DRAINAGE ANALYSIS

for

Definitive Subdivision – Phase II

McGovern Boulevard

Lancaster, Massachusetts

March 26, 2021

COMMONWEALTH OF MASSACHUSETTS
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3-26-21

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1.0 NARRATIVE

1.1 INTRODUCTION

On behalf of our client, North Lancaster, LLC, Hannigan Engineering, Inc. has prepared this Drainage Analysis and Report as part of a Phase II Subdivision submittal package for McGovern Boulevard in Lancaster, Massachusetts. The project was granted Phase I Subdivsion approval in 2014 for the initial construction of a subdivsion roadway within a previously distrubed automobile junkyard along the westerly side of Lunenburg Road. At this time the roadway has been roughly paved within the Right of Way (ROW) and extends approximately 1,600-feet westward which provides access to the FC Stars Soccer Complex. Since this original approval, construction of a gas station on the southerly corner and a dunkin donuts on the nother northers have been completed. At this time it is the intent of the applicant to construct a fully developed roadway system with appropiate utilites in order to advance the overall development of the area.

The purpose of this analysis is to compare the pre-development and post-development peak flow rates to certain design points from the project. In particular, changes in peak rates of runoff generally associated with alterations of land use were studied. These alterations include land being transformed from areas of landscape (grass), woods, and brush to areas of grass, landscape, and impervious areas (rooftops, sidewalks and pavement). The effects of stormwater being re-directed to new areas as a result of the proposed construction and the associated drainage system were reviewed as well. For the purposes of this report, any developed areas which are not impervious will be considered to consist of lawn and landscape areas.

The U.S. Soil Conservation Sevice (SCS) methods were utilized for this analysis in order to establish land use and run-off characteristics in the determination of pre- and post-developement peak run-off rates. All proposed development areas and subsequent impacts on stormwater runoff relative to this development have been incorporated within this analysis and report.

In the area of the proposed construction, an increase in impervious areas are due to the relocation and widening of the roadway system. The roadway will utilize a series of drainage manholes and catchbasins as well as an infiltration basin to capture the runoff in order to provide peak rate mitigation during all storm events. The proposed drainage system will also improve the water quality by providing TSS removal in compliance with the Stormwater Management Regulations.

1.2 METHOD OF ANALYSIS

The enclosed hydrologic calculations utilize the runoff estimating techniques developed by the USDA Soil Conservation Service (SCS). The following publications were used in the preparation of this report:

1. "Urban Hydrology for Small Watersheds"[1]
2. "National Engineering Handbook, Hydrology, Section 4" (NEH-4)[2]
3. "Handbook of Hydraulics" 6th ed. - E.F. Brater & H. Williams[3]
4. "Soil Survey Report for Northeastern Worcester County" 1985 ed. - USDA NRCS[4]

Using SCS publications and other texts on surface water hydrology, in conjunction with drainage software *HydroCAD* developed by Applied Microcomputer Systems[5], Hannigan Engineering, Inc. has calculated peak rates of runoff relative to the subject site for conditions prior to development as well as conditions upon the completion of construction. The drainage software program *HydroCAD* calculates peak rates of runoff similarly to the computer program known as *Computer Programs for Project Formulations-Hydrology, Technical Release Number 20 (TR-20),*

developed by SCS. This program and series of programs are the technical standard utilized by engineers, Planning Boards, Conservation Commission, and Municipal Agencies throughout the region and across the country for the evaluation of storm water conditions.

The analysis reviews certain parameters of sub-watersheds surrounding the subject site and how these parameters are affected by various rainfall conditions. These parameters include land cover and use, soil strata and permeability, and variations in slope. These parameters are used to develop rainfall runoff characteristics, which are used to analyze both pre and post development conditions within and surrounding the proposed construction activity. Some of these characteristics include times of concentration (Tc), peak rates of runoff, runoff volume, and the time the peak rate of runoff occurs within the particular storm event.

Times of concentration were computed by using the SCS "Upland Method" as described in the aforementioned National Engineering Handbook and were utilized for the analysis of the individual watersheds. The Upland Method computes the time of travel of storm waters over segments of the watershed depending upon land conditions, such as surface roughness, channel configuration, slope of land, and flow patterns. The addition of these travel times determines the individual watershed Time of Concentration. This method translates to more accurate Tc's than other more general methods.

1.3 SITE DESCRIPTION

As previously mentioned, the project was approved for a Phase I Definitive Plan by the Town of Lancaster in 2014. As part of this Approval, the initial construction of a subdivision roadway to extend in a westerly direction from Lunenburg Road (Route 70) approximately 1,600-feet to provide access the rear portion of the property. This roadway provided access to land which had historically been utilized as automobile junkyard and had been previously distrubed with packed gravel parking areas. This roadway was left at a binder course of pavement with temporary sediment capturing areas as it was the intent to construct the full roadway at a later date.

Since the original approval, several commericial and recreational projects have been approved and constructed within the project area scope. Specifically, the FC Stars Soccer complex, in 2013 and 2016 on the westerly side of McGovern Brook, a Dunkin Donuts and a gas station along either side of the intersection of McGovern Boulevard and Lunenburg Road. These projects utilize the Phase I roadway system as a means of access to Lunenburg Road. Each project utilized their own sewage and water systems to service the facilites. Drainage for each of these individual projects was accomodated on the lot and primarly uses underground storage systems for peak rate mitigation and recharge. The abutting landowner has submitted plans to extend the roadway system beyond the original limits of the initial project to provide additional roadway infrastructure with a cul-de-sac terminus to the dead-end roadway.

At this time it is the intent of the applicant to proceed with the Phase II. This phase will include the construction of a full width subdivision roadway with associated improvements. The roadway will be constructed within the same general footprint of the existing roadway to the terminus of the original subdivision system and tie directly into the recently submitted McGovern Boulevard Extension plans as prepared by Bohler Engineering in April of 2020.

For the purpose of this analysis, five (5) design points have been established. As the length of McGovern Brook is extensive, the subcatchment areas to the brook have been split into two reaches of the brook. The main subcatchment starts at the top of an adjacent hill and is directed to McGovern Brook. A majority of the existing auto salvage yard is within this subcatchment area. This location has been established as *Design Point #1* and is depicted on the site plans. The remaining area that is directed to McGovern Brook falls from a slight ridge to the brook. The most southerly portion of the subcatchment has been desginated as *Design Point #4* for this analysis. The remaining two subcatchment areas direct surface runoff via low swales to the south, eventually to the Nashua River. These subcatchment areas are predominantly undeveloped woodland areas and have been *Design Points #2 and #3. Design Point #5* is located within a drainage ditch that flows in a northerly direction along Lunenburg Road.

As previously noted several projects have been approved and constructed on either side of McGovern Brook since the original approval. These projects and their stormwater features have incorporated within this analysis to provide a single comprehensive review of the drainage characteristics within the area and to confirm the entire property complies with the appropiate stormwater management standards, and to allow for the continued review of the overall area as development proceeds.

1.4 SOIL CHARACTERISTICS

Soil types for this analysis were based upon review of soils information contained in the SCS publication *Interim Soil Report for Worcester County, Massachusetts – Northeastern Part.* The original mapping has been reestablished via the Web Soil Survey as part of the National Cooperative Soil Survey under the Natural Resource Conservation Service and its website (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx). This mapping is the basis for the soil type determinations for this analysis. Soils within the subject watersheds are also hydrologically classified into different soil groups as defined by the Soil Conservation Service. The following table provides the SCS Hydrological Soil Group classification for each soil type.

Soil Designation	Name	Hydrological Group
245B/C	Hinckley Sandy Loam	A
255A/C	Winsor Loamy Fine Sand	A
262A	Quonset Loamy Sand	A
260A	Sudbury Fine Sandy Loam	B
306D	Paxton Fine Sandy Loam	C
307E	Paxton Fine Sandy Loam	C
311C	Woodbridge Fine Sandy Loam	C
6A	Scarboro Mucky Fine Sandy Loam	D

1.5 RUNOFF CURVE NUMBERS

The SCS runoff curve numbers used in all watershed modeling contained in this report are based on the Hydrologic Soil Groups and land uses below:

Land Use	Hydrologic Soil Group	Curve #
Woods (good)	A	30
Grass Cover (good)	A	39
Brush (good)	A	30
Woods (good)	B	55
Grass Cover (good)	B	61
Brush (good)	B	48
Woods (good)	C	70
Grass Cover (good)	C	74
Range (good)	C	74.
Woods (good)	D	77
Grass Cover (good)	D	80
Brush (good)	D	73
Gravel Surface	NA	96
Impervious	NA	98

1.6 DESIGN CRITERIA

This drainage analysis was developed utilizing a Type III, 24-hour tropical storm as developed by SCS and required for this region. The storm frequencies and the corresponding 24-hour rainfall amounts are as follows:

Storm Frequency (years)	Rainfall (inches)
2	3.0
10	4.5
25	5.4
100	6.7

1.7 THE PROPOSED DRAINAGE SYSTEM

As with any development, changes in land use such as the transformation of woodland areas to lawn, landscape and impervious areas can cause increased peak rates of runoff. On this particular project, these transformed areas consist of driveways and rooftops, as well as alterations in land use from woodland areas to open lawn and landscaped areas. These increases in peak rates of runoff must be mitigated with an appropriately designed site including proper grading to direct stormwater flows to the storm drainage system.

The proposed drainage system captures stormwater runoff from the roadway and surrounding areas via a series of new deep-sump hooded catchbasins. These catchbasins will direct runoff to a drainage trunk line located on either side of the McGovern Brook, which prior to discharge will direct runoff through a Propietary Water Quality Unit for TSS removal.

The proposed catch basins on the project will contain a deep sump (48-inch below the level of the outlet pipe), along with a hood to contain the majority of the roadway debris and sediment within the basin itself, unless otherwise noted. The catchbasins will then discharge directly to the to a Hydrowork Hydroguard unit. These units have been designed to provide additional cleaning and TSS removal prior to discharge. With these components, it can be expected that the water quality units and deep sump catchbasins will achieve the 80 percent TSS removal required.

The westerly portion of the roadway will have the runoff directed towards an existing infiltration basin located on the southerly end of the FC Stars Project via a new trunkline that will extend in a southerly direction and utlimately tie-in to the existing piping. This basin was designed to capture a portion of the previous roadway and surrounding development during its intitial design. Due to changes in project scope, since it's construction, this basin will require further modification to account for the additional flows. Modifications will be exlucisvely limited to the expansion of the basins' berm to allow for additional capacity. This will include the reconstruction of the emergency spillway. Other mitigation features, such as the forebay and outlet structures will remain as is.

The easterly portion of the roadway will have the treated runoff direct towards a 6-foot wide rip-rap apron pad that is approximately 100-feet long which will utilimately discharge to McGovern Brook. The intent of the pad will be to provide velocity migitation of the flows and allow for additional sediment capture within the riprap. It is also anticipated that the reduction in velocity will aid in the ability for the runoff to recharge into the ground over the length of the pad.

The initial construction of the Phase I roadway system included the construction of a series of small temporary sediment basins along the northerly side of the roadway to capture the runoff from the northerly portion of site. It is the intent to continue the use of these features to provide an areas for sediment capture prior to runoff reaching the Brook.

It is anticpated that this site will function as a high intensity roadway and the potential future uses will far exceed 1,000 vehicle trips per day. Therefore the site is considered a Land Use with Higher Potential Pollutant Load (LUHPPL), and further considerations in regards to stormwater runoff are required by Stormwater Management Regulations. In order to satisify Stormwater regulations an oil-grit seperator is provided in the form of a Hydroworks Hydroguard Unit. This unit will provide an enhanced cleaning by providing further TSS removal prior to discharge. In combination with the proposed catchbasins, approximatley 84% TSS removal is provided.

The drainage pipe network on this project was designed utilizing the HydroCAD modeling program and accommodates the 25-year storm event through the on-site pipe network. Subsequent analysis of the 100-year storm event reveals the ability to accommodate this larger event through the on-site piping.

1.8 CONCLUSIONS

As stated above, the design points have been established at several points throughout the property, with the majority of the runoff being directed towards McGovern Brook. The new drainage system is designed to mitigate the effects of the increased impervious areas. The results of the analysis are shown below:

Table 1: Peak Rate of Flow

Design Point		2-yr Storm	25-yr Storm	50-Yr Storm	100-yr Storm
DP#1	Pre-	51.41	128.43	149.43	170.58
	Post-	36.26	101.25	120.66	140.37
DP#2	Pre-	0.00	0.25	0.68	1.41
	Post-	0.00	0.02	0.05	0.10
DP#3	Pre-	0.00	0.01	0.03	0.06
	Post-	0.00	0.01	0.02	0.06
DP#4	Pre-	0.00	0.02	0.05	0.12
	Post-	0.00	0.02	0.07	0.14
DP#5	Pre-	0.27	1.33	1.66	2.00
	Post-	0.26	0.82	0.98	1.14

All flows are in cubic feet per second (cfs).

As outline above, the post-development peak rates of runoff show a decrease for all design points with the exception of *DP#4.* With respect to peak rates, there are slight increases in the peak rate of runoff at Design Point #4. These increases are primarily attributed to the soil conditions within these subcatchment areas as being well drained soils in the Hydrological Soil Group A. As such, the predevelopment runoff characteristics produce little or no runoff. With an overall post development watershed area of approximately 6.2 acres, these increases would likely be absorbed into the down stream swale bottom and never reach the Nashua River. The flow depths attributed to the runoff to these design points in the 100 year storm event are actually less than 0.17 inches. In the event that these flows do travel through the entire length of the swale system to the Nashua River, they would not generate enough velocity to cause downstream erosion and do not have enough volume to cause an increase in downstream flooding. As such, these increases in peak rate of runoff are considered *de minimis*.

The storm water management as outlined herein and as shown on the accompanying plans has the following positive values relative to storm water management:

A) Attenuation of the 2-, 10-, 25- and 100-year storm events has mitigated increases in peak rates of runoff, or has been justified herein.
B) On-site roadway and pavement areas are directed to standard catch basins with deep sumps for collection of debris and sediments prior to discharge.
C) The development adheres to the provisions of the Massachusetts Stormwater Management program with greater than 80% TSS removal.
D) The Stormwater Operation and Maintenance Plan (OMP) attached, has been prepared to ensure long-term function of the system, as designed

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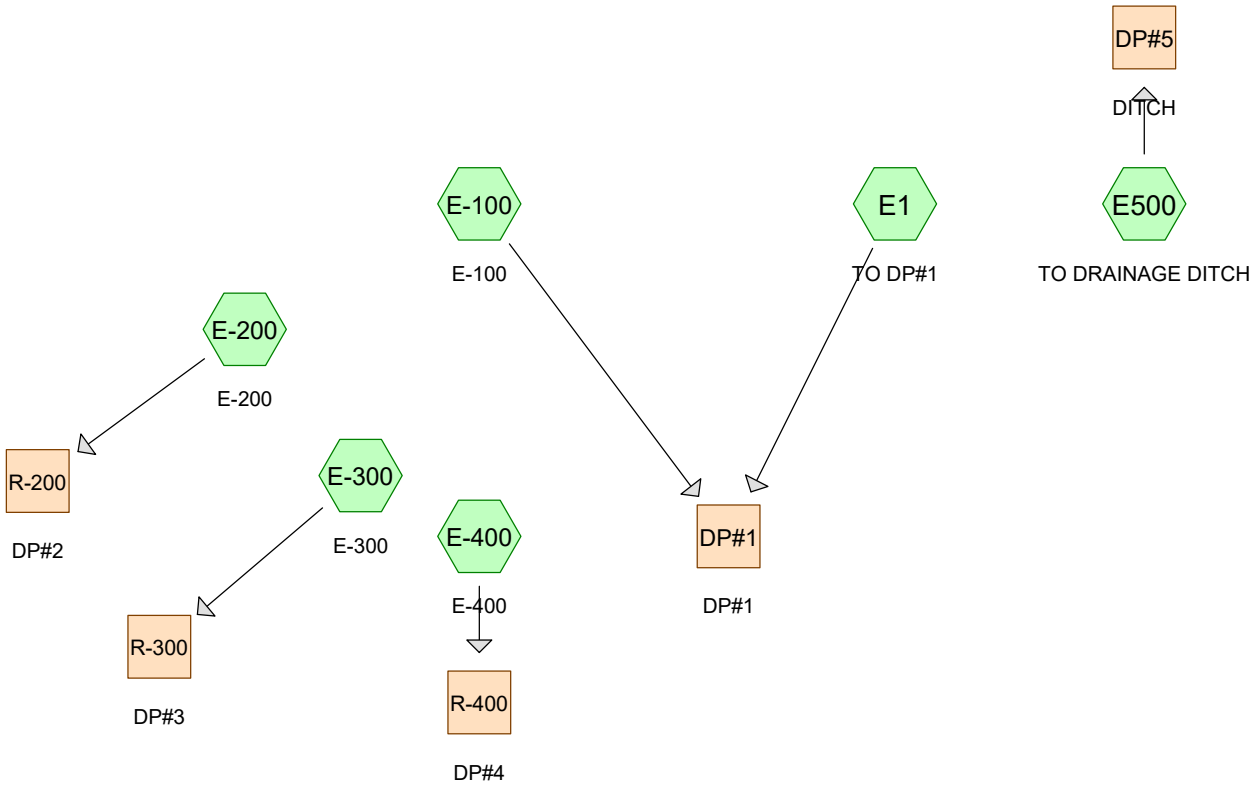
[1]"Urban Hydrology for Small Watersheds (Technical Release Number 55); Engineering Division, United States Dept. of Agriculture ,Soil Conservation Service (Jan. 1975)
[2]"National Engineering Handbook Section 4- Hydrology" ; United States Dept. of Agriculture, Soil Conservation Service (March 1985)
[3]"Handbook of Hydraulics" - 6th ed., E.F. Brater & H. Williams (1976)
[4]"Interim Soil Report for Southern Worcester County" 1995 ed., Published by the Southern Worcester County Conservation District, in cooperation with the United States Department of Agriculture, Natural Resources Conservation Service (1995)
[5] "HydroCAD" Drainage software developed by Applied Microcomputer, Page Hill Road, Chocorua, NH

2.0
HYDROLOGICAL CALCULATIONS

2.1
PRE-DEVELOPMENT CALCULATIONS



Subcat Reach Pond Link

Routing Diagram for 2226-Existing Master Subdivision
Prepared by HANNIGAN ENGINEERING, INC., Printed 3/31/2021
HydroCAD® 10.00-25 s/n 00840 © 2019 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.598	39	>75% Grass cover, Good, HSG A (E1, E500)
1.133	61	>75% Grass cover, Good, HSG B (E1)
0.016	80	>75% Grass cover, Good, HSG D (E1)
2.803	30	Brush, Good, HSG A (E-100, E-200, E1)
1.543	48	Brush, Good, HSG B (E-100, E-200, E1)
0.464	65	Brush, Good, HSG C (E-100)
1.779	73	Brush, Good, HSG D (E-100, E1)
10.339	96	Gravel surface, HSG A (E-100, E-200, E1)
13.658	96	Gravel surface, HSG B (E-100, E-200, E1)
5.904	96	Gravel surface, HSG C (E-100)
2.910	96	Gravel surface, HSG D (E-100, E1)
0.339	79	Pasture/grassland/range, Fair, HSG C (E-100)
1.728	98	Paved parking, HSG A (E1, E500)
2.264	98	Paved parking, HSG B (E1)
0.034	98	Paved parking, HSG D (E1)
20.175	30	Woods, Good, HSG A (E-100, E-200, E-300, E-400, E1)
5.135	55	Woods, Good, HSG B (E-100, E-200, E1)
4.043	70	Woods, Good, HSG C (E-100)
2.870	77	Woods, Good, HSG D (E-100, E1)
78.736	**69**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
36.644	HSG A	E-100, E-200, E-300, E-400, E1, E500
23.733	HSG B	E-100, E-200, E1
10.750	HSG C	E-100
7.608	HSG D	E-100, E1
0.000	Other	
78.736		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
1.598	1.133	0.000	0.016	0.000	2.746	>75% Grass cover, Good	E1, E500
2.803	1.543	0.464	1.779	0.000	6.590	Brush, Good	E-100, E-200, E1
10.339	13.658	5.904	2.910	0.000	32.810	Gravel surface	E-100, E-200, E1
0.000	0.000	0.339	0.000	0.000	0.339	Pasture/grassland/range, Fair	E-100
1.728	2.264	0.000	0.034	0.000	4.026	Paved parking	E1, E500
20.175	5.135	4.043	2.870	0.000	32.224	Woods, Good	E-100, E-200, E-300, E-400, E1
36.644	**23.733**	**10.750**	**7.608**	**0.000**	**78.736**	**TOTAL AREA**	

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E-100: E-100 Runoff Area=1,234,608 sf 0.00% Impervious Runoff Depth=1.52"
Flow Length=2,643' Tc=28.8 min CN=84 Runoff=28.91 cfs 3.581 af

Subcatchment E-200: E-200 Runoff Area=412,466 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=1,151' Tc=22.9 min CN=37 Runoff=0.00 cfs 0.000 af

Subcatchment E-300: E-300 Runoff Area=156,842 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=469' Tc=28.5 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment E-400: E-400 Runoff Area=290,014 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=487' Tc=31.1 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment E1: TO DP#1 Runoff Area=1,307,045 sf 12.45% Impervious Runoff Depth=1.13"
Flow Length=1,794' Tc=27.7 min CN=78 Runoff=22.50 cfs 2.823 af

Subcatchment E500: TO DRAINAGE DITCH Runoff Area=28,748 sf 44.05% Impervious Runoff Depth=0.51"
Flow Length=568' Tc=6.7 min CN=65 Runoff=0.27 cfs 0.028 af

Reach DP#1: DP#1 Inflow=51.41 cfs 6.404 af
Outflow=51.41 cfs 6.404 af

Reach DP#5: DITCH Inflow=0.27 cfs 0.028 af
Outflow=0.27 cfs 0.028 af

Reach R-200: DP#2 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach R-300: DP#3 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach R-400: DP#4 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Total Runoff Area = 78.736 ac Runoff Volume = 6.432 af Average Runoff Depth = 0.98"
94.89% Pervious = 74.710 ac 5.11% Impervious = 4.026 ac

Summary for Subcatchment E-100: E-100

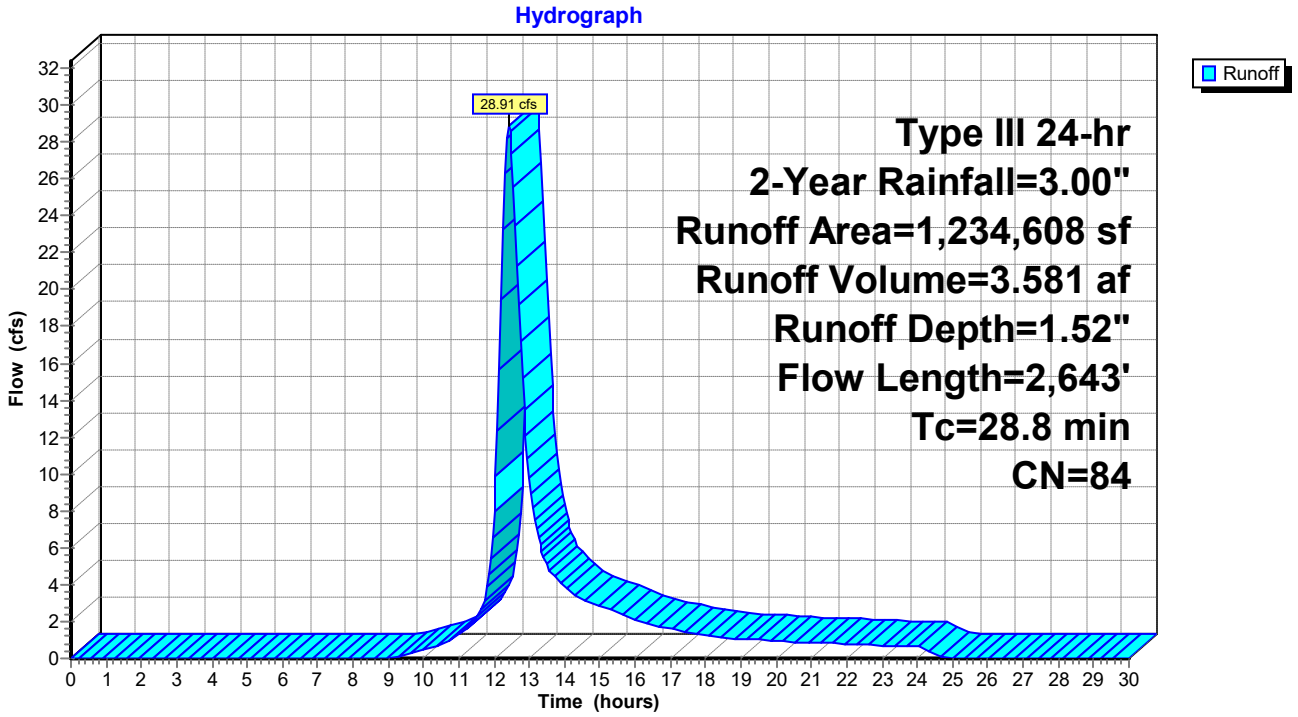
Runoff = 28.91 cfs @ 12.41 hrs, Volume= 3.581 af, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
6,184	30	Brush, Good, HSG A
17,722	48	Brush, Good, HSG B
20,230	65	Brush, Good, HSG C
13,607	73	Brush, Good, HSG D
66,854	30	Woods, Good, HSG A
63,360	55	Woods, Good, HSG B
176,119	70	Woods, Good, HSG C
43,006	77	Woods, Good, HSG D
14,769	79	Pasture/grassland/range, Fair, HSG C
37,593	96	Gravel surface, HSG A
511,618	96	Gravel surface, HSG B
257,166	96	Gravel surface, HSG C
6,380	96	Gravel surface, HSG D
1,234,608	84	Weighted Average
1,234,608		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	53	0.0470	0.23		**Sheet Flow,** Range n= 0.130 P2= 3.00"
2.1	194	0.0980	1.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.7	220	0.1600	1.00		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
1.4	120	0.3300	1.44		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.5	35	0.2300	1.20		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.4	59	0.1350	2.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	159	0.1250	2.47		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	278	0.0540	3.74		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	681	0.0110	1.69		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.6	531	0.0140	1.90		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.8	273	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.4	40	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.8	2,643	Total			

Subcatchment E-100: E-100



Summary for Subcatchment E-200: E-200

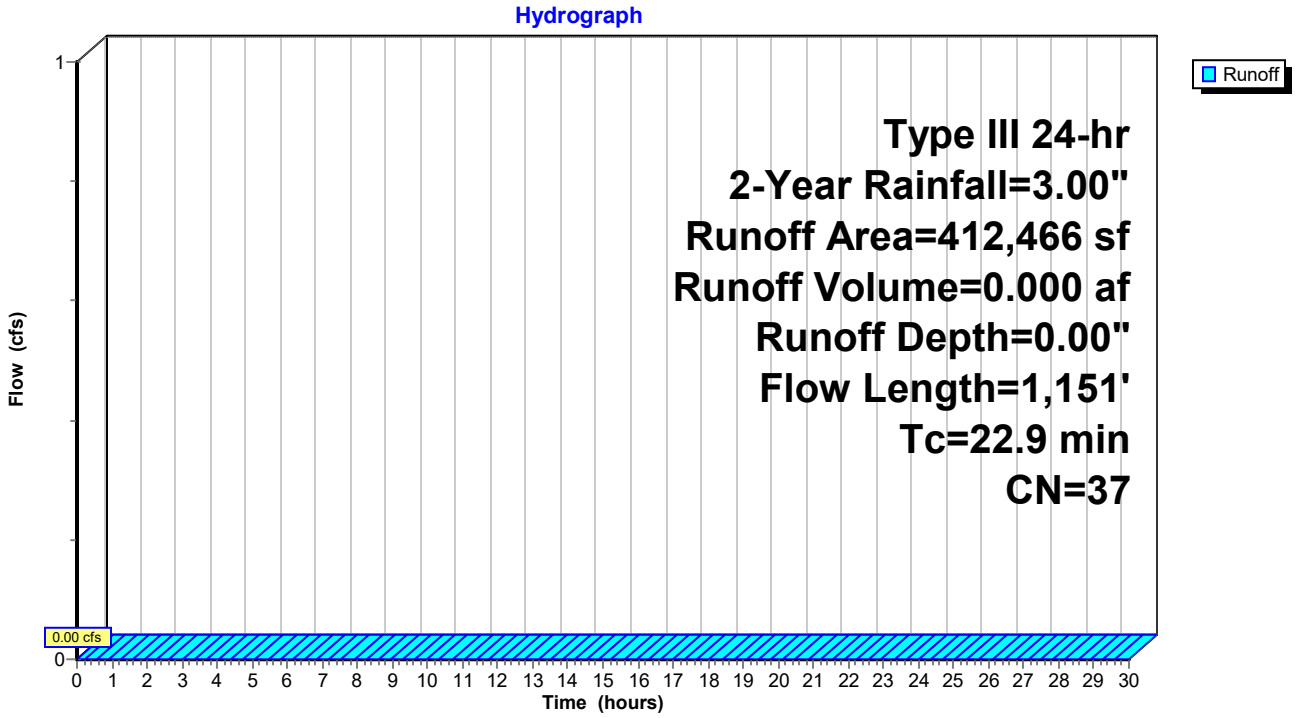
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
10,392	30	Brush, Good, HSG A
5,683	48	Brush, Good, HSG B
343,066	30	Woods, Good, HSG A
22,858	55	Woods, Good, HSG B
21,950	96	Gravel surface, HSG A
8,517	96	Gravel surface, HSG B
412,466	37	Weighted Average
412,466		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	127	0.0280	1.60		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
12.0	410	0.0130	0.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.6	614	0.0230	1.06		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
22.9	1,151	Total			

Subcatchment E-200: E-200



Summary for Subcatchment E-300: E-300

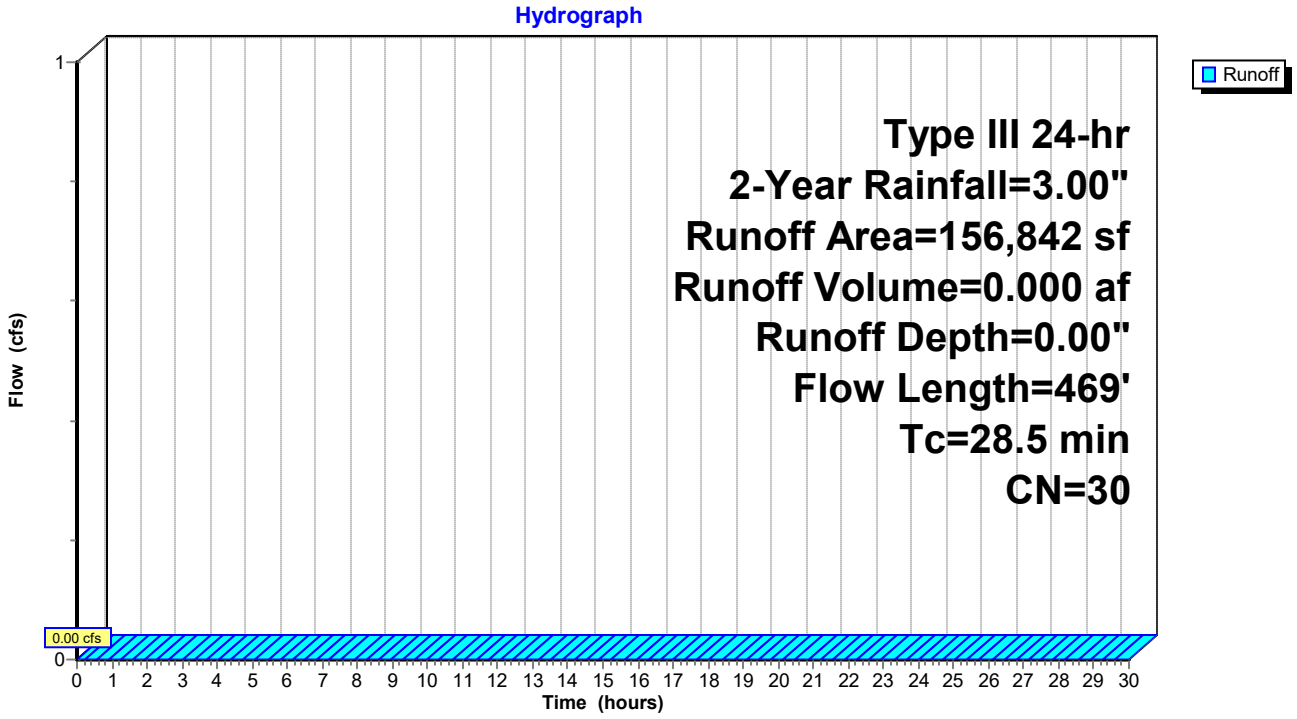
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
156,842	30	Woods, Good, HSG A
156,842		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	76	0.0260	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
12.5	393	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.5	469	Total			

Subcatchment E-300: E-300



Summary for Subcatchment E-400: E-400

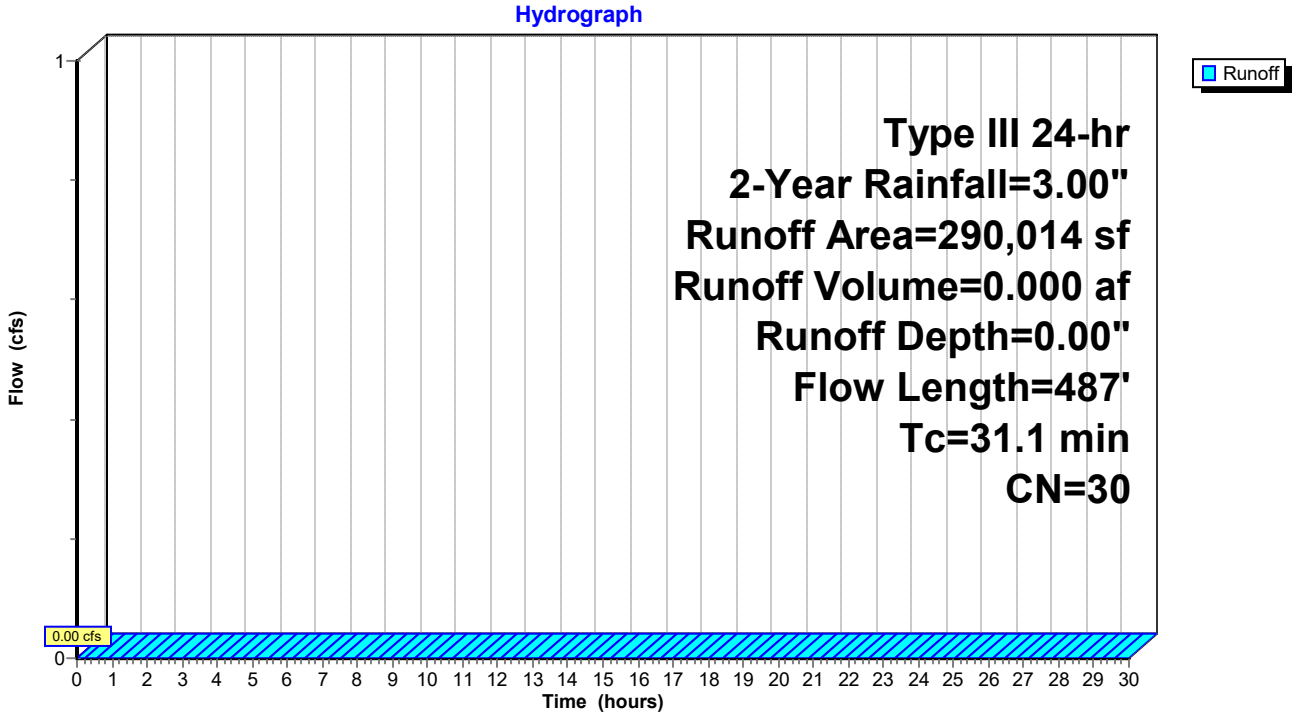
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
290,014	30	Woods, Good, HSG A
290,014		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	75	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
5.8	275	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	56	0.1780	1.05		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.1	22	0.4500	3.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	59	0.1200	0.87		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
31.1	487	Total			

Subcatchment E-400: E-400



Summary for Subcatchment E1: TO DP#1

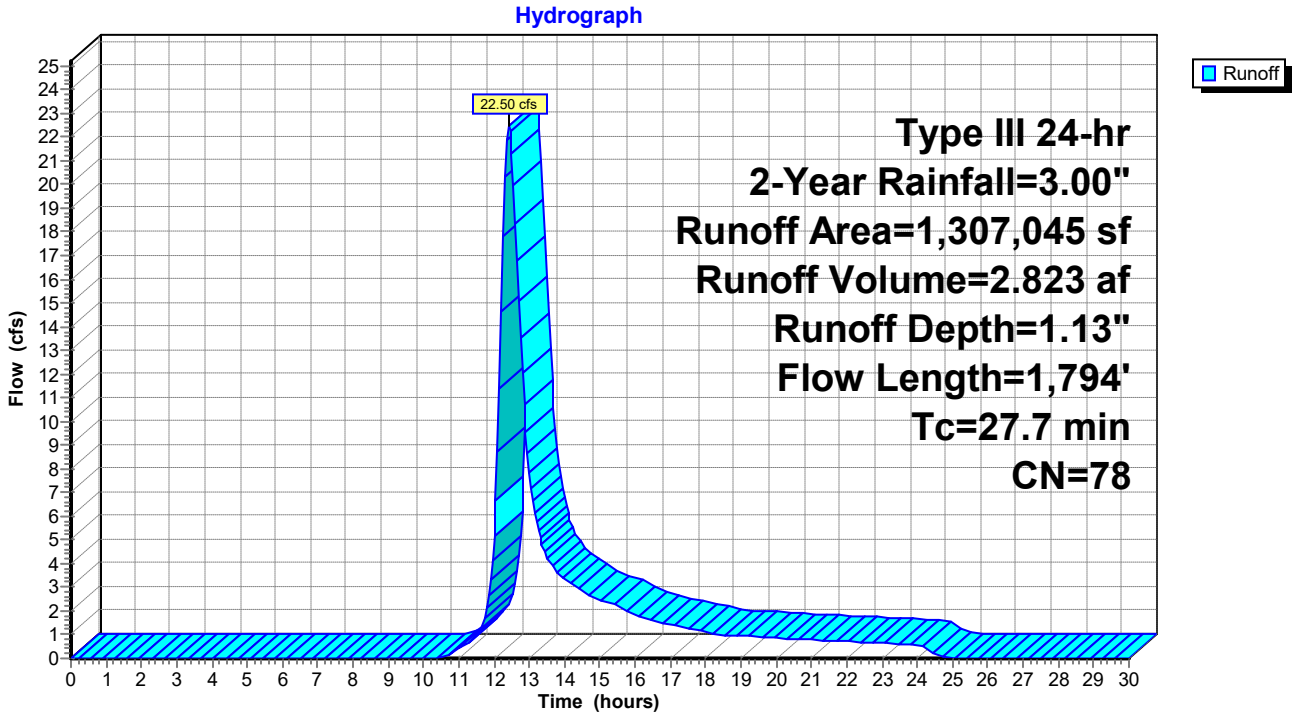
Runoff = 22.50 cfs @ 12.41 hrs, Volume= 2.823 af, Depth= 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
53,517	39	>75% Grass cover, Good, HSG A
105,541	30	Brush, Good, HSG A
22,067	30	Woods, Good, HSG A
390,827	96	Gravel surface, HSG A
62,609	98	Paved parking, HSG A
49,340	61	>75% Grass cover, Good, HSG B
43,824	48	Brush, Good, HSG B
137,472	55	Woods, Good, HSG B
74,794	96	Gravel surface, HSG B
98,633	98	Paved parking, HSG B
686	80	>75% Grass cover, Good, HSG D
63,884	73	Brush, Good, HSG D
82,021	77	Woods, Good, HSG D
120,365	96	Gravel surface, HSG D
1,465	98	Paved parking, HSG D
1,307,045	78	Weighted Average
1,144,338		87.55% Pervious Area
162,707		12.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	25	0.1580	0.29		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	25	0.0200	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
23.0	1,573	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	15	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.7	156	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
27.7	1,794	Total			

Subcatchment E1: TO DP#1



Summary for Subcatchment E500: TO DRAINAGE DITCH

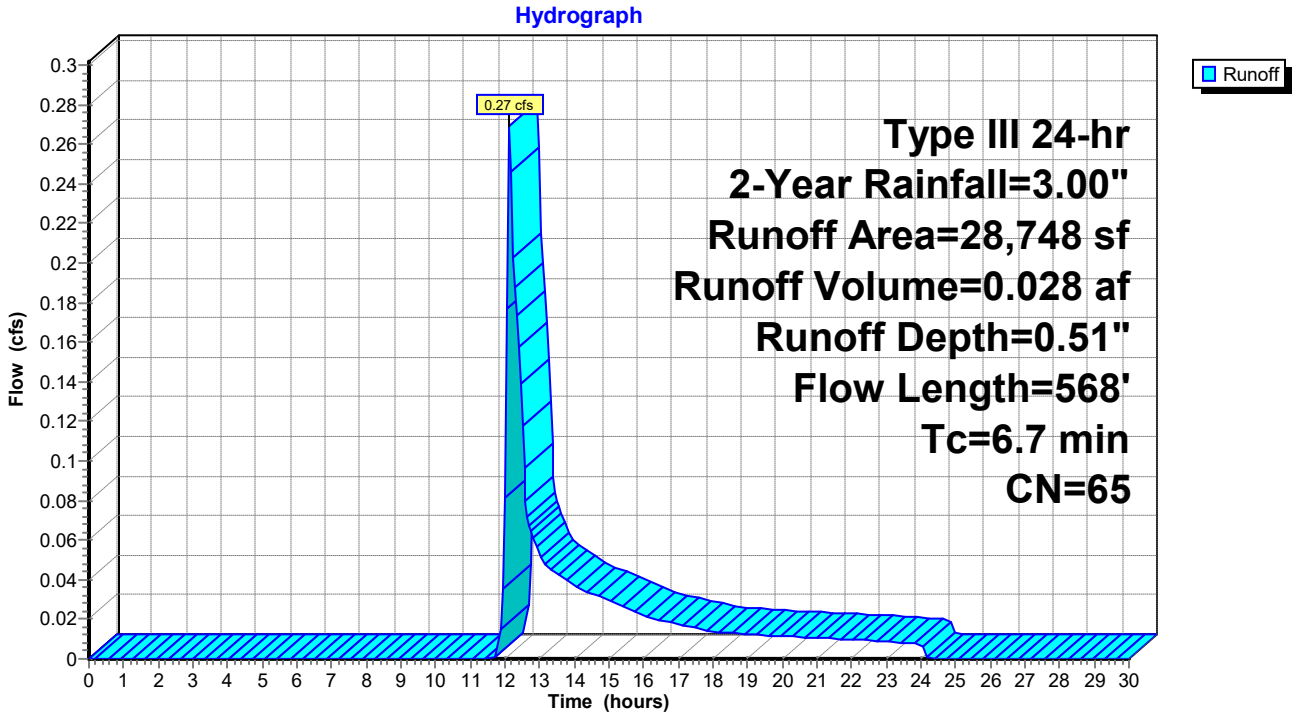
Runoff = 0.27 cfs @ 12.13 hrs, Volume= 0.028 af, Depth= 0.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
16,084	39	>75% Grass cover, Good, HSG A
12,664	98	Paved parking, HSG A
28,748	65	Weighted Average
16,084		55.95% Pervious Area
12,664		44.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
5.4	518	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	568	Total			

Subcatchment E500: TO DRAINAGE DITCH

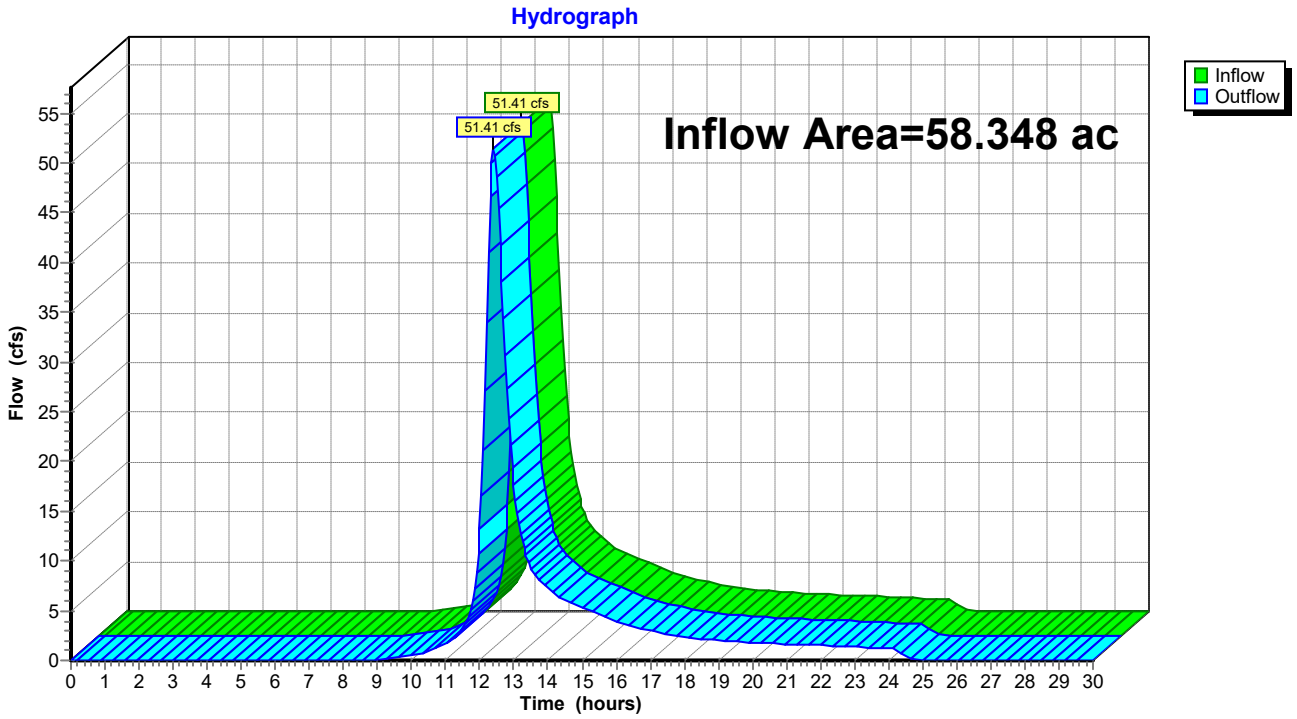


Summary for Reach DP#1: DP#1

Inflow Area = 58.348 ac, 6.40% Impervious, Inflow Depth = 1.32" for 2-Year event
Inflow = 51.41 cfs @ 12.41 hrs, Volume= 6.404 af
Outflow = 51.41 cfs @ 12.41 hrs, Volume= 6.404 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#1: DP#1

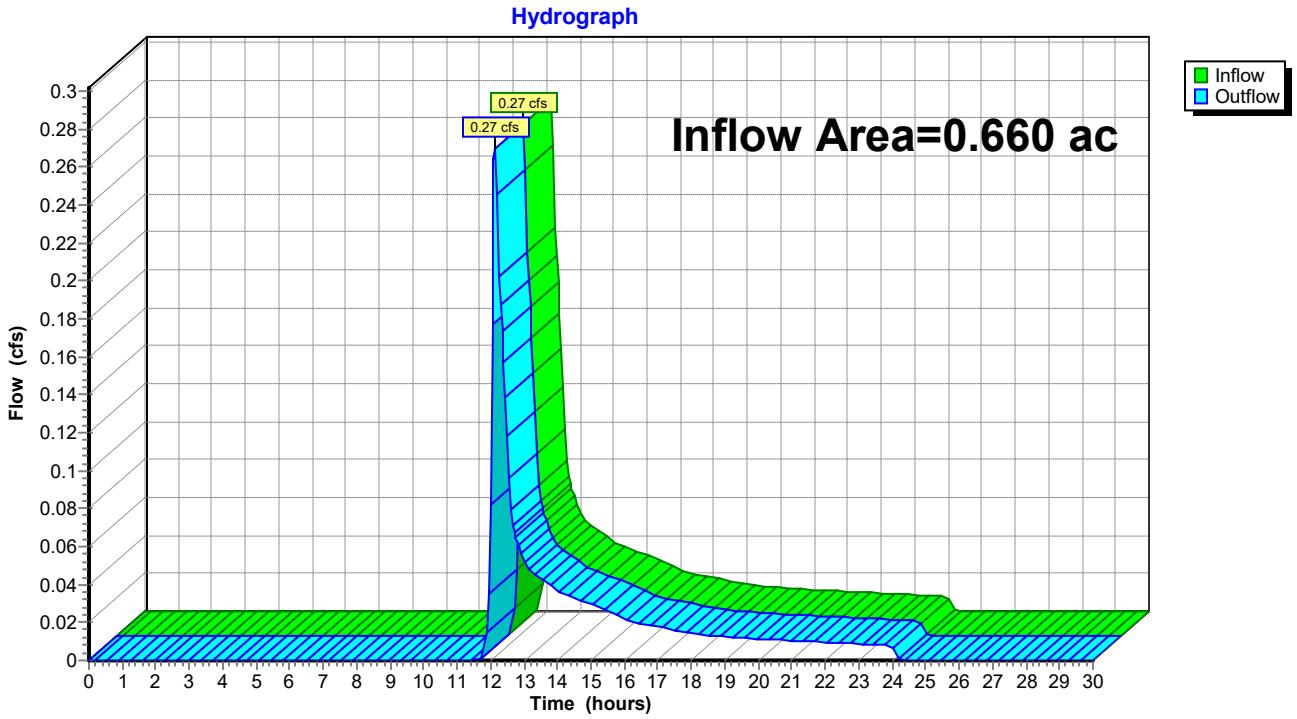


Summary for Reach DP#5: DITCH

Inflow Area = 0.660 ac, 44.05% Impervious, Inflow Depth = 0.51" for 2-Year event
Inflow = 0.27 cfs @ 12.13 hrs, Volume= 0.028 af
Outflow = 0.27 cfs @ 12.13 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#5: DITCH

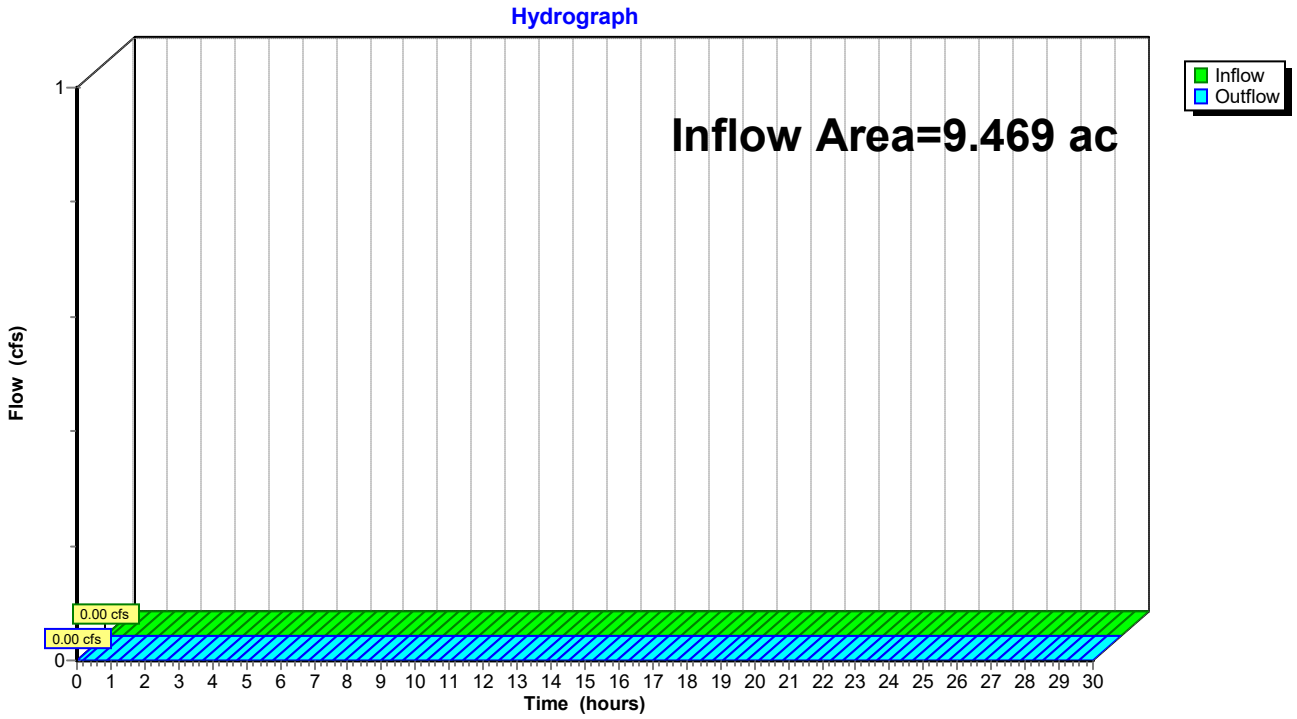


Summary for Reach R-200: DP#2

Inflow Area = 9.469 ac, 0.00% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-200: DP#2

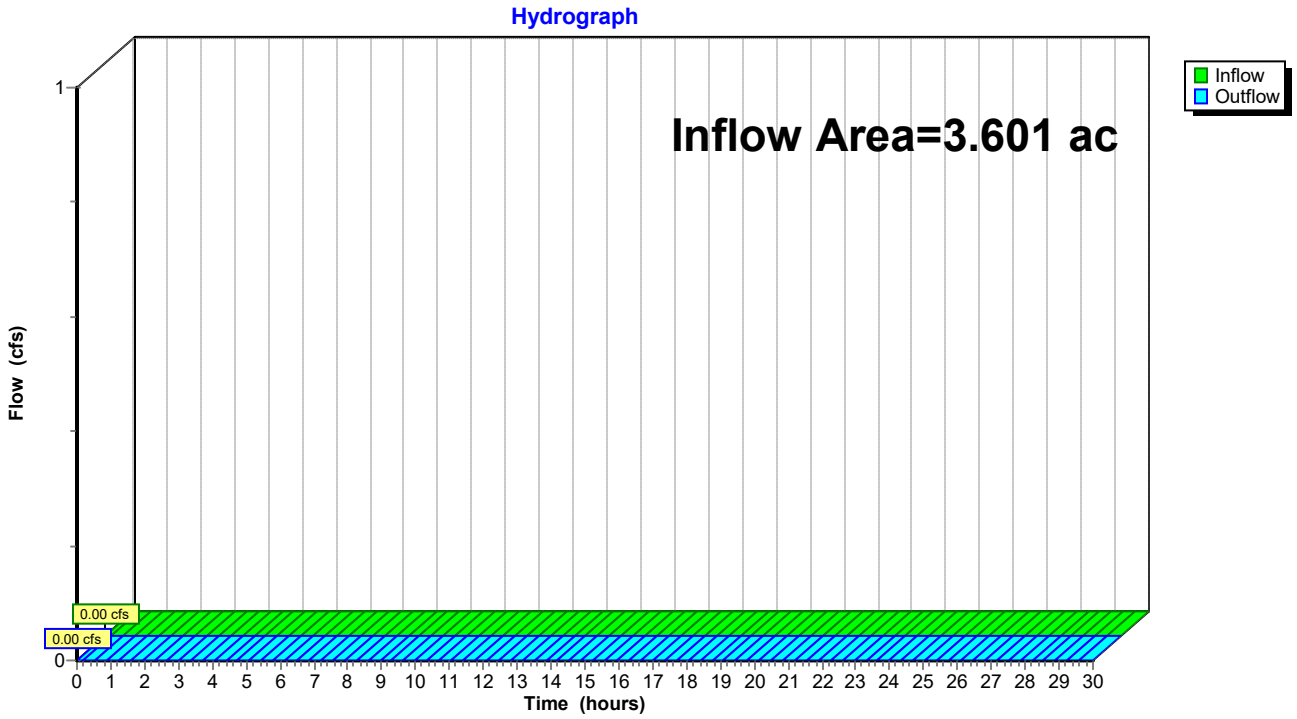


Summary for Reach R-300: DP#3

Inflow Area = 3.601 ac, 0.00% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-300: DP#3

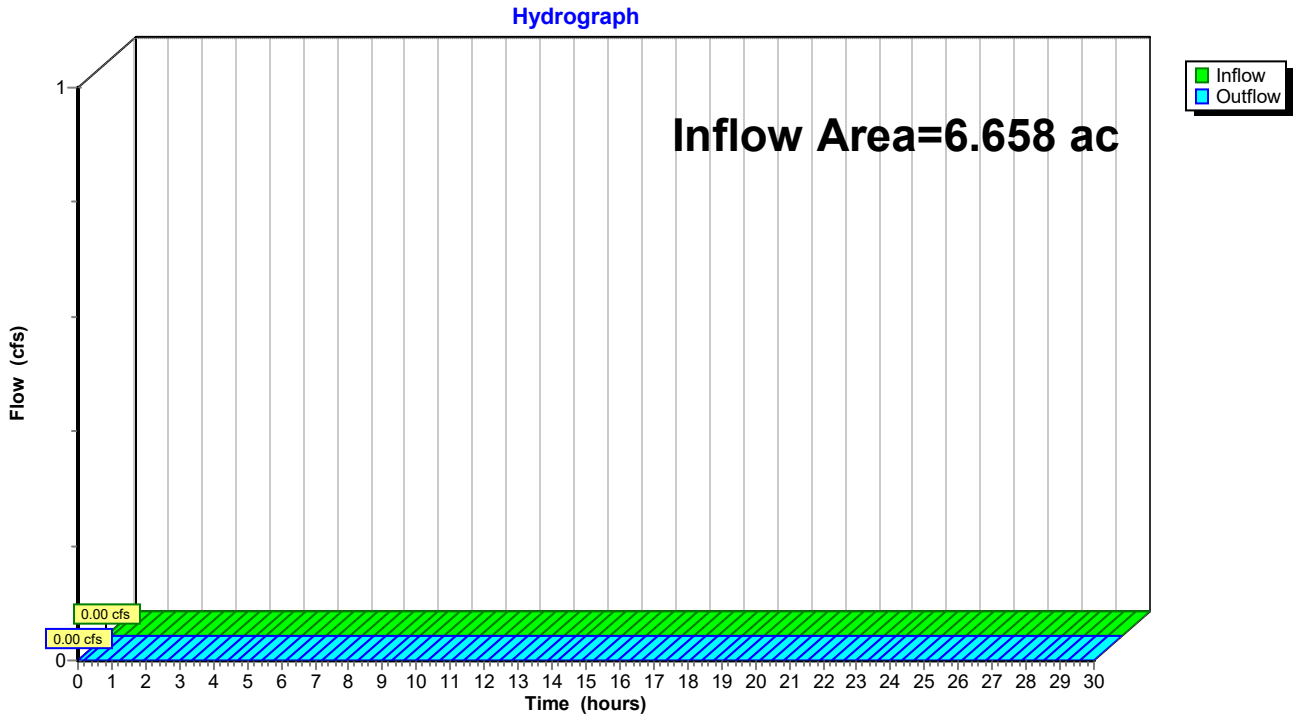


Summary for Reach R-400: DP#4

Inflow Area = 6.658 ac, 0.00% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-400: DP#4



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E-100: E-100 Runoff Area=1,234,608 sf 0.00% Impervious Runoff Depth=3.55"
Flow Length=2,643' Tc=28.8 min CN=84 Runoff=67.37 cfs 8.375 af

Subcatchment E-200: E-200 Runoff Area=412,466 sf 0.00% Impervious Runoff Depth=0.19"
Flow Length=1,151' Tc=22.9 min CN=37 Runoff=0.25 cfs 0.150 af

Subcatchment E-300: E-300 Runoff Area=156,842 sf 0.00% Impervious Runoff Depth=0.02"
Flow Length=469' Tc=28.5 min CN=30 Runoff=0.01 cfs 0.005 af

Subcatchment E-400: E-400 Runoff Area=290,014 sf 0.00% Impervious Runoff Depth=0.02"
Flow Length=487' Tc=31.1 min CN=30 Runoff=0.02 cfs 0.009 af

Subcatchment E1: TO DP#1 Runoff Area=1,307,045 sf 12.45% Impervious Runoff Depth=2.97"
Flow Length=1,794' Tc=27.7 min CN=78 Runoff=61.07 cfs 7.422 af

Subcatchment E500: TO DRAINAGE DITCH Runoff Area=28,748 sf 44.05% Impervious Runoff Depth=1.86"
Flow Length=568' Tc=6.7 min CN=65 Runoff=1.33 cfs 0.102 af

Reach DP#1: DP#1 Inflow=128.43 cfs 15.797 af
Outflow=128.43 cfs 15.797 af

Reach DP#5: DITCH Inflow=1.33 cfs 0.102 af
Outflow=1.33 cfs 0.102 af

Reach R-200: DP#2 Inflow=0.25 cfs 0.150 af
Outflow=0.25 cfs 0.150 af

Reach R-300: DP#3 Inflow=0.01 cfs 0.005 af
Outflow=0.01 cfs 0.005 af

Reach R-400: DP#4 Inflow=0.02 cfs 0.009 af
Outflow=0.02 cfs 0.009 af

Total Runoff Area = 78.736 ac Runoff Volume = 16.063 af Average Runoff Depth = 2.45"
94.89% Pervious = 74.710 ac 5.11% Impervious = 4.026 ac

Summary for Subcatchment E-100: E-100

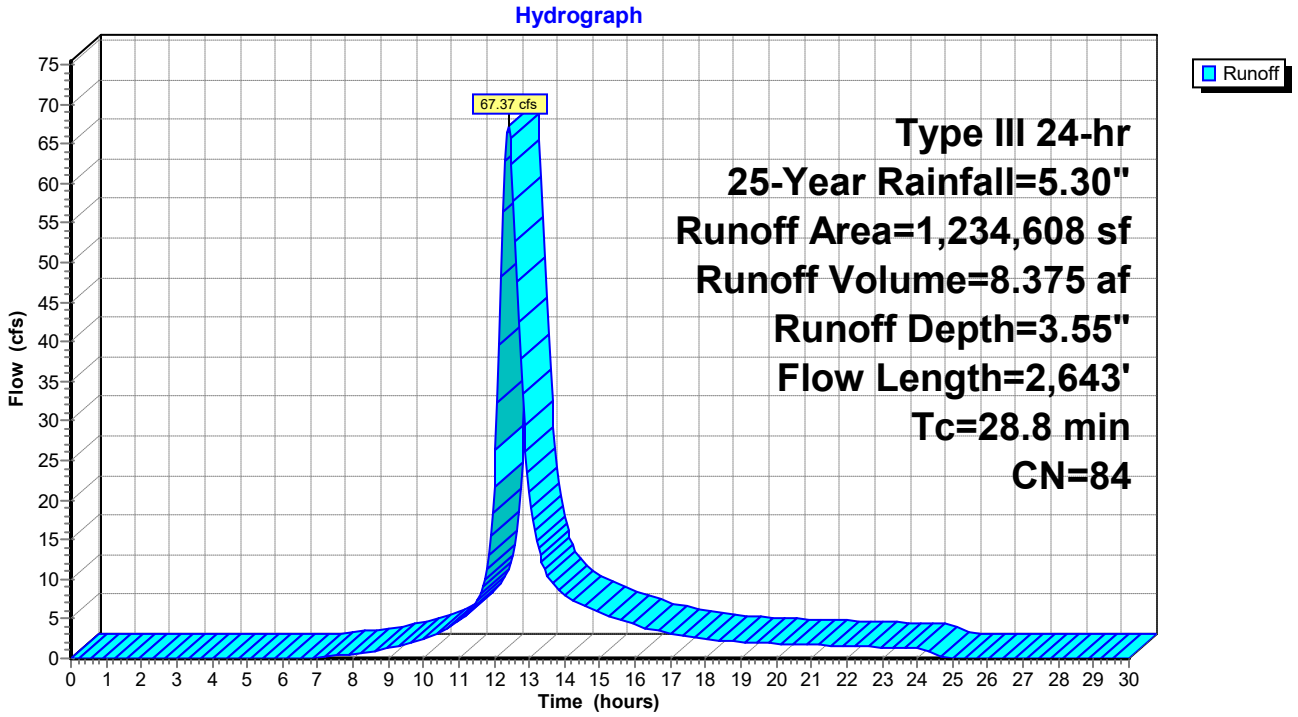
Runoff = 67.37 cfs @ 12.39 hrs, Volume= 8.375 af, Depth= 3.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
6,184	30	Brush, Good, HSG A
17,722	48	Brush, Good, HSG B
20,230	65	Brush, Good, HSG C
13,607	73	Brush, Good, HSG D
66,854	30	Woods, Good, HSG A
63,360	55	Woods, Good, HSG B
176,119	70	Woods, Good, HSG C
43,006	77	Woods, Good, HSG D
14,769	79	Pasture/grassland/range, Fair, HSG C
37,593	96	Gravel surface, HSG A
511,618	96	Gravel surface, HSG B
257,166	96	Gravel surface, HSG C
6,380	96	Gravel surface, HSG D
1,234,608	84	Weighted Average
1,234,608		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	53	0.0470	0.23		**Sheet Flow,** Range n= 0.130 P2= 3.00"
2.1	194	0.0980	1.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.7	220	0.1600	1.00		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
1.4	120	0.3300	1.44		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.5	35	0.2300	1.20		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.4	59	0.1350	2.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	159	0.1250	2.47		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	278	0.0540	3.74		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	681	0.0110	1.69		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.6	531	0.0140	1.90		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.8	273	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.4	40	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.8	2,643	Total			

Subcatchment E-100: E-100



Summary for Subcatchment E-200: E-200

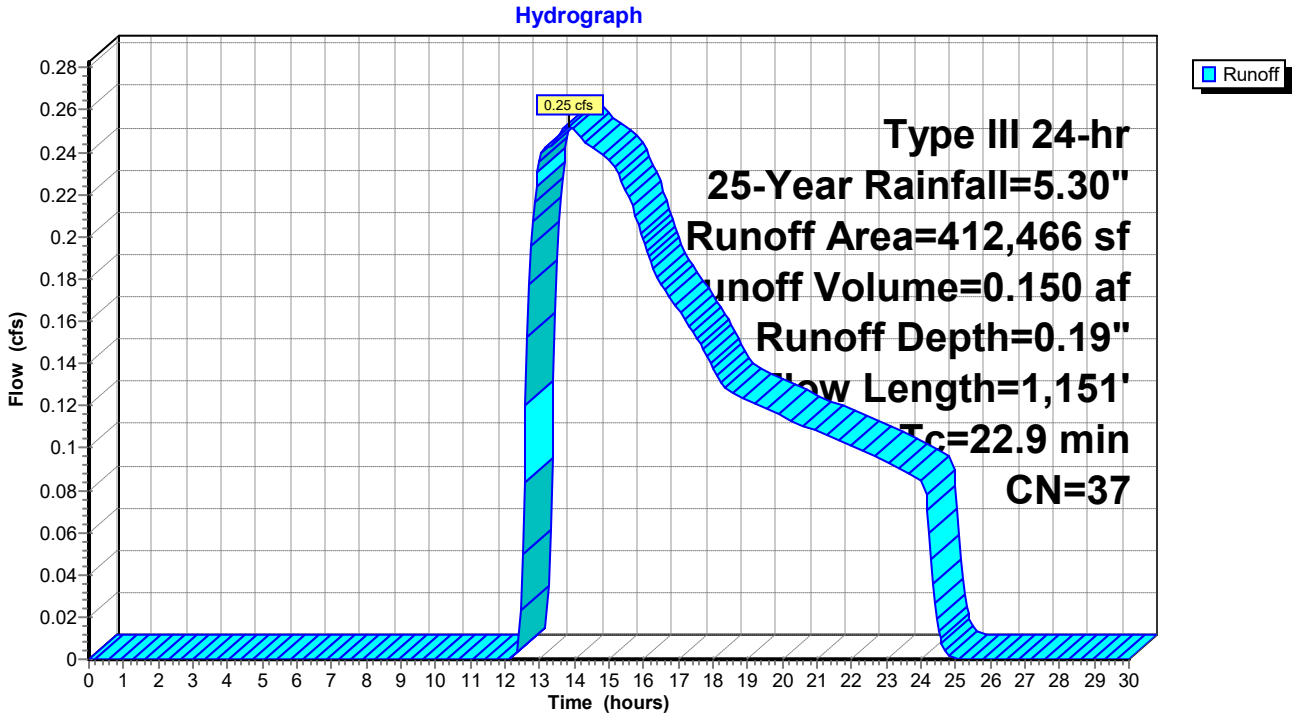
Runoff = 0.25 cfs @ 13.87 hrs, Volume= 0.150 af, Depth= 0.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
10,392	30	Brush, Good, HSG A
5,683	48	Brush, Good, HSG B
343,066	30	Woods, Good, HSG A
22,858	55	Woods, Good, HSG B
21,950	96	Gravel surface, HSG A
8,517	96	Gravel surface, HSG B
412,466	37	Weighted Average
412,466		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	127	0.0280	1.60		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
12.0	410	0.0130	0.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.6	614	0.0230	1.06		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
22.9	1,151	Total			

Subcatchment E-200: E-200



Summary for Subcatchment E-300: E-300

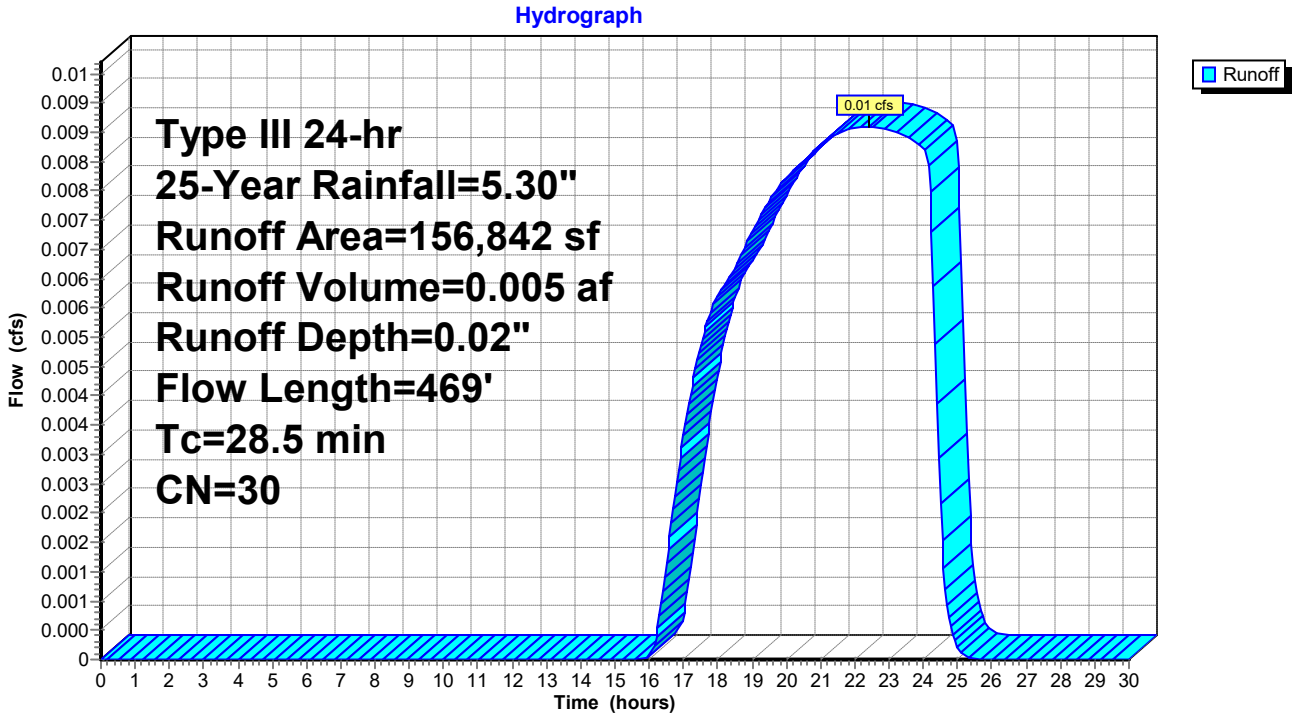
Runoff = 0.01 cfs @ 22.44 hrs, Volume= 0.005 af, Depth= 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
156,842	30	Woods, Good, HSG A
156,842		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	76	0.0260	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
12.5	393	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.5	469	Total			

Subcatchment E-300: E-300



Summary for Subcatchment E-400: E-400

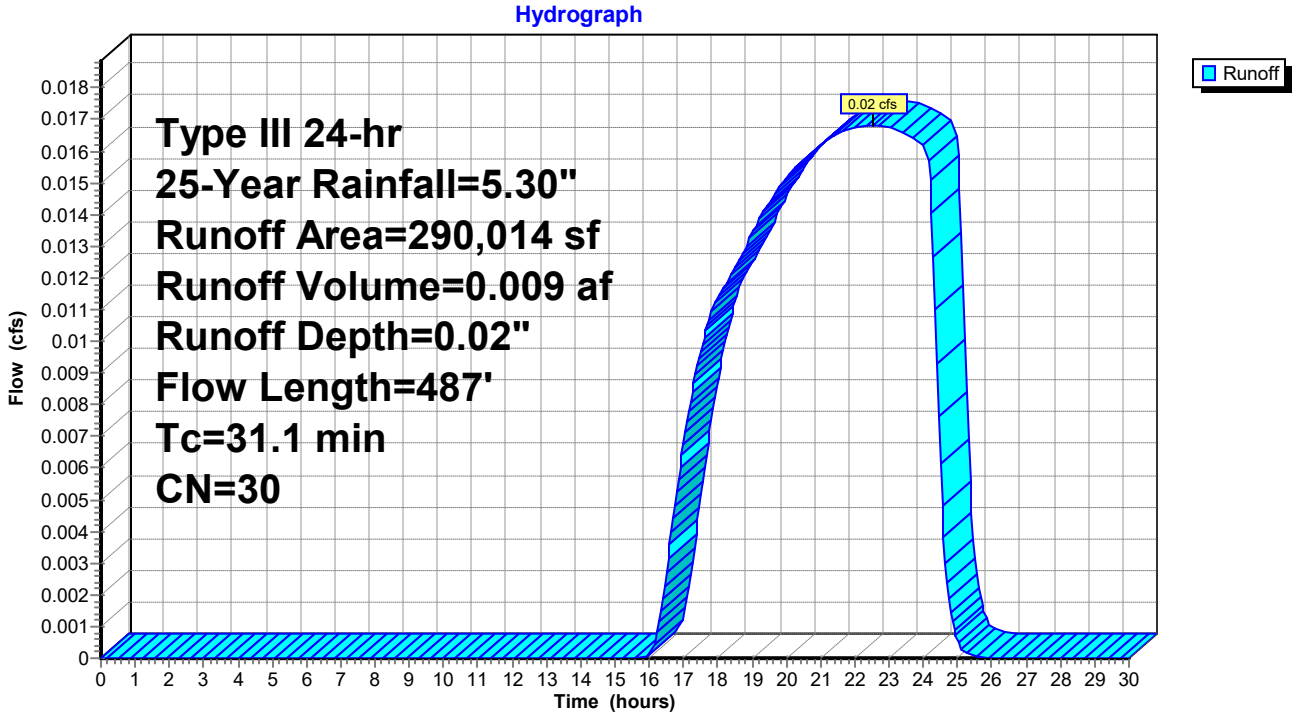
Runoff = 0.02 cfs @ 22.50 hrs, Volume= 0.009 af, Depth= 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
290,014	30	Woods, Good, HSG A
290,014		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	75	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
5.8	275	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	56	0.1780	1.05		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.1	22	0.4500	3.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	59	0.1200	0.87		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
31.1	487	Total			

Subcatchment E-400: E-400



Summary for Subcatchment E1: TO DP#1

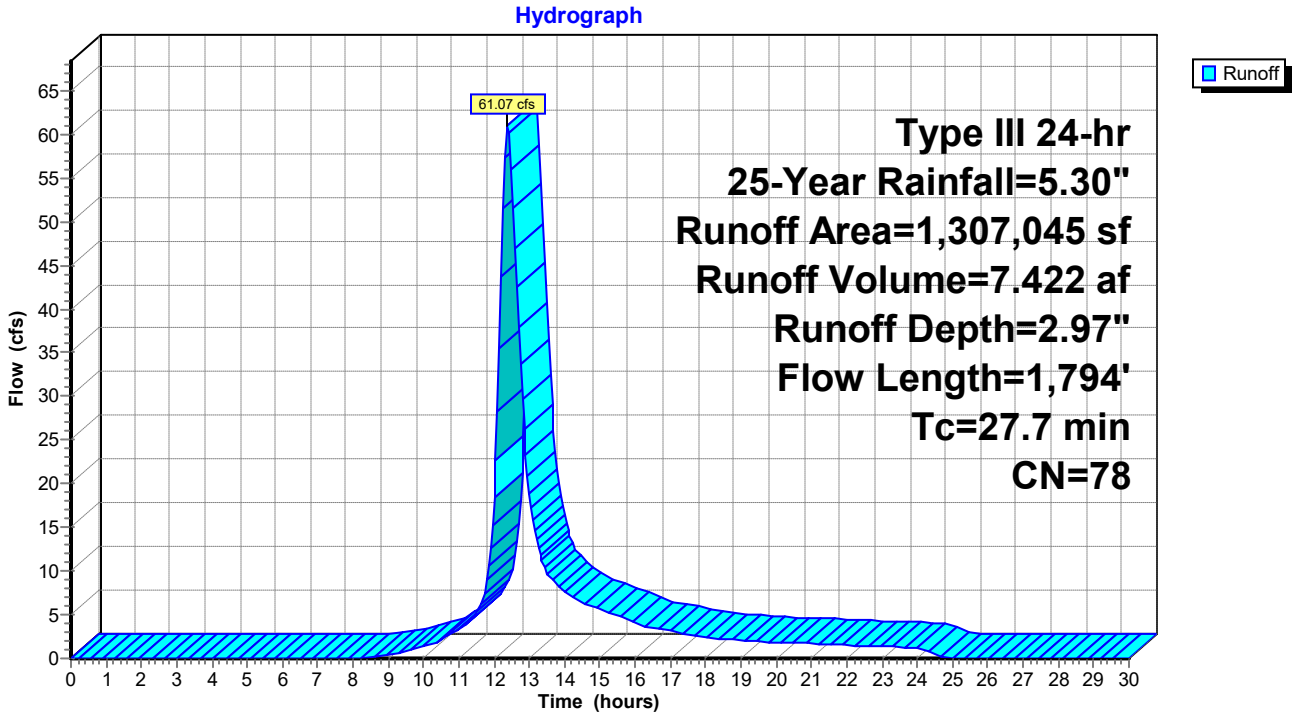
Runoff = 61.07 cfs @ 12.39 hrs, Volume= 7.422 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
53,517	39	>75% Grass cover, Good, HSG A
105,541	30	Brush, Good, HSG A
22,067	30	Woods, Good, HSG A
390,827	96	Gravel surface, HSG A
62,609	98	Paved parking, HSG A
49,340	61	>75% Grass cover, Good, HSG B
43,824	48	Brush, Good, HSG B
137,472	55	Woods, Good, HSG B
74,794	96	Gravel surface, HSG B
98,633	98	Paved parking, HSG B
686	80	>75% Grass cover, Good, HSG D
63,884	73	Brush, Good, HSG D
82,021	77	Woods, Good, HSG D
120,365	96	Gravel surface, HSG D
1,465	98	Paved parking, HSG D
1,307,045	78	Weighted Average
1,144,338		87.55% Pervious Area
162,707		12.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	25	0.1580	0.29		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	25	0.0200	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
23.0	1,573	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	15	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.7	156	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
27.7	1,794	Total			

Subcatchment E1: TO DP#1



Summary for Subcatchment E500: TO DRAINAGE DITCH

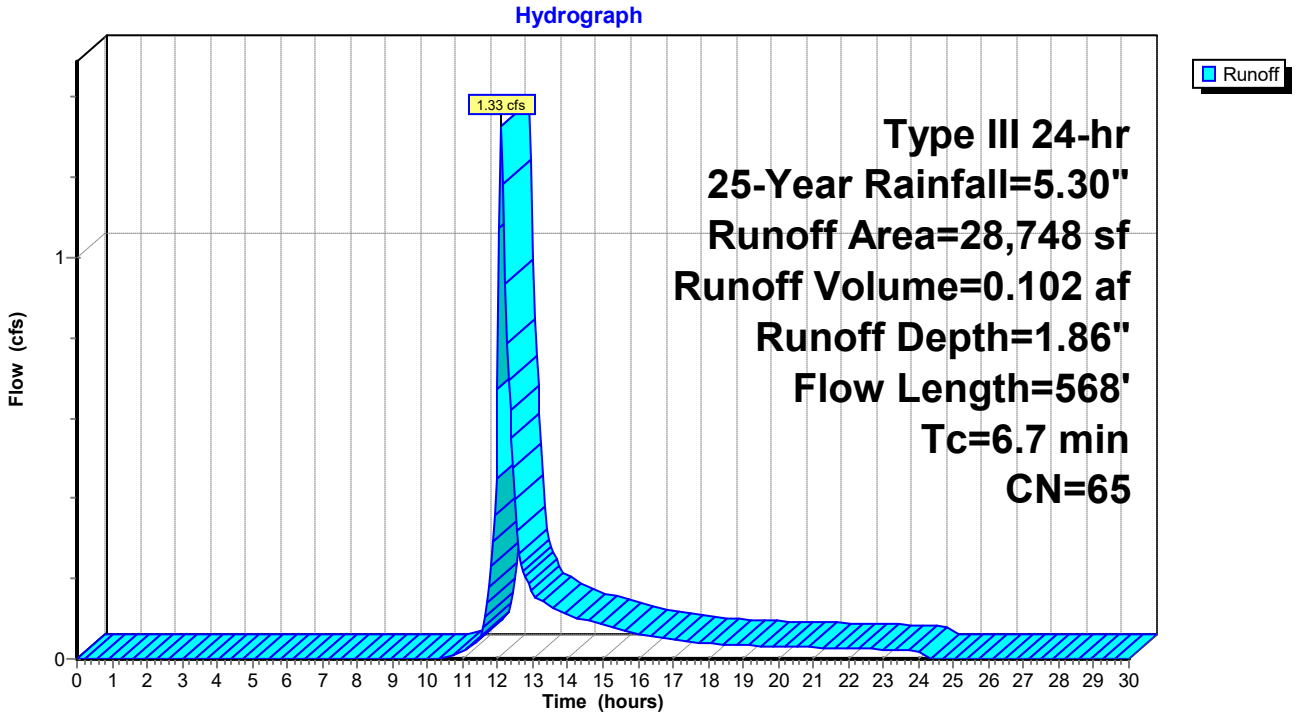
Runoff = 1.33 cfs @ 12.11 hrs, Volume= 0.102 af, Depth= 1.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
16,084	39	>75% Grass cover, Good, HSG A
12,664	98	Paved parking, HSG A
28,748	65	Weighted Average
16,084		55.95% Pervious Area
12,664		44.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
5.4	518	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	568	Total			

Subcatchment E500: TO DRAINAGE DITCH

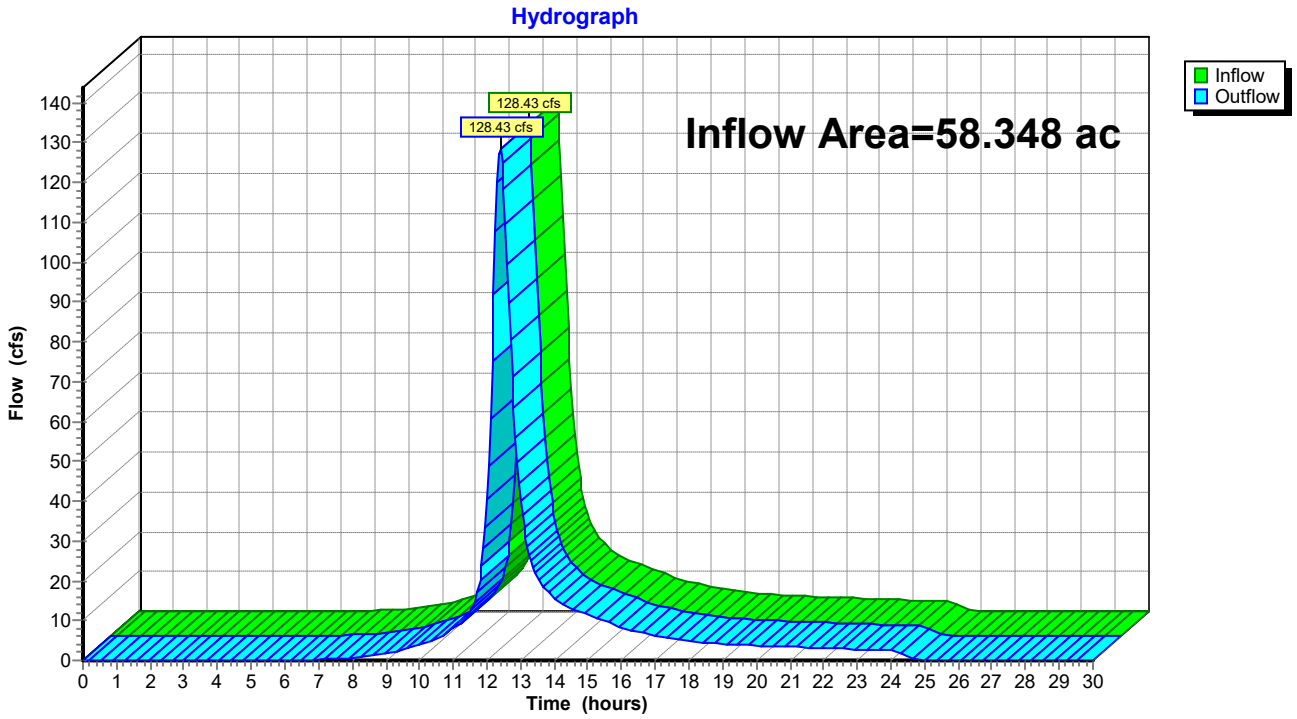


Summary for Reach DP#1: DP#1

Inflow Area = 58.348 ac, 6.40% Impervious, Inflow Depth = 3.25" for 25-Year event
Inflow = 128.43 cfs @ 12.39 hrs, Volume= 15.797 af
Outflow = 128.43 cfs @ 12.39 hrs, Volume= 15.797 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#1: DP#1

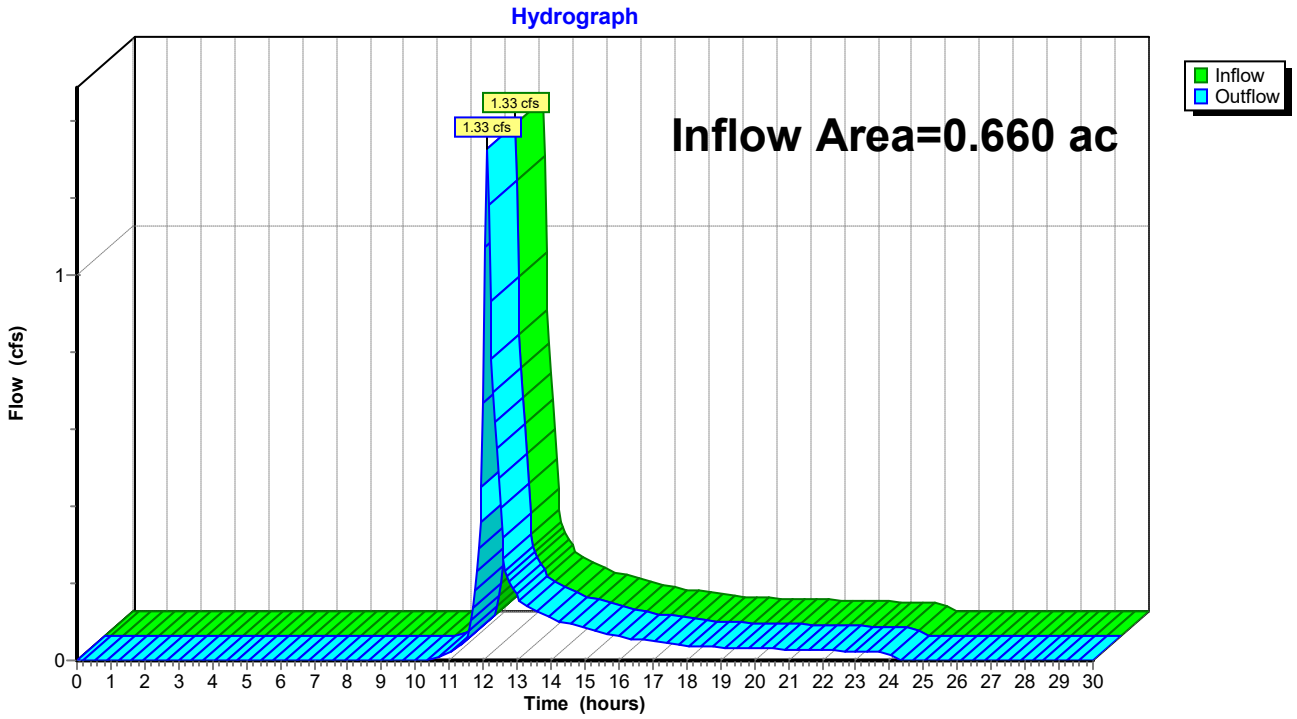


Summary for Reach DP#5: DITCH

Inflow Area = 0.660 ac, 44.05% Impervious, Inflow Depth = 1.86" for 25-Year event
Inflow = 1.33 cfs @ 12.11 hrs, Volume= 0.102 af
Outflow = 1.33 cfs @ 12.11 hrs, Volume= 0.102 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#5: DITCH

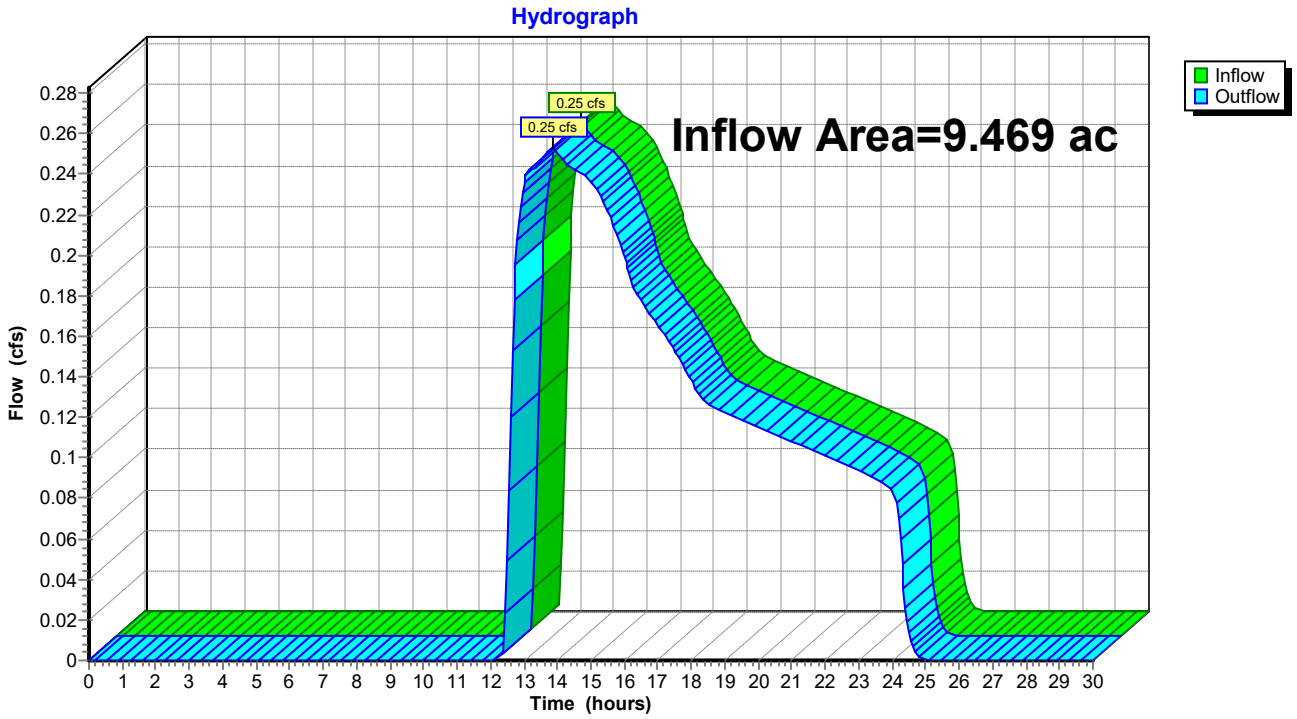


Summary for Reach R-200: DP#2

Inflow Area = 9.469 ac, 0.00% Impervious, Inflow Depth = 0.19" for 25-Year event
Inflow = 0.25 cfs @ 13.87 hrs, Volume= 0.150 af
Outflow = 0.25 cfs @ 13.87 hrs, Volume= 0.150 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-200: DP#2

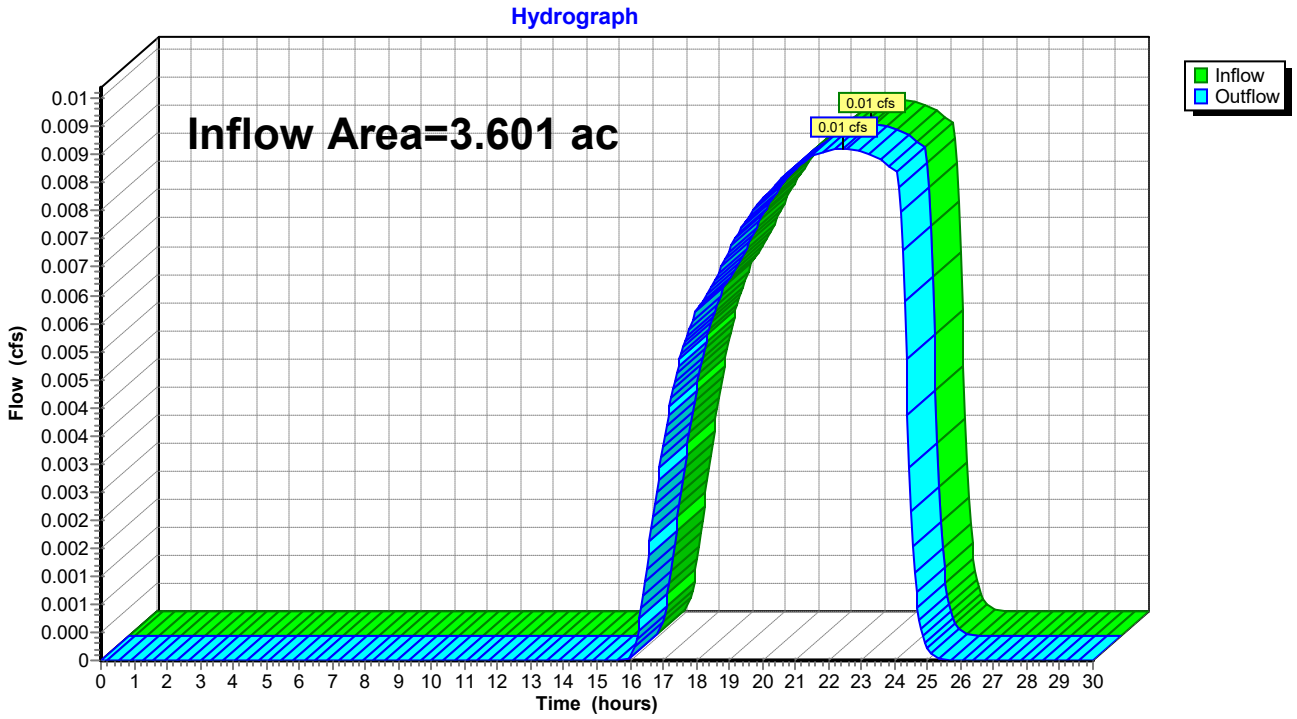


Summary for Reach R-300: DP#3

Inflow Area = 3.601 ac, 0.00% Impervious, Inflow Depth = 0.02" for 25-Year event
Inflow = 0.01 cfs @ 22.44 hrs, Volume= 0.005 af
Outflow = 0.01 cfs @ 22.44 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-300: DP#3

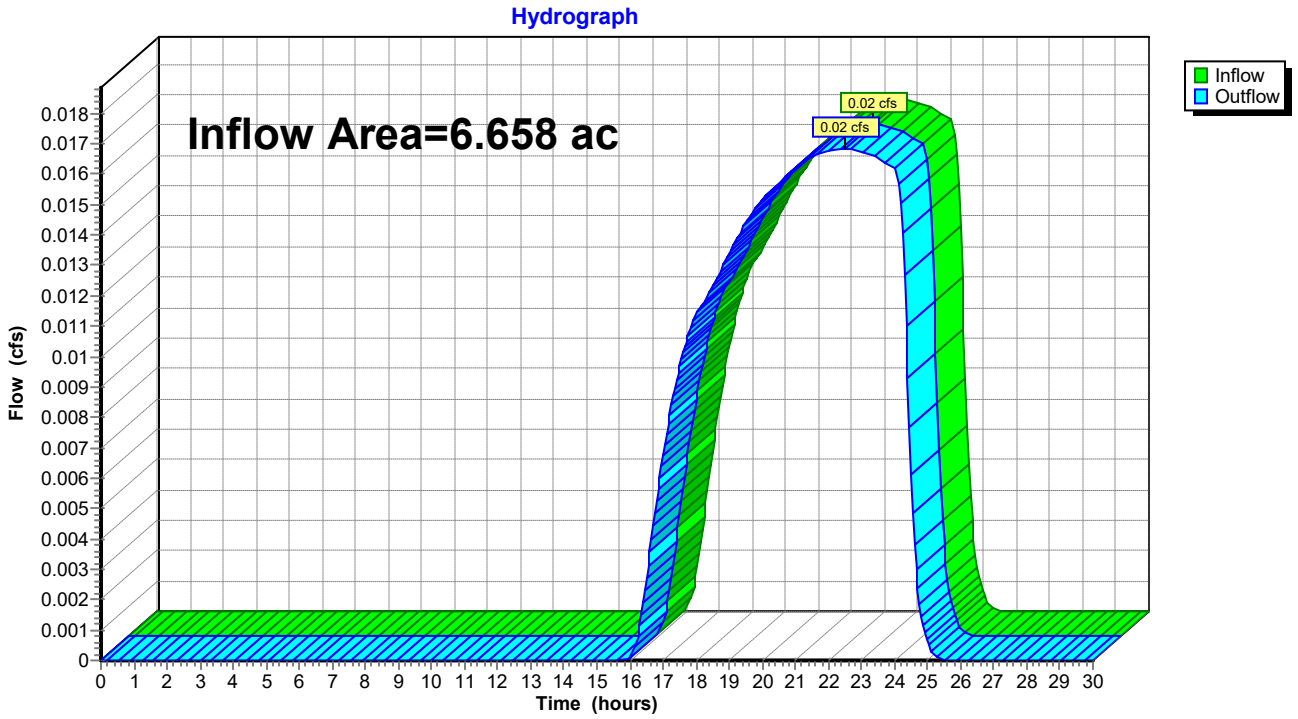


Summary for Reach R-400: DP#4

Inflow Area = 6.658 ac, 0.00% Impervious, Inflow Depth = 0.02" for 25-Year event
Inflow = 0.02 cfs @ 22.50 hrs, Volume= 0.009 af
Outflow = 0.02 cfs @ 22.50 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-400: DP#4



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E-100: E-100 Runoff Area=1,234,608 sf 0.00% Impervious Runoff Depth=4.10"
Flow Length=2,643' Tc=28.8 min CN=84 Runoff=77.64 cfs 9.691 af

Subcatchment E-200: E-200 Runoff Area=412,466 sf 0.00% Impervious Runoff Depth=0.32"
Flow Length=1,151' Tc=22.9 min CN=37 Runoff=0.68 cfs 0.252 af

Subcatchment E-300: E-300 Runoff Area=156,842 sf 0.00% Impervious Runoff Depth=0.06"
Flow Length=469' Tc=28.5 min CN=30 Runoff=0.03 cfs 0.019 af

Subcatchment E-400: E-400 Runoff Area=290,014 sf 0.00% Impervious Runoff Depth=0.06"
Flow Length=487' Tc=31.1 min CN=30 Runoff=0.05 cfs 0.034 af

Subcatchment E1: TO DP#1 Runoff Area=1,307,045 sf 12.45% Impervious Runoff Depth=3.49"
Flow Length=1,794' Tc=27.7 min CN=78 Runoff=71.80 cfs 8.728 af

Subcatchment E500: TO DRAINAGE DITCH Runoff Area=28,748 sf 44.05% Impervious Runoff Depth=2.28"
Flow Length=568' Tc=6.7 min CN=65 Runoff=1.66 cfs 0.125 af

Reach DP#1: DP#1 Inflow=149.43 cfs 18.419 af
Outflow=149.43 cfs 18.419 af

Reach DP#5: DITCH Inflow=1.66 cfs 0.125 af
Outflow=1.66 cfs 0.125 af

Reach R-200: DP#2 Inflow=0.68 cfs 0.252 af
Outflow=0.68 cfs 0.252 af

Reach R-300: DP#3 Inflow=0.03 cfs 0.019 af
Outflow=0.03 cfs 0.019 af

Reach R-400: DP#4 Inflow=0.05 cfs 0.034 af
Outflow=0.05 cfs 0.034 af

Total Runoff Area = 78.736 ac Runoff Volume = 18.849 af Average Runoff Depth = 2.87"
94.89% Pervious = 74.710 ac 5.11% Impervious = 4.026 ac

Summary for Subcatchment E-100: E-100

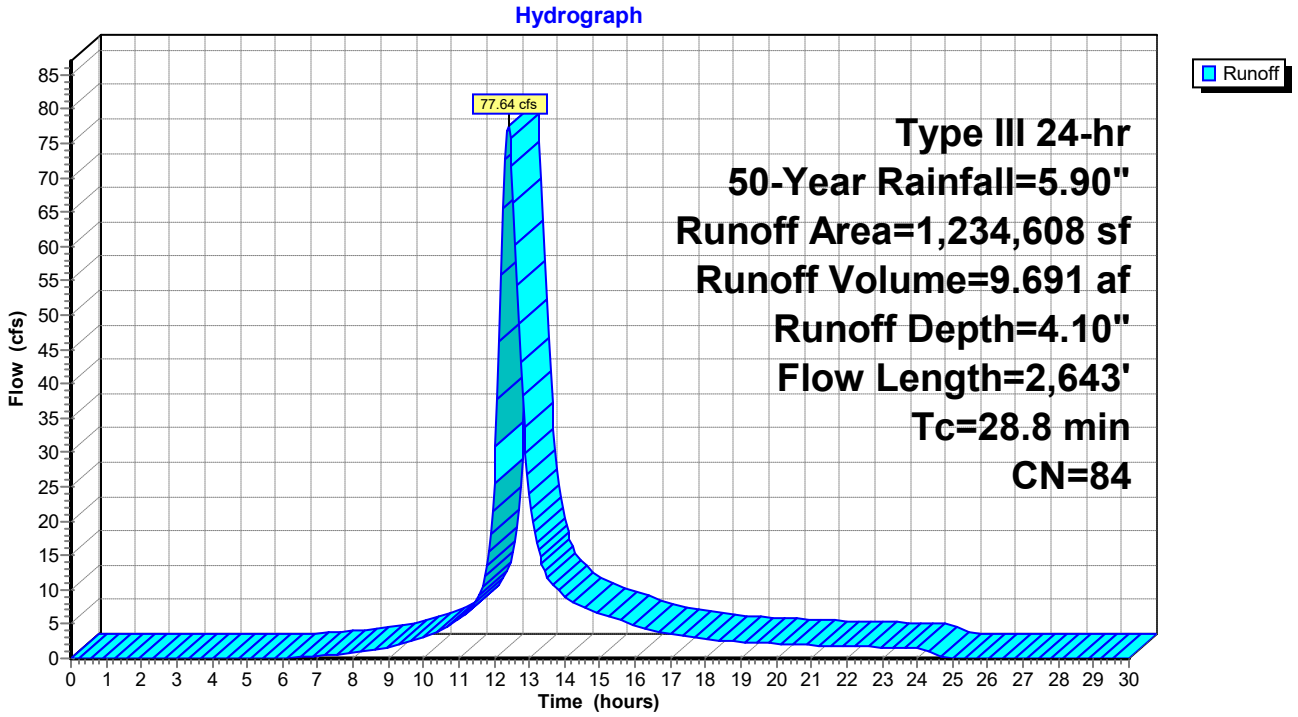
Runoff = 77.64 cfs @ 12.39 hrs, Volume= 9.691 af, Depth= 4.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
6,184	30	Brush, Good, HSG A
17,722	48	Brush, Good, HSG B
20,230	65	Brush, Good, HSG C
13,607	73	Brush, Good, HSG D
66,854	30	Woods, Good, HSG A
63,360	55	Woods, Good, HSG B
176,119	70	Woods, Good, HSG C
43,006	77	Woods, Good, HSG D
14,769	79	Pasture/grassland/range, Fair, HSG C
37,593	96	Gravel surface, HSG A
511,618	96	Gravel surface, HSG B
257,166	96	Gravel surface, HSG C
6,380	96	Gravel surface, HSG D
1,234,608	84	Weighted Average
1,234,608		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	53	0.0470	0.23		**Sheet Flow,** Range n= 0.130 P2= 3.00"
2.1	194	0.0980	1.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.7	220	0.1600	1.00		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
1.4	120	0.3300	1.44		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.5	35	0.2300	1.20		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.4	59	0.1350	2.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	159	0.1250	2.47		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	278	0.0540	3.74		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	681	0.0110	1.69		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.6	531	0.0140	1.90		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.8	273	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.4	40	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.8	2,643	Total			

Subcatchment E-100: E-100



Summary for Subcatchment E-200: E-200

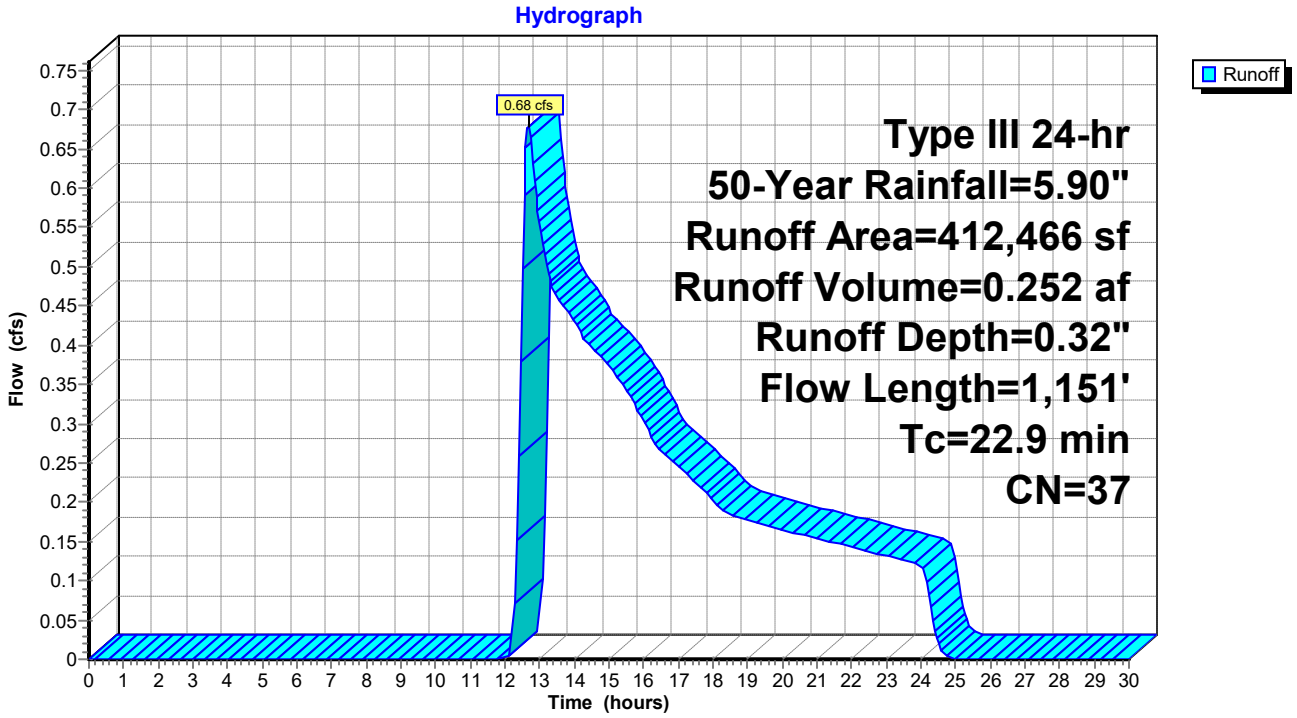
Runoff = 0.68 cfs @ 12.67 hrs, Volume= 0.252 af, Depth= 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
10,392	30	Brush, Good, HSG A
5,683	48	Brush, Good, HSG B
343,066	30	Woods, Good, HSG A
22,858	55	Woods, Good, HSG B
21,950	96	Gravel surface, HSG A
8,517	96	Gravel surface, HSG B
412,466	37	Weighted Average
412,466		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	127	0.0280	1.60		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
12.0	410	0.0130	0.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.6	614	0.0230	1.06		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
22.9	1,151	Total			

Subcatchment E-200: E-200



Summary for Subcatchment E-300: E-300

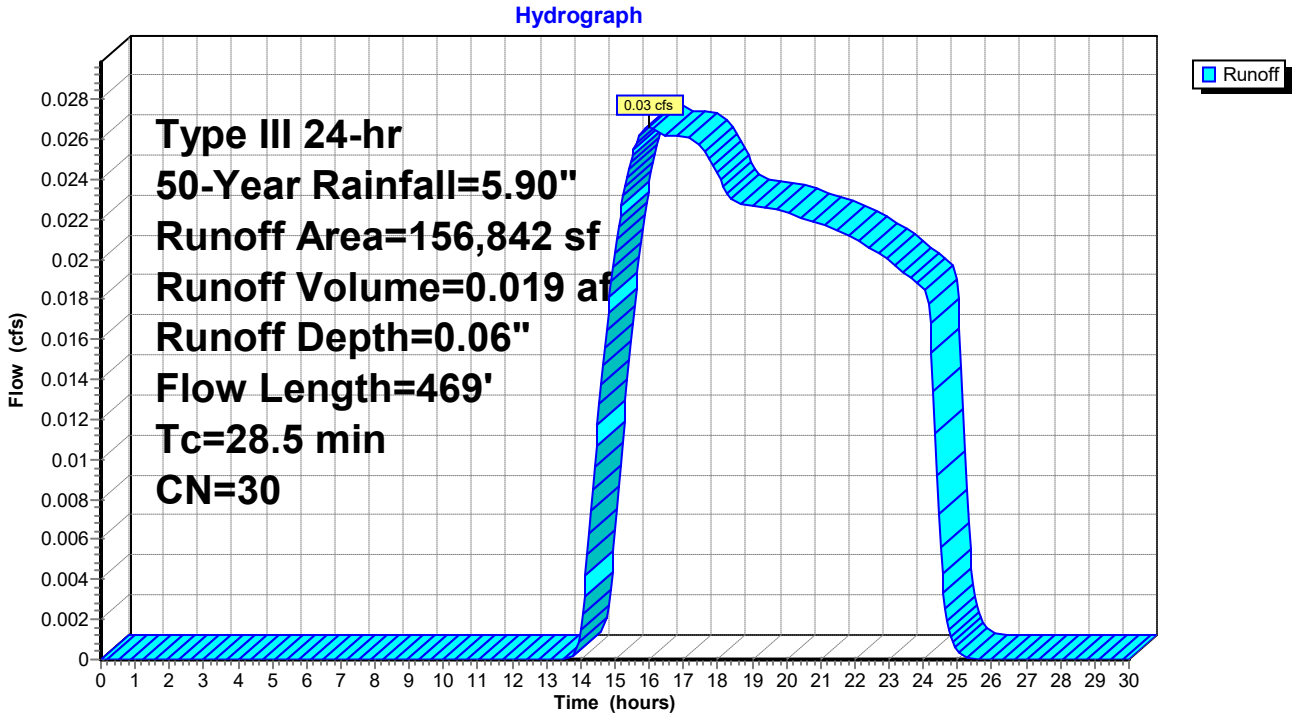
Runoff = 0.03 cfs @ 16.00 hrs, Volume= 0.019 af, Depth= 0.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
156,842	30	Woods, Good, HSG A
156,842		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	76	0.0260	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
12.5	393	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.5	469	Total			

Subcatchment E-300: E-300



Summary for Subcatchment E-400: E-400

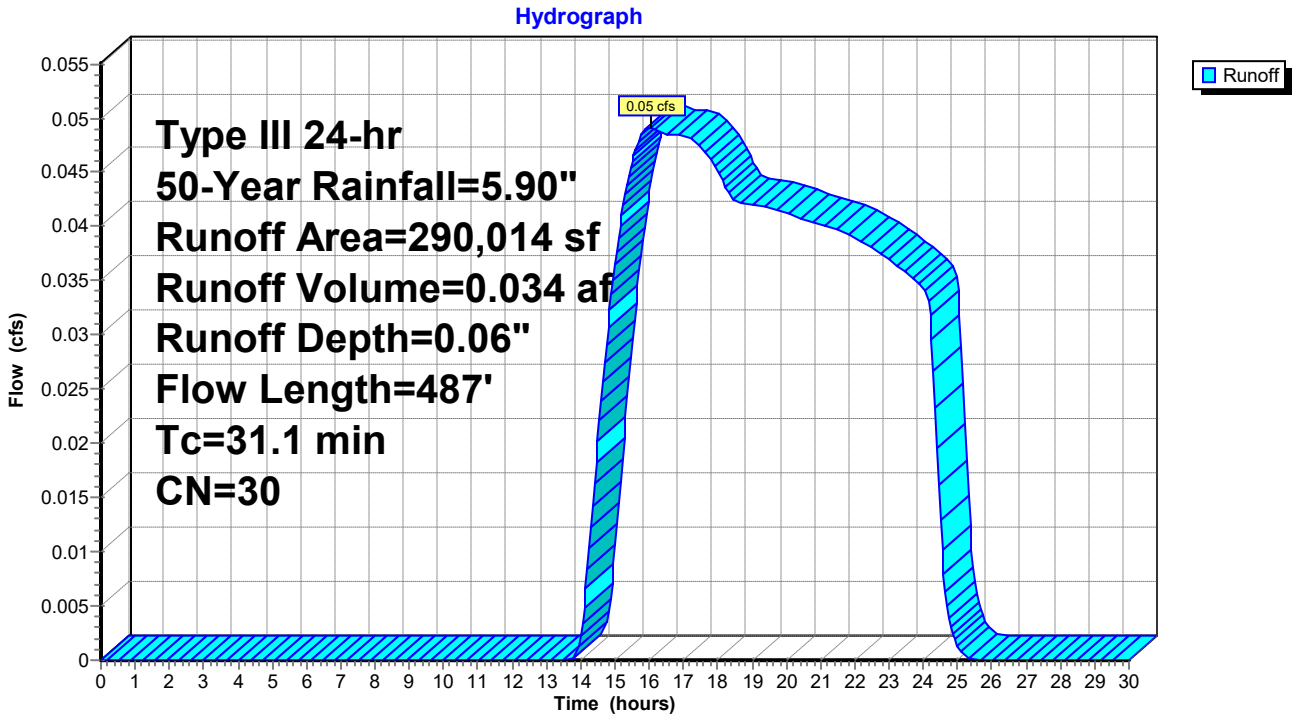
Runoff = 0.05 cfs @ 16.03 hrs, Volume= 0.034 af, Depth= 0.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
290,014	30	Woods, Good, HSG A
290,014		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	75	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
5.8	275	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	56	0.1780	1.05		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.1	22	0.4500	3.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	59	0.1200	0.87		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
31.1	487	Total			

Subcatchment E-400: E-400



Summary for Subcatchment E1: TO DP#1

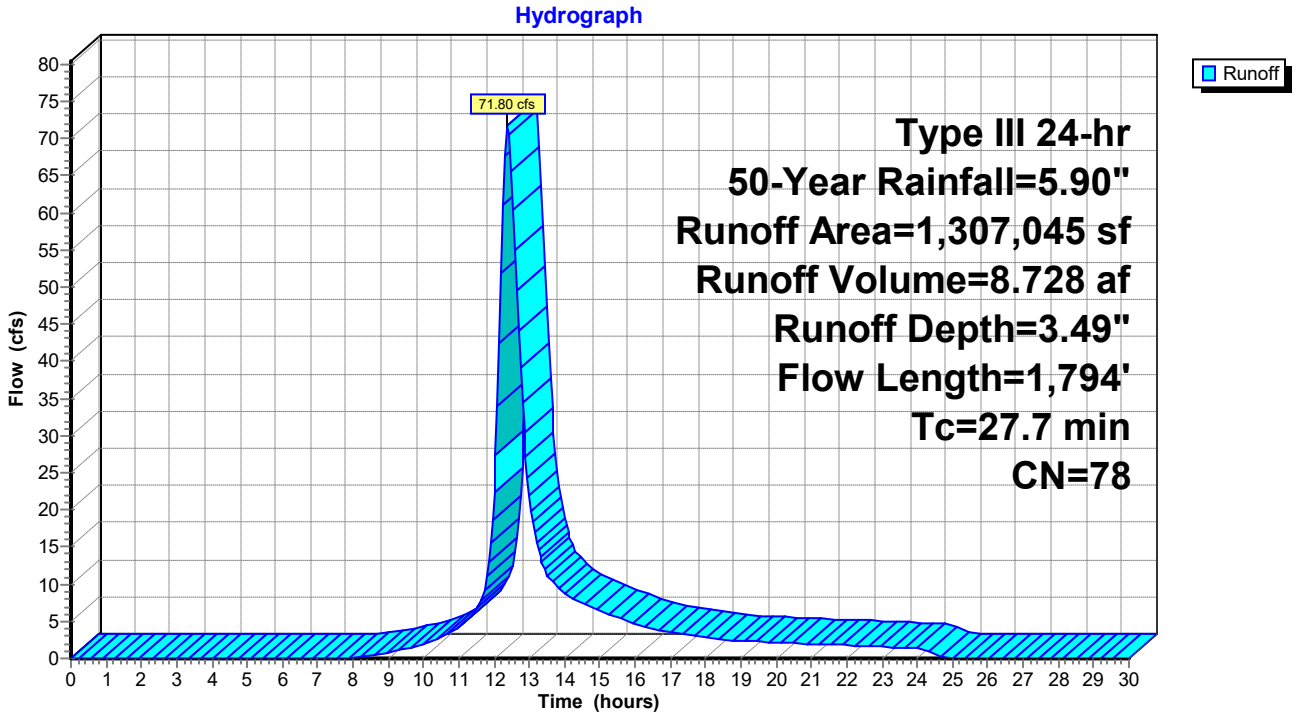
Runoff = 71.80 cfs @ 12.38 hrs, Volume= 8.728 af, Depth= 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
53,517	39	>75% Grass cover, Good, HSG A
105,541	30	Brush, Good, HSG A
22,067	30	Woods, Good, HSG A
390,827	96	Gravel surface, HSG A
62,609	98	Paved parking, HSG A
49,340	61	>75% Grass cover, Good, HSG B
43,824	48	Brush, Good, HSG B
137,472	55	Woods, Good, HSG B
74,794	96	Gravel surface, HSG B
98,633	98	Paved parking, HSG B
686	80	>75% Grass cover, Good, HSG D
63,884	73	Brush, Good, HSG D
82,021	77	Woods, Good, HSG D
120,365	96	Gravel surface, HSG D
1,465	98	Paved parking, HSG D
1,307,045	78	Weighted Average
1,144,338		87.55% Pervious Area
162,707		12.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	25	0.1580	0.29		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	25	0.0200	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
23.0	1,573	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	15	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.7	156	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
27.7	1,794	Total			

Subcatchment E1: TO DP#1



Summary for Subcatchment E500: TO DRAINAGE DITCH

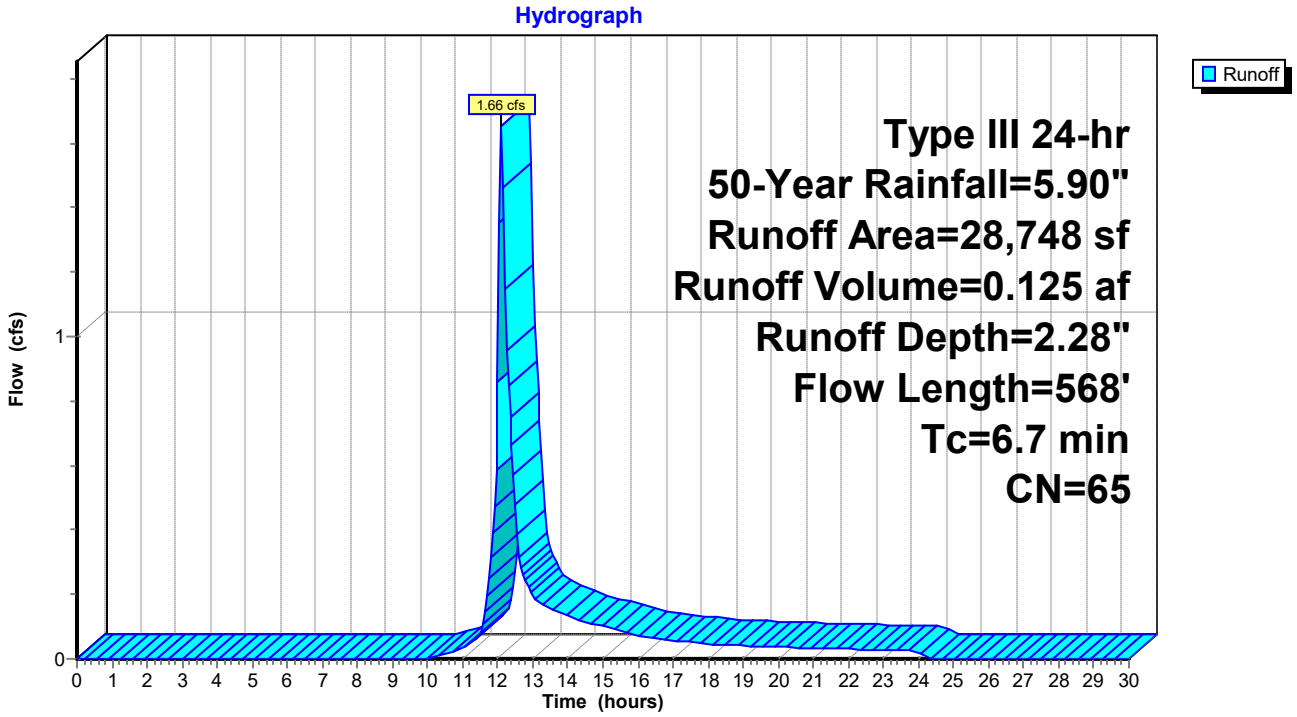
Runoff = 1.66 cfs @ 12.11 hrs, Volume= 0.125 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
16,084	39	>75% Grass cover, Good, HSG A
12,664	98	Paved parking, HSG A
28,748	65	Weighted Average
16,084		55.95% Pervious Area
12,664		44.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
5.4	518	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	568	Total			

Subcatchment E500: TO DRAINAGE DITCH

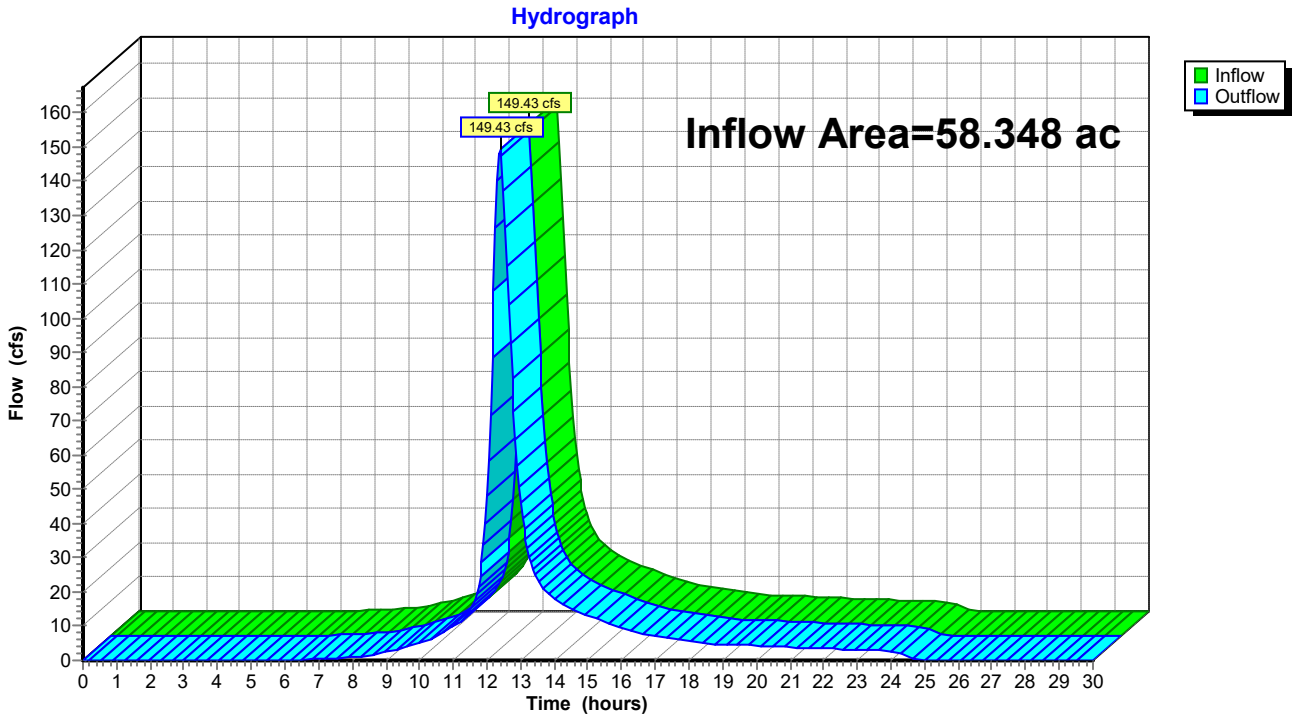


Summary for Reach DP#1: DP#1

Inflow Area = 58.348 ac, 6.40% Impervious, Inflow Depth = 3.79" for 50-Year event
Inflow = 149.43 cfs @ 12.39 hrs, Volume= 18.419 af
Outflow = 149.43 cfs @ 12.39 hrs, Volume= 18.419 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#1: DP#1

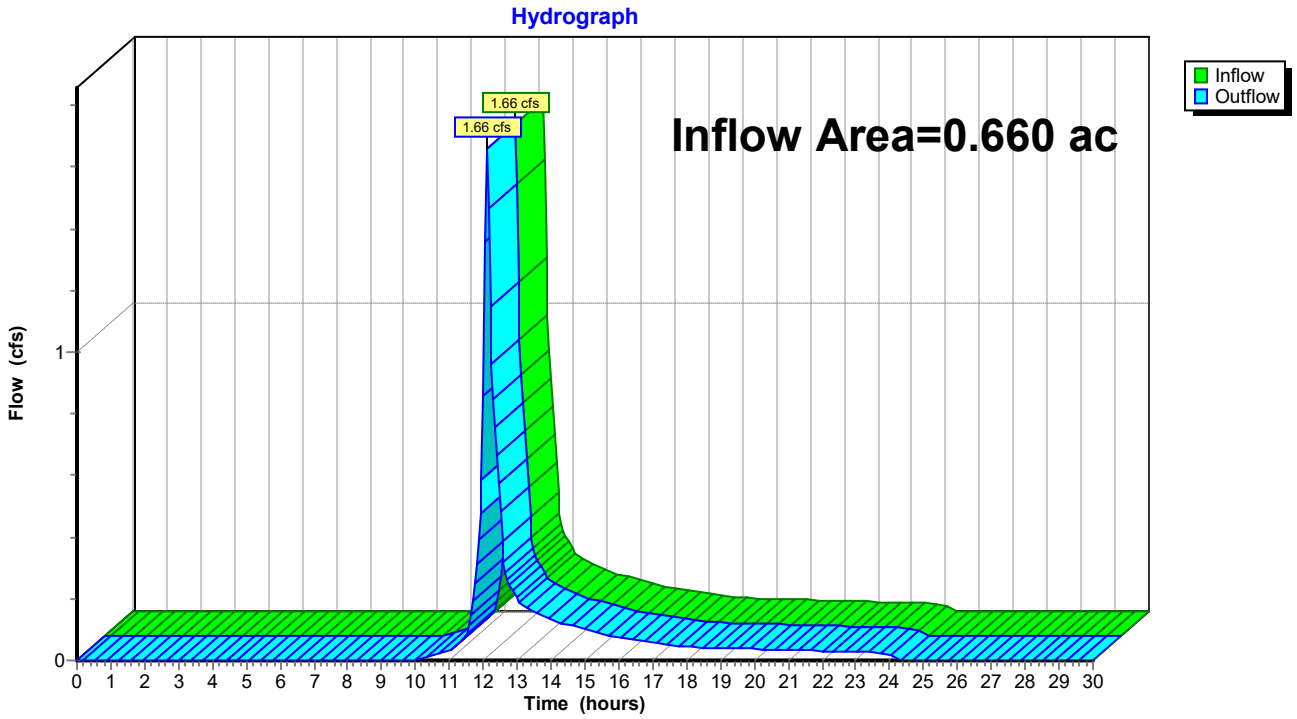


Summary for Reach DP#5: DITCH

Inflow Area = 0.660 ac, 44.05% Impervious, Inflow Depth = 2.28" for 50-Year event
Inflow = 1.66 cfs @ 12.11 hrs, Volume= 0.125 af
Outflow = 1.66 cfs @ 12.11 hrs, Volume= 0.125 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#5: DITCH

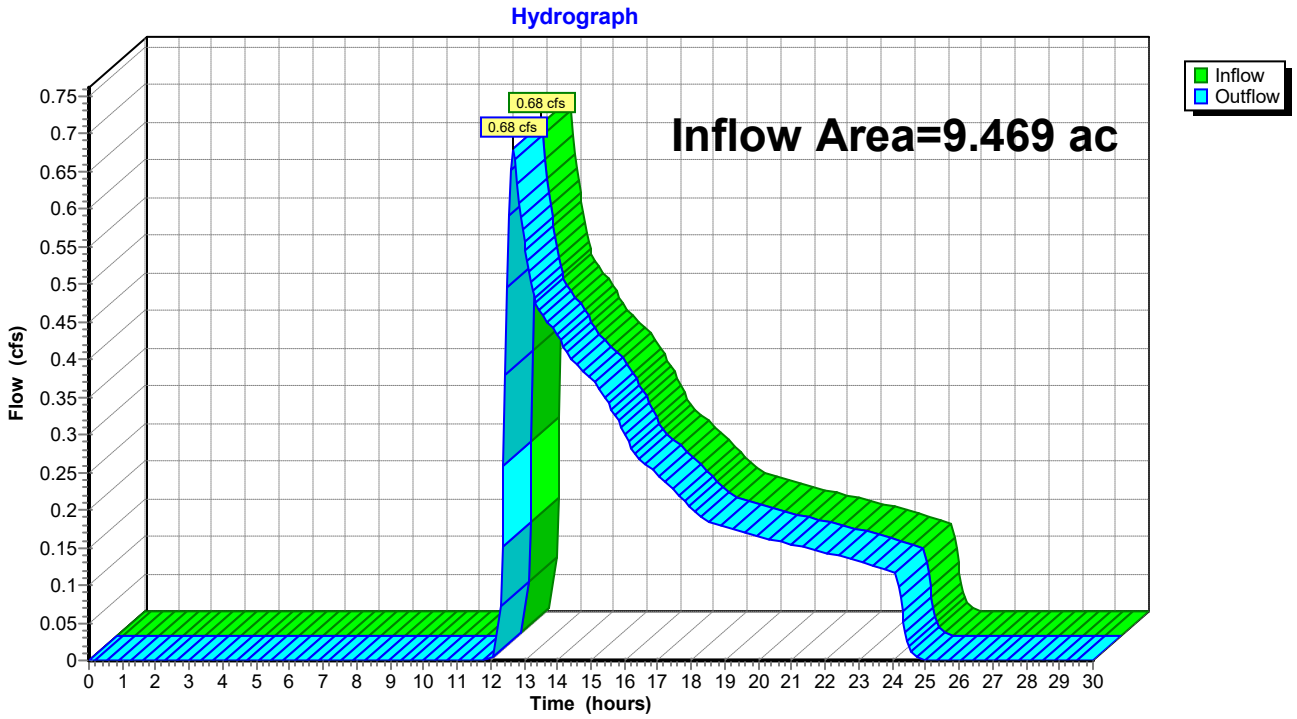


Summary for Reach R-200: DP#2

Inflow Area = 9.469 ac, 0.00% Impervious, Inflow Depth = 0.32" for 50-Year event
Inflow = 0.68 cfs @ 12.67 hrs, Volume= 0.252 af
Outflow = 0.68 cfs @ 12.67 hrs, Volume= 0.252 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-200: DP#2

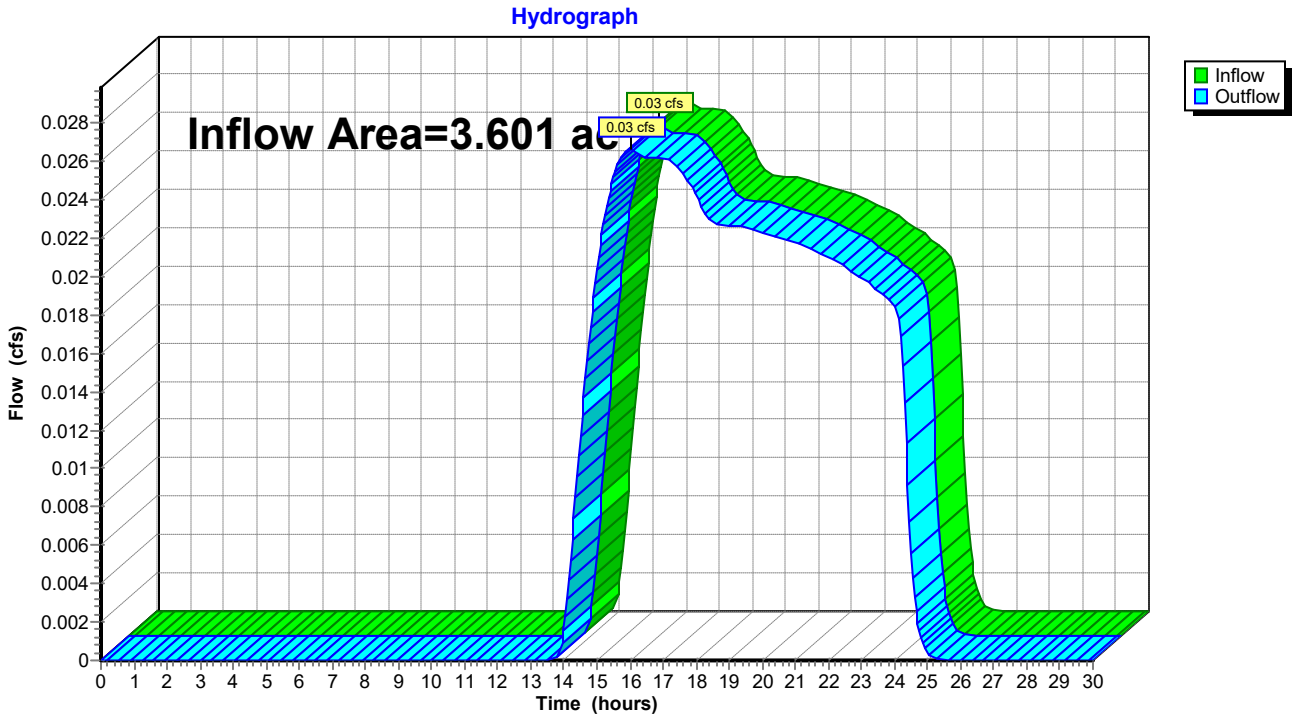


Summary for Reach R-300: DP#3

Inflow Area = 3.601 ac, 0.00% Impervious, Inflow Depth = 0.06" for 50-Year event
Inflow = 0.03 cfs @ 16.00 hrs, Volume= 0.019 af
Outflow = 0.03 cfs @ 16.00 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-300: DP#3

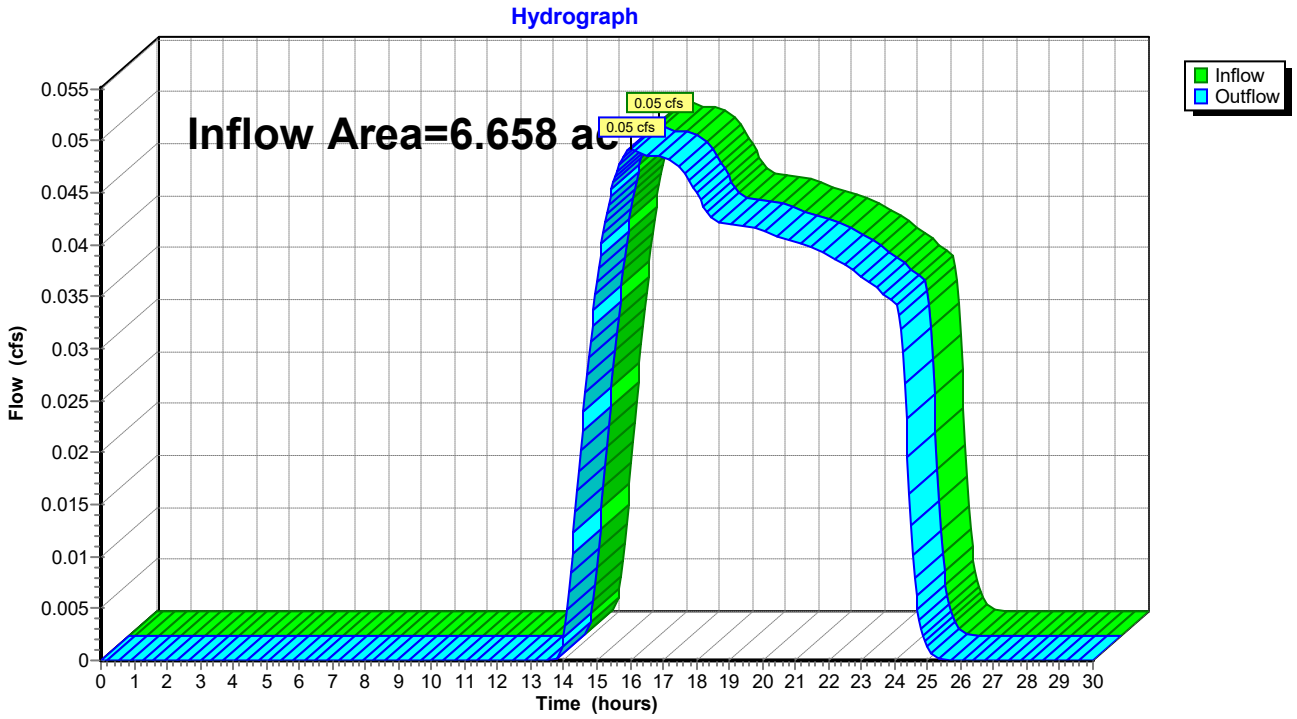


Summary for Reach R-400: DP#4

Inflow Area = 6.658 ac, 0.00% Impervious, Inflow Depth = 0.06" for 50-Year event
Inflow = 0.05 cfs @ 16.03 hrs, Volume= 0.034 af
Outflow = 0.05 cfs @ 16.03 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-400: DP#4



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment E-100: E-100 Runoff Area=1,234,608 sf 0.00% Impervious Runoff Depth=4.67"
Flow Length=2,643' Tc=28.8 min CN=84 Runoff=87.94 cfs 11.022 af

Subcatchment E-200: E-200 Runoff Area=412,466 sf 0.00% Impervious Runoff Depth=0.48"
Flow Length=1,151' Tc=22.9 min CN=37 Runoff=1.41 cfs 0.376 af

Subcatchment E-300: E-300 Runoff Area=156,842 sf 0.00% Impervious Runoff Depth=0.13"
Flow Length=469' Tc=28.5 min CN=30 Runoff=0.06 cfs 0.040 af

Subcatchment E-400: E-400 Runoff Area=290,014 sf 0.00% Impervious Runoff Depth=0.13"
Flow Length=487' Tc=31.1 min CN=30 Runoff=0.12 cfs 0.074 af

Subcatchment E1: TO DP#1 Runoff Area=1,307,045 sf 12.45% Impervious Runoff Depth=4.02"
Flow Length=1,794' Tc=27.7 min CN=78 Runoff=82.66 cfs 10.062 af

Subcatchment E500: TO DRAINAGE DITCH Runoff Area=28,748 sf 44.05% Impervious Runoff Depth=2.72"
Flow Length=568' Tc=6.7 min CN=65 Runoff=2.00 cfs 0.150 af

Reach DP#1: DP#1 Inflow=170.58 cfs 21.083 af
Outflow=170.58 cfs 21.083 af

Reach DP#5: DITCH Inflow=2.00 cfs 0.150 af
Outflow=2.00 cfs 0.150 af

Reach R-200: DP#2 Inflow=1.41 cfs 0.376 af
Outflow=1.41 cfs 0.376 af

Reach R-300: DP#3 Inflow=0.06 cfs 0.040 af
Outflow=0.06 cfs 0.040 af

Reach R-400: DP#4 Inflow=0.12 cfs 0.074 af
Outflow=0.12 cfs 0.074 af

Total Runoff Area = 78.736 ac Runoff Volume = 21.723 af Average Runoff Depth = 3.31"
94.89% Pervious = 74.710 ac 5.11% Impervious = 4.026 ac

Summary for Subcatchment E-100: E-100

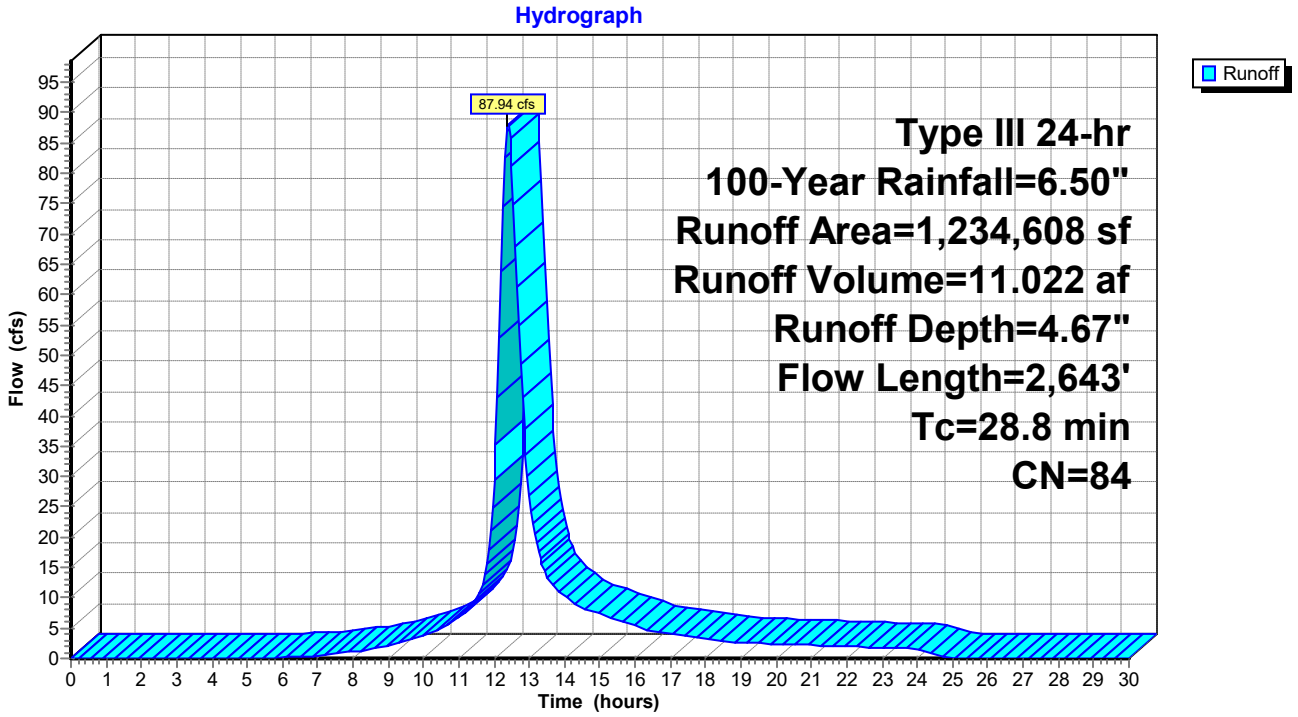
Runoff = 87.94 cfs @ 12.39 hrs, Volume= 11.022 af, Depth= 4.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
6,184	30	Brush, Good, HSG A
17,722	48	Brush, Good, HSG B
20,230	65	Brush, Good, HSG C
13,607	73	Brush, Good, HSG D
66,854	30	Woods, Good, HSG A
63,360	55	Woods, Good, HSG B
176,119	70	Woods, Good, HSG C
43,006	77	Woods, Good, HSG D
14,769	79	Pasture/grassland/range, Fair, HSG C
37,593	96	Gravel surface, HSG A
511,618	96	Gravel surface, HSG B
257,166	96	Gravel surface, HSG C
6,380	96	Gravel surface, HSG D
1,234,608	84	Weighted Average
1,234,608		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	53	0.0470	0.23		**Sheet Flow,** Range n= 0.130 P2= 3.00"
2.1	194	0.0980	1.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.7	220	0.1600	1.00		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
1.4	120	0.3300	1.44		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.5	35	0.2300	1.20		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.4	59	0.1350	2.57		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	159	0.1250	2.47		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	278	0.0540	3.74		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	681	0.0110	1.69		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.6	531	0.0140	1.90		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.8	273	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.4	40	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.8	2,643	Total			

Subcatchment E-100: E-100



Summary for Subcatchment E-200: E-200

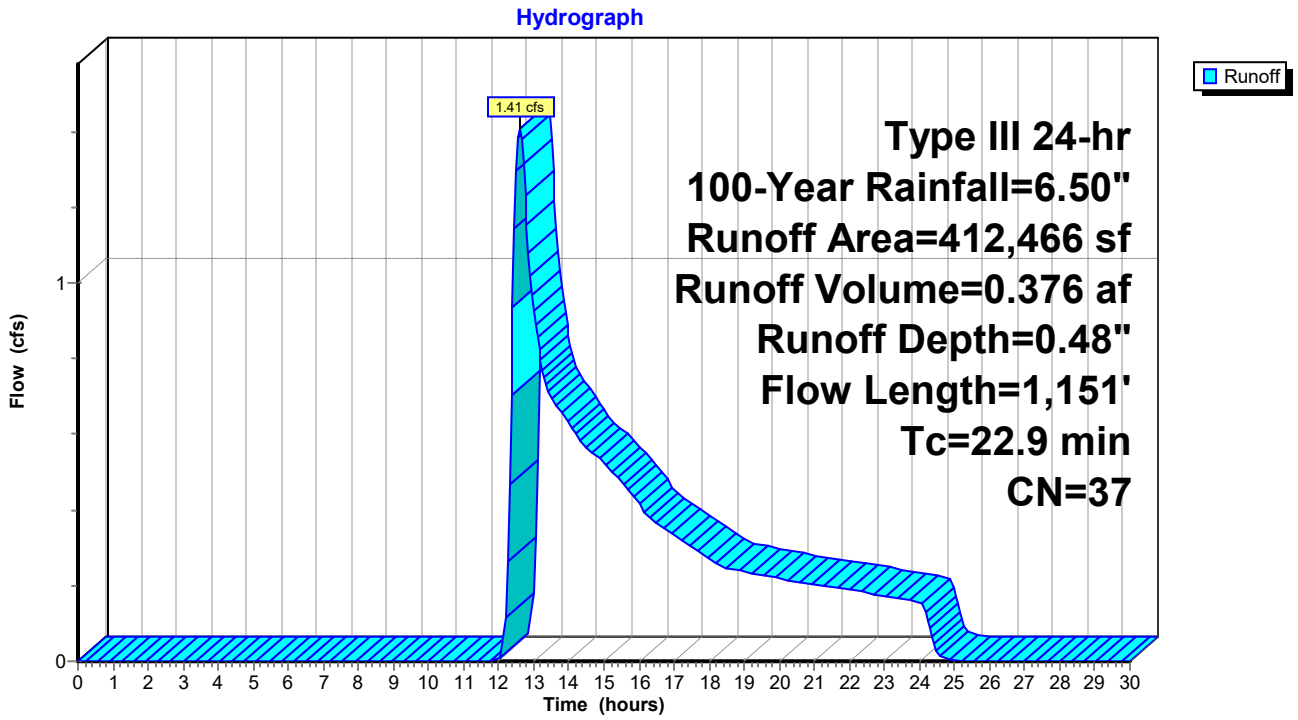
Runoff = 1.41 cfs @ 12.60 hrs, Volume= 0.376 af, Depth= 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
10,392	30	Brush, Good, HSG A
5,683	48	Brush, Good, HSG B
343,066	30	Woods, Good, HSG A
22,858	55	Woods, Good, HSG B
21,950	96	Gravel surface, HSG A
8,517	96	Gravel surface, HSG B
412,466	37	Weighted Average
412,466		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	127	0.0280	1.60		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
12.0	410	0.0130	0.57		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
9.6	614	0.0230	1.06		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
22.9	1,151	Total			

Subcatchment E-200: E-200



Summary for Subcatchment E-300: E-300

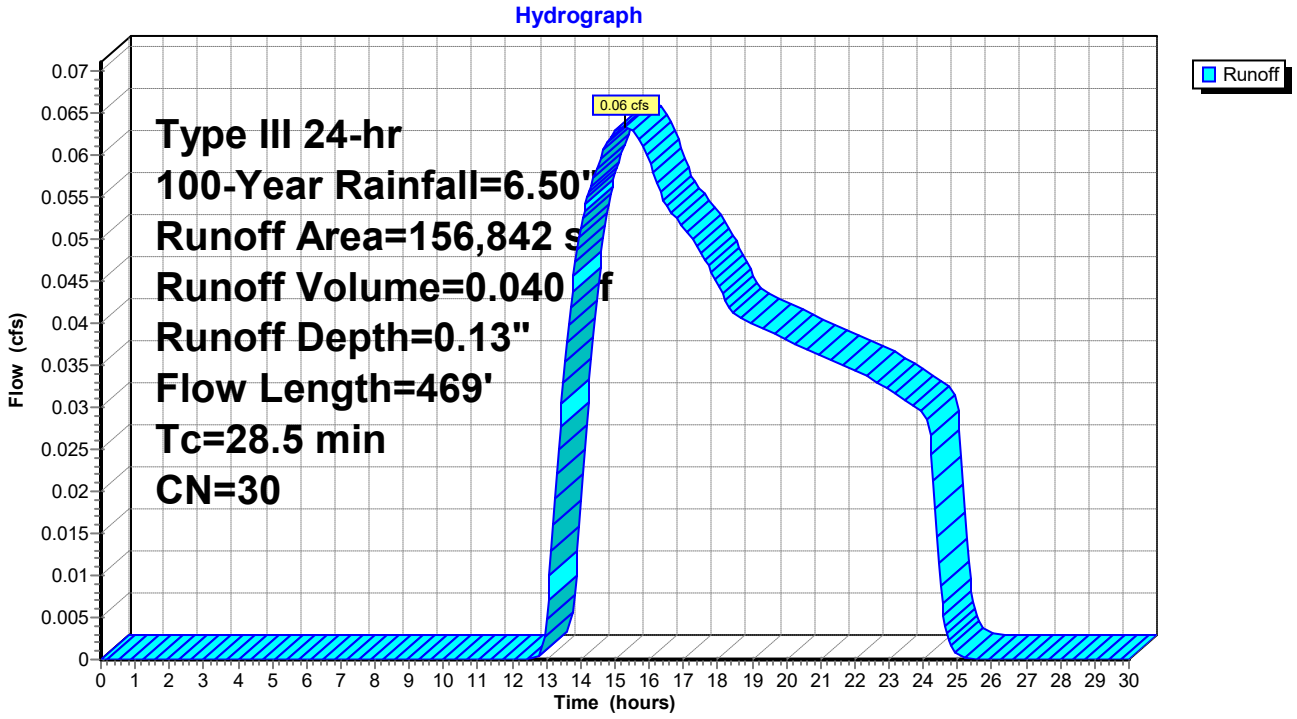
Runoff = 0.06 cfs @ 15.28 hrs, Volume= 0.040 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
156,842	30	Woods, Good, HSG A
156,842		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	76	0.0260	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
12.5	393	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
28.5	469	Total			

Subcatchment E-300: E-300



Summary for Subcatchment E-400: E-400

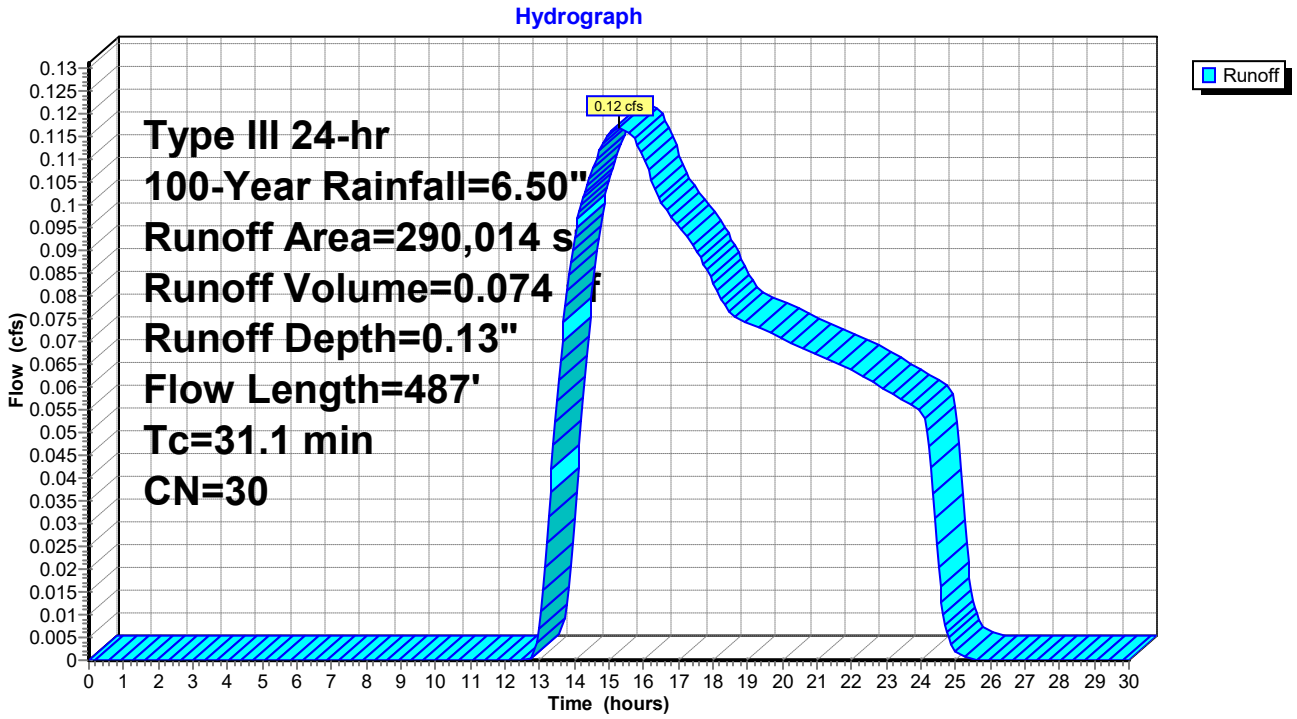
Runoff = 0.12 cfs @ 15.29 hrs, Volume= 0.074 af, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
290,014	30	Woods, Good, HSG A
290,014		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	75	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
5.8	275	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	56	0.1780	1.05		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.1	22	0.4500	3.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	59	0.1200	0.87		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
31.1	487	Total			

Subcatchment E-400: E-400



Summary for Subcatchment E1: TO DP#1

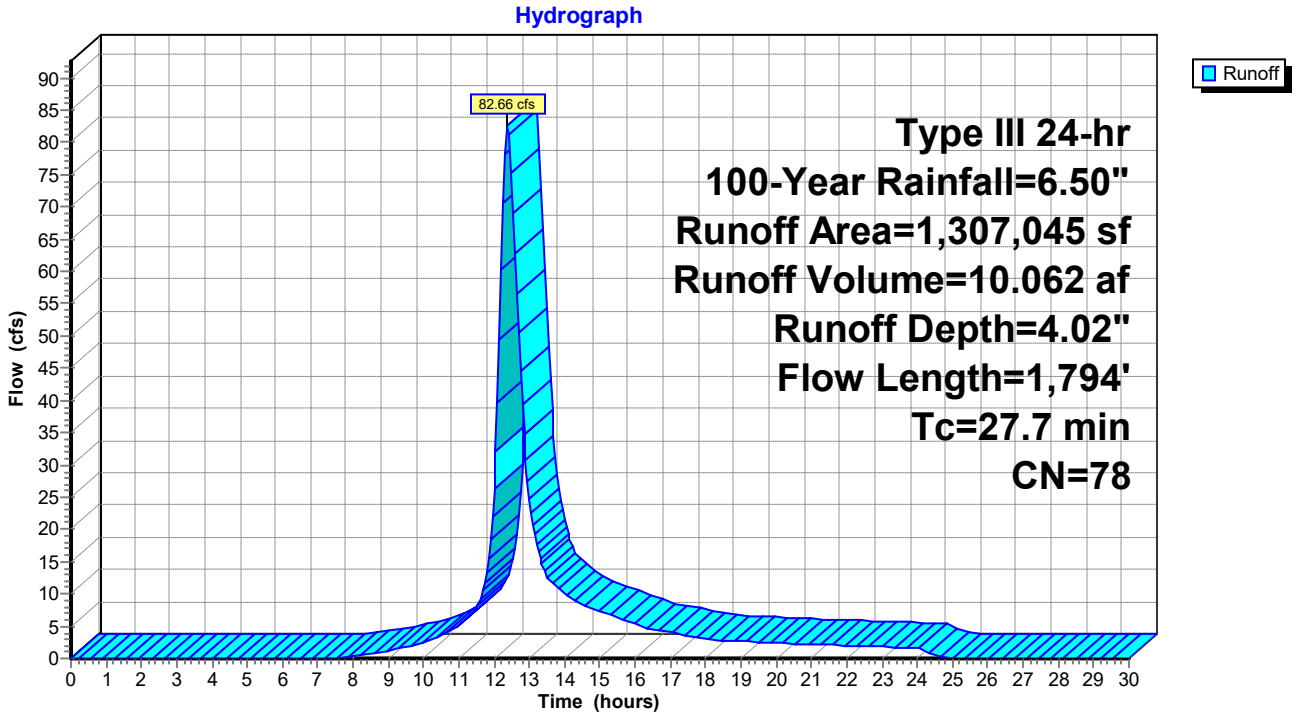
Runoff = 82.66 cfs @ 12.38 hrs, Volume= 10.062 af, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
53,517	39	>75% Grass cover, Good, HSG A
105,541	30	Brush, Good, HSG A
22,067	30	Woods, Good, HSG A
390,827	96	Gravel surface, HSG A
62,609	98	Paved parking, HSG A
49,340	61	>75% Grass cover, Good, HSG B
43,824	48	Brush, Good, HSG B
137,472	55	Woods, Good, HSG B
74,794	96	Gravel surface, HSG B
98,633	98	Paved parking, HSG B
686	80	>75% Grass cover, Good, HSG D
63,884	73	Brush, Good, HSG D
82,021	77	Woods, Good, HSG D
120,365	96	Gravel surface, HSG D
1,465	98	Paved parking, HSG D
1,307,045	78	Weighted Average
1,144,338		87.55% Pervious Area
162,707		12.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	25	0.1580	0.29		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	25	0.0200	1.01		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
23.0	1,573	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	15	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.7	156	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
27.7	1,794	Total			

Subcatchment E1: TO DP#1



Summary for Subcatchment E500: TO DRAINAGE DITCH

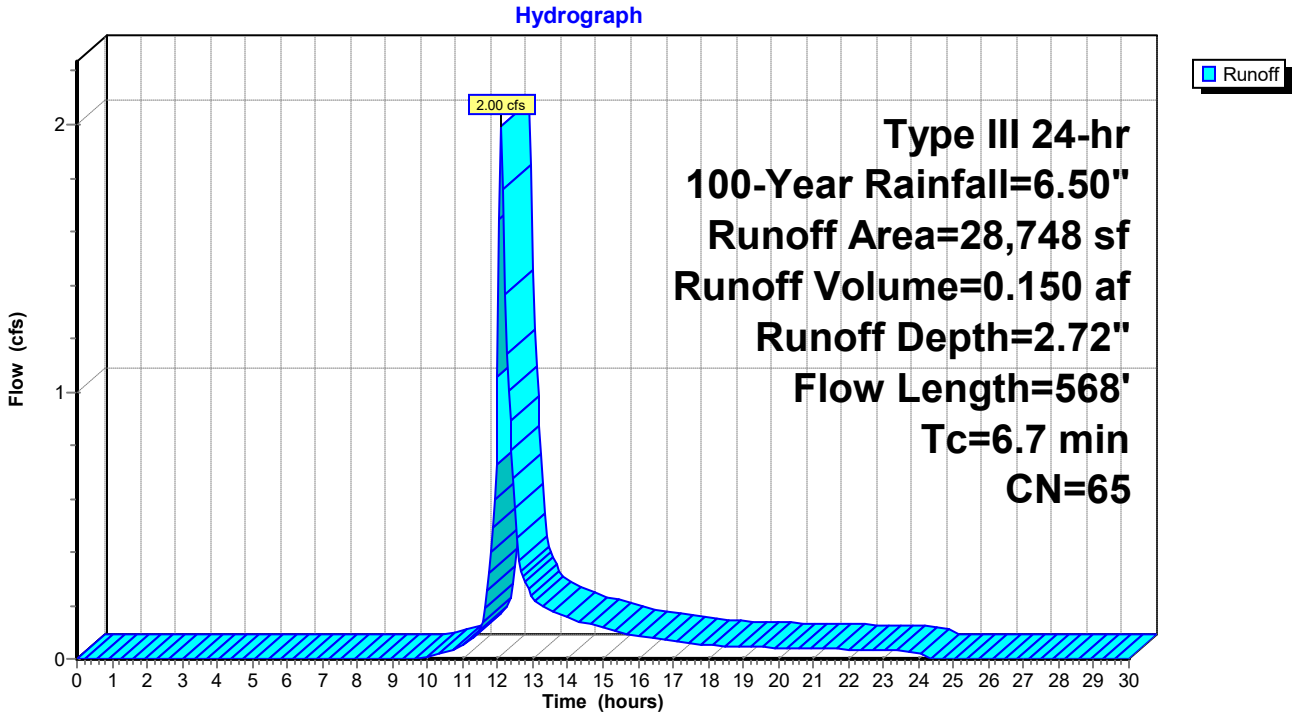
Runoff = 2.00 cfs @ 12.10 hrs, Volume= 0.150 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
16,084	39	>75% Grass cover, Good, HSG A
12,664	98	Paved parking, HSG A
28,748	65	Weighted Average
16,084		55.95% Pervious Area
12,664		44.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
5.4	518	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	568	Total			

Subcatchment E500: TO DRAINAGE DITCH

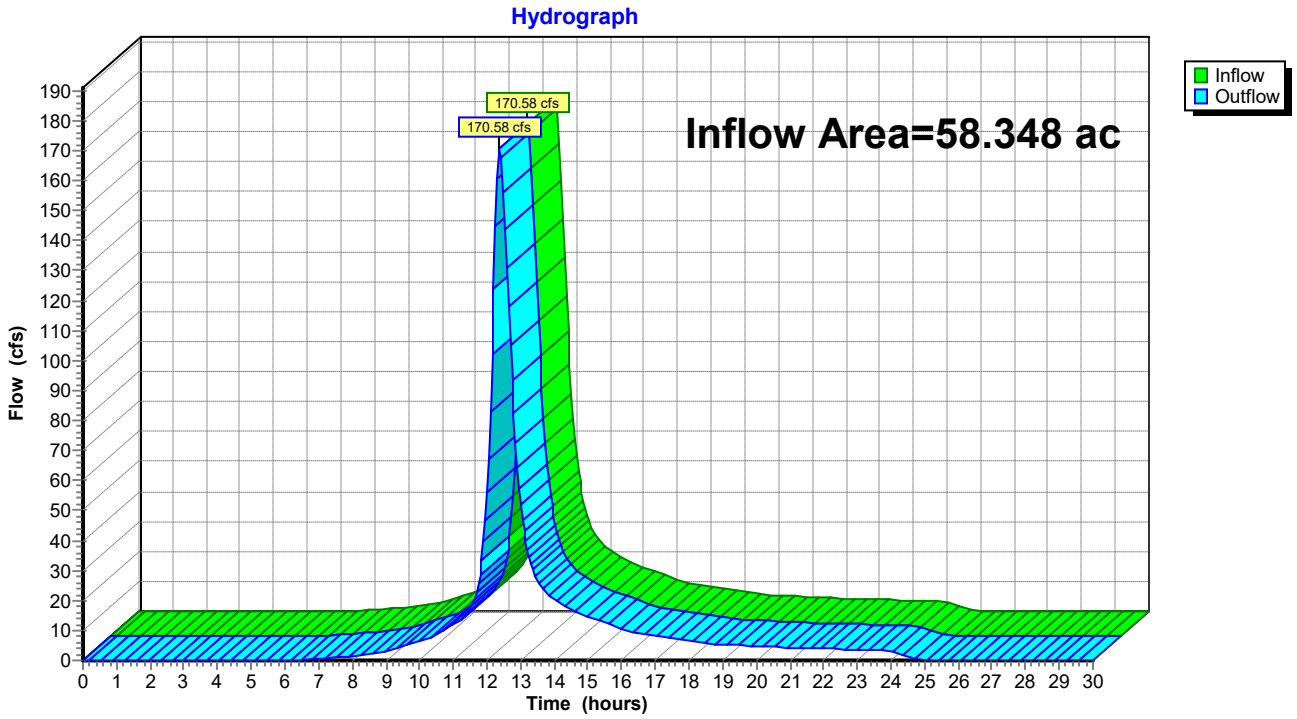


Summary for Reach DP#1: DP#1

Inflow Area = 58.348 ac, 6.40% Impervious, Inflow Depth = 4.34" for 100-Year event
Inflow = 170.58 cfs @ 12.39 hrs, Volume= 21.083 af
Outflow = 170.58 cfs @ 12.39 hrs, Volume= 21.083 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#1: DP#1

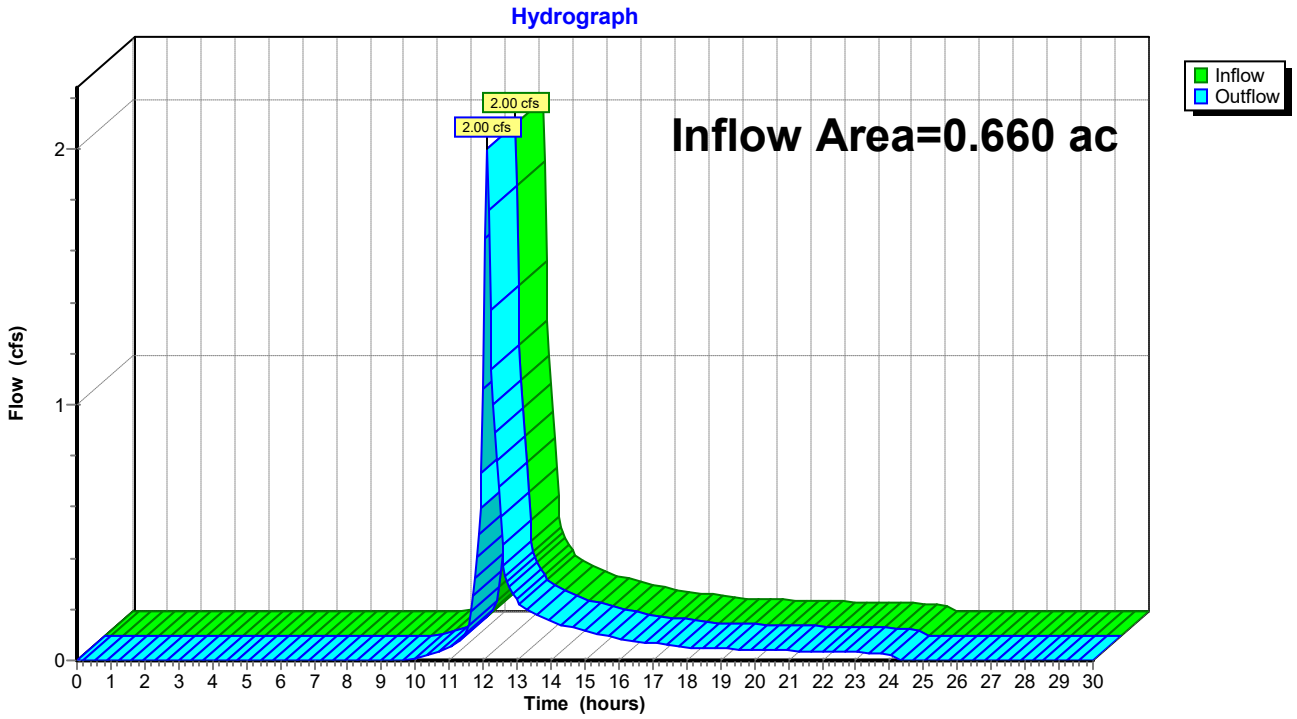


Summary for Reach DP#5: DITCH

Inflow Area = 0.660 ac, 44.05% Impervious, Inflow Depth = 2.72" for 100-Year event
Inflow = 2.00 cfs @ 12.10 hrs, Volume= 0.150 af
Outflow = 2.00 cfs @ 12.10 hrs, Volume= 0.150 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#5: DITCH

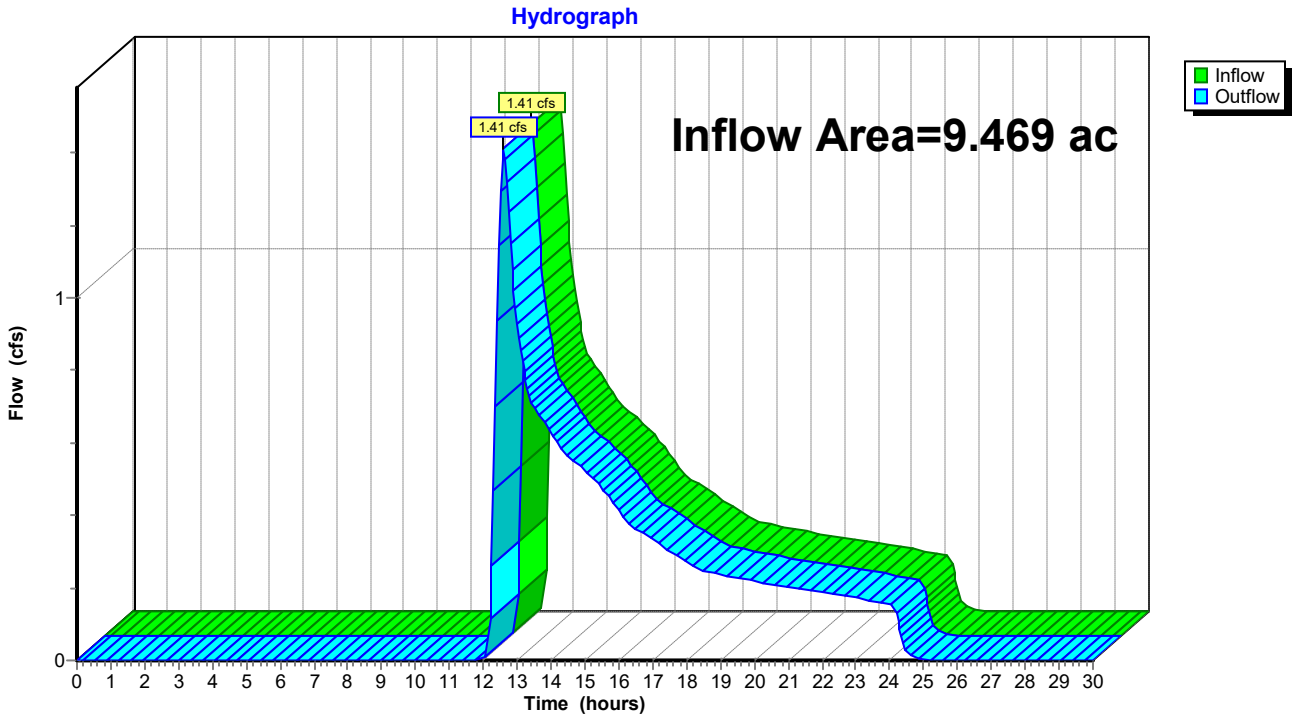


Summary for Reach R-200: DP#2

Inflow Area = 9.469 ac, 0.00% Impervious, Inflow Depth = 0.48" for 100-Year event
Inflow = 1.41 cfs @ 12.60 hrs, Volume= 0.376 af
Outflow = 1.41 cfs @ 12.60 hrs, Volume= 0.376 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-200: DP#2

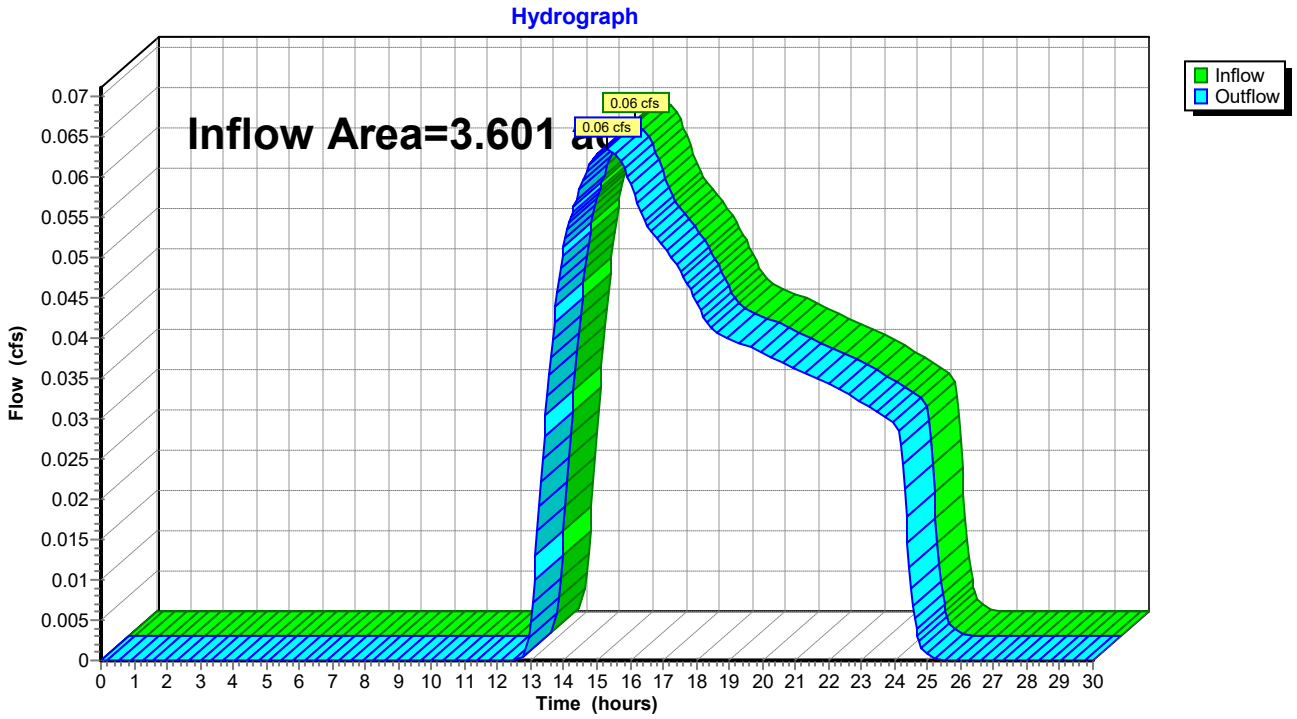


Summary for Reach R-300: DP#3

Inflow Area = 3.601 ac, 0.00% Impervious, Inflow Depth = 0.13" for 100-Year event
Inflow = 0.06 cfs @ 15.28 hrs, Volume= 0.040 af
Outflow = 0.06 cfs @ 15.28 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-300: DP#3

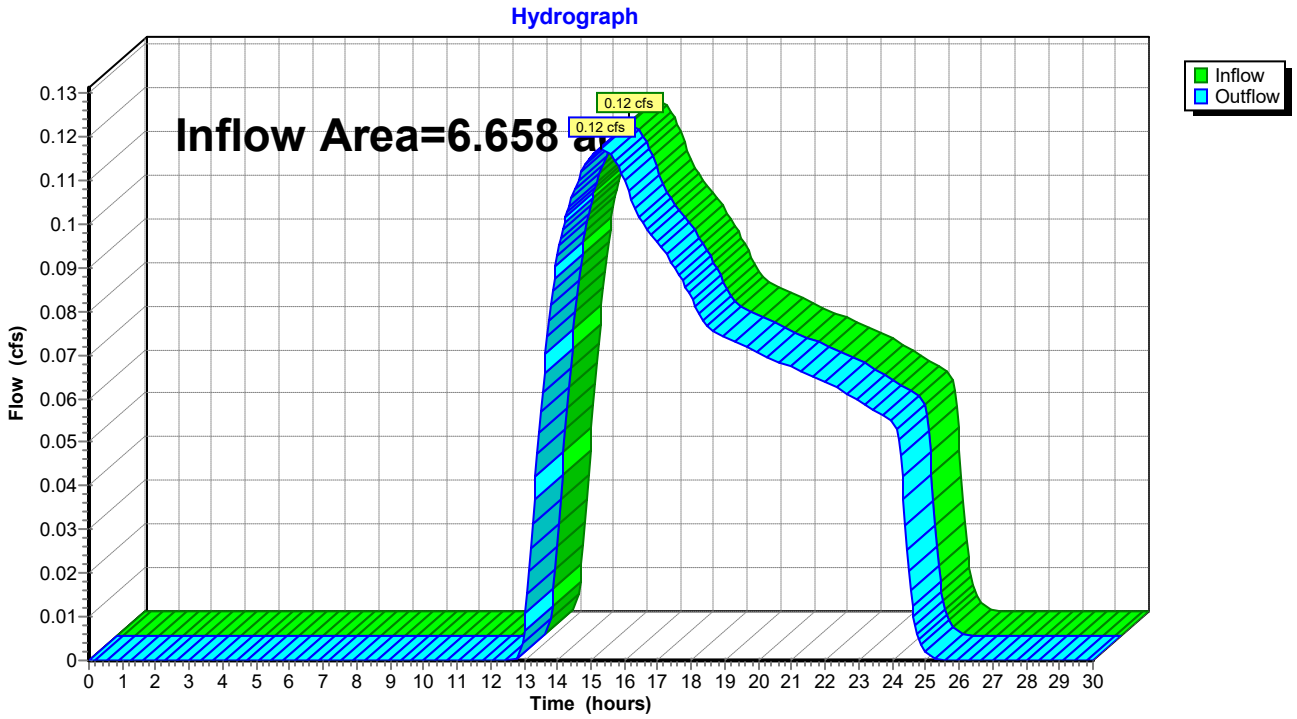


Summary for Reach R-400: DP#4

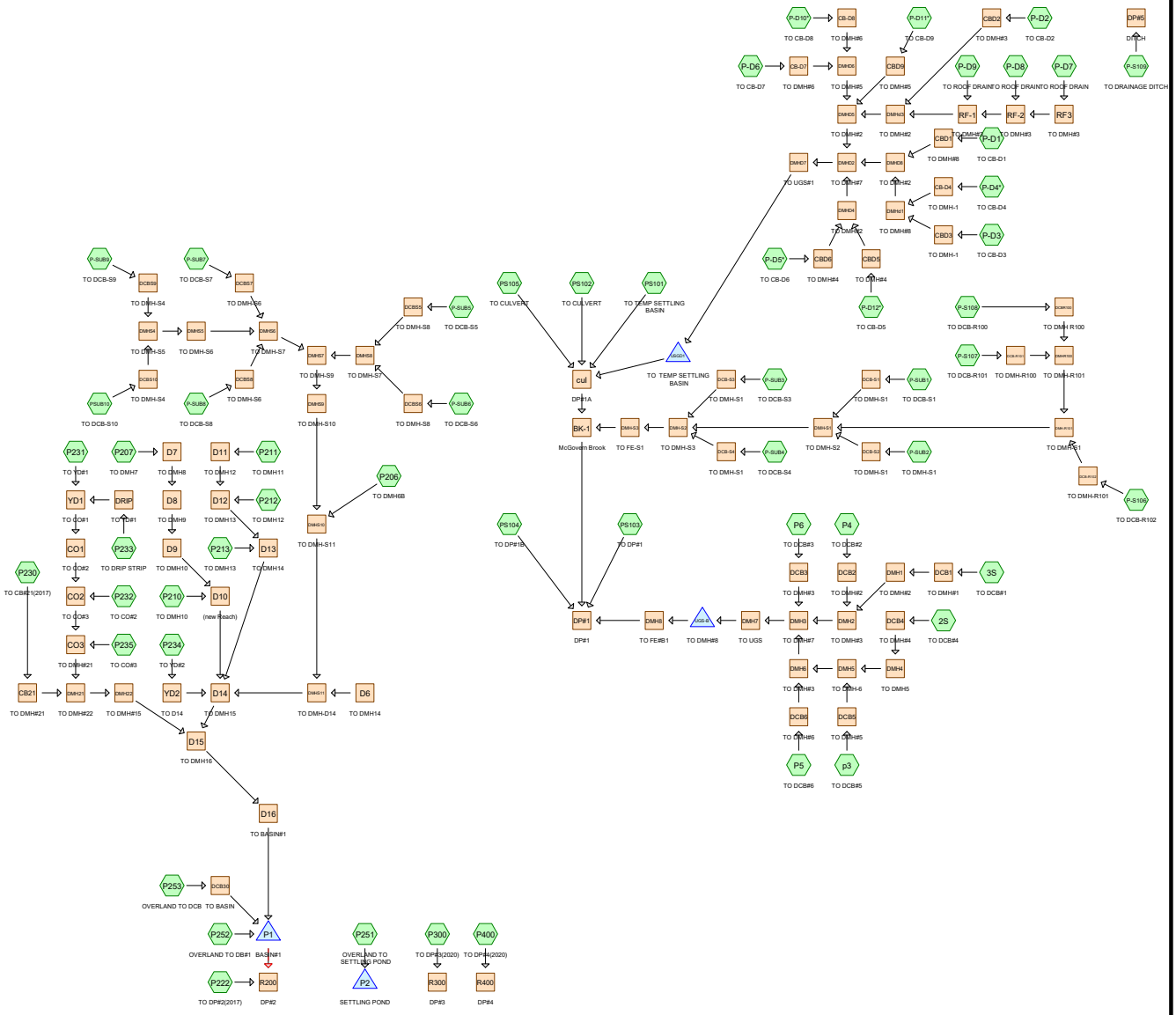
Inflow Area = 6.658 ac, 0.00% Impervious, Inflow Depth = 0.13" for 100-Year event
Inflow = 0.12 cfs @ 15.29 hrs, Volume= 0.074 af
Outflow = 0.12 cfs @ 15.29 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R-400: DP#4



2.2
POST DEVELOPMENT CALCULATIONS



Subcat | Reach | Pond | Link

Routing Diagram for 2226-Proposed Master Subdivision-2021
Prepared by HANNIGAN ENGINEERING, INC., Printed 3/31/2021
HydroCAD® 10.00-25 s/n 00840 © 2019 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
474,545	39	>75% Grass cover, Good, HSG A (2S, 3S, P-D1, P-D10*, P-D11*, P-D12*, P-D2, P-D3, P-D4*, P-S106, P-S107, P-S108, P-S109, P-SUB1, P-SUB2, P-SUB3, P-SUB4, P222, P230, P251, P252, P253, p3, P4, P400, P5, P6, PS103, PS104)
378,499	61	>75% Grass cover, Good, HSG B (P-SUB5, P-SUB6, P-SUB7, P-SUB8, P-SUB9, P206, P207, P210, P211, P212, P213, P222, P230, P231, P233, P234, P253, PS103, PS104, PSUB10)
12,576	74	>75% Grass cover, Good, HSG C (P-SUB5, P-SUB6, P-SUB7, P-SUB8, P-SUB9, P206, P211, PS105)
24,061	80	>75% Grass cover, Good, HSG D (P-SUB3, P-SUB4, P-SUB5, P-SUB6, PS101, PS103)
29,511	30	Brush, Good, HSG A (PS101, PS103)
47,206	48	Brush, Good, HSG B (PS103, PS104)
72,597	73	Brush, Good, HSG D (PS101, PS102, PS103, PS104)
300,261	96	Gravel surface, HSG A (PS101, PS103)
127,615	96	Gravel surface, HSG B (P-SUB7, P-SUB9, PS103, PS104, PS105)
225,242	96	Gravel surface, HSG C (P-SUB7, P-SUB9, PS105)
88,007	96	Gravel surface, HSG D (PS101, PS103, PS104, PS105)
34,999	74	Pasture/grassland/range, Good, HSG C (PS105)
258,745	98	Paved parking, HSG A (2S, 3S, P-D1, P-D10*, P-D11*, P-D12*, P-D2, P-D3, P-D4*, P-D5*, P-D6, P-D7, P-D8, P-D9, P-S106, P-S107, P-S108, P-S109, P-SUB1, P-SUB2, P-SUB3, P-SUB4, P230, P251, P252, P253, p3, P4, P400, P5, P6, PS103, PS104)
242,733	98	Paved parking, HSG B (P-SUB5, P-SUB6, P-SUB7, P-SUB8, P-SUB9, P207, P210, P211, P212, P213, P230, P231, P232, P233, P234, P235, P253, PS103, PS104, PSUB10)
8,478	98	Paved parking, HSG C (P-SUB5, P-SUB6, P-SUB7, P-SUB8, P-SUB9, PSUB10)
20,870	98	Paved parking, HSG D (P-SUB3, P-SUB4, P-SUB5, P-SUB6, PS103)
41,588	92	Urban commercial, 85% imp, HSG B (P206, P211)
7,512	94	Urban commercial, 85% imp, HSG C (P206, P211)
522,627	30	Woods, Good, HSG A (P222, P251, P252, P300, P400, PS101, PS103)
204,547	55	Woods, Good, HSG B (P222, P252, PS103, PS104)
185,763	70	Woods, Good, HSG C (PS104, PS105)
121,752	77	Woods, Good, HSG D (PS102, PS103, PS104)
3,429,734	**68**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
1,585,689	HSG A	2S, 3S, P-D1, P-D10*, P-D11*, P-D12*, P-D2, P-D3, P-D4*, P-D5*, P-D6, P-D7, P-D8, P-D9, P-S106, P-S107, P-S108, P-S109, P-SUB1, P-SUB2, P-SUB3, P-SUB4, P222, P230, P251, P252, P253, p3, P300, P4, P400, P5, P6, PS101, PS103, PS104
1,042,188	HSG B	P-SUB5, P-SUB6, P-SUB7, P-SUB8, P-SUB9, P206, P207, P210, P211, P212, P213, P222, P230, P231, P232, P233, P234, P235, P252, P253, PS103, PS104, PS105, PSUB10
474,570	HSG C	P-SUB5, P-SUB6, P-SUB7, P-SUB8, P-SUB9, P206, P211, PS104, PS105, PSUB10
327,287	HSG D	P-SUB3, P-SUB4, P-SUB5, P-SUB6, PS101, PS102, PS103, PS104, PS105
0	Other	
3,429,734		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
474,545	378,499	12,576	24,061	0	889,681	>75% Grass cover, Good
29,511	47,206	0	72,597	0	149,314	Brush, Good
300,261	127,615	225,242	88,007	0	741,125	Gravel surface
0	0	34,999	0	0	34,999	Pasture/grassland/range, Good
258,745	242,733	8,478	20,870	0	530,826	Paved parking
0	41,588	7,512	0	0	49,100	Urban commercial, 85% imp
522,627	204,547	185,763	121,752	0	1,034,689	Woods, Good
1,585,689	**1,042,188**	**474,570**	**327,287**	**0**	**3,429,734**	**TOTAL AREA**

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	PS104	0.00	0.00	84.0	0.0110	0.012	15.0	0.0	0.0
2	CB-D4	352.70	352.20	42.0	0.0119	0.013	12.0	0.0	0.0
3	CB-D7	351.70	351.50	18.0	0.0111	0.013	12.0	0.0	0.0
4	CB-D8	351.70	351.50	22.0	0.0091	0.013	12.0	0.0	0.0
5	CB21	346.40	345.40	50.0	0.0200	0.013	12.0	0.0	0.0
6	CBD1	352.70	352.00	22.0	0.0318	0.013	12.0	0.0	0.0
7	CBD2	353.10	353.00	8.0	0.0125	0.013	12.0	0.0	0.0
8	CBD3	352.80	352.20	11.0	0.0545	0.013	12.0	0.0	0.0
9	CBD5	351.80	351.60	21.0	0.0095	0.013	12.0	0.0	0.0
10	CBD6	351.80	351.60	18.0	0.0111	0.013	12.0	0.0	0.0
11	CBD9	352.50	352.00	46.0	0.0109	0.013	12.0	0.0	0.0
12	CO1	350.50	349.00	74.0	0.0203	0.010	10.0	0.0	0.0
13	CO2	349.00	347.40	81.0	0.0198	0.010	10.0	0.0	0.0
14	CO3	347.40	345.40	30.0	0.0667	0.010	10.0	0.0	0.0
15	D10	346.60	343.60	103.0	0.0291	0.013	12.0	0.0	0.0
16	D11	348.50	347.20	86.0	0.0151	0.013	12.0	0.0	0.0
17	D12	347.10	345.85	83.0	0.0151	0.013	15.0	0.0	0.0
18	D13	345.75	343.60	109.0	0.0197	0.013	15.0	0.0	0.0
19	D14	338.20	335.45	390.0	0.0071	0.013	30.0	0.0	0.0
20	D15	335.35	333.75	232.0	0.0069	0.013	30.0	0.0	0.0
21	D16	333.65	333.15	71.0	0.0070	0.013	30.0	0.0	0.0
22	D6	339.60	339.50	14.0	0.0071	0.013	24.0	0.0	0.0
23	D7	354.15	351.30	87.0	0.0328	0.013	12.0	0.0	0.0
24	D8	351.20	347.80	113.0	0.0301	0.013	12.0	0.0	0.0
25	D9	347.70	346.70	70.0	0.0143	0.013	12.0	0.0	0.0
26	DCB-R101	355.50	355.30	8.0	0.0250	0.011	12.0	0.0	0.0
27	DCB-R102	357.20	356.00	80.0	0.0150	0.011	12.0	0.0	0.0
28	DCB-S1	351.20	350.90	24.0	0.0125	0.011	12.0	0.0	0.0
29	DCB-S2	351.20	350.90	14.0	0.0214	0.011	12.0	0.0	0.0
30	DCB-S3	346.90	346.70	21.0	0.0095	0.011	12.0	0.0	0.0
31	DCB-S4	346.90	346.70	7.0	0.0286	0.011	12.0	0.0	0.0
32	DCB1	355.30	354.70	61.0	0.0098	0.013	12.0	0.0	0.0
33	DCB2	354.40	354.00	30.0	0.0133	0.013	12.0	0.0	0.0
34	DCB3	351.90	351.60	48.0	0.0062	0.013	12.0	0.0	0.0
35	DCB30	338.00	335.90	140.0	0.0150	0.013	15.0	0.0	0.0
36	DCB4	355.50	355.30	23.0	0.0087	0.013	12.0	0.0	0.0
37	DCB5	354.80	354.60	21.0	0.0095	0.013	12.0	0.0	0.0
38	DCB6	353.40	353.30	6.0	0.0167	0.013	12.0	0.0	0.0
39	DCBR100	354.50	353.10	162.0	0.0086	0.011	12.0	0.0	0.0
40	DCBS10	356.50	356.00	9.0	0.0556	0.011	12.0	0.0	0.0
41	DCBS5	347.00	346.50	23.0	0.0217	0.011	12.0	0.0	0.0

Pipe Listing (all nodes) (continued)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
42	DCBS6	347.00	346.50	16.0	0.0313	0.011	12.0	0.0	0.0
43	DCBS7	350.10	349.80	20.0	0.0150	0.011	12.0	0.0	0.0
44	DCBS8	350.10	349.80	10.0	0.0300	0.011	12.0	0.0	0.0
45	DCBS9	356.50	356.00	18.0	0.0278	0.011	12.0	0.0	0.0
46	DMH-R101	351.00	348.60	265.0	0.0091	0.011	15.0	0.0	0.0
47	DMH-S1	348.50	346.80	279.0	0.0061	0.011	18.0	0.0	0.0
48	DMH-S2	346.70	346.20	42.0	0.0119	0.011	18.0	0.0	0.0
49	DMH-S3	346.00	345.70	25.0	0.0120	0.011	18.0	0.0	0.0
50	DMH1	354.60	353.30	65.0	0.0200	0.013	12.0	0.0	0.0
51	DMH2	353.20	351.60	111.0	0.0144	0.013	12.0	0.0	0.0
52	DMH21	345.20	341.80	168.0	0.0202	0.013	12.0	0.0	0.0
53	DMH22	341.70	341.00	9.0	0.0778	0.013	12.0	0.0	0.0
54	DMH3	351.50	351.20	13.0	0.0231	0.013	15.0	0.0	0.0
55	DMH4	355.20	354.60	77.0	0.0078	0.013	12.0	0.0	0.0
56	DMH5	354.10	353.30	108.0	0.0074	0.013	12.0	0.0	0.0
57	DMH6	353.20	351.60	150.0	0.0107	0.013	15.0	0.0	0.0
58	DMH7	351.00	350.80	10.0	0.0200	0.013	15.0	0.0	0.0
59	DMH8	349.90	349.00	50.0	0.0180	0.013	12.0	0.0	0.0
60	DMHd1	352.10	351.10	82.0	0.0122	0.013	12.0	0.0	0.0
61	DMHD2	350.40	350.30	8.0	0.0125	0.013	15.0	0.0	0.0
62	DMHd3	352.40	351.00	27.0	0.0519	0.013	12.0	0.0	0.0
63	DMHD4	351.50	350.50	133.0	0.0075	0.013	12.0	0.0	0.0
64	DMHD5	350.90	350.40	70.0	0.0071	0.013	12.0	0.0	0.0
65	DMHD6	351.40	351.00	59.0	0.0068	0.013	12.0	0.0	0.0
66	DMHD7	350.15	350.00	12.0	0.0125	0.013	15.0	0.0	0.0
67	DMHD8	351.00	350.50	39.0	0.0128	0.013	12.0	0.0	0.0
68	DMHR100	353.00	351.10	188.0	0.0101	0.011	12.0	0.0	0.0
69	DMHS10	343.30	340.50	240.0	0.0117	0.013	24.0	0.0	0.0
70	DMHS11	339.20	338.30	130.0	0.0069	0.013	24.0	0.0	0.0
71	DMHS4	352.00	350.10	126.0	0.0151	0.011	12.0	0.0	0.0
72	DMHS5	350.00	348.10	126.0	0.0151	0.011	12.0	0.0	0.0
73	DMHS6	348.00	347.50	20.0	0.0250	0.011	15.0	0.0	0.0
74	DMHS7	344.90	344.50	20.0	0.0200	0.011	15.0	0.0	0.0
75	DMHS8	346.40	345.00	184.0	0.0076	0.011	15.0	0.0	0.0
76	DMHS9	344.25	343.40	137.0	0.0062	0.013	18.0	0.0	0.0
77	RF-1	351.70	351.20	48.0	0.0104	0.013	6.0	0.0	0.0
78	RF-2	351.80	351.20	61.0	0.0098	0.012	6.0	0.0	0.0
79	RF3	352.10	351.10	94.0	0.0106	0.012	6.0	0.0	0.0
80	YD1	350.80	350.50	14.0	0.0214	0.010	10.0	0.0	0.0
81	YD2	347.80	347.40	9.0	0.0444	0.010	10.0	0.0	0.0
82	P1	332.60	331.50	223.0	0.0049	0.013	12.0	0.0	0.0

Pipe Listing (all nodes) (continued)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
83	UGS-B	350.80	350.80	3.4	0.0000	0.013	12.0	0.0	0.0
84	UGS-B	350.70	350.00	40.0	0.0175	0.013	12.0	0.0	0.0
85	USGD1	350.40	350.40	3.4	0.0000	0.013	10.0	0.0	0.0
86	USGD1	350.00	349.00	40.0	0.0250	0.013	12.0	0.0	0.0

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 2S: TO DCB#4 Runoff Area=5,916 sf 84.47% Impervious Runoff Depth=1.90"
Flow Length=93' Slope=0.0340 '/' Tc=5.0 min CN=89 Runoff=0.30 cfs 937 cf

Subcatchment 3S: TO DCB#1 Runoff Area=3,582 sf 82.83% Impervious Runoff Depth=1.82"
Flow Length=77' Tc=5.0 min CN=88 Runoff=0.17 cfs 543 cf

Subcatchment P-D1: TO CB-D1 Runoff Area=6,833 sf 88.85% Impervious Runoff Depth=2.07"
Flow Length=90' Tc=5.0 min CN=91 Runoff=0.38 cfs 1,179 cf

Subcatchment P-D10*: TO CB-D8 Runoff Area=5,879 sf 76.82% Impervious Runoff Depth=1.52"
Flow Length=177' Slope=0.0200 '/' Tc=5.0 min CN=84 Runoff=0.24 cfs 743 cf

Subcatchment P-D11*: TO CB-D9 Runoff Area=4,151 sf 71.91% Impervious Runoff Depth=1.31"
Flow Length=153' Slope=0.0200 '/' Tc=5.0 min CN=81 Runoff=0.15 cfs 454 cf

Subcatchment P-D12*: TO CB-D5 Runoff Area=7,120 sf 71.57% Impervious Runoff Depth=1.31"
Flow Length=134' Tc=5.0 min CN=81 Runoff=0.25 cfs 779 cf

Subcatchment P-D2: TO CB-D2 Runoff Area=4,392 sf 76.55% Impervious Runoff Depth=1.52"
Flow Length=93' Slope=0.0170 '/' Tc=5.0 min CN=84 Runoff=0.18 cfs 555 cf

Subcatchment P-D3: TO CB-D3 Runoff Area=4,805 sf 87.24% Impervious Runoff Depth=1.98"
Flow Length=65' Tc=5.0 min CN=90 Runoff=0.26 cfs 794 cf

Subcatchment P-D4*: TO CB-D4 Runoff Area=16,447 sf 47.74% Impervious Runoff Depth=0.58"
Flow Length=105' Tc=5.0 min CN=67 Runoff=0.21 cfs 802 cf

Subcatchment P-D5*: TO CB-D6 Runoff Area=2,202 sf 100.00% Impervious Runoff Depth=2.77"
Flow Length=169' Tc=5.0 min CN=98 Runoff=0.15 cfs 508 cf

Subcatchment P-D6: TO CB-D7 Runoff Area=2,624 sf 100.00% Impervious Runoff Depth=2.77"
Flow Length=151' Tc=5.0 min CN=98 Runoff=0.18 cfs 605 cf

Subcatchment P-D7: TO ROOF DRAIN Runoff Area=933 sf 100.00% Impervious Runoff Depth=2.77"
Flow Length=39' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.06 cfs 215 cf

Subcatchment P-D8: TO ROOF DRAIN Runoff Area=920 sf 100.00% Impervious Runoff Depth=2.77"
Flow Length=39' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.06 cfs 212 cf

Subcatchment P-D9: TO ROOF DRAIN Runoff Area=282 sf 100.00% Impervious Runoff Depth=2.77"
Flow Length=40' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.02 cfs 65 cf

Subcatchment P-S106: TO DCB-R102 Runoff Area=13,651 sf 53.41% Impervious Runoff Depth=0.76"
Flow Length=246' Slope=0.0050 '/' Tc=5.0 min CN=71 Runoff=0.25 cfs 865 cf

Subcatchment P-S107: TO DCB-R101 Runoff Area=18,867 sf 80.97% Impervious Runoff Depth=1.74"
Flow Length=255' Slope=0.0050 '/' Tc=5.0 min CN=87 Runoff=0.88 cfs 2,734 cf

Subcatchment P-S108: TO DCB-R100 Runoff Area=8,304 sf 89.80% Impervious Runoff Depth=2.16"
Flow Length=315' Slope=0.0050 '/' Tc=5.0 min CN=92 Runoff=0.48 cfs 1,495 cf

Subcatchment P-S109: TO DRAINAGE Runoff Area=12,076 sf 57.69% Impervious Runoff Depth=0.86"
Flow Length=227' Slope=0.0050 '/' Tc=5.0 min CN=73 Runoff=0.26 cfs 863 cf

Subcatchment P-SUB1: TO DCB-S1 Runoff Area=8,226 sf 87.83% Impervious Runoff Depth=2.07"
Flow Length=203' Tc=5.0 min CN=91 Runoff=0.46 cfs 1,420 cf

Subcatchment P-SUB2: TO DMH-S1 Runoff Area=10,318 sf 80.45% Impervious Runoff Depth=1.66"
Flow Length=213' Tc=5.0 min CN=86 Runoff=0.46 cfs 1,429 cf

Subcatchment P-SUB3: TO DCB-S3 Runoff Area=18,672 sf 88.33% Impervious Runoff Depth=2.25"
Flow Length=296' Tc=5.0 min CN=93 Runoff=1.11 cfs 3,507 cf

Subcatchment P-SUB4: TO DCB-S4 Runoff Area=24,334 sf 83.66% Impervious Runoff Depth=1.98"
Flow Length=301' Tc=6.3 min CN=90 Runoff=1.25 cfs 4,023 cf

Subcatchment P-SUB5: TO DCB-S5 Runoff Area=13,730 sf 73.11% Impervious Runoff Depth=1.98"
Flow Length=223' Tc=5.0 min CN=90 Runoff=0.73 cfs 2,270 cf

Subcatchment P-SUB6: TO DCB-S6 Runoff Area=14,048 sf 86.89% Impervious Runoff Depth=2.35"
Flow Length=231' Tc=5.0 min CN=94 Runoff=0.86 cfs 2,751 cf

Subcatchment P-SUB7: TO DCB-S7 Runoff Area=14,635 sf 28.88% Impervious Runoff Depth=1.98"
Flow Length=382' Slope=0.0200 '/' Tc=9.8 min CN=90 Runoff=0.67 cfs 2,420 cf

Subcatchment P-SUB8: TO DCB-S8 Runoff Area=6,568 sf 85.14% Impervious Runoff Depth=2.25"
Flow Length=254' Tc=5.0 min CN=93 Runoff=0.39 cfs 1,234 cf

Subcatchment P-SUB9: TO DCB-S9 Runoff Area=6,737 sf 13.88% Impervious Runoff Depth=2.16"
Flow Length=159' Tc=8.5 min CN=92 Runoff=0.35 cfs 1,213 cf

Subcatchment P206: TO DMH6B Runoff Area=52,950 sf 74.01% Impervious Runoff Depth=1.90"
Tc=5.0 min CN=89 Runoff=2.69 cfs 8,383 cf

Subcatchment P207: TO DMH7 Runoff Area=3,621 sf 77.22% Impervious Runoff Depth=1.98"
Tc=5.0 min CN=90 Runoff=0.19 cfs 599 cf

Subcatchment P210: TO DMH10 Runoff Area=47,718 sf 68.99% Impervious Runoff Depth=1.74"
Tc=5.0 min CN=87 Runoff=2.23 cfs 6,916 cf

Subcatchment P211: TO DMH11 Runoff Area=39,805 sf 44.80% Impervious Runoff Depth=1.19"
Tc=5.0 min CN=79 Runoff=1.25 cfs 3,942 cf

Subcatchment P212: TO DMH12 Runoff Area=23,845 sf 77.66% Impervious Runoff Depth=1.98"
Tc=5.0 min CN=90 Runoff=1.27 cfs 3,943 cf

Subcatchment P213: TO DMH13 Runoff Area=12,176 sf 88.58% Impervious Runoff Depth=2.35"
Tc=5.0 min CN=94 Runoff=0.75 cfs 2,385 cf

Subcatchment P222: TO DP#2(2017) Runoff Area=106,869 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=711' Tc=22.1 min CN=33 Runoff=0.00 cfs 0 cf

Subcatchment P230: TO CB#21(2017) Runoff Area=16,502 sf 47.31% Impervious Runoff Depth=1.13"
Flow Length=306' Tc=5.0 min CN=78 Runoff=0.49 cfs 1,552 cf

Subcatchment P231: TO YD#1 Runoff Area=3,459 sf 6.76% Impervious Runoff Depth=0.47"
Flow Length=48' Slope=0.0300 '/' Tc=5.0 min CN=64 Runoff=0.03 cfs 135 cf

Subcatchment P232: TO CO#2 Runoff Area=2,490 sf 100.00% Impervious Runoff Depth=2.77"
Flow Length=88' Tc=5.0 min CN=98 Runoff=0.17 cfs 574 cf

Subcatchment P233: TO DRIP STRIP Runoff Area=1,722 sf 96.81% Impervious Runoff Depth=2.66"
Flow Length=55' Tc=5.0 min CN=97 Runoff=0.11 cfs 381 cf

Subcatchment P234: TO YD#2 Runoff Area=10,793 sf 49.52% Impervious Runoff Depth=1.19"
Flow Length=166' Tc=5.0 min CN=79 Runoff=0.34 cfs 1,069 cf

Subcatchment P235: TO CO#3 Runoff Area=670 sf 100.00% Impervious Runoff Depth=2.77"
Flow Length=25' Slope=0.0830 '/' Tc=5.0 min CN=98 Runoff=0.05 cfs 155 cf

Subcatchment P251: OVERLAND TO Runoff Area=59,763 sf 5.17% Impervious Runoff Depth=0.00"
Flow Length=294' Tc=16.4 min CN=42 Runoff=0.00 cfs 20 cf

Subcatchment P252: OVERLAND TO DB#1 Runoff Area=84,788 sf 3.33% Impervious Runoff Depth=0.00"
Flow Length=224' Tc=15.5 min CN=41 Runoff=0.00 cfs 7 cf

Subcatchment P253: OVERLAND TO DCB Runoff Area=198,125 sf 23.50% Impervious Runoff Depth=0.33"
Flow Length=393' Tc=17.3 min CN=60 Runoff=0.70 cfs 5,503 cf

Subcatchment p3: TO DCB#5 Runoff Area=13,229 sf 94.75% Impervious Runoff Depth=2.45"
Flow Length=141' Tc=5.0 min CN=95 Runoff=0.83 cfs 2,700 cf

Subcatchment P300: TO DP#3(2020) Runoff Area=145,987 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=566' Tc=27.1 min CN=30 Runoff=0.00 cfs 0 cf

Subcatchment P4: TO DCB#2 Runoff Area=12,397 sf 88.23% Impervious Runoff Depth=2.07"
Flow Length=162' Tc=5.0 min CN=91 Runoff=0.69 cfs 2,140 cf

Subcatchment P400: TO DP#4(2020) Runoff Area=270,932 sf 0.59% Impervious Runoff Depth=0.00"
Flow Length=487' Tc=31.1 min CN=31 Runoff=0.00 cfs 0 cf

Subcatchment P5: TO DCB#6 Runoff Area=18,802 sf 87.54% Impervious Runoff Depth=2.07"
Flow Length=124' Tc=5.0 min CN=91 Runoff=1.04 cfs 3,245 cf

Subcatchment P6: TO DCB#3 Runoff Area=13,758 sf 90.05% Impervious Runoff Depth=2.16"
Flow Length=267' Tc=5.0 min CN=92 Runoff=0.79 cfs 2,478 cf

Subcatchment PS101: TO TEMP Runoff Area=259,359 sf 0.00% Impervious Runoff Depth=2.16"
Flow Length=764' Tc=12.9 min CN=92 Runoff=11.80 cfs 46,709 cf

Subcatchment PS102: TO CULVERT Runoff Area=47,989 sf 0.00% Impervious Runoff Depth=1.02"
Flow Length=59' Slope=0.0400 '/' Tc=11.0 min CN=76 Runoff=1.05 cfs 4,059 cf

Subcatchment PS103: TO DP#1 Runoff Area=784,060 sf 17.42% Impervious Runoff Depth=0.96"
Flow Length=1,062' Tc=15.8 min CN=75 Runoff=14.00 cfs 62,776 cf

Subcatchment PS104: TO DP#1B Runoff Area=481,036 sf 3.31% Impervious Runoff Depth=0.25"
Flow Length=1,026' Tc=11.5 min CN=57 Runoff=1.10 cfs 9,866 cf

Subcatchment PS105: TO CULVERT Runoff Area=478,368 sf 0.00% Impervious Runoff Depth=1.59"
Flow Length=1,550' Tc=21.8 min CN=85 Runoff=13.25 cfs 63,313 cf

Subcatchment PSUB10: TO DCB-S10 Runoff Area=2,269 sf 91.63% Impervious Runoff Depth=2.45"
Flow Length=85' Slope=0.0300 '/' Tc=5.0 min CN=95 Runoff=0.14 cfs 463 cf

Reach BK-1: McGovern Brook Avg. Flow Depth=0.60' Max Vel=2.98 fps Inflow=27.37 cfs 130,561 cf
n=0.030 L=1,417.0' S=0.0085 '/' Capacity=6,024.18 cfs Outflow=24.75 cfs 130,558 cf

Reach CB-D4: TO DMH-1 Avg. Flow Depth=0.16' Max Vel=2.64 fps Inflow=0.21 cfs 802 cf
12.0" Round Pipe n=0.013 L=42.0' S=0.0119 '/' Capacity=3.89 cfs Outflow=0.21 cfs 802 cf

Reach CB-D7: TO DMH#6 Avg. Flow Depth=0.15' Max Vel=2.42 fps Inflow=0.18 cfs 605 cf
12.0" Round Pipe n=0.013 L=18.0' S=0.0111 '/' Capacity=3.76 cfs Outflow=0.17 cfs 605 cf

Reach CB-D8: TO DMH#6 Avg. Flow Depth=0.18' Max Vel=2.49 fps Inflow=0.24 cfs 743 cf
12.0" Round Pipe n=0.013 L=22.0' S=0.0091 '/' Capacity=3.40 cfs Outflow=0.24 cfs 743 cf

Reach CB21: TO DMH#21 Avg. Flow Depth=0.21' Max Vel=4.06 fps Inflow=0.49 cfs 1,552 cf
12.0" Round Pipe n=0.013 L=50.0' S=0.0200 '/' Capacity=5.04 cfs Outflow=0.49 cfs 1,552 cf

Reach CBD1: TO DMH#8 Avg. Flow Depth=0.17' Max Vel=4.39 fps Inflow=0.38 cfs 1,179 cf
12.0" Round Pipe n=0.013 L=22.0' S=0.0318 '/' Capacity=6.36 cfs Outflow=0.37 cfs 1,179 cf

Reach CBD2: TO DMH#3 Avg. Flow Depth=0.14' Max Vel=2.55 fps Inflow=0.18 cfs 555 cf
12.0" Round Pipe n=0.013 L=8.0' S=0.0125 '/' Capacity=3.98 cfs Outflow=0.18 cfs 555 cf

Reach CBD3: TO DMH-1 Avg. Flow Depth=0.12' Max Vel=4.72 fps Inflow=0.26 cfs 794 cf
12.0" Round Pipe n=0.013 L=11.0' S=0.0545 '/' Capacity=8.32 cfs Outflow=0.25 cfs 794 cf

Reach CBD5: TO DMH#4 Avg. Flow Depth=0.18' Max Vel=2.56 fps Inflow=0.25 cfs 779 cf
12.0" Round Pipe n=0.013 L=21.0' S=0.0095 '/' Capacity=3.48 cfs Outflow=0.25 cfs 779 cf

Reach CBD6: TO DMH#4 Avg. Flow Depth=0.14' Max Vel=2.30 fps Inflow=0.15 cfs 508 cf
12.0" Round Pipe n=0.013 L=18.0' S=0.0111 '/' Capacity=3.76 cfs Outflow=0.15 cfs 508 cf

Reach CBD9: TO DMH#5 Avg. Flow Depth=0.14' Max Vel=2.29 fps Inflow=0.15 cfs 454 cf
12.0" Round Pipe n=0.013 L=46.0' S=0.0109 '/' Capacity=3.71 cfs Outflow=0.14 cfs 454 cf

Reach CO1: TO CO#2 Avg. Flow Depth=0.11' Max Vel=3.48 fps Inflow=0.14 cfs 517 cf
10.0" Round Pipe n=0.010 L=74.0' S=0.0203 '/' Capacity=4.06 cfs Outflow=0.14 cfs 517 cf

Reach CO2: TO CO#3 Avg. Flow Depth=0.16' Max Vel=4.32 fps Inflow=0.30 cfs 1,091 cf
10.0" Round Pipe n=0.010 L=81.0' S=0.0198 '/' Capacity=4.00 cfs Outflow=0.30 cfs 1,091 cf

Reach CO3: TO DMH#21 Avg. Flow Depth=0.12' Max Vel=6.88 fps Inflow=0.34 cfs 1,246 cf
10.0" Round Pipe n=0.010 L=30.0' S=0.0667 '/' Capacity=7.35 cfs Outflow=0.34 cfs 1,246 cf

Reach cul: DP#1A Inflow=24.17 cfs 115,087 cf
Outflow=24.17 cfs 115,087 cf

Reach D10: (new Reach) Avg. Flow Depth=0.44' Max Vel=7.27 fps Inflow=2.40 cfs 7,514 cf
12.0" Round Pipe n=0.013 L=103.0' S=0.0291 '/' Capacity=6.08 cfs Outflow=2.39 cfs 7,514 cf

Reach D11: TO DMH12 Avg. Flow Depth=0.37' Max Vel=4.81 fps Inflow=1.25 cfs 3,942 cf
12.0" Round Pipe n=0.013 L=86.0' S=0.0151 '/' Capacity=4.38 cfs Outflow=1.24 cfs 3,942 cf

Reach D12: TO DMH13 Avg. Flow Depth=0.48' Max Vel=5.71 fps Inflow=2.49 cfs 7,885 cf
15.0" Round Pipe n=0.013 L=83.0' S=0.0151 '/' Capacity=7.93 cfs Outflow=2.47 cfs 7,885 cf

Reach D13: TO DMH14 Avg. Flow Depth=0.51' Max Vel=6.75 fps Inflow=3.20 cfs 10,269 cf
15.0" Round Pipe n=0.013 L=109.0' S=0.0197 '/' Capacity=9.07 cfs Outflow=3.17 cfs 10,269 cf

Reach D14: TO DMH15 Avg. Flow Depth=0.96' Max Vel=6.18 fps Inflow=10.94 cfs 37,587 cf
30.0" Round Pipe n=0.013 L=390.0' S=0.0071 '/' Capacity=34.44 cfs Outflow=10.46 cfs 37,587 cf

Reach D15: TO DMH16 Avg. Flow Depth=0.99' Max Vel=6.22 fps Inflow=11.21 cfs 40,385 cf
30.0" Round Pipe n=0.013 L=232.0' S=0.0069 '/' Capacity=34.06 cfs Outflow=11.05 cfs 40,385 cf

Reach D16: TO BASIN#1 Avg. Flow Depth=0.97' Max Vel=6.24 fps Inflow=11.05 cfs 40,385 cf
30.0" Round Pipe n=0.013 L=71.0' S=0.0070 '/' Capacity=34.42 cfs Outflow=10.98 cfs 40,385 cf

Reach D6: TO DMH14 Avg. Flow Depth=0.00' Max Vel=0.00 fps
24.0" Round Pipe n=0.013 L=14.0' S=0.0071 '/' Capacity=19.12 cfs Outflow=0.00 cfs 0 cf

Reach D7: TO DMH8 Avg. Flow Depth=0.12' Max Vel=3.65 fps Inflow=0.19 cfs 599 cf
12.0" Round Pipe n=0.013 L=87.0' S=0.0328 '/' Capacity=6.45 cfs Outflow=0.19 cfs 599 cf

Reach D8: TO DMH9 Avg. Flow Depth=0.12' Max Vel=3.54 fps Inflow=0.19 cfs 599 cf
12.0" Round Pipe n=0.013 L=113.0' S=0.0301 '/' Capacity=6.18 cfs Outflow=0.19 cfs 599 cf

Reach D9: TO DMH10 Avg. Flow Depth=0.14' Max Vel=2.71 fps Inflow=0.19 cfs 599 cf
12.0" Round Pipe n=0.013 L=70.0' S=0.0143 '/' Capacity=4.26 cfs Outflow=0.18 cfs 599 cf

Reach DCB-R101: TO DMH-R100 Avg. Flow Depth=0.25' Max Vel=5.84 fps Inflow=0.88 cfs 2,734 cf
12.0" Round Pipe n=0.011 L=8.0' S=0.0250 '/' Capacity=6.66 cfs Outflow=0.88 cfs 2,734 cf

Reach DCB-R102: TO DMH-R101 Avg. Flow Depth=0.15' Max Vel=3.40 fps Inflow=0.25 cfs 865 cf
12.0" Round Pipe n=0.011 L=80.0' S=0.0150 '/' Capacity=5.16 cfs Outflow=0.25 cfs 865 cf

Reach DCB-S1: TO DMH-S1 Avg. Flow Depth=0.21' Max Vel=3.76 fps Inflow=0.46 cfs 1,420 cf
12.0" Round Pipe n=0.011 L=24.0' S=0.0125 '/' Capacity=4.71 cfs Outflow=0.45 cfs 1,420 cf

Reach DCB-S2: TO DMH-S1 Avg. Flow Depth=0.19' Max Vel=4.58 fps Inflow=0.46 cfs 1,429 cf
12.0" Round Pipe n=0.011 L=14.0' S=0.0214 '/' Capacity=6.16 cfs Outflow=0.46 cfs 1,429 cf

Reach DCB-S3: TO DMH-S1 Avg. Flow Depth=0.35' Max Vel=4.40 fps Inflow=1.11 cfs 3,507 cf
12.0" Round Pipe n=0.011 L=21.0' S=0.0095 '/' Capacity=4.11 cfs Outflow=1.10 cfs 3,507 cf

Reach DCB-S4: TO DMH-S1 Avg. Flow Depth=0.28' Max Vel=6.82 fps Inflow=1.25 cfs 4,023 cf
12.0" Round Pipe n=0.011 L=7.0' S=0.0286 '/' Capacity=7.12 cfs Outflow=1.25 cfs 4,023 cf

Reach DCB1: TO DMH#1 Avg. Flow Depth=0.15' Max Vel=2.33 fps Inflow=0.17 cfs 543 cf
12.0" Round Pipe n=0.013 L=61.0' S=0.0098 '/' Capacity=3.53 cfs Outflow=0.17 cfs 543 cf

Reach DCB2: TO DMH#2 Avg. Flow Depth=0.28' Max Vel=3.85 fps Inflow=0.69 cfs 2,140 cf
12.0" Round Pipe n=0.013 L=30.0' S=0.0133 '/' Capacity=4.11 cfs Outflow=0.68 cfs 2,140 cf

Reach DCB3: TO DMH#3 Avg. Flow Depth=0.36' Max Vel=3.05 fps Inflow=0.79 cfs 2,478 cf
12.0" Round Pipe n=0.013 L=48.0' S=0.0062 '/' Capacity=2.82 cfs Outflow=0.78 cfs 2,478 cf

Reach DCB30: TO BASIN Avg. Flow Depth=0.25' Max Vel=3.98 fps Inflow=0.70 cfs 5,503 cf
15.0" Round Pipe n=0.013 L=140.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=0.70 cfs 5,503 cf

Reach DCB4: TO DMH#4 Avg. Flow Depth=0.20' Max Vel=2.61 fps Inflow=0.30 cfs 937 cf
12.0" Round Pipe n=0.013 L=23.0' S=0.0087 '/' Capacity=3.32 cfs Outflow=0.30 cfs 937 cf

Reach DCB5: TO DMH#5 Avg. Flow Depth=0.33' Max Vel=3.60 fps Inflow=0.83 cfs 2,700 cf
12.0" Round Pipe n=0.013 L=21.0' S=0.0095 '/' Capacity=3.48 cfs Outflow=0.82 cfs 2,700 cf

Reach DCB6: TO DMH#6 Avg. Flow Depth=0.32' Max Vel=4.69 fps Inflow=1.04 cfs 3,245 cf
12.0" Round Pipe n=0.013 L=6.0' S=0.0167 '/' Capacity=4.60 cfs Outflow=1.04 cfs 3,245 cf

Reach DCBR100: TO DMH R100 Avg. Flow Depth=0.23' Max Vel=3.36 fps Inflow=0.48 cfs 1,495 cf
12.0" Round Pipe n=0.011 L=162.0' S=0.0086 '/' Capacity=3.91 cfs Outflow=0.46 cfs 1,495 cf

Reach DCBS10: TO DMH-S4 Avg. Flow Depth=0.08' Max Vel=4.50 fps Inflow=0.14 cfs 463 cf
12.0" Round Pipe n=0.011 L=9.0' S=0.0556 '/' Capacity=9.92 cfs Outflow=0.14 cfs 463 cf

Reach DCBS5: TO DMH-S8 Avg. Flow Depth=0.23' Max Vel=5.25 fps Inflow=0.73 cfs 2,270 cf
12.0" Round Pipe n=0.011 L=23.0' S=0.0217 '/' Capacity=6.21 cfs Outflow=0.72 cfs 2,270 cf

Reach DCBS6: TO DMH-S8 Avg. Flow Depth=0.23' Max Vel=6.26 fps Inflow=0.86 cfs 2,751 cf
12.0" Round Pipe n=0.011 L=16.0' S=0.0313 '/' Capacity=7.44 cfs Outflow=0.86 cfs 2,751 cf

Reach DCBS7: TO DMH-S6 Avg. Flow Depth=0.24' Max Vel=4.53 fps Inflow=0.67 cfs 2,420 cf
12.0" Round Pipe n=0.011 L=20.0' S=0.0150 '/' Capacity=5.16 cfs Outflow=0.67 cfs 2,420 cf

Reach DCBS8: TO DMH-S6 Avg. Flow Depth=0.16' Max Vel=4.89 fps Inflow=0.39 cfs 1,234 cf
12.0" Round Pipe n=0.011 L=10.0' S=0.0300 '/' Capacity=7.29 cfs Outflow=0.39 cfs 1,234 cf

Reach DCBS9: TO DMH-S4 Avg. Flow Depth=0.15' Max Vel=4.62 fps Inflow=0.35 cfs 1,213 cf
12.0" Round Pipe n=0.011 L=18.0' S=0.0278 '/' Capacity=7.02 cfs Outflow=0.35 cfs 1,213 cf

Reach DMH-R101: TO DMH-S1 Avg. Flow Depth=0.39' Max Vel=4.67 fps Inflow=1.55 cfs 5,095 cf
15.0" Round Pipe n=0.011 L=265.0' S=0.0091 '/' Capacity=7.27 cfs Outflow=1.47 cfs 5,095 cf

Reach DMH-S1: TO DMH-S2 Avg. Flow Depth=0.50' Max Vel=4.45 fps Inflow=2.30 cfs 7,944 cf
18.0" Round Pipe n=0.011 L=279.0' S=0.0061 '/' Capacity=9.69 cfs Outflow=2.22 cfs 7,944 cf

Reach DMH-S2: TO DMH-S3 Avg. Flow Depth=0.59' Max Vel=6.83 fps Inflow=4.38 cfs 15,475 cf
18.0" Round Pipe n=0.011 L=42.0' S=0.0119 '/' Capacity=13.55 cfs Outflow=4.36 cfs 15,475 cf

Reach DMH-S3: TO FE-S1 Avg. Flow Depth=0.58' Max Vel=6.84 fps Inflow=4.36 cfs 15,475 cf
18.0" Round Pipe n=0.011 L=25.0' S=0.0120 '/' Capacity=13.60 cfs Outflow=4.36 cfs 15,475 cf

Reach DMH1: TO DMH#2 Avg. Flow Depth=0.13' Max Vel=2.99 fps Inflow=0.17 cfs 543 cf
12.0" Round Pipe n=0.013 L=65.0' S=0.0200 '/' Capacity=5.04 cfs Outflow=0.17 cfs 543 cf

Reach DMH2: TO DMH#3 Avg. Flow Depth=0.30' Max Vel=4.24 fps Inflow=0.84 cfs 2,682 cf
12.0" Round Pipe n=0.013 L=111.0' S=0.0144 '/' Capacity=4.28 cfs Outflow=0.83 cfs 2,682 cf

Reach DMH21: TO DMH#22 Avg. Flow Depth=0.27' Max Vel=4.76 fps Inflow=0.83 cfs 2,798 cf
12.0" Round Pipe n=0.013 L=168.0' S=0.0202 '/' Capacity=5.07 cfs Outflow=0.81 cfs 2,798 cf

Reach DMH22: TO DMH#15 Avg. Flow Depth=0.19' Max Vel=7.62 fps Inflow=0.81 cfs 2,798 cf
12.0" Round Pipe n=0.013 L=9.0' S=0.0778 '/' Capacity=9.94 cfs Outflow=0.81 cfs 2,798 cf

Reach DMH3: TO DMH#7 Avg. Flow Depth=0.53' Max Vel=7.42 fps Inflow=3.67 cfs 12,042 cf
15.0" Round Pipe n=0.013 L=13.0' S=0.0231 '/' Capacity=9.81 cfs Outflow=3.67 cfs 12,042 cf

Reach DMH4: TO DMH5 Avg. Flow Depth=0.21' Max Vel=2.52 fps Inflow=0.30 cfs 937 cf
12.0" Round Pipe n=0.013 L=77.0' S=0.0078 '/' Capacity=3.15 cfs Outflow=0.29 cfs 937 cf

Reach DMH5: TO DMH-6 Avg. Flow Depth=0.42' Max Vel=3.59 fps Inflow=1.11 cfs 3,637 cf
12.0" Round Pipe n=0.013 L=108.0' S=0.0074 '/' Capacity=3.07 cfs Outflow=1.09 cfs 3,637 cf

Reach DMH6: TO DMH#3 Avg. Flow Depth=0.48' Max Vel=4.83 fps Inflow=2.11 cfs 6,882 cf
15.0" Round Pipe n=0.013 L=150.0' S=0.0107 '/' Capacity=6.67 cfs Outflow=2.07 cfs 6,882 cf

Reach DMH7: TO UGS Avg. Flow Depth=0.55' Max Vel=7.04 fps Inflow=3.67 cfs 12,042 cf
15.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/' Capacity=9.14 cfs Outflow=3.67 cfs 12,042 cf

Reach DMH8: TO FE#B1 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0 cf
12.0" Round Pipe n=0.013 L=50.0' S=0.0180 '/' Capacity=4.78 cfs Outflow=0.00 cfs 0 cf

Reach DMHd1: TO DMH#8 Avg. Flow Depth=0.23' Max Vel=3.35 fps Inflow=0.46 cfs 1,596 cf
12.0" Round Pipe n=0.013 L=82.0' S=0.0122 '/' Capacity=3.93 cfs Outflow=0.45 cfs 1,596 cf

Reach DMHD2: TO DMH#7 Avg. Flow Depth=0.46' Max Vel=5.06 fps Inflow=2.04 cfs 6,913 cf
15.0" Round Pipe n=0.013 L=8.0' S=0.0125 '/' Capacity=7.22 cfs Outflow=2.04 cfs 6,913 cf

Reach DMHd3: TO DMH#2 Avg. Flow Depth=0.13' Max Vel=4.98 fps Inflow=0.31 cfs 1,047 cf
12.0" Round Pipe n=0.013 L=27.0' S=0.0519 '/' Capacity=8.11 cfs Outflow=0.31 cfs 1,047 cf

Reach DMHD4: TO DMH#2 Avg. Flow Depth=0.24' Max Vel=2.70 fps Inflow=0.39 cfs 1,287 cf
12.0" Round Pipe n=0.013 L=133.0' S=0.0075 '/' Capacity=3.09 cfs Outflow=0.38 cfs 1,287 cf

Reach DMHD5: TO DMH#2 Avg. Flow Depth=0.37' Max Vel=3.31 fps Inflow=0.86 cfs 2,850 cf
12.0" Round Pipe n=0.013 L=70.0' S=0.0071 '/' Capacity=3.01 cfs Outflow=0.85 cfs 2,850 cf

Reach DMHD6: TO DMH#5 Avg. Flow Depth=0.25' Max Vel=2.63 fps Inflow=0.41 cfs 1,348 cf
12.0" Round Pipe n=0.013 L=59.0' S=0.0068 '/' Capacity=2.93 cfs Outflow=0.41 cfs 1,348 cf

Reach DMHD7: TO UGS#1 Avg. Flow Depth=0.45' Max Vel=5.06 fps Inflow=2.04 cfs 6,913 cf
15.0" Round Pipe n=0.013 L=12.0' S=0.0125 '/' Capacity=7.22 cfs Outflow=2.04 cfs 6,913 cf

Reach DMHD8: TO DMH#2 Avg. Flow Depth=0.31' Max Vel=4.02 fps Inflow=0.82 cfs 2,776 cf
12.0" Round Pipe n=0.013 L=39.0' S=0.0128 '/' Capacity=4.03 cfs Outflow=0.81 cfs 2,776 cf

Reach DMHR100: TO DMH-R101 Avg. Flow Depth=0.39' Max Vel=4.78 fps Inflow=1.33 cfs 4,230 cf
12.0" Round Pipe n=0.011 L=188.0' S=0.0101 '/' Capacity=4.23 cfs Outflow=1.30 cfs 4,230 cf

Reach DMHS10: TO DMH-S11 Avg. Flow Depth=0.64' Max Vel=6.26 fps Inflow=5.45 cfs 18,734 cf
24.0" Round Pipe n=0.013 L=240.0' S=0.0117 '/' Capacity=24.43 cfs Outflow=5.32 cfs 18,734 cf

Reach DMHS11: TO DMH-D14 Avg. Flow Depth=0.73' Max Vel=5.12 fps Inflow=5.32 cfs 18,734 cf
24.0" Round Pipe n=0.013 L=130.0' S=0.0069 '/' Capacity=18.82 cfs Outflow=5.19 cfs 18,734 cf

Reach DMHS4: TO DMH-S5 Avg. Flow Depth=0.21' Max Vel=4.10 fps Inflow=0.48 cfs 1,676 cf
12.0" Round Pipe n=0.011 L=126.0' S=0.0151 '/' Capacity=5.17 cfs Outflow=0.47 cfs 1,676 cf

Reach DMHS5: TO DMH-S6 Avg. Flow Depth=0.20' Max Vel=4.06 fps Inflow=0.47 cfs 1,676 cf
12.0" Round Pipe n=0.011 L=126.0' S=0.0151 '/' Capacity=5.17 cfs Outflow=0.46 cfs 1,676 cf

Reach DMHS6: TO DMH-S7 Avg. Flow Depth=0.29' Max Vel=6.62 fps Inflow=1.46 cfs 5,330 cf
15.0" Round Pipe n=0.011 L=20.0' S=0.0250 '/' Capacity=12.07 cfs Outflow=1.45 cfs 5,330 cf

Reach DMHS7: TO DMH-S9 Avg. Flow Depth=0.45' Max Vel=7.51 fps Inflow=2.98 cfs 10,351 cf
15.0" Round Pipe n=0.011 L=20.0' S=0.0200 '/' Capacity=10.80 cfs Outflow=2.97 cfs 10,351 cf

Reach DMHS8: TO DMH-S7 Avg. Flow Depth=0.41' Max Vel=4.44 fps Inflow=1.58 cfs 5,021 cf
15.0" Round Pipe n=0.011 L=184.0' S=0.0076 '/' Capacity=6.66 cfs Outflow=1.54 cfs 5,021 cf

Reach DMHS9: TO DMH-S10 Avg. Flow Depth=0.62' Max Vel=4.28 fps Inflow=2.97 cfs 10,351 cf
18.0" Round Pipe n=0.013 L=137.0' S=0.0062 '/' Capacity=8.27 cfs Outflow=2.90 cfs 10,351 cf

Reach DP#1: DP#1 Inflow=36.26 cfs 203,201 cf
Outflow=36.26 cfs 203,201 cf

Reach DP#5: DITCH Inflow=0.26 cfs 863 cf
Outflow=0.26 cfs 863 cf

Reach DRIP: TO YD#1 Inflow=0.11 cfs 381 cf
Outflow=0.11 cfs 381 cf

Reach R200: DP#2 Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Reach R300: DP#3 Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Reach R400: DP#4 Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Reach RF-1: TO DMH#3 Avg. Flow Depth=0.17' Max Vel=2.40 fps Inflow=0.14 cfs 493 cf
6.0" Round Pipe n=0.013 L=48.0' S=0.0104 '/' Capacity=0.57 cfs Outflow=0.14 cfs 493 cf

Reach RF-2: TO DMH#3 Avg. Flow Depth=0.15' Max Vel=2.40 fps Inflow=0.12 cfs 427 cf
6.0" Round Pipe n=0.012 L=61.0' S=0.0098 '/' Capacity=0.60 cfs Outflow=0.12 cfs 427 cf

Reach RF3: TO DMH#3 Avg. Flow Depth=0.11' Max Vel=2.03 fps Inflow=0.06 cfs 215 cf
6.0" Round Pipe n=0.012 L=94.0' S=0.0106 '/' Capacity=0.63 cfs Outflow=0.06 cfs 215 cf

Reach YD1: TO CO#1 Avg. Flow Depth=0.11' Max Vel=3.53 fps Inflow=0.14 cfs 517 cf
10.0" Round Pipe n=0.010 L=14.0' S=0.0214 '/' Capacity=4.17 cfs Outflow=0.14 cfs 517 cf

Reach YD2: TO D14 Avg. Flow Depth=0.13' Max Vel=5.93 fps Inflow=0.34 cfs 1,069 cf
10.0" Round Pipe n=0.010 L=9.0' S=0.0444 '/' Capacity=6.00 cfs Outflow=0.34 cfs 1,069 cf

Pond P1: BASIN#1 Peak Elev=335.47' Storage=8,655 cf Inflow=11.17 cfs 45,895 cf
Discarded=3.88 cfs 45,895 cf Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=3.88 cfs 45,895 cf

Pond P2: SETTLING POND Peak Elev=343.00' Storage=0 cf Inflow=0.00 cfs 20 cf
Outflow=0.00 cfs 20 cf

Pond UGS-B: TO DMH#8 Peak Elev=350.39' Storage=0.068 af Inflow=3.67 cfs 12,042 cf
Discarded=0.87 cfs 12,042 cf Primary=0.00 cfs 0 cf Outflow=0.87 cfs 12,042 cf

Pond USGD1: TO TEMP SETTLING BASIN Peak Elev=350.45' Storage=0.139 af Inflow=2.04 cfs 6,913 cf
Outflow=0.04 cfs 1,005 cf

Total Runoff Area = 3,429,734 sf Runoff Volume = 267,932 cf Average Runoff Depth = 0.94"
83.31% Pervious = 2,857,173 sf 16.69% Impervious = 572,561 sf

Summary for Subcatchment 2S: TO DCB#4

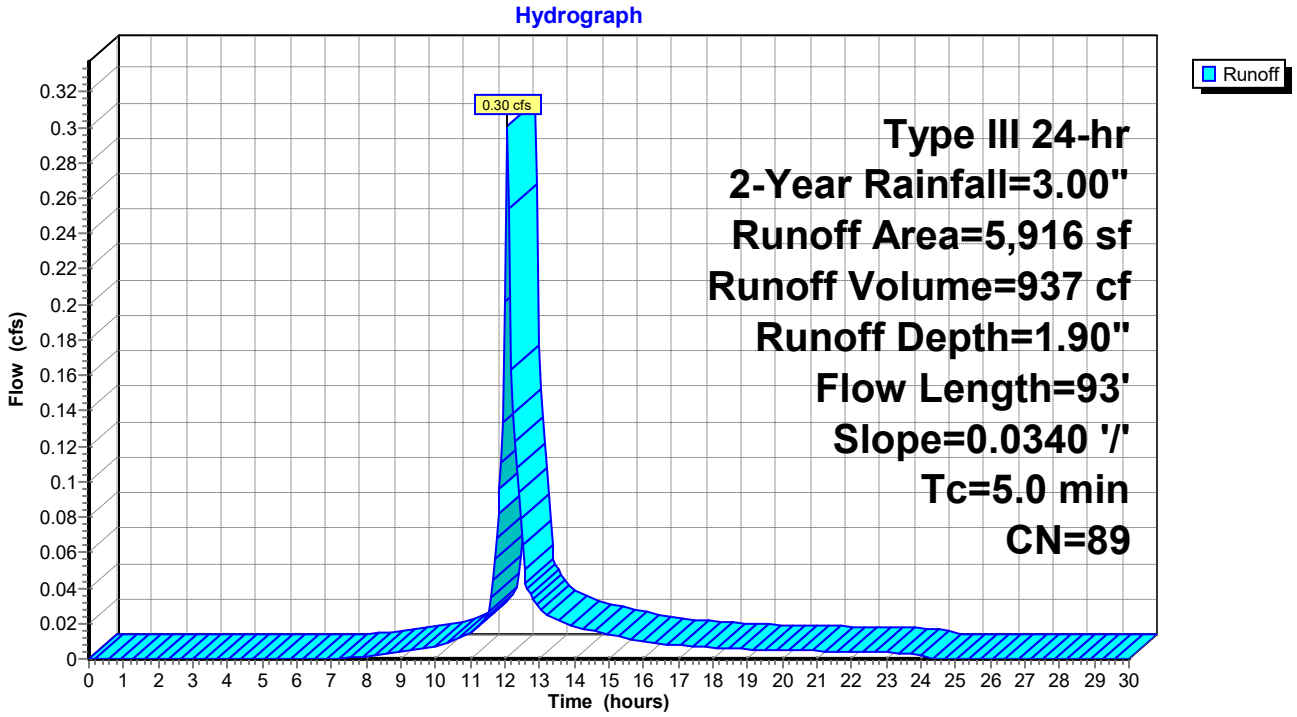
Runoff = 0.30 cfs @ 12.08 hrs, Volume= 937 cf, Depth= 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
919	39	>75% Grass cover, Good, HSG A
4,997	98	Paved parking, HSG A
5,916	89	Weighted Average
919		15.53% Pervious Area
4,997		84.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0340	1.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	43	0.0340	3.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	93	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: TO DCB#4



Summary for Subcatchment 3S: TO DCB#1

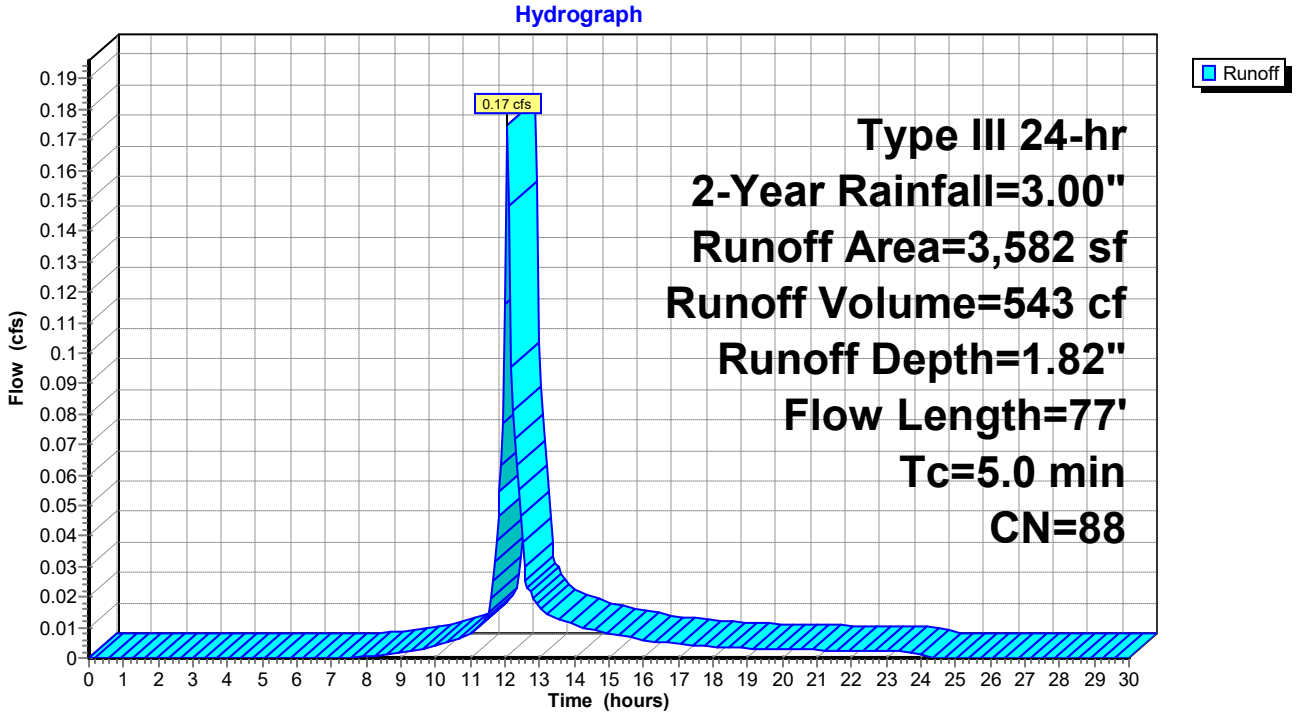
Runoff = 0.17 cfs @ 12.08 hrs, Volume= 543 cf, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
615	39	>75% Grass cover, Good, HSG A
2,967	98	Paved parking, HSG A
3,582	88	Weighted Average
615		17.17% Pervious Area
2,967		82.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.9	44	0.0100	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	27	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	77	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: TO DCB#1



Summary for Subcatchment P-D1: TO CB-D1

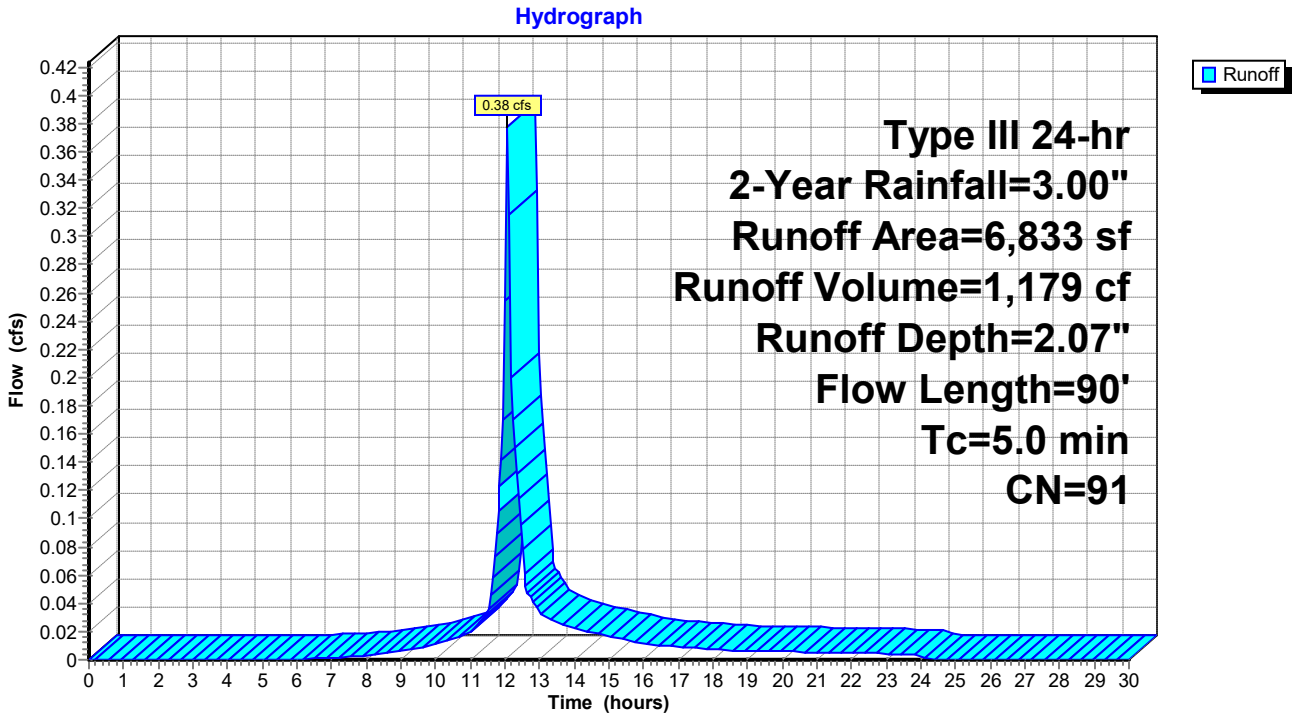
Runoff = 0.38 cfs @ 12.07 hrs, Volume= 1,179 cf, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
762	39	>75% Grass cover, Good, HSG A
6,071	98	Paved parking, HSG A
6,833	91	Weighted Average
762		11.15% Pervious Area
6,071		88.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	16	0.0830	1.63		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	19	0.0100	0.72		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	15	0.0250	1.00		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	40	0.0250	3.21		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	90	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D1: TO CB-D1



Summary for Subcatchment P-D10*: TO CB-D8

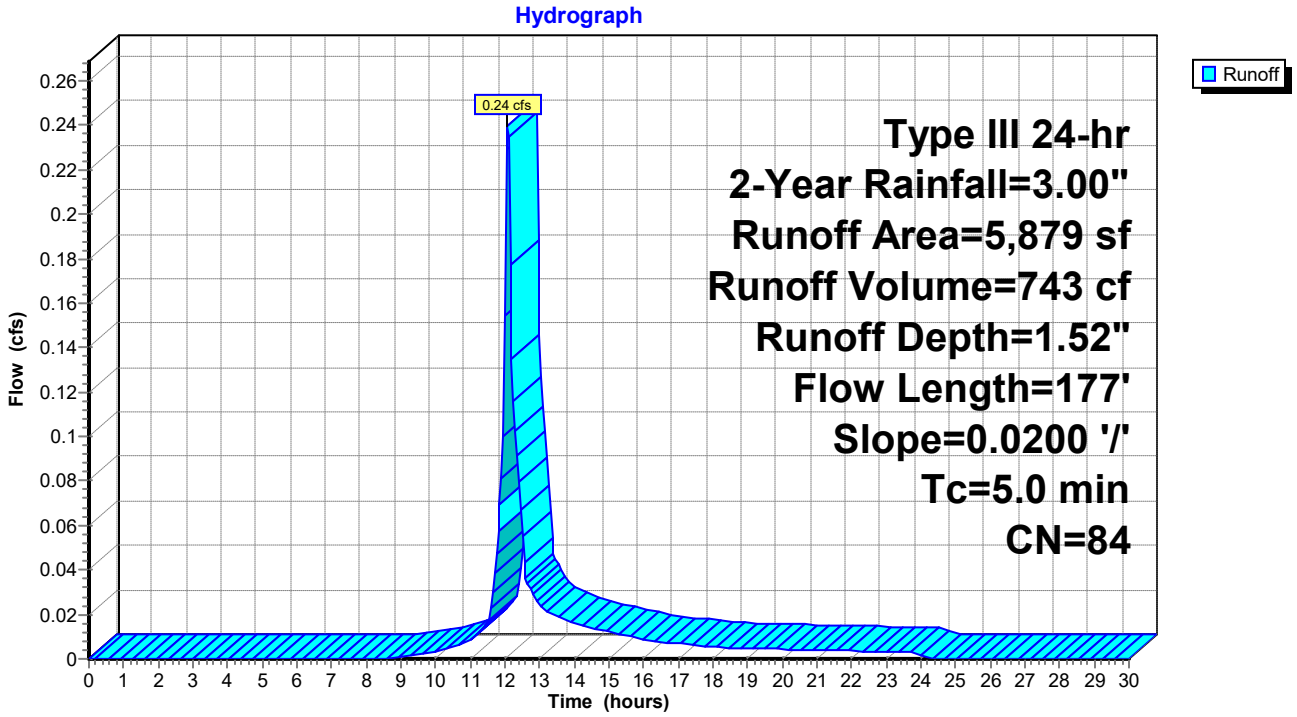
Runoff = 0.24 cfs @ 12.08 hrs, Volume= 743 cf, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
1,363	39	>75% Grass cover, Good, HSG A
4,516	98	Paved parking, HSG A
5,879	84	Weighted Average
1,363		23.18% Pervious Area
4,516		76.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	127	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	177	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D10*: TO CB-D8



Summary for Subcatchment P-D11*: TO CB-D9

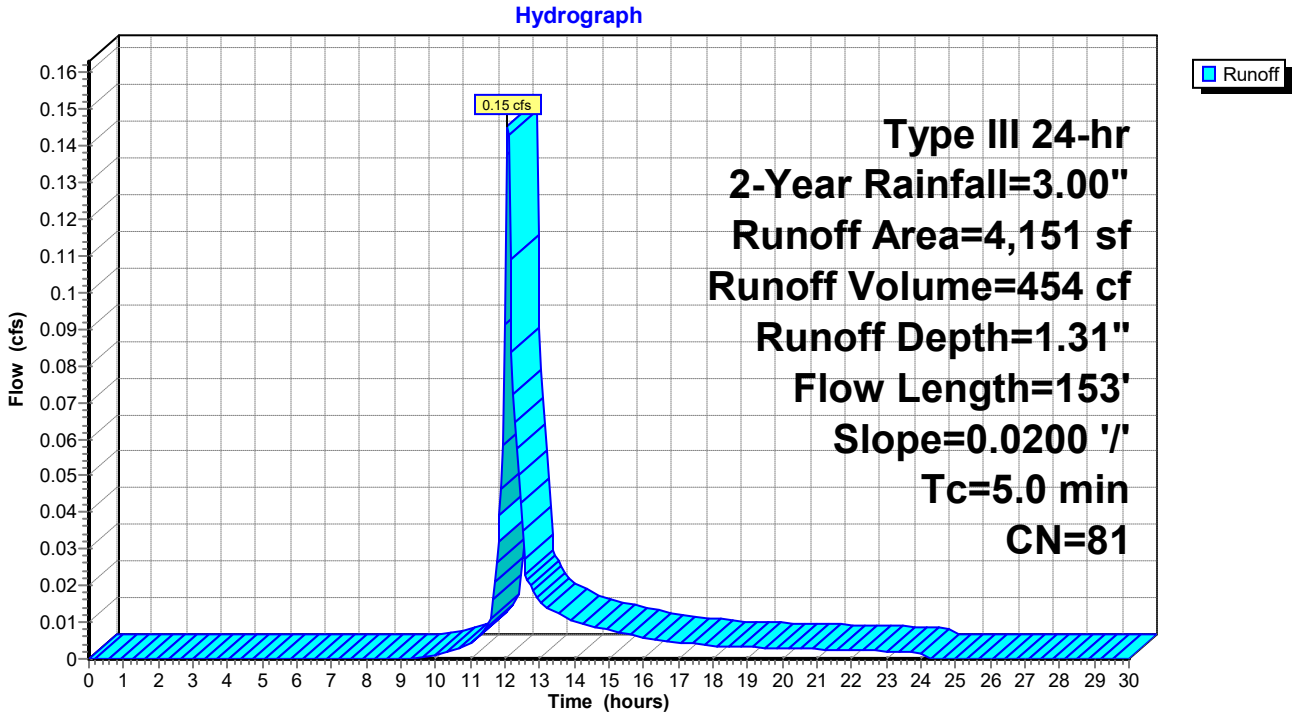
Runoff = 0.15 cfs @ 12.08 hrs, Volume= 454 cf, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
1,166	39	>75% Grass cover, Good, HSG A
2,985	98	Paved parking, HSG A
4,151	81	Weighted Average
1,166		28.09% Pervious Area
2,985		71.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	153	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D11*: TO CB-D9



Summary for Subcatchment P-D12*: TO CB-D5

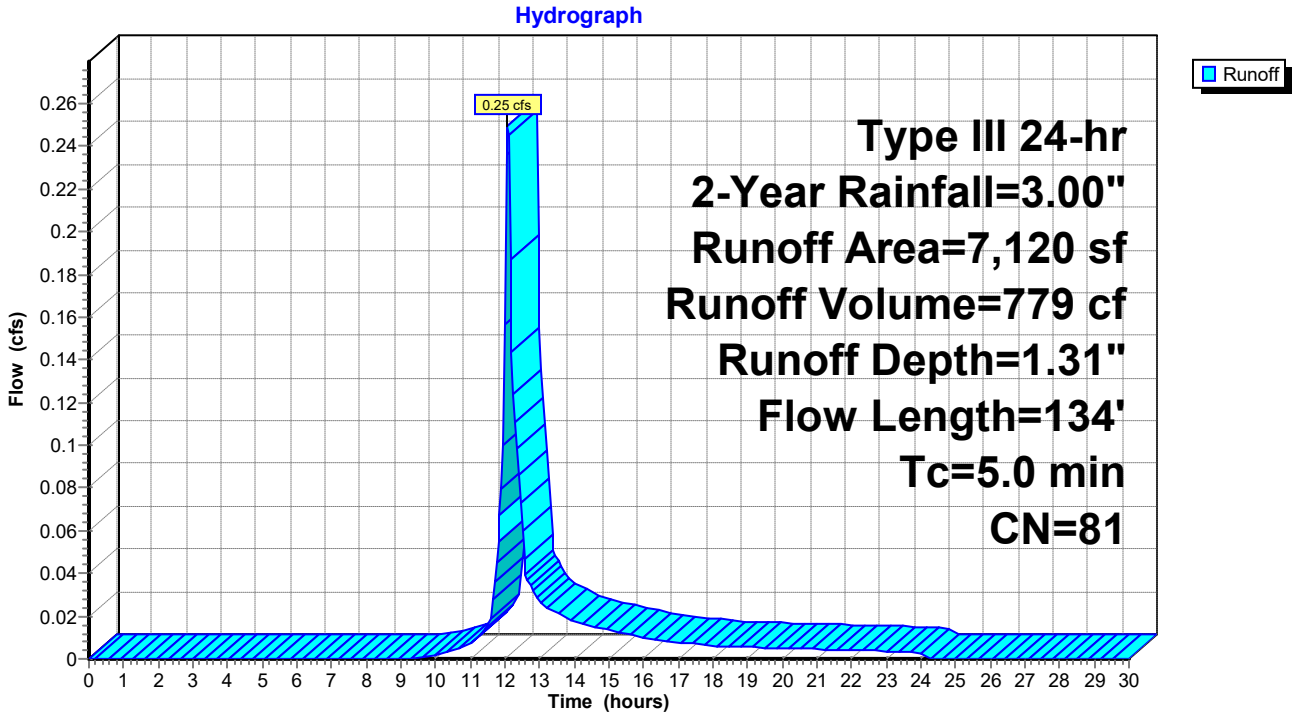
Runoff = 0.25 cfs @ 12.08 hrs, Volume= 779 cf, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
2,024	39	>75% Grass cover, Good, HSG A
5,096	98	Paved parking, HSG A
7,120	81	Weighted Average
2,024		28.43% Pervious Area
5,096		71.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	84	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	134	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D12*: TO CB-D5



Summary for Subcatchment P-D2: TO CB-D2

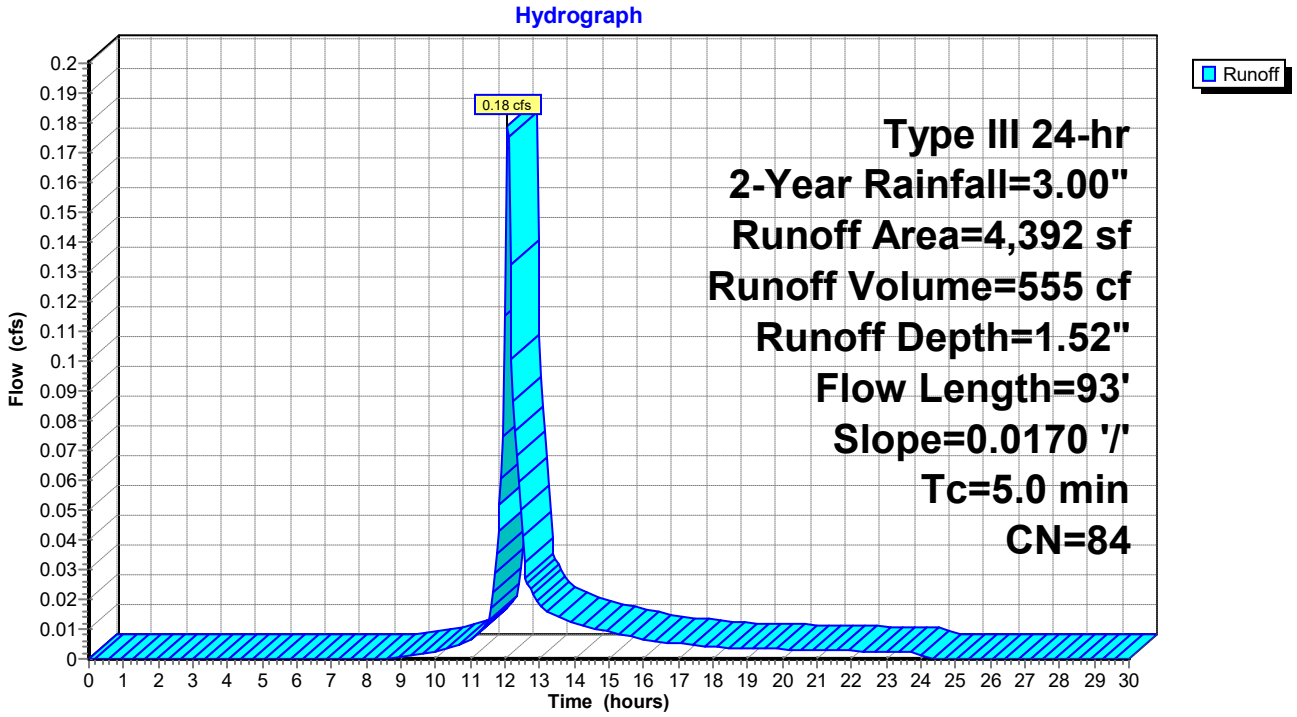
Runoff = 0.18 cfs @ 12.08 hrs, Volume= 555 cf, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
1,030	39	>75% Grass cover, Good, HSG A
3,362	98	Paved parking, HSG A
4,392	84	Weighted Average
1,030		23.45% Pervious Area
3,362		76.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	50	0.0170	1.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	43	0.0170	2.65		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	93	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D2: TO CB-D2



Summary for Subcatchment P-D3: TO CB-D3

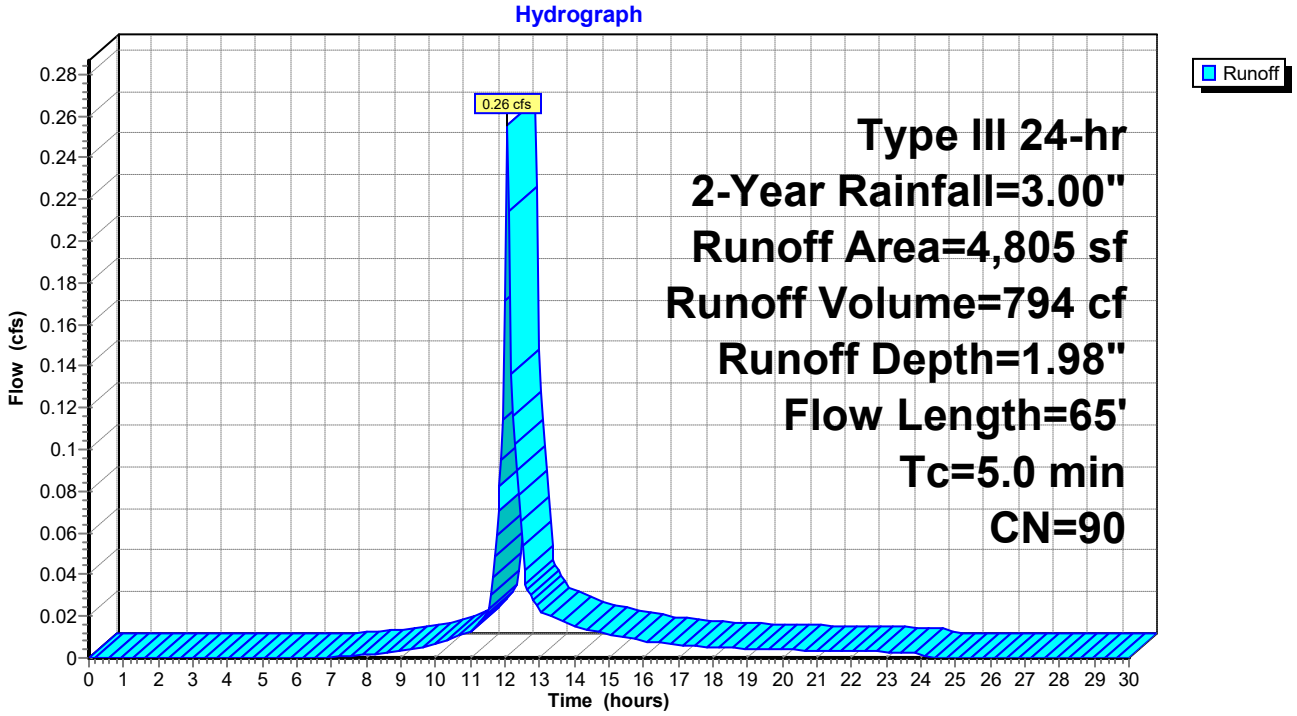
Runoff = 0.26 cfs @ 12.07 hrs, Volume= 794 cf, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
613	39	>75% Grass cover, Good, HSG A
4,192	98	Paved parking, HSG A
4,805	90	Weighted Average
613		12.76% Pervious Area
4,192		87.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	8	0.0100	0.61		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	42	0.0250	1.22		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.1	15	0.0250	3.21		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	65	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D3: TO CB-D3



Summary for Subcatchment P-D4*: TO CB-D4

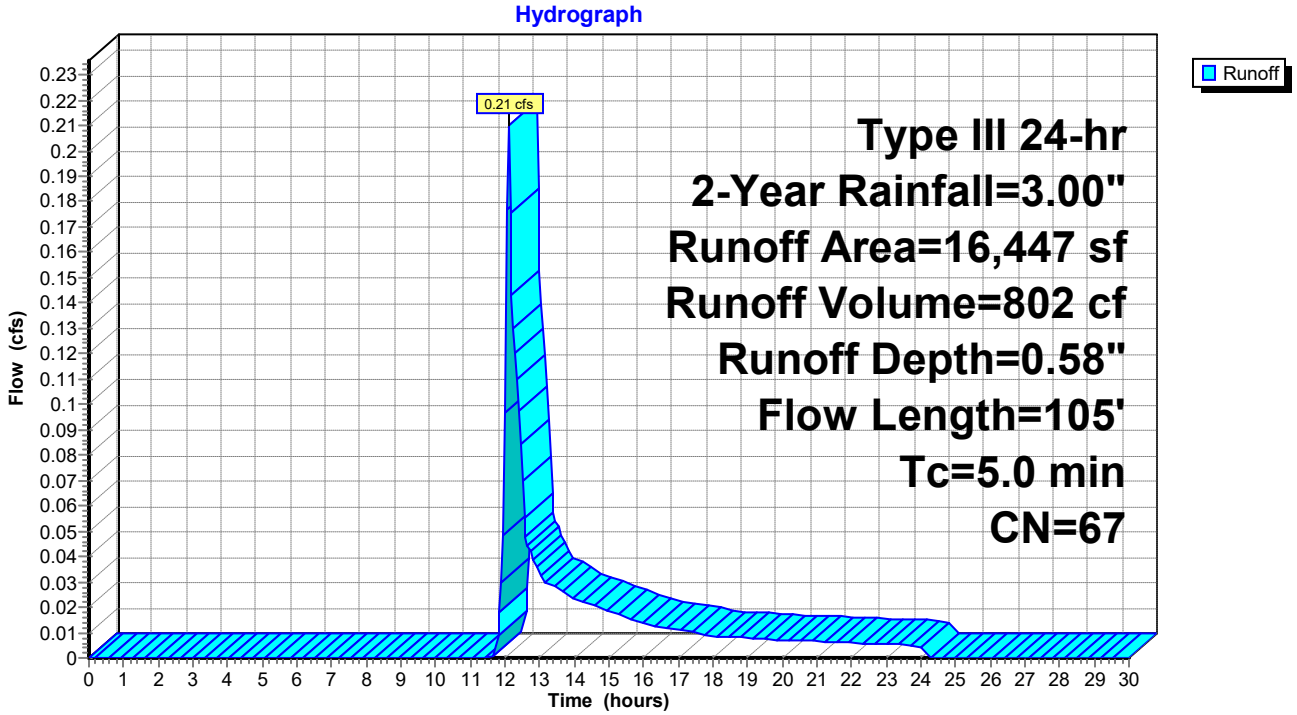
Runoff = 0.21 cfs @ 12.10 hrs, Volume= 802 cf, Depth= 0.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
8,595	39	>75% Grass cover, Good, HSG A
7,852	98	Paved parking, HSG A
16,447	67	Weighted Average
8,595		52.26% Pervious Area
7,852		47.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	43	0.0800	0.24		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	7	0.0100	0.59		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	55	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.7	105	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D4*: TO CB-D4



Summary for Subcatchment P-D5*: TO CB-D6

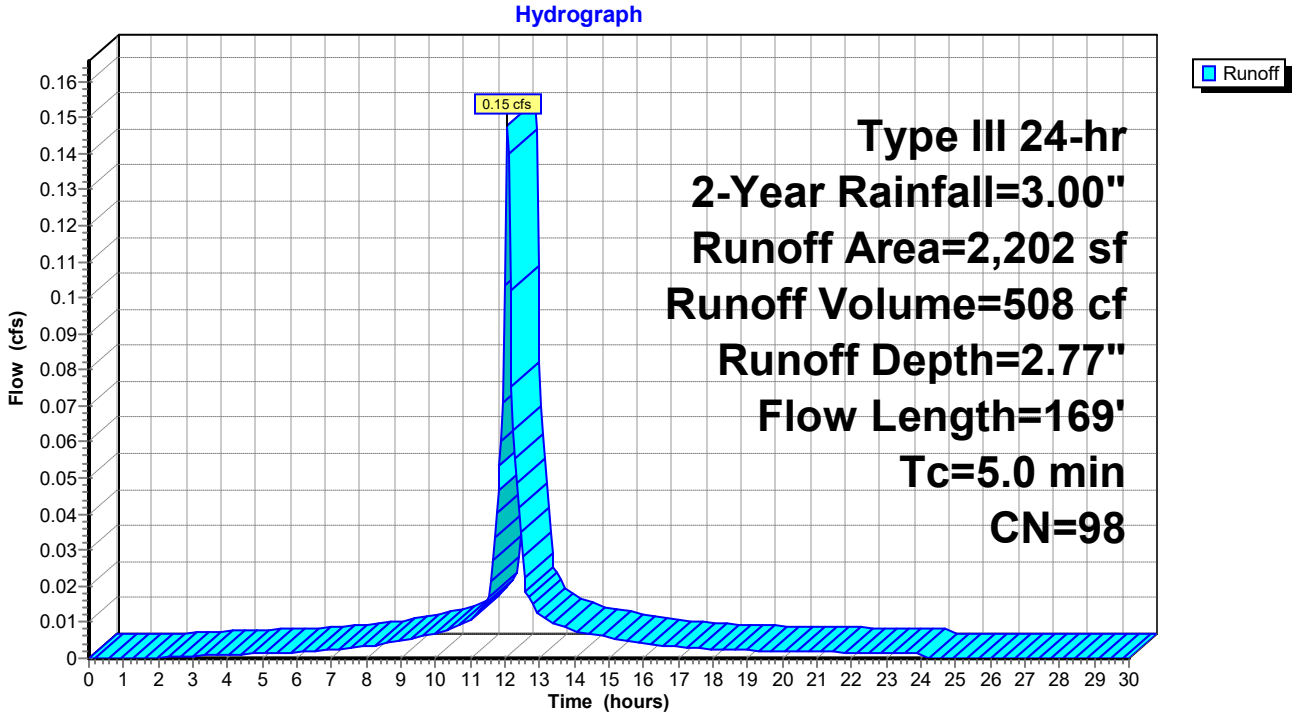
Runoff = 0.15 cfs @ 12.07 hrs, Volume= 508 cf, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
2,202	98	Paved parking, HSG A
2,202		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.95		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	32	0.0190	1.04		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	119	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	169	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D5*: TO CB-D6



Summary for Subcatchment P-D6: TO CB-D7

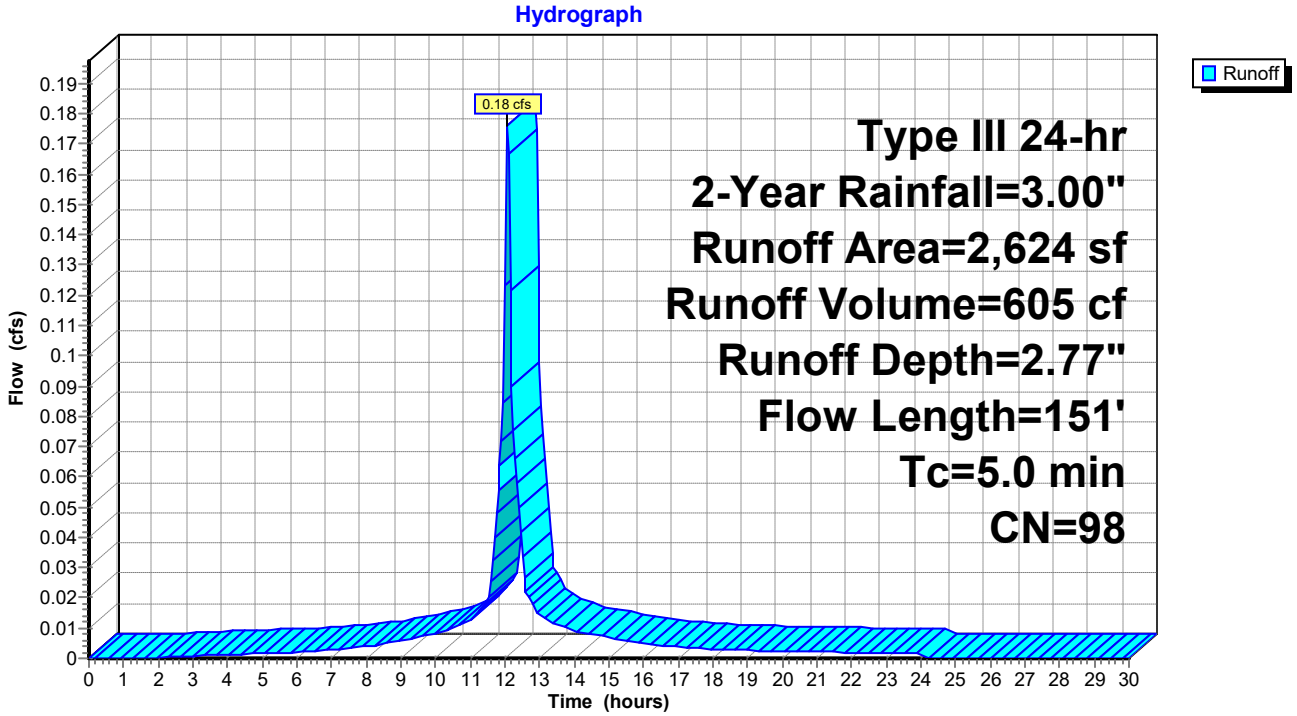
Runoff = 0.18 cfs @ 12.07 hrs, Volume= 605 cf, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
2,624	98	Paved parking, HSG A
2,624		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.95		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	32	0.0190	1.04		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	101	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	151	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D6: TO CB-D7



Summary for Subcatchment P-D7: TO ROOF DRAIN

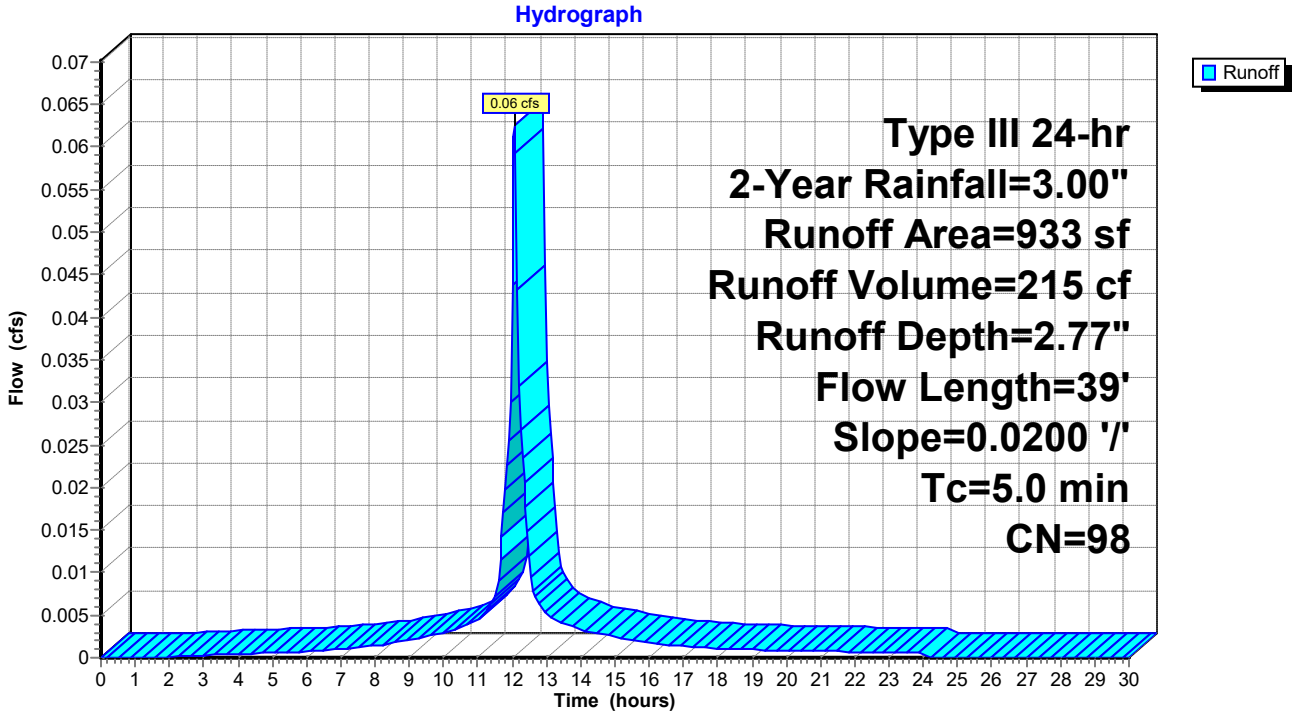
Runoff = 0.06 cfs @ 12.07 hrs, Volume= 215 cf, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
933	98	Paved parking, HSG A
933		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D7: TO ROOF DRAIN



Summary for Subcatchment P-D8: TO ROOF DRAIN

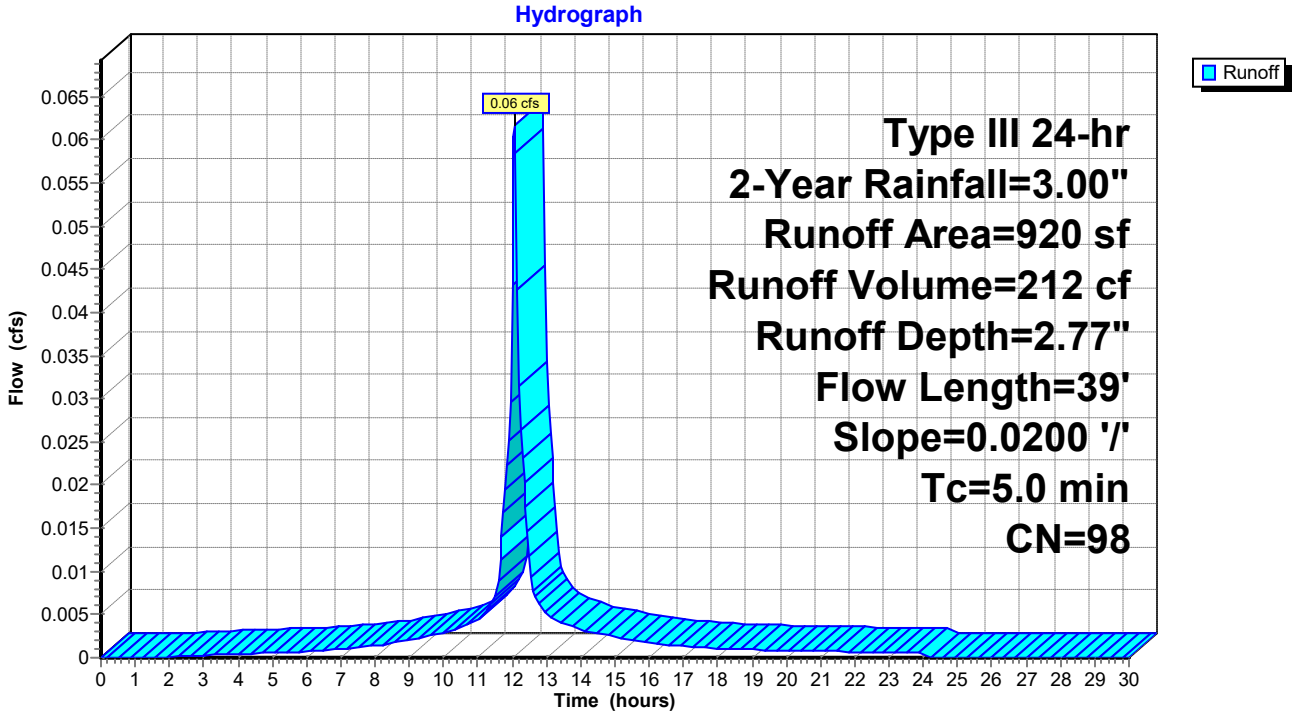
Runoff = 0.06 cfs @ 12.07 hrs, Volume= 212 cf, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
920	98	Paved parking, HSG A
920		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D8: TO ROOF DRAIN



Summary for Subcatchment P-D9: TO ROOF DRAIN

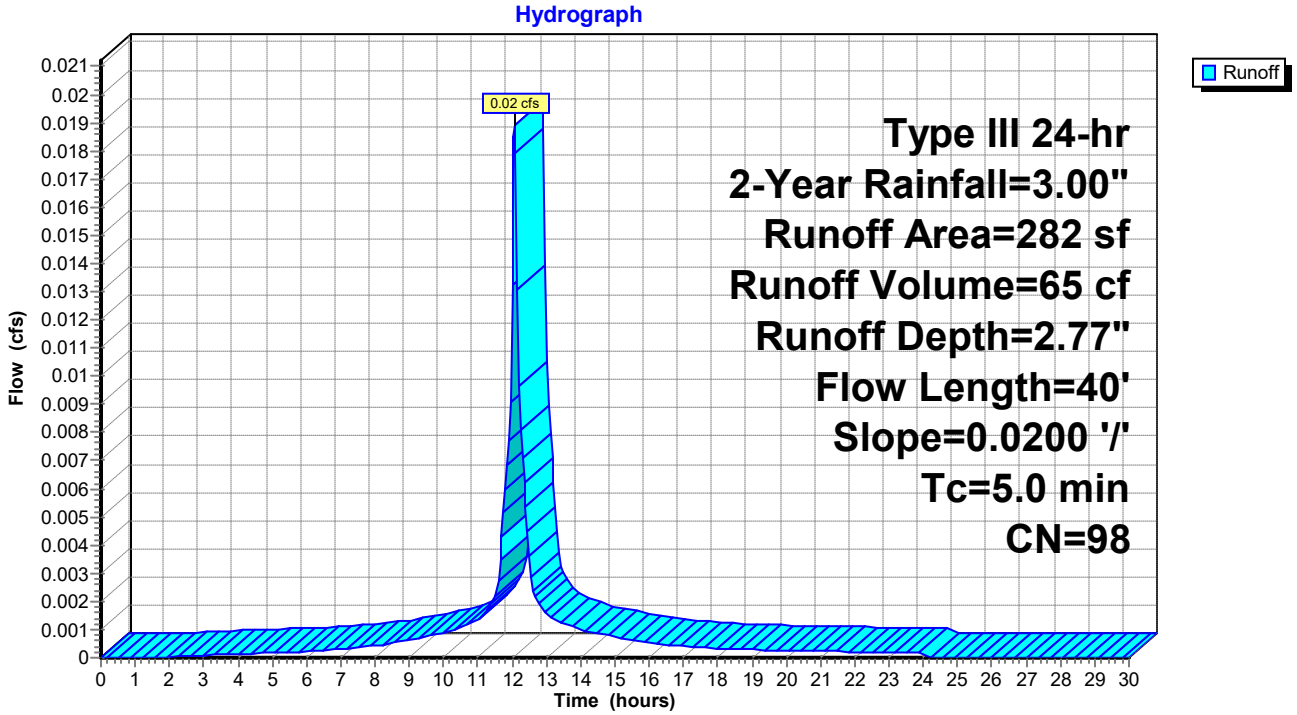
Runoff = 0.02 cfs @ 12.07 hrs, Volume= 65 cf, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
282	98	Paved parking, HSG A
282		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.11		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	40	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D9: TO ROOF DRAIN



Summary for Subcatchment P-S106: TO DCB-R102

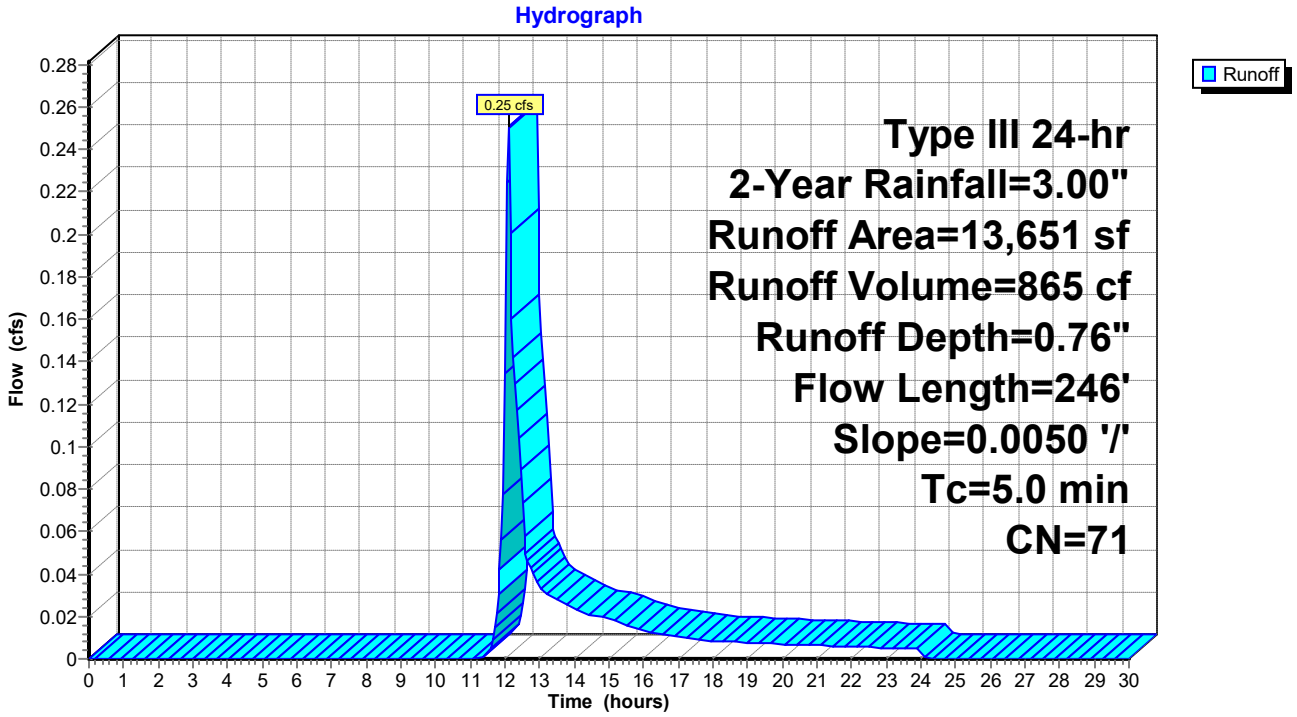
Runoff = 0.25 cfs @ 12.09 hrs, Volume= 865 cf, Depth= 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
6,360	39	>75% Grass cover, Good, HSG A
7,291	98	Paved parking, HSG A
13,651	71	Weighted Average
6,360		46.59% Pervious Area
7,291		53.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.3	196	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.6	246	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S106: TO DCB-R102



Summary for Subcatchment P-S107: TO DCB-R101

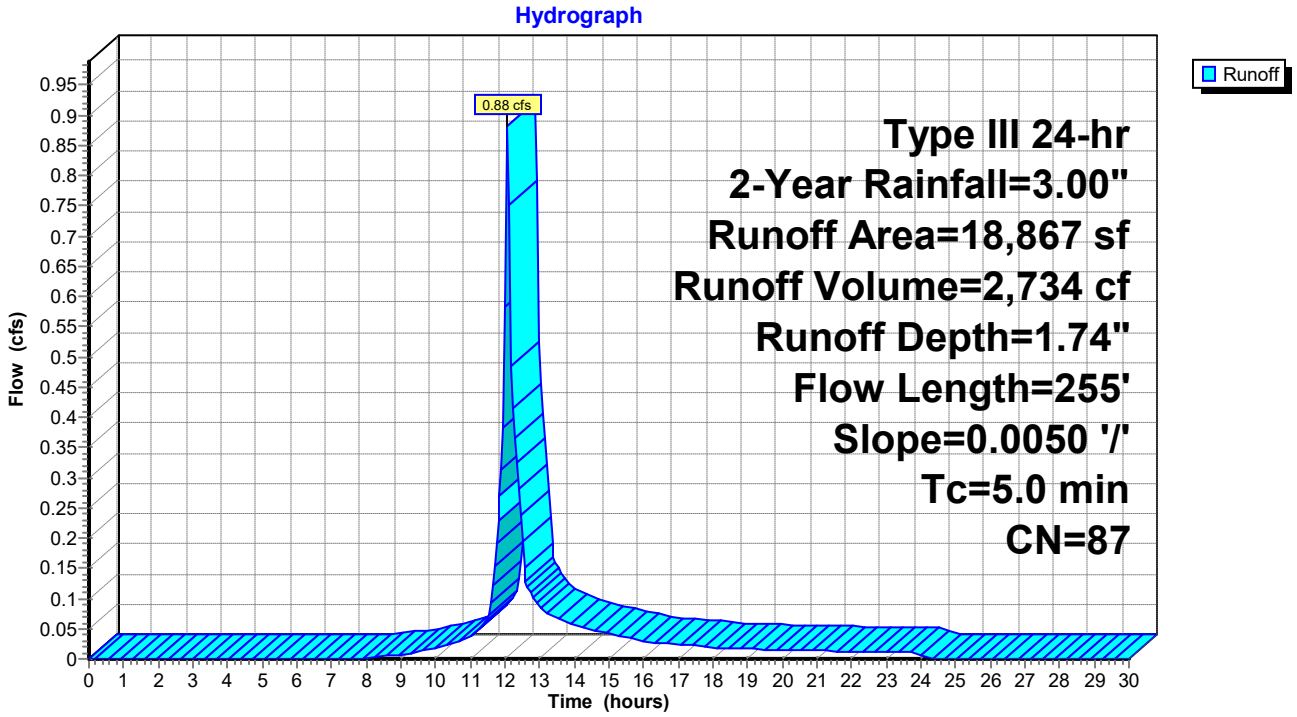
Runoff = 0.88 cfs @ 12.08 hrs, Volume= 2,734 cf, Depth= 1.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
3,590	39	>75% Grass cover, Good, HSG A
15,277	98	Paved parking, HSG A
18,867	87	Weighted Average
3,590		19.03% Pervious Area
15,277		80.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.4	205	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.7	255	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S107: TO DCB-R101



Summary for Subcatchment P-S108: TO DCB-R100

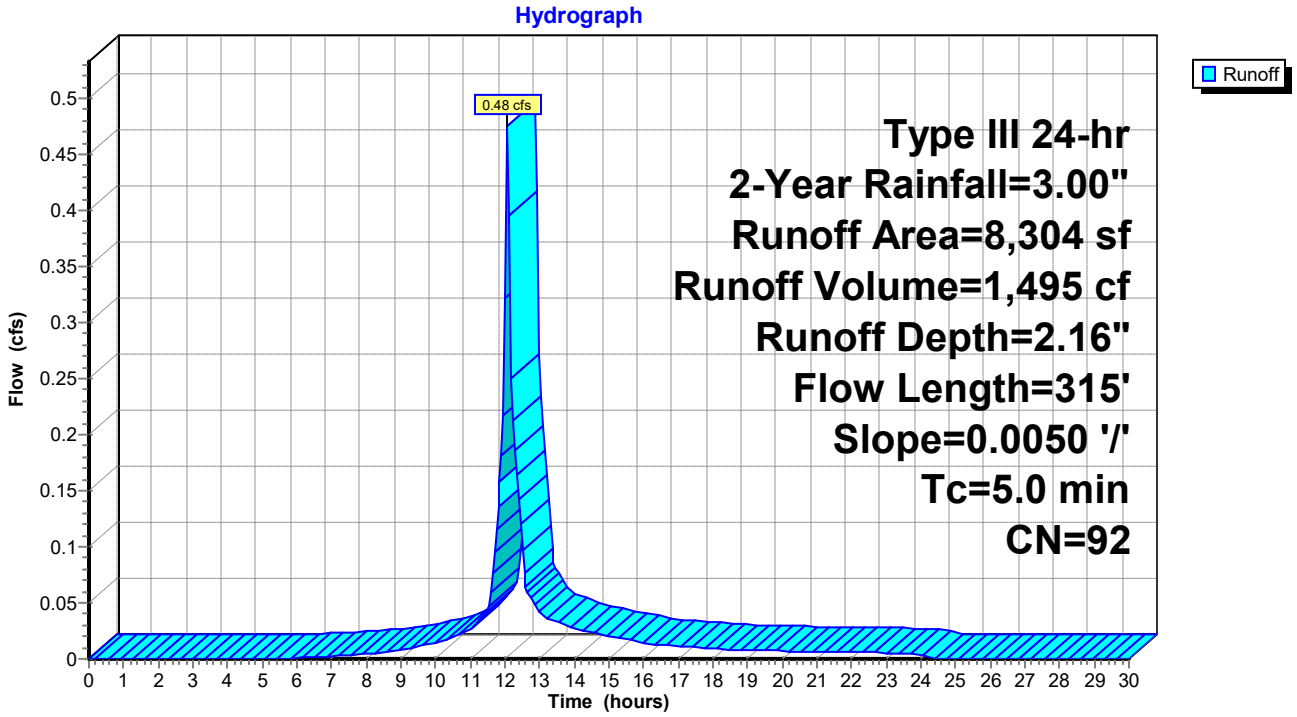
Runoff = 0.48 cfs @ 12.07 hrs, Volume= 1,495 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
847	39	>75% Grass cover, Good, HSG A
7,457	98	Paved parking, HSG A
8,304	92	Weighted Average
847		10.20% Pervious Area
7,457		89.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
3.1	265	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.4	315	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S108: TO DCB-R100



Summary for Subcatchment P-S109: TO DRAINAGE DITCH

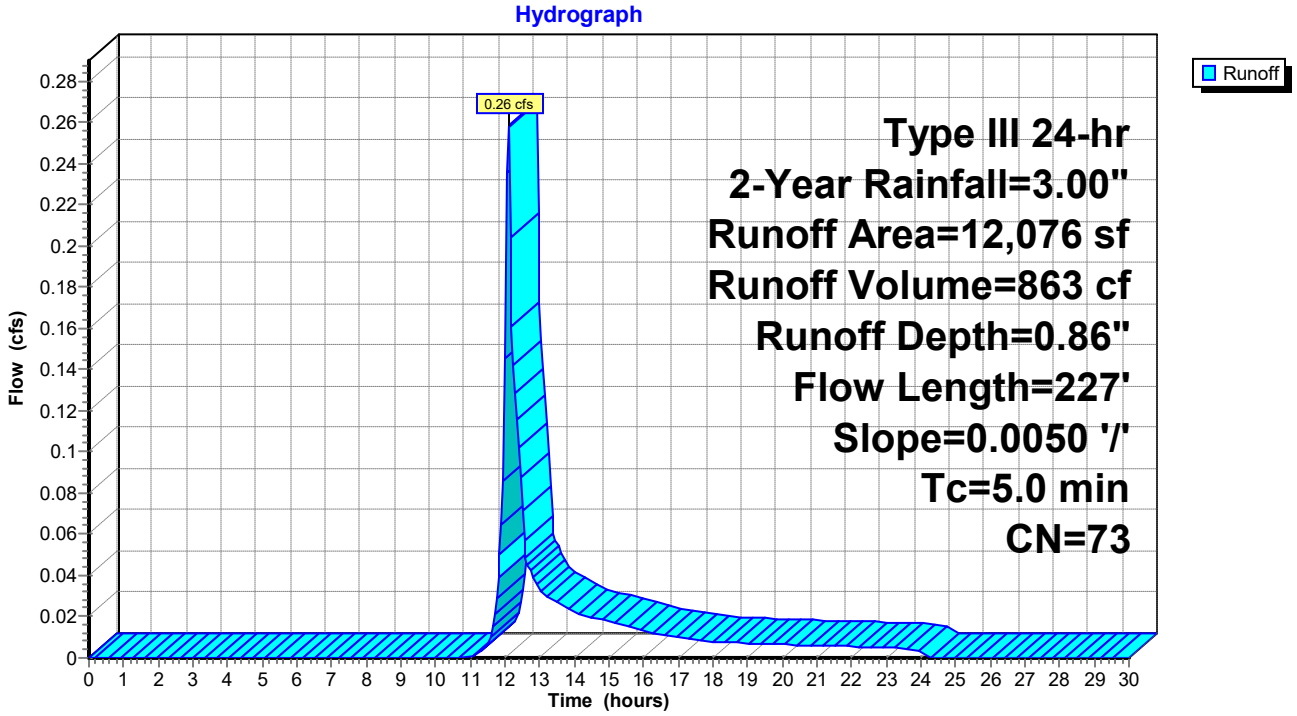
Runoff = 0.26 cfs @ 12.09 hrs, Volume= 863 cf, Depth= 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
4,506	39	>75% Grass cover, Good, HSG A
2,802	98	Paved parking, HSG A
4,165	98	Paved parking, HSG A
603	39	>75% Grass cover, Good, HSG A
12,076	73	Weighted Average
5,109		42.31% Pervious Area
6,967		57.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.1	177	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.4	227	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S109: TO DRAINAGE DITCH



Summary for Subcatchment P-SUB1: TO DCB-S1

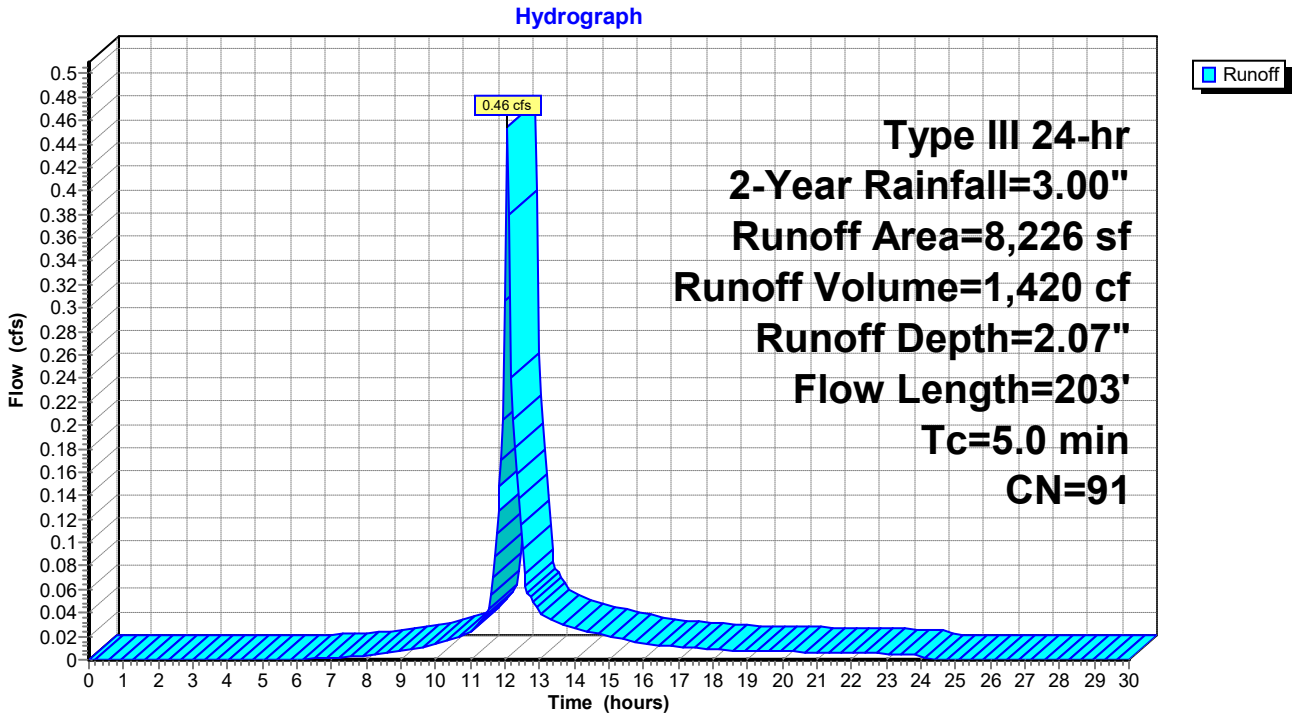
Runoff = 0.46 cfs @ 12.07 hrs, Volume= 1,420 cf, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
1,001	39	>75% Grass cover, Good, HSG A
7,225	98	Paved parking, HSG A
8,226	91	Weighted Average
1,001		12.17% Pervious Area
7,225		87.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0200	0.10		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	10	0.0200	0.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	33	0.0300	1.25		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	153	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	203	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB1: TO DCB-S1



Summary for Subcatchment P-SUB2: TO DMH-S1

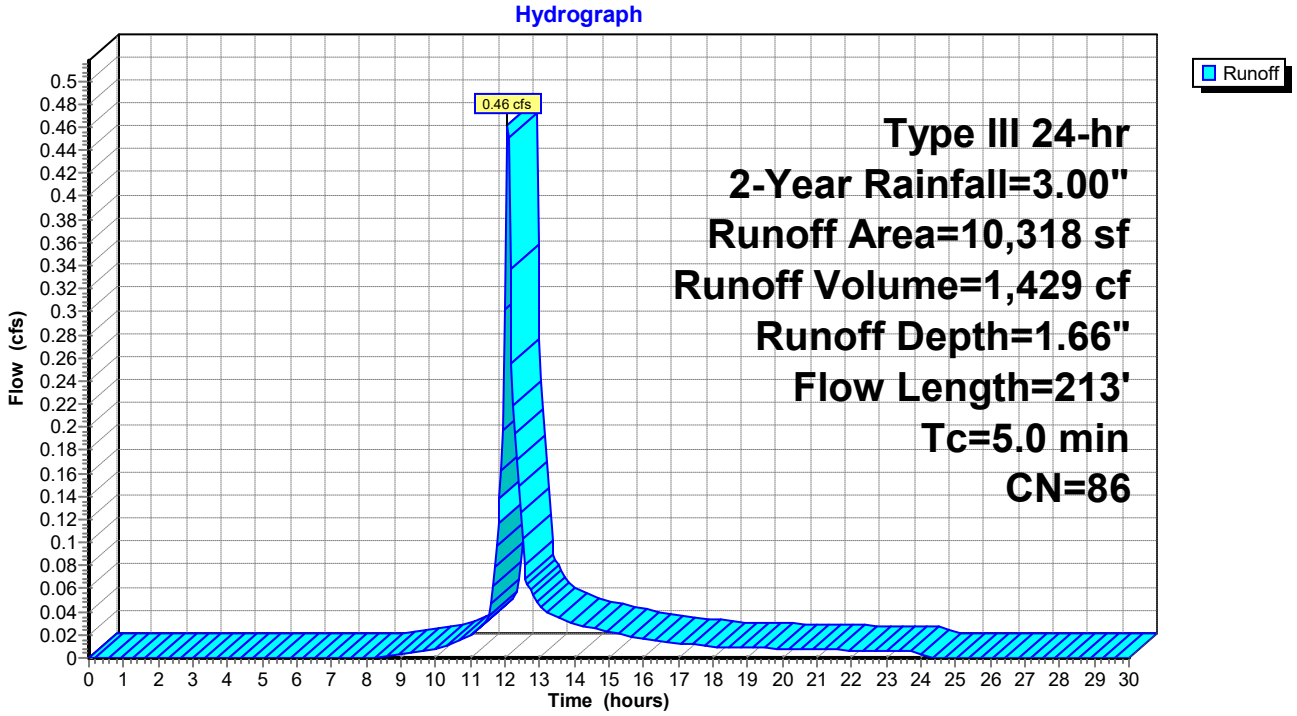
Runoff = 0.46 cfs @ 12.08 hrs, Volume= 1,429 cf, Depth= 1.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
2,017	39	>75% Grass cover, Good, HSG A
8,301	98	Paved parking, HSG A
10,318	86	Weighted Average
2,017		19.55% Pervious Area
8,301		80.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	25	0.0200	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	25	0.0300	1.19		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.8	163	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.5	213	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB2: TO DMH-S1



Summary for Subcatchment P-SUB3: TO DCB-S3

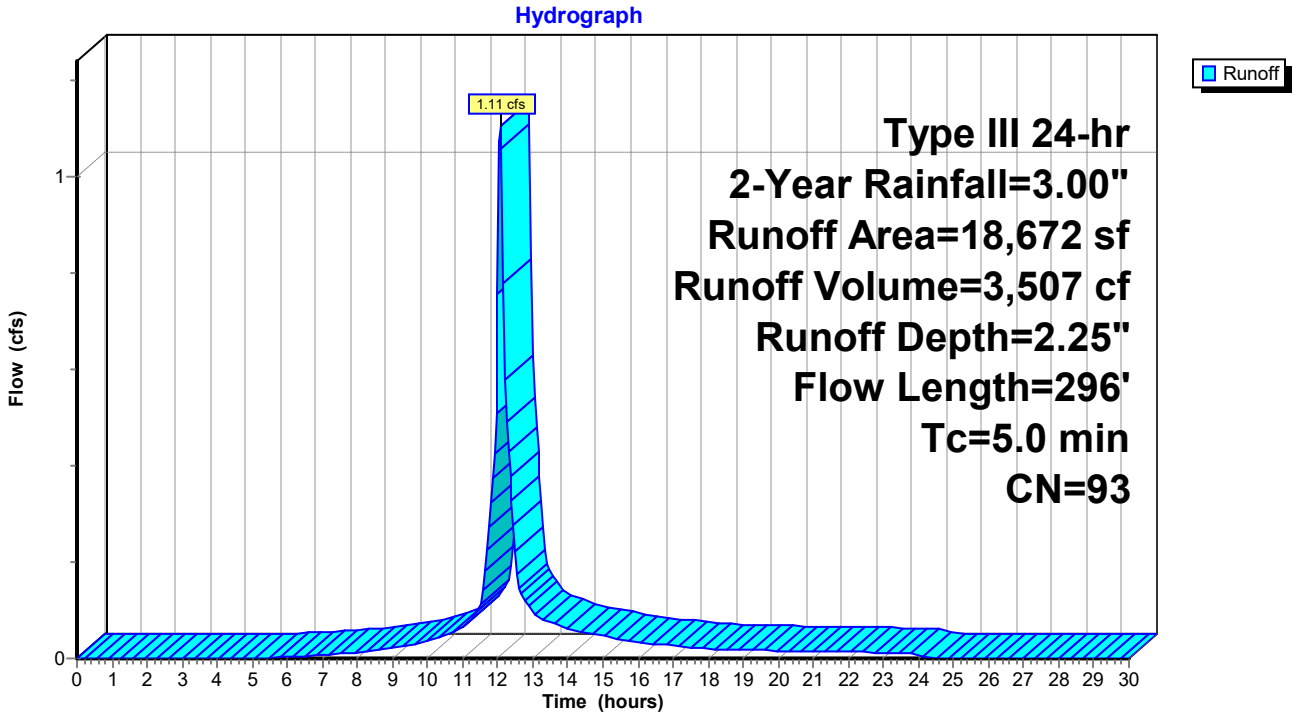
Runoff = 1.11 cfs @ 12.07 hrs, Volume= 3,507 cf, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
1,241	39	>75% Grass cover, Good, HSG A
10,029	98	Paved parking, HSG A
938	80	>75% Grass cover, Good, HSG D
6,464	98	Paved parking, HSG D
18,672	93	Weighted Average
2,179		11.67% Pervious Area
16,493		88.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0200	0.10		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	10	0.0150	0.75		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	33	0.0130	0.90		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.8	246	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.8	296	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB3: TO DCB-S3



Summary for Subcatchment P-SUB4: TO DCB-S4

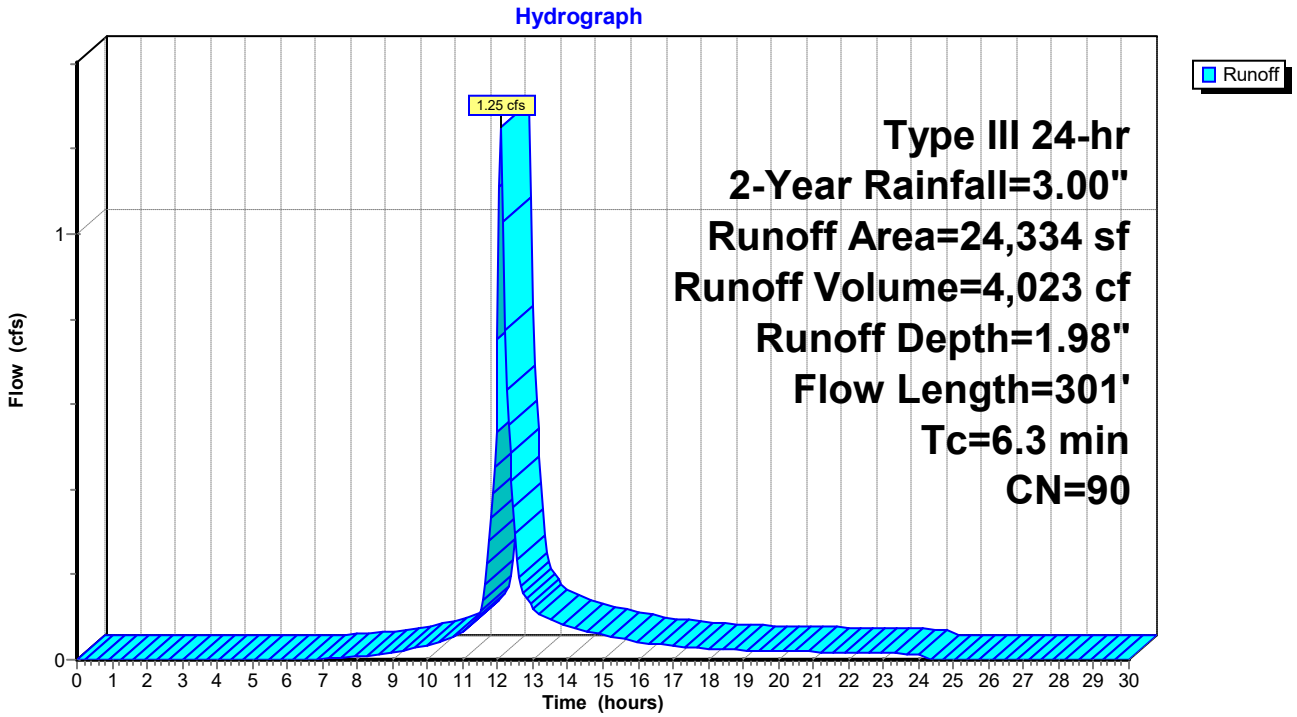
Runoff = 1.25 cfs @ 12.09 hrs, Volume= 4,023 cf, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
3,109	39	>75% Grass cover, Good, HSG A
12,902	98	Paved parking, HSG A
867	80	>75% Grass cover, Good, HSG D
7,456	98	Paved parking, HSG D
24,334	90	Weighted Average
3,976		16.34% Pervious Area
20,358		83.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	32	0.0200	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	18	0.0150	0.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.8	251	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.3	301	Total			

Subcatchment P-SUB4: TO DCB-S4



Summary for Subcatchment P-SUB5: TO DCB-S5

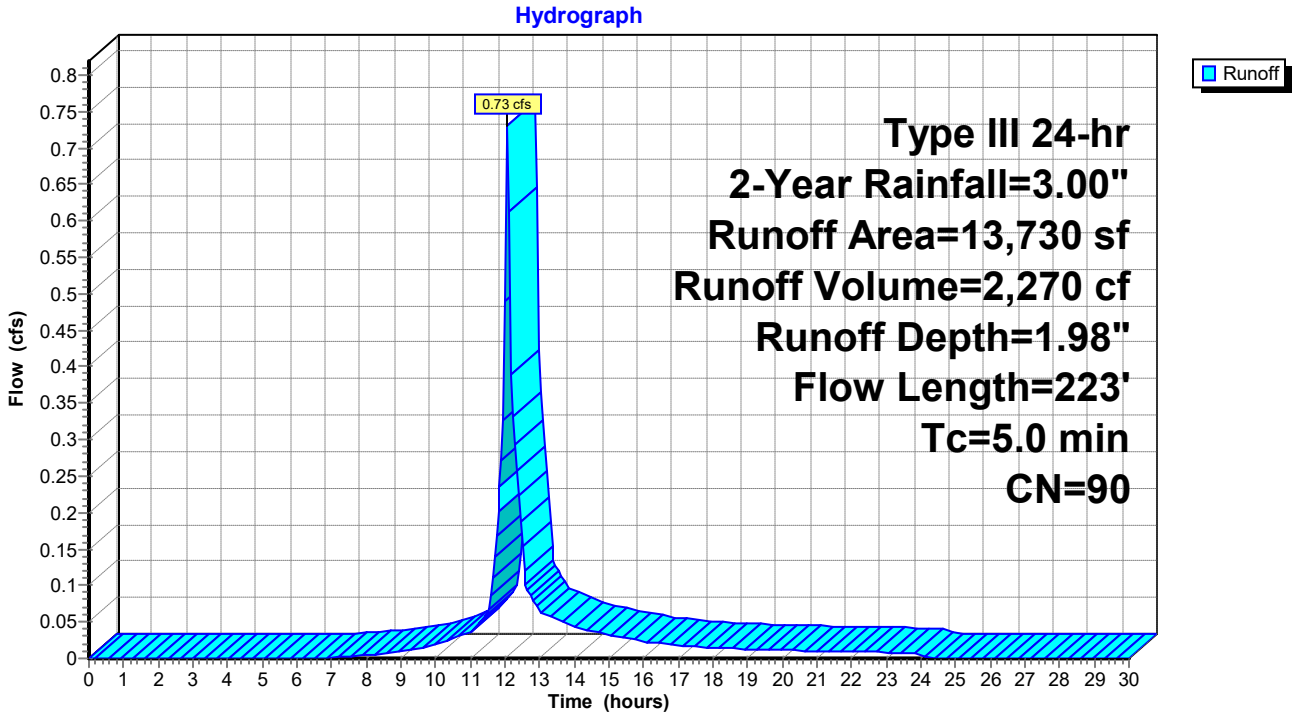
Runoff = 0.73 cfs @ 12.07 hrs, Volume= 2,270 cf, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
2,180	61	>75% Grass cover, Good, HSG B
5,640	98	Paved parking, HSG B
1,094	74	>75% Grass cover, Good, HSG C
2,002	98	Paved parking, HSG C
418	80	>75% Grass cover, Good, HSG D
2,396	98	Paved parking, HSG D
13,730	90	Weighted Average
3,692		26.89% Pervious Area
10,038		73.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.0	173	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.9	223	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB5: TO DCB-S5



Summary for Subcatchment P-SUB6: TO DCB-S6

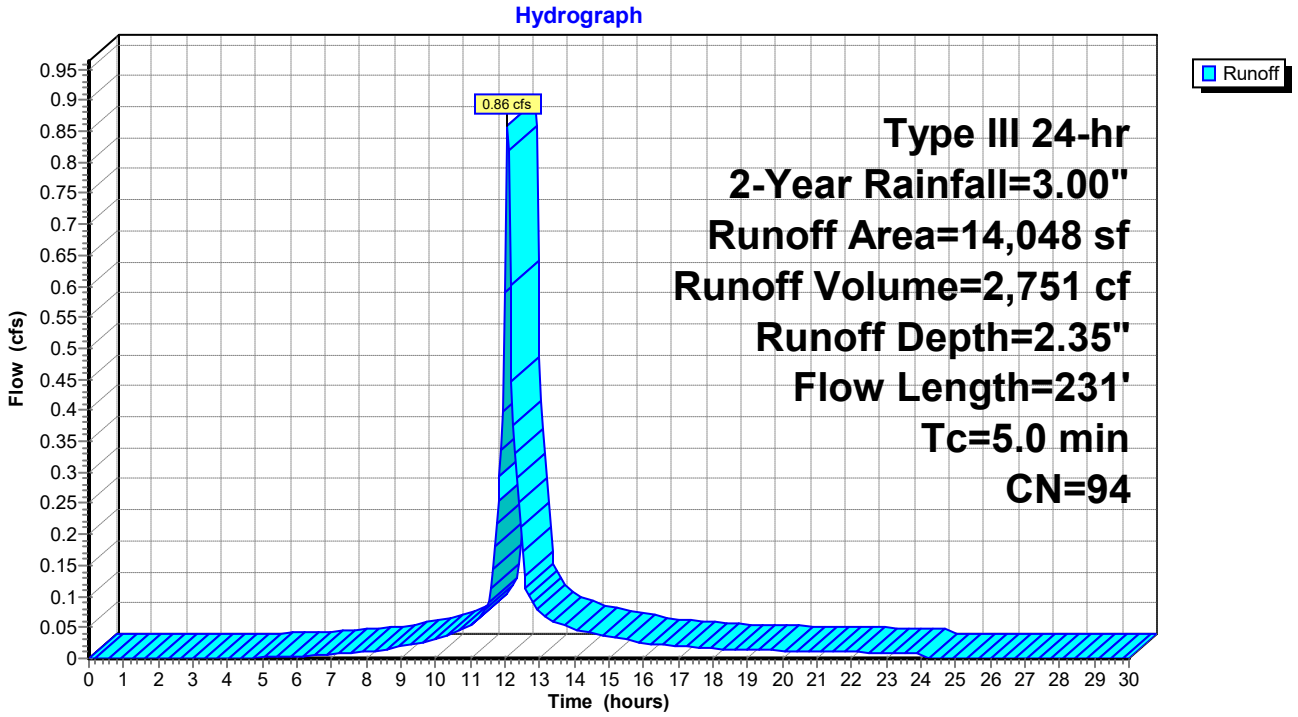
Runoff = 0.86 cfs @ 12.07 hrs, Volume= 2,751 cf, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
1,127	61	>75% Grass cover, Good, HSG B
7,164	98	Paved parking, HSG B
397	74	>75% Grass cover, Good, HSG C
2,299	98	Paved parking, HSG C
318	80	>75% Grass cover, Good, HSG D
2,743	98	Paved parking, HSG D
14,048	94	Weighted Average
1,842		13.11% Pervious Area
12,206		86.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.1	181	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.0	231	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB6: TO DCB-S6



Summary for Subcatchment P-SUB7: TO DCB-S7

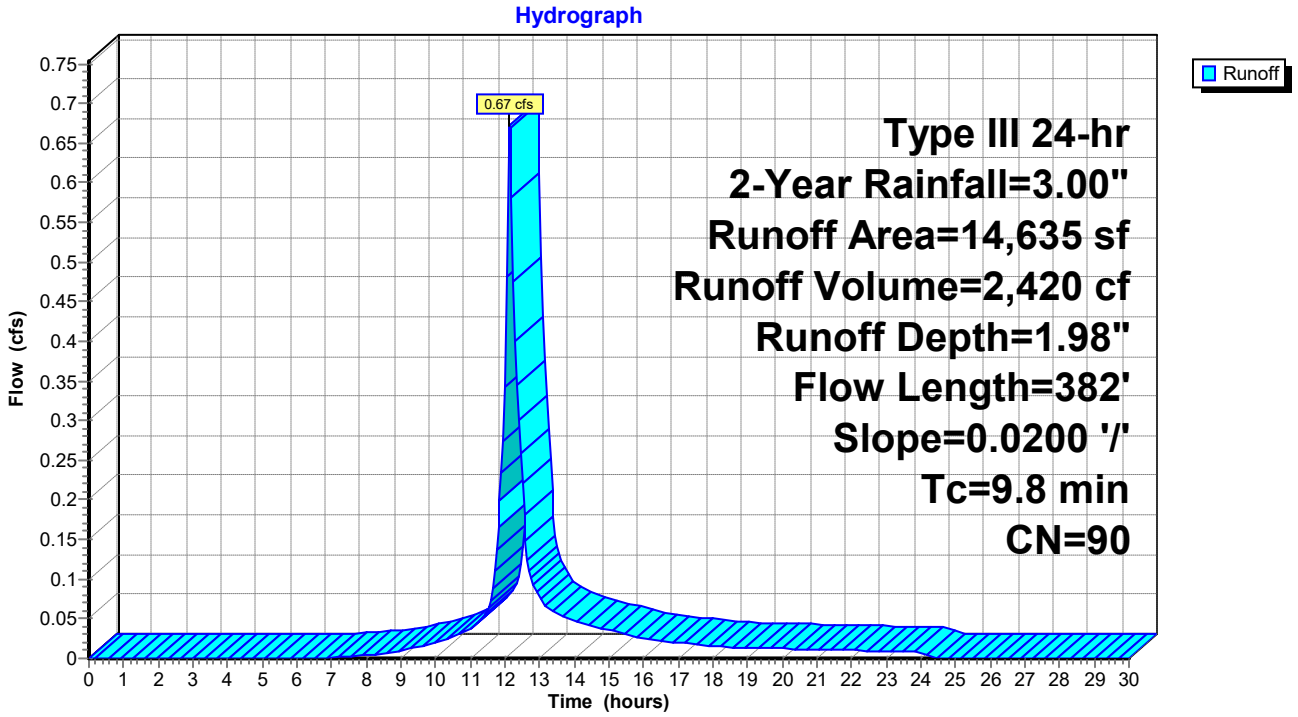
Runoff = 0.67 cfs @ 12.14 hrs, Volume= 2,420 cf, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
2,073	61	>75% Grass cover, Good, HSG B
5,665	96	Gravel surface, HSG B
2,552	98	Paved parking, HSG B
824	74	>75% Grass cover, Good, HSG C
1,846	96	Gravel surface, HSG C
1,675	98	Paved parking, HSG C
14,635	90	Weighted Average
10,408		71.12% Pervious Area
4,227		28.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	75	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	61	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.4	246	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.8	382	Total			

Subcatchment P-SUB7: TO DCB-S7



Summary for Subcatchment P-SUB8: TO DCB-S8

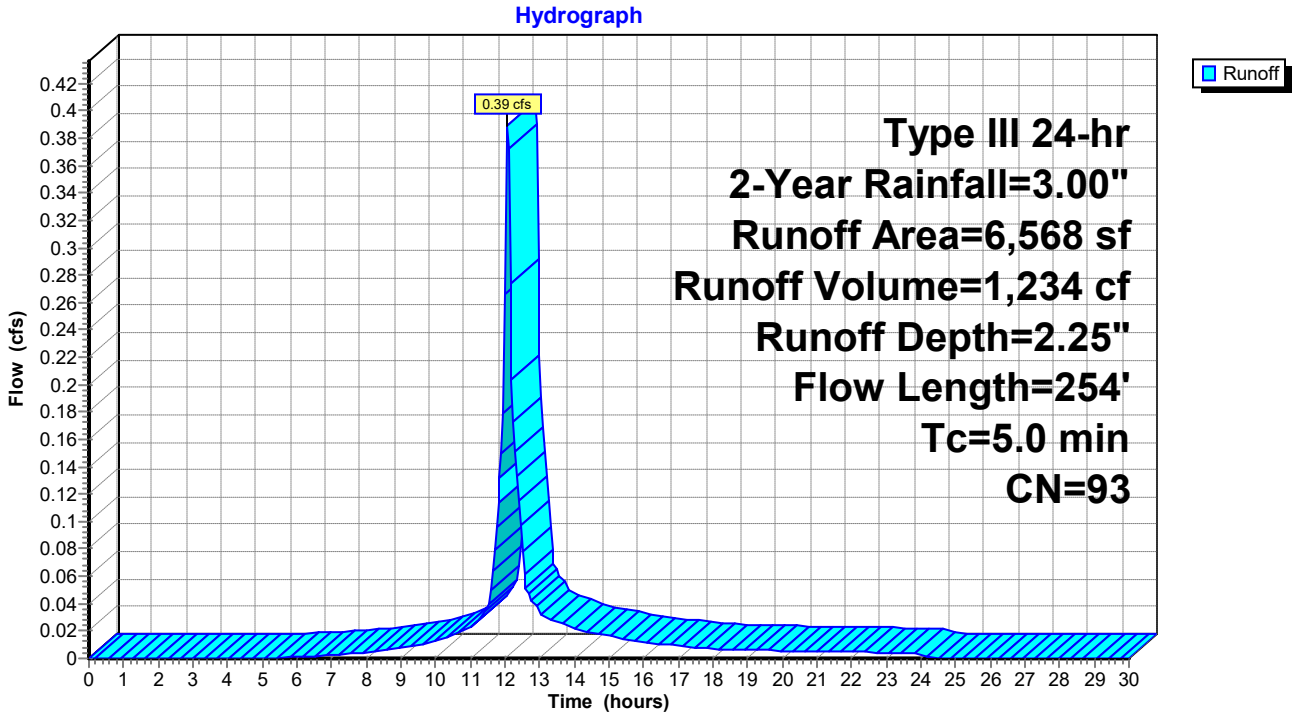
Runoff = 0.39 cfs @ 12.07 hrs, Volume= 1,234 cf, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
592	61	>75% Grass cover, Good, HSG B
3,350	98	Paved parking, HSG B
384	74	>75% Grass cover, Good, HSG C
2,242	98	Paved parking, HSG C
6,568	93	Weighted Average
976		14.86% Pervious Area
5,592		85.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	204	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.1	254	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB8: TO DCB-S8



Summary for Subcatchment P-SUB9: TO DCB-S9

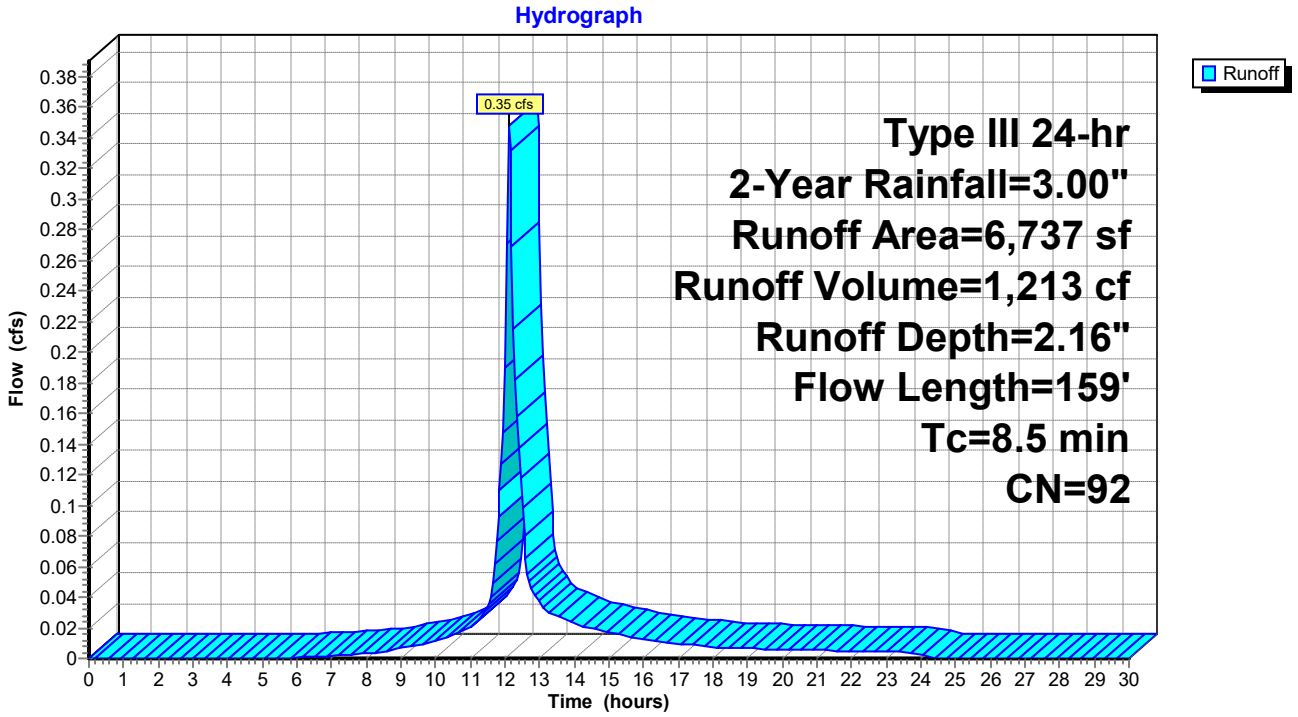
Runoff = 0.35 cfs @ 12.12 hrs, Volume= 1,213 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
615	61	>75% Grass cover, Good, HSG B
851	96	Gravel surface, HSG B
717	98	Paved parking, HSG B
435	74	>75% Grass cover, Good, HSG C
3,901	96	Gravel surface, HSG C
218	98	Paved parking, HSG C
6,737	92	Weighted Average
5,802		86.12% Pervious Area
935		13.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	75	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	55	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	29	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
8.5	159	Total			

Subcatchment P-SUB9: TO DCB-S9



Summary for Subcatchment P206: TO DMH6B

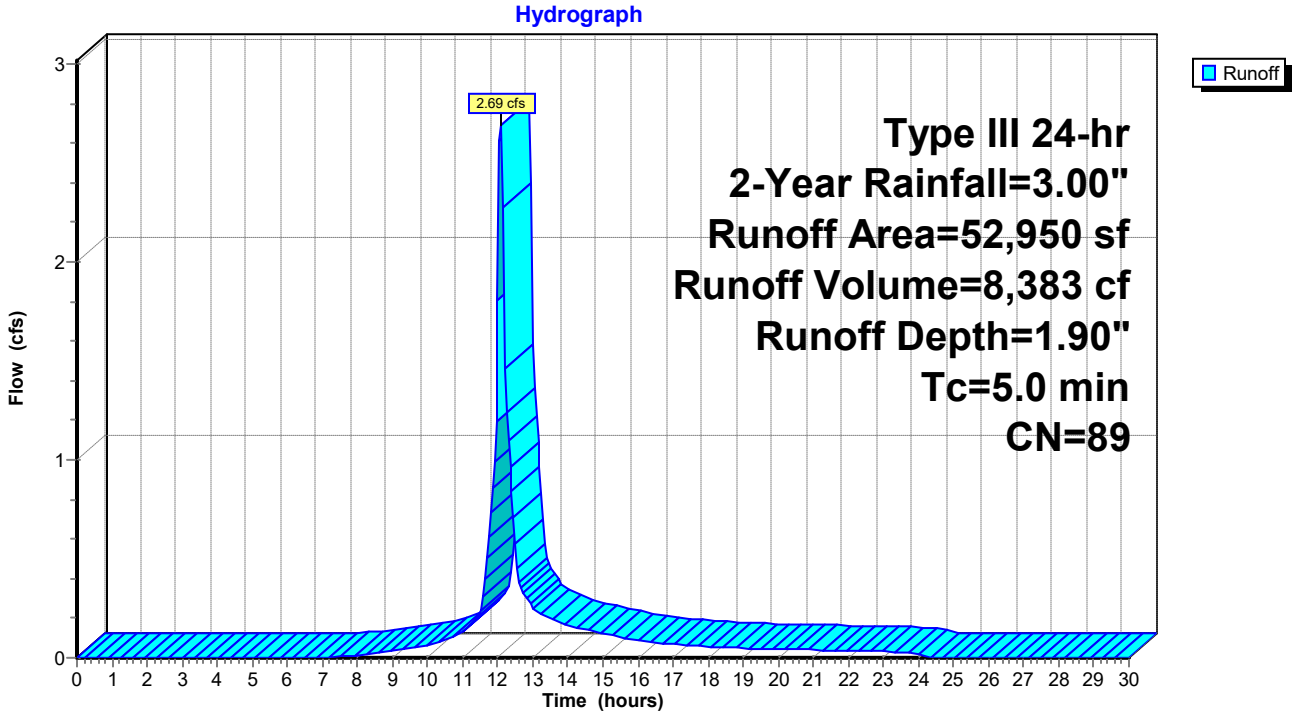
Runoff = 2.69 cfs @ 12.08 hrs, Volume= 8,383 cf, Depth= 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
3,483	61	>75% Grass cover, Good, HSG B
40,747	92	Urban commercial, 85% imp, HSG B
3,361	74	>75% Grass cover, Good, HSG C
5,359	94	Urban commercial, 85% imp, HSG C
52,950	89	Weighted Average
13,760		25.99% Pervious Area
39,190		74.01% Impervious Area

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

Subcatchment P206: TO DMH6B



Summary for Subcatchment P207: TO DMH7

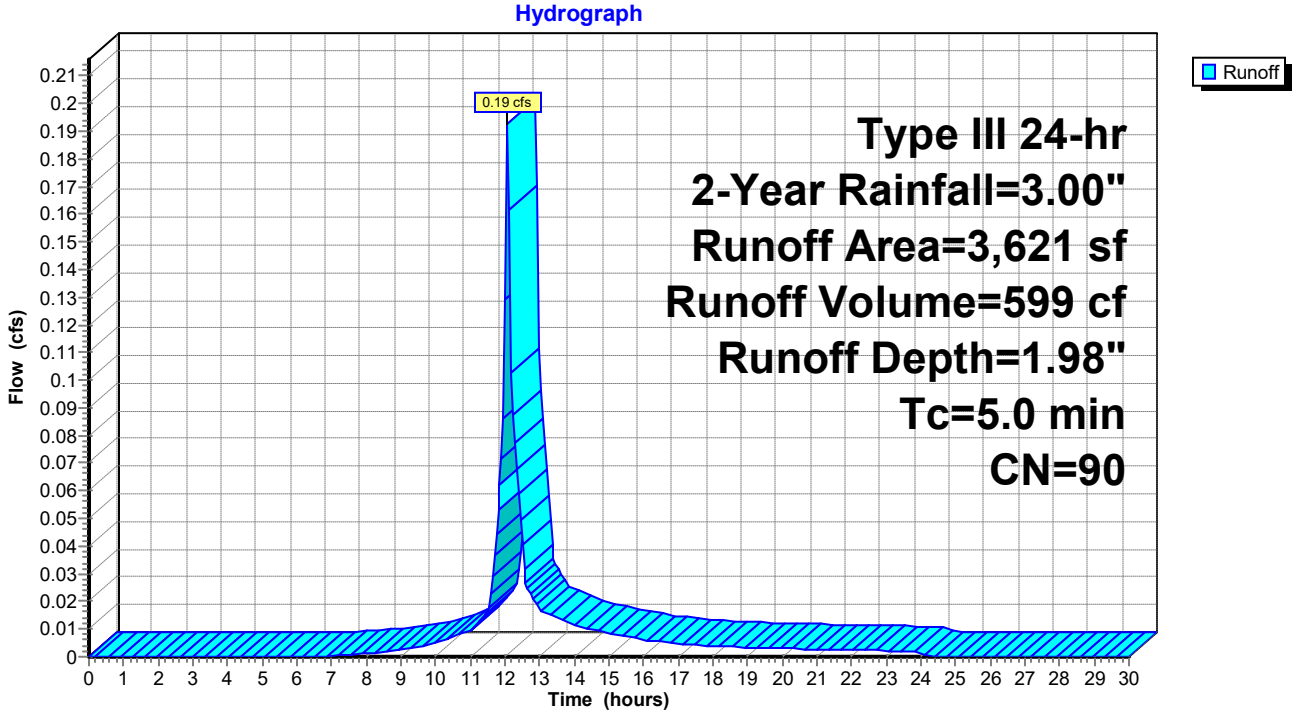
Runoff = 0.19 cfs @ 12.07 hrs, Volume= 599 cf, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
825	61	>75% Grass cover, Good, HSG B
2,796	98	Paved parking, HSG B
3,621	90	Weighted Average
825		22.78% Pervious Area
2,796		77.22% Impervious Area

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

Subcatchment P207: TO DMH7



Summary for Subcatchment P210: TO DMH10

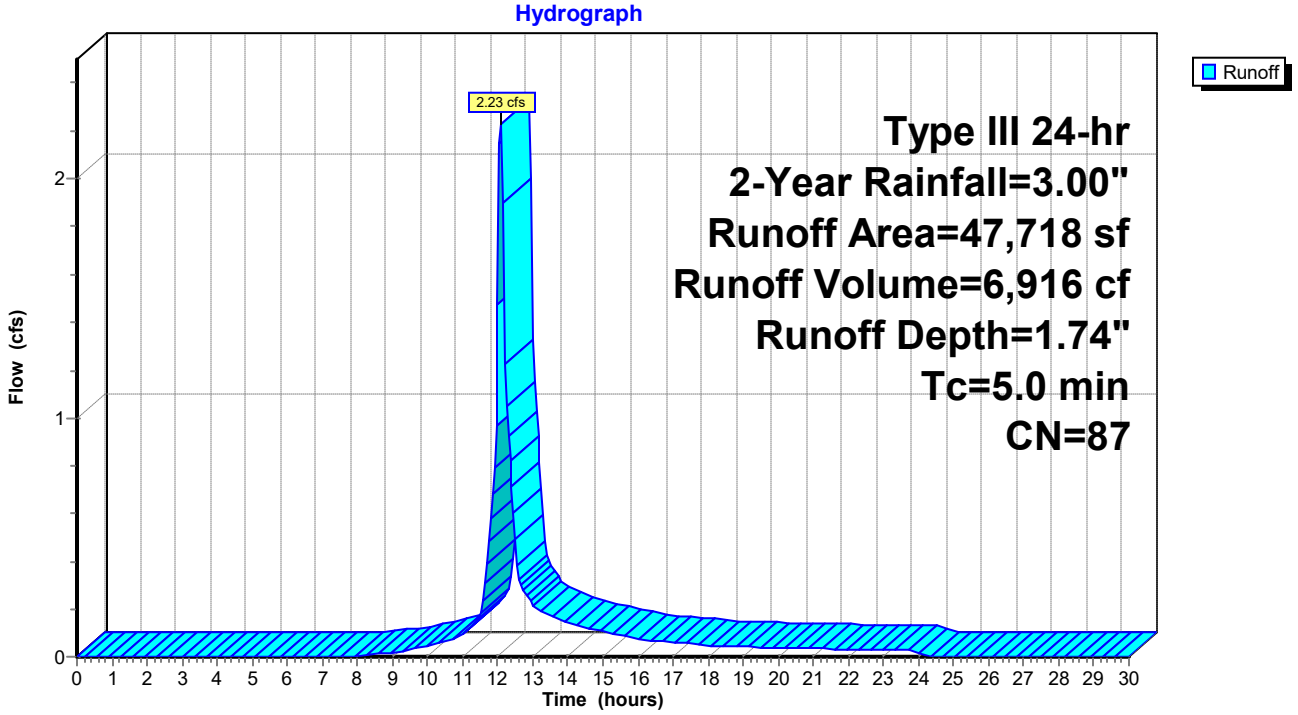
Runoff = 2.23 cfs @ 12.08 hrs, Volume= 6,916 cf, Depth= 1.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
14,798	61	>75% Grass cover, Good, HSG B
32,920	98	Paved parking, HSG B
47,718	87	Weighted Average
14,798		31.01% Pervious Area
32,920		68.99% Impervious Area

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

Subcatchment P210: TO DMH10



Summary for Subcatchment P211: TO DMH11

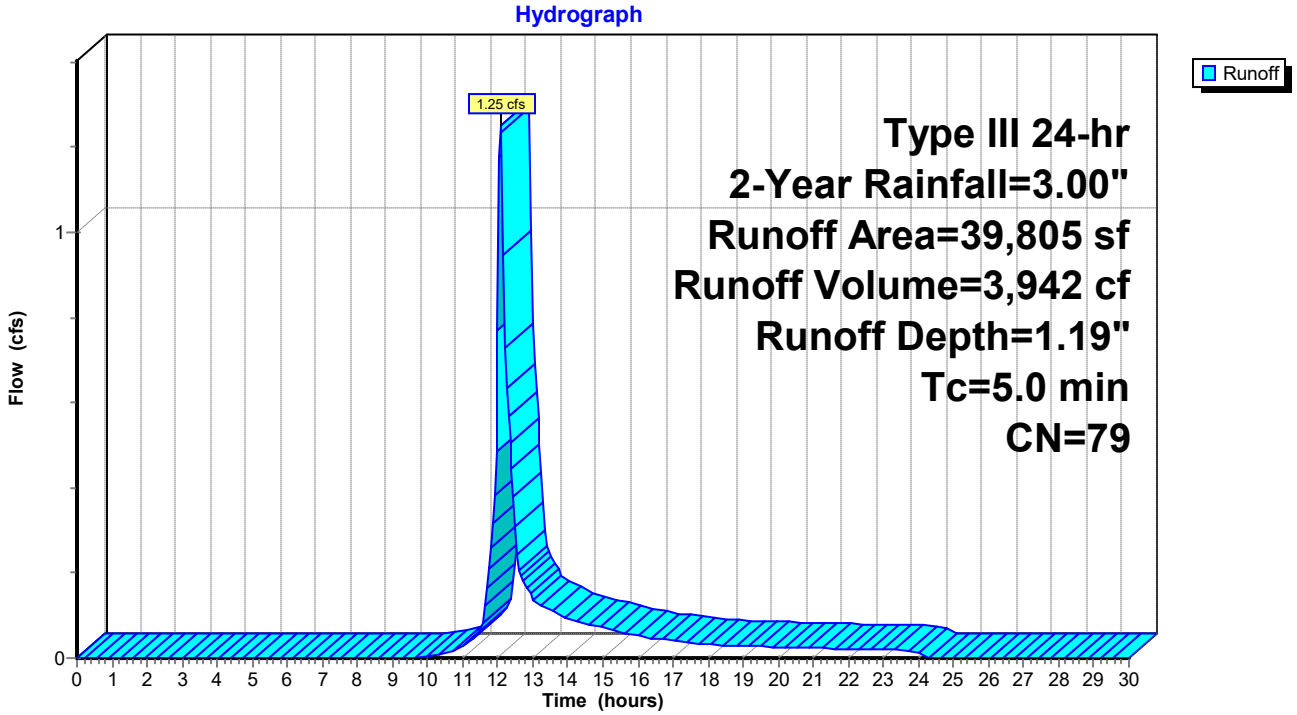
Runoff = 1.25 cfs @ 12.08 hrs, Volume= 3,942 cf, Depth= 1.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
16,145	61	>75% Grass cover, Good, HSG B
5,377	74	>75% Grass cover, Good, HSG C
841	92	Urban commercial, 85% imp, HSG B
2,153	94	Urban commercial, 85% imp, HSG C
15,289	98	Paved parking, HSG B
39,805	79	Weighted Average
21,971		55.20% Pervious Area
17,834		44.80% Impervious Area

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

Subcatchment P211: TO DMH11



Summary for Subcatchment P212: TO DMH12

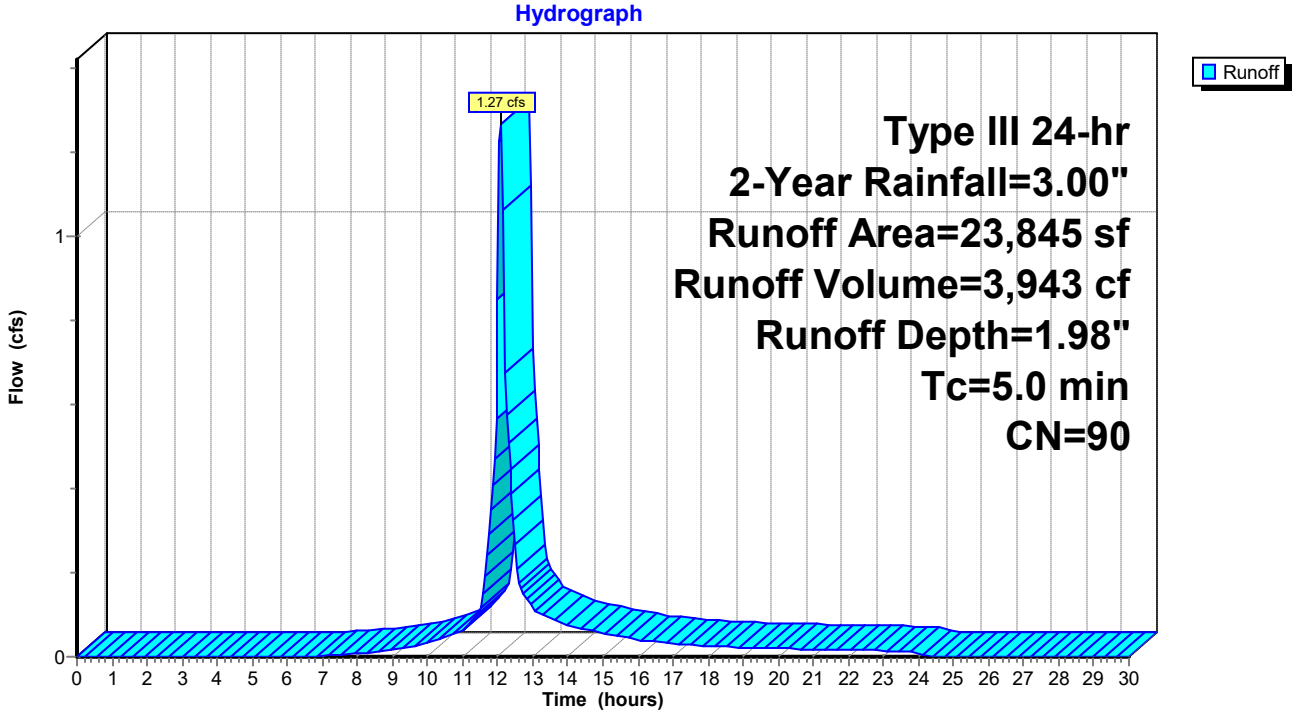
Runoff = 1.27 cfs @ 12.07 hrs, Volume= 3,943 cf, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
5,327	61	>75% Grass cover, Good, HSG B
18,518	98	Paved parking, HSG B
23,845	90	Weighted Average
5,327		22.34% Pervious Area
18,518		77.66% Impervious Area

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

Subcatchment P212: TO DMH12



Summary for Subcatchment P213: TO DMH13

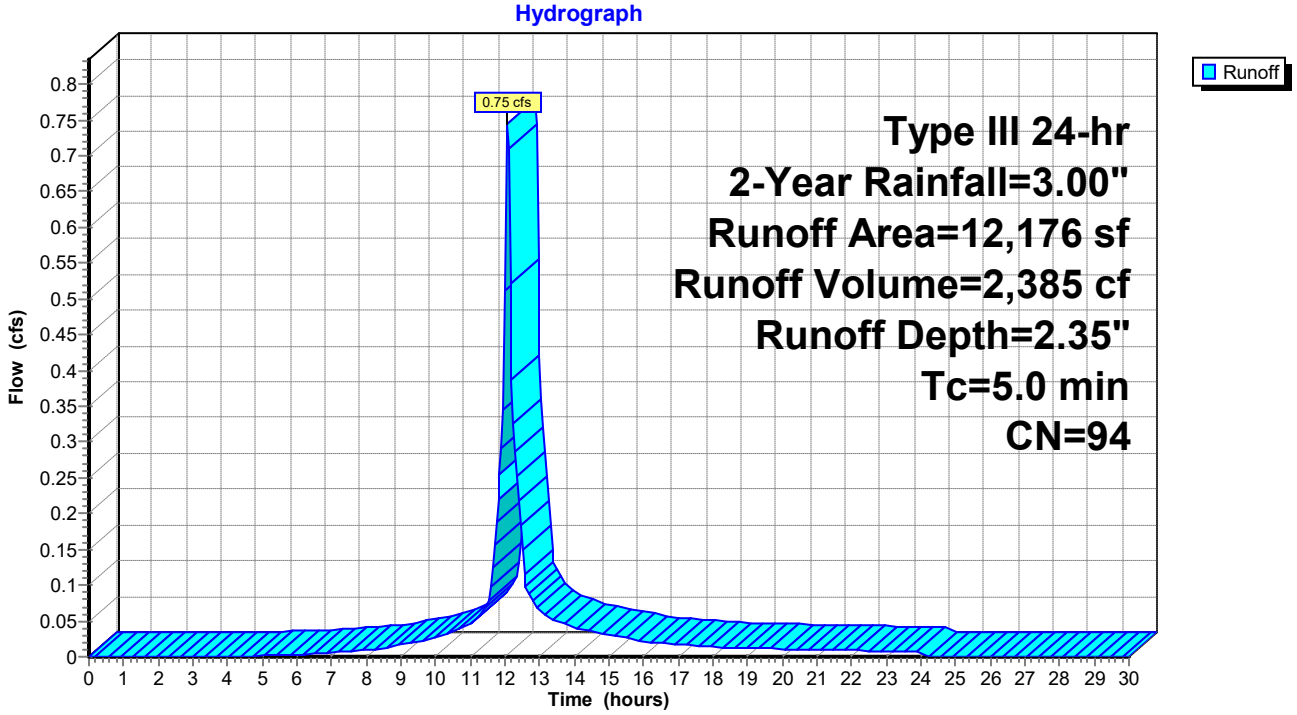
Runoff = 0.75 cfs @ 12.07 hrs, Volume= 2,385 cf, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
1,390	61	>75% Grass cover, Good, HSG B
10,786	98	Paved parking, HSG B
12,176	94	Weighted Average
1,390		11.42% Pervious Area
10,786		88.58% Impervious Area

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

Subcatchment P213: TO DMH13



Summary for Subcatchment P222: TO DP#2(2017)

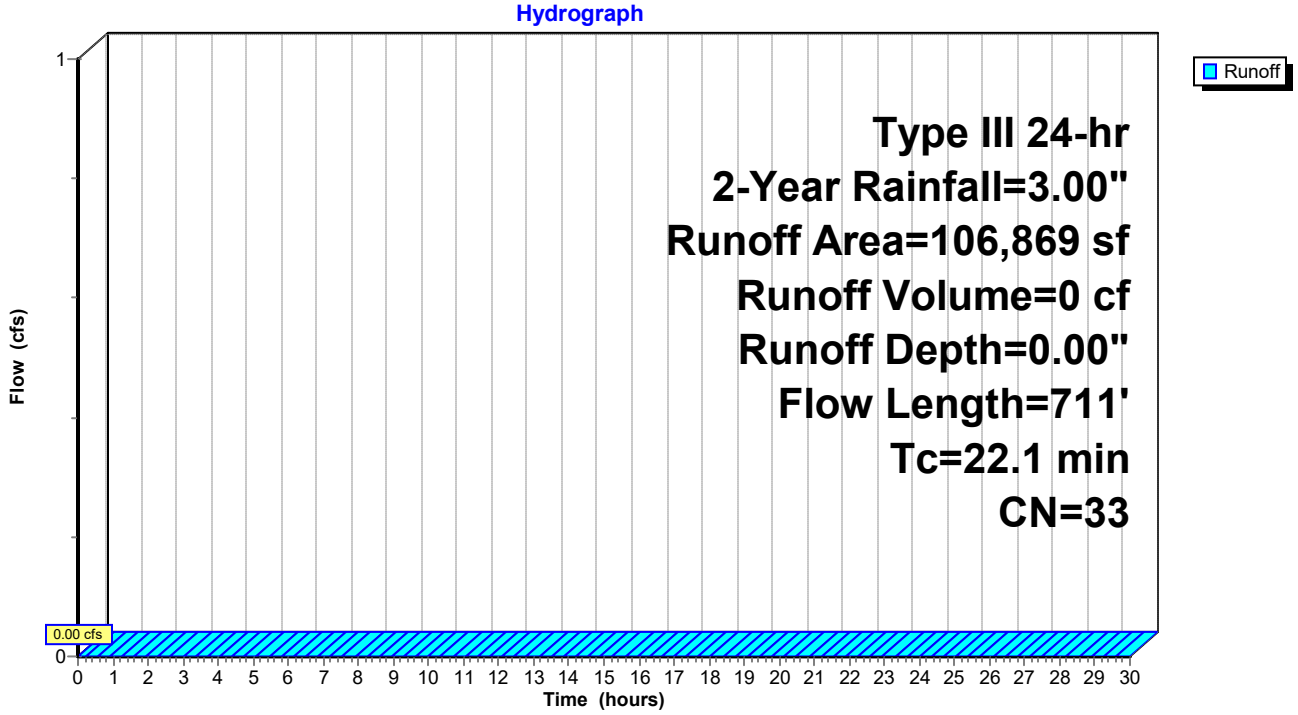
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
692	39	>75% Grass cover, Good, HSG A
93,055	30	Woods, Good, HSG A
1,977	61	>75% Grass cover, Good, HSG B
11,145	55	Woods, Good, HSG B
106,869	33	Weighted Average
106,869		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	47	0.0300	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.1	28	0.0300	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.5	85	0.0300	2.79		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
12.1	398	0.0120	0.55		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.7	153	0.0920	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
22.1	711	Total			

Subcatchment P222: TO DP#2(2017)



Summary for Subcatchment P230: TO CB#21(2017)

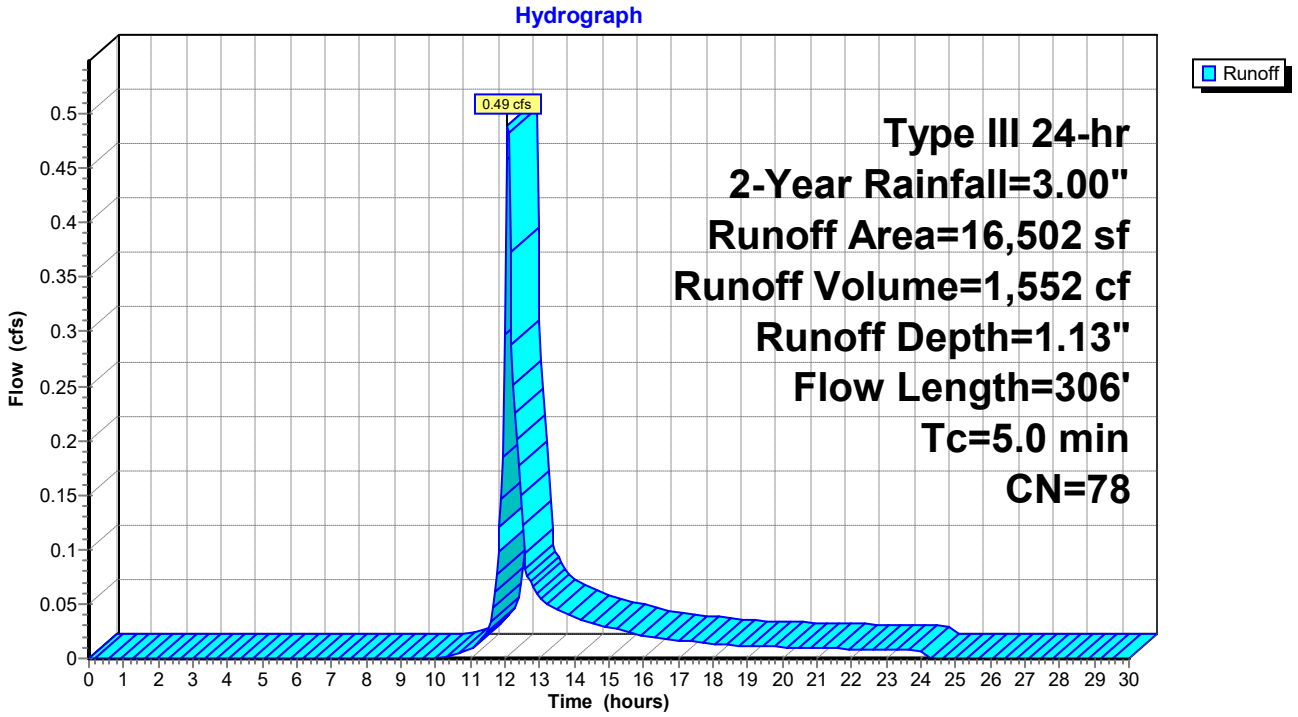
Runoff = 0.49 cfs @ 12.08 hrs, Volume= 1,552 cf, Depth= 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
8,396	61	>75% Grass cover, Good, HSG B
7,248	98	Paved parking, HSG B
299	39	>75% Grass cover, Good, HSG A
559	98	Paved parking, HSG A
16,502	78	Weighted Average
8,695		52.69% Pervious Area
7,807		47.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	20	0.0500	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	30	0.0270	1.18		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.0	10	0.0270	3.34		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.8	246	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.1	306	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P230: TO CB#21(2017)



Summary for Subcatchment P231: TO YD#1

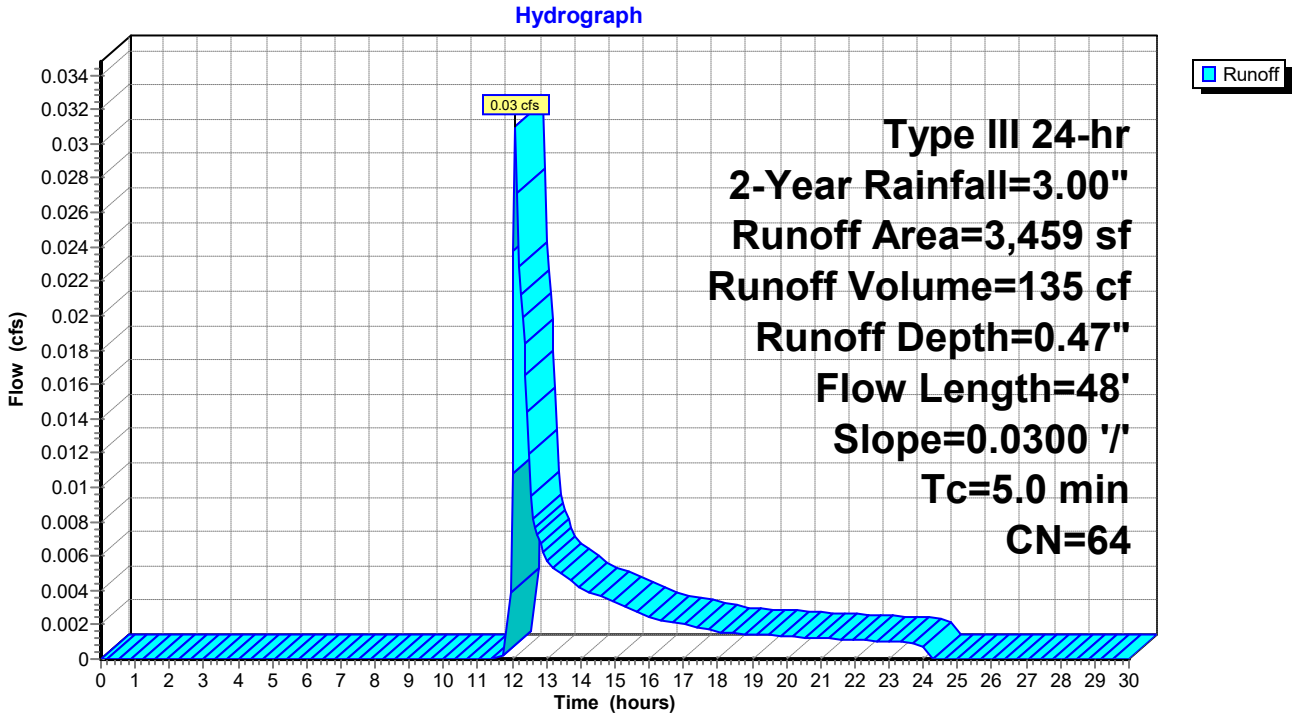
Runoff = 0.03 cfs @ 12.11 hrs, Volume= 135 cf, Depth= 0.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
3,225	61	>75% Grass cover, Good, HSG B
234	98	Paved parking, HSG B
3,459	64	Weighted Average
3,225		93.24% Pervious Area
234		6.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	48	0.0300	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
4.8	48	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P231: TO YD#1



Summary for Subcatchment P232: TO CO#2

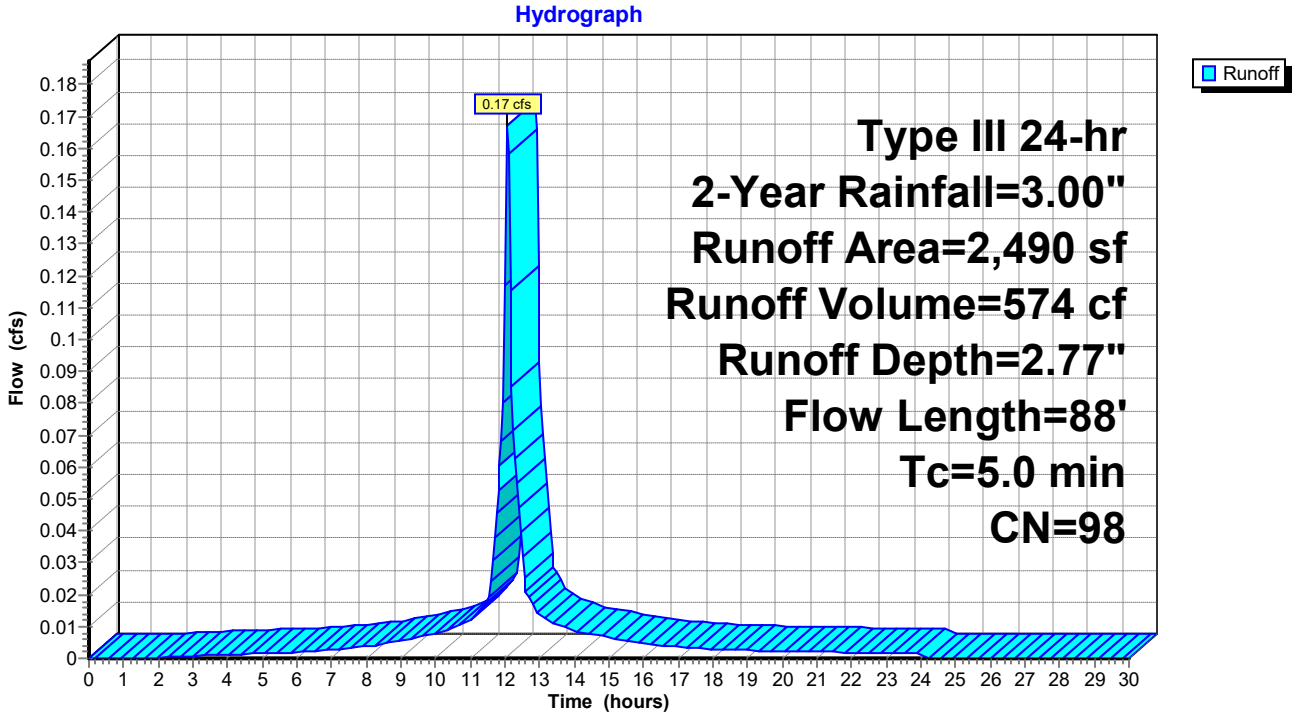
Runoff = 0.17 cfs @ 12.07 hrs, Volume= 574 cf, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
2,490	98	Paved parking, HSG B
2,490		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0830	2.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.1	31	0.0800	5.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	7	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.6	88	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P232: TO CO#2



Summary for Subcatchment P233: TO DRIP STRIP

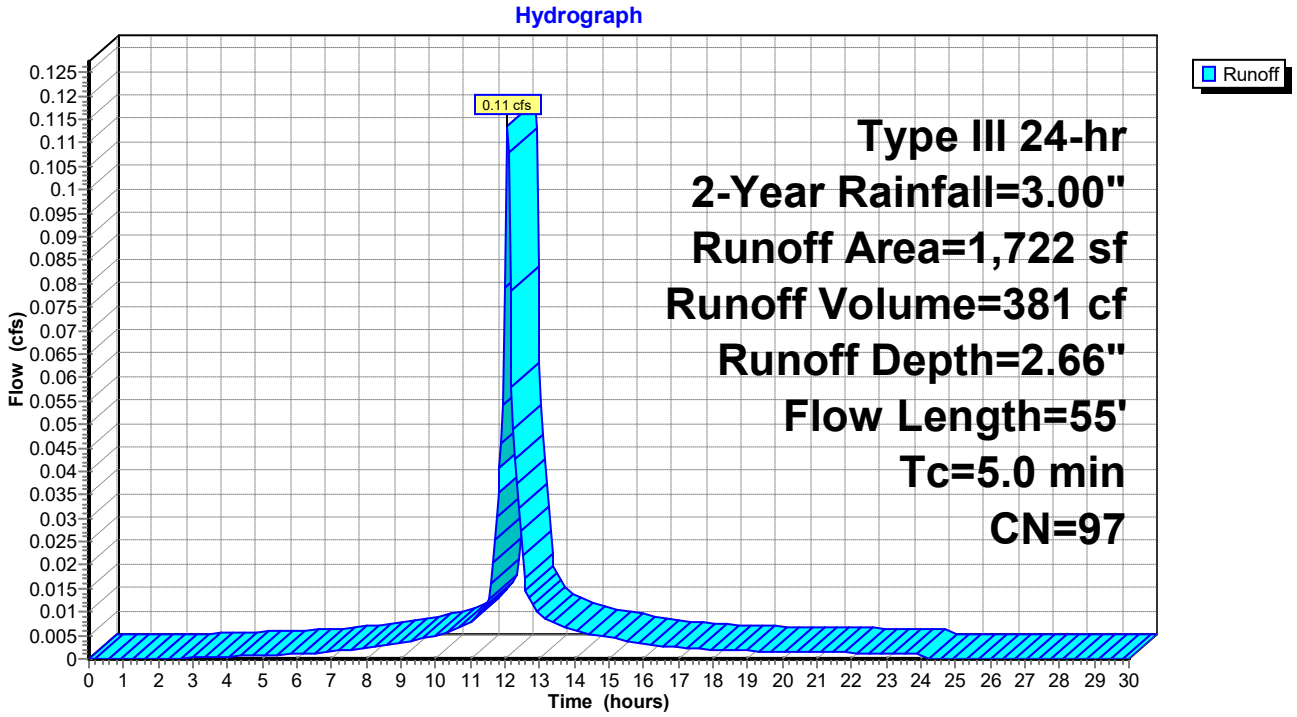
Runoff = 0.11 cfs @ 12.07 hrs, Volume= 381 cf, Depth= 2.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
55	61	>75% Grass cover, Good, HSG B
1,667	98	Paved parking, HSG B
1,722	97	Weighted Average
55		3.19% Pervious Area
1,667		96.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0800	2.02		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.0	5	0.0830	5.85		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	55	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P233: TO DRIP STRIP



Summary for Subcatchment P234: TO YD#2

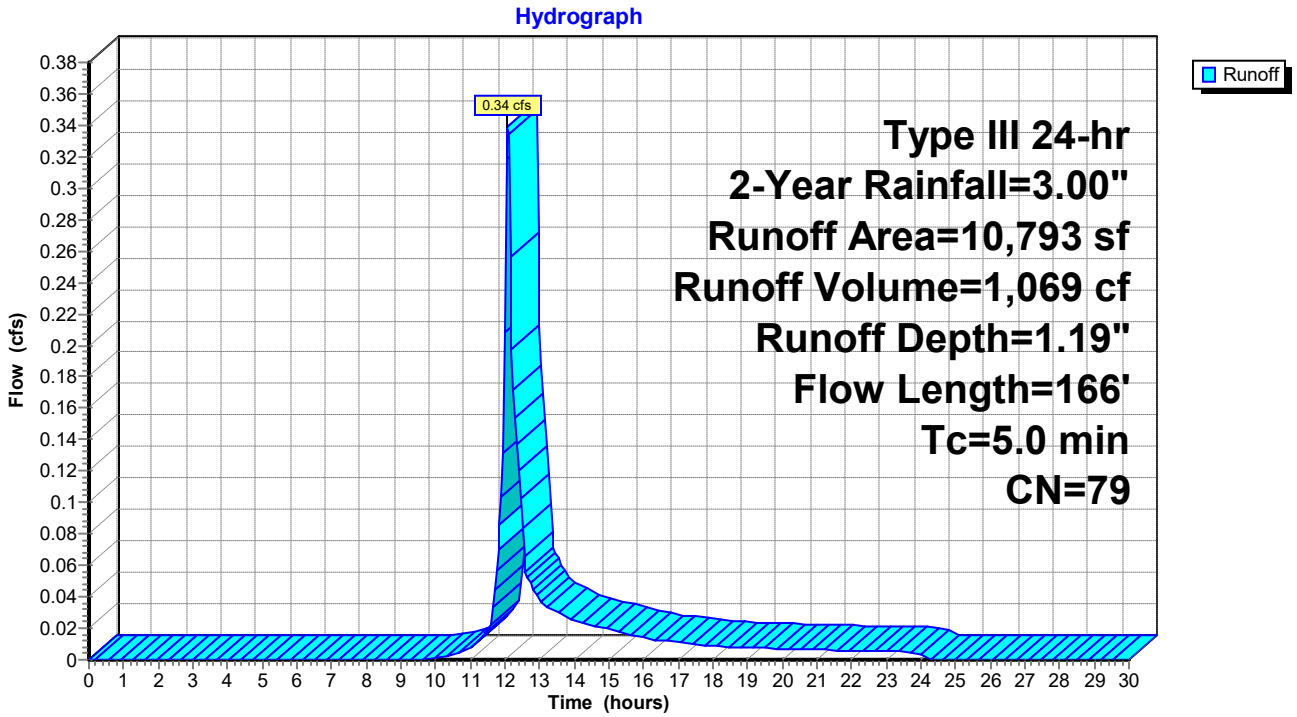
Runoff = 0.34 cfs @ 12.08 hrs, Volume= 1,069 cf, Depth= 1.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
5,448	61	>75% Grass cover, Good, HSG B
5,345	98	Paved parking, HSG B
10,793	79	Weighted Average
5,448		50.48% Pervious Area
5,345		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	28	0.0700	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.7	22	0.0040	0.52		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.3	98	0.0040	1.28		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.2	18	0.0110	1.69		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.4	166	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P234: TO YD#2



Summary for Subcatchment P235: TO CO#3

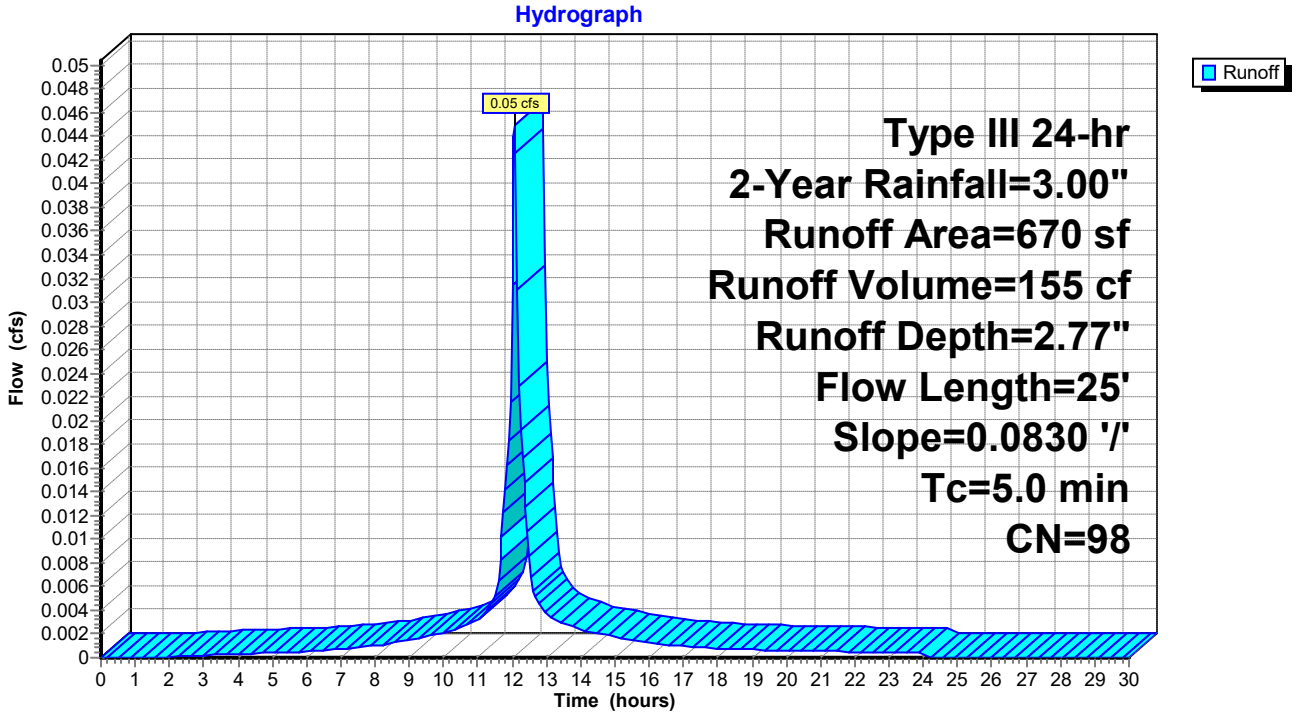
Runoff = 0.05 cfs @ 12.07 hrs, Volume= 155 cf, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
670	98	Paved parking, HSG B
670		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	25	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P235: TO CO#3



Summary for Subcatchment P251: OVERLAND TO SETTLING POND

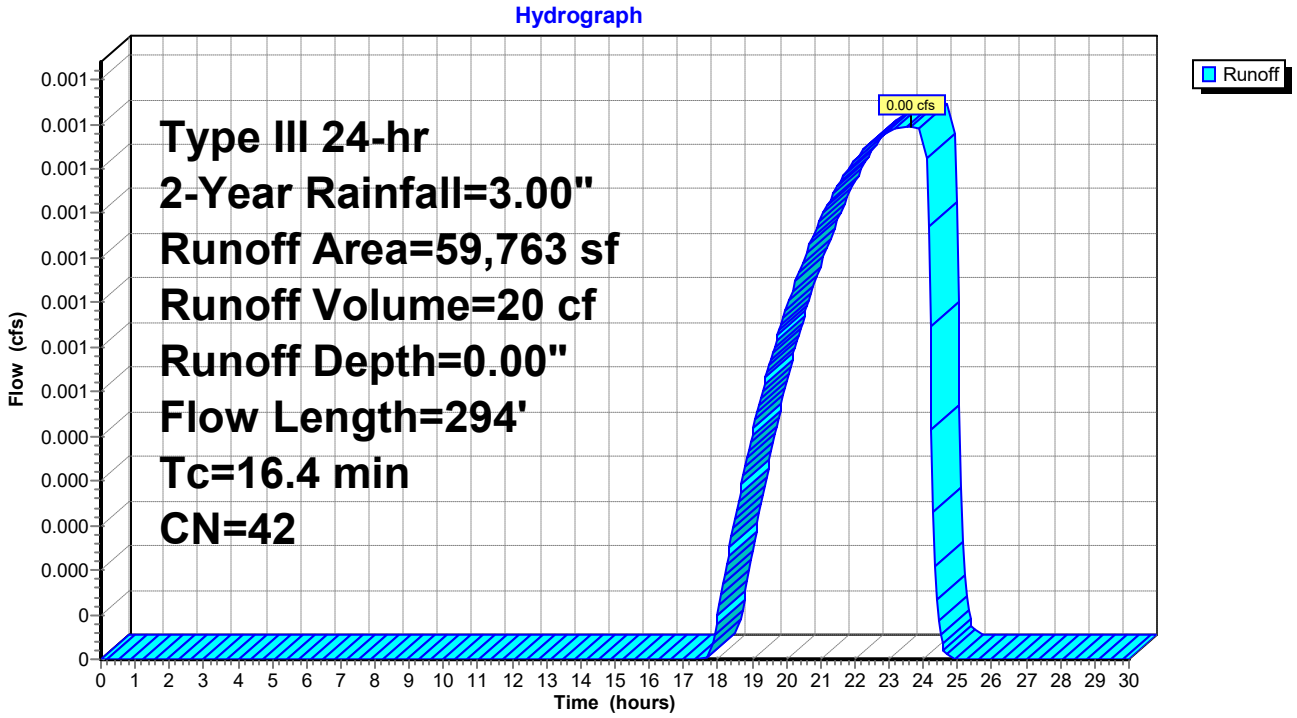
Runoff = 0.00 cfs @ 23.65 hrs, Volume= 20 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
53,277	39	>75% Grass cover, Good, HSG A
3,396	30	Woods, Good, HSG A
3,090	98	Paved parking, HSG A
59,763	42	Weighted Average
56,673		94.83% Pervious Area
3,090		5.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.4	99	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	13	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	107	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
16.4	294	Total			

Subcatchment P251: OVERLAND TO SETTLING POND



Summary for Subcatchment P252: OVERLAND TO DB#1

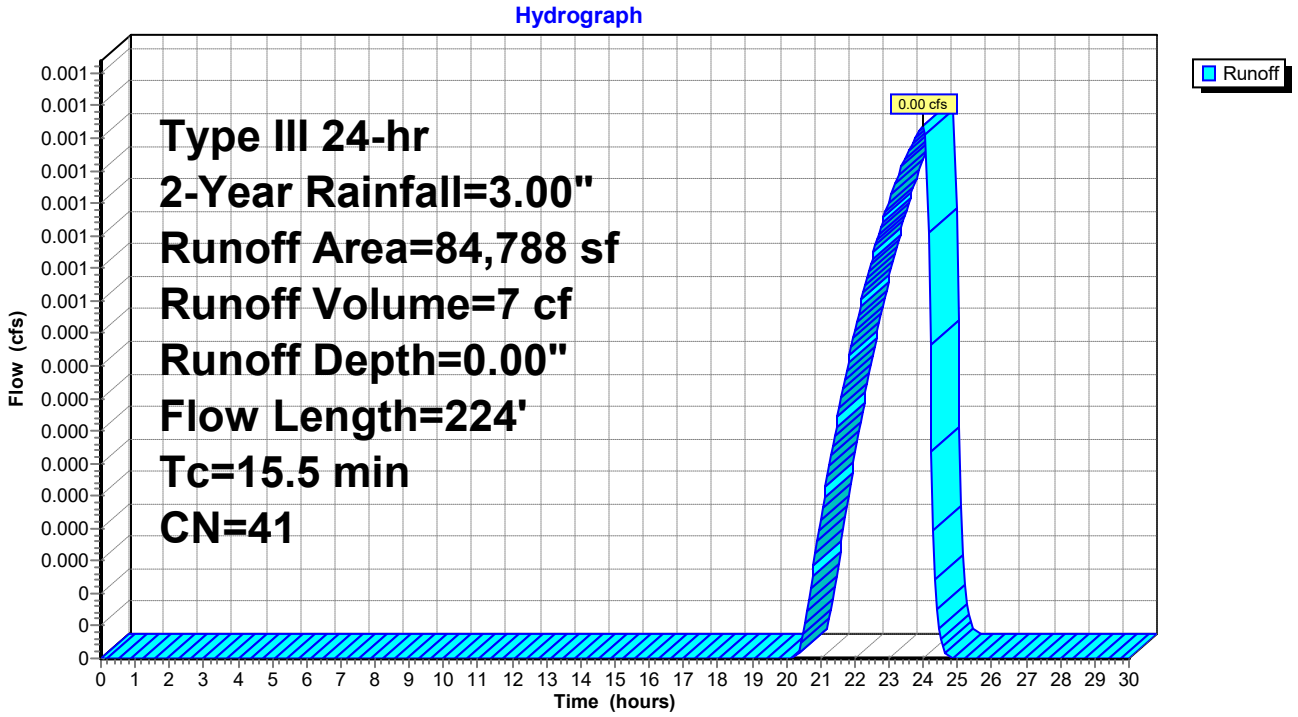
Runoff = 0.00 cfs @ 24.00 hrs, Volume= 7 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
77,531	39	>75% Grass cover, Good, HSG A
2,014	30	Woods, Good, HSG A
2,822	98	Paved parking, HSG A
2,421	55	Woods, Good, HSG B
84,788	41	Weighted Average
81,966		96.67% Pervious Area
2,822		3.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.2	79	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	13	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	57	0.3300	9.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
15.5	224	Total			

Subcatchment P252: OVERLAND TO DB#1



Summary for Subcatchment P253: OVERLAND TO DCB

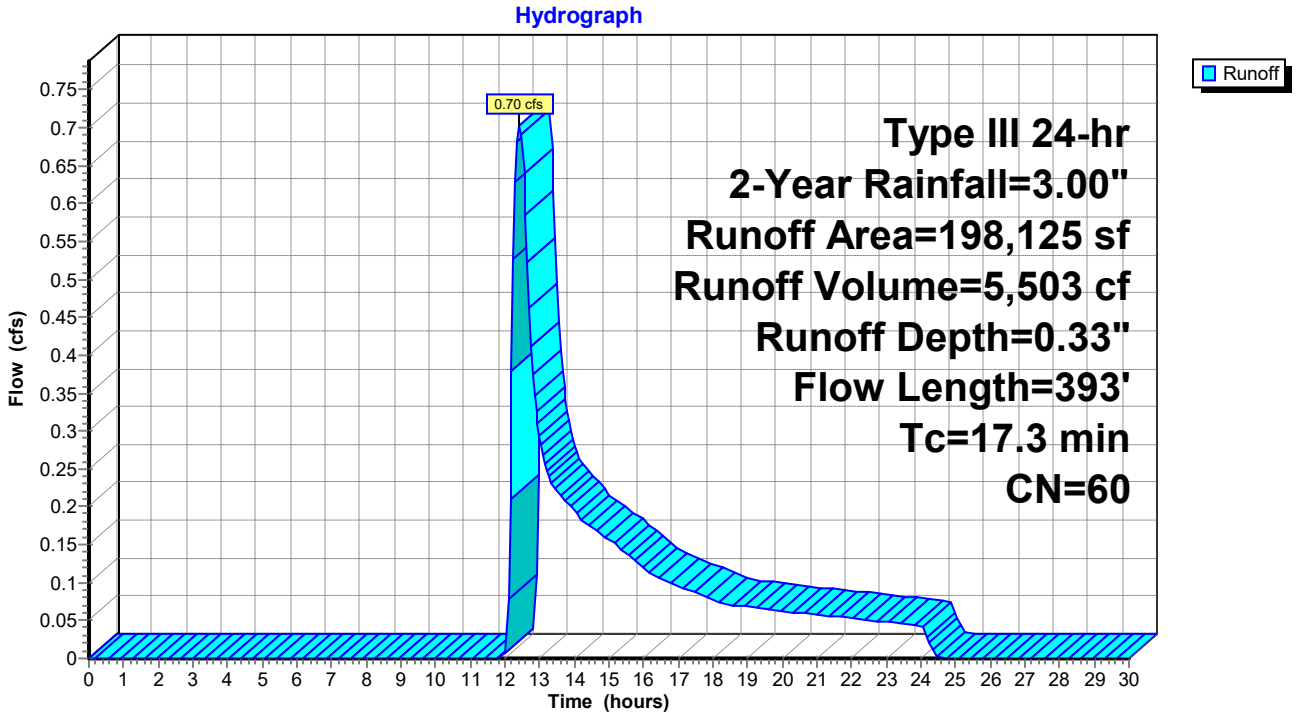
Runoff = 0.70 cfs @ 12.42 hrs, Volume= 5,503 cf, Depth= 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
85,790	39	>75% Grass cover, Good, HSG A
28,252	98	Paved parking, HSG A
65,778	61	>75% Grass cover, Good, HSG B
18,305	98	Paved parking, HSG B
198,125	60	Weighted Average
151,568		76.50% Pervious Area
46,557		23.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.8	125	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	15	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.6	60	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	118	0.0180	2.72		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
17.3	393	Total			

Subcatchment P253: OVERLAND TO DCB



Summary for Subcatchment p3: TO DCB#5

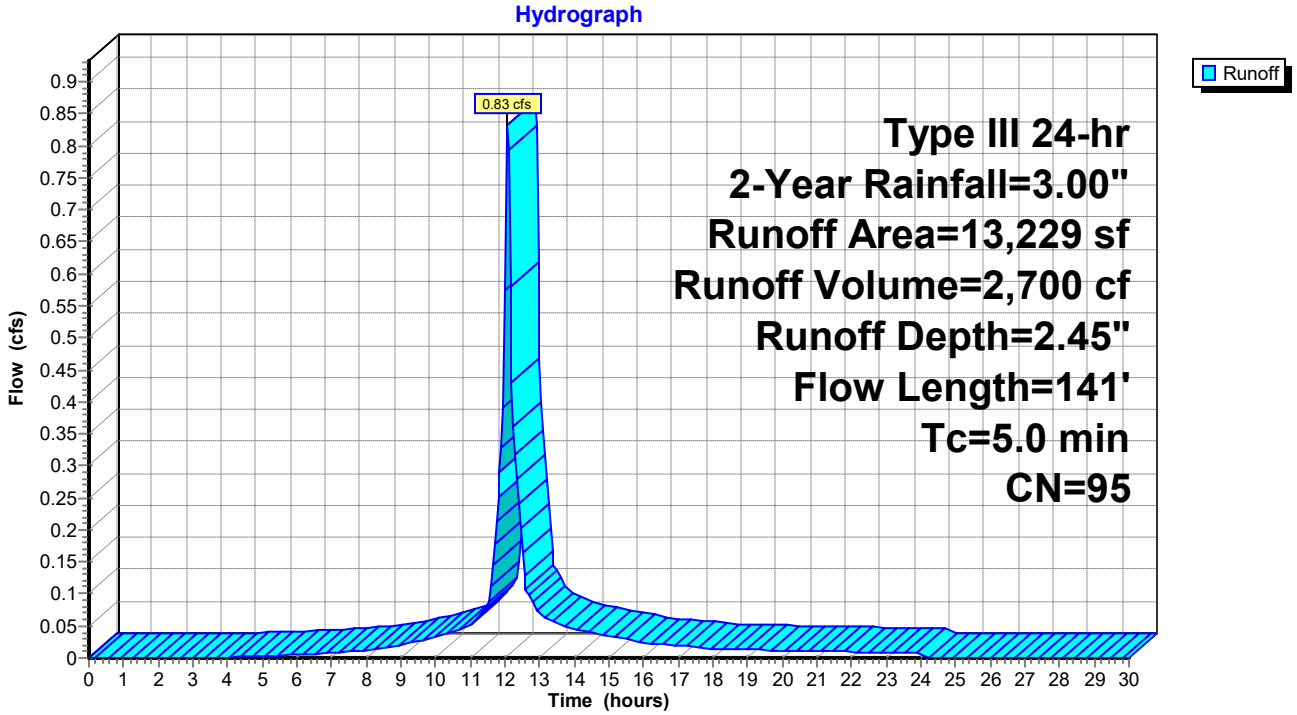
Runoff = 0.83 cfs @ 12.07 hrs, Volume= 2,700 cf, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
694	39	>75% Grass cover, Good, HSG A
12,535	98	Paved parking, HSG A
13,229	95	Weighted Average
694		5.25% Pervious Area
12,535		94.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	25	0.0100	0.76		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	91	0.0160	2.57		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	141	Total, Increased to minimum Tc = 5.0 min			

Subcatchment p3: TO DCB#5



Summary for Subcatchment P300: TO DP#3(2020)

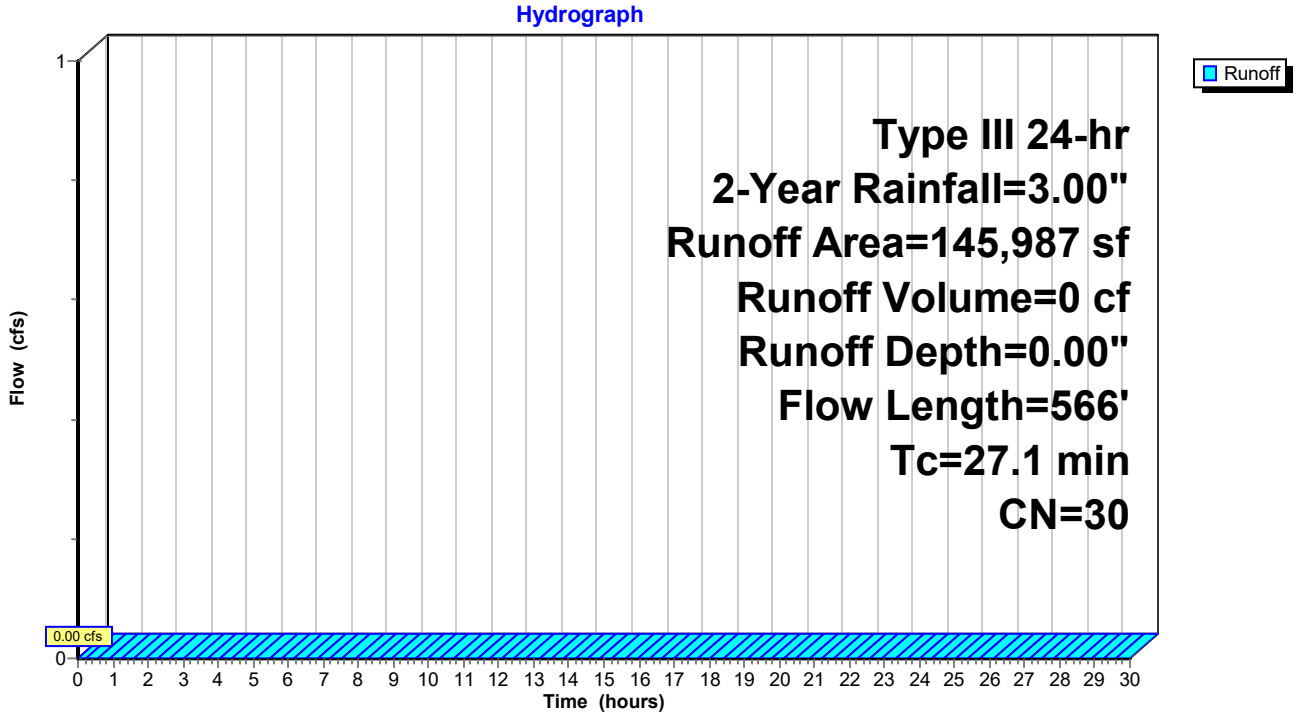
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
145,987	30	Woods, Good, HSG A
145,987		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	75	0.0450	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
1.1	71	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.3	420	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
27.1	566	Total			

Subcatchment P300: TO DP#3(2020)



Summary for Subcatchment P4: TO DCB#2

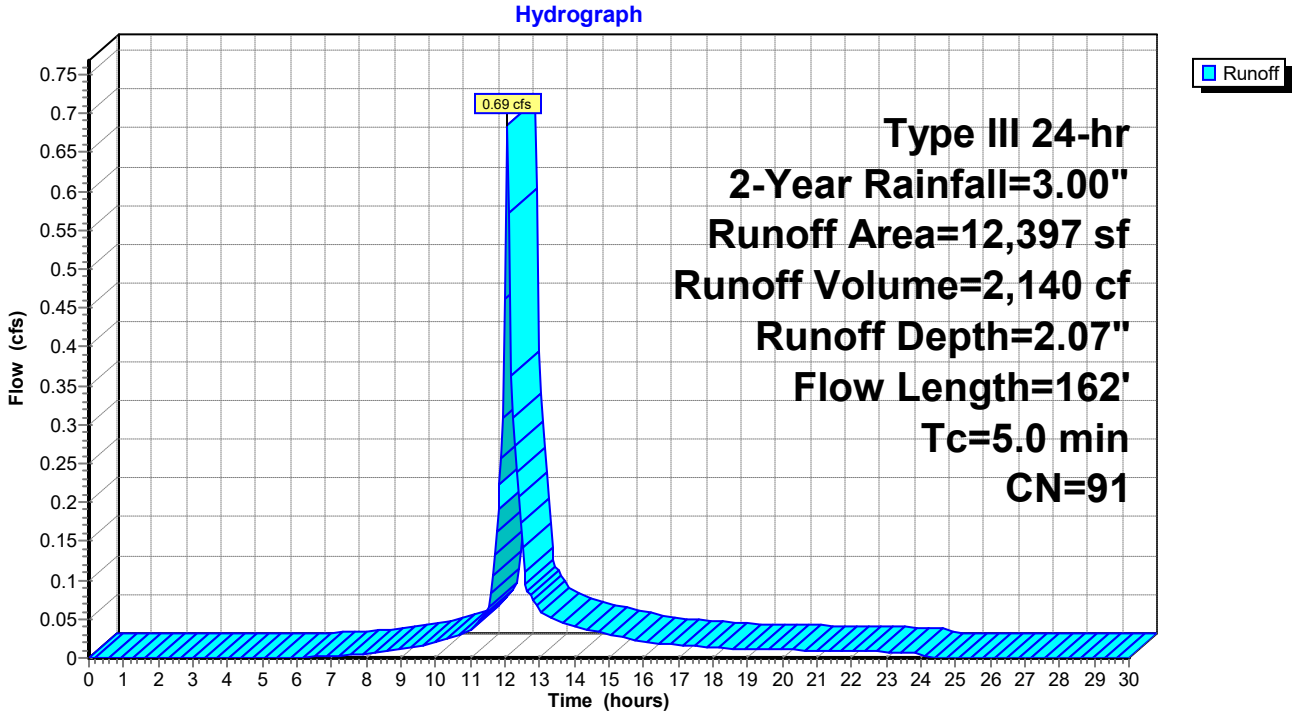
Runoff = 0.69 cfs @ 12.07 hrs, Volume= 2,140 cf, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
1,459	39	>75% Grass cover, Good, HSG A
10,938	98	Paved parking, HSG A
12,397	91	Weighted Average
1,459		11.77% Pervious Area
10,938		88.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	25	0.0100	0.76		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	112	0.0160	2.57		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	162	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P4: TO DCB#2



Summary for Subcatchment P400: TO DP#4(2020)

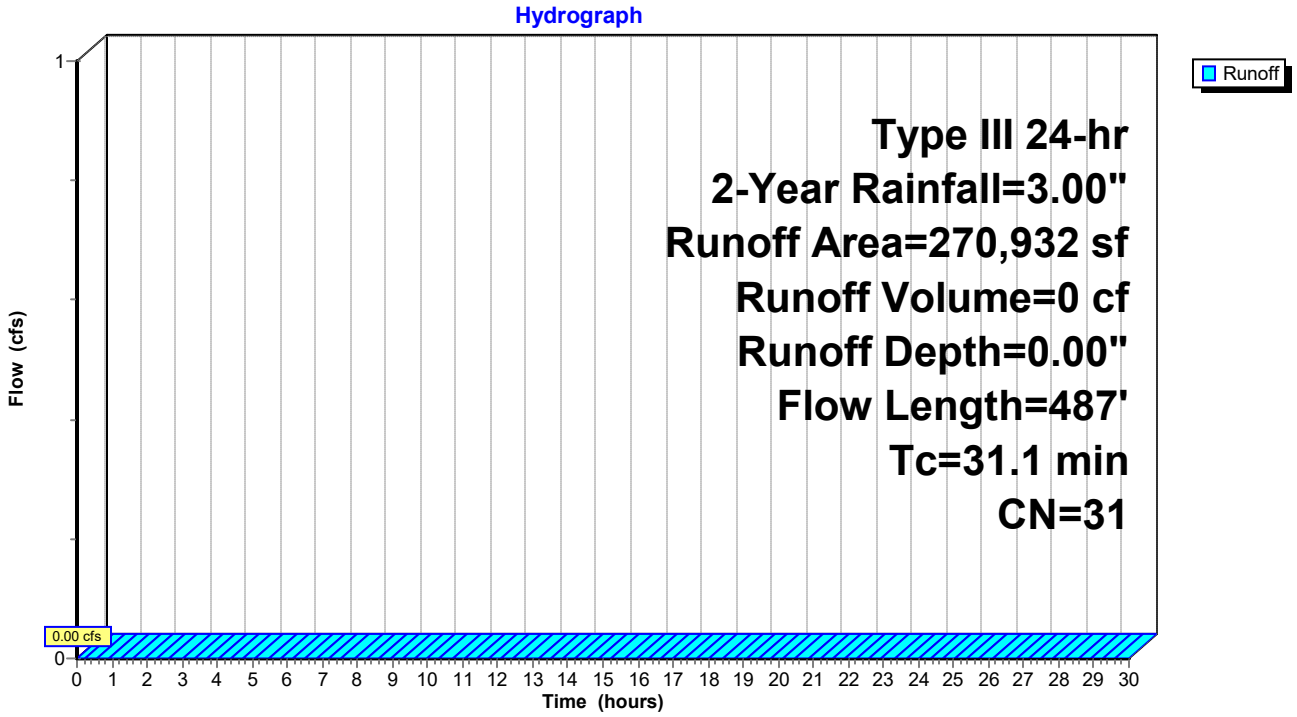
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
13,230	39	>75% Grass cover, Good, HSG A
256,109	30	Woods, Good, HSG A
1,593	98	Paved parking, HSG A
270,932	31	Weighted Average
269,339		99.41% Pervious Area
1,593		0.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	75	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
5.8	275	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	56	0.1780	1.05		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.1	22	0.4500	3.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	59	0.1200	0.87		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
31.1	487	Total			

Subcatchment P400: TO DP#4(2020)



Summary for Subcatchment P5: TO DCB#6

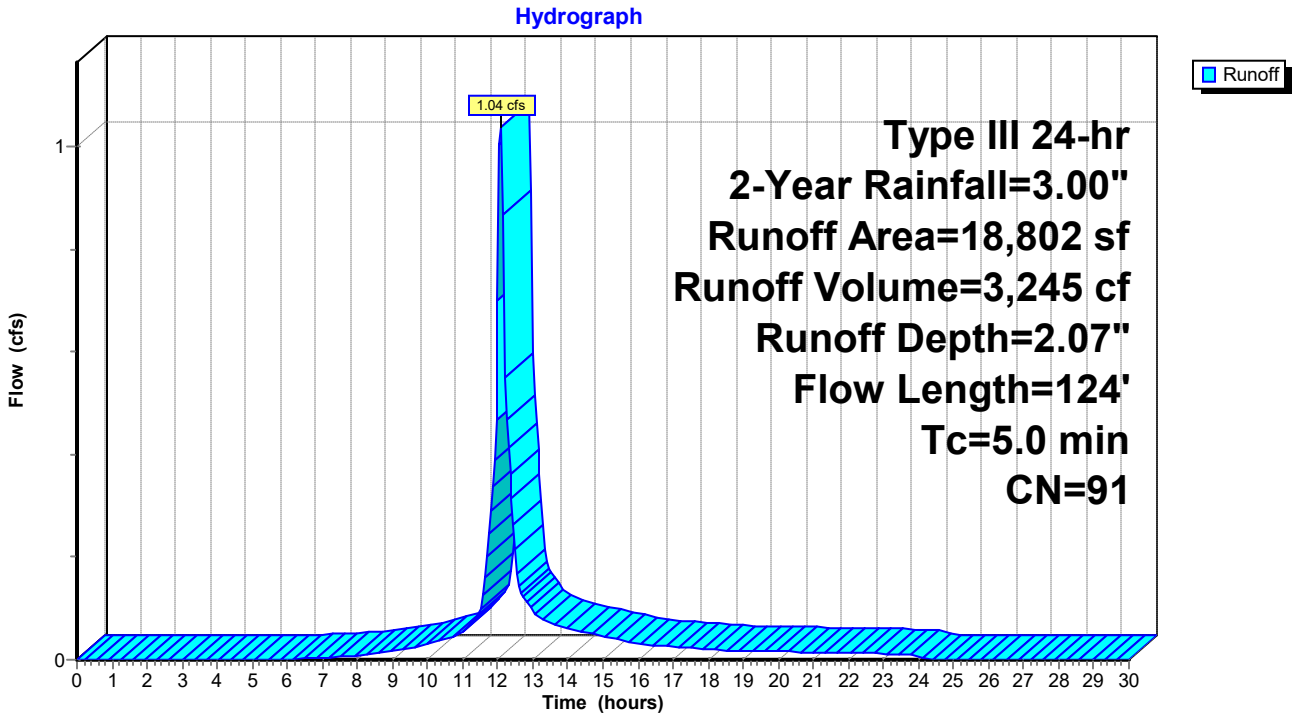
Runoff = 1.04 cfs @ 12.07 hrs, Volume= 3,245 cf, Depth= 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
2,343	39	>75% Grass cover, Good, HSG A
16,459	98	Paved parking, HSG A
18,802	91	Weighted Average
2,343		12.46% Pervious Area
16,459		87.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	11	0.0100	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	14	0.0300	1.06		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	74	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	124	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P5: TO DCB#6



Summary for Subcatchment P6: TO DCB#3

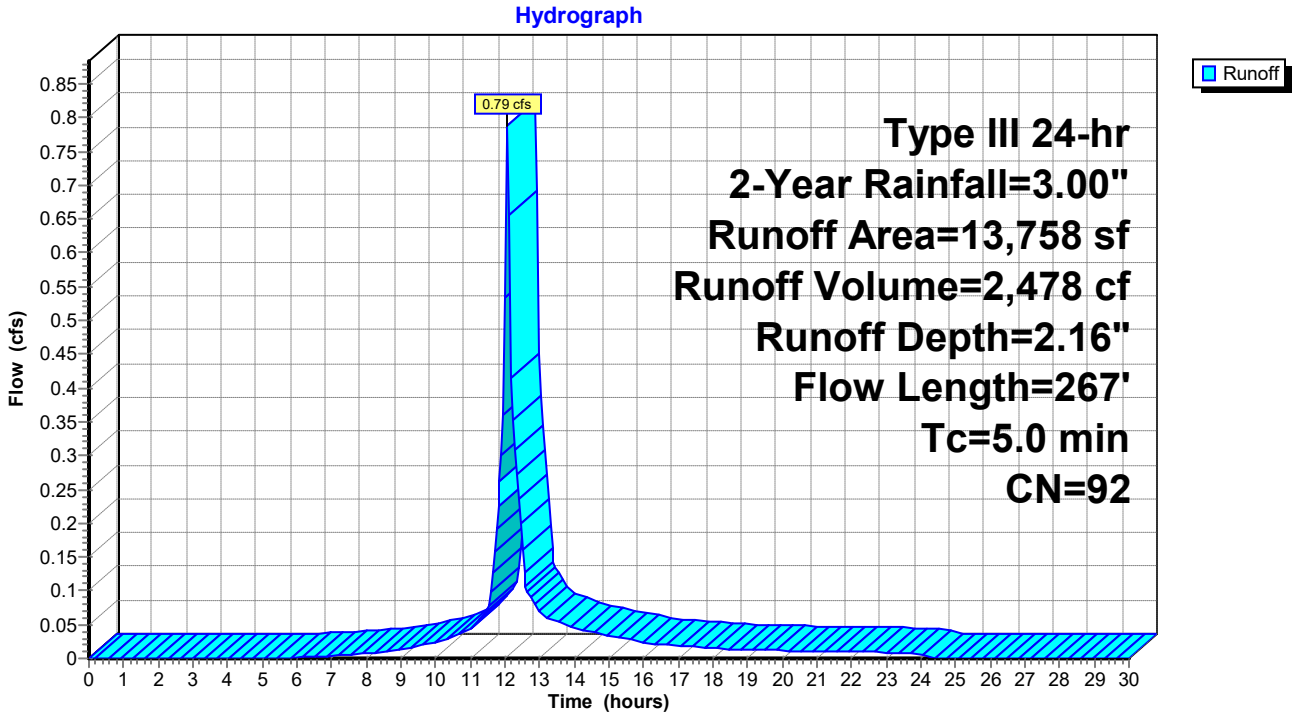
Runoff = 0.79 cfs @ 12.07 hrs, Volume= 2,478 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
1,369	39	>75% Grass cover, Good, HSG A
12,389	98	Paved parking, HSG A
13,758	92	Weighted Average
1,369		9.95% Pervious Area
12,389		90.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	5	0.0100	0.07		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.3	10	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	5	0.0100	0.07		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.5	30	0.0200	1.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	217	0.0240	3.14		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.4	267	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P6: TO DCB#3



Summary for Subcatchment PS101: TO TEMP SETTLING BASIN

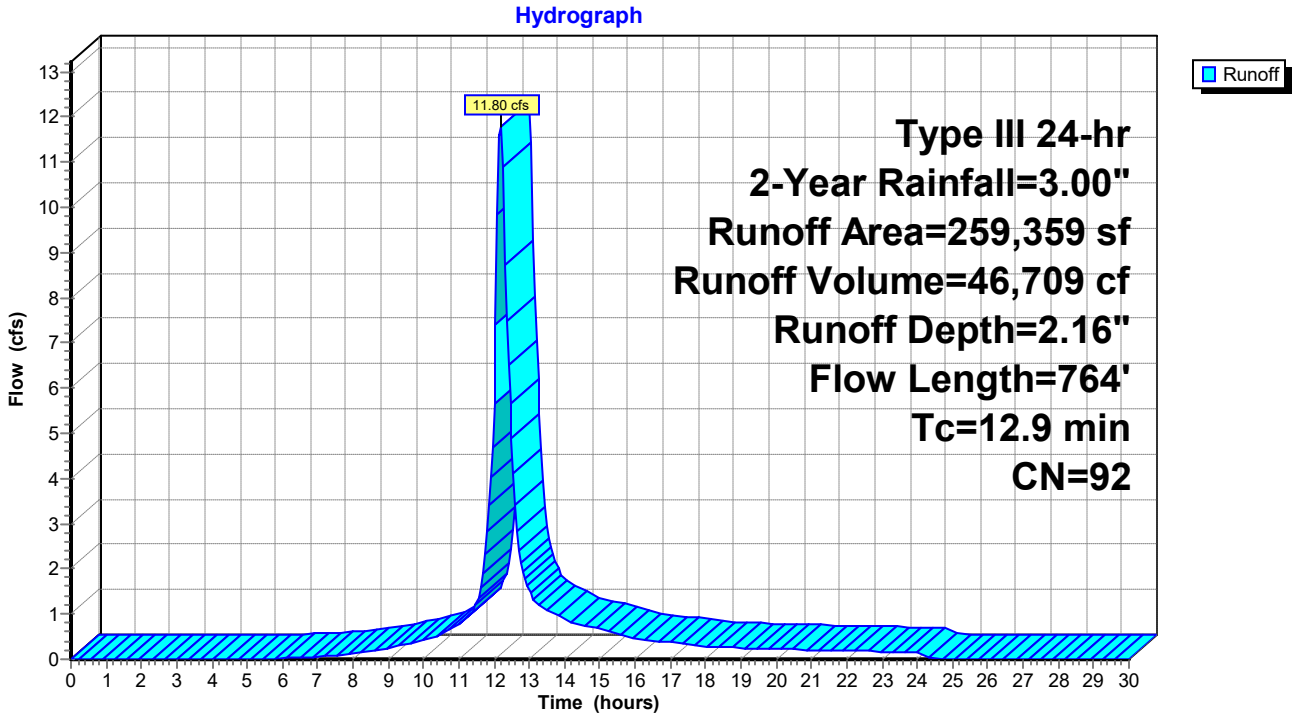
Runoff = 11.80 cfs @ 12.17 hrs, Volume= 46,709 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
604	30	Woods, Good, HSG A
218,879	96	Gravel surface, HSG A
7,125	30	Brush, Good, HSG A
20,834	80	>75% Grass cover, Good, HSG D
5,941	96	Gravel surface, HSG D
5,976	73	Brush, Good, HSG D
259,359	92	Weighted Average
259,359		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	75	0.0670	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.2	187	0.0270	2.65		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	502	0.0060	1.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
12.9	764	Total			

Subcatchment PS101: TO TEMP SETTLING BASIN



Summary for Subcatchment PS102: TO CULVERT

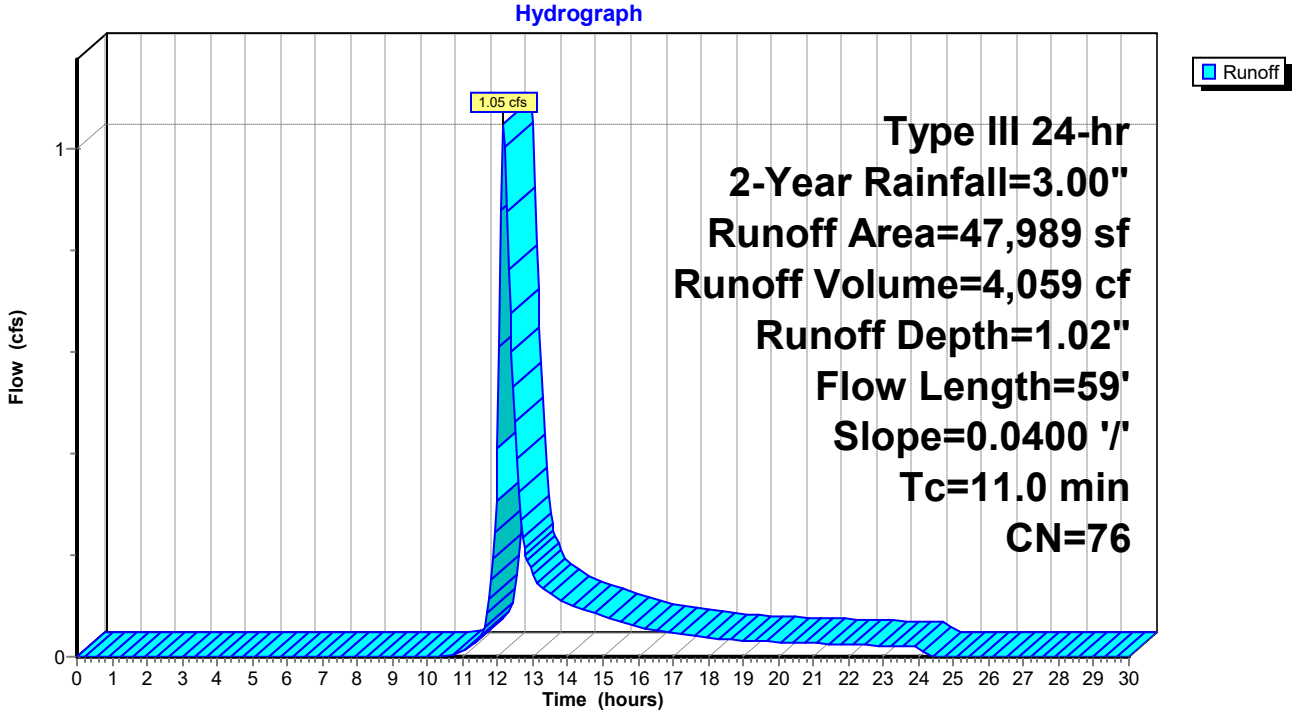
Runoff = 1.05 cfs @ 12.17 hrs, Volume= 4,059 cf, Depth= 1.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
10,627	73	Brush, Good, HSG D
37,362	77	Woods, Good, HSG D
47,989	76	Weighted Average
47,989		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	59	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"

Subcatchment PS102: TO CULVERT



Summary for Subcatchment PS103: TO DP#1

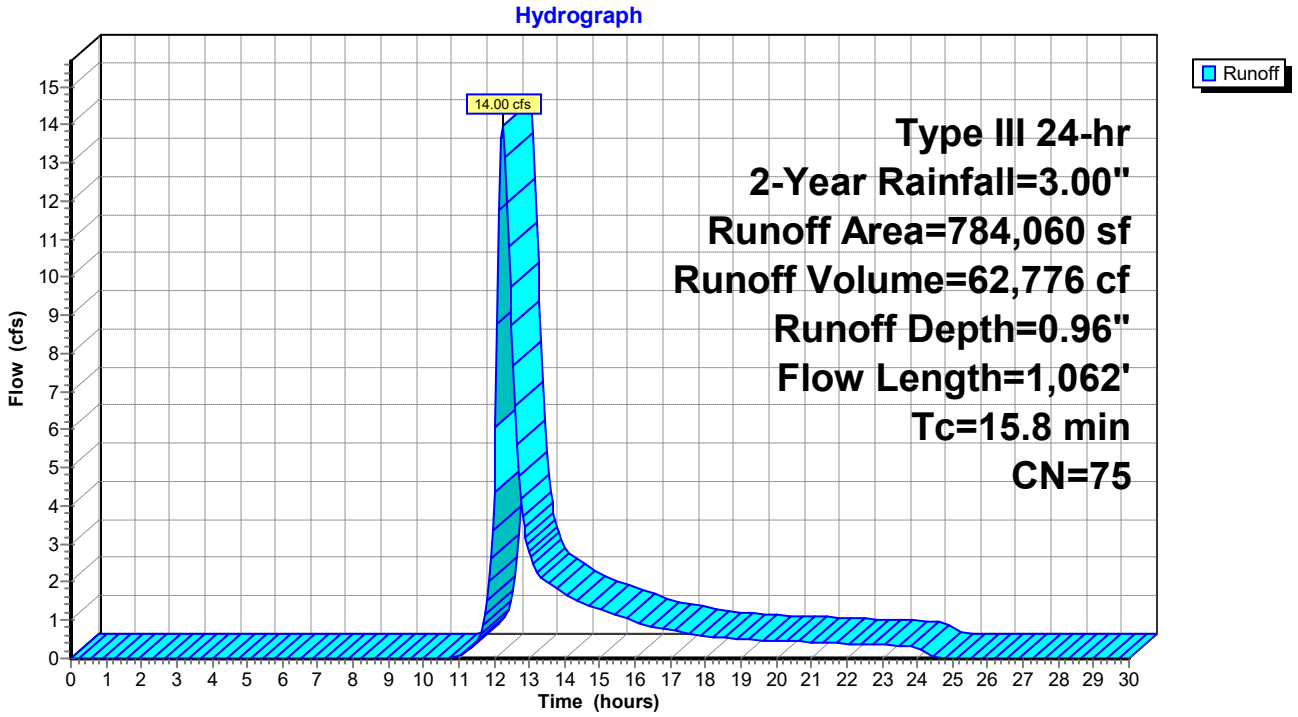
Runoff = 14.00 cfs @ 12.24 hrs, Volume= 62,776 cf, Depth= 0.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
51,017	39	>75% Grass cover, Good, HSG A
22,386	30	Brush, Good, HSG A
21,462	30	Woods, Good, HSG A
81,382	96	Gravel surface, HSG A
36,128	98	Paved parking, HSG A
49,340	61	>75% Grass cover, Good, HSG B
43,824	48	Brush, Good, HSG B
137,472	55	Woods, Good, HSG B
74,794	96	Gravel surface, HSG B
98,633	98	Paved parking, HSG B
686	80	>75% Grass cover, Good, HSG D
41,115	73	Brush, Good, HSG D
43,771	77	Woods, Good, HSG D
80,239	96	Gravel surface, HSG D
1,811	98	Paved parking, HSG D
784,060	75	Weighted Average
647,488		82.58% Pervious Area
136,572		17.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
12.3	841	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	15	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.7	156	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.8	1,062	Total			

Subcatchment PS103: TO DP#1



Summary for Subcatchment PS104: TO DP#1B

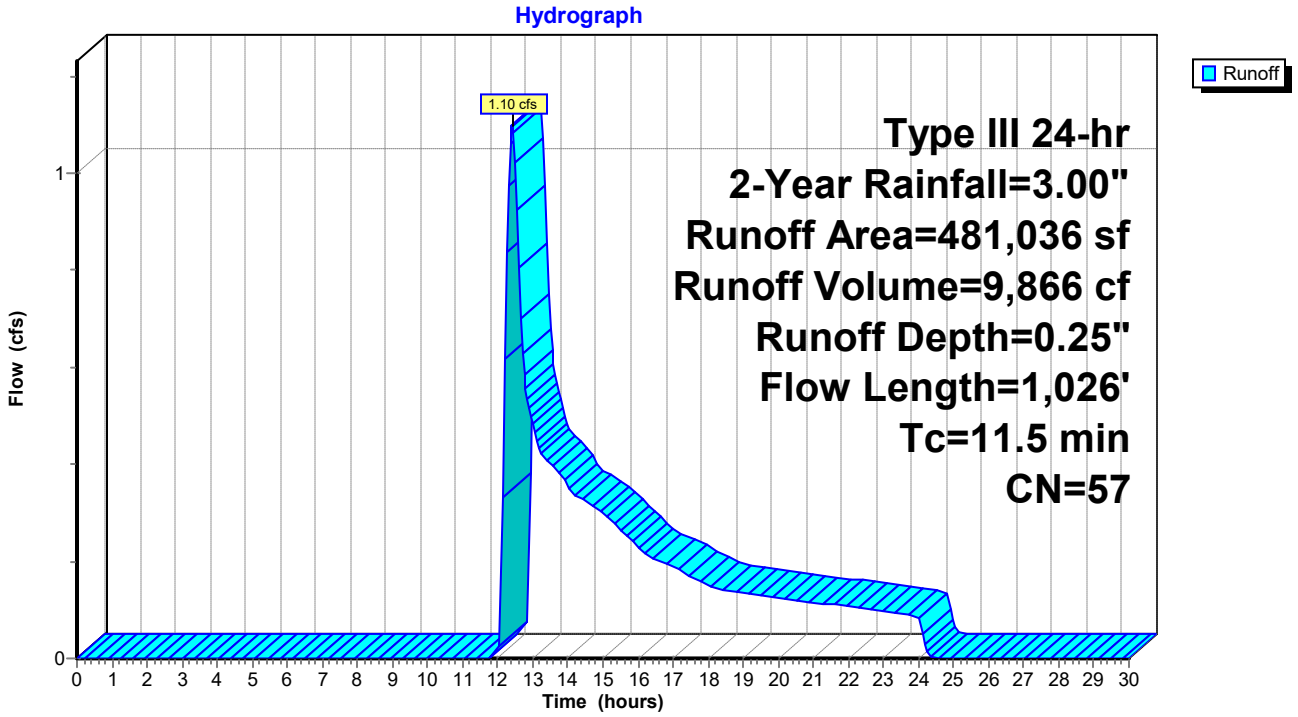
Runoff = 1.10 cfs @ 12.41 hrs, Volume= 9,866 cf, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
146,483	39	>75% Grass cover, Good, HSG A
9,644	70	Woods, Good, HSG C
9,532	98	Paved parking, HSG A
195,535	61	>75% Grass cover, Good, HSG B
3,382	48	Brush, Good, HSG B
53,509	55	Woods, Good, HSG B
234	96	Gravel surface, HSG B
6,372	98	Paved parking, HSG B
14,879	73	Brush, Good, HSG D
40,619	77	Woods, Good, HSG D
847	96	Gravel surface, HSG D
481,036	57	Weighted Average
465,132		96.69% Pervious Area
15,904		3.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	75	0.0500	1.81		**Sheet Flow, gravel** Smooth surfaces n= 0.011 P2= 3.00"
0.1	25	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.1	304	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	84	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.3	25	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.0	93	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
11.5	1,026	Total			

Subcatchment PS104: TO DP#1B



Summary for Subcatchment PS105: TO CULVERT

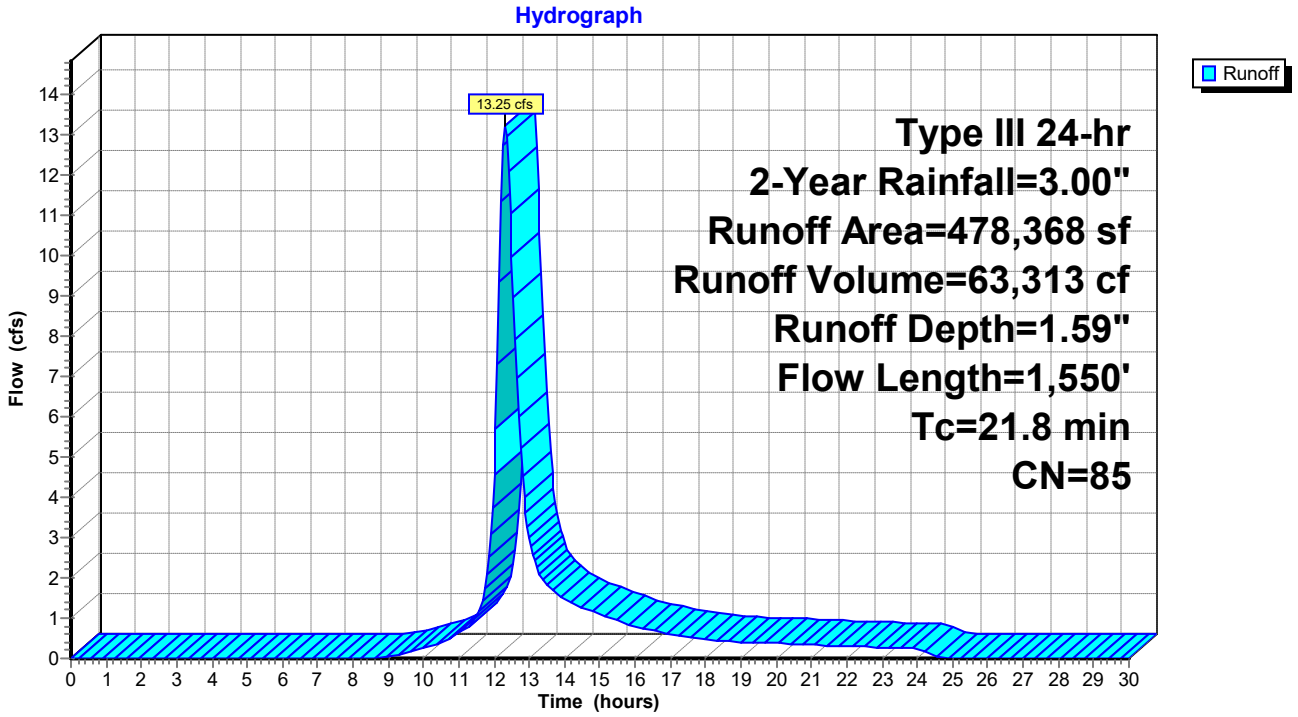
Runoff = 13.25 cfs @ 12.31 hrs, Volume= 63,313 cf, Depth= 1.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
46,071	96	Gravel surface, HSG B
704	74	>75% Grass cover, Good, HSG C
34,999	74	Pasture/grassland/range, Good, HSG C
176,119	70	Woods, Good, HSG C
219,495	96	Gravel surface, HSG C
980	96	Gravel surface, HSG D
478,368	85	Weighted Average
478,368		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	75	0.0770	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
3.8	314	0.0770	1.39		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	110	0.2000	2.24		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.6	107	0.3500	2.96		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.2	250	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	30	0.3300	9.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.6	163	0.0800	4.55		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.4	501	0.0230	2.44		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	1,550	Total			

Subcatchment PS105: TO CULVERT



Summary for Subcatchment PSUB10: TO DCB-S10

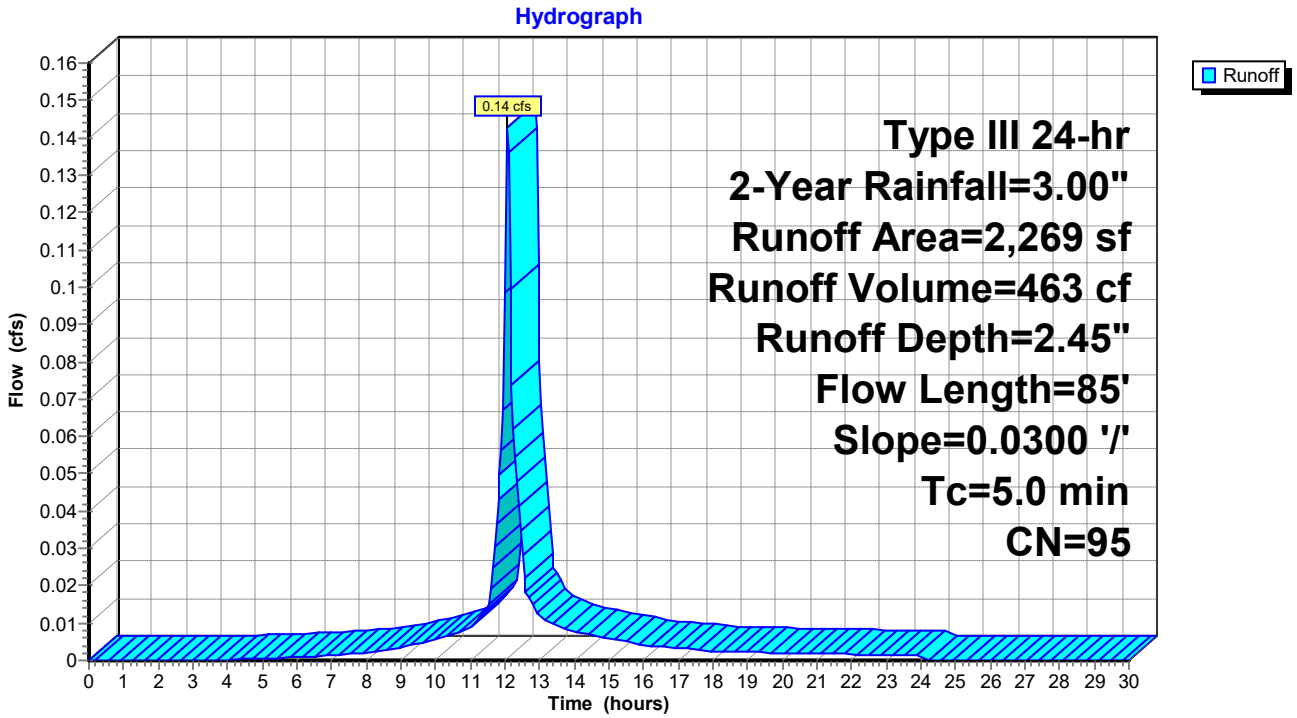
Runoff = 0.14 cfs @ 12.07 hrs, Volume= 463 cf, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (sf)	CN	Description
190	61	>75% Grass cover, Good, HSG B
2,037	98	Paved parking, HSG B
42	98	Paved parking, HSG C
2,269	95	Weighted Average
190		8.37% Pervious Area
2,079		91.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0300	1.36		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	35	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	85	Total, Increased to minimum Tc = 5.0 min			

Subcatchment PSUB10: TO DCB-S10



Summary for Reach BK-1: McGovern Brook

Inflow Area = 944,676 sf, 13.07% Impervious, Inflow Depth = 1.66" for 2-Year event
Inflow = 27.37 cfs @ 12.21 hrs, Volume= 130,561 cf
Outflow = 24.75 cfs @ 12.44 hrs, Volume= 130,558 cf, Atten= 10%, Lag= 14.2 min

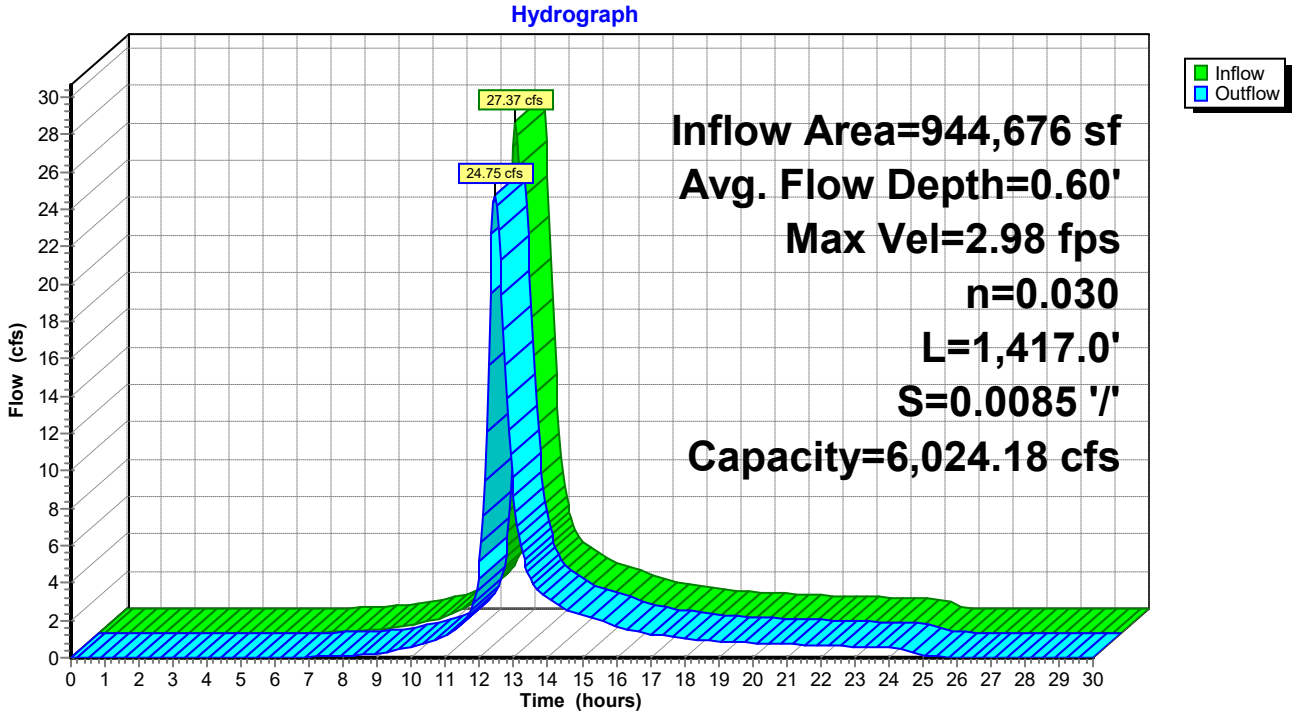
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.98 fps, Min. Travel Time= 7.9 min
Avg. Velocity = 1.09 fps, Avg. Travel Time= 21.6 min

Peak Storage= 11,839 cf @ 12.31 hrs
Average Depth at Peak Storage= 0.60'
Bank-Full Depth= 10.00' Flow Area= 420.0 sf, Capacity= 6,024.18 cfs

12.00' x 10.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 72.00'
Length= 1,417.0' Slope= 0.0085 '/'
Inlet Invert= 346.00', Outlet Invert= 334.00'

‡

Reach BK-1: McGovern Brook



Stage-Discharge for Reach BK-1: McGovern Brook

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.00	0.00	0.00
346.10	0.96	1.19
346.20	1.51	3.80
346.30	1.94	7.52
346.40	2.32	12.26
346.50	2.66	17.94
346.60	2.96	24.54
346.70	3.25	32.03
346.80	3.51	40.42
346.90	3.76	49.68
347.00	3.99	59.83
347.10	4.21	70.86
347.20	4.42	82.79
347.30	4.63	95.61
347.40	4.82	109.33
347.50	5.01	123.97
347.60	5.19	139.53
347.70	5.37	156.03
347.80	5.54	173.47
347.90	5.71	191.87
348.00	5.87	211.24
348.10	6.03	231.59
348.20	6.18	252.93
348.30	6.33	275.28
348.40	6.48	298.65
348.50	6.63	323.06
348.60	6.77	348.50
348.70	6.91	375.01
348.80	7.05	402.59
348.90	7.18	431.25
349.00	7.32	461.01
349.10	7.45	491.88
349.20	7.58	523.87
349.30	7.71	557.00
349.40	7.83	591.28
349.50	7.96	626.73
349.60	8.08	663.35
349.70	8.20	701.16
349.80	8.32	740.17
349.90	8.44	780.40
350.00	8.56	821.86
350.10	8.68	864.56
350.20	8.79	908.51
350.30	8.91	953.73
350.40	9.02	1,000.23
350.50	9.13	1,048.02
350.60	9.24	1,097.12
350.70	9.35	1,147.54
350.80	9.46	1,199.29
350.90	9.57	1,252.38
351.00	9.68	1,306.82
351.10	9.79	1,362.64
351.20	9.89	1,419.84
351.30	10.00	1,478.43
351.40	10.10	1,538.43
351.50	10.21	1,599.84
351.60	10.31	1,662.69
351.70	10.41	1,726.98
351.80	10.51	1,792.73
351.90	10.61	1,859.94
352.00	10.71	1,928.63
352.10	10.81	1,998.82
352.20	10.91	2,070.50
352.30	11.01	2,143.71
352.40	11.11	2,218.44
352.50	11.21	2,294.71
352.60	11.30	2,372.53
352.70	11.40	2,451.92
352.80	11.50	2,532.88
352.90	11.59	2,615.43
353.00	11.69	2,699.58
353.10	11.78	2,785.33
353.20	11.87	2,872.71
353.30	11.97	2,961.73
353.40	12.06	3,052.39
353.50	12.15	3,144.70
353.60	12.25	3,238.69
353.70	12.34	3,334.35
353.80	12.43	3,431.71
353.90	12.52	3,530.77
354.00	12.61	3,631.54
354.10	12.70	3,734.04
354.20	12.79	3,838.27
354.30	12.88	3,944.26
354.40	12.97	4,052.00
354.50	13.06	4,161.51
354.60	13.14	4,272.81
354.70	13.23	4,385.90
354.80	13.32	4,500.79
354.90	13.41	4,617.49
355.00	13.49	4,736.03
355.10	13.58	4,856.40
355.20	13.67	4,978.61
355.30	13.75	5,102.69
355.40	13.84	5,228.63
355.50	13.92	5,356.46
355.60	14.01	5,486.18
355.70	14.09	5,617.80
355.80	14.18	5,751.33
355.90	14.26	5,886.79
356.00	**14.34**	**6,024.18**

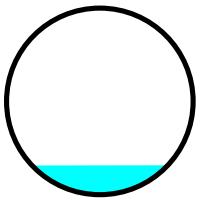
Summary for Reach CB-D4: TO DMH-1

Inflow Area = 16,447 sf, 47.74% Impervious, Inflow Depth = 0.58" for 2-Year event
Inflow = 0.21 cfs @ 12.10 hrs, Volume= 802 cf
Outflow = 0.21 cfs @ 12.11 hrs, Volume= 802 cf, Atten= 1%, Lag= 0.4 min

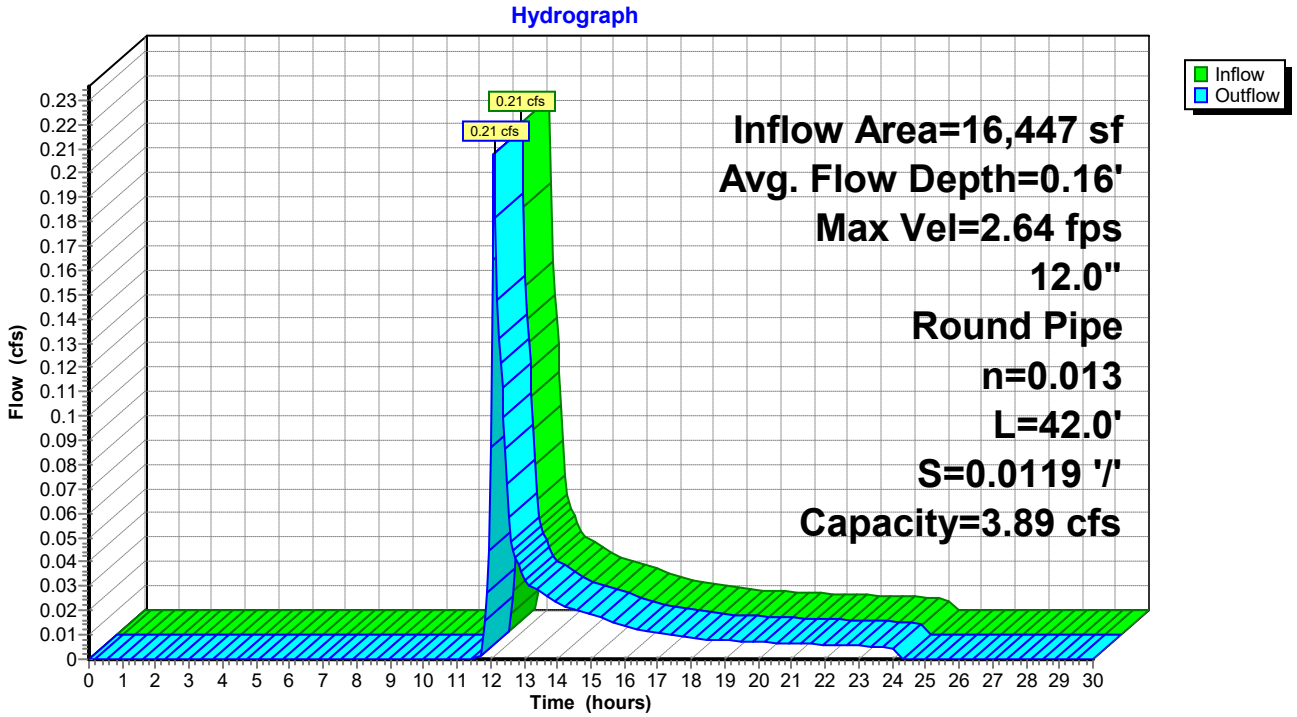
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.64 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.13 fps, Avg. Travel Time= 0.6 min

Peak Storage= 3 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.16'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.89 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 42.0' Slope= 0.0119 '/'
Inlet Invert= 352.70', Outlet Invert= 352.20'



Reach CB-D4: TO DMH-1



Stage-Discharge for Reach CB-D4: TO DMH-1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.70	0.00	0.00
352.71	0.44	0.00
352.72	0.70	0.00
352.73	0.91	0.01
352.74	1.10	0.01
352.75	1.27	0.02
352.76	1.43	0.03
352.77	1.58	0.04
352.78	1.72	0.05
352.79	1.86	0.07
352.80	1.99	0.08
352.81	2.11	0.10
352.82	2.23	0.12
352.83	2.34	0.14
352.84	2.45	0.16
352.85	2.56	0.19
352.86	2.66	0.22
352.87	2.76	0.24
352.88	2.86	0.27
352.89	2.95	0.31
352.90	3.04	0.34
352.91	3.13	0.38
352.92	3.22	0.41
352.93	3.31	0.45
352.94	3.39	0.49
352.95	3.47	0.53
352.96	3.55	0.58
352.97	3.62	0.62
352.98	3.70	0.67
352.99	3.77	0.71
353.00	3.84	0.76
353.01	3.91	0.81
353.02	3.98	0.86
353.03	4.04	0.91
353.04	4.11	0.97
353.05	4.17	1.02
353.06	4.23	1.08
353.07	4.29	1.13
353.08	4.35	1.19
353.09	4.41	1.25
353.10	4.47	1.31
353.11	4.52	1.37
353.12	4.57	1.43
353.13	4.62	1.49
353.14	4.67	1.56
353.15	4.72	1.62
353.16	4.77	1.68
353.17	4.82	1.75
353.18	4.86	1.81
353.19	4.91	1.88
353.20	4.95	1.94
353.21	4.99	2.01
353.22	5.03	2.08
353.23	5.07	2.14
353.24	5.11	2.21
353.25	5.14	2.28
353.26	5.18	2.34
353.27	5.21	2.41
353.28	5.25	2.48
353.29	5.28	2.54
353.30	5.31	2.61
353.31	5.34	2.68
353.32	5.36	2.74
353.33	5.39	2.81
353.34	5.42	2.88
353.35	5.44	2.94
353.36	5.46	3.00
353.37	5.49	3.07
353.38	5.51	3.13
353.39	5.52	3.19
353.40	5.54	3.25
353.41	5.56	3.31
353.42	5.57	3.37
353.43	5.59	3.43
353.44	5.60	3.49
353.45	5.61	3.54
353.46	5.62	3.60
353.47	5.63	3.65
353.48	5.63	3.70
353.49	5.64	3.75
353.50	5.64	3.80
353.51	**5.64**	3.85
353.52	5.64	3.89
353.53	5.64	3.93
353.54	5.64	3.97
353.55	5.63	4.01
353.56	5.62	4.04
353.57	5.61	4.07
353.58	5.60	4.10
353.59	5.58	4.12
353.60	5.56	4.14
353.61	5.54	4.16
353.62	5.52	4.17
353.63	5.49	4.18
353.64	5.46	**4.18**
353.65	5.42	4.18
353.66	5.37	4.16
353.67	5.32	4.14
353.68	5.26	4.11
353.69	5.17	4.05
353.70	4.95	3.89

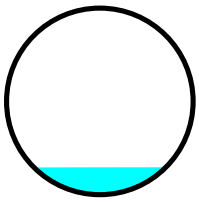
Summary for Reach CB-D7: TO DMH#6

Inflow Area = 2,624 sf,100.00% Impervious, Inflow Depth = 2.77" for 2-Year event
Inflow = 0.18 cfs @ 12.07 hrs, Volume= 605 cf
Outflow = 0.17 cfs @ 12.07 hrs, Volume= 605 cf, Atten= 1%, Lag= 0.3 min

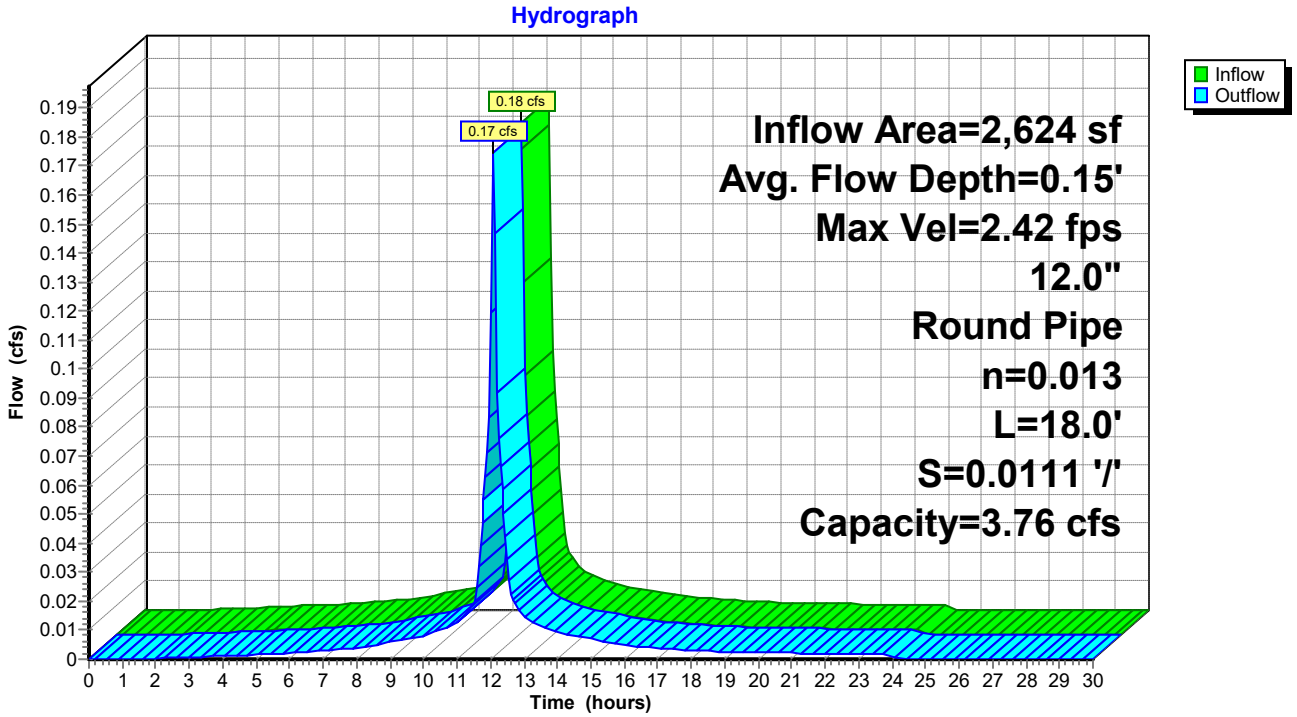
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.42 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.80 fps, Avg. Travel Time= 0.4 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.15'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.76 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 18.0' Slope= 0.0111 '/'
Inlet Invert= 351.70', Outlet Invert= 351.50'



Reach CB-D7: TO DMH#6



Stage-Discharge for Reach CB-D7: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.43	0.00
351.72	0.67	0.00
351.73	0.88	0.01
351.74	1.06	0.01
351.75	1.23	0.02
351.76	1.38	0.03
351.77	1.53	0.04
351.78	1.66	0.05
351.79	1.79	0.06
351.80	1.92	0.08
351.81	2.04	0.10
351.82	2.15	0.11
351.83	2.26	0.14
351.84	2.37	0.16
351.85	2.47	0.18
351.86	2.57	0.21
351.87	2.67	0.24
351.88	2.76	0.27
351.89	2.85	0.30
351.90	2.94	0.33
351.91	3.03	0.36
351.92	3.11	0.40
351.93	3.19	0.44
351.94	3.27	0.47
351.95	3.35	0.51
351.96	3.43	0.56
351.97	3.50	0.60
351.98	3.57	0.64
351.99	3.64	0.69
352.00	3.71	0.74
352.01	3.78	0.78
352.02	3.84	0.83
352.03	3.91	0.88
352.04	3.97	0.93
352.05	4.03	0.99
352.06	4.09	1.04
352.07	4.15	1.10
352.08	4.20	1.15
352.09	4.26	1.21
352.10	4.31	1.27
352.11	4.37	1.32
352.12	4.42	1.38
352.13	4.47	1.44
352.14	4.52	1.50
352.15	4.56	1.56
352.16	4.61	1.63
352.17	4.65	1.69
352.18	4.70	1.75
352.19	4.74	1.81
352.20	4.78	1.88
352.21	4.82	1.94
352.22	4.86	2.01
352.23	4.90	2.07
352.24	4.93	2.13
352.25	4.97	2.20
352.26	5.00	2.26
352.27	5.04	2.33
352.28	5.07	2.39
352.29	5.10	2.46
352.30	5.13	2.52
352.31	5.16	2.59
352.32	5.18	2.65
352.33	5.21	2.71
352.34	5.23	2.78
352.35	5.26	2.84
352.36	5.28	2.90
352.37	5.30	2.96
352.38	5.32	3.03
352.39	5.34	3.09
352.40	5.35	3.14
352.41	5.37	3.20
352.42	5.38	3.26
352.43	5.40	3.32
352.44	5.41	3.37
352.45	5.42	3.42
352.46	5.43	3.48
352.47	5.44	3.53
352.48	5.44	3.58
352.49	5.45	3.62
352.50	5.45	3.67
352.51	**5.45**	3.71
352.52	5.45	3.76
352.53	5.45	3.80
352.54	5.44	3.83
352.55	5.44	3.87
352.56	5.43	3.90
352.57	5.42	3.93
352.58	5.41	3.96
352.59	5.39	3.98
352.60	5.38	4.00
352.61	5.36	4.02
352.62	5.33	4.03
352.63	5.30	4.04
352.64	5.27	**4.04**
352.65	5.24	4.04
352.66	5.19	4.02
352.67	5.14	4.00
352.68	5.08	3.97
352.69	4.99	3.91
352.70	4.78	3.76

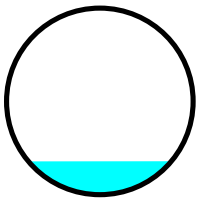
Summary for Reach CB-D8: TO DMH#6

Inflow Area = 5,879 sf, 76.82% Impervious, Inflow Depth = 1.52" for 2-Year event
Inflow = 0.24 cfs @ 12.08 hrs, Volume= 743 cf
Outflow = 0.24 cfs @ 12.08 hrs, Volume= 743 cf, Atten= 0%, Lag= 0.3 min

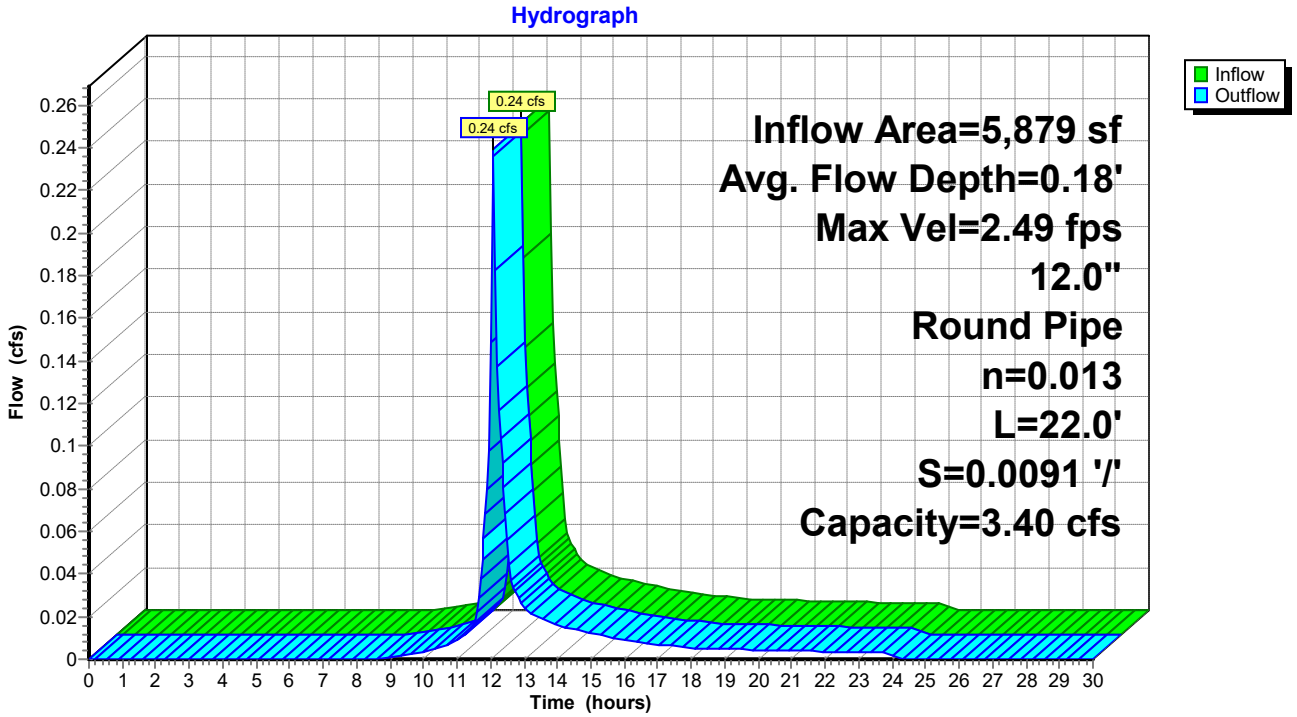
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.49 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.89 fps, Avg. Travel Time= 0.4 min

Peak Storage= 2 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.40 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 22.0' Slope= 0.0091 '/'
Inlet Invert= 351.70', Outlet Invert= 351.50'



Reach CB-D8: TO DMH#6



Stage-Discharge for Reach CB-D8: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.38	0.00
351.72	0.61	0.00
351.73	0.80	0.01
351.74	0.96	0.01
351.75	1.11	0.02
351.76	1.25	0.02
351.77	1.38	0.03
351.78	1.51	0.04
351.79	1.62	0.06
351.80	1.74	0.07
351.81	1.84	0.09
351.82	1.95	0.10
351.83	2.05	0.12
351.84	2.14	0.14
351.85	2.24	0.17
351.86	2.33	0.19
351.87	2.41	0.21
351.88	2.50	0.24
351.89	2.58	0.27
351.90	2.66	0.30
351.91	2.74	0.33
351.92	2.81	0.36
351.93	2.89	0.39
351.94	2.96	0.43
351.95	3.03	0.47
351.96	3.10	0.50
351.97	3.17	0.54
351.98	3.23	0.58
351.99	3.29	0.62
352.00	3.36	0.67
352.01	3.42	0.71
352.02	3.48	0.75
352.03	3.53	0.80
352.04	3.59	0.85
352.05	3.65	0.89
352.06	3.70	0.94
352.07	3.75	0.99
352.08	3.80	1.04
352.09	3.85	1.09
352.10	3.90	1.14
352.11	3.95	1.20
352.12	4.00	1.25
352.13	4.04	1.30
352.14	4.09	1.36
352.15	4.13	1.41
352.16	4.17	1.47
352.17	4.21	1.53
352.18	4.25	1.58
352.19	4.29	1.64
352.20	4.33	1.70
352.21	4.36	1.76
352.22	4.40	1.81
352.23	4.43	1.87
352.24	4.46	1.93
352.25	4.50	1.99
352.26	4.53	2.05
352.27	4.56	2.11
352.28	4.58	2.17
352.29	4.61	2.22
352.30	4.64	2.28
352.31	4.66	2.34
352.32	4.69	2.40
352.33	4.71	2.46
352.34	4.73	2.51
352.35	4.75	2.57
352.36	4.77	2.63
352.37	4.79	2.68
352.38	4.81	2.74
352.39	4.83	2.79
352.40	4.84	2.84
352.41	4.86	2.90
352.42	4.87	2.95
352.43	4.88	3.00
352.44	4.89	3.05
352.45	4.90	3.10
352.46	4.91	3.15
352.47	4.92	3.19
352.48	4.92	3.24
352.49	4.93	3.28
352.50	4.93	3.32
352.51	**4.93**	3.36
352.52	4.93	3.40
352.53	4.93	3.43
352.54	4.92	3.47
352.55	4.92	3.50
352.56	4.91	3.53
352.57	4.90	3.56
352.58	4.89	3.58
352.59	4.88	3.60
352.60	4.86	3.62
352.61	4.84	3.64
352.62	4.82	3.65
352.63	4.80	3.65
352.64	4.77	**3.65**
352.65	4.74	3.65
352.66	4.70	3.64
352.67	4.65	3.62
352.68	4.59	3.59
352.69	4.51	3.54
352.70	4.33	3.40

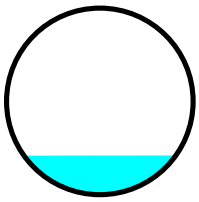
Summary for Reach CB21: TO DMH#21

Inflow Area = 16,502 sf, 47.31% Impervious, Inflow Depth = 1.13" for 2-Year event
Inflow = 0.49 cfs @ 12.08 hrs, Volume= 1,552 cf
Outflow = 0.49 cfs @ 12.09 hrs, Volume= 1,552 cf, Atten= 1%, Lag= 0.4 min

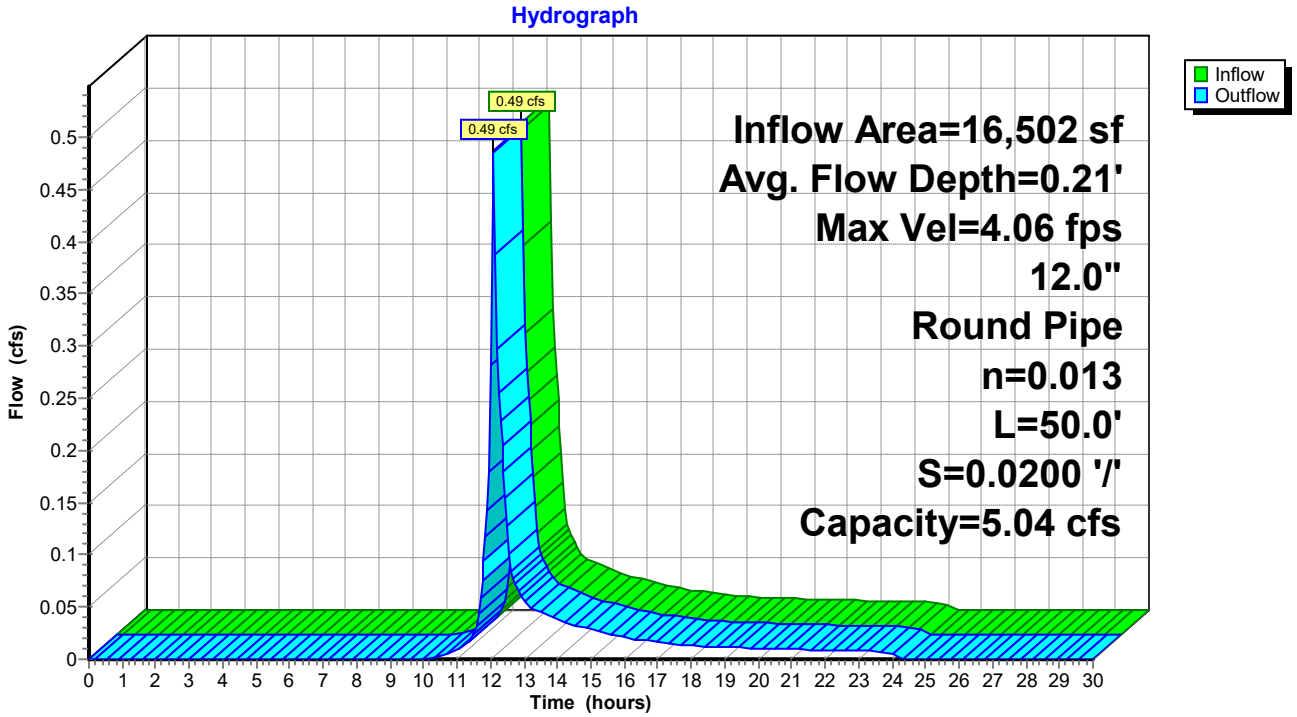
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.06 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.53 fps, Avg. Travel Time= 0.5 min

Peak Storage= 6 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.04 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 50.0' Slope= 0.0200 '/'
Inlet Invert= 346.40', Outlet Invert= 345.40'



Reach CB21: TO DMH#21



Stage-Discharge for Reach CB21: TO DMH#21

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.40	0.00	0.00
346.41	0.57	0.00
346.42	0.90	0.00
346.43	1.18	0.01
346.44	1.42	0.02
346.45	1.65	0.02
346.46	1.86	0.04
346.47	2.05	0.05
346.48	2.23	0.07
346.49	2.41	0.08
346.50	2.57	0.11
346.51	2.73	0.13
346.52	2.89	0.15
346.53	3.03	0.18
346.54	3.18	0.21
346.55	3.32	0.24
346.56	3.45	0.28
346.57	3.58	0.32
346.58	3.70	0.36
346.59	3.83	0.40
346.60	3.95	0.44
346.61	4.06	0.49
346.62	4.17	0.53
346.63	4.28	0.58
346.64	4.39	0.64
346.65	4.50	0.69
346.66	4.60	0.75
346.67	4.70	0.80
346.68	4.79	0.86
346.69	4.89	0.92
346.70	4.98	0.99
346.71	5.07	1.05
346.72	5.16	1.12
346.73	5.24	1.19
346.74	5.33	1.25
346.75	5.41	1.32
346.76	5.49	1.40
346.77	5.57	1.47
346.78	5.64	1.54
346.79	5.72	1.62
346.80	5.79	1.70
346.81	5.86	1.78
346.82	5.93	1.86
346.83	5.99	1.94
346.84	6.06	2.02
346.85	6.12	2.10
346.86	6.18	2.18
346.87	6.24	2.27
346.88	6.30	2.35
346.89	6.36	2.43
346.90	6.42	2.52
346.91	6.47	2.61
346.92	6.52	2.69
346.93	6.57	2.78
346.94	6.62	2.86
346.95	6.67	2.95
346.96	6.71	3.04
346.97	6.76	3.13
346.98	6.80	3.21
346.99	6.84	3.30
347.00	6.88	3.39
347.01	6.92	3.47
347.02	6.95	3.56
347.03	6.99	3.64
347.04	7.02	3.73
347.05	7.05	3.81
347.06	7.08	3.89
347.07	7.11	3.98
347.08	7.14	4.06
347.09	7.16	4.14
347.10	7.18	4.22
347.11	7.20	4.30
347.12	7.22	4.37
347.13	7.24	4.45
347.14	7.26	4.52
347.15	7.27	4.59
347.16	7.28	4.66
347.17	7.29	4.73
347.18	7.30	4.80
347.19	7.31	4.86
347.20	7.31	4.93
347.21	**7.31**	4.98
347.22	7.31	5.04
347.23	7.31	5.09
347.24	7.30	5.14
347.25	7.30	5.19
347.26	7.29	5.24
347.27	7.27	5.28
347.28	7.26	5.31
347.29	7.24	5.34
347.30	7.21	5.37
347.31	7.19	5.39
347.32	7.15	5.41
347.33	7.12	5.42
347.34	7.07	**5.42**
347.35	7.02	5.41
347.36	6.97	5.40
347.37	6.90	5.37
347.38	6.81	5.32
347.39	6.70	5.25
347.40	6.42	5.04

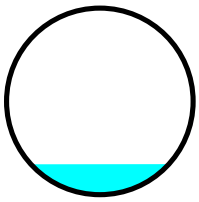
Summary for Reach CBD1: TO DMH#8

Inflow Area = 6,833 sf, 88.85% Impervious, Inflow Depth = 2.07" for 2-Year event
Inflow = 0.38 cfs @ 12.07 hrs, Volume= 1,179 cf
Outflow = 0.37 cfs @ 12.08 hrs, Volume= 1,179 cf, Atten= 1%, Lag= 0.2 min

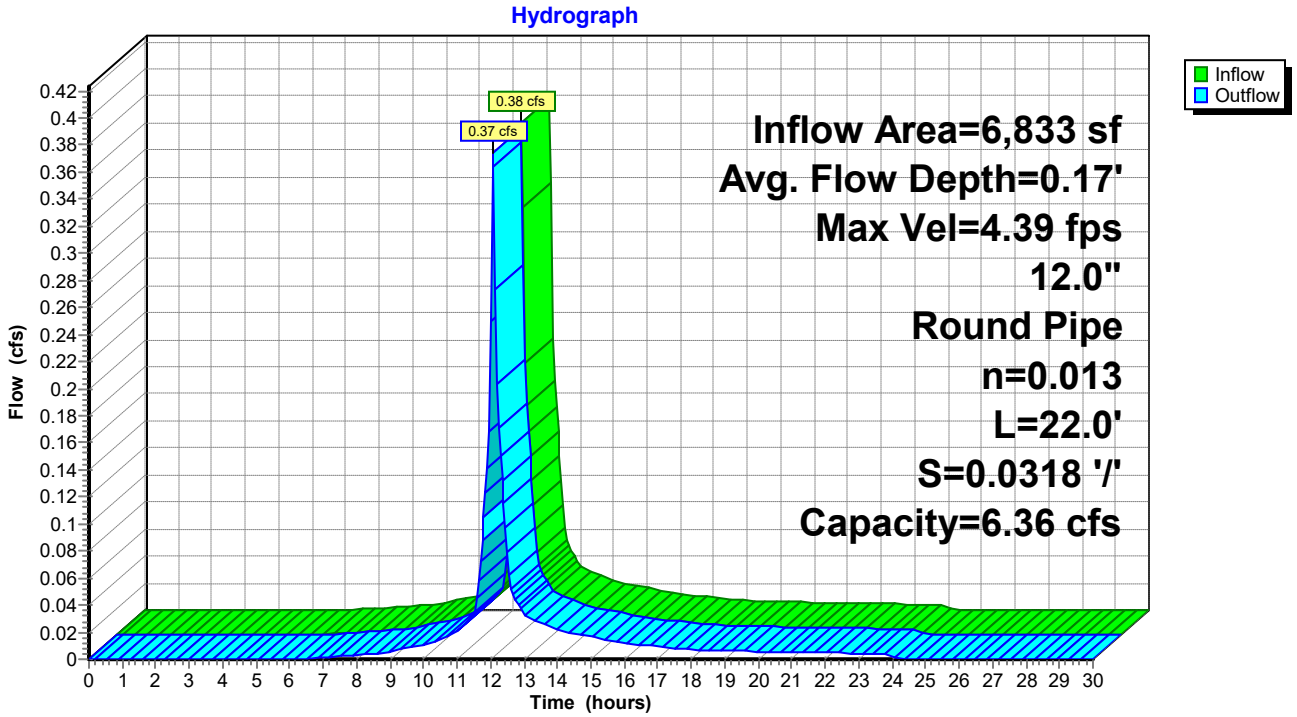
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.39 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.49 fps, Avg. Travel Time= 0.2 min

Peak Storage= 2 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.36 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 22.0' Slope= 0.0318 '/'
Inlet Invert= 352.70', Outlet Invert= 352.00'



Reach CBD1: TO DMH#8



Stage-Discharge for Reach CBD1: TO DMH#8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.70	0.00	0.00
352.71	0.72	0.00
352.72	1.14	0.00
352.73	1.49	0.01
352.74	1.80	0.02
352.75	2.08	0.03
352.76	2.34	0.05
352.77	2.58	0.06
352.78	2.82	0.08
352.79	3.04	0.11
352.80	3.25	0.13
352.81	3.45	0.16
352.82	3.64	0.19
352.83	3.83	0.23
352.84	4.01	0.27
352.85	4.18	0.31
352.86	4.35	0.35
352.87	4.51	0.40
352.88	4.67	0.45
352.89	4.83	0.50
352.90	4.98	0.56
352.91	5.12	0.61
352.92	5.26	0.67
352.93	5.40	0.74
352.94	5.54	0.80
352.95	5.67	0.87
352.96	5.80	0.94
352.97	5.92	1.01
352.98	6.04	1.09
352.99	6.16	1.17
353.00	6.28	1.24
353.01	6.39	1.33
353.02	6.50	1.41
353.03	6.61	1.49
353.04	6.72	1.58
353.05	6.82	1.67
353.06	6.92	1.76
353.07	7.02	1.85
353.08	7.12	1.95
353.09	7.21	2.04
353.10	7.30	2.14
353.11	7.39	2.24
353.12	7.48	2.34
353.13	7.56	2.44
353.14	7.64	2.54
353.15	7.72	2.65
353.16	7.80	2.75
353.17	7.88	2.86
353.18	7.95	2.96
353.19	8.02	3.07
353.20	8.09	3.18
353.21	8.16	3.29
353.22	8.23	3.39
353.23	8.29	3.50
353.24	8.35	3.61
353.25	8.41	3.72
353.26	8.47	3.83
353.27	8.52	3.94
353.28	8.58	4.05
353.29	8.63	4.16
353.30	8.68	4.27
353.31	8.73	4.38
353.32	8.77	4.49
353.33	8.81	4.59
353.34	8.86	4.70
353.35	8.90	4.81
353.36	8.93	4.91
353.37	8.97	5.02
353.38	9.00	5.12
353.39	9.03	5.22
353.40	9.06	5.32
353.41	9.09	5.42
353.42	9.11	5.52
353.43	9.13	5.61
353.44	9.15	5.70
353.45	9.17	5.80
353.46	9.19	5.88
353.47	9.20	5.97
353.48	9.21	6.05
353.49	9.22	6.13
353.50	9.22	6.21
353.51	**9.22**	6.29
353.52	9.22	6.36
353.53	9.22	6.43
353.54	9.21	6.49
353.55	9.20	6.55
353.56	9.19	6.60
353.57	9.17	6.65
353.58	9.15	6.70
353.59	9.13	6.74
353.60	9.10	6.77
353.61	9.06	6.80
353.62	9.02	6.82
353.63	8.98	6.83
353.64	8.92	**6.84**
353.65	8.86	6.83
353.66	8.79	6.81
353.67	8.70	6.77
353.68	8.59	6.72
353.69	8.45	6.62
353.70	8.09	6.36

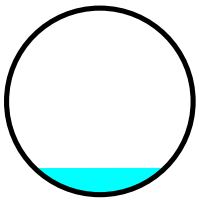
Summary for Reach CBD2: TO DMH#3

Inflow Area = 4,392 sf, 76.55% Impervious, Inflow Depth = 1.52" for 2-Year event
Inflow = 0.18 cfs @ 12.08 hrs, Volume= 555 cf
Outflow = 0.18 cfs @ 12.08 hrs, Volume= 555 cf, Atten= 0%, Lag= 0.1 min

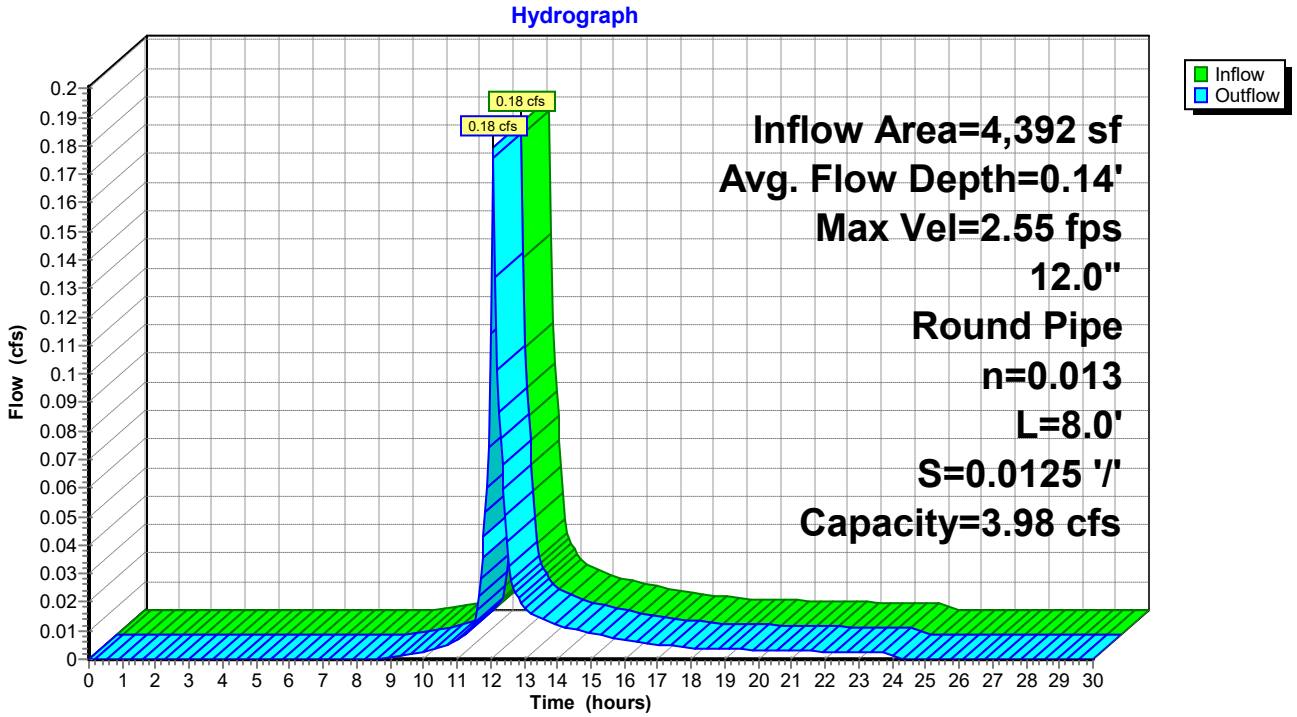
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.55 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.92 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.14'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.98 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 8.0' Slope= 0.0125 '/'
Inlet Invert= 353.10', Outlet Invert= 353.00'



Reach CBD2: TO DMH#3



Stage-Discharge for Reach CBD2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.10	0.00	0.00
353.11	0.45	0.00
353.12	0.71	0.00
353.13	0.93	0.01
353.14	1.13	0.01
353.15	1.30	0.02
353.16	1.47	0.03
353.17	1.62	0.04
353.18	1.77	0.05
353.19	1.90	0.07
353.20	2.03	0.08
353.21	2.16	0.10
353.22	2.28	0.12
353.23	2.40	0.14
353.24	2.51	0.17
353.25	2.62	0.19
353.26	2.73	0.22
353.27	2.83	0.25
353.28	2.93	0.28
353.29	3.03	0.31
353.30	3.12	0.35
353.31	3.21	0.38
353.32	3.30	0.42
353.33	3.39	0.46
353.34	3.47	0.50
353.35	3.55	0.55
353.36	3.63	0.59
353.37	3.71	0.64
353.38	3.79	0.68
353.39	3.86	0.73
353.40	3.94	0.78
353.41	4.01	0.83
353.42	4.08	0.88
353.43	4.14	0.94
353.44	4.21	0.99
353.45	4.28	1.05
353.46	4.34	1.10
353.47	4.40	1.16
353.48	4.46	1.22
353.49	4.52	1.28
353.50	4.58	1.34
353.51	4.63	1.40
353.52	4.69	1.47
353.53	4.74	1.53
353.54	4.79	1.59
353.55	4.84	1.66
353.56	4.89	1.72
353.57	4.94	1.79
353.58	4.98	1.86
353.59	5.03	1.92
353.60	5.07	1.99
353.61	5.11	2.06
353.62	5.16	2.13
353.63	5.20	2.20
353.64	5.23	2.26
353.65	5.27	2.33
353.66	5.31	2.40
353.67	5.34	2.47
353.68	5.38	2.54
353.69	5.41	2.61
353.70	5.44	2.68
353.71	5.47	2.74
353.72	5.50	2.81
353.73	5.52	2.88
353.74	5.55	2.95
353.75	5.58	3.01
353.76	5.60	3.08
353.77	5.62	3.14
353.78	5.64	3.21
353.79	5.66	3.27
353.80	5.68	3.33
353.81	5.70	3.40
353.82	5.71	3.46
353.83	5.73	3.52
353.84	5.74	3.58
353.85	5.75	3.63
353.86	5.76	3.69
353.87	5.77	3.74
353.88	5.77	3.79
353.89	5.78	3.84
353.90	5.78	3.89
353.91	**5.78**	3.94
353.92	5.78	3.98
353.93	5.78	4.03
353.94	5.77	4.07
353.95	5.77	4.10
353.96	5.76	4.14
353.97	5.75	4.17
353.98	5.74	4.20
353.99	5.72	4.22
354.00	5.70	4.25
354.01	5.68	4.26
354.02	5.66	4.28
354.03	5.63	4.28
354.04	5.59	**4.28**
354.05	5.55	4.28
354.06	5.51	4.27
354.07	5.45	4.25
354.08	5.38	4.21
354.09	5.29	4.15
354.10	5.07	3.98

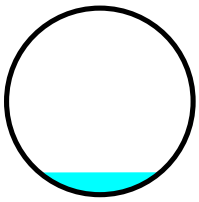
Summary for Reach CBD3: TO DMH-1

Inflow Area = 4,805 sf, 87.24% Impervious, Inflow Depth = 1.98" for 2-Year event
Inflow = 0.26 cfs @ 12.07 hrs, Volume= 794 cf
Outflow = 0.25 cfs @ 12.08 hrs, Volume= 794 cf, Atten= 1%, Lag= 0.1 min

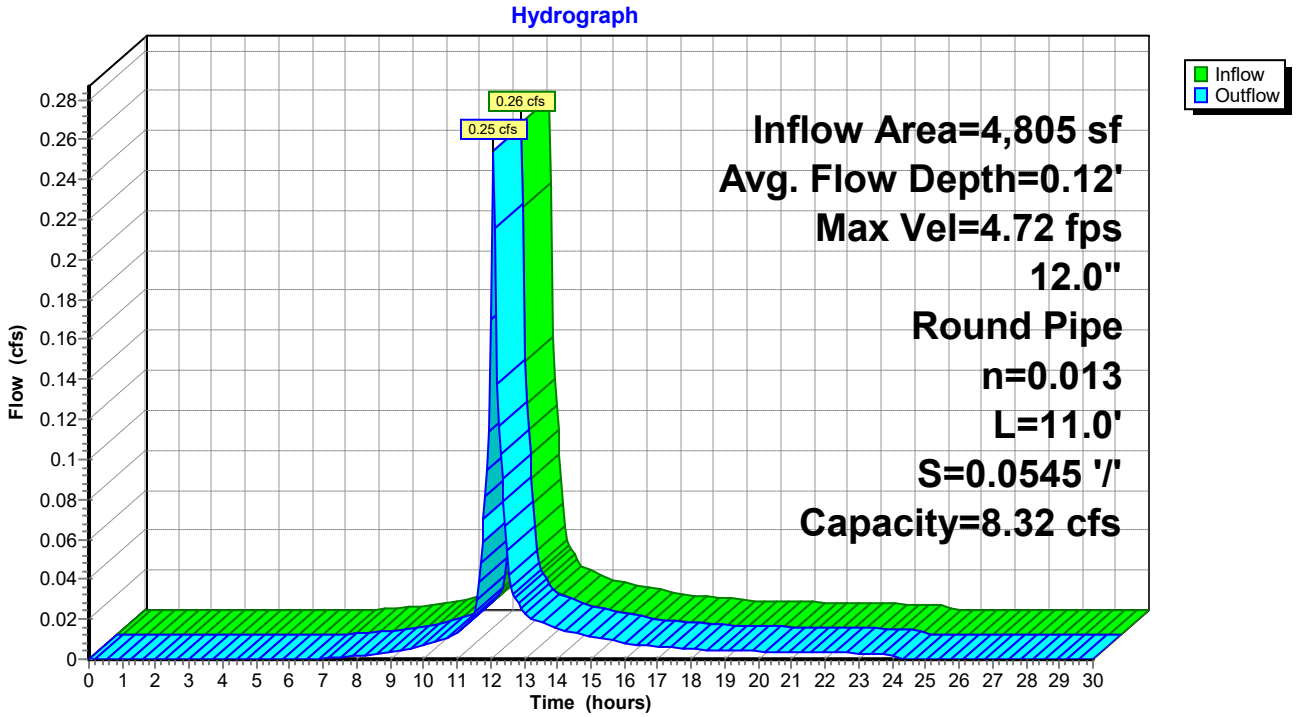
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.72 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.64 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.32 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 11.0' Slope= 0.0545 '/'
Inlet Invert= 352.80', Outlet Invert= 352.20'



Reach CBD3: TO DMH-1



Stage-Discharge for Reach CBD3: TO DMH-1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.80	0.00	0.00
352.81	0.94	0.00
352.82	1.49	0.01
352.83	1.95	0.01
352.84	2.35	0.02
352.85	2.72	0.04
352.86	3.06	0.06
352.87	3.38	0.08
352.88	3.69	0.11
352.89	3.97	0.14
352.90	4.25	0.17
352.91	4.51	0.21
352.92	4.77	0.25
352.93	5.01	0.30
352.94	5.25	0.35
352.95	5.48	0.40
352.96	5.70	0.46
352.97	5.91	0.52
352.98	6.12	0.59
352.99	6.32	0.66
353.00	6.52	0.73
353.01	6.71	0.80
353.02	6.89	0.88
353.03	7.07	0.97
353.04	7.25	1.05
353.05	7.42	1.14
353.06	7.59	1.23
353.07	7.75	1.33
353.08	7.91	1.42
353.09	8.07	1.53
353.10	8.22	1.63
353.11	8.37	1.74
353.12	8.52	1.85
353.13	8.66	1.96
353.14	8.80	2.07
353.15	8.93	2.19
353.16	9.06	2.31
353.17	9.19	2.43
353.18	9.32	2.55
353.19	9.44	2.68
353.20	9.56	2.80
353.21	9.67	2.93
353.22	9.79	3.06
353.23	9.90	3.20
353.24	10.01	3.33
353.25	10.11	3.47
353.26	10.21	3.60
353.27	10.31	3.74
353.28	10.41	3.88
353.29	10.50	4.02
353.30	10.59	4.16
353.31	10.68	4.30
353.32	10.77	4.44
353.33	10.85	4.59
353.34	10.93	4.73
353.35	11.01	4.87
353.36	11.09	5.02
353.37	11.16	5.16
353.38	11.23	5.30
353.39	11.30	5.45
353.40	11.36	5.59
353.41	11.42	5.73
353.42	11.48	5.87
353.43	11.54	6.02
353.44	11.59	6.16
353.45	11.65	6.29
353.46	11.70	6.43
353.47	11.74	6.57
353.48	11.79	6.70
353.49	11.83	6.84
353.50	11.86	6.97
353.51	11.90	7.10
353.52	11.93	7.22
353.53	11.96	7.35
353.54	11.99	7.47
353.55	12.01	7.59
353.56	12.03	7.70
353.57	12.05	7.82
353.58	12.06	7.93
353.59	12.07	8.03
353.60	12.08	8.13
353.61	**12.08**	8.23
353.62	12.08	8.32
353.63	12.07	8.41
353.64	12.06	8.50
353.65	12.05	8.57
353.66	12.03	8.65
353.67	12.01	8.71
353.68	11.98	8.77
353.69	11.95	8.82
353.70	11.91	8.87
353.71	11.87	8.90
353.72	11.81	8.93
353.73	11.75	8.95
353.74	11.68	**8.95**
353.75	11.60	8.94
353.76	11.51	8.91
353.77	11.39	8.87
353.78	11.25	8.79
353.79	11.06	8.67
353.80	10.59	8.32

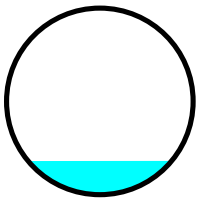
Summary for Reach CBD5: TO DMH#4

Inflow Area = 7,120 sf, 71.57% Impervious, Inflow Depth = 1.31" for 2-Year event
Inflow = 0.25 cfs @ 12.08 hrs, Volume= 779 cf
Outflow = 0.25 cfs @ 12.09 hrs, Volume= 779 cf, Atten= 0%, Lag= 0.3 min

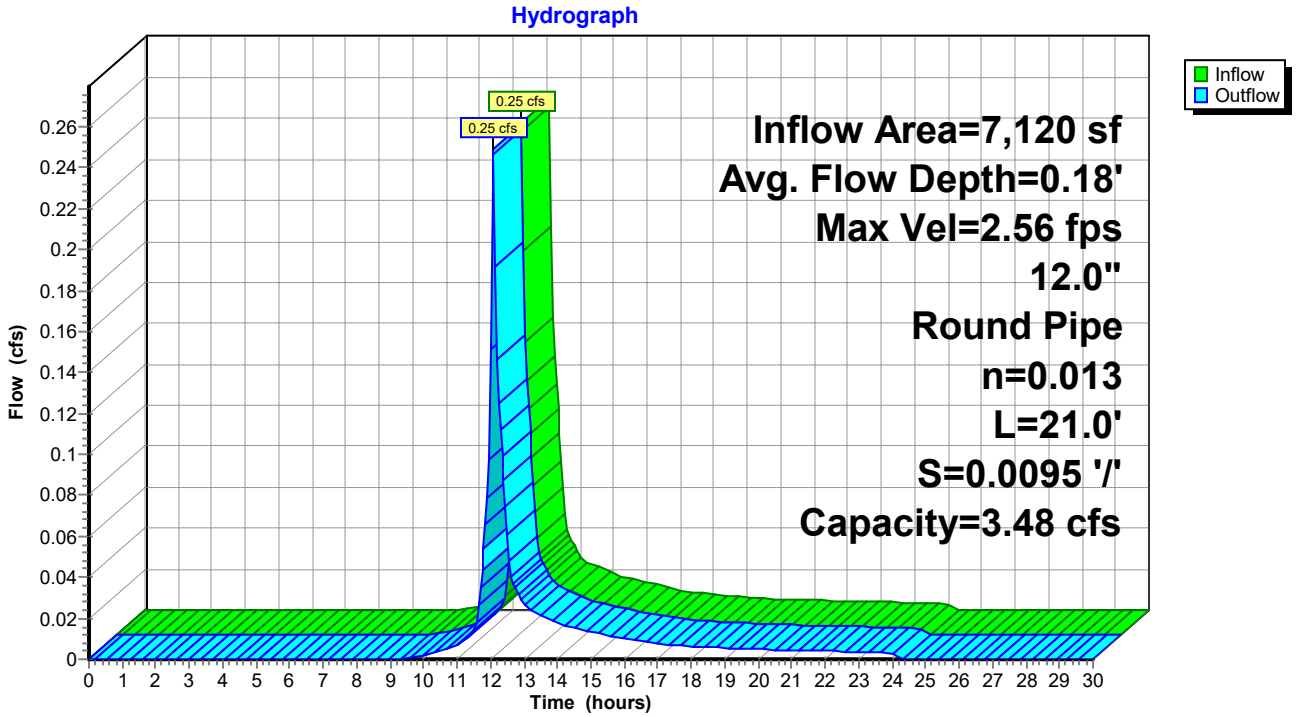
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.56 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.94 fps, Avg. Travel Time= 0.4 min

Peak Storage= 2 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.48 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 351.80', Outlet Invert= 351.60'



Reach CBD5: TO DMH#4



Stage-Discharge for Reach CBD5: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.39	0.00
351.82	0.62	0.00
351.83	0.81	0.01
351.84	0.98	0.01
351.85	1.14	0.02
351.86	1.28	0.02
351.87	1.41	0.03
351.88	1.54	0.05
351.89	1.66	0.06
351.90	1.78	0.07
351.91	1.89	0.09
351.92	1.99	0.11
351.93	2.09	0.13
351.94	2.19	0.15
351.95	2.29	0.17
351.96	2.38	0.19
351.97	2.47	0.22
351.98	2.56	0.25
351.99	2.64	0.27
352.00	2.72	0.30
352.01	2.80	0.34
352.02	2.88	0.37
352.03	2.96	0.40
352.04	3.03	0.44
352.05	3.10	0.48
352.06	3.17	0.51
352.07	3.24	0.55
352.08	3.31	0.60
352.09	3.37	0.64
352.10	3.44	0.68
352.11	3.50	0.73
352.12	3.56	0.77
352.13	3.62	0.82
352.14	3.68	0.87
352.15	3.73	0.91
352.16	3.79	0.96
352.17	3.84	1.01
352.18	3.89	1.07
352.19	3.94	1.12
352.20	3.99	1.17
352.21	4.04	1.23
352.22	4.09	1.28
352.23	4.14	1.34
352.24	4.18	1.39
352.25	4.22	1.45
352.26	4.27	1.51
352.27	4.31	1.56
352.28	4.35	1.62
352.29	4.39	1.68
352.30	4.43	1.74
352.31	4.46	1.80
352.32	4.50	1.86
352.33	4.53	1.92
352.34	4.57	1.98
352.35	4.60	2.04
352.36	4.63	2.10
352.37	4.66	2.16
352.38	4.69	2.22
352.39	4.72	2.28
352.40	4.75	2.34
352.41	4.77	2.40
352.42	4.80	2.45
352.43	4.82	2.51
352.44	4.85	2.57
352.45	4.87	2.63
352.46	4.89	2.69
352.47	4.91	2.74
352.48	4.92	2.80
352.49	4.94	2.86
352.50	4.96	2.91
352.51	4.97	2.96
352.52	4.99	3.02
352.53	5.00	3.07
352.54	5.01	3.12
352.55	5.02	3.17
352.56	5.03	3.22
352.57	5.03	3.27
352.58	5.04	3.31
352.59	5.04	3.36
352.60	5.05	3.40
352.61	**5.05**	3.44
352.62	5.05	3.48
352.63	5.04	3.52
352.64	5.04	3.55
352.65	5.04	3.58
352.66	5.03	3.61
352.67	5.02	3.64
352.68	5.01	3.67
352.69	4.99	3.69
352.70	4.98	3.71
352.71	4.96	3.72
352.72	4.94	3.73
352.73	4.91	3.74
352.74	4.88	**3.74**
352.75	4.85	3.74
352.76	4.81	3.73
352.77	4.76	3.71
352.78	4.70	3.67
352.79	4.62	3.62
352.80	4.43	3.48

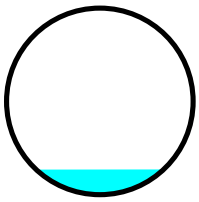
Summary for Reach CBD6: TO DMH#4

Inflow Area = 2,202 sf,100.00% Impervious, Inflow Depth = 2.77" for 2-Year event
Inflow = 0.15 cfs @ 12.07 hrs, Volume= 508 cf
Outflow = 0.15 cfs @ 12.07 hrs, Volume= 508 cf, Atten= 1%, Lag= 0.3 min

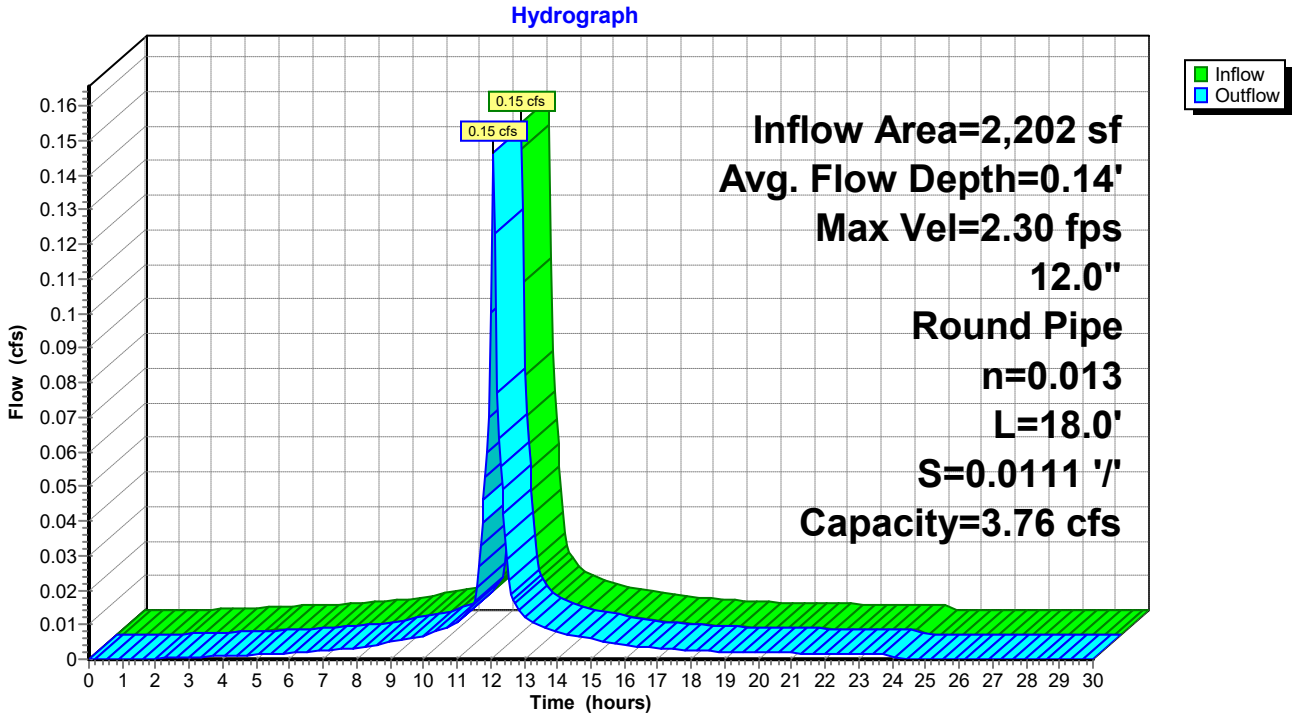
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.30 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.76 fps, Avg. Travel Time= 0.4 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.14'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.76 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 18.0' Slope= 0.0111 '/'
Inlet Invert= 351.80', Outlet Invert= 351.60'



Reach CBD6: TO DMH#4



Stage-Discharge for Reach CBD6: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.43	0.00
351.82	0.67	0.00
351.83	0.88	0.01
351.84	1.06	0.01
351.85	1.23	0.02
351.86	1.38	0.03
351.87	1.53	0.04
351.88	1.66	0.05
351.89	1.79	0.06
351.90	1.92	0.08
351.91	2.04	0.10
351.92	2.15	0.11
351.93	2.26	0.14
351.94	2.37	0.16
351.95	2.47	0.18
351.96	2.57	0.21
351.97	2.67	0.24
351.98	2.76	0.27
351.99	2.85	0.30
352.00	2.94	0.33
352.01	3.03	0.36
352.02	3.11	0.40
352.03	3.19	0.44
352.04	3.27	0.47
352.05	3.35	0.51
352.06	3.43	0.56
352.07	3.50	0.60
352.08	3.57	0.64
352.09	3.64	0.69
352.10	3.71	0.74
352.11	3.78	0.78
352.12	3.84	0.83
352.13	3.91	0.88
352.14	3.97	0.93
352.15	4.03	0.99
352.16	4.09	1.04
352.17	4.15	1.10
352.18	4.20	1.15
352.19	4.26	1.21
352.20	4.31	1.27
352.21	4.37	1.32
352.22	4.42	1.38
352.23	4.47	1.44
352.24	4.52	1.50
352.25	4.56	1.56
352.26	4.61	1.63
352.27	4.65	1.69
352.28	4.70	1.75
352.29	4.74	1.81
352.30	4.78	1.88
352.31	4.82	1.94
352.32	4.86	2.01
352.33	4.90	2.07
352.34	4.93	2.13
352.35	4.97	2.20
352.36	5.00	2.26
352.37	5.04	2.33
352.38	5.07	2.39
352.39	5.10	2.46
352.40	5.13	2.52
352.41	5.16	2.59
352.42	5.18	2.65
352.43	5.21	2.71
352.44	5.23	2.78
352.45	5.26	2.84
352.46	5.28	2.90
352.47	5.30	2.96
352.48	5.32	3.03
352.49	5.34	3.09
352.50	5.35	3.14
352.51	5.37	3.20
352.52	5.38	3.26
352.53	5.40	3.32
352.54	5.41	3.37
352.55	5.42	3.42
352.56	5.43	3.48
352.57	5.44	3.53
352.58	5.44	3.58
352.59	5.45	3.62
352.60	5.45	3.67
352.61	**5.45**	3.71
352.62	5.45	3.76
352.63	5.45	3.80
352.64	5.44	3.83
352.65	5.44	3.87
352.66	5.43	3.90
352.67	5.42	3.93
352.68	5.41	3.96
352.69	5.39	3.98
352.70	5.38	4.00
352.71	5.36	4.02
352.72	5.33	4.03
352.73	5.30	4.04
352.74	5.27	**4.04**
352.75	5.24	4.04
352.76	5.19	4.02
352.77	5.14	4.00
352.78	5.08	3.97
352.79	4.99	3.91
352.80	4.78	3.76

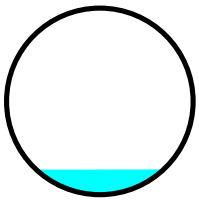
Summary for Reach CBD9: TO DMH#5

Inflow Area = 4,151 sf, 71.91% Impervious, Inflow Depth = 1.31" for 2-Year event
Inflow = 0.15 cfs @ 12.08 hrs, Volume= 454 cf
Outflow = 0.14 cfs @ 12.09 hrs, Volume= 454 cf, Atten= 1%, Lag= 0.7 min

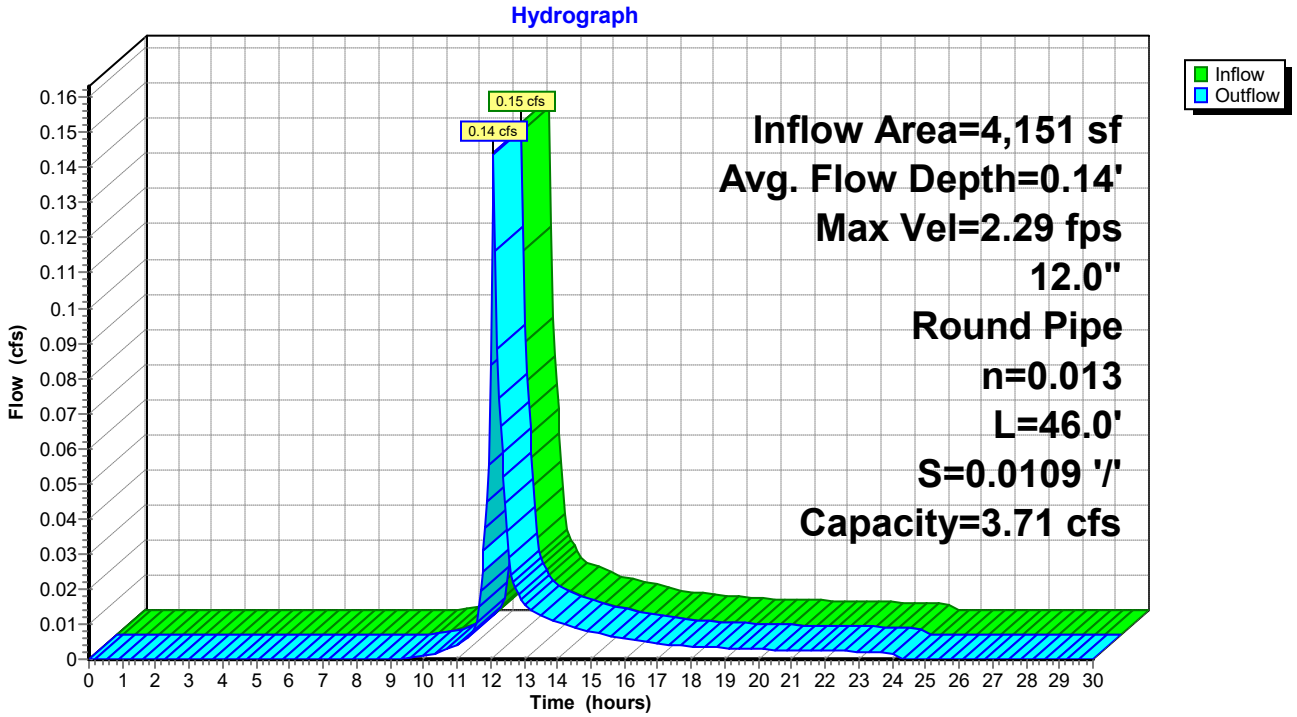
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.29 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 0.9 min

Peak Storage= 3 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.14'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.71 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 46.0' Slope= 0.0109 '/'
Inlet Invert= 352.50', Outlet Invert= 352.00'



Reach CBD9: TO DMH#5



Stage-Discharge for Reach CBD9: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.50	0.00	0.00
352.51	0.42	0.00
352.52	0.67	0.00
352.53	0.87	0.01
352.54	1.05	0.01
352.55	1.21	0.02
352.56	1.37	0.03
352.57	1.51	0.04
352.58	1.65	0.05
352.59	1.77	0.06
352.60	1.90	0.08
352.61	2.01	0.09
352.62	2.13	0.11
352.63	2.24	0.13
352.64	2.34	0.16
352.65	2.44	0.18
352.66	2.54	0.21
352.67	2.64	0.23
352.68	2.73	0.26
352.69	2.82	0.29
352.70	2.91	0.33
352.71	2.99	0.36
352.72	3.08	0.39
352.73	3.16	0.43
352.74	3.24	0.47
352.75	3.31	0.51
352.76	3.39	0.55
352.77	3.46	0.59
352.78	3.53	0.64
352.79	3.60	0.68
352.80	3.67	0.73
352.81	3.74	0.77
352.82	3.80	0.82
352.83	3.86	0.87
352.84	3.93	0.92
352.85	3.99	0.98
352.86	4.05	1.03
352.87	4.10	1.08
352.88	4.16	1.14
352.89	4.21	1.19
352.90	4.27	1.25
352.91	4.32	1.31
352.92	4.37	1.37
352.93	4.42	1.43
352.94	4.47	1.49
352.95	4.51	1.55
352.96	4.56	1.61
352.97	4.60	1.67
352.98	4.65	1.73
352.99	4.69	1.79
353.00	4.73	1.86
353.01	4.77	1.92
353.02	4.81	1.98
353.03	4.84	2.05
353.04	4.88	2.11
353.05	4.92	2.18
353.06	4.95	2.24
353.07	4.98	2.30
353.08	5.01	2.37
353.09	5.04	2.43
353.10	5.07	2.50
353.11	5.10	2.56
353.12	5.13	2.62
353.13	5.15	2.69
353.14	5.18	2.75
353.15	5.20	2.81
353.16	5.22	2.87
353.17	5.24	2.93
353.18	5.26	2.99
353.19	5.28	3.05
353.20	5.30	3.11
353.21	5.31	3.17
353.22	5.33	3.22
353.23	5.34	3.28
353.24	5.35	3.33
353.25	5.36	3.39
353.26	5.37	3.44
353.27	5.38	3.49
353.28	5.38	3.54
353.29	5.39	3.59
353.30	5.39	3.63
353.31	**5.39**	3.67
353.32	5.39	3.72
353.33	5.39	3.76
353.34	5.39	3.79
353.35	5.38	3.83
353.36	5.37	3.86
353.37	5.36	3.89
353.38	5.35	3.92
353.39	5.33	3.94
353.40	5.32	3.96
353.41	5.30	3.97
353.42	5.27	3.99
353.43	5.25	3.99
353.44	5.22	**4.00**
353.45	5.18	3.99
353.46	5.14	3.98
353.47	5.08	3.96
353.48	5.02	3.93
353.49	4.94	3.87
353.50	4.73	3.71

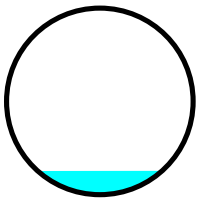
Summary for Reach CO1: TO CO#2

Inflow Area = 5,181 sf, 36.69% Impervious, Inflow Depth = 1.20" for 2-Year event
Inflow = 0.14 cfs @ 12.08 hrs, Volume= 517 cf
Outflow = 0.14 cfs @ 12.09 hrs, Volume= 517 cf, Atten= 1%, Lag= 0.7 min

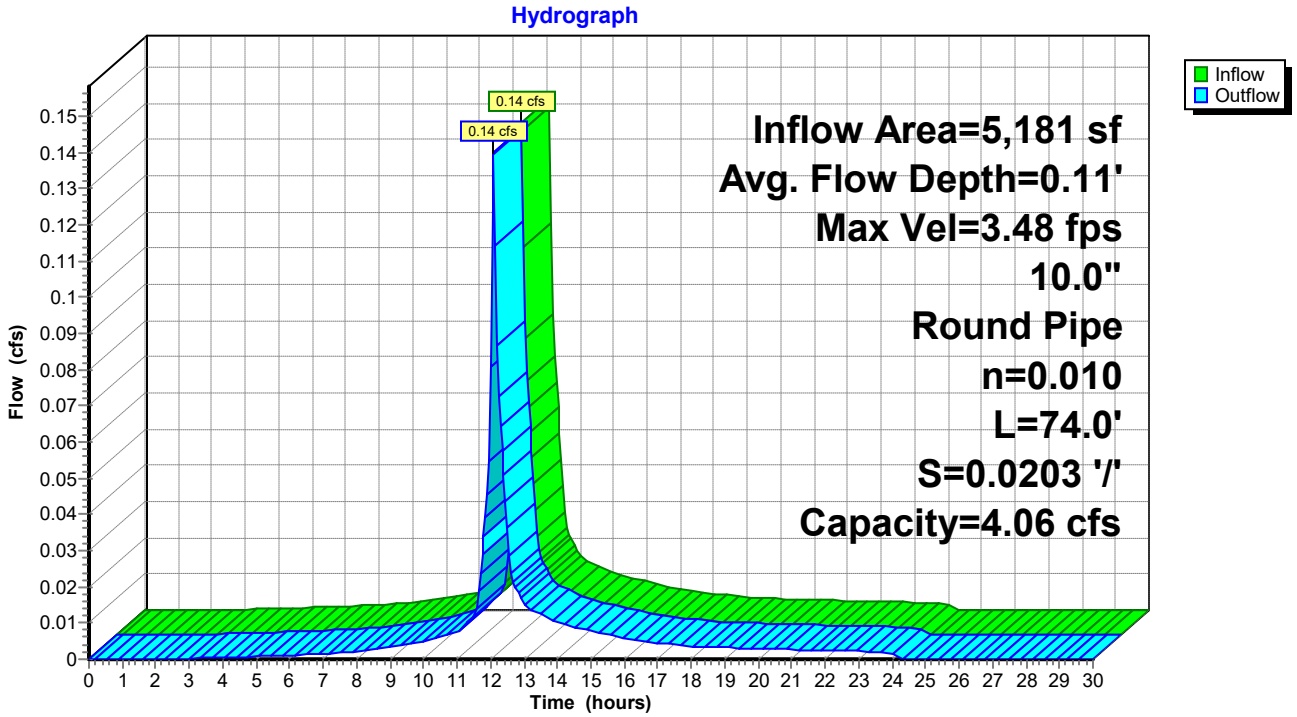
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.48 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.19 fps, Avg. Travel Time= 1.0 min

Peak Storage= 3 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.11'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.06 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 74.0' Slope= 0.0203 '/'
Inlet Invert= 350.50', Outlet Invert= 349.00'



Reach CO1: TO CO#2



Stage-Discharge for Reach CO1: TO CO#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.50	0.00	0.00
350.51	0.74	0.00
350.52	1.18	0.00
350.53	1.54	0.01
350.54	1.86	0.02
350.55	2.15	0.03
350.56	2.42	0.04
350.57	2.67	0.06
350.58	2.91	0.08
350.59	3.13	0.10
350.60	3.35	0.12
350.61	3.55	0.15
350.62	3.75	0.18
350.63	3.94	0.21
350.64	4.12	0.25
350.65	4.29	0.29
350.66	4.46	0.33
350.67	4.63	0.37
350.68	4.79	0.42
350.69	4.94	0.46
350.70	5.09	0.51
350.71	5.23	0.56
350.72	5.37	0.62
350.73	5.51	0.68
350.74	5.64	0.73
350.75	5.77	0.79
350.76	5.90	0.86
350.77	6.02	0.92
350.78	6.13	0.99
350.79	6.25	1.05
350.80	6.36	1.12
350.81	6.47	1.20
350.82	6.57	1.27
350.83	6.67	1.34
350.84	6.77	1.42
350.85	6.87	1.49
350.86	6.96	1.57
350.87	7.05	1.65
350.88	7.14	1.73
350.89	7.22	1.81
350.90	7.31	1.89
350.91	7.38	1.97
350.92	7.46	2.06
350.93	7.53	2.14
350.94	7.60	2.22
350.95	7.67	2.31
350.96	7.74	2.39
350.97	7.80	2.47
350.98	7.86	2.56
350.99	7.92	2.64
351.00	7.97	2.72
351.01	8.03	2.81
351.02	8.08	2.89
351.03	8.12	2.97
351.04	8.17	3.05
351.05	8.21	3.13
351.06	8.25	3.21
351.07	8.28	3.29
351.08	8.32	3.37
351.09	8.35	3.45
351.10	8.37	3.52
351.11	8.40	3.59
351.12	8.42	3.66
351.13	8.44	3.73
351.14	8.45	3.80
351.15	8.46	3.86
351.16	8.47	3.92
351.17	8.47	3.98
351.18	**8.48**	4.04
351.19	8.47	4.09
351.20	8.47	4.14
351.21	8.45	4.19
351.22	8.44	4.23
351.23	8.42	4.26
351.24	8.39	4.30
351.25	8.36	4.32
351.26	8.32	4.34
351.27	8.27	4.36
351.28	8.22	**4.36**
351.29	8.15	4.36
351.30	8.07	4.34
351.31	7.97	4.31
351.32	7.84	4.26
351.33	7.57	4.12

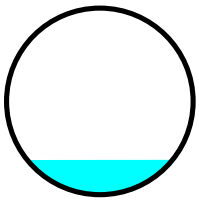
Summary for Reach CO2: TO CO#3

Inflow Area = 7,671 sf, 57.24% Impervious, Inflow Depth = 1.71" for 2-Year event
Inflow = 0.30 cfs @ 12.08 hrs, Volume= 1,091 cf
Outflow = 0.30 cfs @ 12.09 hrs, Volume= 1,091 cf, Atten= 1%, Lag= 0.6 min

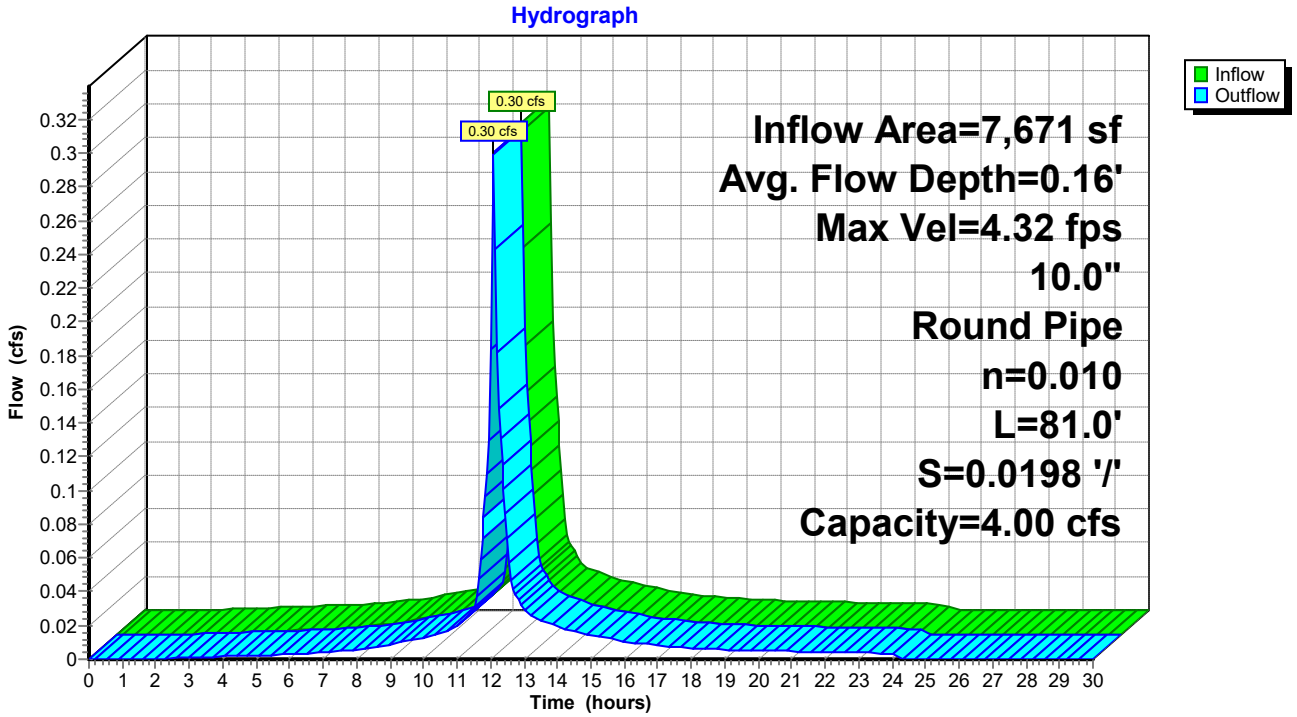
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.32 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.43 fps, Avg. Travel Time= 0.9 min

Peak Storage= 6 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.16'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.00 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 81.0' Slope= 0.0198 '/'
Inlet Invert= 349.00', Outlet Invert= 347.40'



Reach CO2: TO CO#3



Stage-Discharge for Reach CO2: TO CO#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
349.00	0.00	0.00
349.01	0.73	0.00
349.02	1.16	0.00
349.03	1.52	0.01
349.04	1.83	0.02
349.05	2.12	0.03
349.06	2.39	0.04
349.07	2.63	0.06
349.08	2.87	0.08
349.09	3.09	0.10
349.10	3.30	0.12
349.11	3.50	0.15
349.12	3.70	0.18
349.13	3.88	0.21
349.14	4.06	0.25
349.15	4.24	0.28
349.16	4.41	0.32
349.17	4.57	0.37
349.18	4.72	0.41
349.19	4.88	0.46
349.20	5.02	0.51
349.21	5.17	0.56
349.22	5.30	0.61
349.23	5.44	0.67
349.24	5.57	0.72
349.25	5.70	0.78
349.26	5.82	0.85
349.27	5.94	0.91
349.28	6.06	0.97
349.29	6.17	1.04
349.30	6.28	1.11
349.31	6.38	1.18
349.32	6.49	1.25
349.33	6.59	1.32
349.34	6.69	1.40
349.35	6.78	1.47
349.36	6.87	1.55
349.37	6.96	1.63
349.38	7.05	1.71
349.39	7.13	1.79
349.40	7.21	1.87
349.41	7.29	1.95
349.42	7.36	2.03
349.43	7.44	2.11
349.44	7.51	2.19
349.45	7.57	2.28
349.46	7.64	2.36
349.47	7.70	2.44
349.48	7.76	2.52
349.49	7.82	2.61
349.50	7.87	2.69
349.51	7.92	2.77
349.52	7.97	2.85
349.53	8.02	2.93
349.54	8.06	3.01
349.55	8.10	3.09
349.56	8.14	3.17
349.57	8.18	3.25
349.58	8.21	3.33
349.59	8.24	3.40
349.60	8.27	3.47
349.61	8.29	3.55
349.62	8.31	3.62
349.63	8.33	3.68
349.64	8.34	3.75
349.65	8.35	3.81
349.66	8.36	3.87
349.67	8.37	3.93
349.68	**8.37**	3.99
349.69	8.36	4.04
349.70	8.36	4.09
349.71	8.35	4.13
349.72	8.33	4.17
349.73	8.31	4.21
349.74	8.28	4.24
349.75	8.25	4.27
349.76	8.21	4.29
349.77	8.17	4.30
349.78	8.11	**4.31**
349.79	8.05	4.30
349.80	7.97	4.29
349.81	7.87	4.26
349.82	7.74	4.21
349.83	7.47	4.07

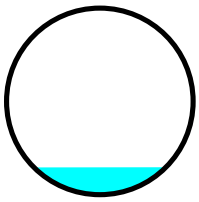
Summary for Reach CO3: TO DMH#21

Inflow Area = 8,341 sf, 60.68% Impervious, Inflow Depth = 1.79" for 2-Year event
Inflow = 0.34 cfs @ 12.09 hrs, Volume= 1,246 cf
Outflow = 0.34 cfs @ 12.09 hrs, Volume= 1,246 cf, Atten= 0%, Lag= 0.1 min

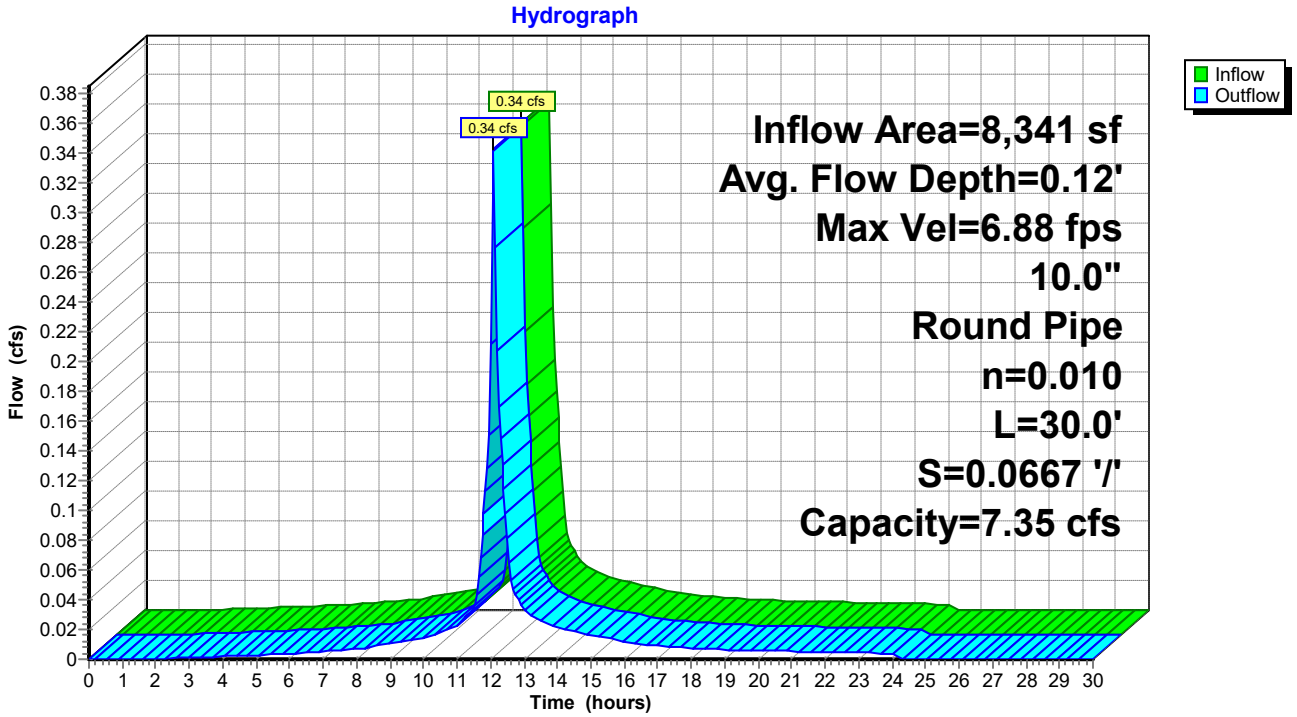
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.88 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.29 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 7.35 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 30.0' Slope= 0.0667 '/'
Inlet Invert= 347.40', Outlet Invert= 345.40'



Reach CO3: TO DMH#21



Stage-Discharge for Reach CO3: TO DMH#21

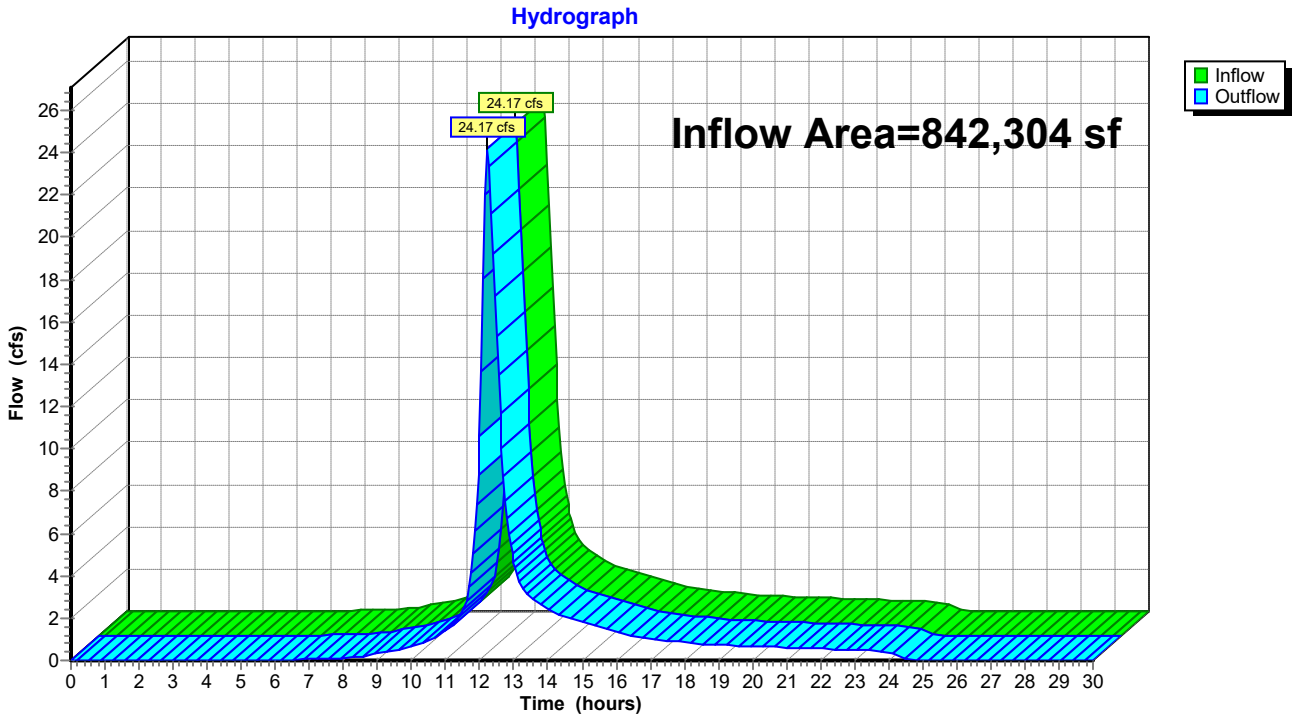
Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.40	0.00	0.00
347.41	1.34	0.00
347.42	2.13	0.01
347.43	2.79	0.02
347.44	3.37	0.03
347.45	3.90	0.05
347.46	4.38	0.08
347.47	4.84	0.11
347.48	5.27	0.14
347.49	5.68	0.18
347.50	6.07	0.22
347.51	6.44	0.27
347.52	6.79	0.33
347.53	7.14	0.39
347.54	7.47	0.45
347.55	7.79	0.52
347.56	8.09	0.59
347.57	8.39	0.67
347.58	8.68	0.75
347.59	8.96	0.84
347.60	9.23	0.93
347.61	9.49	1.02
347.62	9.74	1.12
347.63	9.99	1.22
347.64	10.23	1.33
347.65	10.47	1.44
347.66	10.69	1.55
347.67	10.91	1.67
347.68	11.12	1.79
347.69	11.33	1.91
347.70	11.53	2.04
347.71	11.73	2.17
347.72	11.92	2.30
347.73	12.10	2.43
347.74	12.28	2.57
347.75	12.46	2.71
347.76	12.63	2.85
347.77	12.79	2.99
347.78	12.95	3.14
347.79	13.10	3.28
347.80	13.25	3.43
347.81	13.39	3.58
347.82	13.53	3.73
347.83	13.66	3.88
347.84	13.79	4.03
347.85	13.91	4.18
347.86	14.03	4.33
347.87	14.15	4.49
347.88	14.26	4.64
347.89	14.36	4.79
347.90	14.46	4.94
347.91	14.55	5.09
347.92	14.64	5.24
347.93	14.73	5.39
347.94	14.81	5.54
347.95	14.88	5.68
347.96	14.95	5.83
347.97	15.02	5.97
347.98	15.08	6.11
347.99	15.13	6.25
348.00	15.18	6.38
348.01	15.23	6.51
348.02	15.27	6.64
348.03	15.30	6.77
348.04	15.33	6.89
348.05	15.35	7.01
348.06	15.36	7.12
348.07	15.37	7.22
348.08	**15.37**	7.32
348.09	15.37	7.42
348.10	15.35	7.51
348.11	15.33	7.59
348.12	15.30	7.67
348.13	15.27	7.73
348.14	15.22	7.79
348.15	15.16	7.84
348.16	15.09	7.87
348.17	15.00	7.90
348.18	14.90	**7.91**
348.19	14.79	7.90
348.20	14.64	7.88
348.21	14.46	7.82
348.22	14.22	7.73
348.23	13.72	7.48

Summary for Reach cul: DP#1A

Inflow Area = 842,304 sf, 4.87% Impervious, Inflow Depth = 1.64" for 2-Year event
Inflow = 24.17 cfs @ 12.22 hrs, Volume= 115,087 cf
Outflow = 24.17 cfs @ 12.22 hrs, Volume= 115,087 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach cul: DP#1A



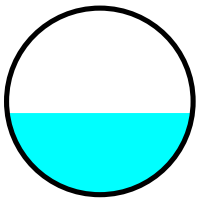
Summary for Reach D10: (new Reach)

Inflow Area = 51,339 sf, 69.57% Impervious, Inflow Depth = 1.76" for 2-Year event
Inflow = 2.40 cfs @ 12.08 hrs, Volume= 7,514 cf
Outflow = 2.39 cfs @ 12.09 hrs, Volume= 7,514 cf, Atten= 1%, Lag= 0.5 min

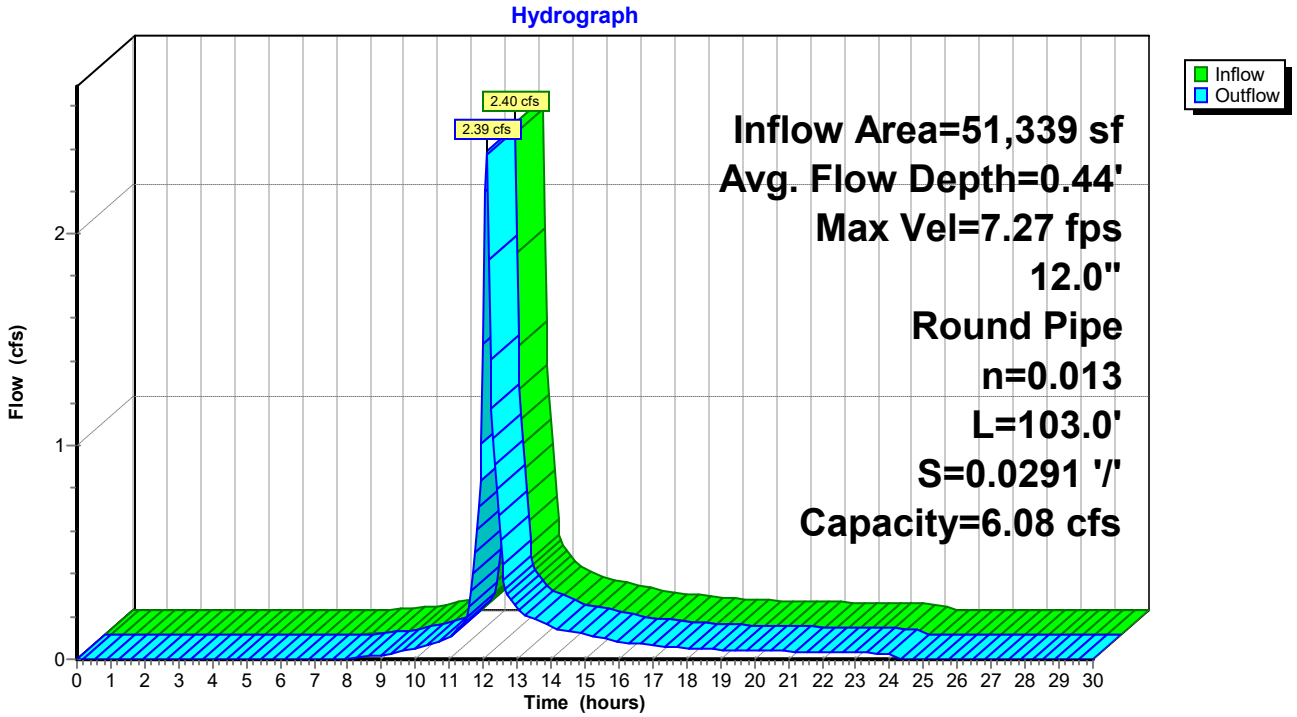
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.27 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.48 fps, Avg. Travel Time= 0.7 min

Peak Storage= 34 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.44'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.08 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 103.0' Slope= 0.0291 '/'
Inlet Invert= 346.60', Outlet Invert= 343.60'



Reach D10: (new Reach)



Stage-Discharge for Reach D10: (new Reach)

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.60	0.00	0.00
346.61	0.69	0.00
346.62	1.09	0.00
346.63	1.42	0.01
346.64	1.72	0.02
346.65	1.99	0.03
346.66	2.24	0.04
346.67	2.47	0.06
346.68	2.69	0.08
346.69	2.90	0.10
346.70	3.11	0.13
346.71	3.30	0.16
346.72	3.48	0.19
346.73	3.66	0.22
346.74	3.83	0.26
346.75	4.00	0.30
346.76	4.16	0.34
346.77	4.32	0.38
346.78	4.47	0.43
346.79	4.62	0.48
346.80	4.76	0.53
346.81	4.90	0.59
346.82	5.04	0.65
346.83	5.17	0.71
346.84	5.30	0.77
346.85	5.42	0.83
346.86	5.55	0.90
346.87	5.67	0.97
346.88	5.78	1.04
346.89	5.90	1.11
346.90	6.01	1.19
346.91	6.12	1.27
346.92	6.22	1.35
346.93	6.33	1.43
346.94	6.43	1.51
346.95	6.53	1.60
346.96	6.62	1.69
346.97	6.72	1.77
346.98	6.81	1.86
346.99	6.90	1.96
347.00	6.98	2.05
347.01	7.07	2.14
347.02	7.15	2.24
347.03	7.23	2.34
347.04	7.31	2.43
347.05	7.39	2.53
347.06	7.46	2.63
347.07	7.54	2.73
347.08	7.61	2.83
347.09	7.68	2.94
347.10	7.74	3.04
347.11	7.81	3.14
347.12	7.87	3.25
347.13	7.93	3.35
347.14	7.99	3.46
347.15	8.05	3.56
347.16	8.10	3.67
347.17	8.15	3.77
347.18	8.21	3.88
347.19	8.26	3.98
347.20	8.30	4.09
347.21	8.35	4.19
347.22	8.39	4.29
347.23	8.43	4.40
347.24	8.47	4.50
347.25	8.51	4.60
347.26	8.55	4.70
347.27	8.58	4.80
347.28	8.61	4.90
347.29	8.64	4.99
347.30	8.67	5.09
347.31	8.69	5.19
347.32	8.72	5.28
347.33	8.74	5.37
347.34	8.76	5.46
347.35	8.78	5.54
347.36	8.79	5.63
347.37	8.80	5.71
347.38	8.81	5.79
347.39	8.82	5.87
347.40	8.82	5.94
347.41	**8.83**	6.01
347.42	8.83	6.08
347.43	8.82	6.15
347.44	8.82	6.21
347.45	8.81	6.27
347.46	8.79	6.32
347.47	8.78	6.37
347.48	8.76	6.41
347.49	8.73	6.45
347.50	8.70	6.48
347.51	8.67	6.51
347.52	8.63	6.53
347.53	8.59	6.54
347.54	8.54	**6.54**
347.55	8.48	6.53
347.56	8.41	6.51
347.57	8.32	6.48
347.58	8.22	6.43
347.59	8.08	6.34
347.60	7.74	6.08

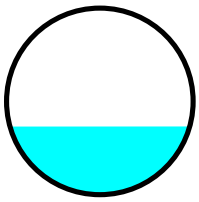
Summary for Reach D11: TO DMH12

Inflow Area = 39,805 sf, 44.80% Impervious, Inflow Depth = 1.19" for 2-Year event
Inflow = 1.25 cfs @ 12.08 hrs, Volume= 3,942 cf
Outflow = 1.24 cfs @ 12.09 hrs, Volume= 3,942 cf, Atten= 1%, Lag= 0.6 min

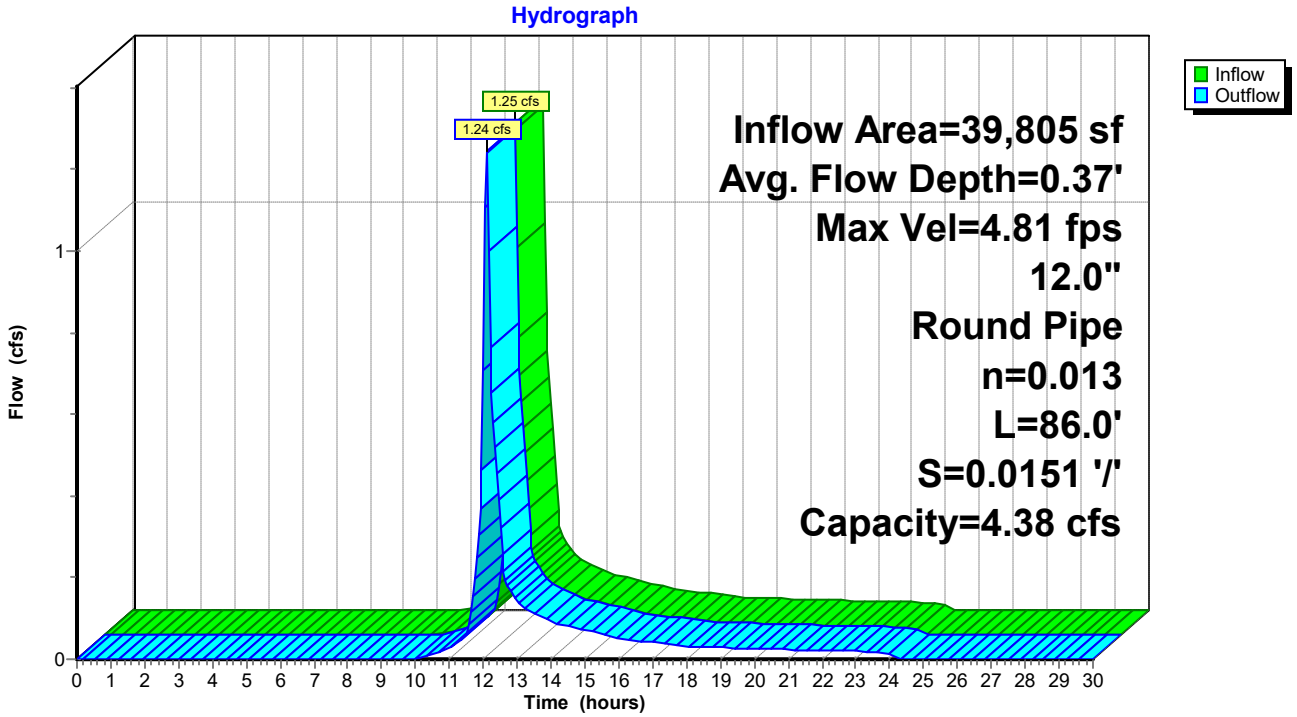
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.81 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.81 fps, Avg. Travel Time= 0.8 min

Peak Storage= 22 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.38 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 86.0' Slope= 0.0151 '/'
Inlet Invert= 348.50', Outlet Invert= 347.20'



Reach D11: TO DMH12



Stage-Discharge for Reach D11: TO DMH12

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.50	0.00	0.00
348.51	0.50	0.00
348.52	0.79	0.00
348.53	1.03	0.01
348.54	1.24	0.01
348.55	1.43	0.02
348.56	1.61	0.03
348.57	1.78	0.04
348.58	1.94	0.06
348.59	2.09	0.07
348.60	2.24	0.09
348.61	2.38	0.11
348.62	2.51	0.13
348.63	2.64	0.16
348.64	2.76	0.18
348.65	2.88	0.21
348.66	3.00	0.24
348.67	3.11	0.28
348.68	3.22	0.31
348.69	3.33	0.35
348.70	3.43	0.38
348.71	3.53	0.42
348.72	3.63	0.46
348.73	3.72	0.51
348.74	3.82	0.55
348.75	3.91	0.60
348.76	4.00	0.65
348.77	4.08	0.70
348.78	4.17	0.75
348.79	4.25	0.80
348.80	4.33	0.86
348.81	4.41	0.91
348.82	4.48	0.97
348.83	4.56	1.03
348.84	4.63	1.09
348.85	4.70	1.15
348.86	4.77	1.21
348.87	4.84	1.28
348.88	4.90	1.34
348.89	4.97	1.41
348.90	5.03	1.48
348.91	5.09	1.54
348.92	5.15	1.61
348.93	5.21	1.68
348.94	5.27	1.75
348.95	5.32	1.82
348.96	5.38	1.90
348.97	5.43	1.97
348.98	5.48	2.04
348.99	5.53	2.12
349.00	5.58	2.19
349.01	5.62	2.26
349.02	5.67	2.34
349.03	5.71	2.41
349.04	5.76	2.49
349.05	5.80	2.57
349.06	5.84	2.64
349.07	5.87	2.72
349.08	5.91	2.79
349.09	5.95	2.87
349.10	5.98	2.94
349.11	6.01	3.02
349.12	6.05	3.09
349.13	6.08	3.17
349.14	6.10	3.24
349.15	6.13	3.31
349.16	6.16	3.39
349.17	6.18	3.46
349.18	6.20	3.53
349.19	6.23	3.60
349.20	6.25	3.67
349.21	6.26	3.74
349.22	6.28	3.80
349.23	6.30	3.87
349.24	6.31	3.93
349.25	6.32	3.99
349.26	6.33	4.06
349.27	6.34	4.11
349.28	6.35	4.17
349.29	6.35	4.23
349.30	6.36	4.28
349.31	**6.36**	4.33
349.32	6.36	4.38
349.33	6.36	4.43
349.34	6.35	4.47
349.35	6.34	4.51
349.36	6.33	4.55
349.37	6.32	4.59
349.38	6.31	4.62
349.39	6.29	4.65
349.40	6.27	4.67
349.41	6.25	4.69
349.42	6.22	4.70
349.43	6.19	4.71
349.44	6.15	**4.71**
349.45	6.11	4.71
349.46	6.06	4.69
349.47	6.00	4.67
349.48	5.92	4.63
349.49	5.82	4.56
349.50	5.58	4.38

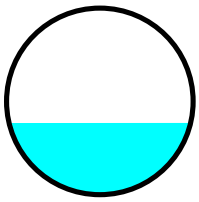
Summary for Reach D12: TO DMH13

Inflow Area = 63,650 sf, 57.11% Impervious, Inflow Depth = 1.49" for 2-Year event
Inflow = 2.49 cfs @ 12.08 hrs, Volume= 7,885 cf
Outflow = 2.47 cfs @ 12.09 hrs, Volume= 7,885 cf, Atten= 1%, Lag= 0.5 min

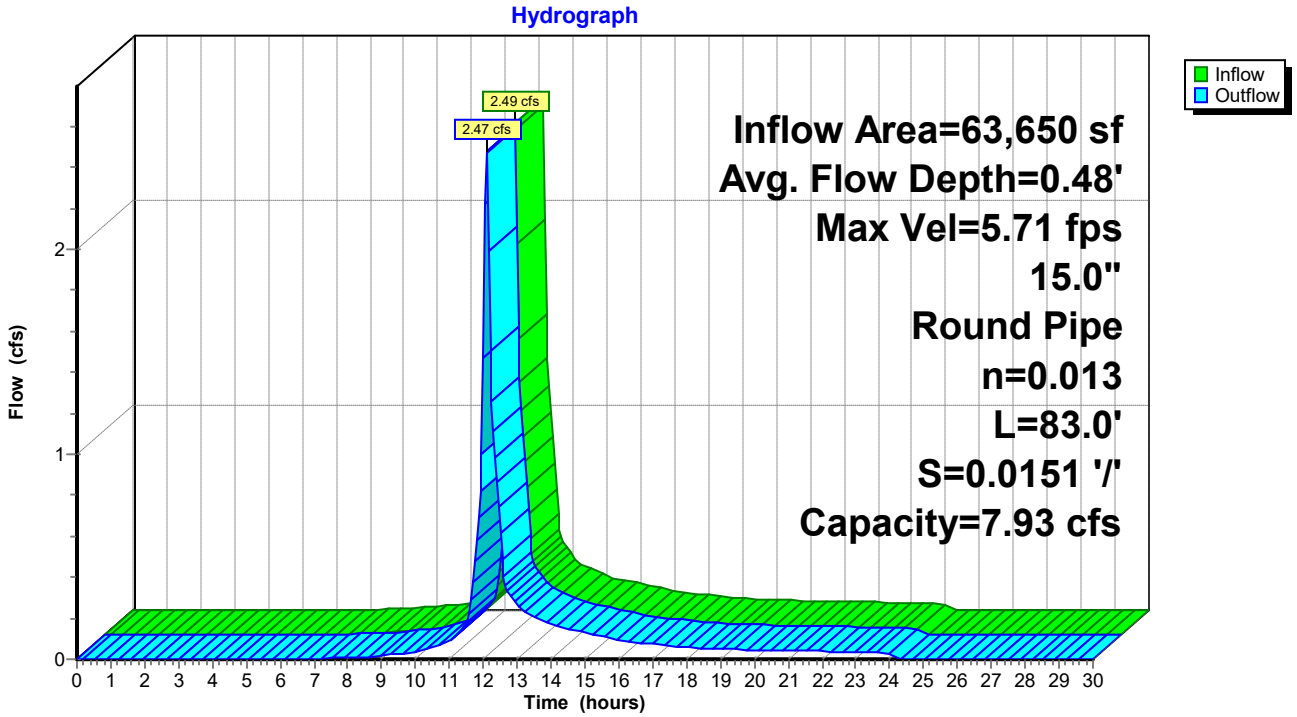
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.71 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.93 fps, Avg. Travel Time= 0.7 min

Peak Storage= 36 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.48'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.93 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0151 '/'
Inlet Invert= 347.10', Outlet Invert= 345.85'



Reach D12: TO DMH13



Stage-Discharge for Reach D12: TO DMH13

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.10	0.00	0.00
347.11	0.46	0.00
347.12	0.78	0.00
347.13	1.02	0.01
347.14	1.24	0.01
347.15	1.43	0.02
347.16	1.61	0.04
347.17	1.78	0.05
347.18	1.95	0.06
347.19	2.10	0.08
347.20	2.25	0.10
347.21	2.39	0.13
347.22	2.52	0.15
347.23	2.66	0.18
347.24	2.78	0.21
347.25	2.91	0.24
347.26	3.03	0.28
347.27	3.14	0.32
347.28	3.25	0.35
347.29	3.37	0.40
347.30	3.47	0.44
347.31	3.58	0.49
347.32	3.68	0.54
347.33	3.78	0.59
347.34	3.88	0.64
347.35	3.97	0.69
347.36	4.07	0.75
347.37	4.16	0.81
347.38	4.25	0.87
347.39	4.34	0.94
347.40	4.42	1.00
347.41	4.51	1.07
347.42	4.59	1.14
347.43	4.67	1.21
347.44	4.75	1.28
347.45	4.83	1.36
347.46	4.90	1.43
347.47	4.98	1.51
347.48	5.05	1.59
347.49	5.12	1.67
347.50	5.19	1.76
347.51	5.26	1.84
347.52	5.33	1.93
347.53	5.40	2.02
347.54	5.46	2.11
347.55	5.53	2.20
347.56	5.59	2.29
347.57	5.65	2.38
347.58	5.71	2.48
347.59	5.77	2.57
347.60	5.83	2.67
347.61	5.88	2.77
347.62	5.94	2.87
347.63	6.00	2.97
347.64	6.05	3.07
347.65	6.10	3.17
347.66	6.15	3.28
347.67	6.20	3.38
347.68	6.25	3.48
347.69	6.30	3.59
347.70	6.35	3.70
347.71	6.39	3.80
347.72	6.44	3.91
347.73	6.48	4.02
347.74	6.52	4.13
347.75	6.57	4.23
347.76	6.61	4.34
347.77	6.65	4.45
347.78	6.69	4.56
347.79	6.72	4.67
347.80	6.76	4.78
347.81	6.80	4.89
347.82	6.83	5.00
347.83	6.86	5.11
347.84	6.90	5.22
347.85	6.93	5.33
347.86	6.96	5.43
347.87	6.99	5.54
347.88	7.02	5.65
347.89	7.04	5.76
347.90	7.07	5.86
347.91	7.10	5.97
347.92	7.12	6.08
347.93	7.14	6.18
347.94	7.16	6.28
347.95	7.19	6.39
347.96	7.21	6.49
347.97	7.22	6.59
347.98	7.24	6.69
347.99	7.26	6.78
348.00	7.27	6.88
348.01	7.29	6.98
348.02	7.30	7.07
348.03	7.31	7.16
348.04	7.32	7.25
348.05	7.33	7.34
348.06	7.34	7.43
348.07	7.35	7.51
348.08	7.35	7.59
348.09	7.36	7.67
348.10	7.36	7.75
348.11	7.36	7.82
348.12	**7.36**	7.90
348.13	7.36	7.96
348.14	7.36	8.03
348.15	7.36	8.09
348.16	7.35	8.15
348.17	7.34	8.21
348.18	7.33	8.26
348.19	7.32	8.31
348.20	7.31	8.36
348.21	7.29	8.40
348.22	7.27	8.43
348.23	7.25	8.46
348.24	7.23	8.49
348.25	7.20	8.51
348.26	7.17	8.52
348.27	7.14	**8.53**
348.28	7.10	8.52
348.29	7.06	8.51
348.30	7.02	8.49
348.31	6.96	8.46
348.32	6.89	8.41
348.33	6.81	8.33
348.34	6.69	8.19
348.35	6.46	7.93

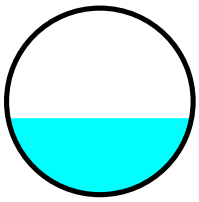
Summary for Reach D13: TO DMH14

Inflow Area = 75,826 sf, 62.17% Impervious, Inflow Depth = 1.63" for 2-Year event
Inflow = 3.20 cfs @ 12.09 hrs, Volume= 10,269 cf
Outflow = 3.17 cfs @ 12.10 hrs, Volume= 10,269 cf, Atten= 1%, Lag= 0.5 min

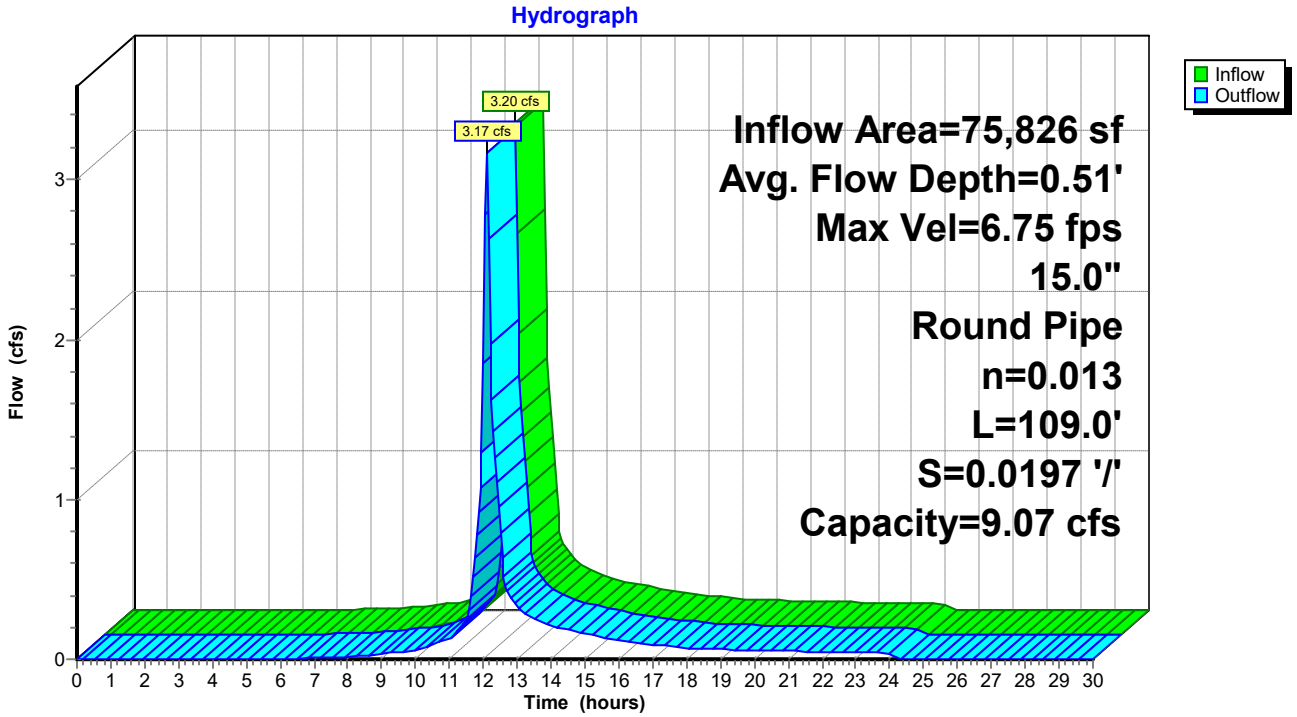
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.75 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.16 fps, Avg. Travel Time= 0.8 min

Peak Storage= 52 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.51'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.07 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 109.0' Slope= 0.0197 '/'
Inlet Invert= 345.75', Outlet Invert= 343.60'



Reach D13: TO DMH14



Stage-Discharge for Reach D13: TO DMH14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
345.75	0.00	0.00
345.76	0.53	0.00
345.77	0.89	0.00
345.78	1.17	0.01
345.79	1.42	0.02
345.80	1.64	0.03
345.81	1.85	0.04
345.82	2.04	0.06
345.83	2.23	0.07
345.84	2.40	0.10
345.85	2.57	0.12
345.86	2.73	0.15
345.87	2.89	0.17
345.88	3.04	0.21
345.89	3.19	0.24
345.90	3.33	0.28
345.91	3.46	0.32
345.92	3.60	0.36
345.93	3.73	0.41
345.94	3.85	0.45
345.95	3.97	0.50
345.96	4.09	0.56
345.97	4.21	0.61
345.98	4.33	0.67
345.99	4.44	0.73
346.00	4.55	0.79
346.01	4.65	0.86
346.02	4.76	0.93
346.03	4.86	1.00
346.04	4.96	1.07
346.05	5.06	1.15
346.06	5.16	1.22
346.07	5.25	1.30
346.08	5.34	1.38
346.09	5.43	1.47
346.10	5.52	1.55
346.11	5.61	1.64
346.12	5.70	1.73
346.13	5.78	1.82
346.14	5.86	1.92
346.15	5.94	2.01
346.16	6.02	2.11
346.17	6.10	2.21
346.18	6.18	2.31
346.19	6.25	2.41
346.20	6.32	2.52
346.21	6.40	2.62
346.22	6.47	2.73
346.23	6.54	2.84
346.24	6.60	2.95
346.25	6.67	3.06
346.26	6.73	3.17
346.27	6.80	3.28
346.28	6.86	3.40
346.29	6.92	3.51
346.30	6.98	3.63
346.31	7.04	3.75
346.32	7.10	3.87
346.33	7.15	3.99
346.34	7.21	4.11
346.35	7.26	4.23
346.36	7.32	4.35
346.37	7.37	4.47
346.38	7.42	4.60
346.39	7.47	4.72
346.40	7.51	4.85
346.41	7.56	4.97
346.42	7.61	5.10
346.43	7.65	5.22
346.44	7.69	5.35
346.45	7.74	5.47
346.46	7.78	5.60
346.47	7.82	5.72
346.48	7.85	5.85
346.49	7.89	5.97
346.50	7.93	6.10
346.51	7.96	6.22
346.52	8.00	6.34
346.53	8.03	6.47
346.54	8.06	6.59
346.55	8.09	6.71
346.56	8.12	6.83
346.57	8.15	6.95
346.58	8.17	7.07
346.59	8.20	7.19
346.60	8.22	7.31
346.61	8.25	7.42
346.62	8.27	7.54
346.63	8.29	7.65
346.64	8.31	7.76
346.65	8.33	7.87
346.66	8.34	7.98
346.67	8.36	8.09
346.68	8.37	8.20
346.69	8.38	8.30
346.70	8.39	8.40
346.71	8.40	8.50
346.72	8.41	8.59
346.73	8.42	8.69
346.74	8.42	8.78
346.75	8.43	8.87
346.76	8.43	8.95
346.77	**8.43**	9.04
346.78	8.43	9.11
346.79	8.42	9.19
346.80	8.42	9.26
346.81	8.41	9.33
346.82	8.40	9.40
346.83	8.39	9.46
346.84	8.38	9.51
346.85	8.36	9.56
346.86	8.34	9.61
346.87	8.32	9.65
346.88	8.30	9.69
346.89	8.27	9.71
346.90	8.24	9.74
346.91	8.21	9.75
346.92	8.17	**9.76**
346.93	8.13	9.75
346.94	8.08	9.74
346.95	8.03	9.72
346.96	7.96	9.68
346.97	7.89	9.62
346.98	7.80	9.53
346.99	7.65	9.38
347.00	7.39	9.07

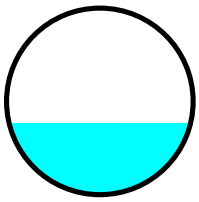
Summary for Reach D14: TO DMH15

Inflow Area = 248,895 sf, 65.27% Impervious, Inflow Depth = 1.81" for 2-Year event
Inflow = 10.94 cfs @ 12.11 hrs, Volume= 37,587 cf
Outflow = 10.46 cfs @ 12.14 hrs, Volume= 37,587 cf, Atten= 4%, Lag= 2.1 min

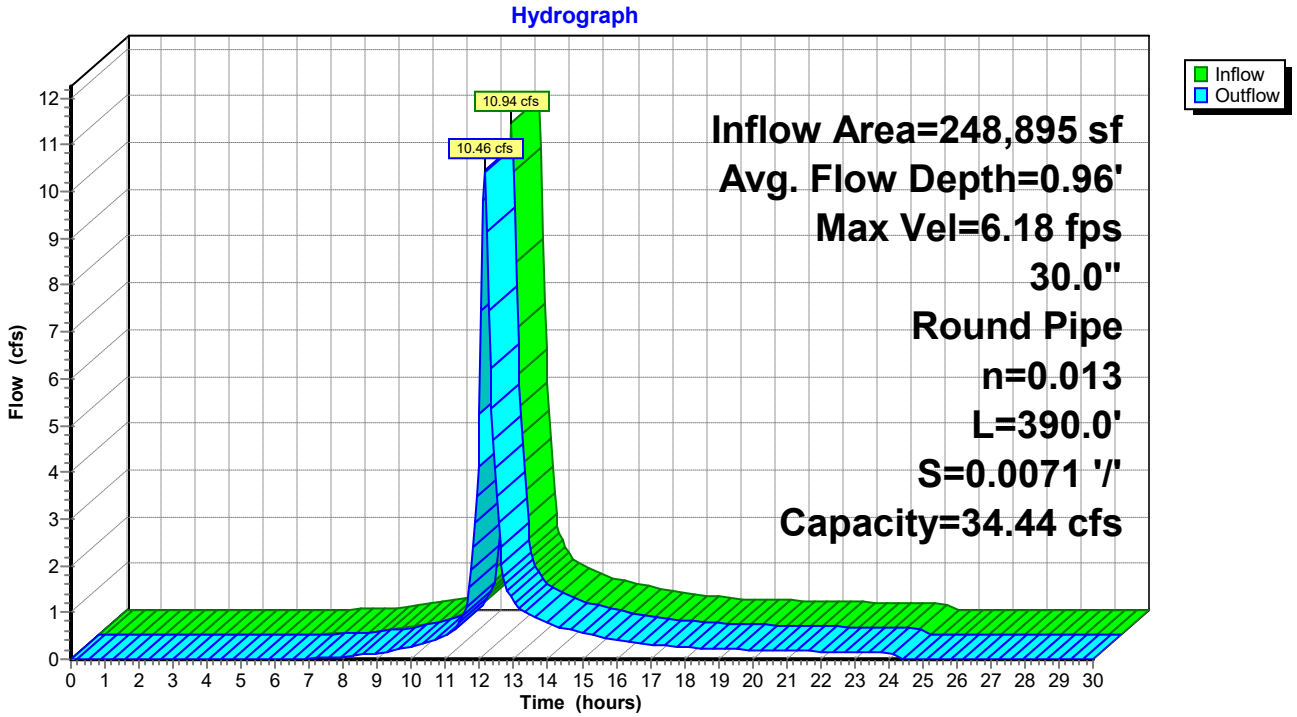
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.18 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 1.96 fps, Avg. Travel Time= 3.3 min

Peak Storage= 679 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.96'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.44 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 390.0' Slope= 0.0071 '/'
Inlet Invert= 338.20', Outlet Invert= 335.45'



Reach D14: TO DMH15



Stage-Discharge for Reach D14: TO DMH15

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
338.20	0.00	0.00
338.22	0.50	0.00
338.24	0.84	0.02
338.26	1.11	0.04
338.28	1.34	0.06
338.30	1.56	0.10
338.32	1.75	0.15
338.34	1.94	0.21
338.36	2.11	0.28
338.38	2.28	0.36
338.40	2.44	0.45
338.42	2.59	0.55
338.44	2.74	0.66
338.46	2.88	0.78
338.48	3.02	0.91
338.50	3.16	1.05
338.52	3.29	1.21
338.54	3.41	1.37
338.56	3.54	1.54
338.58	3.66	1.72
338.60	3.77	1.91
338.62	3.89	2.12
338.64	4.00	2.33
338.66	4.11	2.55
338.68	4.21	2.78
338.70	4.32	3.02
338.72	4.42	3.27
338.74	4.52	3.52
338.76	4.61	3.79
338.78	4.71	4.07
338.80	4.80	4.35
338.82	4.89	4.64
338.84	4.98	4.95
338.86	5.07	5.26
338.88	5.16	5.57
338.90	5.24	5.90
338.92	5.32	6.23
338.94	5.41	6.57
338.96	5.49	6.92
338.98	5.56	7.28
339.00	5.64	7.64
339.02	5.72	8.01
339.04	5.79	8.38
339.06	5.86	8.77
339.08	5.93	9.15
339.10	6.00	9.55
339.12	6.07	9.95
339.14	6.14	10.36
339.16	6.20	10.77
339.18	6.27	11.19
339.20	6.33	11.61
339.22	6.39	12.03
339.24	6.45	12.47
339.26	6.51	12.90
339.28	6.57	13.34
339.30	6.63	13.79
339.32	6.68	14.23
339.34	6.74	14.69
339.36	6.79	15.14
339.38	6.84	15.60
339.40	6.89	16.06
339.42	6.94	16.52
339.44	6.99	16.99
339.46	7.04	17.46
339.48	7.09	17.93
339.50	7.13	18.40
339.52	7.18	18.87
339.54	7.22	19.34
339.56	7.26	19.82
339.58	7.30	20.29
339.60	7.34	20.77
339.62	7.38	21.24
339.64	7.42	21.72
339.66	7.45	22.19
339.68	7.49	22.67
339.70	7.52	23.14
339.72	7.56	23.61
339.74	7.59	24.08
339.76	7.62	24.55
339.78	7.65	25.01
339.80	7.68	25.48
339.82	7.71	25.94
339.84	7.73	26.39
339.86	7.76	26.85
339.88	7.78	27.30
339.90	7.81	27.74
339.92	7.83	28.18
339.94	7.85	28.62
339.96	7.87	29.05
339.98	7.88	29.48
340.00	7.90	29.90
340.02	7.92	30.31
340.04	7.93	30.71
340.06	7.94	31.11
340.08	7.96	31.50
340.10	7.97	31.89
340.12	7.98	32.26
340.14	7.98	32.63
340.16	7.99	32.98
340.18	7.99	33.33
340.20	8.00	33.67
340.22	**8.00**	33.99
340.24	**8.00**	34.30
340.26	8.00	34.60
340.28	7.99	34.89
340.30	7.99	35.17
340.32	7.98	35.43
340.34	7.97	35.67
340.36	7.96	35.90
340.38	7.95	36.11
340.40	7.94	36.31
340.42	7.92	36.48
340.44	7.90	36.64
340.46	7.88	36.77
340.48	7.85	36.88
340.50	7.82	36.97
340.52	7.79	37.02
340.54	7.76	**37.04**
340.56	7.72	**37.03**
340.58	7.67	36.99
340.60	7.62	36.90
340.62	7.56	36.75
340.64	7.49	36.52
340.66	7.40	36.19
340.68	7.26	35.60
340.70	7.02	34.44

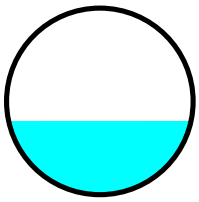
Summary for Reach D15: TO DMH16

Inflow Area = 273,738 sf, 64.05% Impervious, Inflow Depth = 1.77" for 2-Year event
Inflow = 11.21 cfs @ 12.14 hrs, Volume= 40,385 cf
Outflow = 11.05 cfs @ 12.16 hrs, Volume= 40,385 cf, Atten= 1%, Lag= 1.1 min

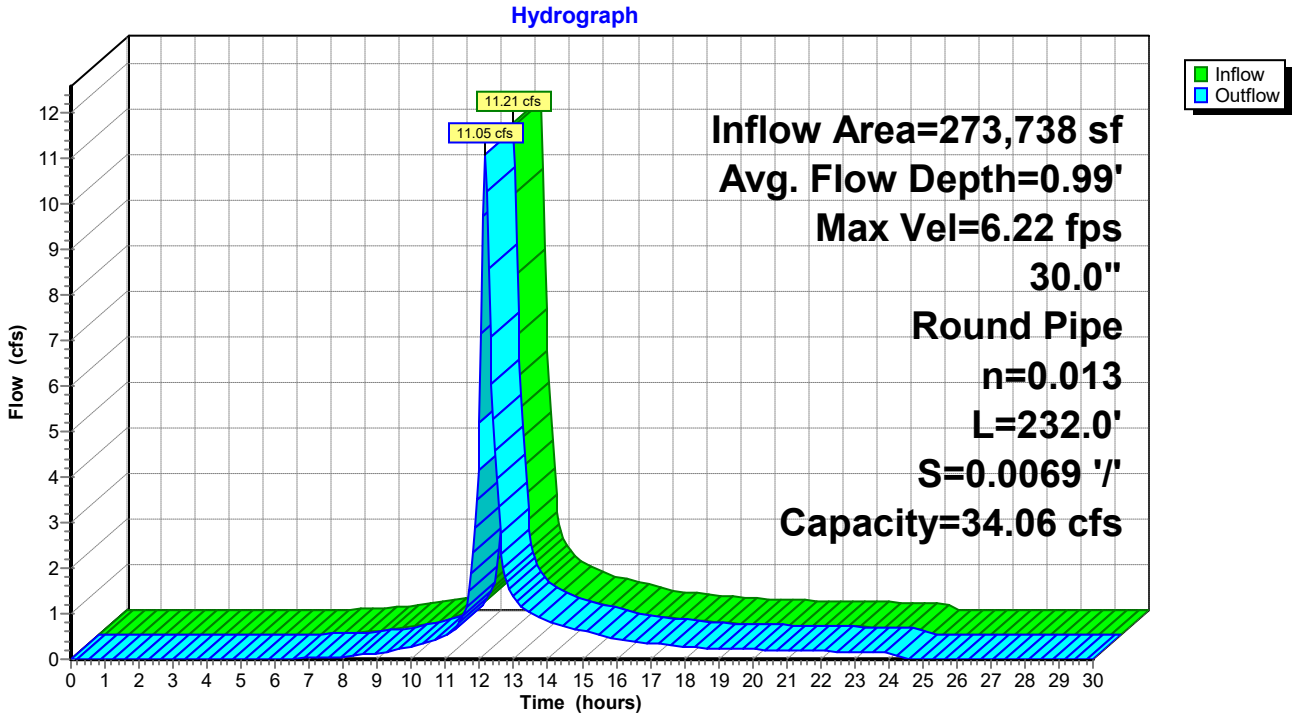
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.22 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.85 fps, Avg. Travel Time= 2.1 min

Peak Storage= 419 cf @ 12.15 hrs
Average Depth at Peak Storage= 0.99'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.06 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 232.0' Slope= 0.0069 '/'
Inlet Invert= 335.35', Outlet Invert= 333.75'



Reach D15: TO DMH16



Stage-Discharge for Reach D15: TO DMH16

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
335.35	0.00	0.00
335.37	0.49	0.00
335.39	0.83	0.02
335.41	1.10	0.04
335.43	1.33	0.06
335.45	1.54	0.10
335.47	1.73	0.15
335.49	1.92	0.21
335.51	2.09	0.28
335.53	2.26	0.36
335.55	2.41	0.44
335.57	2.57	0.54
335.59	2.71	0.65
335.61	2.85	0.77
335.63	2.99	0.90
335.65	3.12	1.04
335.67	3.25	1.19
335.69	3.38	1.35
335.71	3.50	1.52
335.73	3.62	1.70
335.75	3.73	1.89
335.77	3.84	2.09
335.79	3.95	2.30
335.81	4.06	2.52
335.83	4.17	2.75
335.85	4.27	2.98
335.87	4.37	3.23
335.89	4.47	3.49
335.91	4.56	3.75
335.93	4.66	4.02
335.95	4.75	4.30
335.97	4.84	4.59
335.99	4.93	4.89
336.01	5.01	5.20
336.03	5.10	5.51
336.05	5.18	5.83
336.07	5.27	6.16
336.09	5.35	6.50
336.11	5.42	6.84
336.13	5.50	7.20
336.15	5.58	7.55
336.17	5.65	7.92
336.19	5.73	8.29
336.21	5.80	8.67
336.23	5.87	9.05
336.25	5.94	9.44
336.27	6.00	9.84
336.29	6.07	10.24
336.31	6.13	10.65
336.33	6.20	11.06
336.35	6.26	11.48
336.37	6.32	11.90
336.39	6.38	12.33
336.41	6.44	12.76
336.43	6.50	13.20
336.45	6.55	13.63
336.47	6.61	14.08
336.49	6.66	14.52
336.51	6.72	14.97
336.53	6.77	15.43
336.55	6.82	15.88
336.57	6.87	16.34
336.59	6.92	16.80
336.61	6.96	17.26
336.63	7.01	17.73
336.65	7.05	18.19
336.67	7.10	18.66
336.69	7.14	19.13
336.71	7.18	19.60
336.73	7.22	20.07
336.75	7.26	20.54
336.77	7.30	21.01
336.79	7.34	21.48
336.81	7.37	21.95
336.83	7.41	22.42
336.85	7.44	22.88
336.87	7.47	23.35
336.89	7.51	23.82
336.91	7.54	24.28
336.93	7.57	24.74
336.95	7.59	25.20
336.97	7.62	25.65
336.99	7.65	26.10
337.01	7.67	26.55
337.03	7.70	27.00
337.05	7.72	27.44
337.07	7.74	27.87
337.09	7.76	28.30
337.11	7.78	28.73
337.13	7.80	29.15
337.15	7.81	29.57
337.17	7.83	29.97
337.19	7.84	30.37
337.21	7.86	30.77
337.23	7.87	31.16
337.25	7.88	31.54
337.27	7.89	31.91
337.29	7.89	32.27
337.31	7.90	32.62
337.33	7.91	32.96
337.35	7.91	33.30
337.37	**7.91**	33.62
337.39	**7.91**	33.92
337.41	7.91	34.22
337.43	7.91	34.51
337.45	7.90	34.78
337.47	7.89	35.04
337.49	7.89	35.28
337.51	7.88	35.50
337.53	7.86	35.71
337.55	7.85	35.91
337.57	7.83	36.08
337.59	7.81	36.23
337.61	7.79	36.36
337.63	7.77	36.47
337.65	7.74	36.56
337.67	7.71	36.61
337.69	7.67	**36.63**
337.71	7.63	**36.62**
337.73	7.59	36.58
337.75	7.54	36.49
337.77	7.48	36.34
337.79	7.40	36.12
337.81	7.32	35.79
337.83	7.18	35.21
337.85	6.94	34.06

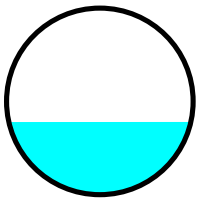
Summary for Reach D16: TO BASIN#1

Inflow Area = 273,738 sf, 64.05% Impervious, Inflow Depth = 1.77" for 2-Year event
Inflow = 11.05 cfs @ 12.16 hrs, Volume= 40,385 cf
Outflow = 10.98 cfs @ 12.16 hrs, Volume= 40,385 cf, Atten= 1%, Lag= 0.3 min

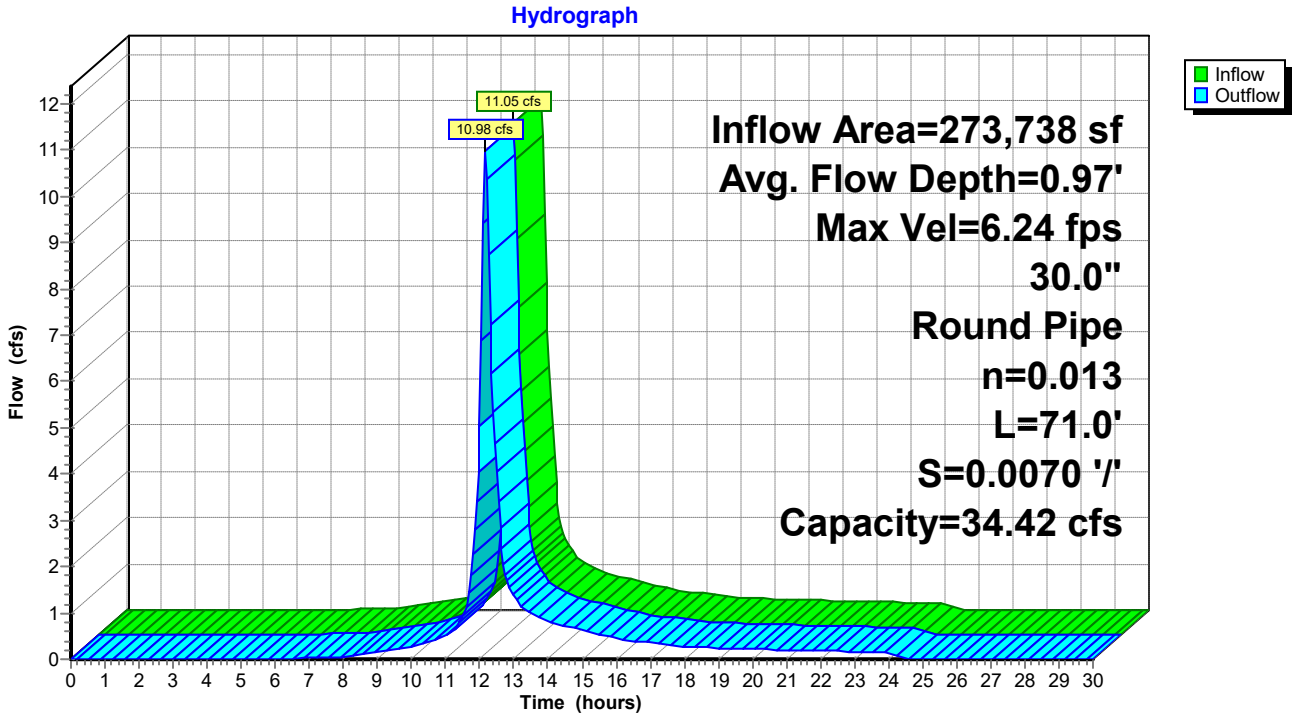
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.24 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.86 fps, Avg. Travel Time= 0.6 min

Peak Storage= 126 cf @ 12.16 hrs
Average Depth at Peak Storage= 0.97'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.42 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 71.0' Slope= 0.0070 '/'
Inlet Invert= 333.65', Outlet Invert= 333.15'



Reach D16: TO BASIN#1



Stage-Discharge for Reach D16: TO BASIN#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
333.65	0.00	0.00
333.67	0.50	0.00
333.69	0.84	0.02
333.71	1.11	0.04
333.73	1.34	0.06
333.75	1.56	0.10
333.77	1.75	0.15
333.79	1.94	0.21
333.81	2.11	0.28
333.83	2.28	0.36
333.85	2.44	0.45
333.87	2.59	0.55
333.89	2.74	0.66
333.91	2.88	0.78
333.93	3.02	0.91
333.95	3.16	1.05
333.97	3.28	1.21
333.99	3.41	1.37
334.01	3.53	1.54
334.03	3.65	1.72
334.05	3.77	1.91
334.07	3.88	2.11
334.09	3.99	2.33
334.11	4.10	2.55
334.13	4.21	2.78
334.15	4.31	3.01
334.17	4.41	3.26
334.19	4.51	3.52
334.21	4.61	3.79
334.23	4.71	4.06
334.25	4.80	4.35
334.27	4.89	4.64
334.29	4.98	4.94
334.31	5.07	5.25
334.33	5.15	5.57
334.35	5.24	5.89
334.37	5.32	6.23
334.39	5.40	6.57
334.41	5.48	6.92
334.43	5.56	7.27
334.45	5.64	7.63
334.47	5.71	8.00
334.49	5.79	8.38
334.51	5.86	8.76
334.53	5.93	9.15
334.55	6.00	9.54
334.57	6.07	9.94
334.59	6.13	10.35
334.61	6.20	10.76
334.63	6.26	11.18
334.65	6.33	11.60
334.67	6.39	12.03
334.69	6.45	12.46
334.71	6.51	12.89
334.73	6.57	13.33
334.75	6.62	13.78
334.77	6.68	14.23
334.79	6.73	14.68
334.81	6.79	15.13
334.83	6.84	15.59
334.85	6.89	16.05
334.87	6.94	16.51
334.89	6.99	16.98
334.91	7.04	17.44
334.93	7.08	17.91
334.95	7.13	18.38
334.97	7.17	18.86
334.99	7.21	19.33
335.01	7.26	19.80
335.03	7.30	20.28
335.05	7.34	20.75
335.07	7.38	21.23
335.09	7.41	21.70
335.11	7.45	22.18
335.13	7.49	22.65
335.15	7.52	23.13
335.17	7.55	23.60
335.19	7.58	24.07
335.21	7.62	24.53
335.23	7.65	25.00
335.25	7.67	25.46
335.27	7.70	25.92
335.29	7.73	26.38
335.31	7.75	26.83
335.33	7.78	27.28
335.35	7.80	27.73
335.37	7.82	28.17
335.39	7.84	28.60
335.41	7.86	29.03
335.43	7.88	29.46
335.45	7.90	29.88
335.47	7.91	30.29
335.49	7.93	30.69
335.51	7.94	31.09
335.53	7.95	31.48
335.55	7.96	31.87
335.57	7.97	32.24
335.59	7.98	32.61
335.61	7.98	32.96
335.63	7.99	33.31
335.65	7.99	33.65
335.67	**7.99**	33.97
335.69	**7.99**	34.28
335.71	7.99	34.58
335.73	7.99	34.87
335.75	7.98	35.15
335.77	7.98	35.40
335.79	7.97	35.65
335.81	7.96	35.88
335.83	7.95	36.09
335.85	7.93	36.29
335.87	7.91	36.46
335.89	7.89	36.61
335.91	7.87	36.74
335.93	7.85	36.86
335.95	7.82	36.94
335.97	7.79	37.00
335.99	7.75	**37.02**
336.01	7.71	**37.01**
336.03	7.67	36.96
336.05	7.61	36.88
336.07	7.55	36.72
336.09	7.48	36.50
336.11	7.39	36.17
336.13	7.26	35.58
336.15	7.01	34.42

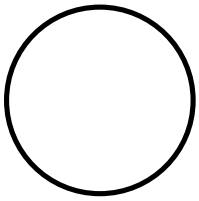
Summary for Reach D6: TO DMH14

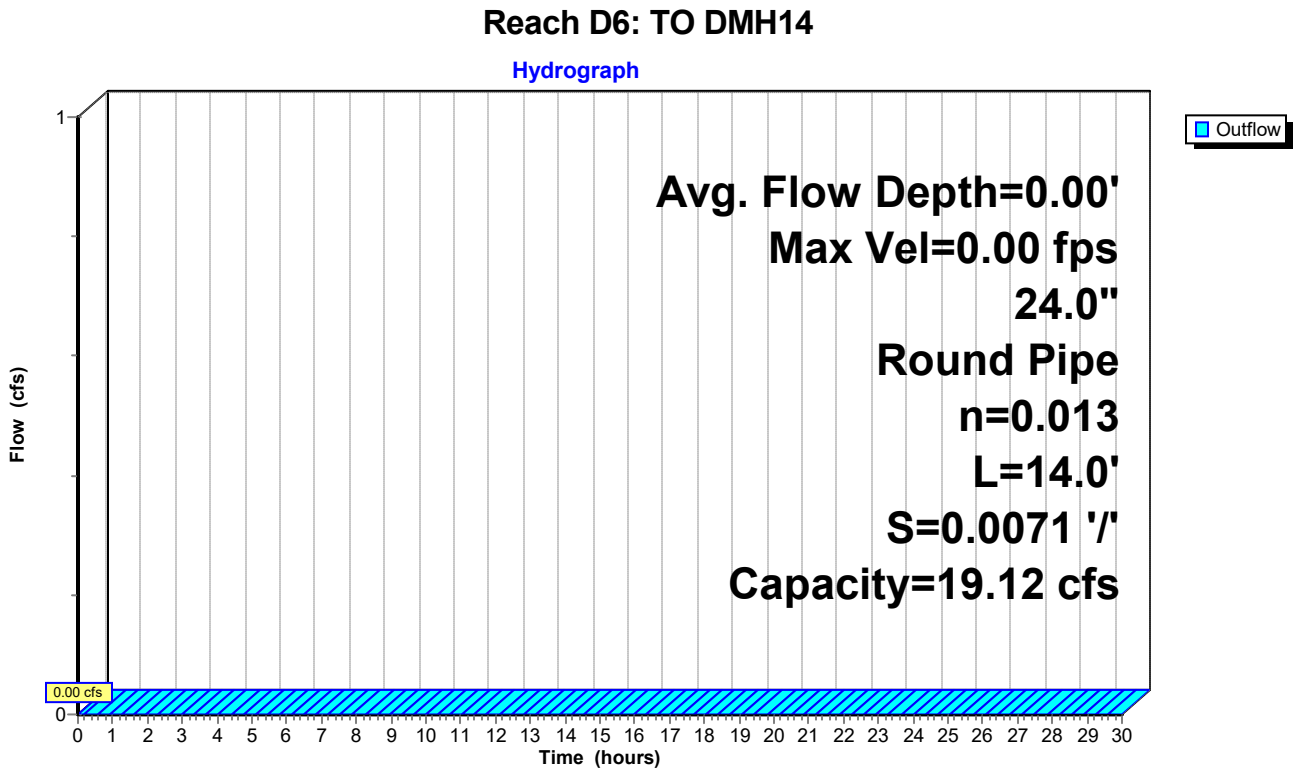
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 19.12 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 14.0' Slope= 0.0071 '/'
Inlet Invert= 339.60', Outlet Invert= 339.50'





Stage-Discharge for Reach D6: TO DMH14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
339.60	0.00	0.00
339.62	0.54	0.00
339.64	0.86	0.01
339.66	1.12	0.03
339.68	1.35	0.06
339.70	1.56	0.09
339.72	1.76	0.14
339.74	1.94	0.19
339.76	2.12	0.25
339.78	2.28	0.32
339.80	2.44	0.40
339.82	2.59	0.49
339.84	2.74	0.58
339.86	2.88	0.69
339.88	3.01	0.81
339.90	3.15	0.93
339.92	3.27	1.06
339.94	3.39	1.20
339.96	3.51	1.35
339.98	3.63	1.51
340.00	3.74	1.67
340.02	3.85	1.85
340.04	3.96	2.03
340.06	4.06	2.22
340.08	4.17	2.41
340.10	4.26	2.62
340.12	4.36	2.83
340.14	4.45	3.05
340.16	4.55	3.27
340.18	4.64	3.51
340.20	4.72	3.74
340.22	4.81	3.99
340.24	4.89	4.24
340.26	4.97	4.50
340.28	5.05	4.76
340.30	5.13	5.03
340.32	5.21	5.30
340.34	5.28	5.58
340.36	5.35	5.86
340.38	5.42	6.15
340.40	5.49	6.44
340.42	5.56	6.74
340.44	5.62	7.04
340.46	5.69	7.34
340.48	5.75	7.65
340.50	5.81	7.96
340.52	5.87	8.28
340.54	5.92	8.59
340.56	5.98	8.91
340.58	6.03	9.24
340.60	6.09	9.56
340.62	6.14	9.89
340.64	6.19	10.21
340.66	6.23	10.54
340.68	6.28	10.87
340.70	6.33	11.20
340.72	6.37	11.53
340.74	6.41	11.86
340.76	6.45	12.19
340.78	6.49	12.52
340.80	6.53	12.85
340.82	6.56	13.17
340.84	6.60	13.50
340.86	6.63	13.82
340.88	6.66	14.14
340.90	6.69	14.46
340.92	6.72	14.78
340.94	6.74	15.09
340.96	6.77	15.40
340.98	6.79	15.71
341.00	6.81	16.01
341.02	6.83	16.30
341.04	6.85	16.60
341.06	6.87	16.88
341.08	6.88	17.16
341.10	6.90	17.43
341.12	6.91	17.70
341.14	6.92	17.96
341.16	6.93	18.21
341.18	6.93	18.45
341.20	6.94	18.69
341.22	**6.94**	18.91
341.24	6.94	19.13
341.26	6.93	19.33
341.28	6.93	19.52
341.30	6.92	19.70
341.32	6.91	19.87
341.34	6.90	20.02
341.36	6.88	20.16
341.38	6.86	20.28
341.40	6.84	20.38
341.42	6.82	20.46
341.44	6.79	20.52
341.46	6.75	20.56
341.48	6.71	**20.57**
341.50	6.66	20.54
341.52	6.61	20.48
341.54	6.54	20.38
341.56	6.46	20.20
341.58	6.35	19.92
341.60	6.09	19.12

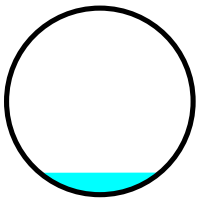
Summary for Reach D7: TO DMH8

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 1.98" for 2-Year event
Inflow = 0.19 cfs @ 12.07 hrs, Volume= 599 cf
Outflow = 0.19 cfs @ 12.09 hrs, Volume= 599 cf, Atten= 2%, Lag= 0.9 min

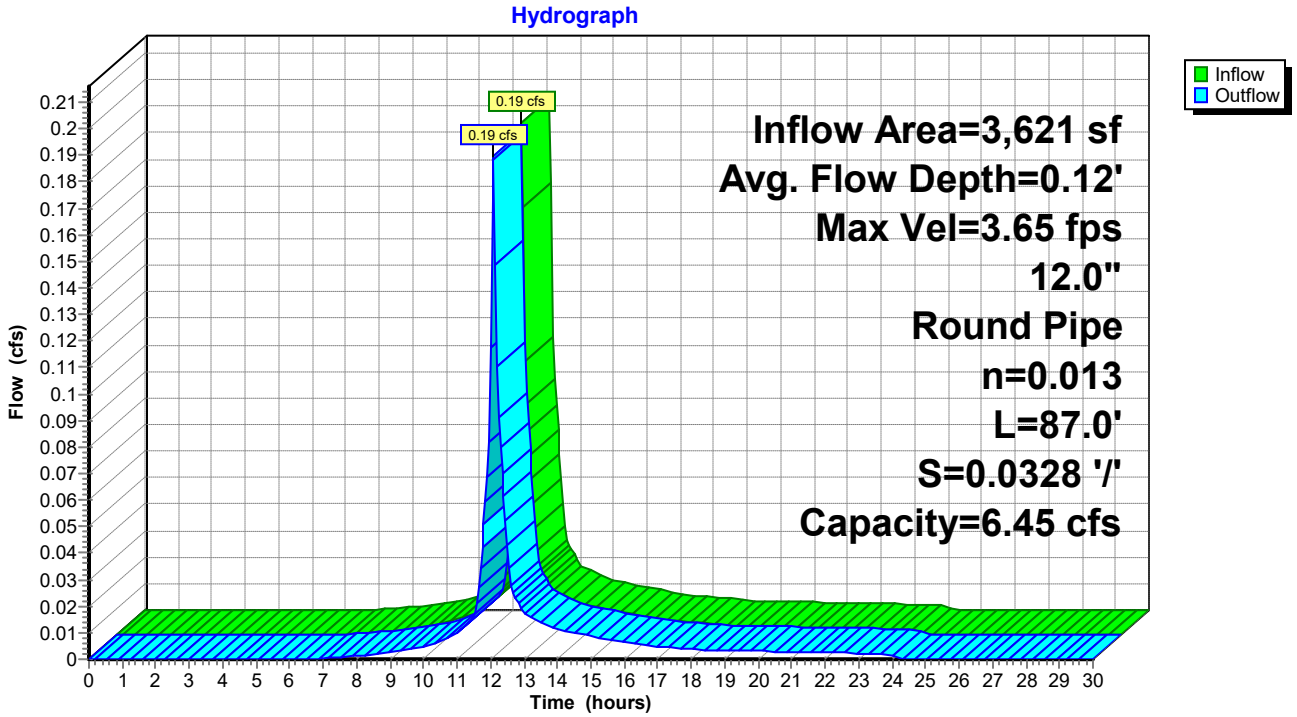
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.65 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.26 fps, Avg. Travel Time= 1.1 min

Peak Storage= 5 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.45 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 87.0' Slope= 0.0328 '/'
Inlet Invert= 354.15', Outlet Invert= 351.30'



Reach D7: TO DMH8



Stage-Discharge for Reach D7: TO DMH8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.15	0.00	0.00
354.16	0.73	0.00
354.17	1.16	0.00
354.18	1.51	0.01
354.19	1.82	0.02
354.20	2.11	0.03
354.21	2.37	0.05
354.22	2.62	0.06
354.23	2.86	0.08
354.24	3.08	0.11
354.25	3.29	0.13
354.26	3.50	0.16
354.27	3.69	0.20
354.28	3.88	0.23
354.29	4.07	0.27
354.30	4.24	0.31
354.31	4.41	0.36
354.32	4.58	0.41
354.33	4.74	0.46
354.34	4.90	0.51
354.35	5.05	0.56
354.36	5.20	0.62
354.37	5.34	0.68
354.38	5.48	0.75
354.39	5.62	0.81
354.40	5.75	0.88
354.41	5.88	0.95
354.42	6.01	1.03
354.43	6.13	1.10
354.44	6.25	1.18
354.45	6.37	1.26
354.46	6.49	1.35
354.47	6.60	1.43
354.48	6.71	1.52
354.49	6.82	1.61
354.50	6.92	1.70
354.51	7.02	1.79
354.52	7.12	1.88
354.53	7.22	1.98
354.54	7.31	2.07
354.55	7.41	2.17
354.56	7.50	2.27
354.57	7.59	2.37
354.58	7.67	2.48
354.59	7.75	2.58
354.60	7.84	2.69
354.61	7.91	2.79
354.62	7.99	2.90
354.63	8.07	3.01
354.64	8.14	3.12
354.65	8.21	3.22
354.66	8.28	3.33
354.67	8.35	3.44
354.68	8.41	3.55
354.69	8.47	3.67
354.70	8.53	3.78
354.71	8.59	3.89
354.72	8.65	4.00
354.73	8.70	4.11
354.74	8.75	4.22
354.75	8.81	4.33
354.76	8.85	4.44
354.77	8.90	4.55
354.78	8.94	4.66
354.79	8.99	4.77
354.80	9.03	4.88
354.81	9.06	4.98
354.82	9.10	5.09
354.83	9.13	5.19
354.84	9.16	5.30
354.85	9.19	5.40
354.86	9.22	5.50
354.87	9.25	5.60
354.88	9.27	5.69
354.89	9.29	5.79
354.90	9.31	5.88
354.91	9.32	5.97
354.92	9.33	6.06
354.93	9.34	6.14
354.94	9.35	6.22
354.95	9.36	6.30
354.96	**9.36**	6.38
354.97	9.36	6.45
354.98	9.36	6.52
354.99	9.35	6.58
355.00	9.34	6.64
355.01	9.33	6.70
355.02	9.31	6.75
355.03	9.29	6.80
355.04	9.26	6.84
355.05	9.23	6.87
355.06	9.20	6.90
355.07	9.16	6.92
355.08	9.11	6.93
355.09	9.05	**6.94**
355.10	8.99	6.93
355.11	8.92	6.91
355.12	8.83	6.87
355.13	8.72	6.81
355.14	8.57	6.72
355.15	8.21	6.45

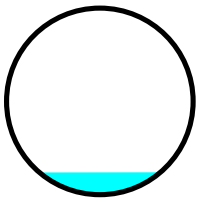
Summary for Reach D8: TO DMH9

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 1.98" for 2-Year event
Inflow = 0.19 cfs @ 12.09 hrs, Volume= 599 cf
Outflow = 0.19 cfs @ 12.10 hrs, Volume= 599 cf, Atten= 2%, Lag= 0.9 min

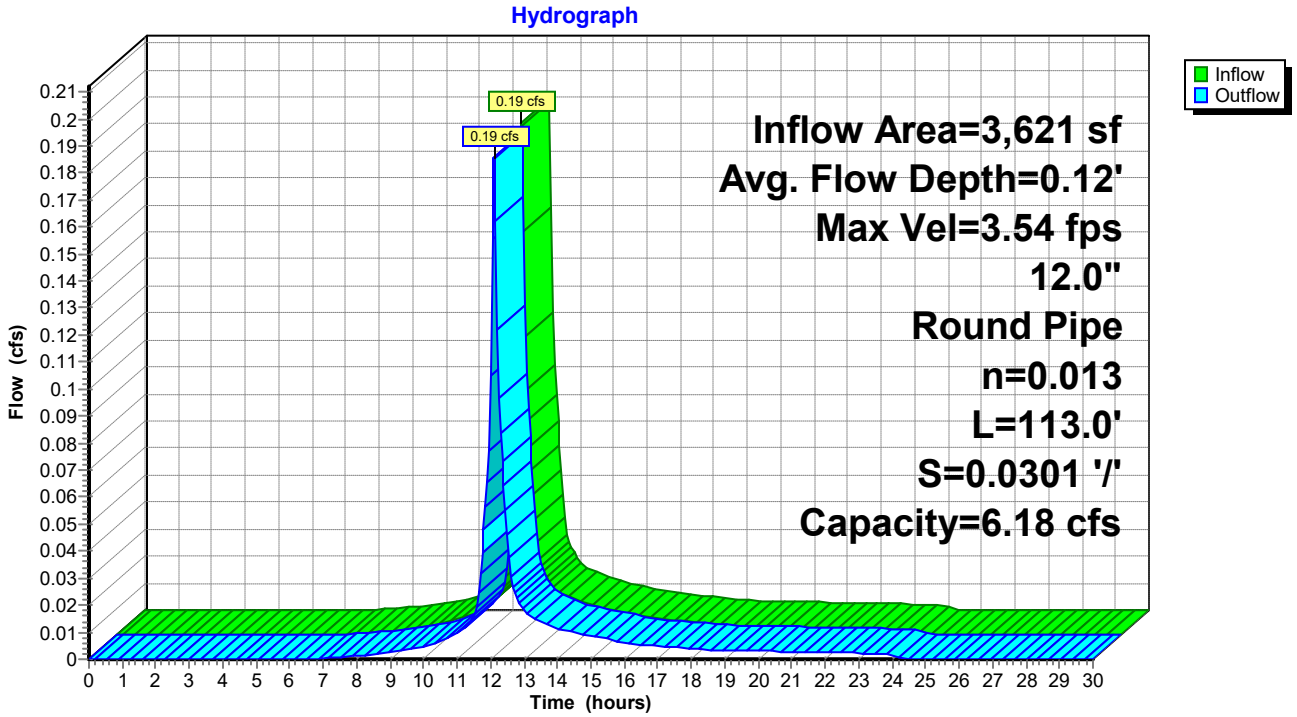
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.54 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.22 fps, Avg. Travel Time= 1.5 min

Peak Storage= 6 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.18 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 113.0' Slope= 0.0301 '/'
Inlet Invert= 351.20', Outlet Invert= 347.80'



Reach D8: TO DMH9



Stage-Discharge for Reach D8: TO DMH9

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.70	0.00
351.22	1.11	0.00
351.23	1.45	0.01
351.24	1.75	0.02
351.25	2.02	0.03
351.26	2.28	0.04
351.27	2.51	0.06
351.28	2.74	0.08
351.29	2.95	0.10
351.30	3.16	0.13
351.31	3.35	0.16
351.32	3.54	0.19
351.33	3.72	0.22
351.34	3.90	0.26
351.35	4.07	0.30
351.36	4.23	0.34
351.37	4.39	0.39
351.38	4.54	0.44
351.39	4.69	0.49
351.40	4.84	0.54
351.41	4.98	0.60
351.42	5.12	0.66
351.43	5.25	0.72
351.44	5.39	0.78
351.45	5.51	0.85
351.46	5.64	0.91
351.47	5.76	0.99
351.48	5.88	1.06
351.49	5.99	1.13
351.50	6.11	1.21
351.51	6.22	1.29
351.52	6.33	1.37
351.53	6.43	1.45
351.54	6.53	1.54
351.55	6.63	1.62
351.56	6.73	1.71
351.57	6.83	1.80
351.58	6.92	1.89
351.59	7.01	1.99
351.60	7.10	2.08
351.61	7.19	2.18
351.62	7.27	2.28
351.63	7.35	2.37
351.64	7.43	2.47
351.65	7.51	2.57
351.66	7.59	2.68
351.67	7.66	2.78
351.68	7.73	2.88
351.69	7.80	2.99
351.70	7.87	3.09
351.71	7.93	3.20
351.72	8.00	3.30
351.73	8.06	3.41
351.74	8.12	3.51
351.75	8.18	3.62
351.76	8.23	3.73
351.77	8.29	3.83
351.78	8.34	3.94
351.79	8.39	4.05
351.80	8.44	4.15
351.81	8.48	4.26
351.82	8.53	4.36
351.83	8.57	4.47
351.84	8.61	4.57
351.85	8.65	4.67
351.86	8.69	4.78
351.87	8.72	4.88
351.88	8.75	4.98
351.89	8.78	5.08
351.90	8.81	5.17
351.91	8.84	5.27
351.92	8.86	5.36
351.93	8.88	5.46
351.94	8.90	5.55
351.95	8.92	5.64
351.96	8.93	5.72
351.97	8.95	5.81
351.98	8.96	5.89
351.99	8.96	5.97
352.00	8.97	6.04
352.01	**8.97**	6.11
352.02	8.97	6.18
352.03	8.97	6.25
352.04	8.96	6.31
352.05	8.95	6.37
352.06	8.94	6.42
352.07	8.92	6.47
352.08	8.90	6.51
352.09	8.88	6.55
352.10	8.85	6.59
352.11	8.81	6.61
352.12	8.77	6.63
352.13	8.73	6.64
352.14	8.68	**6.65**
352.15	8.62	6.64
352.16	8.54	6.62
352.17	8.46	6.59
352.18	8.35	6.53
352.19	8.21	6.44
352.20	7.87	6.18

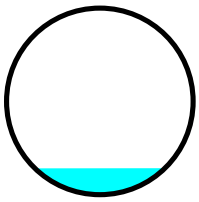
Summary for Reach D9: TO DMH10

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 1.98" for 2-Year event
Inflow = 0.19 cfs @ 12.10 hrs, Volume= 599 cf
Outflow = 0.18 cfs @ 12.11 hrs, Volume= 599 cf, Atten= 2%, Lag= 0.7 min

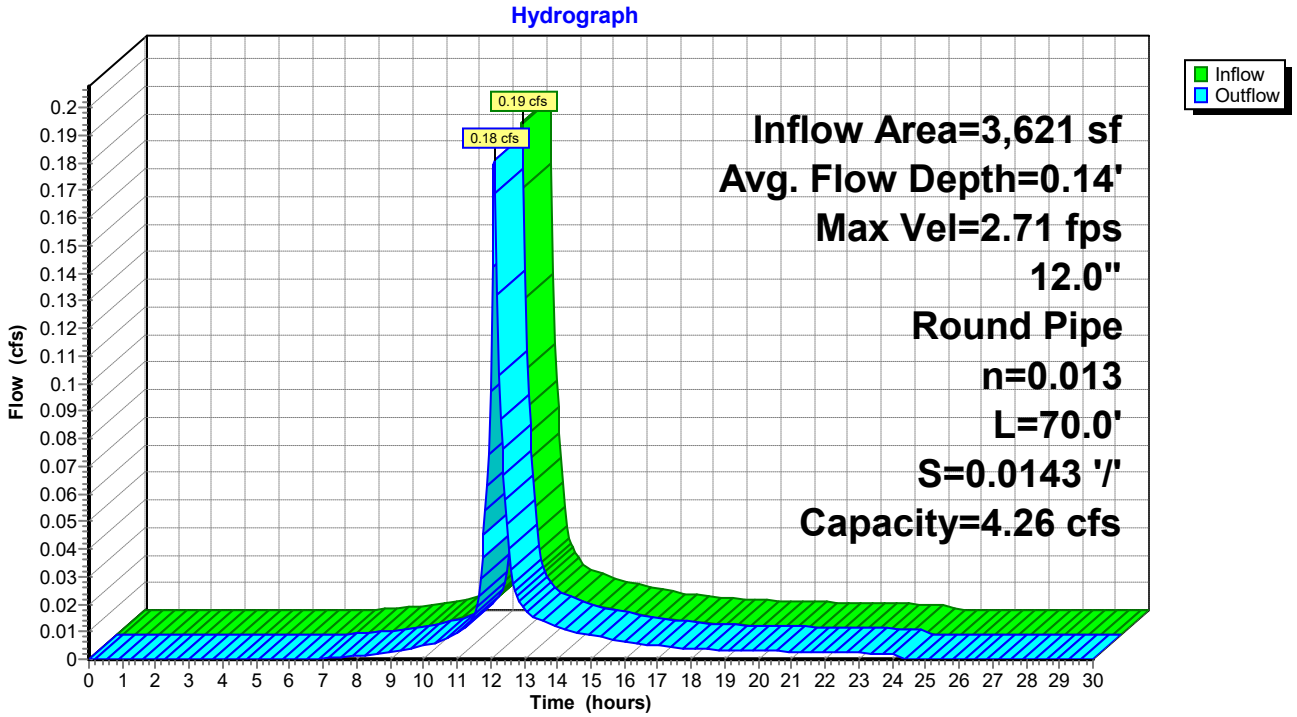
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.71 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.93 fps, Avg. Travel Time= 1.3 min

Peak Storage= 5 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.14'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.26 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 70.0' Slope= 0.0143 '/'
Inlet Invert= 347.70', Outlet Invert= 346.70'



Reach D9: TO DMH10



Stage-Discharge for Reach D9: TO DMH10

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.70	0.00	0.00
347.71	0.48	0.00
347.72	0.76	0.00
347.73	1.00	0.01
347.74	1.20	0.01
347.75	1.39	0.02
347.76	1.57	0.03
347.77	1.73	0.04
347.78	1.89	0.06
347.79	2.03	0.07
347.80	2.18	0.09
347.81	2.31	0.11
347.82	2.44	0.13
347.83	2.56	0.15
347.84	2.69	0.18
347.85	2.80	0.21
347.86	2.92	0.24
347.87	3.02	0.27
347.88	3.13	0.30
347.89	3.23	0.34
347.90	3.33	0.37
347.91	3.43	0.41
347.92	3.53	0.45
347.93	3.62	0.49
347.94	3.71	0.54
347.95	3.80	0.58
347.96	3.88	0.63
347.97	3.97	0.68
347.98	4.05	0.73
347.99	4.13	0.78
348.00	4.21	0.83
348.01	4.28	0.89
348.02	4.36	0.94
348.03	4.43	1.00
348.04	4.50	1.06
348.05	4.57	1.12
348.06	4.64	1.18
348.07	4.70	1.24
348.08	4.77	1.31
348.09	4.83	1.37
348.10	4.89	1.44
348.11	4.95	1.50
348.12	5.01	1.57
348.13	5.07	1.64
348.14	5.12	1.70
348.15	5.17	1.77
348.16	5.23	1.84
348.17	5.28	1.91
348.18	5.33	1.99
348.19	5.38	2.06
348.20	5.42	2.13
348.21	5.47	2.20
348.22	5.51	2.27
348.23	5.55	2.35
348.24	5.60	2.42
348.25	5.64	2.49
348.26	5.67	2.57
348.27	5.71	2.64
348.28	5.75	2.71
348.29	5.78	2.79
348.30	5.81	2.86
348.31	5.85	2.93
348.32	5.88	3.01
348.33	5.91	3.08
348.34	5.93	3.15
348.35	5.96	3.22
348.36	5.99	3.29
348.37	6.01	3.36
348.38	6.03	3.43
348.39	6.05	3.50
348.40	6.07	3.57
348.41	6.09	3.63
348.42	6.11	3.70
348.43	6.12	3.76
348.44	6.13	3.82
348.45	6.15	3.88
348.46	6.16	3.94
348.47	6.16	4.00
348.48	6.17	4.06
348.49	6.18	4.11
348.50	6.18	4.16
348.51	**6.18**	4.21
348.52	6.18	4.26
348.53	6.18	4.31
348.54	6.17	4.35
348.55	6.17	4.39
348.56	6.16	4.42
348.57	6.15	4.46
348.58	6.13	4.49
348.59	6.12	4.52
348.60	6.10	4.54
348.61	6.07	4.56
348.62	6.05	4.57
348.63	6.01	4.58
348.64	5.98	**4.58**
348.65	5.94	4.58
348.66	5.89	4.56
348.67	5.83	4.54
348.68	5.76	4.50
348.69	5.66	4.44
348.70	5.42	4.26

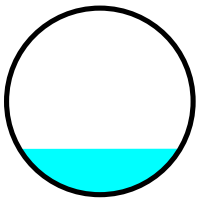
Summary for Reach DCB-R101: TO DMH-R100

Inflow Area = 18,867 sf, 80.97% Impervious, Inflow Depth = 1.74" for 2-Year event
Inflow = 0.88 cfs @ 12.08 hrs, Volume= 2,734 cf
Outflow = 0.88 cfs @ 12.08 hrs, Volume= 2,734 cf, Atten= 0%, Lag= 0.1 min

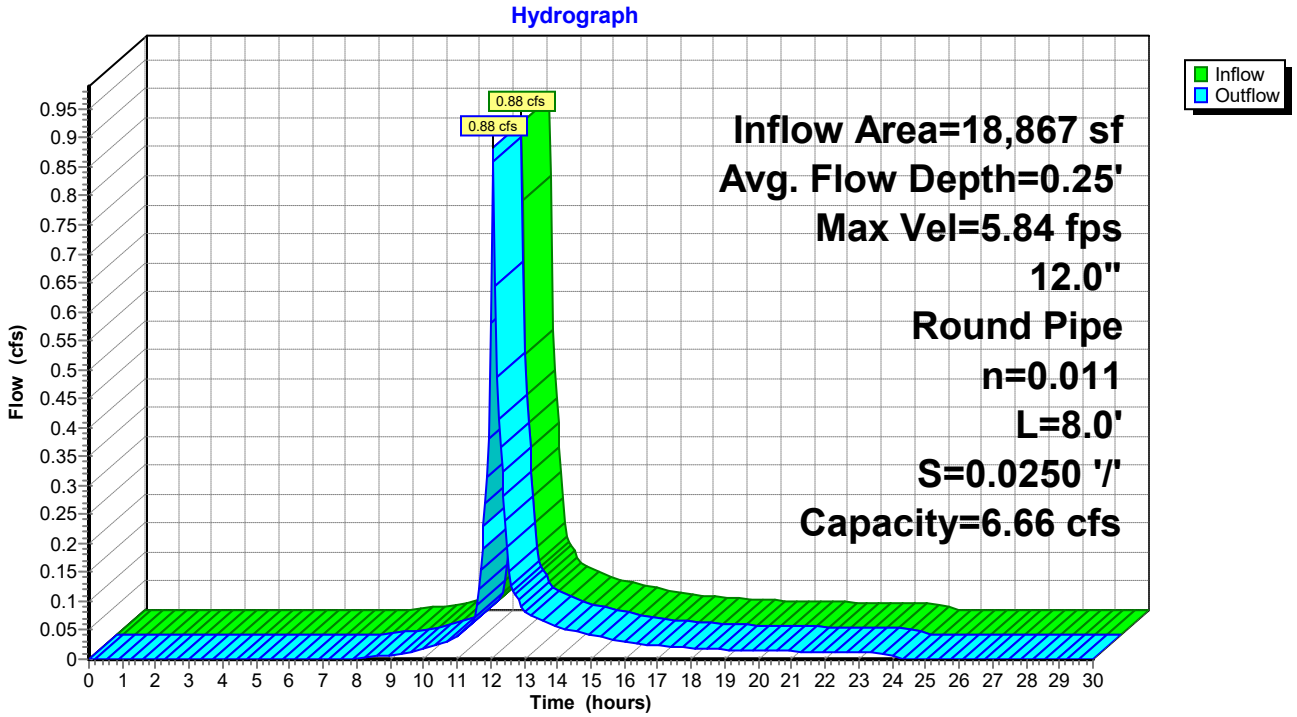
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.84 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.05 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.25'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.66 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 8.0' Slope= 0.0250 '/'
Inlet Invert= 355.50', Outlet Invert= 355.30'



Reach DCB-R101: TO DMH-R100



Stage-Discharge for Reach DCB-R101: TO DMH-R100

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.50	0.00	0.00
355.51	0.75	0.00
355.52	1.19	0.00
355.53	1.56	0.01
355.54	1.88	0.02
355.55	2.18	0.03
355.56	2.45	0.05
355.57	2.71	0.07
355.58	2.95	0.09
355.59	3.18	0.11
355.60	3.40	0.14
355.61	3.61	0.17
355.62	3.81	0.20
355.63	4.01	0.24
355.64	4.20	0.28
355.65	4.38	0.32
355.66	4.56	0.37
355.67	4.73	0.42
355.68	4.89	0.47
355.69	5.06	0.53
355.70	5.21	0.58
355.71	5.37	0.64
355.72	5.52	0.71
355.73	5.66	0.77
355.74	5.80	0.84
355.75	5.94	0.91
355.76	6.07	0.99
355.77	6.20	1.06
355.78	6.33	1.14
355.79	6.46	1.22
355.80	6.58	1.30
355.81	6.70	1.39
355.82	6.81	1.48
355.83	6.93	1.57
355.84	7.04	1.66
355.85	7.15	1.75
355.86	7.25	1.85
355.87	7.35	1.94
355.88	7.45	2.04
355.89	7.55	2.14
355.90	7.65	2.24
355.91	7.74	2.35
355.92	7.83	2.45
355.93	7.92	2.56
355.94	8.01	2.66
355.95	8.09	2.77
355.96	8.17	2.88
355.97	8.25	2.99
355.98	8.33	3.10
355.99	8.40	3.22
356.00	8.48	3.33
356.01	8.55	3.44
356.02	8.62	3.56
356.03	8.68	3.67
356.04	8.75	3.78
356.05	8.81	3.90
356.06	8.87	4.01
356.07	8.93	4.13
356.08	8.98	4.24
356.09	9.04	4.36
356.10	9.09	4.47
356.11	9.14	4.59
356.12	9.19	4.70
356.13	9.23	4.81
356.14	9.28	4.92
356.15	9.32	5.04
356.16	9.36	5.15
356.17	9.39	5.25
356.18	9.43	5.36
356.19	9.46	5.47
356.20	9.49	5.57
356.21	9.52	5.68
356.22	9.55	5.78
356.23	9.57	5.88
356.24	9.59	5.98
356.25	9.61	6.07
356.26	9.62	6.16
356.27	9.64	6.25
356.28	9.65	6.34
356.29	9.66	6.43
356.30	9.66	6.51
356.31	**9.66**	6.59
356.32	9.66	6.66
356.33	9.66	6.73
356.34	9.65	6.80
356.35	9.64	6.86
356.36	9.63	6.92
356.37	9.61	6.97
356.38	9.59	7.02
356.39	9.56	7.06
356.40	9.53	7.10
356.41	9.49	7.12
356.42	9.45	7.15
356.43	9.40	7.16
356.44	9.35	**7.16**
356.45	9.28	7.15
356.46	9.21	7.13
356.47	9.11	7.10
356.48	9.00	7.03
356.49	8.85	6.94
356.50	8.48	6.66

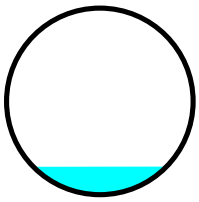
Summary for Reach DCB-R102: TO DMH-R101

Inflow Area = 13,651 sf, 53.41% Impervious, Inflow Depth = 0.76" for 2-Year event
Inflow = 0.25 cfs @ 12.09 hrs, Volume= 865 cf
Outflow = 0.25 cfs @ 12.10 hrs, Volume= 865 cf, Atten= 1%, Lag= 0.7 min

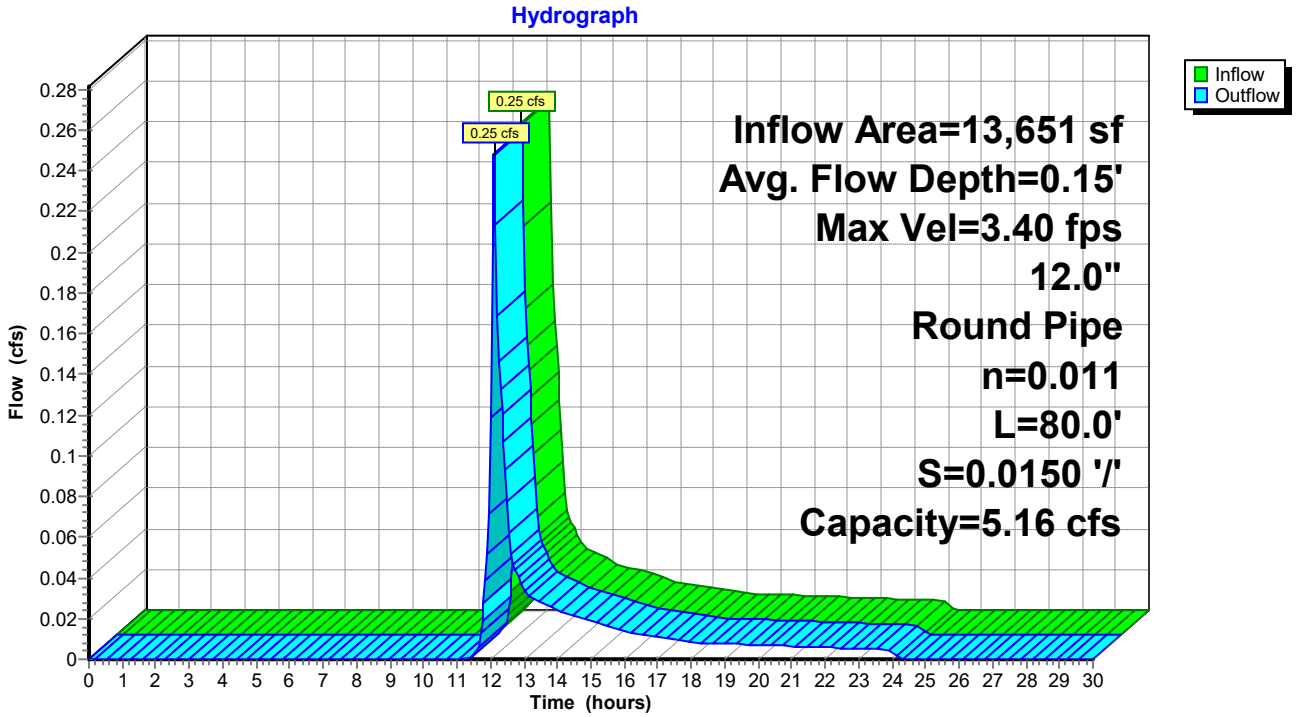
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.40 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.38 fps, Avg. Travel Time= 1.0 min

Peak Storage= 6 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.15'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 80.0' Slope= 0.0150 '/'
Inlet Invert= 357.20', Outlet Invert= 356.00'



Reach DCB-R102: TO DMH-R101



Stage-Discharge for Reach DCB-R102: TO DMH-R101

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
357.20	0.00	0.00
357.21	0.58	0.00
357.22	0.92	0.00
357.23	1.21	0.01
357.24	1.46	0.02
357.25	1.69	0.02
357.26	1.90	0.04
357.27	2.10	0.05
357.28	2.29	0.07
357.29	2.46	0.09
357.30	2.63	0.11
357.31	2.80	0.13
357.32	2.95	0.16
357.33	3.11	0.19
357.34	3.25	0.22
357.35	3.39	0.25
357.36	3.53	0.29
357.37	3.66	0.32
357.38	3.79	0.36
357.39	3.92	0.41
357.40	4.04	0.45
357.41	4.16	0.50
357.42	4.27	0.55
357.43	4.38	0.60
357.44	4.49	0.65
357.45	4.60	0.71
357.46	4.70	0.76
357.47	4.81	0.82
357.48	4.91	0.88
357.49	5.00	0.95
357.50	5.10	1.01
357.51	5.19	1.08
357.52	5.28	1.14
357.53	5.37	1.21
357.54	5.45	1.28
357.55	5.53	1.36
357.56	5.62	1.43
357.57	5.70	1.50
357.58	5.77	1.58
357.59	5.85	1.66
357.60	5.92	1.74
357.61	6.00	1.82
357.62	6.07	1.90
357.63	6.13	1.98
357.64	6.20	2.06
357.65	6.27	2.15
357.66	6.33	2.23
357.67	6.39	2.32
357.68	6.45	2.40
357.69	6.51	2.49
357.70	6.57	2.58
357.71	6.62	2.67
357.72	6.67	2.75
357.73	6.73	2.84
357.74	6.78	2.93
357.75	6.82	3.02
357.76	6.87	3.11
357.77	6.92	3.20
357.78	6.96	3.29
357.79	7.00	3.38
357.80	7.04	3.46
357.81	7.08	3.55
357.82	7.12	3.64
357.83	7.15	3.73
357.84	7.19	3.81
357.85	7.22	3.90
357.86	7.25	3.99
357.87	7.28	4.07
357.88	7.30	4.15
357.89	7.33	4.24
357.90	7.35	4.32
357.91	7.37	4.40
357.92	7.39	4.48
357.93	7.41	4.55
357.94	7.43	4.63
357.95	7.44	4.70
357.96	7.45	4.77
357.97	7.46	4.84
357.98	7.47	4.91
357.99	7.48	4.98
358.00	7.48	5.04
358.01	**7.49**	5.10
358.02	7.48	5.16
358.03	7.48	5.21
358.04	7.48	5.27
358.05	7.47	5.31
358.06	7.46	5.36
358.07	7.44	5.40
358.08	7.43	5.44
358.09	7.41	5.47
358.10	7.38	5.50
358.11	7.35	5.52
358.12	7.32	5.53
358.13	7.28	5.54
358.14	7.24	**5.55**
358.15	7.19	5.54
358.16	7.13	5.52
358.17	7.06	5.50
358.18	6.97	5.45
358.19	6.85	5.37
358.20	6.57	5.16

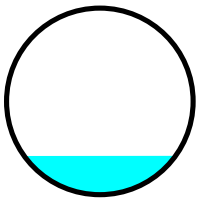
Summary for Reach DCB-S1: TO DMH-S1

Inflow Area = 8,226 sf, 87.83% Impervious, Inflow Depth = 2.07" for 2-Year event
Inflow = 0.46 cfs @ 12.07 hrs, Volume= 1,420 cf
Outflow = 0.45 cfs @ 12.08 hrs, Volume= 1,420 cf, Atten= 1%, Lag= 0.2 min

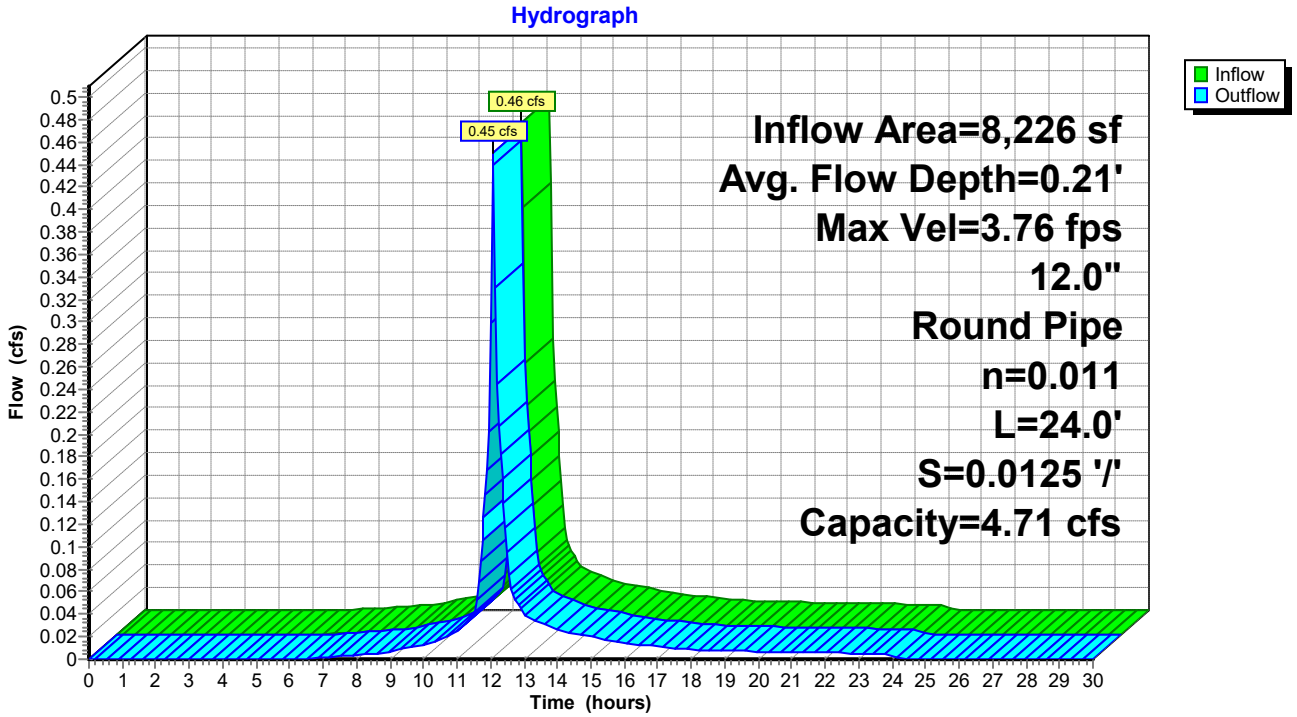
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.76 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.27 fps, Avg. Travel Time= 0.3 min

Peak Storage= 3 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.71 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 24.0' Slope= 0.0125 '/'
Inlet Invert= 351.20', Outlet Invert= 350.90'



Reach DCB-S1: TO DMH-S1



Stage-Discharge for Reach DCB-S1: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.53	0.00
351.22	0.84	0.00
351.23	1.10	0.01
351.24	1.33	0.01
351.25	1.54	0.02
351.26	1.73	0.03
351.27	1.91	0.05
351.28	2.09	0.06
351.29	2.25	0.08
351.30	2.40	0.10
351.31	2.55	0.12
351.32	2.70	0.14
351.33	2.84	0.17
351.34	2.97	0.20
351.35	3.10	0.23
351.36	3.22	0.26
351.37	3.34	0.30
351.38	3.46	0.33
351.39	3.58	0.37
351.40	3.69	0.41
351.41	3.79	0.45
351.42	3.90	0.50
351.43	4.00	0.55
351.44	4.10	0.59
351.45	4.20	0.64
351.46	4.29	0.70
351.47	4.39	0.75
351.48	4.48	0.81
351.49	4.57	0.86
351.50	4.65	0.92
351.51	4.74	0.98
351.52	4.82	1.04
351.53	4.90	1.11
351.54	4.98	1.17
351.55	5.05	1.24
351.56	5.13	1.31
351.57	5.20	1.37
351.58	5.27	1.44
351.59	5.34	1.51
351.60	5.41	1.59
351.61	5.47	1.66
351.62	5.54	1.73
351.63	5.60	1.81
351.64	5.66	1.88
351.65	5.72	1.96
351.66	5.78	2.04
351.67	5.83	2.12
351.68	5.89	2.19
351.69	5.94	2.27
351.70	5.99	2.35
351.71	6.04	2.43
351.72	6.09	2.51
351.73	6.14	2.60
351.74	6.19	2.68
351.75	6.23	2.76
351.76	6.27	2.84
351.77	6.31	2.92
351.78	6.35	3.00
351.79	6.39	3.08
351.80	6.43	3.16
351.81	6.46	3.24
351.82	6.50	3.32
351.83	6.53	3.40
351.84	6.56	3.48
351.85	6.59	3.56
351.86	6.62	3.64
351.87	6.64	3.72
351.88	6.67	3.79
351.89	6.69	3.87
351.90	6.71	3.94
351.91	6.73	4.01
351.92	6.75	4.09
351.93	6.77	4.16
351.94	6.78	4.23
351.95	6.79	4.29
351.96	6.81	4.36
351.97	6.81	4.42
351.98	6.82	4.48
351.99	6.83	4.54
352.00	6.83	4.60
352.01	**6.83**	4.66
352.02	6.83	4.71
352.03	6.83	4.76
352.04	6.82	4.81
352.05	6.82	4.85
352.06	6.81	4.89
352.07	6.80	4.93
352.08	6.78	4.96
352.09	6.76	4.99
352.10	6.74	5.02
352.11	6.71	5.04
352.12	6.68	5.05
352.13	6.65	5.06
352.14	6.61	**5.06**
352.15	6.56	5.06
352.16	6.51	5.04
352.17	6.44	5.02
352.18	6.36	4.97
352.19	6.26	4.91
352.20	5.99	4.71

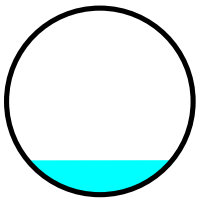
Summary for Reach DCB-S2: TO DMH-S1

Inflow Area = 10,318 sf, 80.45% Impervious, Inflow Depth = 1.66" for 2-Year event
Inflow = 0.46 cfs @ 12.08 hrs, Volume= 1,429 cf
Outflow = 0.46 cfs @ 12.08 hrs, Volume= 1,429 cf, Atten= 0%, Lag= 0.1 min

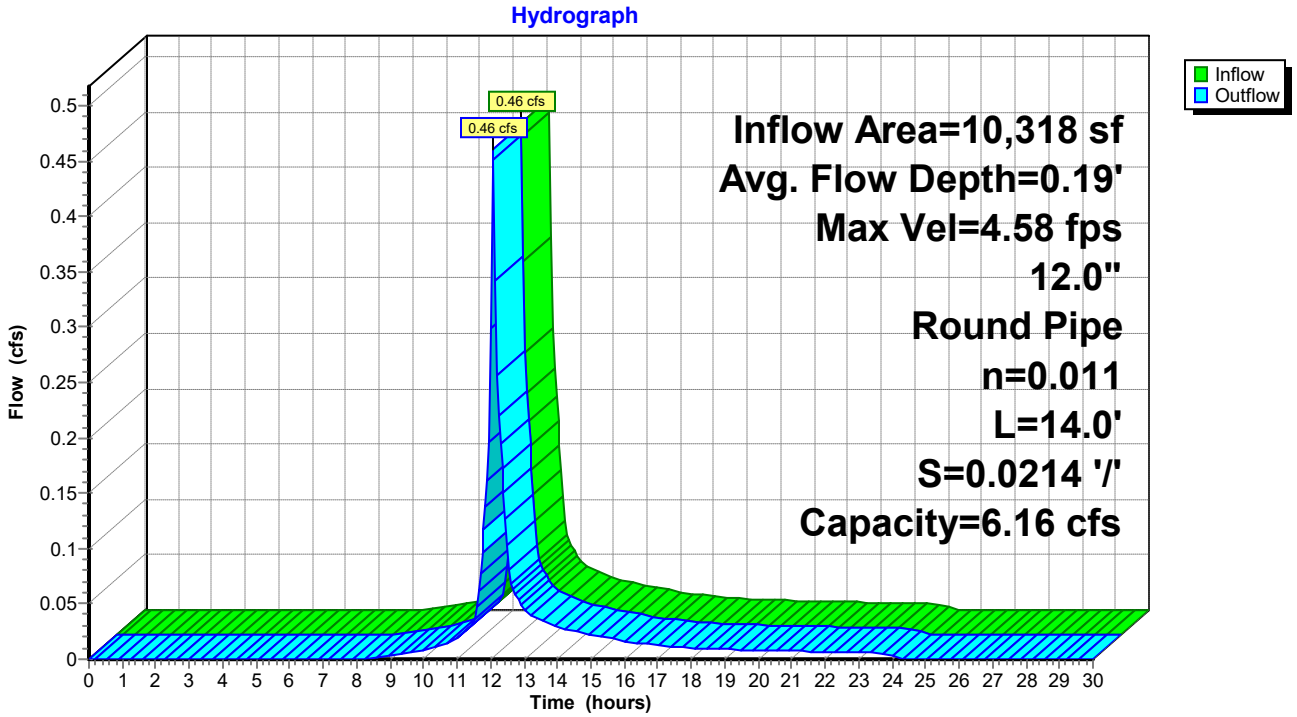
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.58 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.62 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 14.0' Slope= 0.0214 '/'
Inlet Invert= 351.20', Outlet Invert= 350.90'



Reach DCB-S2: TO DMH-S1



Stage-Discharge for Reach DCB-S2: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.70	0.00
351.22	1.10	0.00
351.23	1.44	0.01
351.24	1.74	0.02
351.25	2.02	0.03
351.26	2.27	0.04
351.27	2.51	0.06
351.28	2.73	0.08
351.29	2.94	0.10
351.30	3.15	0.13
351.31	3.34	0.16
351.32	3.53	0.19
351.33	3.71	0.22
351.34	3.89	0.26
351.35	4.06	0.30
351.36	4.22	0.34
351.37	4.38	0.39
351.38	4.53	0.44
351.39	4.68	0.49
351.40	4.83	0.54
351.41	4.97	0.60
351.42	5.11	0.65
351.43	5.24	0.72
351.44	5.37	0.78
351.45	5.50	0.84
351.46	5.62	0.91
351.47	5.74	0.98
351.48	5.86	1.06
351.49	5.98	1.13
351.50	6.09	1.21
351.51	6.20	1.29
351.52	6.31	1.37
351.53	6.41	1.45
351.54	6.52	1.53
351.55	6.62	1.62
351.56	6.71	1.71
351.57	6.81	1.80
351.58	6.90	1.89
351.59	6.99	1.98
351.60	7.08	2.08
351.61	7.17	2.17
351.62	7.25	2.27
351.63	7.33	2.37
351.64	7.41	2.47
351.65	7.49	2.57
351.66	7.57	2.67
351.67	7.64	2.77
351.68	7.71	2.87
351.69	7.78	2.98
351.70	7.85	3.08
351.71	7.91	3.19
351.72	7.98	3.29
351.73	8.04	3.40
351.74	8.10	3.50
351.75	8.16	3.61
351.76	8.21	3.72
351.77	8.27	3.82
351.78	8.32	3.93
351.79	8.37	4.04
351.80	8.42	4.14
351.81	8.46	4.25
351.82	8.51	4.35
351.83	8.55	4.46
351.84	8.59	4.56
351.85	8.63	4.66
351.86	8.66	4.76
351.87	8.70	4.87
351.88	8.73	4.96
351.89	8.76	5.06
351.90	8.79	5.16
351.91	8.81	5.26
351.92	8.84	5.35
351.93	8.86	5.44
351.94	8.88	5.53
351.95	8.90	5.62
351.96	8.91	5.71
351.97	8.92	5.79
351.98	8.93	5.87
351.99	8.94	5.95
352.00	8.94	6.02
352.01	**8.95**	6.10
352.02	8.95	6.17
352.03	8.94	6.23
352.04	8.94	6.29
352.05	8.93	6.35
352.06	8.91	6.40
352.07	8.90	6.45
352.08	8.88	6.50
352.09	8.85	6.54
352.10	8.82	6.57
352.11	8.79	6.60
352.12	8.75	6.62
352.13	8.71	6.63
352.14	8.65	**6.63**
352.15	8.59	6.62
352.16	8.52	6.60
352.17	8.44	6.57
352.18	8.33	6.51
352.19	8.19	6.42
352.20	7.85	6.16

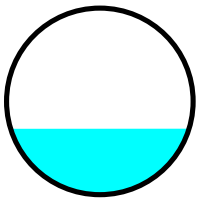
Summary for Reach DCB-S3: TO DMH-S1

Inflow Area = 18,672 sf, 88.33% Impervious, Inflow Depth = 2.25" for 2-Year event
Inflow = 1.11 cfs @ 12.07 hrs, Volume= 3,507 cf
Outflow = 1.10 cfs @ 12.08 hrs, Volume= 3,507 cf, Atten= 1%, Lag= 0.2 min

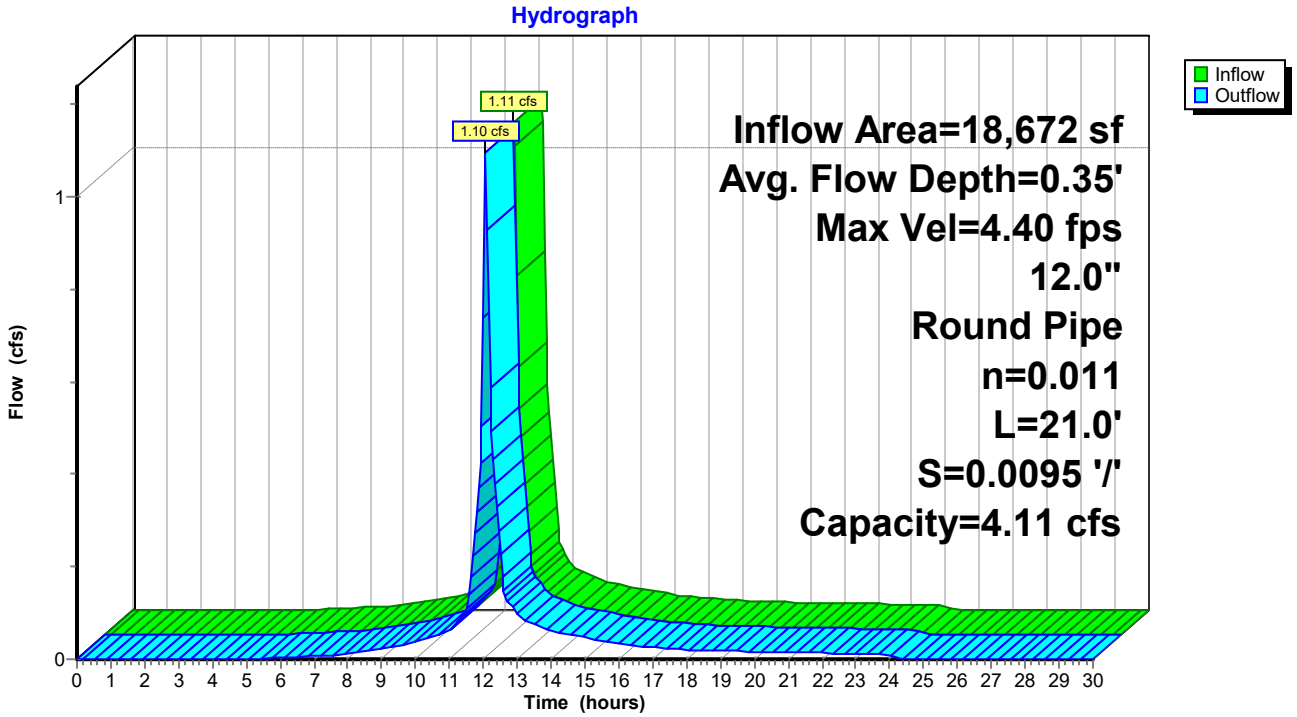
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.40 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.47 fps, Avg. Travel Time= 0.2 min

Peak Storage= 5 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.35'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.11 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 346.90', Outlet Invert= 346.70'



Reach DCB-S3: TO DMH-S1



Stage-Discharge for Reach DCB-S3: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.90	0.00	0.00
346.91	0.47	0.00
346.92	0.74	0.00
346.93	0.96	0.01
346.94	1.16	0.01
346.95	1.34	0.02
346.96	1.51	0.03
346.97	1.67	0.04
346.98	1.82	0.05
346.99	1.96	0.07
347.00	2.10	0.09
347.01	2.23	0.10
347.02	2.35	0.13
347.03	2.47	0.15
347.04	2.59	0.17
347.05	2.70	0.20
347.06	2.81	0.23
347.07	2.92	0.26
347.08	3.02	0.29
347.09	3.12	0.32
347.10	3.22	0.36
347.11	3.31	0.40
347.12	3.40	0.44
347.13	3.49	0.48
347.14	3.58	0.52
347.15	3.67	0.56
347.16	3.75	0.61
347.17	3.83	0.66
347.18	3.91	0.70
347.19	3.99	0.75
347.20	4.06	0.80
347.21	4.13	0.86
347.22	4.21	0.91
347.23	4.28	0.97
347.24	4.34	1.02
347.25	4.41	1.08
347.26	4.48	1.14
347.27	4.54	1.20
347.28	4.60	1.26
347.29	4.66	1.32
347.30	4.72	1.38
347.31	4.78	1.45
347.32	4.83	1.51
347.33	4.89	1.58
347.34	4.94	1.64
347.35	4.99	1.71
347.36	5.04	1.78
347.37	5.09	1.85
347.38	5.14	1.92
347.39	5.19	1.98
347.40	5.23	2.05
347.41	5.28	2.12
347.42	5.32	2.19
347.43	5.36	2.27
347.44	5.40	2.34
347.45	5.44	2.41
347.46	5.47	2.48
347.47	5.51	2.55
347.48	5.55	2.62
347.49	5.58	2.69
347.50	5.61	2.76
347.51	5.64	2.83
347.52	5.67	2.90
347.53	5.70	2.97
347.54	5.73	3.04
347.55	5.75	3.11
347.56	5.78	3.18
347.57	5.80	3.24
347.58	5.82	3.31
347.59	5.84	3.38
347.60	5.86	3.44
347.61	5.88	3.50
347.62	5.89	3.57
347.63	5.91	3.63
347.64	5.92	3.69
347.65	5.93	3.75
347.66	5.94	3.80
347.67	5.95	3.86
347.68	5.95	3.91
347.69	5.96	3.97
347.70	5.96	4.02
347.71	**5.96**	4.06
347.72	5.96	4.11
347.73	5.96	4.15
347.74	5.96	4.20
347.75	5.95	4.23
347.76	5.94	4.27
347.77	5.93	4.30
347.78	5.92	4.33
347.79	5.90	4.36
347.80	5.88	4.38
347.81	5.86	4.40
347.82	5.83	4.41
347.83	5.80	4.42
347.84	5.77	**4.42**
347.85	5.73	4.42
347.86	5.68	4.40
347.87	5.63	4.38
347.88	5.56	4.34
347.89	5.46	4.28
347.90	5.23	4.11

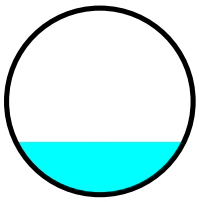
Summary for Reach DCB-S4: TO DMH-S1

Inflow Area = 24,334 sf, 83.66% Impervious, Inflow Depth = 1.98" for 2-Year event
Inflow = 1.25 cfs @ 12.09 hrs, Volume= 4,023 cf
Outflow = 1.25 cfs @ 12.09 hrs, Volume= 4,023 cf, Atten= 0%, Lag= 0.0 min

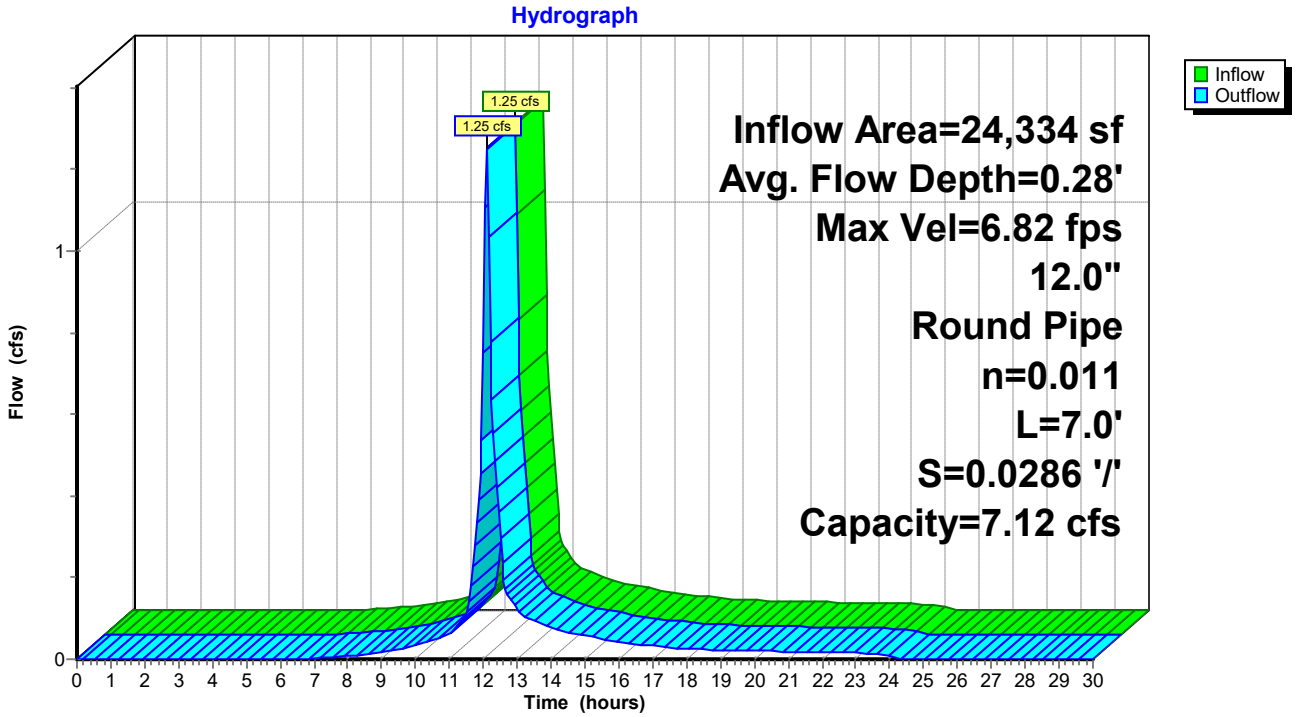
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.82 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.33 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.28'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.12 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 7.0' Slope= 0.0286 '/'
Inlet Invert= 346.90', Outlet Invert= 346.70'



Reach DCB-S4: TO DMH-S1



Stage-Discharge for Reach DCB-S4: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.90	0.00	0.00
346.91	0.81	0.00
346.92	1.28	0.00
346.93	1.67	0.01
346.94	2.01	0.02
346.95	2.33	0.03
346.96	2.62	0.05
346.97	2.89	0.07
346.98	3.15	0.09
346.99	3.40	0.12
347.00	3.64	0.15
347.01	3.86	0.18
347.02	4.08	0.22
347.03	4.29	0.26
347.04	4.49	0.30
347.05	4.68	0.35
347.06	4.87	0.40
347.07	5.06	0.45
347.08	5.23	0.50
347.09	5.41	0.56
347.10	5.57	0.62
347.11	5.74	0.69
347.12	5.90	0.76
347.13	6.05	0.83
347.14	6.20	0.90
347.15	6.35	0.97
347.16	6.49	1.05
347.17	6.63	1.13
347.18	6.77	1.22
347.19	6.90	1.31
347.20	7.03	1.39
347.21	7.16	1.48
347.22	7.28	1.58
347.23	7.41	1.67
347.24	7.52	1.77
347.25	7.64	1.87
347.26	7.75	1.97
347.27	7.86	2.08
347.28	7.97	2.18
347.29	8.07	2.29
347.30	8.18	2.40
347.31	8.27	2.51
347.32	8.37	2.62
347.33	8.47	2.73
347.34	8.56	2.85
347.35	8.65	2.96
347.36	8.74	3.08
347.37	8.82	3.20
347.38	8.90	3.32
347.39	8.98	3.44
347.40	9.06	3.56
347.41	9.14	3.68
347.42	9.21	3.80
347.43	9.28	3.92
347.44	9.35	4.05
347.45	9.42	4.17
347.46	9.48	4.29
347.47	9.54	4.41
347.48	9.60	4.54
347.49	9.66	4.66
347.50	9.72	4.78
347.51	9.77	4.90
347.52	9.82	5.02
347.53	9.87	5.15
347.54	9.92	5.26
347.55	9.96	5.38
347.56	10.00	5.50
347.57	10.04	5.62
347.58	10.08	5.73
347.59	10.11	5.85
347.60	10.15	5.96
347.61	10.18	6.07
347.62	10.20	6.18
347.63	10.23	6.28
347.64	10.25	6.39
347.65	10.27	6.49
347.66	10.29	6.59
347.67	10.30	6.69
347.68	10.31	6.78
347.69	10.32	6.87
347.70	10.33	6.96
347.71	**10.33**	7.04
347.72	10.33	7.12
347.73	10.33	7.20
347.74	10.32	7.27
347.75	10.31	7.33
347.76	10.29	7.40
347.77	10.27	7.45
347.78	10.25	7.50
347.79	10.22	7.55
347.80	10.19	7.59
347.81	10.15	7.62
347.82	10.10	7.64
347.83	10.05	7.65
347.84	9.99	**7.66**
347.85	9.92	7.65
347.86	9.84	7.63
347.87	9.74	7.59
347.88	9.62	7.52
347.89	9.46	7.42
347.90	9.06	7.12

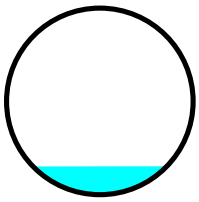
Summary for Reach DCB1: TO DMH#1

Inflow Area = 3,582 sf, 82.83% Impervious, Inflow Depth = 1.82" for 2-Year event
Inflow = 0.17 cfs @ 12.08 hrs, Volume= 543 cf
Outflow = 0.17 cfs @ 12.09 hrs, Volume= 543 cf, Atten= 1%, Lag= 0.9 min

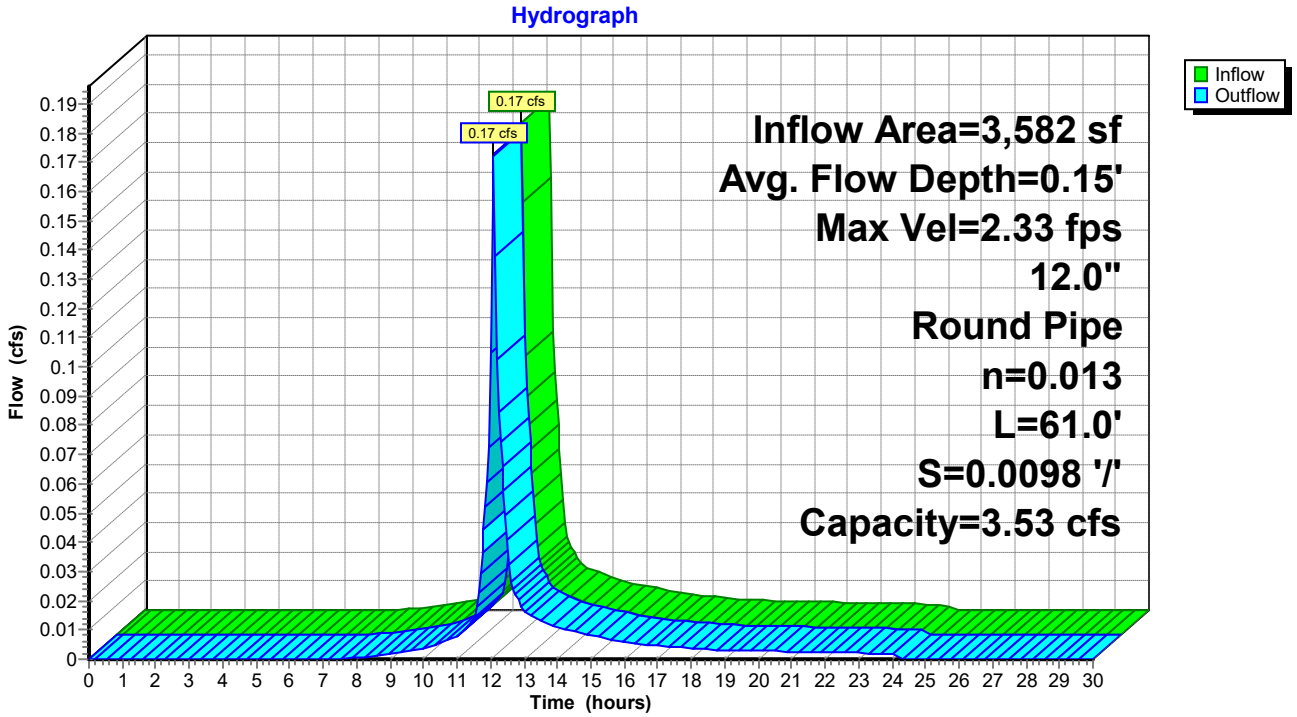
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.33 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.81 fps, Avg. Travel Time= 1.3 min

Peak Storage= 5 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.15'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.53 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 61.0' Slope= 0.0098 '/'
Inlet Invert= 355.30', Outlet Invert= 354.70'



Reach DCB1: TO DMH#1



Stage-Discharge for Reach DCB1: TO DMH#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.30	0.00	0.00
355.31	0.40	0.00
355.32	0.63	0.00
355.33	0.83	0.01
355.34	1.00	0.01
355.35	1.16	0.02
355.36	1.30	0.03
355.37	1.44	0.03
355.38	1.57	0.05
355.39	1.69	0.06
355.40	1.80	0.07
355.41	1.92	0.09
355.42	2.02	0.11
355.43	2.13	0.13
355.44	2.23	0.15
355.45	2.33	0.17
355.46	2.42	0.20
355.47	2.51	0.22
355.48	2.60	0.25
355.49	2.68	0.28
355.50	2.77	0.31
355.51	2.85	0.34
355.52	2.93	0.38
355.53	3.00	0.41
355.54	3.08	0.45
355.55	3.15	0.48
355.56	3.22	0.52
355.57	3.29	0.56
355.58	3.36	0.61
355.59	3.43	0.65
355.60	3.49	0.69
355.61	3.55	0.74
355.62	3.62	0.78
355.63	3.68	0.83
355.64	3.74	0.88
355.65	3.79	0.93
355.66	3.85	0.98
355.67	3.90	1.03
355.68	3.96	1.08
355.69	4.01	1.14
355.70	4.06	1.19
355.71	4.11	1.25
355.72	4.16	1.30
355.73	4.20	1.36
355.74	4.25	1.41
355.75	4.29	1.47
355.76	4.34	1.53
355.77	4.38	1.59
355.78	4.42	1.65
355.79	4.46	1.71
355.80	4.50	1.77
355.81	4.54	1.83
355.82	4.57	1.89
355.83	4.61	1.95
355.84	4.64	2.01
355.85	4.68	2.07
355.86	4.71	2.13
355.87	4.74	2.19
355.88	4.77	2.25
355.89	4.80	2.31
355.90	4.82	2.37
355.91	4.85	2.43
355.92	4.88	2.49
355.93	4.90	2.55
355.94	4.92	2.61
355.95	4.95	2.67
355.96	4.97	2.73
355.97	4.99	2.79
355.98	5.00	2.85
355.99	5.02	2.90
356.00	5.04	2.96
356.01	5.05	3.01
356.02	5.07	3.07
356.03	5.08	3.12
356.04	5.09	3.17
356.05	5.10	3.22
356.06	5.11	3.27
356.07	5.11	3.32
356.08	5.12	3.37
356.09	5.12	3.41
356.10	5.13	3.45
356.11	**5.13**	3.50
356.12	5.13	3.53
356.13	5.13	3.57
356.14	5.12	3.61
356.15	5.12	3.64
356.16	5.11	3.67
356.17	5.10	3.70
356.18	5.09	3.72
356.19	5.07	3.75
356.20	5.06	3.77
356.21	5.04	3.78
356.22	5.02	3.79
356.23	4.99	3.80
356.24	4.96	**3.80**
356.25	4.93	3.80
356.26	4.89	3.79
356.27	4.84	3.77
356.28	4.78	3.73
356.29	4.70	3.68
356.30	4.50	3.53

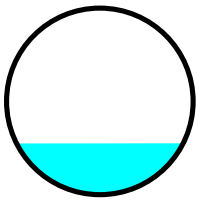
Summary for Reach DCB2: TO DMH#2

Inflow Area = 12,397 sf, 88.23% Impervious, Inflow Depth = 2.07" for 2-Year event
Inflow = 0.69 cfs @ 12.07 hrs, Volume= 2,140 cf
Outflow = 0.68 cfs @ 12.08 hrs, Volume= 2,140 cf, Atten= 1%, Lag= 0.3 min

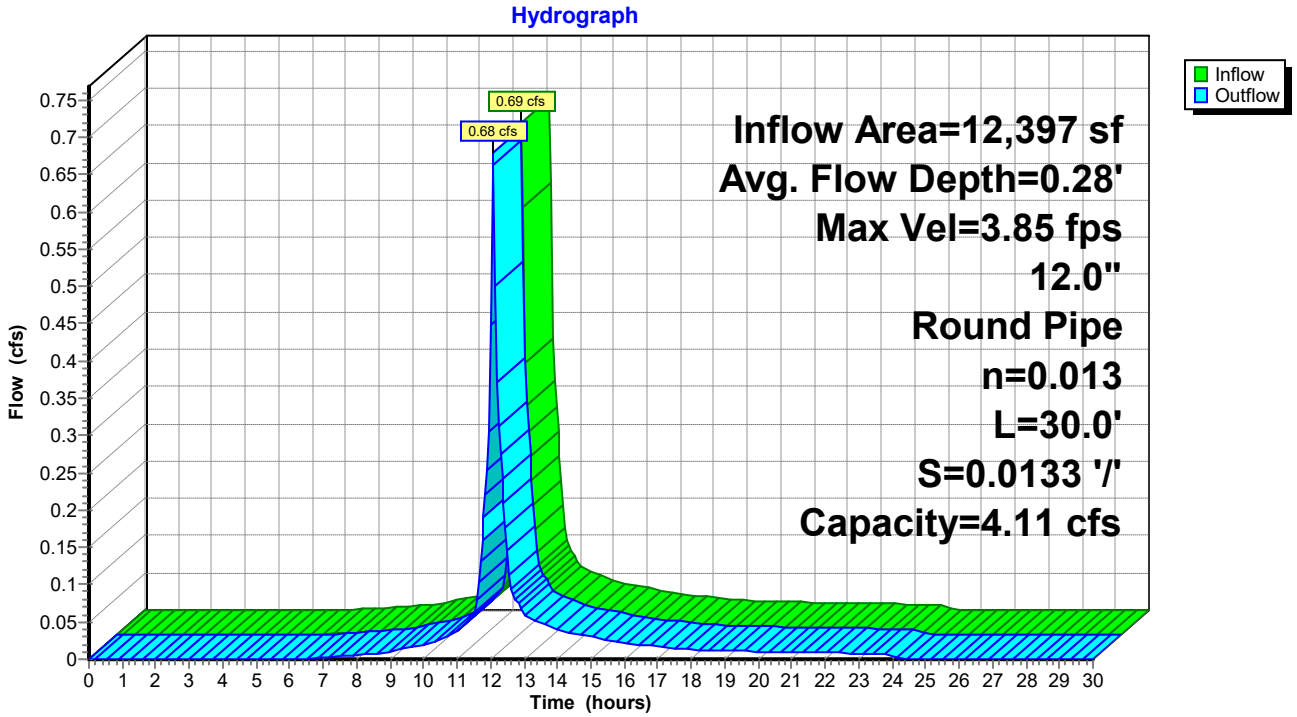
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.85 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.30 fps, Avg. Travel Time= 0.4 min

Peak Storage= 5 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.28'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.11 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 30.0' Slope= 0.0133 '/'
Inlet Invert= 354.40', Outlet Invert= 354.00'



Reach DCB2: TO DMH#2



Stage-Discharge for Reach DCB2: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.40	0.00	0.00
354.41	0.47	0.00
354.42	0.74	0.00
354.43	0.96	0.01
354.44	1.16	0.01
354.45	1.35	0.02
354.46	1.51	0.03
354.47	1.67	0.04
354.48	1.82	0.05
354.49	1.97	0.07
354.50	2.10	0.09
354.51	2.23	0.10
354.52	2.36	0.13
354.53	2.48	0.15
354.54	2.59	0.17
354.55	2.71	0.20
354.56	2.82	0.23
354.57	2.92	0.26
354.58	3.02	0.29
354.59	3.12	0.32
354.60	3.22	0.36
354.61	3.32	0.40
354.62	3.41	0.44
354.63	3.50	0.48
354.64	3.59	0.52
354.65	3.67	0.56
354.66	3.75	0.61
354.67	3.83	0.66
354.68	3.91	0.70
354.69	3.99	0.75
354.70	4.07	0.81
354.71	4.14	0.86
354.72	4.21	0.91
354.73	4.28	0.97
354.74	4.35	1.02
354.75	4.42	1.08
354.76	4.48	1.14
354.77	4.54	1.20
354.78	4.61	1.26
354.79	4.67	1.32
354.80	4.73	1.39
354.81	4.78	1.45
354.82	4.84	1.51
354.83	4.89	1.58
354.84	4.95	1.65
354.85	5.00	1.71
354.86	5.05	1.78
354.87	5.10	1.85
354.88	5.15	1.92
354.89	5.19	1.99
354.90	5.24	2.06
354.91	5.28	2.13
354.92	5.32	2.20
354.93	5.37	2.27
354.94	5.41	2.34
354.95	5.44	2.41
354.96	5.48	2.48
354.97	5.52	2.55
354.98	5.55	2.62
354.99	5.59	2.69
355.00	5.62	2.76
355.01	5.65	2.83
355.02	5.68	2.90
355.03	5.71	2.97
355.04	5.73	3.04
355.05	5.76	3.11
355.06	5.78	3.18
355.07	5.81	3.25
355.08	5.83	3.31
355.09	5.85	3.38
355.10	5.87	3.44
355.11	5.88	3.51
355.12	5.90	3.57
355.13	5.91	3.63
355.14	5.93	3.69
355.15	5.94	3.75
355.16	5.95	3.81
355.17	5.96	3.86
355.18	5.96	3.92
355.19	5.97	3.97
355.20	5.97	4.02
355.21	**5.97**	4.07
355.22	5.97	4.12
355.23	5.97	4.16
355.24	5.96	4.20
355.25	5.96	4.24
355.26	5.95	4.27
355.27	5.94	4.31
355.28	5.92	4.34
355.29	5.91	4.36
355.30	5.89	4.38
355.31	5.87	4.40
355.32	5.84	4.42
355.33	5.81	4.42
355.34	5.78	**4.43**
355.35	5.74	4.42
355.36	5.69	4.41
355.37	5.63	4.38
355.38	5.56	4.35
355.39	5.47	4.29
355.40	5.24	4.11

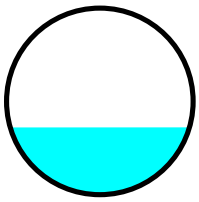
Summary for Reach DCB3: TO DMH#3

Inflow Area = 13,758 sf, 90.05% Impervious, Inflow Depth = 2.16" for 2-Year event
Inflow = 0.79 cfs @ 12.07 hrs, Volume= 2,478 cf
Outflow = 0.78 cfs @ 12.08 hrs, Volume= 2,478 cf, Atten= 2%, Lag= 0.6 min

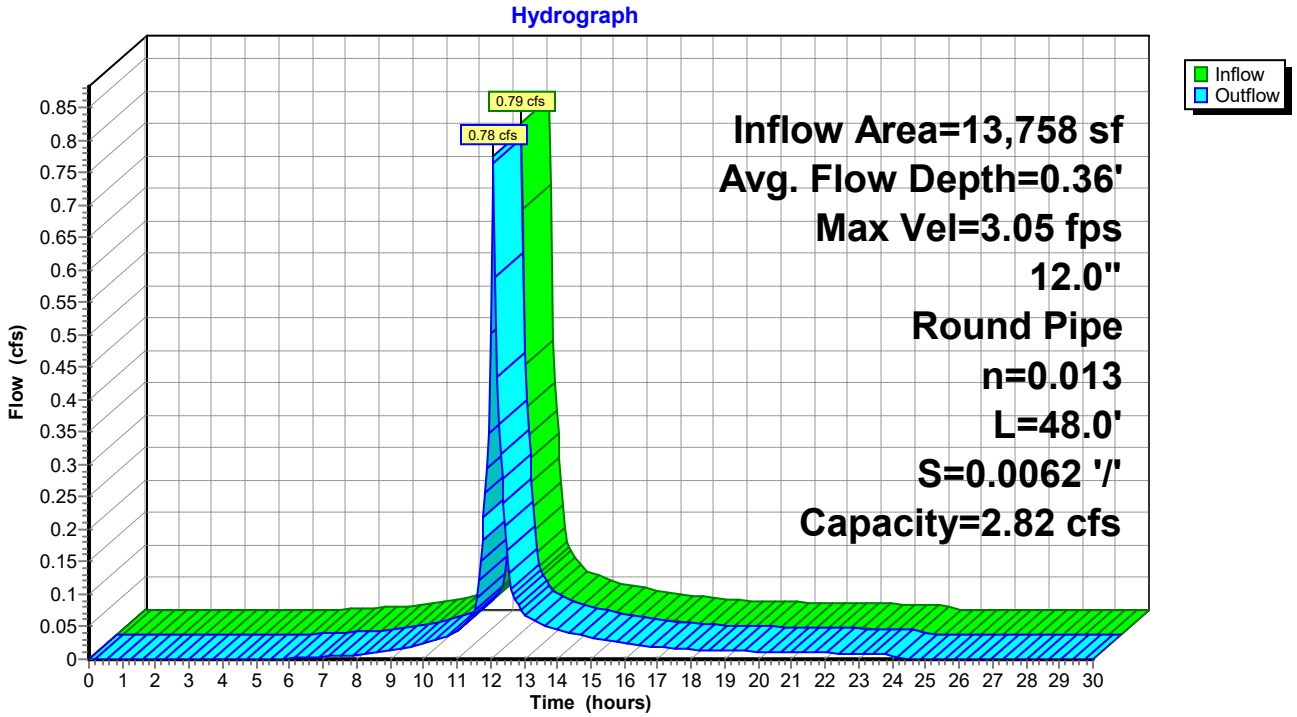
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.05 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.03 fps, Avg. Travel Time= 0.8 min

Peak Storage= 12 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.36'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.82 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 48.0' Slope= 0.0062 '/'
Inlet Invert= 351.90', Outlet Invert= 351.60'



Reach DCB3: TO DMH#3



Stage-Discharge for Reach DCB3: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.90	0.00	0.00
351.91	0.32	0.00
351.92	0.50	0.00
351.93	0.66	0.00
351.94	0.80	0.01
351.95	0.92	0.01
351.96	1.04	0.02
351.97	1.15	0.03
351.98	1.25	0.04
351.99	1.35	0.05
352.00	1.44	0.06
352.01	1.53	0.07
352.02	1.61	0.09
352.03	1.70	0.10
352.04	1.78	0.12
352.05	1.85	0.14
352.06	1.93	0.16
352.07	2.00	0.18
352.08	2.07	0.20
352.09	2.14	0.22
352.10	2.21	0.25
352.11	2.27	0.27
352.12	2.33	0.30
352.13	2.39	0.33
352.14	2.45	0.36
352.15	2.51	0.39
352.16	2.57	0.42
352.17	2.63	0.45
352.18	2.68	0.48
352.19	2.73	0.52
352.20	2.78	0.55
352.21	2.83	0.59
352.22	2.88	0.62
352.23	2.93	0.66
352.24	2.98	0.70
352.25	3.02	0.74
352.26	3.07	0.78
352.27	3.11	0.82
352.28	3.15	0.86
352.29	3.20	0.91
352.30	3.24	0.95
352.31	3.27	0.99
352.32	3.31	1.04
352.33	3.35	1.08
352.34	3.39	1.13
352.35	3.42	1.17
352.36	3.46	1.22
352.37	3.49	1.27
352.38	3.52	1.31
352.39	3.56	1.36
352.40	3.59	1.41
352.41	3.62	1.46
352.42	3.65	1.50
352.43	3.67	1.55
352.44	3.70	1.60
352.45	3.73	1.65
352.46	3.75	1.70
352.47	3.78	1.75
352.48	3.80	1.80
352.49	3.82	1.84
352.50	3.85	1.89
352.51	3.87	1.94
352.52	3.89	1.99
352.53	3.91	2.04
352.54	3.92	2.08
352.55	3.94	2.13
352.56	3.96	2.18
352.57	3.97	2.22
352.58	3.99	2.27
352.59	4.00	2.31
352.60	4.02	2.36
352.61	4.03	2.40
352.62	4.04	2.44
352.63	4.05	2.49
352.64	4.06	2.53
352.65	4.06	2.57
352.66	4.07	2.61
352.67	4.08	2.65
352.68	4.08	2.68
352.69	4.09	2.72
352.70	4.09	2.75
352.71	**4.09**	2.79
352.72	4.09	2.82
352.73	4.09	2.85
352.74	4.08	2.88
352.75	4.08	2.90
352.76	4.07	2.93
352.77	4.07	2.95
352.78	4.06	2.97
352.79	4.05	2.99
352.80	4.03	3.00
352.81	4.02	3.01
352.82	4.00	3.02
352.83	3.98	3.03
352.84	3.95	**3.03**
352.85	3.93	3.03
352.86	3.89	3.02
352.87	3.86	3.00
352.88	3.81	2.98
352.89	3.74	2.93
352.90	3.59	2.82

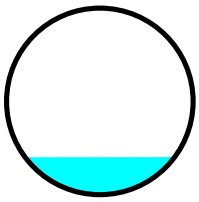
Summary for Reach DCB30: TO BASIN

Inflow Area = 198,125 sf, 23.50% Impervious, Inflow Depth = 0.33" for 2-Year event
Inflow = 0.70 cfs @ 12.42 hrs, Volume= 5,503 cf
Outflow = 0.70 cfs @ 12.44 hrs, Volume= 5,503 cf, Atten= 0%, Lag= 1.0 min

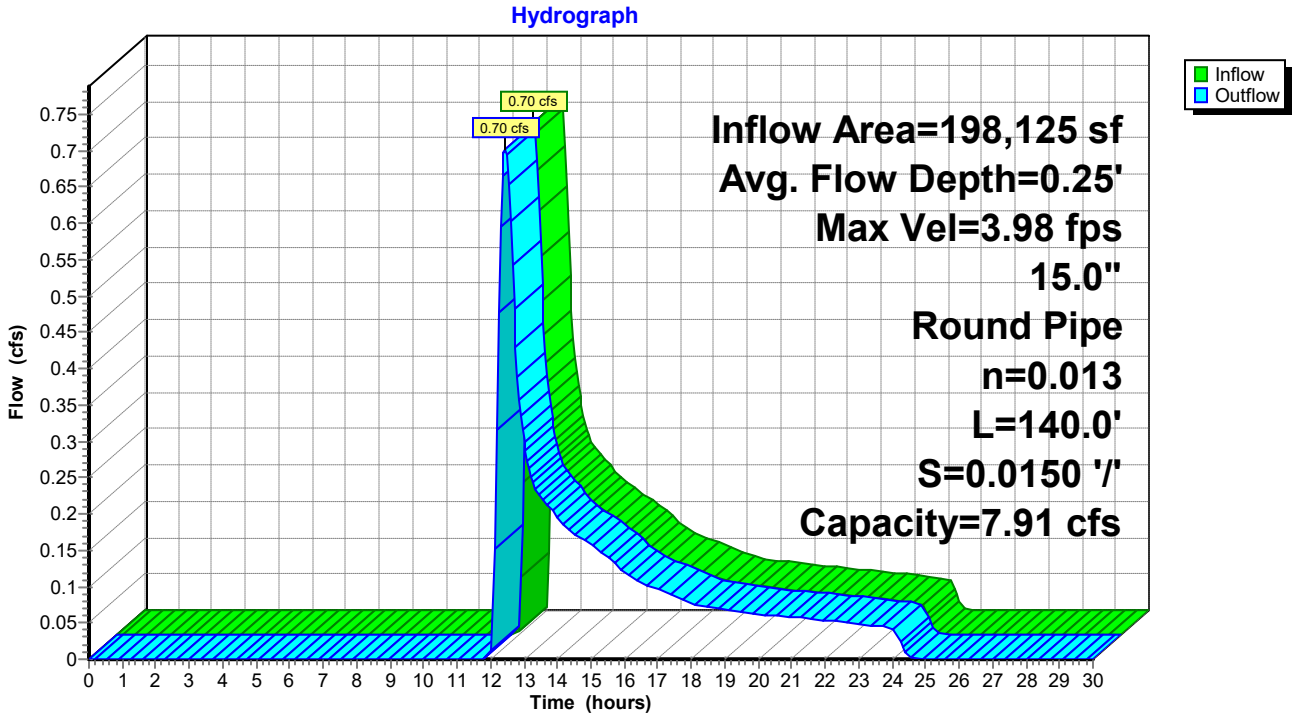
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.98 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 2.15 fps, Avg. Travel Time= 1.1 min

Peak Storage= 25 cf @ 12.43 hrs
Average Depth at Peak Storage= 0.25'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.91 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 140.0' Slope= 0.0150 '/'
Inlet Invert= 338.00', Outlet Invert= 335.90'



Reach DCB30: TO BASIN



Stage-Discharge for Reach DCB30: TO BASIN

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
338.00	0.00	0.00
338.01	0.46	0.00
338.02	0.77	0.00
338.03	1.02	0.01
338.04	1.23	0.01
338.05	1.43	0.02
338.06	1.61	0.04
338.07	1.78	0.05
338.08	1.94	0.06
338.09	2.10	0.08
338.10	2.24	0.10
338.11	2.38	0.13
338.12	2.52	0.15
338.13	2.65	0.18
338.14	2.78	0.21
338.15	2.90	0.24
338.16	3.02	0.28
338.17	3.14	0.31
338.18	3.25	0.35
338.19	3.36	0.40
338.20	3.47	0.44
338.21	3.57	0.49
338.22	3.67	0.53
338.23	3.77	0.59
338.24	3.87	0.64
338.25	3.97	0.69
338.26	4.06	0.75
338.27	4.15	0.81
338.28	4.24	0.87
338.29	4.33	0.93
338.30	4.41	1.00
338.31	4.50	1.07
338.32	4.58	1.14
338.33	4.66	1.21
338.34	4.74	1.28
338.35	4.82	1.35
338.36	4.89	1.43
338.37	4.97	1.51
338.38	5.04	1.59
338.39	5.11	1.67
338.40	5.18	1.75
338.41	5.25	1.84
338.42	5.32	1.93
338.43	5.39	2.01
338.44	5.45	2.10
338.45	5.51	2.19
338.46	5.58	2.29
338.47	5.64	2.38
338.48	5.70	2.47
338.49	5.76	2.57
338.50	5.82	2.67
338.51	5.87	2.76
338.52	5.93	2.86
338.53	5.98	2.96
338.54	6.04	3.06
338.55	6.09	3.17
338.56	6.14	3.27
338.57	6.19	3.37
338.58	6.24	3.48
338.59	6.29	3.58
338.60	6.33	3.69
338.61	6.38	3.80
338.62	6.42	3.90
338.63	6.47	4.01
338.64	6.51	4.12
338.65	6.55	4.23
338.66	6.59	4.33
338.67	6.63	4.44
338.68	6.67	4.55
338.69	6.71	4.66
338.70	6.75	4.77
338.71	6.78	4.88
338.72	6.82	4.99
338.73	6.85	5.10
338.74	6.88	5.21
338.75	6.91	5.32
338.76	6.94	5.42
338.77	6.97	5.53
338.78	7.00	5.64
338.79	7.03	5.75
338.80	7.06	5.85
338.81	7.08	5.96
338.82	7.10	6.06
338.83	7.13	6.17
338.84	7.15	6.27
338.85	7.17	6.37
338.86	7.19	6.47
338.87	7.21	6.57
338.88	7.23	6.67
338.89	7.24	6.77
338.90	7.26	6.87
338.91	7.27	6.96
338.92	7.29	7.05
338.93	7.30	7.15
338.94	7.31	7.24
338.95	7.32	7.32
338.96	7.33	7.41
338.97	7.33	7.49
338.98	7.34	7.58
338.99	7.34	7.66
339.00	7.35	7.73
339.01	7.35	7.81
339.02	**7.35**	7.88
339.03	7.35	7.95
339.04	7.35	8.01
339.05	7.34	8.08
339.06	7.33	8.14
339.07	7.33	8.19
339.08	7.32	8.25
339.09	7.31	8.30
339.10	7.29	8.34
339.11	7.28	8.38
339.12	7.26	8.42
339.13	7.24	8.45
339.14	7.21	8.47
339.15	7.19	8.49
339.16	7.16	8.50
339.17	7.13	**8.51**
339.18	7.09	8.51
339.19	7.05	8.50
339.20	7.00	8.48
339.21	6.95	8.44
339.22	6.88	8.39
339.23	6.80	8.31
339.24	6.67	8.18
339.25	6.45	7.91

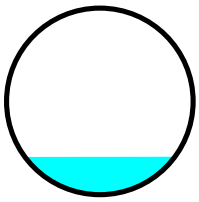
Summary for Reach DCB4: TO DMH#4

Inflow Area = 5,916 sf, 84.47% Impervious, Inflow Depth = 1.90" for 2-Year event
Inflow = 0.30 cfs @ 12.08 hrs, Volume= 937 cf
Outflow = 0.30 cfs @ 12.08 hrs, Volume= 937 cf, Atten= 0%, Lag= 0.3 min

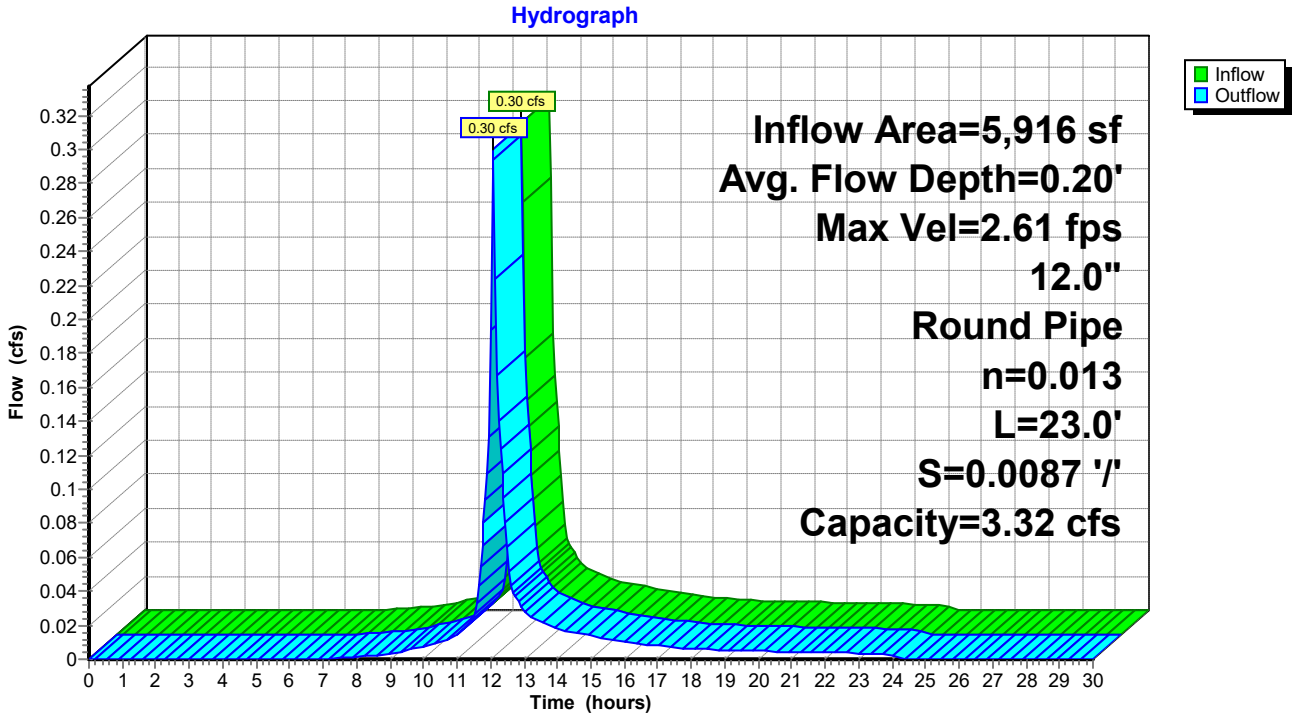
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.61 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.90 fps, Avg. Travel Time= 0.4 min

Peak Storage= 3 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.20'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.32 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 23.0' Slope= 0.0087 '/'
Inlet Invert= 355.50', Outlet Invert= 355.30'



Reach DCB4: TO DMH#4



Stage-Discharge for Reach DCB4: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.50	0.00	0.00
355.51	0.38	0.00
355.52	0.60	0.00
355.53	0.78	0.01
355.54	0.94	0.01
355.55	1.09	0.02
355.56	1.22	0.02
355.57	1.35	0.03
355.58	1.47	0.04
355.59	1.59	0.06
355.60	1.70	0.07
355.61	1.80	0.08
355.62	1.90	0.10
355.63	2.00	0.12
355.64	2.10	0.14
355.65	2.19	0.16
355.66	2.27	0.18
355.67	2.36	0.21
355.68	2.44	0.23
355.69	2.52	0.26
355.70	2.60	0.29
355.71	2.68	0.32
355.72	2.75	0.35
355.73	2.82	0.39
355.74	2.90	0.42
355.75	2.96	0.46
355.76	3.03	0.49
355.77	3.10	0.53
355.78	3.16	0.57
355.79	3.22	0.61
355.80	3.28	0.65
355.81	3.34	0.69
355.82	3.40	0.74
355.83	3.46	0.78
355.84	3.51	0.83
355.85	3.57	0.87
355.86	3.62	0.92
355.87	3.67	0.97
355.88	3.72	1.02
355.89	3.77	1.07
355.90	3.82	1.12
355.91	3.86	1.17
355.92	3.91	1.22
355.93	3.95	1.28
355.94	4.00	1.33
355.95	4.04	1.38
355.96	4.08	1.44
355.97	4.12	1.49
355.98	4.16	1.55
355.99	4.19	1.60
356.00	4.23	1.66
356.01	4.27	1.72
356.02	4.30	1.77
356.03	4.33	1.83
356.04	4.37	1.89
356.05	4.40	1.95
356.06	4.43	2.00
356.07	4.46	2.06
356.08	4.48	2.12
356.09	4.51	2.18
356.10	4.54	2.23
356.11	4.56	2.29
356.12	4.59	2.35
356.13	4.61	2.40
356.14	4.63	2.46
356.15	4.65	2.51
356.16	4.67	2.57
356.17	4.69	2.62
356.18	4.71	2.68
356.19	4.72	2.73
356.20	4.74	2.78
356.21	4.75	2.83
356.22	4.76	2.88
356.23	4.78	2.93
356.24	4.79	2.98
356.25	4.79	3.03
356.26	4.80	3.08
356.27	4.81	3.12
356.28	4.81	3.16
356.29	4.82	3.21
356.30	4.82	3.25
356.31	**4.82**	3.29
356.32	4.82	3.32
356.33	4.82	3.36
356.34	4.82	3.39
356.35	4.81	3.42
356.36	4.80	3.45
356.37	4.80	3.48
356.38	4.78	3.50
356.39	4.77	3.52
356.40	4.76	3.54
356.41	4.74	3.56
356.42	4.72	3.57
356.43	4.69	3.57
356.44	4.66	**3.57**
356.45	4.63	3.57
356.46	4.59	3.56
356.47	4.55	3.54
356.48	4.49	3.51
356.49	4.42	3.46
356.50	4.23	3.32

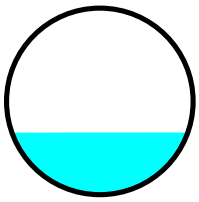
Summary for Reach DCB5: TO DMH#5

Inflow Area = 13,229 sf, 94.75% Impervious, Inflow Depth = 2.45" for 2-Year event
Inflow = 0.83 cfs @ 12.07 hrs, Volume= 2,700 cf
Outflow = 0.82 cfs @ 12.08 hrs, Volume= 2,700 cf, Atten= 1%, Lag= 0.2 min

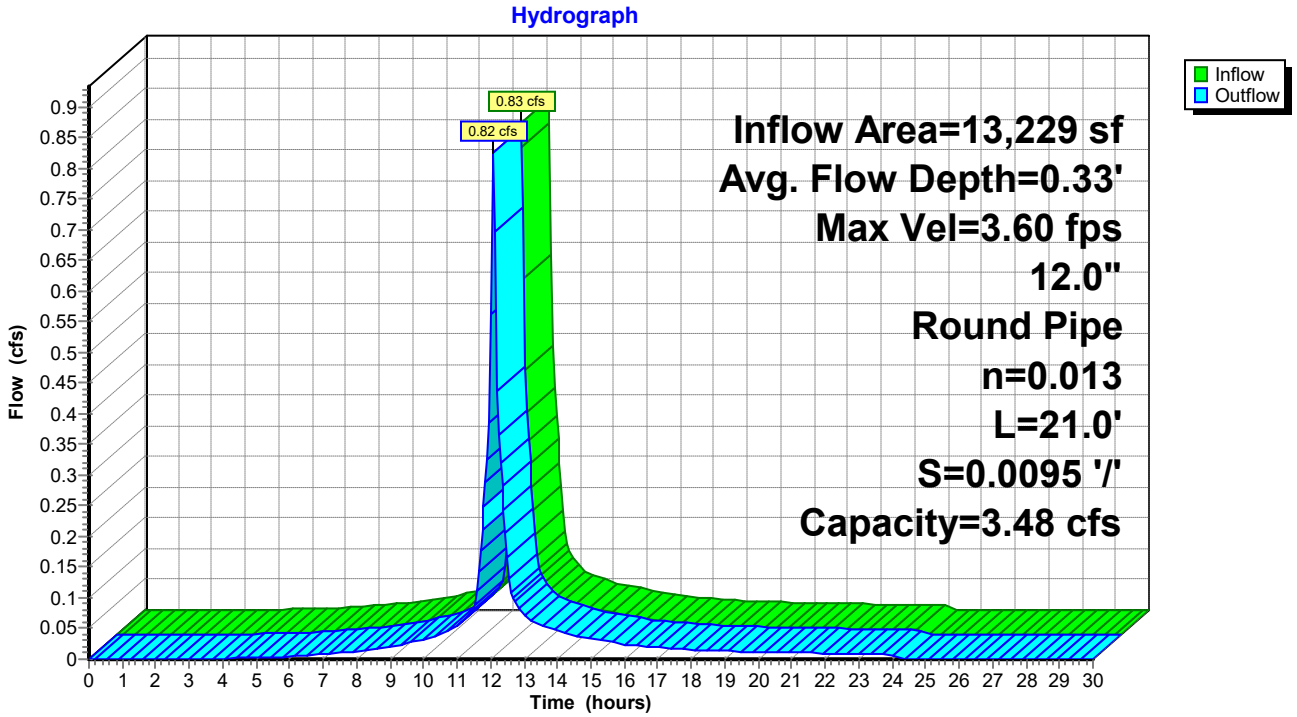
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.60 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.19 fps, Avg. Travel Time= 0.3 min

Peak Storage= 5 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.48 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 354.80', Outlet Invert= 354.60'



Reach DCB5: TO DMH#5



Stage-Discharge for Reach DCB5: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.80	0.00	0.00
354.81	0.39	0.00
354.82	0.62	0.00
354.83	0.81	0.01
354.84	0.98	0.01
354.85	1.14	0.02
354.86	1.28	0.02
354.87	1.41	0.03
354.88	1.54	0.05
354.89	1.66	0.06
354.90	1.78	0.07
354.91	1.89	0.09
354.92	1.99	0.11
354.93	2.09	0.13
354.94	2.19	0.15
354.95	2.29	0.17
354.96	2.38	0.19
354.97	2.47	0.22
354.98	2.56	0.25
354.99	2.64	0.27
355.00	2.72	0.30
355.01	2.80	0.34
355.02	2.88	0.37
355.03	2.96	0.40
355.04	3.03	0.44
355.05	3.10	0.48
355.06	3.17	0.51
355.07	3.24	0.55
355.08	3.31	0.60
355.09	3.37	0.64
355.10	3.44	0.68
355.11	3.50	0.73
355.12	3.56	0.77
355.13	3.62	0.82
355.14	3.68	0.87
355.15	3.73	0.91
355.16	3.79	0.96
355.17	3.84	1.01
355.18	3.89	1.07
355.19	3.94	1.12
355.20	3.99	1.17
355.21	4.04	1.23
355.22	4.09	1.28
355.23	4.14	1.34
355.24	4.18	1.39
355.25	4.22	1.45
355.26	4.27	1.51
355.27	4.31	1.56
355.28	4.35	1.62
355.29	4.39	1.68
355.30	4.43	1.74
355.31	4.46	1.80
355.32	4.50	1.86
355.33	4.53	1.92
355.34	4.57	1.98
355.35	4.60	2.04
355.36	4.63	2.10
355.37	4.66	2.16
355.38	4.69	2.22
355.39	4.72	2.28
355.40	4.75	2.34
355.41	4.77	2.40
355.42	4.80	2.45
355.43	4.82	2.51
355.44	4.85	2.57
355.45	4.87	2.63
355.46	4.89	2.69
355.47	4.91	2.74
355.48	4.92	2.80
355.49	4.94	2.86
355.50	4.96	2.91
355.51	4.97	2.96
355.52	4.99	3.02
355.53	5.00	3.07
355.54	5.01	3.12
355.55	5.02	3.17
355.56	5.03	3.22
355.57	5.03	3.27
355.58	5.04	3.31
355.59	5.04	3.36
355.60	5.05	3.40
355.61	**5.05**	3.44
355.62	5.05	3.48
355.63	5.04	3.52
355.64	5.04	3.55
355.65	5.04	3.58
355.66	5.03	3.61
355.67	5.02	3.64
355.68	5.01	3.67
355.69	4.99	3.69
355.70	4.98	3.71
355.71	4.96	3.72
355.72	4.94	3.73
355.73	4.91	3.74
355.74	4.88	**3.74**
355.75	4.85	3.74
355.76	4.81	3.73
355.77	4.76	3.71
355.78	4.70	3.67
355.79	4.62	3.62
355.80	4.43	3.48

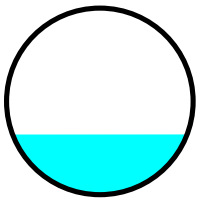
Summary for Reach DCB6: TO DMH#6

Inflow Area = 18,802 sf, 87.54% Impervious, Inflow Depth = 2.07" for 2-Year event
Inflow = 1.04 cfs @ 12.07 hrs, Volume= 3,245 cf
Outflow = 1.04 cfs @ 12.07 hrs, Volume= 3,245 cf, Atten= 0%, Lag= 0.0 min

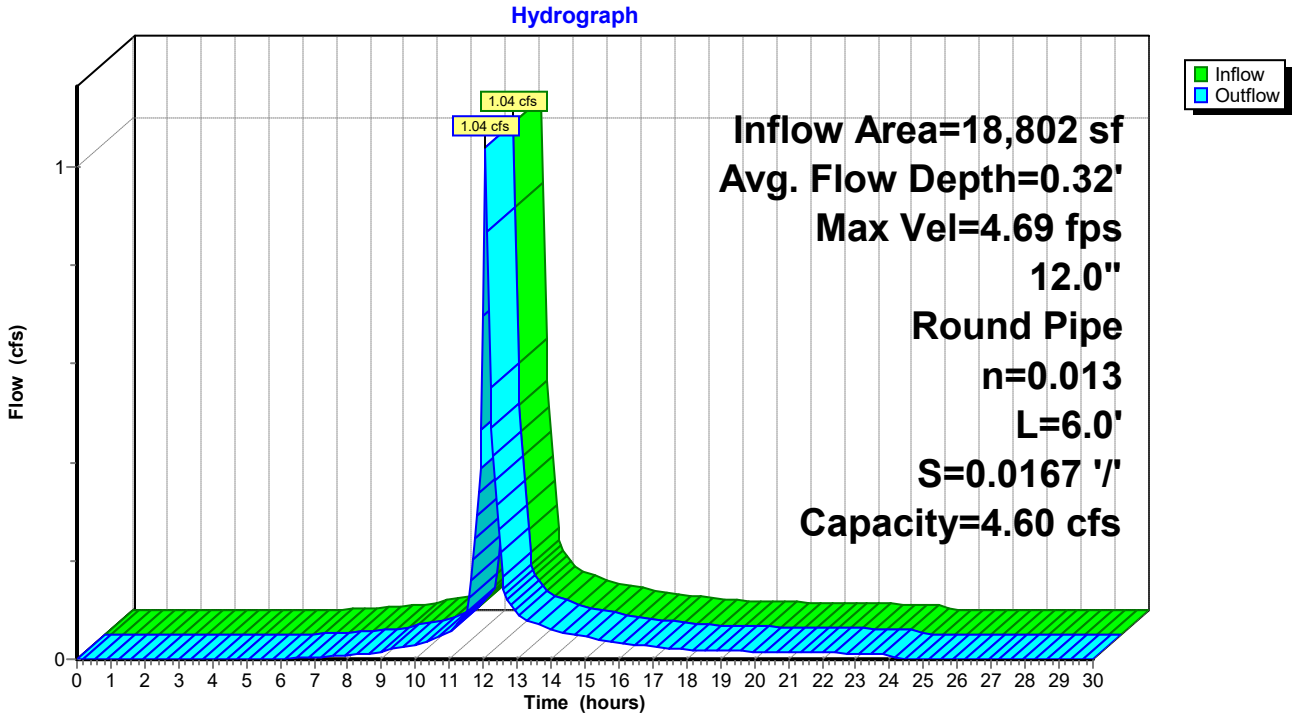
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.69 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.59 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.60 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 6.0' Slope= 0.0167 '/'
Inlet Invert= 353.40', Outlet Invert= 353.30'



Reach DCB6: TO DMH#6



Stage-Discharge for Reach DCB6: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.40	0.00	0.00
353.41	0.52	0.00
353.42	0.82	0.00
353.43	1.08	0.01
353.44	1.30	0.01
353.45	1.50	0.02
353.46	1.69	0.03
353.47	1.87	0.05
353.48	2.04	0.06
353.49	2.20	0.08
353.50	2.35	0.10
353.51	2.50	0.12
353.52	2.64	0.14
353.53	2.77	0.17
353.54	2.90	0.19
353.55	3.03	0.22
353.56	3.15	0.26
353.57	3.27	0.29
353.58	3.38	0.33
353.59	3.49	0.36
353.60	3.60	0.40
353.61	3.71	0.44
353.62	3.81	0.49
353.63	3.91	0.53
353.64	4.01	0.58
353.65	4.10	0.63
353.66	4.20	0.68
353.67	4.29	0.73
353.68	4.38	0.79
353.69	4.46	0.84
353.70	4.55	0.90
353.71	4.63	0.96
353.72	4.71	1.02
353.73	4.79	1.08
353.74	4.86	1.14
353.75	4.94	1.21
353.76	5.01	1.28
353.77	5.08	1.34
353.78	5.15	1.41
353.79	5.22	1.48
353.80	5.28	1.55
353.81	5.35	1.62
353.82	5.41	1.69
353.83	5.47	1.77
353.84	5.53	1.84
353.85	5.59	1.92
353.86	5.65	1.99
353.87	5.70	2.07
353.88	5.75	2.14
353.89	5.81	2.22
353.90	5.86	2.30
353.91	5.91	2.38
353.92	5.95	2.46
353.93	6.00	2.54
353.94	6.04	2.61
353.95	6.09	2.69
353.96	6.13	2.77
353.97	6.17	2.85
353.98	6.21	2.93
353.99	6.24	3.01
354.00	6.28	3.09
354.01	6.31	3.17
354.02	6.35	3.25
354.03	6.38	3.33
354.04	6.41	3.40
354.05	6.44	3.48
354.06	6.46	3.56
354.07	6.49	3.63
354.08	6.51	3.70
354.09	6.54	3.78
354.10	6.56	3.85
354.11	6.58	3.92
354.12	6.59	3.99
354.13	6.61	4.06
354.14	6.63	4.13
354.15	6.64	4.19
354.16	6.65	4.26
354.17	6.66	4.32
354.18	6.67	4.38
354.19	6.67	4.44
354.20	6.67	4.50
354.21	**6.68**	4.55
354.22	6.68	4.60
354.23	6.67	4.65
354.24	6.67	4.70
354.25	6.66	4.74
354.26	6.65	4.78
354.27	6.64	4.82
354.28	6.62	4.85
354.29	6.61	4.88
354.30	6.58	4.90
354.31	6.56	4.92
354.32	6.53	4.94
354.33	6.50	4.95
354.34	6.46	**4.95**
354.35	6.41	4.94
354.36	6.36	4.93
354.37	6.30	4.90
354.38	6.22	4.86
354.39	6.11	4.79
354.40	5.86	4.60

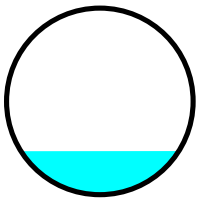
Summary for Reach DCBR100: TO DMH R100

Inflow Area = 8,304 sf, 89.80% Impervious, Inflow Depth = 2.16" for 2-Year event
Inflow = 0.48 cfs @ 12.07 hrs, Volume= 1,495 cf
Outflow = 0.46 cfs @ 12.10 hrs, Volume= 1,495 cf, Atten= 3%, Lag= 1.6 min

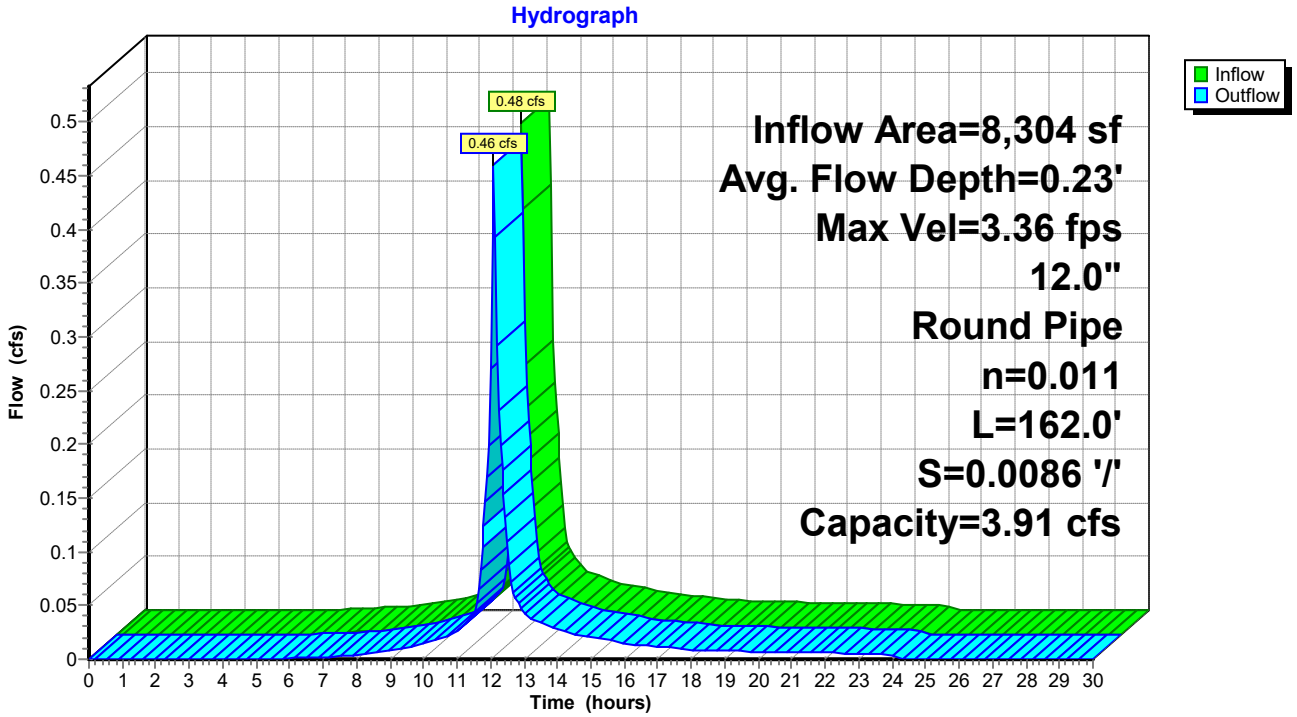
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.36 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.11 fps, Avg. Travel Time= 2.4 min

Peak Storage= 23 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.91 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 162.0' Slope= 0.0086 '/'
Inlet Invert= 354.50', Outlet Invert= 353.10'



Reach DCBR100: TO DMH R100



Stage-Discharge for Reach DCBR100: TO DMH R100

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.50	0.00	0.00
354.51	0.44	0.00
354.52	0.70	0.00
354.53	0.92	0.01
354.54	1.11	0.01
354.55	1.28	0.02
354.56	1.44	0.03
354.57	1.59	0.04
354.58	1.73	0.05
354.59	1.87	0.07
354.60	2.00	0.08
354.61	2.12	0.10
354.62	2.24	0.12
354.63	2.36	0.14
354.64	2.47	0.16
354.65	2.58	0.19
354.66	2.68	0.22
354.67	2.78	0.25
354.68	2.88	0.28
354.69	2.97	0.31
354.70	3.07	0.34
354.71	3.16	0.38
354.72	3.24	0.42
354.73	3.33	0.45
354.74	3.41	0.49
354.75	3.49	0.54
354.76	3.57	0.58
354.77	3.65	0.62
354.78	3.72	0.67
354.79	3.80	0.72
354.80	3.87	0.77
354.81	3.94	0.82
354.82	4.01	0.87
354.83	4.07	0.92
354.84	4.14	0.97
354.85	4.20	1.03
354.86	4.26	1.09
354.87	4.32	1.14
354.88	4.38	1.20
354.89	4.44	1.26
354.90	4.50	1.32
354.91	4.55	1.38
354.92	4.60	1.44
354.93	4.66	1.50
354.94	4.71	1.57
354.95	4.76	1.63
354.96	4.80	1.69
354.97	4.85	1.76
354.98	4.90	1.83
354.99	4.94	1.89
355.00	4.98	1.96
355.01	5.03	2.02
355.02	5.07	2.09
355.03	5.11	2.16
355.04	5.14	2.23
355.05	5.18	2.29
355.06	5.22	2.36
355.07	5.25	2.43
355.08	5.28	2.50
355.09	5.31	2.56
355.10	5.34	2.63
355.11	5.37	2.70
355.12	5.40	2.76
355.13	5.43	2.83
355.14	5.45	2.90
355.15	5.48	2.96
355.16	5.50	3.03
355.17	5.52	3.09
355.18	5.54	3.15
355.19	5.56	3.22
355.20	5.58	3.28
355.21	5.60	3.34
355.22	5.61	3.40
355.23	5.63	3.46
355.24	5.64	3.51
355.25	5.65	3.57
355.26	5.66	3.62
355.27	5.67	3.68
355.28	5.67	3.73
355.29	5.68	3.78
355.30	5.68	3.83
355.31	**5.68**	3.87
355.32	5.68	3.92
355.33	5.68	3.96
355.34	5.67	4.00
355.35	5.67	4.03
355.36	5.66	4.07
355.37	5.65	4.10
355.38	5.64	4.13
355.39	5.62	4.15
355.40	5.60	4.17
355.41	5.58	4.19
355.42	5.56	4.20
355.43	5.53	4.21
355.44	5.50	**4.21**
355.45	5.46	4.21
355.46	5.41	4.19
355.47	5.36	4.17
355.48	5.29	4.14
355.49	5.20	4.08
355.50	4.98	3.91

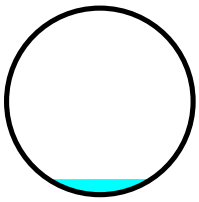
Summary for Reach DCBS10: TO DMH-S4

Inflow Area = 2,269 sf, 91.63% Impervious, Inflow Depth = 2.45" for 2-Year event
Inflow = 0.14 cfs @ 12.07 hrs, Volume= 463 cf
Outflow = 0.14 cfs @ 12.07 hrs, Volume= 463 cf, Atten= 0%, Lag= 0.1 min

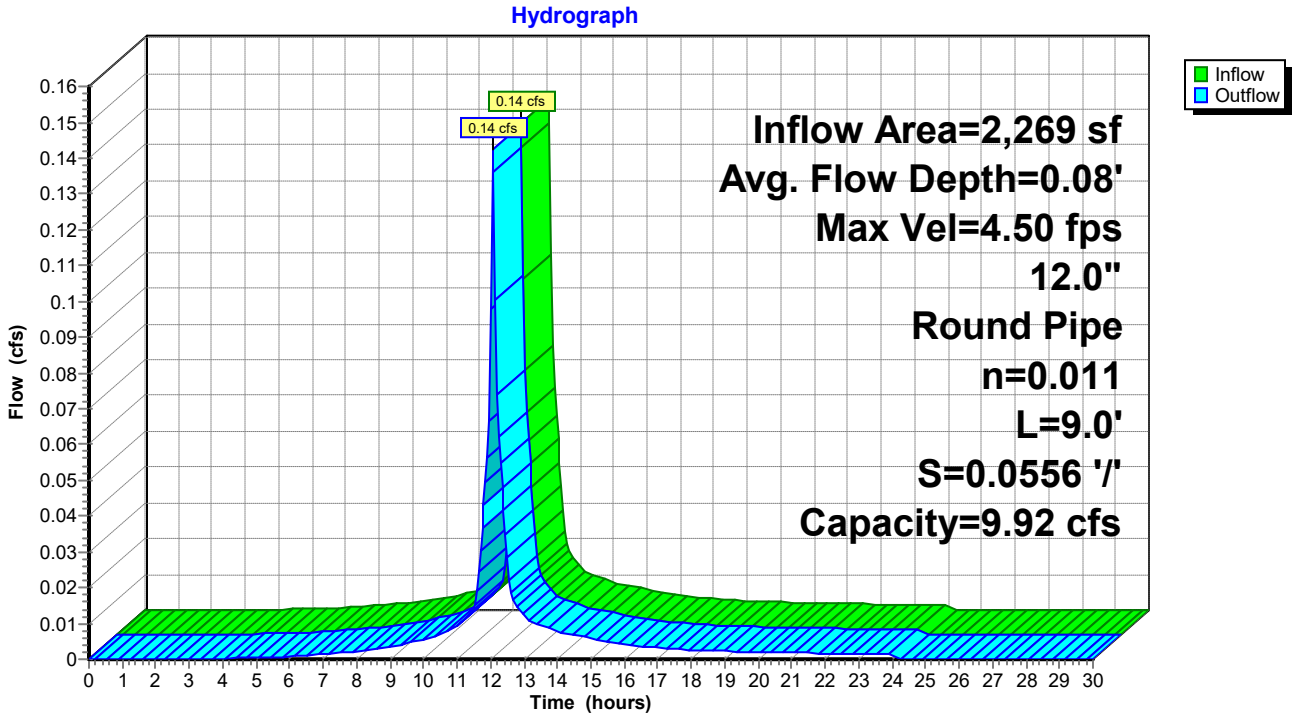
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.50 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.08'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.92 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 9.0' Slope= 0.0556 '/'
Inlet Invert= 356.50', Outlet Invert= 356.00'



Reach DCBS10: TO DMH-S4



Stage-Discharge for Reach DCBS10: TO DMH-S4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
356.50	0.00	0.00
356.51	1.12	0.00
356.52	1.78	0.01
356.53	2.32	0.02
356.54	2.81	0.03
356.55	3.25	0.05
356.56	3.65	0.07
356.57	4.04	0.10
356.58	4.40	0.13
356.59	4.74	0.17
356.60	5.07	0.21
356.61	5.38	0.25
356.62	5.69	0.30
356.63	5.98	0.36
356.64	6.26	0.42
356.65	6.53	0.48
356.66	6.79	0.55
356.67	7.05	0.62
356.68	7.30	0.70
356.69	7.54	0.78
356.70	7.77	0.87
356.71	8.00	0.96
356.72	8.22	1.05
356.73	8.44	1.15
356.74	8.65	1.25
356.75	8.85	1.36
356.76	9.05	1.47
356.77	9.25	1.58
356.78	9.44	1.70
356.79	9.63	1.82
356.80	9.81	1.94
356.81	9.98	2.07
356.82	10.16	2.20
356.83	10.33	2.33
356.84	10.49	2.47
356.85	10.65	2.61
356.86	10.81	2.75
356.87	10.96	2.90
356.88	11.11	3.04
356.89	11.26	3.19
356.90	11.40	3.34
356.91	11.54	3.50
356.92	11.67	3.65
356.93	11.81	3.81
356.94	11.93	3.97
356.95	12.06	4.13
356.96	12.18	4.30
356.97	12.30	4.46
356.98	12.42	4.63
356.99	12.53	4.79
357.00	12.64	4.96
357.01	12.74	5.13
357.02	12.84	5.30
357.03	12.94	5.47
357.04	13.04	5.64
357.05	13.13	5.81
357.06	13.22	5.98
357.07	13.31	6.16
357.08	13.39	6.33
357.09	13.47	6.50
357.10	13.55	6.67
357.11	13.63	6.84
357.12	13.70	7.01
357.13	13.76	7.17
357.14	13.83	7.34
357.15	13.89	7.51
357.16	13.95	7.67
357.17	14.00	7.83
357.18	14.06	7.99
357.19	14.10	8.15
357.20	14.15	8.31
357.21	14.19	8.46
357.22	14.23	8.61
357.23	14.26	8.76
357.24	14.30	8.91
357.25	14.32	9.05
357.26	14.35	9.19
357.27	14.37	9.32
357.28	14.38	9.45
357.29	14.39	9.58
357.30	14.40	9.70
357.31	**14.41**	9.82
357.32	14.40	9.93
357.33	14.40	10.03
357.34	14.39	10.13
357.35	14.37	10.23
357.36	14.35	10.31
357.37	14.33	10.39
357.38	14.29	10.46
357.39	14.25	10.52
357.40	14.21	10.58
357.41	14.15	10.62
357.42	14.09	10.65
357.43	14.02	10.67
357.44	13.93	**10.68**
357.45	13.84	10.66
357.46	13.72	10.63
357.47	13.59	10.58
357.48	13.42	10.49
357.49	13.19	10.34
357.50	12.64	9.92

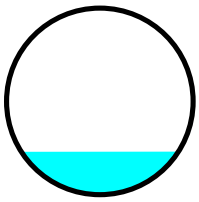
Summary for Reach DCBS5: TO DMH-S8

Inflow Area = 13,730 sf, 73.11% Impervious, Inflow Depth = 1.98" for 2-Year event
Inflow = 0.73 cfs @ 12.07 hrs, Volume= 2,270 cf
Outflow = 0.72 cfs @ 12.08 hrs, Volume= 2,270 cf, Atten= 1%, Lag= 0.2 min

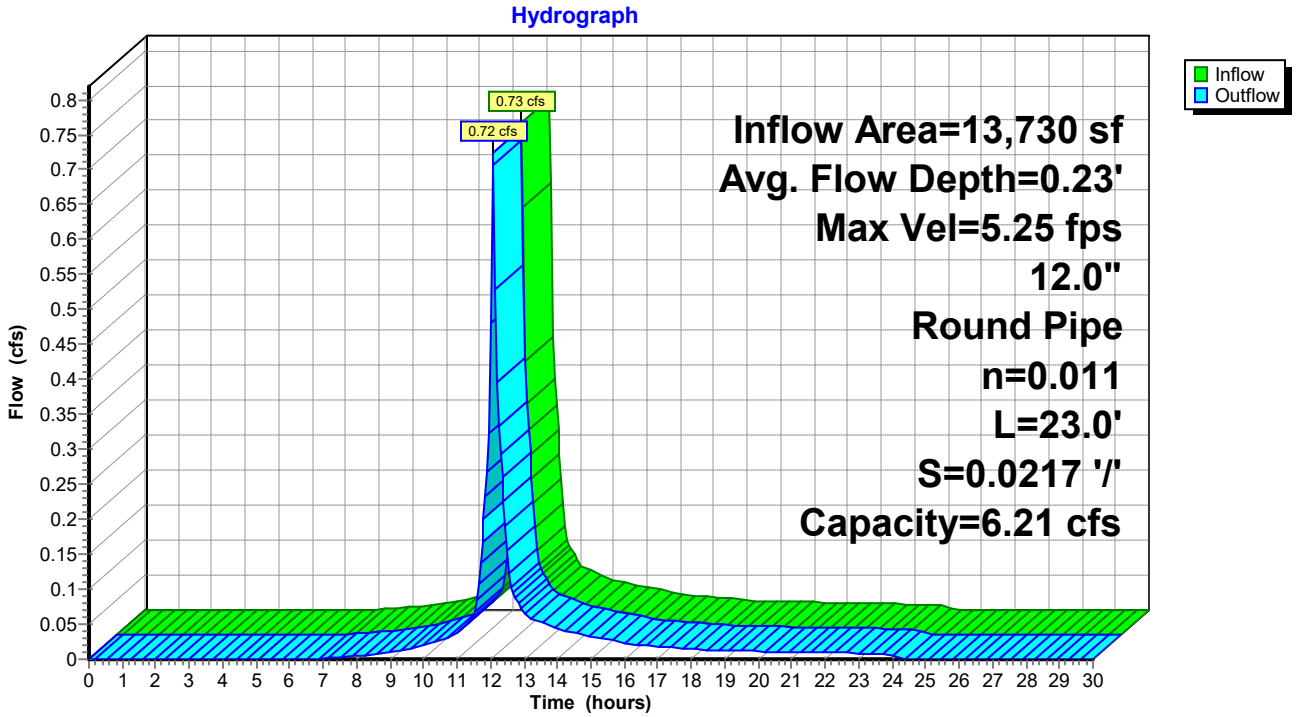
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.25 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.79 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.21 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 23.0' Slope= 0.0217 '/'
Inlet Invert= 347.00', Outlet Invert= 346.50'



Reach DCBS5: TO DMH-S8



Stage-Discharge for Reach DCBS5: TO DMH-S8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.00	0.00	0.00
347.01	0.70	0.00
347.02	1.11	0.00
347.03	1.45	0.01
347.04	1.76	0.02
347.05	2.03	0.03
347.06	2.29	0.04
347.07	2.52	0.06
347.08	2.75	0.08
347.09	2.97	0.10
347.10	3.17	0.13
347.11	3.37	0.16
347.12	3.56	0.19
347.13	3.74	0.22
347.14	3.91	0.26
347.15	4.08	0.30
347.16	4.25	0.34
347.17	4.41	0.39
347.18	4.56	0.44
347.19	4.72	0.49
347.20	4.86	0.54
347.21	5.00	0.60
347.22	5.14	0.66
347.23	5.28	0.72
347.24	5.41	0.78
347.25	5.54	0.85
347.26	5.66	0.92
347.27	5.79	0.99
347.28	5.91	1.06
347.29	6.02	1.14
347.30	6.13	1.22
347.31	6.25	1.30
347.32	6.35	1.38
347.33	6.46	1.46
347.34	6.56	1.55
347.35	6.66	1.63
347.36	6.76	1.72
347.37	6.86	1.81
347.38	6.95	1.90
347.39	7.04	2.00
347.40	7.13	2.09
347.41	7.22	2.19
347.42	7.30	2.29
347.43	7.39	2.38
347.44	7.47	2.48
347.45	7.54	2.59
347.46	7.62	2.69
347.47	7.69	2.79
347.48	7.77	2.89
347.49	7.84	3.00
347.50	7.90	3.10
347.51	7.97	3.21
347.52	8.03	3.32
347.53	8.10	3.42
347.54	8.16	3.53
347.55	8.22	3.64
347.56	8.27	3.74
347.57	8.33	3.85
347.58	8.38	3.96
347.59	8.43	4.06
347.60	8.48	4.17
347.61	8.52	4.28
347.62	8.57	4.38
347.63	8.61	4.49
347.64	8.65	4.59
347.65	8.69	4.70
347.66	8.73	4.80
347.67	8.76	4.90
347.68	8.79	5.00
347.69	8.82	5.10
347.70	8.85	5.20
347.71	8.88	5.29
347.72	8.90	5.39
347.73	8.92	5.48
347.74	8.94	5.57
347.75	8.96	5.66
347.76	8.97	5.75
347.77	8.99	5.83
347.78	9.00	5.91
347.79	9.00	5.99
347.80	9.01	6.07
347.81	**9.01**	6.14
347.82	9.01	6.21
347.83	9.01	6.28
347.84	9.00	6.34
347.85	8.99	6.40
347.86	8.98	6.45
347.87	8.96	6.50
347.88	8.94	6.54
347.89	8.92	6.58
347.90	8.89	6.62
347.91	8.85	6.64
347.92	8.81	6.66
347.93	8.77	6.67
347.94	8.72	**6.68**
347.95	8.66	6.67
347.96	8.58	6.65
347.97	8.50	6.62
347.98	8.39	6.56
347.99	8.25	6.47
348.00	7.90	6.21

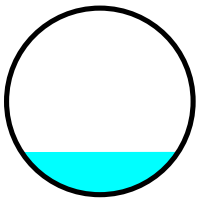
Summary for Reach DCBS6: TO DMH-S8

Inflow Area = 14,048 sf, 86.89% Impervious, Inflow Depth = 2.35" for 2-Year event
Inflow = 0.86 cfs @ 12.07 hrs, Volume= 2,751 cf
Outflow = 0.86 cfs @ 12.07 hrs, Volume= 2,751 cf, Atten= 0%, Lag= 0.1 min

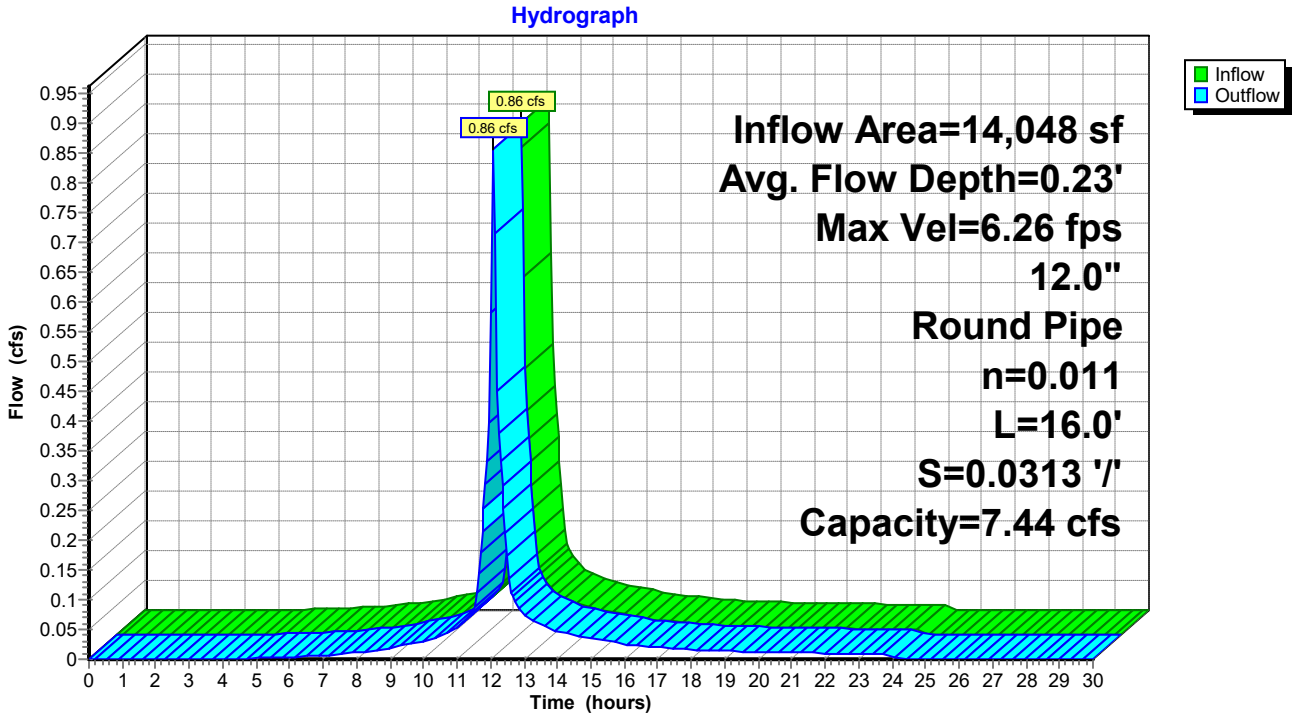
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.26 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.07 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.44 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 16.0' Slope= 0.0313 '/'
Inlet Invert= 347.00', Outlet Invert= 346.50'



Reach DCBS6: TO DMH-S8



Stage-Discharge for Reach DCBS6: TO DMH-S8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.00	0.00	0.00
347.01	0.84	0.00
347.02	1.33	0.01
347.03	1.74	0.01
347.04	2.10	0.02
347.05	2.43	0.04
347.06	2.74	0.05
347.07	3.03	0.07
347.08	3.30	0.10
347.09	3.56	0.12
347.10	3.80	0.16
347.11	4.04	0.19
347.12	4.26	0.23
347.13	4.48	0.27
347.14	4.69	0.31
347.15	4.90	0.36
347.16	5.10	0.41
347.17	5.29	0.47
347.18	5.47	0.53
347.19	5.65	0.59
347.20	5.83	0.65
347.21	6.00	0.72
347.22	6.17	0.79
347.23	6.33	0.86
347.24	6.49	0.94
347.25	6.64	1.02
347.26	6.79	1.10
347.27	6.94	1.19
347.28	7.08	1.27
347.29	7.22	1.36
347.30	7.36	1.46
347.31	7.49	1.55
347.32	7.62	1.65
347.33	7.74	1.75
347.34	7.87	1.85
347.35	7.99	1.96
347.36	8.11	2.06
347.37	8.22	2.17
347.38	8.33	2.28
347.39	8.44	2.39
347.40	8.55	2.51
347.41	8.65	2.62
347.42	8.76	2.74
347.43	8.85	2.86
347.44	8.95	2.98
347.45	9.04	3.10
347.46	9.14	3.22
347.47	9.22	3.35
347.48	9.31	3.47
347.49	9.40	3.60
347.50	9.48	3.72
347.51	9.56	3.85
347.52	9.63	3.98
347.53	9.71	4.10
347.54	9.78	4.23
347.55	9.85	4.36
347.56	9.92	4.49
347.57	9.98	4.62
347.58	10.05	4.74
347.59	10.11	4.87
347.60	10.16	5.00
347.61	10.22	5.13
347.62	10.27	5.25
347.63	10.32	5.38
347.64	10.37	5.51
347.65	10.42	5.63
347.66	10.46	5.75
347.67	10.50	5.88
347.68	10.54	6.00
347.69	10.58	6.11
347.70	10.61	6.23
347.71	10.64	6.35
347.72	10.67	6.46
347.73	10.70	6.57
347.74	10.72	6.68
347.75	10.74	6.79
347.76	10.76	6.89
347.77	10.77	6.99
347.78	10.79	7.09
347.79	10.80	7.18
347.80	10.80	7.28
347.81	**10.80**	7.36
347.82	10.80	7.45
347.83	10.80	7.53
347.84	10.79	7.60
347.85	10.78	7.67
347.86	10.76	7.73
347.87	10.74	7.79
347.88	10.72	7.85
347.89	10.69	7.89
347.90	10.66	7.93
347.91	10.61	7.97
347.92	10.57	7.99
347.93	10.51	8.00
347.94	10.45	**8.01**
347.95	10.38	8.00
347.96	10.29	7.97
347.97	10.19	7.93
347.98	10.06	7.87
347.99	9.89	7.76
348.00	9.48	7.44

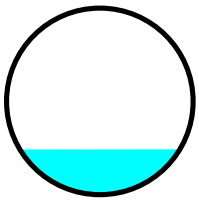
Summary for Reach DCBS7: TO DMH-S6

Inflow Area = 14,635 sf, 28.88% Impervious, Inflow Depth = 1.98" for 2-Year event
Inflow = 0.67 cfs @ 12.14 hrs, Volume= 2,420 cf
Outflow = 0.67 cfs @ 12.14 hrs, Volume= 2,420 cf, Atten= 0%, Lag= 0.1 min

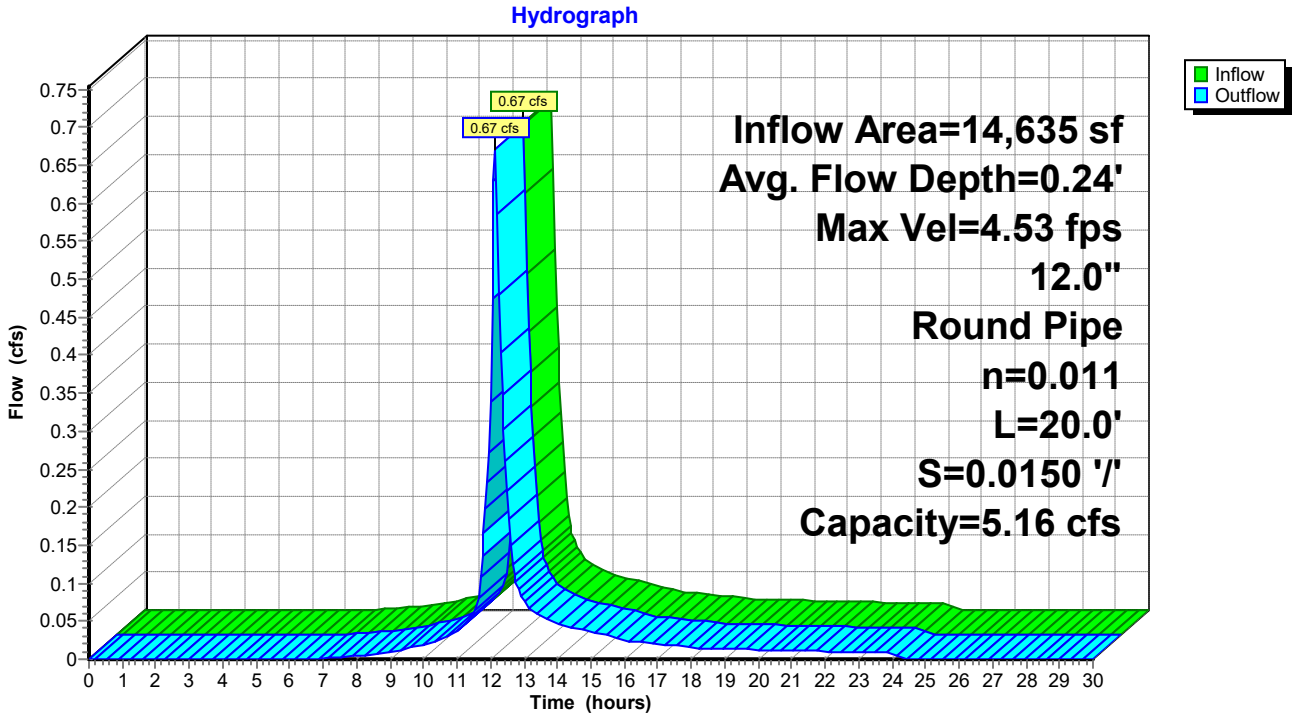
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.53 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.60 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 12.14 hrs
Average Depth at Peak Storage= 0.24'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0150 '/'
Inlet Invert= 350.10', Outlet Invert= 349.80'



Reach DCBS7: TO DMH-S6



Stage-Discharge for Reach DCBS7: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.10	0.00	0.00
350.11	0.58	0.00
350.12	0.92	0.00
350.13	1.21	0.01
350.14	1.46	0.02
350.15	1.69	0.02
350.16	1.90	0.04
350.17	2.10	0.05
350.18	2.29	0.07
350.19	2.46	0.09
350.20	2.63	0.11
350.21	2.80	0.13
350.22	2.95	0.16
350.23	3.11	0.19
350.24	3.25	0.22
350.25	3.39	0.25
350.26	3.53	0.29
350.27	3.66	0.32
350.28	3.79	0.36
350.29	3.92	0.41
350.30	4.04	0.45
350.31	4.16	0.50
350.32	4.27	0.55
350.33	4.38	0.60
350.34	4.49	0.65
350.35	4.60	0.71
350.36	4.70	0.76
350.37	4.81	0.82
350.38	4.91	0.88
350.39	5.00	0.95
350.40	5.10	1.01
350.41	5.19	1.08
350.42	5.28	1.14
350.43	5.37	1.21
350.44	5.45	1.28
350.45	5.53	1.36
350.46	5.62	1.43
350.47	5.70	1.50
350.48	5.77	1.58
350.49	5.85	1.66
350.50	5.92	1.74
350.51	6.00	1.82
350.52	6.07	1.90
350.53	6.13	1.98
350.54	6.20	2.06
350.55	6.27	2.15
350.56	6.33	2.23
350.57	6.39	2.32
350.58	6.45	2.40
350.59	6.51	2.49
350.60	6.57	2.58
350.61	6.62	2.67
350.62	6.67	2.75
350.63	6.73	2.84
350.64	6.78	2.93
350.65	6.82	3.02
350.66	6.87	3.11
350.67	6.92	3.20
350.68	6.96	3.29
350.69	7.00	3.38
350.70	7.04	3.46
350.71	7.08	3.55
350.72	7.12	3.64
350.73	7.15	3.73
350.74	7.19	3.81
350.75	7.22	3.90
350.76	7.25	3.99
350.77	7.28	4.07
350.78	7.30	4.15
350.79	7.33	4.24
350.80	7.35	4.32
350.81	7.37	4.40
350.82	7.39	4.48
350.83	7.41	4.55
350.84	7.43	4.63
350.85	7.44	4.70
350.86	7.45	4.77
350.87	7.46	4.84
350.88	7.47	4.91
350.89	7.48	4.98
350.90	7.48	5.04
350.91	**7.49**	5.10
350.92	7.48	5.16
350.93	7.48	5.21
350.94	7.48	5.27
350.95	7.47	5.31
350.96	7.46	5.36
350.97	7.44	5.40
350.98	7.43	5.44
350.99	7.41	5.47
351.00	7.38	5.50
351.01	7.35	5.52
351.02	7.32	5.53
351.03	7.28	5.54
351.04	7.24	**5.55**
351.05	7.19	5.54
351.06	7.13	5.52
351.07	7.06	5.50
351.08	6.97	5.45
351.09	6.85	5.37
351.10	6.57	5.16

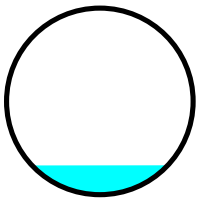
Summary for Reach DCBS8: TO DMH-S6

Inflow Area = 6,568 sf, 85.14% Impervious, Inflow Depth = 2.25" for 2-Year event
Inflow = 0.39 cfs @ 12.07 hrs, Volume= 1,234 cf
Outflow = 0.39 cfs @ 12.07 hrs, Volume= 1,234 cf, Atten= 0%, Lag= 0.1 min

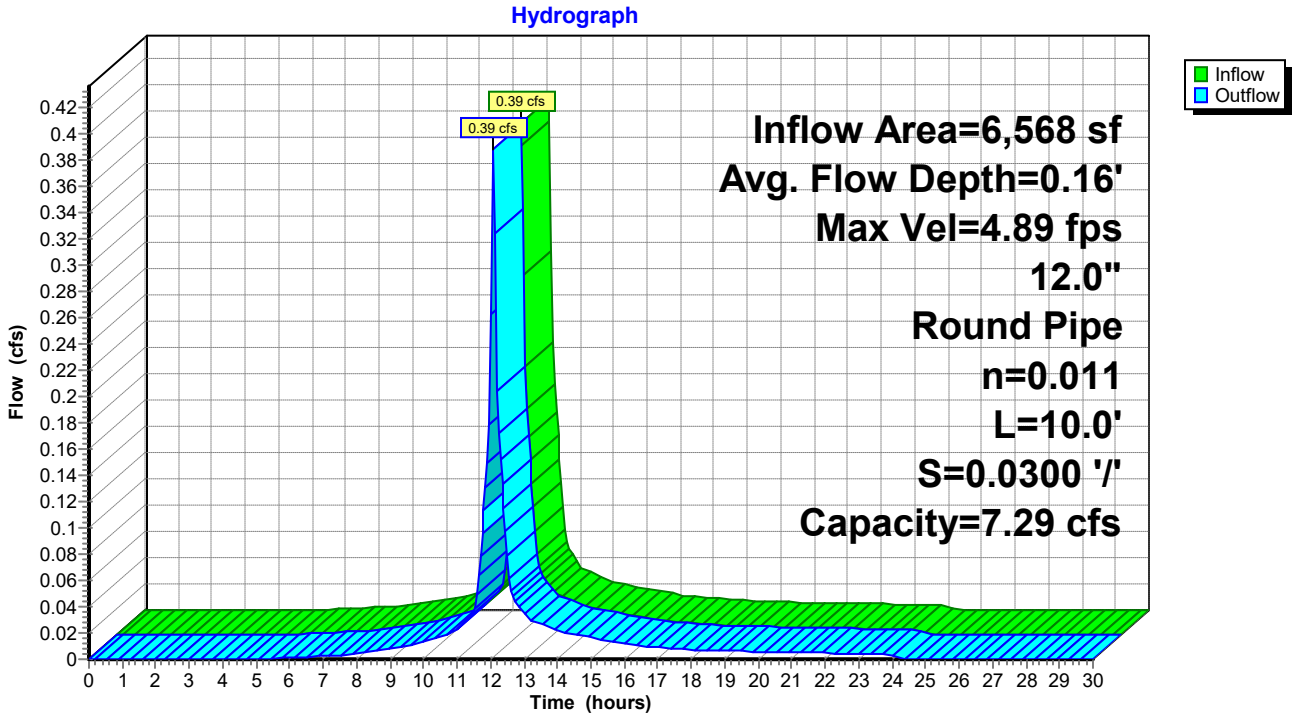
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.89 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.63 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.16'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.29 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 10.0' Slope= 0.0300 '/'
Inlet Invert= 350.10', Outlet Invert= 349.80'



Reach DCBS8: TO DMH-S6



Stage-Discharge for Reach DCBS8: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.10	0.00	0.00
350.11	0.83	0.00
350.12	1.31	0.00
350.13	1.71	0.01
350.14	2.06	0.02
350.15	2.39	0.04
350.16	2.69	0.05
350.17	2.97	0.07
350.18	3.23	0.10
350.19	3.48	0.12
350.20	3.73	0.15
350.21	3.96	0.19
350.22	4.18	0.22
350.23	4.39	0.26
350.24	4.60	0.31
350.25	4.80	0.35
350.26	4.99	0.40
350.27	5.18	0.46
350.28	5.36	0.52
350.29	5.54	0.58
350.30	5.71	0.64
350.31	5.88	0.70
350.32	6.04	0.77
350.33	6.20	0.85
350.34	6.36	0.92
350.35	6.51	1.00
350.36	6.65	1.08
350.37	6.80	1.16
350.38	6.94	1.25
350.39	7.07	1.34
350.40	7.21	1.43
350.41	7.34	1.52
350.42	7.46	1.62
350.43	7.59	1.72
350.44	7.71	1.82
350.45	7.83	1.92
350.46	7.94	2.02
350.47	8.06	2.13
350.48	8.17	2.24
350.49	8.27	2.35
350.50	8.38	2.46
350.51	8.48	2.57
350.52	8.58	2.69
350.53	8.68	2.80
350.54	8.77	2.92
350.55	8.86	3.04
350.56	8.95	3.16
350.57	9.04	3.28
350.58	9.12	3.40
350.59	9.21	3.52
350.60	9.29	3.65
350.61	9.36	3.77
350.62	9.44	3.90
350.63	9.51	4.02
350.64	9.58	4.15
350.65	9.65	4.27
350.66	9.72	4.40
350.67	9.78	4.52
350.68	9.84	4.65
350.69	9.90	4.77
350.70	9.96	4.90
350.71	10.01	5.02
350.72	10.06	5.15
350.73	10.11	5.27
350.74	10.16	5.39
350.75	10.21	5.52
350.76	10.25	5.64
350.77	10.29	5.76
350.78	10.33	5.87
350.79	10.36	5.99
350.80	10.40	6.11
350.81	10.43	6.22
350.82	10.46	6.33
350.83	10.48	6.44
350.84	10.50	6.55
350.85	10.53	6.65
350.86	10.54	6.75
350.87	10.56	6.85
350.88	10.57	6.95
350.89	10.58	7.04
350.90	10.58	7.13
350.91	**10.59**	7.21
350.92	10.59	7.30
350.93	10.58	7.37
350.94	10.57	7.45
350.95	10.56	7.51
350.96	10.55	7.58
350.97	10.53	7.64
350.98	10.50	7.69
350.99	10.47	7.73
351.00	10.44	7.77
351.01	10.40	7.80
351.02	10.35	7.83
351.03	10.30	7.84
351.04	10.24	**7.84**
351.05	10.17	7.84
351.06	10.08	7.81
351.07	9.98	7.77
351.08	9.86	7.71
351.09	9.69	7.60
351.10	9.29	7.29

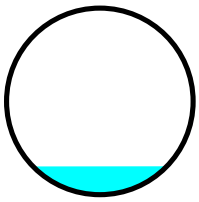
Summary for Reach DCBS9: TO DMH-S4

Inflow Area = 6,737 sf, 13.88% Impervious, Inflow Depth = 2.16" for 2-Year event
Inflow = 0.35 cfs @ 12.12 hrs, Volume= 1,213 cf
Outflow = 0.35 cfs @ 12.12 hrs, Volume= 1,213 cf, Atten= 0%, Lag= 0.1 min

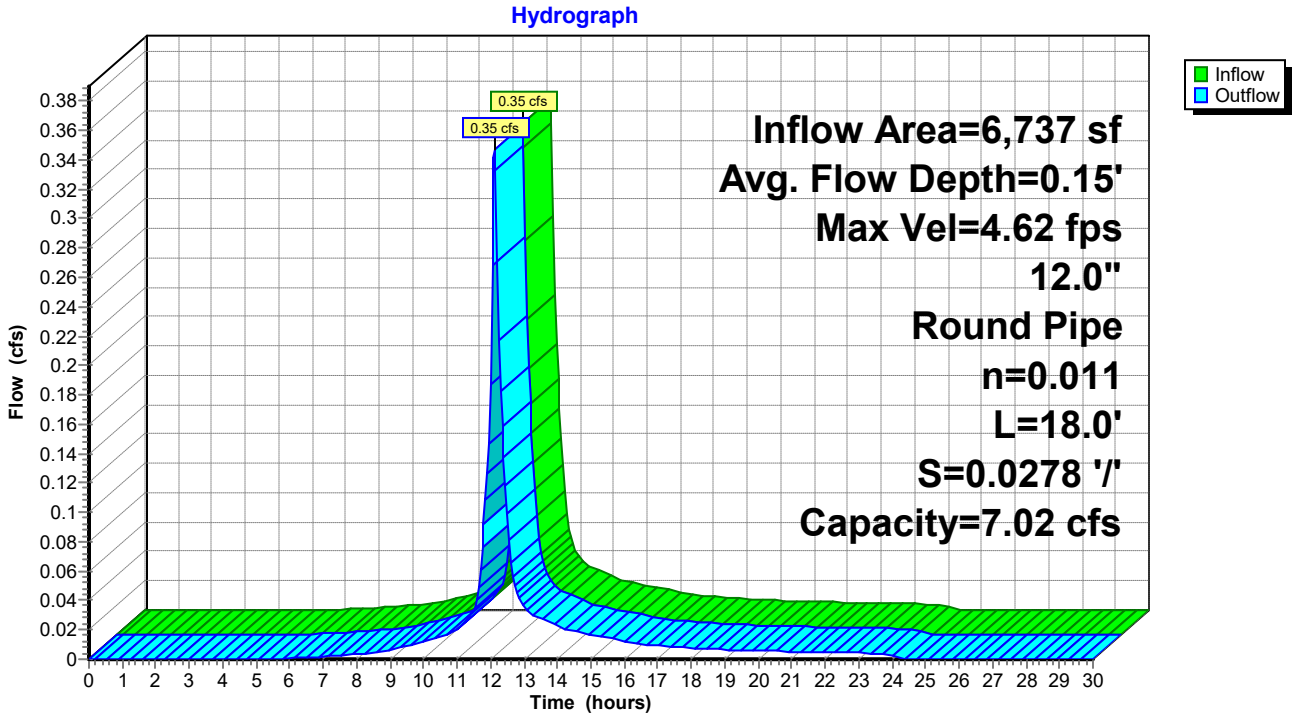
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.62 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.59 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.15'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.02 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 18.0' Slope= 0.0278 '/'
Inlet Invert= 356.50', Outlet Invert= 356.00'



Reach DCBS9: TO DMH-S4



Stage-Discharge for Reach DCBS9: TO DMH-S4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
356.50	0.00	0.00
356.51	0.80	0.00
356.52	1.26	0.00
356.53	1.64	0.01
356.54	1.98	0.02
356.55	2.30	0.03
356.56	2.58	0.05
356.57	2.85	0.07
356.58	3.11	0.09
356.59	3.35	0.12
356.60	3.58	0.15
356.61	3.81	0.18
356.62	4.02	0.21
356.63	4.23	0.25
356.64	4.43	0.30
356.65	4.62	0.34
356.66	4.80	0.39
356.67	4.98	0.44
356.68	5.16	0.50
356.69	5.33	0.55
356.70	5.50	0.61
356.71	5.66	0.68
356.72	5.81	0.74
356.73	5.97	0.81
356.74	6.12	0.89
356.75	6.26	0.96
356.76	6.40	1.04
356.77	6.54	1.12
356.78	6.68	1.20
356.79	6.81	1.29
356.80	6.93	1.37
356.81	7.06	1.46
356.82	7.18	1.56
356.83	7.30	1.65
356.84	7.42	1.75
356.85	7.53	1.85
356.86	7.64	1.95
356.87	7.75	2.05
356.88	7.86	2.15
356.89	7.96	2.26
356.90	8.06	2.36
356.91	8.16	2.47
356.92	8.25	2.58
356.93	8.35	2.70
356.94	8.44	2.81
356.95	8.53	2.92
356.96	8.61	3.04
356.97	8.70	3.15
356.98	8.78	3.27
356.99	8.86	3.39
357.00	8.94	3.51
357.01	9.01	3.63
357.02	9.08	3.75
357.03	9.15	3.87
357.04	9.22	3.99
357.05	9.29	4.11
357.06	9.35	4.23
357.07	9.41	4.35
357.08	9.47	4.47
357.09	9.53	4.59
357.10	9.58	4.71
357.11	9.63	4.83
357.12	9.69	4.95
357.13	9.73	5.07
357.14	9.78	5.19
357.15	9.82	5.31
357.16	9.86	5.42
357.17	9.90	5.54
357.18	9.94	5.65
357.19	9.97	5.76
357.20	10.01	5.88
357.21	10.03	5.98
357.22	10.06	6.09
357.23	10.09	6.20
357.24	10.11	6.30
357.25	10.13	6.40
357.26	10.14	6.50
357.27	10.16	6.59
357.28	10.17	6.68
357.29	10.18	6.77
357.30	10.18	6.86
357.31	**10.19**	6.94
357.32	10.19	7.02
357.33	10.18	7.10
357.34	10.17	7.17
357.35	10.16	7.23
357.36	10.15	7.29
357.37	10.13	7.35
357.38	10.11	7.40
357.39	10.08	7.44
357.40	10.05	7.48
357.41	10.01	7.51
357.42	9.96	7.53
357.43	9.91	7.55
357.44	9.85	**7.55**
357.45	9.78	7.54
357.46	9.70	7.52
357.47	9.61	7.48
357.48	9.49	7.42
357.49	9.33	7.31
357.50	8.94	7.02

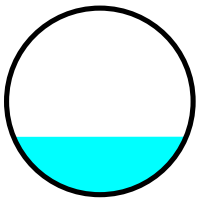
Summary for Reach DMH-R101: TO DMH-S1

Inflow Area = 40,822 sf, 73.55% Impervious, Inflow Depth = 1.50" for 2-Year event
Inflow = 1.55 cfs @ 12.10 hrs, Volume= 5,095 cf
Outflow = 1.47 cfs @ 12.13 hrs, Volume= 5,095 cf, Atten= 5%, Lag= 1.8 min

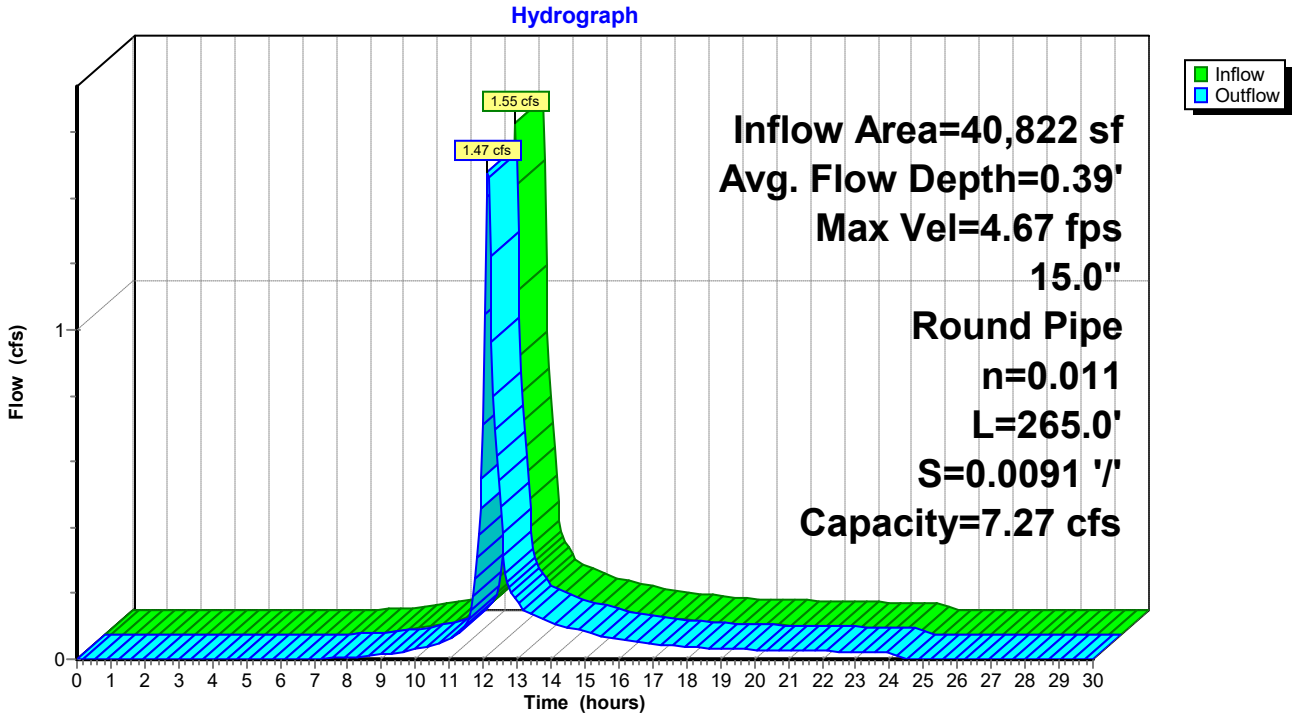
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.67 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 2.9 min

Peak Storage= 87 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.39'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.27 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 265.0' Slope= 0.0091 '/'
Inlet Invert= 351.00', Outlet Invert= 348.60'



Reach DMH-R101: TO DMH-S1



Stage-Discharge for Reach DMH-R101: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.42	0.00
351.02	0.71	0.00
351.03	0.94	0.01
351.04	1.13	0.01
351.05	1.31	0.02
351.06	1.48	0.03
351.07	1.64	0.04
351.08	1.78	0.06
351.09	1.92	0.08
351.10	2.06	0.09
351.11	2.19	0.12
351.12	2.31	0.14
351.13	2.43	0.17
351.14	2.55	0.19
351.15	2.66	0.22
351.16	2.77	0.25
351.17	2.88	0.29
351.18	2.98	0.32
351.19	3.08	0.36
351.20	3.18	0.40
351.21	3.28	0.45
351.22	3.37	0.49
351.23	3.46	0.54
351.24	3.55	0.59
351.25	3.64	0.64
351.26	3.73	0.69
351.27	3.81	0.74
351.28	3.89	0.80
351.29	3.97	0.86
351.30	4.05	0.92
351.31	4.13	0.98
351.32	4.20	1.04
351.33	4.28	1.11
351.34	4.35	1.18
351.35	4.42	1.24
351.36	4.49	1.31
351.37	4.56	1.39
351.38	4.63	1.46
351.39	4.69	1.53
351.40	4.76	1.61
351.41	4.82	1.69
351.42	4.88	1.77
351.43	4.95	1.85
351.44	5.01	1.93
351.45	5.06	2.01
351.46	5.12	2.10
351.47	5.18	2.18
351.48	5.23	2.27
351.49	5.29	2.36
351.50	5.34	2.45
351.51	5.39	2.54
351.52	5.44	2.63
351.53	5.49	2.72
351.54	5.54	2.81
351.55	5.59	2.91
351.56	5.64	3.00
351.57	5.68	3.10
351.58	5.73	3.19
351.59	5.77	3.29
351.60	5.82	3.39
351.61	5.86	3.49
351.62	5.90	3.58
351.63	5.94	3.68
351.64	5.98	3.78
351.65	6.02	3.88
351.66	6.06	3.98
351.67	6.09	4.08
351.68	6.13	4.18
351.69	6.16	4.28
351.70	6.20	4.38
351.71	6.23	4.48
351.72	6.26	4.58
351.73	6.29	4.68
351.74	6.32	4.78
351.75	6.35	4.88
351.76	6.38	4.98
351.77	6.40	5.08
351.78	6.43	5.18
351.79	6.46	5.28
351.80	6.48	5.37
351.81	6.50	5.47
351.82	6.52	5.57
351.83	6.55	5.66
351.84	6.57	5.76
351.85	6.59	5.85
351.86	6.60	5.95
351.87	6.62	6.04
351.88	6.64	6.13
351.89	6.65	6.22
351.90	6.67	6.31
351.91	6.68	6.39
351.92	6.69	6.48
351.93	6.70	6.56
351.94	6.71	6.65
351.95	6.72	6.73
351.96	6.73	6.81
351.97	6.74	6.88
351.98	6.74	6.96
351.99	6.74	7.03
352.00	6.75	7.10
352.01	6.75	7.17
352.02	**6.75**	7.24
352.03	6.75	7.30
352.04	6.75	7.36
352.05	6.74	7.42
352.06	6.74	7.47
352.07	6.73	7.52
352.08	6.72	7.57
352.09	6.71	7.62
352.10	6.70	7.66
352.11	6.68	7.70
352.12	6.66	7.73
352.13	6.65	7.76
352.14	6.63	7.78
352.15	6.60	7.80
352.16	6.57	7.81
352.17	6.54	**7.81**
352.18	6.51	7.81
352.19	6.47	7.80
352.20	6.43	7.78
352.21	6.38	7.75
352.22	6.32	7.70
352.23	6.24	7.63
352.24	6.13	7.51
352.25	5.92	7.27

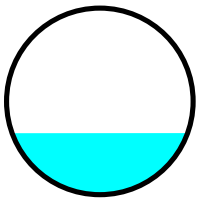
Summary for Reach DMH-S1: TO DMH-S2

Inflow Area = 59,366 sf, 76.73% Impervious, Inflow Depth = 1.61" for 2-Year event
Inflow = 2.30 cfs @ 12.11 hrs, Volume= 7,944 cf
Outflow = 2.22 cfs @ 12.14 hrs, Volume= 7,944 cf, Atten= 4%, Lag= 2.1 min

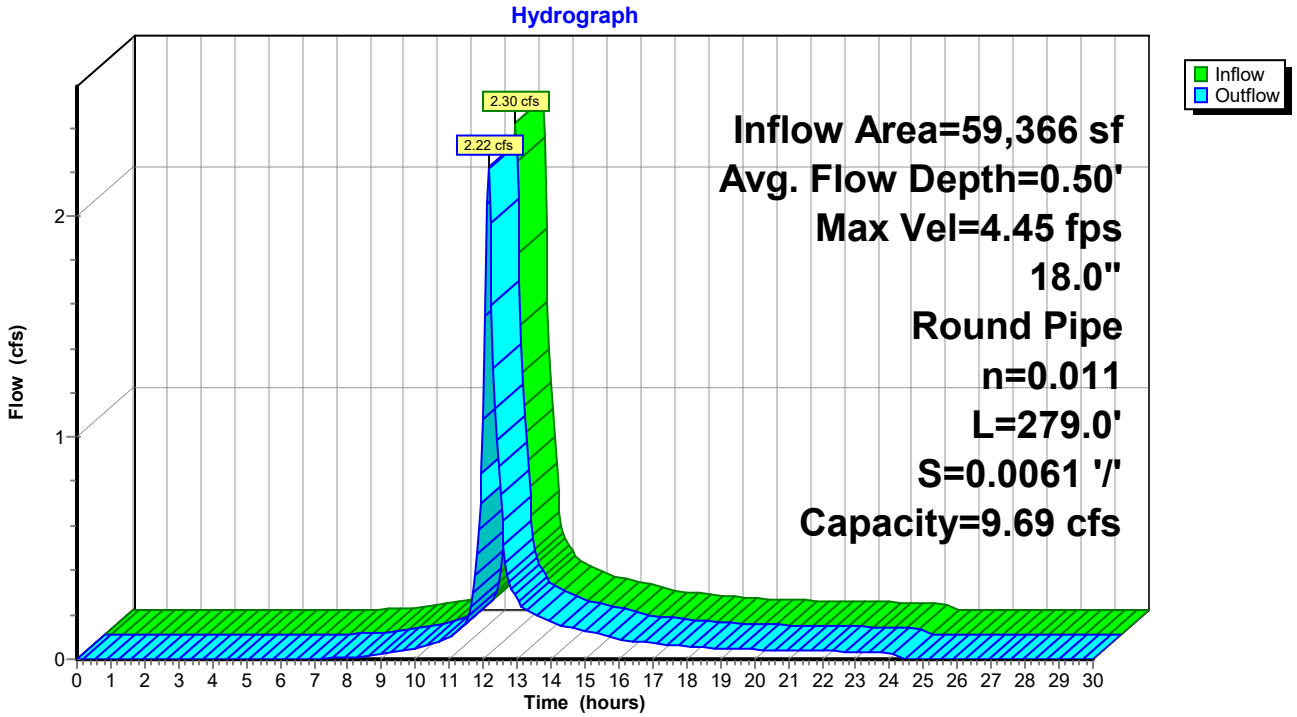
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.45 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.48 fps, Avg. Travel Time= 3.1 min

Peak Storage= 142 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.50'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 9.69 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 279.0' Slope= 0.0061 '/'
Inlet Invert= 348.50', Outlet Invert= 346.80'



Reach DMH-S1: TO DMH-S2



Stage-Discharge for Reach DMH-S1: TO DMH-S2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.50	0.00	0.00
348.51	0.33	0.00
348.52	0.58	0.00
348.53	0.77	0.01
348.54	0.93	0.01
348.55	1.08	0.02
348.56	1.22	0.03
348.57	1.35	0.04
348.58	1.47	0.05
348.59	1.59	0.07
348.60	1.70	0.09
348.61	1.80	0.11
348.62	1.91	0.13
348.63	2.01	0.15
348.64	2.10	0.18
348.65	2.20	0.20
348.66	2.29	0.23
348.67	2.38	0.26
348.68	2.47	0.30
348.69	2.55	0.33
348.70	2.63	0.37
348.71	2.72	0.41
348.72	2.79	0.45
348.73	2.87	0.49
348.74	2.95	0.54
348.75	3.02	0.59
348.76	3.09	0.63
348.77	3.17	0.68
348.78	3.24	0.74
348.79	3.31	0.79
348.80	3.37	0.85
348.81	3.44	0.91
348.82	3.50	0.97
348.83	3.57	1.03
348.84	3.63	1.09
348.85	3.69	1.16
348.86	3.75	1.22
348.87	3.81	1.29
348.88	3.87	1.36
348.89	3.93	1.43
348.90	3.99	1.51
348.91	4.04	1.58
348.92	4.10	1.66
348.93	4.15	1.74
348.94	4.20	1.82
348.95	4.26	1.90
348.96	4.31	1.98
348.97	4.36	2.06
348.98	4.41	2.15
348.99	4.46	2.24
349.00	4.51	2.32
349.01	4.55	2.41
349.02	4.60	2.50
349.03	4.65	2.59
349.04	4.69	2.69
349.05	4.74	2.78
349.06	4.78	2.88
349.07	4.82	2.97
349.08	4.86	3.07
349.09	4.91	3.17
349.10	4.95	3.27
349.11	4.99	3.37
349.12	5.03	3.47
349.13	5.07	3.57
349.14	5.10	3.67
349.15	5.14	3.77
349.16	5.18	3.88
349.17	5.22	3.98
349.18	5.25	4.09
349.19	5.29	4.20
349.20	5.32	4.30
349.21	5.35	4.41
349.22	5.39	4.52
349.23	5.42	4.63
349.24	5.45	4.74
349.25	5.48	4.85
349.26	5.51	4.96
349.27	5.54	5.07
349.28	5.57	5.18
349.29	5.60	5.29
349.30	5.63	5.40
349.31	5.66	5.51
349.32	5.69	5.62
349.33	5.71	5.73
349.34	5.74	5.84
349.35	5.76	5.95
349.36	5.79	6.07
349.37	5.81	6.18
349.38	5.84	6.29
349.39	5.86	6.40
349.40	5.88	6.51
349.41	5.90	6.62
349.42	5.92	6.73
349.43	5.94	6.84
349.44	5.96	6.95
349.45	5.98	7.06
349.46	6.00	7.17
349.47	6.02	7.28
349.48	6.04	7.38
349.49	6.05	7.49
349.50	6.07	7.60
349.51	6.08	7.70
349.52	6.10	7.81
349.53	6.11	7.91
349.54	6.13	8.01
349.55	6.14	8.11
349.56	6.15	8.21
349.57	6.16	8.31
349.58	6.18	8.41
349.59	6.19	8.51
349.60	6.19	8.60
349.61	6.20	8.70
349.62	6.21	8.79
349.63	6.22	8.88
349.64	6.23	8.97
349.65	6.23	9.06
349.66	6.24	9.15
349.67	6.24	9.23
349.68	6.24	9.31
349.69	6.25	9.39
349.70	6.25	9.47
349.71	6.25	9.55
349.72	**6.25**	9.62
349.73	6.25	9.69
349.74	6.25	9.76
349.75	6.25	9.83
349.76	6.24	9.89
349.77	6.24	9.96
349.78	6.23	10.01
349.79	6.23	10.07
349.80	6.22	10.12
349.81	6.21	10.17
349.82	6.20	10.22
349.83	6.19	10.26
349.84	6.18	10.29
349.85	6.17	10.33
349.86	6.15	10.36
349.87	6.13	10.38
349.88	6.11	10.40
349.89	6.09	10.41
349.90	6.07	10.42
349.91	6.05	**10.42**
349.92	6.02	10.42
349.93	5.99	10.40
349.94	5.95	10.38
349.95	5.92	10.35
349.96	5.87	10.30
349.97	5.82	10.24
349.98	5.76	10.14
349.99	5.64	9.96
350.00	5.48	9.69

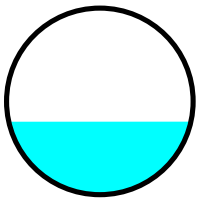
Summary for Reach DMH-S2: TO DMH-S3

Inflow Area = 102,372 sf, 80.49% Impervious, Inflow Depth = 1.81" for 2-Year event
Inflow = 4.38 cfs @ 12.11 hrs, Volume= 15,475 cf
Outflow = 4.36 cfs @ 12.11 hrs, Volume= 15,475 cf, Atten= 0%, Lag= 0.2 min

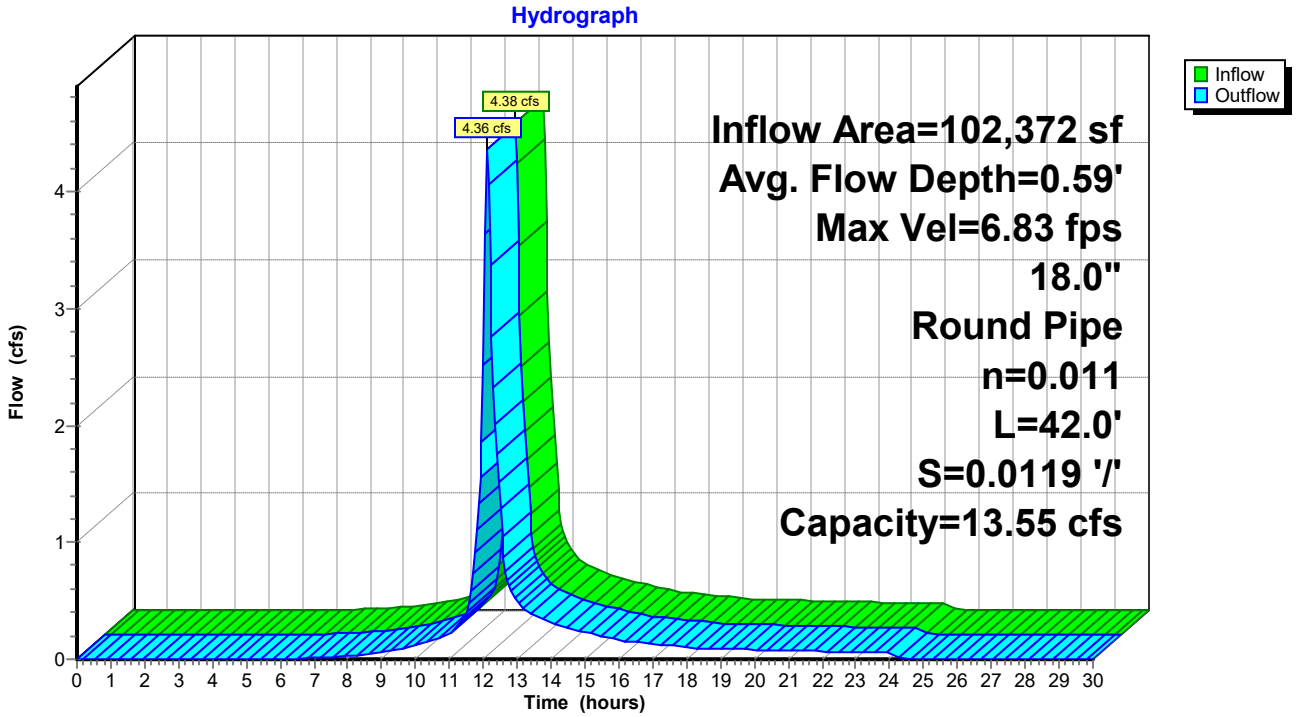
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.83 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.24 fps, Avg. Travel Time= 0.3 min

Peak Storage= 27 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.59'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.55 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 42.0' Slope= 0.0119 '/'
Inlet Invert= 346.70', Outlet Invert= 346.20'



Reach DMH-S2: TO DMH-S3



Stage-Discharge for Reach DMH-S2: TO DMH-S3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.70	0.00	0.00
346.71	0.45	0.00
346.72	0.81	0.00
346.73	1.08	0.01
346.74	1.30	0.02
346.75	1.51	0.03
346.76	1.70	0.04
346.77	1.88	0.06
346.78	2.05	0.08
346.79	2.22	0.10
346.80	2.37	0.12
346.81	2.52	0.15
346.82	2.67	0.18
346.83	2.81	0.21
346.84	2.94	0.25
346.85	3.07	0.28
346.86	3.20	0.32
346.87	3.33	0.37
346.88	3.45	0.41
346.89	3.57	0.46
346.90	3.68	0.52
346.91	3.80	0.57
346.92	3.91	0.63
346.93	4.01	0.69
346.94	4.12	0.75
346.95	4.22	0.82
346.96	4.33	0.89
346.97	4.43	0.96
346.98	4.52	1.03
346.99	4.62	1.11
347.00	4.71	1.19
347.01	4.81	1.27
347.02	4.90	1.35
347.03	4.99	1.44
347.04	5.07	1.53
347.05	5.16	1.62
347.06	5.25	1.71
347.07	5.33	1.81
347.08	5.41	1.91
347.09	5.49	2.01
347.10	5.57	2.11
347.11	5.65	2.21
347.12	5.73	2.32
347.13	5.80	2.43
347.14	5.88	2.54
347.15	5.95	2.65
347.16	6.02	2.77
347.17	6.09	2.89
347.18	6.16	3.00
347.19	6.23	3.12
347.20	6.30	3.25
347.21	6.36	3.37
347.22	6.43	3.50
347.23	6.49	3.63
347.24	6.56	3.76
347.25	6.62	3.89
347.26	6.68	4.02
347.27	6.74	4.15
347.28	6.80	4.29
347.29	6.86	4.43
347.30	6.92	4.56
347.31	6.97	4.70
347.32	7.03	4.85
347.33	7.08	4.99
347.34	7.13	5.13
347.35	7.19	5.28
347.36	7.24	5.42
347.37	7.29	5.57
347.38	7.34	5.72
347.39	7.39	5.86
347.40	7.44	6.01
347.41	7.48	6.16
347.42	7.53	6.32
347.43	7.58	6.47
347.44	7.62	6.62
347.45	7.66	6.77
347.46	7.71	6.93
347.47	7.75	7.08
347.48	7.79	7.23
347.49	7.83	7.39
347.50	7.87	7.54
347.51	7.91	7.70
347.52	7.95	7.86
347.53	7.98	8.01
347.54	8.02	8.17
347.55	8.06	8.32
347.56	8.09	8.48
347.57	8.12	8.63
347.58	8.16	8.79
347.59	8.19	8.95
347.60	8.22	9.10
347.61	8.25	9.25
347.62	8.28	9.41
347.63	8.31	9.56
347.64	8.34	9.72
347.65	8.36	9.87
347.66	8.39	10.02
347.67	8.41	10.17
347.68	8.44	10.32
347.69	8.46	10.47
347.70	8.48	10.62
347.71	8.51	10.76
347.72	8.53	10.91
347.73	8.55	11.05
347.74	8.56	11.20
347.75	8.58	11.34
347.76	8.60	11.48
347.77	8.62	11.62
347.78	8.63	11.76
347.79	8.65	11.89
347.80	8.66	12.03
347.81	8.67	12.16
347.82	8.68	12.29
347.83	8.69	12.41
347.84	8.70	12.54
347.85	8.71	12.66
347.86	8.72	12.78
347.87	8.72	12.90
347.88	8.73	13.02
347.89	8.73	13.13
347.90	8.74	13.24
347.91	8.74	13.35
347.92	**8.74**	13.45
347.93	8.74	13.55
347.94	8.74	13.65
347.95	8.73	13.74
347.96	8.73	13.83
347.97	8.72	13.92
347.98	8.71	14.00
347.99	8.71	14.07
348.00	8.69	14.15
348.01	8.68	14.21
348.02	8.67	14.28
348.03	8.65	14.34
348.04	8.64	14.39
348.05	8.62	14.44
348.06	8.60	14.48
348.07	8.57	14.51
348.08	8.55	14.54
348.09	8.52	14.55
348.10	8.49	14.57
348.11	8.45	**14.57**
348.12	8.41	14.56
348.13	8.37	14.54
348.14	8.32	14.51
348.15	8.27	14.46
348.16	8.21	14.39
348.17	8.14	14.31
348.18	8.05	14.18
348.19	7.89	13.92
348.20	7.66	13.55

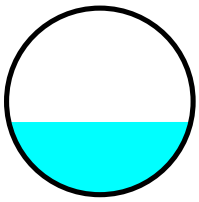
Summary for Reach DMH-S3: TO FE-S1

Inflow Area = 102,372 sf, 80.49% Impervious, Inflow Depth = 1.81" for 2-Year event
Inflow = 4.36 cfs @ 12.11 hrs, Volume= 15,475 cf
Outflow = 4.36 cfs @ 12.11 hrs, Volume= 15,475 cf, Atten= 0%, Lag= 0.1 min

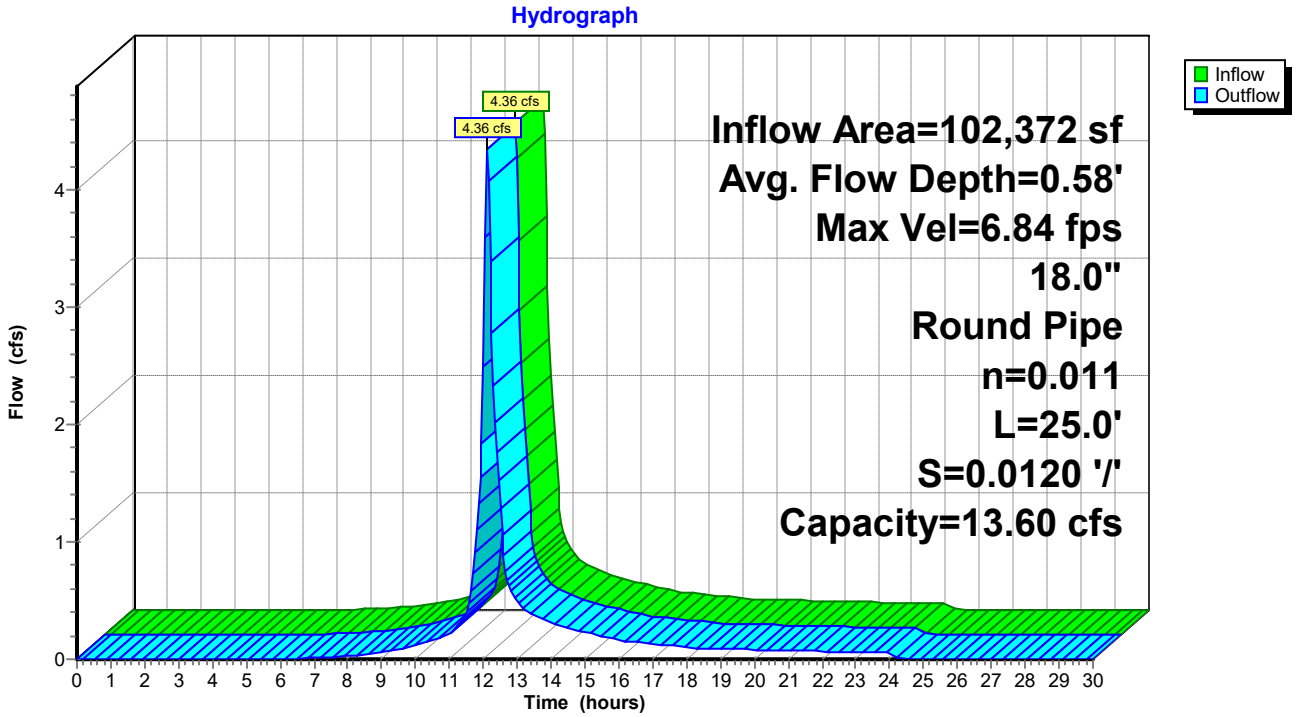
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.84 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.24 fps, Avg. Travel Time= 0.2 min

Peak Storage= 16 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.58'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.60 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 25.0' Slope= 0.0120 '/'
Inlet Invert= 346.00', Outlet Invert= 345.70'



Reach DMH-S3: TO FE-S1



Stage-Discharge for Reach DMH-S3: TO FE-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.00	0.00	0.00
346.01	0.46	0.00
346.02	0.82	0.00
346.03	1.08	0.01
346.04	1.30	0.02
346.05	1.51	0.03
346.06	1.71	0.04
346.07	1.89	0.06
346.08	2.06	0.08
346.09	2.23	0.10
346.10	2.38	0.12
346.11	2.53	0.15
346.12	2.68	0.18
346.13	2.82	0.21
346.14	2.95	0.25
346.15	3.09	0.28
346.16	3.21	0.33
346.17	3.34	0.37
346.18	3.46	0.42
346.19	3.58	0.47
346.20	3.70	0.52
346.21	3.81	0.57
346.22	3.92	0.63
346.23	4.03	0.69
346.24	4.14	0.76
346.25	4.24	0.82
346.26	4.34	0.89
346.27	4.44	0.96
346.28	4.54	1.04
346.29	4.64	1.11
346.30	4.73	1.19
346.31	4.83	1.27
346.32	4.92	1.36
346.33	5.01	1.44
346.34	5.09	1.53
346.35	5.18	1.62
346.36	5.27	1.72
346.37	5.35	1.81
346.38	5.43	1.91
346.39	5.51	2.01
346.40	5.59	2.12
346.41	5.67	2.22
346.42	5.75	2.33
346.43	5.82	2.44
346.44	5.90	2.55
346.45	5.97	2.66
346.46	6.04	2.78
346.47	6.12	2.90
346.48	6.19	3.02
346.49	6.25	3.14
346.50	6.32	3.26
346.51	6.39	3.39
346.52	6.45	3.51
346.53	6.52	3.64
346.54	6.58	3.77
346.55	6.64	3.90
346.56	6.71	4.04
346.57	6.77	4.17
346.58	6.83	4.31
346.59	6.88	4.44
346.60	6.94	4.58
346.61	7.00	4.72
346.62	7.05	4.87
346.63	7.11	5.01
346.64	7.16	5.15
346.65	7.22	5.30
346.66	7.27	5.44
346.67	7.32	5.59
346.68	7.37	5.74
346.69	7.42	5.89
346.70	7.47	6.04
346.71	7.51	6.19
346.72	7.56	6.34
346.73	7.61	6.49
346.74	7.65	6.65
346.75	7.70	6.80
346.76	7.74	6.95
346.77	7.78	7.11
346.78	7.82	7.26
346.79	7.86	7.42
346.80	7.90	7.57
346.81	7.94	7.73
346.82	7.98	7.89
346.83	8.02	8.04
346.84	8.05	8.20
346.85	8.09	8.36
346.86	8.12	8.51
346.87	8.16	8.67
346.88	8.19	8.82
346.89	8.22	8.98
346.90	8.25	9.14
346.91	8.28	9.29
346.92	8.31	9.45
346.93	8.34	9.60
346.94	8.37	9.75
346.95	8.40	9.91
346.96	8.42	10.06
346.97	8.45	10.21
346.98	8.47	10.36
346.99	8.50	10.51
347.00	8.52	10.66
347.01	8.54	10.81
347.02	8.56	10.95
347.03	8.58	11.10
347.04	8.60	11.24
347.05	8.62	11.39
347.06	8.63	11.53
347.07	8.65	11.67
347.08	8.67	11.80
347.09	8.68	11.94
347.10	8.69	12.07
347.11	8.71	12.21
347.12	8.72	12.34
347.13	8.73	12.46
347.14	8.74	12.59
347.15	8.75	12.71
347.16	8.75	12.83
347.17	8.76	12.95
347.18	8.76	13.07
347.19	8.77	13.18
347.20	8.77	13.29
347.21	8.77	13.40
347.22	**8.77**	13.50
347.23	8.77	13.60
347.24	8.77	13.70
347.25	8.77	13.79
347.26	8.76	13.89
347.27	8.76	13.97
347.28	8.75	14.05
347.29	8.74	14.13
347.30	8.73	14.20
347.31	8.72	14.27
347.32	8.70	14.34
347.33	8.69	14.39
347.34	8.67	14.45
347.35	8.65	14.49
347.36	8.63	14.53
347.37	8.61	14.57
347.38	8.58	14.60
347.39	8.55	14.61
347.40	8.52	14.62
347.41	8.49	**14.63**
347.42	8.45	14.62
347.43	8.40	14.60
347.44	8.36	14.57
347.45	8.30	14.52
347.46	8.24	14.45
347.47	8.17	14.37
347.48	8.08	14.24
347.49	7.92	13.98
347.50	7.70	13.60

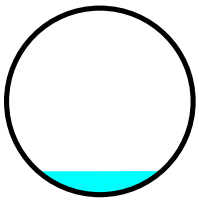
Summary for Reach DMH1: TO DMH#2

Inflow Area = 3,582 sf, 82.83% Impervious, Inflow Depth = 1.82" for 2-Year event
Inflow = 0.17 cfs @ 12.09 hrs, Volume= 543 cf
Outflow = 0.17 cfs @ 12.10 hrs, Volume= 543 cf, Atten= 1%, Lag= 0.6 min

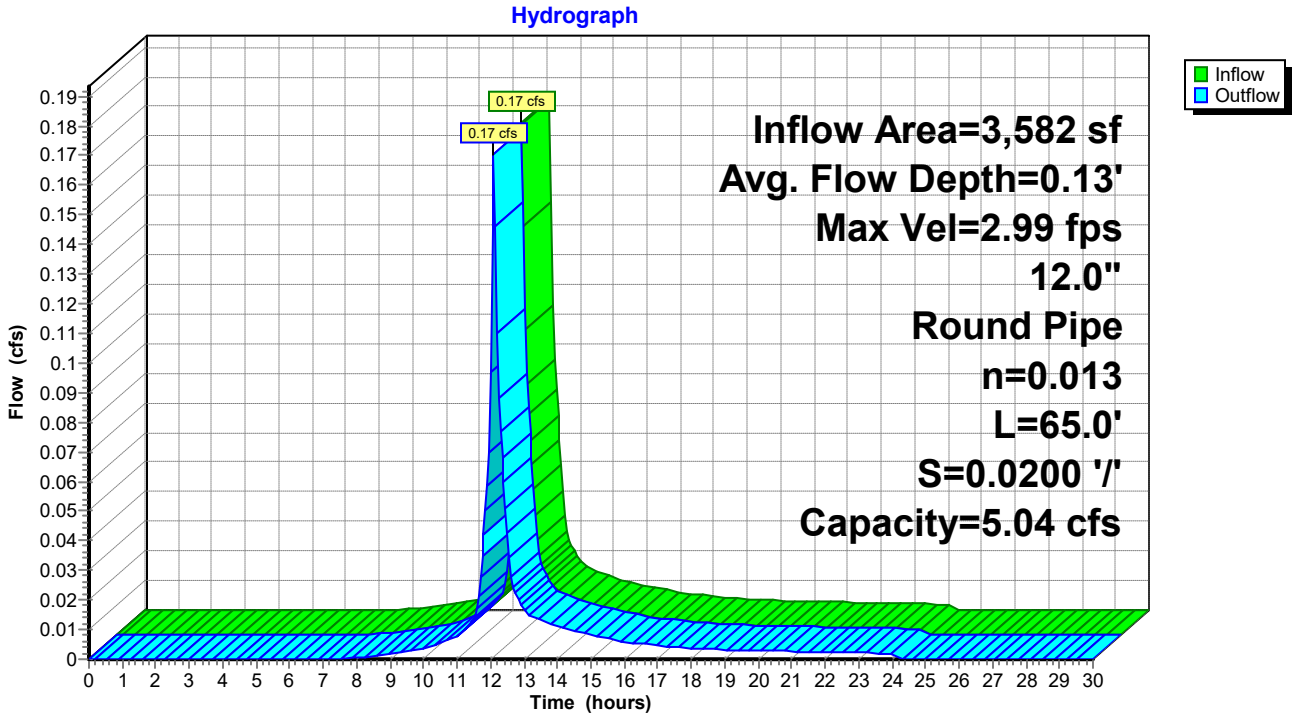
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.99 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.04 fps, Avg. Travel Time= 1.0 min

Peak Storage= 4 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.13'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.04 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 65.0' Slope= 0.0200 '/'
Inlet Invert= 354.60', Outlet Invert= 353.30'



Reach DMH1: TO DMH#2



Stage-Discharge for Reach DMH1: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.60	0.00	0.00
354.61	0.57	0.00
354.62	0.90	0.00
354.63	1.18	0.01
354.64	1.42	0.02
354.65	1.65	0.02
354.66	1.86	0.04
354.67	2.05	0.05
354.68	2.23	0.07
354.69	2.41	0.08
354.70	2.57	0.11
354.71	2.73	0.13
354.72	2.89	0.15
354.73	3.03	0.18
354.74	3.18	0.21
354.75	3.32	0.24
354.76	3.45	0.28
354.77	3.58	0.32
354.78	3.70	0.36
354.79	3.83	0.40
354.80	3.95	0.44
354.81	4.06	0.49
354.82	4.17	0.53
354.83	4.28	0.58
354.84	4.39	0.64
354.85	4.50	0.69
354.86	4.60	0.75
354.87	4.70	0.80
354.88	4.79	0.86
354.89	4.89	0.92
354.90	4.98	0.99
354.91	5.07	1.05
354.92	5.16	1.12
354.93	5.24	1.19
354.94	5.33	1.25
354.95	5.41	1.32
354.96	5.49	1.40
354.97	5.57	1.47
354.98	5.64	1.54
354.99	5.72	1.62
355.00	5.79	1.70
355.01	5.86	1.78
355.02	5.93	1.86
355.03	5.99	1.94
355.04	6.06	2.02
355.05	6.12	2.10
355.06	6.18	2.18
355.07	6.24	2.27
355.08	6.30	2.35
355.09	6.36	2.43
355.10	6.42	2.52
355.11	6.47	2.61
355.12	6.52	2.69
355.13	6.57	2.78
355.14	6.62	2.86
355.15	6.67	2.95
355.16	6.71	3.04
355.17	6.76	3.13
355.18	6.80	3.21
355.19	6.84	3.30
355.20	6.88	3.39
355.21	6.92	3.47
355.22	6.95	3.56
355.23	6.99	3.64
355.24	7.02	3.73
355.25	7.05	3.81
355.26	7.08	3.89
355.27	7.11	3.98
355.28	7.14	4.06
355.29	7.16	4.14
355.30	7.18	4.22
355.31	7.20	4.30
355.32	7.22	4.37
355.33	7.24	4.45
355.34	7.26	4.52
355.35	7.27	4.59
355.36	7.28	4.66
355.37	7.29	4.73
355.38	7.30	4.80
355.39	7.31	4.86
355.40	7.31	4.93
355.41	**7.31**	4.98
355.42	7.31	5.04
355.43	7.31	5.09
355.44	7.30	5.14
355.45	7.30	5.19
355.46	7.29	5.24
355.47	7.27	5.28
355.48	7.26	5.31
355.49	7.24	5.34
355.50	7.21	5.37
355.51	7.19	5.39
355.52	7.15	5.41
355.53	7.12	5.42
355.54	7.07	**5.42**
355.55	7.02	5.41
355.56	6.97	5.40
355.57	6.90	5.37
355.58	6.81	5.32
355.59	6.70	5.25
355.60	6.42	5.04

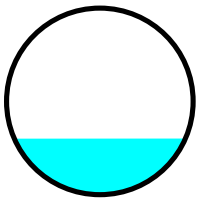
Summary for Reach DMH2: TO DMH#3

Inflow Area = 15,979 sf, 87.02% Impervious, Inflow Depth = 2.01" for 2-Year event
Inflow = 0.84 cfs @ 12.08 hrs, Volume= 2,682 cf
Outflow = 0.83 cfs @ 12.10 hrs, Volume= 2,682 cf, Atten= 1%, Lag= 0.8 min

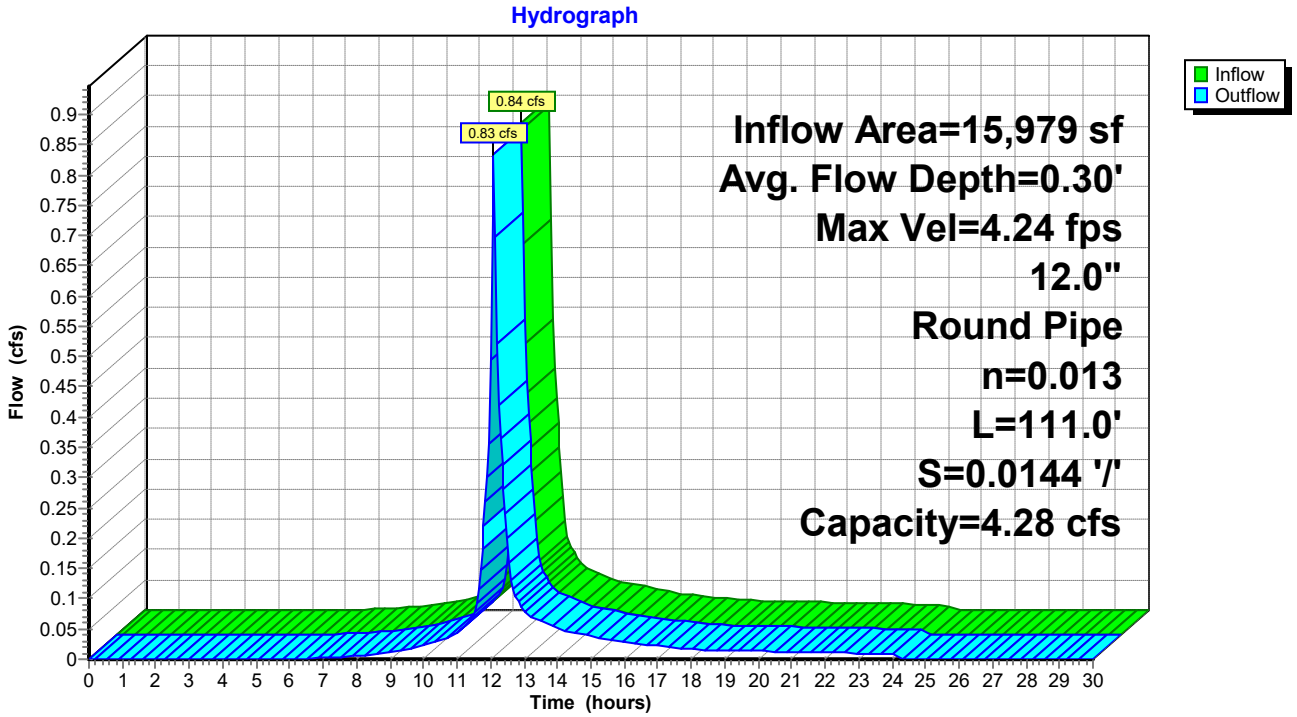
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.24 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.42 fps, Avg. Travel Time= 1.3 min

Peak Storage= 22 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.28 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 111.0' Slope= 0.0144 '/'
Inlet Invert= 353.20', Outlet Invert= 351.60'



Reach DMH2: TO DMH#3



Stage-Discharge for Reach DMH2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.20	0.00	0.00
353.21	0.48	0.00
353.22	0.77	0.00
353.23	1.00	0.01
353.24	1.21	0.01
353.25	1.40	0.02
353.26	1.57	0.03
353.27	1.74	0.04
353.28	1.90	0.06
353.29	2.04	0.07
353.30	2.18	0.09
353.31	2.32	0.11
353.32	2.45	0.13
353.33	2.58	0.15
353.34	2.70	0.18
353.35	2.81	0.21
353.36	2.93	0.24
353.37	3.04	0.27
353.38	3.15	0.30
353.39	3.25	0.34
353.40	3.35	0.37
353.41	3.45	0.41
353.42	3.54	0.45
353.43	3.64	0.50
353.44	3.73	0.54
353.45	3.82	0.59
353.46	3.90	0.63
353.47	3.99	0.68
353.48	4.07	0.73
353.49	4.15	0.78
353.50	4.23	0.84
353.51	4.30	0.89
353.52	4.38	0.95
353.53	4.45	1.01
353.54	4.52	1.06
353.55	4.59	1.12
353.56	4.66	1.19
353.57	4.72	1.25
353.58	4.79	1.31
353.59	4.85	1.38
353.60	4.91	1.44
353.61	4.97	1.51
353.62	5.03	1.58
353.63	5.09	1.64
353.64	5.14	1.71
353.65	5.20	1.78
353.66	5.25	1.85
353.67	5.30	1.92
353.68	5.35	1.99
353.69	5.40	2.07
353.70	5.45	2.14
353.71	5.49	2.21
353.72	5.54	2.28
353.73	5.58	2.36
353.74	5.62	2.43
353.75	5.66	2.51
353.76	5.70	2.58
353.77	5.74	2.65
353.78	5.77	2.73
353.79	5.81	2.80
353.80	5.84	2.87
353.81	5.87	2.95
353.82	5.90	3.02
353.83	5.93	3.09
353.84	5.96	3.16
353.85	5.99	3.24
353.86	6.01	3.31
353.87	6.04	3.38
353.88	6.06	3.45
353.89	6.08	3.51
353.90	6.10	3.58
353.91	6.12	3.65
353.92	6.13	3.71
353.93	6.15	3.78
353.94	6.16	3.84
353.95	6.17	3.90
353.96	6.18	3.96
353.97	6.19	4.02
353.98	6.20	4.07
353.99	6.20	4.13
354.00	6.21	4.18
354.01	**6.21**	4.23
354.02	6.21	4.28
354.03	6.21	4.32
354.04	6.20	4.37
354.05	6.19	4.41
354.06	6.19	4.44
354.07	6.17	4.48
354.08	6.16	4.51
354.09	6.14	4.54
354.10	6.12	4.56
354.11	6.10	4.58
354.12	6.07	4.59
354.13	6.04	4.60
354.14	6.01	**4.60**
354.15	5.96	4.60
354.16	5.91	4.58
354.17	5.86	4.56
354.18	5.78	4.52
354.19	5.68	4.46
354.20	5.45	4.28

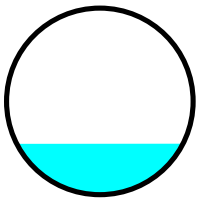
Summary for Reach DMH21: TO DMH#22

Inflow Area = 24,843 sf, 51.80% Impervious, Inflow Depth = 1.35" for 2-Year event
Inflow = 0.83 cfs @ 12.09 hrs, Volume= 2,798 cf
Outflow = 0.81 cfs @ 12.11 hrs, Volume= 2,798 cf, Atten= 2%, Lag= 1.0 min

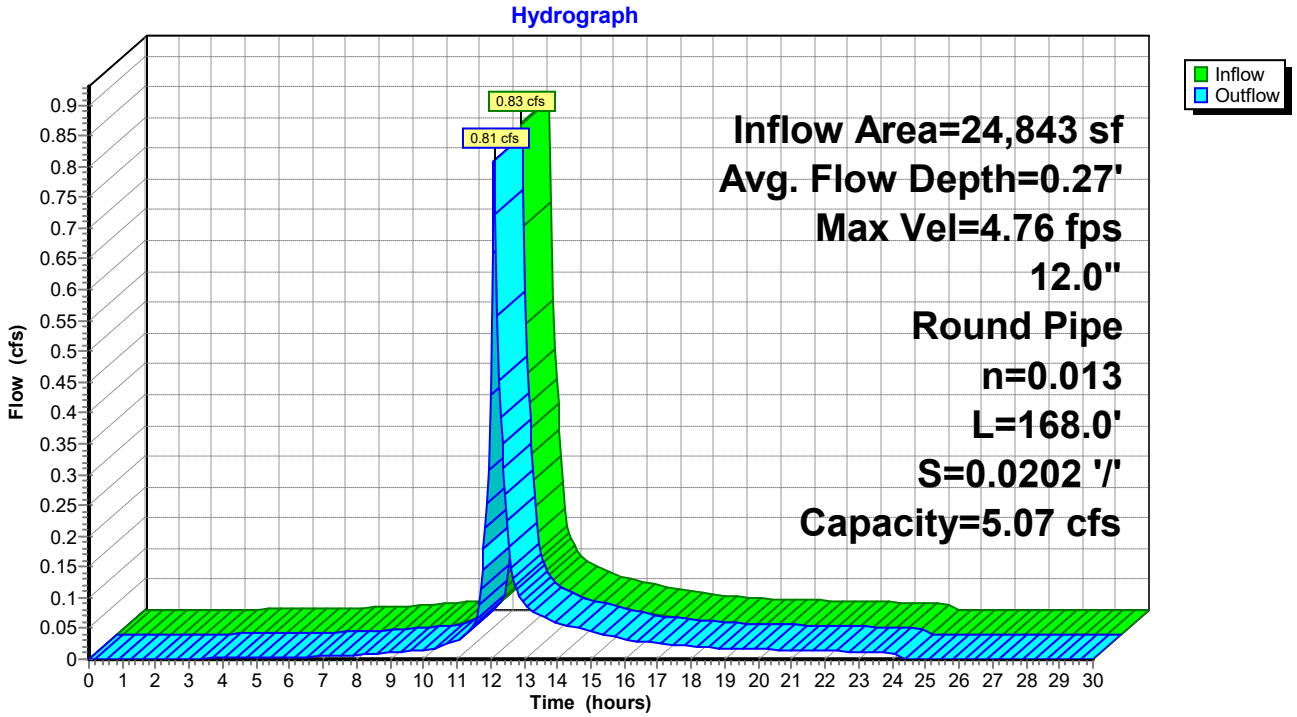
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.76 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.49 fps, Avg. Travel Time= 1.9 min

Peak Storage= 29 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.27'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.07 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 168.0' Slope= 0.0202 '/'
Inlet Invert= 345.20', Outlet Invert= 341.80'



Reach DMH21: TO DMH#22



Stage-Discharge for Reach DMH21: TO DMH#22

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
345.20	0.00	0.00
345.21	0.57	0.00
345.22	0.91	0.00
345.23	1.19	0.01
345.24	1.43	0.02
345.25	1.66	0.02
345.26	1.87	0.04
345.27	2.06	0.05
345.28	2.25	0.07
345.29	2.42	0.08
345.30	2.59	0.11
345.31	2.75	0.13
345.32	2.90	0.16
345.33	3.05	0.18
345.34	3.20	0.21
345.35	3.34	0.25
345.36	3.47	0.28
345.37	3.60	0.32
345.38	3.73	0.36
345.39	3.85	0.40
345.40	3.97	0.44
345.41	4.09	0.49
345.42	4.20	0.54
345.43	4.31	0.59
345.44	4.42	0.64
345.45	4.52	0.69
345.46	4.62	0.75
345.47	4.72	0.81
345.48	4.82	0.87
345.49	4.92	0.93
345.50	5.01	0.99
345.51	5.10	1.06
345.52	5.19	1.12
345.53	5.27	1.19
345.54	5.36	1.26
345.55	5.44	1.33
345.56	5.52	1.41
345.57	5.60	1.48
345.58	5.67	1.55
345.59	5.75	1.63
345.60	5.82	1.71
345.61	5.89	1.79
345.62	5.96	1.87
345.63	6.03	1.95
345.64	6.10	2.03
345.65	6.16	2.11
345.66	6.22	2.19
345.67	6.28	2.28
345.68	6.34	2.36
345.69	6.40	2.45
345.70	6.45	2.53
345.71	6.51	2.62
345.72	6.56	2.71
345.73	6.61	2.79
345.74	6.66	2.88
345.75	6.71	2.97
345.76	6.75	3.06
345.77	6.80	3.14
345.78	6.84	3.23
345.79	6.88	3.32
345.80	6.92	3.41
345.81	6.96	3.49
345.82	6.99	3.58
345.83	7.03	3.66
345.84	7.06	3.75
345.85	7.09	3.83
345.86	7.12	3.92
345.87	7.15	4.00
345.88	7.18	4.08
345.89	7.20	4.16
345.90	7.23	4.24
345.91	7.25	4.32
345.92	7.27	4.40
345.93	7.28	4.48
345.94	7.30	4.55
345.95	7.31	4.62
345.96	7.33	4.69
345.97	7.34	4.76
345.98	7.35	4.83
345.99	7.35	4.89
346.00	7.36	4.95
346.01	**7.36**	5.01
346.02	7.36	5.07
346.03	7.35	5.12
346.04	7.35	5.18
346.05	7.34	5.22
346.06	7.33	5.27
346.07	7.32	5.31
346.08	7.30	5.34
346.09	7.28	5.37
346.10	7.26	5.40
346.11	7.23	5.42
346.12	7.20	5.44
346.13	7.16	5.45
346.14	7.12	**5.45**
346.15	7.07	5.45
346.16	7.01	5.43
346.17	6.94	5.40
346.18	6.85	5.36
346.19	6.74	5.28
346.20	6.45	5.07

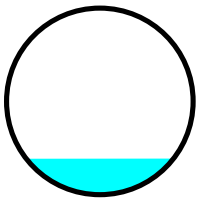
Summary for Reach DMH22: TO DMH#15

Inflow Area = 24,843 sf, 51.80% Impervious, Inflow Depth = 1.35" for 2-Year event
Inflow = 0.81 cfs @ 12.11 hrs, Volume= 2,798 cf
Outflow = 0.81 cfs @ 12.11 hrs, Volume= 2,798 cf, Atten= 0%, Lag= 0.0 min

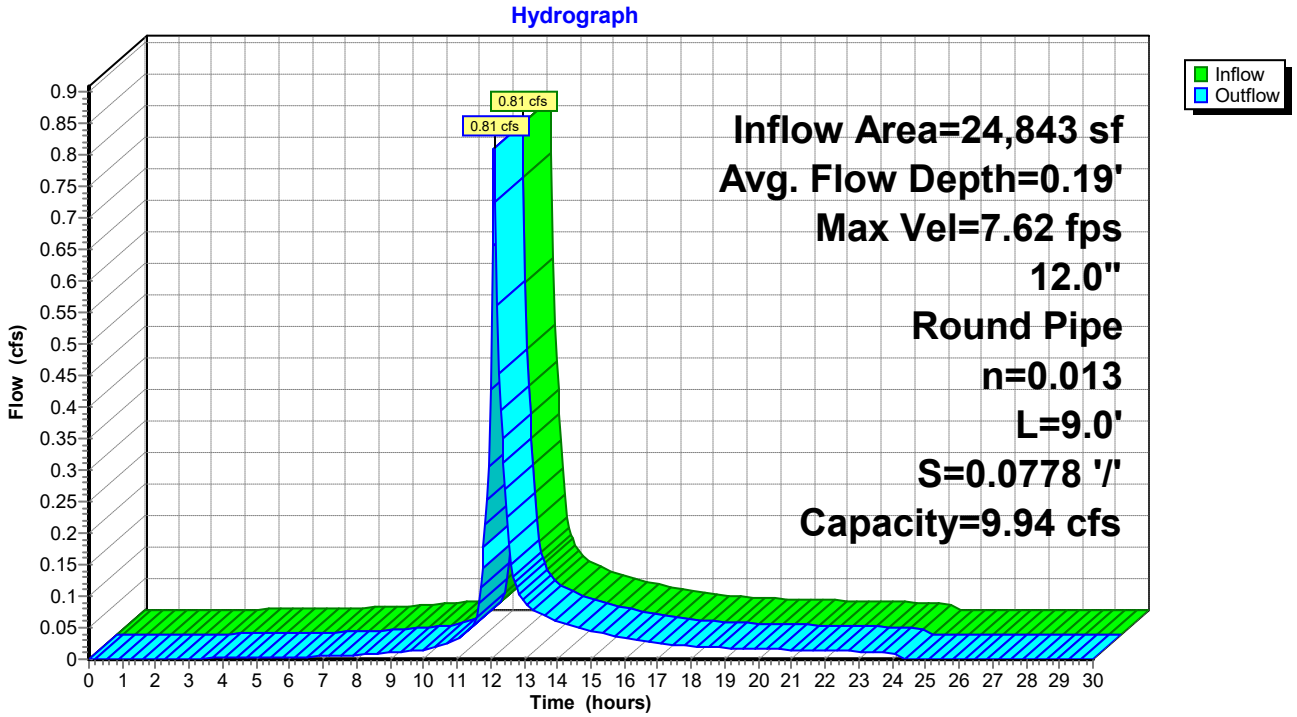
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.62 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.41 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.94 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 9.0' Slope= 0.0778 '/'
Inlet Invert= 341.70', Outlet Invert= 341.00'



Reach DMH22: TO DMH#15



Stage-Discharge for Reach DMH22: TO DMH#15

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
341.70	0.00	0.00
341.71	1.13	0.00
341.72	1.78	0.01
341.73	2.33	0.02
341.74	2.81	0.03
341.75	3.25	0.05
341.76	3.66	0.07
341.77	4.04	0.10
341.78	4.40	0.13
341.79	4.75	0.17
341.80	5.08	0.21
341.81	5.39	0.25
341.82	5.69	0.30
341.83	5.98	0.36
341.84	6.27	0.42
341.85	6.54	0.48
341.86	6.80	0.55
341.87	7.06	0.62
341.88	7.31	0.70
341.89	7.55	0.78
341.90	7.78	0.87
341.91	8.01	0.96
341.92	8.23	1.05
341.93	8.45	1.15
341.94	8.66	1.26
341.95	8.86	1.36
341.96	9.06	1.47
341.97	9.26	1.58
341.98	9.45	1.70
341.99	9.64	1.82
342.00	9.82	1.95
342.01	10.00	2.07
342.02	10.17	2.20
342.03	10.34	2.34
342.04	10.50	2.47
342.05	10.66	2.61
342.06	10.82	2.75
342.07	10.98	2.90
342.08	11.12	3.05
342.09	11.27	3.20
342.10	11.41	3.35
342.11	11.55	3.50
342.12	11.69	3.66
342.13	11.82	3.82
342.14	11.95	3.98
342.15	12.07	4.14
342.16	12.20	4.30
342.17	12.31	4.47
342.18	12.43	4.63
342.19	12.54	4.80
342.20	12.65	4.97
342.21	12.76	5.14
342.22	12.86	5.31
342.23	12.96	5.48
342.24	13.06	5.65
342.25	13.15	5.82
342.26	13.24	5.99
342.27	13.33	6.16
342.28	13.41	6.33
342.29	13.49	6.50
342.30	13.57	6.68
342.31	13.64	6.85
342.32	13.71	7.01
342.33	13.78	7.18
342.34	13.85	7.35
342.35	13.91	7.52
342.36	13.97	7.68
342.37	14.02	7.84
342.38	14.07	8.00
342.39	14.12	8.16
342.40	14.17	8.32
342.41	14.21	8.47
342.42	14.25	8.62
342.43	14.28	8.77
342.44	14.31	8.92
342.45	14.34	9.06
342.46	14.36	9.20
342.47	14.38	9.33
342.48	14.40	9.46
342.49	14.41	9.59
342.50	14.42	9.71
342.51	**14.42**	9.83
342.52	14.42	9.94
342.53	14.42	10.05
342.54	14.41	10.15
342.55	14.39	10.24
342.56	14.37	10.32
342.57	14.34	10.40
342.58	14.31	10.47
342.59	14.27	10.54
342.60	14.22	10.59
342.61	14.17	10.63
342.62	14.11	10.66
342.63	14.03	10.68
342.64	13.95	**10.69**
342.65	13.85	10.68
342.66	13.74	10.65
342.67	13.60	10.59
342.68	13.43	10.50
342.69	13.20	10.35
342.70	12.65	9.94

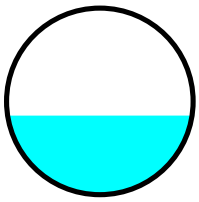
Summary for Reach DMH3: TO DMH#7

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 2.14" for 2-Year event
Inflow = 3.67 cfs @ 12.10 hrs, Volume= 12,042 cf
Outflow = 3.67 cfs @ 12.10 hrs, Volume= 12,042 cf, Atten= 0%, Lag= 0.0 min

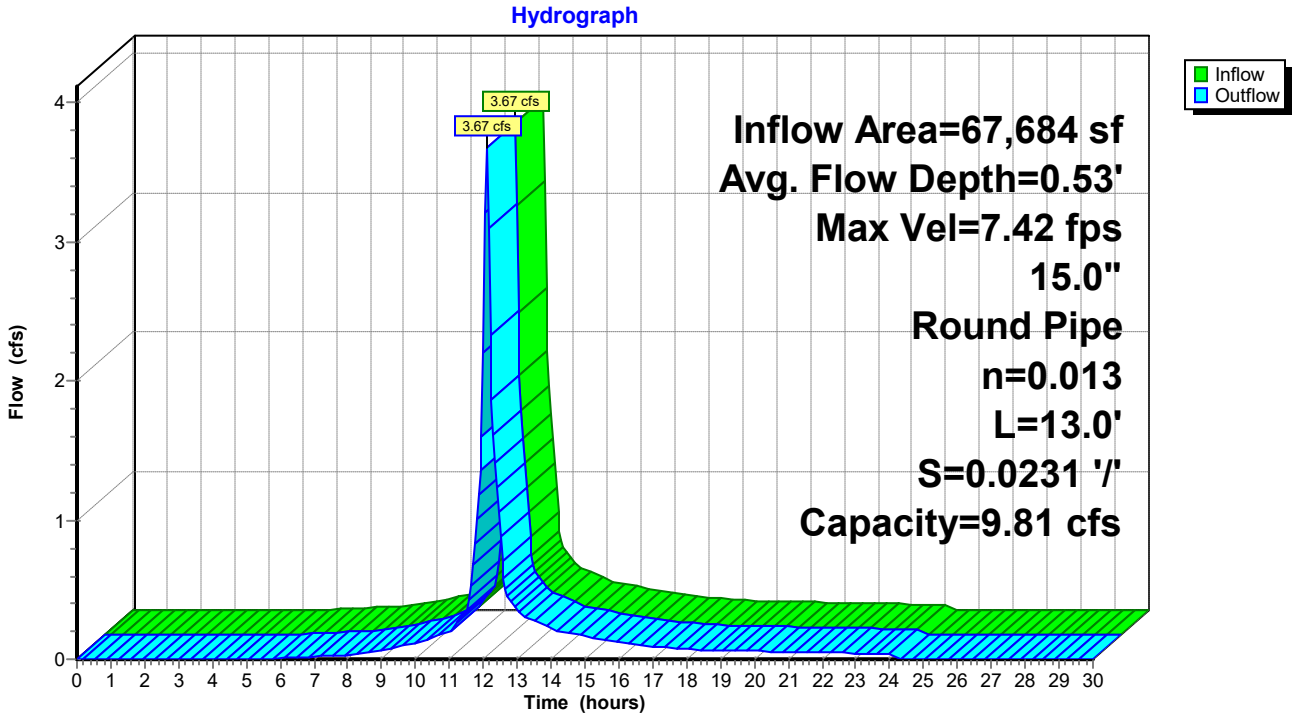
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.42 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.38 fps, Avg. Travel Time= 0.1 min

Peak Storage= 6 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.53'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.81 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 13.0' Slope= 0.0231 '/'
Inlet Invert= 351.50', Outlet Invert= 351.20'



Reach DMH3: TO DMH#7



Stage-Discharge for Reach DMH3: TO DMH#7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.50	0.00	0.00
351.51	0.57	0.00
351.52	0.96	0.00
351.53	1.26	0.01
351.54	1.53	0.02
351.55	1.78	0.03
351.56	2.00	0.04
351.57	2.21	0.06
351.58	2.41	0.08
351.59	2.60	0.10
351.60	2.78	0.13
351.61	2.96	0.16
351.62	3.12	0.19
351.63	3.29	0.22
351.64	3.45	0.26
351.65	3.60	0.30
351.66	3.75	0.34
351.67	3.89	0.39
351.68	4.03	0.44
351.69	4.17	0.49
351.70	4.30	0.54
351.71	4.43	0.60
351.72	4.55	0.66
351.73	4.68	0.73
351.74	4.80	0.79
351.75	4.92	0.86
351.76	5.03	0.93
351.77	5.15	1.00
351.78	5.26	1.08
351.79	5.37	1.16
351.80	5.47	1.24
351.81	5.58	1.32
351.82	5.68	1.41
351.83	5.78	1.50
351.84	5.88	1.59
351.85	5.97	1.68
351.86	6.07	1.78
351.87	6.16	1.87
351.88	6.25	1.97
351.89	6.34	2.07
351.90	6.43	2.18
351.91	6.51	2.28
351.92	6.60	2.39
351.93	6.68	2.50
351.94	6.76	2.61
351.95	6.84	2.72
351.96	6.92	2.83
351.97	6.99	2.95
351.98	7.07	3.07
351.99	7.14	3.19
352.00	7.21	3.31
352.01	7.28	3.43
352.02	7.35	3.55
352.03	7.42	3.68
352.04	7.49	3.80
352.05	7.55	3.93
352.06	7.62	4.06
352.07	7.68	4.18
352.08	7.74	4.31
352.09	7.80	4.44
352.10	7.86	4.58
352.11	7.91	4.71
352.12	7.97	4.84
352.13	8.02	4.97
352.14	8.08	5.11
352.15	8.13	5.24
352.16	8.18	5.38
352.17	8.23	5.51
352.18	8.28	5.65
352.19	8.32	5.78
352.20	8.37	5.92
352.21	8.41	6.05
352.22	8.45	6.19
352.23	8.50	6.32
352.24	8.54	6.46
352.25	8.58	6.59
352.26	8.61	6.73
352.27	8.65	6.86
352.28	8.68	6.99
352.29	8.72	7.13
352.30	8.75	7.26
352.31	8.78	7.39
352.32	8.81	7.52
352.33	8.84	7.65
352.34	8.87	7.78
352.35	8.90	7.90
352.36	8.92	8.03
352.37	8.94	8.15
352.38	8.96	8.28
352.39	8.99	8.40
352.40	9.00	8.52
352.41	9.02	8.64
352.42	9.04	8.75
352.43	9.05	8.86
352.44	9.07	8.98
352.45	9.08	9.09
352.46	9.09	9.19
352.47	9.10	9.30
352.48	9.10	9.40
352.49	9.11	9.50
352.50	9.11	9.59
352.51	9.12	9.68
352.52	**9.12**	9.77
352.53	9.11	9.86
352.54	9.11	9.94
352.55	9.11	10.02
352.56	9.10	10.09
352.57	9.09	10.16
352.58	9.08	10.23
352.59	9.06	10.29
352.60	9.04	10.34
352.61	9.02	10.39
352.62	9.00	10.44
352.63	8.98	10.48
352.64	8.95	10.51
352.65	8.92	10.53
352.66	8.88	10.55
352.67	8.84	**10.55**
352.68	8.79	10.55
352.69	8.74	10.54
352.70	8.68	10.51
352.71	8.61	10.47
352.72	8.53	10.41
352.73	8.43	10.31
352.74	8.28	10.14
352.75	8.00	9.81

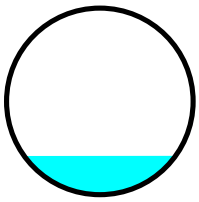
Summary for Reach DMH4: TO DMH5

Inflow Area = 5,916 sf, 84.47% Impervious, Inflow Depth = 1.90" for 2-Year event
Inflow = 0.30 cfs @ 12.08 hrs, Volume= 937 cf
Outflow = 0.29 cfs @ 12.10 hrs, Volume= 937 cf, Atten= 2%, Lag= 0.9 min

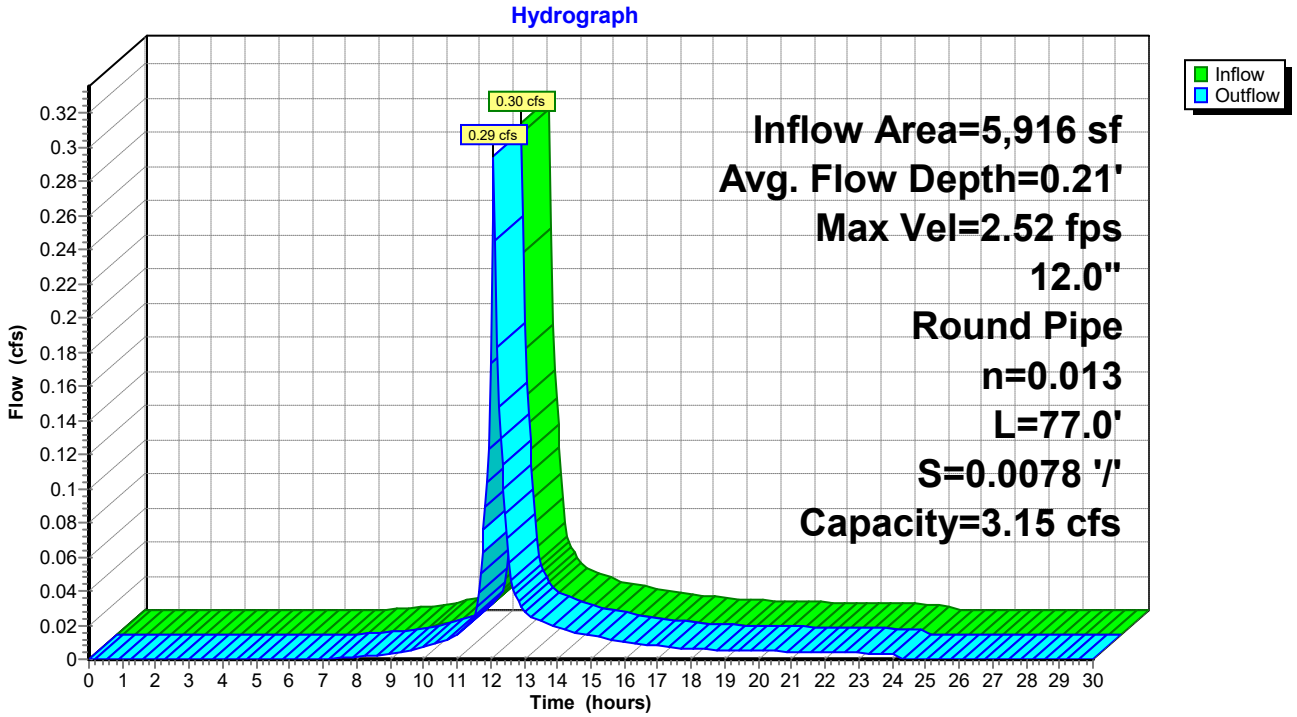
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.52 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.86 fps, Avg. Travel Time= 1.5 min

Peak Storage= 9 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.15 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 77.0' Slope= 0.0078 '/'
Inlet Invert= 355.20', Outlet Invert= 354.60'



Reach DMH4: TO DMH5



Stage-Discharge for Reach DMH4: TO DMH5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.20	0.00	0.00
355.21	0.36	0.00
355.22	0.56	0.00
355.23	0.74	0.01
355.24	0.89	0.01
355.25	1.03	0.02
355.26	1.16	0.02
355.27	1.28	0.03
355.28	1.39	0.04
355.29	1.50	0.05
355.30	1.61	0.07
355.31	1.71	0.08
355.32	1.80	0.10
355.33	1.89	0.11
355.34	1.98	0.13
355.35	2.07	0.15
355.36	2.15	0.17
355.37	2.23	0.20
355.38	2.31	0.22
355.39	2.39	0.25
355.40	2.46	0.28
355.41	2.54	0.30
355.42	2.61	0.33
355.43	2.67	0.36
355.44	2.74	0.40
355.45	2.81	0.43
355.46	2.87	0.47
355.47	2.93	0.50
355.48	2.99	0.54
355.49	3.05	0.58
355.50	3.11	0.62
355.51	3.16	0.66
355.52	3.22	0.70
355.53	3.27	0.74
355.54	3.32	0.78
355.55	3.38	0.83
355.56	3.43	0.87
355.57	3.47	0.92
355.58	3.52	0.96
355.59	3.57	1.01
355.60	3.61	1.06
355.61	3.66	1.11
355.62	3.70	1.16
355.63	3.74	1.21
355.64	3.78	1.26
355.65	3.82	1.31
355.66	3.86	1.36
355.67	3.90	1.41
355.68	3.93	1.47
355.69	3.97	1.52
355.70	4.00	1.57
355.71	4.04	1.63
355.72	4.07	1.68
355.73	4.10	1.73
355.74	4.13	1.79
355.75	4.16	1.84
355.76	4.19	1.90
355.77	4.22	1.95
355.78	4.24	2.00
355.79	4.27	2.06
355.80	4.29	2.11
355.81	4.32	2.17
355.82	4.34	2.22
355.83	4.36	2.27
355.84	4.38	2.33
355.85	4.40	2.38
355.86	4.42	2.43
355.87	4.44	2.48
355.88	4.45	2.53
355.89	4.47	2.58
355.90	4.48	2.63
355.91	4.50	2.68
355.92	4.51	2.73
355.93	4.52	2.78
355.94	4.53	2.82
355.95	4.54	2.87
355.96	4.55	2.91
355.97	4.55	2.95
355.98	4.56	3.00
355.99	4.56	3.04
356.00	4.56	3.07
356.01	**4.57**	3.11
356.02	4.56	3.15
356.03	4.56	3.18
356.04	4.56	3.21
356.05	4.55	3.24
356.06	4.55	3.27
356.07	4.54	3.29
356.08	4.53	3.32
356.09	4.52	3.34
356.10	4.50	3.35
356.11	4.49	3.37
356.12	4.47	3.38
356.13	4.44	3.38
356.14	4.42	**3.38**
356.15	4.38	3.38
356.16	4.35	3.37
356.17	4.31	3.35
356.18	4.25	3.32
356.19	4.18	3.28
356.20	4.00	3.15

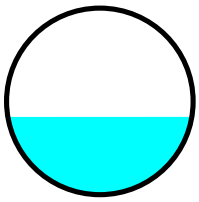
Summary for Reach DMH5: TO DMH-6

Inflow Area = 19,145 sf, 91.57% Impervious, Inflow Depth = 2.28" for 2-Year event
Inflow = 1.11 cfs @ 12.08 hrs, Volume= 3,637 cf
Outflow = 1.09 cfs @ 12.10 hrs, Volume= 3,637 cf, Atten= 2%, Lag= 0.9 min

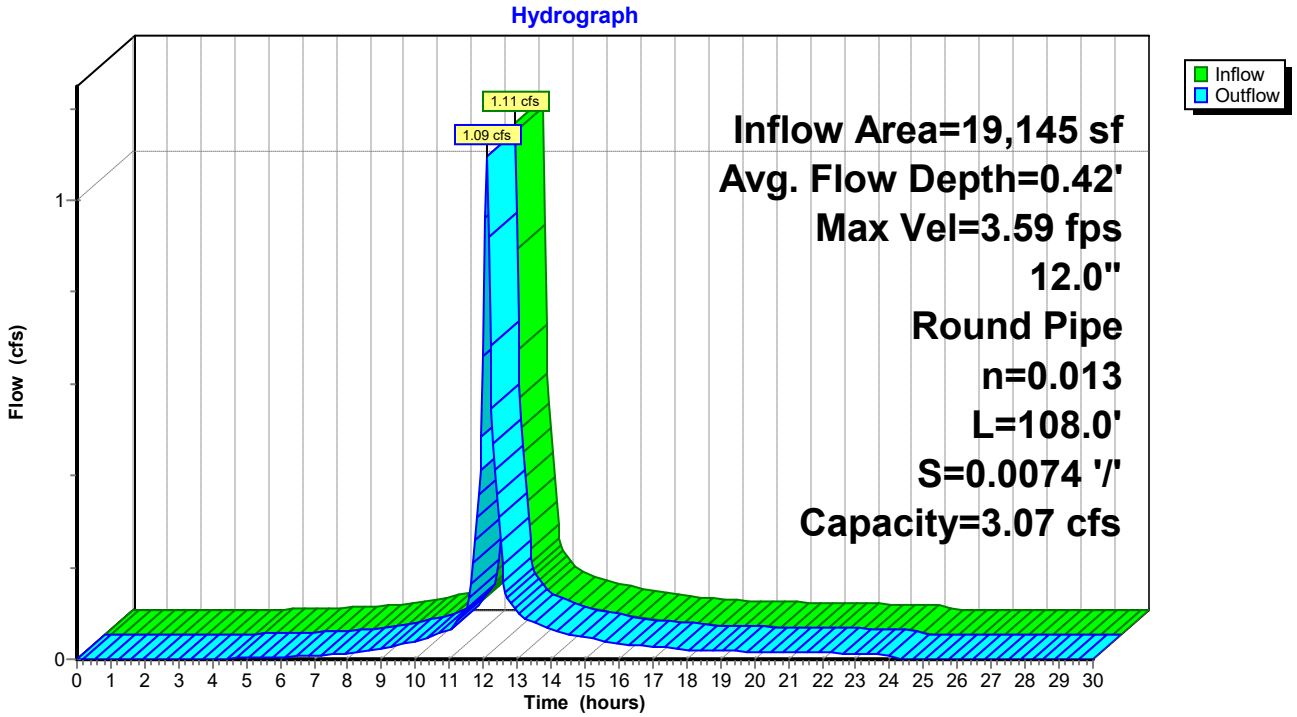
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.59 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.17 fps, Avg. Travel Time= 1.5 min

Peak Storage= 34 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.42'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.07 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 108.0' Slope= 0.0074 '/'
Inlet Invert= 354.10', Outlet Invert= 353.30'



Reach DMH5: TO DMH-6



Stage-Discharge for Reach DMH5: TO DMH-6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.10	0.00	0.00
354.11	0.35	0.00
354.12	0.55	0.00
354.13	0.72	0.00
354.14	0.87	0.01
354.15	1.00	0.01
354.16	1.13	0.02
354.17	1.25	0.03
354.18	1.36	0.04
354.19	1.46	0.05
354.20	1.57	0.06
354.21	1.66	0.08
354.22	1.76	0.09
354.23	1.85	0.11
354.24	1.93	0.13
354.25	2.02	0.15
354.26	2.10	0.17
354.27	2.18	0.19
354.28	2.25	0.22
354.29	2.33	0.24
354.30	2.40	0.27
354.31	2.47	0.30
354.32	2.54	0.33
354.33	2.61	0.36
354.34	2.67	0.39
354.35	2.74	0.42
354.36	2.80	0.45
354.37	2.86	0.49
354.38	2.92	0.53
354.39	2.97	0.56
354.40	3.03	0.60
354.41	3.08	0.64
354.42	3.14	0.68
354.43	3.19	0.72
354.44	3.24	0.76
354.45	3.29	0.81
354.46	3.34	0.85
354.47	3.39	0.89
354.48	3.43	0.94
354.49	3.48	0.99
354.50	3.52	1.03
354.51	3.57	1.08
354.52	3.61	1.13
354.53	3.65	1.18
354.54	3.69	1.23
354.55	3.73	1.28
354.56	3.76	1.33
354.57	3.80	1.38
354.58	3.84	1.43
354.59	3.87	1.48
354.60	3.90	1.53
354.61	3.94	1.59
354.62	3.97	1.64
354.63	4.00	1.69
354.64	4.03	1.74
354.65	4.06	1.80
354.66	4.09	1.85
354.67	4.11	1.90
354.68	4.14	1.95
354.69	4.16	2.01
354.70	4.19	2.06
354.71	4.21	2.11
354.72	4.23	2.16
354.73	4.25	2.22
354.74	4.27	2.27
354.75	4.29	2.32
354.76	4.31	2.37
354.77	4.33	2.42
354.78	4.34	2.47
354.79	4.36	2.52
354.80	4.37	2.57
354.81	4.38	2.61
354.82	4.40	2.66
354.83	4.41	2.71
354.84	4.42	2.75
354.85	4.43	2.80
354.86	4.43	2.84
354.87	4.44	2.88
354.88	4.44	2.92
354.89	4.45	2.96
354.90	4.45	3.00
354.91	**4.45**	3.03
354.92	4.45	3.07
354.93	4.45	3.10
354.94	4.45	3.13
354.95	4.44	3.16
354.96	4.43	3.19
354.97	4.43	3.21
354.98	4.42	3.23
354.99	4.40	3.25
355.00	4.39	3.27
355.01	4.37	3.28
355.02	4.35	3.29
355.03	4.33	3.30
355.04	4.31	**3.30**
355.05	4.28	3.29
355.06	4.24	3.29
355.07	4.20	3.27
355.08	4.15	3.24
355.09	4.07	3.20
355.10	3.90	3.07

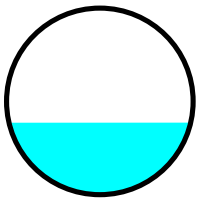
Summary for Reach DMH6: TO DMH#3

Inflow Area = 37,947 sf, 89.57% Impervious, Inflow Depth = 2.18" for 2-Year event
Inflow = 2.11 cfs @ 12.09 hrs, Volume= 6,882 cf
Outflow = 2.07 cfs @ 12.10 hrs, Volume= 6,882 cf, Atten= 2%, Lag= 0.9 min

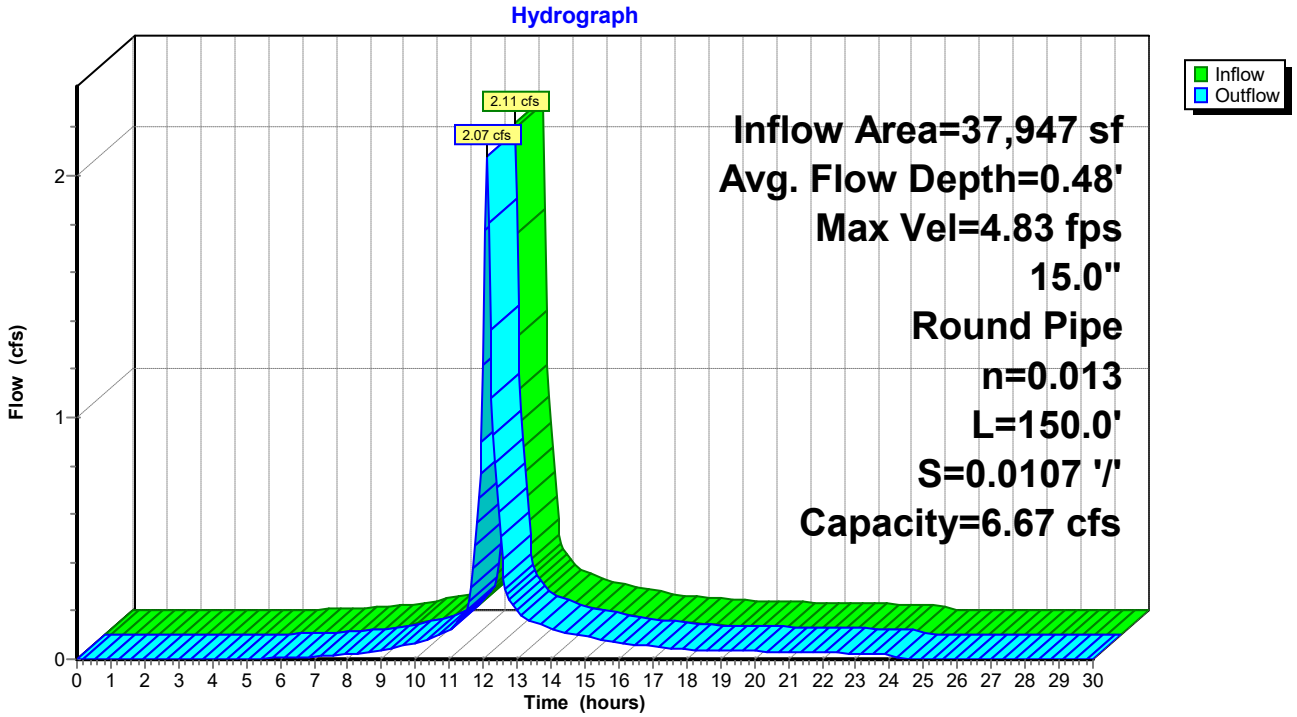
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.83 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 1.6 min

Peak Storage= 66 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.48'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.67 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 150.0' Slope= 0.0107 '/'
Inlet Invert= 353.20', Outlet Invert= 351.60'



Reach DMH6: TO DMH#3



Stage-Discharge for Reach DMH6: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.20	0.00	0.00
353.21	0.39	0.00
353.22	0.65	0.00
353.23	0.86	0.01
353.24	1.04	0.01
353.25	1.21	0.02
353.26	1.36	0.03
353.27	1.50	0.04
353.28	1.64	0.05
353.29	1.77	0.07
353.30	1.89	0.09
353.31	2.01	0.11
353.32	2.12	0.13
353.33	2.24	0.15
353.34	2.34	0.18
353.35	2.45	0.20
353.36	2.55	0.23
353.37	2.64	0.27
353.38	2.74	0.30
353.39	2.83	0.33
353.40	2.92	0.37
353.41	3.01	0.41
353.42	3.10	0.45
353.43	3.18	0.49
353.44	3.26	0.54
353.45	3.34	0.58
353.46	3.42	0.63
353.47	3.50	0.68
353.48	3.57	0.73
353.49	3.65	0.79
353.50	3.72	0.84
353.51	3.79	0.90
353.52	3.86	0.96
353.53	3.93	1.02
353.54	4.00	1.08
353.55	4.06	1.14
353.56	4.13	1.21
353.57	4.19	1.27
353.58	4.25	1.34
353.59	4.31	1.41
353.60	4.37	1.48
353.61	4.43	1.55
353.62	4.49	1.62
353.63	4.54	1.70
353.64	4.60	1.77
353.65	4.65	1.85
353.66	4.70	1.93
353.67	4.75	2.01
353.68	4.81	2.09
353.69	4.86	2.17
353.70	4.90	2.25
353.71	4.95	2.33
353.72	5.00	2.41
353.73	5.05	2.50
353.74	5.09	2.58
353.75	5.13	2.67
353.76	5.18	2.76
353.77	5.22	2.84
353.78	5.26	2.93
353.79	5.30	3.02
353.80	5.34	3.11
353.81	5.38	3.20
353.82	5.42	3.29
353.83	5.45	3.38
353.84	5.49	3.47
353.85	5.53	3.56
353.86	5.56	3.65
353.87	5.59	3.75
353.88	5.63	3.84
353.89	5.66	3.93
353.90	5.69	4.02
353.91	5.72	4.11
353.92	5.75	4.21
353.93	5.78	4.30
353.94	5.80	4.39
353.95	5.83	4.48
353.96	5.86	4.57
353.97	5.88	4.66
353.98	5.90	4.76
353.99	5.93	4.85
354.00	5.95	4.94
354.01	5.97	5.02
354.02	5.99	5.11
354.03	6.01	5.20
354.04	6.03	5.29
354.05	6.05	5.37
354.06	6.06	5.46
354.07	6.08	5.54
354.08	6.09	5.63
354.09	6.11	5.71
354.10	6.12	5.79
354.11	6.13	5.87
354.12	6.15	5.95
354.13	6.16	6.03
354.14	6.16	6.10
354.15	6.17	6.18
354.16	6.18	6.25
354.17	6.19	6.32
354.18	6.19	6.39
354.19	6.19	6.46
354.20	6.20	6.52
354.21	6.20	6.58
354.22	**6.20**	6.64
354.23	6.20	6.70
354.24	6.19	6.76
354.25	6.19	6.81
354.26	6.19	6.86
354.27	6.18	6.91
354.28	6.17	6.95
354.29	6.16	7.00
354.30	6.15	7.03
354.31	6.14	7.07
354.32	6.12	7.10
354.33	6.10	7.12
354.34	6.08	7.14
354.35	6.06	7.16
354.36	6.04	7.17
354.37	6.01	**7.18**
354.38	5.98	7.17
354.39	5.94	7.16
354.40	5.90	7.15
354.41	5.86	7.12
354.42	5.80	7.07
354.43	5.73	7.01
354.44	5.63	6.90
354.45	5.44	6.67

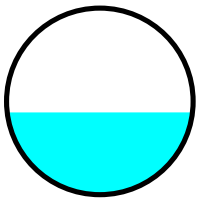
Summary for Reach DMH7: TO UGS

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 2.14" for 2-Year event
Inflow = 3.67 cfs @ 12.10 hrs, Volume= 12,042 cf
Outflow = 3.67 cfs @ 12.10 hrs, Volume= 12,042 cf, Atten= 0%, Lag= 0.0 min

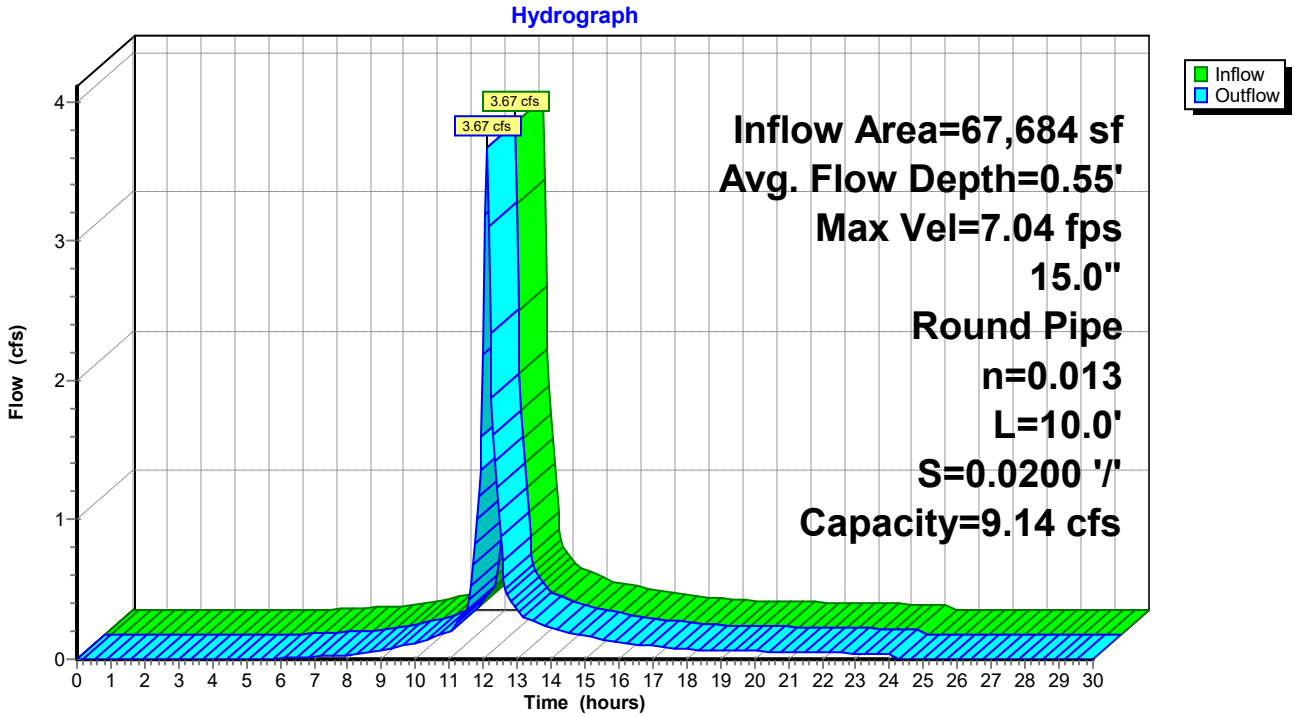
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.04 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.26 fps, Avg. Travel Time= 0.1 min

Peak Storage= 5 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.55'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.14 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 10.0' Slope= 0.0200 '/'
Inlet Invert= 351.00', Outlet Invert= 350.80'



Reach DMH7: TO UGS



Stage-Discharge for Reach DMH7: TO UGS

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.53	0.00
351.02	0.89	0.00
351.03	1.18	0.01
351.04	1.43	0.02
351.05	1.65	0.03
351.06	1.86	0.04
351.07	2.06	0.06
351.08	2.24	0.07
351.09	2.42	0.10
351.10	2.59	0.12
351.11	2.75	0.15
351.12	2.91	0.18
351.13	3.06	0.21
351.14	3.21	0.24
351.15	3.35	0.28
351.16	3.49	0.32
351.17	3.62	0.36
351.18	3.75	0.41
351.19	3.88	0.46
351.20	4.00	0.51
351.21	4.12	0.56
351.22	4.24	0.62
351.23	4.36	0.68
351.24	4.47	0.74
351.25	4.58	0.80
351.26	4.69	0.87
351.27	4.79	0.93
351.28	4.89	1.01
351.29	5.00	1.08
351.30	5.10	1.15
351.31	5.19	1.23
351.32	5.29	1.31
351.33	5.38	1.39
351.34	5.47	1.48
351.35	5.56	1.56
351.36	5.65	1.65
351.37	5.74	1.74
351.38	5.82	1.84
351.39	5.90	1.93
351.40	5.98	2.03
351.41	6.06	2.12
351.42	6.14	2.22
351.43	6.22	2.33
351.44	6.29	2.43
351.45	6.37	2.53
351.46	6.44	2.64
351.47	6.51	2.75
351.48	6.58	2.86
351.49	6.65	2.97
351.50	6.72	3.08
351.51	6.78	3.19
351.52	6.85	3.31
351.53	6.91	3.42
351.54	6.97	3.54
351.55	7.03	3.66
351.56	7.09	3.78
351.57	7.15	3.90
351.58	7.20	4.02
351.59	7.26	4.14
351.60	7.31	4.26
351.61	7.37	4.38
351.62	7.42	4.51
351.63	7.47	4.63
351.64	7.52	4.75
351.65	7.57	4.88
351.66	7.61	5.00
351.67	7.66	5.13
351.68	7.70	5.26
351.69	7.75	5.38
351.70	7.79	5.51
351.71	7.83	5.63
351.72	7.87	5.76
351.73	7.91	5.89
351.74	7.95	6.01
351.75	7.98	6.14
351.76	8.02	6.26
351.77	8.05	6.39
351.78	8.09	6.51
351.79	8.12	6.63
351.80	8.15	6.76
351.81	8.18	6.88
351.82	8.20	7.00
351.83	8.23	7.12
351.84	8.26	7.24
351.85	8.28	7.36
351.86	8.30	7.48
351.87	8.33	7.59
351.88	8.35	7.71
351.89	8.36	7.82
351.90	8.38	7.93
351.91	8.40	8.04
351.92	8.41	8.15
351.93	8.43	8.25
351.94	8.44	8.36
351.95	8.45	8.46
351.96	8.46	8.56
351.97	8.47	8.65
351.98	8.48	8.75
351.99	8.48	8.84
352.00	8.48	8.93
352.01	8.49	9.02
352.02	**8.49**	9.10
352.03	8.48	9.18
352.04	8.48	9.25
352.05	8.48	9.33
352.06	8.47	9.40
352.07	8.46	9.46
352.08	8.45	9.52
352.09	8.44	9.58
352.10	8.42	9.63
352.11	8.40	9.68
352.12	8.38	9.72
352.13	8.36	9.75
352.14	8.33	9.78
352.15	8.30	9.80
352.16	8.27	9.82
352.17	8.23	**9.83**
352.18	8.19	9.82
352.19	8.14	9.81
352.20	8.08	9.79
352.21	8.02	9.75
352.22	7.94	9.69
352.23	7.85	9.60
352.24	7.70	9.44
352.25	7.44	9.14

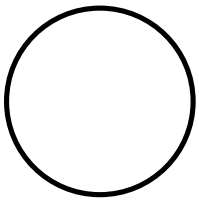
Summary for Reach DMH8: TO FE#B1

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

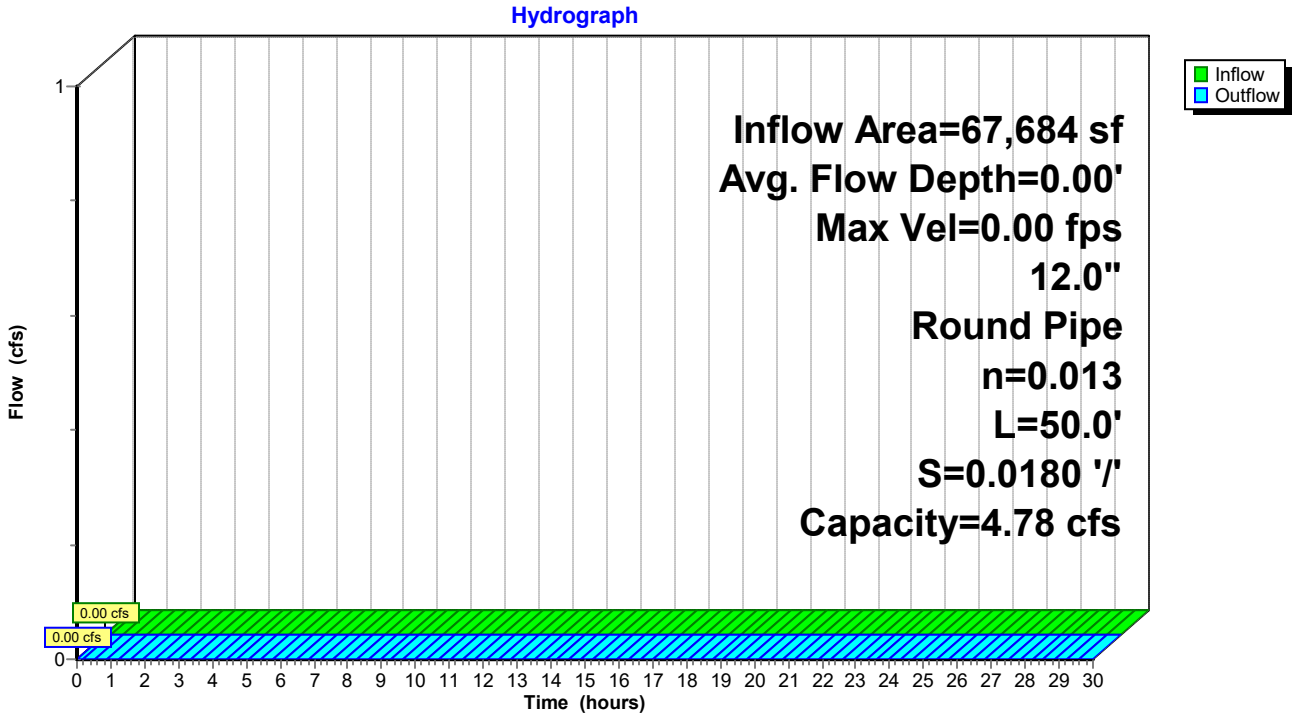
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.78 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 50.0' Slope= 0.0180 '/'
Inlet Invert= 349.90', Outlet Invert= 349.00'



Reach DMH8: TO FE#B1



Stage-Discharge for Reach DMH8: TO FE#B1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
349.90	0.00	0.00
349.91	0.54	0.00
349.92	0.86	0.00
349.93	1.12	0.01
349.94	1.35	0.01
349.95	1.56	0.02
349.96	1.76	0.03
349.97	1.94	0.05
349.98	2.12	0.06
349.99	2.28	0.08
350.00	2.44	0.10
350.01	2.59	0.12
350.02	2.74	0.15
350.03	2.88	0.17
350.04	3.01	0.20
350.05	3.15	0.23
350.06	3.27	0.27
350.07	3.40	0.30
350.08	3.51	0.34
350.09	3.63	0.38
350.10	3.74	0.42
350.11	3.85	0.46
350.12	3.96	0.51
350.13	4.06	0.55
350.14	4.17	0.60
350.15	4.26	0.65
350.16	4.36	0.71
350.17	4.45	0.76
350.18	4.55	0.82
350.19	4.64	0.88
350.20	4.72	0.94
350.21	4.81	1.00
350.22	4.89	1.06
350.23	4.97	1.12
350.24	5.05	1.19
350.25	5.13	1.26
350.26	5.21	1.33
350.27	5.28	1.39
350.28	5.35	1.47
350.29	5.42	1.54
350.30	5.49	1.61
350.31	5.56	1.68
350.32	5.62	1.76
350.33	5.69	1.84
350.34	5.75	1.91
350.35	5.81	1.99
350.36	5.87	2.07
350.37	5.92	2.15
350.38	5.98	2.23
350.39	6.03	2.31
350.40	6.09	2.39
350.41	6.14	2.47
350.42	6.19	2.55
350.43	6.23	2.64
350.44	6.28	2.72
350.45	6.33	2.80
350.46	6.37	2.88
350.47	6.41	2.96
350.48	6.45	3.05
350.49	6.49	3.13
350.50	6.53	3.21
350.51	6.56	3.29
350.52	6.60	3.37
350.53	6.63	3.46
350.54	6.66	3.54
350.55	6.69	3.62
350.56	6.72	3.69
350.57	6.75	3.77
350.58	6.77	3.85
350.59	6.79	3.93
350.60	6.82	4.00
350.61	6.84	4.08
350.62	6.85	4.15
350.63	6.87	4.22
350.64	6.89	4.29
350.65	6.90	4.36
350.66	6.91	4.43
350.67	6.92	4.49
350.68	6.93	4.55
350.69	6.93	4.61
350.70	6.94	4.67
350.71	**6.94**	4.73
350.72	6.94	4.78
350.73	6.94	4.83
350.74	6.93	4.88
350.75	6.92	4.93
350.76	6.91	4.97
350.77	6.90	5.00
350.78	6.88	5.04
350.79	6.86	5.07
350.80	6.84	5.09
350.81	6.82	5.12
350.82	6.79	5.13
350.83	6.75	5.14
350.84	6.71	**5.14**
350.85	6.66	5.14
350.86	6.61	5.12
350.87	6.54	5.09
350.88	6.46	5.05
350.89	6.35	4.98
350.90	6.09	4.78

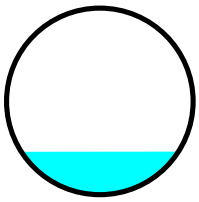
Summary for Reach DMHd1: TO DMH#8

Inflow Area = 21,252 sf, 56.67% Impervious, Inflow Depth = 0.90" for 2-Year event
Inflow = 0.46 cfs @ 12.09 hrs, Volume= 1,596 cf
Outflow = 0.45 cfs @ 12.10 hrs, Volume= 1,596 cf, Atten= 1%, Lag= 0.7 min

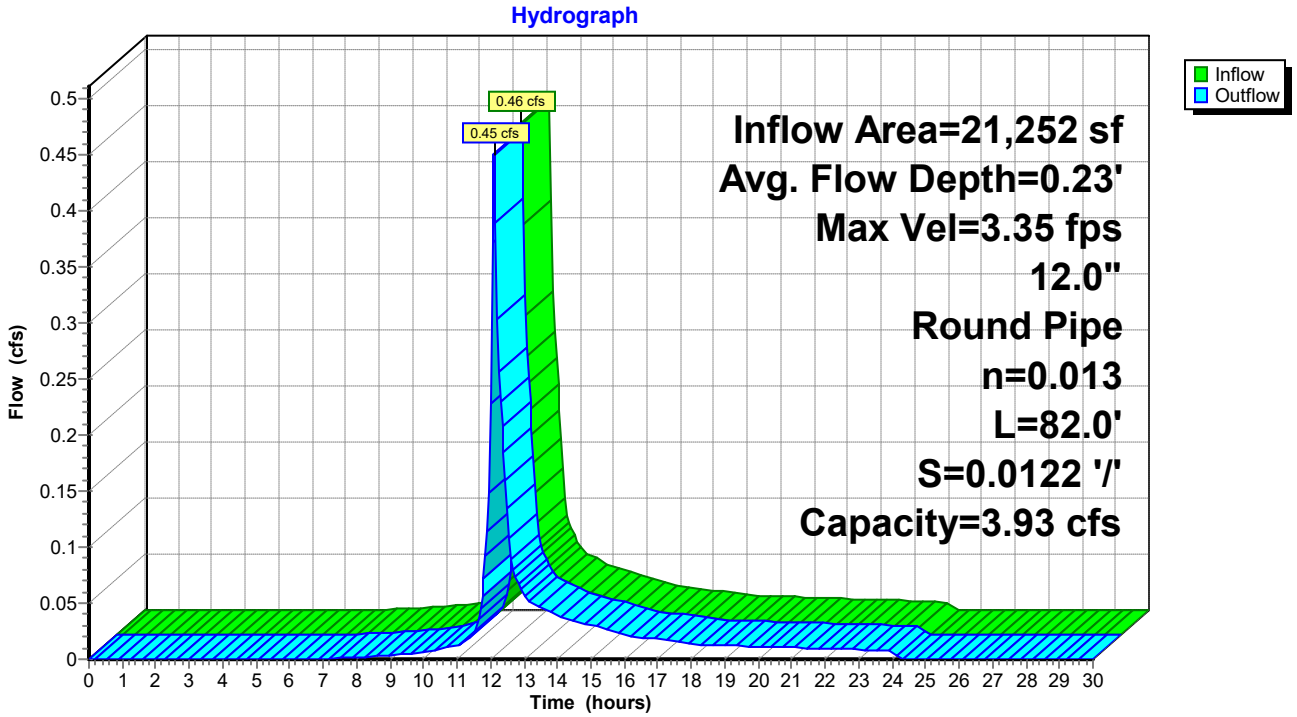
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.35 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.18 fps, Avg. Travel Time= 1.2 min

Peak Storage= 11 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.93 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 82.0' Slope= 0.0122 '/'
Inlet Invert= 352.10', Outlet Invert= 351.10'



Reach DMHd1: TO DMH#8



Stage-Discharge for Reach DMHd1: TO DMH#8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.10	0.00	0.00
352.11	0.45	0.00
352.12	0.71	0.00
352.13	0.92	0.01
352.14	1.11	0.01
352.15	1.29	0.02
352.16	1.45	0.03
352.17	1.60	0.04
352.18	1.74	0.05
352.19	1.88	0.07
352.20	2.01	0.08
352.21	2.13	0.10
352.22	2.25	0.12
352.23	2.37	0.14
352.24	2.48	0.17
352.25	2.59	0.19
352.26	2.69	0.22
352.27	2.79	0.25
352.28	2.89	0.28
352.29	2.99	0.31
352.30	3.08	0.34
352.31	3.17	0.38
352.32	3.26	0.42
352.33	3.35	0.46
352.34	3.43	0.50
352.35	3.51	0.54
352.36	3.59	0.58
352.37	3.67	0.63
352.38	3.74	0.67
352.39	3.82	0.72
352.40	3.89	0.77
352.41	3.96	0.82
352.42	4.03	0.87
352.43	4.09	0.93
352.44	4.16	0.98
352.45	4.22	1.03
352.46	4.29	1.09
352.47	4.35	1.15
352.48	4.41	1.21
352.49	4.46	1.27
352.50	4.52	1.33
352.51	4.57	1.39
352.52	4.63	1.45
352.53	4.68	1.51
352.54	4.73	1.57
352.55	4.78	1.64
352.56	4.83	1.70
352.57	4.88	1.77
352.58	4.92	1.83
352.59	4.97	1.90
352.60	5.01	1.97
352.61	5.05	2.03
352.62	5.09	2.10
352.63	5.13	2.17
352.64	5.17	2.24
352.65	5.21	2.30
352.66	5.24	2.37
352.67	5.28	2.44
352.68	5.31	2.51
352.69	5.34	2.58
352.70	5.37	2.64
352.71	5.40	2.71
352.72	5.43	2.78
352.73	5.46	2.84
352.74	5.48	2.91
352.75	5.51	2.98
352.76	5.53	3.04
352.77	5.55	3.11
352.78	5.57	3.17
352.79	5.59	3.23
352.80	5.61	3.29
352.81	5.63	3.36
352.82	5.64	3.42
352.83	5.65	3.47
352.84	5.67	3.53
352.85	5.68	3.59
352.86	5.69	3.64
352.87	5.70	3.70
352.88	5.70	3.75
352.89	5.71	3.80
352.90	5.71	3.85
352.91	**5.71**	3.89
352.92	5.71	3.94
352.93	5.71	3.98
352.94	5.70	4.02
352.95	5.70	4.05
352.96	5.69	4.09
352.97	5.68	4.12
352.98	5.67	4.15
352.99	5.65	4.17
353.00	5.63	4.19
353.01	5.61	4.21
353.02	5.59	4.22
353.03	5.56	4.23
353.04	5.52	**4.23**
353.05	5.49	4.23
353.06	5.44	4.22
353.07	5.39	4.19
353.08	5.32	4.16
353.09	5.23	4.10
353.10	5.01	3.93

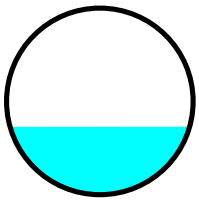
Summary for Reach DMHD2: TO DMH#7

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 1.47" for 2-Year event
Inflow = 2.04 cfs @ 12.10 hrs, Volume= 6,913 cf
Outflow = 2.04 cfs @ 12.10 hrs, Volume= 6,913 cf, Atten= 0%, Lag= 0.0 min

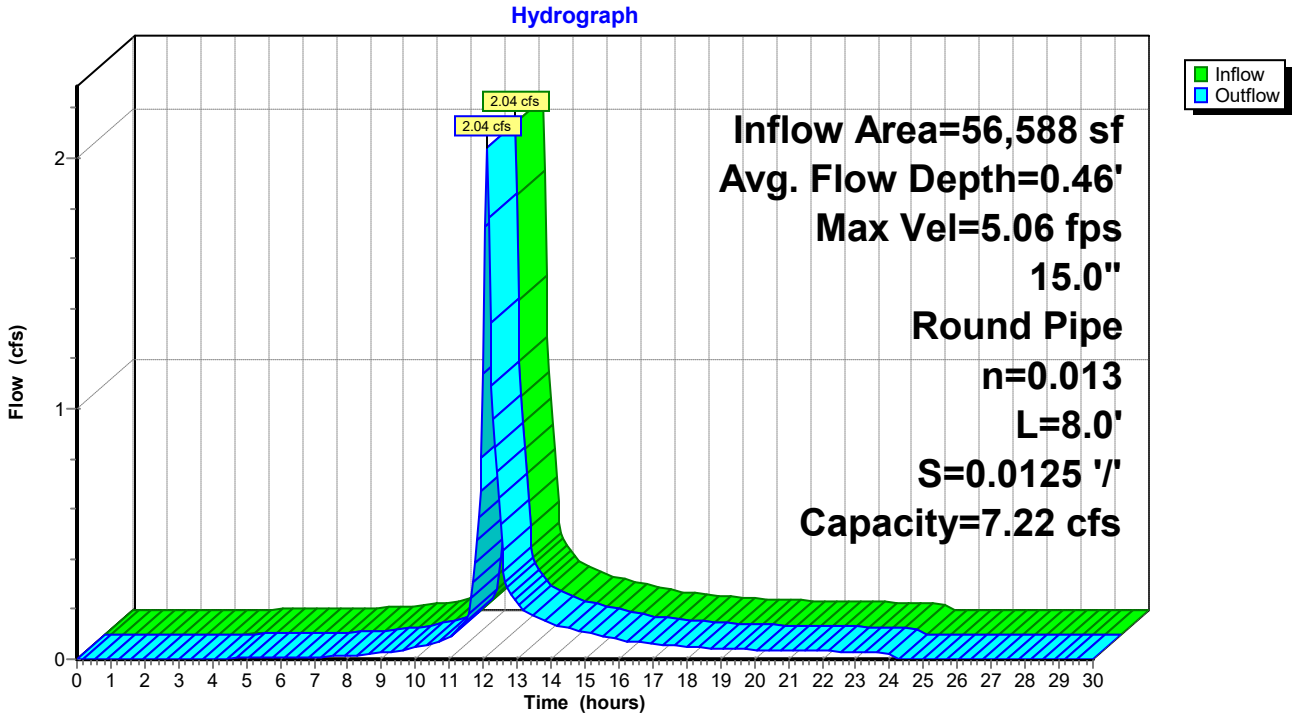
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.06 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.56 fps, Avg. Travel Time= 0.1 min

Peak Storage= 3 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.46'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.22 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 8.0' Slope= 0.0125 '/'
Inlet Invert= 350.40', Outlet Invert= 350.30'



Reach DMHD2: TO DMH#7



Stage-Discharge for Reach DMHD2: TO DMH#7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.40	0.00	0.00
350.41	0.42	0.00
350.42	0.71	0.00
350.43	0.93	0.01
350.44	1.13	0.01
350.45	1.31	0.02
350.46	1.47	0.03
350.47	1.63	0.04
350.48	1.77	0.06
350.49	1.91	0.08
350.50	2.05	0.09
350.51	2.18	0.12
350.52	2.30	0.14
350.53	2.42	0.16
350.54	2.54	0.19
350.55	2.65	0.22
350.56	2.76	0.25
350.57	2.86	0.29
350.58	2.97	0.32
350.59	3.07	0.36
350.60	3.16	0.40
350.61	3.26	0.44
350.62	3.35	0.49
350.63	3.44	0.53
350.64	3.53	0.58
350.65	3.62	0.63
350.66	3.70	0.68
350.67	3.79	0.74
350.68	3.87	0.80
350.69	3.95	0.85
350.70	4.03	0.91
350.71	4.10	0.97
350.72	4.18	1.04
350.73	4.25	1.10
350.74	4.33	1.17
350.75	4.40	1.24
350.76	4.47	1.31
350.77	4.53	1.38
350.78	4.60	1.45
350.79	4.67	1.53
350.80	4.73	1.60
350.81	4.79	1.68
350.82	4.86	1.76
350.83	4.92	1.84
350.84	4.98	1.92
350.85	5.03	2.00
350.86	5.09	2.09
350.87	5.15	2.17
350.88	5.20	2.26
350.89	5.26	2.35
350.90	5.31	2.43
350.91	5.36	2.52
350.92	5.41	2.61
350.93	5.46	2.71
350.94	5.51	2.80
350.95	5.56	2.89
350.96	5.61	2.98
350.97	5.65	3.08
350.98	5.70	3.17
350.99	5.74	3.27
351.00	5.78	3.37
351.01	5.82	3.46
351.02	5.86	3.56
351.03	5.90	3.66
351.04	5.94	3.76
351.05	5.98	3.86
351.06	6.02	3.96
351.07	6.06	4.06
351.08	6.09	4.16
351.09	6.12	4.26
351.10	6.16	4.35
351.11	6.19	4.45
351.12	6.22	4.55
351.13	6.25	4.65
351.14	6.28	4.75
351.15	6.31	4.85
351.16	6.34	4.95
351.17	6.37	5.05
351.18	6.39	5.15
351.19	6.42	5.25
351.20	6.44	5.34
351.21	6.46	5.44
351.22	6.49	5.53
351.23	6.51	5.63
351.24	6.53	5.72
351.25	6.55	5.82
351.26	6.56	5.91
351.27	6.58	6.00
351.28	6.60	6.09
351.29	6.61	6.18
351.30	6.63	6.27
351.31	6.64	6.36
351.32	6.65	6.44
351.33	6.66	6.52
351.34	6.67	6.61
351.35	6.68	6.69
351.36	6.69	6.76
351.37	6.70	6.84
351.38	6.70	6.92
351.39	6.70	6.99
351.40	6.71	7.06
351.41	6.71	7.13
351.42	**6.71**	7.19
351.43	6.71	7.26
351.44	6.71	7.32
351.45	6.70	7.37
351.46	6.70	7.43
351.47	6.69	7.48
351.48	6.68	7.53
351.49	6.67	7.57
351.50	6.66	7.61
351.51	6.64	7.65
351.52	6.63	7.68
351.53	6.61	7.71
351.54	6.59	7.73
351.55	6.56	7.75
351.56	6.54	7.76
351.57	6.51	**7.77**
351.58	6.47	7.77
351.59	6.43	7.76
351.60	6.39	7.74
351.61	6.34	7.71
351.62	6.28	7.66
351.63	6.21	7.59
351.64	6.09	7.46
351.65	5.89	7.22

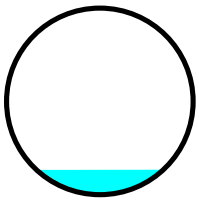
Summary for Reach DMHd3: TO DMH#2

Inflow Area = 6,527 sf, 84.22% Impervious, Inflow Depth = 1.93" for 2-Year event
Inflow = 0.31 cfs @ 12.09 hrs, Volume= 1,047 cf
Outflow = 0.31 cfs @ 12.09 hrs, Volume= 1,047 cf, Atten= 0%, Lag= 0.2 min

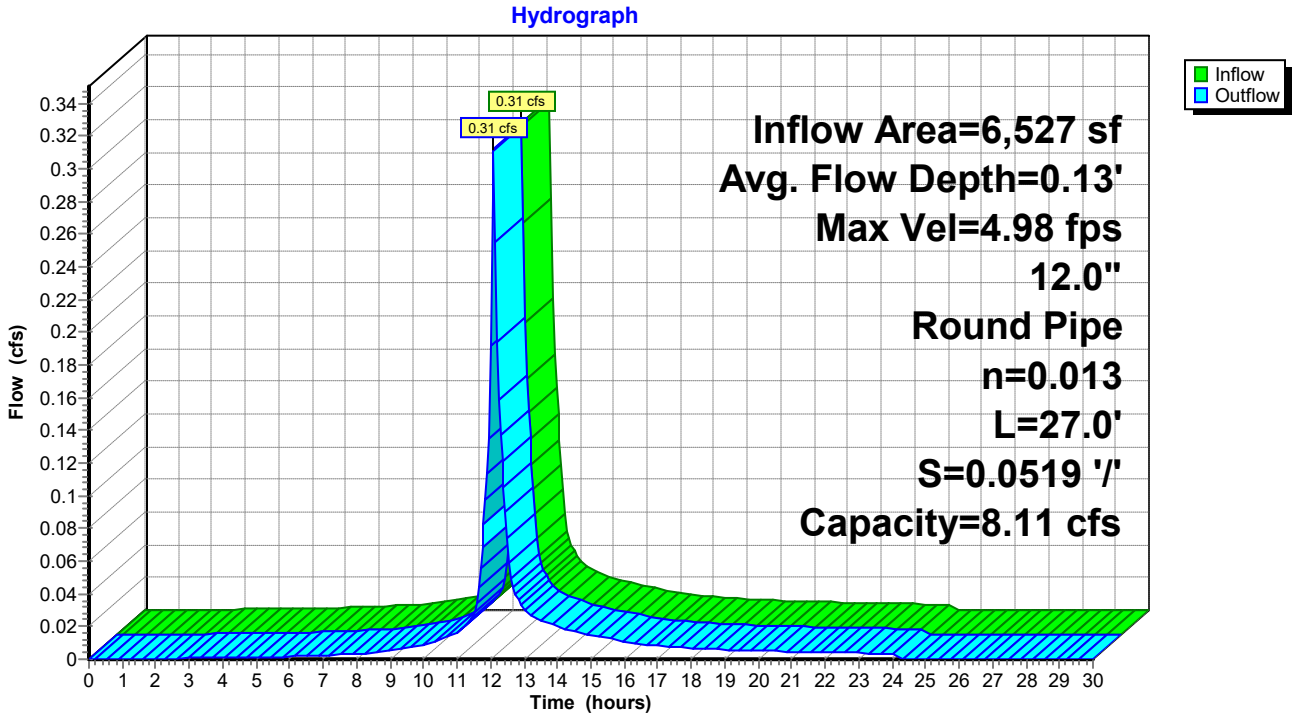
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.98 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.59 fps, Avg. Travel Time= 0.3 min

Peak Storage= 2 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.13'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.11 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 27.0' Slope= 0.0519 '/'
Inlet Invert= 352.40', Outlet Invert= 351.00'



Reach DMHd3: TO DMH#2



Stage-Discharge for Reach DMHd3: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.40	0.00	0.00
352.41	0.92	0.00
352.42	1.45	0.01
352.43	1.90	0.01
352.44	2.29	0.02
352.45	2.65	0.04
352.46	2.99	0.06
352.47	3.30	0.08
352.48	3.59	0.11
352.49	3.88	0.14
352.50	4.14	0.17
352.51	4.40	0.21
352.52	4.65	0.25
352.53	4.89	0.29
352.54	5.12	0.34
352.55	5.34	0.39
352.56	5.55	0.45
352.57	5.76	0.51
352.58	5.96	0.57
352.59	6.16	0.64
352.60	6.35	0.71
352.61	6.54	0.78
352.62	6.72	0.86
352.63	6.90	0.94
352.64	7.07	1.02
352.65	7.24	1.11
352.66	7.40	1.20
352.67	7.56	1.29
352.68	7.72	1.39
352.69	7.87	1.49
352.70	8.02	1.59
352.71	8.16	1.69
352.72	8.30	1.80
352.73	8.44	1.91
352.74	8.58	2.02
352.75	8.71	2.13
352.76	8.84	2.25
352.77	8.96	2.37
352.78	9.08	2.49
352.79	9.20	2.61
352.80	9.32	2.73
352.81	9.43	2.86
352.82	9.54	2.99
352.83	9.65	3.12
352.84	9.76	3.25
352.85	9.86	3.38
352.86	9.96	3.51
352.87	10.05	3.65
352.88	10.15	3.78
352.89	10.24	3.92
352.90	10.33	4.06
352.91	10.42	4.19
352.92	10.50	4.33
352.93	10.58	4.47
352.94	10.66	4.61
352.95	10.74	4.75
352.96	10.81	4.89
352.97	10.88	5.03
352.98	10.95	5.17
352.99	11.01	5.31
353.00	11.08	5.45
353.01	11.14	5.59
353.02	11.20	5.73
353.03	11.25	5.86
353.04	11.31	6.00
353.05	11.36	6.14
353.06	11.40	6.27
353.07	11.45	6.40
353.08	11.49	6.53
353.09	11.53	6.66
353.10	11.57	6.79
353.11	11.60	6.92
353.12	11.63	7.04
353.13	11.66	7.16
353.14	11.69	7.28
353.15	11.71	7.40
353.16	11.73	7.51
353.17	11.74	7.62
353.18	11.76	7.73
353.19	11.77	7.83
353.20	11.77	7.93
353.21	**11.78**	8.03
353.22	11.78	8.12
353.23	11.77	8.20
353.24	11.76	8.28
353.25	11.75	8.36
353.26	11.73	8.43
353.27	11.71	8.49
353.28	11.68	8.55
353.29	11.65	8.60
353.30	11.61	8.65
353.31	11.57	8.68
353.32	11.52	8.71
353.33	11.46	8.72
353.34	11.39	**8.73**
353.35	11.31	8.72
353.36	11.22	8.69
353.37	11.11	8.65
353.38	10.97	8.57
353.39	10.78	8.45
353.40	10.33	8.11

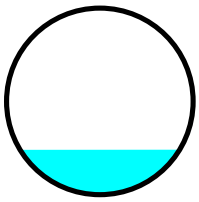
Summary for Reach DMHD4: TO DMH#2

Inflow Area = 9,322 sf, 78.29% Impervious, Inflow Depth = 1.66" for 2-Year event
Inflow = 0.39 cfs @ 12.08 hrs, Volume= 1,287 cf
Outflow = 0.38 cfs @ 12.11 hrs, Volume= 1,287 cf, Atten= 3%, Lag= 1.4 min

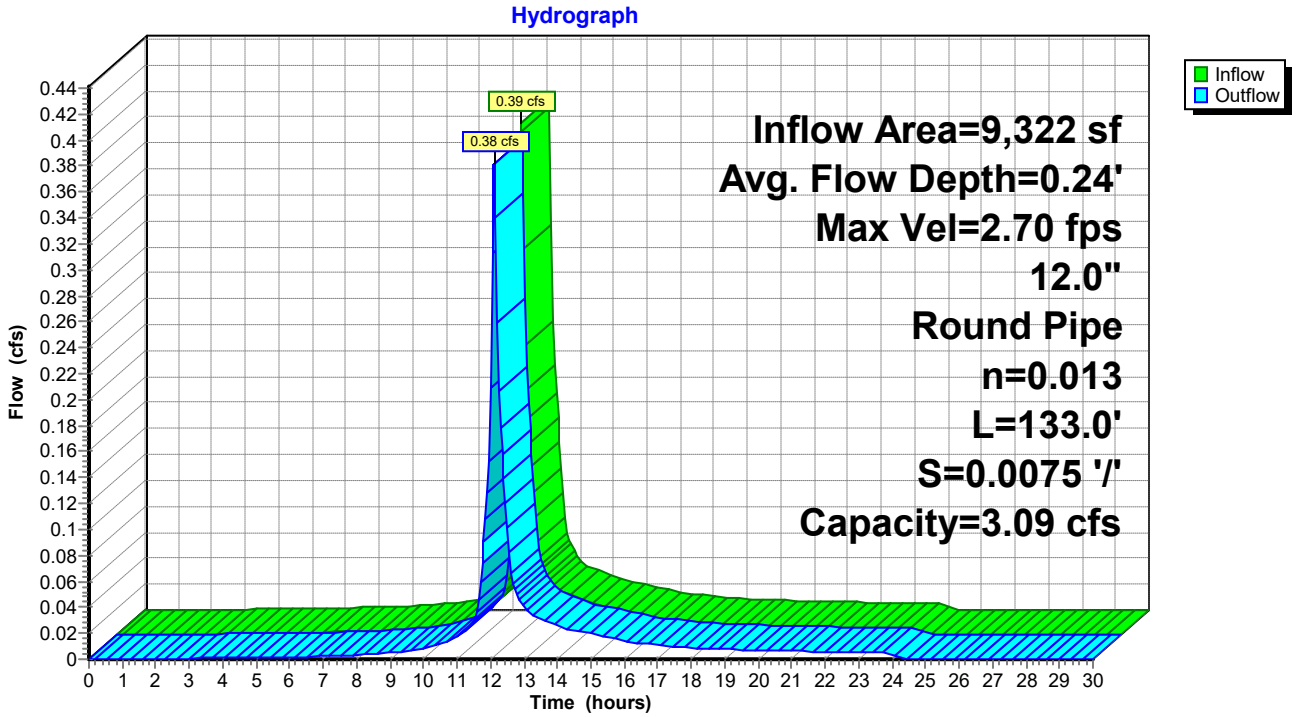
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.70 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 0.83 fps, Avg. Travel Time= 2.7 min

Peak Storage= 19 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.24'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.09 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 133.0' Slope= 0.0075 '/'
Inlet Invert= 351.50', Outlet Invert= 350.50'



Reach DMHD4: TO DMH#2



Stage-Discharge for Reach DMHD4: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.50	0.00	0.00
351.51	0.35	0.00
351.52	0.55	0.00
351.53	0.72	0.00
351.54	0.87	0.01
351.55	1.01	0.01
351.56	1.14	0.02
351.57	1.26	0.03
351.58	1.37	0.04
351.59	1.48	0.05
351.60	1.58	0.06
351.61	1.68	0.08
351.62	1.77	0.09
351.63	1.86	0.11
351.64	1.95	0.13
351.65	2.03	0.15
351.66	2.11	0.17
351.67	2.19	0.19
351.68	2.27	0.22
351.69	2.35	0.24
351.70	2.42	0.27
351.71	2.49	0.30
351.72	2.56	0.33
351.73	2.63	0.36
351.74	2.69	0.39
351.75	2.76	0.42
351.76	2.82	0.46
351.77	2.88	0.49
351.78	2.94	0.53
351.79	3.00	0.57
351.80	3.05	0.60
351.81	3.11	0.64
351.82	3.16	0.69
351.83	3.21	0.73
351.84	3.27	0.77
351.85	3.32	0.81
351.86	3.36	0.86
351.87	3.41	0.90
351.88	3.46	0.95
351.89	3.50	0.99
351.90	3.55	1.04
351.91	3.59	1.09
351.92	3.63	1.14
351.93	3.68	1.19
351.94	3.72	1.24
351.95	3.75	1.29
351.96	3.79	1.34
351.97	3.83	1.39
351.98	3.86	1.44
351.99	3.90	1.49
352.00	3.93	1.54
352.01	3.97	1.60
352.02	4.00	1.65
352.03	4.03	1.70
352.04	4.06	1.76
352.05	4.09	1.81
352.06	4.12	1.86
352.07	4.14	1.92
352.08	4.17	1.97
352.09	4.19	2.02
352.10	4.22	2.08
352.11	4.24	2.13
352.12	4.26	2.18
352.13	4.28	2.23
352.14	4.30	2.29
352.15	4.32	2.34
352.16	4.34	2.39
352.17	4.36	2.44
352.18	4.38	2.49
352.19	4.39	2.54
352.20	4.40	2.59
352.21	4.42	2.63
352.22	4.43	2.68
352.23	4.44	2.73
352.24	4.45	2.77
352.25	4.46	2.82
352.26	4.47	2.86
352.27	4.47	2.90
352.28	4.48	2.94
352.29	4.48	2.98
352.30	4.48	3.02
352.31	**4.48**	3.06
352.32	4.48	3.09
352.33	4.48	3.12
352.34	4.48	3.15
352.35	4.47	3.18
352.36	4.47	3.21
352.37	4.46	3.23
352.38	4.45	3.26
352.39	4.44	3.28
352.40	4.42	3.29
352.41	4.41	3.31
352.42	4.39	3.32
352.43	4.36	3.32
352.44	4.34	**3.32**
352.45	4.31	3.32
352.46	4.27	3.31
352.47	4.23	3.29
352.48	4.18	3.26
352.49	4.11	3.22
352.50	3.93	3.09

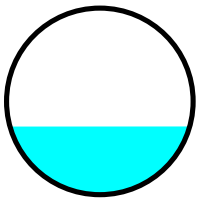
Summary for Reach DMHD5: TO DMH#2

Inflow Area = 19,181 sf, 81.45% Impervious, Inflow Depth = 1.78" for 2-Year event
Inflow = 0.86 cfs @ 12.09 hrs, Volume= 2,850 cf
Outflow = 0.85 cfs @ 12.10 hrs, Volume= 2,850 cf, Atten= 1%, Lag= 0.6 min

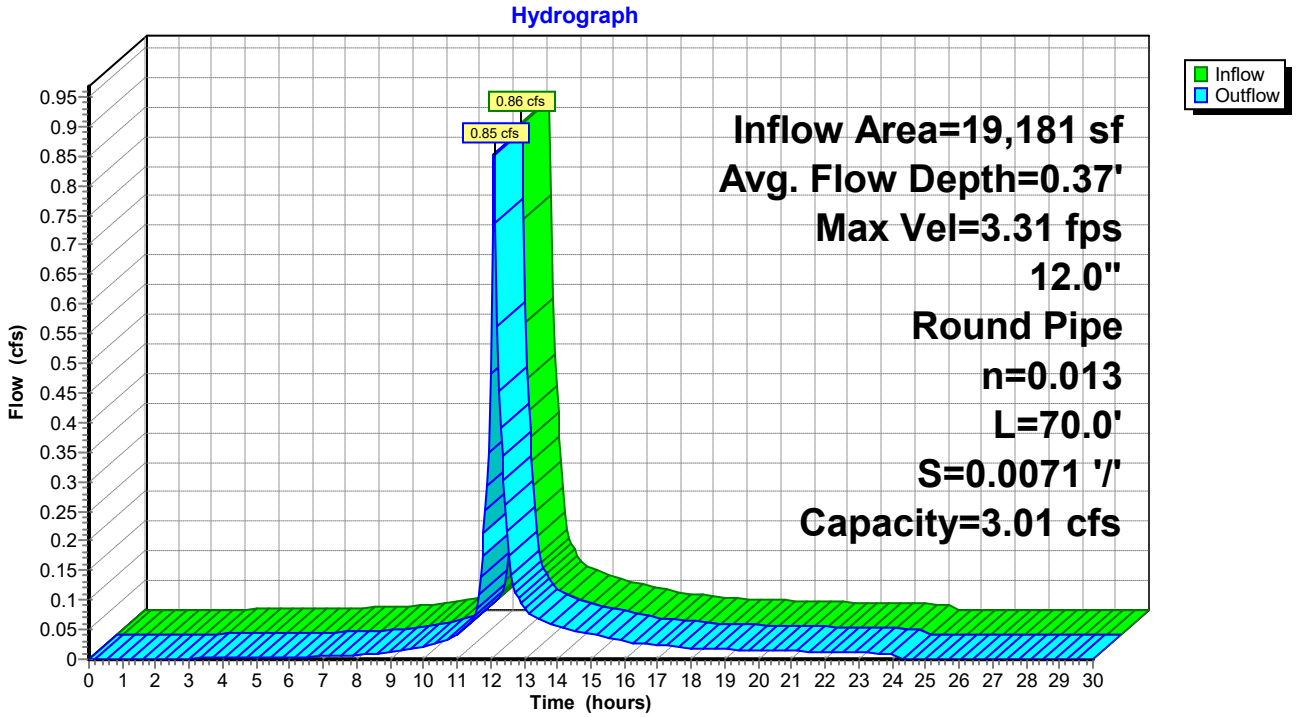
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.31 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.03 fps, Avg. Travel Time= 1.1 min

Peak Storage= 18 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.01 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 70.0' Slope= 0.0071 '/'
Inlet Invert= 350.90', Outlet Invert= 350.40'



Reach DMHD5: TO DMH#2



Stage-Discharge for Reach DMHD5: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.90	0.00	0.00
350.91	0.34	0.00
350.92	0.54	0.00
350.93	0.71	0.00
350.94	0.85	0.01
350.95	0.98	0.01
350.96	1.11	0.02
350.97	1.22	0.03
350.98	1.33	0.04
350.99	1.44	0.05
351.00	1.54	0.06
351.01	1.63	0.08
351.02	1.73	0.09
351.03	1.81	0.11
351.04	1.90	0.13
351.05	1.98	0.15
351.06	2.06	0.17
351.07	2.14	0.19
351.08	2.21	0.21
351.09	2.29	0.24
351.10	2.36	0.26
351.11	2.43	0.29
351.12	2.49	0.32
351.13	2.56	0.35
351.14	2.62	0.38
351.15	2.69	0.41
351.16	2.75	0.45
351.17	2.81	0.48
351.18	2.86	0.52
351.19	2.92	0.55
351.20	2.98	0.59
351.21	3.03	0.63
351.22	3.08	0.67
351.23	3.13	0.71
351.24	3.18	0.75
351.25	3.23	0.79
351.26	3.28	0.83
351.27	3.33	0.88
351.28	3.37	0.92
351.29	3.42	0.97
351.30	3.46	1.01
351.31	3.50	1.06
351.32	3.54	1.11
351.33	3.58	1.16
351.34	3.62	1.21
351.35	3.66	1.25
351.36	3.70	1.30
351.37	3.73	1.35
351.38	3.77	1.40
351.39	3.80	1.45
351.40	3.83	1.51
351.41	3.87	1.56
351.42	3.90	1.61
351.43	3.93	1.66
351.44	3.96	1.71
351.45	3.98	1.76
351.46	4.01	1.82
351.47	4.04	1.87
351.48	4.06	1.92
351.49	4.09	1.97
351.50	4.11	2.02
351.51	4.13	2.07
351.52	4.16	2.13
351.53	4.18	2.18
351.54	4.20	2.23
351.55	4.21	2.28
351.56	4.23	2.33
351.57	4.25	2.38
351.58	4.26	2.43
351.59	4.28	2.47
351.60	4.29	2.52
351.61	4.31	2.57
351.62	4.32	2.61
351.63	4.33	2.66
351.64	4.34	2.70
351.65	4.35	2.75
351.66	4.35	2.79
351.67	4.36	2.83
351.68	4.36	2.87
351.69	4.37	2.91
351.70	4.37	2.94
351.71	**4.37**	2.98
351.72	4.37	3.01
351.73	4.37	3.04
351.74	4.37	3.07
351.75	4.36	3.10
351.76	4.35	3.13
351.77	4.35	3.15
351.78	4.34	3.17
351.79	4.32	3.19
351.80	4.31	3.21
351.81	4.29	3.22
351.82	4.28	3.23
351.83	4.25	3.24
351.84	4.23	**3.24**
351.85	4.20	3.24
351.86	4.16	3.23
351.87	4.12	3.21
351.88	4.07	3.18
351.89	4.00	3.14
351.90	3.83	3.01

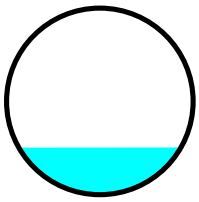
Summary for Reach DMHD6: TO DMH#5

Inflow Area = 8,503 sf, 83.97% Impervious, Inflow Depth = 1.90" for 2-Year event
Inflow = 0.41 cfs @ 12.08 hrs, Volume= 1,348 cf
Outflow = 0.41 cfs @ 12.09 hrs, Volume= 1,348 cf, Atten= 1%, Lag= 0.7 min

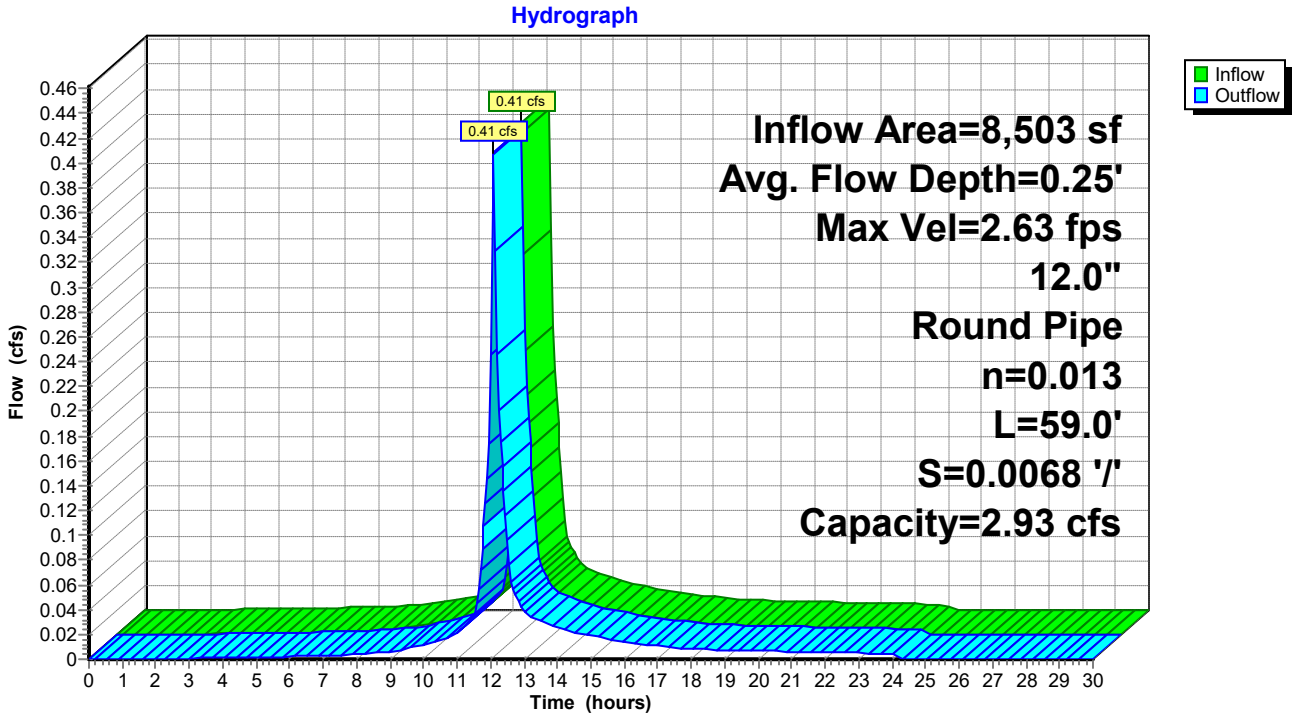
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.63 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.82 fps, Avg. Travel Time= 1.2 min

Peak Storage= 9 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.25'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.93 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 59.0' Slope= 0.0068 '/'
Inlet Invert= 351.40', Outlet Invert= 351.00'



Reach DMHD6: TO DMH#5



Stage-Discharge for Reach DMHD6: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.40	0.00	0.00
351.41	0.33	0.00
351.42	0.53	0.00
351.43	0.69	0.00
351.44	0.83	0.01
351.45	0.96	0.01
351.46	1.08	0.02
351.47	1.19	0.03
351.48	1.30	0.04
351.49	1.40	0.05
351.50	1.50	0.06
351.51	1.59	0.07
351.52	1.68	0.09
351.53	1.77	0.11
351.54	1.85	0.12
351.55	1.93	0.14
351.56	2.01	0.16
351.57	2.08	0.18
351.58	2.16	0.21
351.59	2.23	0.23
351.60	2.30	0.26
351.61	2.36	0.28
351.62	2.43	0.31
351.63	2.49	0.34
351.64	2.56	0.37
351.65	2.62	0.40
351.66	2.68	0.43
351.67	2.73	0.47
351.68	2.79	0.50
351.69	2.85	0.54
351.70	2.90	0.57
351.71	2.95	0.61
351.72	3.00	0.65
351.73	3.05	0.69
351.74	3.10	0.73
351.75	3.15	0.77
351.76	3.20	0.81
351.77	3.24	0.86
351.78	3.28	0.90
351.79	3.33	0.94
351.80	3.37	0.99
351.81	3.41	1.03
351.82	3.45	1.08
351.83	3.49	1.13
351.84	3.53	1.17
351.85	3.56	1.22
351.86	3.60	1.27
351.87	3.64	1.32
351.88	3.67	1.37
351.89	3.70	1.42
351.90	3.74	1.47
351.91	3.77	1.52
351.92	3.80	1.57
351.93	3.83	1.62
351.94	3.85	1.67
351.95	3.88	1.72
351.96	3.91	1.77
351.97	3.93	1.82
351.98	3.96	1.87
351.99	3.98	1.92
352.00	4.01	1.97
352.01	4.03	2.02
352.02	4.05	2.07
352.03	4.07	2.12
352.04	4.09	2.17
352.05	4.11	2.22
352.06	4.12	2.27
352.07	4.14	2.32
352.08	4.15	2.36
352.09	4.17	2.41
352.10	4.18	2.46
352.11	4.19	2.50
352.12	4.21	2.55
352.13	4.22	2.59
352.14	4.23	2.63
352.15	4.23	2.68
352.16	4.24	2.72
352.17	4.25	2.76
352.18	4.25	2.79
352.19	4.25	2.83
352.20	4.26	2.87
352.21	**4.26**	2.90
352.22	4.26	2.93
352.23	4.26	2.97
352.24	4.25	3.00
352.25	4.25	3.02
352.26	4.24	3.05
352.27	4.23	3.07
352.28	4.22	3.09
352.29	4.21	3.11
352.30	4.20	3.13
352.31	4.18	3.14
352.32	4.16	3.15
352.33	4.14	3.15
352.34	4.12	**3.16**
352.35	4.09	3.15
352.36	4.06	3.14
352.37	4.02	3.13
352.38	3.97	3.10
352.39	3.90	3.06
352.40	3.74	2.93

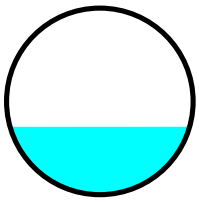
Summary for Reach DMHD7: TO UGS#1

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 1.47" for 2-Year event
Inflow = 2.04 cfs @ 12.10 hrs, Volume= 6,913 cf
Outflow = 2.04 cfs @ 12.10 hrs, Volume= 6,913 cf, Atten= 0%, Lag= 0.1 min

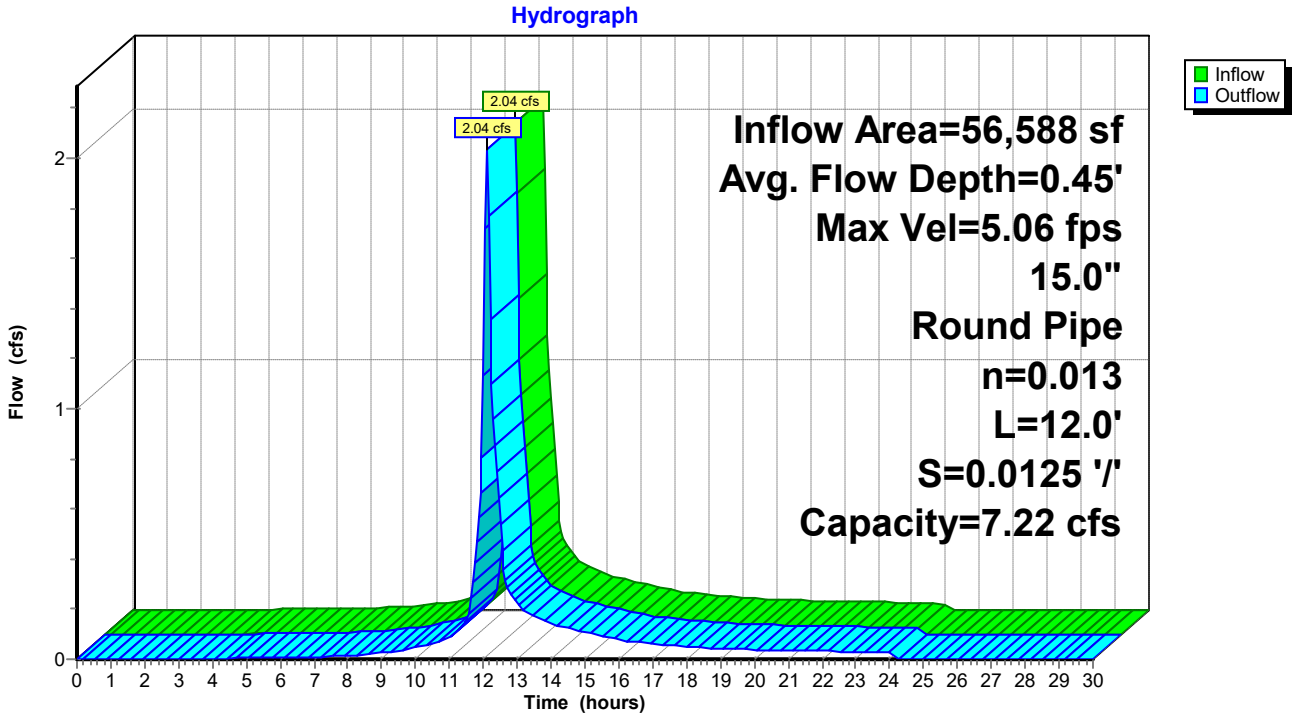
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.06 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.56 fps, Avg. Travel Time= 0.1 min

Peak Storage= 5 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.45'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.22 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 12.0' Slope= 0.0125 '/'
Inlet Invert= 350.15', Outlet Invert= 350.00'



Reach DMHD7: TO UGS#1



Stage-Discharge for Reach DMHD7: TO UGS#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.15	0.00	0.00
350.16	0.42	0.00
350.17	0.71	0.00
350.18	0.93	0.01
350.19	1.13	0.01
350.20	1.31	0.02
350.21	1.47	0.03
350.22	1.63	0.04
350.23	1.77	0.06
350.24	1.91	0.08
350.25	2.05	0.09
350.26	2.18	0.12
350.27	2.30	0.14
350.28	2.42	0.16
350.29	2.54	0.19
350.30	2.65	0.22
350.31	2.76	0.25
350.32	2.86	0.29
350.33	2.97	0.32
350.34	3.07	0.36
350.35	3.16	0.40
350.36	3.26	0.44
350.37	3.35	0.49
350.38	3.44	0.53
350.39	3.53	0.58
350.40	3.62	0.63
350.41	3.70	0.68
350.42	3.79	0.74
350.43	3.87	0.80
350.44	3.95	0.85
350.45	4.03	0.91
350.46	4.10	0.97
350.47	4.18	1.04
350.48	4.25	1.10
350.49	4.33	1.17
350.50	4.40	1.24
350.51	4.47	1.31
350.52	4.53	1.38
350.53	4.60	1.45
350.54	4.67	1.53
350.55	4.73	1.60
350.56	4.79	1.68
350.57	4.86	1.76
350.58	4.92	1.84
350.59	4.98	1.92
350.60	5.03	2.00
350.61	5.09	2.09
350.62	5.15	2.17
350.63	5.20	2.26
350.64	5.26	2.35
350.65	5.31	2.43
350.66	5.36	2.52
350.67	5.41	2.61
350.68	5.46	2.71
350.69	5.51	2.80
350.70	5.56	2.89
350.71	5.61	2.98
350.72	5.65	3.08
350.73	5.70	3.17
350.74	5.74	3.27
350.75	5.78	3.37
350.76	5.82	3.46
350.77	5.86	3.56
350.78	5.90	3.66
350.79	5.94	3.76
350.80	5.98	3.86
350.81	6.02	3.96
350.82	6.06	4.06
350.83	6.09	4.16
350.84	6.12	4.26
350.85	6.16	4.35
350.86	6.19	4.45
350.87	6.22	4.55
350.88	6.25	4.65
350.89	6.28	4.75
350.90	6.31	4.85
350.91	6.34	4.95
350.92	6.37	5.05
350.93	6.39	5.15
350.94	6.42	5.25
350.95	6.44	5.34
350.96	6.46	5.44
350.97	6.49	5.53
350.98	6.51	5.63
350.99	6.53	5.72
351.00	6.55	5.82
351.01	6.56	5.91
351.02	6.58	6.00
351.03	6.60	6.09
351.04	6.61	6.18
351.05	6.63	6.27
351.06	6.64	6.36
351.07	6.65	6.44
351.08	6.66	6.52
351.09	6.67	6.61
351.10	6.68	6.69
351.11	6.69	6.76
351.12	6.70	6.84
351.13	6.70	6.92
351.14	6.70	6.99
351.15	6.71	7.06
351.16	6.71	7.13
351.17	**6.71**	7.19
351.18	6.71	7.26
351.19	6.71	7.32
351.20	6.70	7.37
351.21	6.70	7.43
351.22	6.69	7.48
351.23	6.68	7.53
351.24	6.67	7.57
351.25	6.66	7.61
351.26	6.64	7.65
351.27	6.63	7.68
351.28	6.61	7.71
351.29	6.59	7.73
351.30	6.56	7.75
351.31	6.54	7.76
351.32	6.51	**7.77**
351.33	6.47	7.77
351.34	6.43	7.76
351.35	6.39	7.74
351.36	6.34	7.71
351.37	6.28	7.66
351.38	6.21	7.59
351.39	6.09	7.46
351.40	5.89	7.22

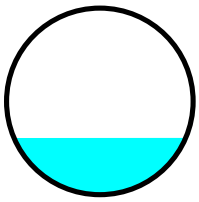
Summary for Reach DMHD8: TO DMH#2

Inflow Area = 28,085 sf, 64.50% Impervious, Inflow Depth = 1.19" for 2-Year event
Inflow = 0.82 cfs @ 12.09 hrs, Volume= 2,776 cf
Outflow = 0.81 cfs @ 12.10 hrs, Volume= 2,776 cf, Atten= 1%, Lag= 0.3 min

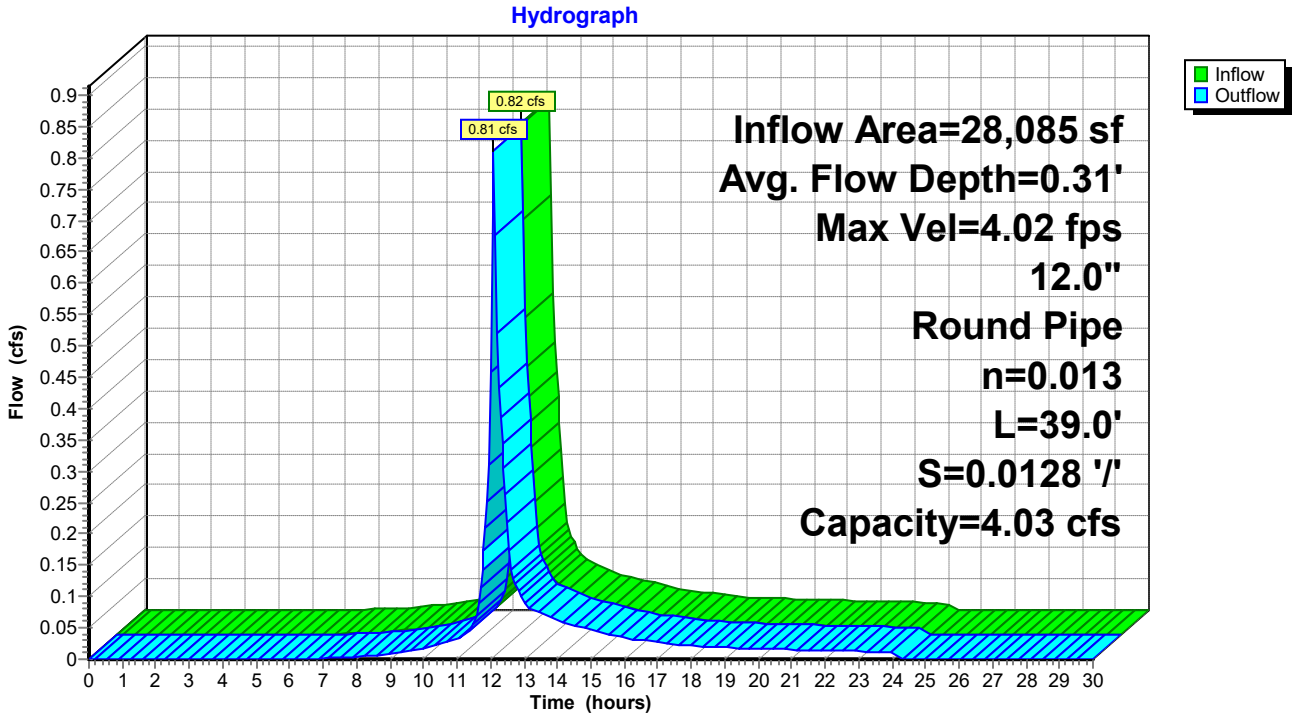
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.02 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.39 fps, Avg. Travel Time= 0.5 min

Peak Storage= 8 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.31'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.03 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 39.0' Slope= 0.0128 '/'
Inlet Invert= 351.00', Outlet Invert= 350.50'



Reach DMHD8: TO DMH#2



Stage-Discharge for Reach DMHD8: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.46	0.00
351.02	0.72	0.00
351.03	0.94	0.01
351.04	1.14	0.01
351.05	1.32	0.02
351.06	1.49	0.03
351.07	1.64	0.04
351.08	1.79	0.05
351.09	1.93	0.07
351.10	2.06	0.08
351.11	2.19	0.10
351.12	2.31	0.12
351.13	2.43	0.15
351.14	2.54	0.17
351.15	2.65	0.20
351.16	2.76	0.22
351.17	2.87	0.25
351.18	2.97	0.29
351.19	3.06	0.32
351.20	3.16	0.35
351.21	3.25	0.39
351.22	3.34	0.43
351.23	3.43	0.47
351.24	3.52	0.51
351.25	3.60	0.55
351.26	3.68	0.60
351.27	3.76	0.64
351.28	3.84	0.69
351.29	3.91	0.74
351.30	3.99	0.79
351.31	4.06	0.84
351.32	4.13	0.89
351.33	4.20	0.95
351.34	4.26	1.00
351.35	4.33	1.06
351.36	4.39	1.12
351.37	4.46	1.18
351.38	4.52	1.24
351.39	4.58	1.30
351.40	4.63	1.36
351.41	4.69	1.42
351.42	4.75	1.49
351.43	4.80	1.55
351.44	4.85	1.61
351.45	4.90	1.68
351.46	4.95	1.75
351.47	5.00	1.81
351.48	5.05	1.88
351.49	5.09	1.95
351.50	5.14	2.02
351.51	5.18	2.09
351.52	5.22	2.15
351.53	5.26	2.22
351.54	5.30	2.29
351.55	5.34	2.36
351.56	5.37	2.43
351.57	5.41	2.50
351.58	5.44	2.57
351.59	5.48	2.64
351.60	5.51	2.71
351.61	5.54	2.78
351.62	5.57	2.85
351.63	5.60	2.92
351.64	5.62	2.98
351.65	5.65	3.05
351.66	5.67	3.12
351.67	5.69	3.18
351.68	5.71	3.25
351.69	5.73	3.31
351.70	5.75	3.38
351.71	5.77	3.44
351.72	5.78	3.50
351.73	5.80	3.56
351.74	5.81	3.62
351.75	5.82	3.68
351.76	5.83	3.73
351.77	5.84	3.79
351.78	5.85	3.84
351.79	5.85	3.89
351.80	5.85	3.94
351.81	**5.86**	3.99
351.82	5.86	4.04
351.83	5.85	4.08
351.84	5.85	4.12
351.85	5.84	4.16
351.86	5.83	4.19
351.87	5.82	4.22
351.88	5.81	4.25
351.89	5.79	4.28
351.90	5.77	4.30
351.91	5.75	4.32
351.92	5.73	4.33
351.93	5.70	4.34
351.94	5.66	**4.34**
351.95	5.62	4.33
351.96	5.58	4.32
351.97	5.52	4.30
351.98	5.45	4.26
351.99	5.36	4.20
352.00	5.14	4.03

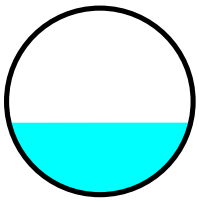
Summary for Reach DMHR100: TO DMH-R101

Inflow Area = 27,171 sf, 83.67% Impervious, Inflow Depth = 1.87" for 2-Year event
Inflow = 1.33 cfs @ 12.09 hrs, Volume= 4,230 cf
Outflow = 1.30 cfs @ 12.10 hrs, Volume= 4,230 cf, Atten= 2%, Lag= 1.1 min

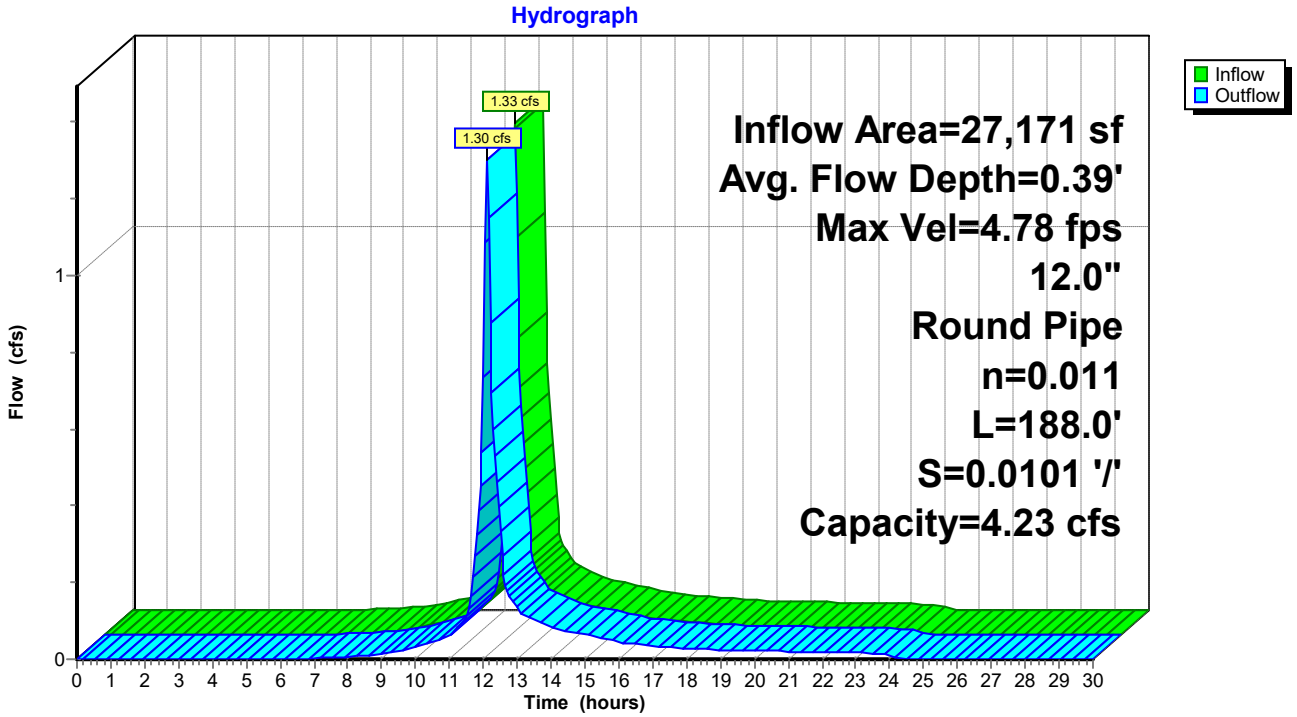
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.78 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.56 fps, Avg. Travel Time= 2.0 min

Peak Storage= 53 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.39'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.23 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 188.0' Slope= 0.0101 '/'
Inlet Invert= 353.00', Outlet Invert= 351.10'



Reach DMHR100: TO DMH-R101



Stage-Discharge for Reach DMHR100: TO DMH-R101

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.00	0.00	0.00
353.01	0.48	0.00
353.02	0.76	0.00
353.03	0.99	0.01
353.04	1.20	0.01
353.05	1.38	0.02
353.06	1.56	0.03
353.07	1.72	0.04
353.08	1.88	0.06
353.09	2.02	0.07
353.10	2.16	0.09
353.11	2.30	0.11
353.12	2.43	0.13
353.13	2.55	0.15
353.14	2.67	0.18
353.15	2.79	0.21
353.16	2.90	0.24
353.17	3.01	0.27
353.18	3.11	0.30
353.19	3.21	0.33
353.20	3.31	0.37
353.21	3.41	0.41
353.22	3.51	0.45
353.23	3.60	0.49
353.24	3.69	0.53
353.25	3.78	0.58
353.26	3.86	0.63
353.27	3.94	0.67
353.28	4.03	0.72
353.29	4.11	0.78
353.30	4.18	0.83
353.31	4.26	0.88
353.32	4.33	0.94
353.33	4.40	1.00
353.34	4.47	1.05
353.35	4.54	1.11
353.36	4.61	1.17
353.37	4.68	1.24
353.38	4.74	1.30
353.39	4.80	1.36
353.40	4.86	1.43
353.41	4.92	1.49
353.42	4.98	1.56
353.43	5.04	1.63
353.44	5.09	1.69
353.45	5.14	1.76
353.46	5.20	1.83
353.47	5.25	1.90
353.48	5.30	1.97
353.49	5.34	2.04
353.50	5.39	2.12
353.51	5.43	2.19
353.52	5.48	2.26
353.53	5.52	2.33
353.54	5.56	2.41
353.55	5.60	2.48
353.56	5.64	2.55
353.57	5.68	2.63
353.58	5.71	2.70
353.59	5.75	2.77
353.60	5.78	2.84
353.61	5.81	2.92
353.62	5.84	2.99
353.63	5.87	3.06
353.64	5.90	3.13
353.65	5.92	3.20
353.66	5.95	3.27
353.67	5.97	3.34
353.68	6.00	3.41
353.69	6.02	3.48
353.70	6.04	3.54
353.71	6.05	3.61
353.72	6.07	3.67
353.73	6.08	3.74
353.74	6.10	3.80
353.75	6.11	3.86
353.76	6.12	3.92
353.77	6.13	3.98
353.78	6.13	4.03
353.79	6.14	4.09
353.80	6.14	4.14
353.81	**6.14**	4.19
353.82	6.14	4.23
353.83	6.14	4.28
353.84	6.14	4.32
353.85	6.13	4.36
353.86	6.12	4.40
353.87	6.11	4.43
353.88	6.10	4.46
353.89	6.08	4.49
353.90	6.06	4.51
353.91	6.04	4.53
353.92	6.01	4.54
353.93	5.98	4.55
353.94	5.94	**4.55**
353.95	5.90	4.55
353.96	5.85	4.54
353.97	5.79	4.51
353.98	5.72	4.47
353.99	5.63	4.41
354.00	5.39	4.23

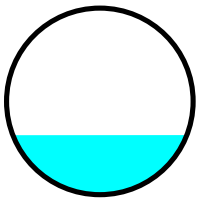
Summary for Reach DMHS10: TO DMH-S11

Inflow Area = 110,937 sf, 66.95% Impervious, Inflow Depth = 2.03" for 2-Year event
Inflow = 5.45 cfs @ 12.10 hrs, Volume= 18,734 cf
Outflow = 5.32 cfs @ 12.12 hrs, Volume= 18,734 cf, Atten= 2%, Lag= 1.0 min

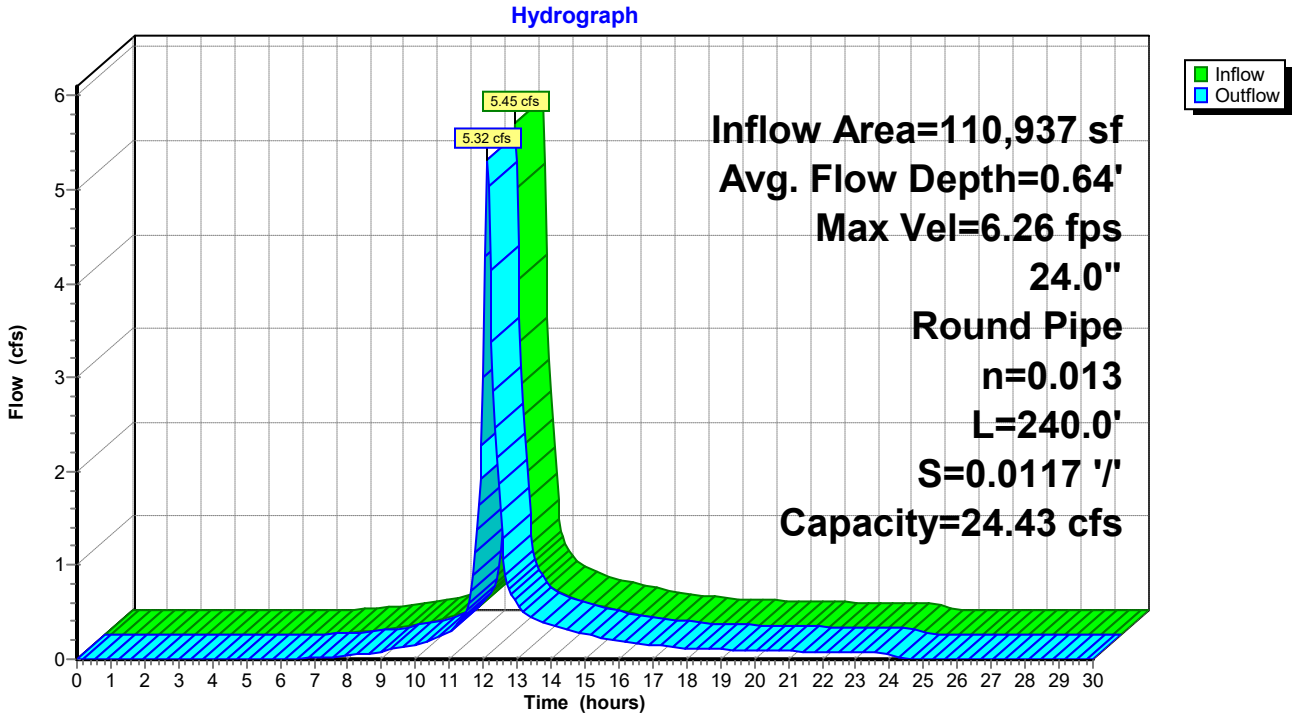
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.26 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 2.00 fps, Avg. Travel Time= 2.0 min

Peak Storage= 209 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.64'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 24.43 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 240.0' Slope= 0.0117 '/'
Inlet Invert= 343.30', Outlet Invert= 340.50'



Reach DMHS10: TO DMH-S11



Stage-Discharge for Reach DMHS10: TO DMH-S11

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
343.30	0.00	0.00
343.32	0.69	0.00
343.34	1.10	0.02
343.36	1.43	0.04
343.38	1.73	0.07
343.40	2.00	0.12
343.42	2.25	0.17
343.44	2.48	0.24
343.46	2.71	0.32
343.48	2.92	0.41
343.50	3.12	0.51
343.52	3.31	0.62
343.54	3.50	0.75
343.56	3.68	0.88
343.58	3.85	1.03
343.60	4.02	1.19
343.62	4.18	1.36
343.64	4.34	1.54
343.66	4.49	1.73
343.68	4.64	1.93
343.70	4.78	2.14
343.72	4.92	2.36
343.74	5.06	2.59
343.76	5.19	2.84
343.78	5.32	3.09
343.80	5.45	3.35
343.82	5.57	3.62
343.84	5.69	3.90
343.86	5.81	4.18
343.88	5.92	4.48
343.90	6.04	4.79
343.92	6.15	5.10
343.94	6.25	5.42
343.96	6.36	5.75
343.98	6.46	6.08
344.00	6.56	6.42
344.02	6.65	6.77
344.04	6.75	7.13
344.06	6.84	7.49
344.08	6.93	7.86
344.10	7.02	8.23
344.12	7.10	8.61
344.14	7.19	9.00
344.16	7.27	9.39
344.18	7.35	9.78
344.20	7.42	10.18
344.22	7.50	10.58
344.24	7.57	10.98
344.26	7.64	11.39
344.28	7.71	11.80
344.30	7.78	12.22
344.32	7.84	12.63
344.34	7.91	13.05
344.36	7.97	13.47
344.38	8.03	13.89
344.40	8.08	14.31
344.42	8.14	14.73
344.44	8.19	15.16
344.46	8.24	15.58
344.48	8.29	16.00
344.50	8.34	16.42
344.52	8.39	16.83
344.54	8.43	17.25
344.56	8.47	17.66
344.58	8.51	18.08
344.60	8.55	18.48
344.62	8.59	18.89
344.64	8.62	19.29
344.66	8.65	19.68
344.68	8.68	20.07
344.70	8.71	20.46
344.72	8.74	20.84
344.74	8.76	21.21
344.76	8.78	21.57
344.78	8.80	21.93
344.80	8.82	22.28
344.82	8.83	22.62
344.84	8.84	22.95
344.86	8.85	23.27
344.88	8.86	23.59
344.90	8.86	23.88
344.92	**8.87**	24.17
344.94	8.87	24.44
344.96	8.86	24.70
344.98	8.86	24.95
345.00	8.85	25.18
345.02	8.83	25.39
345.04	8.82	25.58
345.06	8.80	25.76
345.08	8.77	25.91
345.10	8.74	26.04
345.12	8.71	26.15
345.14	8.67	26.23
345.16	8.63	26.27
345.18	8.58	**26.28**
345.20	8.52	26.26
345.22	8.45	26.18
345.24	8.36	26.04
345.26	8.26	25.82
345.28	8.12	25.46
345.30	7.78	24.43

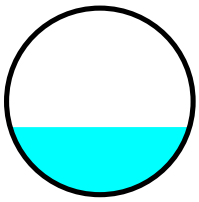
Summary for Reach DMHS11: TO DMH-D14

Inflow Area = 110,937 sf, 66.95% Impervious, Inflow Depth = 2.03" for 2-Year event
Inflow = 5.32 cfs @ 12.12 hrs, Volume= 18,734 cf
Outflow = 5.19 cfs @ 12.13 hrs, Volume= 18,734 cf, Atten= 2%, Lag= 0.8 min

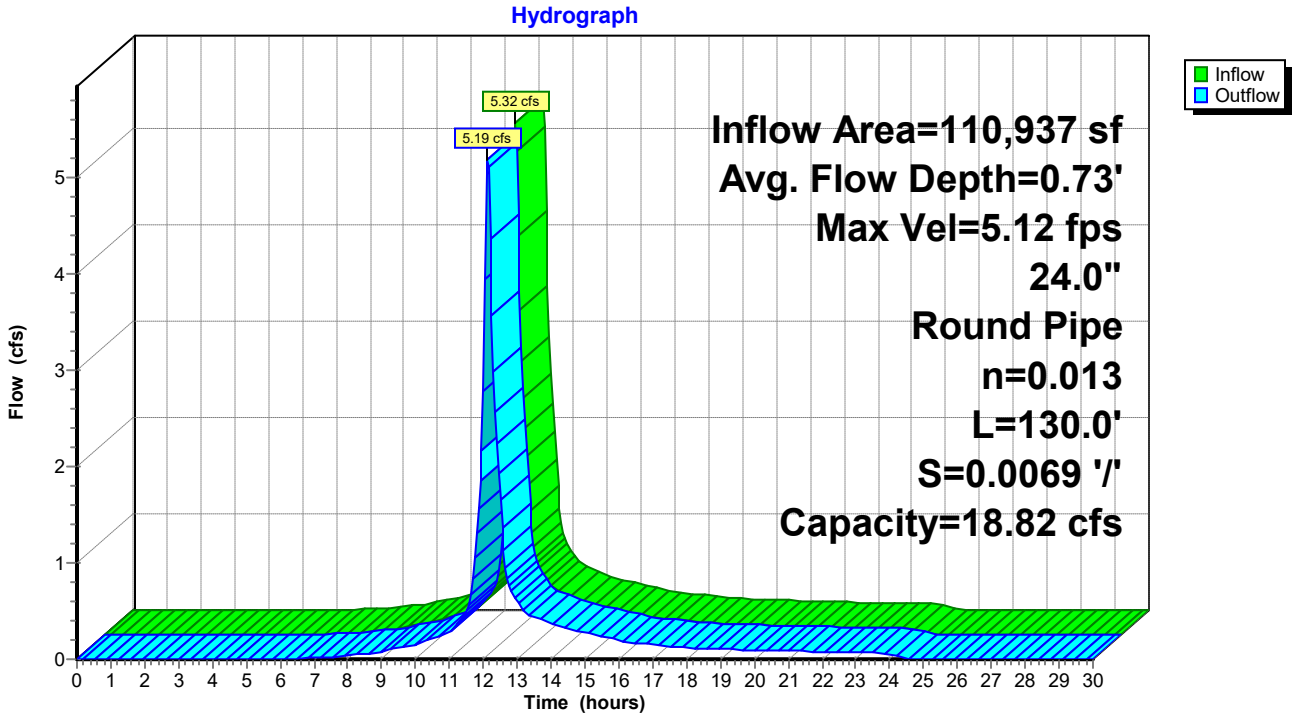
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.12 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.66 fps, Avg. Travel Time= 1.3 min

Peak Storage= 134 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.73'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 18.82 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 130.0' Slope= 0.0069 '/'
Inlet Invert= 339.20', Outlet Invert= 338.30'



Reach DMHS11: TO DMH-D14



Stage-Discharge for Reach DMHS11: TO DMH-D14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
339.20	0.00	0.00
339.22	0.53	0.00
339.24	0.84	0.01
339.26	1.10	0.03
339.28	1.33	0.06
339.30	1.54	0.09
339.32	1.73	0.13
339.34	1.91	0.19
339.36	2.09	0.25
339.38	2.25	0.31
339.40	2.40	0.39
339.42	2.55	0.48
339.44	2.70	0.58
339.46	2.83	0.68
339.48	2.97	0.79
339.50	3.10	0.91
339.52	3.22	1.05
339.54	3.34	1.18
339.56	3.46	1.33
339.58	3.57	1.49
339.60	3.69	1.65
339.62	3.79	1.82
339.64	3.90	2.00
339.66	4.00	2.18
339.68	4.10	2.38
339.70	4.20	2.58
339.72	4.29	2.79
339.74	4.39	3.00
339.76	4.48	3.22
339.78	4.56	3.45
339.80	4.65	3.69
339.82	4.73	3.93
339.84	4.82	4.17
339.86	4.90	4.43
339.88	4.97	4.69
339.90	5.05	4.95
339.92	5.13	5.22
339.94	5.20	5.49
339.96	5.27	5.77
339.98	5.34	6.06
340.00	5.41	6.34
340.02	5.47	6.64
340.04	5.54	6.93
340.06	5.60	7.23
340.08	5.66	7.53
340.10	5.72	7.84
340.12	5.78	8.15
340.14	5.83	8.46
340.16	5.89	8.78
340.18	5.94	9.09
340.20	5.99	9.41
340.22	6.04	9.73
340.24	6.09	10.05
340.26	6.14	10.38
340.28	6.18	10.70
340.30	6.23	11.02
340.32	6.27	11.35
340.34	6.31	11.67
340.36	6.35	12.00
340.38	6.39	12.32
340.40	6.43	12.65
340.42	6.46	12.97
340.44	6.49	13.29
340.46	6.53	13.61
340.48	6.56	13.92
340.50	6.59	14.24
340.52	6.61	14.55
340.54	6.64	14.86
340.56	6.66	15.16
340.58	6.69	15.46
340.60	6.71	15.76
340.62	6.73	16.05
340.64	6.75	16.34
340.66	6.76	16.62
340.68	6.78	16.90
340.70	6.79	17.16
340.72	6.80	17.43
340.74	6.81	17.68
340.76	6.82	17.93
340.78	6.83	18.17
340.80	6.83	18.40
340.82	**6.83**	18.62
340.84	6.83	18.83
340.86	6.83	19.03
340.88	6.82	19.22
340.90	6.81	19.40
340.92	6.81	19.56
340.94	6.79	19.71
340.96	6.78	19.84
340.98	6.76	19.96
341.00	6.74	20.06
341.02	6.71	20.14
341.04	6.68	20.20
341.06	6.65	20.24
341.08	6.61	**20.25**
341.10	6.56	20.23
341.12	6.51	20.17
341.14	6.44	20.06
341.16	6.36	19.89
341.18	6.25	19.61
341.20	5.99	18.82

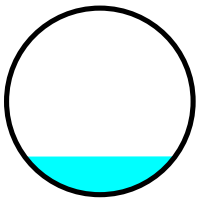
Summary for Reach DMHS4: TO DMH-S5

Inflow Area = 9,006 sf, 33.47% Impervious, Inflow Depth = 2.23" for 2-Year event
Inflow = 0.48 cfs @ 12.11 hrs, Volume= 1,676 cf
Outflow = 0.47 cfs @ 12.12 hrs, Volume= 1,676 cf, Atten= 2%, Lag= 0.8 min

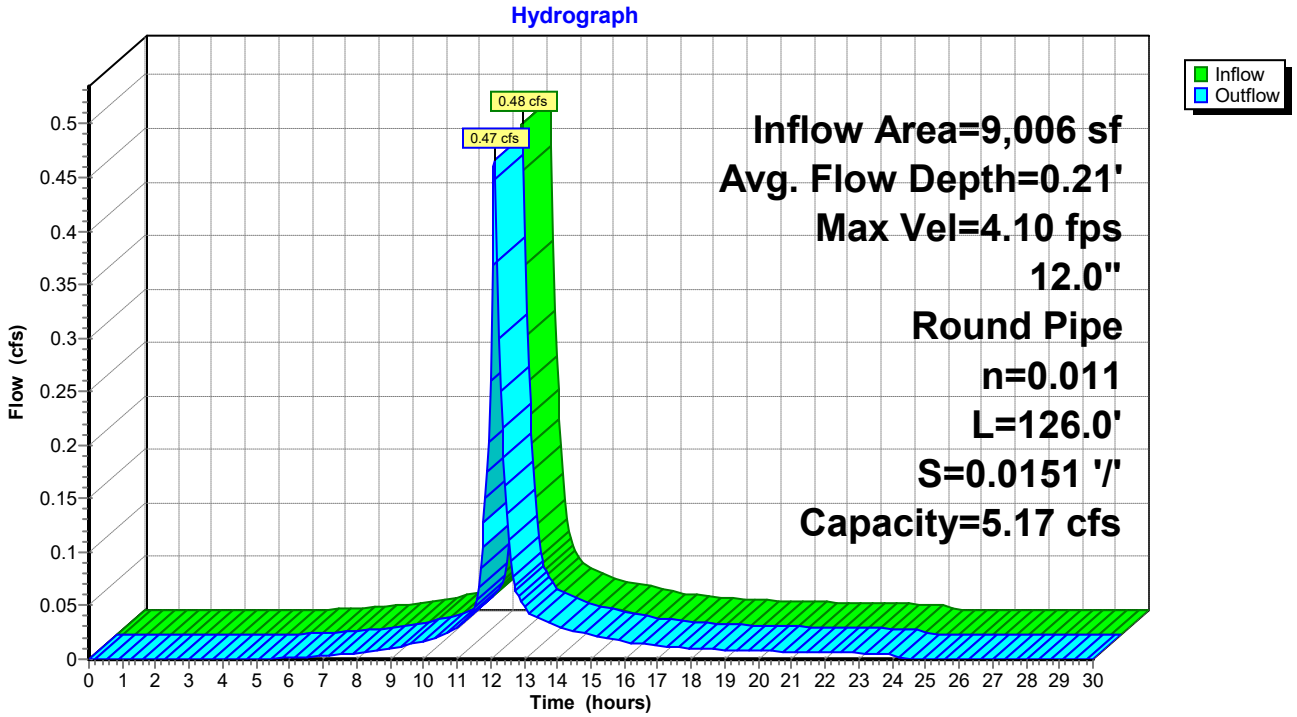
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.10 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.35 fps, Avg. Travel Time= 1.6 min

Peak Storage= 15 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.17 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 126.0' Slope= 0.0151 '/'
Inlet Invert= 352.00', Outlet Invert= 350.10'



Reach DMHS4: TO DMH-S5



Stage-Discharge for Reach DMHS4: TO DMH-S5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.00	0.00	0.00
352.01	0.59	0.00
352.02	0.93	0.00
352.03	1.21	0.01
352.04	1.46	0.02
352.05	1.69	0.02
352.06	1.90	0.04
352.07	2.10	0.05
352.08	2.29	0.07
352.09	2.47	0.09
352.10	2.64	0.11
352.11	2.80	0.13
352.12	2.96	0.16
352.13	3.11	0.19
352.14	3.26	0.22
352.15	3.40	0.25
352.16	3.54	0.29
352.17	3.67	0.33
352.18	3.80	0.37
352.19	3.93	0.41
352.20	4.05	0.45
352.21	4.17	0.50
352.22	4.28	0.55
352.23	4.40	0.60
352.24	4.51	0.65
352.25	4.61	0.71
352.26	4.72	0.77
352.27	4.82	0.82
352.28	4.92	0.89
352.29	5.01	0.95
352.30	5.11	1.01
352.31	5.20	1.08
352.32	5.29	1.15
352.33	5.38	1.22
352.34	5.47	1.29
352.35	5.55	1.36
352.36	5.63	1.43
352.37	5.71	1.51
352.38	5.79	1.59
352.39	5.87	1.66
352.40	5.94	1.74
352.41	6.01	1.82
352.42	6.08	1.90
352.43	6.15	1.99
352.44	6.22	2.07
352.45	6.28	2.15
352.46	6.35	2.24
352.47	6.41	2.32
352.48	6.47	2.41
352.49	6.53	2.50
352.50	6.58	2.59
352.51	6.64	2.67
352.52	6.69	2.76
352.53	6.74	2.85
352.54	6.79	2.94
352.55	6.84	3.03
352.56	6.89	3.12
352.57	6.93	3.21
352.58	6.98	3.30
352.59	7.02	3.39
352.60	7.06	3.47
352.61	7.10	3.56
352.62	7.14	3.65
352.63	7.17	3.74
352.64	7.20	3.82
352.65	7.24	3.91
352.66	7.27	4.00
352.67	7.30	4.08
352.68	7.32	4.16
352.69	7.35	4.25
352.70	7.37	4.33
352.71	7.39	4.41
352.72	7.41	4.49
352.73	7.43	4.57
352.74	7.45	4.64
352.75	7.46	4.71
352.76	7.47	4.79
352.77	7.48	4.86
352.78	7.49	4.93
352.79	7.50	4.99
352.80	7.50	5.05
352.81	**7.51**	5.11
352.82	7.50	5.17
352.83	7.50	5.23
352.84	7.50	5.28
352.85	7.49	5.33
352.86	7.48	5.37
352.87	7.46	5.41
352.88	7.45	5.45
352.89	7.43	5.48
352.90	7.40	5.51
352.91	7.37	5.53
352.92	7.34	5.55
352.93	7.30	5.56
352.94	7.26	**5.56**
352.95	7.21	5.56
352.96	7.15	5.54
352.97	7.08	5.51
352.98	6.99	5.46
352.99	6.87	5.39
353.00	6.58	5.17

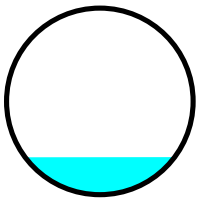
Summary for Reach DMHS5: TO DMH-S6

Inflow Area = 9,006 sf, 33.47% Impervious, Inflow Depth = 2.23" for 2-Year event
Inflow = 0.47 cfs @ 12.12 hrs, Volume= 1,676 cf
Outflow = 0.46 cfs @ 12.14 hrs, Volume= 1,676 cf, Atten= 2%, Lag= 1.1 min

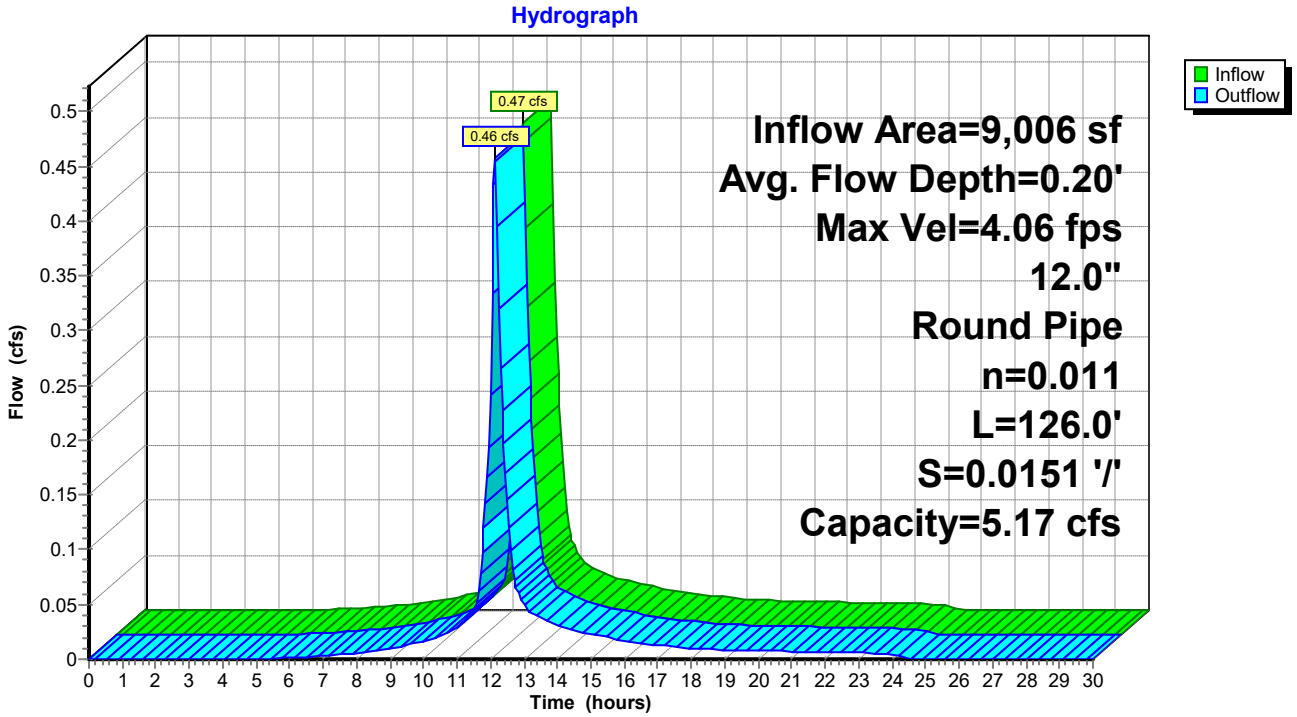
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.06 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.35 fps, Avg. Travel Time= 1.6 min

Peak Storage= 14 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.20'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.17 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 126.0' Slope= 0.0151 '/'
Inlet Invert= 350.00', Outlet Invert= 348.10'



Reach DMHS5: TO DMH-S6



Stage-Discharge for Reach DMHS5: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.00	0.00	0.00
350.01	0.59	0.00
350.02	0.93	0.00
350.03	1.21	0.01
350.04	1.46	0.02
350.05	1.69	0.02
350.06	1.90	0.04
350.07	2.10	0.05
350.08	2.29	0.07
350.09	2.47	0.09
350.10	2.64	0.11
350.11	2.80	0.13
350.12	2.96	0.16
350.13	3.11	0.19
350.14	3.26	0.22
350.15	3.40	0.25
350.16	3.54	0.29
350.17	3.67	0.33
350.18	3.80	0.37
350.19	3.93	0.41
350.20	4.05	0.45
350.21	4.17	0.50
350.22	4.28	0.55
350.23	4.40	0.60
350.24	4.51	0.65
350.25	4.61	0.71
350.26	4.72	0.77
350.27	4.82	0.82
350.28	4.92	0.89
350.29	5.01	0.95
350.30	5.11	1.01
350.31	5.20	1.08
350.32	5.29	1.15
350.33	5.38	1.22
350.34	5.47	1.29
350.35	5.55	1.36
350.36	5.63	1.43
350.37	5.71	1.51
350.38	5.79	1.59
350.39	5.87	1.66
350.40	5.94	1.74
350.41	6.01	1.82
350.42	6.08	1.90
350.43	6.15	1.99
350.44	6.22	2.07
350.45	6.28	2.15
350.46	6.35	2.24
350.47	6.41	2.32
350.48	6.47	2.41
350.49	6.53	2.50
350.50	6.58	2.59
350.51	6.64	2.67
350.52	6.69	2.76
350.53	6.74	2.85
350.54	6.79	2.94
350.55	6.84	3.03
350.56	6.89	3.12
350.57	6.93	3.21
350.58	6.98	3.30
350.59	7.02	3.39
350.60	7.06	3.47
350.61	7.10	3.56
350.62	7.14	3.65
350.63	7.17	3.74
350.64	7.20	3.82
350.65	7.24	3.91
350.66	7.27	4.00
350.67	7.30	4.08
350.68	7.32	4.16
350.69	7.35	4.25
350.70	7.37	4.33
350.71	7.39	4.41
350.72	7.41	4.49
350.73	7.43	4.57
350.74	7.45	4.64
350.75	7.46	4.71
350.76	7.47	4.79
350.77	7.48	4.86
350.78	7.49	4.93
350.79	7.50	4.99
350.80	7.50	5.05
350.81	**7.51**	5.11
350.82	7.50	5.17
350.83	7.50	5.23
350.84	7.50	5.28
350.85	7.49	5.33
350.86	7.48	5.37
350.87	7.46	5.41
350.88	7.45	5.45
350.89	7.43	5.48
350.90	7.40	5.51
350.91	7.37	5.53
350.92	7.34	5.55
350.93	7.30	5.56
350.94	7.26	**5.56**
350.95	7.21	5.56
350.96	7.15	5.54
350.97	7.08	5.51
350.98	6.99	5.46
350.99	6.87	5.39
351.00	6.58	5.17

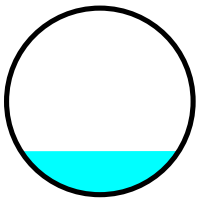
Summary for Reach DMHS6: TO DMH-S7

Inflow Area = 30,209 sf, 42.48% Impervious, Inflow Depth = 2.12" for 2-Year event
Inflow = 1.46 cfs @ 12.12 hrs, Volume= 5,330 cf
Outflow = 1.45 cfs @ 12.12 hrs, Volume= 5,330 cf, Atten= 0%, Lag= 0.1 min

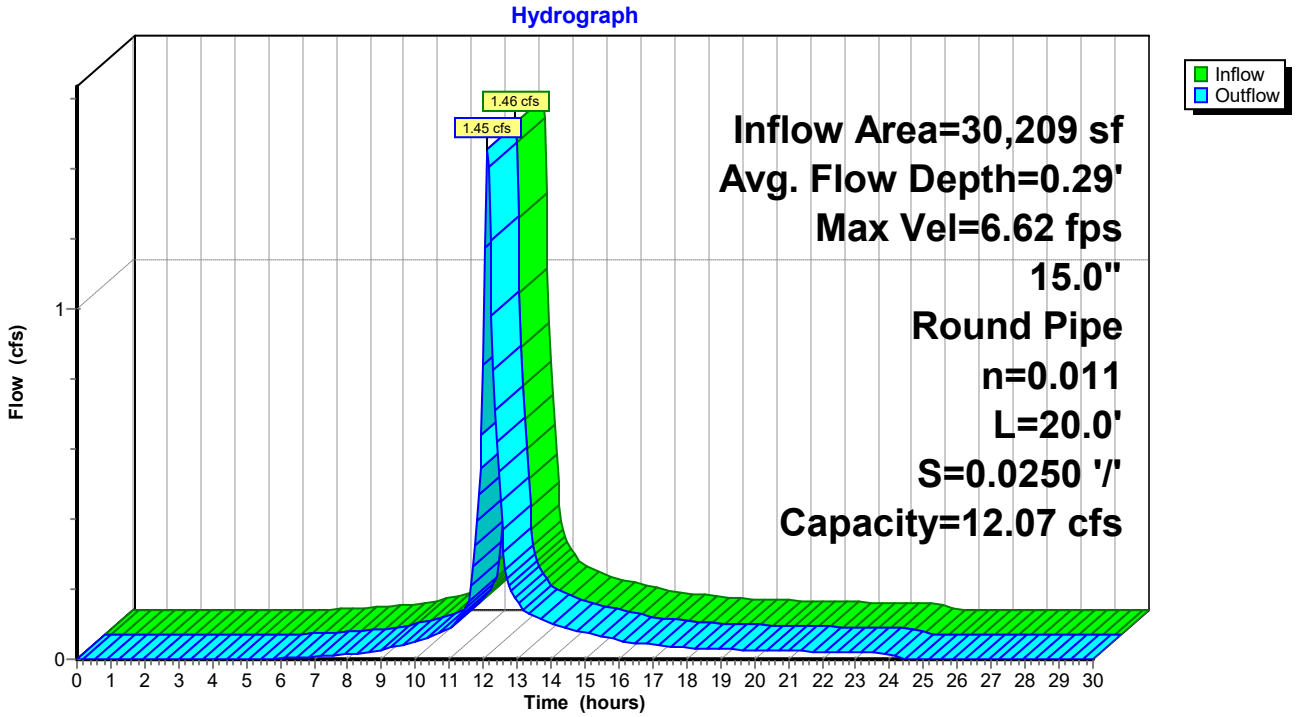
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.62 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.19 fps, Avg. Travel Time= 0.2 min

Peak Storage= 4 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.29'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 12.07 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0250 '/'
Inlet Invert= 348.00', Outlet Invert= 347.50'



Reach DMHS6: TO DMH-S7



Stage-Discharge for Reach DMHS6: TO DMH-S7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.00	0.00	0.00
348.01	0.70	0.00
348.02	1.18	0.01
348.03	1.55	0.01
348.04	1.88	0.02
348.05	2.18	0.04
348.06	2.46	0.05
348.07	2.72	0.07
348.08	2.96	0.10
348.09	3.20	0.13
348.10	3.42	0.16
348.11	3.64	0.19
348.12	3.84	0.23
348.13	4.04	0.27
348.14	4.24	0.32
348.15	4.43	0.37
348.16	4.61	0.42
348.17	4.78	0.48
348.18	4.96	0.54
348.19	5.12	0.60
348.20	5.29	0.67
348.21	5.45	0.74
348.22	5.60	0.82
348.23	5.76	0.89
348.24	5.90	0.97
348.25	6.05	1.06
348.26	6.19	1.14
348.27	6.33	1.24
348.28	6.47	1.33
348.29	6.60	1.43
348.30	6.73	1.52
348.31	6.86	1.63
348.32	6.99	1.73
348.33	7.11	1.84
348.34	7.23	1.95
348.35	7.35	2.07
348.36	7.46	2.18
348.37	7.58	2.30
348.38	7.69	2.43
348.39	7.80	2.55
348.40	7.91	2.68
348.41	8.01	2.81
348.42	8.12	2.94
348.43	8.22	3.07
348.44	8.32	3.21
348.45	8.41	3.35
348.46	8.51	3.49
348.47	8.60	3.63
348.48	8.70	3.77
348.49	8.79	3.92
348.50	8.87	4.07
348.51	8.96	4.22
348.52	9.05	4.37
348.53	9.13	4.52
348.54	9.21	4.68
348.55	9.29	4.83
348.56	9.37	4.99
348.57	9.44	5.15
348.58	9.52	5.31
348.59	9.59	5.47
348.60	9.66	5.63
348.61	9.73	5.79
348.62	9.80	5.95
348.63	9.87	6.12
348.64	9.93	6.28
348.65	10.00	6.45
348.66	10.06	6.61
348.67	10.12	6.78
348.68	10.18	6.95
348.69	10.24	7.11
348.70	10.29	7.28
348.71	10.35	7.44
348.72	10.40	7.61
348.73	10.45	7.78
348.74	10.50	7.94
348.75	10.55	8.11
348.76	10.59	8.27
348.77	10.64	8.44
348.78	10.68	8.60
348.79	10.72	8.77
348.80	10.77	8.93
348.81	10.80	9.09
348.82	10.84	9.25
348.83	10.88	9.41
348.84	10.91	9.57
348.85	10.94	9.72
348.86	10.97	9.88
348.87	11.00	10.03
348.88	11.03	10.18
348.89	11.05	10.33
348.90	11.08	10.48
348.91	11.10	10.62
348.92	11.12	10.76
348.93	11.14	10.90
348.94	11.15	11.04
348.95	11.17	11.18
348.96	11.18	11.31
348.97	11.19	11.43
348.98	11.20	11.56
348.99	11.21	11.68
349.00	11.21	11.80
349.01	11.21	11.91
349.02	**11.21**	12.02
349.03	11.21	12.13
349.04	11.21	12.23
349.05	11.20	12.33
349.06	11.19	12.42
349.07	11.18	12.50
349.08	11.16	12.58
349.09	11.15	12.66
349.10	11.13	12.73
349.11	11.10	12.79
349.12	11.07	12.84
349.13	11.04	12.89
349.14	11.01	12.92
349.15	10.97	12.96
349.16	10.92	12.97
349.17	10.87	**12.98**
349.18	10.82	12.98
349.19	10.75	12.96
349.20	10.68	12.93
349.21	10.60	12.88
349.22	10.50	12.80
349.23	10.37	12.68
349.24	10.18	12.48
349.25	9.84	12.07

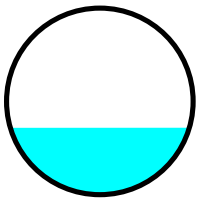
Summary for Reach DMHS7: TO DMH-S9

Inflow Area = 57,987 sf, 60.49% Impervious, Inflow Depth = 2.14" for 2-Year event
Inflow = 2.98 cfs @ 12.11 hrs, Volume= 10,351 cf
Outflow = 2.97 cfs @ 12.11 hrs, Volume= 10,351 cf, Atten= 0%, Lag= 0.1 min

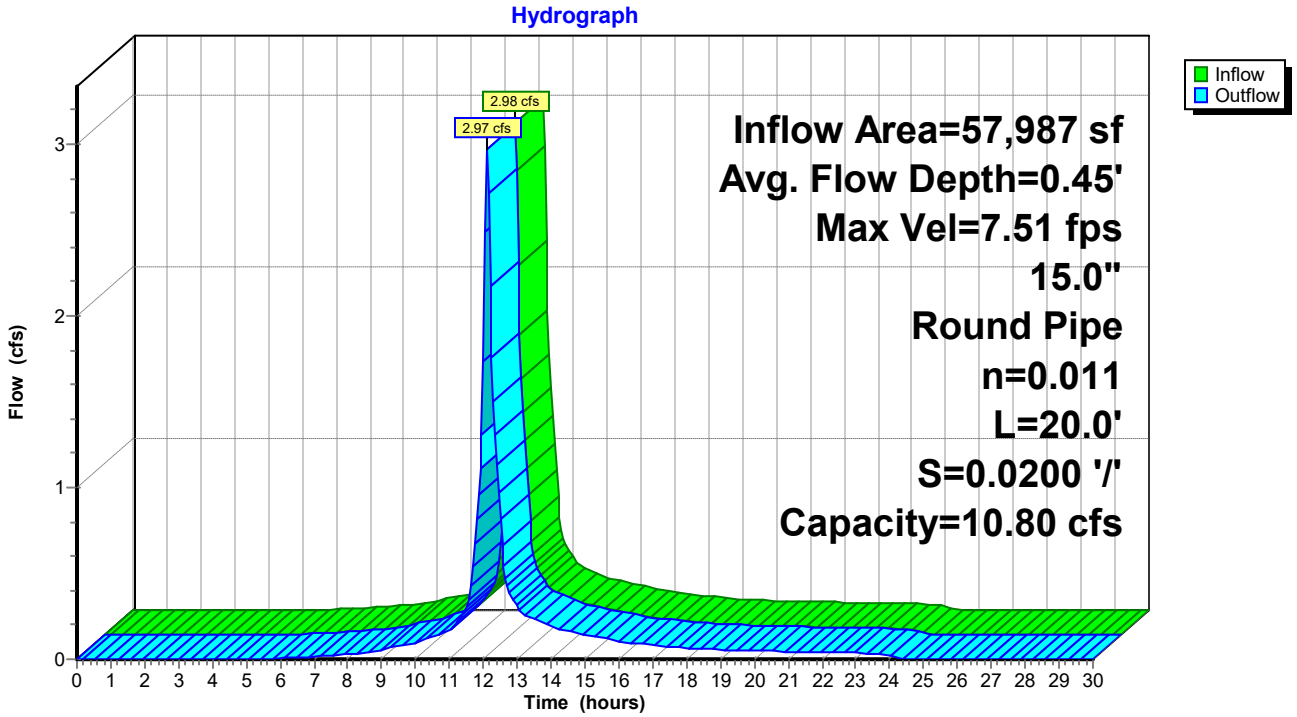
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.51 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.46 fps, Avg. Travel Time= 0.1 min

Peak Storage= 8 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.45'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.80 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0200 '/'
Inlet Invert= 344.90', Outlet Invert= 344.50'



Reach DMHS7: TO DMH-S9



Stage-Discharge for Reach DMHS7: TO DMH-S9

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
344.90	0.00	0.00
344.91	0.63	0.00
344.92	1.06	0.01
344.93	1.39	0.01
344.94	1.69	0.02
344.95	1.95	0.03
344.96	2.20	0.05
344.97	2.43	0.07
344.98	2.65	0.09
344.99	2.86	0.11
345.00	3.06	0.14
345.01	3.25	0.17
345.02	3.44	0.21
345.03	3.62	0.25
345.04	3.79	0.29
345.05	3.96	0.33
345.06	4.12	0.38
345.07	4.28	0.43
345.08	4.43	0.48
345.09	4.58	0.54
345.10	4.73	0.60
345.11	4.87	0.66
345.12	5.01	0.73
345.13	5.15	0.80
345.14	5.28	0.87
345.15	5.41	0.95
345.16	5.54	1.02
345.17	5.66	1.10
345.18	5.78	1.19
345.19	5.90	1.27
345.20	6.02	1.36
345.21	6.14	1.46
345.22	6.25	1.55
345.23	6.36	1.65
345.24	6.47	1.75
345.25	6.57	1.85
345.26	6.68	1.95
345.27	6.78	2.06
345.28	6.88	2.17
345.29	6.98	2.28
345.30	7.07	2.39
345.31	7.17	2.51
345.32	7.26	2.63
345.33	7.35	2.75
345.34	7.44	2.87
345.35	7.53	2.99
345.36	7.61	3.12
345.37	7.69	3.25
345.38	7.78	3.38
345.39	7.86	3.51
345.40	7.94	3.64
345.41	8.01	3.77
345.42	8.09	3.91
345.43	8.16	4.04
345.44	8.24	4.18
345.45	8.31	4.32
345.46	8.38	4.46
345.47	8.45	4.60
345.48	8.51	4.75
345.49	8.58	4.89
345.50	8.64	5.03
345.51	8.71	5.18
345.52	8.77	5.33
345.53	8.83	5.47
345.54	8.89	5.62
345.55	8.94	5.77
345.56	9.00	5.91
345.57	9.05	6.06
345.58	9.10	6.21
345.59	9.16	6.36
345.60	9.21	6.51
345.61	9.25	6.66
345.62	9.30	6.81
345.63	9.35	6.96
345.64	9.39	7.11
345.65	9.43	7.25
345.66	9.48	7.40
345.67	9.52	7.55
345.68	9.56	7.70
345.69	9.59	7.84
345.70	9.63	7.99
345.71	9.66	8.13
345.72	9.70	8.27
345.73	9.73	8.42
345.74	9.76	8.56
345.75	9.79	8.70
345.76	9.81	8.83
345.77	9.84	8.97
345.78	9.86	9.11
345.79	9.89	9.24
345.80	9.91	9.37
345.81	9.93	9.50
345.82	9.94	9.63
345.83	9.96	9.75
345.84	9.98	9.88
345.85	9.99	10.00
345.86	10.00	10.11
345.87	10.01	10.23
345.88	10.02	10.34
345.89	10.02	10.45
345.90	10.03	10.55
345.91	10.03	10.65
345.92	**10.03**	10.75
345.93	10.03	10.85
345.94	10.02	10.94
345.95	10.02	11.02
345.96	10.01	11.10
345.97	10.00	11.18
345.98	9.98	11.25
345.99	9.97	11.32
346.00	9.95	11.38
346.01	9.93	11.44
346.02	9.90	11.48
346.03	9.88	11.53
346.04	9.85	11.56
346.05	9.81	11.59
346.06	9.77	11.60
346.07	9.72	**11.61**
346.08	9.67	11.61
346.09	9.62	11.59
346.10	9.55	11.57
346.11	9.48	11.52
346.12	9.39	11.45
346.13	9.28	11.35
346.14	9.11	11.16
346.15	8.80	10.80

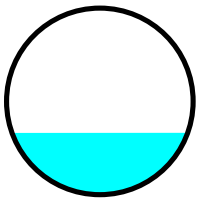
Summary for Reach DMHS8: TO DMH-S7

Inflow Area = 27,778 sf, 80.08% Impervious, Inflow Depth = 2.17" for 2-Year event
Inflow = 1.58 cfs @ 12.08 hrs, Volume= 5,021 cf
Outflow = 1.54 cfs @ 12.10 hrs, Volume= 5,021 cf, Atten= 2%, Lag= 1.3 min

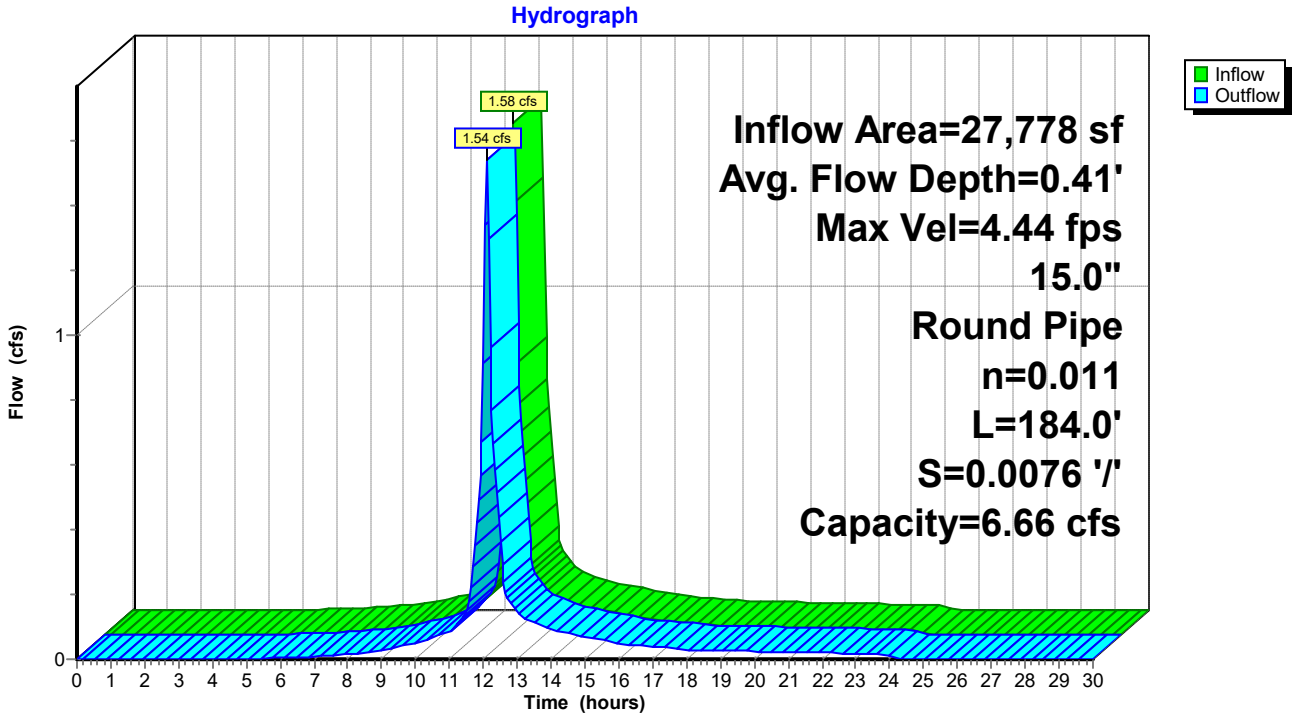
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.44 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.43 fps, Avg. Travel Time= 2.1 min

Peak Storage= 65 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.41'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.66 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 184.0' Slope= 0.0076 '/'
Inlet Invert= 346.40', Outlet Invert= 345.00'



Reach DMHS8: TO DMH-S7



Stage-Discharge for Reach DMHS8: TO DMH-S7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.40	0.00	0.00
346.41	0.39	0.00
346.42	0.65	0.00
346.43	0.86	0.01
346.44	1.04	0.01
346.45	1.21	0.02
346.46	1.36	0.03
346.47	1.50	0.04
346.48	1.63	0.05
346.49	1.76	0.07
346.50	1.89	0.09
346.51	2.01	0.11
346.52	2.12	0.13
346.53	2.23	0.15
346.54	2.34	0.18
346.55	2.44	0.20
346.56	2.54	0.23
346.57	2.64	0.26
346.58	2.73	0.30
346.59	2.83	0.33
346.60	2.92	0.37
346.61	3.01	0.41
346.62	3.09	0.45
346.63	3.17	0.49
346.64	3.26	0.54
346.65	3.34	0.58
346.66	3.42	0.63
346.67	3.49	0.68
346.68	3.57	0.73
346.69	3.64	0.79
346.70	3.71	0.84
346.71	3.78	0.90
346.72	3.85	0.96
346.73	3.92	1.02
346.74	3.99	1.08
346.75	4.05	1.14
346.76	4.12	1.20
346.77	4.18	1.27
346.78	4.24	1.34
346.79	4.30	1.41
346.80	4.36	1.48
346.81	4.42	1.55
346.82	4.48	1.62
346.83	4.53	1.69
346.84	4.59	1.77
346.85	4.64	1.85
346.86	4.69	1.92
346.87	4.75	2.00
346.88	4.80	2.08
346.89	4.85	2.16
346.90	4.90	2.24
346.91	4.94	2.33
346.92	4.99	2.41
346.93	5.04	2.49
346.94	5.08	2.58
346.95	5.13	2.67
346.96	5.17	2.75
346.97	5.21	2.84
346.98	5.25	2.93
346.99	5.29	3.02
347.00	5.33	3.10
347.01	5.37	3.19
347.02	5.41	3.28
347.03	5.44	3.37
347.04	5.48	3.47
347.05	5.52	3.56
347.06	5.55	3.65
347.07	5.58	3.74
347.08	5.62	3.83
347.09	5.65	3.92
347.10	5.68	4.02
347.11	5.71	4.11
347.12	5.74	4.20
347.13	5.77	4.29
347.14	5.79	4.38
347.15	5.82	4.47
347.16	5.84	4.57
347.17	5.87	4.66
347.18	5.89	4.75
347.19	5.92	4.84
347.20	5.94	4.93
347.21	5.96	5.01
347.22	5.98	5.10
347.23	6.00	5.19
347.24	6.02	5.28
347.25	6.04	5.36
347.26	6.05	5.45
347.27	6.07	5.53
347.28	6.08	5.62
347.29	6.10	5.70
347.30	6.11	5.78
347.31	6.12	5.86
347.32	6.13	5.94
347.33	6.14	6.02
347.34	6.15	6.09
347.35	6.16	6.17
347.36	6.17	6.24
347.37	6.17	6.31
347.38	6.18	6.38
347.39	6.18	6.44
347.40	6.18	6.51
347.41	6.19	6.57
347.42	**6.19**	6.63
347.43	6.18	6.69
347.44	6.18	6.75
347.45	6.18	6.80
347.46	6.17	6.85
347.47	6.17	6.90
347.48	6.16	6.94
347.49	6.15	6.98
347.50	6.14	7.02
347.51	6.12	7.05
347.52	6.11	7.08
347.53	6.09	7.11
347.54	6.07	7.13
347.55	6.05	7.15
347.56	6.03	7.16
347.57	6.00	**7.16**
347.58	5.97	7.16
347.59	5.93	7.15
347.60	5.89	7.13
347.61	5.85	7.10
347.62	5.79	7.06
347.63	5.72	7.00
347.64	5.62	6.88
347.65	5.43	6.66

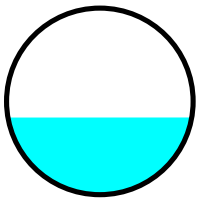
Summary for Reach DMHS9: TO DMH-S10

Inflow Area = 57,987 sf, 60.49% Impervious, Inflow Depth = 2.14" for 2-Year event
Inflow = 2.97 cfs @ 12.11 hrs, Volume= 10,351 cf
Outflow = 2.90 cfs @ 12.12 hrs, Volume= 10,351 cf, Atten= 2%, Lag= 0.9 min

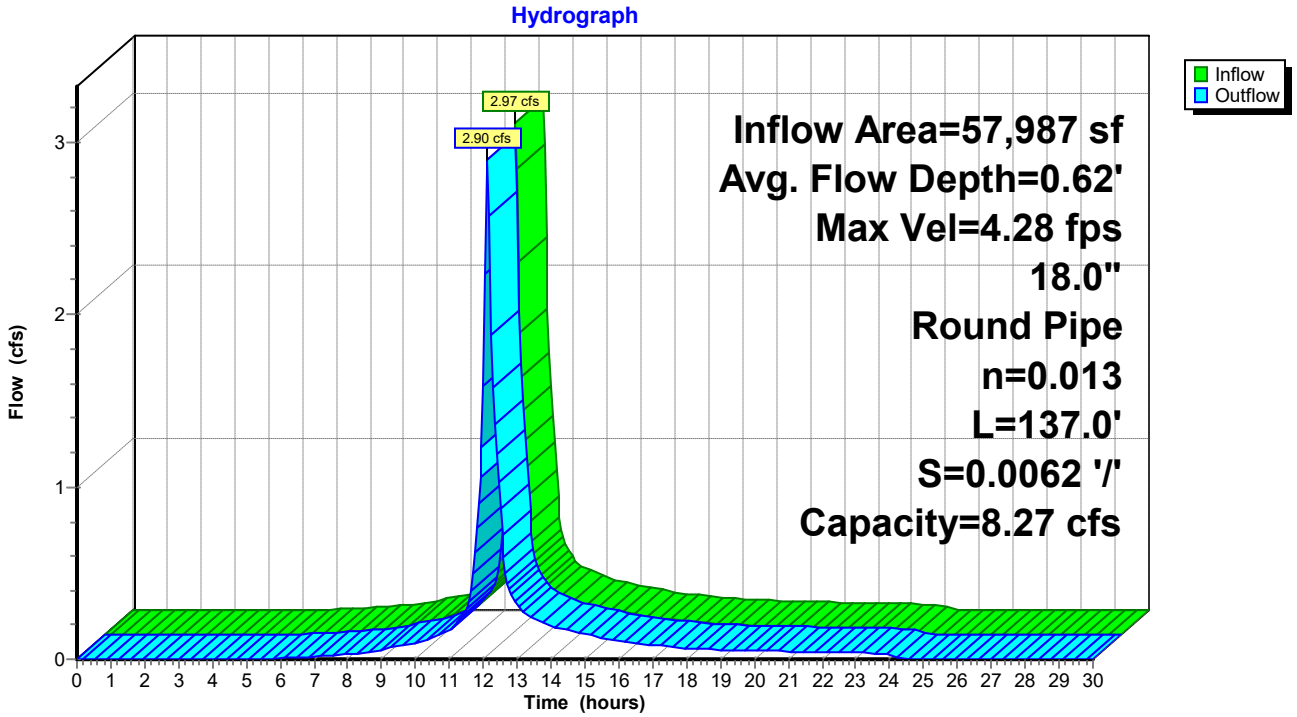
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.28 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.40 fps, Avg. Travel Time= 1.6 min

Peak Storage= 95 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.62'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.27 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 137.0' Slope= 0.0062 '/'
Inlet Invert= 344.25', Outlet Invert= 343.40'



Reach DMHS9: TO DMH-S10



Stage-Discharge for Reach DMHS9: TO DMH-S10

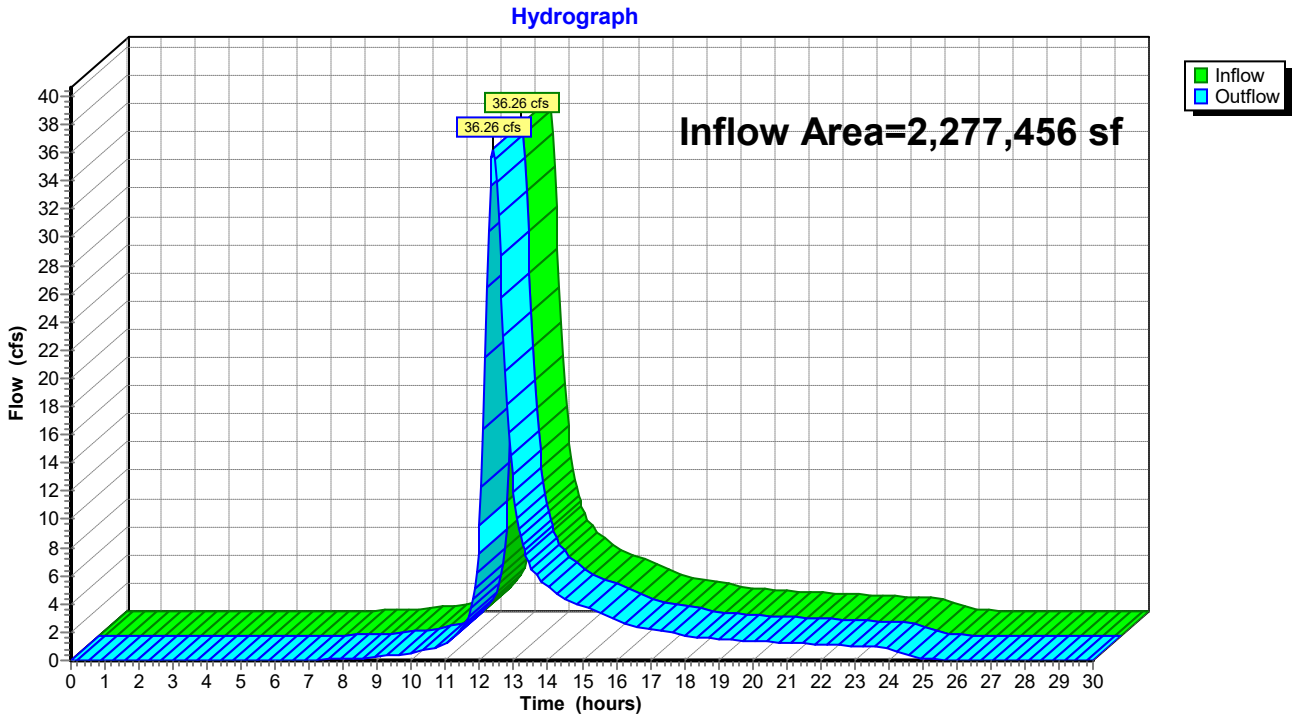
Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
344.25	0.00	0.00
344.26	0.28	0.00
344.27	0.50	0.00
344.28	0.66	0.01
344.29	0.79	0.01
344.30	0.92	0.02
344.31	1.04	0.02
344.32	1.15	0.03
344.33	1.25	0.05
344.34	1.35	0.06
344.35	1.45	0.07
344.36	1.54	0.09
344.37	1.63	0.11
344.38	1.71	0.13
344.39	1.80	0.15
344.40	1.88	0.17
344.41	1.96	0.20
344.42	2.03	0.23
344.43	2.11	0.25
344.44	2.18	0.28
344.45	2.25	0.32
344.46	2.32	0.35
344.47	2.39	0.38
344.48	2.45	0.42
344.49	2.52	0.46
344.50	2.58	0.50
344.51	2.64	0.54
344.52	2.70	0.58
344.53	2.76	0.63
344.54	2.82	0.68
344.55	2.88	0.72
344.56	2.94	0.77
344.57	2.99	0.83
344.58	3.05	0.88
344.59	3.10	0.93
344.60	3.15	0.99
344.61	3.20	1.05
344.62	3.26	1.10
344.63	3.31	1.16
344.64	3.35	1.22
344.65	3.40	1.29
344.66	3.45	1.35
344.67	3.50	1.42
344.68	3.54	1.48
344.69	3.59	1.55
344.70	3.63	1.62
344.71	3.68	1.69
344.72	3.72	1.76
344.73	3.76	1.83
344.74	3.81	1.91
344.75	3.85	1.98
344.76	3.89	2.06
344.77	3.93	2.14
344.78	3.97	2.22
344.79	4.01	2.29
344.80	4.04	2.37
344.81	4.08	2.46
344.82	4.12	2.54
344.83	4.15	2.62
344.84	4.19	2.70
344.85	4.22	2.79
344.86	4.26	2.87
344.87	4.29	2.96
344.88	4.33	3.05
344.89	4.36	3.13
344.90	4.39	3.22
344.91	4.42	3.31
344.92	4.45	3.40
344.93	4.48	3.49
344.94	4.51	3.58
344.95	4.54	3.67
344.96	4.57	3.77
344.97	4.60	3.86
344.98	4.63	3.95
344.99	4.66	4.04
345.00	4.68	4.14
345.01	4.71	4.23
345.02	4.73	4.32
345.03	4.76	4.42
345.04	4.78	4.51
345.05	4.81	4.61
345.06	4.83	4.70
345.07	4.85	4.80
345.08	4.88	4.89
345.09	4.90	4.99
345.10	4.92	5.08
345.11	4.94	5.18
345.12	4.96	5.27
345.13	4.98	5.37
345.14	5.00	5.46
345.15	5.02	5.56
345.16	5.04	5.65
345.17	5.06	5.75
345.18	5.08	5.84
345.19	5.09	5.93
345.20	5.11	6.03
345.21	5.12	6.12
345.22	5.14	6.21
345.23	5.15	6.30
345.24	5.17	6.40
345.25	5.18	6.49
345.26	5.20	6.58
345.27	5.21	6.66
345.28	5.22	6.75
345.29	5.23	6.84
345.30	5.24	6.93
345.31	5.25	7.01
345.32	5.26	7.10
345.33	5.27	7.18
345.34	5.28	7.26
345.35	5.29	7.35
345.36	5.30	7.43
345.37	5.30	7.51
345.38	5.31	7.58
345.39	5.32	7.66
345.40	5.32	7.74
345.41	5.33	7.81
345.42	5.33	7.88
345.43	5.33	7.95
345.44	5.33	8.02
345.45	5.34	8.09
345.46	5.34	8.15
345.47	**5.34**	8.22
345.48	5.34	8.28
345.49	5.34	8.34
345.50	5.33	8.39
345.51	5.33	8.45
345.52	5.33	8.50
345.53	5.32	8.55
345.54	5.32	8.60
345.55	5.31	8.64
345.56	5.30	8.68
345.57	5.30	8.72
345.58	5.29	8.76
345.59	5.28	8.79
345.60	5.26	8.82
345.61	5.25	8.84
345.62	5.24	8.86
345.63	5.22	8.88
345.64	5.20	8.89
345.65	5.18	8.90
345.66	5.16	**8.90**
345.67	5.14	8.89
345.68	5.11	8.88
345.69	5.08	8.86
345.70	5.05	8.83
345.71	5.01	8.79
345.72	4.97	8.74
345.73	4.92	8.66
345.74	4.82	8.51
345.75	4.68	8.27

Summary for Reach DP#1: DP#1

Inflow Area = 2,277,456 sf, 14.76% Impervious, Inflow Depth = 1.07" for 2-Year event
Inflow = 36.26 cfs @ 12.40 hrs, Volume= 203,201 cf
Outflow = 36.26 cfs @ 12.40 hrs, Volume= 203,201 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#1: DP#1

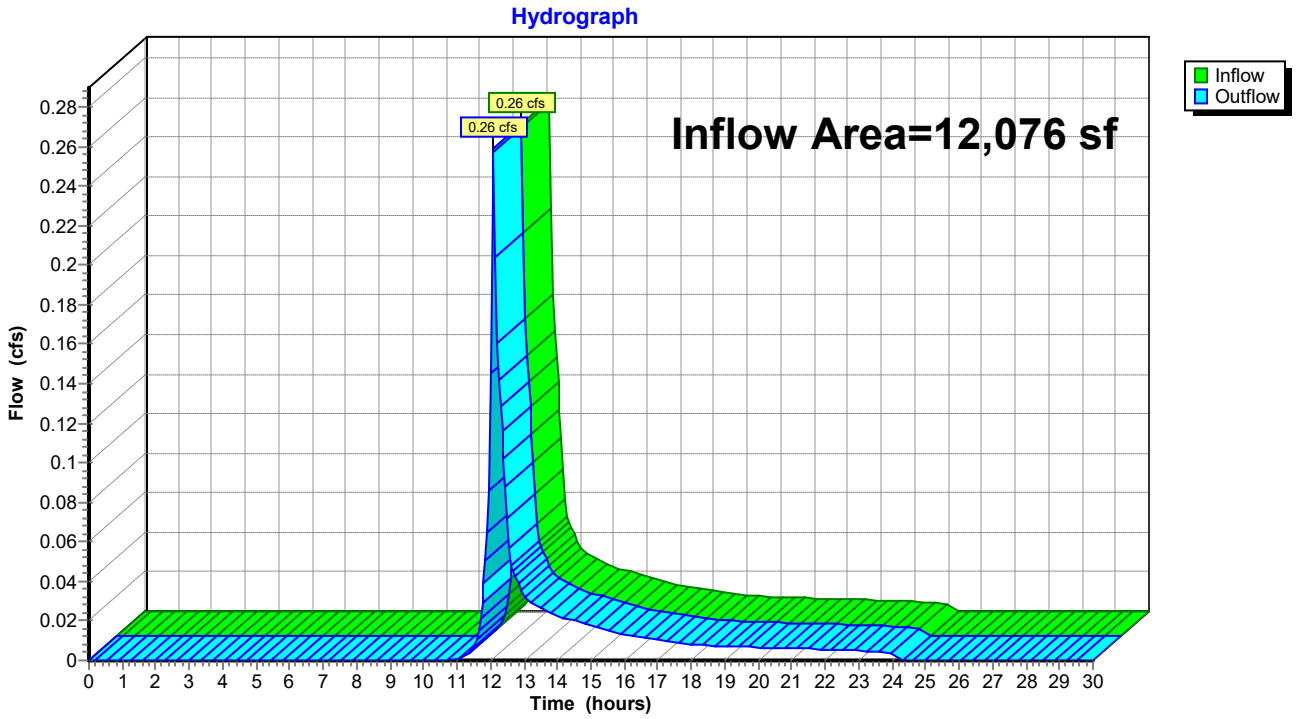


Summary for Reach DP#5: DITCH

Inflow Area = 12,076 sf, 57.69% Impervious, Inflow Depth = 0.86" for 2-Year event
Inflow = 0.26 cfs @ 12.09 hrs, Volume= 863 cf
Outflow = 0.26 cfs @ 12.09 hrs, Volume= 863 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#5: DITCH

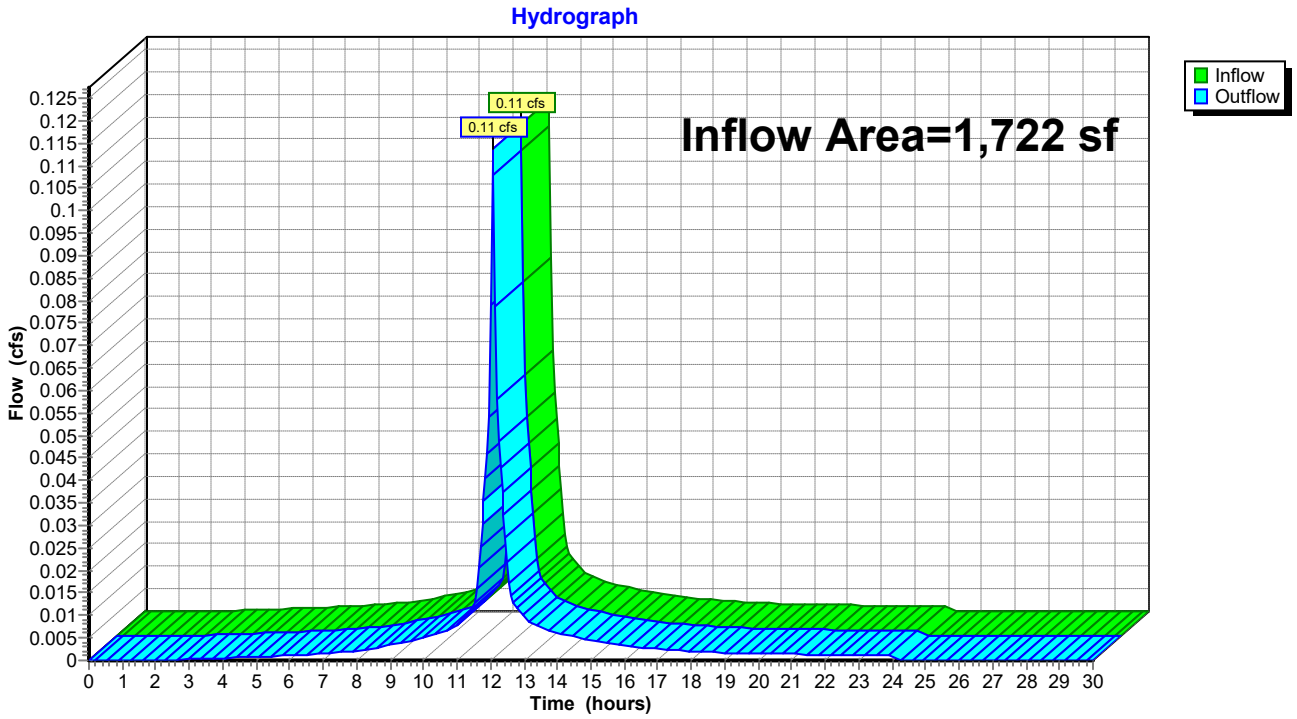


Summary for Reach DRIP: TO YD#1

Inflow Area = 1,722 sf, 96.81% Impervious, Inflow Depth = 2.66" for 2-Year event
Inflow = 0.11 cfs @ 12.07 hrs, Volume= 381 cf
Outflow = 0.11 cfs @ 12.07 hrs, Volume= 381 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DRIP: TO YD#1

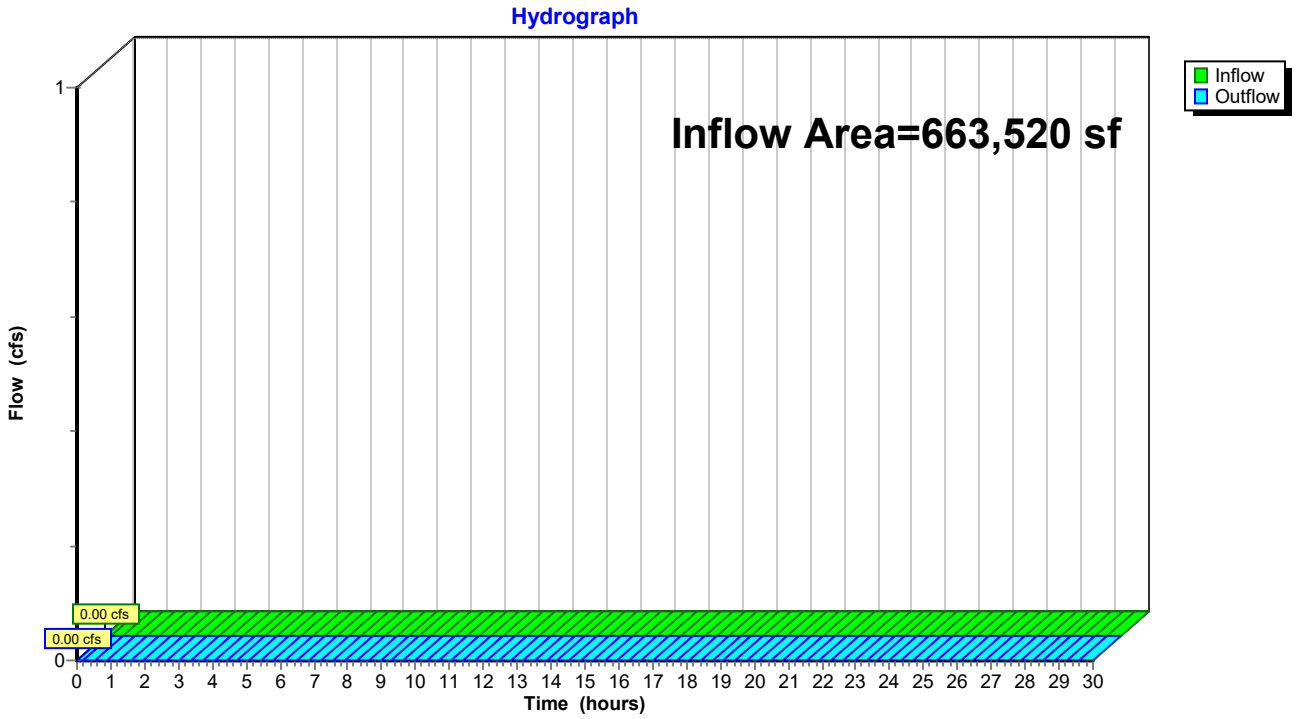


Summary for Reach R200: DP#2

Inflow Area = 663,520 sf, 33.87% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R200: DP#2

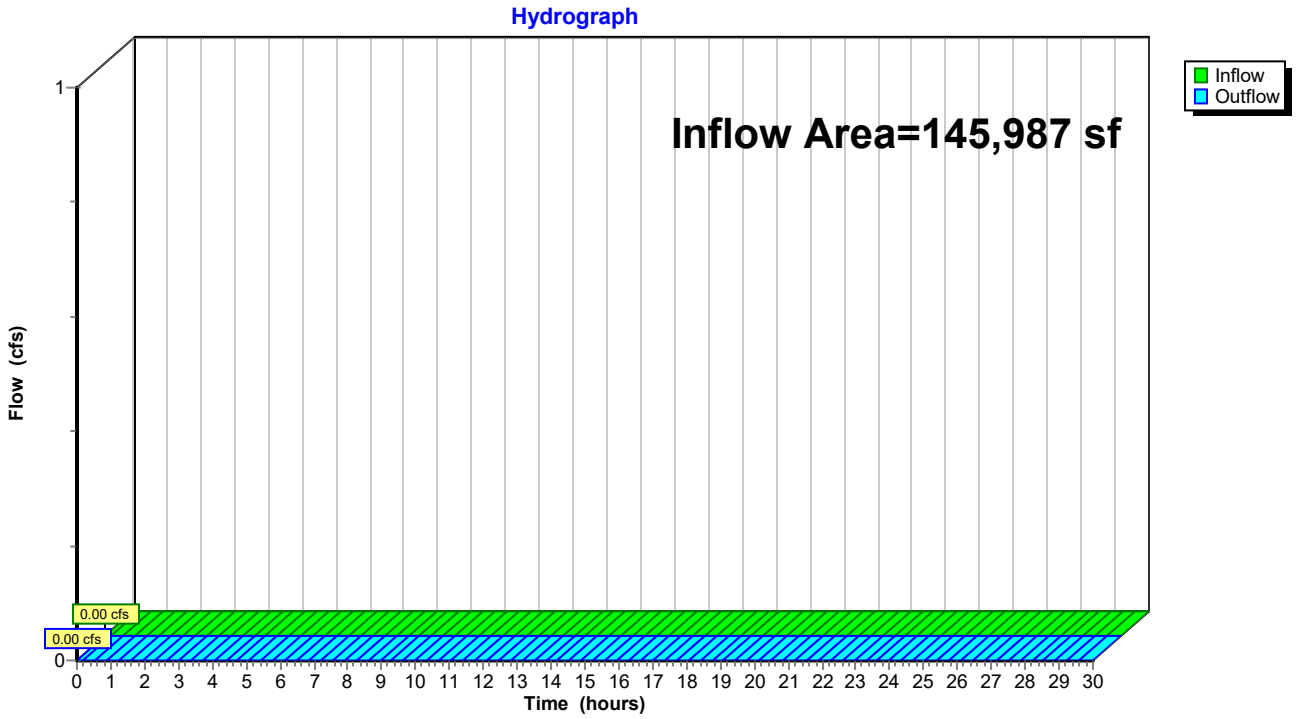


Summary for Reach R300: DP#3

Inflow Area = 145,987 sf, 0.00% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R300: DP#3

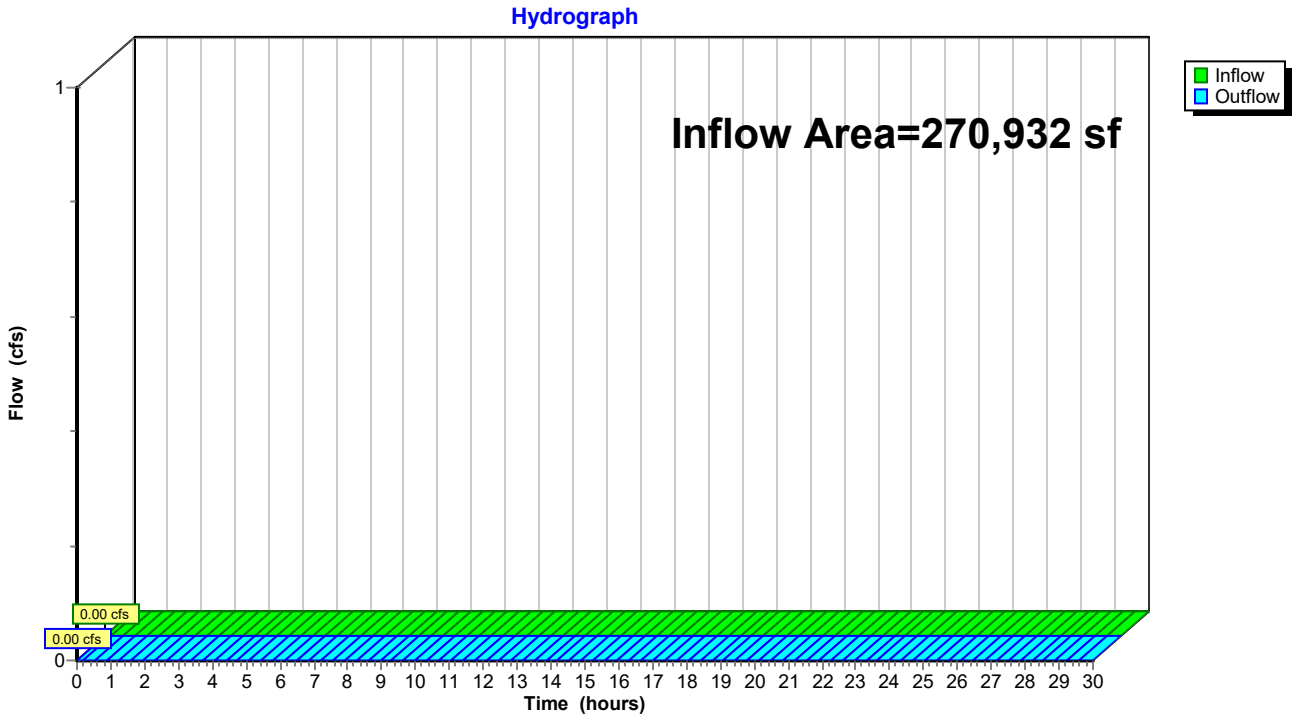


Summary for Reach R400: DP#4

Inflow Area = 270,932 sf, 0.59% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R400: DP#4



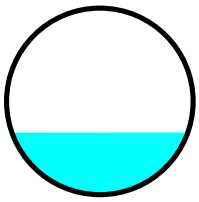
Summary for Reach RF-1: TO DMH#3

Inflow Area = 2,135 sf,100.00% Impervious, Inflow Depth = 2.77" for 2-Year event
Inflow = 0.14 cfs @ 12.09 hrs, Volume= 493 cf
Outflow = 0.14 cfs @ 12.10 hrs, Volume= 493 cf, Atten= 1%, Lag= 0.5 min

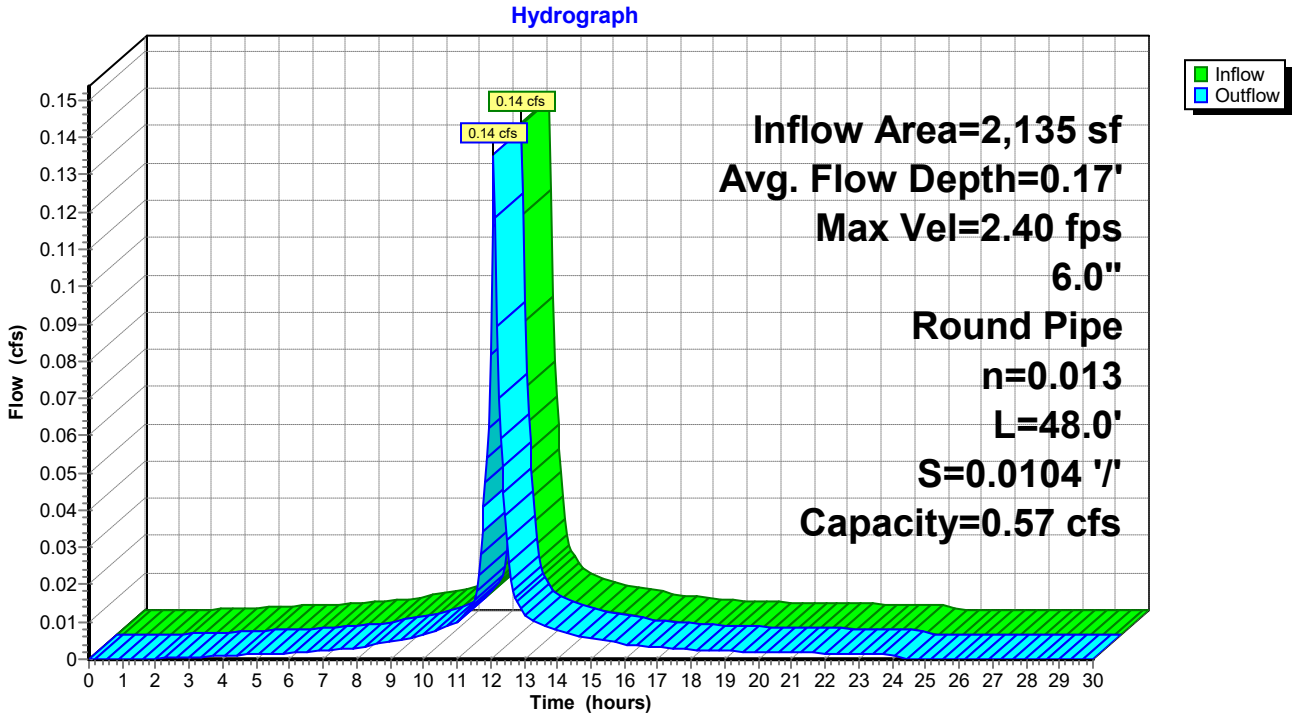
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.40 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 0.79 fps, Avg. Travel Time= 1.0 min

Peak Storage= 3 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.57 cfs

6.0" Round Pipe
n= 0.013 Cast iron, coated
Length= 48.0' Slope= 0.0104 '/'
Inlet Invert= 351.70', Outlet Invert= 351.20'



Reach RF-1: TO DMH#3



Stage-Discharge for Reach RF-1: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.41	0.00
351.72	0.65	0.00
351.73	0.84	0.00
351.74	1.02	0.01
351.75	1.17	0.01
351.76	1.31	0.02
351.77	1.44	0.02
351.78	1.57	0.03
351.79	1.68	0.04
351.80	1.79	0.05
351.81	1.90	0.06
351.82	2.00	0.07
351.83	2.09	0.08
351.84	2.18	0.10
351.85	2.26	0.11
351.86	2.34	0.13
351.87	2.42	0.14
351.88	2.49	0.16
351.89	2.56	0.18
351.90	2.63	0.19
351.91	2.69	0.21
351.92	2.75	0.23
351.93	2.81	0.25
351.94	2.87	0.27
351.95	2.92	0.29
351.96	2.96	0.31
351.97	3.01	0.33
351.98	3.05	0.35
351.99	3.09	0.37
352.00	3.13	0.38
352.01	3.16	0.40
352.02	3.19	0.42
352.03	3.22	0.44
352.04	3.24	0.46
352.05	3.27	0.48
352.06	3.28	0.50
352.07	3.30	0.51
352.08	3.31	0.53
352.09	3.32	0.55
352.10	3.32	0.56
352.11	**3.32**	0.57
352.12	3.32	0.58
352.13	3.31	0.60
352.14	3.30	0.60
352.15	3.28	0.61
352.16	3.25	0.61
352.17	3.22	**0.62**
352.18	3.17	0.61
352.19	3.10	0.61
352.20	2.92	0.57

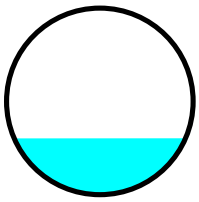
Summary for Reach RF-2: TO DMH#3

Inflow Area = 1,853 sf,100.00% Impervious, Inflow Depth = 2.77" for 2-Year event
Inflow = 0.12 cfs @ 12.08 hrs, Volume= 427 cf
Outflow = 0.12 cfs @ 12.10 hrs, Volume= 427 cf, Atten= 1%, Lag= 0.7 min

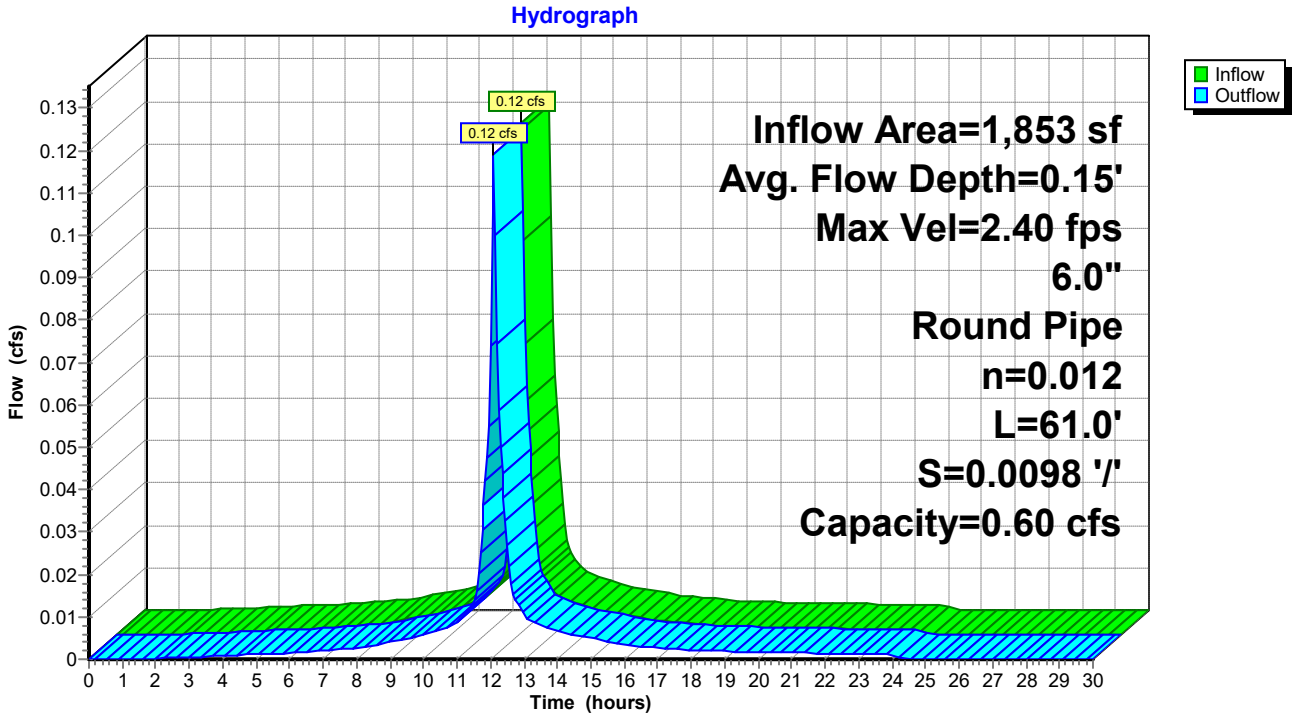
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.40 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.79 fps, Avg. Travel Time= 1.3 min

Peak Storage= 3 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.15'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.60 cfs

6.0" Round Pipe
n= 0.012 Steel, smooth
Length= 61.0' Slope= 0.0098 '/'
Inlet Invert= 351.80', Outlet Invert= 351.20'



Reach RF-2: TO DMH#3



Stage-Discharge for Reach RF-2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.43	0.00
351.82	0.68	0.00
351.83	0.89	0.00
351.84	1.07	0.01
351.85	1.23	0.01
351.86	1.38	0.02
351.87	1.52	0.03
351.88	1.65	0.03
351.89	1.77	0.04
351.90	1.89	0.05
351.91	2.00	0.06
351.92	2.10	0.08
351.93	2.20	0.09
351.94	2.29	0.10
351.95	2.38	0.12
351.96	2.47	0.13
351.97	2.55	0.15
351.98	2.63	0.17
351.99	2.70	0.18
352.00	2.77	0.20
352.01	2.84	0.22
352.02	2.90	0.24
352.03	2.96	0.26
352.04	3.02	0.28
352.05	3.07	0.30
352.06	3.12	0.32
352.07	3.17	0.34
352.08	3.21	0.36
352.09	3.25	0.38
352.10	3.29	0.41
352.11	3.33	0.43
352.12	3.36	0.45
352.13	3.39	0.47
352.14	3.42	0.49
352.15	3.44	0.50
352.16	3.46	0.52
352.17	3.47	0.54
352.18	3.49	0.56
352.19	3.49	0.57
352.20	3.50	0.59
352.21	**3.50**	0.60
352.22	3.50	0.62
352.23	3.49	0.63
352.24	3.47	0.64
352.25	3.45	0.64
352.26	3.42	0.65
352.27	3.39	**0.65**
352.28	3.33	0.65
352.29	3.26	0.64
352.30	3.07	0.60

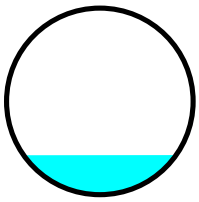
Summary for Reach RF3: TO DMH#3

Inflow Area = 933 sf,100.00% Impervious, Inflow Depth = 2.77" for 2-Year event
Inflow = 0.06 cfs @ 12.07 hrs, Volume= 215 cf
Outflow = 0.06 cfs @ 12.10 hrs, Volume= 215 cf, Atten= 4%, Lag= 1.5 min

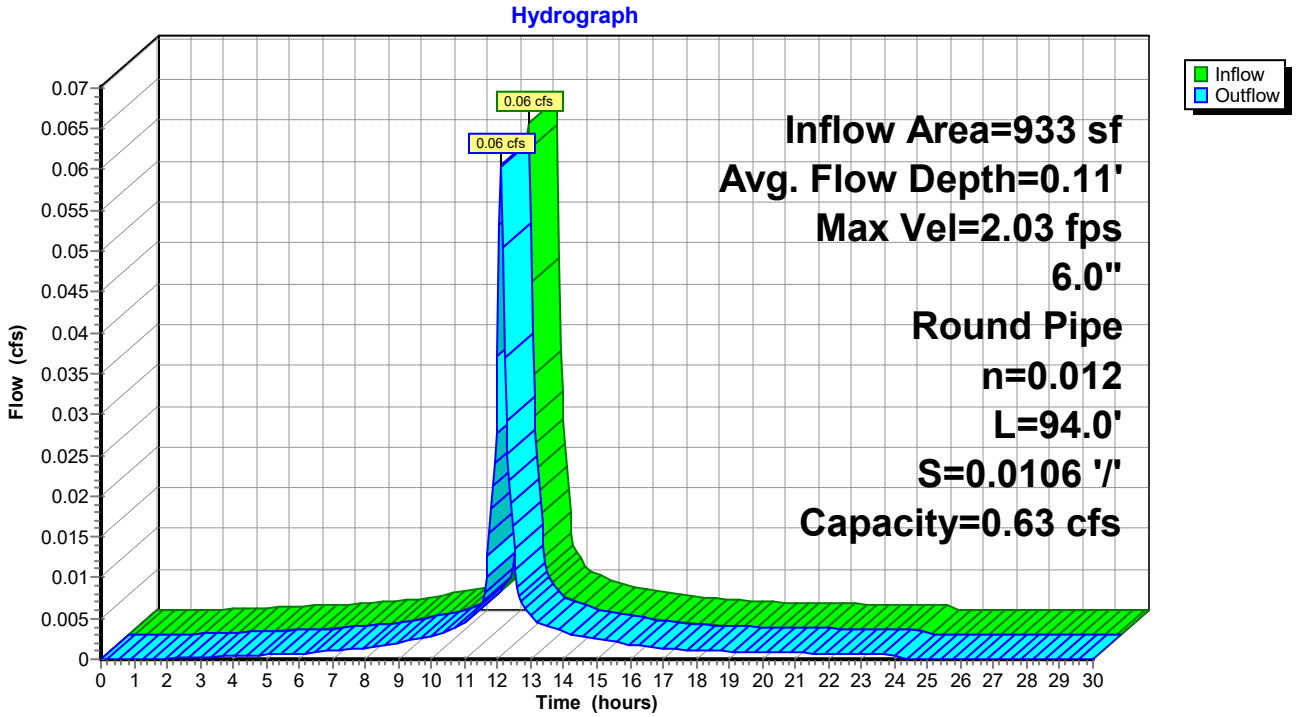
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.03 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 0.67 fps, Avg. Travel Time= 2.3 min

Peak Storage= 3 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.11'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.63 cfs

6.0" Round Pipe
n= 0.012 Steel, smooth
Length= 94.0' Slope= 0.0106 '/'
Inlet Invert= 352.10', Outlet Invert= 351.10'



Reach RF3: TO DMH#3



Stage-Discharge for Reach RF3: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.10	0.00	0.00
352.11	0.45	0.00
352.12	0.71	0.00
352.13	0.92	0.00
352.14	1.11	0.01
352.15	1.28	0.01
352.16	1.44	0.02
352.17	1.58	0.03
352.18	1.72	0.03
352.19	1.84	0.04
352.20	1.96	0.05
352.21	2.08	0.07
352.22	2.19	0.08
352.23	2.29	0.09
352.24	2.39	0.11
352.25	2.48	0.12
352.26	2.57	0.14
352.27	2.65	0.16
352.28	2.73	0.17
352.29	2.81	0.19
352.30	2.88	0.21
352.31	2.95	0.23
352.32	3.02	0.25
352.33	3.08	0.27
352.34	3.14	0.29
352.35	3.19	0.31
352.36	3.25	0.33
352.37	3.30	0.36
352.38	3.34	0.38
352.39	3.38	0.40
352.40	3.42	0.42
352.41	3.46	0.44
352.42	3.49	0.46
352.43	3.52	0.48
352.44	3.55	0.51
352.45	3.58	0.52
352.46	3.60	0.54
352.47	3.61	0.56
352.48	3.63	0.58
352.49	3.63	0.60
352.50	3.64	0.61
352.51	**3.64**	0.63
352.52	3.64	0.64
352.53	3.63	0.65
352.54	3.61	0.66
352.55	3.59	0.67
352.56	3.56	0.67
352.57	3.52	**0.67**
352.58	3.47	0.67
352.59	3.39	0.66
352.60	3.19	0.63

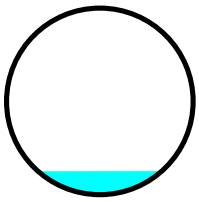
Summary for Reach YD1: TO CO#1

Inflow Area = 5,181 sf, 36.69% Impervious, Inflow Depth = 1.20" for 2-Year event
Inflow = 0.14 cfs @ 12.08 hrs, Volume= 517 cf
Outflow = 0.14 cfs @ 12.08 hrs, Volume= 517 cf, Atten= 0%, Lag= 0.1 min

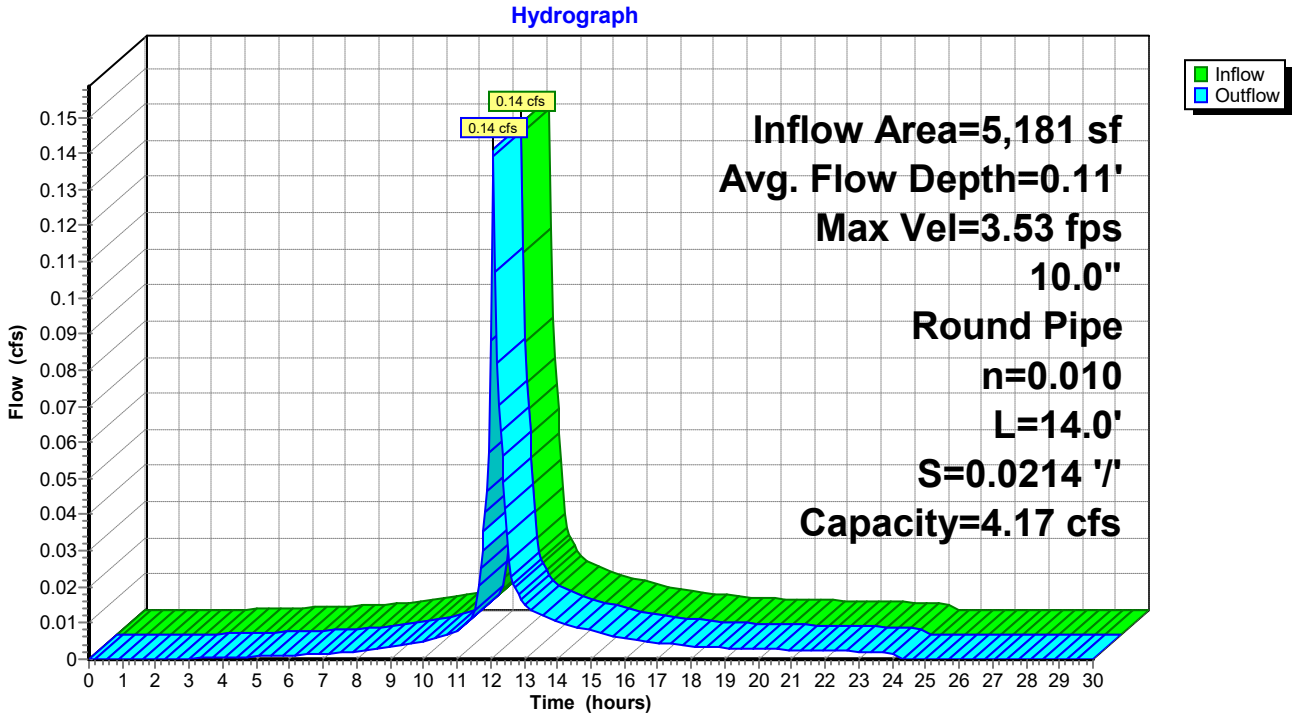
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.53 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.21 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.11'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.17 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 14.0' Slope= 0.0214 '/'
Inlet Invert= 350.80', Outlet Invert= 350.50'



Reach YD1: TO CO#1



Stage-Discharge for Reach YD1: TO CO#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.80	0.00	0.00
350.81	0.76	0.00
350.82	1.21	0.00
350.83	1.58	0.01
350.84	1.91	0.02
350.85	2.21	0.03
350.86	2.49	0.04
350.87	2.74	0.06
350.88	2.99	0.08
350.89	3.22	0.10
350.90	3.44	0.13
350.91	3.65	0.16
350.92	3.85	0.19
350.93	4.05	0.22
350.94	4.23	0.26
350.95	4.41	0.29
350.96	4.59	0.34
350.97	4.76	0.38
350.98	4.92	0.43
350.99	5.08	0.48
351.00	5.23	0.53
351.01	5.38	0.58
351.02	5.52	0.64
351.03	5.66	0.69
351.04	5.80	0.75
351.05	5.93	0.82
351.06	6.06	0.88
351.07	6.19	0.95
351.08	6.31	1.01
351.09	6.42	1.08
351.10	6.54	1.16
351.11	6.65	1.23
351.12	6.76	1.30
351.13	6.86	1.38
351.14	6.96	1.46
351.15	7.06	1.54
351.16	7.16	1.62
351.17	7.25	1.70
351.18	7.34	1.78
351.19	7.43	1.86
351.20	7.51	1.94
351.21	7.59	2.03
351.22	7.67	2.11
351.23	7.75	2.20
351.24	7.82	2.28
351.25	7.89	2.37
351.26	7.96	2.46
351.27	8.02	2.54
351.28	8.08	2.63
351.29	8.14	2.72
351.30	8.20	2.80
351.31	8.25	2.89
351.32	8.30	2.97
351.33	8.35	3.06
351.34	8.40	3.14
351.35	8.44	3.22
351.36	8.48	3.30
351.37	8.52	3.39
351.38	8.55	3.46
351.39	8.58	3.54
351.40	8.61	3.62
351.41	8.63	3.69
351.42	8.65	3.77
351.43	8.67	3.84
351.44	8.69	3.91
351.45	8.70	3.97
351.46	8.71	4.03
351.47	8.71	4.10
351.48	**8.71**	4.15
351.49	8.71	4.21
351.50	8.70	4.26
351.51	8.69	4.30
351.52	8.68	4.35
351.53	8.65	4.38
351.54	8.63	4.42
351.55	8.59	4.44
351.56	8.55	4.46
351.57	8.51	4.48
351.58	8.45	**4.48**
351.59	8.38	4.48
351.60	8.30	4.47
351.61	8.20	4.44
351.62	8.06	4.38
351.63	7.78	4.24

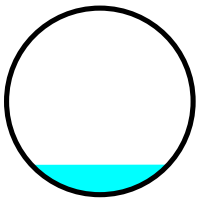
Summary for Reach YD2: TO D14

Inflow Area = 10,793 sf, 49.52% Impervious, Inflow Depth = 1.19" for 2-Year event
Inflow = 0.34 cfs @ 12.08 hrs, Volume= 1,069 cf
Outflow = 0.34 cfs @ 12.08 hrs, Volume= 1,069 cf, Atten= 0%, Lag= 0.1 min

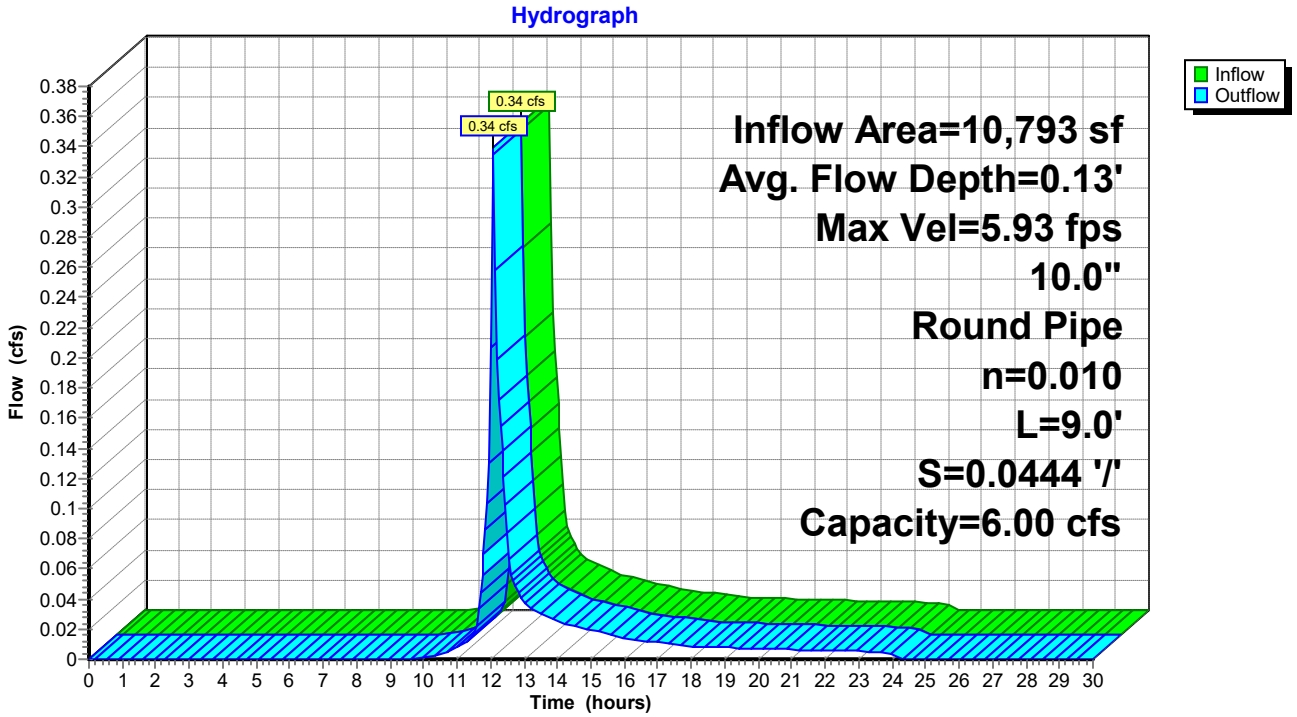
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.93 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.23 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.13'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 6.00 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 9.0' Slope= 0.0444 '/'
Inlet Invert= 347.80', Outlet Invert= 347.40'



Reach YD2: TO D14



Stage-Discharge for Reach YD2: TO D14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.80	0.00	0.00
347.81	1.09	0.00
347.82	1.74	0.01
347.83	2.28	0.01
347.84	2.75	0.03
347.85	3.18	0.04
347.86	3.58	0.06
347.87	3.95	0.09
347.88	4.30	0.12
347.89	4.64	0.15
347.90	4.95	0.18
347.91	5.26	0.22
347.92	5.55	0.27
347.93	5.83	0.32
347.94	6.10	0.37
347.95	6.36	0.42
347.96	6.61	0.48
347.97	6.85	0.55
347.98	7.09	0.61
347.99	7.31	0.68
348.00	7.54	0.76
348.01	7.75	0.84
348.02	7.96	0.92
348.03	8.16	1.00
348.04	8.35	1.09
348.05	8.54	1.18
348.06	8.73	1.27
348.07	8.91	1.36
348.08	9.08	1.46
348.09	9.25	1.56
348.10	9.42	1.66
348.11	9.58	1.77
348.12	9.73	1.88
348.13	9.88	1.99
348.14	10.03	2.10
348.15	10.17	2.21
348.16	10.31	2.33
348.17	10.44	2.44
348.18	10.57	2.56
348.19	10.70	2.68
348.20	10.82	2.80
348.21	10.93	2.92
348.22	11.05	3.04
348.23	11.16	3.17
348.24	11.26	3.29
348.25	11.36	3.41
348.26	11.46	3.54
348.27	11.55	3.66
348.28	11.64	3.79
348.29	11.73	3.91
348.30	11.81	4.03
348.31	11.88	4.16
348.32	11.96	4.28
348.33	12.03	4.40
348.34	12.09	4.52
348.35	12.15	4.64
348.36	12.21	4.76
348.37	12.26	4.88
348.38	12.31	4.99
348.39	12.36	5.10
348.40	12.40	5.21
348.41	12.43	5.32
348.42	12.46	5.42
348.43	12.49	5.53
348.44	12.51	5.62
348.45	12.53	5.72
348.46	12.54	5.81
348.47	12.55	5.90
348.48	**12.55**	5.98
348.49	12.55	6.06
348.50	12.54	6.13
348.51	12.52	6.20
348.52	12.49	6.26
348.53	12.46	6.31
348.54	12.43	6.36
348.55	12.38	6.40
348.56	12.32	6.43
348.57	12.25	6.45
348.58	12.17	**6.46**
348.59	12.07	6.45
348.60	11.96	6.43
348.61	11.81	6.39
348.62	11.61	6.31
348.63	11.20	6.11

Summary for Pond P1: BASIN#1

Inflow Area =	556,651 sf,	40.37% Impervious,	Inflow Depth =	0.99"	for 2-Year event
Inflow =	11.17 cfs @	12.17 hrs,	Volume=	45,895 cf	
Outflow =	3.88 cfs @	12.57 hrs,	Volume=	45,895 cf,	Atten= 65%, Lag= 24.1 min
Discarded =	3.88 cfs @	12.57 hrs,	Volume=	45,895 cf	
Primary =	0.00 cfs @	0.00 hrs,	Volume=	0 cf	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0 cf	

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 335.47' @ 12.57 hrs Surf.Area= 19,289 sf Storage= 8,655 cf

Plug-Flow detention time= 14.2 min calculated for 45,819 cf (100% of inflow)
Center-of-Mass det. time= 14.2 min (850.9 - 836.8)

Volume	Invert	Avail.Storage	Storage Description
#1	335.00'	119,716 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
335.00	17,284	0	0
336.00	21,521	19,403	19,403
338.00	25,021	46,542	65,945
340.00	28,750	53,771	119,716

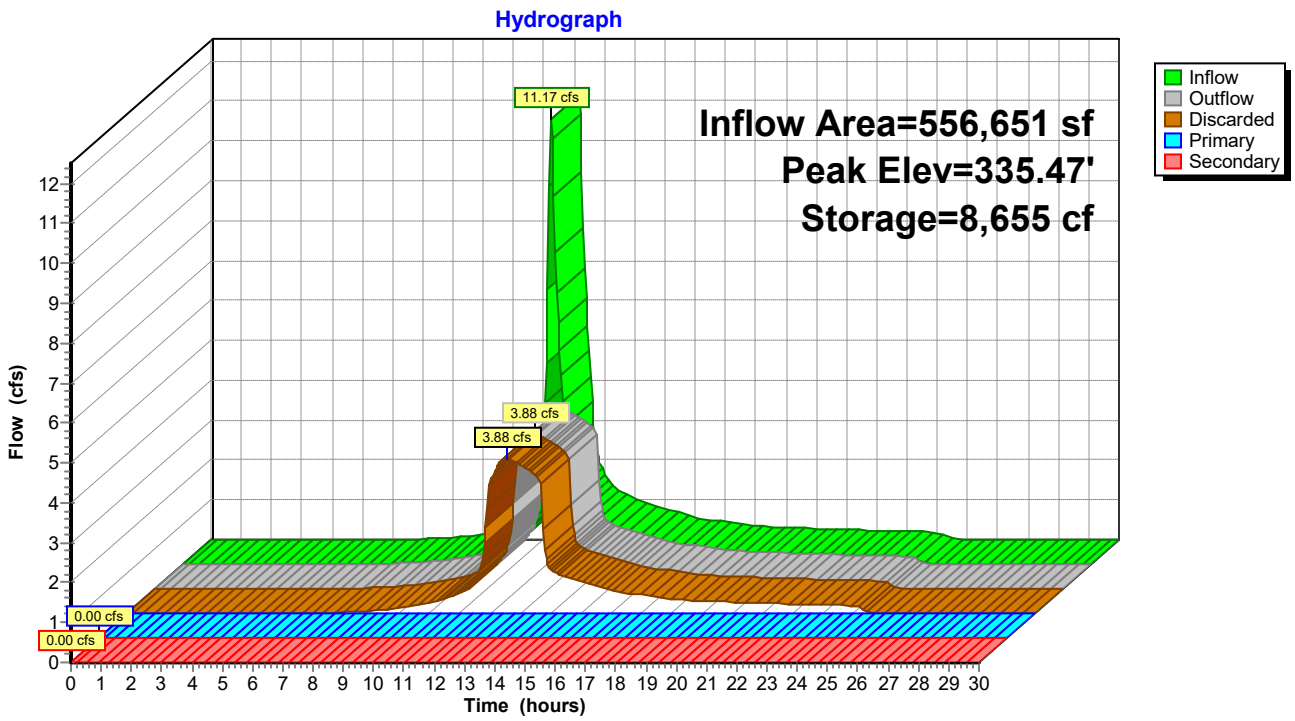
Device	Routing	Invert	Outlet Devices
#1	Primary	332.60'	**12.0" Round Culvert** L= 223.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 332.60' / 331.50' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	335.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 326.00'
#3	Device 1	338.00'	**6.0" Vert. Orifice/Grate X 3.00** C= 0.600
#4	Secondary	339.00'	**14.0' 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

Discarded OutFlow Max=3.87 cfs @ 12.57 hrs HW=335.47' (Free Discharge)
└─**2=Exfiltration** (Controls 3.87 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 3.34 cfs potential flow)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P1: BASIN#1



Stage-Discharge for Pond P1: BASIN#1

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
335.00	0.00	0.00	0.00	0.00
335.10	3.43	3.43	0.00	0.00
335.20	3.55	3.55	0.00	0.00
335.30	3.67	3.67	0.00	0.00
335.40	3.79	3.79	0.00	0.00
335.50	3.91	3.91	0.00	0.00
335.60	4.03	4.03	0.00	0.00
335.70	4.15	4.15	0.00	0.00
335.80	4.28	4.28	0.00	0.00
335.90	4.40	4.40	0.00	0.00
336.00	4.53	4.53	0.00	0.00
336.10	4.61	4.61	0.00	0.00
336.20	4.69	4.69	0.00	0.00
336.30	4.77	4.77	0.00	0.00
336.40	4.85	4.85	0.00	0.00
336.50	4.93	4.93	0.00	0.00
336.60	5.01	5.01	0.00	0.00
336.70	5.09	5.09	0.00	0.00
336.80	5.17	5.17	0.00	0.00
336.90	5.25	5.25	0.00	0.00
337.00	5.33	5.33	0.00	0.00
337.10	5.41	5.41	0.00	0.00
337.20	5.50	5.50	0.00	0.00
337.30	5.58	5.58	0.00	0.00
337.40	5.66	5.66	0.00	0.00
337.50	5.75	5.75	0.00	0.00
337.60	5.83	5.83	0.00	0.00
337.70	5.91	5.91	0.00	0.00
337.80	6.00	6.00	0.00	0.00
337.90	6.08	6.08	0.00	0.00
338.00	6.17	6.17	0.00	0.00
338.10	6.34	6.25	0.09	0.00
338.20	6.68	6.34	0.34	0.00
338.30	7.12	6.43	0.69	0.00
338.40	7.60	6.52	1.09	0.00
338.50	8.02	6.60	1.42	0.00
338.60	8.37	6.69	1.68	0.00
338.70	8.68	6.78	1.90	0.00
338.80	8.97	6.87	2.10	0.00
338.90	9.25	6.96	2.29	0.00
339.00	9.51	7.05	2.46	0.00
339.10	10.86	7.14	2.61	1.10
339.20	13.11	7.23	2.76	3.12
339.30	16.04	7.32	2.91	5.81
339.40	19.52	7.41	3.04	9.07
339.50	23.69	7.50	3.17	13.02
339.60	28.46	7.59	3.30	17.57
339.70	33.20	7.69	3.42	22.10
339.80	38.26	7.78	3.53	26.95
339.90	43.61	7.87	3.64	32.09
340.00	**49.23**	**7.96**	**3.75**	**37.52**

Summary for Pond P2: SETTLING POND

Inflow Area = 59,763 sf, 5.17% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 23.65 hrs, Volume= 20 cf
Outflow = 0.00 cfs @ 23.66 hrs, Volume= 20 cf, Atten= 0%, Lag= 0.5 min
Discarded = 0.00 cfs @ 23.66 hrs, Volume= 20 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 343.00' @ 23.66 hrs Surf.Area= 707 sf Storage= 0 cf

Plug-Flow detention time= 0.9 min calculated for 20 cf (100% of inflow)
Center-of-Mass det. time= 0.9 min (1,304.4 - 1,303.5)

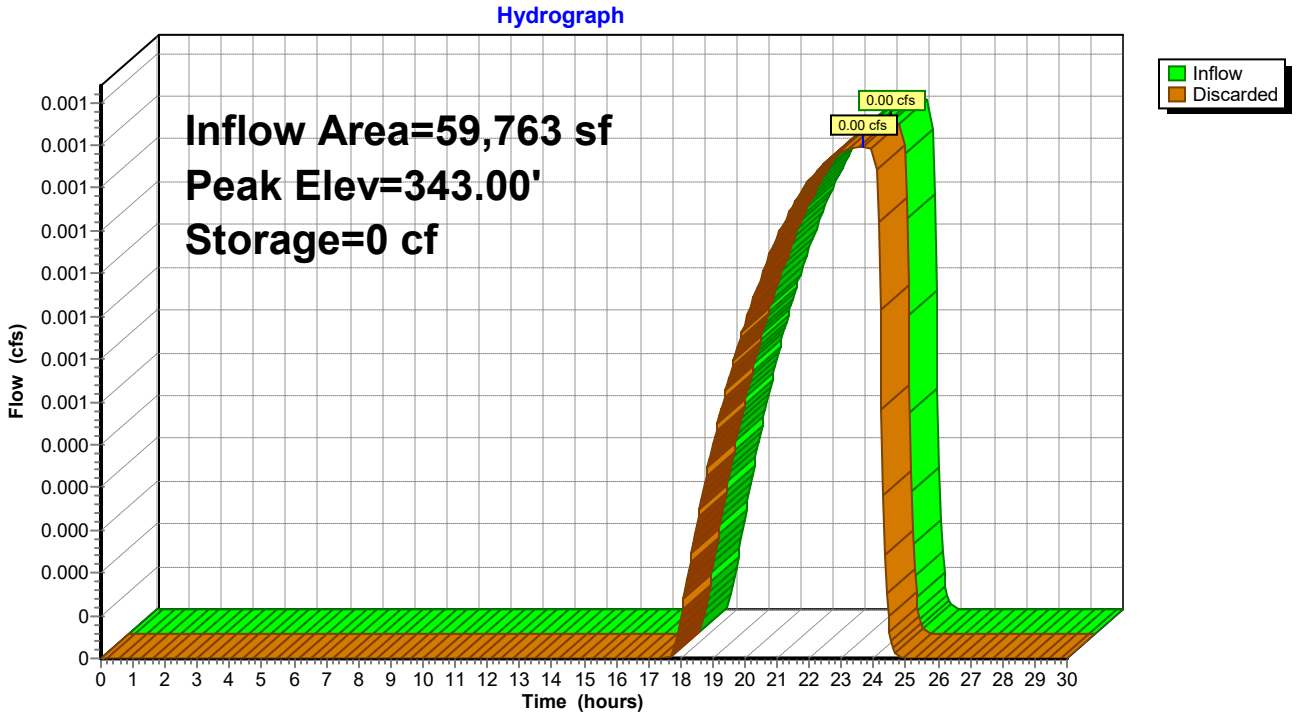
Volume	Invert	Avail.Storage	Storage Description
#1	343.00'	1,470 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
343.00	707	0	0
344.00	2,233	1,470	1,470

Device	Routing	Invert	Outlet Devices
#1	Discarded	343.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 337.80'

Discarded OutFlow Max=0.14 cfs @ 23.66 hrs HW=343.00' (Free Discharge)
└**1=Exfiltration** (Controls 0.14 cfs)

Pond P2: SETTLING POND



Stage-Discharge for Pond P2: SETTLING POND

Elevation (feet)	Discarded (cfs)	Elevation (feet)	Discarded (cfs)
343.00	0.00	343.52	0.31
343.01	0.14	343.53	0.31
343.02	0.14	343.54	0.31
343.03	0.14	343.55	0.32
343.04	0.15	343.56	0.32
343.05	0.15	343.57	0.33
343.06	0.15	343.58	0.33
343.07	0.16	343.59	0.33
343.08	0.16	343.60	0.34
343.09	0.16	343.61	0.34
343.10	0.17	343.62	0.34
343.11	0.17	343.63	0.35
343.12	0.17	343.64	0.35
343.13	0.18	343.65	0.35
343.14	0.18	343.66	0.36
343.15	0.18	343.67	0.36
343.16	0.19	343.68	0.36
343.17	0.19	343.69	0.37
343.18	0.19	343.70	0.37
343.19	0.20	343.71	0.37
343.20	0.20	343.72	0.38
343.21	0.20	343.73	0.38
343.22	0.21	343.74	0.39
343.23	0.21	343.75	0.39
343.24	0.21	343.76	0.39
343.25	0.22	343.77	0.40
343.26	0.22	343.78	0.40
343.27	0.22	343.79	0.40
343.28	0.23	343.80	0.41
343.29	0.23	343.81	0.41
343.30	0.23	343.82	0.41
343.31	0.24	343.83	0.42
343.32	0.24	343.84	0.42
343.33	0.24	343.85	0.42
343.34	0.25	343.86	0.43
343.35	0.25	343.87	0.43
343.36	0.25	343.88	0.44
343.37	0.26	343.89	0.44
343.38	0.26	343.90	0.44
343.39	0.26	343.91	0.45
343.40	0.27	343.92	0.45
343.41	0.27	343.93	0.45
343.42	0.27	343.94	0.46
343.43	0.28	343.95	0.46
343.44	0.28	343.96	0.46
343.45	0.28	343.97	0.47
343.46	0.29	343.98	0.47
343.47	0.29	343.99	0.48
343.48	0.29	344.00	**0.48**
343.49	0.30		
343.50	0.30		
343.51	0.30		

Summary for Pond UGS-B: TO DMH#8

Inflow Area =	67,684 sf, 89.07% Impervious, Inflow Depth = 2.14" for 2-Year event				
Inflow =	3.67 cfs @	12.10 hrs,	Volume=	12,042 cf	
Outflow =	0.87 cfs @	12.50 hrs,	Volume=	12,042 cf,	Atten= 76%, Lag= 24.3 min
Discarded =	0.87 cfs @	12.50 hrs,	Volume=	12,042 cf	
Primary =	0.00 cfs @	0.00 hrs,	Volume=	0 cf	

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 350.39' @ 12.50 hrs Surf.Area= 0.074 ac Storage= 0.068 af

Plug-Flow detention time= 21.0 min calculated for 12,022 cf (100% of inflow)
Center-of-Mass det. time= 21.0 min (822.7 - 801.7)

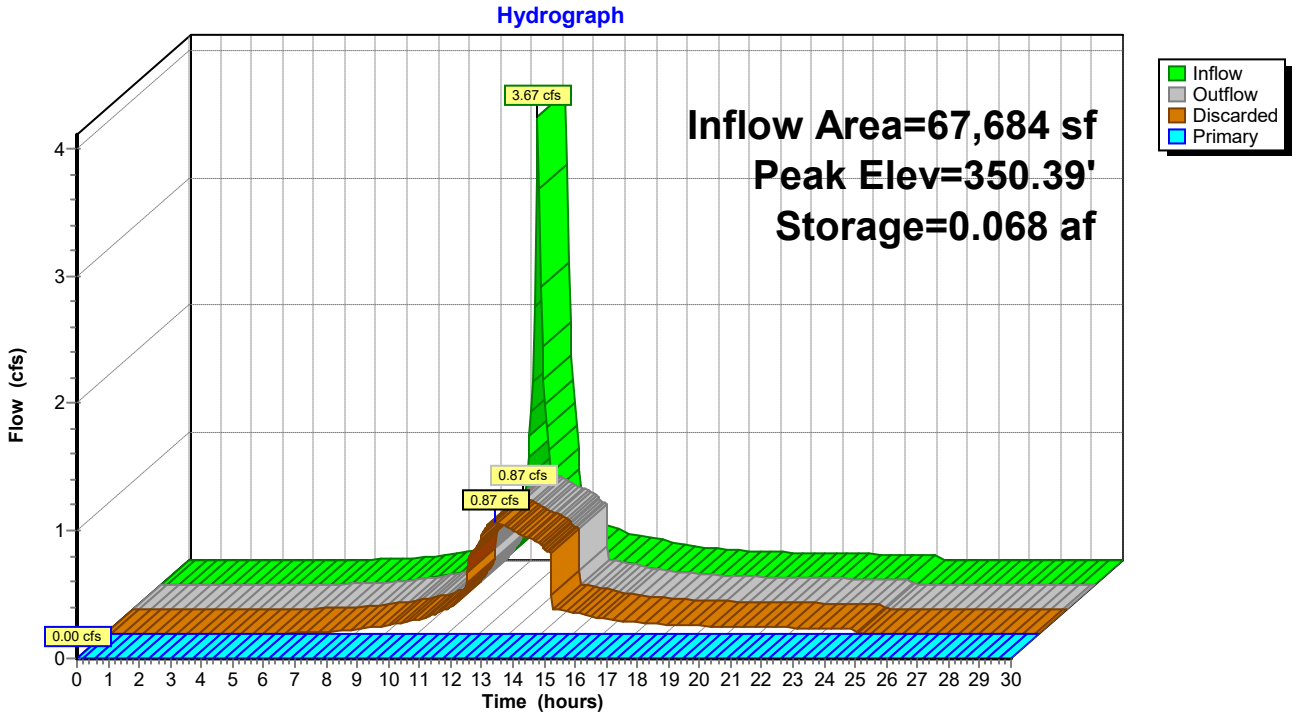
Volume	Invert	Avail.Storage	Storage Description
#1	349.00'	0.082 af	**54.00'W x 60.00'L x 4.00'H Prismatoid** 0.298 af Overall - 0.094 af Embedded = 0.204 af x 40.0% Voids
#2	349.50'	0.094 af	**ADS_StormTech SC-740** x 88 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 11 rows
		0.175 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Device 2	350.80'	**12.0" Round Culvert X 11.00** L= 3.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.80' / 350.80' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Primary	350.70'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.70' / 350.00' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Discarded	349.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 345.60'

Discarded OutFlow Max=0.87 cfs @ 12.50 hrs HW=350.39' (Free Discharge)
└─**3=Exfiltration** (Controls 0.87 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=349.00' (Free Discharge)
└─**2=Culvert** (Controls 0.00 cfs)
  └─**1=Culvert** (Controls 0.00 cfs)

Pond UGS-B: TO DMH#8



Stage-Discharge for Pond UGS-B: TO DMH#8

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
349.00	0.00	0.00	0.00
349.05	0.63	0.63	0.00
349.10	0.64	0.64	0.00
349.15	0.65	0.65	0.00
349.20	0.66	0.66	0.00
349.25	0.67	0.67	0.00
349.30	0.67	0.67	0.00
349.35	0.68	0.68	0.00
349.40	0.69	0.69	0.00
349.45	0.70	0.70	0.00
349.50	0.71	0.71	0.00
349.55	0.72	0.72	0.00
349.60	0.73	0.73	0.00
349.65	0.74	0.74	0.00
349.70	0.75	0.75	0.00
349.75	0.76	0.76	0.00
349.80	0.77	0.77	0.00
349.85	0.78	0.78	0.00
349.90	0.78	0.78	0.00
349.95	0.79	0.79	0.00
350.00	0.80	0.80	0.00
350.05	0.81	0.81	0.00
350.10	0.82	0.82	0.00
350.15	0.83	0.83	0.00
350.20	0.84	0.84	0.00
350.25	0.85	0.85	0.00
350.30	0.86	0.86	0.00
350.35	0.87	0.87	0.00
350.40	0.88	0.88	0.00
350.45	0.88	0.88	0.00
350.50	0.89	0.89	0.00
350.55	0.90	0.90	0.00
350.60	0.91	0.91	0.00
350.65	0.92	0.92	0.00
350.70	0.93	0.93	0.00
350.75	0.94	0.94	0.00
350.80	0.95	0.95	0.00
350.85	1.00	0.96	0.05
350.90	1.10	0.97	0.13
350.95	1.18	0.98	0.21
351.00	1.28	0.99	0.29
351.05	1.38	0.99	0.39
351.10	1.50	1.00	0.50
351.15	1.63	1.01	0.62
351.20	1.77	1.02	0.75
351.25	1.91	1.03	0.88
351.30	2.06	1.04	1.02
351.35	2.22	1.05	1.17
351.40	2.38	1.06	1.32
351.45	2.54	1.07	1.47
351.50	2.70	1.08	1.62
351.55	2.85	1.09	1.76
351.60	2.99	1.09	1.90
351.65	3.12	1.10	2.02
351.70	3.22	1.11	2.11
351.75	3.34	1.12	2.21
351.80	3.44	1.13	2.31
351.85	3.55	1.14	2.41
351.90	3.65	1.15	2.50
351.95	3.74	1.16	2.59
352.00	3.84	1.17	2.67
352.05	3.93	1.18	2.75
352.10	4.02	1.19	2.83
352.15	4.10	1.19	2.91
352.20	4.19	1.20	2.99
352.25	4.27	1.21	3.06
352.30	4.35	1.22	3.13
352.35	4.43	1.23	3.20
352.40	4.51	1.24	3.27
352.45	4.59	1.25	3.34
352.50	4.66	1.26	3.40
352.55	4.74	1.27	3.47
352.60	4.81	1.28	3.53
352.65	4.88	1.29	3.60
352.70	4.95	1.30	3.66
352.75	5.02	1.30	3.72
352.80	5.09	1.31	3.78
352.85	5.16	1.32	3.83
352.90	5.22	1.33	3.89
352.95	5.29	1.34	3.95
353.00	**5.36**	**1.35**	**4.01**

Summary for Pond USGD1: TO TEMP SETTLING BASIN

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 1.47" for 2-Year event
Inflow = 2.04 cfs @ 12.10 hrs, Volume= 6,913 cf
Outflow = 0.04 cfs @ 18.59 hrs, Volume= 1,005 cf, Atten= 98%, Lag= 389.5 min
Primary = 0.04 cfs @ 18.59 hrs, Volume= 1,005 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 350.45' @ 18.59 hrs Surf.Area= 0.110 ac Storage= 0.139 af

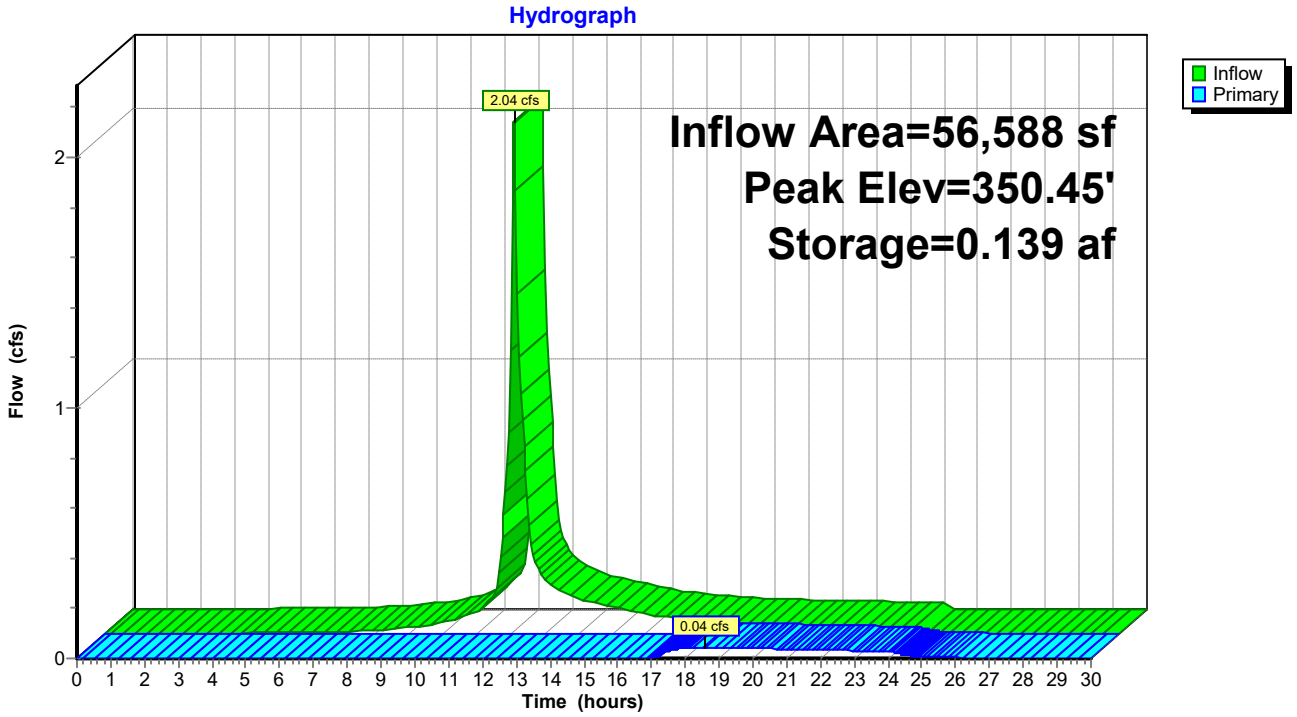
Plug-Flow detention time= 642.1 min calculated for 1,003 cf (15% of inflow)
Center-of-Mass det. time= 439.5 min (1,257.7 - 818.2)

Volume	Invert	Avail.Storage	Storage Description
#1	348.50'	0.107 af	**60.00'W x 80.00'L x 3.50'H Prismatoid** 0.386 af Overall - 0.118 af Embedded = 0.268 af x 40.0% Voids
#2	349.00'	0.118 af	**ADS_StormTech SC-740** x 111 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 11 rows
		0.225 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Device 2	350.40'	**10.0" Round Culvert X 11.00** L= 3.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.40' / 350.40' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Primary	350.00'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.00' / 349.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.04 cfs @ 18.59 hrs HW=350.45' (Free Discharge)
└─**2=Culvert** (Passes 0.04 cfs of 0.61 cfs potential flow)
  └─**1=Culvert** (Barrel Controls 0.04 cfs @ 0.42 fps)

Pond USGD1: TO TEMP SETTLING BASIN



Stage-Discharge for Pond USGD1: TO TEMP SETTLING BASIN

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
348.50	0.00	349.54	0.00	350.58	0.70	351.62	3.16
348.52	0.00	349.56	0.00	350.60	0.87	351.64	3.19
348.54	0.00	349.58	0.00	350.62	1.05	351.66	3.22
348.56	0.00	349.60	0.00	350.64	1.14	351.68	3.24
348.58	0.00	349.62	0.00	350.66	1.20	351.70	3.27
348.60	0.00	349.64	0.00	350.68	1.26	351.72	3.30
348.62	0.00	349.66	0.00	350.70	1.32	351.74	3.32
348.64	0.00	349.68	0.00	350.72	1.38	351.76	3.35
348.66	0.00	349.70	0.00	350.74	1.44	351.78	3.38
348.68	0.00	349.72	0.00	350.76	1.50	351.80	3.40
348.70	0.00	349.74	0.00	350.78	1.56	351.82	3.43
348.72	0.00	349.76	0.00	350.80	1.62	351.84	3.46
348.74	0.00	349.78	0.00	350.82	1.68	351.86	3.48
348.76	0.00	349.80	0.00	350.84	1.74	351.88	3.51
348.78	0.00	349.82	0.00	350.86	1.79	351.90	3.53
348.80	0.00	349.84	0.00	350.88	1.85	351.92	3.56
348.82	0.00	349.86	0.00	350.90	1.90	351.94	3.58
348.84	0.00	349.88	0.00	350.92	1.95	351.96	3.61
348.86	0.00	349.90	0.00	350.94	2.00	351.98	3.63
348.88	0.00	349.92	0.00	350.96	2.04	352.00	**3.66**
348.90	0.00	349.94	0.00	350.98	2.08		
348.92	0.00	349.96	0.00	351.00	2.11		
348.94	0.00	349.98	0.00	351.02	2.15		
348.96	0.00	350.00	0.00	351.04	2.19		
348.98	0.00	350.02	0.00	351.06	2.23		
349.00	0.00	350.04	0.00	351.08	2.27		
349.02	0.00	350.06	0.00	351.10	2.31		
349.04	0.00	350.08	0.00	351.12	2.35		
349.06	0.00	350.10	0.00	351.14	2.39		
349.08	0.00	350.12	0.00	351.16	2.43		
349.10	0.00	350.14	0.00	351.18	2.46		
349.12	0.00	350.16	0.00	351.20	2.50		
349.14	0.00	350.18	0.00	351.22	2.53		
349.16	0.00	350.20	0.00	351.24	2.57		
349.18	0.00	350.22	0.00	351.26	2.60		
349.20	0.00	350.24	0.00	351.28	2.64		
349.22	0.00	350.26	0.00	351.30	2.67		
349.24	0.00	350.28	0.00	351.32	2.70		
349.26	0.00	350.30	0.00	351.34	2.74		
349.28	0.00	350.32	0.00	351.36	2.77		
349.30	0.00	350.34	0.00	351.38	2.80		
349.32	0.00	350.36	0.00	351.40	2.83		
349.34	0.00	350.38	0.00	351.42	2.86		
349.36	0.00	350.40	0.00	351.44	2.89		
349.38	0.00	350.42	0.00	351.46	2.93		
349.40	0.00	350.44	0.02	351.48	2.96		
349.42	0.00	350.46	0.06	351.50	2.99		
349.44	0.00	350.48	0.12	351.52	3.02		
349.46	0.00	350.50	0.20	351.54	3.04		
349.48	0.00	350.52	0.30	351.56	3.07		
349.50	0.00	350.54	0.41	351.58	3.10		
349.52	0.00	350.56	0.55	351.60	3.13		

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 2S: TO DCB#4 Runoff Area=5,916 sf 84.47% Impervious Runoff Depth=4.06"
Flow Length=93' Slope=0.0340 '/' Tc=5.0 min CN=89 Runoff=0.63 cfs 2,001 cf

Subcatchment 3S: TO DCB#1 Runoff Area=3,582 sf 82.83% Impervious Runoff Depth=3.95"
Flow Length=77' Tc=5.0 min CN=88 Runoff=0.37 cfs 1,180 cf

Subcatchment P-D1: TO CB-D1 Runoff Area=6,833 sf 88.85% Impervious Runoff Depth=4.27"
Flow Length=90' Tc=5.0 min CN=91 Runoff=0.75 cfs 2,434 cf

Subcatchment P-D10*: TO CB-D8 Runoff Area=5,879 sf 76.82% Impervious Runoff Depth=3.55"
Flow Length=177' Slope=0.0200 '/' Tc=5.0 min CN=84 Runoff=0.56 cfs 1,737 cf

Subcatchment P-D11*: TO CB-D9 Runoff Area=4,151 sf 71.91% Impervious Runoff Depth=3.25"
Flow Length=153' Slope=0.0200 '/' Tc=5.0 min CN=81 Runoff=0.36 cfs 1,125 cf

Subcatchment P-D12*: TO CB-D5 Runoff Area=7,120 sf 71.57% Impervious Runoff Depth=3.25"
Flow Length=134' Tc=5.0 min CN=81 Runoff=0.62 cfs 1,929 cf

Subcatchment P-D2: TO CB-D2 Runoff Area=4,392 sf 76.55% Impervious Runoff Depth=3.55"
Flow Length=93' Slope=0.0170 '/' Tc=5.0 min CN=84 Runoff=0.42 cfs 1,298 cf

Subcatchment P-D3: TO CB-D3 Runoff Area=4,805 sf 87.24% Impervious Runoff Depth=4.17"
Flow Length=65' Tc=5.0 min CN=90 Runoff=0.52 cfs 1,668 cf

Subcatchment P-D4*: TO CB-D4 Runoff Area=16,447 sf 47.74% Impervious Runoff Depth=2.01"
Flow Length=105' Tc=5.0 min CN=67 Runoff=0.87 cfs 2,762 cf

Subcatchment P-D5*: TO CB-D6 Runoff Area=2,202 sf 100.00% Impervious Runoff Depth=5.06"
Flow Length=169' Tc=5.0 min CN=98 Runoff=0.26 cfs 929 cf

Subcatchment P-D6: TO CB-D7 Runoff Area=2,624 sf 100.00% Impervious Runoff Depth=5.06"
Flow Length=151' Tc=5.0 min CN=98 Runoff=0.31 cfs 1,107 cf

Subcatchment P-D7: TO ROOF DRAIN Runoff Area=933 sf 100.00% Impervious Runoff Depth=5.06"
Flow Length=39' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.11 cfs 394 cf

Subcatchment P-D8: TO ROOF DRAIN Runoff Area=920 sf 100.00% Impervious Runoff Depth=5.06"
Flow Length=39' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.11 cfs 388 cf

Subcatchment P-D9: TO ROOF DRAIN Runoff Area=282 sf 100.00% Impervious Runoff Depth=5.06"
Flow Length=40' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.03 cfs 119 cf

Subcatchment P-S106: TO DCB-R102 Runoff Area=13,651 sf 53.41% Impervious Runoff Depth=2.35"
Flow Length=246' Slope=0.0050 '/' Tc=5.0 min CN=71 Runoff=0.86 cfs 2,669 cf

Subcatchment P-S107: TO DCB-R101 Runoff Area=18,867 sf 80.97% Impervious Runoff Depth=3.85"
Flow Length=255' Slope=0.0050 '/' Tc=5.0 min CN=87 Runoff=1.92 cfs 6,054 cf

Subcatchment P-S108: TO DCB-R100 Runoff Area=8,304 sf 89.80% Impervious Runoff Depth=4.38"
Flow Length=315' Slope=0.0050 '/' Tc=5.0 min CN=92 Runoff=0.93 cfs 3,033 cf

Subcatchment P-S109: TO DRAINAGE Runoff Area=12,076 sf 57.69% Impervious Runoff Depth=2.52"
Flow Length=227' Slope=0.0050 '/' Tc=5.0 min CN=73 Runoff=0.82 cfs 2,534 cf

Subcatchment P-SUB1: TO DCB-S1 Runoff Area=8,226 sf 87.83% Impervious Runoff Depth=4.27"
Flow Length=203' Tc=5.0 min CN=91 Runoff=0.91 cfs 2,930 cf

Subcatchment P-SUB2: TO DMH-S1 Runoff Area=10,318 sf 80.45% Impervious Runoff Depth=3.75"
Flow Length=213' Tc=5.0 min CN=86 Runoff=1.03 cfs 3,223 cf

Subcatchment P-SUB3: TO DCB-S3 Runoff Area=18,672 sf 88.33% Impervious Runoff Depth=4.49"
Flow Length=296' Tc=5.0 min CN=93 Runoff=2.13 cfs 6,991 cf

Subcatchment P-SUB4: TO DCB-S4 Runoff Area=24,334 sf 83.66% Impervious Runoff Depth=4.17"
Flow Length=301' Tc=6.3 min CN=90 Runoff=2.55 cfs 8,448 cf

Subcatchment P-SUB5: TO DCB-S5 Runoff Area=13,730 sf 73.11% Impervious Runoff Depth=4.17"
Flow Length=223' Tc=5.0 min CN=90 Runoff=1.49 cfs 4,767 cf

Subcatchment P-SUB6: TO DCB-S6 Runoff Area=14,048 sf 86.89% Impervious Runoff Depth=4.60"
Flow Length=231' Tc=5.0 min CN=94 Runoff=1.62 cfs 5,390 cf

Subcatchment P-SUB7: TO DCB-S7 Runoff Area=14,635 sf 28.88% Impervious Runoff Depth=4.17"
Flow Length=382' Slope=0.0200 '/' Tc=9.8 min CN=90 Runoff=1.37 cfs 5,081 cf

Subcatchment P-SUB8: TO DCB-S8 Runoff Area=6,568 sf 85.14% Impervious Runoff Depth=4.49"
Flow Length=254' Tc=5.0 min CN=93 Runoff=0.75 cfs 2,459 cf

Subcatchment P-SUB9: TO DCB-S9 Runoff Area=6,737 sf 13.88% Impervious Runoff Depth=4.38"
Flow Length=159' Tc=8.5 min CN=92 Runoff=0.68 cfs 2,460 cf

Subcatchment P206: TO DMH6B Runoff Area=52,950 sf 74.01% Impervious Runoff Depth=4.06"
Tc=5.0 min CN=89 Runoff=5.63 cfs 17,914 cf

Subcatchment P207: TO DMH7 Runoff Area=3,621 sf 77.22% Impervious Runoff Depth=4.17"
Tc=5.0 min CN=90 Runoff=0.39 cfs 1,257 cf

Subcatchment P210: TO DMH10 Runoff Area=47,718 sf 68.99% Impervious Runoff Depth=3.85"
Tc=5.0 min CN=87 Runoff=4.87 cfs 15,312 cf

Subcatchment P211: TO DMH11 Runoff Area=39,805 sf 44.80% Impervious Runoff Depth=3.06"
Tc=5.0 min CN=79 Runoff=3.28 cfs 10,156 cf

Subcatchment P212: TO DMH12 Runoff Area=23,845 sf 77.66% Impervious Runoff Depth=4.17"
Tc=5.0 min CN=90 Runoff=2.58 cfs 8,278 cf

Subcatchment P213: TO DMH13 Runoff Area=12,176 sf 88.58% Impervious Runoff Depth=4.60"
Tc=5.0 min CN=94 Runoff=1.41 cfs 4,672 cf

Subcatchment P222: TO DP#2(2017) Runoff Area=106,869 sf 0.00% Impervious Runoff Depth=0.07"
Flow Length=711' Tc=22.1 min CN=33 Runoff=0.02 cfs 635 cf

Subcatchment P230: TO CB#21(2017) Runoff Area=16,502 sf 47.31% Impervious Runoff Depth=2.97"
Flow Length=306' Tc=5.0 min CN=78 Runoff=1.32 cfs 4,082 cf

Subcatchment P231: TO YD#1 Runoff Area=3,459 sf 6.76% Impervious Runoff Depth=1.78"
Flow Length=48' Slope=0.0300 '/' Tc=5.0 min CN=64 Runoff=0.16 cfs 513 cf

Subcatchment P232: TO CO#2 Runoff Area=2,490 sf 100.00% Impervious Runoff Depth=5.06"
Flow Length=88' Tc=5.0 min CN=98 Runoff=0.30 cfs 1,051 cf

Subcatchment P233: TO DRIP STRIP Runoff Area=1,722 sf 96.81% Impervious Runoff Depth=4.95"
Flow Length=55' Tc=5.0 min CN=97 Runoff=0.21 cfs 710 cf

Subcatchment P234: TO YD#2 Runoff Area=10,793 sf 49.52% Impervious Runoff Depth=3.06"
Flow Length=166' Tc=5.0 min CN=79 Runoff=0.89 cfs 2,754 cf

Subcatchment P235: TO CO#3 Runoff Area=670 sf 100.00% Impervious Runoff Depth=5.06"
Flow Length=25' Slope=0.0830 '/' Tc=5.0 min CN=98 Runoff=0.08 cfs 283 cf

Subcatchment P251: OVERLAND TO Runoff Area=59,763 sf 5.17% Impervious Runoff Depth=0.39"
Flow Length=294' Tc=16.4 min CN=42 Runoff=0.19 cfs 1,963 cf

Subcatchment P252: OVERLAND TO DB#1 Runoff Area=84,788 sf 3.33% Impervious Runoff Depth=0.35"
Flow Length=224' Tc=15.5 min CN=41 Runoff=0.22 cfs 2,465 cf

Subcatchment P253: OVERLAND TO DCB Runoff Area=198,125 sf 23.50% Impervious Runoff Depth=1.48"
Flow Length=393' Tc=17.3 min CN=60 Runoff=5.10 cfs 24,431 cf

Subcatchment p3: TO DCB#5 Runoff Area=13,229 sf 94.75% Impervious Runoff Depth=4.72"
Flow Length=141' Tc=5.0 min CN=95 Runoff=1.55 cfs 5,200 cf

Subcatchment P300: TO DP#3(2020) Runoff Area=145,987 sf 0.00% Impervious Runoff Depth=0.02"
Flow Length=566' Tc=27.1 min CN=30 Runoff=0.01 cfs 204 cf

Subcatchment P4: TO DCB#2 Runoff Area=12,397 sf 88.23% Impervious Runoff Depth=4.27"
Flow Length=162' Tc=5.0 min CN=91 Runoff=1.37 cfs 4,415 cf

Subcatchment P400: TO DP#4(2020) Runoff Area=270,932 sf 0.59% Impervious Runoff Depth=0.03"
Flow Length=487' Tc=31.1 min CN=31 Runoff=0.02 cfs 703 cf

Subcatchment P5: TO DCB#6 Runoff Area=18,802 sf 87.54% Impervious Runoff Depth=4.27"
Flow Length=124' Tc=5.0 min CN=91 Runoff=2.07 cfs 6,696 cf

Subcatchment P6: TO DCB#3 Runoff Area=13,758 sf 90.05% Impervious Runoff Depth=4.38"
Flow Length=267' Tc=5.0 min CN=92 Runoff=1.54 cfs 5,025 cf

Subcatchment PS101: TO TEMP Runoff Area=259,359 sf 0.00% Impervious Runoff Depth=4.38"
Flow Length=764' Tc=12.9 min CN=92 Runoff=23.14 cfs 94,723 cf

Subcatchment PS102: TO CULVERT Runoff Area=47,989 sf 0.00% Impervious Runoff Depth=2.78"
Flow Length=59' Slope=0.0400 '/' Tc=11.0 min CN=76 Runoff=3.02 cfs 11,136 cf

Subcatchment PS103: TO DP#1 Runoff Area=784,060 sf 17.42% Impervious Runoff Depth=2.69"
Flow Length=1,062' Tc=15.8 min CN=75 Runoff=41.91 cfs 176,067 cf

Subcatchment PS104: TO DP#1B Runoff Area=481,036 sf 3.31% Impervious Runoff Depth=1.27"
Flow Length=1,026' Tc=11.5 min CN=57 Runoff=11.64 cfs 50,831 cf

Subcatchment PS105: TO CULVERT Runoff Area=478,368 sf 0.00% Impervious Runoff Depth=3.65"
Flow Length=1,550' Tc=21.8 min CN=85 Runoff=30.18 cfs 145,358 cf

Subcatchment PSUB10: TO DCB-S10 Runoff Area=2,269 sf 91.63% Impervious Runoff Depth=4.72"
Flow Length=85' Slope=0.0300 '/' Tc=5.0 min CN=95 Runoff=0.27 cfs 892 cf

Reach BK-1: McGovern Brook Avg. Flow Depth=0.97' Max Vel=3.92 fps Inflow=60.44 cfs 294,544 cf
n=0.030 L=1,417.0' S=0.0085 '/' Capacity=6,024.18 cfs Outflow=56.71 cfs 294,541 cf

Reach CB-D4: TO DMH-1 Avg. Flow Depth=0.32' Max Vel=3.98 fps Inflow=0.87 cfs 2,762 cf
12.0" Round Pipe n=0.013 L=42.0' S=0.0119 '/' Capacity=3.89 cfs Outflow=0.87 cfs 2,762 cf

Reach CB-D7: TO DMH#6 Avg. Flow Depth=0.20' Max Vel=2.88 fps Inflow=0.31 cfs 1,107 cf
12.0" Round Pipe n=0.013 L=18.0' S=0.0111 '/' Capacity=3.76 cfs Outflow=0.31 cfs 1,107 cf

Reach CB-D8: TO DMH#6 Avg. Flow Depth=0.27' Max Vel=3.16 fps Inflow=0.56 cfs 1,737 cf
12.0" Round Pipe n=0.013 L=22.0' S=0.0091 '/' Capacity=3.40 cfs Outflow=0.55 cfs 1,737 cf

Reach CB21: TO DMH#21 Avg. Flow Depth=0.35' Max Vel=5.37 fps Inflow=1.32 cfs 4,082 cf
12.0" Round Pipe n=0.013 L=50.0' S=0.0200 '/' Capacity=5.04 cfs Outflow=1.31 cfs 4,082 cf

Reach CBD1: TO DMH#8 Avg. Flow Depth=0.23' Max Vel=5.39 fps Inflow=0.75 cfs 2,434 cf
12.0" Round Pipe n=0.013 L=22.0' S=0.0318 '/' Capacity=6.36 cfs Outflow=0.75 cfs 2,434 cf

Reach CBD2: TO DMH#3 Avg. Flow Depth=0.22' Max Vel=3.25 fps Inflow=0.42 cfs 1,298 cf
12.0" Round Pipe n=0.013 L=8.0' S=0.0125 '/' Capacity=3.98 cfs Outflow=0.41 cfs 1,298 cf

Reach CBD3: TO DMH-1 Avg. Flow Depth=0.17' Max Vel=5.85 fps Inflow=0.52 cfs 1,668 cf
12.0" Round Pipe n=0.013 L=11.0' S=0.0545 '/' Capacity=8.32 cfs Outflow=0.52 cfs 1,668 cf

Reach CBD5: TO DMH#4 Avg. Flow Depth=0.29' Max Vel=3.33 fps Inflow=0.62 cfs 1,929 cf
12.0" Round Pipe n=0.013 L=21.0' S=0.0095 '/' Capacity=3.48 cfs Outflow=0.62 cfs 1,929 cf

Reach CBD6: TO DMH#4 Avg. Flow Depth=0.18' Max Vel=2.73 fps Inflow=0.26 cfs 929 cf
12.0" Round Pipe n=0.013 L=18.0' S=0.0111 '/' Capacity=3.76 cfs Outflow=0.26 cfs 929 cf

Reach CBD9: TO DMH#5 Avg. Flow Depth=0.21' Max Vel=2.99 fps Inflow=0.36 cfs 1,125 cf
12.0" Round Pipe n=0.013 L=46.0' S=0.0109 '/' Capacity=3.71 cfs Outflow=0.36 cfs 1,125 cf

Reach CO1: TO CO#2 Avg. Flow Depth=0.17' Max Vel=4.58 fps Inflow=0.36 cfs 1,222 cf
10.0" Round Pipe n=0.010 L=74.0' S=0.0203 '/' Capacity=4.06 cfs Outflow=0.36 cfs 1,222 cf

Reach CO2: TO CO#3 Avg. Flow Depth=0.23' Max Vel=5.39 fps Inflow=0.65 cfs 2,273 cf
10.0" Round Pipe n=0.010 L=81.0' S=0.0198 '/' Capacity=4.00 cfs Outflow=0.65 cfs 2,273 cf

Reach CO3: TO DMH#21 Avg. Flow Depth=0.18' Max Vel=8.56 fps Inflow=0.72 cfs 2,556 cf
10.0" Round Pipe n=0.010 L=30.0' S=0.0667 '/' Capacity=7.35 cfs Outflow=0.72 cfs 2,556 cf

Reach cul: DP#1A Inflow=54.00 cfs 261,197 cf
Outflow=54.00 cfs 261,197 cf

Reach D10: (new Reach) Avg. Flow Depth=0.71' Max Vel=8.67 fps Inflow=5.19 cfs 16,569 cf
12.0" Round Pipe n=0.013 L=103.0' S=0.0291 '/' Capacity=6.08 cfs Outflow=5.16 cfs 16,569 cf

Reach D11: TO DMH12 Avg. Flow Depth=0.65' Max Vel=6.10 fps Inflow=3.28 cfs 10,156 cf
12.0" Round Pipe n=0.013 L=86.0' S=0.0151 '/' Capacity=4.38 cfs Outflow=3.26 cfs 10,156 cf

Reach D12: TO DMH13 Avg. Flow Depth=0.80' Max Vel=7.04 fps Inflow=5.81 cfs 18,434 cf
15.0" Round Pipe n=0.013 L=83.0' S=0.0151 '/' Capacity=7.93 cfs Outflow=5.78 cfs 18,434 cf

Reach D13: TO DMH14 Avg. Flow Depth=0.84' Max Vel=8.18 fps Inflow=7.15 cfs 23,106 cf
15.0" Round Pipe n=0.013 L=109.0' S=0.0197 '/' Capacity=9.07 cfs Outflow=7.11 cfs 23,106 cf

Reach D14: TO DMH15 Avg. Flow Depth=1.51' Max Vel=7.54 fps Inflow=23.59 cfs 81,391 cf
30.0" Round Pipe n=0.013 L=390.0' S=0.0071 '/' Capacity=34.44 cfs Outflow=22.66 cfs 81,391 cf

Reach D15: TO DMH16 Avg. Flow Depth=1.57' Max Vel=7.53 fps Inflow=24.59 cfs 88,029 cf
30.0" Round Pipe n=0.013 L=232.0' S=0.0069 '/' Capacity=34.06 cfs Outflow=24.11 cfs 88,029 cf

Reach D16: TO BASIN#1 Avg. Flow Depth=1.54' Max Vel=7.59 fps Inflow=24.11 cfs 88,029 cf
30.0" Round Pipe n=0.013 L=71.0' S=0.0070 '/' Capacity=34.42 cfs Outflow=24.02 cfs 88,029 cf

Reach D6: TO DMH14 Avg. Flow Depth=0.00' Max Vel=0.00 fps
24.0" Round Pipe n=0.013 L=14.0' S=0.0071 '/' Capacity=19.12 cfs Outflow=0.00 cfs 0 cf

Reach D7: TO DMH8 Avg. Flow Depth=0.17' Max Vel=4.50 fps Inflow=0.39 cfs 1,257 cf
12.0" Round Pipe n=0.013 L=87.0' S=0.0328 '/' Capacity=6.45 cfs Outflow=0.39 cfs 1,257 cf

Reach D8: TO DMH9 Avg. Flow Depth=0.17' Max Vel=4.38 fps Inflow=0.39 cfs 1,257 cf
12.0" Round Pipe n=0.013 L=113.0' S=0.0301 '/' Capacity=6.18 cfs Outflow=0.38 cfs 1,257 cf

Reach D9: TO DMH10 Avg. Flow Depth=0.20' Max Vel=3.35 fps Inflow=0.38 cfs 1,257 cf
12.0" Round Pipe n=0.013 L=70.0' S=0.0143 '/' Capacity=4.26 cfs Outflow=0.37 cfs 1,257 cf

Reach DCB-R101: TO DMH-R100 Avg. Flow Depth=0.37' Max Vel=7.27 fps Inflow=1.92 cfs 6,054 cf
12.0" Round Pipe n=0.011 L=8.0' S=0.0250 '/' Capacity=6.66 cfs Outflow=1.92 cfs 6,054 cf

Reach DCB-R102: TO DMH-R101 Avg. Flow Depth=0.28' Max Vel=4.85 fps Inflow=0.86 cfs 2,669 cf
12.0" Round Pipe n=0.011 L=80.0' S=0.0150 '/' Capacity=5.16 cfs Outflow=0.85 cfs 2,669 cf

Reach DCB-S1: TO DMH-S1 Avg. Flow Depth=0.30' Max Vel=4.59 fps Inflow=0.91 cfs 2,930 cf
12.0" Round Pipe n=0.011 L=24.0' S=0.0125 '/' Capacity=4.71 cfs Outflow=0.90 cfs 2,930 cf

Reach DCB-S2: TO DMH-S1 Avg. Flow Depth=0.28' Max Vel=5.76 fps Inflow=1.03 cfs 3,223 cf
12.0" Round Pipe n=0.011 L=14.0' S=0.0214 '/' Capacity=6.16 cfs Outflow=1.02 cfs 3,223 cf

Reach DCB-S3: TO DMH-S1 Avg. Flow Depth=0.51' Max Vel=5.24 fps Inflow=2.13 cfs 6,991 cf
12.0" Round Pipe n=0.011 L=21.0' S=0.0095 '/' Capacity=4.11 cfs Outflow=2.12 cfs 6,991 cf

Reach DCB-S4: TO DMH-S1 Avg. Flow Depth=0.41' Max Vel=8.30 fps Inflow=2.55 cfs 8,448 cf
12.0" Round Pipe n=0.011 L=7.0' S=0.0286 '/' Capacity=7.12 cfs Outflow=2.54 cfs 8,448 cf

Reach DCB1: TO DMH#1 Avg. Flow Depth=0.22' Max Vel=2.90 fps Inflow=0.37 cfs 1,180 cf
12.0" Round Pipe n=0.013 L=61.0' S=0.0098 '/' Capacity=3.53 cfs Outflow=0.37 cfs 1,180 cf

Reach DCB2: TO DMH#2 Avg. Flow Depth=0.40' Max Vel=4.66 fps Inflow=1.37 cfs 4,415 cf
12.0" Round Pipe n=0.013 L=30.0' S=0.0133 '/' Capacity=4.11 cfs Outflow=1.35 cfs 4,415 cf

Reach DCB3: TO DMH#3 Avg. Flow Depth=0.53' Max Vel=3.64 fps Inflow=1.54 cfs 5,025 cf
12.0" Round Pipe n=0.013 L=48.0' S=0.0062 '/' Capacity=2.82 cfs Outflow=1.52 cfs 5,025 cf

Reach DCB30: TO BASIN Avg. Flow Depth=0.73' Max Vel=6.84 fps Inflow=5.10 cfs 24,431 cf
15.0" Round Pipe n=0.013 L=140.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=5.06 cfs 24,431 cf

Reach DCB4: TO DMH#4 Avg. Flow Depth=0.30' Max Vel=3.22 fps Inflow=0.63 cfs 2,001 cf
12.0" Round Pipe n=0.013 L=23.0' S=0.0087 '/' Capacity=3.32 cfs Outflow=0.62 cfs 2,001 cf

Reach DCB5: TO DMH#5 Avg. Flow Depth=0.47' Max Vel=4.26 fps Inflow=1.55 cfs 5,200 cf
12.0" Round Pipe n=0.013 L=21.0' S=0.0095 '/' Capacity=3.48 cfs Outflow=1.54 cfs 5,200 cf

Reach DCB6: TO DMH#6 Avg. Flow Depth=0.47' Max Vel=5.66 fps Inflow=2.07 cfs 6,696 cf
12.0" Round Pipe n=0.013 L=6.0' S=0.0167 '/' Capacity=4.60 cfs Outflow=2.07 cfs 6,696 cf

Reach DCBR100: TO DMH R100 Avg. Flow Depth=0.33' Max Vel=4.06 fps Inflow=0.93 cfs 3,033 cf
12.0" Round Pipe n=0.011 L=162.0' S=0.0086 '/' Capacity=3.91 cfs Outflow=0.90 cfs 3,033 cf

Reach DCBS10: TO DMH-S4 Avg. Flow Depth=0.11' Max Vel=5.42 fps Inflow=0.27 cfs 892 cf
12.0" Round Pipe n=0.011 L=9.0' S=0.0556 '/' Capacity=9.92 cfs Outflow=0.26 cfs 892 cf

Reach DCBS5: TO DMH-S8 Avg. Flow Depth=0.33' Max Vel=6.43 fps Inflow=1.49 cfs 4,767 cf
12.0" Round Pipe n=0.011 L=23.0' S=0.0217 '/' Capacity=6.21 cfs Outflow=1.48 cfs 4,767 cf

Reach DCBS6: TO DMH-S8 Avg. Flow Depth=0.32' Max Vel=7.52 fps Inflow=1.62 cfs 5,390 cf
12.0" Round Pipe n=0.011 L=16.0' S=0.0313 '/' Capacity=7.44 cfs Outflow=1.62 cfs 5,390 cf

Reach DCBS7: TO DMH-S6 Avg. Flow Depth=0.35' Max Vel=5.54 fps Inflow=1.37 cfs 5,081 cf
12.0" Round Pipe n=0.011 L=20.0' S=0.0150 '/' Capacity=5.16 cfs Outflow=1.37 cfs 5,081 cf

Reach DCBS8: TO DMH-S6 Avg. Flow Depth=0.22' Max Vel=5.93 fps Inflow=0.75 cfs 2,459 cf
12.0" Round Pipe n=0.011 L=10.0' S=0.0300 '/' Capacity=7.29 cfs Outflow=0.75 cfs 2,459 cf

Reach DCBS9: TO DMH-S4 Avg. Flow Depth=0.21' Max Vel=5.64 fps Inflow=0.68 cfs 2,460 cf
12.0" Round Pipe n=0.011 L=18.0' S=0.0278 '/' Capacity=7.02 cfs Outflow=0.68 cfs 2,460 cf

Reach DMH-R101: TO DMH-S1 Avg. Flow Depth=0.62' Max Vel=5.90 fps Inflow=3.60 cfs 11,756 cf
15.0" Round Pipe n=0.011 L=265.0' S=0.0091 '/' Capacity=7.27 cfs Outflow=3.46 cfs 11,756 cf

Reach DMH-S1: TO DMH-S2 Avg. Flow Depth=0.79' Max Vel=5.58 fps Inflow=5.28 cfs 17,908 cf
18.0" Round Pipe n=0.011 L=279.0' S=0.0061 '/' Capacity=9.69 cfs Outflow=5.05 cfs 17,908 cf

Reach DMH-S2: TO DMH-S3 Avg. Flow Depth=0.93' Max Vel=8.30 fps Inflow=9.50 cfs 33,347 cf
18.0" Round Pipe n=0.011 L=42.0' S=0.0119 '/' Capacity=13.55 cfs Outflow=9.47 cfs 33,347 cf

Reach DMH-S3: TO FE-S1 Avg. Flow Depth=0.92' Max Vel=8.31 fps Inflow=9.47 cfs 33,347 cf
18.0" Round Pipe n=0.011 L=25.0' S=0.0120 '/' Capacity=13.60 cfs Outflow=9.45 cfs 33,347 cf

Reach DMH1: TO DMH#2 Avg. Flow Depth=0.18' Max Vel=3.73 fps Inflow=0.37 cfs 1,180 cf
12.0" Round Pipe n=0.013 L=65.0' S=0.0200 '/' Capacity=5.04 cfs Outflow=0.36 cfs 1,180 cf

Reach DMH2: TO DMH#3 Avg. Flow Depth=0.44' Max Vel=5.13 fps Inflow=1.71 cfs 5,596 cf
12.0" Round Pipe n=0.013 L=111.0' S=0.0144 '/' Capacity=4.28 cfs Outflow=1.69 cfs 5,596 cf

Reach DMH21: TO DMH#22 Avg. Flow Depth=0.44' Max Vel=6.10 fps Inflow=2.04 cfs 6,637 cf
12.0" Round Pipe n=0.013 L=168.0' S=0.0202 '/' Capacity=5.07 cfs Outflow=2.00 cfs 6,637 cf

Reach DMH22: TO DMH#15 Avg. Flow Depth=0.30' Max Vel=9.90 fps Inflow=2.00 cfs 6,637 cf
12.0" Round Pipe n=0.013 L=9.0' S=0.0778 '/' Capacity=9.94 cfs Outflow=2.00 cfs 6,637 cf

Reach DMH3: TO DMH#7 Avg. Flow Depth=0.80' Max Vel=8.75 fps Inflow=7.28 cfs 24,518 cf
15.0" Round Pipe n=0.013 L=13.0' S=0.0231 '/' Capacity=9.81 cfs Outflow=7.27 cfs 24,518 cf

Reach DMH4: TO DMH5 Avg. Flow Depth=0.30' Max Vel=3.11 fps Inflow=0.62 cfs 2,001 cf
12.0" Round Pipe n=0.013 L=77.0' S=0.0078 '/' Capacity=3.15 cfs Outflow=0.61 cfs 2,001 cf

Reach DMH5: TO DMH-6 Avg. Flow Depth=0.62' Max Vel=4.21 fps Inflow=2.13 cfs 7,201 cf
12.0" Round Pipe n=0.013 L=108.0' S=0.0074 '/' Capacity=3.07 cfs Outflow=2.11 cfs 7,201 cf

Reach DMH6: TO DMH#3 Avg. Flow Depth=0.71' Max Vel=5.72 fps Inflow=4.14 cfs 13,898 cf
15.0" Round Pipe n=0.013 L=150.0' S=0.0107 '/' Capacity=6.67 cfs Outflow=4.08 cfs 13,898 cf

Reach DMH7: TO UGS Avg. Flow Depth=0.84' Max Vel=8.26 fps Inflow=7.27 cfs 24,518 cf
15.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/' Capacity=9.14 cfs Outflow=7.27 cfs 24,518 cf

Reach DMH8: TO FE#B1 Avg. Flow Depth=0.46' Max Vel=5.86 fps Inflow=2.05 cfs 3,468 cf
12.0" Round Pipe n=0.013 L=50.0' S=0.0180 '/' Capacity=4.78 cfs Outflow=2.06 cfs 3,468 cf

Reach DMHd1: TO DMH#8 Avg. Flow Depth=0.41' Max Vel=4.56 fps Inflow=1.38 cfs 4,430 cf
12.0" Round Pipe n=0.013 L=82.0' S=0.0122 '/' Capacity=3.93 cfs Outflow=1.37 cfs 4,430 cf

Reach DMHD2: TO DMH#7 Avg. Flow Depth=0.75' Max Vel=6.30 fps Inflow=4.81 cfs 15,890 cf
15.0" Round Pipe n=0.013 L=8.0' S=0.0125 '/' Capacity=7.22 cfs Outflow=4.80 cfs 15,890 cf

Reach DMHd3: TO DMH#2 Avg. Flow Depth=0.19' Max Vel=6.18 fps Inflow=0.65 cfs 2,199 cf
12.0" Round Pipe n=0.013 L=27.0' S=0.0519 '/' Capacity=8.11 cfs Outflow=0.65 cfs 2,199 cf

Reach DMHD4: TO DMH#2 Avg. Flow Depth=0.37' Max Vel=3.39 fps Inflow=0.88 cfs 2,858 cf
12.0" Round Pipe n=0.013 L=133.0' S=0.0075 '/' Capacity=3.09 cfs Outflow=0.86 cfs 2,858 cf

Reach DMHD5: TO DMH#2 Avg. Flow Depth=0.57' Max Vel=4.04 fps Inflow=1.87 cfs 6,168 cf
12.0" Round Pipe n=0.013 L=70.0' S=0.0071 '/' Capacity=3.01 cfs Outflow=1.85 cfs 6,168 cf

Reach DMHD6: TO DMH#5 Avg. Flow Depth=0.37' Max Vel=3.24 fps Inflow=0.86 cfs 2,844 cf
12.0" Round Pipe n=0.013 L=59.0' S=0.0068 '/' Capacity=2.93 cfs Outflow=0.86 cfs 2,844 cf

Reach DMHD7: TO UGS#1 Avg. Flow Depth=0.75' Max Vel=6.30 fps Inflow=4.80 cfs 15,890 cf
15.0" Round Pipe n=0.013 L=12.0' S=0.0125 '/' Capacity=7.22 cfs Outflow=4.80 cfs 15,890 cf

Reach DMHD8: TO DMH#2 Avg. Flow Depth=0.51' Max Vel=5.18 fps Inflow=2.10 cfs 6,863 cf
12.0" Round Pipe n=0.013 L=39.0' S=0.0128 '/' Capacity=4.03 cfs Outflow=2.10 cfs 6,863 cf

Reach DMHR100: TO DMH-R101 Avg. Flow Depth=0.60' Max Vel=5.76 fps Inflow=2.80 cfs 9,087 cf
12.0" Round Pipe n=0.011 L=188.0' S=0.0101 '/' Capacity=4.23 cfs Outflow=2.75 cfs 9,087 cf

Reach DMHS10: TO DMH-S11 Avg. Flow Depth=0.95' Max Vel=7.59 fps Inflow=11.08 cfs 38,963 cf
24.0" Round Pipe n=0.013 L=240.0' S=0.0117 '/' Capacity=24.43 cfs Outflow=10.88 cfs 38,963 cf

Reach DMHS11: TO DMH-D14 Avg. Flow Depth=1.09' Max Vel=6.20 fps Inflow=10.88 cfs 38,963 cf
24.0" Round Pipe n=0.013 L=130.0' S=0.0069 '/' Capacity=18.82 cfs Outflow=10.71 cfs 38,963 cf

Reach DMHS4: TO DMH-S5 Avg. Flow Depth=0.29' Max Vel=4.97 fps Inflow=0.92 cfs 3,352 cf
12.0" Round Pipe n=0.011 L=126.0' S=0.0151 '/' Capacity=5.17 cfs Outflow=0.91 cfs 3,352 cf

Reach DMHS5: TO DMH-S6 Avg. Flow Depth=0.28' Max Vel=4.92 fps Inflow=0.91 cfs 3,352 cf
12.0" Round Pipe n=0.011 L=126.0' S=0.0151 '/' Capacity=5.17 cfs Outflow=0.89 cfs 3,352 cf

Reach DMHS6: TO DMH-S7 Avg. Flow Depth=0.42' Max Vel=8.06 fps Inflow=2.90 cfs 10,892 cf
15.0" Round Pipe n=0.011 L=20.0' S=0.0250 '/' Capacity=12.07 cfs Outflow=2.89 cfs 10,892 cf

Reach DMHS7: TO DMH-S9 Avg. Flow Depth=0.66' Max Vel=8.98 fps Inflow=5.88 cfs 21,049 cf
15.0" Round Pipe n=0.011 L=20.0' S=0.0200 '/' Capacity=10.80 cfs Outflow=5.87 cfs 21,049 cf

Reach DMHS8: TO DMH-S7 Avg. Flow Depth=0.60' Max Vel=5.31 fps Inflow=3.10 cfs 10,157 cf
15.0" Round Pipe n=0.011 L=184.0' S=0.0076 '/' Capacity=6.66 cfs Outflow=3.02 cfs 10,157 cf

Reach DMHS9: TO DMH-S10 Avg. Flow Depth=0.93' Max Vel=5.07 fps Inflow=5.87 cfs 21,049 cf
18.0" Round Pipe n=0.013 L=137.0' S=0.0062 '/' Capacity=8.27 cfs Outflow=5.75 cfs 21,049 cf

Reach DP#1: DP#1 Inflow=101.25 cfs 524,907 cf
Outflow=101.25 cfs 524,907 cf

Reach DP#5: DITCH Inflow=0.82 cfs 2,534 cf
Outflow=0.82 cfs 2,534 cf

Reach DRIP: TO YD#1 Inflow=0.21 cfs 710 cf
Outflow=0.21 cfs 710 cf

Reach R200: DP#2 Inflow=0.02 cfs 635 cf
Outflow=0.02 cfs 635 cf

Reach R300: DP#3 Inflow=0.01 cfs 204 cf
Outflow=0.01 cfs 204 cf

Reach R400: DP#4 Inflow=0.02 cfs 703 cf
Outflow=0.02 cfs 703 cf

Reach RF-1: TO DMH#3 Avg. Flow Depth=0.23' Max Vel=2.81 fps Inflow=0.25 cfs 901 cf
6.0" Round Pipe n=0.013 L=48.0' S=0.0104 '/' Capacity=0.57 cfs Outflow=0.24 cfs 901 cf

Reach RF-2: TO DMH#3 Avg. Flow Depth=0.21' Max Vel=2.81 fps Inflow=0.22 cfs 782 cf
6.0" Round Pipe n=0.012 L=61.0' S=0.0098 '/' Capacity=0.60 cfs Outflow=0.21 cfs 782 cf

Reach RF3: TO DMH#3 Avg. Flow Depth=0.14' Max Vel=2.40 fps Inflow=0.11 cfs 394 cf
6.0" Round Pipe n=0.012 L=94.0' S=0.0106 '/' Capacity=0.63 cfs Outflow=0.11 cfs 394 cf

Reach YD1: TO CO#1 Avg. Flow Depth=0.17' Max Vel=4.65 fps Inflow=0.36 cfs 1,222 cf
10.0" Round Pipe n=0.010 L=14.0' S=0.0214 '/' Capacity=4.17 cfs Outflow=0.36 cfs 1,222 cf

Reach YD2: TO D14 Avg. Flow Depth=0.22' Max Vel=7.83 fps Inflow=0.89 cfs 2,754 cf
10.0" Round Pipe n=0.010 L=9.0' S=0.0444 '/' Capacity=6.00 cfs Outflow=0.89 cfs 2,754 cf

Pond P1: BASIN#1 Peak Elev=336.73' Storage=35,548 cf Inflow=27.66 cfs 114,925 cf
Discarded=5.11 cfs 114,925 cf Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=5.11 cfs 114,925 cf

Pond P2: SETTLING POND Peak Elev=343.05' Storage=40 cf Inflow=0.19 cfs 1,963 cf
Outflow=0.15 cfs 1,963 cf

Pond UGS-B: TO DMH#8 Peak Elev=351.67' Storage=0.134 af Inflow=7.27 cfs 24,518 cf
Discarded=1.11 cfs 21,050 cf Primary=2.05 cfs 3,468 cf Outflow=3.16 cfs 24,518 cf

Pond USGD1: TO TEMP SETTLING BASIN Peak Elev=350.85' Storage=0.167 af Inflow=4.80 cfs 15,890 cf
Outflow=1.77 cfs 9,980 cf

Total Runoff Area = 3,429,734 sf Runoff Volume = 672,833 cf Average Runoff Depth = 2.35"
83.31% Pervious = 2,857,173 sf 16.69% Impervious = 572,561 sf

Summary for Subcatchment 2S: TO DCB#4

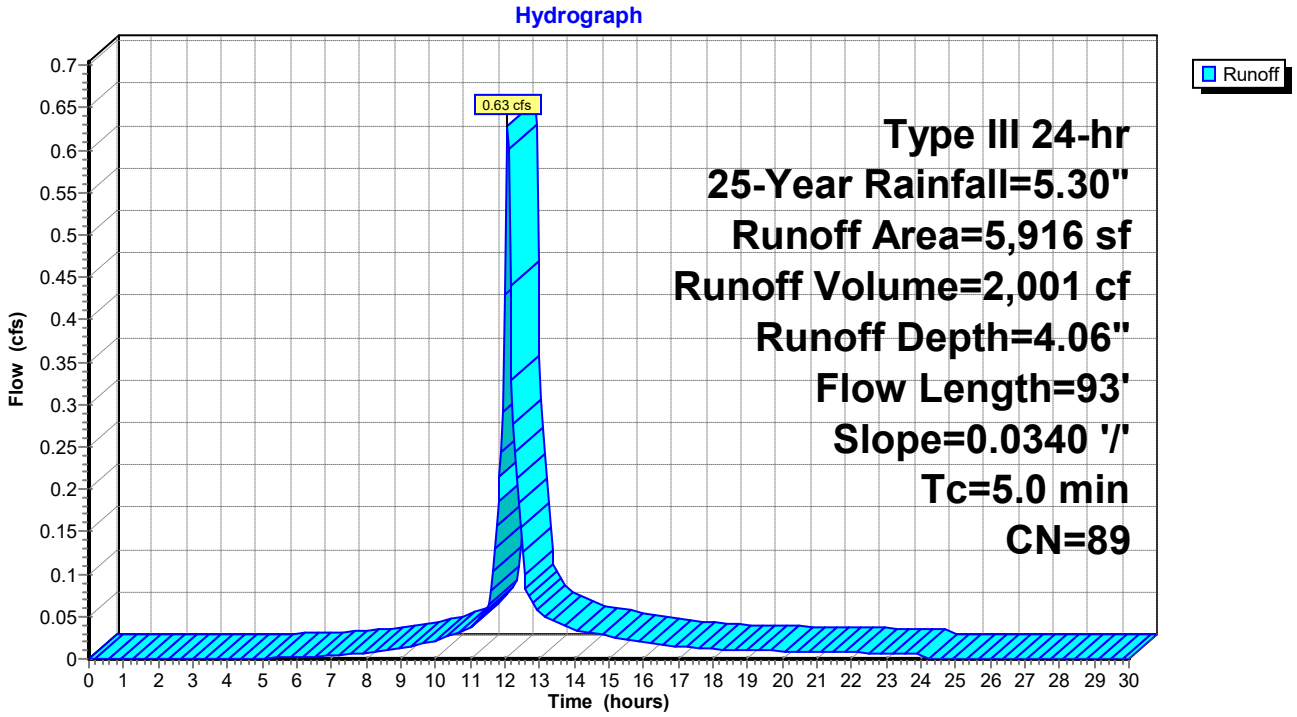
Runoff = 0.63 cfs @ 12.07 hrs, Volume= 2,001 cf, Depth= 4.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
919	39	>75% Grass cover, Good, HSG A
4,997	98	Paved parking, HSG A
5,916	89	Weighted Average
919		15.53% Pervious Area
4,997		84.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0340	1.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	43	0.0340	3.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	93	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: TO DCB#4



Summary for Subcatchment 3S: TO DCB#1

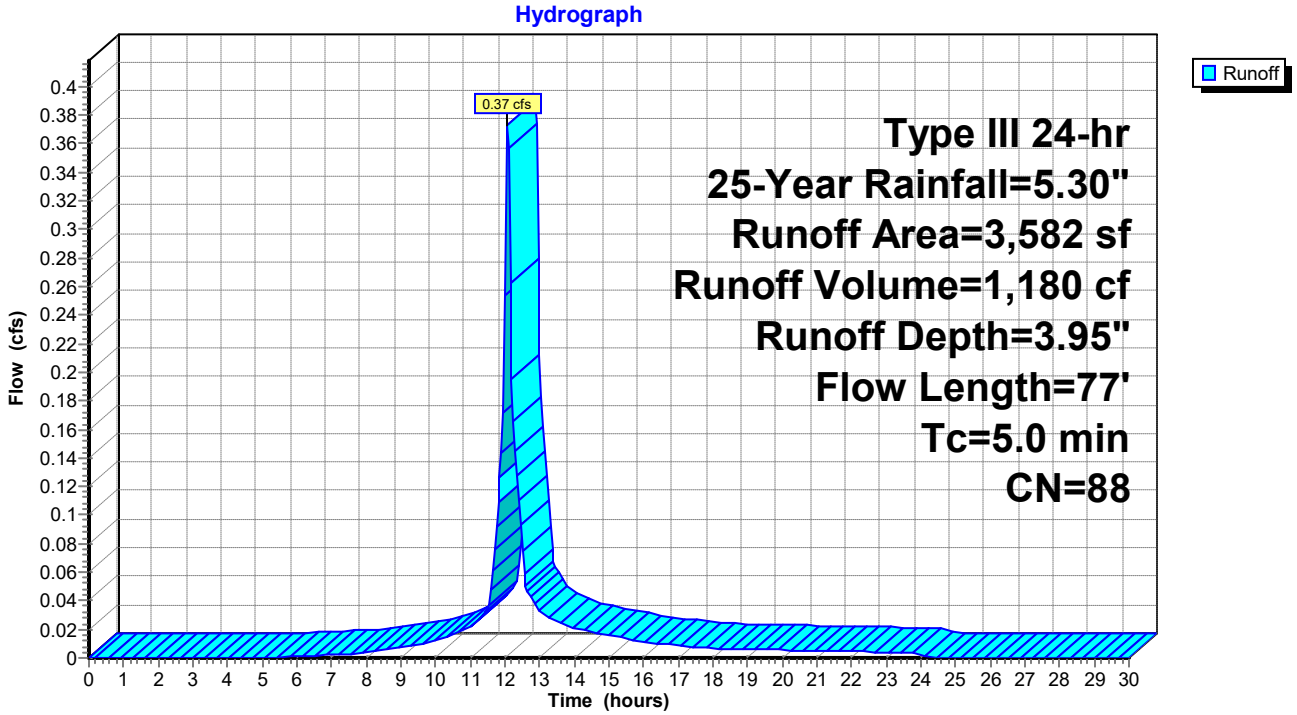
Runoff = 0.37 cfs @ 12.07 hrs, Volume= 1,180 cf, Depth= 3.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
615	39	>75% Grass cover, Good, HSG A
2,967	98	Paved parking, HSG A
3,582	88	Weighted Average
615		17.17% Pervious Area
2,967		82.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.9	44	0.0100	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	27	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	77	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: TO DCB#1



Summary for Subcatchment P-D1: TO CB-D1

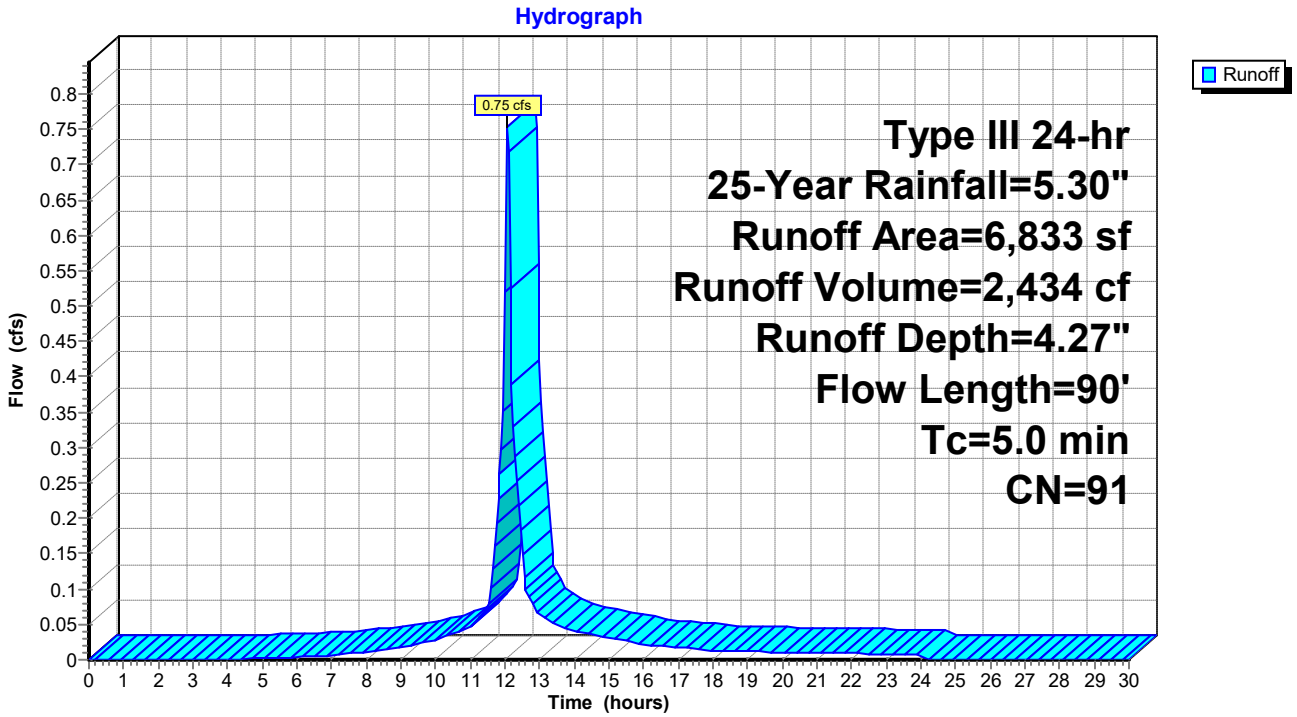
Runoff = 0.75 cfs @ 12.07 hrs, Volume= 2,434 cf, Depth= 4.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
762	39	>75% Grass cover, Good, HSG A
6,071	98	Paved parking, HSG A
6,833	91	Weighted Average
762		11.15% Pervious Area
6,071		88.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	16	0.0830	1.63		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	19	0.0100	0.72		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	15	0.0250	1.00		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	40	0.0250	3.21		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	90	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D1: TO CB-D1



Summary for Subcatchment P-D10*: TO CB-D8

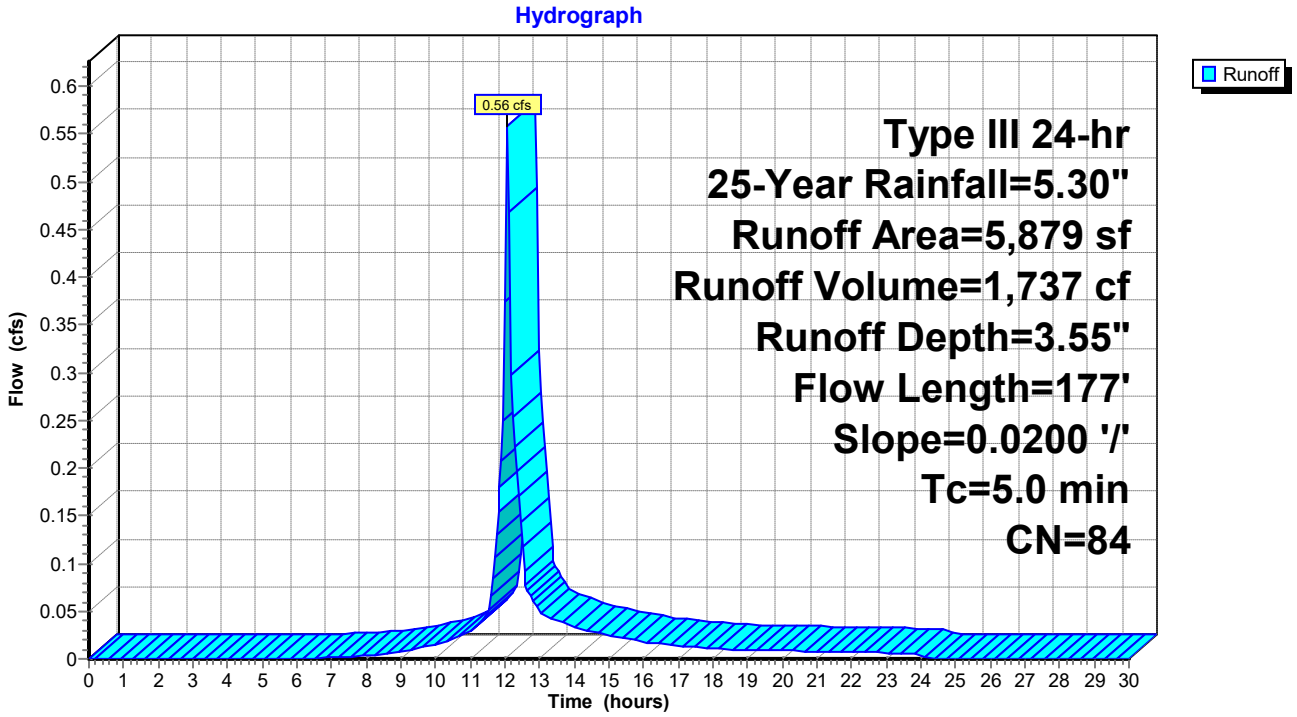
Runoff = 0.56 cfs @ 12.07 hrs, Volume= 1,737 cf, Depth= 3.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
1,363	39	>75% Grass cover, Good, HSG A
4,516	98	Paved parking, HSG A
5,879	84	Weighted Average
1,363		23.18% Pervious Area
4,516		76.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	127	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	177	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D10*: TO CB-D8



Summary for Subcatchment P-D11*: TO CB-D9

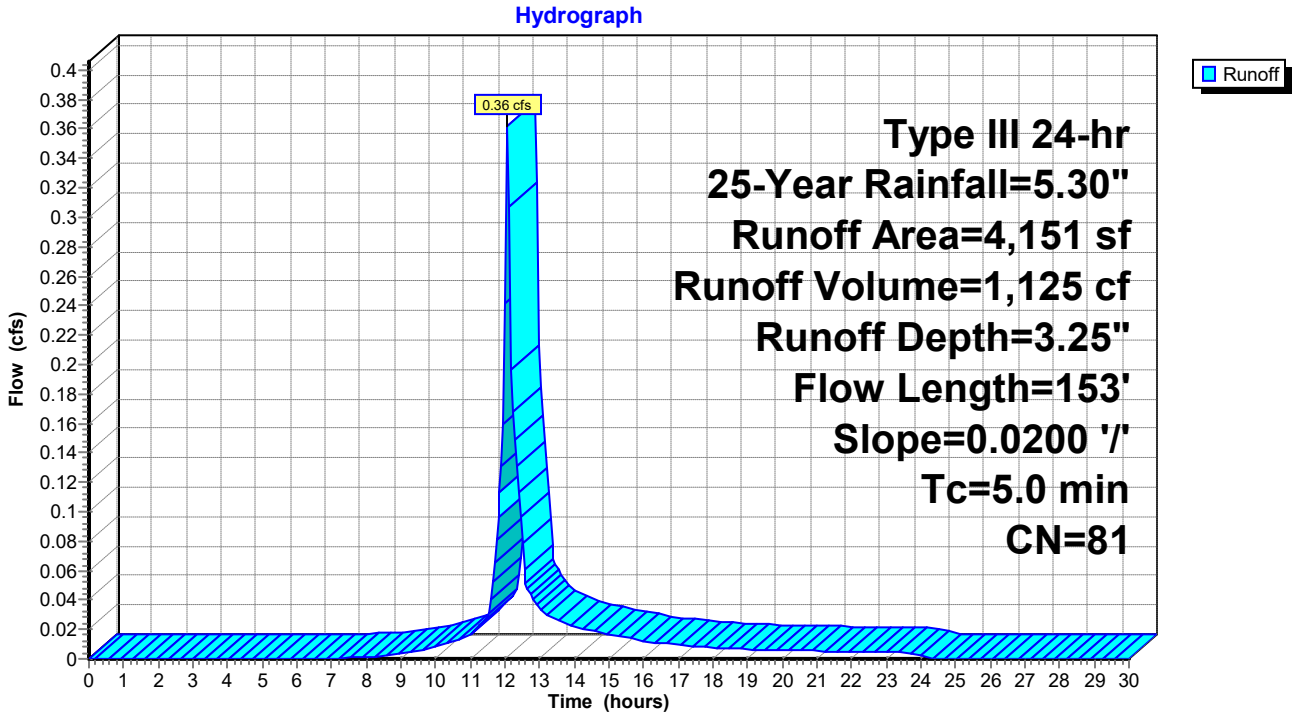
Runoff = 0.36 cfs @ 12.08 hrs, Volume= 1,125 cf, Depth= 3.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
1,166	39	>75% Grass cover, Good, HSG A
2,985	98	Paved parking, HSG A
4,151	81	Weighted Average
1,166		28.09% Pervious Area
2,985		71.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	153	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D11*: TO CB-D9



Summary for Subcatchment P-D12*: TO CB-D5

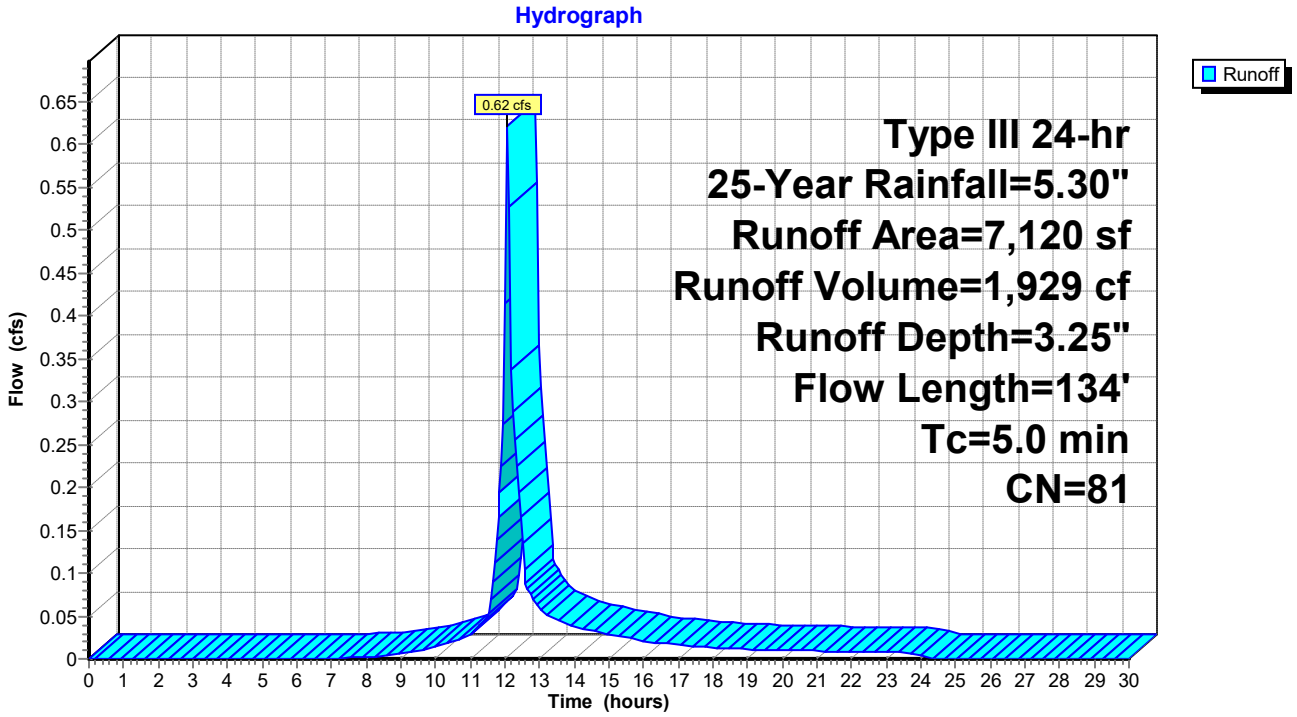
Runoff = 0.62 cfs @ 12.08 hrs, Volume= 1,929 cf, Depth= 3.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
2,024	39	>75% Grass cover, Good, HSG A
5,096	98	Paved parking, HSG A
7,120	81	Weighted Average
2,024		28.43% Pervious Area
5,096		71.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	84	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	134	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D12*: TO CB-D5



Summary for Subcatchment P-D2: TO CB-D2

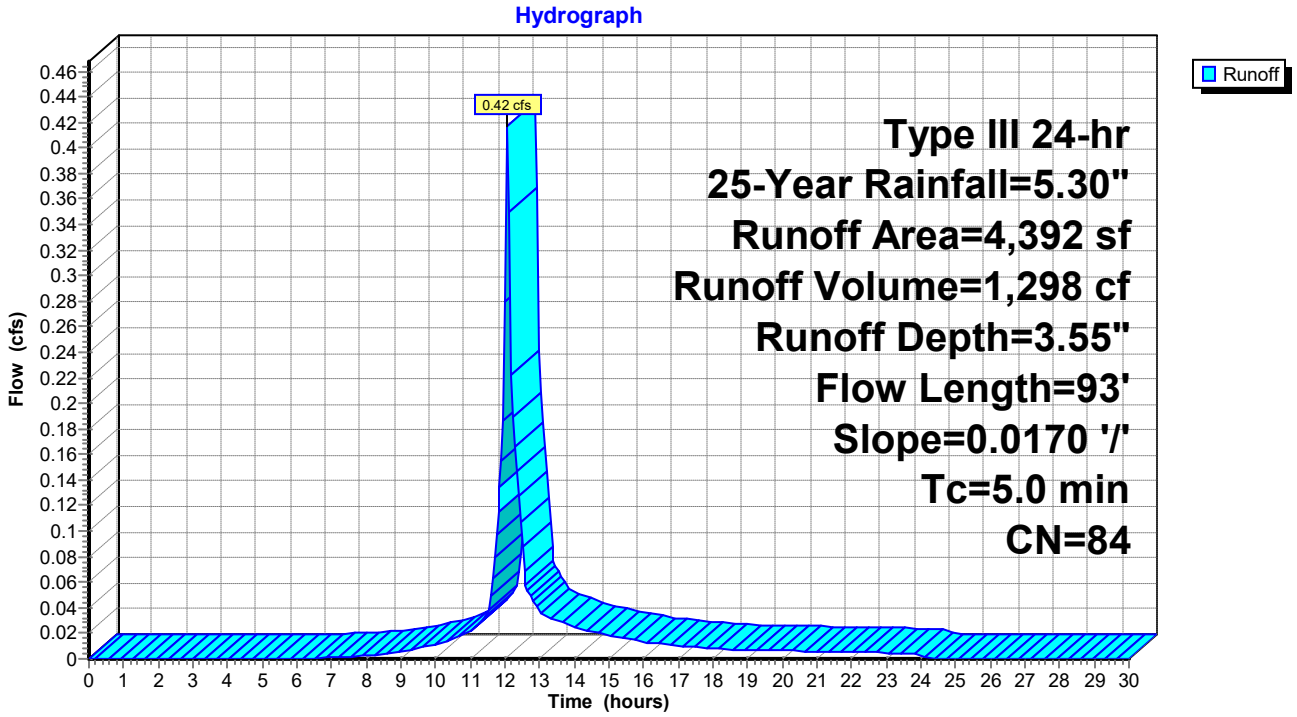
Runoff = 0.42 cfs @ 12.07 hrs, Volume= 1,298 cf, Depth= 3.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
1,030	39	>75% Grass cover, Good, HSG A
3,362	98	Paved parking, HSG A
4,392	84	Weighted Average
1,030		23.45% Pervious Area
3,362		76.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	50	0.0170	1.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	43	0.0170	2.65		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	93	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D2: TO CB-D2



Summary for Subcatchment P-D3: TO CB-D3

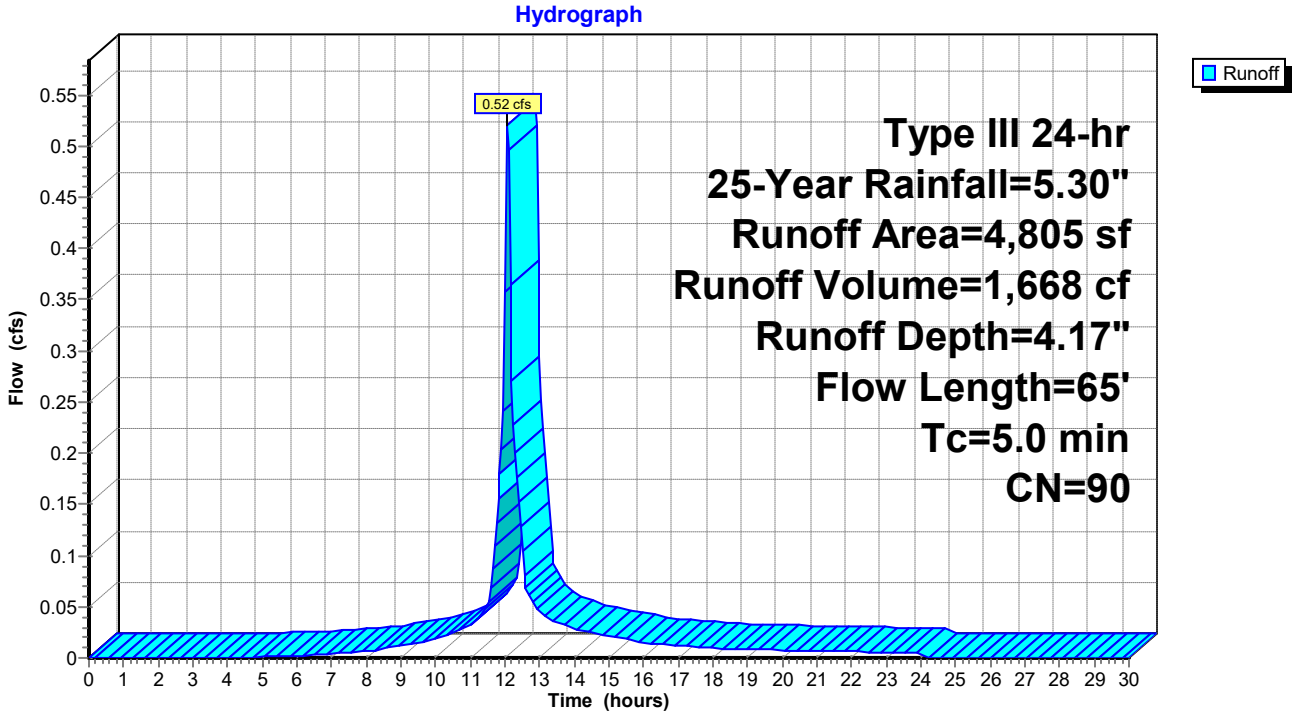
Runoff = 0.52 cfs @ 12.07 hrs, Volume= 1,668 cf, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
613	39	>75% Grass cover, Good, HSG A
4,192	98	Paved parking, HSG A
4,805	90	Weighted Average
613		12.76% Pervious Area
4,192		87.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	8	0.0100	0.61		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	42	0.0250	1.22		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.1	15	0.0250	3.21		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	65	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D3: TO CB-D3



Summary for Subcatchment P-D4*: TO CB-D4

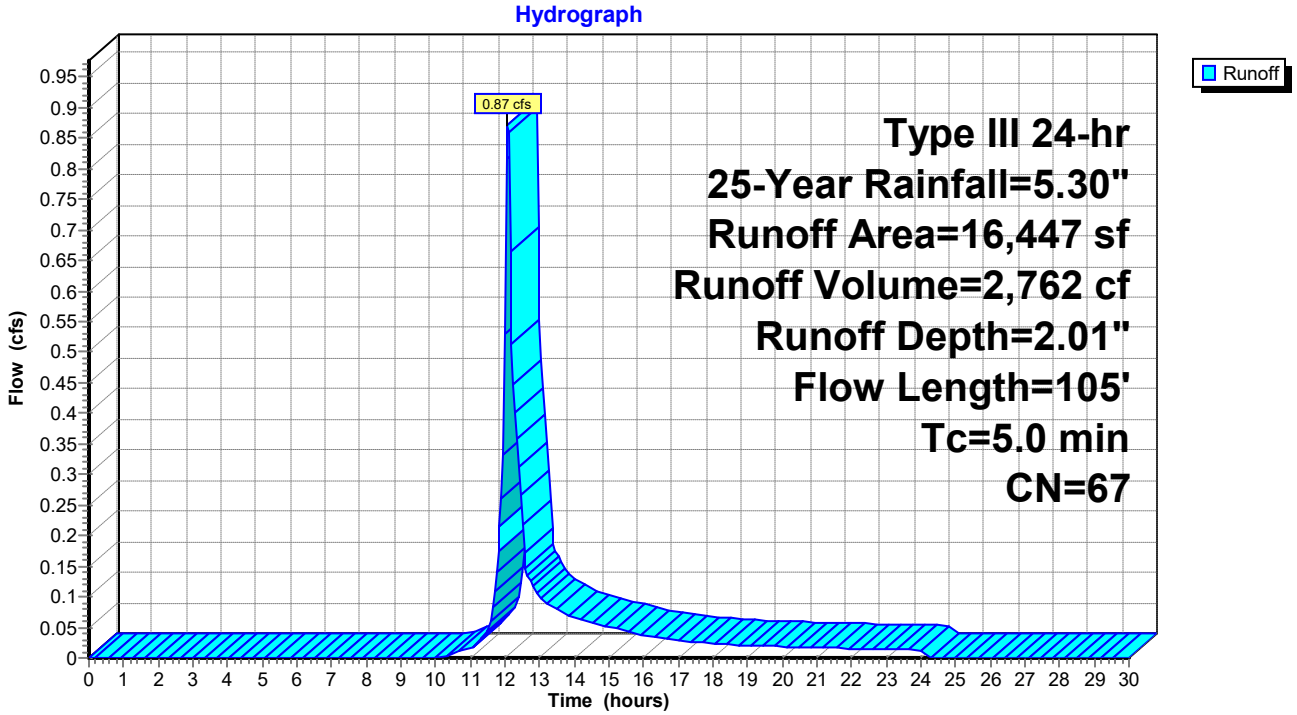
Runoff = 0.87 cfs @ 12.08 hrs, Volume= 2,762 cf, Depth= 2.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
8,595	39	>75% Grass cover, Good, HSG A
7,852	98	Paved parking, HSG A
16,447	67	Weighted Average
8,595		52.26% Pervious Area
7,852		47.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	43	0.0800	0.24		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	7	0.0100	0.59		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	55	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.7	105	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D4*: TO CB-D4



Summary for Subcatchment P-D5*: TO CB-D6

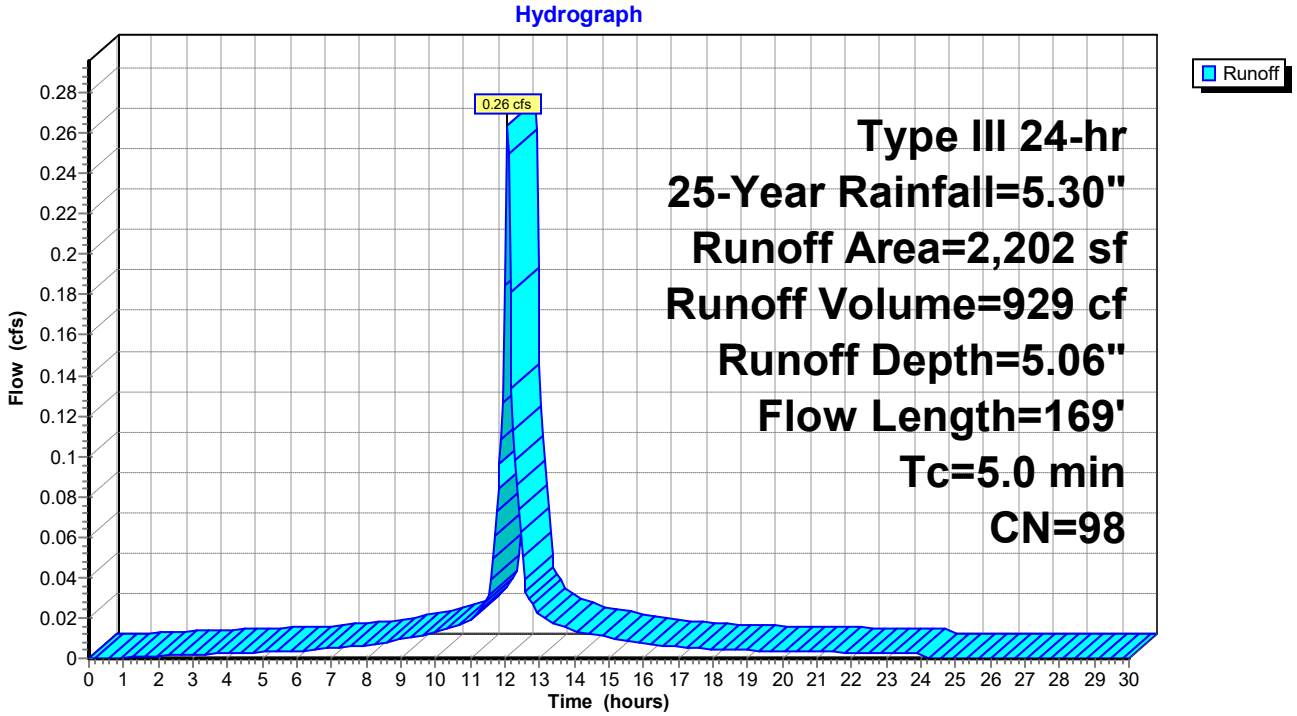
Runoff = 0.26 cfs @ 12.07 hrs, Volume= 929 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
2,202	98	Paved parking, HSG A
2,202		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.95		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	32	0.0190	1.04		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	119	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	169	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D5*: TO CB-D6



Summary for Subcatchment P-D6: TO CB-D7

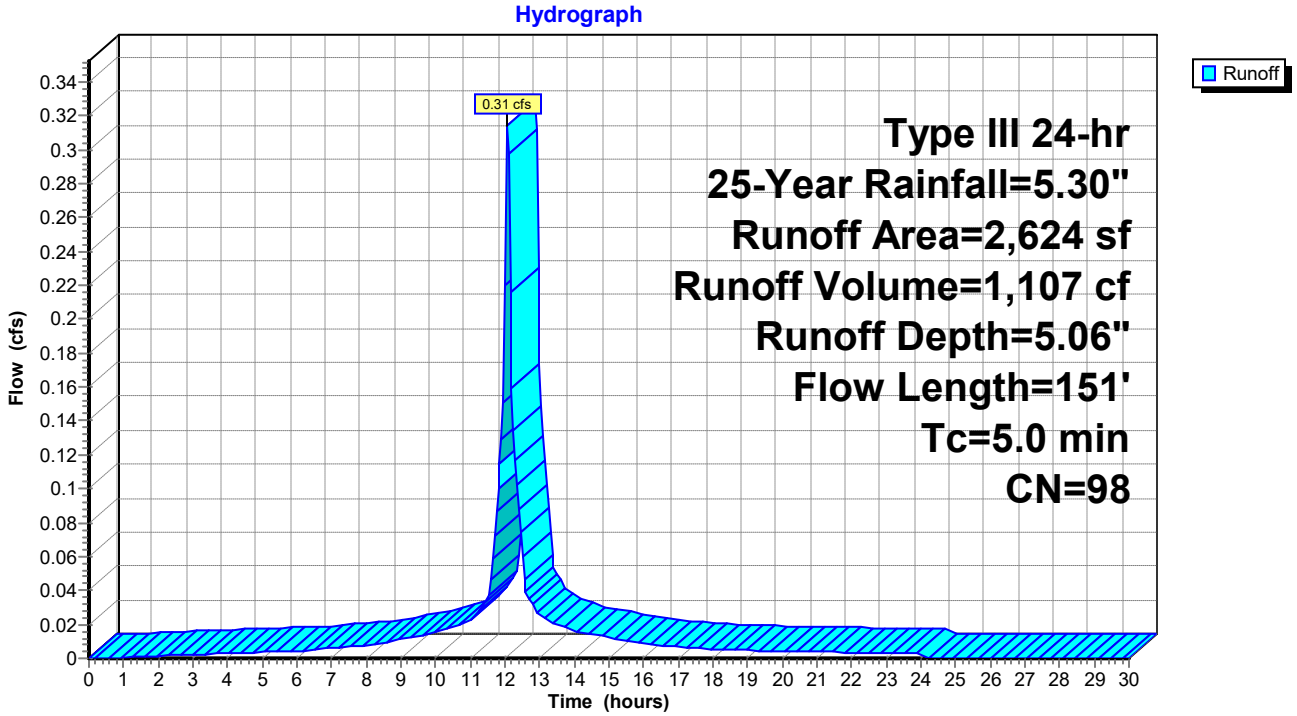
Runoff = 0.31 cfs @ 12.07 hrs, Volume= 1,107 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
2,624	98	Paved parking, HSG A
2,624		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.95		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	32	0.0190	1.04		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	101	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	151	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D6: TO CB-D7



Summary for Subcatchment P-D7: TO ROOF DRAIN

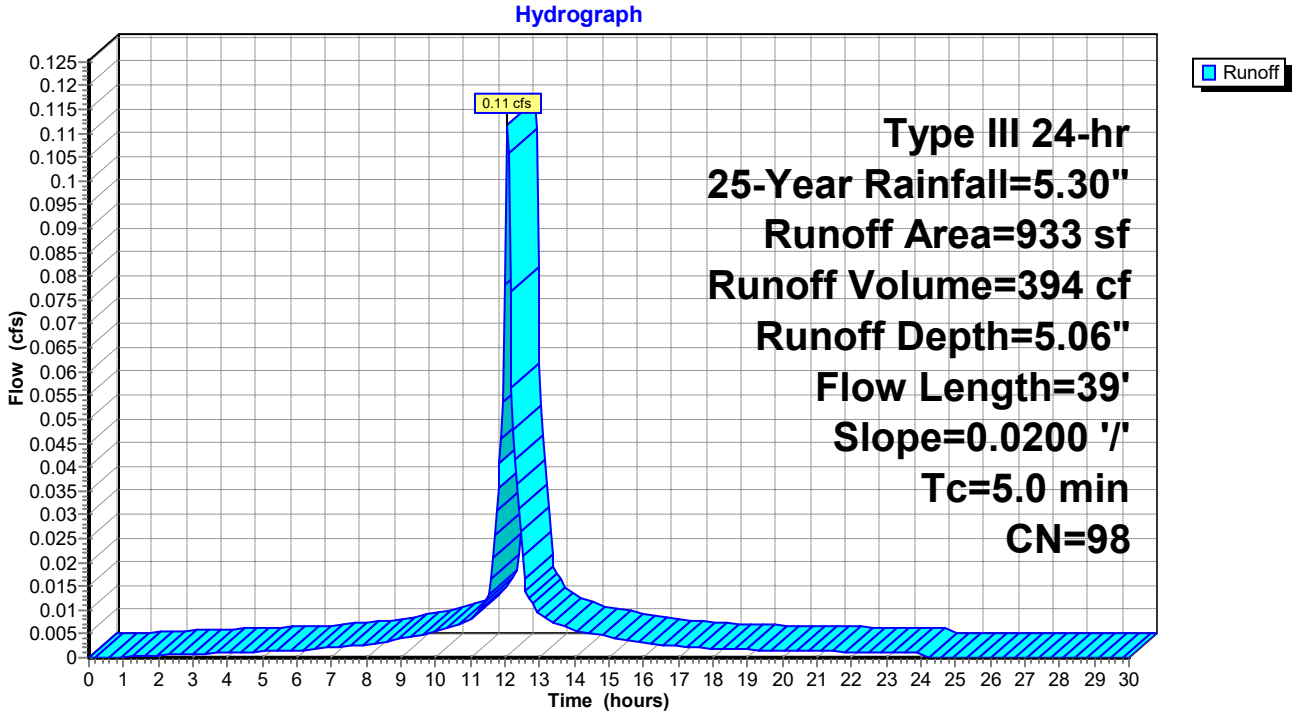
Runoff = 0.11 cfs @ 12.07 hrs, Volume= 394 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
933	98	Paved parking, HSG A
933		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D7: TO ROOF DRAIN



Summary for Subcatchment P-D8: TO ROOF DRAIN

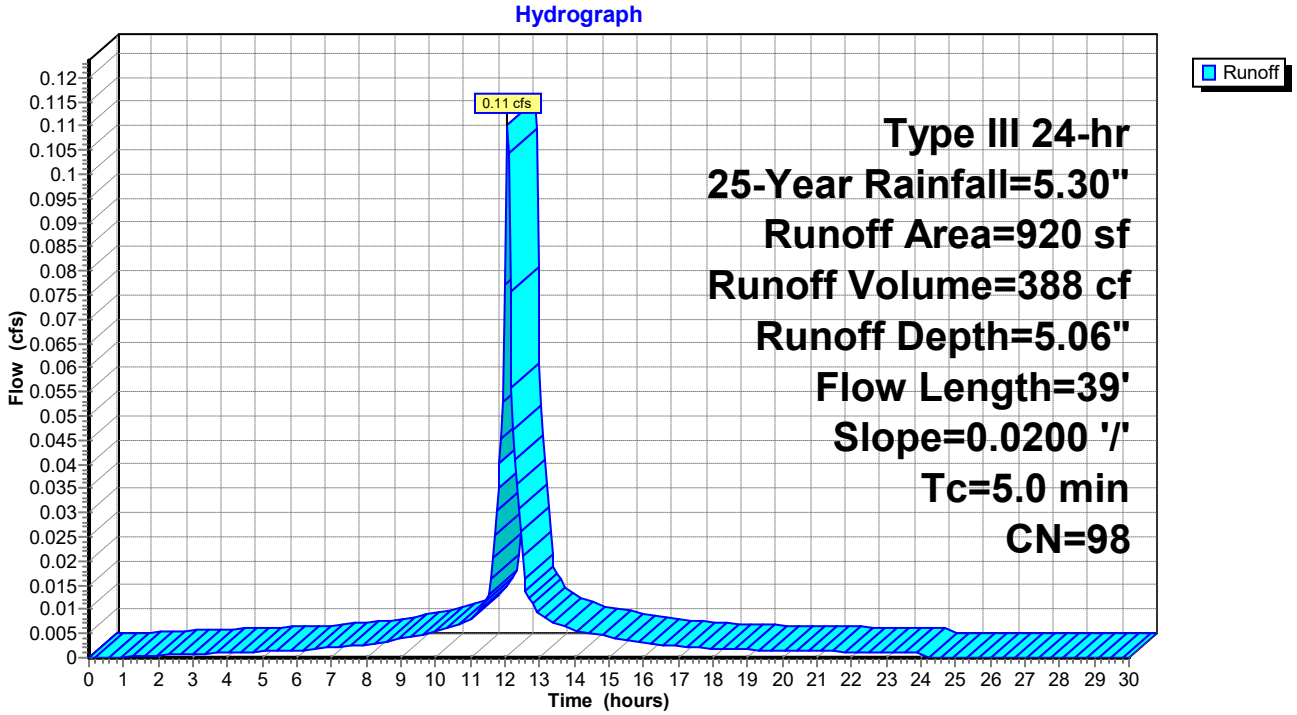
Runoff = 0.11 cfs @ 12.07 hrs, Volume= 388 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
920	98	Paved parking, HSG A
920		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D8: TO ROOF DRAIN



Summary for Subcatchment P-D9: TO ROOF DRAIN

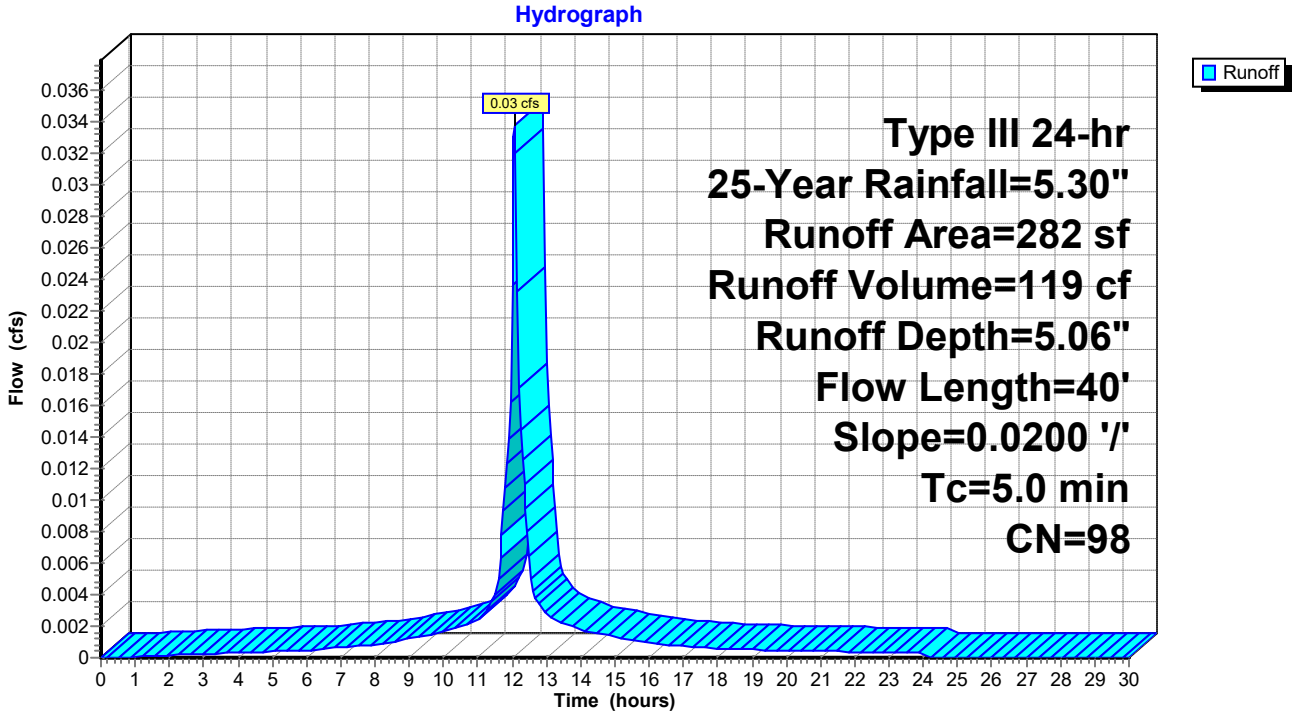
Runoff = 0.03 cfs @ 12.07 hrs, Volume= 119 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
282	98	Paved parking, HSG A
282		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.11		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	40	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D9: TO ROOF DRAIN



Summary for Subcatchment P-S106: TO DCB-R102

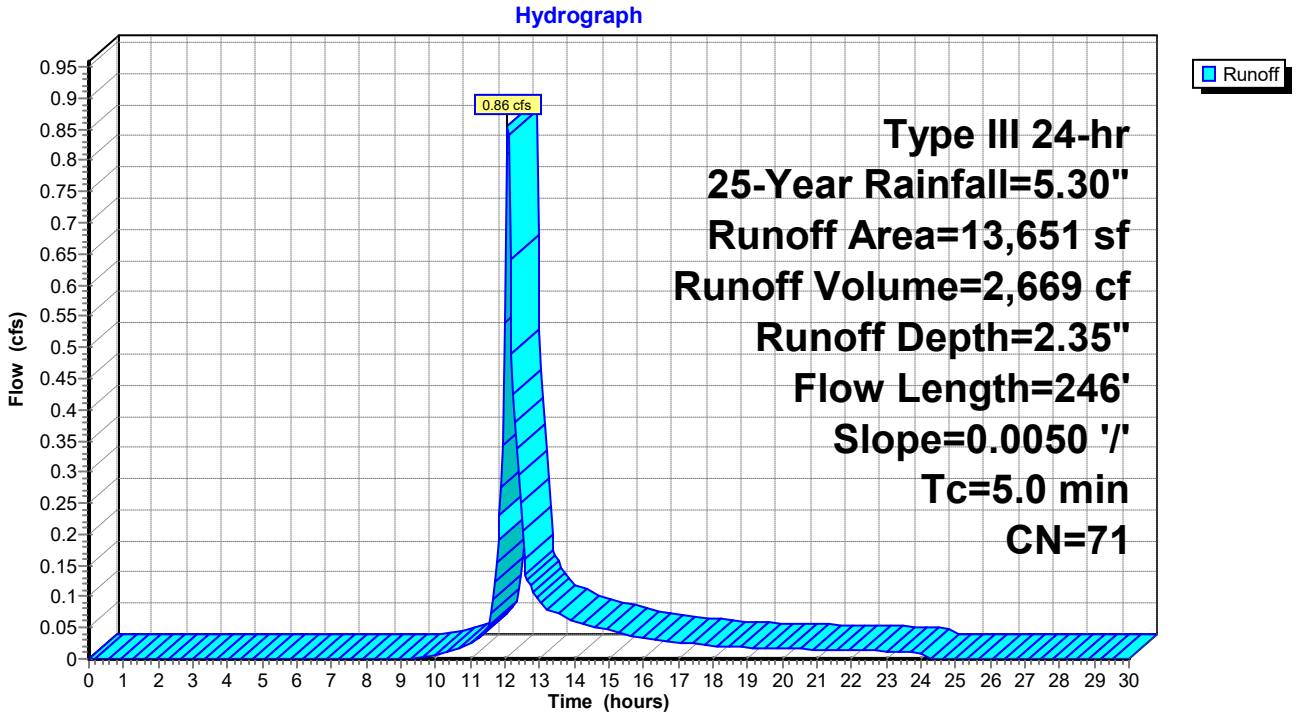
Runoff = 0.86 cfs @ 12.08 hrs, Volume= 2,669 cf, Depth= 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
6,360	39	>75% Grass cover, Good, HSG A
7,291	98	Paved parking, HSG A
13,651	71	Weighted Average
6,360		46.59% Pervious Area
7,291		53.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.3	196	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.6	246	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S106: TO DCB-R102



Summary for Subcatchment P-S107: TO DCB-R101

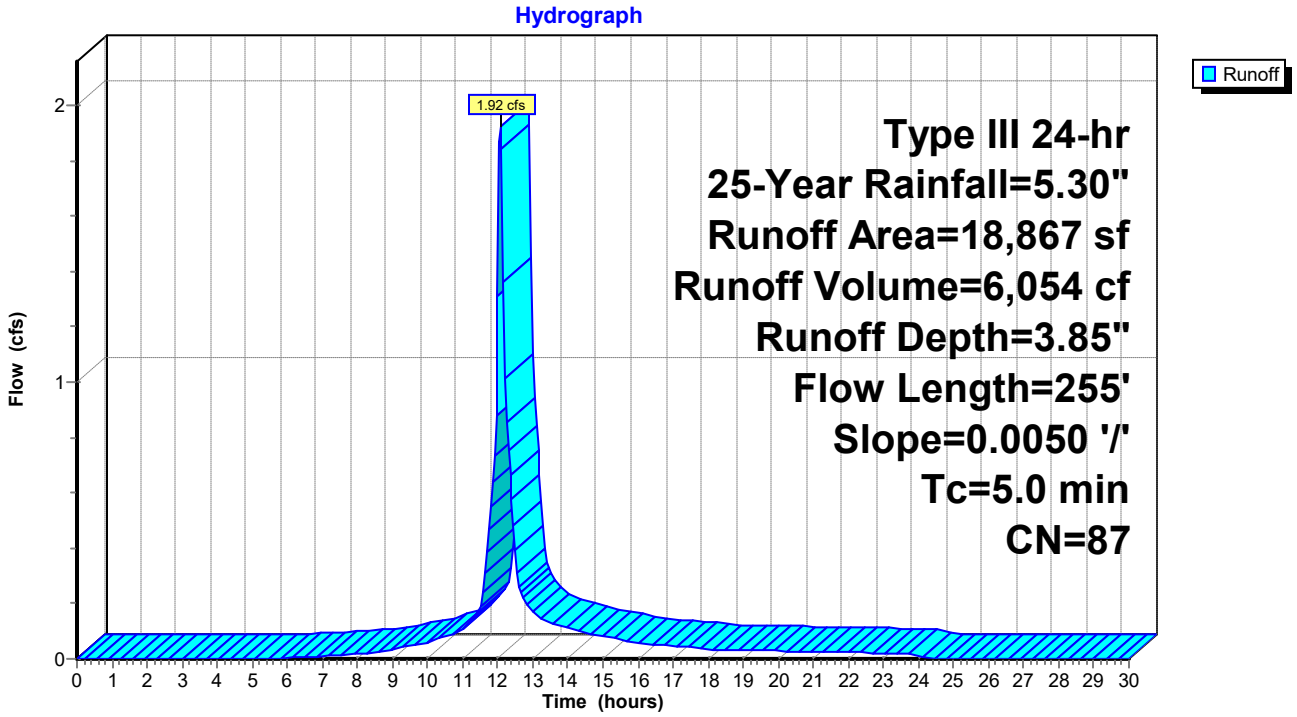
Runoff = 1.92 cfs @ 12.07 hrs, Volume= 6,054 cf, Depth= 3.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
3,590	39	>75% Grass cover, Good, HSG A
15,277	98	Paved parking, HSG A
18,867	87	Weighted Average
3,590		19.03% Pervious Area
15,277		80.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.4	205	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.7	255	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S107: TO DCB-R101



Summary for Subcatchment P-S108: TO DCB-R100

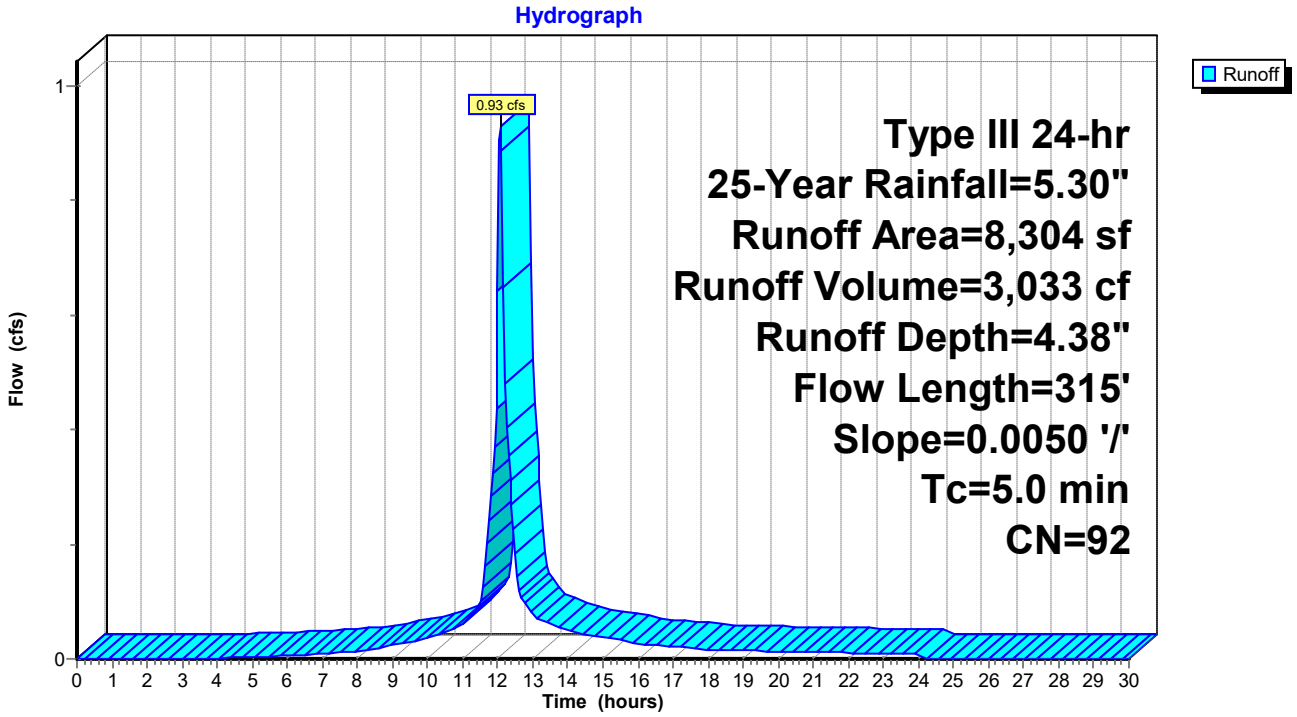
Runoff = 0.93 cfs @ 12.07 hrs, Volume= 3,033 cf, Depth= 4.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
847	39	>75% Grass cover, Good, HSG A
7,457	98	Paved parking, HSG A
8,304	92	Weighted Average
847		10.20% Pervious Area
7,457		89.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
3.1	265	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.4	315	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S108: TO DCB-R100



Summary for Subcatchment P-S109: TO DRAINAGE DITCH

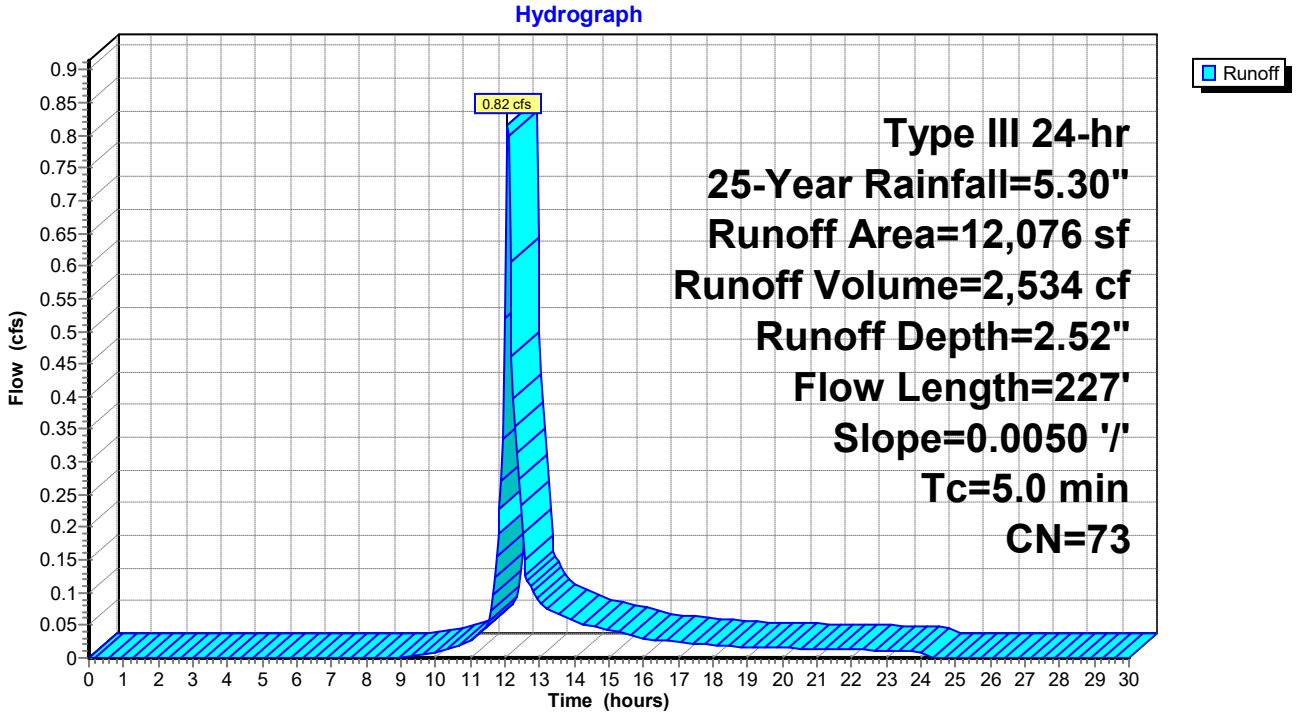
Runoff = 0.82 cfs @ 12.08 hrs, Volume= 2,534 cf, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
4,506	39	>75% Grass cover, Good, HSG A
2,802	98	Paved parking, HSG A
4,165	98	Paved parking, HSG A
603	39	>75% Grass cover, Good, HSG A
12,076	73	Weighted Average
5,109		42.31% Pervious Area
6,967		57.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.1	177	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.4	227	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S109: TO DRAINAGE DITCH



Summary for Subcatchment P-SUB1: TO DCB-S1

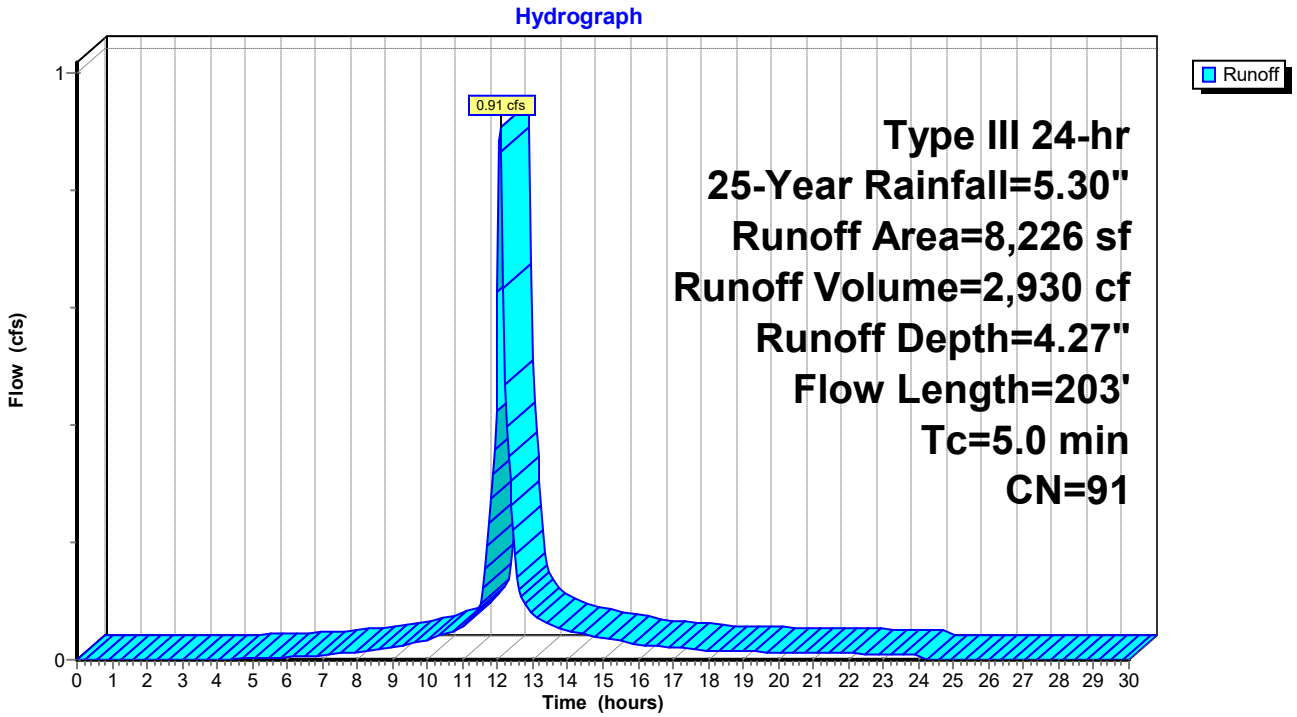
Runoff = 0.91 cfs @ 12.07 hrs, Volume= 2,930 cf, Depth= 4.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
1,001	39	>75% Grass cover, Good, HSG A
7,225	98	Paved parking, HSG A
8,226	91	Weighted Average
1,001		12.17% Pervious Area
7,225		87.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0200	0.10		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	10	0.0200	0.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	33	0.0300	1.25		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	153	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	203	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB1: TO DCB-S1



Summary for Subcatchment P-SUB2: TO DMH-S1

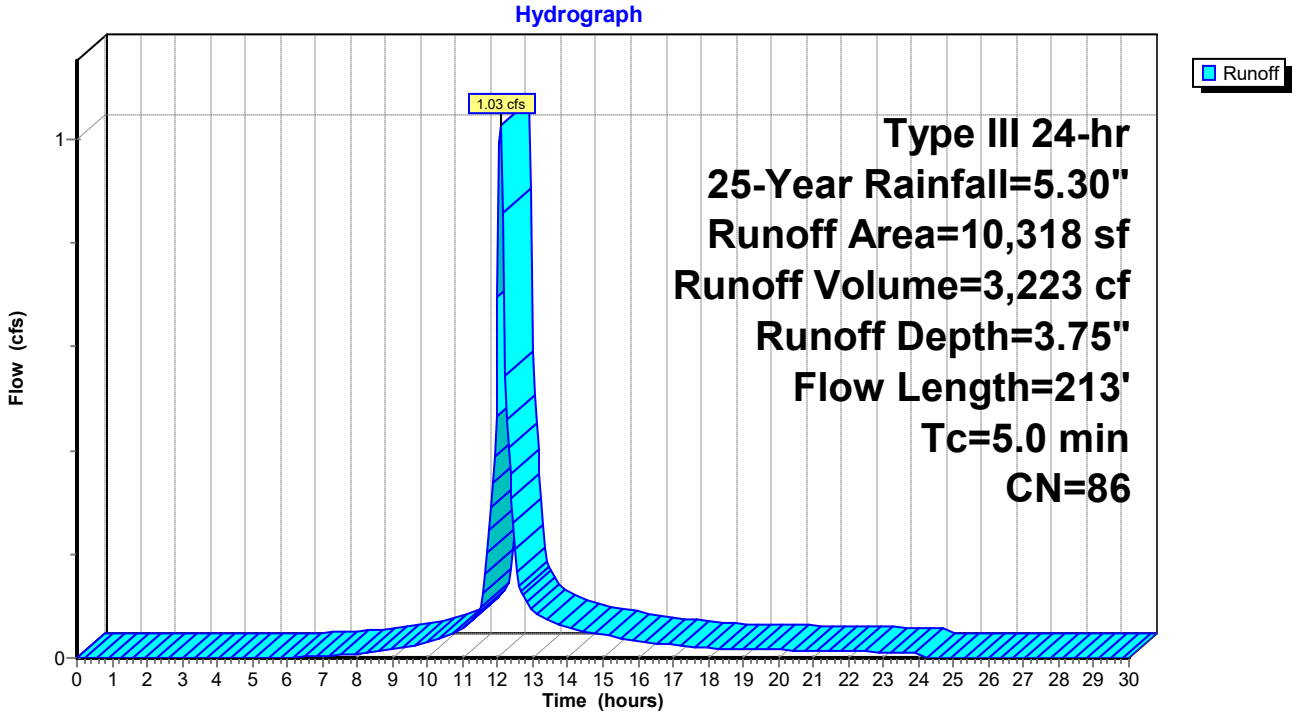
Runoff = 1.03 cfs @ 12.07 hrs, Volume= 3,223 cf, Depth= 3.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
2,017	39	>75% Grass cover, Good, HSG A
8,301	98	Paved parking, HSG A
10,318	86	Weighted Average
2,017		19.55% Pervious Area
8,301		80.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	25	0.0200	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	25	0.0300	1.19		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.8	163	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.5	213	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB2: TO DMH-S1



Summary for Subcatchment P-SUB3: TO DCB-S3

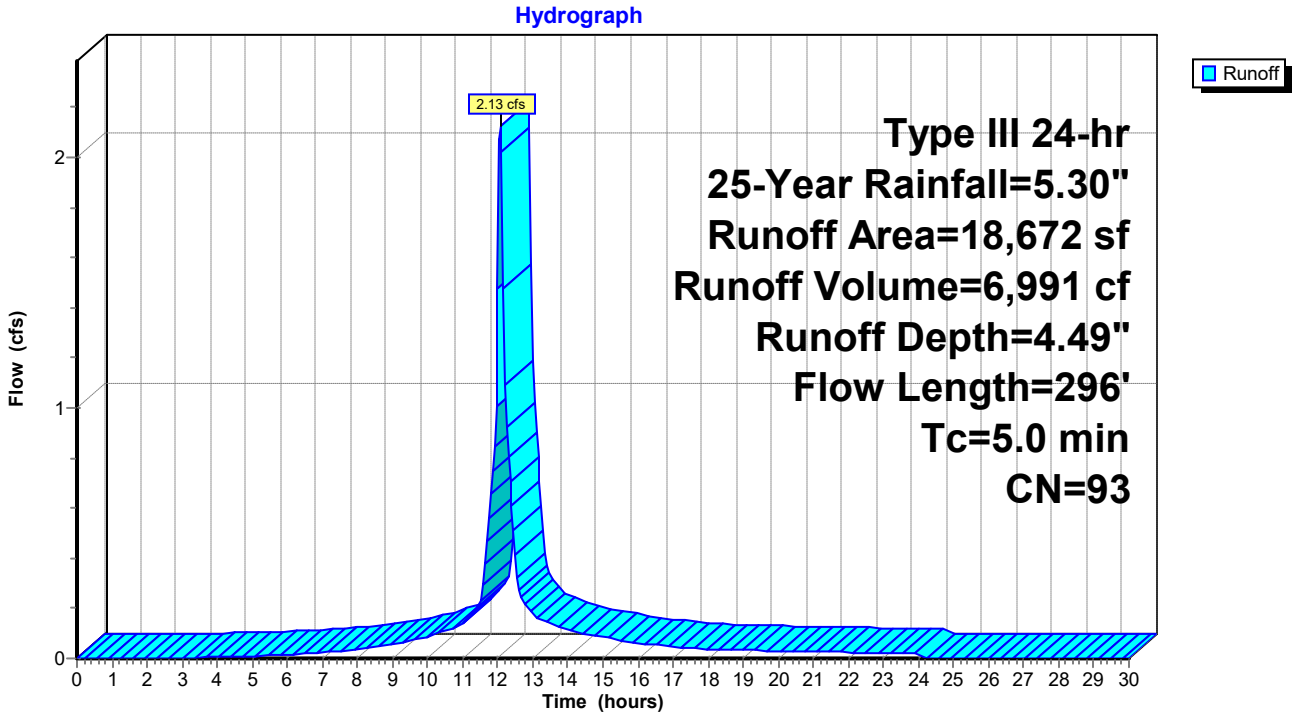
Runoff = 2.13 cfs @ 12.07 hrs, Volume= 6,991 cf, Depth= 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
1,241	39	>75% Grass cover, Good, HSG A
10,029	98	Paved parking, HSG A
938	80	>75% Grass cover, Good, HSG D
6,464	98	Paved parking, HSG D
18,672	93	Weighted Average
2,179		11.67% Pervious Area
16,493		88.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0200	0.10		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	10	0.0150	0.75		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	33	0.0130	0.90		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.8	246	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.8	296	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB3: TO DCB-S3



Summary for Subcatchment P-SUB4: TO DCB-S4

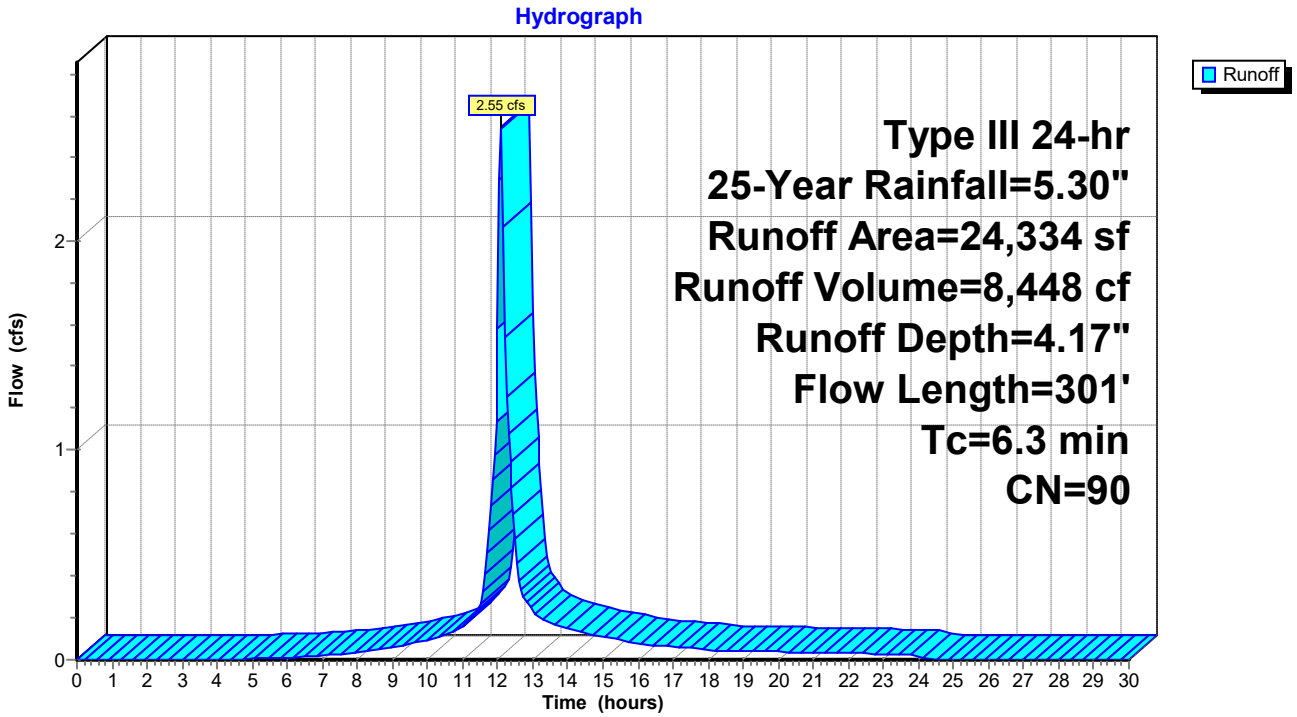
Runoff = 2.55 cfs @ 12.09 hrs, Volume= 8,448 cf, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
3,109	39	>75% Grass cover, Good, HSG A
12,902	98	Paved parking, HSG A
867	80	>75% Grass cover, Good, HSG D
7,456	98	Paved parking, HSG D
24,334	90	Weighted Average
3,976		16.34% Pervious Area
20,358		83.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	32	0.0200	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	18	0.0150	0.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.8	251	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.3	301	Total			

Subcatchment P-SUB4: TO DCB-S4



Summary for Subcatchment P-SUB5: TO DCB-S5

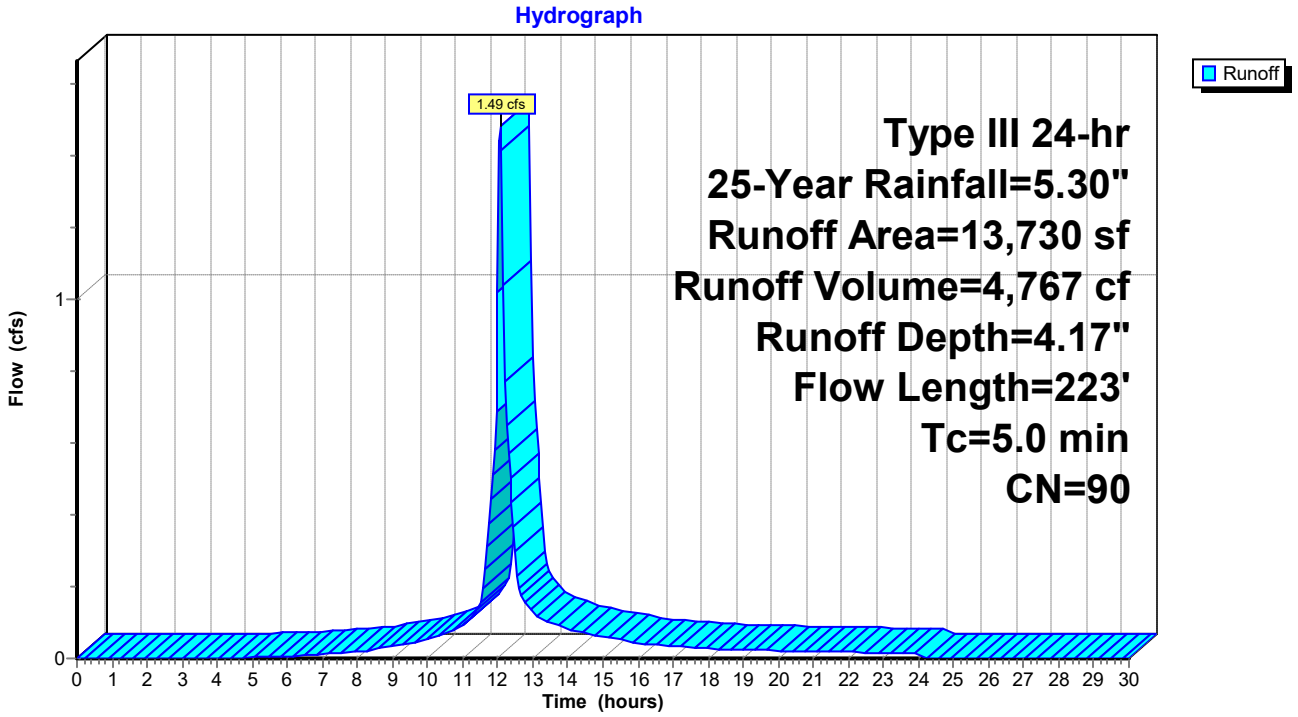
Runoff = 1.49 cfs @ 12.07 hrs, Volume= 4,767 cf, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
2,180	61	>75% Grass cover, Good, HSG B
5,640	98	Paved parking, HSG B
1,094	74	>75% Grass cover, Good, HSG C
2,002	98	Paved parking, HSG C
418	80	>75% Grass cover, Good, HSG D
2,396	98	Paved parking, HSG D
13,730	90	Weighted Average
3,692		26.89% Pervious Area
10,038		73.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.0	173	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.9	223	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB5: TO DCB-S5



Summary for Subcatchment P-SUB6: TO DCB-S6

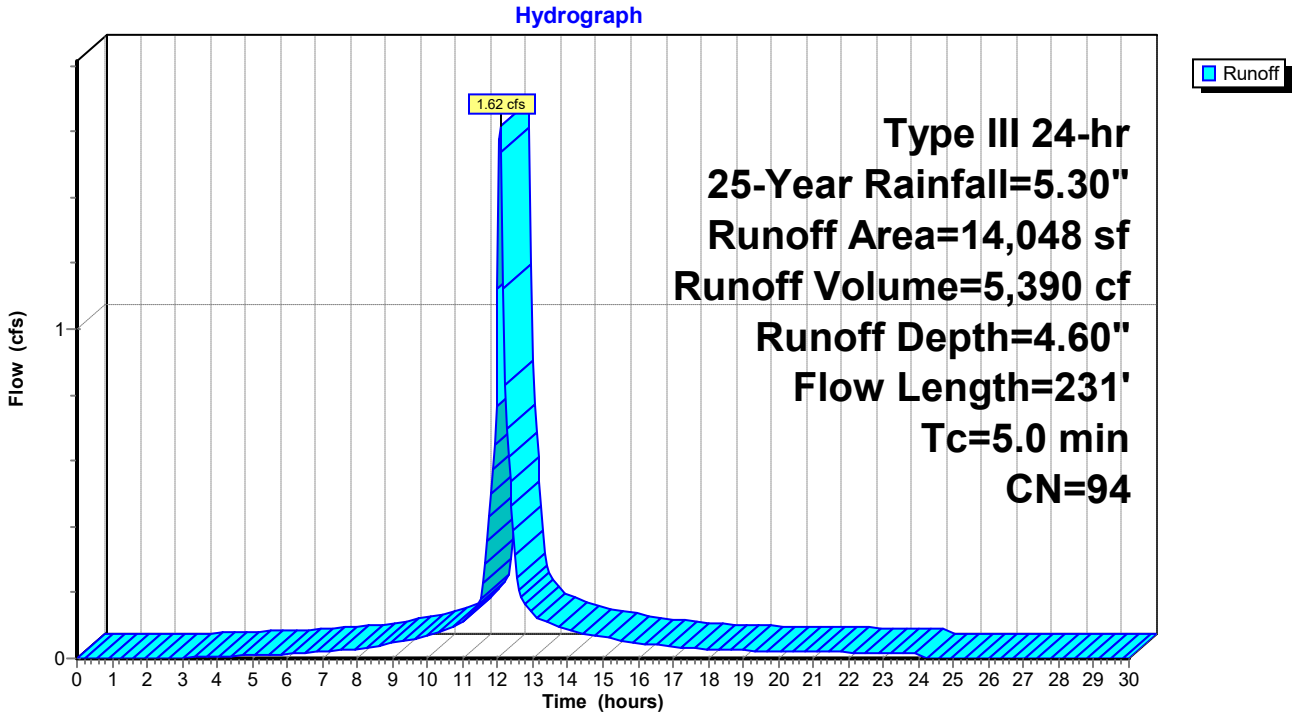
Runoff = 1.62 cfs @ 12.07 hrs, Volume= 5,390 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
1,127	61	>75% Grass cover, Good, HSG B
7,164	98	Paved parking, HSG B
397	74	>75% Grass cover, Good, HSG C
2,299	98	Paved parking, HSG C
318	80	>75% Grass cover, Good, HSG D
2,743	98	Paved parking, HSG D
14,048	94	Weighted Average
1,842		13.11% Pervious Area
12,206		86.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.1	181	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.0	231	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB6: TO DCB-S6



Summary for Subcatchment P-SUB7: TO DCB-S7

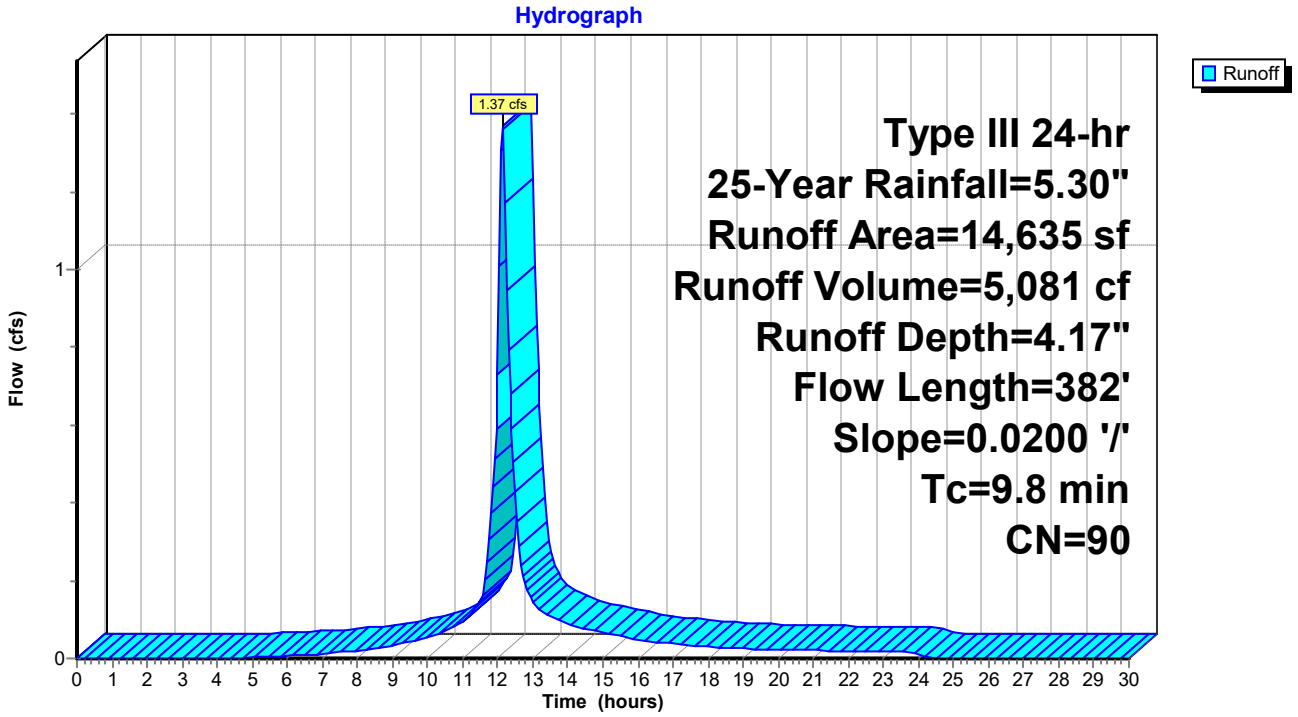
Runoff = 1.37 cfs @ 12.14 hrs, Volume= 5,081 cf, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
2,073	61	>75% Grass cover, Good, HSG B
5,665	96	Gravel surface, HSG B
2,552	98	Paved parking, HSG B
824	74	>75% Grass cover, Good, HSG C
1,846	96	Gravel surface, HSG C
1,675	98	Paved parking, HSG C
14,635	90	Weighted Average
10,408		71.12% Pervious Area
4,227		28.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	75	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	61	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.4	246	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.8	382	Total			

Subcatchment P-SUB7: TO DCB-S7



Summary for Subcatchment P-SUB8: TO DCB-S8

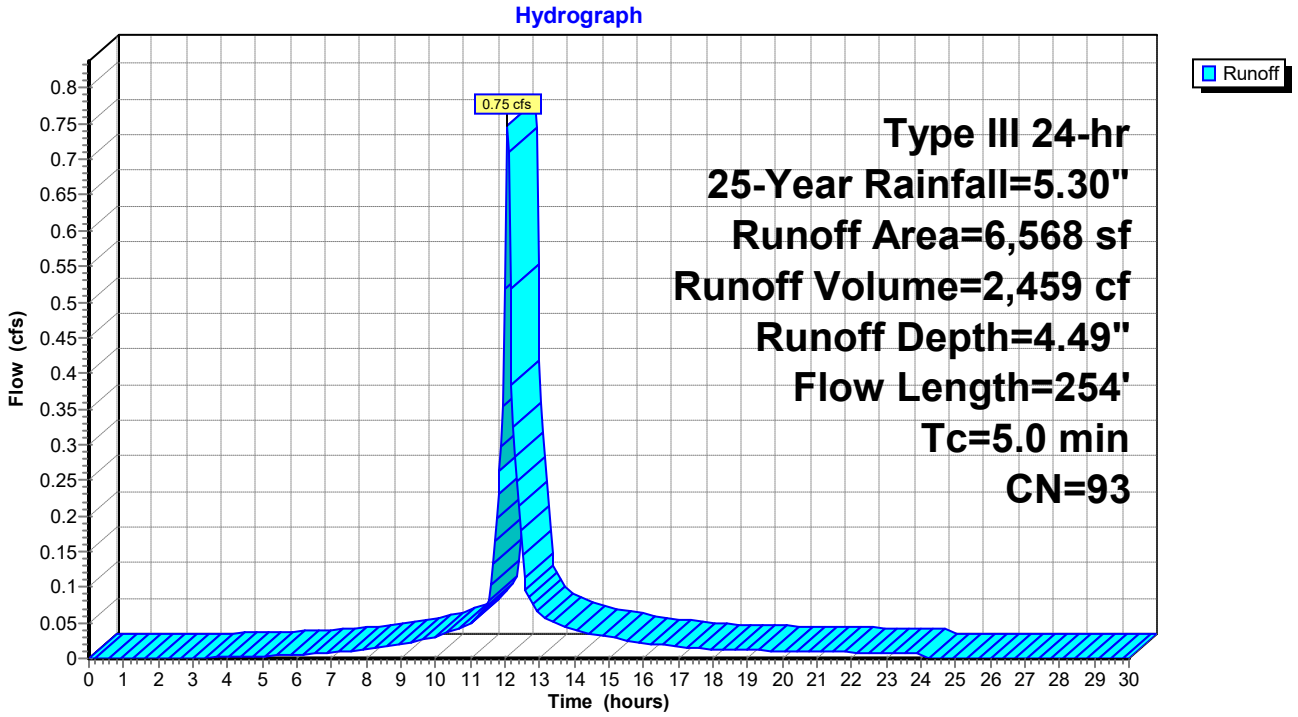
Runoff = 0.75 cfs @ 12.07 hrs, Volume= 2,459 cf, Depth= 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
592	61	>75% Grass cover, Good, HSG B
3,350	98	Paved parking, HSG B
384	74	>75% Grass cover, Good, HSG C
2,242	98	Paved parking, HSG C
6,568	93	Weighted Average
976		14.86% Pervious Area
5,592		85.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	204	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.1	254	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB8: TO DCB-S8



Summary for Subcatchment P-SUB9: TO DCB-S9

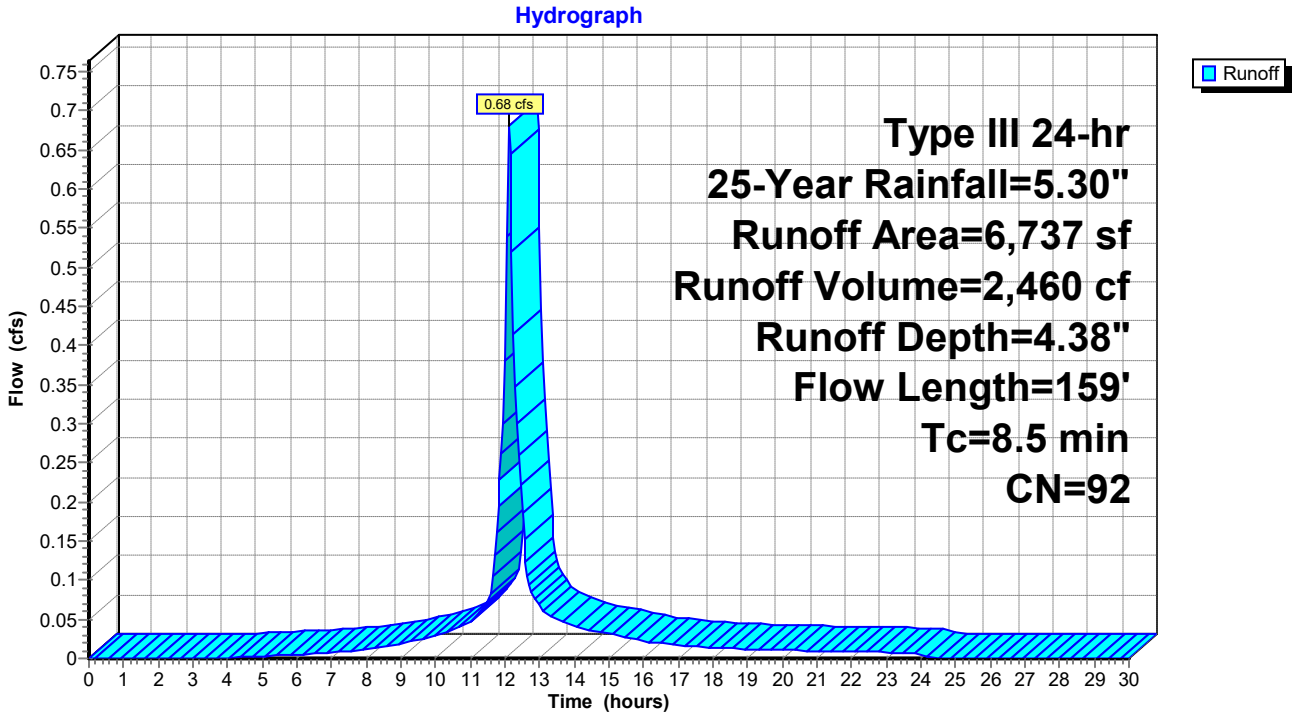
Runoff = 0.68 cfs @ 12.12 hrs, Volume= 2,460 cf, Depth= 4.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
615	61	>75% Grass cover, Good, HSG B
851	96	Gravel surface, HSG B
717	98	Paved parking, HSG B
435	74	>75% Grass cover, Good, HSG C
3,901	96	Gravel surface, HSG C
218	98	Paved parking, HSG C
6,737	92	Weighted Average
5,802		86.12% Pervious Area
935		13.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	75	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	55	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	29	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
8.5	159	Total			

Subcatchment P-SUB9: TO DCB-S9



Summary for Subcatchment P206: TO DMH6B

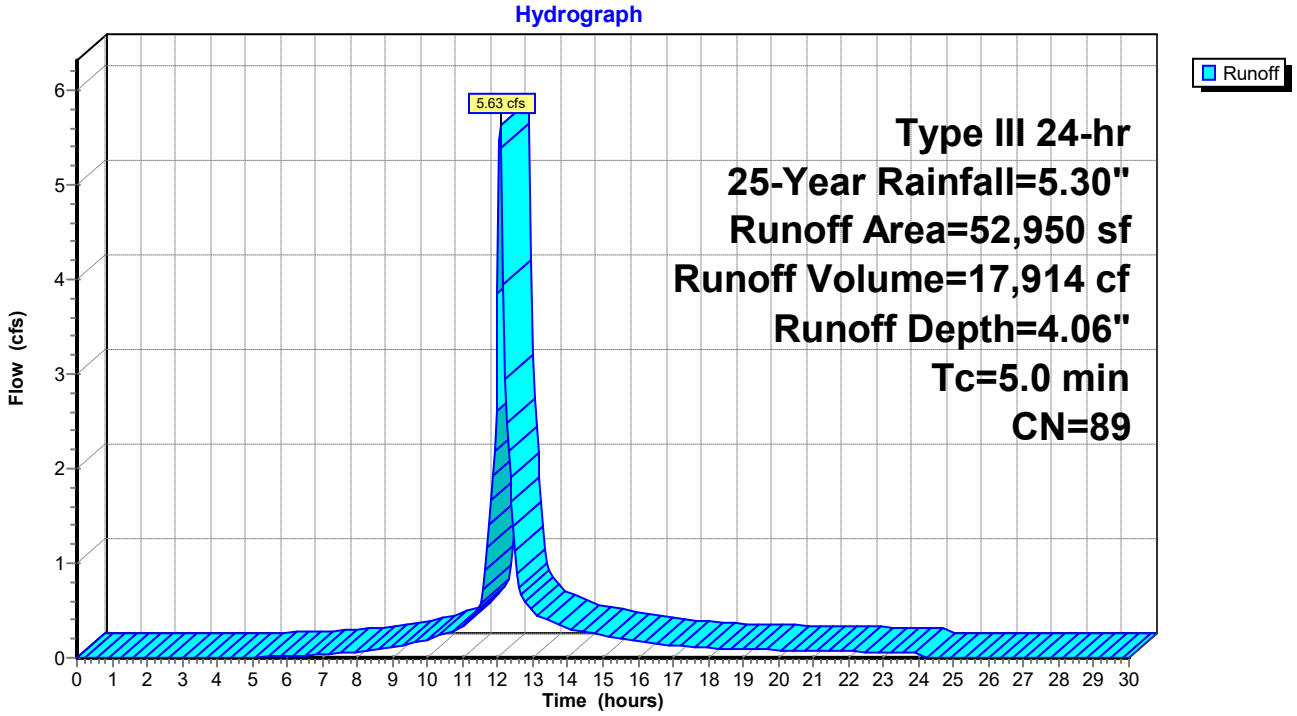
Runoff = 5.63 cfs @ 12.07 hrs, Volume= 17,914 cf, Depth= 4.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
3,483	61	>75% Grass cover, Good, HSG B
40,747	92	Urban commercial, 85% imp, HSG B
3,361	74	>75% Grass cover, Good, HSG C
5,359	94	Urban commercial, 85% imp, HSG C
52,950	89	Weighted Average
13,760		25.99% Pervious Area
39,190		74.01% Impervious Area

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

Subcatchment P206: TO DMH6B



Summary for Subcatchment P207: TO DMH7

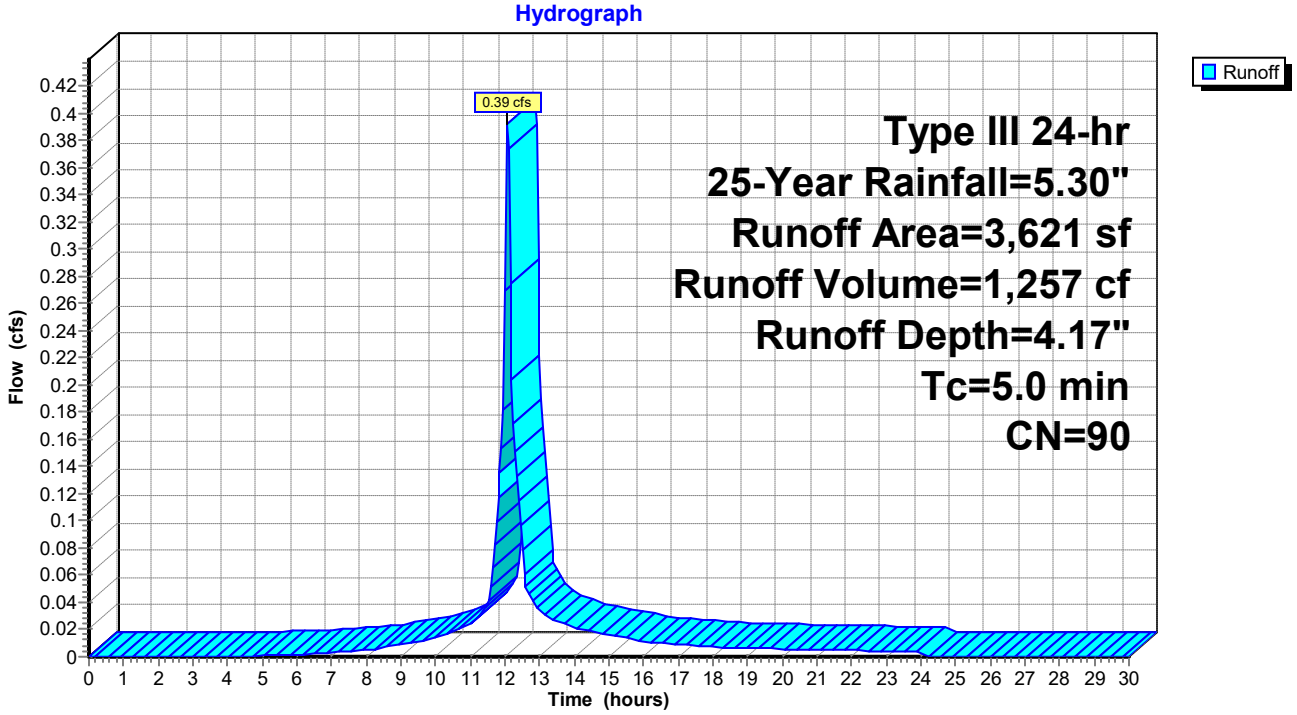
Runoff = 0.39 cfs @ 12.07 hrs, Volume= 1,257 cf, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
825	61	>75% Grass cover, Good, HSG B
2,796	98	Paved parking, HSG B
3,621	90	Weighted Average
825		22.78% Pervious Area
2,796		77.22% Impervious Area

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

Subcatchment P207: TO DMH7



Summary for Subcatchment P210: TO DMH10

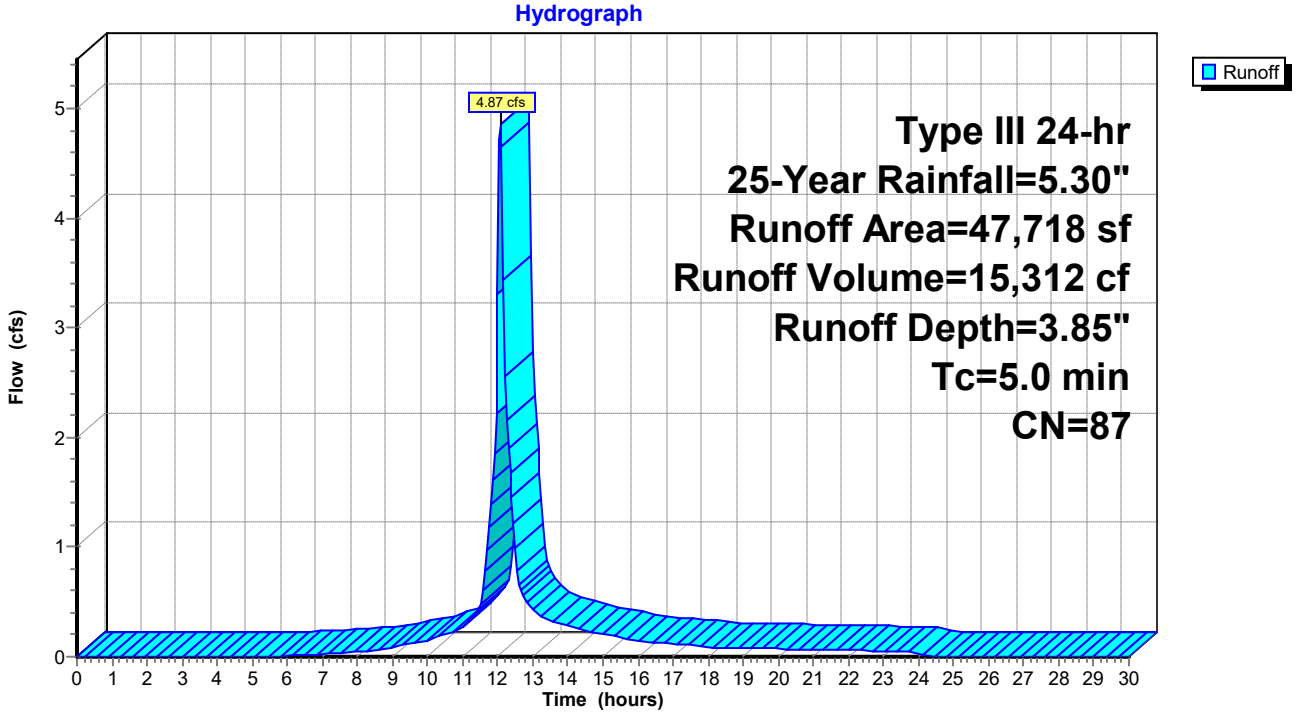
Runoff = 4.87 cfs @ 12.07 hrs, Volume= 15,312 cf, Depth= 3.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
14,798	61	>75% Grass cover, Good, HSG B
32,920	98	Paved parking, HSG B
47,718	87	Weighted Average
14,798		31.01% Pervious Area
32,920		68.99% Impervious Area

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

Subcatchment P210: TO DMH10



Summary for Subcatchment P211: TO DMH11

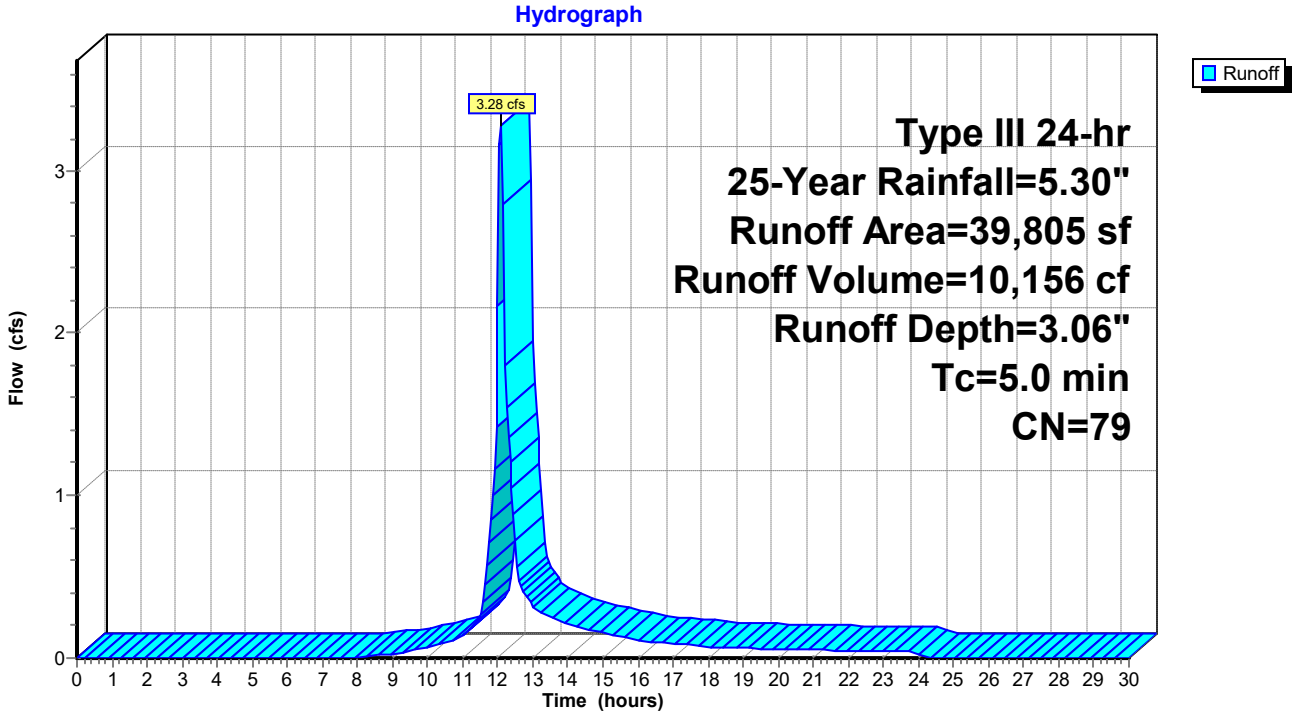
Runoff = 3.28 cfs @ 12.08 hrs, Volume= 10,156 cf, Depth= 3.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
16,145	61	>75% Grass cover, Good, HSG B
5,377	74	>75% Grass cover, Good, HSG C
841	92	Urban commercial, 85% imp, HSG B
2,153	94	Urban commercial, 85% imp, HSG C
15,289	98	Paved parking, HSG B
39,805	79	Weighted Average
21,971		55.20% Pervious Area
17,834		44.80% Impervious Area

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

Subcatchment P211: TO DMH11



Summary for Subcatchment P212: TO DMH12

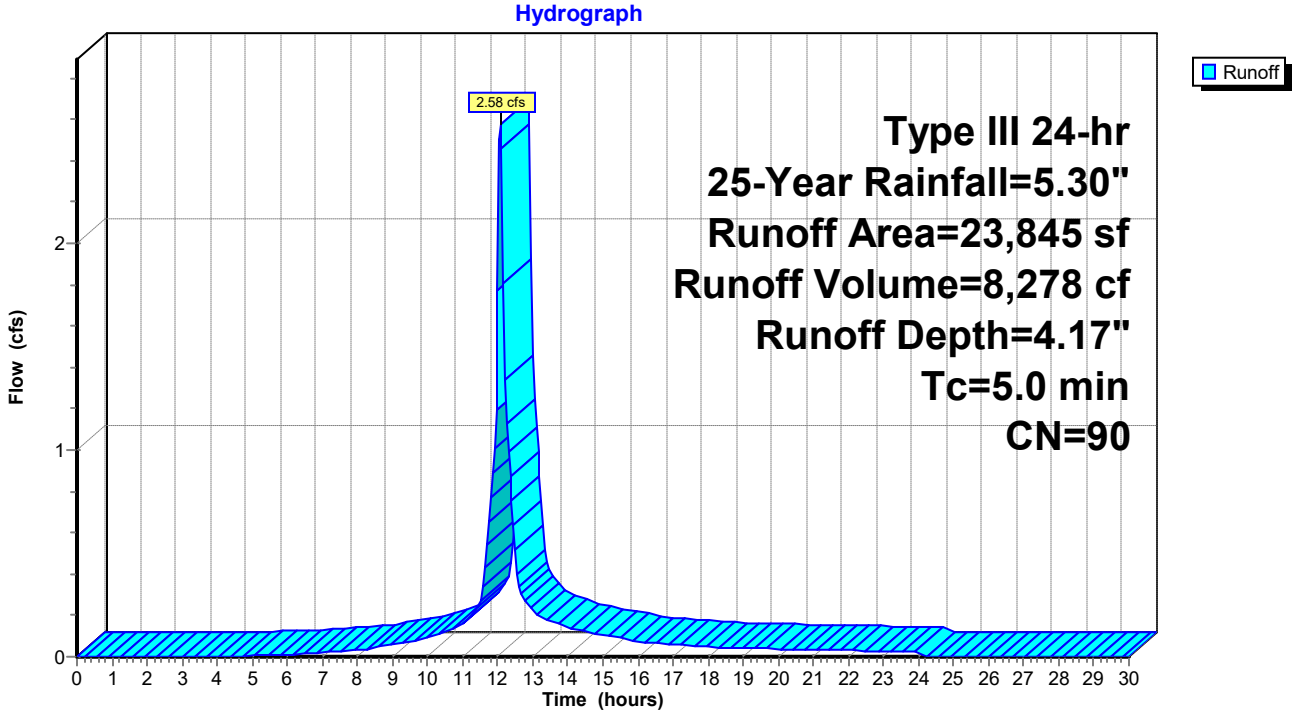
Runoff = 2.58 cfs @ 12.07 hrs, Volume= 8,278 cf, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
5,327	61	>75% Grass cover, Good, HSG B
18,518	98	Paved parking, HSG B
23,845	90	Weighted Average
5,327		22.34% Pervious Area
18,518		77.66% Impervious Area

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

Subcatchment P212: TO DMH12



Summary for Subcatchment P213: TO DMH13

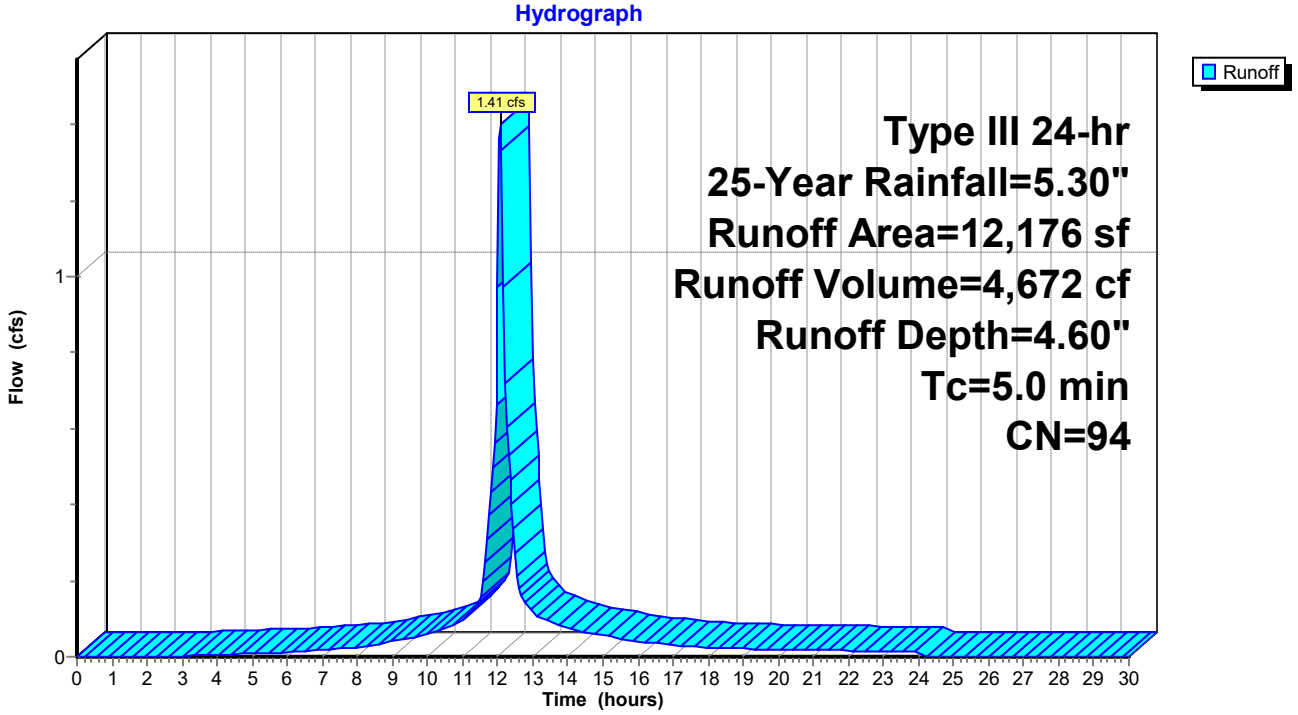
Runoff = 1.41 cfs @ 12.07 hrs, Volume= 4,672 cf, Depth= 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
1,390	61	>75% Grass cover, Good, HSG B
10,786	98	Paved parking, HSG B
12,176	94	Weighted Average
1,390		11.42% Pervious Area
10,786		88.58% Impervious Area

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

Subcatchment P213: TO DMH13



Summary for Subcatchment P222: TO DP#2(2017)

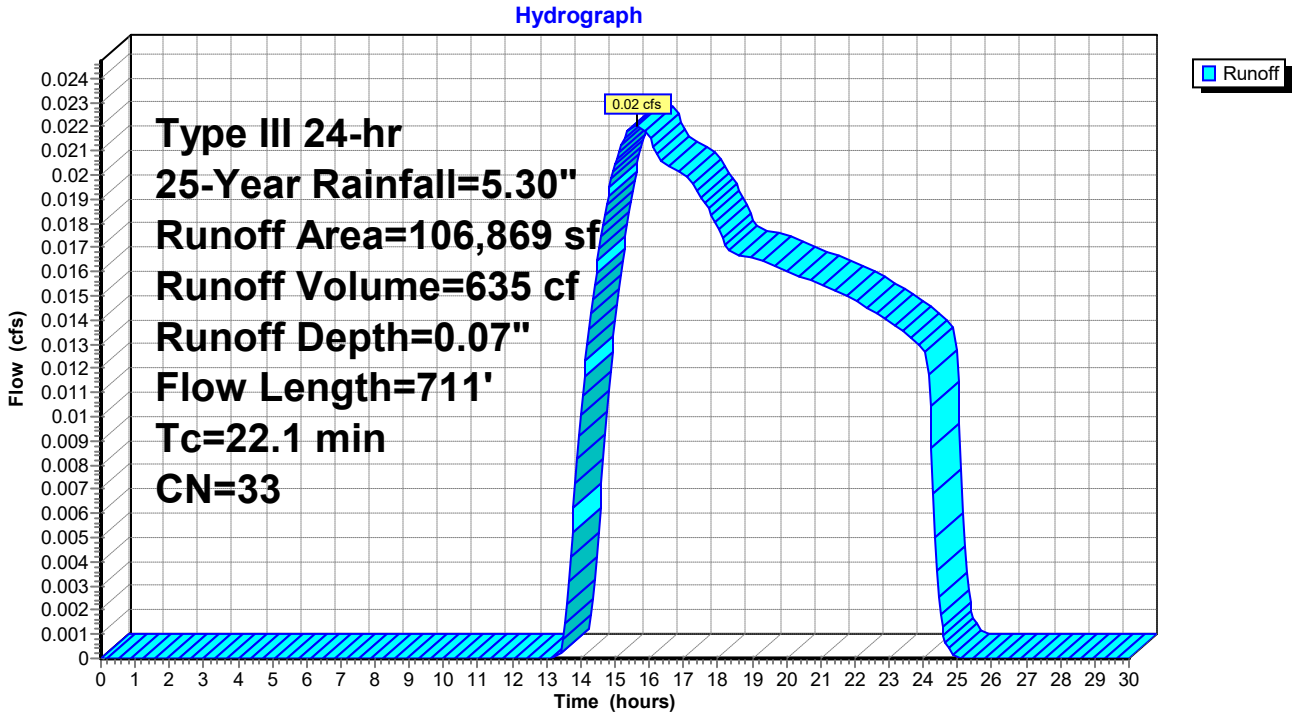
Runoff = 0.02 cfs @ 15.63 hrs, Volume= 635 cf, Depth= 0.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
692	39	>75% Grass cover, Good, HSG A
93,055	30	Woods, Good, HSG A
1,977	61	>75% Grass cover, Good, HSG B
11,145	55	Woods, Good, HSG B
106,869	33	Weighted Average
106,869		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	47	0.0300	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.1	28	0.0300	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.5	85	0.0300	2.79		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
12.1	398	0.0120	0.55		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.7	153	0.0920	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
22.1	711	Total			

Subcatchment P222: TO DP#2(2017)



Summary for Subcatchment P230: TO CB#21(2017)

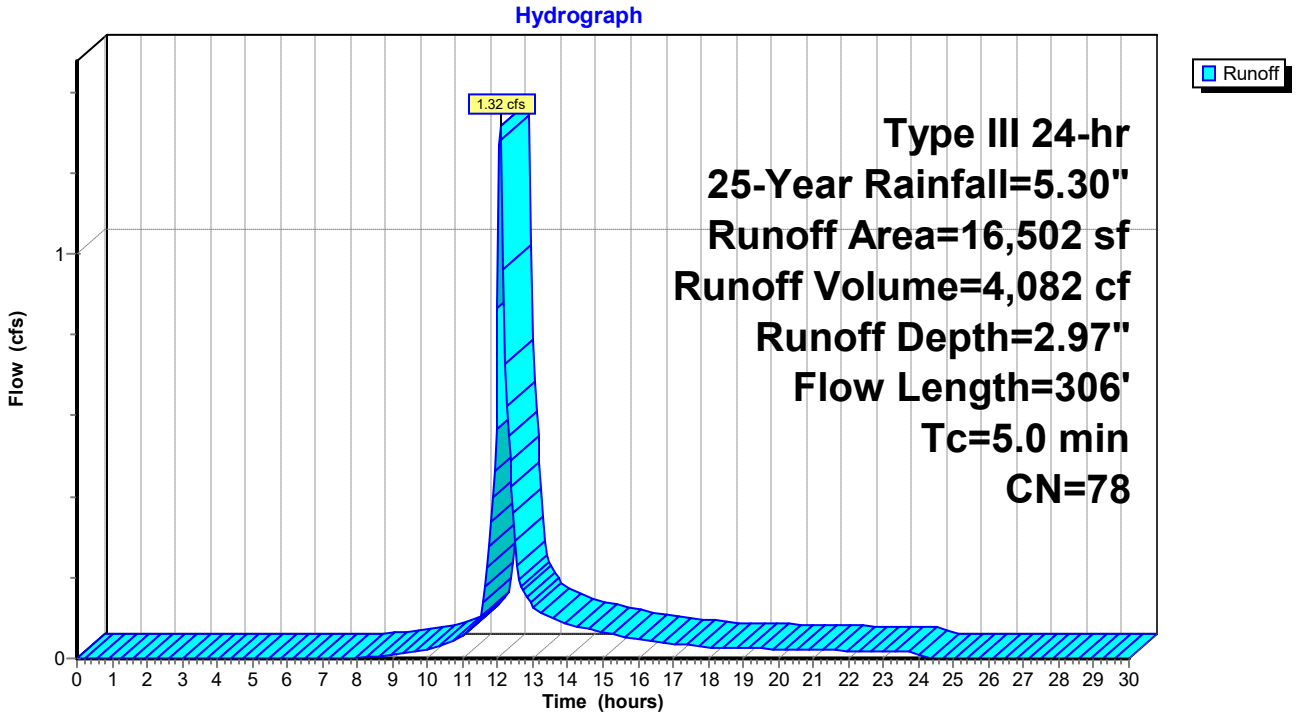
Runoff = 1.32 cfs @ 12.08 hrs, Volume= 4,082 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
8,396	61	>75% Grass cover, Good, HSG B
7,248	98	Paved parking, HSG B
299	39	>75% Grass cover, Good, HSG A
559	98	Paved parking, HSG A
16,502	78	Weighted Average
8,695		52.69% Pervious Area
7,807		47.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	20	0.0500	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	30	0.0270	1.18		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.0	10	0.0270	3.34		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.8	246	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.1	306	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P230: TO CB#21(2017)



Summary for Subcatchment P231: TO YD#1

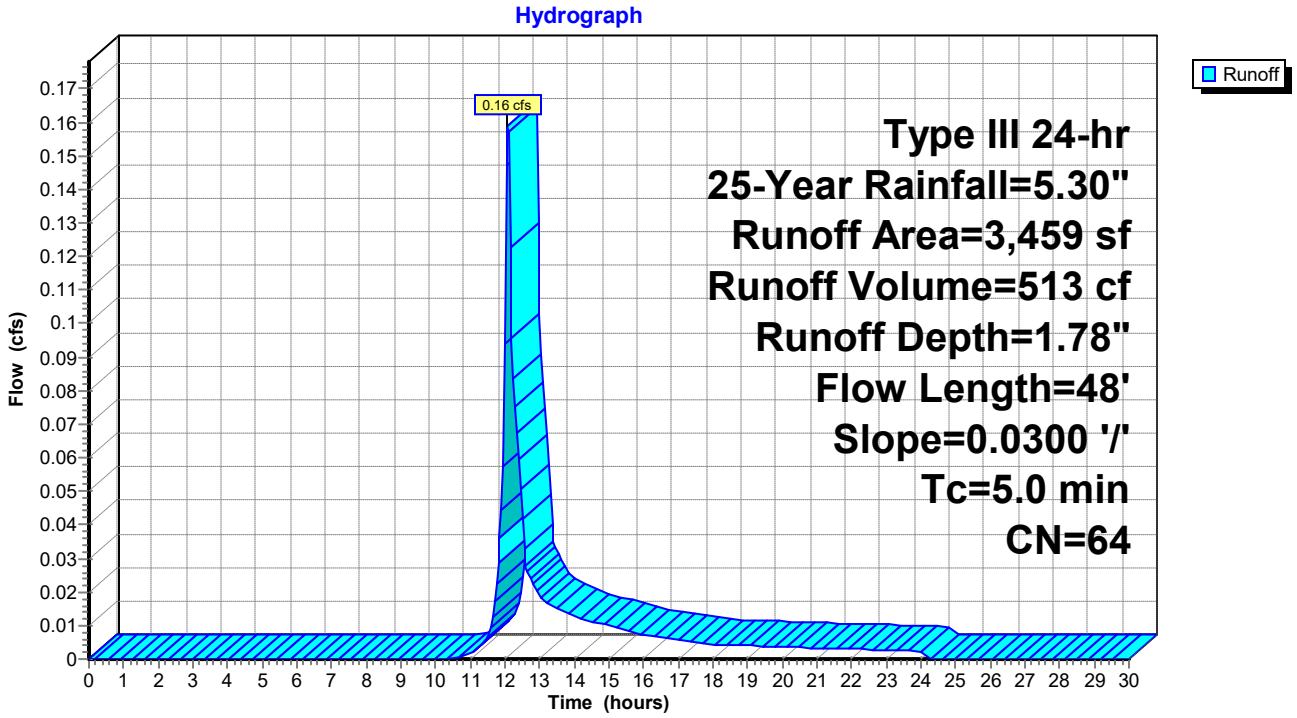
Runoff = 0.16 cfs @ 12.09 hrs, Volume= 513 cf, Depth= 1.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
3,225	61	>75% Grass cover, Good, HSG B
234	98	Paved parking, HSG B
3,459	64	Weighted Average
3,225		93.24% Pervious Area
234		6.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	48	0.0300	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
4.8	48	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P231: TO YD#1



Summary for Subcatchment P232: TO CO#2

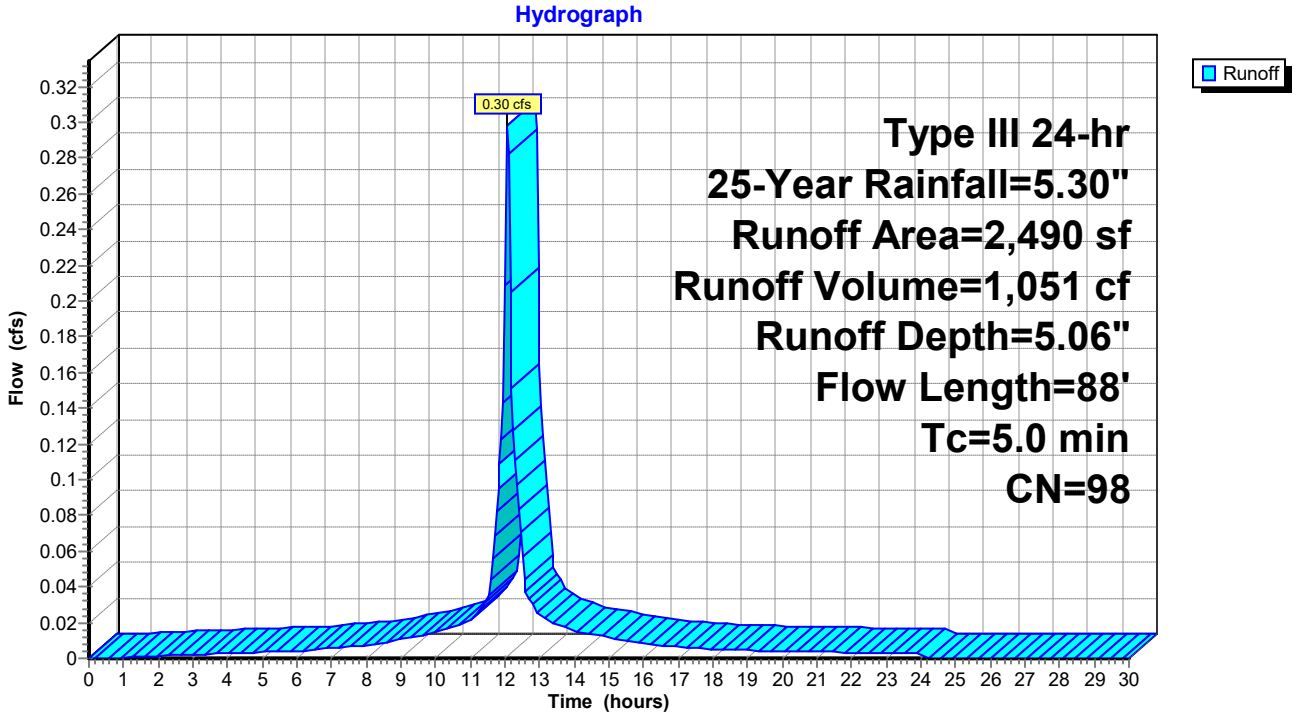
Runoff = 0.30 cfs @ 12.07 hrs, Volume= 1,051 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
2,490	98	Paved parking, HSG B
2,490		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0830	2.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.1	31	0.0800	5.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	7	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.6	88	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P232: TO CO#2



Summary for Subcatchment P233: TO DRIP STRIP

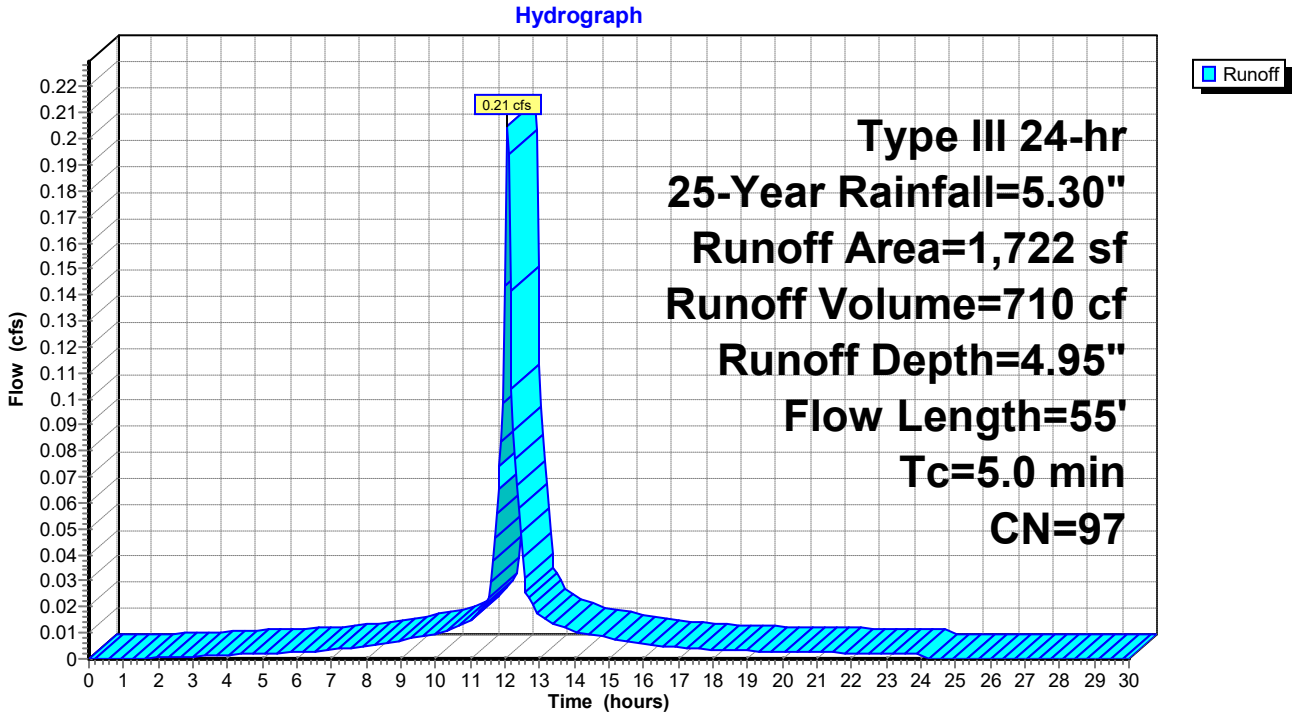
Runoff = 0.21 cfs @ 12.07 hrs, Volume= 710 cf, Depth= 4.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
55	61	>75% Grass cover, Good, HSG B
1,667	98	Paved parking, HSG B
1,722	97	Weighted Average
55		3.19% Pervious Area
1,667		96.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0800	2.02		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.0	5	0.0830	5.85		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	55	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P233: TO DRIP STRIP



Summary for Subcatchment P234: TO YD#2

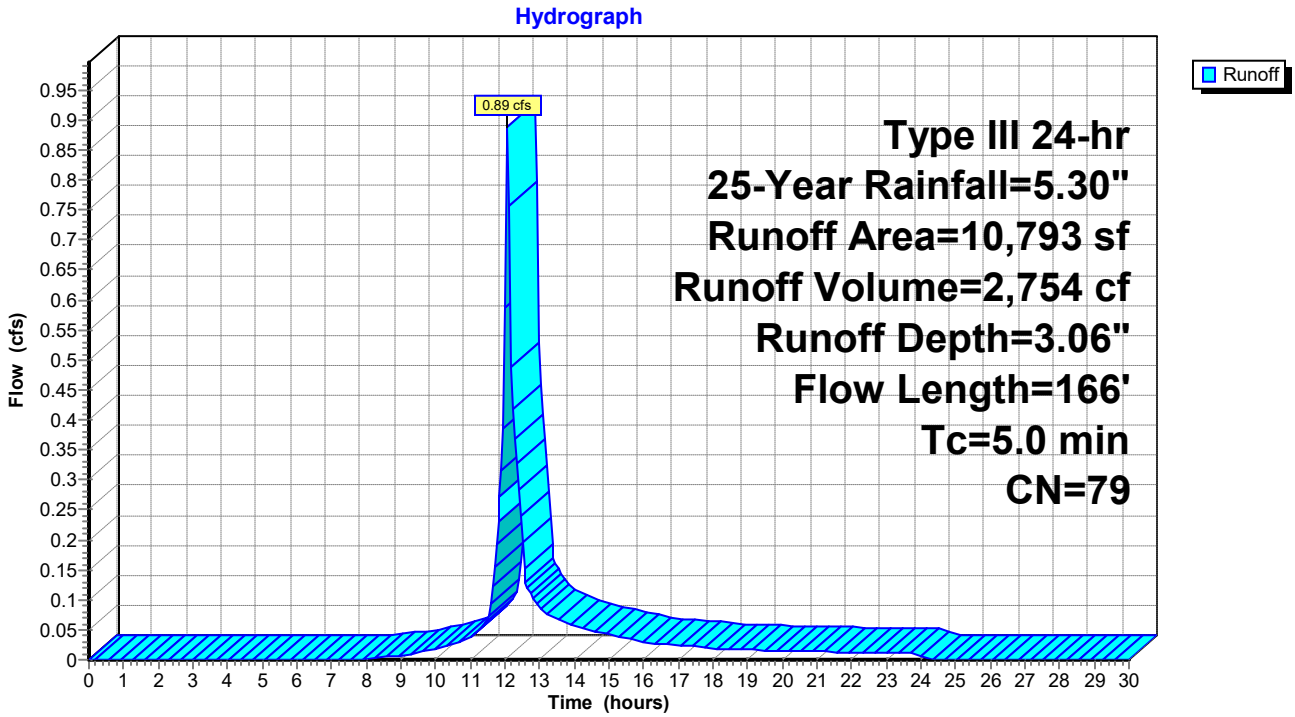
Runoff = 0.89 cfs @ 12.08 hrs, Volume= 2,754 cf, Depth= 3.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
5,448	61	>75% Grass cover, Good, HSG B
5,345	98	Paved parking, HSG B
10,793	79	Weighted Average
5,448		50.48% Pervious Area
5,345		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	28	0.0700	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.7	22	0.0040	0.52		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.3	98	0.0040	1.28		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.2	18	0.0110	1.69		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.4	166	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P234: TO YD#2



Summary for Subcatchment P235: TO CO#3

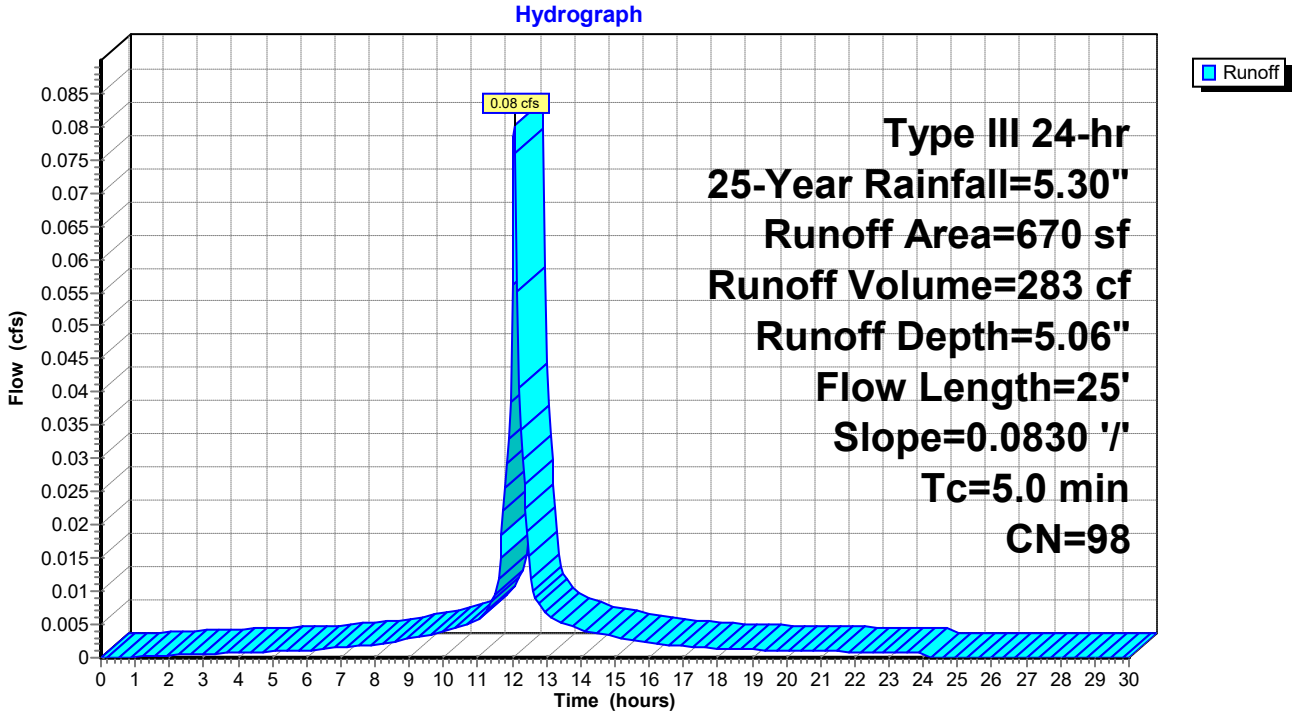
Runoff = 0.08 cfs @ 12.07 hrs, Volume= 283 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
670	98	Paved parking, HSG B
670		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	25	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P235: TO CO#3



Summary for Subcatchment P251: OVERLAND TO SETTLING POND

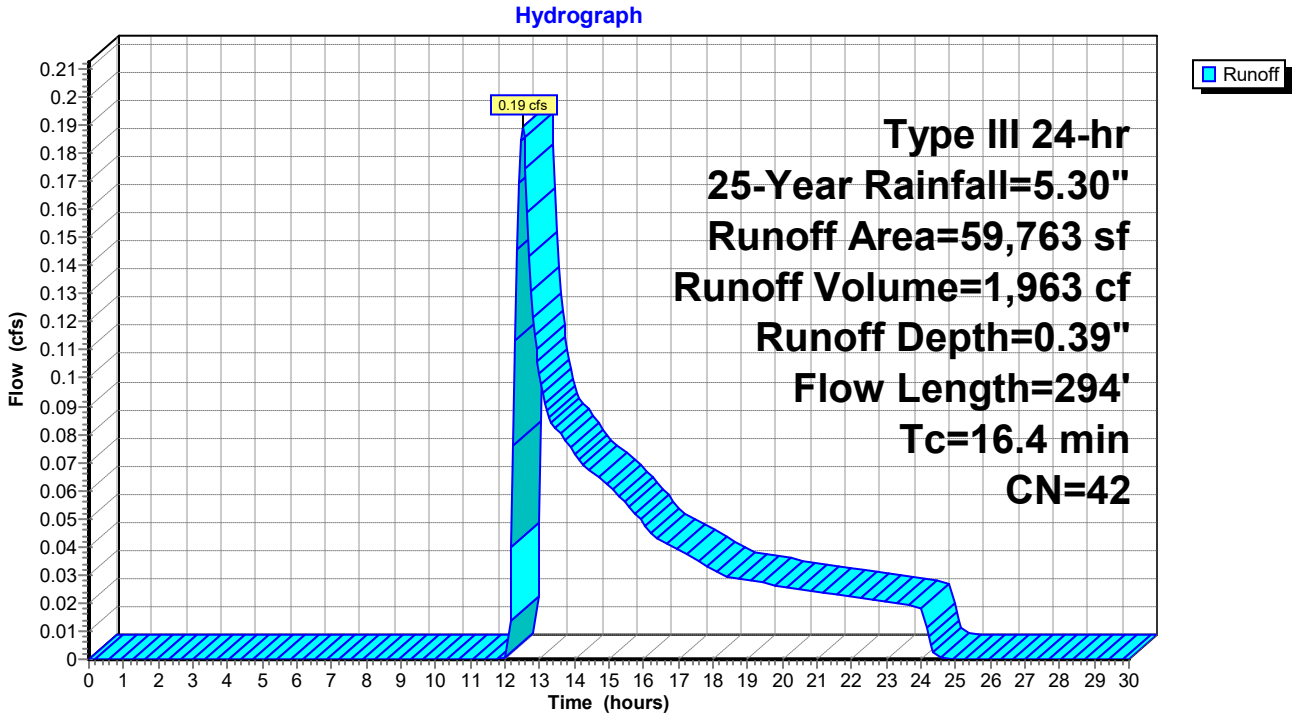
Runoff = 0.19 cfs @ 12.50 hrs, Volume= 1,963 cf, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
53,277	39	>75% Grass cover, Good, HSG A
3,396	30	Woods, Good, HSG A
3,090	98	Paved parking, HSG A
59,763	42	Weighted Average
56,673		94.83% Pervious Area
3,090		5.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.4	99	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	13	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	107	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
16.4	294	Total			

Subcatchment P251: OVERLAND TO SETTLING POND



Summary for Subcatchment P252: OVERLAND TO DB#1

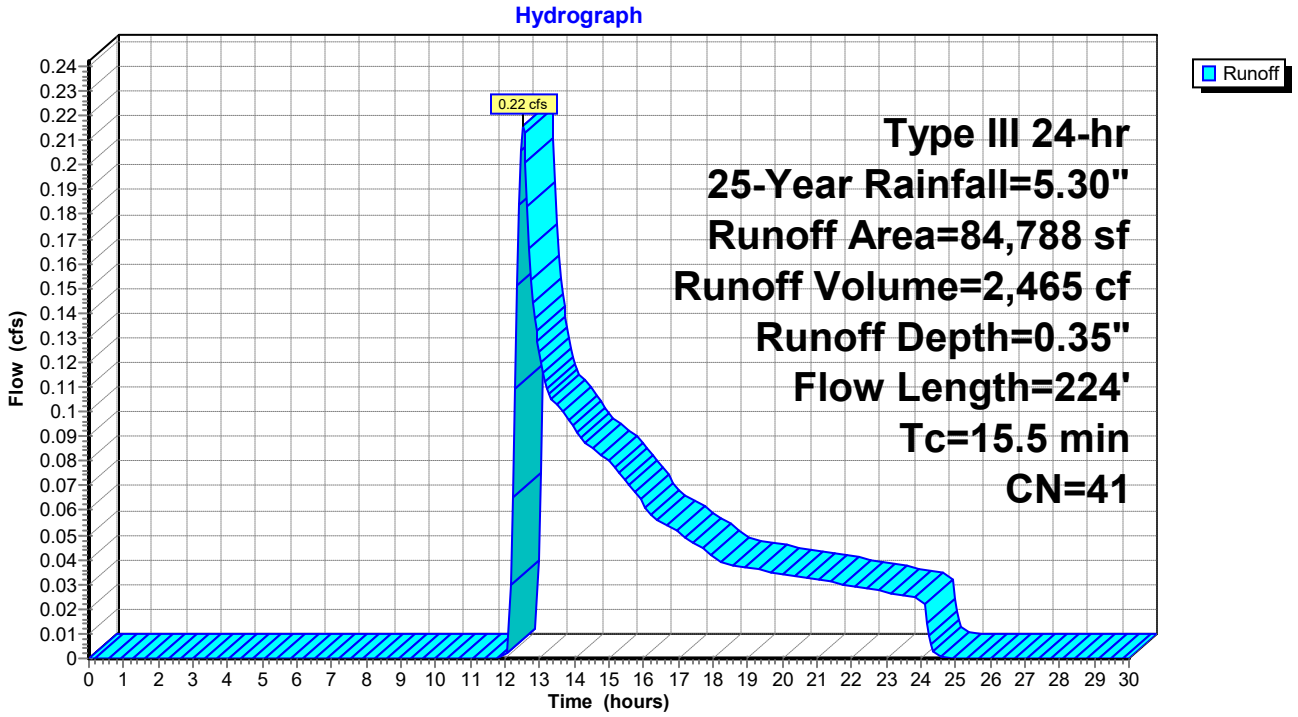
Runoff = 0.22 cfs @ 12.51 hrs, Volume= 2,465 cf, Depth= 0.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
77,531	39	>75% Grass cover, Good, HSG A
2,014	30	Woods, Good, HSG A
2,822	98	Paved parking, HSG A
2,421	55	Woods, Good, HSG B
84,788	41	Weighted Average
81,966		96.67% Pervious Area
2,822		3.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.2	79	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	13	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	57	0.3300	9.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
15.5	224	Total			

Subcatchment P252: OVERLAND TO DB#1



Summary for Subcatchment P253: OVERLAND TO DCB

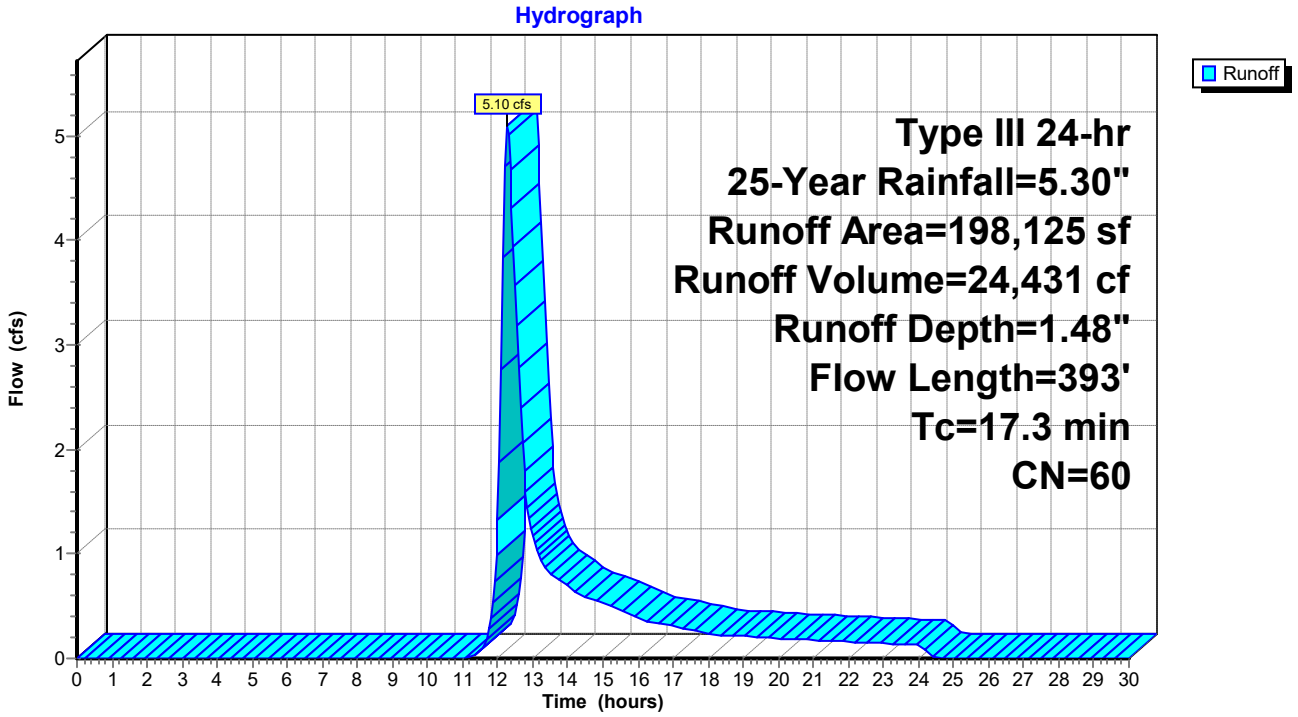
Runoff = 5.10 cfs @ 12.27 hrs, Volume= 24,431 cf, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
85,790	39	>75% Grass cover, Good, HSG A
28,252	98	Paved parking, HSG A
65,778	61	>75% Grass cover, Good, HSG B
18,305	98	Paved parking, HSG B
198,125	60	Weighted Average
151,568		76.50% Pervious Area
46,557		23.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.8	125	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	15	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.6	60	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	118	0.0180	2.72		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
17.3	393	Total			

Subcatchment P253: OVERLAND TO DCB



Summary for Subcatchment p3: TO DCB#5

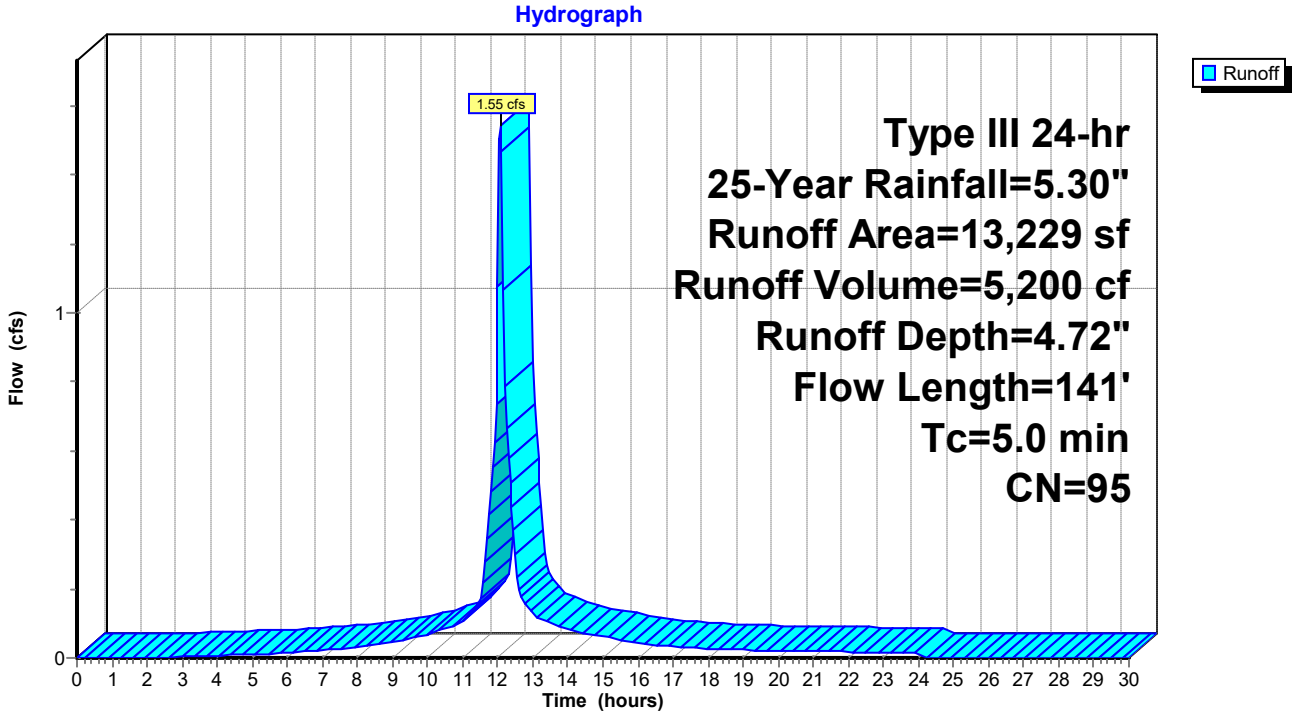
Runoff = 1.55 cfs @ 12.07 hrs, Volume= 5,200 cf, Depth= 4.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
694	39	>75% Grass cover, Good, HSG A
12,535	98	Paved parking, HSG A
13,229	95	Weighted Average
694		5.25% Pervious Area
12,535		94.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	25	0.0100	0.76		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	91	0.0160	2.57		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	141	Total, Increased to minimum Tc = 5.0 min			

Subcatchment p3: TO DCB#5



Summary for Subcatchment P300: TO DP#3(2020)

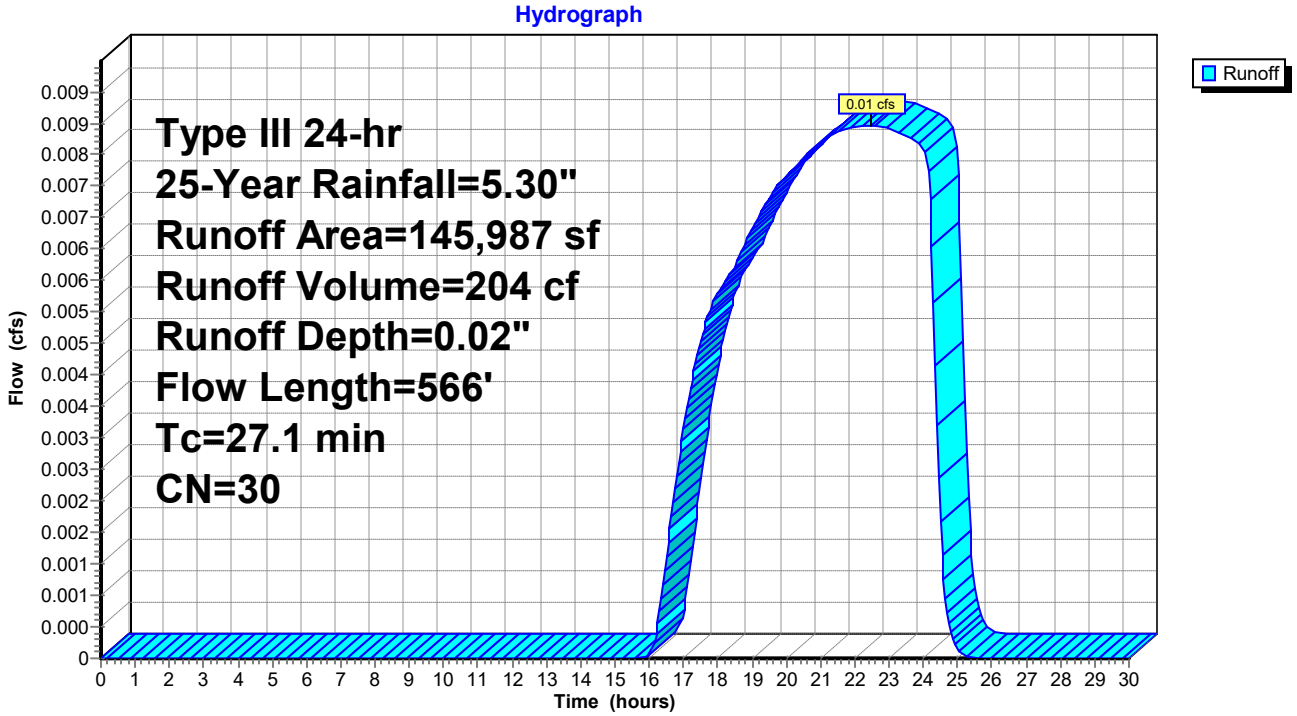
Runoff = 0.01 cfs @ 22.46 hrs, Volume= 204 cf, Depth= 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
145,987	30	Woods, Good, HSG A
145,987		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	75	0.0450	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
1.1	71	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.3	420	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
27.1	566	Total			

Subcatchment P300: TO DP#3(2020)



Summary for Subcatchment P4: TO DCB#2

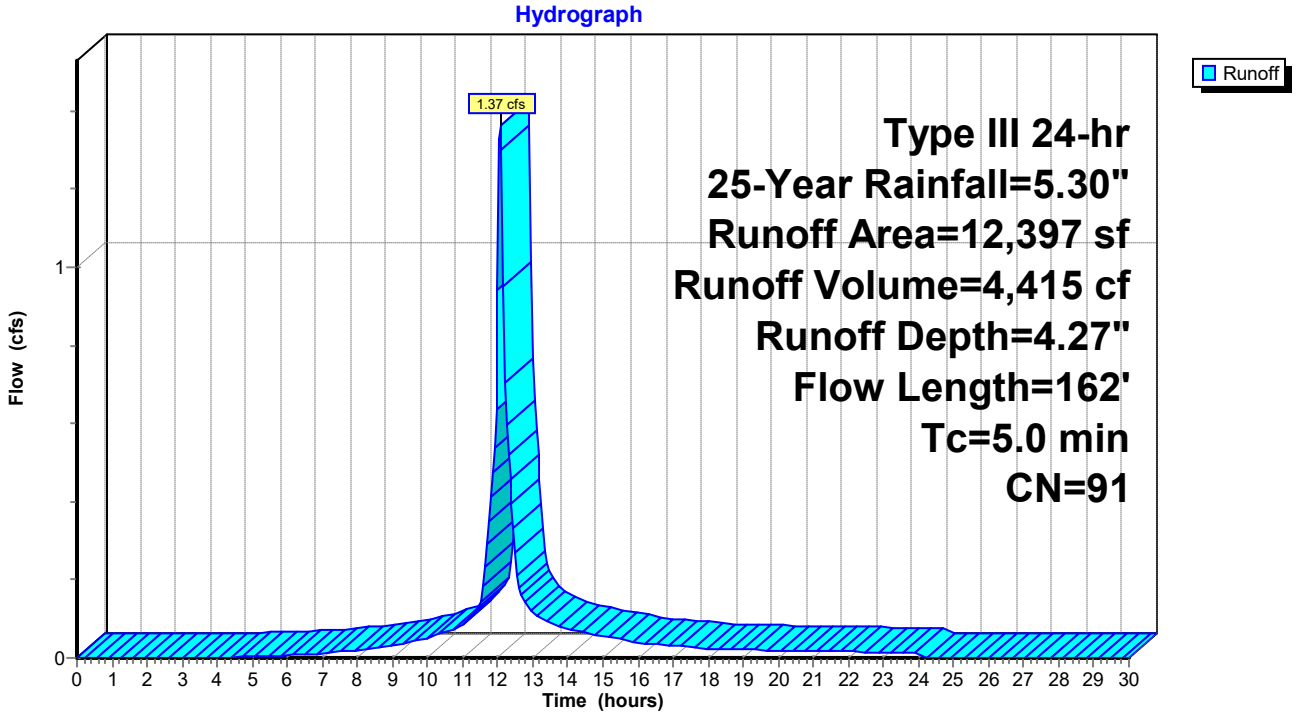
Runoff = 1.37 cfs @ 12.07 hrs, Volume= 4,415 cf, Depth= 4.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
1,459	39	>75% Grass cover, Good, HSG A
10,938	98	Paved parking, HSG A
12,397	91	Weighted Average
1,459		11.77% Pervious Area
10,938		88.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	25	0.0100	0.76		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	112	0.0160	2.57		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	162	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P4: TO DCB#2



Summary for Subcatchment P400: TO DP#4(2020)

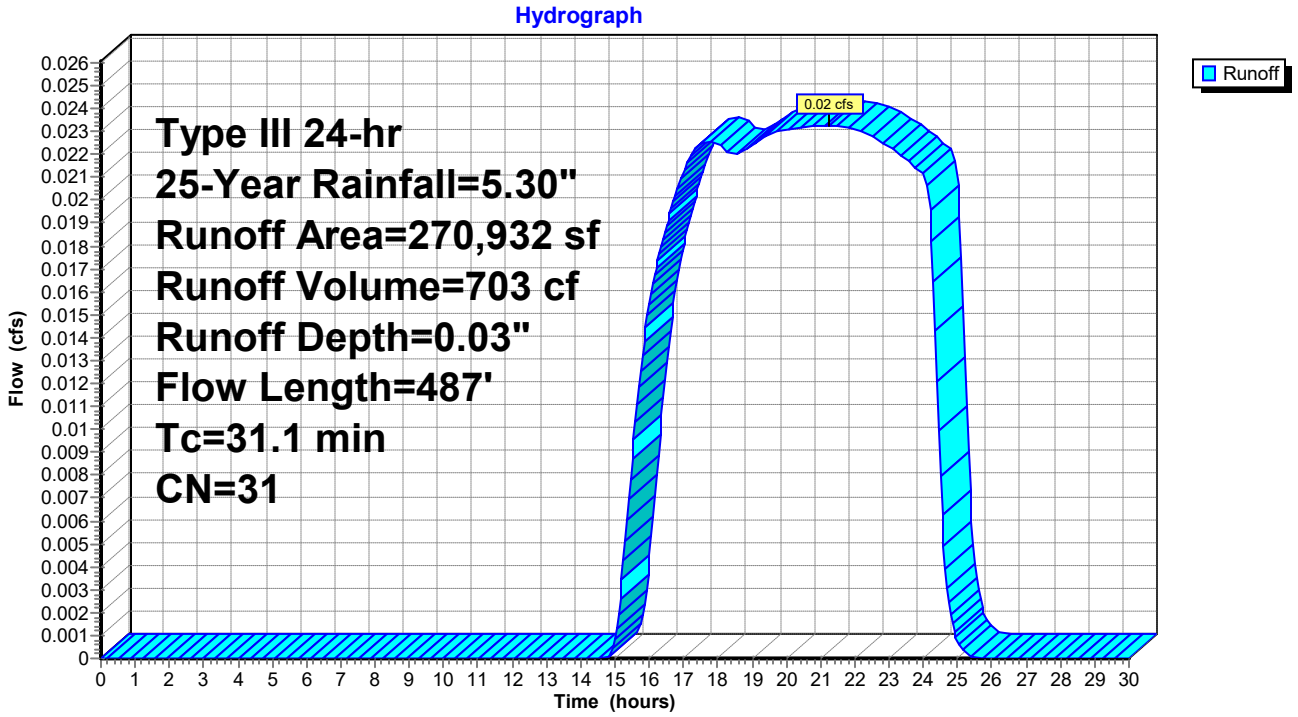
Runoff = 0.02 cfs @ 21.24 hrs, Volume= 703 cf, Depth= 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
13,230	39	>75% Grass cover, Good, HSG A
256,109	30	Woods, Good, HSG A
1,593	98	Paved parking, HSG A
270,932	31	Weighted Average
269,339		99.41% Pervious Area
1,593		0.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	75	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
5.8	275	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	56	0.1780	1.05		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.1	22	0.4500	3.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	59	0.1200	0.87		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
31.1	487	Total			

Subcatchment P400: TO DP#4(2020)



Summary for Subcatchment P5: TO DCB#6

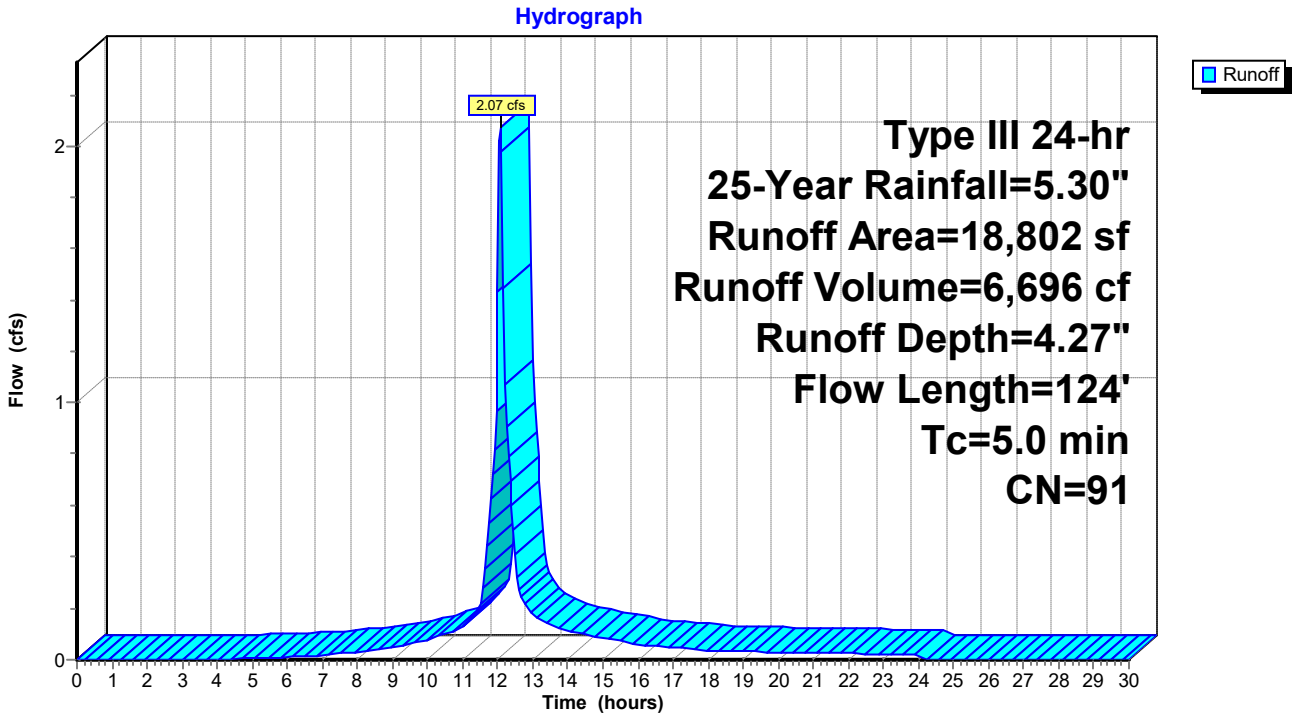
Runoff = 2.07 cfs @ 12.07 hrs, Volume= 6,696 cf, Depth= 4.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
2,343	39	>75% Grass cover, Good, HSG A
16,459	98	Paved parking, HSG A
18,802	91	Weighted Average
2,343		12.46% Pervious Area
16,459		87.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	11	0.0100	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	14	0.0300	1.06		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	74	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	124	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P5: TO DCB#6



Summary for Subcatchment P6: TO DCB#3

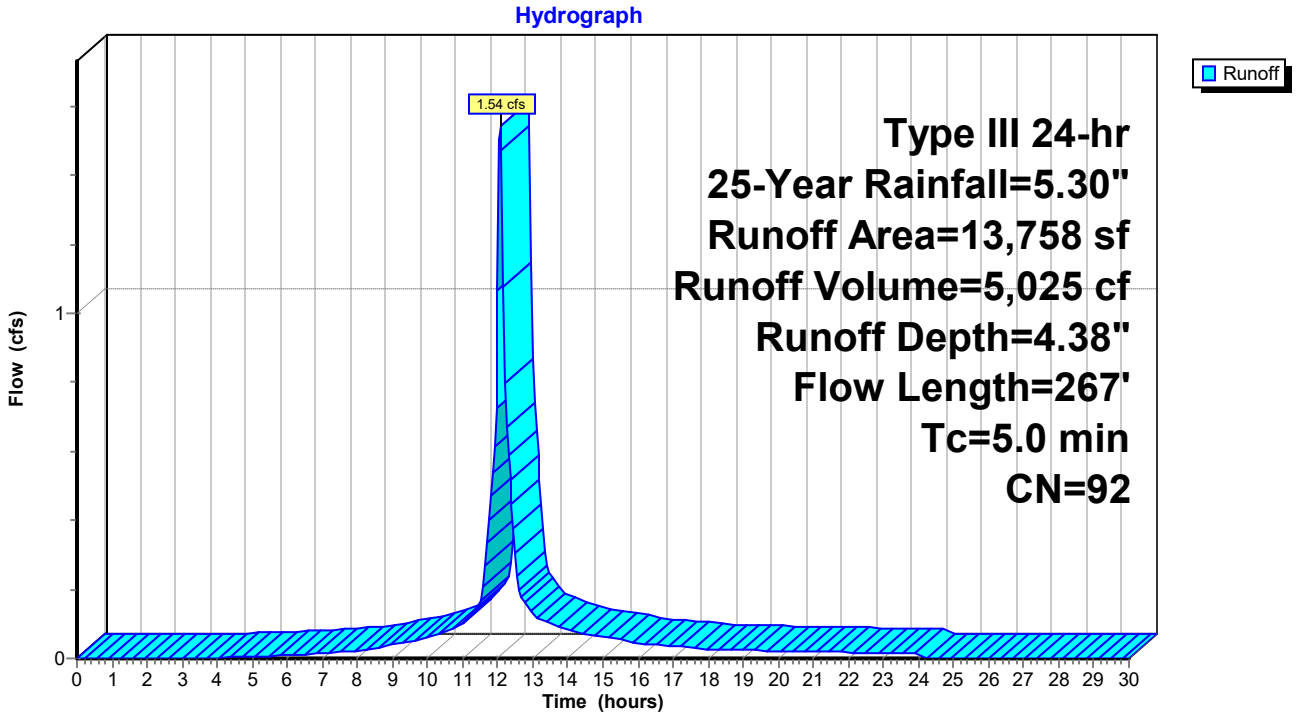
Runoff = 1.54 cfs @ 12.07 hrs, Volume= 5,025 cf, Depth= 4.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
1,369	39	>75% Grass cover, Good, HSG A
12,389	98	Paved parking, HSG A
13,758	92	Weighted Average
1,369		9.95% Pervious Area
12,389		90.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	5	0.0100	0.07		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.3	10	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	5	0.0100	0.07		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.5	30	0.0200	1.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	217	0.0240	3.14		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.4	267	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P6: TO DCB#3



Summary for Subcatchment PS101: TO TEMP SETTLING BASIN

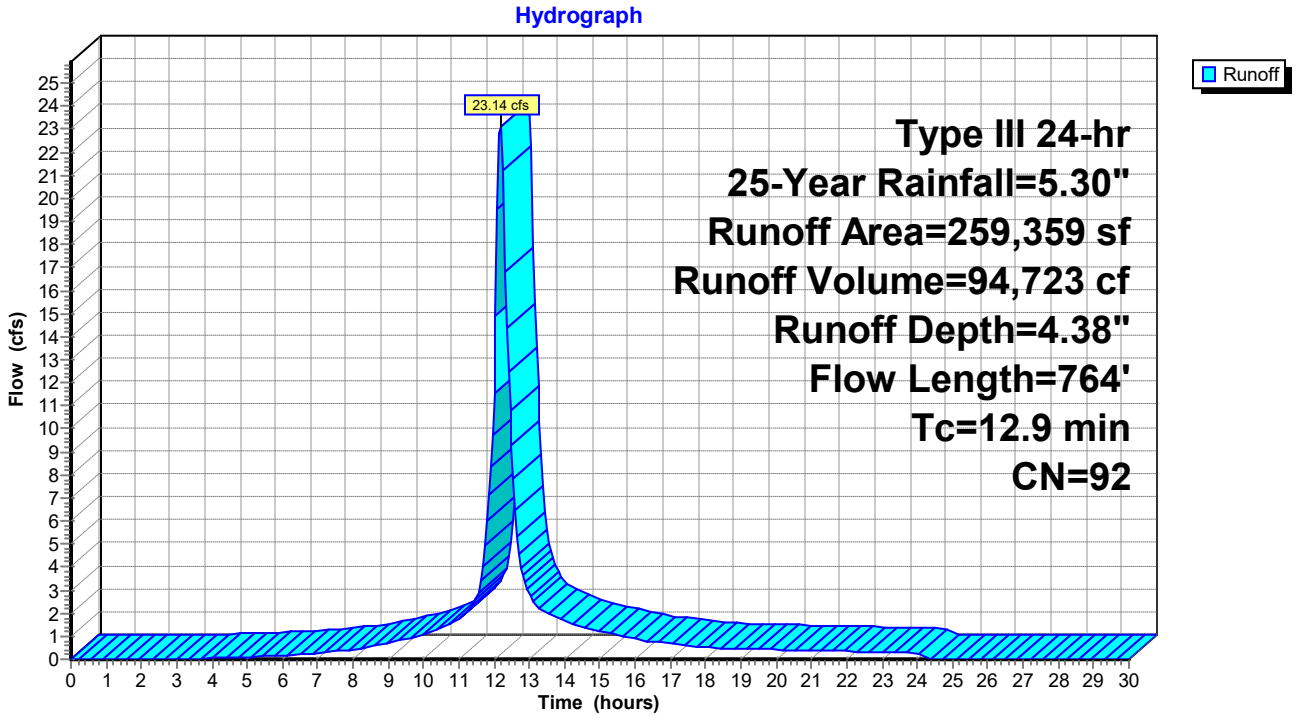
Runoff = 23.14 cfs @ 12.17 hrs, Volume= 94,723 cf, Depth= 4.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
604	30	Woods, Good, HSG A
218,879	96	Gravel surface, HSG A
7,125	30	Brush, Good, HSG A
20,834	80	>75% Grass cover, Good, HSG D
5,941	96	Gravel surface, HSG D
5,976	73	Brush, Good, HSG D
259,359	92	Weighted Average
259,359		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	75	0.0670	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.2	187	0.0270	2.65		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	502	0.0060	1.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
12.9	764	Total			

Subcatchment PS101: TO TEMP SETTLING BASIN



Summary for Subcatchment PS102: TO CULVERT

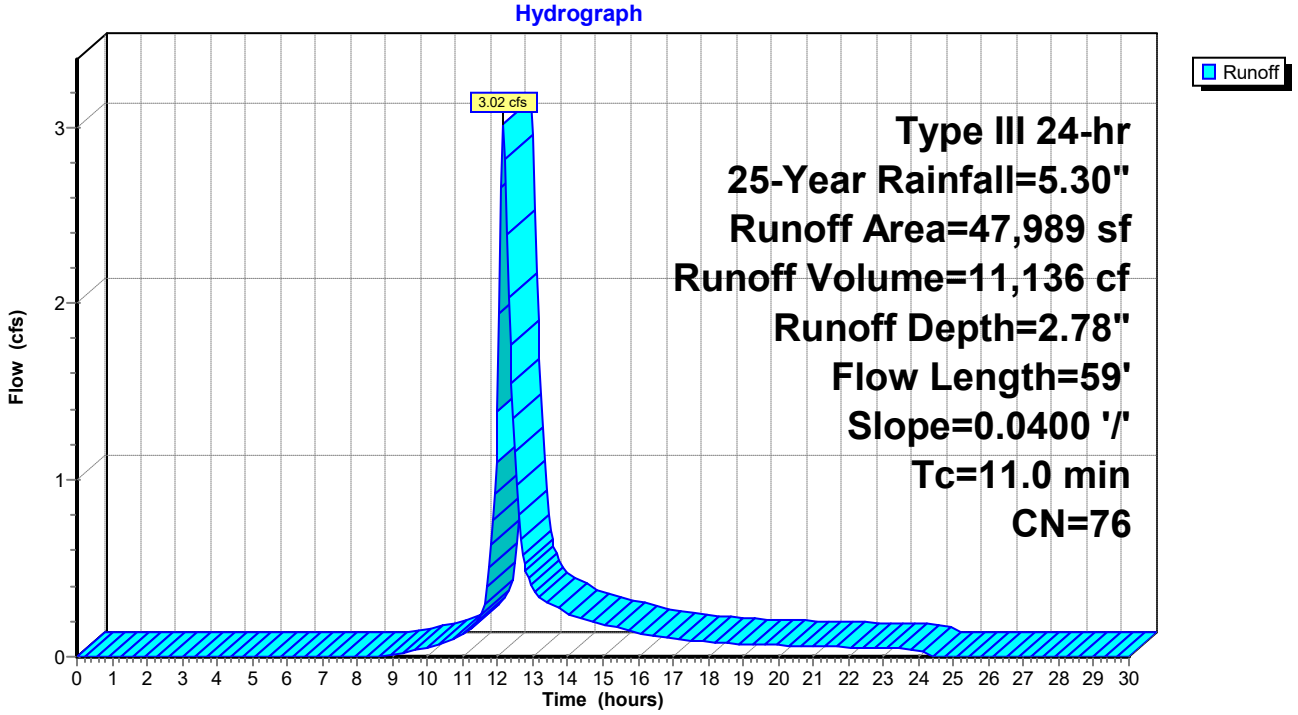
Runoff = 3.02 cfs @ 12.16 hrs, Volume= 11,136 cf, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
10,627	73	Brush, Good, HSG D
37,362	77	Woods, Good, HSG D
47,989	76	Weighted Average
47,989		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	59	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"

Subcatchment PS102: TO CULVERT



Summary for Subcatchment PS103: TO DP#1

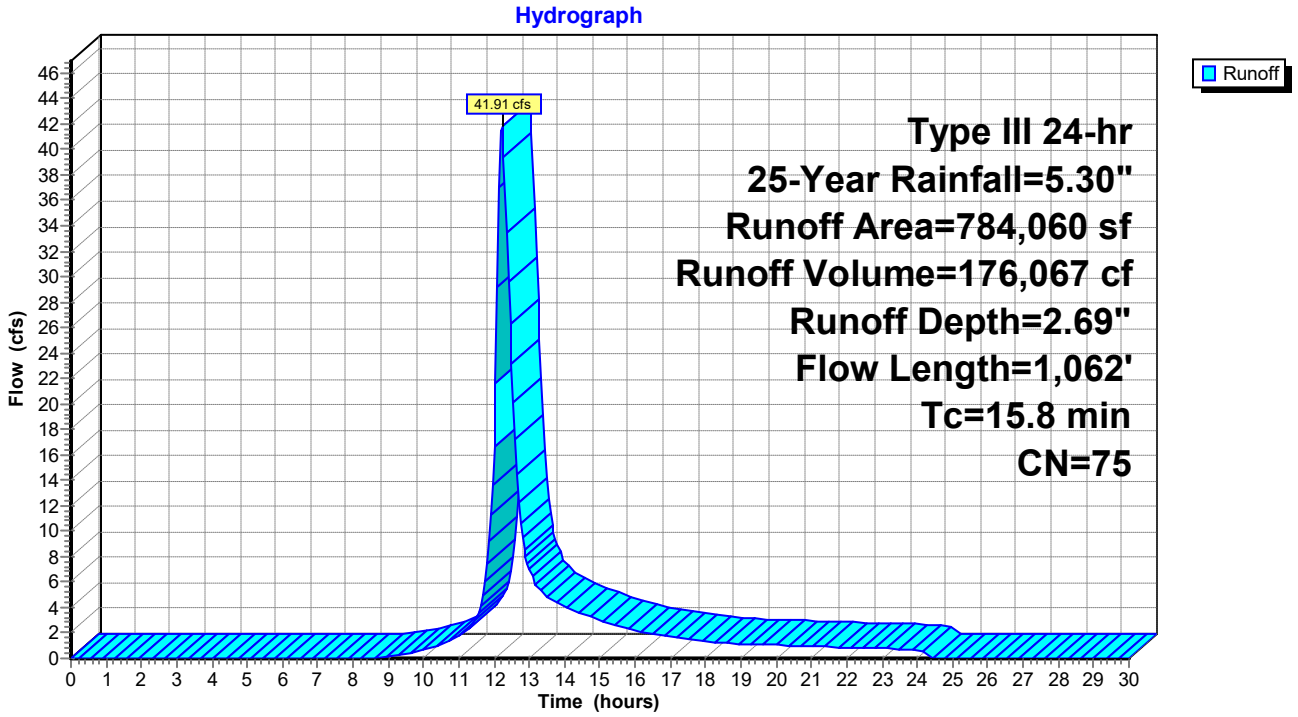
Runoff = 41.91 cfs @ 12.22 hrs, Volume= 176,067 cf, Depth= 2.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
51,017	39	>75% Grass cover, Good, HSG A
22,386	30	Brush, Good, HSG A
21,462	30	Woods, Good, HSG A
81,382	96	Gravel surface, HSG A
36,128	98	Paved parking, HSG A
49,340	61	>75% Grass cover, Good, HSG B
43,824	48	Brush, Good, HSG B
137,472	55	Woods, Good, HSG B
74,794	96	Gravel surface, HSG B
98,633	98	Paved parking, HSG B
686	80	>75% Grass cover, Good, HSG D
41,115	73	Brush, Good, HSG D
43,771	77	Woods, Good, HSG D
80,239	96	Gravel surface, HSG D
1,811	98	Paved parking, HSG D
784,060	75	Weighted Average
647,488		82.58% Pervious Area
136,572		17.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
12.3	841	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	15	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.7	156	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.8	1,062	Total			

Subcatchment PS103: TO DP#1



Summary for Subcatchment PS104: TO DP#1B

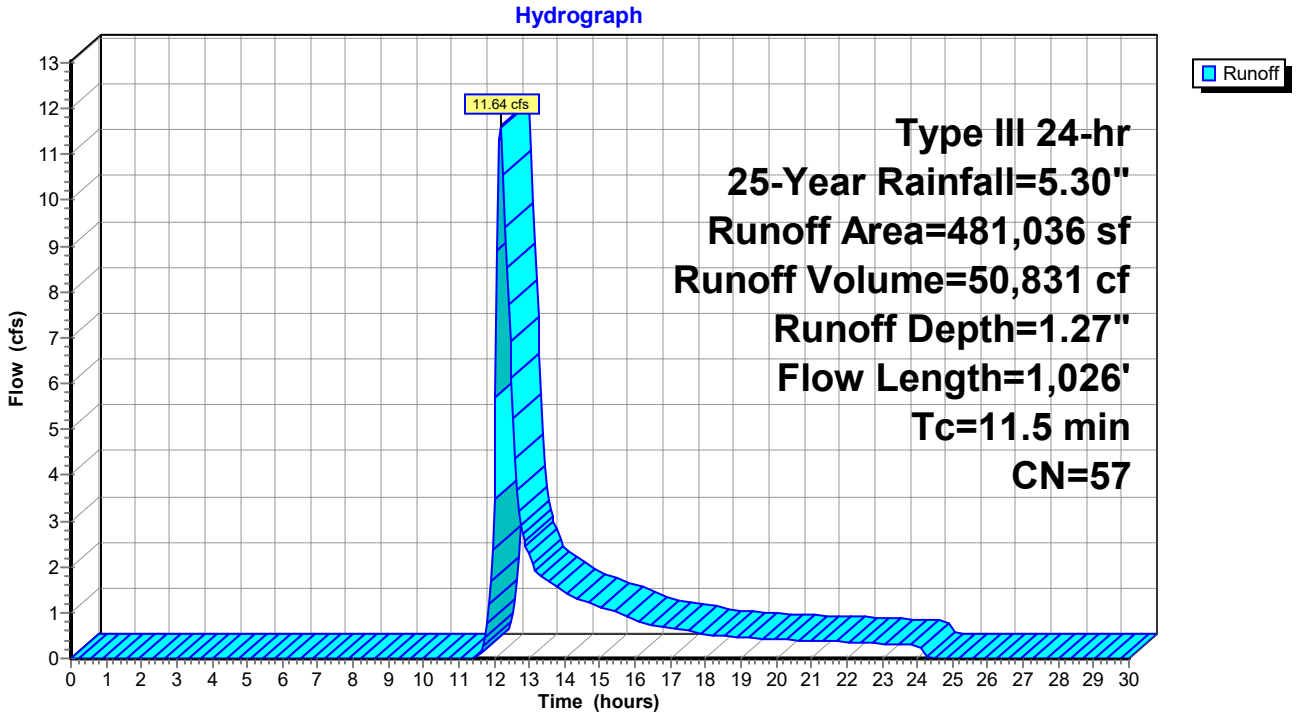
Runoff = 11.64 cfs @ 12.19 hrs, Volume= 50,831 cf, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
146,483	39	>75% Grass cover, Good, HSG A
9,644	70	Woods, Good, HSG C
9,532	98	Paved parking, HSG A
195,535	61	>75% Grass cover, Good, HSG B
3,382	48	Brush, Good, HSG B
53,509	55	Woods, Good, HSG B
234	96	Gravel surface, HSG B
6,372	98	Paved parking, HSG B
14,879	73	Brush, Good, HSG D
40,619	77	Woods, Good, HSG D
847	96	Gravel surface, HSG D
481,036	57	Weighted Average
465,132		96.69% Pervious Area
15,904		3.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	75	0.0500	1.81		**Sheet Flow, gravel** Smooth surfaces n= 0.011 P2= 3.00"
0.1	25	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.1	304	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	84	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.3	25	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.0	93	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
11.5	1,026	Total			

Subcatchment PS104: TO DP#1B



Summary for Subcatchment PS105: TO CULVERT

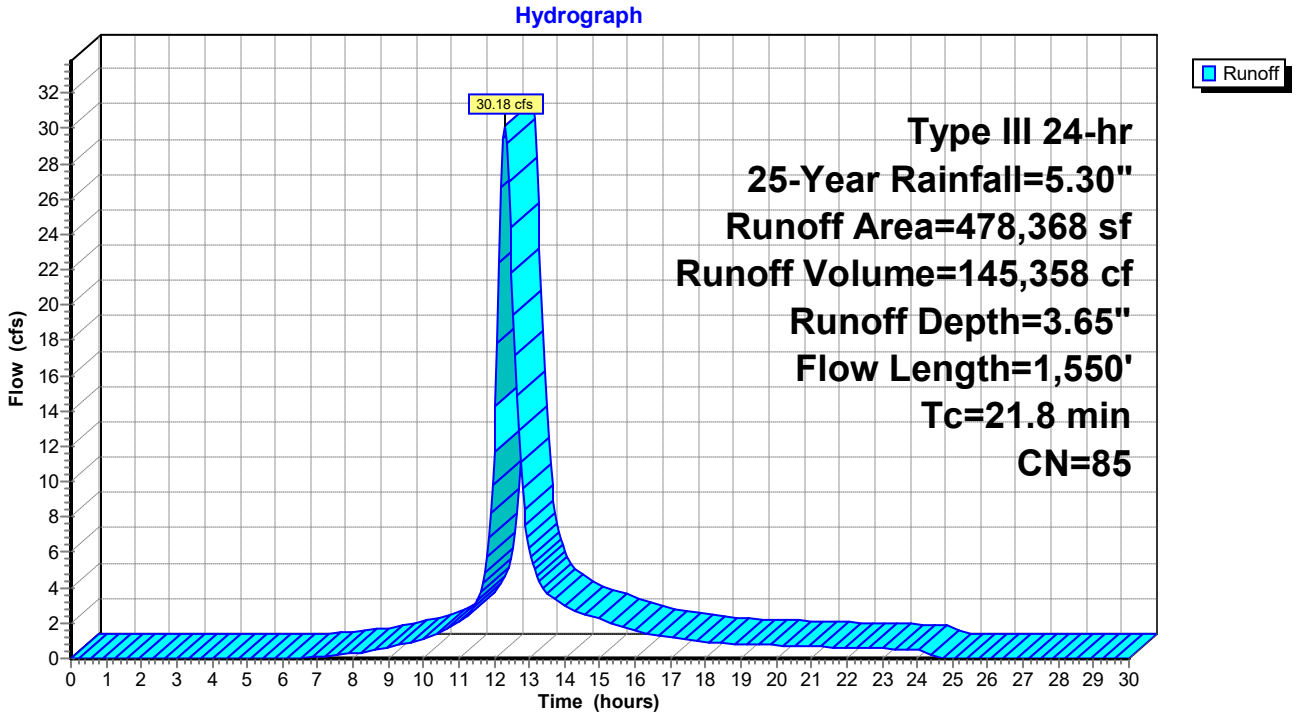
Runoff = 30.18 cfs @ 12.30 hrs, Volume= 145,358 cf, Depth= 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
46,071	96	Gravel surface, HSG B
704	74	>75% Grass cover, Good, HSG C
34,999	74	Pasture/grassland/range, Good, HSG C
176,119	70	Woods, Good, HSG C
219,495	96	Gravel surface, HSG C
980	96	Gravel surface, HSG D
478,368	85	Weighted Average
478,368		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	75	0.0770	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
3.8	314	0.0770	1.39		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	110	0.2000	2.24		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.6	107	0.3500	2.96		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.2	250	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	30	0.3300	9.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.6	163	0.0800	4.55		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.4	501	0.0230	2.44		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	1,550	Total			

Subcatchment PS105: TO CULVERT



Summary for Subcatchment PSUB10: TO DCB-S10

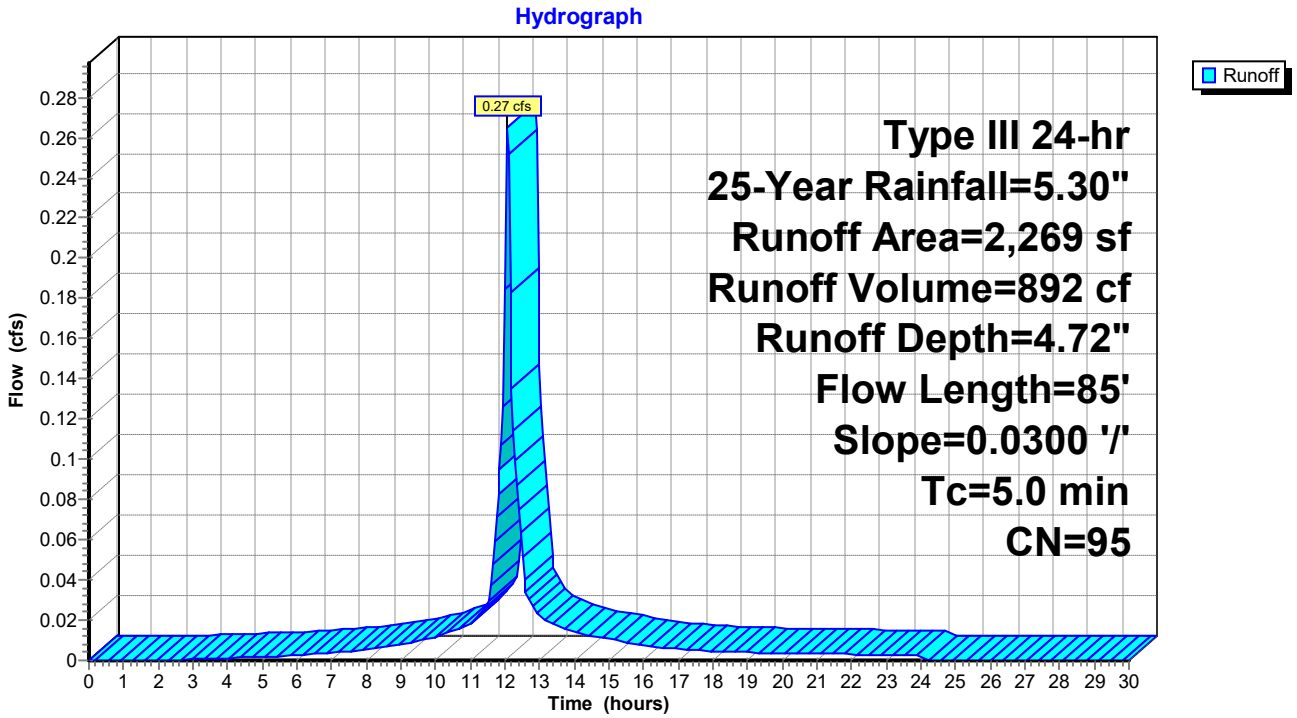
Runoff = 0.27 cfs @ 12.07 hrs, Volume= 892 cf, Depth= 4.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.30"

Area (sf)	CN	Description
190	61	>75% Grass cover, Good, HSG B
2,037	98	Paved parking, HSG B
42	98	Paved parking, HSG C
2,269	95	Weighted Average
190		8.37% Pervious Area
2,079		91.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0300	1.36		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	35	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	85	Total, Increased to minimum Tc = 5.0 min			

Subcatchment PSUB10: TO DCB-S10



Summary for Reach BK-1: McGovern Brook

Inflow Area = 944,676 sf, 13.07% Impervious, Inflow Depth = 3.74" for 25-Year event
Inflow = 60.44 cfs @ 12.21 hrs, Volume= 294,544 cf
Outflow = 56.71 cfs @ 12.39 hrs, Volume= 294,541 cf, Atten= 6%, Lag= 10.8 min

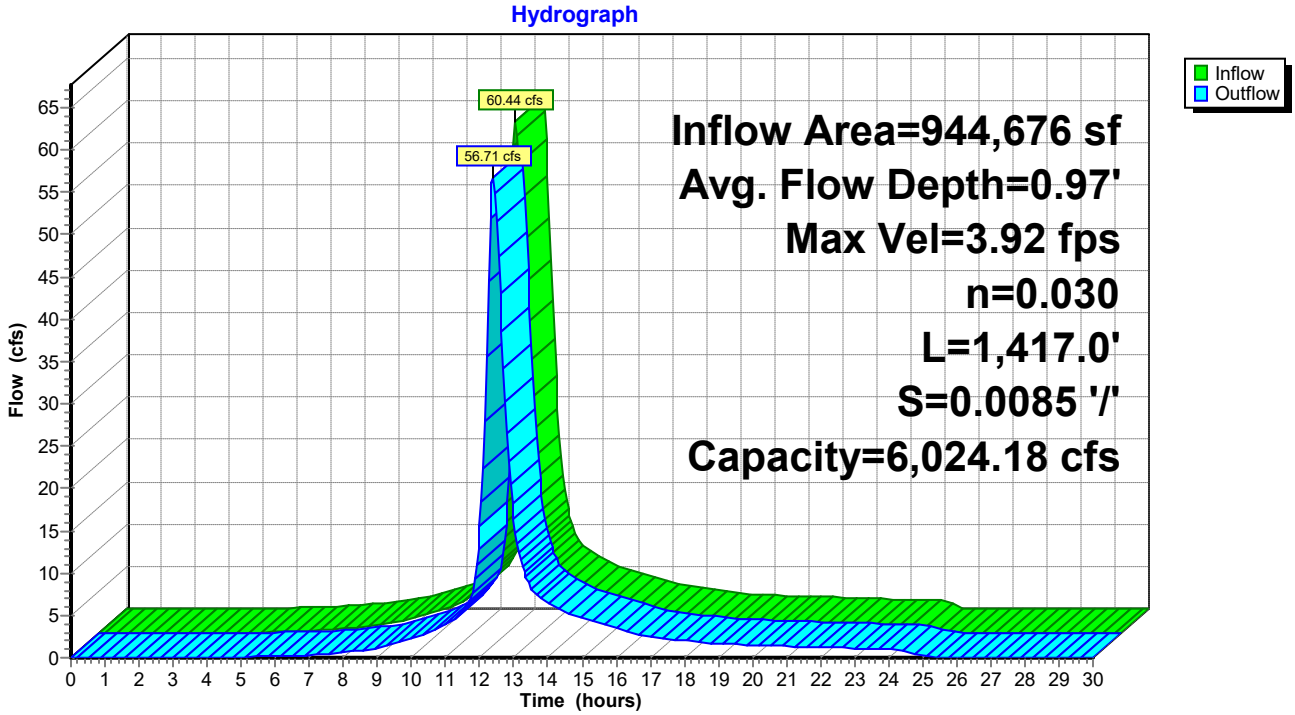
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.92 fps, Min. Travel Time= 6.0 min
Avg. Velocity = 1.24 fps, Avg. Travel Time= 19.0 min

Peak Storage= 20,487 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.97'
Bank-Full Depth= 10.00' Flow Area= 420.0 sf, Capacity= 6,024.18 cfs

12.00' x 10.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 72.00'
Length= 1,417.0' Slope= 0.0085 '/'
Inlet Invert= 346.00', Outlet Invert= 334.00'

‡

Reach BK-1: McGovern Brook



Stage-Discharge for Reach BK-1: McGovern Brook

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.00	0.00	0.00
346.10	0.96	1.19
346.20	1.51	3.80
346.30	1.94	7.52
346.40	2.32	12.26
346.50	2.66	17.94
346.60	2.96	24.54
346.70	3.25	32.03
346.80	3.51	40.42
346.90	3.76	49.68
347.00	3.99	59.83
347.10	4.21	70.86
347.20	4.42	82.79
347.30	4.63	95.61
347.40	4.82	109.33
347.50	5.01	123.97
347.60	5.19	139.53
347.70	5.37	156.03
347.80	5.54	173.47
347.90	5.71	191.87
348.00	5.87	211.24
348.10	6.03	231.59
348.20	6.18	252.93
348.30	6.33	275.28
348.40	6.48	298.65
348.50	6.63	323.06
348.60	6.77	348.50
348.70	6.91	375.01
348.80	7.05	402.59
348.90	7.18	431.25
349.00	7.32	461.01
349.10	7.45	491.88
349.20	7.58	523.87
349.30	7.71	557.00
349.40	7.83	591.28
349.50	7.96	626.73
349.60	8.08	663.35
349.70	8.20	701.16
349.80	8.32	740.17
349.90	8.44	780.40
350.00	8.56	821.86
350.10	8.68	864.56
350.20	8.79	908.51
350.30	8.91	953.73
350.40	9.02	1,000.23
350.50	9.13	1,048.02
350.60	9.24	1,097.12
350.70	9.35	1,147.54
350.80	9.46	1,199.29
350.90	9.57	1,252.38
351.00	9.68	1,306.82
351.10	9.79	1,362.64
351.20	9.89	1,419.84
351.30	10.00	1,478.43
351.40	10.10	1,538.43
351.50	10.21	1,599.84
351.60	10.31	1,662.69
351.70	10.41	1,726.98
351.80	10.51	1,792.73
351.90	10.61	1,859.94
352.00	10.71	1,928.63
352.10	10.81	1,998.82
352.20	10.91	2,070.50
352.30	11.01	2,143.71
352.40	11.11	2,218.44
352.50	11.21	2,294.71
352.60	11.30	2,372.53
352.70	11.40	2,451.92
352.80	11.50	2,532.88
352.90	11.59	2,615.43
353.00	11.69	2,699.58
353.10	11.78	2,785.33
353.20	11.87	2,872.71
353.30	11.97	2,961.73
353.40	12.06	3,052.39
353.50	12.15	3,144.70
353.60	12.25	3,238.69
353.70	12.34	3,334.35
353.80	12.43	3,431.71
353.90	12.52	3,530.77
354.00	12.61	3,631.54
354.10	12.70	3,734.04
354.20	12.79	3,838.27
354.30	12.88	3,944.26
354.40	12.97	4,052.00
354.50	13.06	4,161.51
354.60	13.14	4,272.81
354.70	13.23	4,385.90
354.80	13.32	4,500.79
354.90	13.41	4,617.49
355.00	13.49	4,736.03
355.10	13.58	4,856.40
355.20	13.67	4,978.61
355.30	13.75	5,102.69
355.40	13.84	5,228.63
355.50	13.92	5,356.46
355.60	14.01	5,486.18
355.70	14.09	5,617.80
355.80	14.18	5,751.33
355.90	14.26	5,886.79
356.00	**14.34**	**6,024.18**

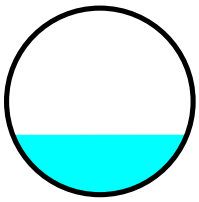
Summary for Reach CB-D4: TO DMH-1

Inflow Area = 16,447 sf, 47.74% Impervious, Inflow Depth = 2.01" for 25-Year event
Inflow = 0.87 cfs @ 12.08 hrs, Volume= 2,762 cf
Outflow = 0.87 cfs @ 12.09 hrs, Volume= 2,762 cf, Atten= 0%, Lag= 0.3 min

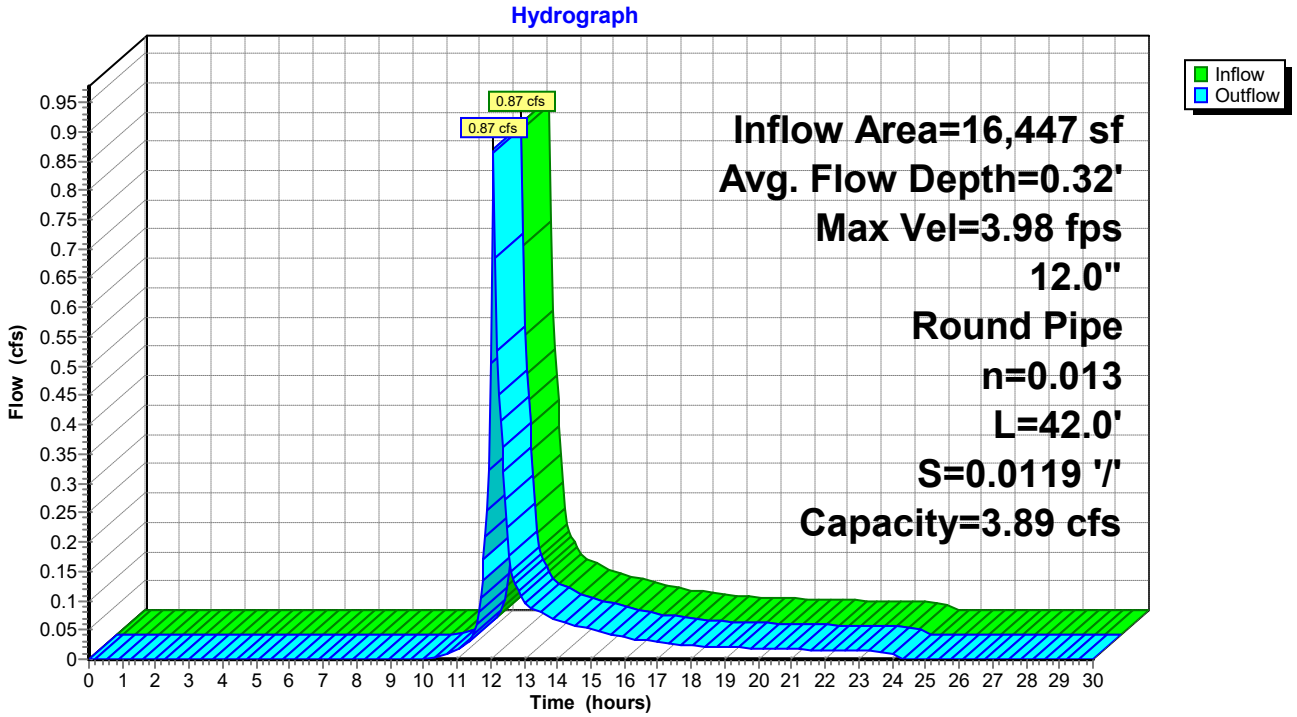
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.98 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.51 fps, Avg. Travel Time= 0.5 min

Peak Storage= 9 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.89 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 42.0' Slope= 0.0119 '/'
Inlet Invert= 352.70', Outlet Invert= 352.20'



Reach CB-D4: TO DMH-1



Stage-Discharge for Reach CB-D4: TO DMH-1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.70	0.00	0.00
352.71	0.44	0.00
352.72	0.70	0.00
352.73	0.91	0.01
352.74	1.10	0.01
352.75	1.27	0.02
352.76	1.43	0.03
352.77	1.58	0.04
352.78	1.72	0.05
352.79	1.86	0.07
352.80	1.99	0.08
352.81	2.11	0.10
352.82	2.23	0.12
352.83	2.34	0.14
352.84	2.45	0.16
352.85	2.56	0.19
352.86	2.66	0.22
352.87	2.76	0.24
352.88	2.86	0.27
352.89	2.95	0.31
352.90	3.04	0.34
352.91	3.13	0.38
352.92	3.22	0.41
352.93	3.31	0.45
352.94	3.39	0.49
352.95	3.47	0.53
352.96	3.55	0.58
352.97	3.62	0.62
352.98	3.70	0.67
352.99	3.77	0.71
353.00	3.84	0.76
353.01	3.91	0.81
353.02	3.98	0.86
353.03	4.04	0.91
353.04	4.11	0.97
353.05	4.17	1.02
353.06	4.23	1.08
353.07	4.29	1.13
353.08	4.35	1.19
353.09	4.41	1.25
353.10	4.47	1.31
353.11	4.52	1.37
353.12	4.57	1.43
353.13	4.62	1.49
353.14	4.67	1.56
353.15	4.72	1.62
353.16	4.77	1.68
353.17	4.82	1.75
353.18	4.86	1.81
353.19	4.91	1.88
353.20	4.95	1.94
353.21	4.99	2.01
353.22	5.03	2.08
353.23	5.07	2.14
353.24	5.11	2.21
353.25	5.14	2.28
353.26	5.18	2.34
353.27	5.21	2.41
353.28	5.25	2.48
353.29	5.28	2.54
353.30	5.31	2.61
353.31	5.34	2.68
353.32	5.36	2.74
353.33	5.39	2.81
353.34	5.42	2.88
353.35	5.44	2.94
353.36	5.46	3.00
353.37	5.49	3.07
353.38	5.51	3.13
353.39	5.52	3.19
353.40	5.54	3.25
353.41	5.56	3.31
353.42	5.57	3.37
353.43	5.59	3.43
353.44	5.60	3.49
353.45	5.61	3.54
353.46	5.62	3.60
353.47	5.63	3.65
353.48	5.63	3.70
353.49	5.64	3.75
353.50	5.64	3.80
353.51	**5.64**	3.85
353.52	5.64	3.89
353.53	5.64	3.93
353.54	5.64	3.97
353.55	5.63	4.01
353.56	5.62	4.04
353.57	5.61	4.07
353.58	5.60	4.10
353.59	5.58	4.12
353.60	5.56	4.14
353.61	5.54	4.16
353.62	5.52	4.17
353.63	5.49	4.18
353.64	5.46	**4.18**
353.65	5.42	4.18
353.66	5.37	4.16
353.67	5.32	4.14
353.68	5.26	4.11
353.69	5.17	4.05
353.70	4.95	3.89

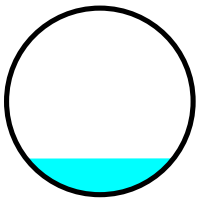
Summary for Reach CB-D7: TO DMH#6

Inflow Area = 2,624 sf,100.00% Impervious, Inflow Depth = 5.06" for 25-Year event
Inflow = 0.31 cfs @ 12.07 hrs, Volume= 1,107 cf
Outflow = 0.31 cfs @ 12.07 hrs, Volume= 1,107 cf, Atten= 1%, Lag= 0.2 min

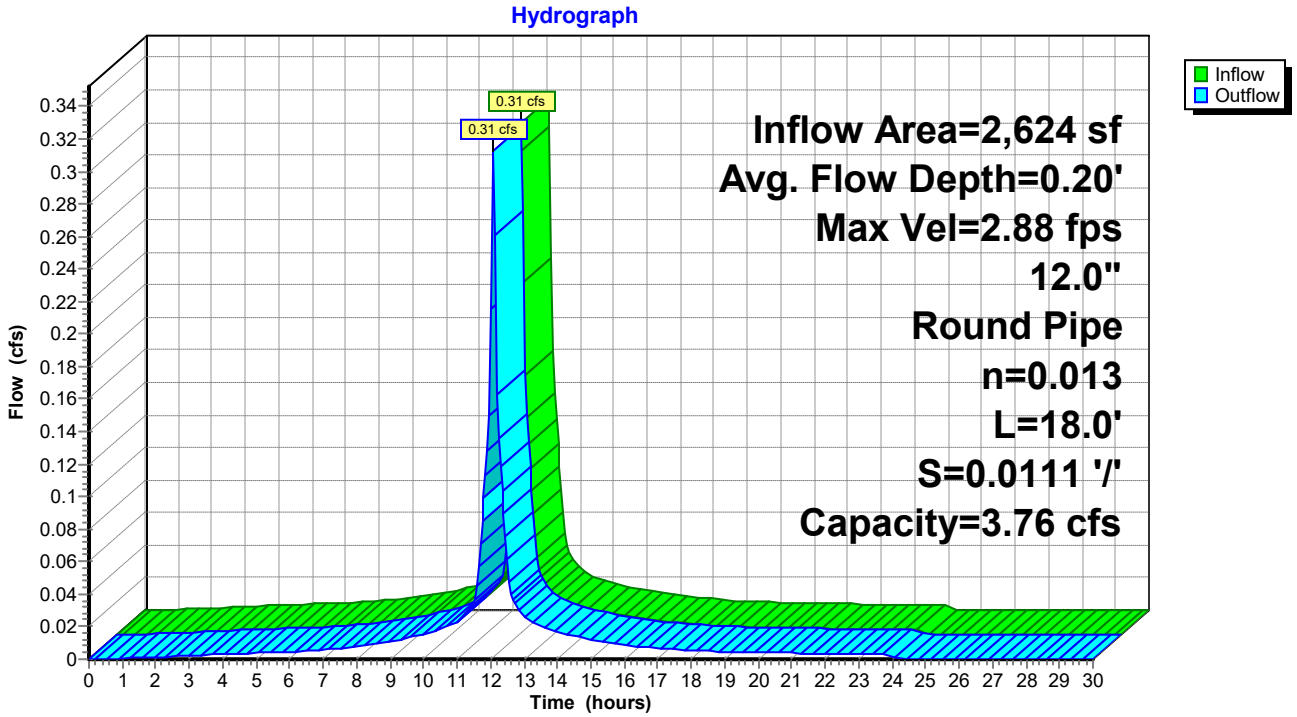
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.88 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.95 fps, Avg. Travel Time= 0.3 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.20'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.76 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 18.0' Slope= 0.0111 '/'
Inlet Invert= 351.70', Outlet Invert= 351.50'



Reach CB-D7: TO DMH#6



Stage-Discharge for Reach CB-D7: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.43	0.00
351.72	0.67	0.00
351.73	0.88	0.01
351.74	1.06	0.01
351.75	1.23	0.02
351.76	1.38	0.03
351.77	1.53	0.04
351.78	1.66	0.05
351.79	1.79	0.06
351.80	1.92	0.08
351.81	2.04	0.10
351.82	2.15	0.11
351.83	2.26	0.14
351.84	2.37	0.16
351.85	2.47	0.18
351.86	2.57	0.21
351.87	2.67	0.24
351.88	2.76	0.27
351.89	2.85	0.30
351.90	2.94	0.33
351.91	3.03	0.36
351.92	3.11	0.40
351.93	3.19	0.44
351.94	3.27	0.47
351.95	3.35	0.51
351.96	3.43	0.56
351.97	3.50	0.60
351.98	3.57	0.64
351.99	3.64	0.69
352.00	3.71	0.74
352.01	3.78	0.78
352.02	3.84	0.83
352.03	3.91	0.88
352.04	3.97	0.93
352.05	4.03	0.99
352.06	4.09	1.04
352.07	4.15	1.10
352.08	4.20	1.15
352.09	4.26	1.21
352.10	4.31	1.27
352.11	4.37	1.32
352.12	4.42	1.38
352.13	4.47	1.44
352.14	4.52	1.50
352.15	4.56	1.56
352.16	4.61	1.63
352.17	4.65	1.69
352.18	4.70	1.75
352.19	4.74	1.81
352.20	4.78	1.88
352.21	4.82	1.94
352.22	4.86	2.01
352.23	4.90	2.07
352.24	4.93	2.13
352.25	4.97	2.20
352.26	5.00	2.26
352.27	5.04	2.33
352.28	5.07	2.39
352.29	5.10	2.46
352.30	5.13	2.52
352.31	5.16	2.59
352.32	5.18	2.65
352.33	5.21	2.71
352.34	5.23	2.78
352.35	5.26	2.84
352.36	5.28	2.90
352.37	5.30	2.96
352.38	5.32	3.03
352.39	5.34	3.09
352.40	5.35	3.14
352.41	5.37	3.20
352.42	5.38	3.26
352.43	5.40	3.32
352.44	5.41	3.37
352.45	5.42	3.42
352.46	5.43	3.48
352.47	5.44	3.53
352.48	5.44	3.58
352.49	5.45	3.62
352.50	5.45	3.67
352.51	**5.45**	3.71
352.52	5.45	3.76
352.53	5.45	3.80
352.54	5.44	3.83
352.55	5.44	3.87
352.56	5.43	3.90
352.57	5.42	3.93
352.58	5.41	3.96
352.59	5.39	3.98
352.60	5.38	4.00
352.61	5.36	4.02
352.62	5.33	4.03
352.63	5.30	4.04
352.64	5.27	**4.04**
352.65	5.24	4.04
352.66	5.19	4.02
352.67	5.14	4.00
352.68	5.08	3.97
352.69	4.99	3.91
352.70	4.78	3.76

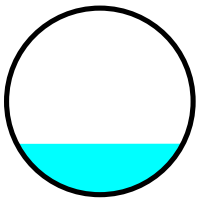
Summary for Reach CB-D8: TO DMH#6

Inflow Area = 5,879 sf, 76.82% Impervious, Inflow Depth = 3.55" for 25-Year event
Inflow = 0.56 cfs @ 12.07 hrs, Volume= 1,737 cf
Outflow = 0.55 cfs @ 12.08 hrs, Volume= 1,737 cf, Atten= 1%, Lag= 0.3 min

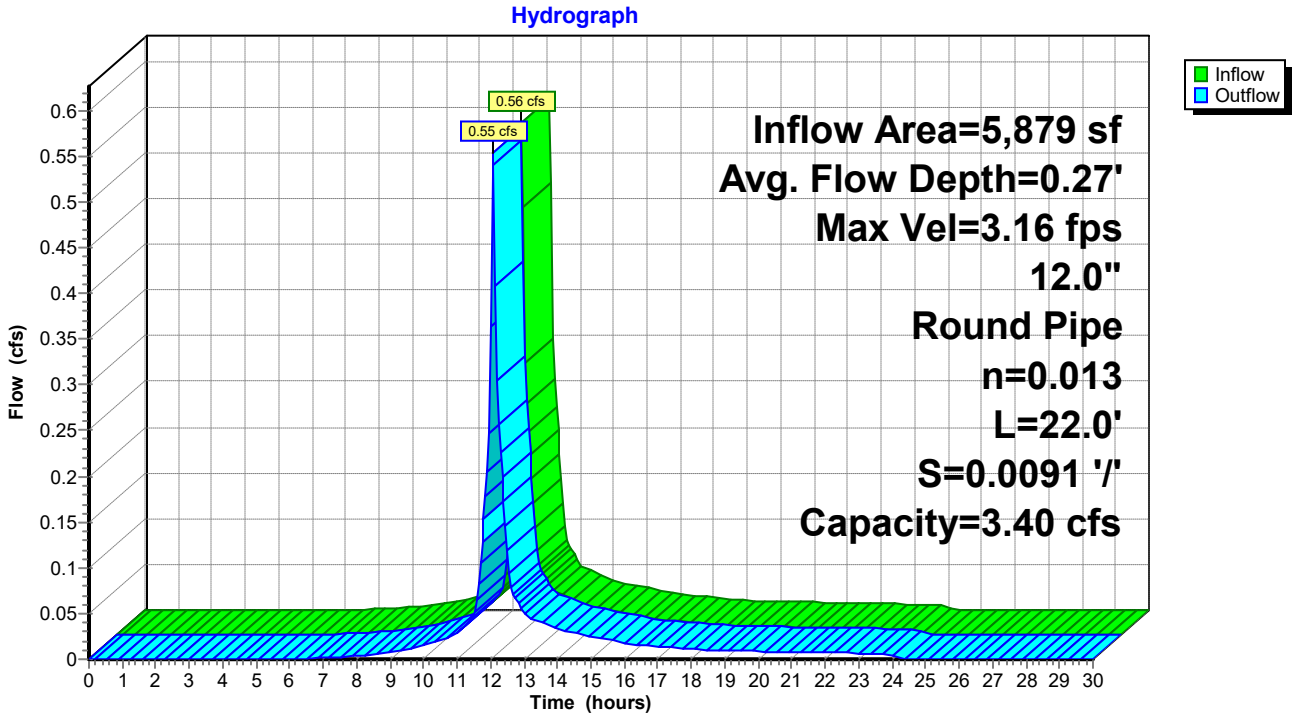
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.16 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.08 fps, Avg. Travel Time= 0.3 min

Peak Storage= 4 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.27'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.40 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 22.0' Slope= 0.0091 '/'
Inlet Invert= 351.70', Outlet Invert= 351.50'



Reach CB-D8: TO DMH#6



Stage-Discharge for Reach CB-D8: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.38	0.00
351.72	0.61	0.00
351.73	0.80	0.01
351.74	0.96	0.01
351.75	1.11	0.02
351.76	1.25	0.02
351.77	1.38	0.03
351.78	1.51	0.04
351.79	1.62	0.06
351.80	1.74	0.07
351.81	1.84	0.09
351.82	1.95	0.10
351.83	2.05	0.12
351.84	2.14	0.14
351.85	2.24	0.17
351.86	2.33	0.19
351.87	2.41	0.21
351.88	2.50	0.24
351.89	2.58	0.27
351.90	2.66	0.30
351.91	2.74	0.33
351.92	2.81	0.36
351.93	2.89	0.39
351.94	2.96	0.43
351.95	3.03	0.47
351.96	3.10	0.50
351.97	3.17	0.54
351.98	3.23	0.58
351.99	3.29	0.62
352.00	3.36	0.67
352.01	3.42	0.71
352.02	3.48	0.75
352.03	3.53	0.80
352.04	3.59	0.85
352.05	3.65	0.89
352.06	3.70	0.94
352.07	3.75	0.99
352.08	3.80	1.04
352.09	3.85	1.09
352.10	3.90	1.14
352.11	3.95	1.20
352.12	4.00	1.25
352.13	4.04	1.30
352.14	4.09	1.36
352.15	4.13	1.41
352.16	4.17	1.47
352.17	4.21	1.53
352.18	4.25	1.58
352.19	4.29	1.64
352.20	4.33	1.70
352.21	4.36	1.76
352.22	4.40	1.81
352.23	4.43	1.87
352.24	4.46	1.93
352.25	4.50	1.99
352.26	4.53	2.05
352.27	4.56	2.11
352.28	4.58	2.17
352.29	4.61	2.22
352.30	4.64	2.28
352.31	4.66	2.34
352.32	4.69	2.40
352.33	4.71	2.46
352.34	4.73	2.51
352.35	4.75	2.57
352.36	4.77	2.63
352.37	4.79	2.68
352.38	4.81	2.74
352.39	4.83	2.79
352.40	4.84	2.84
352.41	4.86	2.90
352.42	4.87	2.95
352.43	4.88	3.00
352.44	4.89	3.05
352.45	4.90	3.10
352.46	4.91	3.15
352.47	4.92	3.19
352.48	4.92	3.24
352.49	4.93	3.28
352.50	4.93	3.32
352.51	**4.93**	3.36
352.52	4.93	3.40
352.53	4.93	3.43
352.54	4.92	3.47
352.55	4.92	3.50
352.56	4.91	3.53
352.57	4.90	3.56
352.58	4.89	3.58
352.59	4.88	3.60
352.60	4.86	3.62
352.61	4.84	3.64
352.62	4.82	3.65
352.63	4.80	3.65
352.64	4.77	**3.65**
352.65	4.74	3.65
352.66	4.70	3.64
352.67	4.65	3.62
352.68	4.59	3.59
352.69	4.51	3.54
352.70	4.33	3.40

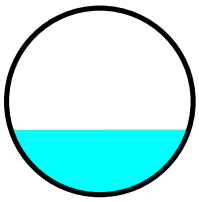
Summary for Reach CB21: TO DMH#21

Inflow Area = 16,502 sf, 47.31% Impervious, Inflow Depth = 2.97" for 25-Year event
Inflow = 1.32 cfs @ 12.08 hrs, Volume= 4,082 cf
Outflow = 1.31 cfs @ 12.08 hrs, Volume= 4,082 cf, Atten= 0%, Lag= 0.4 min

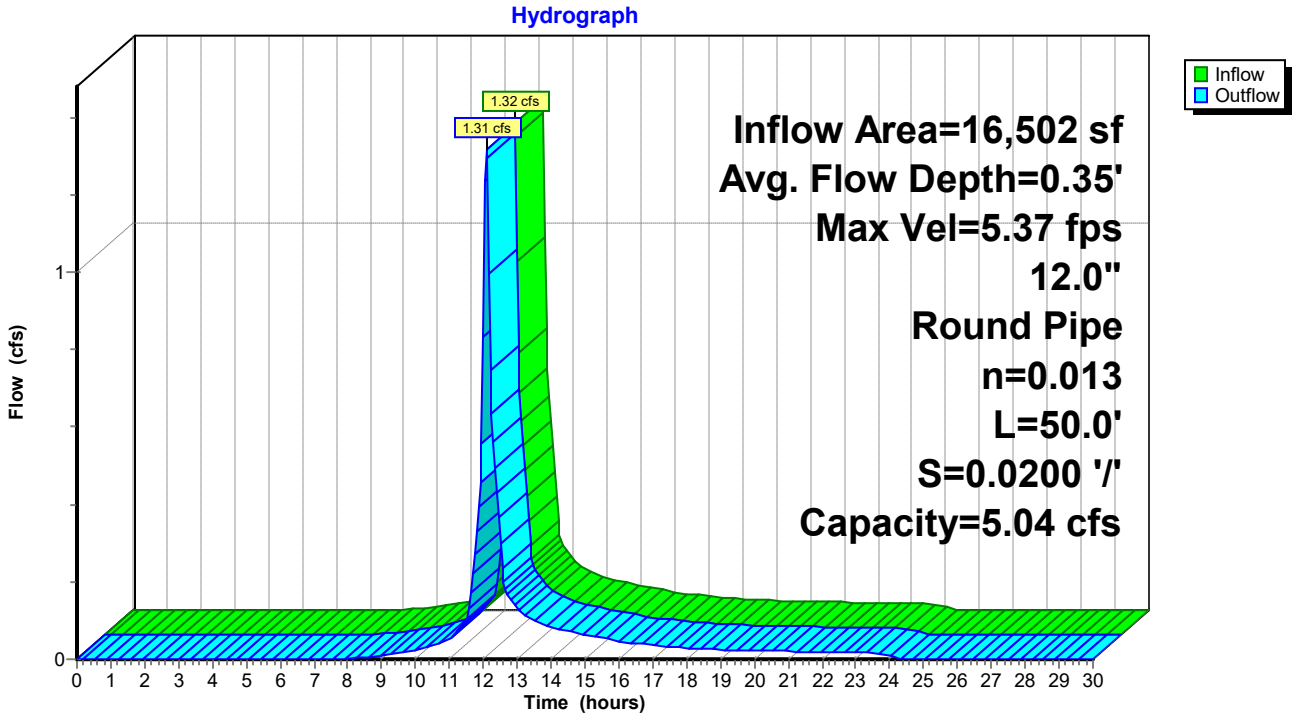
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.37 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.91 fps, Avg. Travel Time= 0.4 min

Peak Storage= 12 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.35'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.04 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 50.0' Slope= 0.0200 '/'
Inlet Invert= 346.40', Outlet Invert= 345.40'



Reach CB21: TO DMH#21



Stage-Discharge for Reach CB21: TO DMH#21

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.40	0.00	0.00
346.41	0.57	0.00
346.42	0.90	0.00
346.43	1.18	0.01
346.44	1.42	0.02
346.45	1.65	0.02
346.46	1.86	0.04
346.47	2.05	0.05
346.48	2.23	0.07
346.49	2.41	0.08
346.50	2.57	0.11
346.51	2.73	0.13
346.52	2.89	0.15
346.53	3.03	0.18
346.54	3.18	0.21
346.55	3.32	0.24
346.56	3.45	0.28
346.57	3.58	0.32
346.58	3.70	0.36
346.59	3.83	0.40
346.60	3.95	0.44
346.61	4.06	0.49
346.62	4.17	0.53
346.63	4.28	0.58
346.64	4.39	0.64
346.65	4.50	0.69
346.66	4.60	0.75
346.67	4.70	0.80
346.68	4.79	0.86
346.69	4.89	0.92
346.70	4.98	0.99
346.71	5.07	1.05
346.72	5.16	1.12
346.73	5.24	1.19
346.74	5.33	1.25
346.75	5.41	1.32
346.76	5.49	1.40
346.77	5.57	1.47
346.78	5.64	1.54
346.79	5.72	1.62
346.80	5.79	1.70
346.81	5.86	1.78
346.82	5.93	1.86
346.83	5.99	1.94
346.84	6.06	2.02
346.85	6.12	2.10
346.86	6.18	2.18
346.87	6.24	2.27
346.88	6.30	2.35
346.89	6.36	2.43
346.90	6.42	2.52
346.91	6.47	2.61
346.92	6.52	2.69
346.93	6.57	2.78
346.94	6.62	2.86
346.95	6.67	2.95
346.96	6.71	3.04
346.97	6.76	3.13
346.98	6.80	3.21
346.99	6.84	3.30
347.00	6.88	3.39
347.01	6.92	3.47
347.02	6.95	3.56
347.03	6.99	3.64
347.04	7.02	3.73
347.05	7.05	3.81
347.06	7.08	3.89
347.07	7.11	3.98
347.08	7.14	4.06
347.09	7.16	4.14
347.10	7.18	4.22
347.11	7.20	4.30
347.12	7.22	4.37
347.13	7.24	4.45
347.14	7.26	4.52
347.15	7.27	4.59
347.16	7.28	4.66
347.17	7.29	4.73
347.18	7.30	4.80
347.19	7.31	4.86
347.20	7.31	4.93
347.21	**7.31**	4.98
347.22	7.31	5.04
347.23	7.31	5.09
347.24	7.30	5.14
347.25	7.30	5.19
347.26	7.29	5.24
347.27	7.27	5.28
347.28	7.26	5.31
347.29	7.24	5.34
347.30	7.21	5.37
347.31	7.19	5.39
347.32	7.15	5.41
347.33	7.12	5.42
347.34	7.07	**5.42**
347.35	7.02	5.41
347.36	6.97	5.40
347.37	6.90	5.37
347.38	6.81	5.32
347.39	6.70	5.25
347.40	6.42	5.04

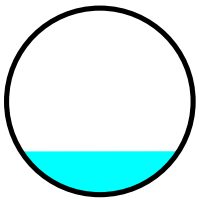
Summary for Reach CBD1: TO DMH#8

Inflow Area = 6,833 sf, 88.85% Impervious, Inflow Depth = 4.27" for 25-Year event
Inflow = 0.75 cfs @ 12.07 hrs, Volume= 2,434 cf
Outflow = 0.75 cfs @ 12.07 hrs, Volume= 2,434 cf, Atten= 1%, Lag= 0.1 min

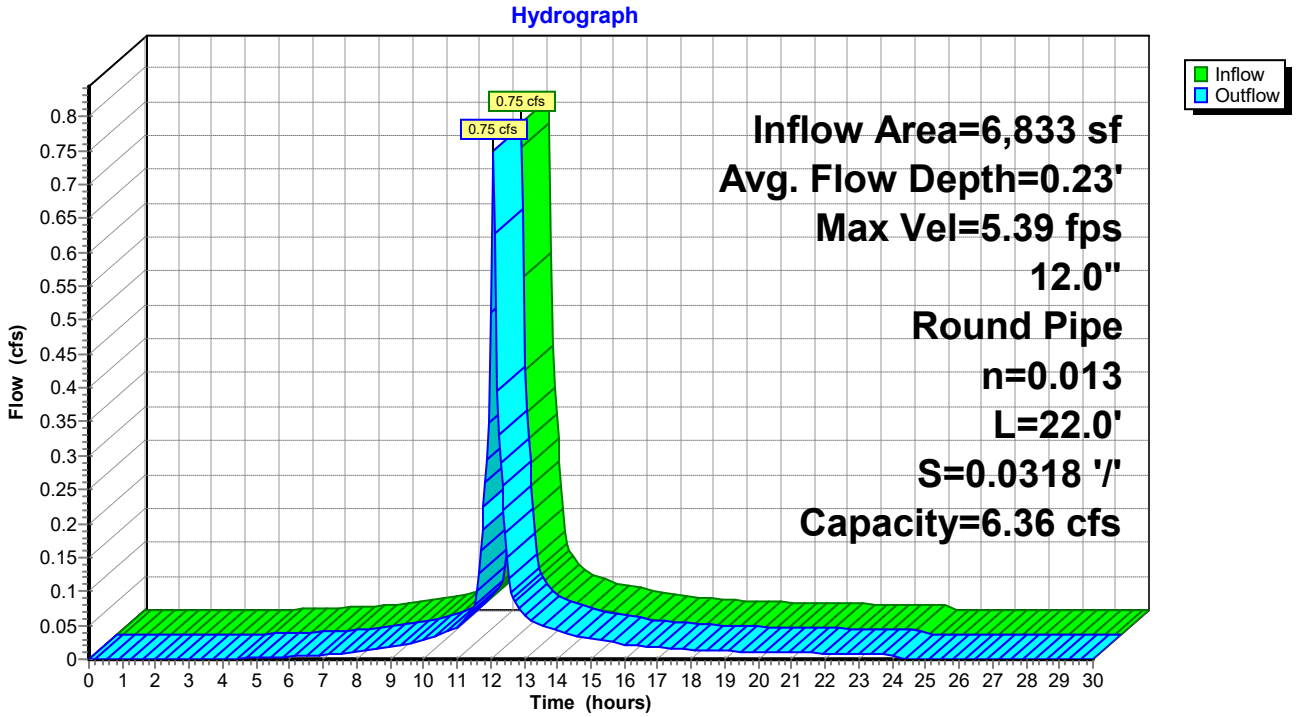
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.39 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.77 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.36 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 22.0' Slope= 0.0318 '/'
Inlet Invert= 352.70', Outlet Invert= 352.00'



Reach CBD1: TO DMH#8



Stage-Discharge for Reach CBD1: TO DMH#8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.70	0.00	0.00
352.71	0.72	0.00
352.72	1.14	0.00
352.73	1.49	0.01
352.74	1.80	0.02
352.75	2.08	0.03
352.76	2.34	0.05
352.77	2.58	0.06
352.78	2.82	0.08
352.79	3.04	0.11
352.80	3.25	0.13
352.81	3.45	0.16
352.82	3.64	0.19
352.83	3.83	0.23
352.84	4.01	0.27
352.85	4.18	0.31
352.86	4.35	0.35
352.87	4.51	0.40
352.88	4.67	0.45
352.89	4.83	0.50
352.90	4.98	0.56
352.91	5.12	0.61
352.92	5.26	0.67
352.93	5.40	0.74
352.94	5.54	0.80
352.95	5.67	0.87
352.96	5.80	0.94
352.97	5.92	1.01
352.98	6.04	1.09
352.99	6.16	1.17
353.00	6.28	1.24
353.01	6.39	1.33
353.02	6.50	1.41
353.03	6.61	1.49
353.04	6.72	1.58
353.05	6.82	1.67
353.06	6.92	1.76
353.07	7.02	1.85
353.08	7.12	1.95
353.09	7.21	2.04
353.10	7.30	2.14
353.11	7.39	2.24
353.12	7.48	2.34
353.13	7.56	2.44
353.14	7.64	2.54
353.15	7.72	2.65
353.16	7.80	2.75
353.17	7.88	2.86
353.18	7.95	2.96
353.19	8.02	3.07
353.20	8.09	3.18
353.21	8.16	3.29
353.22	8.23	3.39
353.23	8.29	3.50
353.24	8.35	3.61
353.25	8.41	3.72
353.26	8.47	3.83
353.27	8.52	3.94
353.28	8.58	4.05
353.29	8.63	4.16
353.30	8.68	4.27
353.31	8.73	4.38
353.32	8.77	4.49
353.33	8.81	4.59
353.34	8.86	4.70
353.35	8.90	4.81
353.36	8.93	4.91
353.37	8.97	5.02
353.38	9.00	5.12
353.39	9.03	5.22
353.40	9.06	5.32
353.41	9.09	5.42
353.42	9.11	5.52
353.43	9.13	5.61
353.44	9.15	5.70
353.45	9.17	5.80
353.46	9.19	5.88
353.47	9.20	5.97
353.48	9.21	6.05
353.49	9.22	6.13
353.50	9.22	6.21
353.51	**9.22**	6.29
353.52	9.22	6.36
353.53	9.22	6.43
353.54	9.21	6.49
353.55	9.20	6.55
353.56	9.19	6.60
353.57	9.17	6.65
353.58	9.15	6.70
353.59	9.13	6.74
353.60	9.10	6.77
353.61	9.06	6.80
353.62	9.02	6.82
353.63	8.98	6.83
353.64	8.92	**6.84**
353.65	8.86	6.83
353.66	8.79	6.81
353.67	8.70	6.77
353.68	8.59	6.72
353.69	8.45	6.62
353.70	8.09	6.36

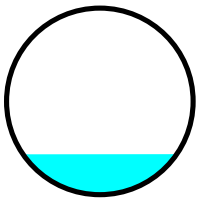
Summary for Reach CBD2: TO DMH#3

Inflow Area = 4,392 sf, 76.55% Impervious, Inflow Depth = 3.55" for 25-Year event
Inflow = 0.42 cfs @ 12.07 hrs, Volume= 1,298 cf
Outflow = 0.41 cfs @ 12.08 hrs, Volume= 1,298 cf, Atten= 1%, Lag= 0.1 min

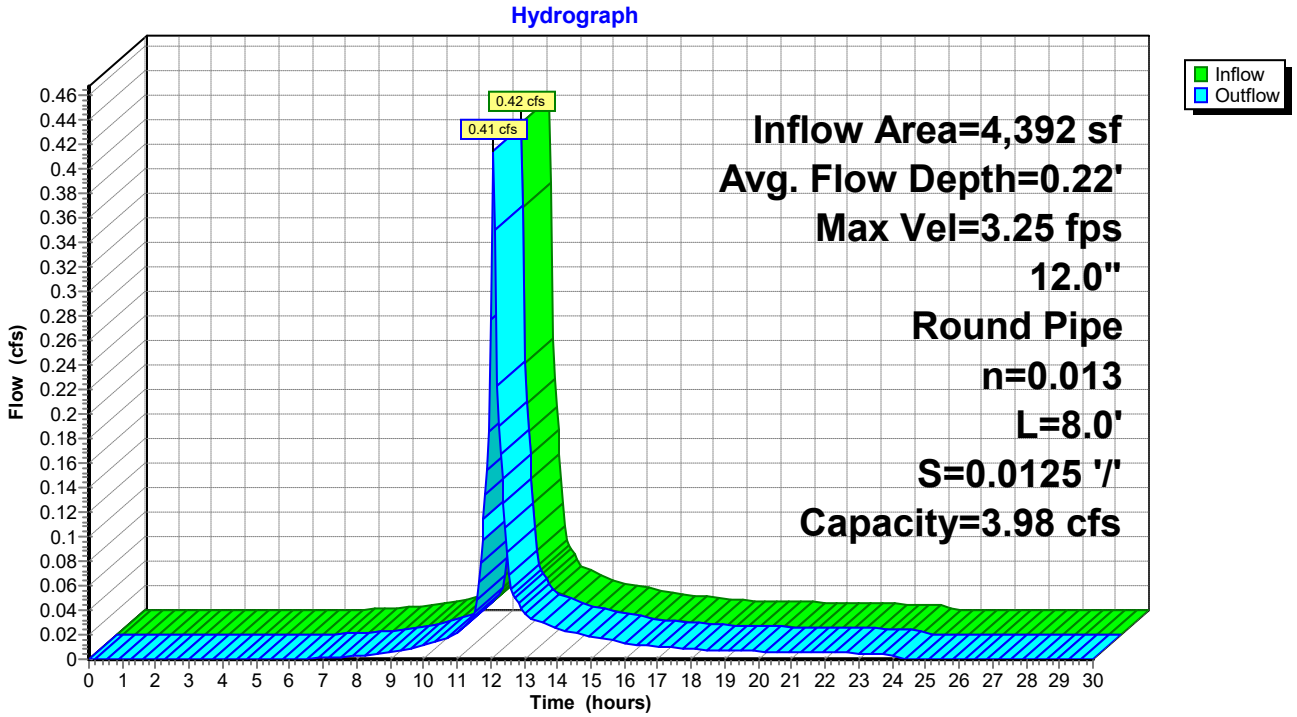
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.25 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.11 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.22'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.98 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 8.0' Slope= 0.0125 '/'
Inlet Invert= 353.10', Outlet Invert= 353.00'



Reach CBD2: TO DMH#3



Stage-Discharge for Reach CBD2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.10	0.00	0.00
353.11	0.45	0.00
353.12	0.71	0.00
353.13	0.93	0.01
353.14	1.13	0.01
353.15	1.30	0.02
353.16	1.47	0.03
353.17	1.62	0.04
353.18	1.77	0.05
353.19	1.90	0.07
353.20	2.03	0.08
353.21	2.16	0.10
353.22	2.28	0.12
353.23	2.40	0.14
353.24	2.51	0.17
353.25	2.62	0.19
353.26	2.73	0.22
353.27	2.83	0.25
353.28	2.93	0.28
353.29	3.03	0.31
353.30	3.12	0.35
353.31	3.21	0.38
353.32	3.30	0.42
353.33	3.39	0.46
353.34	3.47	0.50
353.35	3.55	0.55
353.36	3.63	0.59
353.37	3.71	0.64
353.38	3.79	0.68
353.39	3.86	0.73
353.40	3.94	0.78
353.41	4.01	0.83
353.42	4.08	0.88
353.43	4.14	0.94
353.44	4.21	0.99
353.45	4.28	1.05
353.46	4.34	1.10
353.47	4.40	1.16
353.48	4.46	1.22
353.49	4.52	1.28
353.50	4.58	1.34
353.51	4.63	1.40
353.52	4.69	1.47
353.53	4.74	1.53
353.54	4.79	1.59
353.55	4.84	1.66
353.56	4.89	1.72
353.57	4.94	1.79
353.58	4.98	1.86
353.59	5.03	1.92
353.60	5.07	1.99
353.61	5.11	2.06
353.62	5.16	2.13
353.63	5.20	2.20
353.64	5.23	2.26
353.65	5.27	2.33
353.66	5.31	2.40
353.67	5.34	2.47
353.68	5.38	2.54
353.69	5.41	2.61
353.70	5.44	2.68
353.71	5.47	2.74
353.72	5.50	2.81
353.73	5.52	2.88
353.74	5.55	2.95
353.75	5.58	3.01
353.76	5.60	3.08
353.77	5.62	3.14
353.78	5.64	3.21
353.79	5.66	3.27
353.80	5.68	3.33
353.81	5.70	3.40
353.82	5.71	3.46
353.83	5.73	3.52
353.84	5.74	3.58
353.85	5.75	3.63
353.86	5.76	3.69
353.87	5.77	3.74
353.88	5.77	3.79
353.89	5.78	3.84
353.90	5.78	3.89
353.91	**5.78**	3.94
353.92	5.78	3.98
353.93	5.78	4.03
353.94	5.77	4.07
353.95	5.77	4.10
353.96	5.76	4.14
353.97	5.75	4.17
353.98	5.74	4.20
353.99	5.72	4.22
354.00	5.70	4.25
354.01	5.68	4.26
354.02	5.66	4.28
354.03	5.63	4.28
354.04	5.59	**4.28**
354.05	5.55	4.28
354.06	5.51	4.27
354.07	5.45	4.25
354.08	5.38	4.21
354.09	5.29	4.15
354.10	5.07	3.98

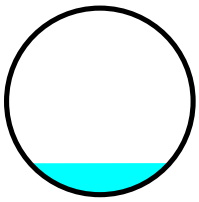
Summary for Reach CBD3: TO DMH-1

Inflow Area = 4,805 sf, 87.24% Impervious, Inflow Depth = 4.17" for 25-Year event
Inflow = 0.52 cfs @ 12.07 hrs, Volume= 1,668 cf
Outflow = 0.52 cfs @ 12.07 hrs, Volume= 1,668 cf, Atten= 0%, Lag= 0.1 min

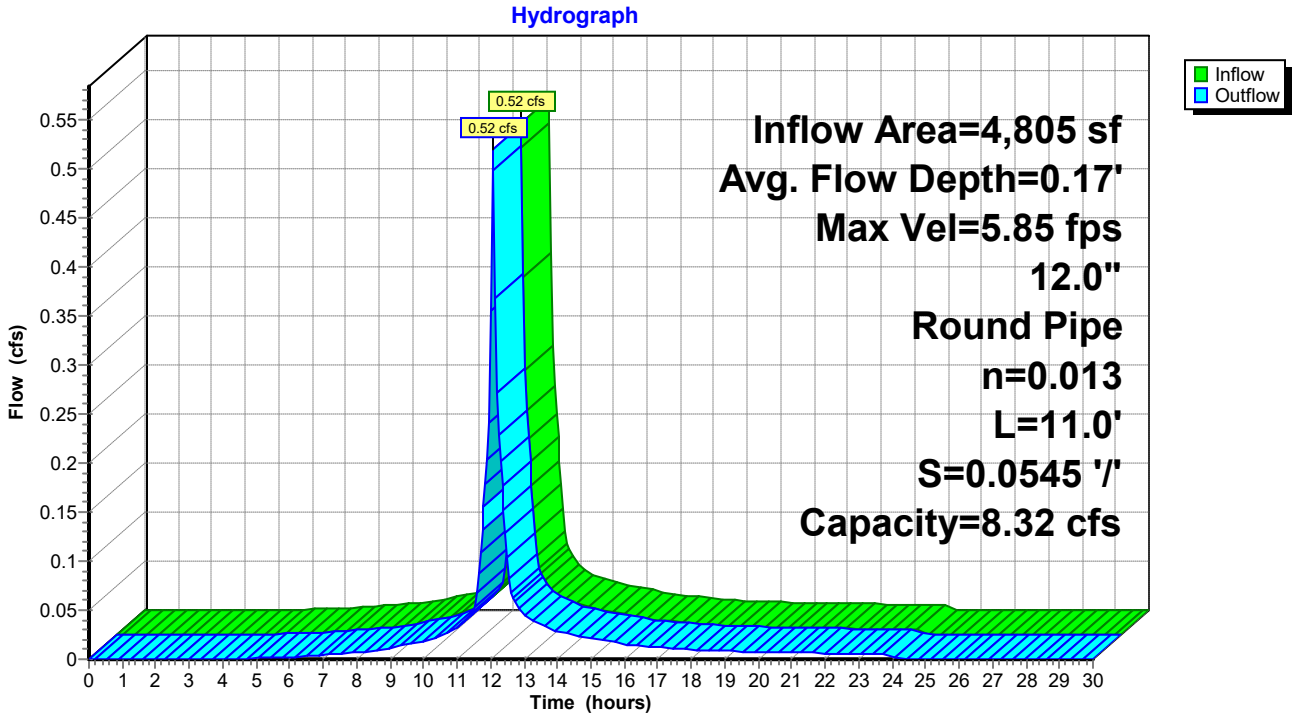
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.85 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.93 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.32 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 11.0' Slope= 0.0545 '/'
Inlet Invert= 352.80', Outlet Invert= 352.20'



Reach CBD3: TO DMH-1



Stage-Discharge for Reach CBD3: TO DMH-1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.80	0.00	0.00
352.81	0.94	0.00
352.82	1.49	0.01
352.83	1.95	0.01
352.84	2.35	0.02
352.85	2.72	0.04
352.86	3.06	0.06
352.87	3.38	0.08
352.88	3.69	0.11
352.89	3.97	0.14
352.90	4.25	0.17
352.91	4.51	0.21
352.92	4.77	0.25
352.93	5.01	0.30
352.94	5.25	0.35
352.95	5.48	0.40
352.96	5.70	0.46
352.97	5.91	0.52
352.98	6.12	0.59
352.99	6.32	0.66
353.00	6.52	0.73
353.01	6.71	0.80
353.02	6.89	0.88
353.03	7.07	0.97
353.04	7.25	1.05
353.05	7.42	1.14
353.06	7.59	1.23
353.07	7.75	1.33
353.08	7.91	1.42
353.09	8.07	1.53
353.10	8.22	1.63
353.11	8.37	1.74
353.12	8.52	1.85
353.13	8.66	1.96
353.14	8.80	2.07
353.15	8.93	2.19
353.16	9.06	2.31
353.17	9.19	2.43
353.18	9.32	2.55
353.19	9.44	2.68
353.20	9.56	2.80
353.21	9.67	2.93
353.22	9.79	3.06
353.23	9.90	3.20
353.24	10.01	3.33
353.25	10.11	3.47
353.26	10.21	3.60
353.27	10.31	3.74
353.28	10.41	3.88
353.29	10.50	4.02
353.30	10.59	4.16
353.31	10.68	4.30
353.32	10.77	4.44
353.33	10.85	4.59
353.34	10.93	4.73
353.35	11.01	4.87
353.36	11.09	5.02
353.37	11.16	5.16
353.38	11.23	5.30
353.39	11.30	5.45
353.40	11.36	5.59
353.41	11.42	5.73
353.42	11.48	5.87
353.43	11.54	6.02
353.44	11.59	6.16
353.45	11.65	6.29
353.46	11.70	6.43
353.47	11.74	6.57
353.48	11.79	6.70
353.49	11.83	6.84
353.50	11.86	6.97
353.51	11.90	7.10
353.52	11.93	7.22
353.53	11.96	7.35
353.54	11.99	7.47
353.55	12.01	7.59
353.56	12.03	7.70
353.57	12.05	7.82
353.58	12.06	7.93
353.59	12.07	8.03
353.60	12.08	8.13
353.61	**12.08**	8.23
353.62	12.08	8.32
353.63	12.07	8.41
353.64	12.06	8.50
353.65	12.05	8.57
353.66	12.03	8.65
353.67	12.01	8.71
353.68	11.98	8.77
353.69	11.95	8.82
353.70	11.91	8.87
353.71	11.87	8.90
353.72	11.81	8.93
353.73	11.75	8.95
353.74	11.68	**8.95**
353.75	11.60	8.94
353.76	11.51	8.91
353.77	11.39	8.87
353.78	11.25	8.79
353.79	11.06	8.67
353.80	10.59	8.32

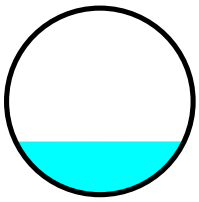
Summary for Reach CBD5: TO DMH#4

Inflow Area = 7,120 sf, 71.57% Impervious, Inflow Depth = 3.25" for 25-Year event
Inflow = 0.62 cfs @ 12.08 hrs, Volume= 1,929 cf
Outflow = 0.62 cfs @ 12.08 hrs, Volume= 1,929 cf, Atten= 0%, Lag= 0.2 min

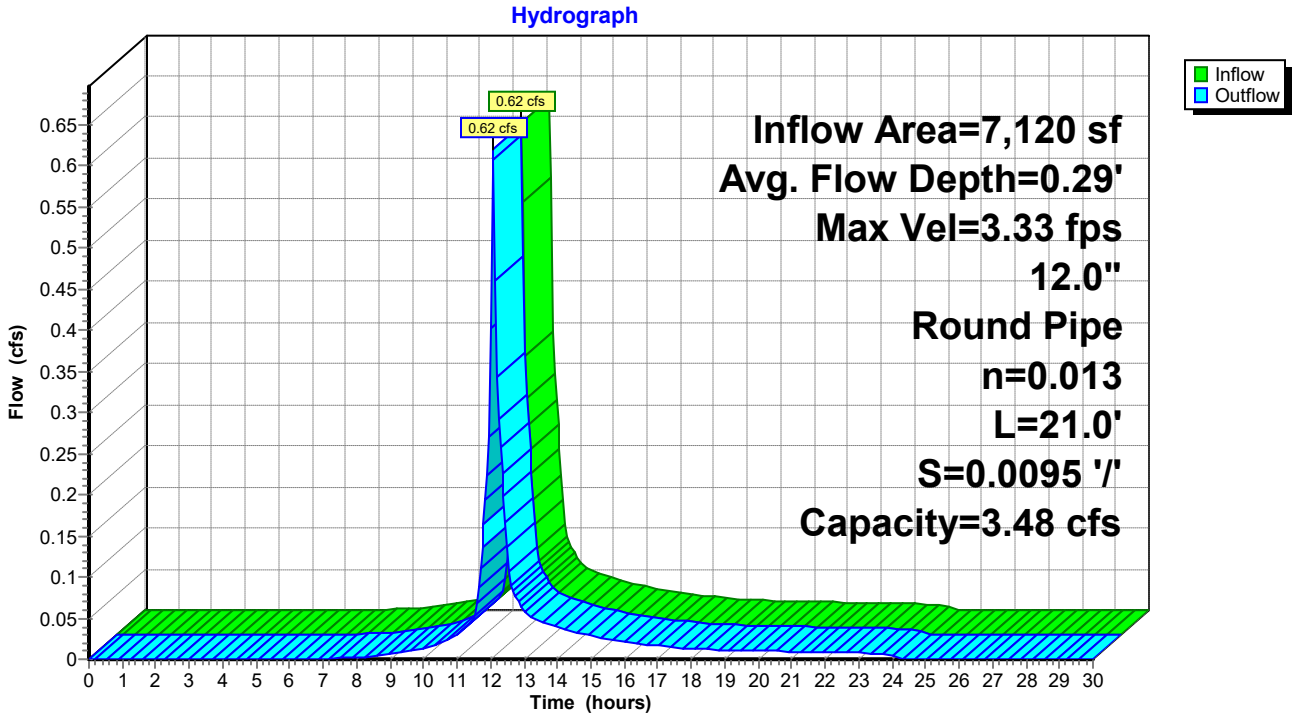
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.33 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.16 fps, Avg. Travel Time= 0.3 min

Peak Storage= 4 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.29'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.48 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 351.80', Outlet Invert= 351.60'



Reach CBD5: TO DMH#4



Stage-Discharge for Reach CBD5: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.39	0.00
351.82	0.62	0.00
351.83	0.81	0.01
351.84	0.98	0.01
351.85	1.14	0.02
351.86	1.28	0.02
351.87	1.41	0.03
351.88	1.54	0.05
351.89	1.66	0.06
351.90	1.78	0.07
351.91	1.89	0.09
351.92	1.99	0.11
351.93	2.09	0.13
351.94	2.19	0.15
351.95	2.29	0.17
351.96	2.38	0.19
351.97	2.47	0.22
351.98	2.56	0.25
351.99	2.64	0.27
352.00	2.72	0.30
352.01	2.80	0.34
352.02	2.88	0.37
352.03	2.96	0.40
352.04	3.03	0.44
352.05	3.10	0.48
352.06	3.17	0.51
352.07	3.24	0.55
352.08	3.31	0.60
352.09	3.37	0.64
352.10	3.44	0.68
352.11	3.50	0.73
352.12	3.56	0.77
352.13	3.62	0.82
352.14	3.68	0.87
352.15	3.73	0.91
352.16	3.79	0.96
352.17	3.84	1.01
352.18	3.89	1.07
352.19	3.94	1.12
352.20	3.99	1.17
352.21	4.04	1.23
352.22	4.09	1.28
352.23	4.14	1.34
352.24	4.18	1.39
352.25	4.22	1.45
352.26	4.27	1.51
352.27	4.31	1.56
352.28	4.35	1.62
352.29	4.39	1.68
352.30	4.43	1.74
352.31	4.46	1.80
352.32	4.50	1.86
352.33	4.53	1.92
352.34	4.57	1.98
352.35	4.60	2.04
352.36	4.63	2.10
352.37	4.66	2.16
352.38	4.69	2.22
352.39	4.72	2.28
352.40	4.75	2.34
352.41	4.77	2.40
352.42	4.80	2.45
352.43	4.82	2.51
352.44	4.85	2.57
352.45	4.87	2.63
352.46	4.89	2.69
352.47	4.91	2.74
352.48	4.92	2.80
352.49	4.94	2.86
352.50	4.96	2.91
352.51	4.97	2.96
352.52	4.99	3.02
352.53	5.00	3.07
352.54	5.01	3.12
352.55	5.02	3.17
352.56	5.03	3.22
352.57	5.03	3.27
352.58	5.04	3.31
352.59	5.04	3.36
352.60	5.05	3.40
352.61	**5.05**	3.44
352.62	5.05	3.48
352.63	5.04	3.52
352.64	5.04	3.55
352.65	5.04	3.58
352.66	5.03	3.61
352.67	5.02	3.64
352.68	5.01	3.67
352.69	4.99	3.69
352.70	4.98	3.71
352.71	4.96	3.72
352.72	4.94	3.73
352.73	4.91	3.74
352.74	4.88	**3.74**
352.75	4.85	3.74
352.76	4.81	3.73
352.77	4.76	3.71
352.78	4.70	3.67
352.79	4.62	3.62
352.80	4.43	3.48

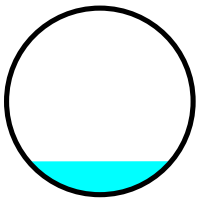
Summary for Reach CBD6: TO DMH#4

Inflow Area = 2,202 sf,100.00% Impervious, Inflow Depth = 5.06" for 25-Year event
Inflow = 0.26 cfs @ 12.07 hrs, Volume= 929 cf
Outflow = 0.26 cfs @ 12.07 hrs, Volume= 929 cf, Atten= 1%, Lag= 0.2 min

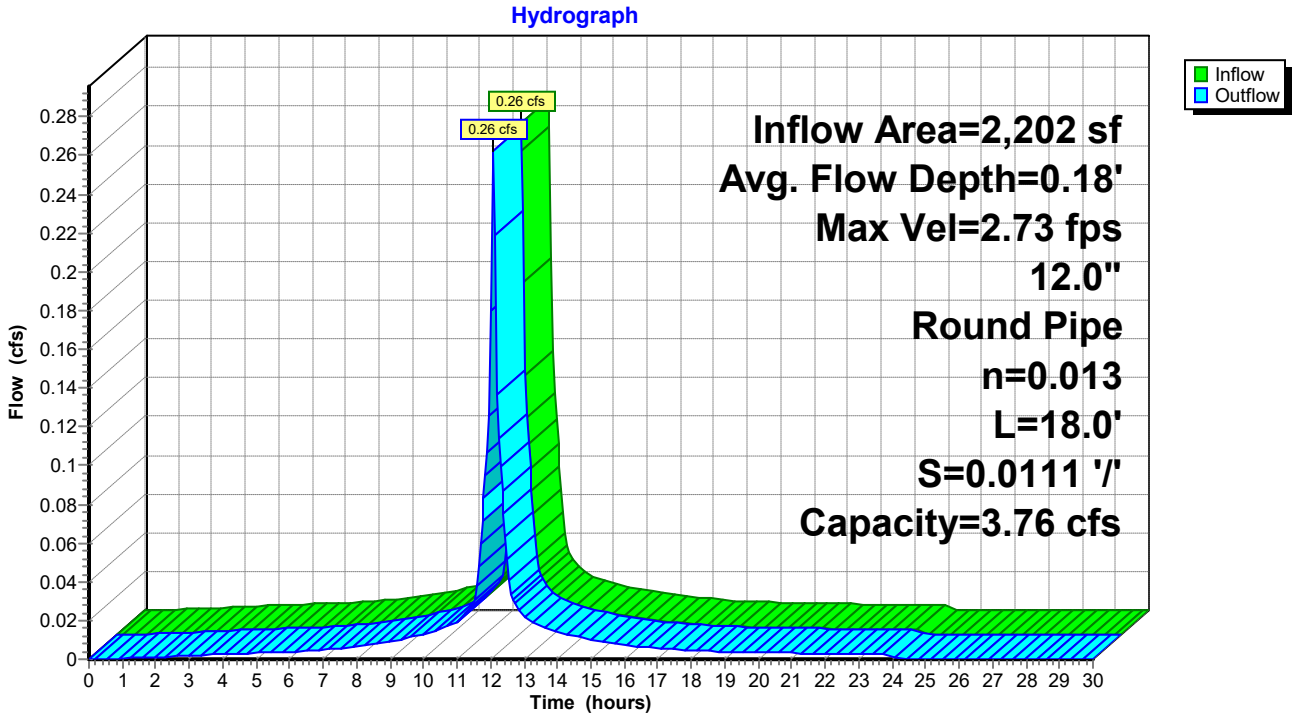
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.73 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.90 fps, Avg. Travel Time= 0.3 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.76 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 18.0' Slope= 0.0111 '/'
Inlet Invert= 351.80', Outlet Invert= 351.60'



Reach CBD6: TO DMH#4



Stage-Discharge for Reach CBD6: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.43	0.00
351.82	0.67	0.00
351.83	0.88	0.01
351.84	1.06	0.01
351.85	1.23	0.02
351.86	1.38	0.03
351.87	1.53	0.04
351.88	1.66	0.05
351.89	1.79	0.06
351.90	1.92	0.08
351.91	2.04	0.10
351.92	2.15	0.11
351.93	2.26	0.14
351.94	2.37	0.16
351.95	2.47	0.18
351.96	2.57	0.21
351.97	2.67	0.24
351.98	2.76	0.27
351.99	2.85	0.30
352.00	2.94	0.33
352.01	3.03	0.36
352.02	3.11	0.40
352.03	3.19	0.44
352.04	3.27	0.47
352.05	3.35	0.51
352.06	3.43	0.56
352.07	3.50	0.60
352.08	3.57	0.64
352.09	3.64	0.69
352.10	3.71	0.74
352.11	3.78	0.78
352.12	3.84	0.83
352.13	3.91	0.88
352.14	3.97	0.93
352.15	4.03	0.99
352.16	4.09	1.04
352.17	4.15	1.10
352.18	4.20	1.15
352.19	4.26	1.21
352.20	4.31	1.27
352.21	4.37	1.32
352.22	4.42	1.38
352.23	4.47	1.44
352.24	4.52	1.50
352.25	4.56	1.56
352.26	4.61	1.63
352.27	4.65	1.69
352.28	4.70	1.75
352.29	4.74	1.81
352.30	4.78	1.88
352.31	4.82	1.94
352.32	4.86	2.01
352.33	4.90	2.07
352.34	4.93	2.13
352.35	4.97	2.20
352.36	5.00	2.26
352.37	5.04	2.33
352.38	5.07	2.39
352.39	5.10	2.46
352.40	5.13	2.52
352.41	5.16	2.59
352.42	5.18	2.65
352.43	5.21	2.71
352.44	5.23	2.78
352.45	5.26	2.84
352.46	5.28	2.90
352.47	5.30	2.96
352.48	5.32	3.03
352.49	5.34	3.09
352.50	5.35	3.14
352.51	5.37	3.20
352.52	5.38	3.26
352.53	5.40	3.32
352.54	5.41	3.37
352.55	5.42	3.42
352.56	5.43	3.48
352.57	5.44	3.53
352.58	5.44	3.58
352.59	5.45	3.62
352.60	5.45	3.67
352.61	**5.45**	3.71
352.62	5.45	3.76
352.63	5.45	3.80
352.64	5.44	3.83
352.65	5.44	3.87
352.66	5.43	3.90
352.67	5.42	3.93
352.68	5.41	3.96
352.69	5.39	3.98
352.70	5.38	4.00
352.71	5.36	4.02
352.72	5.33	4.03
352.73	5.30	4.04
352.74	5.27	**4.04**
352.75	5.24	4.04
352.76	5.19	4.02
352.77	5.14	4.00
352.78	5.08	3.97
352.79	4.99	3.91
352.80	4.78	3.76

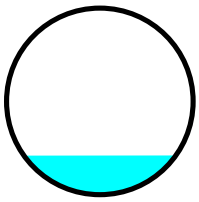
Summary for Reach CBD9: TO DMH#5

Inflow Area = 4,151 sf, 71.91% Impervious, Inflow Depth = 3.25" for 25-Year event
Inflow = 0.36 cfs @ 12.08 hrs, Volume= 1,125 cf
Outflow = 0.36 cfs @ 12.09 hrs, Volume= 1,125 cf, Atten= 1%, Lag= 0.6 min

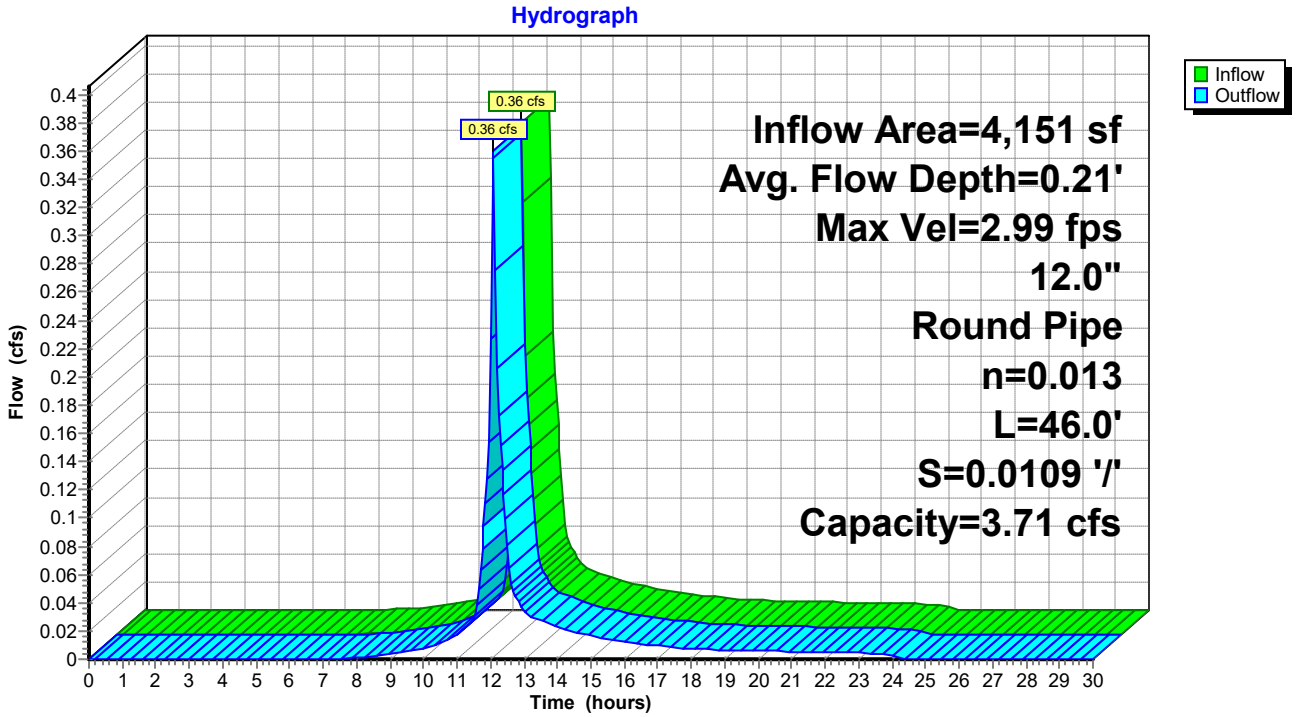
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.99 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.03 fps, Avg. Travel Time= 0.7 min

Peak Storage= 6 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.71 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 46.0' Slope= 0.0109 '/'
Inlet Invert= 352.50', Outlet Invert= 352.00'



Reach CBD9: TO DMH#5



Stage-Discharge for Reach CBD9: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.50	0.00	0.00
352.51	0.42	0.00
352.52	0.67	0.00
352.53	0.87	0.01
352.54	1.05	0.01
352.55	1.21	0.02
352.56	1.37	0.03
352.57	1.51	0.04
352.58	1.65	0.05
352.59	1.77	0.06
352.60	1.90	0.08
352.61	2.01	0.09
352.62	2.13	0.11
352.63	2.24	0.13
352.64	2.34	0.16
352.65	2.44	0.18
352.66	2.54	0.21
352.67	2.64	0.23
352.68	2.73	0.26
352.69	2.82	0.29
352.70	2.91	0.33
352.71	2.99	0.36
352.72	3.08	0.39
352.73	3.16	0.43
352.74	3.24	0.47
352.75	3.31	0.51
352.76	3.39	0.55
352.77	3.46	0.59
352.78	3.53	0.64
352.79	3.60	0.68
352.80	3.67	0.73
352.81	3.74	0.77
352.82	3.80	0.82
352.83	3.86	0.87
352.84	3.93	0.92
352.85	3.99	0.98
352.86	4.05	1.03
352.87	4.10	1.08
352.88	4.16	1.14
352.89	4.21	1.19
352.90	4.27	1.25
352.91	4.32	1.31
352.92	4.37	1.37
352.93	4.42	1.43
352.94	4.47	1.49
352.95	4.51	1.55
352.96	4.56	1.61
352.97	4.60	1.67
352.98	4.65	1.73
352.99	4.69	1.79
353.00	4.73	1.86
353.01	4.77	1.92
353.02	4.81	1.98
353.03	4.84	2.05
353.04	4.88	2.11
353.05	4.92	2.18
353.06	4.95	2.24
353.07	4.98	2.30
353.08	5.01	2.37
353.09	5.04	2.43
353.10	5.07	2.50
353.11	5.10	2.56
353.12	5.13	2.62
353.13	5.15	2.69
353.14	5.18	2.75
353.15	5.20	2.81
353.16	5.22	2.87
353.17	5.24	2.93
353.18	5.26	2.99
353.19	5.28	3.05
353.20	5.30	3.11
353.21	5.31	3.17
353.22	5.33	3.22
353.23	5.34	3.28
353.24	5.35	3.33
353.25	5.36	3.39
353.26	5.37	3.44
353.27	5.38	3.49
353.28	5.38	3.54
353.29	5.39	3.59
353.30	5.39	3.63
353.31	**5.39**	3.67
353.32	5.39	3.72
353.33	5.39	3.76
353.34	5.39	3.79
353.35	5.38	3.83
353.36	5.37	3.86
353.37	5.36	3.89
353.38	5.35	3.92
353.39	5.33	3.94
353.40	5.32	3.96
353.41	5.30	3.97
353.42	5.27	3.99
353.43	5.25	3.99
353.44	5.22	**4.00**
353.45	5.18	3.99
353.46	5.14	3.98
353.47	5.08	3.96
353.48	5.02	3.93
353.49	4.94	3.87
353.50	4.73	3.71

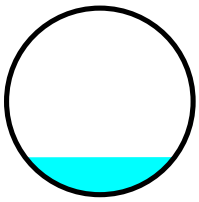
Summary for Reach CO1: TO CO#2

Inflow Area = 5,181 sf, 36.69% Impervious, Inflow Depth = 2.83" for 25-Year event
Inflow = 0.36 cfs @ 12.08 hrs, Volume= 1,222 cf
Outflow = 0.36 cfs @ 12.09 hrs, Volume= 1,222 cf, Atten= 1%, Lag= 0.6 min

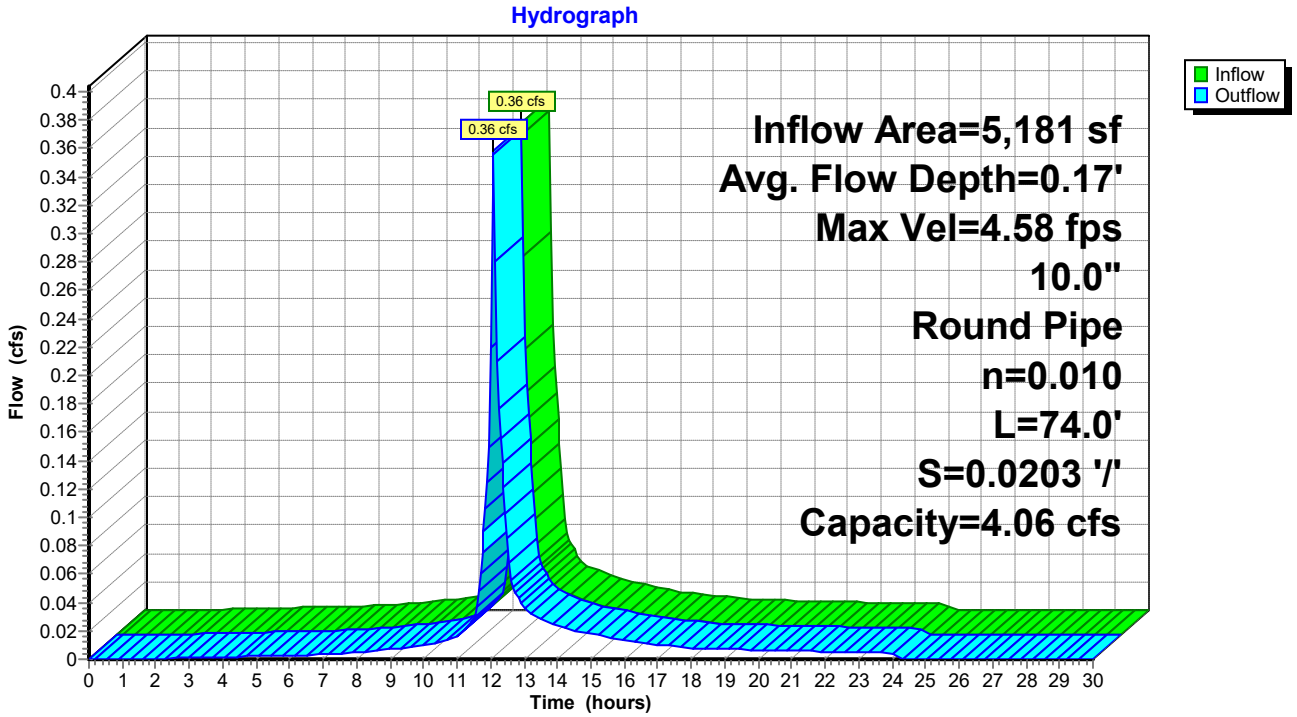
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.58 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.47 fps, Avg. Travel Time= 0.8 min

Peak Storage= 6 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.06 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 74.0' Slope= 0.0203 '/'
Inlet Invert= 350.50', Outlet Invert= 349.00'



Reach CO1: TO CO#2



Stage-Discharge for Reach CO1: TO CO#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.50	0.00	0.00
350.51	0.74	0.00
350.52	1.18	0.00
350.53	1.54	0.01
350.54	1.86	0.02
350.55	2.15	0.03
350.56	2.42	0.04
350.57	2.67	0.06
350.58	2.91	0.08
350.59	3.13	0.10
350.60	3.35	0.12
350.61	3.55	0.15
350.62	3.75	0.18
350.63	3.94	0.21
350.64	4.12	0.25
350.65	4.29	0.29
350.66	4.46	0.33
350.67	4.63	0.37
350.68	4.79	0.42
350.69	4.94	0.46
350.70	5.09	0.51
350.71	5.23	0.56
350.72	5.37	0.62
350.73	5.51	0.68
350.74	5.64	0.73
350.75	5.77	0.79
350.76	5.90	0.86
350.77	6.02	0.92
350.78	6.13	0.99
350.79	6.25	1.05
350.80	6.36	1.12
350.81	6.47	1.20
350.82	6.57	1.27
350.83	6.67	1.34
350.84	6.77	1.42
350.85	6.87	1.49
350.86	6.96	1.57
350.87	7.05	1.65
350.88	7.14	1.73
350.89	7.22	1.81
350.90	7.31	1.89
350.91	7.38	1.97
350.92	7.46	2.06
350.93	7.53	2.14
350.94	7.60	2.22
350.95	7.67	2.31
350.96	7.74	2.39
350.97	7.80	2.47
350.98	7.86	2.56
350.99	7.92	2.64
351.00	7.97	2.72
351.01	8.03	2.81
351.02	8.08	2.89
351.03	8.12	2.97
351.04	8.17	3.05
351.05	8.21	3.13
351.06	8.25	3.21
351.07	8.28	3.29
351.08	8.32	3.37
351.09	8.35	3.45
351.10	8.37	3.52
351.11	8.40	3.59
351.12	8.42	3.66
351.13	8.44	3.73
351.14	8.45	3.80
351.15	8.46	3.86
351.16	8.47	3.92
351.17	8.47	3.98
351.18	**8.48**	4.04
351.19	8.47	4.09
351.20	8.47	4.14
351.21	8.45	4.19
351.22	8.44	4.23
351.23	8.42	4.26
351.24	8.39	4.30
351.25	8.36	4.32
351.26	8.32	4.34
351.27	8.27	4.36
351.28	8.22	**4.36**
351.29	8.15	4.36
351.30	8.07	4.34
351.31	7.97	4.31
351.32	7.84	4.26
351.33	7.57	4.12

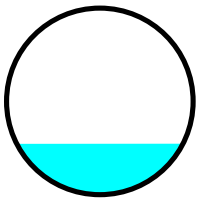
Summary for Reach CO2: TO CO#3

Inflow Area = 7,671 sf, 57.24% Impervious, Inflow Depth = 3.56" for 25-Year event
Inflow = 0.65 cfs @ 12.08 hrs, Volume= 2,273 cf
Outflow = 0.65 cfs @ 12.09 hrs, Volume= 2,273 cf, Atten= 1%, Lag= 0.5 min

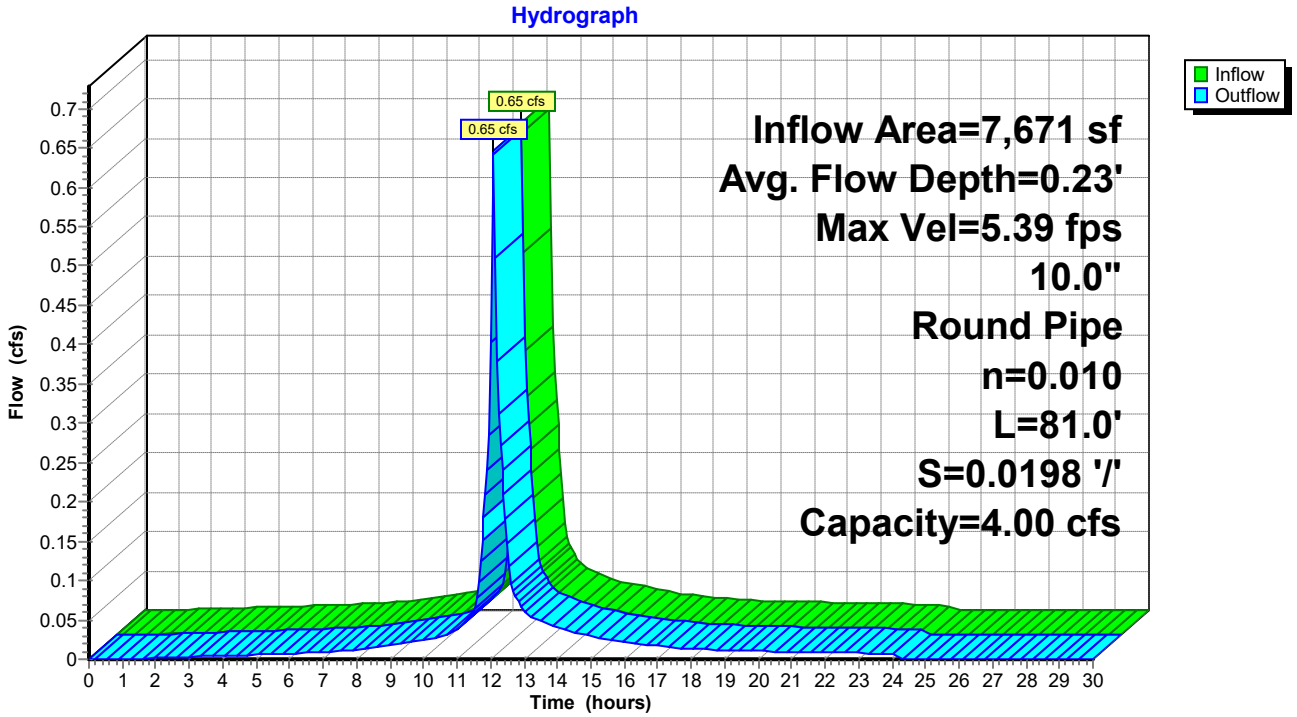
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.39 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.75 fps, Avg. Travel Time= 0.8 min

Peak Storage= 10 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.00 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 81.0' Slope= 0.0198 '/'
Inlet Invert= 349.00', Outlet Invert= 347.40'



Reach CO2: TO CO#3



Stage-Discharge for Reach CO2: TO CO#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
349.00	0.00	0.00
349.01	0.73	0.00
349.02	1.16	0.00
349.03	1.52	0.01
349.04	1.83	0.02
349.05	2.12	0.03
349.06	2.39	0.04
349.07	2.63	0.06
349.08	2.87	0.08
349.09	3.09	0.10
349.10	3.30	0.12
349.11	3.50	0.15
349.12	3.70	0.18
349.13	3.88	0.21
349.14	4.06	0.25
349.15	4.24	0.28
349.16	4.41	0.32
349.17	4.57	0.37
349.18	4.72	0.41
349.19	4.88	0.46
349.20	5.02	0.51
349.21	5.17	0.56
349.22	5.30	0.61
349.23	5.44	0.67
349.24	5.57	0.72
349.25	5.70	0.78
349.26	5.82	0.85
349.27	5.94	0.91
349.28	6.06	0.97
349.29	6.17	1.04
349.30	6.28	1.11
349.31	6.38	1.18
349.32	6.49	1.25
349.33	6.59	1.32
349.34	6.69	1.40
349.35	6.78	1.47
349.36	6.87	1.55
349.37	6.96	1.63
349.38	7.05	1.71
349.39	7.13	1.79
349.40	7.21	1.87
349.41	7.29	1.95
349.42	7.36	2.03
349.43	7.44	2.11
349.44	7.51	2.19
349.45	7.57	2.28
349.46	7.64	2.36
349.47	7.70	2.44
349.48	7.76	2.52
349.49	7.82	2.61
349.50	7.87	2.69
349.51	7.92	2.77
349.52	7.97	2.85
349.53	8.02	2.93
349.54	8.06	3.01
349.55	8.10	3.09
349.56	8.14	3.17
349.57	8.18	3.25
349.58	8.21	3.33
349.59	8.24	3.40
349.60	8.27	3.47
349.61	8.29	3.55
349.62	8.31	3.62
349.63	8.33	3.68
349.64	8.34	3.75
349.65	8.35	3.81
349.66	8.36	3.87
349.67	8.37	3.93
349.68	**8.37**	3.99
349.69	8.36	4.04
349.70	8.36	4.09
349.71	8.35	4.13
349.72	8.33	4.17
349.73	8.31	4.21
349.74	8.28	4.24
349.75	8.25	4.27
349.76	8.21	4.29
349.77	8.17	4.30
349.78	8.11	**4.31**
349.79	8.05	4.30
349.80	7.97	4.29
349.81	7.87	4.26
349.82	7.74	4.21
349.83	7.47	4.07

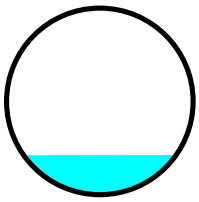
Summary for Reach CO3: TO DMH#21

Inflow Area = 8,341 sf, 60.68% Impervious, Inflow Depth = 3.68" for 25-Year event
Inflow = 0.72 cfs @ 12.09 hrs, Volume= 2,556 cf
Outflow = 0.72 cfs @ 12.09 hrs, Volume= 2,556 cf, Atten= 0%, Lag= 0.1 min

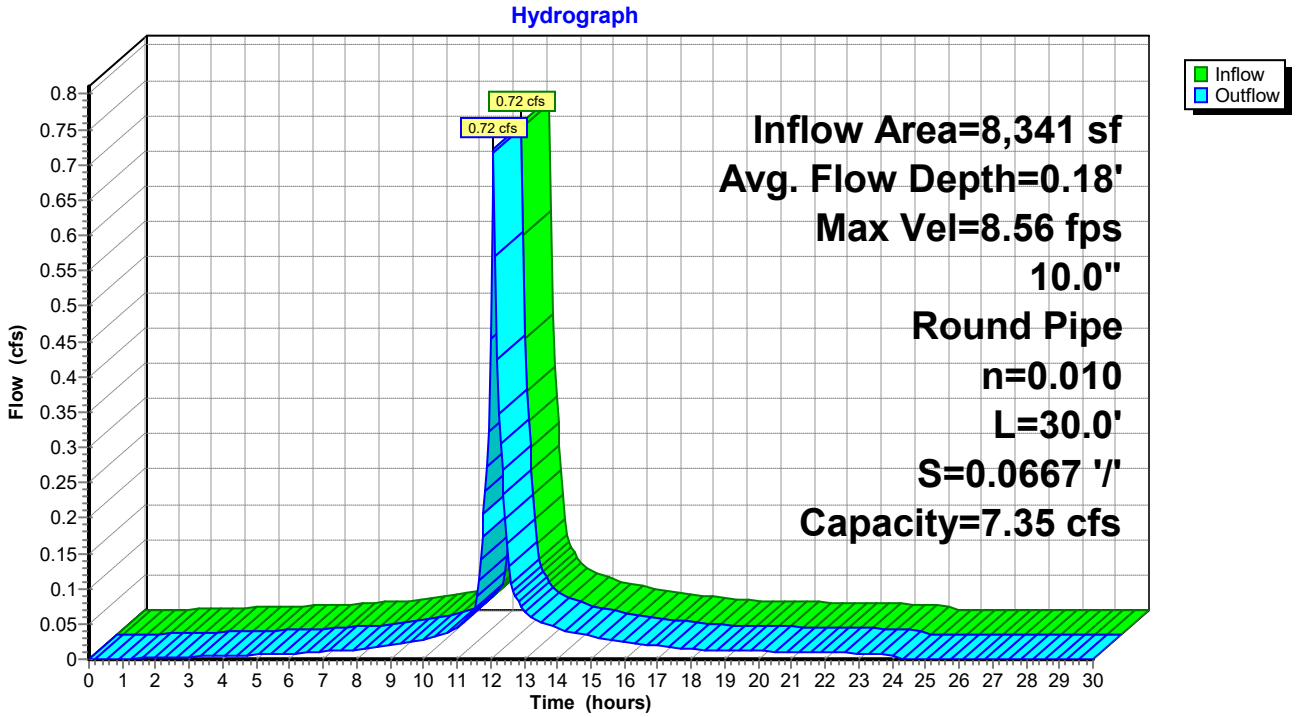
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.56 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.80 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 7.35 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 30.0' Slope= 0.0667 '/'
Inlet Invert= 347.40', Outlet Invert= 345.40'



Reach CO3: TO DMH#21



Stage-Discharge for Reach CO3: TO DMH#21

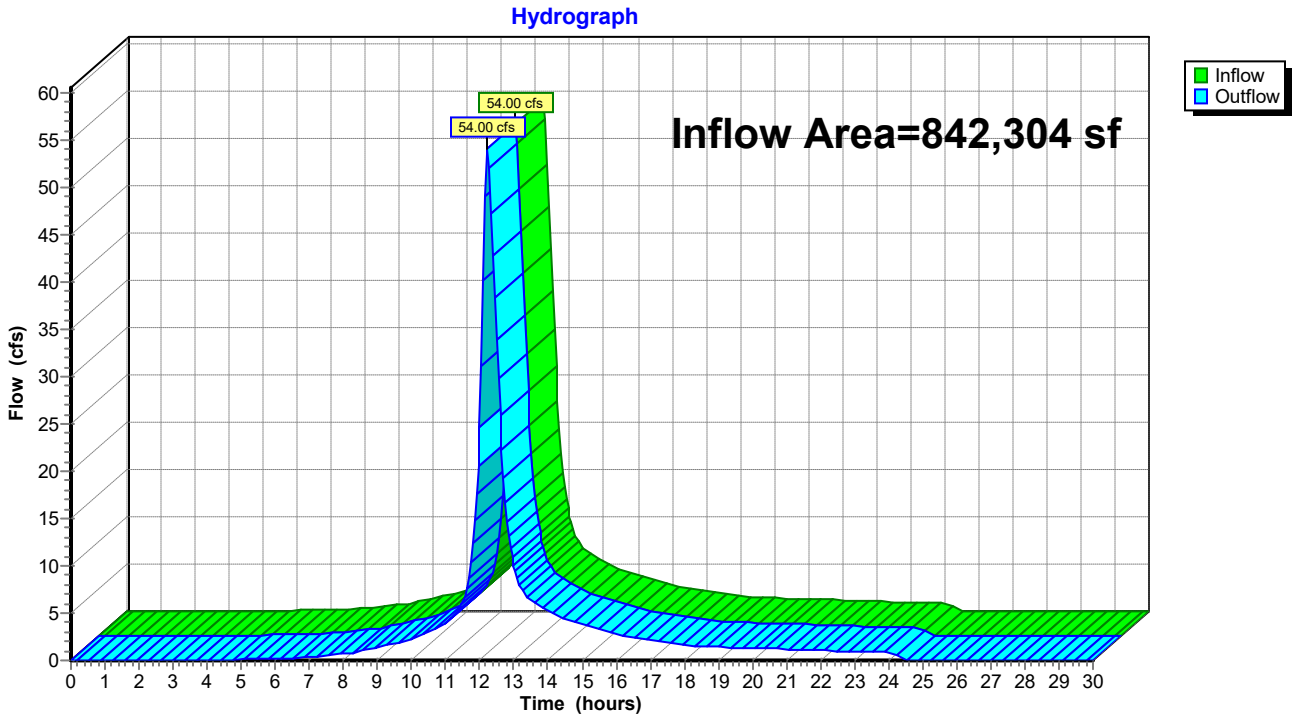
Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.40	0.00	0.00
347.41	1.34	0.00
347.42	2.13	0.01
347.43	2.79	0.02
347.44	3.37	0.03
347.45	3.90	0.05
347.46	4.38	0.08
347.47	4.84	0.11
347.48	5.27	0.14
347.49	5.68	0.18
347.50	6.07	0.22
347.51	6.44	0.27
347.52	6.79	0.33
347.53	7.14	0.39
347.54	7.47	0.45
347.55	7.79	0.52
347.56	8.09	0.59
347.57	8.39	0.67
347.58	8.68	0.75
347.59	8.96	0.84
347.60	9.23	0.93
347.61	9.49	1.02
347.62	9.74	1.12
347.63	9.99	1.22
347.64	10.23	1.33
347.65	10.47	1.44
347.66	10.69	1.55
347.67	10.91	1.67
347.68	11.12	1.79
347.69	11.33	1.91
347.70	11.53	2.04
347.71	11.73	2.17
347.72	11.92	2.30
347.73	12.10	2.43
347.74	12.28	2.57
347.75	12.46	2.71
347.76	12.63	2.85
347.77	12.79	2.99
347.78	12.95	3.14
347.79	13.10	3.28
347.80	13.25	3.43
347.81	13.39	3.58
347.82	13.53	3.73
347.83	13.66	3.88
347.84	13.79	4.03
347.85	13.91	4.18
347.86	14.03	4.33
347.87	14.15	4.49
347.88	14.26	4.64
347.89	14.36	4.79
347.90	14.46	4.94
347.91	14.55	5.09
347.92	14.64	5.24
347.93	14.73	5.39
347.94	14.81	5.54
347.95	14.88	5.68
347.96	14.95	5.83
347.97	15.02	5.97
347.98	15.08	6.11
347.99	15.13	6.25
348.00	15.18	6.38
348.01	15.23	6.51
348.02	15.27	6.64
348.03	15.30	6.77
348.04	15.33	6.89
348.05	15.35	7.01
348.06	15.36	7.12
348.07	15.37	7.22
348.08	**15.37**	7.32
348.09	15.37	7.42
348.10	15.35	7.51
348.11	15.33	7.59
348.12	15.30	7.67
348.13	15.27	7.73
348.14	15.22	7.79
348.15	15.16	7.84
348.16	15.09	7.87
348.17	15.00	7.90
348.18	14.90	**7.91**
348.19	14.79	7.90
348.20	14.64	7.88
348.21	14.46	7.82
348.22	14.22	7.73
348.23	13.72	7.48

Summary for Reach cul: DP#1A

Inflow Area = 842,304 sf, 4.87% Impervious, Inflow Depth = 3.72" for 25-Year event
Inflow = 54.00 cfs @ 12.22 hrs, Volume= 261,197 cf
Outflow = 54.00 cfs @ 12.22 hrs, Volume= 261,197 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach cul: DP#1A



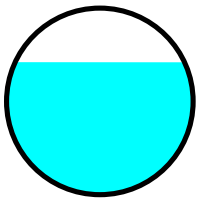
Summary for Reach D10: (new Reach)

Inflow Area = 51,339 sf, 69.57% Impervious, Inflow Depth = 3.87" for 25-Year event
Inflow = 5.19 cfs @ 12.08 hrs, Volume= 16,569 cf
Outflow = 5.16 cfs @ 12.08 hrs, Volume= 16,569 cf, Atten= 1%, Lag= 0.5 min

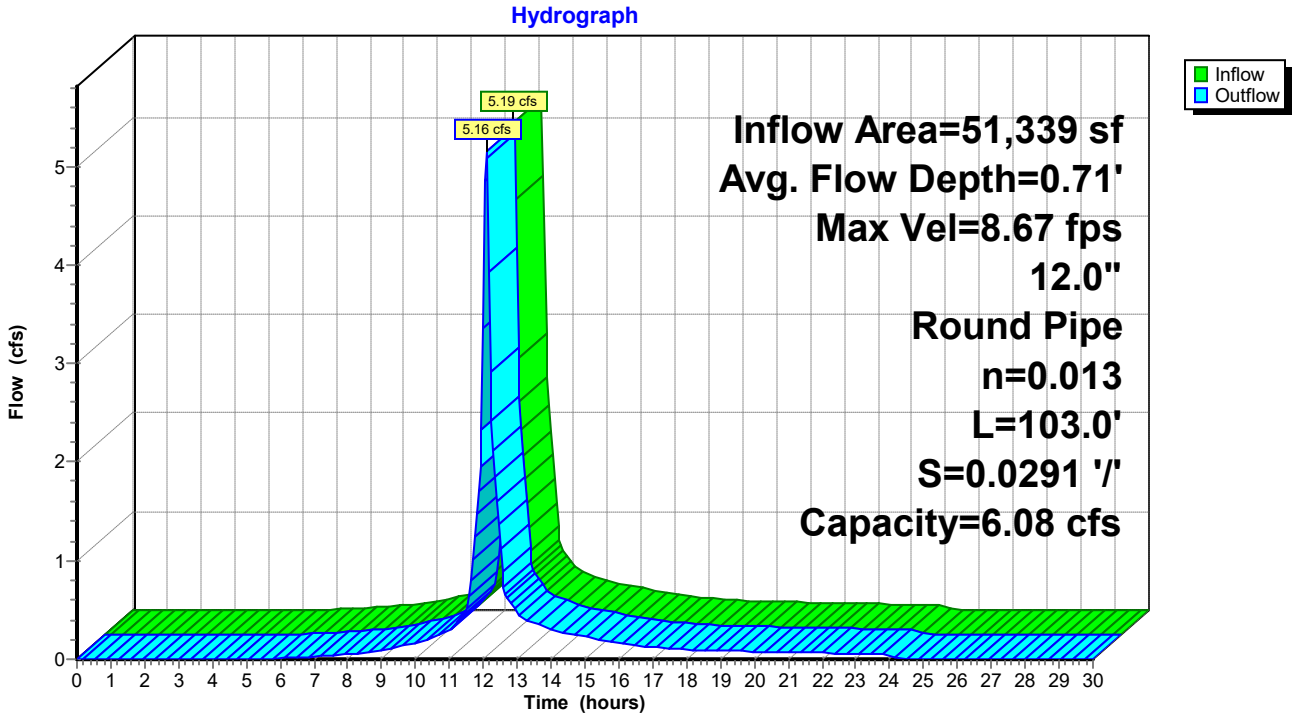
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.67 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.99 fps, Avg. Travel Time= 0.6 min

Peak Storage= 62 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.71'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.08 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 103.0' Slope= 0.0291 '/'
Inlet Invert= 346.60', Outlet Invert= 343.60'



Reach D10: (new Reach)



Stage-Discharge for Reach D10: (new Reach)

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.60	0.00	0.00
346.61	0.69	0.00
346.62	1.09	0.00
346.63	1.42	0.01
346.64	1.72	0.02
346.65	1.99	0.03
346.66	2.24	0.04
346.67	2.47	0.06
346.68	2.69	0.08
346.69	2.90	0.10
346.70	3.11	0.13
346.71	3.30	0.16
346.72	3.48	0.19
346.73	3.66	0.22
346.74	3.83	0.26
346.75	4.00	0.30
346.76	4.16	0.34
346.77	4.32	0.38
346.78	4.47	0.43
346.79	4.62	0.48
346.80	4.76	0.53
346.81	4.90	0.59
346.82	5.04	0.65
346.83	5.17	0.71
346.84	5.30	0.77
346.85	5.42	0.83
346.86	5.55	0.90
346.87	5.67	0.97
346.88	5.78	1.04
346.89	5.90	1.11
346.90	6.01	1.19
346.91	6.12	1.27
346.92	6.22	1.35
346.93	6.33	1.43
346.94	6.43	1.51
346.95	6.53	1.60
346.96	6.62	1.69
346.97	6.72	1.77
346.98	6.81	1.86
346.99	6.90	1.96
347.00	6.98	2.05
347.01	7.07	2.14
347.02	7.15	2.24
347.03	7.23	2.34
347.04	7.31	2.43
347.05	7.39	2.53
347.06	7.46	2.63
347.07	7.54	2.73
347.08	7.61	2.83
347.09	7.68	2.94
347.10	7.74	3.04
347.11	7.81	3.14
347.12	7.87	3.25
347.13	7.93	3.35
347.14	7.99	3.46
347.15	8.05	3.56
347.16	8.10	3.67
347.17	8.15	3.77
347.18	8.21	3.88
347.19	8.26	3.98
347.20	8.30	4.09
347.21	8.35	4.19
347.22	8.39	4.29
347.23	8.43	4.40
347.24	8.47	4.50
347.25	8.51	4.60
347.26	8.55	4.70
347.27	8.58	4.80
347.28	8.61	4.90
347.29	8.64	4.99
347.30	8.67	5.09
347.31	8.69	5.19
347.32	8.72	5.28
347.33	8.74	5.37
347.34	8.76	5.46
347.35	8.78	5.54
347.36	8.79	5.63
347.37	8.80	5.71
347.38	8.81	5.79
347.39	8.82	5.87
347.40	8.82	5.94
347.41	**8.83**	6.01
347.42	8.83	6.08
347.43	8.82	6.15
347.44	8.82	6.21
347.45	8.81	6.27
347.46	8.79	6.32
347.47	8.78	6.37
347.48	8.76	6.41
347.49	8.73	6.45
347.50	8.70	6.48
347.51	8.67	6.51
347.52	8.63	6.53
347.53	8.59	6.54
347.54	8.54	**6.54**
347.55	8.48	6.53
347.56	8.41	6.51
347.57	8.32	6.48
347.58	8.22	6.43
347.59	8.08	6.34
347.60	7.74	6.08

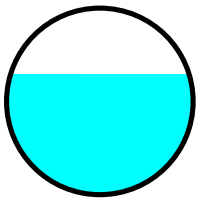
Summary for Reach D11: TO DMH12

Inflow Area = 39,805 sf, 44.80% Impervious, Inflow Depth = 3.06" for 25-Year event
Inflow = 3.28 cfs @ 12.08 hrs, Volume= 10,156 cf
Outflow = 3.26 cfs @ 12.09 hrs, Volume= 10,156 cf, Atten= 1%, Lag= 0.5 min

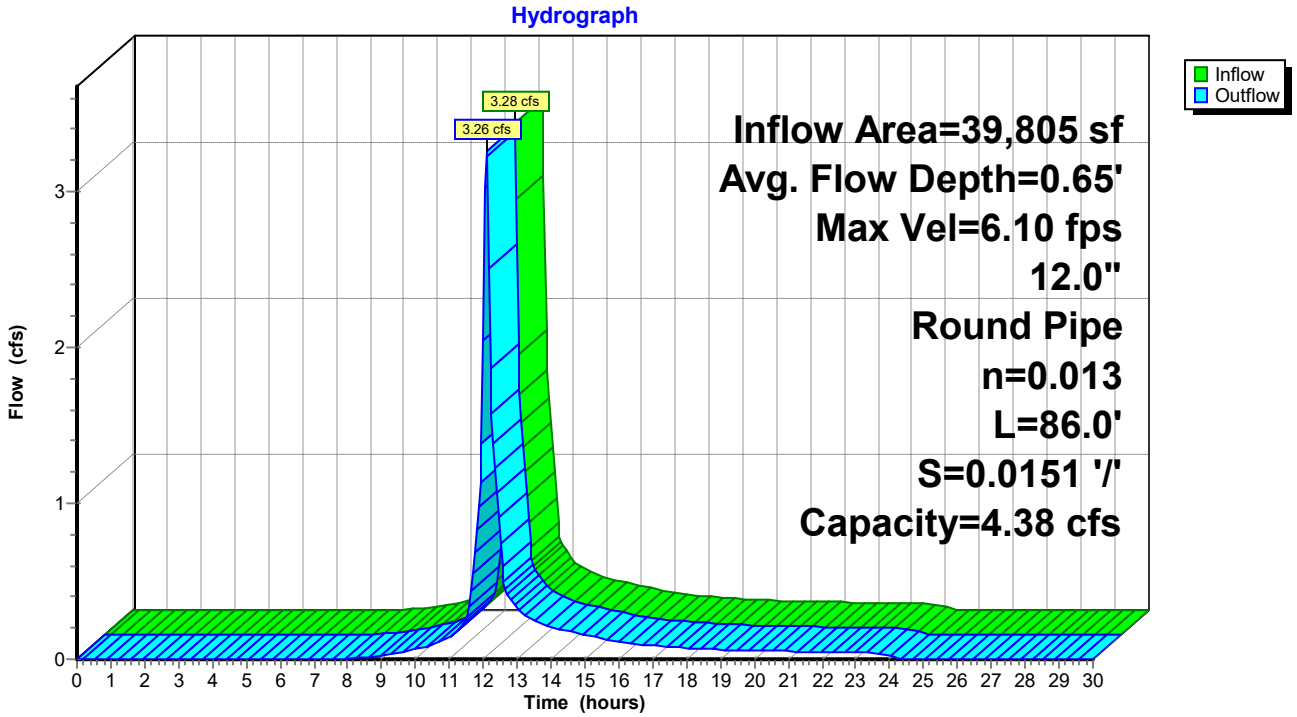
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.10 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.24 fps, Avg. Travel Time= 0.6 min

Peak Storage= 46 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.65'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.38 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 86.0' Slope= 0.0151 '/'
Inlet Invert= 348.50', Outlet Invert= 347.20'



Reach D11: TO DMH12



Stage-Discharge for Reach D11: TO DMH12

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.50	0.00	0.00
348.51	0.50	0.00
348.52	0.79	0.00
348.53	1.03	0.01
348.54	1.24	0.01
348.55	1.43	0.02
348.56	1.61	0.03
348.57	1.78	0.04
348.58	1.94	0.06
348.59	2.09	0.07
348.60	2.24	0.09
348.61	2.38	0.11
348.62	2.51	0.13
348.63	2.64	0.16
348.64	2.76	0.18
348.65	2.88	0.21
348.66	3.00	0.24
348.67	3.11	0.28
348.68	3.22	0.31
348.69	3.33	0.35
348.70	3.43	0.38
348.71	3.53	0.42
348.72	3.63	0.46
348.73	3.72	0.51
348.74	3.82	0.55
348.75	3.91	0.60
348.76	4.00	0.65
348.77	4.08	0.70
348.78	4.17	0.75
348.79	4.25	0.80
348.80	4.33	0.86
348.81	4.41	0.91
348.82	4.48	0.97
348.83	4.56	1.03
348.84	4.63	1.09
348.85	4.70	1.15
348.86	4.77	1.21
348.87	4.84	1.28
348.88	4.90	1.34
348.89	4.97	1.41
348.90	5.03	1.48
348.91	5.09	1.54
348.92	5.15	1.61
348.93	5.21	1.68
348.94	5.27	1.75
348.95	5.32	1.82
348.96	5.38	1.90
348.97	5.43	1.97
348.98	5.48	2.04
348.99	5.53	2.12
349.00	5.58	2.19
349.01	5.62	2.26
349.02	5.67	2.34
349.03	5.71	2.41
349.04	5.76	2.49
349.05	5.80	2.57
349.06	5.84	2.64
349.07	5.87	2.72
349.08	5.91	2.79
349.09	5.95	2.87
349.10	5.98	2.94
349.11	6.01	3.02
349.12	6.05	3.09
349.13	6.08	3.17
349.14	6.10	3.24
349.15	6.13	3.31
349.16	6.16	3.39
349.17	6.18	3.46
349.18	6.20	3.53
349.19	6.23	3.60
349.20	6.25	3.67
349.21	6.26	3.74
349.22	6.28	3.80
349.23	6.30	3.87
349.24	6.31	3.93
349.25	6.32	3.99
349.26	6.33	4.06
349.27	6.34	4.11
349.28	6.35	4.17
349.29	6.35	4.23
349.30	6.36	4.28
349.31	**6.36**	4.33
349.32	6.36	4.38
349.33	6.36	4.43
349.34	6.35	4.47
349.35	6.34	4.51
349.36	6.33	4.55
349.37	6.32	4.59
349.38	6.31	4.62
349.39	6.29	4.65
349.40	6.27	4.67
349.41	6.25	4.69
349.42	6.22	4.70
349.43	6.19	4.71
349.44	6.15	**4.71**
349.45	6.11	4.71
349.46	6.06	4.69
349.47	6.00	4.67
349.48	5.92	4.63
349.49	5.82	4.56
349.50	5.58	4.38

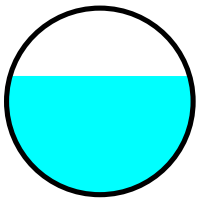
Summary for Reach D12: TO DMH13

Inflow Area = 63,650 sf, 57.11% Impervious, Inflow Depth = 3.48" for 25-Year event
Inflow = 5.81 cfs @ 12.08 hrs, Volume= 18,434 cf
Outflow = 5.78 cfs @ 12.09 hrs, Volume= 18,434 cf, Atten= 1%, Lag= 0.4 min

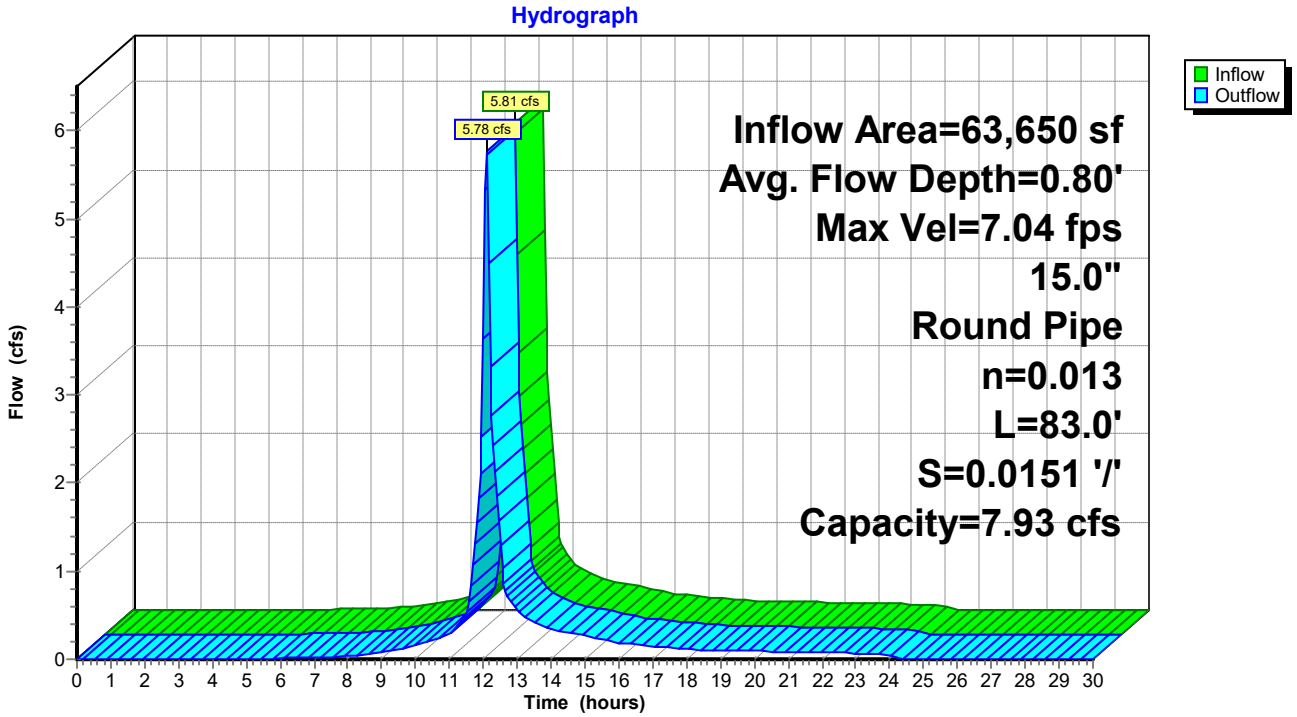
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.04 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.36 fps, Avg. Travel Time= 0.6 min

Peak Storage= 68 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.80'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.93 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0151 '/'
Inlet Invert= 347.10', Outlet Invert= 345.85'



Reach D12: TO DMH13



Stage-Discharge for Reach D12: TO DMH13

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.10	0.00	0.00
347.11	0.46	0.00
347.12	0.78	0.00
347.13	1.02	0.01
347.14	1.24	0.01
347.15	1.43	0.02
347.16	1.61	0.04
347.17	1.78	0.05
347.18	1.95	0.06
347.19	2.10	0.08
347.20	2.25	0.10
347.21	2.39	0.13
347.22	2.52	0.15
347.23	2.66	0.18
347.24	2.78	0.21
347.25	2.91	0.24
347.26	3.03	0.28
347.27	3.14	0.32
347.28	3.25	0.35
347.29	3.37	0.40
347.30	3.47	0.44
347.31	3.58	0.49
347.32	3.68	0.54
347.33	3.78	0.59
347.34	3.88	0.64
347.35	3.97	0.69
347.36	4.07	0.75
347.37	4.16	0.81
347.38	4.25	0.87
347.39	4.34	0.94
347.40	4.42	1.00
347.41	4.51	1.07
347.42	4.59	1.14
347.43	4.67	1.21
347.44	4.75	1.28
347.45	4.83	1.36
347.46	4.90	1.43
347.47	4.98	1.51
347.48	5.05	1.59
347.49	5.12	1.67
347.50	5.19	1.76
347.51	5.26	1.84
347.52	5.33	1.93
347.53	5.40	2.02
347.54	5.46	2.11
347.55	5.53	2.20
347.56	5.59	2.29
347.57	5.65	2.38
347.58	5.71	2.48
347.59	5.77	2.57
347.60	5.83	2.67
347.61	5.88	2.77
347.62	5.94	2.87
347.63	6.00	2.97
347.64	6.05	3.07
347.65	6.10	3.17
347.66	6.15	3.28
347.67	6.20	3.38
347.68	6.25	3.48
347.69	6.30	3.59
347.70	6.35	3.70
347.71	6.39	3.80
347.72	6.44	3.91
347.73	6.48	4.02
347.74	6.52	4.13
347.75	6.57	4.23
347.76	6.61	4.34
347.77	6.65	4.45
347.78	6.69	4.56
347.79	6.72	4.67
347.80	6.76	4.78
347.81	6.80	4.89
347.82	6.83	5.00
347.83	6.86	5.11
347.84	6.90	5.22
347.85	6.93	5.33
347.86	6.96	5.43
347.87	6.99	5.54
347.88	7.02	5.65
347.89	7.04	5.76
347.90	7.07	5.86
347.91	7.10	5.97
347.92	7.12	6.08
347.93	7.14	6.18
347.94	7.16	6.28
347.95	7.19	6.39
347.96	7.21	6.49
347.97	7.22	6.59
347.98	7.24	6.69
347.99	7.26	6.78
348.00	7.27	6.88
348.01	7.29	6.98
348.02	7.30	7.07
348.03	7.31	7.16
348.04	7.32	7.25
348.05	7.33	7.34
348.06	7.34	7.43
348.07	7.35	7.51
348.08	7.35	7.59
348.09	7.36	7.67
348.10	7.36	7.75
348.11	7.36	7.82
348.12	**7.36**	7.90
348.13	7.36	7.96
348.14	7.36	8.03
348.15	7.36	8.09
348.16	7.35	8.15
348.17	7.34	8.21
348.18	7.33	8.26
348.19	7.32	8.31
348.20	7.31	8.36
348.21	7.29	8.40
348.22	7.27	8.43
348.23	7.25	8.46
348.24	7.23	8.49
348.25	7.20	8.51
348.26	7.17	8.52
348.27	7.14	**8.53**
348.28	7.10	8.52
348.29	7.06	8.51
348.30	7.02	8.49
348.31	6.96	8.46
348.32	6.89	8.41
348.33	6.81	8.33
348.34	6.69	8.19
348.35	6.46	7.93

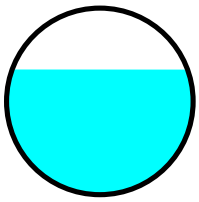
Summary for Reach D13: TO DMH14

Inflow Area = 75,826 sf, 62.17% Impervious, Inflow Depth = 3.66" for 25-Year event
Inflow = 7.15 cfs @ 12.08 hrs, Volume= 23,106 cf
Outflow = 7.11 cfs @ 12.09 hrs, Volume= 23,106 cf, Atten= 1%, Lag= 0.4 min

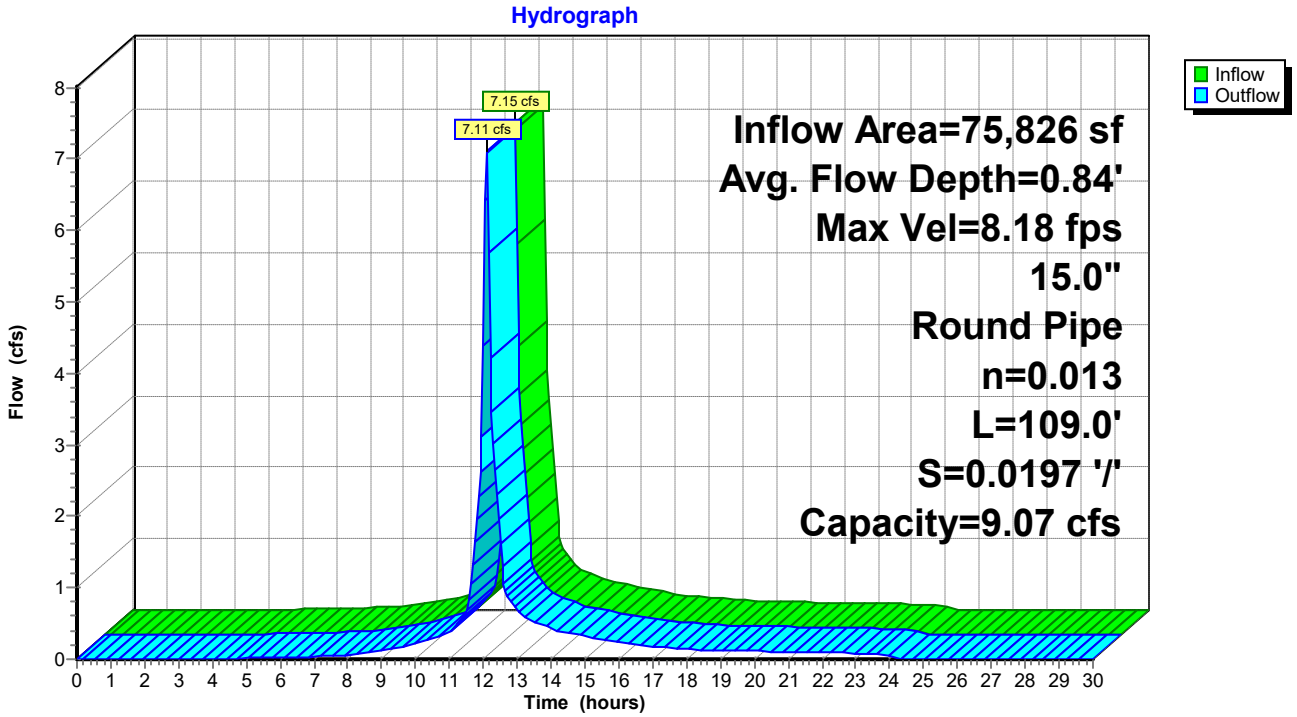
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.18 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.68 fps, Avg. Travel Time= 0.7 min

Peak Storage= 95 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.84'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.07 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 109.0' Slope= 0.0197 '/'
Inlet Invert= 345.75', Outlet Invert= 343.60'



Reach D13: TO DMH14



Stage-Discharge for Reach D13: TO DMH14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
345.75	0.00	0.00
345.76	0.53	0.00
345.77	0.89	0.00
345.78	1.17	0.01
345.79	1.42	0.02
345.80	1.64	0.03
345.81	1.85	0.04
345.82	2.04	0.06
345.83	2.23	0.07
345.84	2.40	0.10
345.85	2.57	0.12
345.86	2.73	0.15
345.87	2.89	0.17
345.88	3.04	0.21
345.89	3.19	0.24
345.90	3.33	0.28
345.91	3.46	0.32
345.92	3.60	0.36
345.93	3.73	0.41
345.94	3.85	0.45
345.95	3.97	0.50
345.96	4.09	0.56
345.97	4.21	0.61
345.98	4.33	0.67
345.99	4.44	0.73
346.00	4.55	0.79
346.01	4.65	0.86
346.02	4.76	0.93
346.03	4.86	1.00
346.04	4.96	1.07
346.05	5.06	1.15
346.06	5.16	1.22
346.07	5.25	1.30
346.08	5.34	1.38
346.09	5.43	1.47
346.10	5.52	1.55
346.11	5.61	1.64
346.12	5.70	1.73
346.13	5.78	1.82
346.14	5.86	1.92
346.15	5.94	2.01
346.16	6.02	2.11
346.17	6.10	2.21
346.18	6.18	2.31
346.19	6.25	2.41
346.20	6.32	2.52
346.21	6.40	2.62
346.22	6.47	2.73
346.23	6.54	2.84
346.24	6.60	2.95
346.25	6.67	3.06
346.26	6.73	3.17
346.27	6.80	3.28
346.28	6.86	3.40
346.29	6.92	3.51
346.30	6.98	3.63
346.31	7.04	3.75
346.32	7.10	3.87
346.33	7.15	3.99
346.34	7.21	4.11
346.35	7.26	4.23
346.36	7.32	4.35
346.37	7.37	4.47
346.38	7.42	4.60
346.39	7.47	4.72
346.40	7.51	4.85
346.41	7.56	4.97
346.42	7.61	5.10
346.43	7.65	5.22
346.44	7.69	5.35
346.45	7.74	5.47
346.46	7.78	5.60
346.47	7.82	5.72
346.48	7.85	5.85
346.49	7.89	5.97
346.50	7.93	6.10
346.51	7.96	6.22
346.52	8.00	6.34
346.53	8.03	6.47
346.54	8.06	6.59
346.55	8.09	6.71
346.56	8.12	6.83
346.57	8.15	6.95
346.58	8.17	7.07
346.59	8.20	7.19
346.60	8.22	7.31
346.61	8.25	7.42
346.62	8.27	7.54
346.63	8.29	7.65
346.64	8.31	7.76
346.65	8.33	7.87
346.66	8.34	7.98
346.67	8.36	8.09
346.68	8.37	8.20
346.69	8.38	8.30
346.70	8.39	8.40
346.71	8.40	8.50
346.72	8.41	8.59
346.73	8.42	8.69
346.74	8.42	8.78
346.75	8.43	8.87
346.76	8.43	8.95
346.77	**8.43**	9.04
346.78	8.43	9.11
346.79	8.42	9.19
346.80	8.42	9.26
346.81	8.41	9.33
346.82	8.40	9.40
346.83	8.39	9.46
346.84	8.38	9.51
346.85	8.36	9.56
346.86	8.34	9.61
346.87	8.32	9.65
346.88	8.30	9.69
346.89	8.27	9.71
346.90	8.24	9.74
346.91	8.21	9.75
346.92	8.17	**9.76**
346.93	8.13	9.75
346.94	8.08	9.74
346.95	8.03	9.72
346.96	7.96	9.68
346.97	7.89	9.62
346.98	7.80	9.53
346.99	7.65	9.38
347.00	7.39	9.07

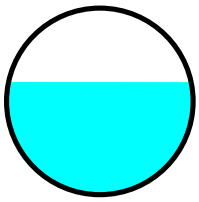
Summary for Reach D14: TO DMH15

Inflow Area = 248,895 sf, 65.27% Impervious, Inflow Depth = 3.92" for 25-Year event
Inflow = 23.59 cfs @ 12.10 hrs, Volume= 81,391 cf
Outflow = 22.66 cfs @ 12.12 hrs, Volume= 81,391 cf, Atten= 4%, Lag= 1.5 min

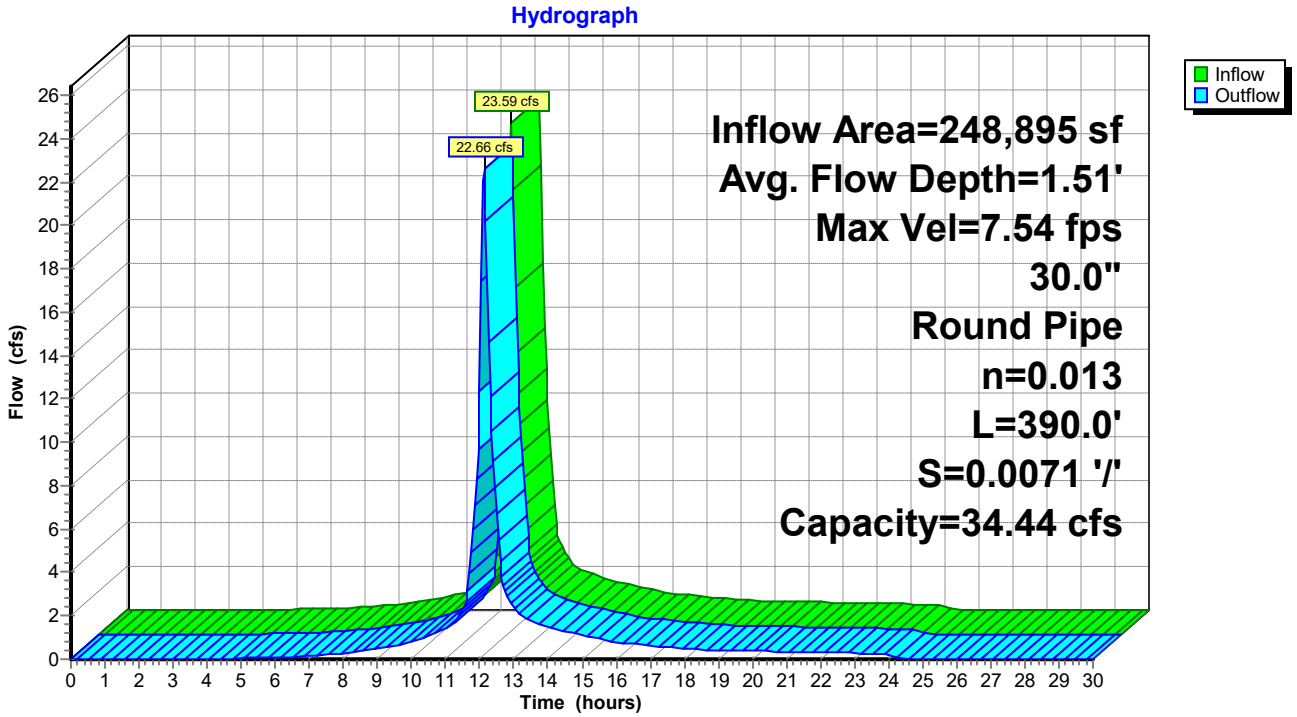
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.54 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 2.41 fps, Avg. Travel Time= 2.7 min

Peak Storage= 1,211 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.51'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.44 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 390.0' Slope= 0.0071 '/'
Inlet Invert= 338.20', Outlet Invert= 335.45'



Reach D14: TO DMH15



Stage-Discharge for Reach D14: TO DMH15

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
338.20	0.00	0.00
338.22	0.50	0.00
338.24	0.84	0.02
338.26	1.11	0.04
338.28	1.34	0.06
338.30	1.56	0.10
338.32	1.75	0.15
338.34	1.94	0.21
338.36	2.11	0.28
338.38	2.28	0.36
338.40	2.44	0.45
338.42	2.59	0.55
338.44	2.74	0.66
338.46	2.88	0.78
338.48	3.02	0.91
338.50	3.16	1.05
338.52	3.29	1.21
338.54	3.41	1.37
338.56	3.54	1.54
338.58	3.66	1.72
338.60	3.77	1.91
338.62	3.89	2.12
338.64	4.00	2.33
338.66	4.11	2.55
338.68	4.21	2.78
338.70	4.32	3.02
338.72	4.42	3.27
338.74	4.52	3.52
338.76	4.61	3.79
338.78	4.71	4.07
338.80	4.80	4.35
338.82	4.89	4.64
338.84	4.98	4.95
338.86	5.07	5.26
338.88	5.16	5.57
338.90	5.24	5.90
338.92	5.32	6.23
338.94	5.41	6.57
338.96	5.49	6.92
338.98	5.56	7.28
339.00	5.64	7.64
339.02	5.72	8.01
339.04	5.79	8.38
339.06	5.86	8.77
339.08	5.93	9.15
339.10	6.00	9.55
339.12	6.07	9.95
339.14	6.14	10.36
339.16	6.20	10.77
339.18	6.27	11.19
339.20	6.33	11.61
339.22	6.39	12.03
339.24	6.45	12.47
339.26	6.51	12.90
339.28	6.57	13.34
339.30	6.63	13.79
339.32	6.68	14.23
339.34	6.74	14.69
339.36	6.79	15.14
339.38	6.84	15.60
339.40	6.89	16.06
339.42	6.94	16.52
339.44	6.99	16.99
339.46	7.04	17.46
339.48	7.09	17.93
339.50	7.13	18.40
339.52	7.18	18.87
339.54	7.22	19.34
339.56	7.26	19.82
339.58	7.30	20.29
339.60	7.34	20.77
339.62	7.38	21.24
339.64	7.42	21.72
339.66	7.45	22.19
339.68	7.49	22.67
339.70	7.52	23.14
339.72	7.56	23.61
339.74	7.59	24.08
339.76	7.62	24.55
339.78	7.65	25.01
339.80	7.68	25.48
339.82	7.71	25.94
339.84	7.73	26.39
339.86	7.76	26.85
339.88	7.78	27.30
339.90	7.81	27.74
339.92	7.83	28.18
339.94	7.85	28.62
339.96	7.87	29.05
339.98	7.88	29.48
340.00	7.90	29.90
340.02	7.92	30.31
340.04	7.93	30.71
340.06	7.94	31.11
340.08	7.96	31.50
340.10	7.97	31.89
340.12	7.98	32.26
340.14	7.98	32.63
340.16	7.99	32.98
340.18	7.99	33.33
340.20	8.00	33.67
340.22	**8.00**	33.99
340.24	**8.00**	34.30
340.26	8.00	34.60
340.28	7.99	34.89
340.30	7.99	35.17
340.32	7.98	35.43
340.34	7.97	35.67
340.36	7.96	35.90
340.38	7.95	36.11
340.40	7.94	36.31
340.42	7.92	36.48
340.44	7.90	36.64
340.46	7.88	36.77
340.48	7.85	36.88
340.50	7.82	36.97
340.52	7.79	37.02
340.54	7.76	**37.04**
340.56	7.72	**37.03**
340.58	7.67	36.99
340.60	7.62	36.90
340.62	7.56	36.75
340.64	7.49	36.52
340.66	7.40	36.19
340.68	7.26	35.60
340.70	7.02	34.44

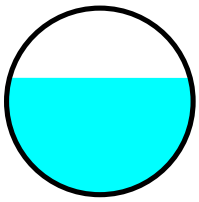
Summary for Reach D15: TO DMH16

Inflow Area = 273,738 sf, 64.05% Impervious, Inflow Depth = 3.86" for 25-Year event
Inflow = 24.59 cfs @ 12.12 hrs, Volume= 88,029 cf
Outflow = 24.11 cfs @ 12.14 hrs, Volume= 88,029 cf, Atten= 2%, Lag= 1.1 min

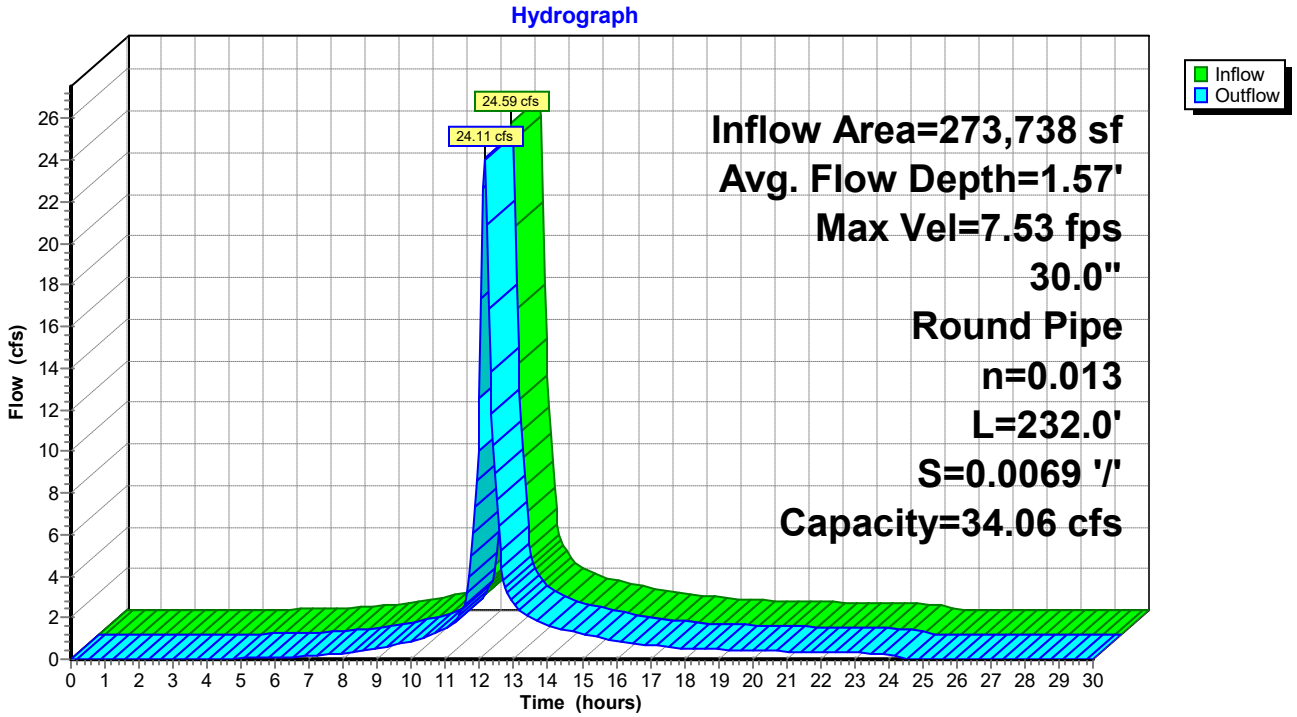
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.53 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.33 fps, Avg. Travel Time= 1.7 min

Peak Storage= 751 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.57'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.06 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 232.0' Slope= 0.0069 '/'
Inlet Invert= 335.35', Outlet Invert= 333.75'



Reach D15: TO DMH16



Stage-Discharge for Reach D15: TO DMH16

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
335.35	0.00	0.00
335.37	0.49	0.00
335.39	0.83	0.02
335.41	1.10	0.04
335.43	1.33	0.06
335.45	1.54	0.10
335.47	1.73	0.15
335.49	1.92	0.21
335.51	2.09	0.28
335.53	2.26	0.36
335.55	2.41	0.44
335.57	2.57	0.54
335.59	2.71	0.65
335.61	2.85	0.77
335.63	2.99	0.90
335.65	3.12	1.04
335.67	3.25	1.19
335.69	3.38	1.35
335.71	3.50	1.52
335.73	3.62	1.70
335.75	3.73	1.89
335.77	3.84	2.09
335.79	3.95	2.30
335.81	4.06	2.52
335.83	4.17	2.75
335.85	4.27	2.98
335.87	4.37	3.23
335.89	4.47	3.49
335.91	4.56	3.75
335.93	4.66	4.02
335.95	4.75	4.30
335.97	4.84	4.59
335.99	4.93	4.89
336.01	5.01	5.20
336.03	5.10	5.51
336.05	5.18	5.83
336.07	5.27	6.16
336.09	5.35	6.50
336.11	5.42	6.84
336.13	5.50	7.20
336.15	5.58	7.55
336.17	5.65	7.92
336.19	5.73	8.29
336.21	5.80	8.67
336.23	5.87	9.05
336.25	5.94	9.44
336.27	6.00	9.84
336.29	6.07	10.24
336.31	6.13	10.65
336.33	6.20	11.06
336.35	6.26	11.48
336.37	6.32	11.90
336.39	6.38	12.33
336.41	6.44	12.76
336.43	6.50	13.20
336.45	6.55	13.63
336.47	6.61	14.08
336.49	6.66	14.52
336.51	6.72	14.97
336.53	6.77	15.43
336.55	6.82	15.88
336.57	6.87	16.34
336.59	6.92	16.80
336.61	6.96	17.26
336.63	7.01	17.73
336.65	7.05	18.19
336.67	7.10	18.66
336.69	7.14	19.13
336.71	7.18	19.60
336.73	7.22	20.07
336.75	7.26	20.54
336.77	7.30	21.01
336.79	7.34	21.48
336.81	7.37	21.95
336.83	7.41	22.42
336.85	7.44	22.88
336.87	7.47	23.35
336.89	7.51	23.82
336.91	7.54	24.28
336.93	7.57	24.74
336.95	7.59	25.20
336.97	7.62	25.65
336.99	7.65	26.10
337.01	7.67	26.55
337.03	7.70	27.00
337.05	7.72	27.44
337.07	7.74	27.87
337.09	7.76	28.30
337.11	7.78	28.73
337.13	7.80	29.15
337.15	7.81	29.57
337.17	7.83	29.97
337.19	7.84	30.37
337.21	7.86	30.77
337.23	7.87	31.16
337.25	7.88	31.54
337.27	7.89	31.91
337.29	7.89	32.27
337.31	7.90	32.62
337.33	7.91	32.96
337.35	7.91	33.30
337.37	**7.91**	33.62
337.39	**7.91**	33.92
337.41	7.91	34.22
337.43	7.91	34.51
337.45	7.90	34.78
337.47	7.89	35.04
337.49	7.89	35.28
337.51	7.88	35.50
337.53	7.86	35.71
337.55	7.85	35.91
337.57	7.83	36.08
337.59	7.81	36.23
337.61	7.79	36.36
337.63	7.77	36.47
337.65	7.74	36.56
337.67	7.71	36.61
337.69	7.67	**36.63**
337.71	7.63	**36.62**
337.73	7.59	36.58
337.75	7.54	36.49
337.77	7.48	36.34
337.79	7.40	36.12
337.81	7.32	35.79
337.83	7.18	35.21
337.85	6.94	34.06

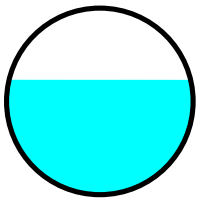
Summary for Reach D16: TO BASIN#1

Inflow Area = 273,738 sf, 64.05% Impervious, Inflow Depth = 3.86" for 25-Year event
Inflow = 24.11 cfs @ 12.14 hrs, Volume= 88,029 cf
Outflow = 24.02 cfs @ 12.15 hrs, Volume= 88,029 cf, Atten= 0%, Lag= 0.3 min

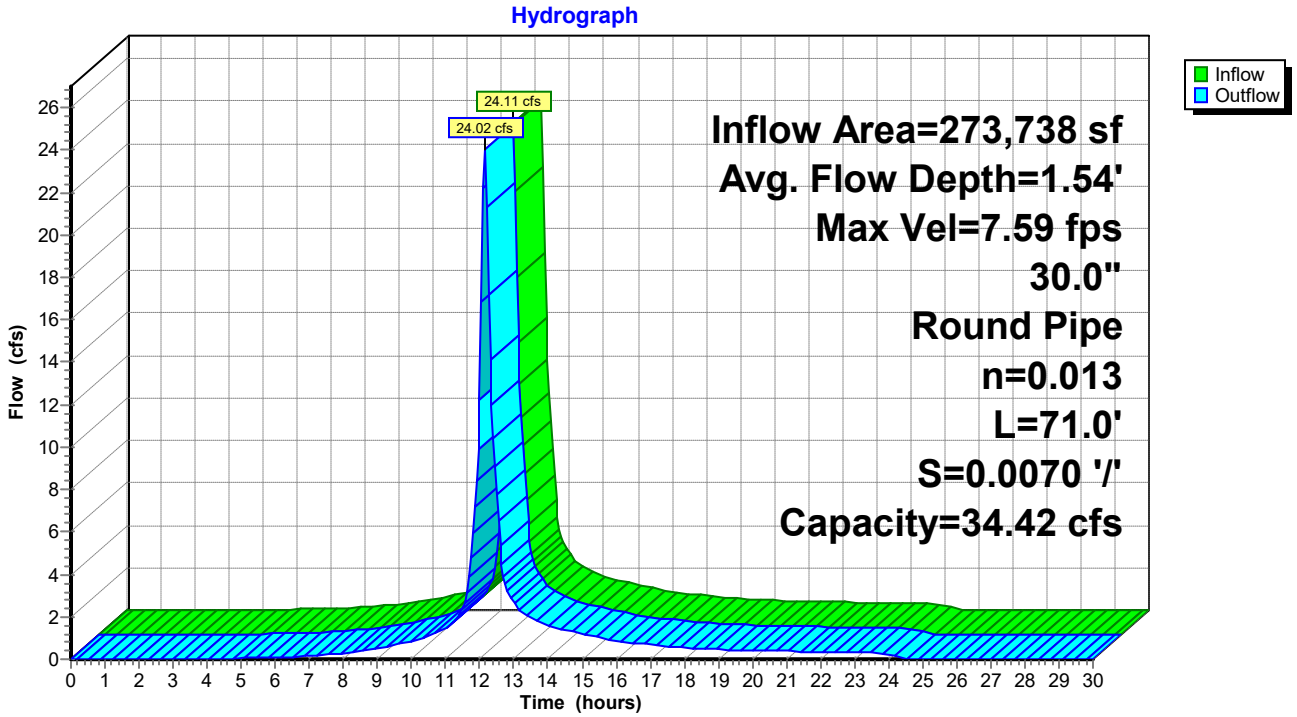
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.59 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.34 fps, Avg. Travel Time= 0.5 min

Peak Storage= 226 cf @ 12.14 hrs
Average Depth at Peak Storage= 1.54'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.42 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 71.0' Slope= 0.0070 '/'
Inlet Invert= 333.65', Outlet Invert= 333.15'



Reach D16: TO BASIN#1



Stage-Discharge for Reach D16: TO BASIN#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
333.65	0.00	0.00
333.67	0.50	0.00
333.69	0.84	0.02
333.71	1.11	0.04
333.73	1.34	0.06
333.75	1.56	0.10
333.77	1.75	0.15
333.79	1.94	0.21
333.81	2.11	0.28
333.83	2.28	0.36
333.85	2.44	0.45
333.87	2.59	0.55
333.89	2.74	0.66
333.91	2.88	0.78
333.93	3.02	0.91
333.95	3.16	1.05
333.97	3.28	1.21
333.99	3.41	1.37
334.01	3.53	1.54
334.03	3.65	1.72
334.05	3.77	1.91
334.07	3.88	2.11
334.09	3.99	2.33
334.11	4.10	2.55
334.13	4.21	2.78
334.15	4.31	3.01
334.17	4.41	3.26
334.19	4.51	3.52
334.21	4.61	3.79
334.23	4.71	4.06
334.25	4.80	4.35
334.27	4.89	4.64
334.29	4.98	4.94
334.31	5.07	5.25
334.33	5.15	5.57
334.35	5.24	5.89
334.37	5.32	6.23
334.39	5.40	6.57
334.41	5.48	6.92
334.43	5.56	7.27
334.45	5.64	7.63
334.47	5.71	8.00
334.49	5.79	8.38
334.51	5.86	8.76
334.53	5.93	9.15
334.55	6.00	9.54
334.57	6.07	9.94
334.59	6.13	10.35
334.61	6.20	10.76
334.63	6.26	11.18
334.65	6.33	11.60
334.67	6.39	12.03
334.69	6.45	12.46
334.71	6.51	12.89
334.73	6.57	13.33
334.75	6.62	13.78
334.77	6.68	14.23
334.79	6.73	14.68
334.81	6.79	15.13
334.83	6.84	15.59
334.85	6.89	16.05
334.87	6.94	16.51
334.89	6.99	16.98
334.91	7.04	17.44
334.93	7.08	17.91
334.95	7.13	18.38
334.97	7.17	18.86
334.99	7.21	19.33
335.01	7.26	19.80
335.03	7.30	20.28
335.05	7.34	20.75
335.07	7.38	21.23
335.09	7.41	21.70
335.11	7.45	22.18
335.13	7.49	22.65
335.15	7.52	23.13
335.17	7.55	23.60
335.19	7.58	24.07
335.21	7.62	24.53
335.23	7.65	25.00
335.25	7.67	25.46
335.27	7.70	25.92
335.29	7.73	26.38
335.31	7.75	26.83
335.33	7.78	27.28
335.35	7.80	27.73
335.37	7.82	28.17
335.39	7.84	28.60
335.41	7.86	29.03
335.43	7.88	29.46
335.45	7.90	29.88
335.47	7.91	30.29
335.49	7.93	30.69
335.51	7.94	31.09
335.53	7.95	31.48
335.55	7.96	31.87
335.57	7.97	32.24
335.59	7.98	32.61
335.61	7.98	32.96
335.63	7.99	33.31
335.65	7.99	33.65
335.67	**7.99**	33.97
335.69	**7.99**	34.28
335.71	7.99	34.58
335.73	7.99	34.87
335.75	7.98	35.15
335.77	7.98	35.40
335.79	7.97	35.65
335.81	7.96	35.88
335.83	7.95	36.09
335.85	7.93	36.29
335.87	7.91	36.46
335.89	7.89	36.61
335.91	7.87	36.74
335.93	7.85	36.86
335.95	7.82	36.94
335.97	7.79	37.00
335.99	7.75	**37.02**
336.01	7.71	**37.01**
336.03	7.67	36.96
336.05	7.61	36.88
336.07	7.55	36.72
336.09	7.48	36.50
336.11	7.39	36.17
336.13	7.26	35.58
336.15	7.01	34.42

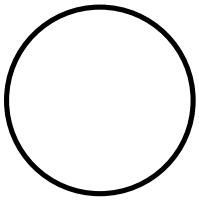
Summary for Reach D6: TO DMH14

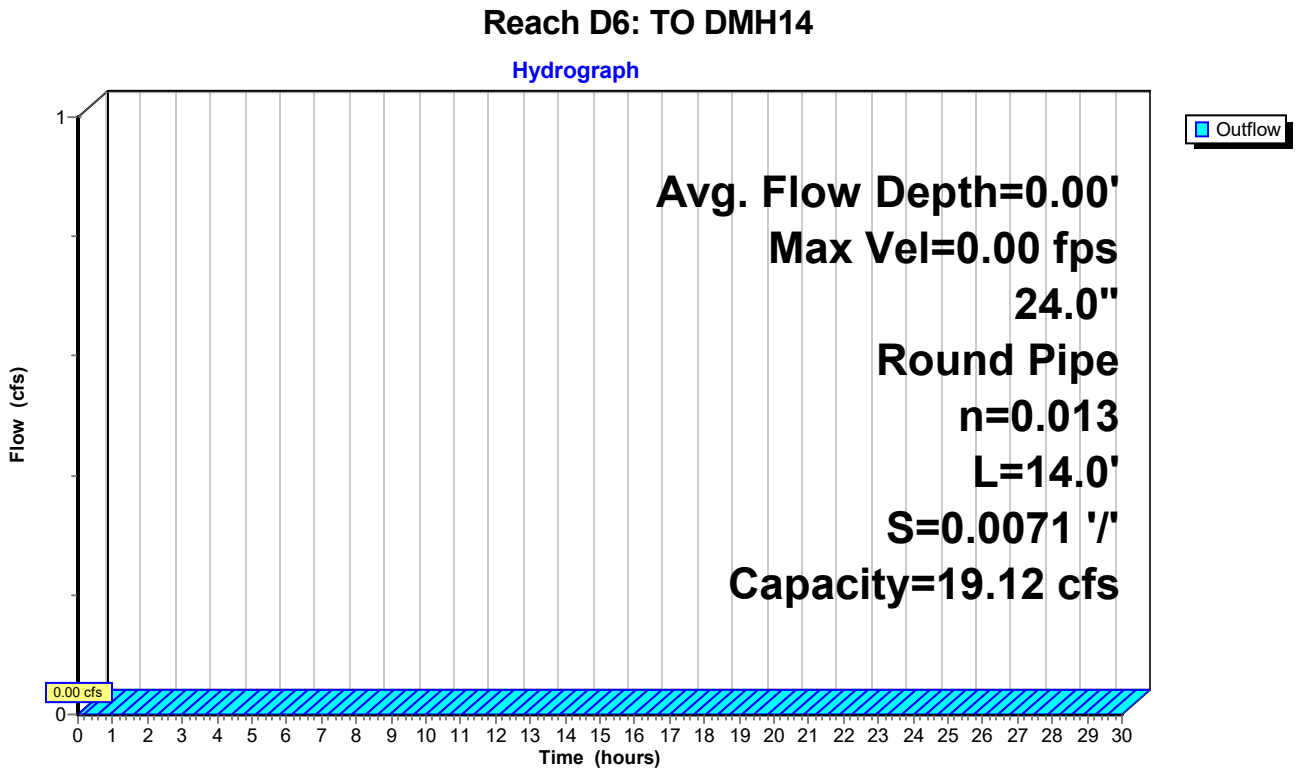
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 19.12 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 14.0' Slope= 0.0071 '/'
Inlet Invert= 339.60', Outlet Invert= 339.50'





Stage-Discharge for Reach D6: TO DMH14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
339.60	0.00	0.00
339.62	0.54	0.00
339.64	0.86	0.01
339.66	1.12	0.03
339.68	1.35	0.06
339.70	1.56	0.09
339.72	1.76	0.14
339.74	1.94	0.19
339.76	2.12	0.25
339.78	2.28	0.32
339.80	2.44	0.40
339.82	2.59	0.49
339.84	2.74	0.58
339.86	2.88	0.69
339.88	3.01	0.81
339.90	3.15	0.93
339.92	3.27	1.06
339.94	3.39	1.20
339.96	3.51	1.35
339.98	3.63	1.51
340.00	3.74	1.67
340.02	3.85	1.85
340.04	3.96	2.03
340.06	4.06	2.22
340.08	4.17	2.41
340.10	4.26	2.62
340.12	4.36	2.83
340.14	4.45	3.05
340.16	4.55	3.27
340.18	4.64	3.51
340.20	4.72	3.74
340.22	4.81	3.99
340.24	4.89	4.24
340.26	4.97	4.50
340.28	5.05	4.76
340.30	5.13	5.03
340.32	5.21	5.30
340.34	5.28	5.58
340.36	5.35	5.86
340.38	5.42	6.15
340.40	5.49	6.44
340.42	5.56	6.74
340.44	5.62	7.04
340.46	5.69	7.34
340.48	5.75	7.65
340.50	5.81	7.96
340.52	5.87	8.28
340.54	5.92	8.59
340.56	5.98	8.91
340.58	6.03	9.24
340.60	6.09	9.56
340.62	6.14	9.89
340.64	6.19	10.21
340.66	6.23	10.54
340.68	6.28	10.87
340.70	6.33	11.20
340.72	6.37	11.53
340.74	6.41	11.86
340.76	6.45	12.19
340.78	6.49	12.52
340.80	6.53	12.85
340.82	6.56	13.17
340.84	6.60	13.50
340.86	6.63	13.82
340.88	6.66	14.14
340.90	6.69	14.46
340.92	6.72	14.78
340.94	6.74	15.09
340.96	6.77	15.40
340.98	6.79	15.71
341.00	6.81	16.01
341.02	6.83	16.30
341.04	6.85	16.60
341.06	6.87	16.88
341.08	6.88	17.16
341.10	6.90	17.43
341.12	6.91	17.70
341.14	6.92	17.96
341.16	6.93	18.21
341.18	6.93	18.45
341.20	6.94	18.69
341.22	**6.94**	18.91
341.24	6.94	19.13
341.26	6.93	19.33
341.28	6.93	19.52
341.30	6.92	19.70
341.32	6.91	19.87
341.34	6.90	20.02
341.36	6.88	20.16
341.38	6.86	20.28
341.40	6.84	20.38
341.42	6.82	20.46
341.44	6.79	20.52
341.46	6.75	20.56
341.48	6.71	**20.57**
341.50	6.66	20.54
341.52	6.61	20.48
341.54	6.54	20.38
341.56	6.46	20.20
341.58	6.35	19.92
341.60	6.09	19.12

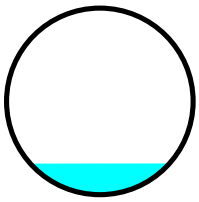
Summary for Reach D7: TO DMH8

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 4.17" for 25-Year event
Inflow = 0.39 cfs @ 12.07 hrs, Volume= 1,257 cf
Outflow = 0.39 cfs @ 12.08 hrs, Volume= 1,257 cf, Atten= 2%, Lag= 0.7 min

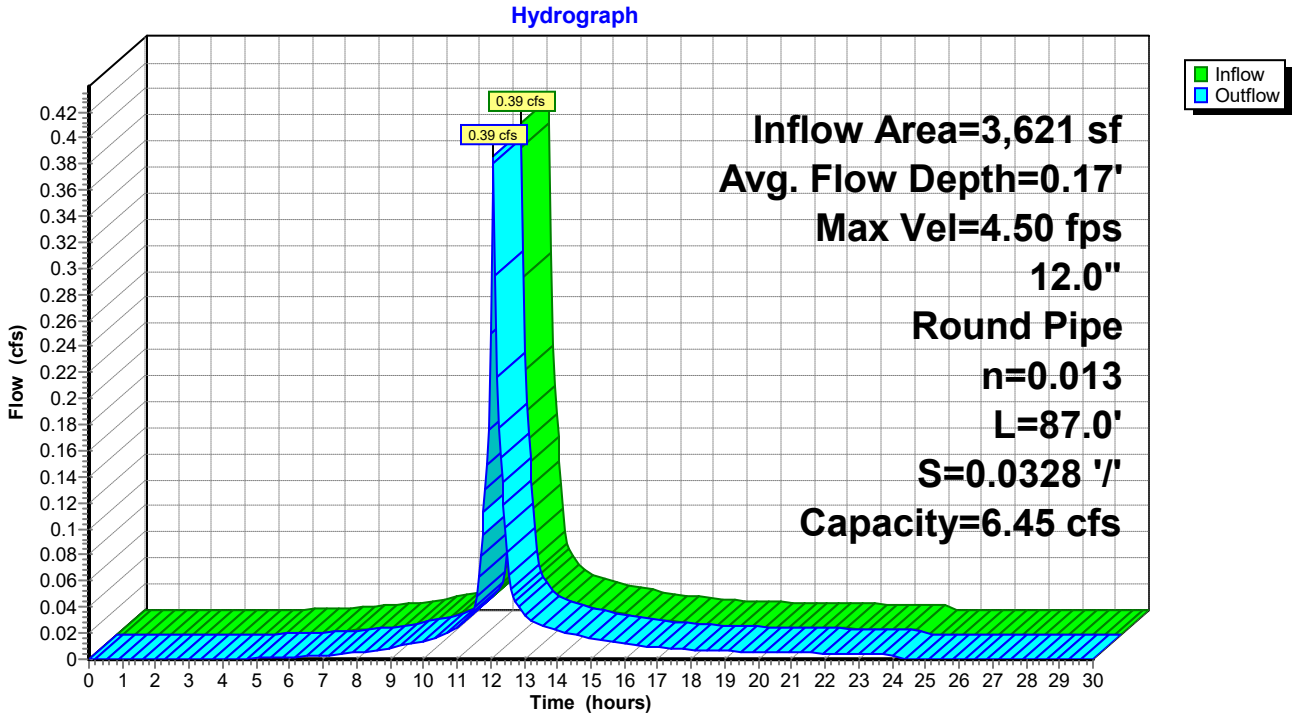
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.50 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.49 fps, Avg. Travel Time= 1.0 min

Peak Storage= 8 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.45 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 87.0' Slope= 0.0328 '/'
Inlet Invert= 354.15', Outlet Invert= 351.30'



Reach D7: TO DMH8



Stage-Discharge for Reach D7: TO DMH8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.15	0.00	0.00
354.16	0.73	0.00
354.17	1.16	0.00
354.18	1.51	0.01
354.19	1.82	0.02
354.20	2.11	0.03
354.21	2.37	0.05
354.22	2.62	0.06
354.23	2.86	0.08
354.24	3.08	0.11
354.25	3.29	0.13
354.26	3.50	0.16
354.27	3.69	0.20
354.28	3.88	0.23
354.29	4.07	0.27
354.30	4.24	0.31
354.31	4.41	0.36
354.32	4.58	0.41
354.33	4.74	0.46
354.34	4.90	0.51
354.35	5.05	0.56
354.36	5.20	0.62
354.37	5.34	0.68
354.38	5.48	0.75
354.39	5.62	0.81
354.40	5.75	0.88
354.41	5.88	0.95
354.42	6.01	1.03
354.43	6.13	1.10
354.44	6.25	1.18
354.45	6.37	1.26
354.46	6.49	1.35
354.47	6.60	1.43
354.48	6.71	1.52
354.49	6.82	1.61
354.50	6.92	1.70
354.51	7.02	1.79
354.52	7.12	1.88
354.53	7.22	1.98
354.54	7.31	2.07
354.55	7.41	2.17
354.56	7.50	2.27
354.57	7.59	2.37
354.58	7.67	2.48
354.59	7.75	2.58
354.60	7.84	2.69
354.61	7.91	2.79
354.62	7.99	2.90
354.63	8.07	3.01
354.64	8.14	3.12
354.65	8.21	3.22
354.66	8.28	3.33
354.67	8.35	3.44
354.68	8.41	3.55
354.69	8.47	3.67
354.70	8.53	3.78
354.71	8.59	3.89
354.72	8.65	4.00
354.73	8.70	4.11
354.74	8.75	4.22
354.75	8.81	4.33
354.76	8.85	4.44
354.77	8.90	4.55
354.78	8.94	4.66
354.79	8.99	4.77
354.80	9.03	4.88
354.81	9.06	4.98
354.82	9.10	5.09
354.83	9.13	5.19
354.84	9.16	5.30
354.85	9.19	5.40
354.86	9.22	5.50
354.87	9.25	5.60
354.88	9.27	5.69
354.89	9.29	5.79
354.90	9.31	5.88
354.91	9.32	5.97
354.92	9.33	6.06
354.93	9.34	6.14
354.94	9.35	6.22
354.95	9.36	6.30
354.96	**9.36**	6.38
354.97	9.36	6.45
354.98	9.36	6.52
354.99	9.35	6.58
355.00	9.34	6.64
355.01	9.33	6.70
355.02	9.31	6.75
355.03	9.29	6.80
355.04	9.26	6.84
355.05	9.23	6.87
355.06	9.20	6.90
355.07	9.16	6.92
355.08	9.11	6.93
355.09	9.05	**6.94**
355.10	8.99	6.93
355.11	8.92	6.91
355.12	8.83	6.87
355.13	8.72	6.81
355.14	8.57	6.72
355.15	8.21	6.45

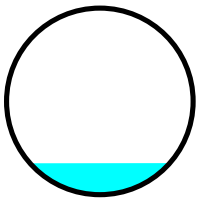
Summary for Reach D8: TO DMH9

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 4.17" for 25-Year event
Inflow = 0.39 cfs @ 12.08 hrs, Volume= 1,257 cf
Outflow = 0.38 cfs @ 12.10 hrs, Volume= 1,257 cf, Atten= 1%, Lag= 0.7 min

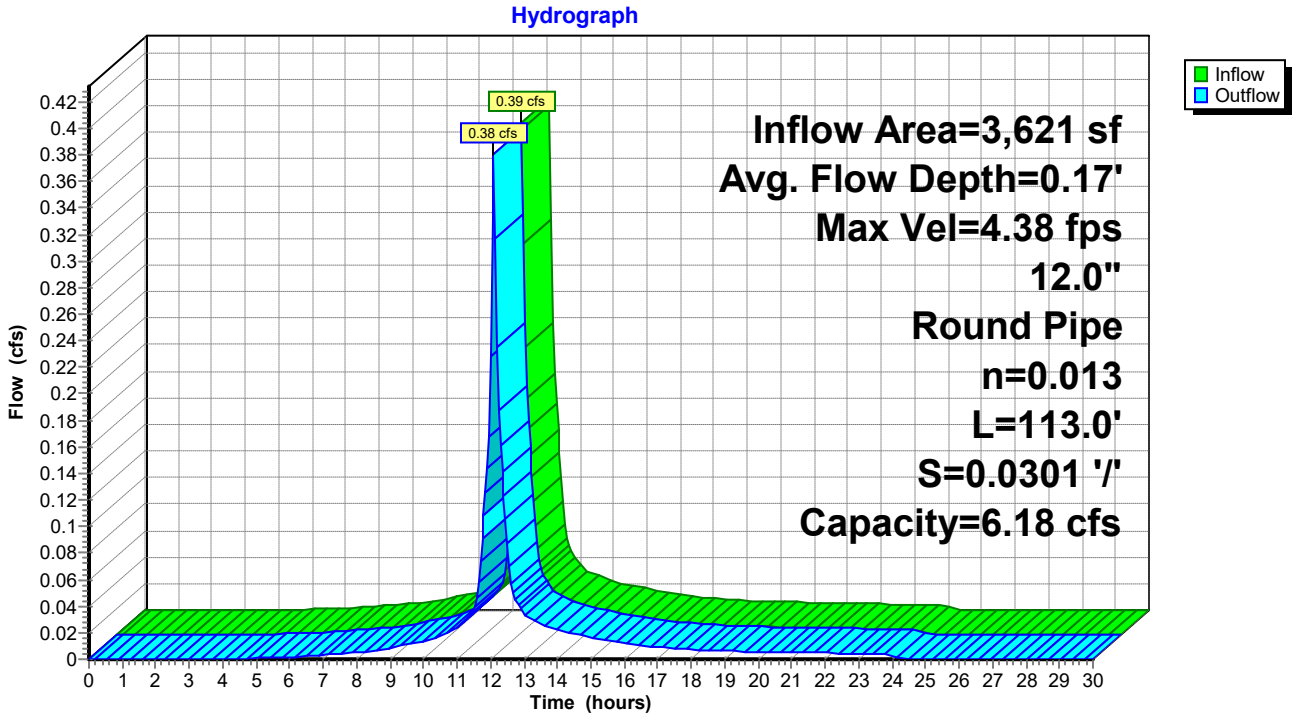
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.38 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.44 fps, Avg. Travel Time= 1.3 min

Peak Storage= 10 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.18 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 113.0' Slope= 0.0301 '/'
Inlet Invert= 351.20', Outlet Invert= 347.80'



Reach D8: TO DMH9



Stage-Discharge for Reach D8: TO DMH9

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.70	0.00
351.22	1.11	0.00
351.23	1.45	0.01
351.24	1.75	0.02
351.25	2.02	0.03
351.26	2.28	0.04
351.27	2.51	0.06
351.28	2.74	0.08
351.29	2.95	0.10
351.30	3.16	0.13
351.31	3.35	0.16
351.32	3.54	0.19
351.33	3.72	0.22
351.34	3.90	0.26
351.35	4.07	0.30
351.36	4.23	0.34
351.37	4.39	0.39
351.38	4.54	0.44
351.39	4.69	0.49
351.40	4.84	0.54
351.41	4.98	0.60
351.42	5.12	0.66
351.43	5.25	0.72
351.44	5.39	0.78
351.45	5.51	0.85
351.46	5.64	0.91
351.47	5.76	0.99
351.48	5.88	1.06
351.49	5.99	1.13
351.50	6.11	1.21
351.51	6.22	1.29
351.52	6.33	1.37
351.53	6.43	1.45
351.54	6.53	1.54
351.55	6.63	1.62
351.56	6.73	1.71
351.57	6.83	1.80
351.58	6.92	1.89
351.59	7.01	1.99
351.60	7.10	2.08
351.61	7.19	2.18
351.62	7.27	2.28
351.63	7.35	2.37
351.64	7.43	2.47
351.65	7.51	2.57
351.66	7.59	2.68
351.67	7.66	2.78
351.68	7.73	2.88
351.69	7.80	2.99
351.70	7.87	3.09
351.71	7.93	3.20
351.72	8.00	3.30
351.73	8.06	3.41
351.74	8.12	3.51
351.75	8.18	3.62
351.76	8.23	3.73
351.77	8.29	3.83
351.78	8.34	3.94
351.79	8.39	4.05
351.80	8.44	4.15
351.81	8.48	4.26
351.82	8.53	4.36
351.83	8.57	4.47
351.84	8.61	4.57
351.85	8.65	4.67
351.86	8.69	4.78
351.87	8.72	4.88
351.88	8.75	4.98
351.89	8.78	5.08
351.90	8.81	5.17
351.91	8.84	5.27
351.92	8.86	5.36
351.93	8.88	5.46
351.94	8.90	5.55
351.95	8.92	5.64
351.96	8.93	5.72
351.97	8.95	5.81
351.98	8.96	5.89
351.99	8.96	5.97
352.00	8.97	6.04
352.01	**8.97**	6.11
352.02	8.97	6.18
352.03	8.97	6.25
352.04	8.96	6.31
352.05	8.95	6.37
352.06	8.94	6.42
352.07	8.92	6.47
352.08	8.90	6.51
352.09	8.88	6.55
352.10	8.85	6.59
352.11	8.81	6.61
352.12	8.77	6.63
352.13	8.73	6.64
352.14	8.68	**6.65**
352.15	8.62	6.64
352.16	8.54	6.62
352.17	8.46	6.59
352.18	8.35	6.53
352.19	8.21	6.44
352.20	7.87	6.18

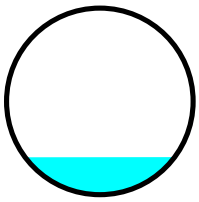
Summary for Reach D9: TO DMH10

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 4.17" for 25-Year event
Inflow = 0.38 cfs @ 12.10 hrs, Volume= 1,257 cf
Outflow = 0.37 cfs @ 12.11 hrs, Volume= 1,257 cf, Atten= 2%, Lag= 0.5 min

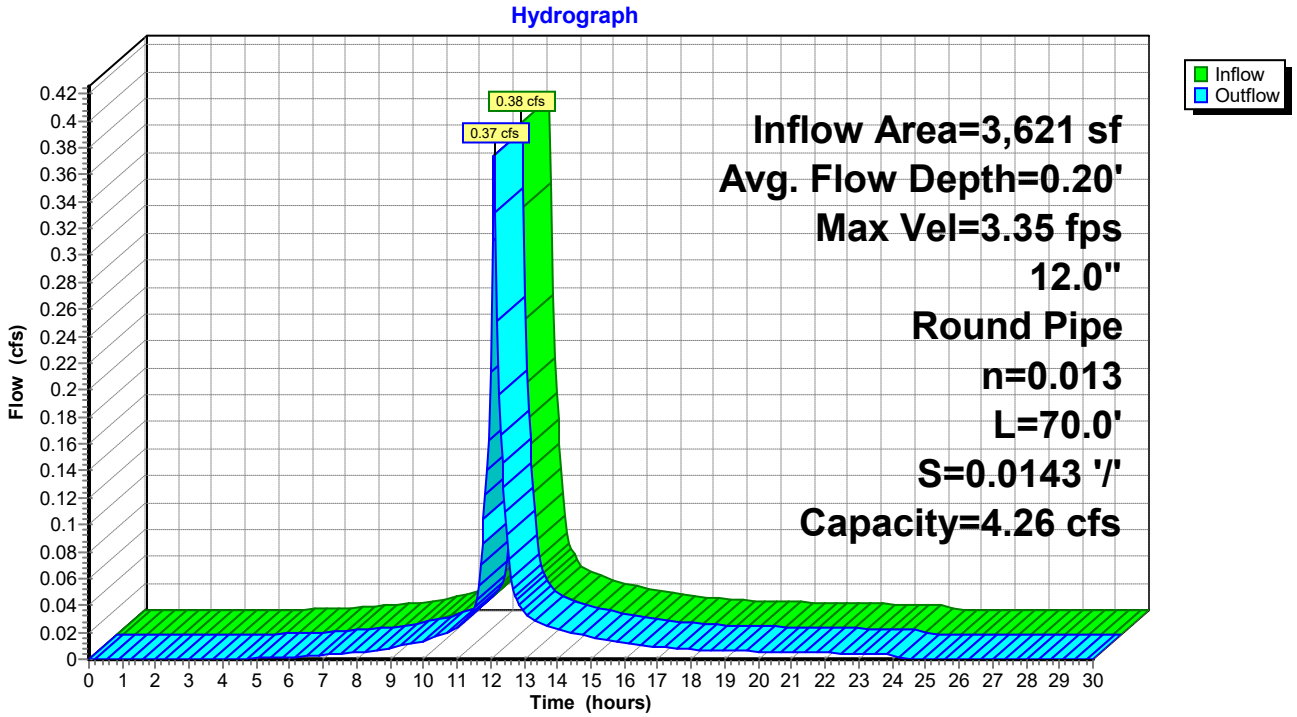
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.35 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.10 fps, Avg. Travel Time= 1.1 min

Peak Storage= 8 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.20'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.26 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 70.0' Slope= 0.0143 '/'
Inlet Invert= 347.70', Outlet Invert= 346.70'



Reach D9: TO DMH10



Stage-Discharge for Reach D9: TO DMH10

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.70	0.00	0.00
347.71	0.48	0.00
347.72	0.76	0.00
347.73	1.00	0.01
347.74	1.20	0.01
347.75	1.39	0.02
347.76	1.57	0.03
347.77	1.73	0.04
347.78	1.89	0.06
347.79	2.03	0.07
347.80	2.18	0.09
347.81	2.31	0.11
347.82	2.44	0.13
347.83	2.56	0.15
347.84	2.69	0.18
347.85	2.80	0.21
347.86	2.92	0.24
347.87	3.02	0.27
347.88	3.13	0.30
347.89	3.23	0.34
347.90	3.33	0.37
347.91	3.43	0.41
347.92	3.53	0.45
347.93	3.62	0.49
347.94	3.71	0.54
347.95	3.80	0.58
347.96	3.88	0.63
347.97	3.97	0.68
347.98	4.05	0.73
347.99	4.13	0.78
348.00	4.21	0.83
348.01	4.28	0.89
348.02	4.36	0.94
348.03	4.43	1.00
348.04	4.50	1.06
348.05	4.57	1.12
348.06	4.64	1.18
348.07	4.70	1.24
348.08	4.77	1.31
348.09	4.83	1.37
348.10	4.89	1.44
348.11	4.95	1.50
348.12	5.01	1.57
348.13	5.07	1.64
348.14	5.12	1.70
348.15	5.17	1.77
348.16	5.23	1.84
348.17	5.28	1.91
348.18	5.33	1.99
348.19	5.38	2.06
348.20	5.42	2.13
348.21	5.47	2.20
348.22	5.51	2.27
348.23	5.55	2.35
348.24	5.60	2.42
348.25	5.64	2.49
348.26	5.67	2.57
348.27	5.71	2.64
348.28	5.75	2.71
348.29	5.78	2.79
348.30	5.81	2.86
348.31	5.85	2.93
348.32	5.88	3.01
348.33	5.91	3.08
348.34	5.93	3.15
348.35	5.96	3.22
348.36	5.99	3.29
348.37	6.01	3.36
348.38	6.03	3.43
348.39	6.05	3.50
348.40	6.07	3.57
348.41	6.09	3.63
348.42	6.11	3.70
348.43	6.12	3.76
348.44	6.13	3.82
348.45	6.15	3.88
348.46	6.16	3.94
348.47	6.16	4.00
348.48	6.17	4.06
348.49	6.18	4.11
348.50	6.18	4.16
348.51	**6.18**	4.21
348.52	6.18	4.26
348.53	6.18	4.31
348.54	6.17	4.35
348.55	6.17	4.39
348.56	6.16	4.42
348.57	6.15	4.46
348.58	6.13	4.49
348.59	6.12	4.52
348.60	6.10	4.54
348.61	6.07	4.56
348.62	6.05	4.57
348.63	6.01	4.58
348.64	5.98	**4.58**
348.65	5.94	4.58
348.66	5.89	4.56
348.67	5.83	4.54
348.68	5.76	4.50
348.69	5.66	4.44
348.70	5.42	4.26

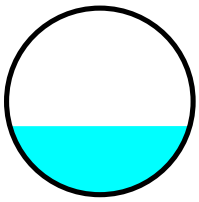
Summary for Reach DCB-R101: TO DMH-R100

Inflow Area = 18,867 sf, 80.97% Impervious, Inflow Depth = 3.85" for 25-Year event
Inflow = 1.92 cfs @ 12.07 hrs, Volume= 6,054 cf
Outflow = 1.92 cfs @ 12.07 hrs, Volume= 6,054 cf, Atten= 0%, Lag= 0.0 min

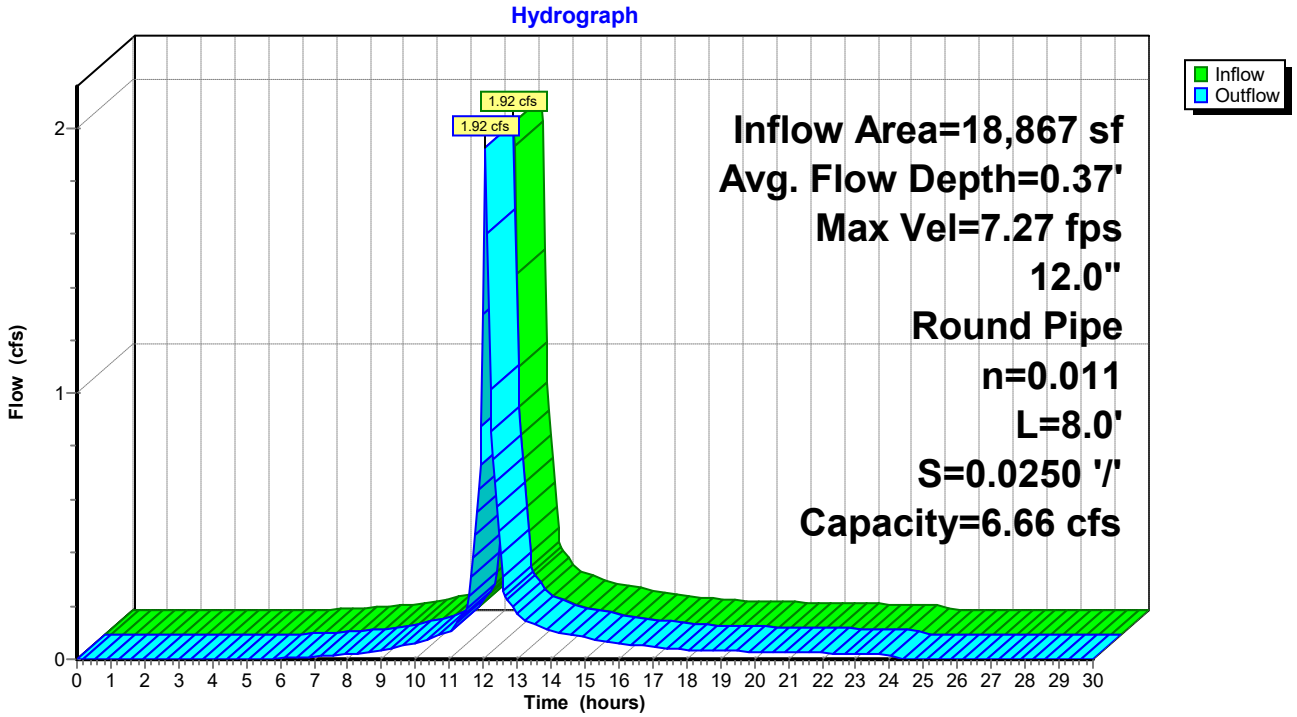
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.27 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.45 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.66 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 8.0' Slope= 0.0250 '/'
Inlet Invert= 355.50', Outlet Invert= 355.30'



Reach DCB-R101: TO DMH-R100



Stage-Discharge for Reach DCB-R101: TO DMH-R100

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.50	0.00	0.00
355.51	0.75	0.00
355.52	1.19	0.00
355.53	1.56	0.01
355.54	1.88	0.02
355.55	2.18	0.03
355.56	2.45	0.05
355.57	2.71	0.07
355.58	2.95	0.09
355.59	3.18	0.11
355.60	3.40	0.14
355.61	3.61	0.17
355.62	3.81	0.20
355.63	4.01	0.24
355.64	4.20	0.28
355.65	4.38	0.32
355.66	4.56	0.37
355.67	4.73	0.42
355.68	4.89	0.47
355.69	5.06	0.53
355.70	5.21	0.58
355.71	5.37	0.64
355.72	5.52	0.71
355.73	5.66	0.77
355.74	5.80	0.84
355.75	5.94	0.91
355.76	6.07	0.99
355.77	6.20	1.06
355.78	6.33	1.14
355.79	6.46	1.22
355.80	6.58	1.30
355.81	6.70	1.39
355.82	6.81	1.48
355.83	6.93	1.57
355.84	7.04	1.66
355.85	7.15	1.75
355.86	7.25	1.85
355.87	7.35	1.94
355.88	7.45	2.04
355.89	7.55	2.14
355.90	7.65	2.24
355.91	7.74	2.35
355.92	7.83	2.45
355.93	7.92	2.56
355.94	8.01	2.66
355.95	8.09	2.77
355.96	8.17	2.88
355.97	8.25	2.99
355.98	8.33	3.10
355.99	8.40	3.22
356.00	8.48	3.33
356.01	8.55	3.44
356.02	8.62	3.56
356.03	8.68	3.67
356.04	8.75	3.78
356.05	8.81	3.90
356.06	8.87	4.01
356.07	8.93	4.13
356.08	8.98	4.24
356.09	9.04	4.36
356.10	9.09	4.47
356.11	9.14	4.59
356.12	9.19	4.70
356.13	9.23	4.81
356.14	9.28	4.92
356.15	9.32	5.04
356.16	9.36	5.15
356.17	9.39	5.25
356.18	9.43	5.36
356.19	9.46	5.47
356.20	9.49	5.57
356.21	9.52	5.68
356.22	9.55	5.78
356.23	9.57	5.88
356.24	9.59	5.98
356.25	9.61	6.07
356.26	9.62	6.16
356.27	9.64	6.25
356.28	9.65	6.34
356.29	9.66	6.43
356.30	9.66	6.51
356.31	**9.66**	6.59
356.32	9.66	6.66
356.33	9.66	6.73
356.34	9.65	6.80
356.35	9.64	6.86
356.36	9.63	6.92
356.37	9.61	6.97
356.38	9.59	7.02
356.39	9.56	7.06
356.40	9.53	7.10
356.41	9.49	7.12
356.42	9.45	7.15
356.43	9.40	7.16
356.44	9.35	**7.16**
356.45	9.28	7.15
356.46	9.21	7.13
356.47	9.11	7.10
356.48	9.00	7.03
356.49	8.85	6.94
356.50	8.48	6.66

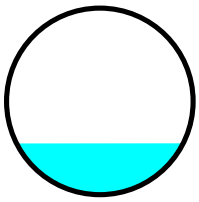
Summary for Reach DCB-R102: TO DMH-R101

Inflow Area = 13,651 sf, 53.41% Impervious, Inflow Depth = 2.35" for 25-Year event
Inflow = 0.86 cfs @ 12.08 hrs, Volume= 2,669 cf
Outflow = 0.85 cfs @ 12.09 hrs, Volume= 2,669 cf, Atten= 1%, Lag= 0.5 min

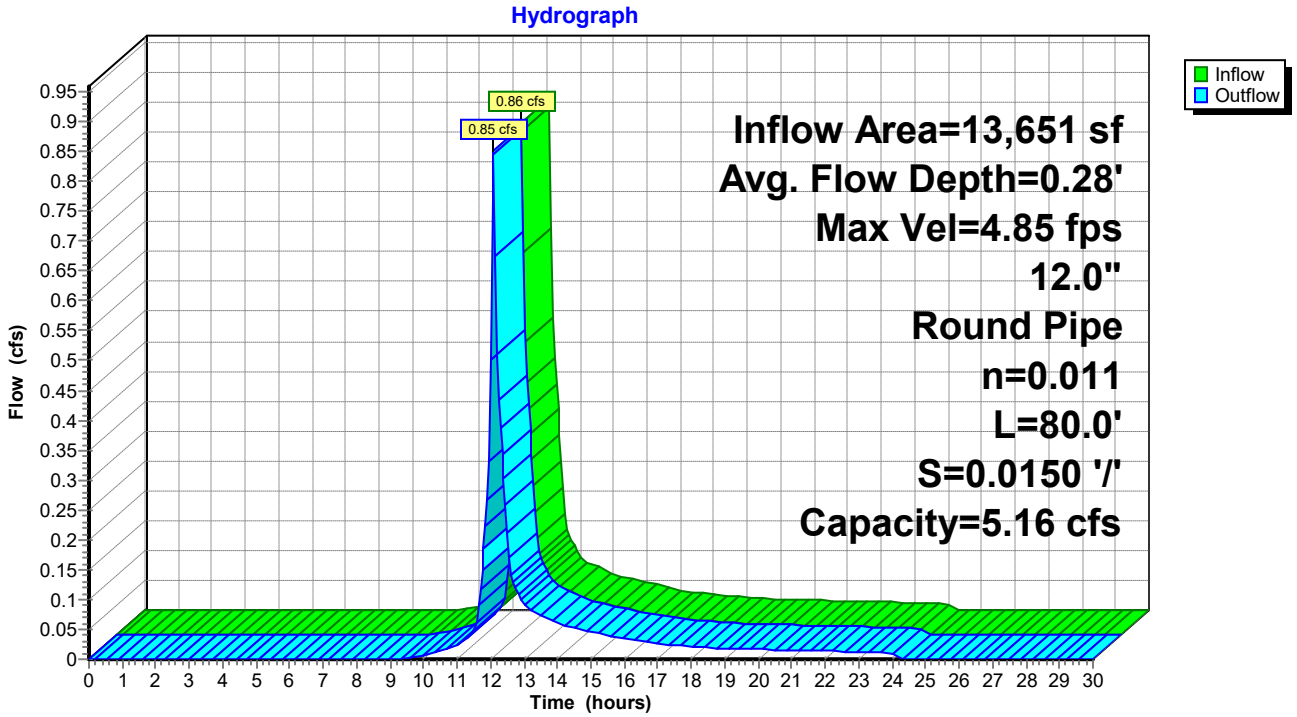
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.85 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.78 fps, Avg. Travel Time= 0.7 min

Peak Storage= 14 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.28'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 80.0' Slope= 0.0150 '/'
Inlet Invert= 357.20', Outlet Invert= 356.00'



Reach DCB-R102: TO DMH-R101



Stage-Discharge for Reach DCB-R102: TO DMH-R101

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
357.20	0.00	0.00
357.21	0.58	0.00
357.22	0.92	0.00
357.23	1.21	0.01
357.24	1.46	0.02
357.25	1.69	0.02
357.26	1.90	0.04
357.27	2.10	0.05
357.28	2.29	0.07
357.29	2.46	0.09
357.30	2.63	0.11
357.31	2.80	0.13
357.32	2.95	0.16
357.33	3.11	0.19
357.34	3.25	0.22
357.35	3.39	0.25
357.36	3.53	0.29
357.37	3.66	0.32
357.38	3.79	0.36
357.39	3.92	0.41
357.40	4.04	0.45
357.41	4.16	0.50
357.42	4.27	0.55
357.43	4.38	0.60
357.44	4.49	0.65
357.45	4.60	0.71
357.46	4.70	0.76
357.47	4.81	0.82
357.48	4.91	0.88
357.49	5.00	0.95
357.50	5.10	1.01
357.51	5.19	1.08
357.52	5.28	1.14
357.53	5.37	1.21
357.54	5.45	1.28
357.55	5.53	1.36
357.56	5.62	1.43
357.57	5.70	1.50
357.58	5.77	1.58
357.59	5.85	1.66
357.60	5.92	1.74
357.61	6.00	1.82
357.62	6.07	1.90
357.63	6.13	1.98
357.64	6.20	2.06
357.65	6.27	2.15
357.66	6.33	2.23
357.67	6.39	2.32
357.68	6.45	2.40
357.69	6.51	2.49
357.70	6.57	2.58
357.71	6.62	2.67
357.72	6.67	2.75
357.73	6.73	2.84
357.74	6.78	2.93
357.75	6.82	3.02
357.76	6.87	3.11
357.77	6.92	3.20
357.78	6.96	3.29
357.79	7.00	3.38
357.80	7.04	3.46
357.81	7.08	3.55
357.82	7.12	3.64
357.83	7.15	3.73
357.84	7.19	3.81
357.85	7.22	3.90
357.86	7.25	3.99
357.87	7.28	4.07
357.88	7.30	4.15
357.89	7.33	4.24
357.90	7.35	4.32
357.91	7.37	4.40
357.92	7.39	4.48
357.93	7.41	4.55
357.94	7.43	4.63
357.95	7.44	4.70
357.96	7.45	4.77
357.97	7.46	4.84
357.98	7.47	4.91
357.99	7.48	4.98
358.00	7.48	5.04
358.01	**7.49**	5.10
358.02	7.48	5.16
358.03	7.48	5.21
358.04	7.48	5.27
358.05	7.47	5.31
358.06	7.46	5.36
358.07	7.44	5.40
358.08	7.43	5.44
358.09	7.41	5.47
358.10	7.38	5.50
358.11	7.35	5.52
358.12	7.32	5.53
358.13	7.28	5.54
358.14	7.24	**5.55**
358.15	7.19	5.54
358.16	7.13	5.52
358.17	7.06	5.50
358.18	6.97	5.45
358.19	6.85	5.37
358.20	6.57	5.16

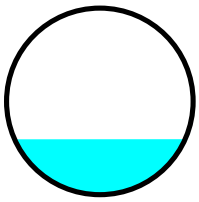
Summary for Reach DCB-S1: TO DMH-S1

Inflow Area = 8,226 sf, 87.83% Impervious, Inflow Depth = 4.27" for 25-Year event
Inflow = 0.91 cfs @ 12.07 hrs, Volume= 2,930 cf
Outflow = 0.90 cfs @ 12.07 hrs, Volume= 2,930 cf, Atten= 1%, Lag= 0.2 min

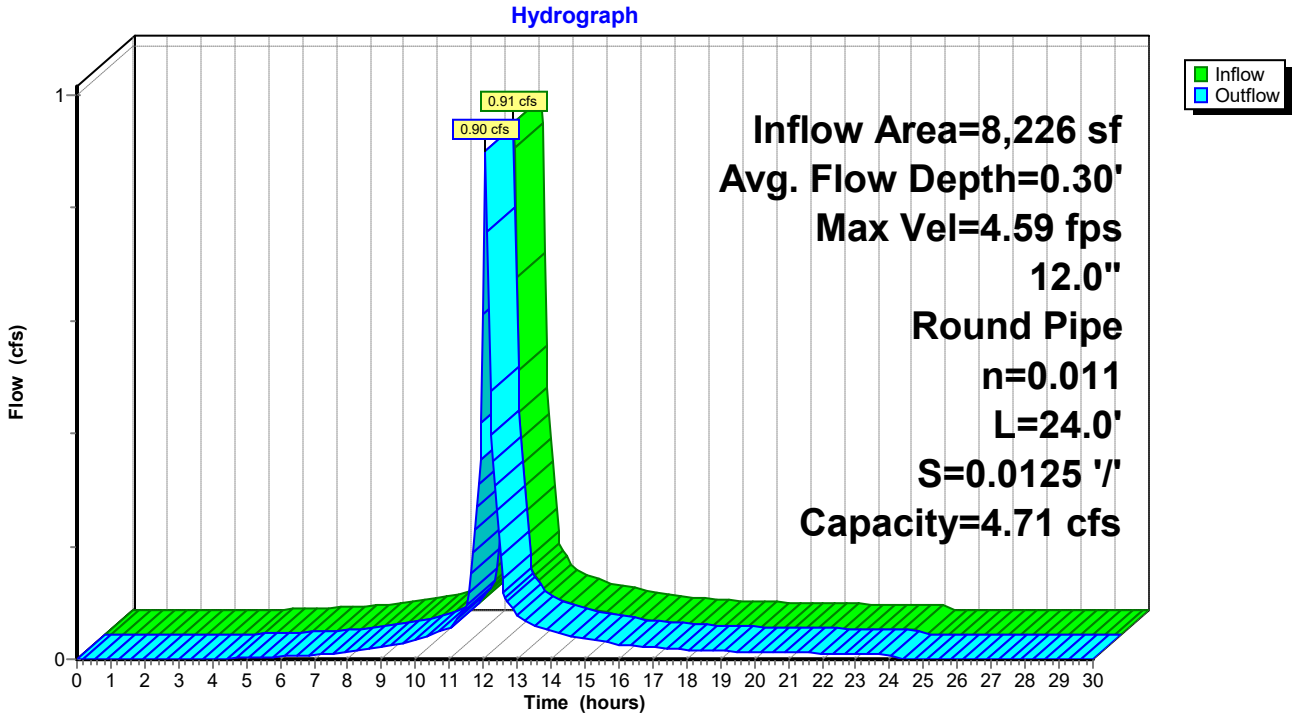
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.59 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.52 fps, Avg. Travel Time= 0.3 min

Peak Storage= 5 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.71 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 24.0' Slope= 0.0125 '/'
Inlet Invert= 351.20', Outlet Invert= 350.90'



Reach DCB-S1: TO DMH-S1



Stage-Discharge for Reach DCB-S1: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.53	0.00
351.22	0.84	0.00
351.23	1.10	0.01
351.24	1.33	0.01
351.25	1.54	0.02
351.26	1.73	0.03
351.27	1.91	0.05
351.28	2.09	0.06
351.29	2.25	0.08
351.30	2.40	0.10
351.31	2.55	0.12
351.32	2.70	0.14
351.33	2.84	0.17
351.34	2.97	0.20
351.35	3.10	0.23
351.36	3.22	0.26
351.37	3.34	0.30
351.38	3.46	0.33
351.39	3.58	0.37
351.40	3.69	0.41
351.41	3.79	0.45
351.42	3.90	0.50
351.43	4.00	0.55
351.44	4.10	0.59
351.45	4.20	0.64
351.46	4.29	0.70
351.47	4.39	0.75
351.48	4.48	0.81
351.49	4.57	0.86
351.50	4.65	0.92
351.51	4.74	0.98
351.52	4.82	1.04
351.53	4.90	1.11
351.54	4.98	1.17
351.55	5.05	1.24
351.56	5.13	1.31
351.57	5.20	1.37
351.58	5.27	1.44
351.59	5.34	1.51
351.60	5.41	1.59
351.61	5.47	1.66
351.62	5.54	1.73
351.63	5.60	1.81
351.64	5.66	1.88
351.65	5.72	1.96
351.66	5.78	2.04
351.67	5.83	2.12
351.68	5.89	2.19
351.69	5.94	2.27
351.70	5.99	2.35
351.71	6.04	2.43
351.72	6.09	2.51
351.73	6.14	2.60
351.74	6.19	2.68
351.75	6.23	2.76
351.76	6.27	2.84
351.77	6.31	2.92
351.78	6.35	3.00
351.79	6.39	3.08
351.80	6.43	3.16
351.81	6.46	3.24
351.82	6.50	3.32
351.83	6.53	3.40
351.84	6.56	3.48
351.85	6.59	3.56
351.86	6.62	3.64
351.87	6.64	3.72
351.88	6.67	3.79
351.89	6.69	3.87
351.90	6.71	3.94
351.91	6.73	4.01
351.92	6.75	4.09
351.93	6.77	4.16
351.94	6.78	4.23
351.95	6.79	4.29
351.96	6.81	4.36
351.97	6.81	4.42
351.98	6.82	4.48
351.99	6.83	4.54
352.00	6.83	4.60
352.01	**6.83**	4.66
352.02	6.83	4.71
352.03	6.83	4.76
352.04	6.82	4.81
352.05	6.82	4.85
352.06	6.81	4.89
352.07	6.80	4.93
352.08	6.78	4.96
352.09	6.76	4.99
352.10	6.74	5.02
352.11	6.71	5.04
352.12	6.68	5.05
352.13	6.65	5.06
352.14	6.61	**5.06**
352.15	6.56	5.06
352.16	6.51	5.04
352.17	6.44	5.02
352.18	6.36	4.97
352.19	6.26	4.91
352.20	5.99	4.71

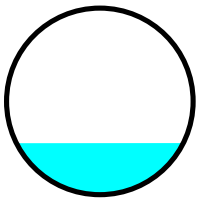
Summary for Reach DCB-S2: TO DMH-S1

Inflow Area = 10,318 sf, 80.45% Impervious, Inflow Depth = 3.75" for 25-Year event
Inflow = 1.03 cfs @ 12.07 hrs, Volume= 3,223 cf
Outflow = 1.02 cfs @ 12.08 hrs, Volume= 3,223 cf, Atten= 1%, Lag= 0.1 min

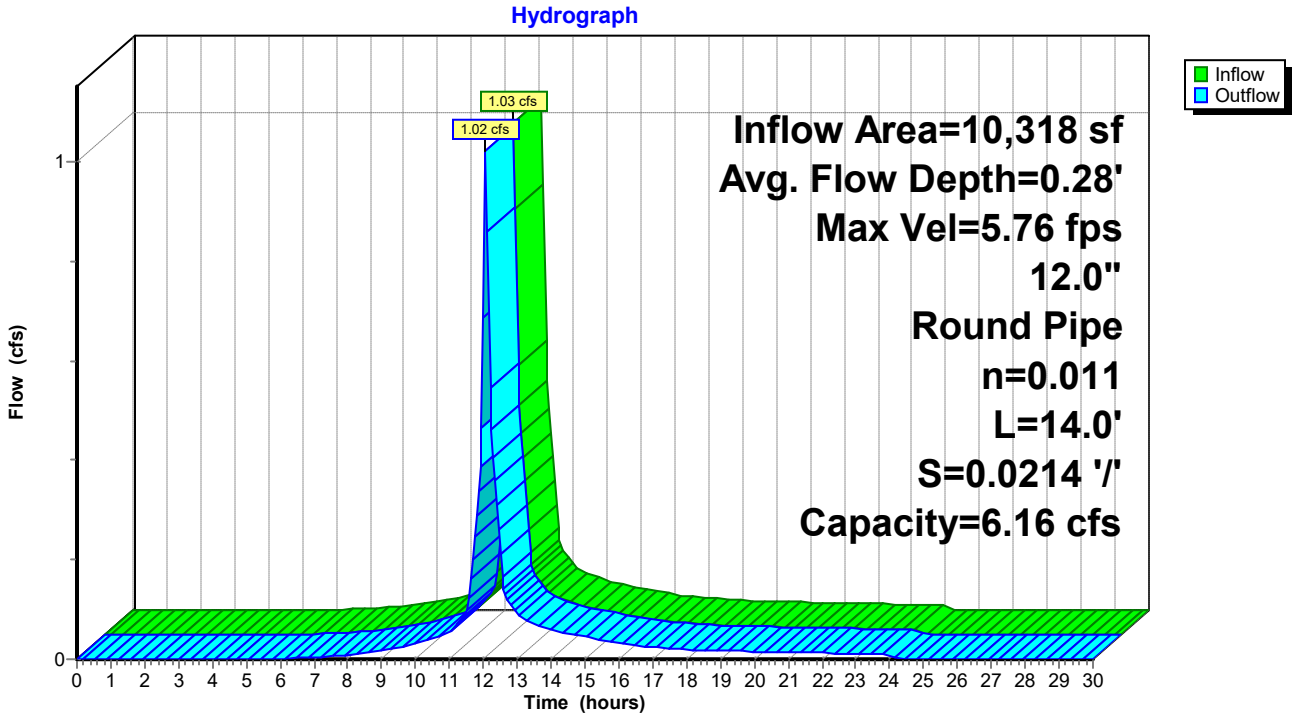
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.76 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.28'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 14.0' Slope= 0.0214 '/'
Inlet Invert= 351.20', Outlet Invert= 350.90'



Reach DCB-S2: TO DMH-S1



Stage-Discharge for Reach DCB-S2: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.70	0.00
351.22	1.10	0.00
351.23	1.44	0.01
351.24	1.74	0.02
351.25	2.02	0.03
351.26	2.27	0.04
351.27	2.51	0.06
351.28	2.73	0.08
351.29	2.94	0.10
351.30	3.15	0.13
351.31	3.34	0.16
351.32	3.53	0.19
351.33	3.71	0.22
351.34	3.89	0.26
351.35	4.06	0.30
351.36	4.22	0.34
351.37	4.38	0.39
351.38	4.53	0.44
351.39	4.68	0.49
351.40	4.83	0.54
351.41	4.97	0.60
351.42	5.11	0.65
351.43	5.24	0.72
351.44	5.37	0.78
351.45	5.50	0.84
351.46	5.62	0.91
351.47	5.74	0.98
351.48	5.86	1.06
351.49	5.98	1.13
351.50	6.09	1.21
351.51	6.20	1.29
351.52	6.31	1.37
351.53	6.41	1.45
351.54	6.52	1.53
351.55	6.62	1.62
351.56	6.71	1.71
351.57	6.81	1.80
351.58	6.90	1.89
351.59	6.99	1.98
351.60	7.08	2.08
351.61	7.17	2.17
351.62	7.25	2.27
351.63	7.33	2.37
351.64	7.41	2.47
351.65	7.49	2.57
351.66	7.57	2.67
351.67	7.64	2.77
351.68	7.71	2.87
351.69	7.78	2.98
351.70	7.85	3.08
351.71	7.91	3.19
351.72	7.98	3.29
351.73	8.04	3.40
351.74	8.10	3.50
351.75	8.16	3.61
351.76	8.21	3.72
351.77	8.27	3.82
351.78	8.32	3.93
351.79	8.37	4.04
351.80	8.42	4.14
351.81	8.46	4.25
351.82	8.51	4.35
351.83	8.55	4.46
351.84	8.59	4.56
351.85	8.63	4.66
351.86	8.66	4.76
351.87	8.70	4.87
351.88	8.73	4.96
351.89	8.76	5.06
351.90	8.79	5.16
351.91	8.81	5.26
351.92	8.84	5.35
351.93	8.86	5.44
351.94	8.88	5.53
351.95	8.90	5.62
351.96	8.91	5.71
351.97	8.92	5.79
351.98	8.93	5.87
351.99	8.94	5.95
352.00	8.94	6.02
352.01	**8.95**	6.10
352.02	8.95	6.17
352.03	8.94	6.23
352.04	8.94	6.29
352.05	8.93	6.35
352.06	8.91	6.40
352.07	8.90	6.45
352.08	8.88	6.50
352.09	8.85	6.54
352.10	8.82	6.57
352.11	8.79	6.60
352.12	8.75	6.62
352.13	8.71	6.63
352.14	8.65	**6.63**
352.15	8.59	6.62
352.16	8.52	6.60
352.17	8.44	6.57
352.18	8.33	6.51
352.19	8.19	6.42
352.20	7.85	6.16

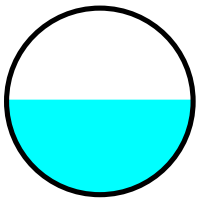
Summary for Reach DCB-S3: TO DMH-S1

Inflow Area = 18,672 sf, 88.33% Impervious, Inflow Depth = 4.49" for 25-Year event
Inflow = 2.13 cfs @ 12.07 hrs, Volume= 6,991 cf
Outflow = 2.12 cfs @ 12.07 hrs, Volume= 6,991 cf, Atten= 1%, Lag= 0.1 min

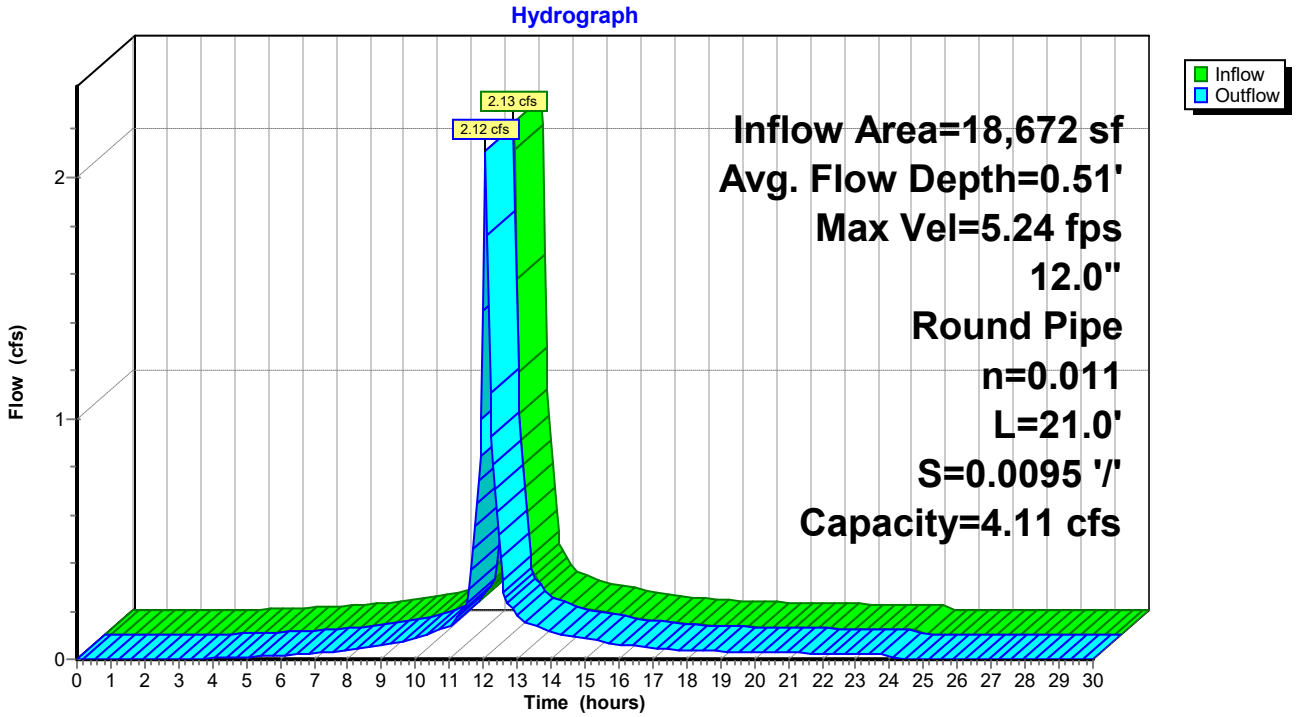
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.24 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.77 fps, Avg. Travel Time= 0.2 min

Peak Storage= 8 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.51'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.11 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 346.90', Outlet Invert= 346.70'



Reach DCB-S3: TO DMH-S1



Stage-Discharge for Reach DCB-S3: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.90	0.00	0.00
346.91	0.47	0.00
346.92	0.74	0.00
346.93	0.96	0.01
346.94	1.16	0.01
346.95	1.34	0.02
346.96	1.51	0.03
346.97	1.67	0.04
346.98	1.82	0.05
346.99	1.96	0.07
347.00	2.10	0.09
347.01	2.23	0.10
347.02	2.35	0.13
347.03	2.47	0.15
347.04	2.59	0.17
347.05	2.70	0.20
347.06	2.81	0.23
347.07	2.92	0.26
347.08	3.02	0.29
347.09	3.12	0.32
347.10	3.22	0.36
347.11	3.31	0.40
347.12	3.40	0.44
347.13	3.49	0.48
347.14	3.58	0.52
347.15	3.67	0.56
347.16	3.75	0.61
347.17	3.83	0.66
347.18	3.91	0.70
347.19	3.99	0.75
347.20	4.06	0.80
347.21	4.13	0.86
347.22	4.21	0.91
347.23	4.28	0.97
347.24	4.34	1.02
347.25	4.41	1.08
347.26	4.48	1.14
347.27	4.54	1.20
347.28	4.60	1.26
347.29	4.66	1.32
347.30	4.72	1.38
347.31	4.78	1.45
347.32	4.83	1.51
347.33	4.89	1.58
347.34	4.94	1.64
347.35	4.99	1.71
347.36	5.04	1.78
347.37	5.09	1.85
347.38	5.14	1.92
347.39	5.19	1.98
347.40	5.23	2.05
347.41	5.28	2.12
347.42	5.32	2.19
347.43	5.36	2.27
347.44	5.40	2.34
347.45	5.44	2.41
347.46	5.47	2.48
347.47	5.51	2.55
347.48	5.55	2.62
347.49	5.58	2.69
347.50	5.61	2.76
347.51	5.64	2.83
347.52	5.67	2.90
347.53	5.70	2.97
347.54	5.73	3.04
347.55	5.75	3.11
347.56	5.78	3.18
347.57	5.80	3.24
347.58	5.82	3.31
347.59	5.84	3.38
347.60	5.86	3.44
347.61	5.88	3.50
347.62	5.89	3.57
347.63	5.91	3.63
347.64	5.92	3.69
347.65	5.93	3.75
347.66	5.94	3.80
347.67	5.95	3.86
347.68	5.95	3.91
347.69	5.96	3.97
347.70	5.96	4.02
347.71	**5.96**	4.06
347.72	5.96	4.11
347.73	5.96	4.15
347.74	5.96	4.20
347.75	5.95	4.23
347.76	5.94	4.27
347.77	5.93	4.30
347.78	5.92	4.33
347.79	5.90	4.36
347.80	5.88	4.38
347.81	5.86	4.40
347.82	5.83	4.41
347.83	5.80	4.42
347.84	5.77	**4.42**
347.85	5.73	4.42
347.86	5.68	4.40
347.87	5.63	4.38
347.88	5.56	4.34
347.89	5.46	4.28
347.90	5.23	4.11

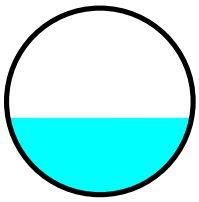
Summary for Reach DCB-S4: TO DMH-S1

Inflow Area = 24,334 sf, 83.66% Impervious, Inflow Depth = 4.17" for 25-Year event
Inflow = 2.55 cfs @ 12.09 hrs, Volume= 8,448 cf
Outflow = 2.54 cfs @ 12.09 hrs, Volume= 8,448 cf, Atten= 0%, Lag= 0.0 min

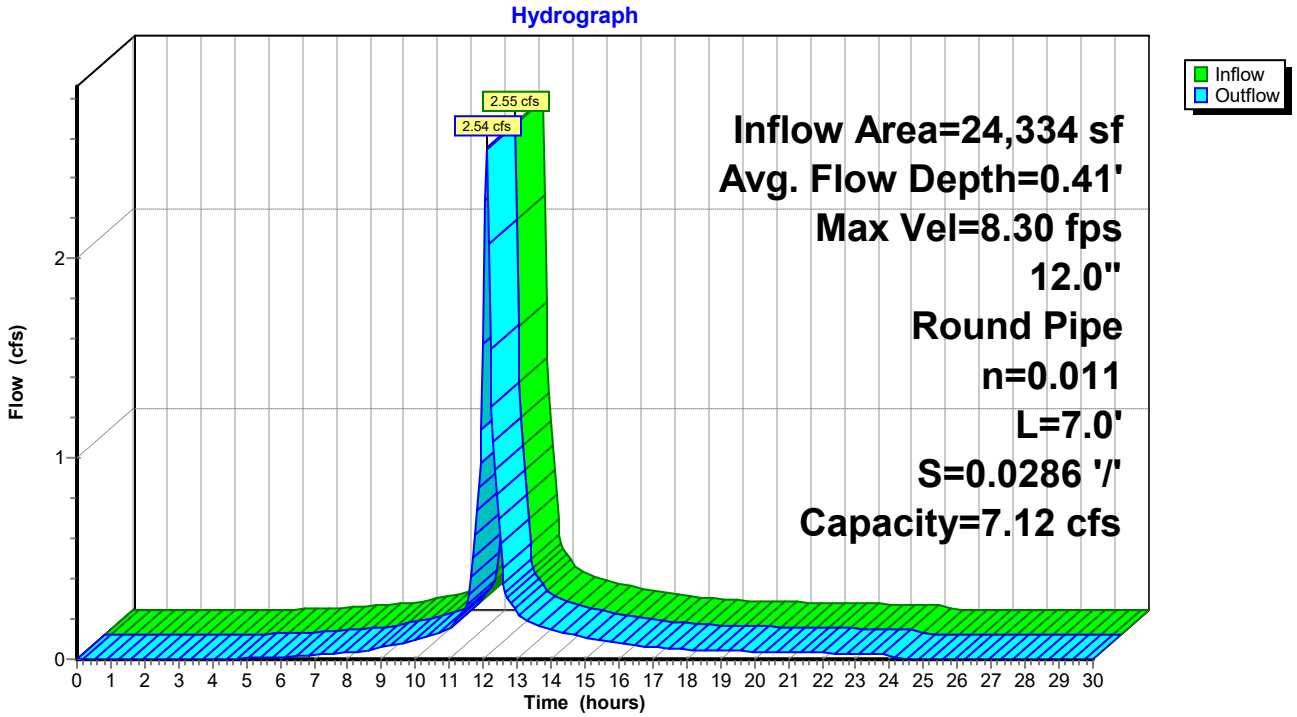
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.30 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.78 fps, Avg. Travel Time= 0.0 min

Peak Storage= 2 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.41'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.12 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 7.0' Slope= 0.0286 '/'
Inlet Invert= 346.90', Outlet Invert= 346.70'



Reach DCB-S4: TO DMH-S1



Stage-Discharge for Reach DCB-S4: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.90	0.00	0.00
346.91	0.81	0.00
346.92	1.28	0.00
346.93	1.67	0.01
346.94	2.01	0.02
346.95	2.33	0.03
346.96	2.62	0.05
346.97	2.89	0.07
346.98	3.15	0.09
346.99	3.40	0.12
347.00	3.64	0.15
347.01	3.86	0.18
347.02	4.08	0.22
347.03	4.29	0.26
347.04	4.49	0.30
347.05	4.68	0.35
347.06	4.87	0.40
347.07	5.06	0.45
347.08	5.23	0.50
347.09	5.41	0.56
347.10	5.57	0.62
347.11	5.74	0.69
347.12	5.90	0.76
347.13	6.05	0.83
347.14	6.20	0.90
347.15	6.35	0.97
347.16	6.49	1.05
347.17	6.63	1.13
347.18	6.77	1.22
347.19	6.90	1.31
347.20	7.03	1.39
347.21	7.16	1.48
347.22	7.28	1.58
347.23	7.41	1.67
347.24	7.52	1.77
347.25	7.64	1.87
347.26	7.75	1.97
347.27	7.86	2.08
347.28	7.97	2.18
347.29	8.07	2.29
347.30	8.18	2.40
347.31	8.27	2.51
347.32	8.37	2.62
347.33	8.47	2.73
347.34	8.56	2.85
347.35	8.65	2.96
347.36	8.74	3.08
347.37	8.82	3.20
347.38	8.90	3.32
347.39	8.98	3.44
347.40	9.06	3.56
347.41	9.14	3.68
347.42	9.21	3.80
347.43	9.28	3.92
347.44	9.35	4.05
347.45	9.42	4.17
347.46	9.48	4.29
347.47	9.54	4.41
347.48	9.60	4.54
347.49	9.66	4.66
347.50	9.72	4.78
347.51	9.77	4.90
347.52	9.82	5.02
347.53	9.87	5.15
347.54	9.92	5.26
347.55	9.96	5.38
347.56	10.00	5.50
347.57	10.04	5.62
347.58	10.08	5.73
347.59	10.11	5.85
347.60	10.15	5.96
347.61	10.18	6.07
347.62	10.20	6.18
347.63	10.23	6.28
347.64	10.25	6.39
347.65	10.27	6.49
347.66	10.29	6.59
347.67	10.30	6.69
347.68	10.31	6.78
347.69	10.32	6.87
347.70	10.33	6.96
347.71	**10.33**	7.04
347.72	10.33	7.12
347.73	10.33	7.20
347.74	10.32	7.27
347.75	10.31	7.33
347.76	10.29	7.40
347.77	10.27	7.45
347.78	10.25	7.50
347.79	10.22	7.55
347.80	10.19	7.59
347.81	10.15	7.62
347.82	10.10	7.64
347.83	10.05	7.65
347.84	9.99	**7.66**
347.85	9.92	7.65
347.86	9.84	7.63
347.87	9.74	7.59
347.88	9.62	7.52
347.89	9.46	7.42
347.90	9.06	7.12

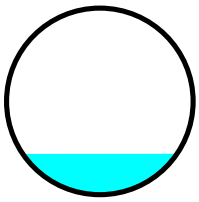
Summary for Reach DCB1: TO DMH#1

Inflow Area = 3,582 sf, 82.83% Impervious, Inflow Depth = 3.95" for 25-Year event
Inflow = 0.37 cfs @ 12.07 hrs, Volume= 1,180 cf
Outflow = 0.37 cfs @ 12.09 hrs, Volume= 1,180 cf, Atten= 2%, Lag= 0.8 min

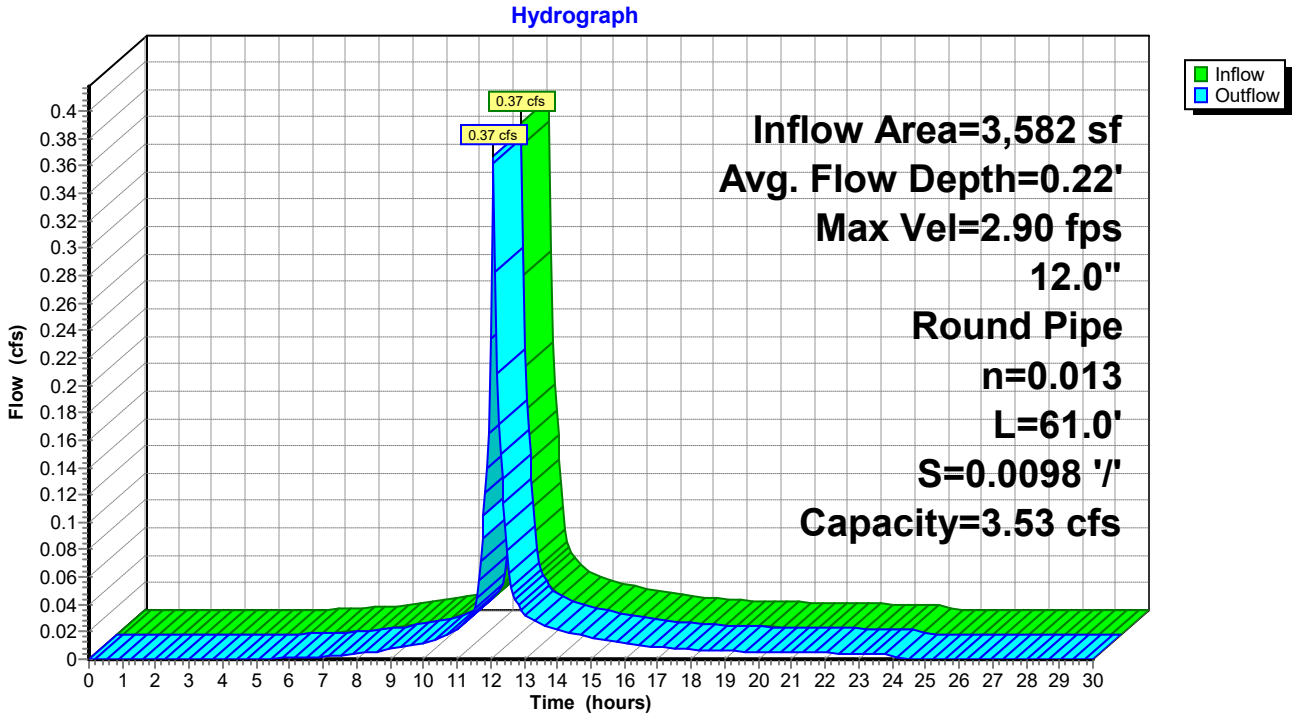
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.90 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.96 fps, Avg. Travel Time= 1.1 min

Peak Storage= 8 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.22'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.53 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 61.0' Slope= 0.0098 '/'
Inlet Invert= 355.30', Outlet Invert= 354.70'



Reach DCB1: TO DMH#1



Stage-Discharge for Reach DCB1: TO DMH#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.30	0.00	0.00
355.31	0.40	0.00
355.32	0.63	0.00
355.33	0.83	0.01
355.34	1.00	0.01
355.35	1.16	0.02
355.36	1.30	0.03
355.37	1.44	0.03
355.38	1.57	0.05
355.39	1.69	0.06
355.40	1.80	0.07
355.41	1.92	0.09
355.42	2.02	0.11
355.43	2.13	0.13
355.44	2.23	0.15
355.45	2.33	0.17
355.46	2.42	0.20
355.47	2.51	0.22
355.48	2.60	0.25
355.49	2.68	0.28
355.50	2.77	0.31
355.51	2.85	0.34
355.52	2.93	0.38
355.53	3.00	0.41
355.54	3.08	0.45
355.55	3.15	0.48
355.56	3.22	0.52
355.57	3.29	0.56
355.58	3.36	0.61
355.59	3.43	0.65
355.60	3.49	0.69
355.61	3.55	0.74
355.62	3.62	0.78
355.63	3.68	0.83
355.64	3.74	0.88
355.65	3.79	0.93
355.66	3.85	0.98
355.67	3.90	1.03
355.68	3.96	1.08
355.69	4.01	1.14
355.70	4.06	1.19
355.71	4.11	1.25
355.72	4.16	1.30
355.73	4.20	1.36
355.74	4.25	1.41
355.75	4.29	1.47
355.76	4.34	1.53
355.77	4.38	1.59
355.78	4.42	1.65
355.79	4.46	1.71
355.80	4.50	1.77
355.81	4.54	1.83
355.82	4.57	1.89
355.83	4.61	1.95
355.84	4.64	2.01
355.85	4.68	2.07
355.86	4.71	2.13
355.87	4.74	2.19
355.88	4.77	2.25
355.89	4.80	2.31
355.90	4.82	2.37
355.91	4.85	2.43
355.92	4.88	2.49
355.93	4.90	2.55
355.94	4.92	2.61
355.95	4.95	2.67
355.96	4.97	2.73
355.97	4.99	2.79
355.98	5.00	2.85
355.99	5.02	2.90
356.00	5.04	2.96
356.01	5.05	3.01
356.02	5.07	3.07
356.03	5.08	3.12
356.04	5.09	3.17
356.05	5.10	3.22
356.06	5.11	3.27
356.07	5.11	3.32
356.08	5.12	3.37
356.09	5.12	3.41
356.10	5.13	3.45
356.11	**5.13**	3.50
356.12	5.13	3.53
356.13	5.13	3.57
356.14	5.12	3.61
356.15	5.12	3.64
356.16	5.11	3.67
356.17	5.10	3.70
356.18	5.09	3.72
356.19	5.07	3.75
356.20	5.06	3.77
356.21	5.04	3.78
356.22	5.02	3.79
356.23	4.99	3.80
356.24	4.96	**3.80**
356.25	4.93	3.80
356.26	4.89	3.79
356.27	4.84	3.77
356.28	4.78	3.73
356.29	4.70	3.68
356.30	4.50	3.53

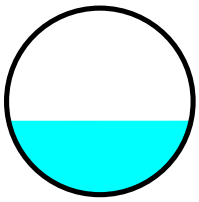
Summary for Reach DCB2: TO DMH#2

Inflow Area = 12,397 sf, 88.23% Impervious, Inflow Depth = 4.27" for 25-Year event
Inflow = 1.37 cfs @ 12.07 hrs, Volume= 4,415 cf
Outflow = 1.35 cfs @ 12.08 hrs, Volume= 4,415 cf, Atten= 1%, Lag= 0.2 min

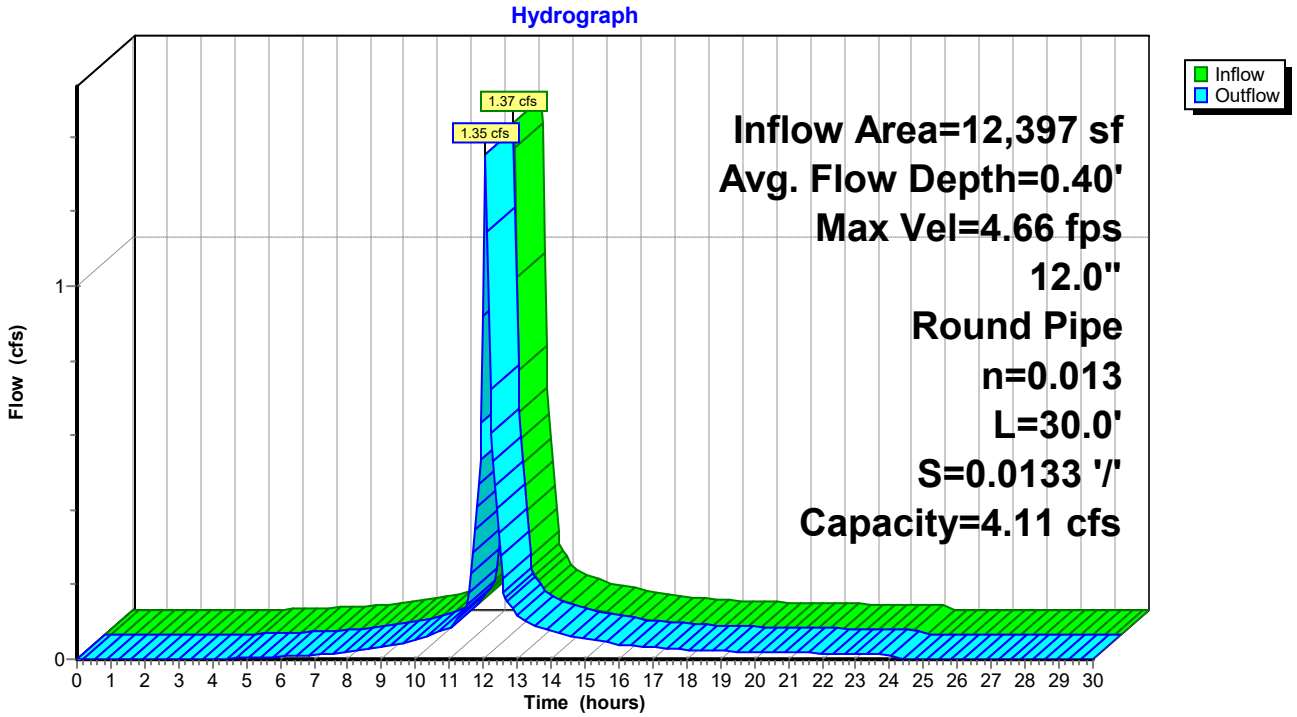
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.66 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.56 fps, Avg. Travel Time= 0.3 min

Peak Storage= 9 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.40'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.11 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 30.0' Slope= 0.0133 '/'
Inlet Invert= 354.40', Outlet Invert= 354.00'



Reach DCB2: TO DMH#2



Stage-Discharge for Reach DCB2: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.40	0.00	0.00
354.41	0.47	0.00
354.42	0.74	0.00
354.43	0.96	0.01
354.44	1.16	0.01
354.45	1.35	0.02
354.46	1.51	0.03
354.47	1.67	0.04
354.48	1.82	0.05
354.49	1.97	0.07
354.50	2.10	0.09
354.51	2.23	0.10
354.52	2.36	0.13
354.53	2.48	0.15
354.54	2.59	0.17
354.55	2.71	0.20
354.56	2.82	0.23
354.57	2.92	0.26
354.58	3.02	0.29
354.59	3.12	0.32
354.60	3.22	0.36
354.61	3.32	0.40
354.62	3.41	0.44
354.63	3.50	0.48
354.64	3.59	0.52
354.65	3.67	0.56
354.66	3.75	0.61
354.67	3.83	0.66
354.68	3.91	0.70
354.69	3.99	0.75
354.70	4.07	0.81
354.71	4.14	0.86
354.72	4.21	0.91
354.73	4.28	0.97
354.74	4.35	1.02
354.75	4.42	1.08
354.76	4.48	1.14
354.77	4.54	1.20
354.78	4.61	1.26
354.79	4.67	1.32
354.80	4.73	1.39
354.81	4.78	1.45
354.82	4.84	1.51
354.83	4.89	1.58
354.84	4.95	1.65
354.85	5.00	1.71
354.86	5.05	1.78
354.87	5.10	1.85
354.88	5.15	1.92
354.89	5.19	1.99
354.90	5.24	2.06
354.91	5.28	2.13
354.92	5.32	2.20
354.93	5.37	2.27
354.94	5.41	2.34
354.95	5.44	2.41
354.96	5.48	2.48
354.97	5.52	2.55
354.98	5.55	2.62
354.99	5.59	2.69
355.00	5.62	2.76
355.01	5.65	2.83
355.02	5.68	2.90
355.03	5.71	2.97
355.04	5.73	3.04
355.05	5.76	3.11
355.06	5.78	3.18
355.07	5.81	3.25
355.08	5.83	3.31
355.09	5.85	3.38
355.10	5.87	3.44
355.11	5.88	3.51
355.12	5.90	3.57
355.13	5.91	3.63
355.14	5.93	3.69
355.15	5.94	3.75
355.16	5.95	3.81
355.17	5.96	3.86
355.18	5.96	3.92
355.19	5.97	3.97
355.20	5.97	4.02
355.21	**5.97**	4.07
355.22	5.97	4.12
355.23	5.97	4.16
355.24	5.96	4.20
355.25	5.96	4.24
355.26	5.95	4.27
355.27	5.94	4.31
355.28	5.92	4.34
355.29	5.91	4.36
355.30	5.89	4.38
355.31	5.87	4.40
355.32	5.84	4.42
355.33	5.81	4.42
355.34	5.78	**4.43**
355.35	5.74	4.42
355.36	5.69	4.41
355.37	5.63	4.38
355.38	5.56	4.35
355.39	5.47	4.29
355.40	5.24	4.11

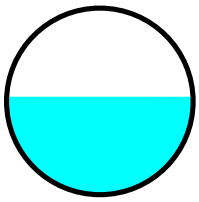
Summary for Reach DCB3: TO DMH#3

Inflow Area = 13,758 sf, 90.05% Impervious, Inflow Depth = 4.38" for 25-Year event
Inflow = 1.54 cfs @ 12.07 hrs, Volume= 5,025 cf
Outflow = 1.52 cfs @ 12.08 hrs, Volume= 5,025 cf, Atten= 2%, Lag= 0.5 min

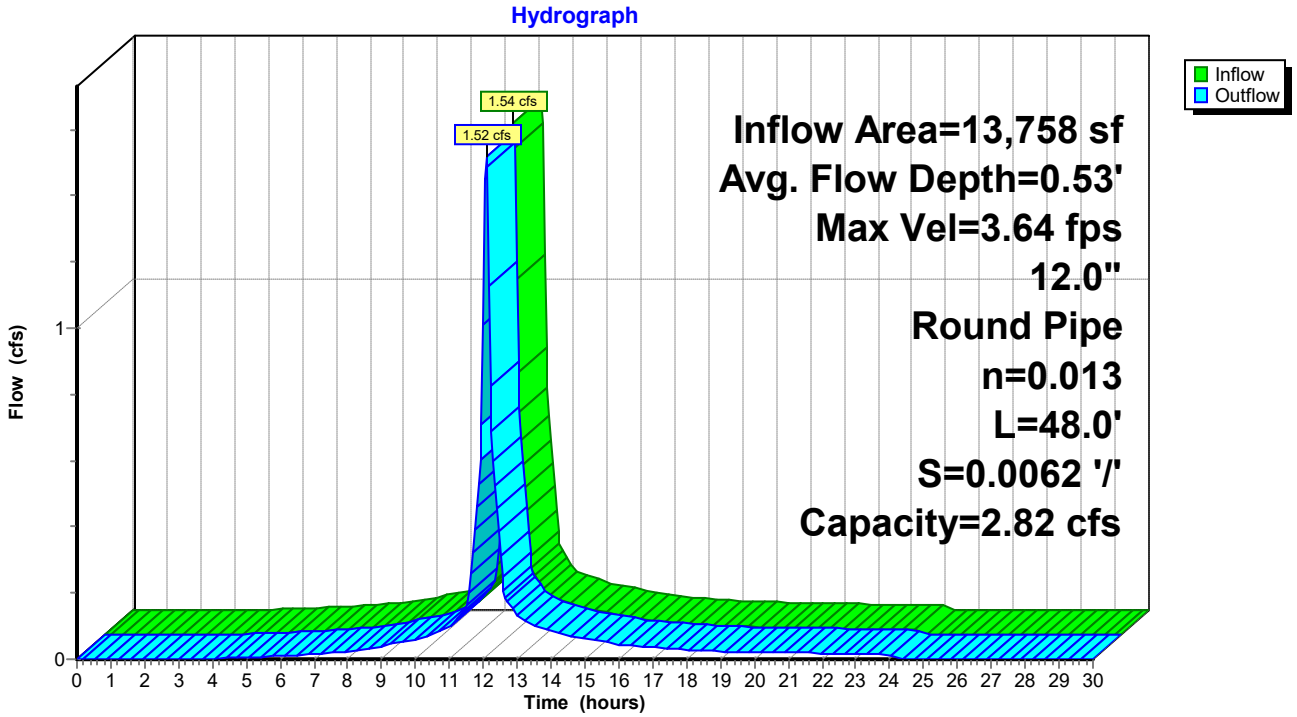
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.64 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.23 fps, Avg. Travel Time= 0.7 min

Peak Storage= 20 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.53'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.82 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 48.0' Slope= 0.0062 '/'
Inlet Invert= 351.90', Outlet Invert= 351.60'



Reach DCB3: TO DMH#3



Stage-Discharge for Reach DCB3: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.90	0.00	0.00
351.91	0.32	0.00
351.92	0.50	0.00
351.93	0.66	0.00
351.94	0.80	0.01
351.95	0.92	0.01
351.96	1.04	0.02
351.97	1.15	0.03
351.98	1.25	0.04
351.99	1.35	0.05
352.00	1.44	0.06
352.01	1.53	0.07
352.02	1.61	0.09
352.03	1.70	0.10
352.04	1.78	0.12
352.05	1.85	0.14
352.06	1.93	0.16
352.07	2.00	0.18
352.08	2.07	0.20
352.09	2.14	0.22
352.10	2.21	0.25
352.11	2.27	0.27
352.12	2.33	0.30
352.13	2.39	0.33
352.14	2.45	0.36
352.15	2.51	0.39
352.16	2.57	0.42
352.17	2.63	0.45
352.18	2.68	0.48
352.19	2.73	0.52
352.20	2.78	0.55
352.21	2.83	0.59
352.22	2.88	0.62
352.23	2.93	0.66
352.24	2.98	0.70
352.25	3.02	0.74
352.26	3.07	0.78
352.27	3.11	0.82
352.28	3.15	0.86
352.29	3.20	0.91
352.30	3.24	0.95
352.31	3.27	0.99
352.32	3.31	1.04
352.33	3.35	1.08
352.34	3.39	1.13
352.35	3.42	1.17
352.36	3.46	1.22
352.37	3.49	1.27
352.38	3.52	1.31
352.39	3.56	1.36
352.40	3.59	1.41
352.41	3.62	1.46
352.42	3.65	1.50
352.43	3.67	1.55
352.44	3.70	1.60
352.45	3.73	1.65
352.46	3.75	1.70
352.47	3.78	1.75
352.48	3.80	1.80
352.49	3.82	1.84
352.50	3.85	1.89
352.51	3.87	1.94
352.52	3.89	1.99
352.53	3.91	2.04
352.54	3.92	2.08
352.55	3.94	2.13
352.56	3.96	2.18
352.57	3.97	2.22
352.58	3.99	2.27
352.59	4.00	2.31
352.60	4.02	2.36
352.61	4.03	2.40
352.62	4.04	2.44
352.63	4.05	2.49
352.64	4.06	2.53
352.65	4.06	2.57
352.66	4.07	2.61
352.67	4.08	2.65
352.68	4.08	2.68
352.69	4.09	2.72
352.70	4.09	2.75
352.71	**4.09**	2.79
352.72	4.09	2.82
352.73	4.09	2.85
352.74	4.08	2.88
352.75	4.08	2.90
352.76	4.07	2.93
352.77	4.07	2.95
352.78	4.06	2.97
352.79	4.05	2.99
352.80	4.03	3.00
352.81	4.02	3.01
352.82	4.00	3.02
352.83	3.98	3.03
352.84	3.95	**3.03**
352.85	3.93	3.03
352.86	3.89	3.02
352.87	3.86	3.00
352.88	3.81	2.98
352.89	3.74	2.93
352.90	3.59	2.82

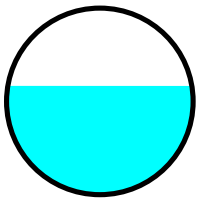
Summary for Reach DCB30: TO BASIN

Inflow Area = 198,125 sf, 23.50% Impervious, Inflow Depth = 1.48" for 25-Year event
Inflow = 5.10 cfs @ 12.27 hrs, Volume= 24,431 cf
Outflow = 5.06 cfs @ 12.28 hrs, Volume= 24,431 cf, Atten= 1%, Lag= 0.6 min

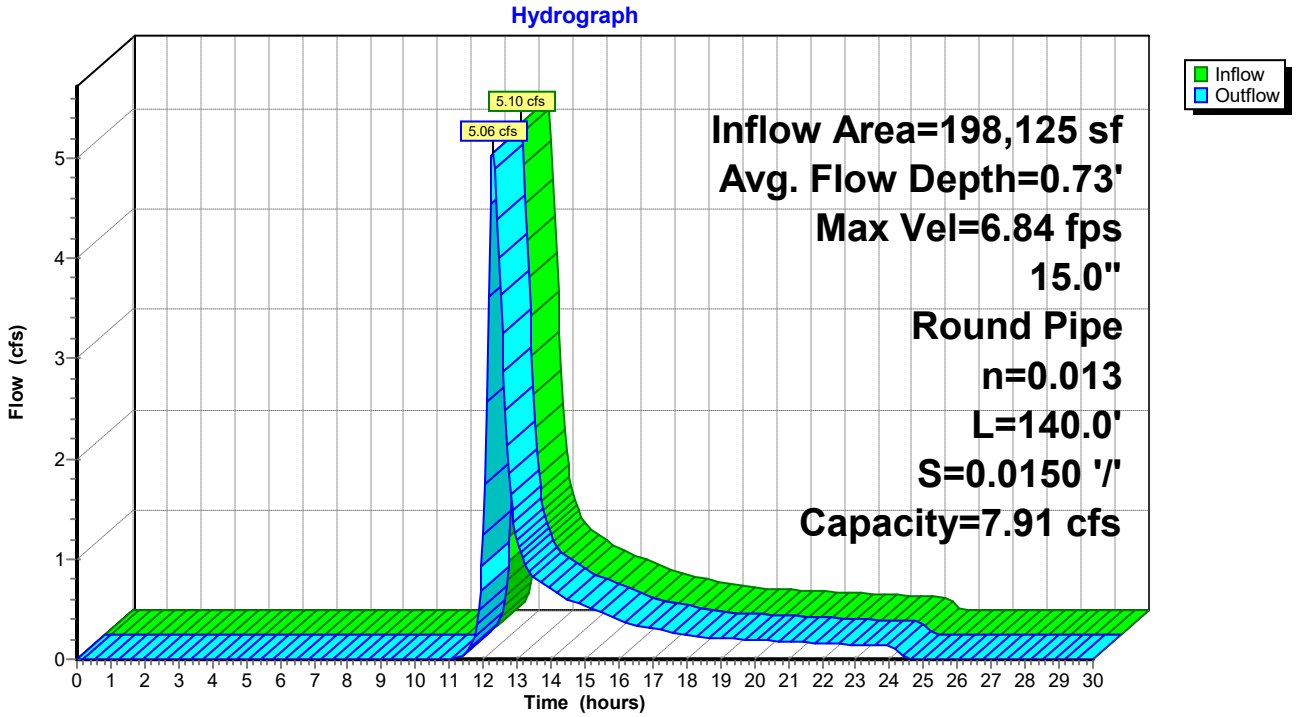
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.84 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.07 fps, Avg. Travel Time= 0.8 min

Peak Storage= 104 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.73'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.91 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 140.0' Slope= 0.0150 '/'
Inlet Invert= 338.00', Outlet Invert= 335.90'



Reach DCB30: TO BASIN



Stage-Discharge for Reach DCB30: TO BASIN

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
338.00	0.00	0.00
338.01	0.46	0.00
338.02	0.77	0.00
338.03	1.02	0.01
338.04	1.23	0.01
338.05	1.43	0.02
338.06	1.61	0.04
338.07	1.78	0.05
338.08	1.94	0.06
338.09	2.10	0.08
338.10	2.24	0.10
338.11	2.38	0.13
338.12	2.52	0.15
338.13	2.65	0.18
338.14	2.78	0.21
338.15	2.90	0.24
338.16	3.02	0.28
338.17	3.14	0.31
338.18	3.25	0.35
338.19	3.36	0.40
338.20	3.47	0.44
338.21	3.57	0.49
338.22	3.67	0.53
338.23	3.77	0.59
338.24	3.87	0.64
338.25	3.97	0.69
338.26	4.06	0.75
338.27	4.15	0.81
338.28	4.24	0.87
338.29	4.33	0.93
338.30	4.41	1.00
338.31	4.50	1.07
338.32	4.58	1.14
338.33	4.66	1.21
338.34	4.74	1.28
338.35	4.82	1.35
338.36	4.89	1.43
338.37	4.97	1.51
338.38	5.04	1.59
338.39	5.11	1.67
338.40	5.18	1.75
338.41	5.25	1.84
338.42	5.32	1.93
338.43	5.39	2.01
338.44	5.45	2.10
338.45	5.51	2.19
338.46	5.58	2.29
338.47	5.64	2.38
338.48	5.70	2.47
338.49	5.76	2.57
338.50	5.82	2.67
338.51	5.87	2.76
338.52	5.93	2.86
338.53	5.98	2.96
338.54	6.04	3.06
338.55	6.09	3.17
338.56	6.14	3.27
338.57	6.19	3.37
338.58	6.24	3.48
338.59	6.29	3.58
338.60	6.33	3.69
338.61	6.38	3.80
338.62	6.42	3.90
338.63	6.47	4.01
338.64	6.51	4.12
338.65	6.55	4.23
338.66	6.59	4.33
338.67	6.63	4.44
338.68	6.67	4.55
338.69	6.71	4.66
338.70	6.75	4.77
338.71	6.78	4.88
338.72	6.82	4.99
338.73	6.85	5.10
338.74	6.88	5.21
338.75	6.91	5.32
338.76	6.94	5.42
338.77	6.97	5.53
338.78	7.00	5.64
338.79	7.03	5.75
338.80	7.06	5.85
338.81	7.08	5.96
338.82	7.10	6.06
338.83	7.13	6.17
338.84	7.15	6.27
338.85	7.17	6.37
338.86	7.19	6.47
338.87	7.21	6.57
338.88	7.23	6.67
338.89	7.24	6.77
338.90	7.26	6.87
338.91	7.27	6.96
338.92	7.29	7.05
338.93	7.30	7.15
338.94	7.31	7.24
338.95	7.32	7.32
338.96	7.33	7.41
338.97	7.33	7.49
338.98	7.34	7.58
338.99	7.34	7.66
339.00	7.35	7.73
339.01	7.35	7.81
339.02	**7.35**	7.88
339.03	7.35	7.95
339.04	7.35	8.01
339.05	7.34	8.08
339.06	7.33	8.14
339.07	7.33	8.19
339.08	7.32	8.25
339.09	7.31	8.30
339.10	7.29	8.34
339.11	7.28	8.38
339.12	7.26	8.42
339.13	7.24	8.45
339.14	7.21	8.47
339.15	7.19	8.49
339.16	7.16	8.50
339.17	7.13	**8.51**
339.18	7.09	8.51
339.19	7.05	8.50
339.20	7.00	8.48
339.21	6.95	8.44
339.22	6.88	8.39
339.23	6.80	8.31
339.24	6.67	8.18
339.25	6.45	7.91

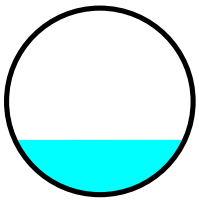
Summary for Reach DCB4: TO DMH#4

Inflow Area = 5,916 sf, 84.47% Impervious, Inflow Depth = 4.06" for 25-Year event
Inflow = 0.63 cfs @ 12.07 hrs, Volume= 2,001 cf
Outflow = 0.62 cfs @ 12.08 hrs, Volume= 2,001 cf, Atten= 1%, Lag= 0.3 min

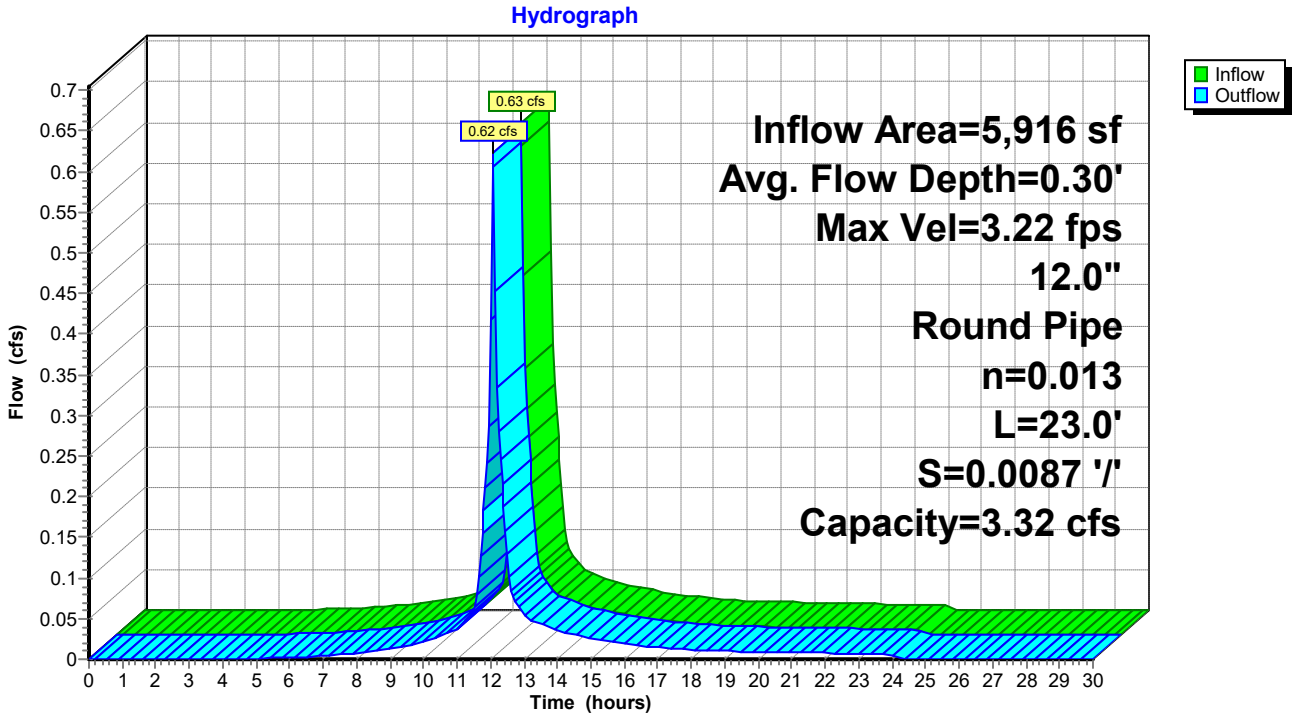
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.22 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.07 fps, Avg. Travel Time= 0.4 min

Peak Storage= 4 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.32 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 23.0' Slope= 0.0087 '/'
Inlet Invert= 355.50', Outlet Invert= 355.30'



Reach DCB4: TO DMH#4



Stage-Discharge for Reach DCB4: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.50	0.00	0.00
355.51	0.38	0.00
355.52	0.60	0.00
355.53	0.78	0.01
355.54	0.94	0.01
355.55	1.09	0.02
355.56	1.22	0.02
355.57	1.35	0.03
355.58	1.47	0.04
355.59	1.59	0.06
355.60	1.70	0.07
355.61	1.80	0.08
355.62	1.90	0.10
355.63	2.00	0.12
355.64	2.10	0.14
355.65	2.19	0.16
355.66	2.27	0.18
355.67	2.36	0.21
355.68	2.44	0.23
355.69	2.52	0.26
355.70	2.60	0.29
355.71	2.68	0.32
355.72	2.75	0.35
355.73	2.82	0.39
355.74	2.90	0.42
355.75	2.96	0.46
355.76	3.03	0.49
355.77	3.10	0.53
355.78	3.16	0.57
355.79	3.22	0.61
355.80	3.28	0.65
355.81	3.34	0.69
355.82	3.40	0.74
355.83	3.46	0.78
355.84	3.51	0.83
355.85	3.57	0.87
355.86	3.62	0.92
355.87	3.67	0.97
355.88	3.72	1.02
355.89	3.77	1.07
355.90	3.82	1.12
355.91	3.86	1.17
355.92	3.91	1.22
355.93	3.95	1.28
355.94	4.00	1.33
355.95	4.04	1.38
355.96	4.08	1.44
355.97	4.12	1.49
355.98	4.16	1.55
355.99	4.19	1.60
356.00	4.23	1.66
356.01	4.27	1.72
356.02	4.30	1.77
356.03	4.33	1.83
356.04	4.37	1.89
356.05	4.40	1.95
356.06	4.43	2.00
356.07	4.46	2.06
356.08	4.48	2.12
356.09	4.51	2.18
356.10	4.54	2.23
356.11	4.56	2.29
356.12	4.59	2.35
356.13	4.61	2.40
356.14	4.63	2.46
356.15	4.65	2.51
356.16	4.67	2.57
356.17	4.69	2.62
356.18	4.71	2.68
356.19	4.72	2.73
356.20	4.74	2.78
356.21	4.75	2.83
356.22	4.76	2.88
356.23	4.78	2.93
356.24	4.79	2.98
356.25	4.79	3.03
356.26	4.80	3.08
356.27	4.81	3.12
356.28	4.81	3.16
356.29	4.82	3.21
356.30	4.82	3.25
356.31	**4.82**	3.29
356.32	4.82	3.32
356.33	4.82	3.36
356.34	4.82	3.39
356.35	4.81	3.42
356.36	4.80	3.45
356.37	4.80	3.48
356.38	4.78	3.50
356.39	4.77	3.52
356.40	4.76	3.54
356.41	4.74	3.56
356.42	4.72	3.57
356.43	4.69	3.57
356.44	4.66	**3.57**
356.45	4.63	3.57
356.46	4.59	3.56
356.47	4.55	3.54
356.48	4.49	3.51
356.49	4.42	3.46
356.50	4.23	3.32

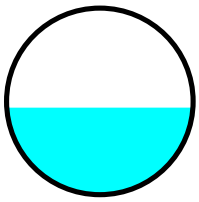
Summary for Reach DCB5: TO DMH#5

Inflow Area = 13,229 sf, 94.75% Impervious, Inflow Depth = 4.72" for 25-Year event
Inflow = 1.55 cfs @ 12.07 hrs, Volume= 5,200 cf
Outflow = 1.54 cfs @ 12.07 hrs, Volume= 5,200 cf, Atten= 1%, Lag= 0.2 min

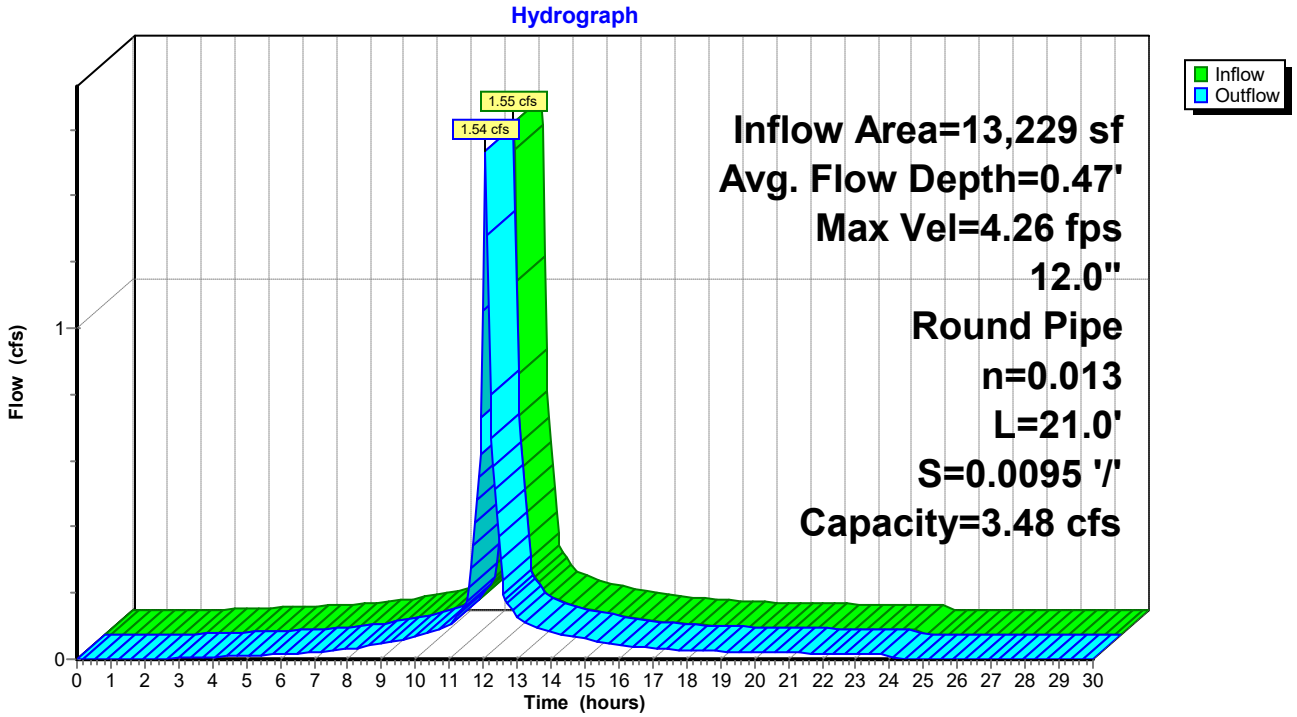
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.26 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.43 fps, Avg. Travel Time= 0.2 min

Peak Storage= 8 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.47'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.48 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 354.80', Outlet Invert= 354.60'



Reach DCB5: TO DMH#5



Stage-Discharge for Reach DCB5: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.80	0.00	0.00
354.81	0.39	0.00
354.82	0.62	0.00
354.83	0.81	0.01
354.84	0.98	0.01
354.85	1.14	0.02
354.86	1.28	0.02
354.87	1.41	0.03
354.88	1.54	0.05
354.89	1.66	0.06
354.90	1.78	0.07
354.91	1.89	0.09
354.92	1.99	0.11
354.93	2.09	0.13
354.94	2.19	0.15
354.95	2.29	0.17
354.96	2.38	0.19
354.97	2.47	0.22
354.98	2.56	0.25
354.99	2.64	0.27
355.00	2.72	0.30
355.01	2.80	0.34
355.02	2.88	0.37
355.03	2.96	0.40
355.04	3.03	0.44
355.05	3.10	0.48
355.06	3.17	0.51
355.07	3.24	0.55
355.08	3.31	0.60
355.09	3.37	0.64
355.10	3.44	0.68
355.11	3.50	0.73
355.12	3.56	0.77
355.13	3.62	0.82
355.14	3.68	0.87
355.15	3.73	0.91
355.16	3.79	0.96
355.17	3.84	1.01
355.18	3.89	1.07
355.19	3.94	1.12
355.20	3.99	1.17
355.21	4.04	1.23
355.22	4.09	1.28
355.23	4.14	1.34
355.24	4.18	1.39
355.25	4.22	1.45
355.26	4.27	1.51
355.27	4.31	1.56
355.28	4.35	1.62
355.29	4.39	1.68
355.30	4.43	1.74
355.31	4.46	1.80
355.32	4.50	1.86
355.33	4.53	1.92
355.34	4.57	1.98
355.35	4.60	2.04
355.36	4.63	2.10
355.37	4.66	2.16
355.38	4.69	2.22
355.39	4.72	2.28
355.40	4.75	2.34
355.41	4.77	2.40
355.42	4.80	2.45
355.43	4.82	2.51
355.44	4.85	2.57
355.45	4.87	2.63
355.46	4.89	2.69
355.47	4.91	2.74
355.48	4.92	2.80
355.49	4.94	2.86
355.50	4.96	2.91
355.51	4.97	2.96
355.52	4.99	3.02
355.53	5.00	3.07
355.54	5.01	3.12
355.55	5.02	3.17
355.56	5.03	3.22
355.57	5.03	3.27
355.58	5.04	3.31
355.59	5.04	3.36
355.60	5.05	3.40
355.61	**5.05**	3.44
355.62	5.05	3.48
355.63	5.04	3.52
355.64	5.04	3.55
355.65	5.04	3.58
355.66	5.03	3.61
355.67	5.02	3.64
355.68	5.01	3.67
355.69	4.99	3.69
355.70	4.98	3.71
355.71	4.96	3.72
355.72	4.94	3.73
355.73	4.91	3.74
355.74	4.88	**3.74**
355.75	4.85	3.74
355.76	4.81	3.73
355.77	4.76	3.71
355.78	4.70	3.67
355.79	4.62	3.62
355.80	4.43	3.48

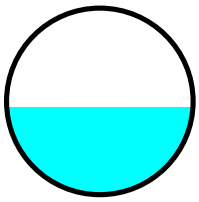
Summary for Reach DCB6: TO DMH#6

Inflow Area = 18,802 sf, 87.54% Impervious, Inflow Depth = 4.27" for 25-Year event
Inflow = 2.07 cfs @ 12.07 hrs, Volume= 6,696 cf
Outflow = 2.07 cfs @ 12.07 hrs, Volume= 6,696 cf, Atten= 0%, Lag= 0.0 min

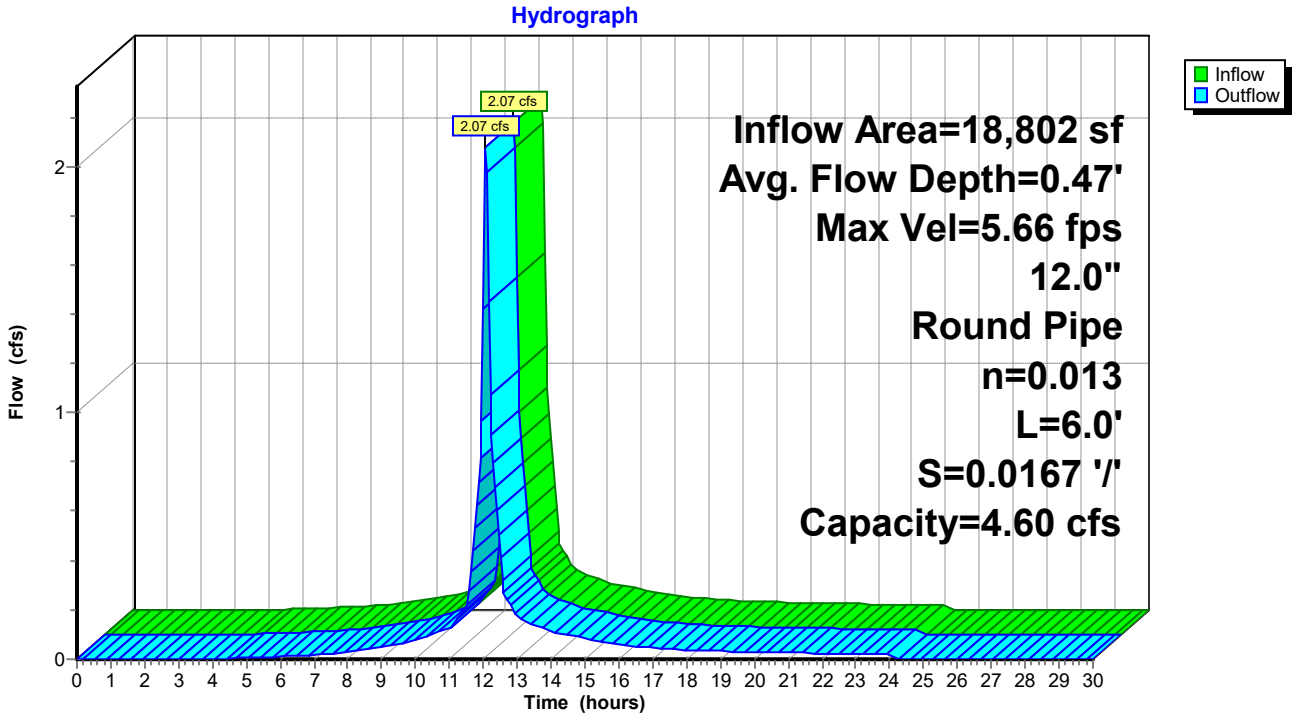
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.66 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.90 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.47'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.60 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 6.0' Slope= 0.0167 '/'
Inlet Invert= 353.40', Outlet Invert= 353.30'



Reach DCB6: TO DMH#6



Stage-Discharge for Reach DCB6: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.40	0.00	0.00
353.41	0.52	0.00
353.42	0.82	0.00
353.43	1.08	0.01
353.44	1.30	0.01
353.45	1.50	0.02
353.46	1.69	0.03
353.47	1.87	0.05
353.48	2.04	0.06
353.49	2.20	0.08
353.50	2.35	0.10
353.51	2.50	0.12
353.52	2.64	0.14
353.53	2.77	0.17
353.54	2.90	0.19
353.55	3.03	0.22
353.56	3.15	0.26
353.57	3.27	0.29
353.58	3.38	0.33
353.59	3.49	0.36
353.60	3.60	0.40
353.61	3.71	0.44
353.62	3.81	0.49
353.63	3.91	0.53
353.64	4.01	0.58
353.65	4.10	0.63
353.66	4.20	0.68
353.67	4.29	0.73
353.68	4.38	0.79
353.69	4.46	0.84
353.70	4.55	0.90
353.71	4.63	0.96
353.72	4.71	1.02
353.73	4.79	1.08
353.74	4.86	1.14
353.75	4.94	1.21
353.76	5.01	1.28
353.77	5.08	1.34
353.78	5.15	1.41
353.79	5.22	1.48
353.80	5.28	1.55
353.81	5.35	1.62
353.82	5.41	1.69
353.83	5.47	1.77
353.84	5.53	1.84
353.85	5.59	1.92
353.86	5.65	1.99
353.87	5.70	2.07
353.88	5.75	2.14
353.89	5.81	2.22
353.90	5.86	2.30
353.91	5.91	2.38
353.92	5.95	2.46
353.93	6.00	2.54
353.94	6.04	2.61
353.95	6.09	2.69
353.96	6.13	2.77
353.97	6.17	2.85
353.98	6.21	2.93
353.99	6.24	3.01
354.00	6.28	3.09
354.01	6.31	3.17
354.02	6.35	3.25
354.03	6.38	3.33
354.04	6.41	3.40
354.05	6.44	3.48
354.06	6.46	3.56
354.07	6.49	3.63
354.08	6.51	3.70
354.09	6.54	3.78
354.10	6.56	3.85
354.11	6.58	3.92
354.12	6.59	3.99
354.13	6.61	4.06
354.14	6.63	4.13
354.15	6.64	4.19
354.16	6.65	4.26
354.17	6.66	4.32
354.18	6.67	4.38
354.19	6.67	4.44
354.20	6.67	4.50
354.21	**6.68**	4.55
354.22	6.68	4.60
354.23	6.67	4.65
354.24	6.67	4.70
354.25	6.66	4.74
354.26	6.65	4.78
354.27	6.64	4.82
354.28	6.62	4.85
354.29	6.61	4.88
354.30	6.58	4.90
354.31	6.56	4.92
354.32	6.53	4.94
354.33	6.50	4.95
354.34	6.46	**4.95**
354.35	6.41	4.94
354.36	6.36	4.93
354.37	6.30	4.90
354.38	6.22	4.86
354.39	6.11	4.79
354.40	5.86	4.60

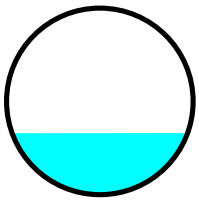
Summary for Reach DCBR100: TO DMH R100

Inflow Area = 8,304 sf, 89.80% Impervious, Inflow Depth = 4.38" for 25-Year event
Inflow = 0.93 cfs @ 12.07 hrs, Volume= 3,033 cf
Outflow = 0.90 cfs @ 12.09 hrs, Volume= 3,033 cf, Atten= 3%, Lag= 1.3 min

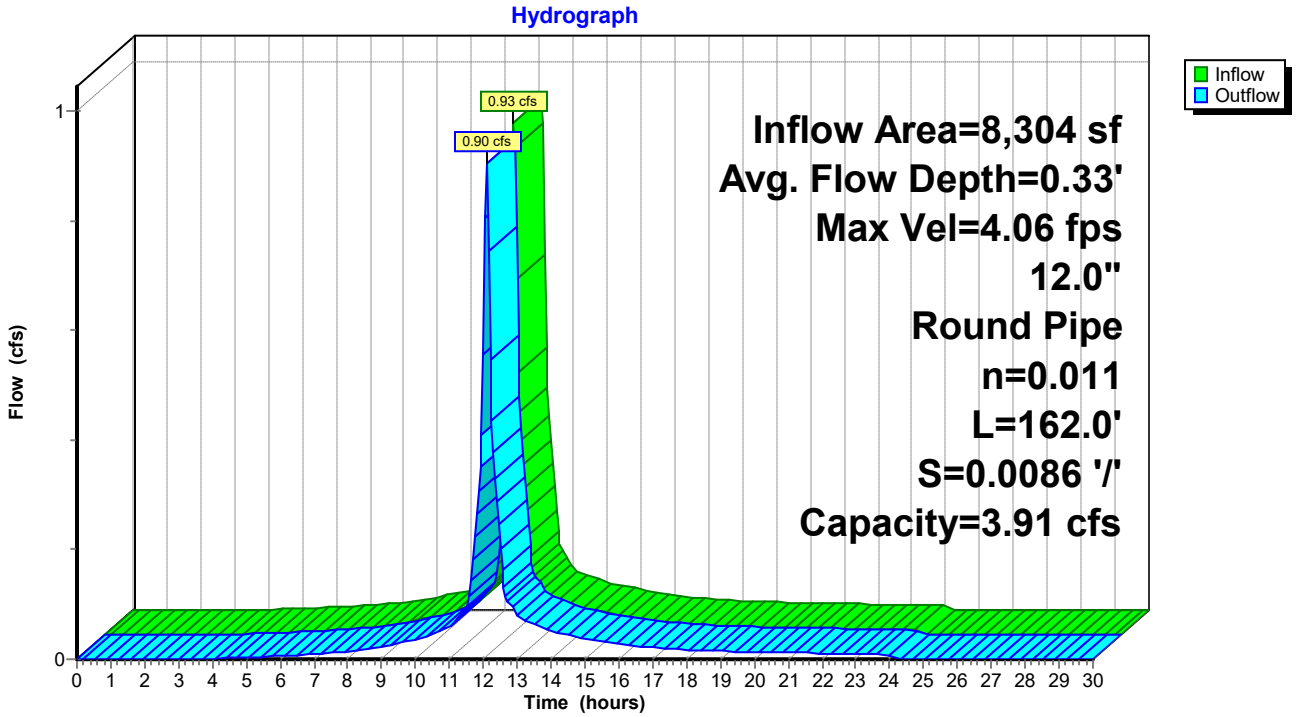
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.06 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.33 fps, Avg. Travel Time= 2.0 min

Peak Storage= 37 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.91 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 162.0' Slope= 0.0086 '/'
Inlet Invert= 354.50', Outlet Invert= 353.10'



Reach DCBR100: TO DMH R100



Stage-Discharge for Reach DCBR100: TO DMH R100

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.50	0.00	0.00
354.51	0.44	0.00
354.52	0.70	0.00
354.53	0.92	0.01
354.54	1.11	0.01
354.55	1.28	0.02
354.56	1.44	0.03
354.57	1.59	0.04
354.58	1.73	0.05
354.59	1.87	0.07
354.60	2.00	0.08
354.61	2.12	0.10
354.62	2.24	0.12
354.63	2.36	0.14
354.64	2.47	0.16
354.65	2.58	0.19
354.66	2.68	0.22
354.67	2.78	0.25
354.68	2.88	0.28
354.69	2.97	0.31
354.70	3.07	0.34
354.71	3.16	0.38
354.72	3.24	0.42
354.73	3.33	0.45
354.74	3.41	0.49
354.75	3.49	0.54
354.76	3.57	0.58
354.77	3.65	0.62
354.78	3.72	0.67
354.79	3.80	0.72
354.80	3.87	0.77
354.81	3.94	0.82
354.82	4.01	0.87
354.83	4.07	0.92
354.84	4.14	0.97
354.85	4.20	1.03
354.86	4.26	1.09
354.87	4.32	1.14
354.88	4.38	1.20
354.89	4.44	1.26
354.90	4.50	1.32
354.91	4.55	1.38
354.92	4.60	1.44
354.93	4.66	1.50
354.94	4.71	1.57
354.95	4.76	1.63
354.96	4.80	1.69
354.97	4.85	1.76
354.98	4.90	1.83
354.99	4.94	1.89
355.00	4.98	1.96
355.01	5.03	2.02
355.02	5.07	2.09
355.03	5.11	2.16
355.04	5.14	2.23
355.05	5.18	2.29
355.06	5.22	2.36
355.07	5.25	2.43
355.08	5.28	2.50
355.09	5.31	2.56
355.10	5.34	2.63
355.11	5.37	2.70
355.12	5.40	2.76
355.13	5.43	2.83
355.14	5.45	2.90
355.15	5.48	2.96
355.16	5.50	3.03
355.17	5.52	3.09
355.18	5.54	3.15
355.19	5.56	3.22
355.20	5.58	3.28
355.21	5.60	3.34
355.22	5.61	3.40
355.23	5.63	3.46
355.24	5.64	3.51
355.25	5.65	3.57
355.26	5.66	3.62
355.27	5.67	3.68
355.28	5.67	3.73
355.29	5.68	3.78
355.30	5.68	3.83
355.31	**5.68**	3.87
355.32	5.68	3.92
355.33	5.68	3.96
355.34	5.67	4.00
355.35	5.67	4.03
355.36	5.66	4.07
355.37	5.65	4.10
355.38	5.64	4.13
355.39	5.62	4.15
355.40	5.60	4.17
355.41	5.58	4.19
355.42	5.56	4.20
355.43	5.53	4.21
355.44	5.50	**4.21**
355.45	5.46	4.21
355.46	5.41	4.19
355.47	5.36	4.17
355.48	5.29	4.14
355.49	5.20	4.08
355.50	4.98	3.91

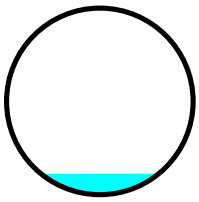
Summary for Reach DCBS10: TO DMH-S4

Inflow Area = 2,269 sf, 91.63% Impervious, Inflow Depth = 4.72" for 25-Year event
Inflow = 0.27 cfs @ 12.07 hrs, Volume= 892 cf
Outflow = 0.26 cfs @ 12.07 hrs, Volume= 892 cf, Atten= 0%, Lag= 0.1 min

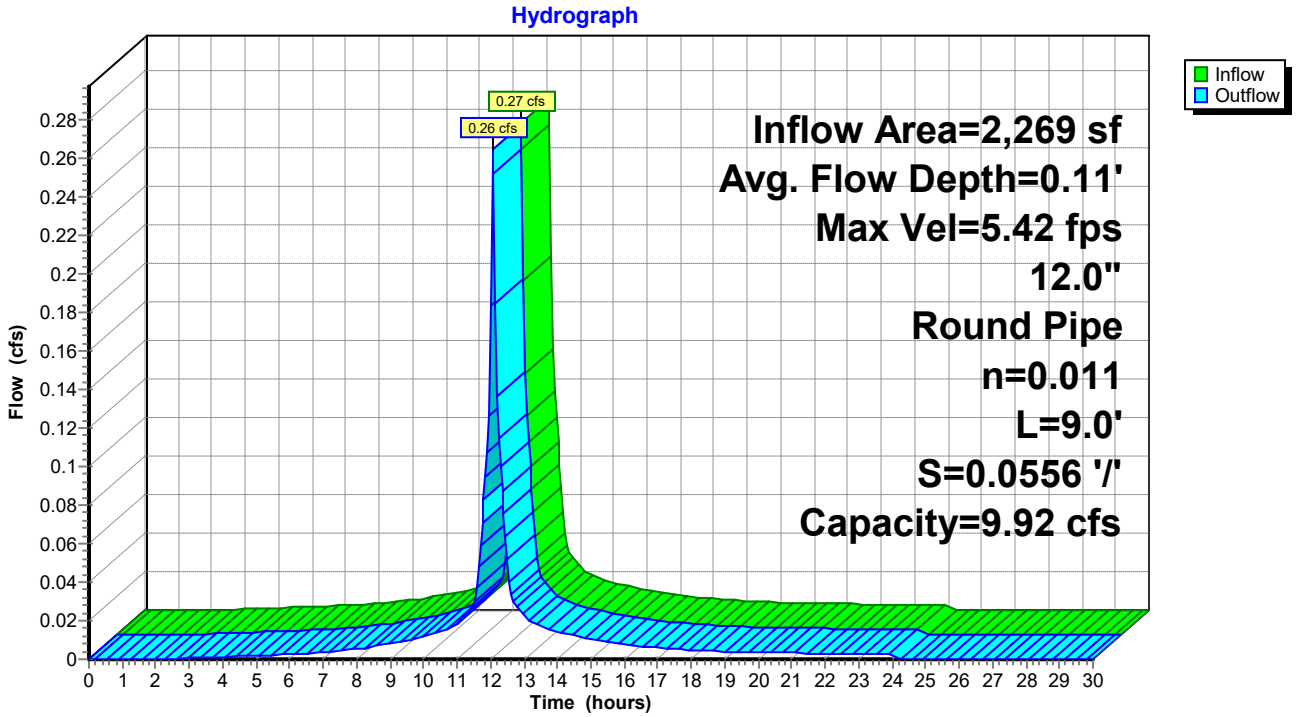
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.42 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.81 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.11'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.92 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 9.0' Slope= 0.0556 '/'
Inlet Invert= 356.50', Outlet Invert= 356.00'



Reach DCBS10: TO DMH-S4



Stage-Discharge for Reach DCBS10: TO DMH-S4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
356.50	0.00	0.00
356.51	1.12	0.00
356.52	1.78	0.01
356.53	2.32	0.02
356.54	2.81	0.03
356.55	3.25	0.05
356.56	3.65	0.07
356.57	4.04	0.10
356.58	4.40	0.13
356.59	4.74	0.17
356.60	5.07	0.21
356.61	5.38	0.25
356.62	5.69	0.30
356.63	5.98	0.36
356.64	6.26	0.42
356.65	6.53	0.48
356.66	6.79	0.55
356.67	7.05	0.62
356.68	7.30	0.70
356.69	7.54	0.78
356.70	7.77	0.87
356.71	8.00	0.96
356.72	8.22	1.05
356.73	8.44	1.15
356.74	8.65	1.25
356.75	8.85	1.36
356.76	9.05	1.47
356.77	9.25	1.58
356.78	9.44	1.70
356.79	9.63	1.82
356.80	9.81	1.94
356.81	9.98	2.07
356.82	10.16	2.20
356.83	10.33	2.33
356.84	10.49	2.47
356.85	10.65	2.61
356.86	10.81	2.75
356.87	10.96	2.90
356.88	11.11	3.04
356.89	11.26	3.19
356.90	11.40	3.34
356.91	11.54	3.50
356.92	11.67	3.65
356.93	11.81	3.81
356.94	11.93	3.97
356.95	12.06	4.13
356.96	12.18	4.30
356.97	12.30	4.46
356.98	12.42	4.63
356.99	12.53	4.79
357.00	12.64	4.96
357.01	12.74	5.13
357.02	12.84	5.30
357.03	12.94	5.47
357.04	13.04	5.64
357.05	13.13	5.81
357.06	13.22	5.98
357.07	13.31	6.16
357.08	13.39	6.33
357.09	13.47	6.50
357.10	13.55	6.67
357.11	13.63	6.84
357.12	13.70	7.01
357.13	13.76	7.17
357.14	13.83	7.34
357.15	13.89	7.51
357.16	13.95	7.67
357.17	14.00	7.83
357.18	14.06	7.99
357.19	14.10	8.15
357.20	14.15	8.31
357.21	14.19	8.46
357.22	14.23	8.61
357.23	14.26	8.76
357.24	14.30	8.91
357.25	14.32	9.05
357.26	14.35	9.19
357.27	14.37	9.32
357.28	14.38	9.45
357.29	14.39	9.58
357.30	14.40	9.70
357.31	**14.41**	9.82
357.32	14.40	9.93
357.33	14.40	10.03
357.34	14.39	10.13
357.35	14.37	10.23
357.36	14.35	10.31
357.37	14.33	10.39
357.38	14.29	10.46
357.39	14.25	10.52
357.40	14.21	10.58
357.41	14.15	10.62
357.42	14.09	10.65
357.43	14.02	10.67
357.44	13.93	**10.68**
357.45	13.84	10.66
357.46	13.72	10.63
357.47	13.59	10.58
357.48	13.42	10.49
357.49	13.19	10.34
357.50	12.64	9.92

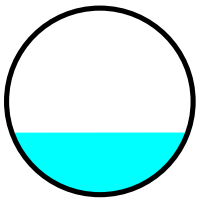
Summary for Reach DCBS5: TO DMH-S8

Inflow Area = 13,730 sf, 73.11% Impervious, Inflow Depth = 4.17" for 25-Year event
Inflow = 1.49 cfs @ 12.07 hrs, Volume= 4,767 cf
Outflow = 1.48 cfs @ 12.07 hrs, Volume= 4,767 cf, Atten= 0%, Lag= 0.1 min

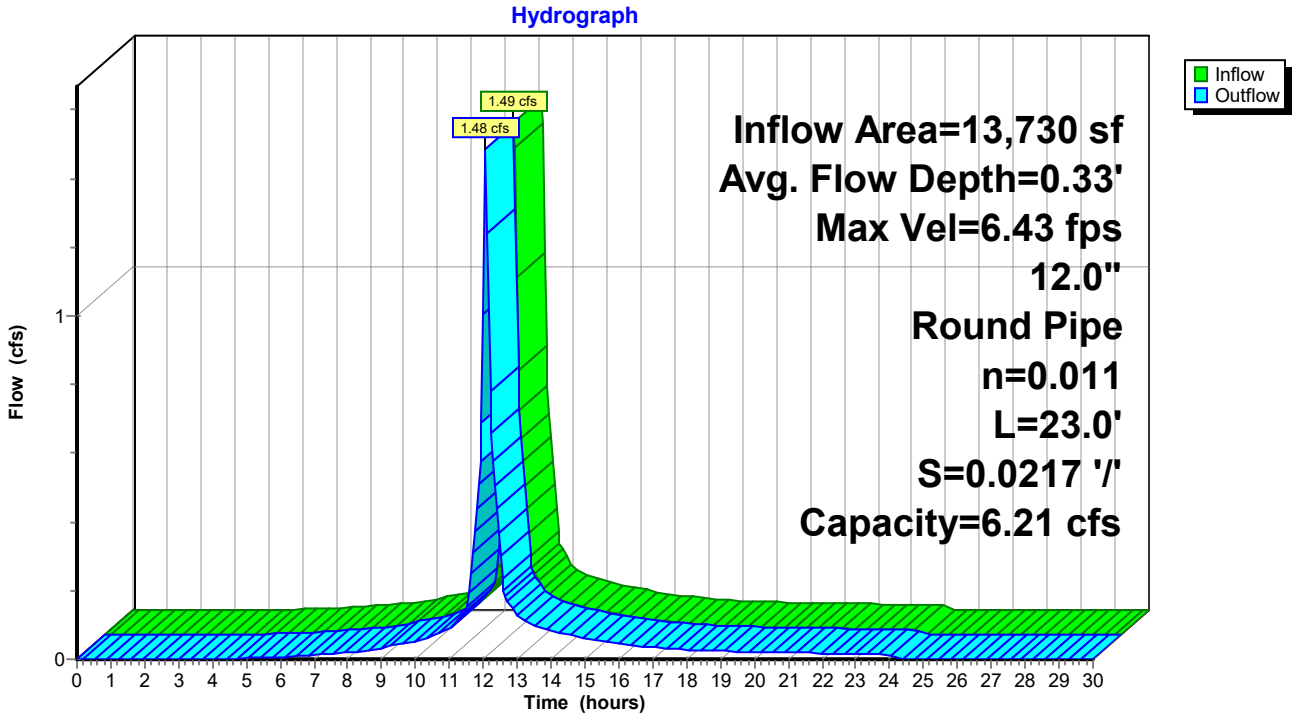
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.43 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.14 fps, Avg. Travel Time= 0.2 min

Peak Storage= 5 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.21 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 23.0' Slope= 0.0217 '/'
Inlet Invert= 347.00', Outlet Invert= 346.50'



Reach DCBS5: TO DMH-S8



Stage-Discharge for Reach DCBS5: TO DMH-S8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.00	0.00	0.00
347.01	0.70	0.00
347.02	1.11	0.00
347.03	1.45	0.01
347.04	1.76	0.02
347.05	2.03	0.03
347.06	2.29	0.04
347.07	2.52	0.06
347.08	2.75	0.08
347.09	2.97	0.10
347.10	3.17	0.13
347.11	3.37	0.16
347.12	3.56	0.19
347.13	3.74	0.22
347.14	3.91	0.26
347.15	4.08	0.30
347.16	4.25	0.34
347.17	4.41	0.39
347.18	4.56	0.44
347.19	4.72	0.49
347.20	4.86	0.54
347.21	5.00	0.60
347.22	5.14	0.66
347.23	5.28	0.72
347.24	5.41	0.78
347.25	5.54	0.85
347.26	5.66	0.92
347.27	5.79	0.99
347.28	5.91	1.06
347.29	6.02	1.14
347.30	6.13	1.22
347.31	6.25	1.30
347.32	6.35	1.38
347.33	6.46	1.46
347.34	6.56	1.55
347.35	6.66	1.63
347.36	6.76	1.72
347.37	6.86	1.81
347.38	6.95	1.90
347.39	7.04	2.00
347.40	7.13	2.09
347.41	7.22	2.19
347.42	7.30	2.29
347.43	7.39	2.38
347.44	7.47	2.48
347.45	7.54	2.59
347.46	7.62	2.69
347.47	7.69	2.79
347.48	7.77	2.89
347.49	7.84	3.00
347.50	7.90	3.10
347.51	7.97	3.21
347.52	8.03	3.32
347.53	8.10	3.42
347.54	8.16	3.53
347.55	8.22	3.64
347.56	8.27	3.74
347.57	8.33	3.85
347.58	8.38	3.96
347.59	8.43	4.06
347.60	8.48	4.17
347.61	8.52	4.28
347.62	8.57	4.38
347.63	8.61	4.49
347.64	8.65	4.59
347.65	8.69	4.70
347.66	8.73	4.80
347.67	8.76	4.90
347.68	8.79	5.00
347.69	8.82	5.10
347.70	8.85	5.20
347.71	8.88	5.29
347.72	8.90	5.39
347.73	8.92	5.48
347.74	8.94	5.57
347.75	8.96	5.66
347.76	8.97	5.75
347.77	8.99	5.83
347.78	9.00	5.91
347.79	9.00	5.99
347.80	9.01	6.07
347.81	**9.01**	6.14
347.82	9.01	6.21
347.83	9.01	6.28
347.84	9.00	6.34
347.85	8.99	6.40
347.86	8.98	6.45
347.87	8.96	6.50
347.88	8.94	6.54
347.89	8.92	6.58
347.90	8.89	6.62
347.91	8.85	6.64
347.92	8.81	6.66
347.93	8.77	6.67
347.94	8.72	**6.68**
347.95	8.66	6.67
347.96	8.58	6.65
347.97	8.50	6.62
347.98	8.39	6.56
347.99	8.25	6.47
348.00	7.90	6.21

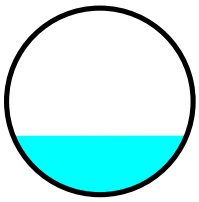
Summary for Reach DCBS6: TO DMH-S8

Inflow Area = 14,048 sf, 86.89% Impervious, Inflow Depth = 4.60" for 25-Year event
Inflow = 1.62 cfs @ 12.07 hrs, Volume= 5,390 cf
Outflow = 1.62 cfs @ 12.07 hrs, Volume= 5,390 cf, Atten= 0%, Lag= 0.1 min

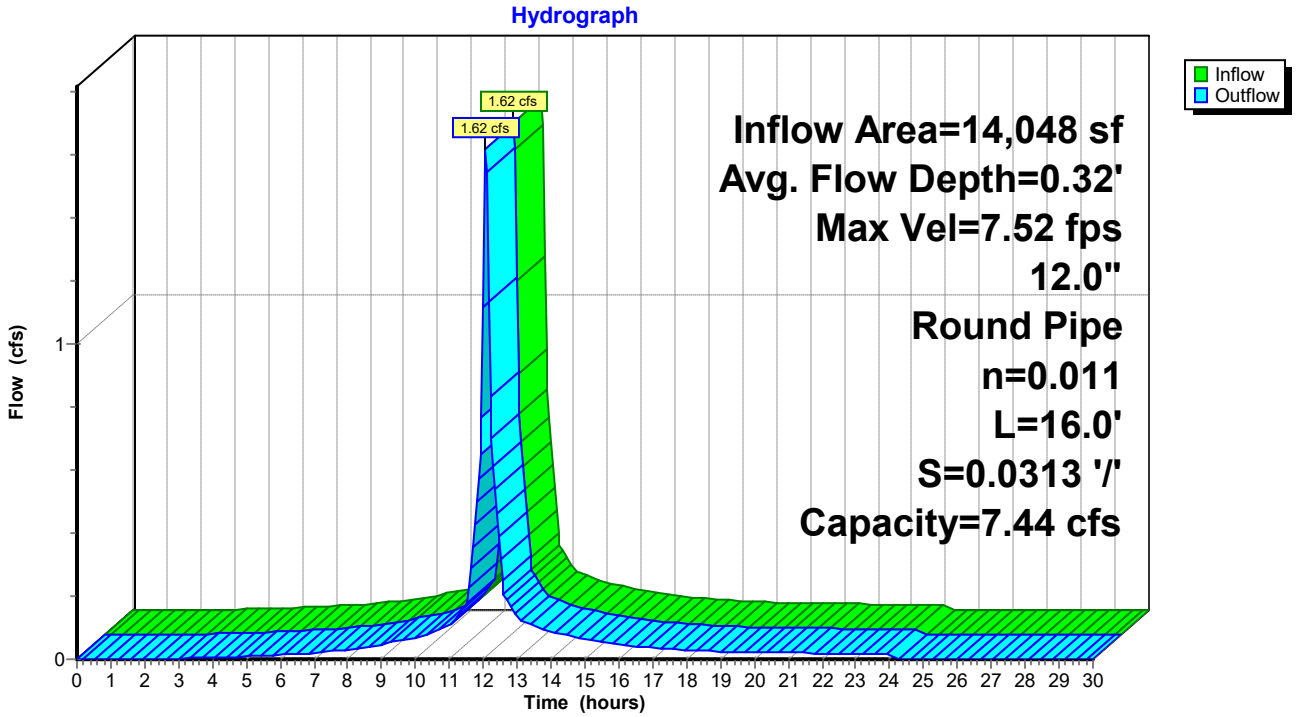
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.52 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.47 fps, Avg. Travel Time= 0.1 min

Peak Storage= 3 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.44 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 16.0' Slope= 0.0313 '/'
Inlet Invert= 347.00', Outlet Invert= 346.50'



Reach DCBS6: TO DMH-S8



Stage-Discharge for Reach DCBS6: TO DMH-S8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.00	0.00	0.00
347.01	0.84	0.00
347.02	1.33	0.01
347.03	1.74	0.01
347.04	2.10	0.02
347.05	2.43	0.04
347.06	2.74	0.05
347.07	3.03	0.07
347.08	3.30	0.10
347.09	3.56	0.12
347.10	3.80	0.16
347.11	4.04	0.19
347.12	4.26	0.23
347.13	4.48	0.27
347.14	4.69	0.31
347.15	4.90	0.36
347.16	5.10	0.41
347.17	5.29	0.47
347.18	5.47	0.53
347.19	5.65	0.59
347.20	5.83	0.65
347.21	6.00	0.72
347.22	6.17	0.79
347.23	6.33	0.86
347.24	6.49	0.94
347.25	6.64	1.02
347.26	6.79	1.10
347.27	6.94	1.19
347.28	7.08	1.27
347.29	7.22	1.36
347.30	7.36	1.46
347.31	7.49	1.55
347.32	7.62	1.65
347.33	7.74	1.75
347.34	7.87	1.85
347.35	7.99	1.96
347.36	8.11	2.06
347.37	8.22	2.17
347.38	8.33	2.28
347.39	8.44	2.39
347.40	8.55	2.51
347.41	8.65	2.62
347.42	8.76	2.74
347.43	8.85	2.86
347.44	8.95	2.98
347.45	9.04	3.10
347.46	9.14	3.22
347.47	9.22	3.35
347.48	9.31	3.47
347.49	9.40	3.60
347.50	9.48	3.72
347.51	9.56	3.85
347.52	9.63	3.98
347.53	9.71	4.10
347.54	9.78	4.23
347.55	9.85	4.36
347.56	9.92	4.49
347.57	9.98	4.62
347.58	10.05	4.74
347.59	10.11	4.87
347.60	10.16	5.00
347.61	10.22	5.13
347.62	10.27	5.25
347.63	10.32	5.38
347.64	10.37	5.51
347.65	10.42	5.63
347.66	10.46	5.75
347.67	10.50	5.88
347.68	10.54	6.00
347.69	10.58	6.11
347.70	10.61	6.23
347.71	10.64	6.35
347.72	10.67	6.46
347.73	10.70	6.57
347.74	10.72	6.68
347.75	10.74	6.79
347.76	10.76	6.89
347.77	10.77	6.99
347.78	10.79	7.09
347.79	10.80	7.18
347.80	10.80	7.28
347.81	**10.80**	7.36
347.82	10.80	7.45
347.83	10.80	7.53
347.84	10.79	7.60
347.85	10.78	7.67
347.86	10.76	7.73
347.87	10.74	7.79
347.88	10.72	7.85
347.89	10.69	7.89
347.90	10.66	7.93
347.91	10.61	7.97
347.92	10.57	7.99
347.93	10.51	8.00
347.94	10.45	**8.01**
347.95	10.38	8.00
347.96	10.29	7.97
347.97	10.19	7.93
347.98	10.06	7.87
347.99	9.89	7.76
348.00	9.48	7.44

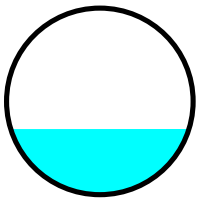
Summary for Reach DCBS7: TO DMH-S6

Inflow Area = 14,635 sf, 28.88% Impervious, Inflow Depth = 4.17" for 25-Year event
Inflow = 1.37 cfs @ 12.14 hrs, Volume= 5,081 cf
Outflow = 1.37 cfs @ 12.14 hrs, Volume= 5,081 cf, Atten= 0%, Lag= 0.1 min

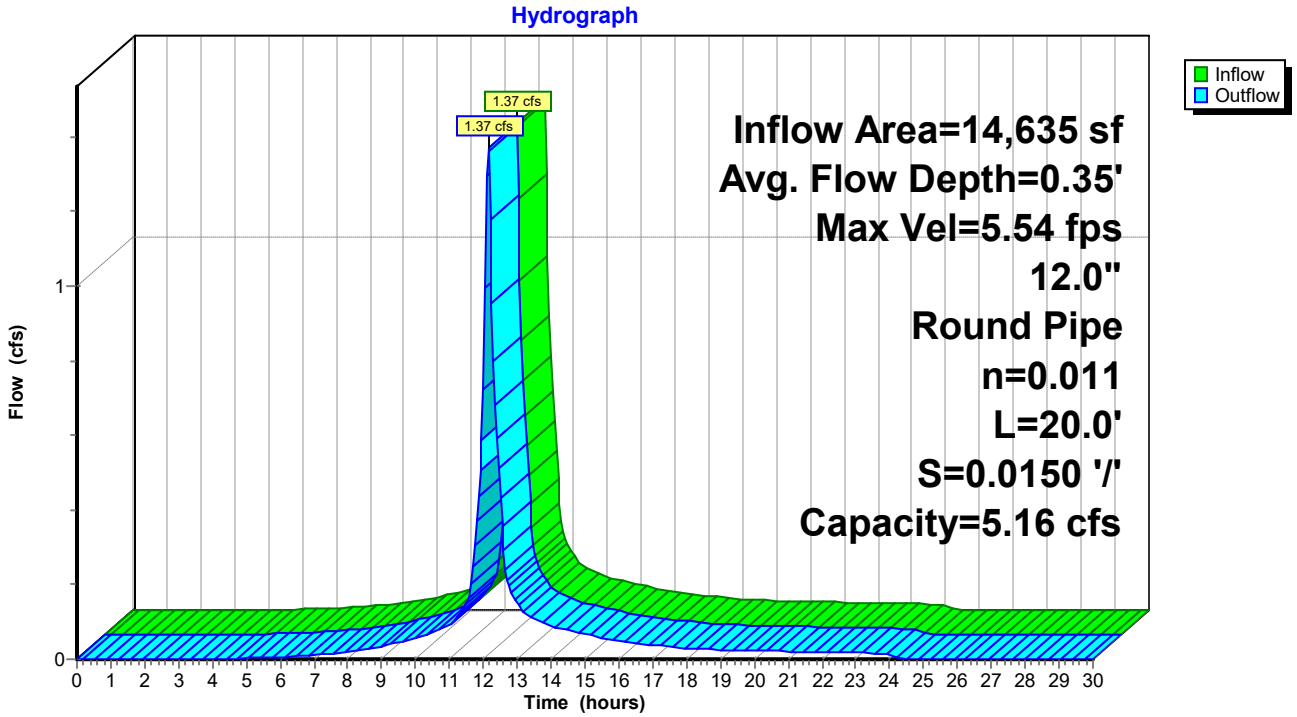
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.54 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.90 fps, Avg. Travel Time= 0.2 min

Peak Storage= 5 cf @ 12.14 hrs
Average Depth at Peak Storage= 0.35'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0150 '/'
Inlet Invert= 350.10', Outlet Invert= 349.80'



Reach DCBS7: TO DMH-S6



Stage-Discharge for Reach DCBS7: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.10	0.00	0.00
350.11	0.58	0.00
350.12	0.92	0.00
350.13	1.21	0.01
350.14	1.46	0.02
350.15	1.69	0.02
350.16	1.90	0.04
350.17	2.10	0.05
350.18	2.29	0.07
350.19	2.46	0.09
350.20	2.63	0.11
350.21	2.80	0.13
350.22	2.95	0.16
350.23	3.11	0.19
350.24	3.25	0.22
350.25	3.39	0.25
350.26	3.53	0.29
350.27	3.66	0.32
350.28	3.79	0.36
350.29	3.92	0.41
350.30	4.04	0.45
350.31	4.16	0.50
350.32	4.27	0.55
350.33	4.38	0.60
350.34	4.49	0.65
350.35	4.60	0.71
350.36	4.70	0.76
350.37	4.81	0.82
350.38	4.91	0.88
350.39	5.00	0.95
350.40	5.10	1.01
350.41	5.19	1.08
350.42	5.28	1.14
350.43	5.37	1.21
350.44	5.45	1.28
350.45	5.53	1.36
350.46	5.62	1.43
350.47	5.70	1.50
350.48	5.77	1.58
350.49	5.85	1.66
350.50	5.92	1.74
350.51	6.00	1.82
350.52	6.07	1.90
350.53	6.13	1.98
350.54	6.20	2.06
350.55	6.27	2.15
350.56	6.33	2.23
350.57	6.39	2.32
350.58	6.45	2.40
350.59	6.51	2.49
350.60	6.57	2.58
350.61	6.62	2.67
350.62	6.67	2.75
350.63	6.73	2.84
350.64	6.78	2.93
350.65	6.82	3.02
350.66	6.87	3.11
350.67	6.92	3.20
350.68	6.96	3.29
350.69	7.00	3.38
350.70	7.04	3.46
350.71	7.08	3.55
350.72	7.12	3.64
350.73	7.15	3.73
350.74	7.19	3.81
350.75	7.22	3.90
350.76	7.25	3.99
350.77	7.28	4.07
350.78	7.30	4.15
350.79	7.33	4.24
350.80	7.35	4.32
350.81	7.37	4.40
350.82	7.39	4.48
350.83	7.41	4.55
350.84	7.43	4.63
350.85	7.44	4.70
350.86	7.45	4.77
350.87	7.46	4.84
350.88	7.47	4.91
350.89	7.48	4.98
350.90	7.48	5.04
350.91	**7.49**	5.10
350.92	7.48	5.16
350.93	7.48	5.21
350.94	7.48	5.27
350.95	7.47	5.31
350.96	7.46	5.36
350.97	7.44	5.40
350.98	7.43	5.44
350.99	7.41	5.47
351.00	7.38	5.50
351.01	7.35	5.52
351.02	7.32	5.53
351.03	7.28	5.54
351.04	7.24	**5.55**
351.05	7.19	5.54
351.06	7.13	5.52
351.07	7.06	5.50
351.08	6.97	5.45
351.09	6.85	5.37
351.10	6.57	5.16

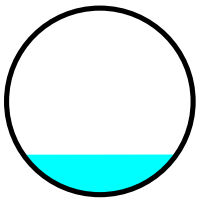
Summary for Reach DCBS8: TO DMH-S6

Inflow Area = 6,568 sf, 85.14% Impervious, Inflow Depth = 4.49" for 25-Year event
Inflow = 0.75 cfs @ 12.07 hrs, Volume= 2,459 cf
Outflow = 0.75 cfs @ 12.07 hrs, Volume= 2,459 cf, Atten= 0%, Lag= 0.1 min

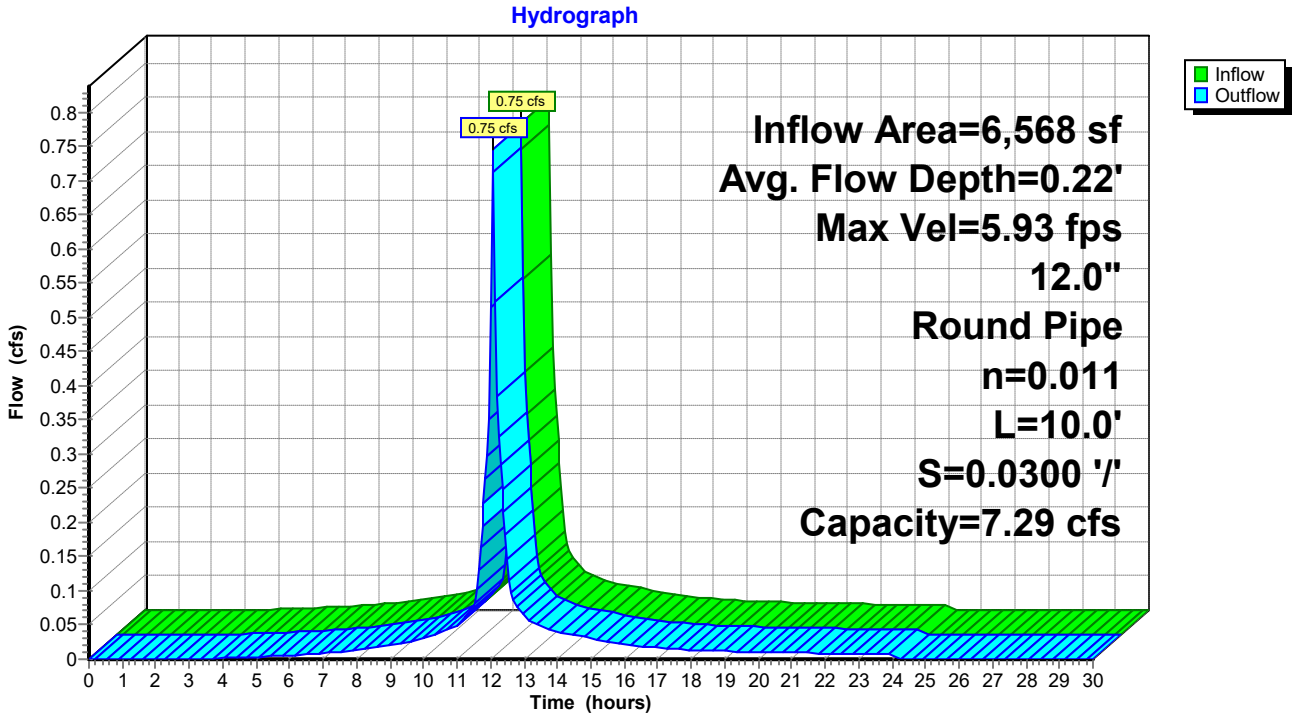
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.93 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.22'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.29 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 10.0' Slope= 0.0300 '/'
Inlet Invert= 350.10', Outlet Invert= 349.80'



Reach DCBS8: TO DMH-S6



Stage-Discharge for Reach DCBS8: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.10	0.00	0.00
350.11	0.83	0.00
350.12	1.31	0.00
350.13	1.71	0.01
350.14	2.06	0.02
350.15	2.39	0.04
350.16	2.69	0.05
350.17	2.97	0.07
350.18	3.23	0.10
350.19	3.48	0.12
350.20	3.73	0.15
350.21	3.96	0.19
350.22	4.18	0.22
350.23	4.39	0.26
350.24	4.60	0.31
350.25	4.80	0.35
350.26	4.99	0.40
350.27	5.18	0.46
350.28	5.36	0.52
350.29	5.54	0.58
350.30	5.71	0.64
350.31	5.88	0.70
350.32	6.04	0.77
350.33	6.20	0.85
350.34	6.36	0.92
350.35	6.51	1.00
350.36	6.65	1.08
350.37	6.80	1.16
350.38	6.94	1.25
350.39	7.07	1.34
350.40	7.21	1.43
350.41	7.34	1.52
350.42	7.46	1.62
350.43	7.59	1.72
350.44	7.71	1.82
350.45	7.83	1.92
350.46	7.94	2.02
350.47	8.06	2.13
350.48	8.17	2.24
350.49	8.27	2.35
350.50	8.38	2.46
350.51	8.48	2.57
350.52	8.58	2.69
350.53	8.68	2.80
350.54	8.77	2.92
350.55	8.86	3.04
350.56	8.95	3.16
350.57	9.04	3.28
350.58	9.12	3.40
350.59	9.21	3.52
350.60	9.29	3.65
350.61	9.36	3.77
350.62	9.44	3.90
350.63	9.51	4.02
350.64	9.58	4.15
350.65	9.65	4.27
350.66	9.72	4.40
350.67	9.78	4.52
350.68	9.84	4.65
350.69	9.90	4.77
350.70	9.96	4.90
350.71	10.01	5.02
350.72	10.06	5.15
350.73	10.11	5.27
350.74	10.16	5.39
350.75	10.21	5.52
350.76	10.25	5.64
350.77	10.29	5.76
350.78	10.33	5.87
350.79	10.36	5.99
350.80	10.40	6.11
350.81	10.43	6.22
350.82	10.46	6.33
350.83	10.48	6.44
350.84	10.50	6.55
350.85	10.53	6.65
350.86	10.54	6.75
350.87	10.56	6.85
350.88	10.57	6.95
350.89	10.58	7.04
350.90	10.58	7.13
350.91	**10.59**	7.21
350.92	10.59	7.30
350.93	10.58	7.37
350.94	10.57	7.45
350.95	10.56	7.51
350.96	10.55	7.58
350.97	10.53	7.64
350.98	10.50	7.69
350.99	10.47	7.73
351.00	10.44	7.77
351.01	10.40	7.80
351.02	10.35	7.83
351.03	10.30	7.84
351.04	10.24	**7.84**
351.05	10.17	7.84
351.06	10.08	7.81
351.07	9.98	7.77
351.08	9.86	7.71
351.09	9.69	7.60
351.10	9.29	7.29

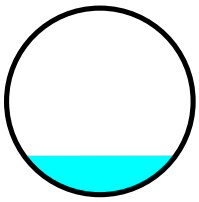
Summary for Reach DCBS9: TO DMH-S4

Inflow Area = 6,737 sf, 13.88% Impervious, Inflow Depth = 4.38" for 25-Year event
Inflow = 0.68 cfs @ 12.12 hrs, Volume= 2,460 cf
Outflow = 0.68 cfs @ 12.12 hrs, Volume= 2,460 cf, Atten= 0%, Lag= 0.1 min

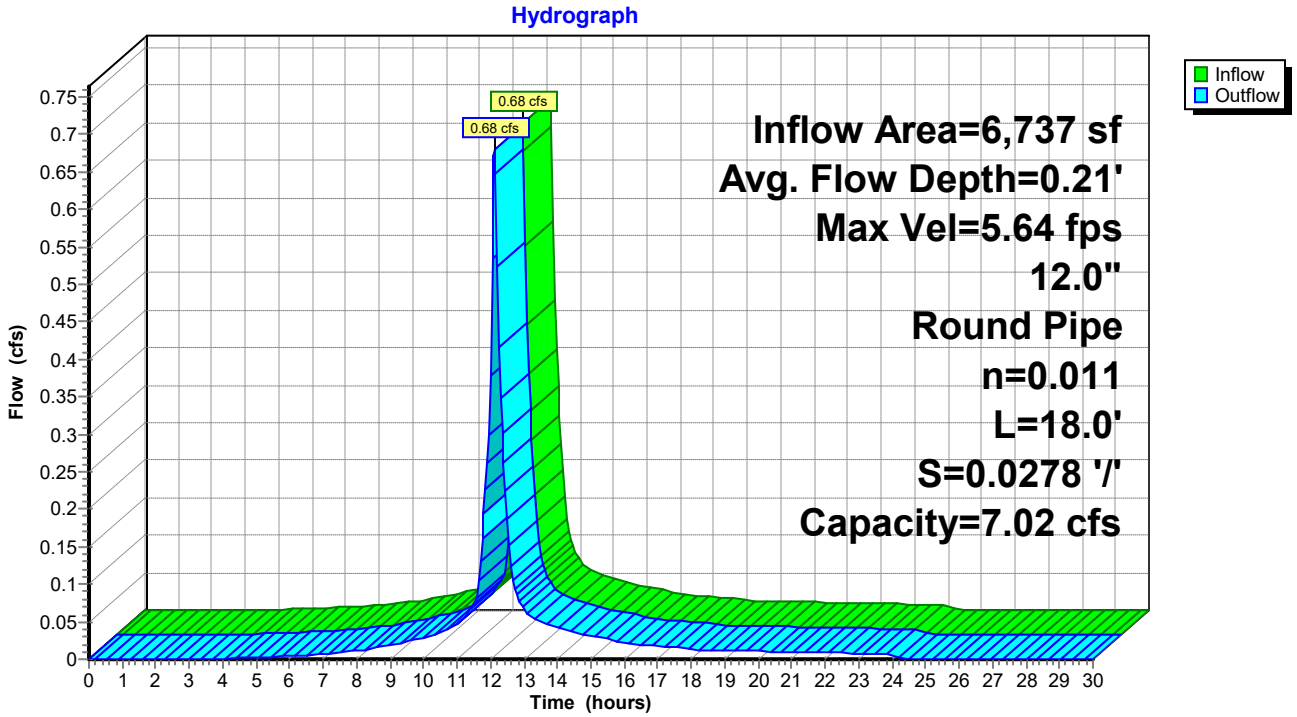
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.64 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.89 fps, Avg. Travel Time= 0.2 min

Peak Storage= 2 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.02 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 18.0' Slope= 0.0278 '/'
Inlet Invert= 356.50', Outlet Invert= 356.00'



Reach DCBS9: TO DMH-S4



Stage-Discharge for Reach DCBS9: TO DMH-S4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
356.50	0.00	0.00
356.51	0.80	0.00
356.52	1.26	0.00
356.53	1.64	0.01
356.54	1.98	0.02
356.55	2.30	0.03
356.56	2.58	0.05
356.57	2.85	0.07
356.58	3.11	0.09
356.59	3.35	0.12
356.60	3.58	0.15
356.61	3.81	0.18
356.62	4.02	0.21
356.63	4.23	0.25
356.64	4.43	0.30
356.65	4.62	0.34
356.66	4.80	0.39
356.67	4.98	0.44
356.68	5.16	0.50
356.69	5.33	0.55
356.70	5.50	0.61
356.71	5.66	0.68
356.72	5.81	0.74
356.73	5.97	0.81
356.74	6.12	0.89
356.75	6.26	0.96
356.76	6.40	1.04
356.77	6.54	1.12
356.78	6.68	1.20
356.79	6.81	1.29
356.80	6.93	1.37
356.81	7.06	1.46
356.82	7.18	1.56
356.83	7.30	1.65
356.84	7.42	1.75
356.85	7.53	1.85
356.86	7.64	1.95
356.87	7.75	2.05
356.88	7.86	2.15
356.89	7.96	2.26
356.90	8.06	2.36
356.91	8.16	2.47
356.92	8.25	2.58
356.93	8.35	2.70
356.94	8.44	2.81
356.95	8.53	2.92
356.96	8.61	3.04
356.97	8.70	3.15
356.98	8.78	3.27
356.99	8.86	3.39
357.00	8.94	3.51
357.01	9.01	3.63
357.02	9.08	3.75
357.03	9.15	3.87
357.04	9.22	3.99
357.05	9.29	4.11
357.06	9.35	4.23
357.07	9.41	4.35
357.08	9.47	4.47
357.09	9.53	4.59
357.10	9.58	4.71
357.11	9.63	4.83
357.12	9.69	4.95
357.13	9.73	5.07
357.14	9.78	5.19
357.15	9.82	5.31
357.16	9.86	5.42
357.17	9.90	5.54
357.18	9.94	5.65
357.19	9.97	5.76
357.20	10.01	5.88
357.21	10.03	5.98
357.22	10.06	6.09
357.23	10.09	6.20
357.24	10.11	6.30
357.25	10.13	6.40
357.26	10.14	6.50
357.27	10.16	6.59
357.28	10.17	6.68
357.29	10.18	6.77
357.30	10.18	6.86
357.31	**10.19**	6.94
357.32	10.19	7.02
357.33	10.18	7.10
357.34	10.17	7.17
357.35	10.16	7.23
357.36	10.15	7.29
357.37	10.13	7.35
357.38	10.11	7.40
357.39	10.08	7.44
357.40	10.05	7.48
357.41	10.01	7.51
357.42	9.96	7.53
357.43	9.91	7.55
357.44	9.85	**7.55**
357.45	9.78	7.54
357.46	9.70	7.52
357.47	9.61	7.48
357.48	9.49	7.42
357.49	9.33	7.31
357.50	8.94	7.02

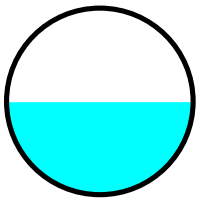
Summary for Reach DMH-R101: TO DMH-S1

Inflow Area = 40,822 sf, 73.55% Impervious, Inflow Depth = 3.46" for 25-Year event
Inflow = 3.60 cfs @ 12.10 hrs, Volume= 11,756 cf
Outflow = 3.46 cfs @ 12.12 hrs, Volume= 11,756 cf, Atten= 4%, Lag= 1.2 min

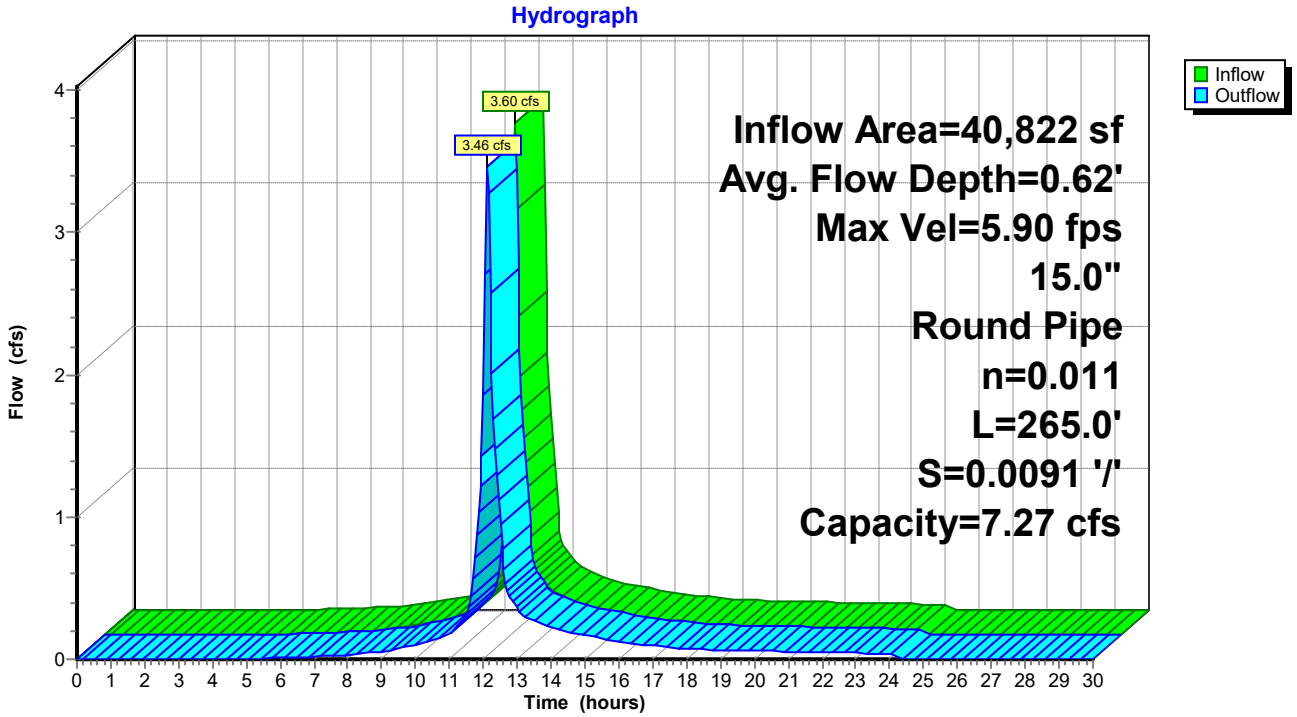
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.90 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.89 fps, Avg. Travel Time= 2.3 min

Peak Storage= 161 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.62'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.27 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 265.0' Slope= 0.0091 '/'
Inlet Invert= 351.00', Outlet Invert= 348.60'



Reach DMH-R101: TO DMH-S1



Stage-Discharge for Reach DMH-R101: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.42	0.00
351.02	0.71	0.00
351.03	0.94	0.01
351.04	1.13	0.01
351.05	1.31	0.02
351.06	1.48	0.03
351.07	1.64	0.04
351.08	1.78	0.06
351.09	1.92	0.08
351.10	2.06	0.09
351.11	2.19	0.12
351.12	2.31	0.14
351.13	2.43	0.17
351.14	2.55	0.19
351.15	2.66	0.22
351.16	2.77	0.25
351.17	2.88	0.29
351.18	2.98	0.32
351.19	3.08	0.36
351.20	3.18	0.40
351.21	3.28	0.45
351.22	3.37	0.49
351.23	3.46	0.54
351.24	3.55	0.59
351.25	3.64	0.64
351.26	3.73	0.69
351.27	3.81	0.74
351.28	3.89	0.80
351.29	3.97	0.86
351.30	4.05	0.92
351.31	4.13	0.98
351.32	4.20	1.04
351.33	4.28	1.11
351.34	4.35	1.18
351.35	4.42	1.24
351.36	4.49	1.31
351.37	4.56	1.39
351.38	4.63	1.46
351.39	4.69	1.53
351.40	4.76	1.61
351.41	4.82	1.69
351.42	4.88	1.77
351.43	4.95	1.85
351.44	5.01	1.93
351.45	5.06	2.01
351.46	5.12	2.10
351.47	5.18	2.18
351.48	5.23	2.27
351.49	5.29	2.36
351.50	5.34	2.45
351.51	5.39	2.54
351.52	5.44	2.63
351.53	5.49	2.72
351.54	5.54	2.81
351.55	5.59	2.91
351.56	5.64	3.00
351.57	5.68	3.10
351.58	5.73	3.19
351.59	5.77	3.29
351.60	5.82	3.39
351.61	5.86	3.49
351.62	5.90	3.58
351.63	5.94	3.68
351.64	5.98	3.78
351.65	6.02	3.88
351.66	6.06	3.98
351.67	6.09	4.08
351.68	6.13	4.18
351.69	6.16	4.28
351.70	6.20	4.38
351.71	6.23	4.48
351.72	6.26	4.58
351.73	6.29	4.68
351.74	6.32	4.78
351.75	6.35	4.88
351.76	6.38	4.98
351.77	6.40	5.08
351.78	6.43	5.18
351.79	6.46	5.28
351.80	6.48	5.37
351.81	6.50	5.47
351.82	6.52	5.57
351.83	6.55	5.66
351.84	6.57	5.76
351.85	6.59	5.85
351.86	6.60	5.95
351.87	6.62	6.04
351.88	6.64	6.13
351.89	6.65	6.22
351.90	6.67	6.31
351.91	6.68	6.39
351.92	6.69	6.48
351.93	6.70	6.56
351.94	6.71	6.65
351.95	6.72	6.73
351.96	6.73	6.81
351.97	6.74	6.88
351.98	6.74	6.96
351.99	6.74	7.03
352.00	6.75	7.10
352.01	6.75	7.17
352.02	**6.75**	7.24
352.03	6.75	7.30
352.04	6.75	7.36
352.05	6.74	7.42
352.06	6.74	7.47
352.07	6.73	7.52
352.08	6.72	7.57
352.09	6.71	7.62
352.10	6.70	7.66
352.11	6.68	7.70
352.12	6.66	7.73
352.13	6.65	7.76
352.14	6.63	7.78
352.15	6.60	7.80
352.16	6.57	7.81
352.17	6.54	**7.81**
352.18	6.51	7.81
352.19	6.47	7.80
352.20	6.43	7.78
352.21	6.38	7.75
352.22	6.32	7.70
352.23	6.24	7.63
352.24	6.13	7.51
352.25	5.92	7.27

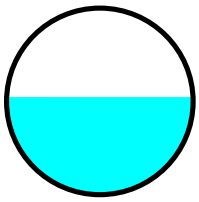
Summary for Reach DMH-S1: TO DMH-S2

Inflow Area = 59,366 sf, 76.73% Impervious, Inflow Depth = 3.62" for 25-Year event
Inflow = 5.28 cfs @ 12.10 hrs, Volume= 17,908 cf
Outflow = 5.05 cfs @ 12.13 hrs, Volume= 17,908 cf, Atten= 4%, Lag= 1.5 min

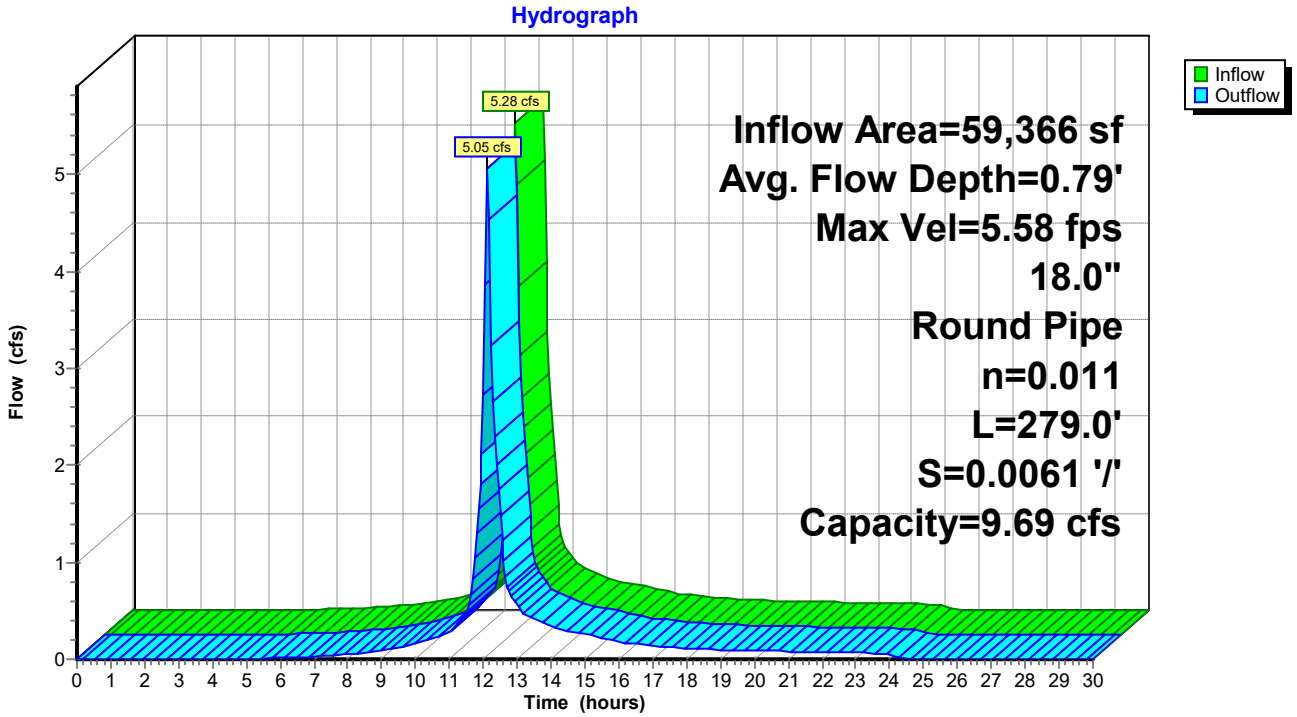
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.58 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.81 fps, Avg. Travel Time= 2.6 min

Peak Storage= 262 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.79'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 9.69 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 279.0' Slope= 0.0061 '/'
Inlet Invert= 348.50', Outlet Invert= 346.80'



Reach DMH-S1: TO DMH-S2



Stage-Discharge for Reach DMH-S1: TO DMH-S2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.50	0.00	0.00
348.51	0.33	0.00
348.52	0.58	0.00
348.53	0.77	0.01
348.54	0.93	0.01
348.55	1.08	0.02
348.56	1.22	0.03
348.57	1.35	0.04
348.58	1.47	0.05
348.59	1.59	0.07
348.60	1.70	0.09
348.61	1.80	0.11
348.62	1.91	0.13
348.63	2.01	0.15
348.64	2.10	0.18
348.65	2.20	0.20
348.66	2.29	0.23
348.67	2.38	0.26
348.68	2.47	0.30
348.69	2.55	0.33
348.70	2.63	0.37
348.71	2.72	0.41
348.72	2.79	0.45
348.73	2.87	0.49
348.74	2.95	0.54
348.75	3.02	0.59
348.76	3.09	0.63
348.77	3.17	0.68
348.78	3.24	0.74
348.79	3.31	0.79
348.80	3.37	0.85
348.81	3.44	0.91
348.82	3.50	0.97
348.83	3.57	1.03
348.84	3.63	1.09
348.85	3.69	1.16
348.86	3.75	1.22
348.87	3.81	1.29
348.88	3.87	1.36
348.89	3.93	1.43
348.90	3.99	1.51
348.91	4.04	1.58
348.92	4.10	1.66
348.93	4.15	1.74
348.94	4.20	1.82
348.95	4.26	1.90
348.96	4.31	1.98
348.97	4.36	2.06
348.98	4.41	2.15
348.99	4.46	2.24
349.00	4.51	2.32
349.01	4.55	2.41
349.02	4.60	2.50
349.03	4.65	2.59
349.04	4.69	2.69
349.05	4.74	2.78
349.06	4.78	2.88
349.07	4.82	2.97
349.08	4.86	3.07
349.09	4.91	3.17
349.10	4.95	3.27
349.11	4.99	3.37
349.12	5.03	3.47
349.13	5.07	3.57
349.14	5.10	3.67
349.15	5.14	3.77
349.16	5.18	3.88
349.17	5.22	3.98
349.18	5.25	4.09
349.19	5.29	4.20
349.20	5.32	4.30
349.21	5.35	4.41
349.22	5.39	4.52
349.23	5.42	4.63
349.24	5.45	4.74
349.25	5.48	4.85
349.26	5.51	4.96
349.27	5.54	5.07
349.28	5.57	5.18
349.29	5.60	5.29
349.30	5.63	5.40
349.31	5.66	5.51
349.32	5.69	5.62
349.33	5.71	5.73
349.34	5.74	5.84
349.35	5.76	5.95
349.36	5.79	6.07
349.37	5.81	6.18
349.38	5.84	6.29
349.39	5.86	6.40
349.40	5.88	6.51
349.41	5.90	6.62
349.42	5.92	6.73
349.43	5.94	6.84
349.44	5.96	6.95
349.45	5.98	7.06
349.46	6.00	7.17
349.47	6.02	7.28
349.48	6.04	7.38
349.49	6.05	7.49
349.50	6.07	7.60
349.51	6.08	7.70
349.52	6.10	7.81
349.53	6.11	7.91
349.54	6.13	8.01
349.55	6.14	8.11
349.56	6.15	8.21
349.57	6.16	8.31
349.58	6.18	8.41
349.59	6.19	8.51
349.60	6.19	8.60
349.61	6.20	8.70
349.62	6.21	8.79
349.63	6.22	8.88
349.64	6.23	8.97
349.65	6.23	9.06
349.66	6.24	9.15
349.67	6.24	9.23
349.68	6.24	9.31
349.69	6.25	9.39
349.70	6.25	9.47
349.71	6.25	9.55
349.72	**6.25**	9.62
349.73	6.25	9.69
349.74	6.25	9.76
349.75	6.25	9.83
349.76	6.24	9.89
349.77	6.24	9.96
349.78	6.23	10.01
349.79	6.23	10.07
349.80	6.22	10.12
349.81	6.21	10.17
349.82	6.20	10.22
349.83	6.19	10.26
349.84	6.18	10.29
349.85	6.17	10.33
349.86	6.15	10.36
349.87	6.13	10.38
349.88	6.11	10.40
349.89	6.09	10.41
349.90	6.07	10.42
349.91	6.05	**10.42**
349.92	6.02	10.42
349.93	5.99	10.40
349.94	5.95	10.38
349.95	5.92	10.35
349.96	5.87	10.30
349.97	5.82	10.24
349.98	5.76	10.14
349.99	5.64	9.96
350.00	5.48	9.69

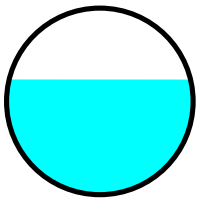
Summary for Reach DMH-S2: TO DMH-S3

Inflow Area = 102,372 sf, 80.49% Impervious, Inflow Depth = 3.91" for 25-Year event
Inflow = 9.50 cfs @ 12.10 hrs, Volume= 33,347 cf
Outflow = 9.47 cfs @ 12.11 hrs, Volume= 33,347 cf, Atten= 0%, Lag= 0.1 min

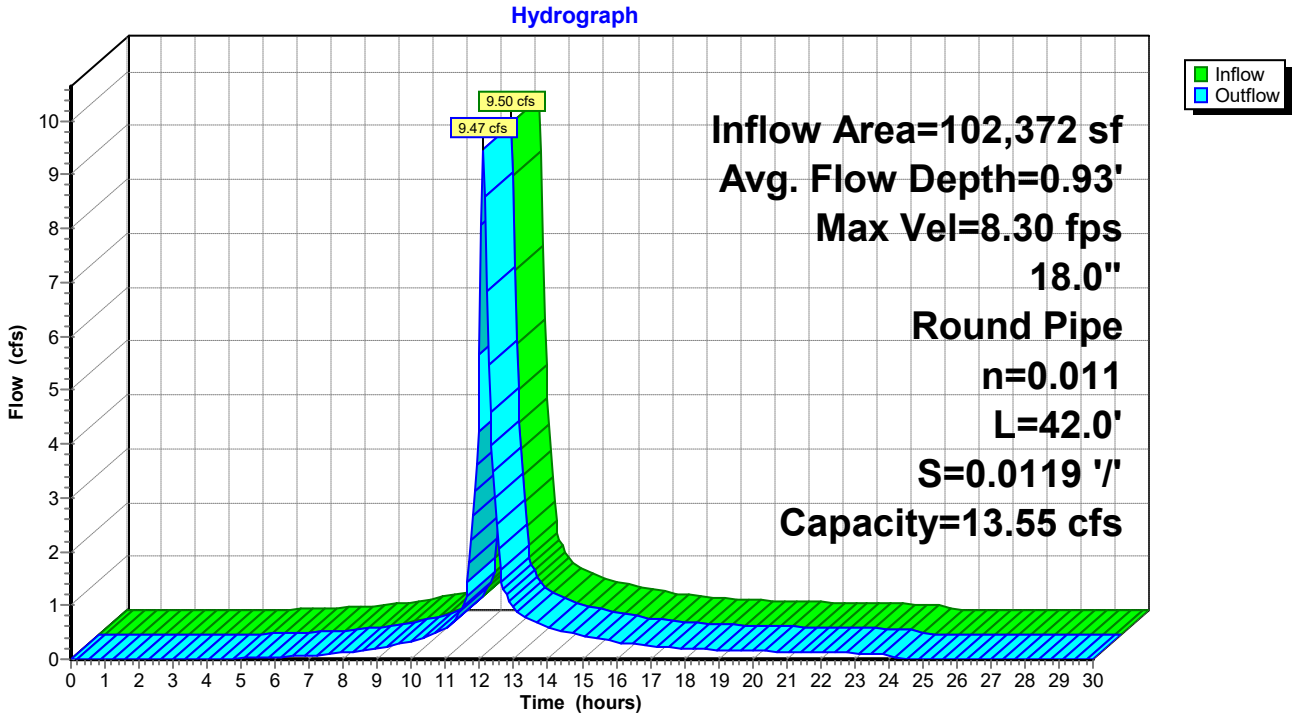
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.30 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.73 fps, Avg. Travel Time= 0.3 min

Peak Storage= 48 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.93'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.55 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 42.0' Slope= 0.0119 '/'
Inlet Invert= 346.70', Outlet Invert= 346.20'



Reach DMH-S2: TO DMH-S3



Stage-Discharge for Reach DMH-S2: TO DMH-S3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.70	0.00	0.00
346.71	0.45	0.00
346.72	0.81	0.00
346.73	1.08	0.01
346.74	1.30	0.02
346.75	1.51	0.03
346.76	1.70	0.04
346.77	1.88	0.06
346.78	2.05	0.08
346.79	2.22	0.10
346.80	2.37	0.12
346.81	2.52	0.15
346.82	2.67	0.18
346.83	2.81	0.21
346.84	2.94	0.25
346.85	3.07	0.28
346.86	3.20	0.32
346.87	3.33	0.37
346.88	3.45	0.41
346.89	3.57	0.46
346.90	3.68	0.52
346.91	3.80	0.57
346.92	3.91	0.63
346.93	4.01	0.69
346.94	4.12	0.75
346.95	4.22	0.82
346.96	4.33	0.89
346.97	4.43	0.96
346.98	4.52	1.03
346.99	4.62	1.11
347.00	4.71	1.19
347.01	4.81	1.27
347.02	4.90	1.35
347.03	4.99	1.44
347.04	5.07	1.53
347.05	5.16	1.62
347.06	5.25	1.71
347.07	5.33	1.81
347.08	5.41	1.91
347.09	5.49	2.01
347.10	5.57	2.11
347.11	5.65	2.21
347.12	5.73	2.32
347.13	5.80	2.43
347.14	5.88	2.54
347.15	5.95	2.65
347.16	6.02	2.77
347.17	6.09	2.89
347.18	6.16	3.00
347.19	6.23	3.12
347.20	6.30	3.25
347.21	6.36	3.37
347.22	6.43	3.50
347.23	6.49	3.63
347.24	6.56	3.76
347.25	6.62	3.89
347.26	6.68	4.02
347.27	6.74	4.15
347.28	6.80	4.29
347.29	6.86	4.43
347.30	6.92	4.56
347.31	6.97	4.70
347.32	7.03	4.85
347.33	7.08	4.99
347.34	7.13	5.13
347.35	7.19	5.28
347.36	7.24	5.42
347.37	7.29	5.57
347.38	7.34	5.72
347.39	7.39	5.86
347.40	7.44	6.01
347.41	7.48	6.16
347.42	7.53	6.32
347.43	7.58	6.47
347.44	7.62	6.62
347.45	7.66	6.77
347.46	7.71	6.93
347.47	7.75	7.08
347.48	7.79	7.23
347.49	7.83	7.39
347.50	7.87	7.54
347.51	7.91	7.70
347.52	7.95	7.86
347.53	7.98	8.01
347.54	8.02	8.17
347.55	8.06	8.32
347.56	8.09	8.48
347.57	8.12	8.63
347.58	8.16	8.79
347.59	8.19	8.95
347.60	8.22	9.10
347.61	8.25	9.25
347.62	8.28	9.41
347.63	8.31	9.56
347.64	8.34	9.72
347.65	8.36	9.87
347.66	8.39	10.02
347.67	8.41	10.17
347.68	8.44	10.32
347.69	8.46	10.47
347.70	8.48	10.62
347.71	8.51	10.76
347.72	8.53	10.91
347.73	8.55	11.05
347.74	8.56	11.20
347.75	8.58	11.34
347.76	8.60	11.48
347.77	8.62	11.62
347.78	8.63	11.76
347.79	8.65	11.89
347.80	8.66	12.03
347.81	8.67	12.16
347.82	8.68	12.29
347.83	8.69	12.41
347.84	8.70	12.54
347.85	8.71	12.66
347.86	8.72	12.78
347.87	8.72	12.90
347.88	8.73	13.02
347.89	8.73	13.13
347.90	8.74	13.24
347.91	8.74	13.35
347.92	**8.74**	13.45
347.93	8.74	13.55
347.94	8.74	13.65
347.95	8.73	13.74
347.96	8.73	13.83
347.97	8.72	13.92
347.98	8.71	14.00
347.99	8.71	14.07
348.00	8.69	14.15
348.01	8.68	14.21
348.02	8.67	14.28
348.03	8.65	14.34
348.04	8.64	14.39
348.05	8.62	14.44
348.06	8.60	14.48
348.07	8.57	14.51
348.08	8.55	14.54
348.09	8.52	14.55
348.10	8.49	14.57
348.11	8.45	**14.57**
348.12	8.41	14.56
348.13	8.37	14.54
348.14	8.32	14.51
348.15	8.27	14.46
348.16	8.21	14.39
348.17	8.14	14.31
348.18	8.05	14.18
348.19	7.89	13.92
348.20	7.66	13.55

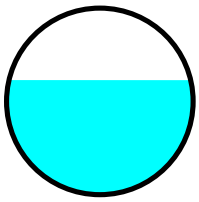
Summary for Reach DMH-S3: TO FE-S1

Inflow Area = 102,372 sf, 80.49% Impervious, Inflow Depth = 3.91" for 25-Year event
Inflow = 9.47 cfs @ 12.11 hrs, Volume= 33,347 cf
Outflow = 9.45 cfs @ 12.11 hrs, Volume= 33,347 cf, Atten= 0%, Lag= 0.1 min

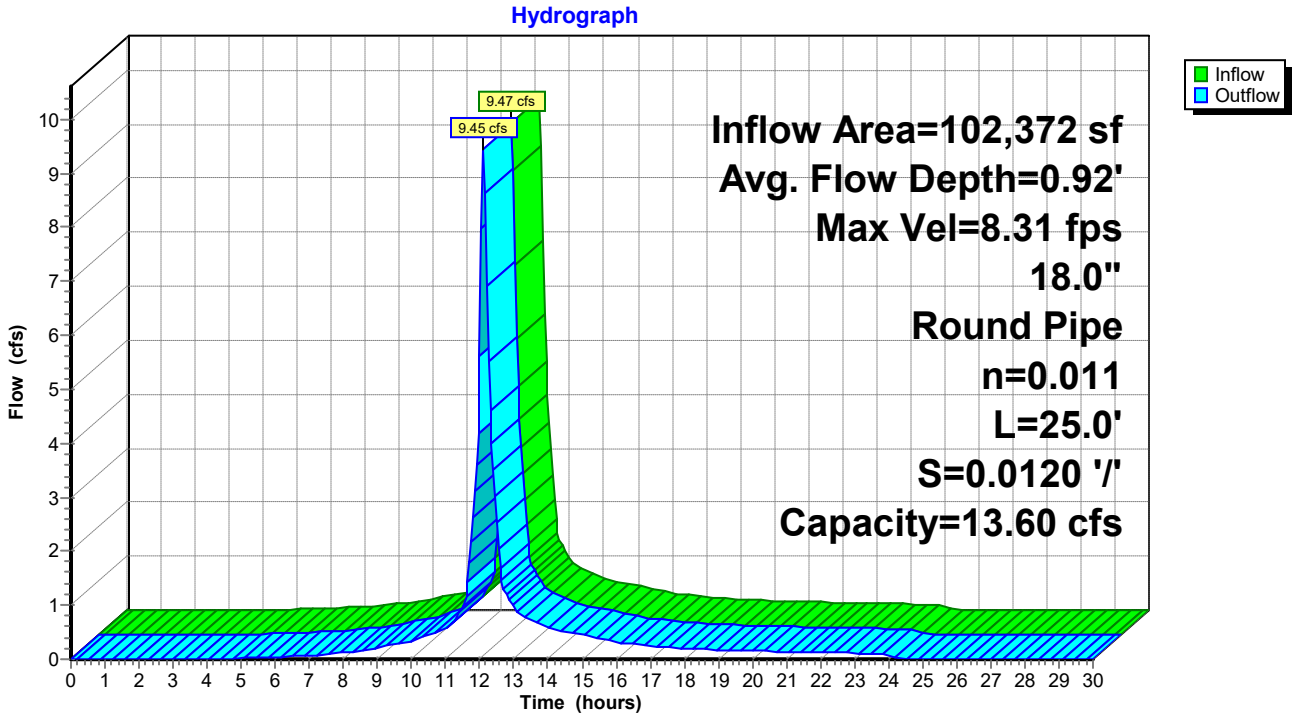
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.31 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.74 fps, Avg. Travel Time= 0.2 min

Peak Storage= 28 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.92'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.60 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 25.0' Slope= 0.0120 '/'
Inlet Invert= 346.00', Outlet Invert= 345.70'



Reach DMH-S3: TO FE-S1



Stage-Discharge for Reach DMH-S3: TO FE-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.00	0.00	0.00
346.01	0.46	0.00
346.02	0.82	0.00
346.03	1.08	0.01
346.04	1.30	0.02
346.05	1.51	0.03
346.06	1.71	0.04
346.07	1.89	0.06
346.08	2.06	0.08
346.09	2.23	0.10
346.10	2.38	0.12
346.11	2.53	0.15
346.12	2.68	0.18
346.13	2.82	0.21
346.14	2.95	0.25
346.15	3.09	0.28
346.16	3.21	0.33
346.17	3.34	0.37
346.18	3.46	0.42
346.19	3.58	0.47
346.20	3.70	0.52
346.21	3.81	0.57
346.22	3.92	0.63
346.23	4.03	0.69
346.24	4.14	0.76
346.25	4.24	0.82
346.26	4.34	0.89
346.27	4.44	0.96
346.28	4.54	1.04
346.29	4.64	1.11
346.30	4.73	1.19
346.31	4.83	1.27
346.32	4.92	1.36
346.33	5.01	1.44
346.34	5.09	1.53
346.35	5.18	1.62
346.36	5.27	1.72
346.37	5.35	1.81
346.38	5.43	1.91
346.39	5.51	2.01
346.40	5.59	2.12
346.41	5.67	2.22
346.42	5.75	2.33
346.43	5.82	2.44
346.44	5.90	2.55
346.45	5.97	2.66
346.46	6.04	2.78
346.47	6.12	2.90
346.48	6.19	3.02
346.49	6.25	3.14
346.50	6.32	3.26
346.51	6.39	3.39
346.52	6.45	3.51
346.53	6.52	3.64
346.54	6.58	3.77
346.55	6.64	3.90
346.56	6.71	4.04
346.57	6.77	4.17
346.58	6.83	4.31
346.59	6.88	4.44
346.60	6.94	4.58
346.61	7.00	4.72
346.62	7.05	4.87
346.63	7.11	5.01
346.64	7.16	5.15
346.65	7.22	5.30
346.66	7.27	5.44
346.67	7.32	5.59
346.68	7.37	5.74
346.69	7.42	5.89
346.70	7.47	6.04
346.71	7.51	6.19
346.72	7.56	6.34
346.73	7.61	6.49
346.74	7.65	6.65
346.75	7.70	6.80
346.76	7.74	6.95
346.77	7.78	7.11
346.78	7.82	7.26
346.79	7.86	7.42
346.80	7.90	7.57
346.81	7.94	7.73
346.82	7.98	7.89
346.83	8.02	8.04
346.84	8.05	8.20
346.85	8.09	8.36
346.86	8.12	8.51
346.87	8.16	8.67
346.88	8.19	8.82
346.89	8.22	8.98
346.90	8.25	9.14
346.91	8.28	9.29
346.92	8.31	9.45
346.93	8.34	9.60
346.94	8.37	9.75
346.95	8.40	9.91
346.96	8.42	10.06
346.97	8.45	10.21
346.98	8.47	10.36
346.99	8.50	10.51
347.00	8.52	10.66
347.01	8.54	10.81
347.02	8.56	10.95
347.03	8.58	11.10
347.04	8.60	11.24
347.05	8.62	11.39
347.06	8.63	11.53
347.07	8.65	11.67
347.08	8.67	11.80
347.09	8.68	11.94
347.10	8.69	12.07
347.11	8.71	12.21
347.12	8.72	12.34
347.13	8.73	12.46
347.14	8.74	12.59
347.15	8.75	12.71
347.16	8.75	12.83
347.17	8.76	12.95
347.18	8.76	13.07
347.19	8.77	13.18
347.20	8.77	13.29
347.21	8.77	13.40
347.22	**8.77**	13.50
347.23	8.77	13.60
347.24	8.77	13.70
347.25	8.77	13.79
347.26	8.76	13.89
347.27	8.76	13.97
347.28	8.75	14.05
347.29	8.74	14.13
347.30	8.73	14.20
347.31	8.72	14.27
347.32	8.70	14.34
347.33	8.69	14.39
347.34	8.67	14.45
347.35	8.65	14.49
347.36	8.63	14.53
347.37	8.61	14.57
347.38	8.58	14.60
347.39	8.55	14.61
347.40	8.52	14.62
347.41	8.49	**14.63**
347.42	8.45	14.62
347.43	8.40	14.60
347.44	8.36	14.57
347.45	8.30	14.52
347.46	8.24	14.45
347.47	8.17	14.37
347.48	8.08	14.24
347.49	7.92	13.98
347.50	7.70	13.60

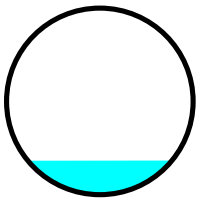
Summary for Reach DMH1: TO DMH#2

Inflow Area = 3,582 sf, 82.83% Impervious, Inflow Depth = 3.95" for 25-Year event
Inflow = 0.37 cfs @ 12.09 hrs, Volume= 1,180 cf
Outflow = 0.36 cfs @ 12.09 hrs, Volume= 1,180 cf, Atten= 1%, Lag= 0.5 min

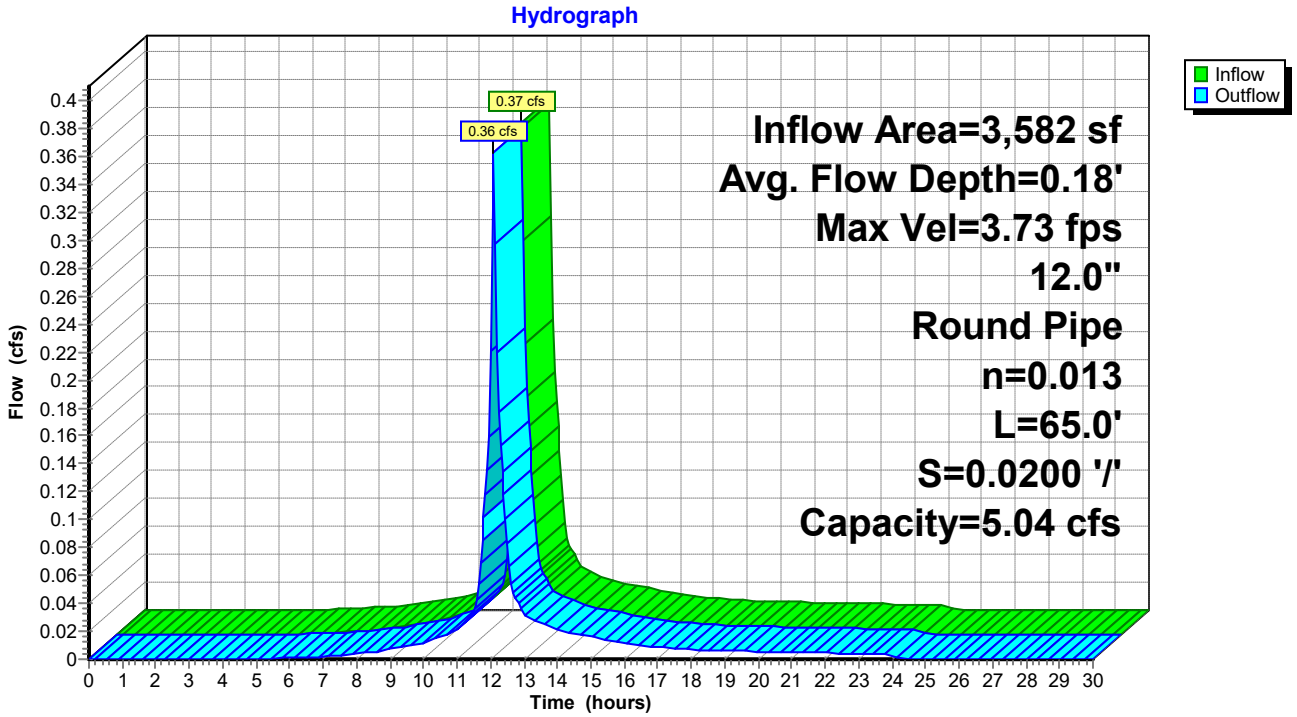
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.73 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.24 fps, Avg. Travel Time= 0.9 min

Peak Storage= 6 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.04 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 65.0' Slope= 0.0200 '/'
Inlet Invert= 354.60', Outlet Invert= 353.30'



Reach DMH1: TO DMH#2



Stage-Discharge for Reach DMH1: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.60	0.00	0.00
354.61	0.57	0.00
354.62	0.90	0.00
354.63	1.18	0.01
354.64	1.42	0.02
354.65	1.65	0.02
354.66	1.86	0.04
354.67	2.05	0.05
354.68	2.23	0.07
354.69	2.41	0.08
354.70	2.57	0.11
354.71	2.73	0.13
354.72	2.89	0.15
354.73	3.03	0.18
354.74	3.18	0.21
354.75	3.32	0.24
354.76	3.45	0.28
354.77	3.58	0.32
354.78	3.70	0.36
354.79	3.83	0.40
354.80	3.95	0.44
354.81	4.06	0.49
354.82	4.17	0.53
354.83	4.28	0.58
354.84	4.39	0.64
354.85	4.50	0.69
354.86	4.60	0.75
354.87	4.70	0.80
354.88	4.79	0.86
354.89	4.89	0.92
354.90	4.98	0.99
354.91	5.07	1.05
354.92	5.16	1.12
354.93	5.24	1.19
354.94	5.33	1.25
354.95	5.41	1.32
354.96	5.49	1.40
354.97	5.57	1.47
354.98	5.64	1.54
354.99	5.72	1.62
355.00	5.79	1.70
355.01	5.86	1.78
355.02	5.93	1.86
355.03	5.99	1.94
355.04	6.06	2.02
355.05	6.12	2.10
355.06	6.18	2.18
355.07	6.24	2.27
355.08	6.30	2.35
355.09	6.36	2.43
355.10	6.42	2.52
355.11	6.47	2.61
355.12	6.52	2.69
355.13	6.57	2.78
355.14	6.62	2.86
355.15	6.67	2.95
355.16	6.71	3.04
355.17	6.76	3.13
355.18	6.80	3.21
355.19	6.84	3.30
355.20	6.88	3.39
355.21	6.92	3.47
355.22	6.95	3.56
355.23	6.99	3.64
355.24	7.02	3.73
355.25	7.05	3.81
355.26	7.08	3.89
355.27	7.11	3.98
355.28	7.14	4.06
355.29	7.16	4.14
355.30	7.18	4.22
355.31	7.20	4.30
355.32	7.22	4.37
355.33	7.24	4.45
355.34	7.26	4.52
355.35	7.27	4.59
355.36	7.28	4.66
355.37	7.29	4.73
355.38	7.30	4.80
355.39	7.31	4.86
355.40	7.31	4.93
355.41	**7.31**	4.98
355.42	7.31	5.04
355.43	7.31	5.09
355.44	7.30	5.14
355.45	7.30	5.19
355.46	7.29	5.24
355.47	7.27	5.28
355.48	7.26	5.31
355.49	7.24	5.34
355.50	7.21	5.37
355.51	7.19	5.39
355.52	7.15	5.41
355.53	7.12	5.42
355.54	7.07	**5.42**
355.55	7.02	5.41
355.56	6.97	5.40
355.57	6.90	5.37
355.58	6.81	5.32
355.59	6.70	5.25
355.60	6.42	5.04

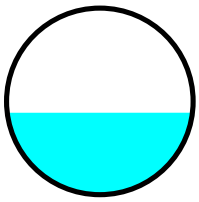
Summary for Reach DMH2: TO DMH#3

Inflow Area = 15,979 sf, 87.02% Impervious, Inflow Depth = 4.20" for 25-Year event
Inflow = 1.71 cfs @ 12.08 hrs, Volume= 5,596 cf
Outflow = 1.69 cfs @ 12.09 hrs, Volume= 5,596 cf, Atten= 1%, Lag= 0.7 min

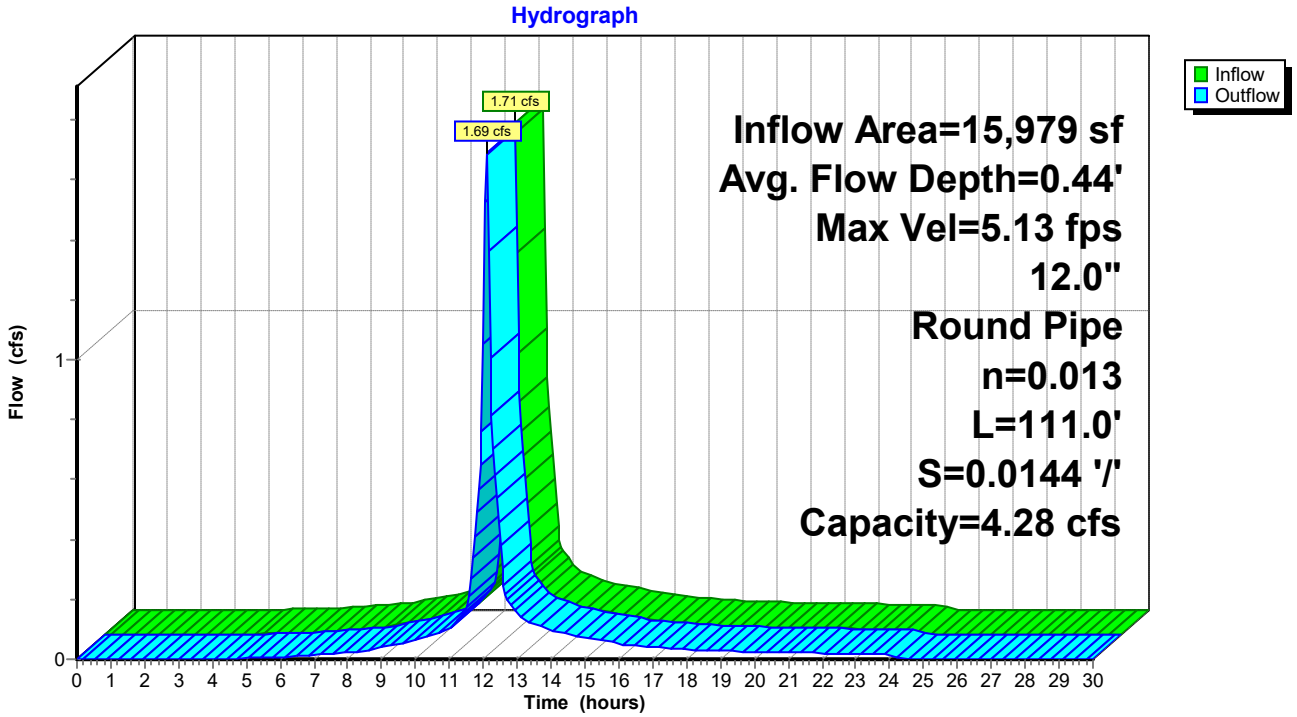
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.13 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.70 fps, Avg. Travel Time= 1.1 min

Peak Storage= 37 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.44'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.28 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 111.0' Slope= 0.0144 '/'
Inlet Invert= 353.20', Outlet Invert= 351.60'



Reach DMH2: TO DMH#3



Stage-Discharge for Reach DMH2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.20	0.00	0.00
353.21	0.48	0.00
353.22	0.77	0.00
353.23	1.00	0.01
353.24	1.21	0.01
353.25	1.40	0.02
353.26	1.57	0.03
353.27	1.74	0.04
353.28	1.90	0.06
353.29	2.04	0.07
353.30	2.18	0.09
353.31	2.32	0.11
353.32	2.45	0.13
353.33	2.58	0.15
353.34	2.70	0.18
353.35	2.81	0.21
353.36	2.93	0.24
353.37	3.04	0.27
353.38	3.15	0.30
353.39	3.25	0.34
353.40	3.35	0.37
353.41	3.45	0.41
353.42	3.54	0.45
353.43	3.64	0.50
353.44	3.73	0.54
353.45	3.82	0.59
353.46	3.90	0.63
353.47	3.99	0.68
353.48	4.07	0.73
353.49	4.15	0.78
353.50	4.23	0.84
353.51	4.30	0.89
353.52	4.38	0.95
353.53	4.45	1.01
353.54	4.52	1.06
353.55	4.59	1.12
353.56	4.66	1.19
353.57	4.72	1.25
353.58	4.79	1.31
353.59	4.85	1.38
353.60	4.91	1.44
353.61	4.97	1.51
353.62	5.03	1.58
353.63	5.09	1.64
353.64	5.14	1.71
353.65	5.20	1.78
353.66	5.25	1.85
353.67	5.30	1.92
353.68	5.35	1.99
353.69	5.40	2.07
353.70	5.45	2.14
353.71	5.49	2.21
353.72	5.54	2.28
353.73	5.58	2.36
353.74	5.62	2.43
353.75	5.66	2.51
353.76	5.70	2.58
353.77	5.74	2.65
353.78	5.77	2.73
353.79	5.81	2.80
353.80	5.84	2.87
353.81	5.87	2.95
353.82	5.90	3.02
353.83	5.93	3.09
353.84	5.96	3.16
353.85	5.99	3.24
353.86	6.01	3.31
353.87	6.04	3.38
353.88	6.06	3.45
353.89	6.08	3.51
353.90	6.10	3.58
353.91	6.12	3.65
353.92	6.13	3.71
353.93	6.15	3.78
353.94	6.16	3.84
353.95	6.17	3.90
353.96	6.18	3.96
353.97	6.19	4.02
353.98	6.20	4.07
353.99	6.20	4.13
354.00	6.21	4.18
354.01	**6.21**	4.23
354.02	6.21	4.28
354.03	6.21	4.32
354.04	6.20	4.37
354.05	6.19	4.41
354.06	6.19	4.44
354.07	6.17	4.48
354.08	6.16	4.51
354.09	6.14	4.54
354.10	6.12	4.56
354.11	6.10	4.58
354.12	6.07	4.59
354.13	6.04	4.60
354.14	6.01	**4.60**
354.15	5.96	4.60
354.16	5.91	4.58
354.17	5.86	4.56
354.18	5.78	4.52
354.19	5.68	4.46
354.20	5.45	4.28

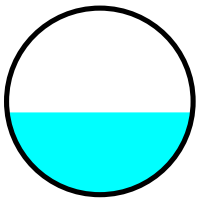
Summary for Reach DMH21: TO DMH#22

Inflow Area = 24,843 sf, 51.80% Impervious, Inflow Depth = 3.21" for 25-Year event
Inflow = 2.04 cfs @ 12.09 hrs, Volume= 6,637 cf
Outflow = 2.00 cfs @ 12.10 hrs, Volume= 6,637 cf, Atten= 2%, Lag= 0.8 min

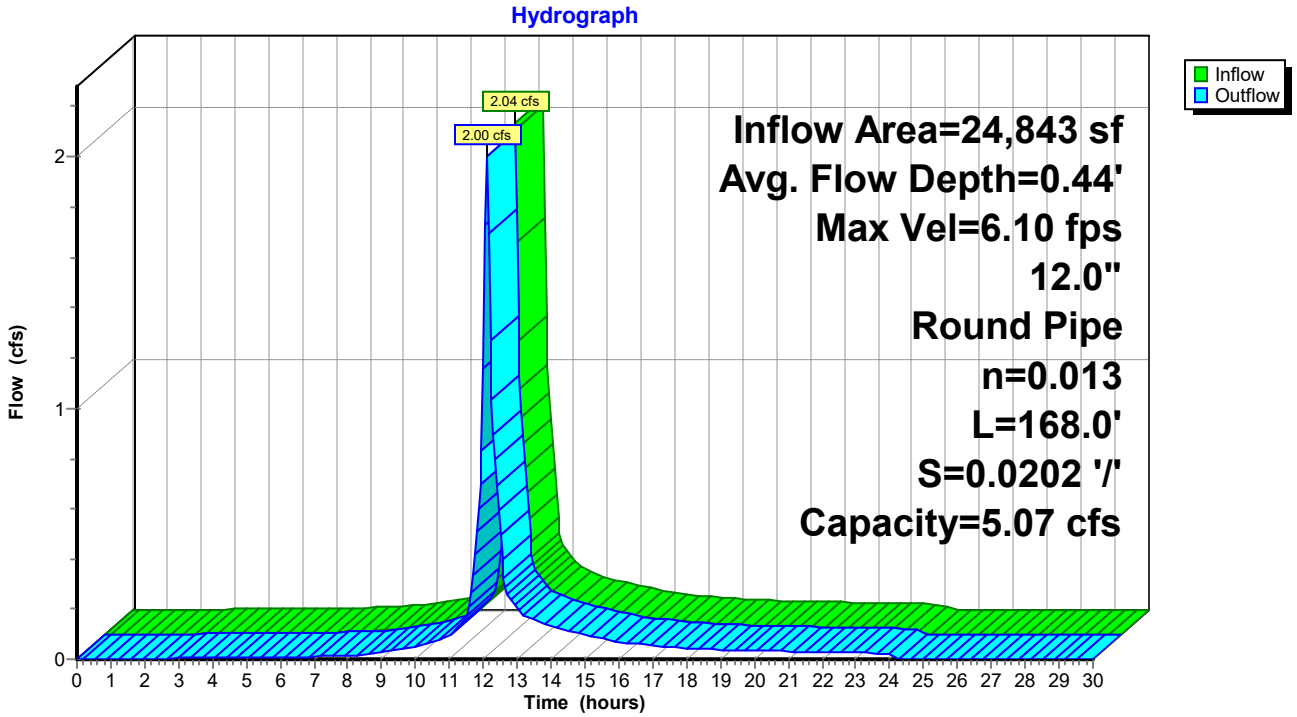
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.10 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.88 fps, Avg. Travel Time= 1.5 min

Peak Storage= 56 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.44'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.07 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 168.0' Slope= 0.0202 '/'
Inlet Invert= 345.20', Outlet Invert= 341.80'



Reach DMH21: TO DMH#22



Stage-Discharge for Reach DMH21: TO DMH#22

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
345.20	0.00	0.00
345.21	0.57	0.00
345.22	0.91	0.00
345.23	1.19	0.01
345.24	1.43	0.02
345.25	1.66	0.02
345.26	1.87	0.04
345.27	2.06	0.05
345.28	2.25	0.07
345.29	2.42	0.08
345.30	2.59	0.11
345.31	2.75	0.13
345.32	2.90	0.16
345.33	3.05	0.18
345.34	3.20	0.21
345.35	3.34	0.25
345.36	3.47	0.28
345.37	3.60	0.32
345.38	3.73	0.36
345.39	3.85	0.40
345.40	3.97	0.44
345.41	4.09	0.49
345.42	4.20	0.54
345.43	4.31	0.59
345.44	4.42	0.64
345.45	4.52	0.69
345.46	4.62	0.75
345.47	4.72	0.81
345.48	4.82	0.87
345.49	4.92	0.93
345.50	5.01	0.99
345.51	5.10	1.06
345.52	5.19	1.12
345.53	5.27	1.19
345.54	5.36	1.26
345.55	5.44	1.33
345.56	5.52	1.41
345.57	5.60	1.48
345.58	5.67	1.55
345.59	5.75	1.63
345.60	5.82	1.71
345.61	5.89	1.79
345.62	5.96	1.87
345.63	6.03	1.95
345.64	6.10	2.03
345.65	6.16	2.11
345.66	6.22	2.19
345.67	6.28	2.28
345.68	6.34	2.36
345.69	6.40	2.45
345.70	6.45	2.53
345.71	6.51	2.62
345.72	6.56	2.71
345.73	6.61	2.79
345.74	6.66	2.88
345.75	6.71	2.97
345.76	6.75	3.06
345.77	6.80	3.14
345.78	6.84	3.23
345.79	6.88	3.32
345.80	6.92	3.41
345.81	6.96	3.49
345.82	6.99	3.58
345.83	7.03	3.66
345.84	7.06	3.75
345.85	7.09	3.83
345.86	7.12	3.92
345.87	7.15	4.00
345.88	7.18	4.08
345.89	7.20	4.16
345.90	7.23	4.24
345.91	7.25	4.32
345.92	7.27	4.40
345.93	7.28	4.48
345.94	7.30	4.55
345.95	7.31	4.62
345.96	7.33	4.69
345.97	7.34	4.76
345.98	7.35	4.83
345.99	7.35	4.89
346.00	7.36	4.95
346.01	**7.36**	5.01
346.02	7.36	5.07
346.03	7.35	5.12
346.04	7.35	5.18
346.05	7.34	5.22
346.06	7.33	5.27
346.07	7.32	5.31
346.08	7.30	5.34
346.09	7.28	5.37
346.10	7.26	5.40
346.11	7.23	5.42
346.12	7.20	5.44
346.13	7.16	5.45
346.14	7.12	**5.45**
346.15	7.07	5.45
346.16	7.01	5.43
346.17	6.94	5.40
346.18	6.85	5.36
346.19	6.74	5.28
346.20	6.45	5.07

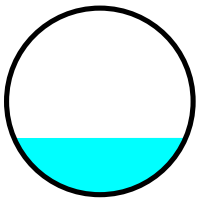
Summary for Reach DMH22: TO DMH#15

Inflow Area = 24,843 sf, 51.80% Impervious, Inflow Depth = 3.21" for 25-Year event
Inflow = 2.00 cfs @ 12.10 hrs, Volume= 6,637 cf
Outflow = 2.00 cfs @ 12.10 hrs, Volume= 6,637 cf, Atten= 0%, Lag= 0.0 min

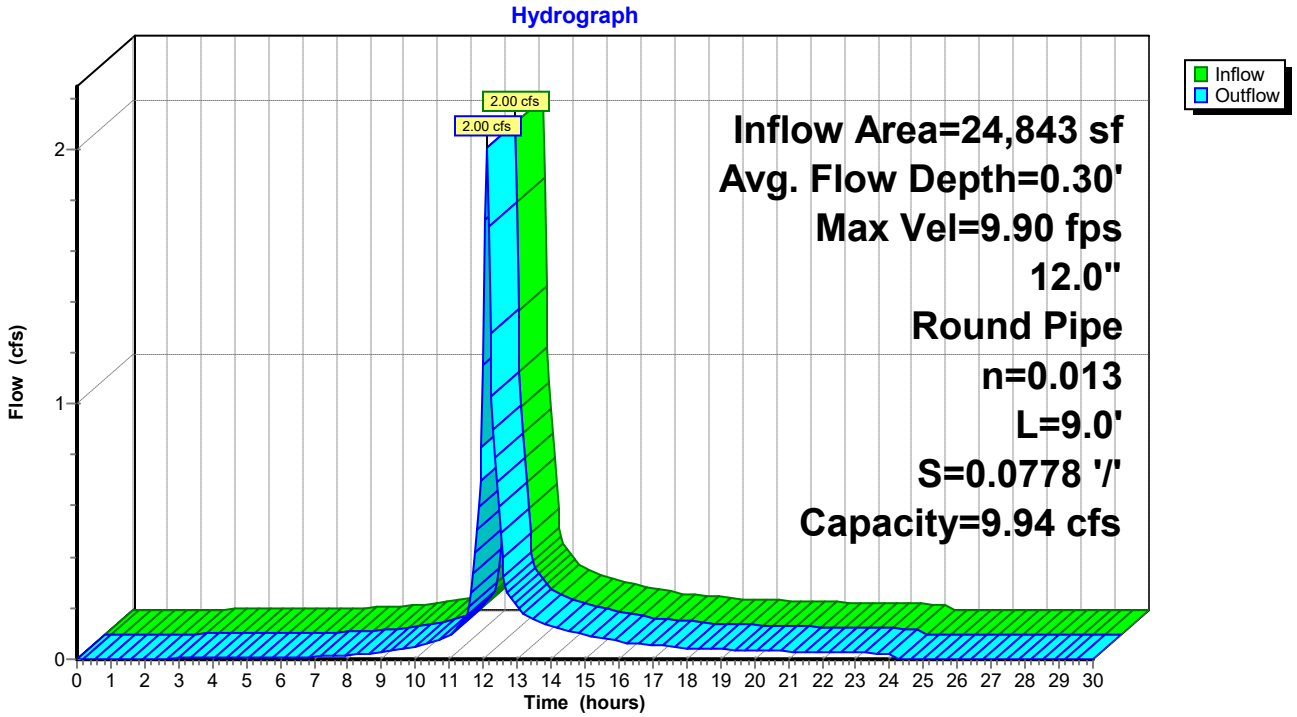
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.90 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.03 fps, Avg. Travel Time= 0.0 min

Peak Storage= 2 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.94 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 9.0' Slope= 0.0778 '/'
Inlet Invert= 341.70', Outlet Invert= 341.00'



Reach DMH22: TO DMH#15



Stage-Discharge for Reach DMH22: TO DMH#15

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
341.70	0.00	0.00
341.71	1.13	0.00
341.72	1.78	0.01
341.73	2.33	0.02
341.74	2.81	0.03
341.75	3.25	0.05
341.76	3.66	0.07
341.77	4.04	0.10
341.78	4.40	0.13
341.79	4.75	0.17
341.80	5.08	0.21
341.81	5.39	0.25
341.82	5.69	0.30
341.83	5.98	0.36
341.84	6.27	0.42
341.85	6.54	0.48
341.86	6.80	0.55
341.87	7.06	0.62
341.88	7.31	0.70
341.89	7.55	0.78
341.90	7.78	0.87
341.91	8.01	0.96
341.92	8.23	1.05
341.93	8.45	1.15
341.94	8.66	1.26
341.95	8.86	1.36
341.96	9.06	1.47
341.97	9.26	1.58
341.98	9.45	1.70
341.99	9.64	1.82
342.00	9.82	1.95
342.01	10.00	2.07
342.02	10.17	2.20
342.03	10.34	2.34
342.04	10.50	2.47
342.05	10.66	2.61
342.06	10.82	2.75
342.07	10.98	2.90
342.08	11.12	3.05
342.09	11.27	3.20
342.10	11.41	3.35
342.11	11.55	3.50
342.12	11.69	3.66
342.13	11.82	3.82
342.14	11.95	3.98
342.15	12.07	4.14
342.16	12.20	4.30
342.17	12.31	4.47
342.18	12.43	4.63
342.19	12.54	4.80
342.20	12.65	4.97
342.21	12.76	5.14
342.22	12.86	5.31
342.23	12.96	5.48
342.24	13.06	5.65
342.25	13.15	5.82
342.26	13.24	5.99
342.27	13.33	6.16
342.28	13.41	6.33
342.29	13.49	6.50
342.30	13.57	6.68
342.31	13.64	6.85
342.32	13.71	7.01
342.33	13.78	7.18
342.34	13.85	7.35
342.35	13.91	7.52
342.36	13.97	7.68
342.37	14.02	7.84
342.38	14.07	8.00
342.39	14.12	8.16
342.40	14.17	8.32
342.41	14.21	8.47
342.42	14.25	8.62
342.43	14.28	8.77
342.44	14.31	8.92
342.45	14.34	9.06
342.46	14.36	9.20
342.47	14.38	9.33
342.48	14.40	9.46
342.49	14.41	9.59
342.50	14.42	9.71
342.51	**14.42**	9.83
342.52	14.42	9.94
342.53	14.42	10.05
342.54	14.41	10.15
342.55	14.39	10.24
342.56	14.37	10.32
342.57	14.34	10.40
342.58	14.31	10.47
342.59	14.27	10.54
342.60	14.22	10.59
342.61	14.17	10.63
342.62	14.11	10.66
342.63	14.03	10.68
342.64	13.95	**10.69**
342.65	13.85	10.68
342.66	13.74	10.65
342.67	13.60	10.59
342.68	13.43	10.50
342.69	13.20	10.35
342.70	12.65	9.94

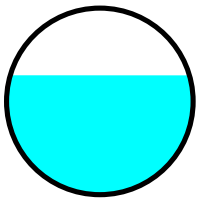
Summary for Reach DMH3: TO DMH#7

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 4.35" for 25-Year event
Inflow = 7.28 cfs @ 12.09 hrs, Volume= 24,518 cf
Outflow = 7.27 cfs @ 12.09 hrs, Volume= 24,518 cf, Atten= 0%, Lag= 0.0 min

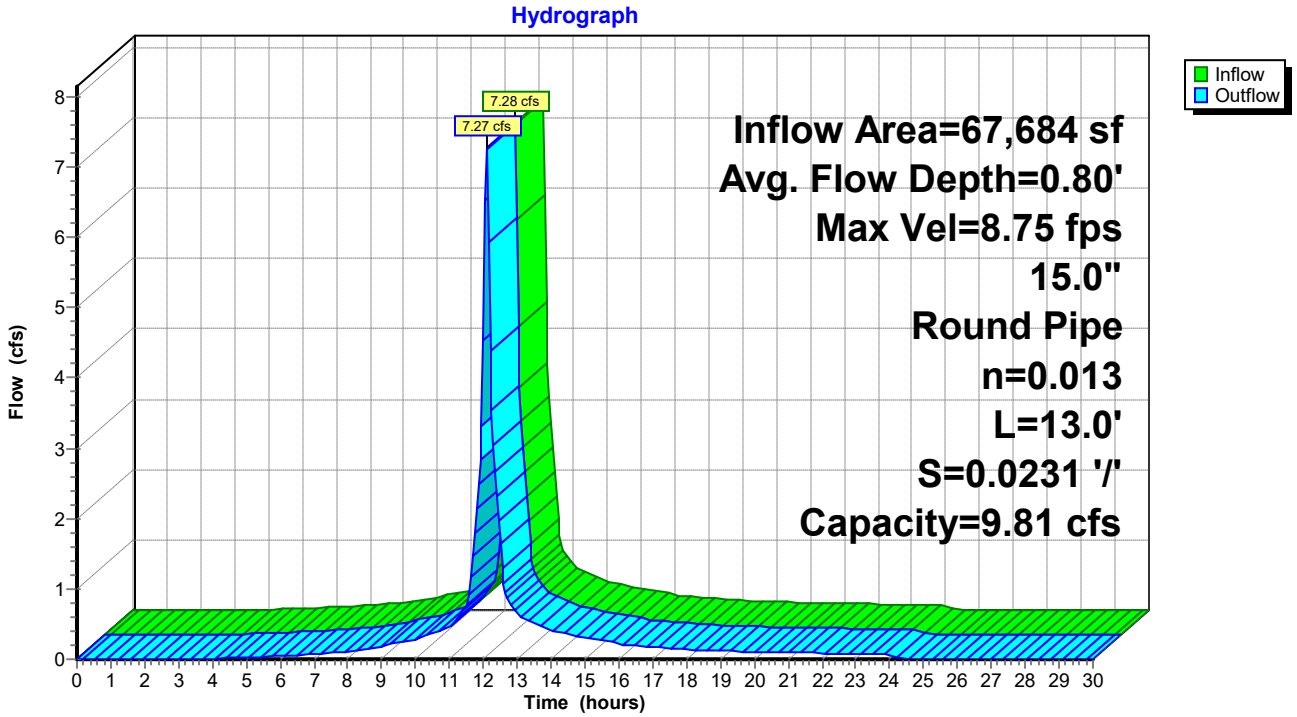
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.75 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.89 fps, Avg. Travel Time= 0.1 min

Peak Storage= 11 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.80'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.81 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 13.0' Slope= 0.0231 '/'
Inlet Invert= 351.50', Outlet Invert= 351.20'



Reach DMH3: TO DMH#7



Stage-Discharge for Reach DMH3: TO DMH#7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.50	0.00	0.00
351.51	0.57	0.00
351.52	0.96	0.00
351.53	1.26	0.01
351.54	1.53	0.02
351.55	1.78	0.03
351.56	2.00	0.04
351.57	2.21	0.06
351.58	2.41	0.08
351.59	2.60	0.10
351.60	2.78	0.13
351.61	2.96	0.16
351.62	3.12	0.19
351.63	3.29	0.22
351.64	3.45	0.26
351.65	3.60	0.30
351.66	3.75	0.34
351.67	3.89	0.39
351.68	4.03	0.44
351.69	4.17	0.49
351.70	4.30	0.54
351.71	4.43	0.60
351.72	4.55	0.66
351.73	4.68	0.73
351.74	4.80	0.79
351.75	4.92	0.86
351.76	5.03	0.93
351.77	5.15	1.00
351.78	5.26	1.08
351.79	5.37	1.16
351.80	5.47	1.24
351.81	5.58	1.32
351.82	5.68	1.41
351.83	5.78	1.50
351.84	5.88	1.59
351.85	5.97	1.68
351.86	6.07	1.78
351.87	6.16	1.87
351.88	6.25	1.97
351.89	6.34	2.07
351.90	6.43	2.18
351.91	6.51	2.28
351.92	6.60	2.39
351.93	6.68	2.50
351.94	6.76	2.61
351.95	6.84	2.72
351.96	6.92	2.83
351.97	6.99	2.95
351.98	7.07	3.07
351.99	7.14	3.19
352.00	7.21	3.31
352.01	7.28	3.43
352.02	7.35	3.55
352.03	7.42	3.68
352.04	7.49	3.80
352.05	7.55	3.93
352.06	7.62	4.06
352.07	7.68	4.18
352.08	7.74	4.31
352.09	7.80	4.44
352.10	7.86	4.58
352.11	7.91	4.71
352.12	7.97	4.84
352.13	8.02	4.97
352.14	8.08	5.11
352.15	8.13	5.24
352.16	8.18	5.38
352.17	8.23	5.51
352.18	8.28	5.65
352.19	8.32	5.78
352.20	8.37	5.92
352.21	8.41	6.05
352.22	8.45	6.19
352.23	8.50	6.32
352.24	8.54	6.46
352.25	8.58	6.59
352.26	8.61	6.73
352.27	8.65	6.86
352.28	8.68	6.99
352.29	8.72	7.13
352.30	8.75	7.26
352.31	8.78	7.39
352.32	8.81	7.52
352.33	8.84	7.65
352.34	8.87	7.78
352.35	8.90	7.90
352.36	8.92	8.03
352.37	8.94	8.15
352.38	8.96	8.28
352.39	8.99	8.40
352.40	9.00	8.52
352.41	9.02	8.64
352.42	9.04	8.75
352.43	9.05	8.86
352.44	9.07	8.98
352.45	9.08	9.09
352.46	9.09	9.19
352.47	9.10	9.30
352.48	9.10	9.40
352.49	9.11	9.50
352.50	9.11	9.59
352.51	9.12	9.68
352.52	**9.12**	9.77
352.53	9.11	9.86
352.54	9.11	9.94
352.55	9.11	10.02
352.56	9.10	10.09
352.57	9.09	10.16
352.58	9.08	10.23
352.59	9.06	10.29
352.60	9.04	10.34
352.61	9.02	10.39
352.62	9.00	10.44
352.63	8.98	10.48
352.64	8.95	10.51
352.65	8.92	10.53
352.66	8.88	10.55
352.67	8.84	**10.55**
352.68	8.79	10.55
352.69	8.74	10.54
352.70	8.68	10.51
352.71	8.61	10.47
352.72	8.53	10.41
352.73	8.43	10.31
352.74	8.28	10.14
352.75	8.00	9.81

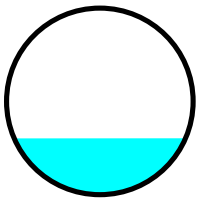
Summary for Reach DMH4: TO DMH5

Inflow Area = 5,916 sf, 84.47% Impervious, Inflow Depth = 4.06" for 25-Year event
Inflow = 0.62 cfs @ 12.08 hrs, Volume= 2,001 cf
Outflow = 0.61 cfs @ 12.09 hrs, Volume= 2,001 cf, Atten= 1%, Lag= 0.8 min

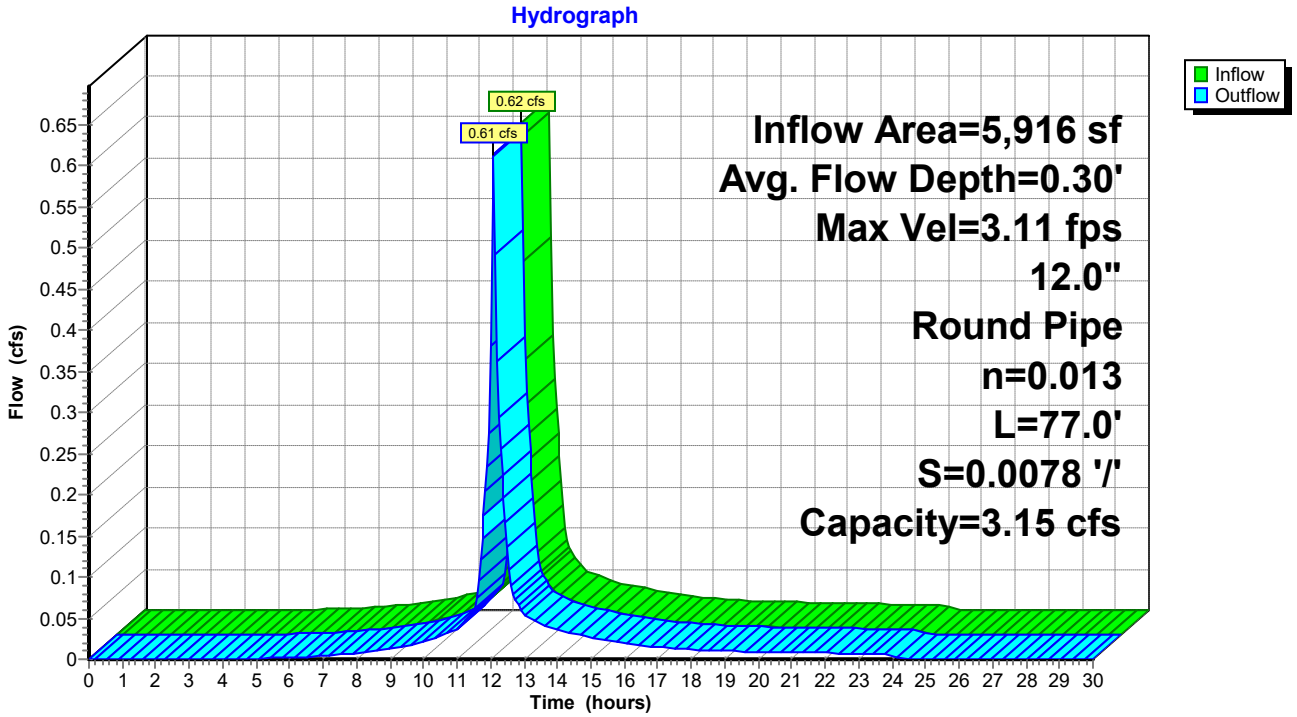
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.11 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.03 fps, Avg. Travel Time= 1.3 min

Peak Storage= 15 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.15 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 77.0' Slope= 0.0078 '/'
Inlet Invert= 355.20', Outlet Invert= 354.60'



Reach DMH4: TO DMH5



Stage-Discharge for Reach DMH4: TO DMH5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.20	0.00	0.00
355.21	0.36	0.00
355.22	0.56	0.00
355.23	0.74	0.01
355.24	0.89	0.01
355.25	1.03	0.02
355.26	1.16	0.02
355.27	1.28	0.03
355.28	1.39	0.04
355.29	1.50	0.05
355.30	1.61	0.07
355.31	1.71	0.08
355.32	1.80	0.10
355.33	1.89	0.11
355.34	1.98	0.13
355.35	2.07	0.15
355.36	2.15	0.17
355.37	2.23	0.20
355.38	2.31	0.22
355.39	2.39	0.25
355.40	2.46	0.28
355.41	2.54	0.30
355.42	2.61	0.33
355.43	2.67	0.36
355.44	2.74	0.40
355.45	2.81	0.43
355.46	2.87	0.47
355.47	2.93	0.50
355.48	2.99	0.54
355.49	3.05	0.58
355.50	3.11	0.62
355.51	3.16	0.66
355.52	3.22	0.70
355.53	3.27	0.74
355.54	3.32	0.78
355.55	3.38	0.83
355.56	3.43	0.87
355.57	3.47	0.92
355.58	3.52	0.96
355.59	3.57	1.01
355.60	3.61	1.06
355.61	3.66	1.11
355.62	3.70	1.16
355.63	3.74	1.21
355.64	3.78	1.26
355.65	3.82	1.31
355.66	3.86	1.36
355.67	3.90	1.41
355.68	3.93	1.47
355.69	3.97	1.52
355.70	4.00	1.57
355.71	4.04	1.63
355.72	4.07	1.68
355.73	4.10	1.73
355.74	4.13	1.79
355.75	4.16	1.84
355.76	4.19	1.90
355.77	4.22	1.95
355.78	4.24	2.00
355.79	4.27	2.06
355.80	4.29	2.11
355.81	4.32	2.17
355.82	4.34	2.22
355.83	4.36	2.27
355.84	4.38	2.33
355.85	4.40	2.38
355.86	4.42	2.43
355.87	4.44	2.48
355.88	4.45	2.53
355.89	4.47	2.58
355.90	4.48	2.63
355.91	4.50	2.68
355.92	4.51	2.73
355.93	4.52	2.78
355.94	4.53	2.82
355.95	4.54	2.87
355.96	4.55	2.91
355.97	4.55	2.95
355.98	4.56	3.00
355.99	4.56	3.04
356.00	4.56	3.07
356.01	**4.57**	3.11
356.02	4.56	3.15
356.03	4.56	3.18
356.04	4.56	3.21
356.05	4.55	3.24
356.06	4.55	3.27
356.07	4.54	3.29
356.08	4.53	3.32
356.09	4.52	3.34
356.10	4.50	3.35
356.11	4.49	3.37
356.12	4.47	3.38
356.13	4.44	3.38
356.14	4.42	**3.38**
356.15	4.38	3.38
356.16	4.35	3.37
356.17	4.31	3.35
356.18	4.25	3.32
356.19	4.18	3.28
356.20	4.00	3.15

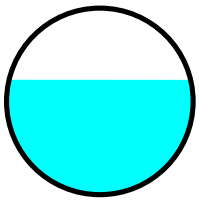
Summary for Reach DMH5: TO DMH-6

Inflow Area = 19,145 sf, 91.57% Impervious, Inflow Depth = 4.51" for 25-Year event
Inflow = 2.13 cfs @ 12.08 hrs, Volume= 7,201 cf
Outflow = 2.11 cfs @ 12.09 hrs, Volume= 7,201 cf, Atten= 1%, Lag= 0.8 min

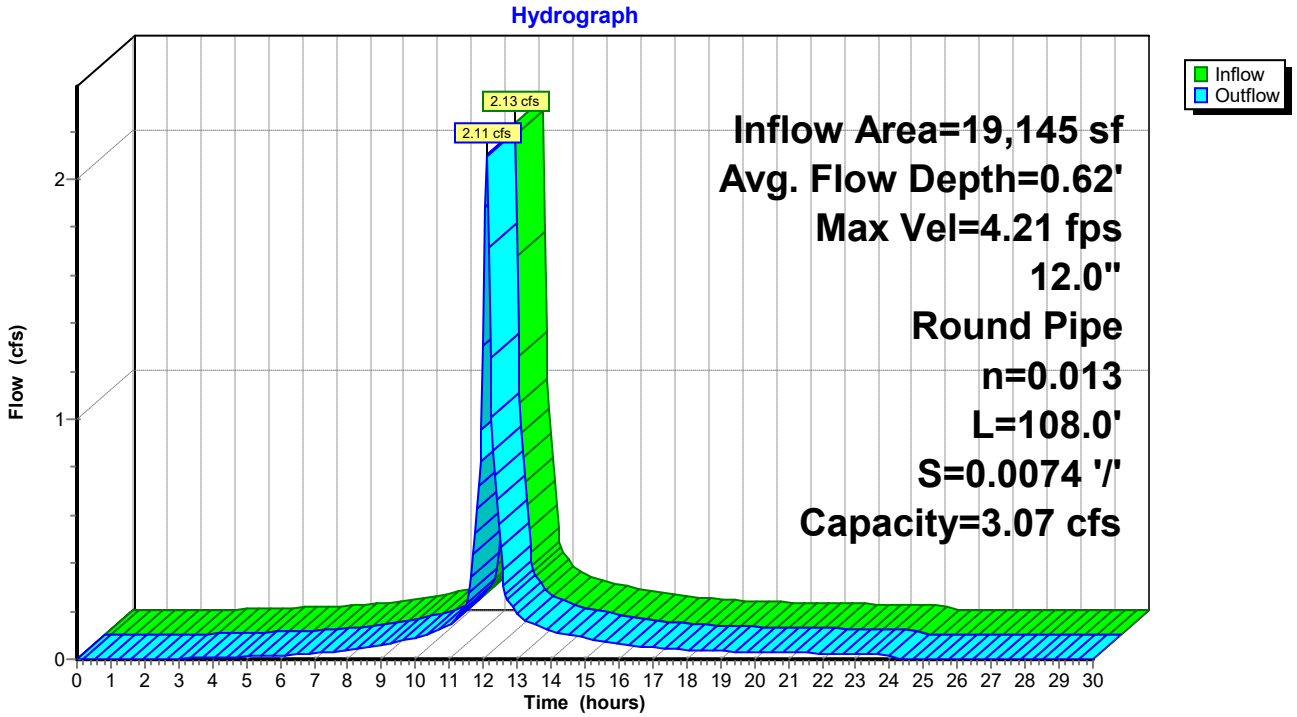
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.21 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.42 fps, Avg. Travel Time= 1.3 min

Peak Storage= 55 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.62'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.07 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 108.0' Slope= 0.0074 '/'
Inlet Invert= 354.10', Outlet Invert= 353.30'



Reach DMH5: TO DMH-6



Stage-Discharge for Reach DMH5: TO DMH-6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.10	0.00	0.00
354.11	0.35	0.00
354.12	0.55	0.00
354.13	0.72	0.00
354.14	0.87	0.01
354.15	1.00	0.01
354.16	1.13	0.02
354.17	1.25	0.03
354.18	1.36	0.04
354.19	1.46	0.05
354.20	1.57	0.06
354.21	1.66	0.08
354.22	1.76	0.09
354.23	1.85	0.11
354.24	1.93	0.13
354.25	2.02	0.15
354.26	2.10	0.17
354.27	2.18	0.19
354.28	2.25	0.22
354.29	2.33	0.24
354.30	2.40	0.27
354.31	2.47	0.30
354.32	2.54	0.33
354.33	2.61	0.36
354.34	2.67	0.39
354.35	2.74	0.42
354.36	2.80	0.45
354.37	2.86	0.49
354.38	2.92	0.53
354.39	2.97	0.56
354.40	3.03	0.60
354.41	3.08	0.64
354.42	3.14	0.68
354.43	3.19	0.72
354.44	3.24	0.76
354.45	3.29	0.81
354.46	3.34	0.85
354.47	3.39	0.89
354.48	3.43	0.94
354.49	3.48	0.99
354.50	3.52	1.03
354.51	3.57	1.08
354.52	3.61	1.13
354.53	3.65	1.18
354.54	3.69	1.23
354.55	3.73	1.28
354.56	3.76	1.33
354.57	3.80	1.38
354.58	3.84	1.43
354.59	3.87	1.48
354.60	3.90	1.53
354.61	3.94	1.59
354.62	3.97	1.64
354.63	4.00	1.69
354.64	4.03	1.74
354.65	4.06	1.80
354.66	4.09	1.85
354.67	4.11	1.90
354.68	4.14	1.95
354.69	4.16	2.01
354.70	4.19	2.06
354.71	4.21	2.11
354.72	4.23	2.16
354.73	4.25	2.22
354.74	4.27	2.27
354.75	4.29	2.32
354.76	4.31	2.37
354.77	4.33	2.42
354.78	4.34	2.47
354.79	4.36	2.52
354.80	4.37	2.57
354.81	4.38	2.61
354.82	4.40	2.66
354.83	4.41	2.71
354.84	4.42	2.75
354.85	4.43	2.80
354.86	4.43	2.84
354.87	4.44	2.88
354.88	4.44	2.92
354.89	4.45	2.96
354.90	4.45	3.00
354.91	**4.45**	3.03
354.92	4.45	3.07
354.93	4.45	3.10
354.94	4.45	3.13
354.95	4.44	3.16
354.96	4.43	3.19
354.97	4.43	3.21
354.98	4.42	3.23
354.99	4.40	3.25
355.00	4.39	3.27
355.01	4.37	3.28
355.02	4.35	3.29
355.03	4.33	3.30
355.04	4.31	**3.30**
355.05	4.28	3.29
355.06	4.24	3.29
355.07	4.20	3.27
355.08	4.15	3.24
355.09	4.07	3.20
355.10	3.90	3.07

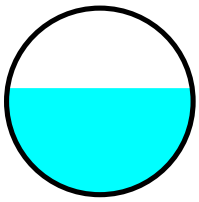
Summary for Reach DMH6: TO DMH#3

Inflow Area = 37,947 sf, 89.57% Impervious, Inflow Depth = 4.39" for 25-Year event
Inflow = 4.14 cfs @ 12.08 hrs, Volume= 13,898 cf
Outflow = 4.08 cfs @ 12.10 hrs, Volume= 13,898 cf, Atten= 1%, Lag= 0.8 min

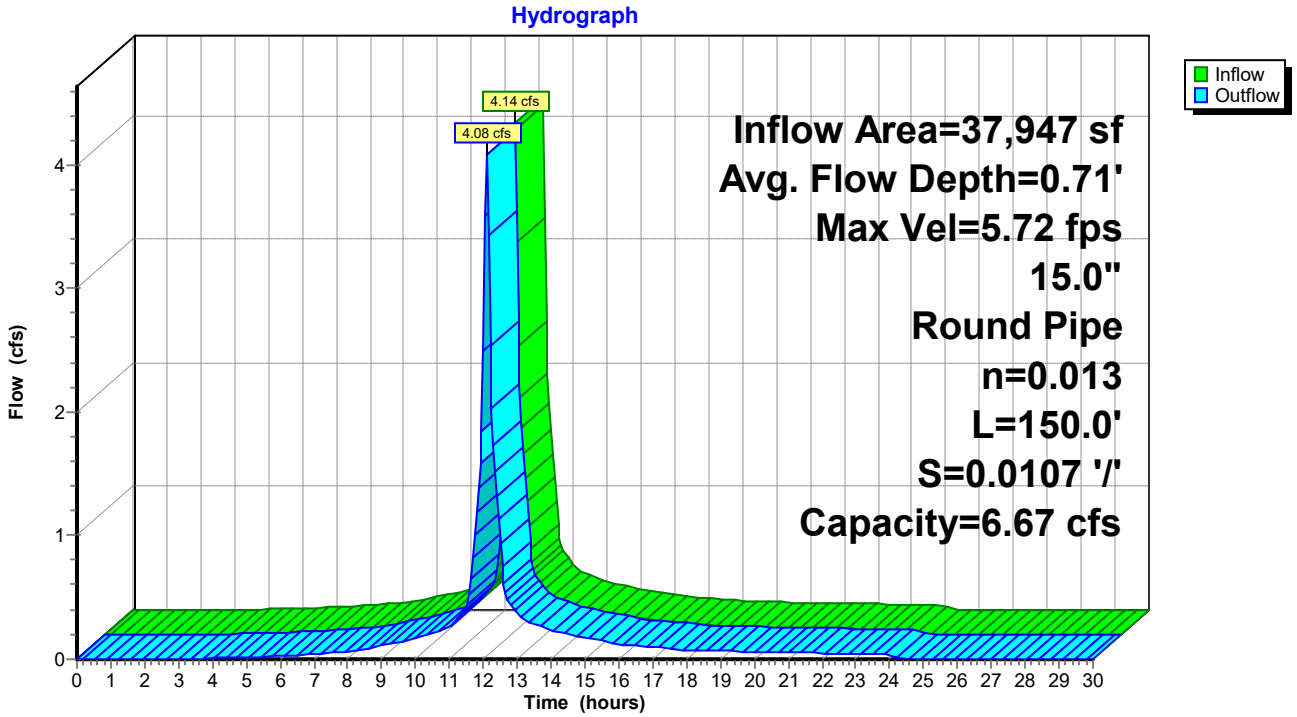
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.72 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.87 fps, Avg. Travel Time= 1.3 min

Peak Storage= 109 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.71'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.67 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 150.0' Slope= 0.0107 '/'
Inlet Invert= 353.20', Outlet Invert= 351.60'



Reach DMH6: TO DMH#3



Stage-Discharge for Reach DMH6: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.20	0.00	0.00
353.21	0.39	0.00
353.22	0.65	0.00
353.23	0.86	0.01
353.24	1.04	0.01
353.25	1.21	0.02
353.26	1.36	0.03
353.27	1.50	0.04
353.28	1.64	0.05
353.29	1.77	0.07
353.30	1.89	0.09
353.31	2.01	0.11
353.32	2.12	0.13
353.33	2.24	0.15
353.34	2.34	0.18
353.35	2.45	0.20
353.36	2.55	0.23
353.37	2.64	0.27
353.38	2.74	0.30
353.39	2.83	0.33
353.40	2.92	0.37
353.41	3.01	0.41
353.42	3.10	0.45
353.43	3.18	0.49
353.44	3.26	0.54
353.45	3.34	0.58
353.46	3.42	0.63
353.47	3.50	0.68
353.48	3.57	0.73
353.49	3.65	0.79
353.50	3.72	0.84
353.51	3.79	0.90
353.52	3.86	0.96
353.53	3.93	1.02
353.54	4.00	1.08
353.55	4.06	1.14
353.56	4.13	1.21
353.57	4.19	1.27
353.58	4.25	1.34
353.59	4.31	1.41
353.60	4.37	1.48
353.61	4.43	1.55
353.62	4.49	1.62
353.63	4.54	1.70
353.64	4.60	1.77
353.65	4.65	1.85
353.66	4.70	1.93
353.67	4.75	2.01
353.68	4.81	2.09
353.69	4.86	2.17
353.70	4.90	2.25
353.71	4.95	2.33
353.72	5.00	2.41
353.73	5.05	2.50
353.74	5.09	2.58
353.75	5.13	2.67
353.76	5.18	2.76
353.77	5.22	2.84
353.78	5.26	2.93
353.79	5.30	3.02
353.80	5.34	3.11
353.81	5.38	3.20
353.82	5.42	3.29
353.83	5.45	3.38
353.84	5.49	3.47
353.85	5.53	3.56
353.86	5.56	3.65
353.87	5.59	3.75
353.88	5.63	3.84
353.89	5.66	3.93
353.90	5.69	4.02
353.91	5.72	4.11
353.92	5.75	4.21
353.93	5.78	4.30
353.94	5.80	4.39
353.95	5.83	4.48
353.96	5.86	4.57
353.97	5.88	4.66
353.98	5.90	4.76
353.99	5.93	4.85
354.00	5.95	4.94
354.01	5.97	5.02
354.02	5.99	5.11
354.03	6.01	5.20
354.04	6.03	5.29
354.05	6.05	5.37
354.06	6.06	5.46
354.07	6.08	5.54
354.08	6.09	5.63
354.09	6.11	5.71
354.10	6.12	5.79
354.11	6.13	5.87
354.12	6.15	5.95
354.13	6.16	6.03
354.14	6.16	6.10
354.15	6.17	6.18
354.16	6.18	6.25
354.17	6.19	6.32
354.18	6.19	6.39
354.19	6.19	6.46
354.20	6.20	6.52
354.21	6.20	6.58
354.22	**6.20**	6.64
354.23	6.20	6.70
354.24	6.19	6.76
354.25	6.19	6.81
354.26	6.19	6.86
354.27	6.18	6.91
354.28	6.17	6.95
354.29	6.16	7.00
354.30	6.15	7.03
354.31	6.14	7.07
354.32	6.12	7.10
354.33	6.10	7.12
354.34	6.08	7.14
354.35	6.06	7.16
354.36	6.04	7.17
354.37	6.01	**7.18**
354.38	5.98	7.17
354.39	5.94	7.16
354.40	5.90	7.15
354.41	5.86	7.12
354.42	5.80	7.07
354.43	5.73	7.01
354.44	5.63	6.90
354.45	5.44	6.67

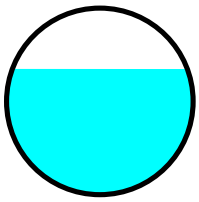
Summary for Reach DMH7: TO UGS

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 4.35" for 25-Year event
Inflow = 7.27 cfs @ 12.09 hrs, Volume= 24,518 cf
Outflow = 7.27 cfs @ 12.09 hrs, Volume= 24,518 cf, Atten= 0%, Lag= 0.0 min

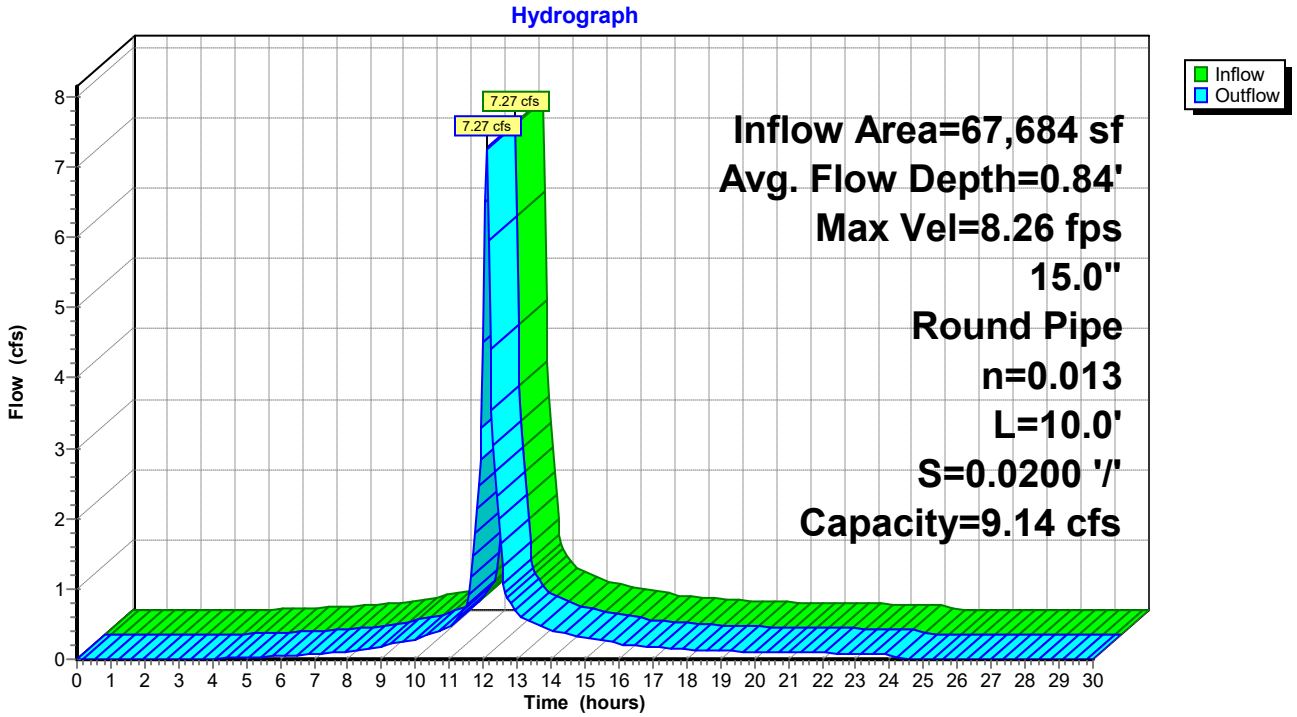
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.26 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.75 fps, Avg. Travel Time= 0.1 min

Peak Storage= 9 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.84'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.14 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 10.0' Slope= 0.0200 '/'
Inlet Invert= 351.00', Outlet Invert= 350.80'



Reach DMH7: TO UGS



Stage-Discharge for Reach DMH7: TO UGS

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.53	0.00
351.02	0.89	0.00
351.03	1.18	0.01
351.04	1.43	0.02
351.05	1.65	0.03
351.06	1.86	0.04
351.07	2.06	0.06
351.08	2.24	0.07
351.09	2.42	0.10
351.10	2.59	0.12
351.11	2.75	0.15
351.12	2.91	0.18
351.13	3.06	0.21
351.14	3.21	0.24
351.15	3.35	0.28
351.16	3.49	0.32
351.17	3.62	0.36
351.18	3.75	0.41
351.19	3.88	0.46
351.20	4.00	0.51
351.21	4.12	0.56
351.22	4.24	0.62
351.23	4.36	0.68
351.24	4.47	0.74
351.25	4.58	0.80
351.26	4.69	0.87
351.27	4.79	0.93
351.28	4.89	1.01
351.29	5.00	1.08
351.30	5.10	1.15
351.31	5.19	1.23
351.32	5.29	1.31
351.33	5.38	1.39
351.34	5.47	1.48
351.35	5.56	1.56
351.36	5.65	1.65
351.37	5.74	1.74
351.38	5.82	1.84
351.39	5.90	1.93
351.40	5.98	2.03
351.41	6.06	2.12
351.42	6.14	2.22
351.43	6.22	2.33
351.44	6.29	2.43
351.45	6.37	2.53
351.46	6.44	2.64
351.47	6.51	2.75
351.48	6.58	2.86
351.49	6.65	2.97
351.50	6.72	3.08
351.51	6.78	3.19
351.52	6.85	3.31
351.53	6.91	3.42
351.54	6.97	3.54
351.55	7.03	3.66
351.56	7.09	3.78
351.57	7.15	3.90
351.58	7.20	4.02
351.59	7.26	4.14
351.60	7.31	4.26
351.61	7.37	4.38
351.62	7.42	4.51
351.63	7.47	4.63
351.64	7.52	4.75
351.65	7.57	4.88
351.66	7.61	5.00
351.67	7.66	5.13
351.68	7.70	5.26
351.69	7.75	5.38
351.70	7.79	5.51
351.71	7.83	5.63
351.72	7.87	5.76
351.73	7.91	5.89
351.74	7.95	6.01
351.75	7.98	6.14
351.76	8.02	6.26
351.77	8.05	6.39
351.78	8.09	6.51
351.79	8.12	6.63
351.80	8.15	6.76
351.81	8.18	6.88
351.82	8.20	7.00
351.83	8.23	7.12
351.84	8.26	7.24
351.85	8.28	7.36
351.86	8.30	7.48
351.87	8.33	7.59
351.88	8.35	7.71
351.89	8.36	7.82
351.90	8.38	7.93
351.91	8.40	8.04
351.92	8.41	8.15
351.93	8.43	8.25
351.94	8.44	8.36
351.95	8.45	8.46
351.96	8.46	8.56
351.97	8.47	8.65
351.98	8.48	8.75
351.99	8.48	8.84
352.00	8.48	8.93
352.01	8.49	9.02
352.02	**8.49**	9.10
352.03	8.48	9.18
352.04	8.48	9.25
352.05	8.48	9.33
352.06	8.47	9.40
352.07	8.46	9.46
352.08	8.45	9.52
352.09	8.44	9.58
352.10	8.42	9.63
352.11	8.40	9.68
352.12	8.38	9.72
352.13	8.36	9.75
352.14	8.33	9.78
352.15	8.30	9.80
352.16	8.27	9.82
352.17	8.23	**9.83**
352.18	8.19	9.82
352.19	8.14	9.81
352.20	8.08	9.79
352.21	8.02	9.75
352.22	7.94	9.69
352.23	7.85	9.60
352.24	7.70	9.44
352.25	7.44	9.14

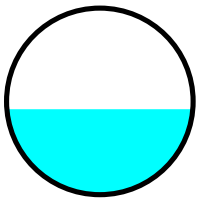
Summary for Reach DMH8: TO FE#B1

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 0.61" for 25-Year event
Inflow = 2.05 cfs @ 12.29 hrs, Volume= 3,468 cf
Outflow = 2.06 cfs @ 12.30 hrs, Volume= 3,468 cf, Atten= 0%, Lag= 0.4 min

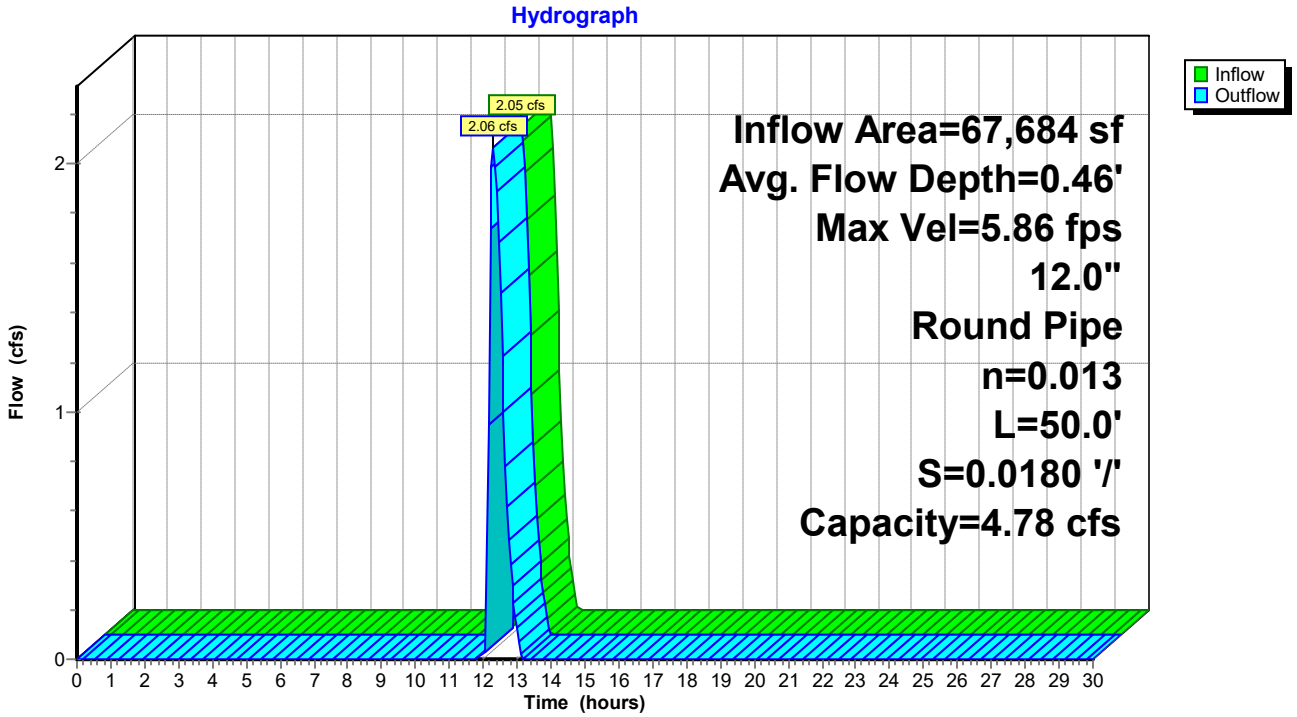
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.86 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.07 fps, Avg. Travel Time= 0.2 min

Peak Storage= 18 cf @ 12.30 hrs
Average Depth at Peak Storage= 0.46'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.78 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 50.0' Slope= 0.0180 '/'
Inlet Invert= 349.90', Outlet Invert= 349.00'



Reach DMH8: TO FE#B1



Stage-Discharge for Reach DMH8: TO FE#B1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
349.90	0.00	0.00
349.91	0.54	0.00
349.92	0.86	0.00
349.93	1.12	0.01
349.94	1.35	0.01
349.95	1.56	0.02
349.96	1.76	0.03
349.97	1.94	0.05
349.98	2.12	0.06
349.99	2.28	0.08
350.00	2.44	0.10
350.01	2.59	0.12
350.02	2.74	0.15
350.03	2.88	0.17
350.04	3.01	0.20
350.05	3.15	0.23
350.06	3.27	0.27
350.07	3.40	0.30
350.08	3.51	0.34
350.09	3.63	0.38
350.10	3.74	0.42
350.11	3.85	0.46
350.12	3.96	0.51
350.13	4.06	0.55
350.14	4.17	0.60
350.15	4.26	0.65
350.16	4.36	0.71
350.17	4.45	0.76
350.18	4.55	0.82
350.19	4.64	0.88
350.20	4.72	0.94
350.21	4.81	1.00
350.22	4.89	1.06
350.23	4.97	1.12
350.24	5.05	1.19
350.25	5.13	1.26
350.26	5.21	1.33
350.27	5.28	1.39
350.28	5.35	1.47
350.29	5.42	1.54
350.30	5.49	1.61
350.31	5.56	1.68
350.32	5.62	1.76
350.33	5.69	1.84
350.34	5.75	1.91
350.35	5.81	1.99
350.36	5.87	2.07
350.37	5.92	2.15
350.38	5.98	2.23
350.39	6.03	2.31
350.40	6.09	2.39
350.41	6.14	2.47
350.42	6.19	2.55
350.43	6.23	2.64
350.44	6.28	2.72
350.45	6.33	2.80
350.46	6.37	2.88
350.47	6.41	2.96
350.48	6.45	3.05
350.49	6.49	3.13
350.50	6.53	3.21
350.51	6.56	3.29
350.52	6.60	3.37
350.53	6.63	3.46
350.54	6.66	3.54
350.55	6.69	3.62
350.56	6.72	3.69
350.57	6.75	3.77
350.58	6.77	3.85
350.59	6.79	3.93
350.60	6.82	4.00
350.61	6.84	4.08
350.62	6.85	4.15
350.63	6.87	4.22
350.64	6.89	4.29
350.65	6.90	4.36
350.66	6.91	4.43
350.67	6.92	4.49
350.68	6.93	4.55
350.69	6.93	4.61
350.70	6.94	4.67
350.71	**6.94**	4.73
350.72	6.94	4.78
350.73	6.94	4.83
350.74	6.93	4.88
350.75	6.92	4.93
350.76	6.91	4.97
350.77	6.90	5.00
350.78	6.88	5.04
350.79	6.86	5.07
350.80	6.84	5.09
350.81	6.82	5.12
350.82	6.79	5.13
350.83	6.75	5.14
350.84	6.71	**5.14**
350.85	6.66	5.14
350.86	6.61	5.12
350.87	6.54	5.09
350.88	6.46	5.05
350.89	6.35	4.98
350.90	6.09	4.78

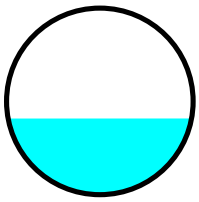
Summary for Reach DMHd1: TO DMH#8

Inflow Area = 21,252 sf, 56.67% Impervious, Inflow Depth = 2.50" for 25-Year event
Inflow = 1.38 cfs @ 12.08 hrs, Volume= 4,430 cf
Outflow = 1.37 cfs @ 12.09 hrs, Volume= 4,430 cf, Atten= 1%, Lag= 0.6 min

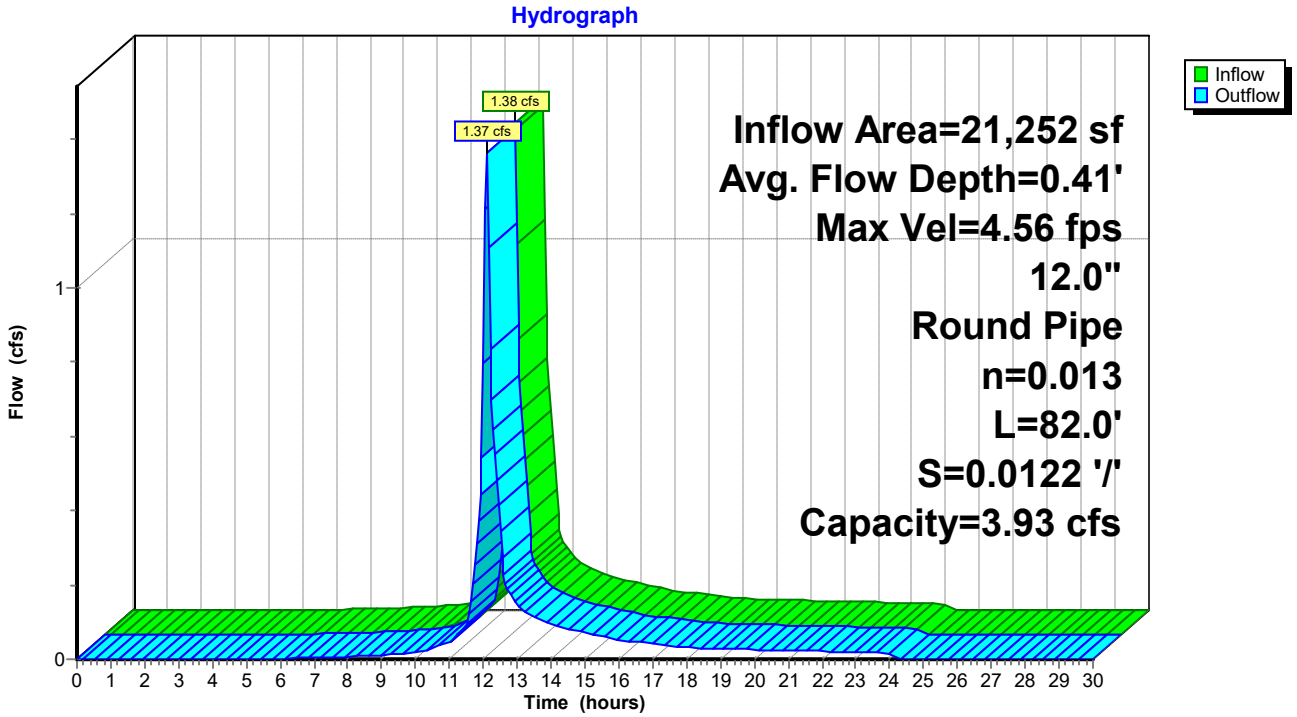
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.56 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.47 fps, Avg. Travel Time= 0.9 min

Peak Storage= 25 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.41'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.93 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 82.0' Slope= 0.0122 '/'
Inlet Invert= 352.10', Outlet Invert= 351.10'



Reach DMHd1: TO DMH#8



Stage-Discharge for Reach DMHd1: TO DMH#8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.10	0.00	0.00
352.11	0.45	0.00
352.12	0.71	0.00
352.13	0.92	0.01
352.14	1.11	0.01
352.15	1.29	0.02
352.16	1.45	0.03
352.17	1.60	0.04
352.18	1.74	0.05
352.19	1.88	0.07
352.20	2.01	0.08
352.21	2.13	0.10
352.22	2.25	0.12
352.23	2.37	0.14
352.24	2.48	0.17
352.25	2.59	0.19
352.26	2.69	0.22
352.27	2.79	0.25
352.28	2.89	0.28
352.29	2.99	0.31
352.30	3.08	0.34
352.31	3.17	0.38
352.32	3.26	0.42
352.33	3.35	0.46
352.34	3.43	0.50
352.35	3.51	0.54
352.36	3.59	0.58
352.37	3.67	0.63
352.38	3.74	0.67
352.39	3.82	0.72
352.40	3.89	0.77
352.41	3.96	0.82
352.42	4.03	0.87
352.43	4.09	0.93
352.44	4.16	0.98
352.45	4.22	1.03
352.46	4.29	1.09
352.47	4.35	1.15
352.48	4.41	1.21
352.49	4.46	1.27
352.50	4.52	1.33
352.51	4.57	1.39
352.52	4.63	1.45
352.53	4.68	1.51
352.54	4.73	1.57
352.55	4.78	1.64
352.56	4.83	1.70
352.57	4.88	1.77
352.58	4.92	1.83
352.59	4.97	1.90
352.60	5.01	1.97
352.61	5.05	2.03
352.62	5.09	2.10
352.63	5.13	2.17
352.64	5.17	2.24
352.65	5.21	2.30
352.66	5.24	2.37
352.67	5.28	2.44
352.68	5.31	2.51
352.69	5.34	2.58
352.70	5.37	2.64
352.71	5.40	2.71
352.72	5.43	2.78
352.73	5.46	2.84
352.74	5.48	2.91
352.75	5.51	2.98
352.76	5.53	3.04
352.77	5.55	3.11
352.78	5.57	3.17
352.79	5.59	3.23
352.80	5.61	3.29
352.81	5.63	3.36
352.82	5.64	3.42
352.83	5.65	3.47
352.84	5.67	3.53
352.85	5.68	3.59
352.86	5.69	3.64
352.87	5.70	3.70
352.88	5.70	3.75
352.89	5.71	3.80
352.90	5.71	3.85
352.91	**5.71**	3.89
352.92	5.71	3.94
352.93	5.71	3.98
352.94	5.70	4.02
352.95	5.70	4.05
352.96	5.69	4.09
352.97	5.68	4.12
352.98	5.67	4.15
352.99	5.65	4.17
353.00	5.63	4.19
353.01	5.61	4.21
353.02	5.59	4.22
353.03	5.56	4.23
353.04	5.52	**4.23**
353.05	5.49	4.23
353.06	5.44	4.22
353.07	5.39	4.19
353.08	5.32	4.16
353.09	5.23	4.10
353.10	5.01	3.93

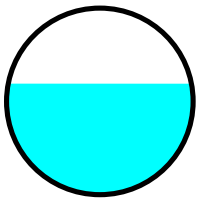
Summary for Reach DMHD2: TO DMH#7

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 3.37" for 25-Year event
Inflow = 4.81 cfs @ 12.09 hrs, Volume= 15,890 cf
Outflow = 4.80 cfs @ 12.09 hrs, Volume= 15,890 cf, Atten= 0%, Lag= 0.0 min

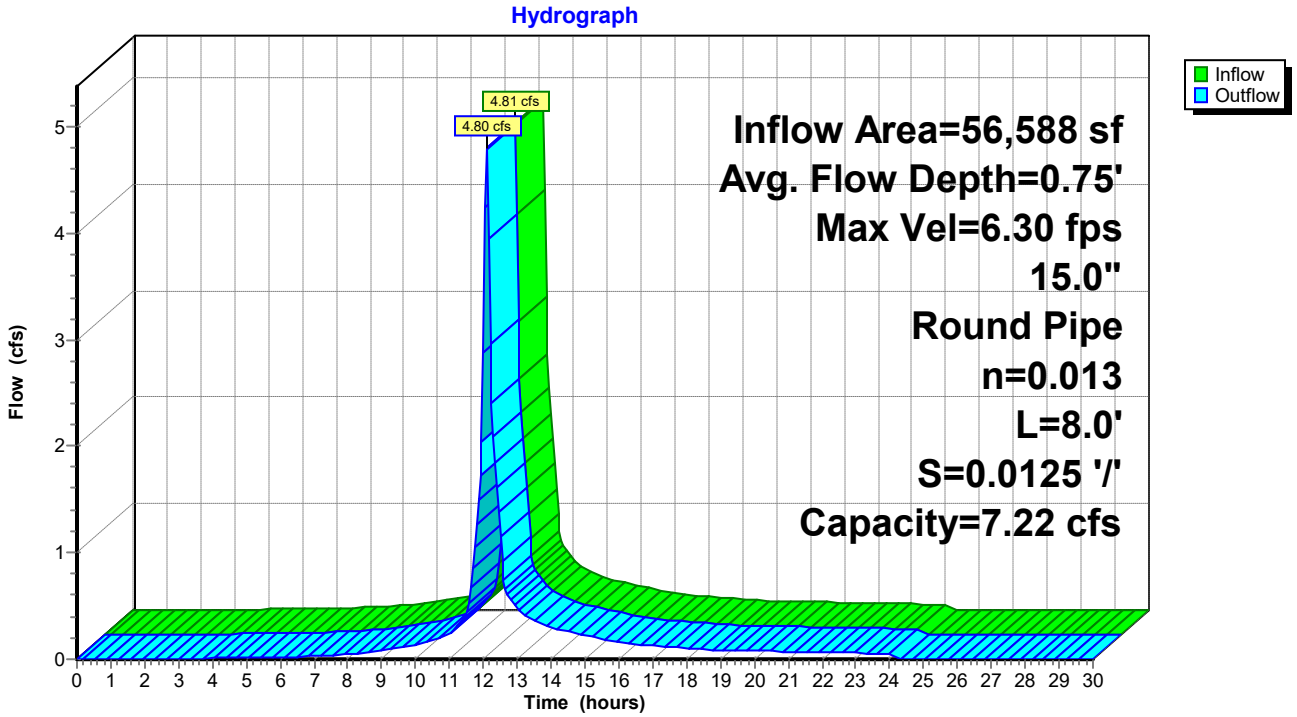
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.30 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.98 fps, Avg. Travel Time= 0.1 min

Peak Storage= 6 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.75'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.22 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 8.0' Slope= 0.0125 '/'
Inlet Invert= 350.40', Outlet Invert= 350.30'



Reach DMHD2: TO DMH#7



Stage-Discharge for Reach DMHD2: TO DMH#7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.40	0.00	0.00
350.41	0.42	0.00
350.42	0.71	0.00
350.43	0.93	0.01
350.44	1.13	0.01
350.45	1.31	0.02
350.46	1.47	0.03
350.47	1.63	0.04
350.48	1.77	0.06
350.49	1.91	0.08
350.50	2.05	0.09
350.51	2.18	0.12
350.52	2.30	0.14
350.53	2.42	0.16
350.54	2.54	0.19
350.55	2.65	0.22
350.56	2.76	0.25
350.57	2.86	0.29
350.58	2.97	0.32
350.59	3.07	0.36
350.60	3.16	0.40
350.61	3.26	0.44
350.62	3.35	0.49
350.63	3.44	0.53
350.64	3.53	0.58
350.65	3.62	0.63
350.66	3.70	0.68
350.67	3.79	0.74
350.68	3.87	0.80
350.69	3.95	0.85
350.70	4.03	0.91
350.71	4.10	0.97
350.72	4.18	1.04
350.73	4.25	1.10
350.74	4.33	1.17
350.75	4.40	1.24
350.76	4.47	1.31
350.77	4.53	1.38
350.78	4.60	1.45
350.79	4.67	1.53
350.80	4.73	1.60
350.81	4.79	1.68
350.82	4.86	1.76
350.83	4.92	1.84
350.84	4.98	1.92
350.85	5.03	2.00
350.86	5.09	2.09
350.87	5.15	2.17
350.88	5.20	2.26
350.89	5.26	2.35
350.90	5.31	2.43
350.91	5.36	2.52
350.92	5.41	2.61
350.93	5.46	2.71
350.94	5.51	2.80
350.95	5.56	2.89
350.96	5.61	2.98
350.97	5.65	3.08
350.98	5.70	3.17
350.99	5.74	3.27
351.00	5.78	3.37
351.01	5.82	3.46
351.02	5.86	3.56
351.03	5.90	3.66
351.04	5.94	3.76
351.05	5.98	3.86
351.06	6.02	3.96
351.07	6.06	4.06
351.08	6.09	4.16
351.09	6.12	4.26
351.10	6.16	4.35
351.11	6.19	4.45
351.12	6.22	4.55
351.13	6.25	4.65
351.14	6.28	4.75
351.15	6.31	4.85
351.16	6.34	4.95
351.17	6.37	5.05
351.18	6.39	5.15
351.19	6.42	5.25
351.20	6.44	5.34
351.21	6.46	5.44
351.22	6.49	5.53
351.23	6.51	5.63
351.24	6.53	5.72
351.25	6.55	5.82
351.26	6.56	5.91
351.27	6.58	6.00
351.28	6.60	6.09
351.29	6.61	6.18
351.30	6.63	6.27
351.31	6.64	6.36
351.32	6.65	6.44
351.33	6.66	6.52
351.34	6.67	6.61
351.35	6.68	6.69
351.36	6.69	6.76
351.37	6.70	6.84
351.38	6.70	6.92
351.39	6.70	6.99
351.40	6.71	7.06
351.41	6.71	7.13
351.42	**6.71**	7.19
351.43	6.71	7.26
351.44	6.71	7.32
351.45	6.70	7.37
351.46	6.70	7.43
351.47	6.69	7.48
351.48	6.68	7.53
351.49	6.67	7.57
351.50	6.66	7.61
351.51	6.64	7.65
351.52	6.63	7.68
351.53	6.61	7.71
351.54	6.59	7.73
351.55	6.56	7.75
351.56	6.54	7.76
351.57	6.51	**7.77**
351.58	6.47	7.77
351.59	6.43	7.76
351.60	6.39	7.74
351.61	6.34	7.71
351.62	6.28	7.66
351.63	6.21	7.59
351.64	6.09	7.46
351.65	5.89	7.22

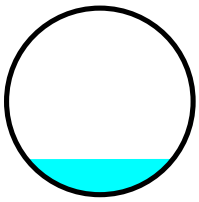
Summary for Reach DMHd3: TO DMH#2

Inflow Area = 6,527 sf, 84.22% Impervious, Inflow Depth = 4.04" for 25-Year event
Inflow = 0.65 cfs @ 12.08 hrs, Volume= 2,199 cf
Outflow = 0.65 cfs @ 12.09 hrs, Volume= 2,199 cf, Atten= 0%, Lag= 0.1 min

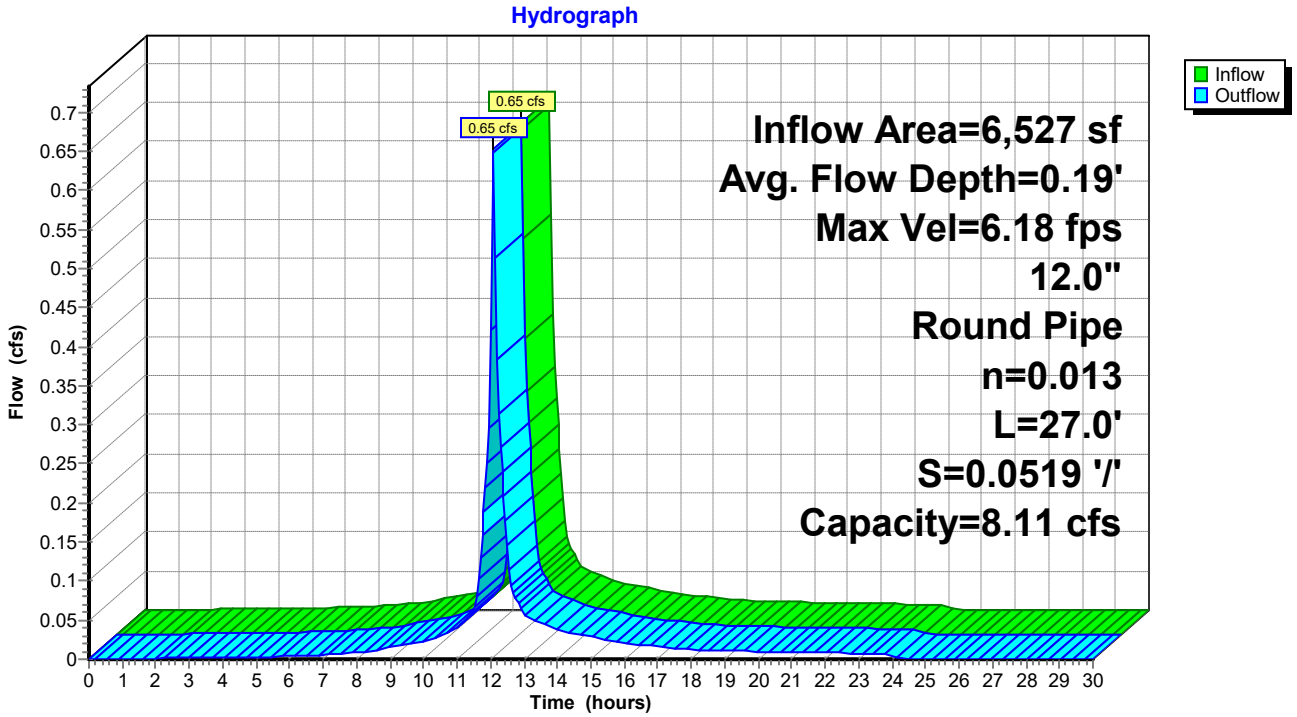
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.18 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.11 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 27.0' Slope= 0.0519 '/'
Inlet Invert= 352.40', Outlet Invert= 351.00'



Reach DMHd3: TO DMH#2



Stage-Discharge for Reach DMHd3: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.40	0.00	0.00
352.41	0.92	0.00
352.42	1.45	0.01
352.43	1.90	0.01
352.44	2.29	0.02
352.45	2.65	0.04
352.46	2.99	0.06
352.47	3.30	0.08
352.48	3.59	0.11
352.49	3.88	0.14
352.50	4.14	0.17
352.51	4.40	0.21
352.52	4.65	0.25
352.53	4.89	0.29
352.54	5.12	0.34
352.55	5.34	0.39
352.56	5.55	0.45
352.57	5.76	0.51
352.58	5.96	0.57
352.59	6.16	0.64
352.60	6.35	0.71
352.61	6.54	0.78
352.62	6.72	0.86
352.63	6.90	0.94
352.64	7.07	1.02
352.65	7.24	1.11
352.66	7.40	1.20
352.67	7.56	1.29
352.68	7.72	1.39
352.69	7.87	1.49
352.70	8.02	1.59
352.71	8.16	1.69
352.72	8.30	1.80
352.73	8.44	1.91
352.74	8.58	2.02
352.75	8.71	2.13
352.76	8.84	2.25
352.77	8.96	2.37
352.78	9.08	2.49
352.79	9.20	2.61
352.80	9.32	2.73
352.81	9.43	2.86
352.82	9.54	2.99
352.83	9.65	3.12
352.84	9.76	3.25
352.85	9.86	3.38
352.86	9.96	3.51
352.87	10.05	3.65
352.88	10.15	3.78
352.89	10.24	3.92
352.90	10.33	4.06
352.91	10.42	4.19
352.92	10.50	4.33
352.93	10.58	4.47
352.94	10.66	4.61
352.95	10.74	4.75
352.96	10.81	4.89
352.97	10.88	5.03
352.98	10.95	5.17
352.99	11.01	5.31
353.00	11.08	5.45
353.01	11.14	5.59
353.02	11.20	5.73
353.03	11.25	5.86
353.04	11.31	6.00
353.05	11.36	6.14
353.06	11.40	6.27
353.07	11.45	6.40
353.08	11.49	6.53
353.09	11.53	6.66
353.10	11.57	6.79
353.11	11.60	6.92
353.12	11.63	7.04
353.13	11.66	7.16
353.14	11.69	7.28
353.15	11.71	7.40
353.16	11.73	7.51
353.17	11.74	7.62
353.18	11.76	7.73
353.19	11.77	7.83
353.20	11.77	7.93
353.21	**11.78**	8.03
353.22	11.78	8.12
353.23	11.77	8.20
353.24	11.76	8.28
353.25	11.75	8.36
353.26	11.73	8.43
353.27	11.71	8.49
353.28	11.68	8.55
353.29	11.65	8.60
353.30	11.61	8.65
353.31	11.57	8.68
353.32	11.52	8.71
353.33	11.46	8.72
353.34	11.39	**8.73**
353.35	11.31	8.72
353.36	11.22	8.69
353.37	11.11	8.65
353.38	10.97	8.57
353.39	10.78	8.45
353.40	10.33	8.11

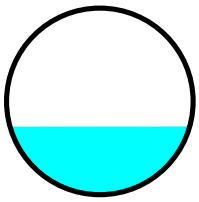
Summary for Reach DMHD4: TO DMH#2

Inflow Area = 9,322 sf, 78.29% Impervious, Inflow Depth = 3.68" for 25-Year event
Inflow = 0.88 cfs @ 12.08 hrs, Volume= 2,858 cf
Outflow = 0.86 cfs @ 12.10 hrs, Volume= 2,858 cf, Atten= 2%, Lag= 1.2 min

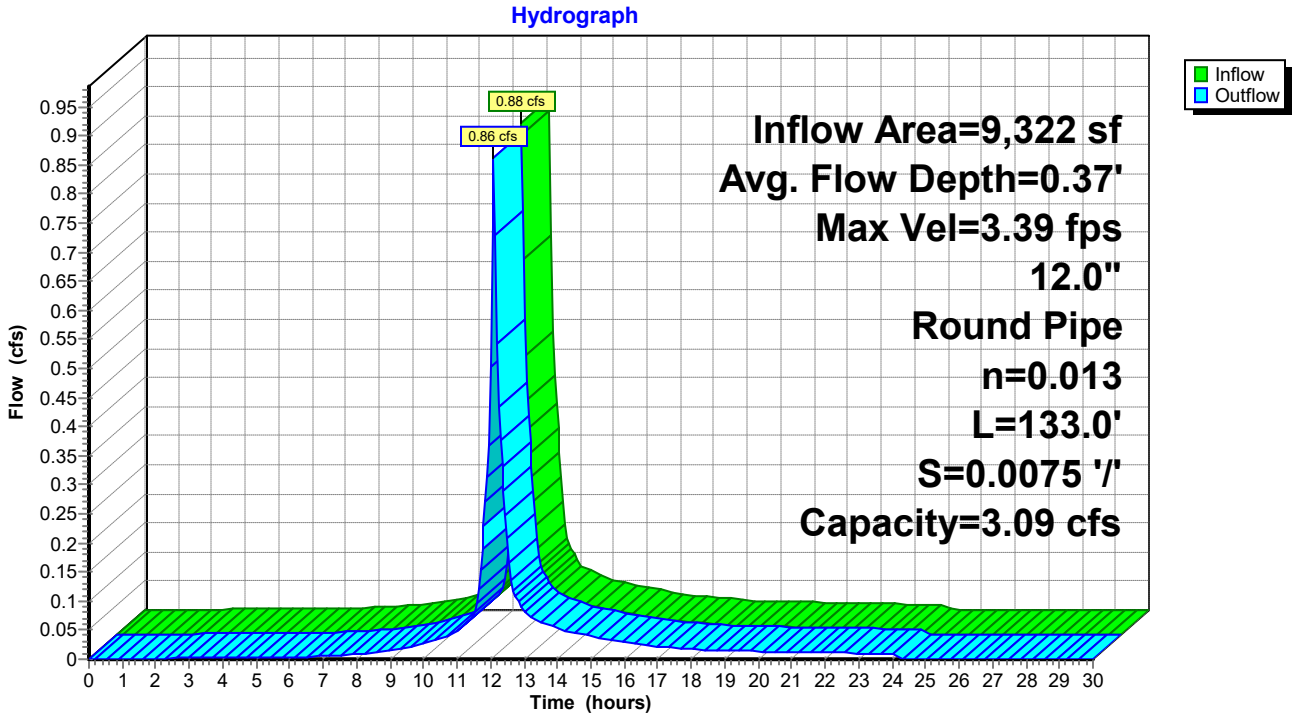
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.39 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.04 fps, Avg. Travel Time= 2.1 min

Peak Storage= 35 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.09 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 133.0' Slope= 0.0075 '/'
Inlet Invert= 351.50', Outlet Invert= 350.50'



Reach DMHD4: TO DMH#2



Stage-Discharge for Reach DMHD4: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.50	0.00	0.00
351.51	0.35	0.00
351.52	0.55	0.00
351.53	0.72	0.00
351.54	0.87	0.01
351.55	1.01	0.01
351.56	1.14	0.02
351.57	1.26	0.03
351.58	1.37	0.04
351.59	1.48	0.05
351.60	1.58	0.06
351.61	1.68	0.08
351.62	1.77	0.09
351.63	1.86	0.11
351.64	1.95	0.13
351.65	2.03	0.15
351.66	2.11	0.17
351.67	2.19	0.19
351.68	2.27	0.22
351.69	2.35	0.24
351.70	2.42	0.27
351.71	2.49	0.30
351.72	2.56	0.33
351.73	2.63	0.36
351.74	2.69	0.39
351.75	2.76	0.42
351.76	2.82	0.46
351.77	2.88	0.49
351.78	2.94	0.53
351.79	3.00	0.57
351.80	3.05	0.60
351.81	3.11	0.64
351.82	3.16	0.69
351.83	3.21	0.73
351.84	3.27	0.77
351.85	3.32	0.81
351.86	3.36	0.86
351.87	3.41	0.90
351.88	3.46	0.95
351.89	3.50	0.99
351.90	3.55	1.04
351.91	3.59	1.09
351.92	3.63	1.14
351.93	3.68	1.19
351.94	3.72	1.24
351.95	3.75	1.29
351.96	3.79	1.34
351.97	3.83	1.39
351.98	3.86	1.44
351.99	3.90	1.49
352.00	3.93	1.54
352.01	3.97	1.60
352.02	4.00	1.65
352.03	4.03	1.70
352.04	4.06	1.76
352.05	4.09	1.81
352.06	4.12	1.86
352.07	4.14	1.92
352.08	4.17	1.97
352.09	4.19	2.02
352.10	4.22	2.08
352.11	4.24	2.13
352.12	4.26	2.18
352.13	4.28	2.23
352.14	4.30	2.29
352.15	4.32	2.34
352.16	4.34	2.39
352.17	4.36	2.44
352.18	4.38	2.49
352.19	4.39	2.54
352.20	4.40	2.59
352.21	4.42	2.63
352.22	4.43	2.68
352.23	4.44	2.73
352.24	4.45	2.77
352.25	4.46	2.82
352.26	4.47	2.86
352.27	4.47	2.90
352.28	4.48	2.94
352.29	4.48	2.98
352.30	4.48	3.02
352.31	**4.48**	3.06
352.32	4.48	3.09
352.33	4.48	3.12
352.34	4.48	3.15
352.35	4.47	3.18
352.36	4.47	3.21
352.37	4.46	3.23
352.38	4.45	3.26
352.39	4.44	3.28
352.40	4.42	3.29
352.41	4.41	3.31
352.42	4.39	3.32
352.43	4.36	3.32
352.44	4.34	**3.32**
352.45	4.31	3.32
352.46	4.27	3.31
352.47	4.23	3.29
352.48	4.18	3.26
352.49	4.11	3.22
352.50	3.93	3.09

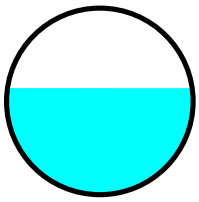
Summary for Reach DMHD5: TO DMH#2

Inflow Area = 19,181 sf, 81.45% Impervious, Inflow Depth = 3.86" for 25-Year event
Inflow = 1.87 cfs @ 12.09 hrs, Volume= 6,168 cf
Outflow = 1.85 cfs @ 12.10 hrs, Volume= 6,168 cf, Atten= 1%, Lag= 0.5 min

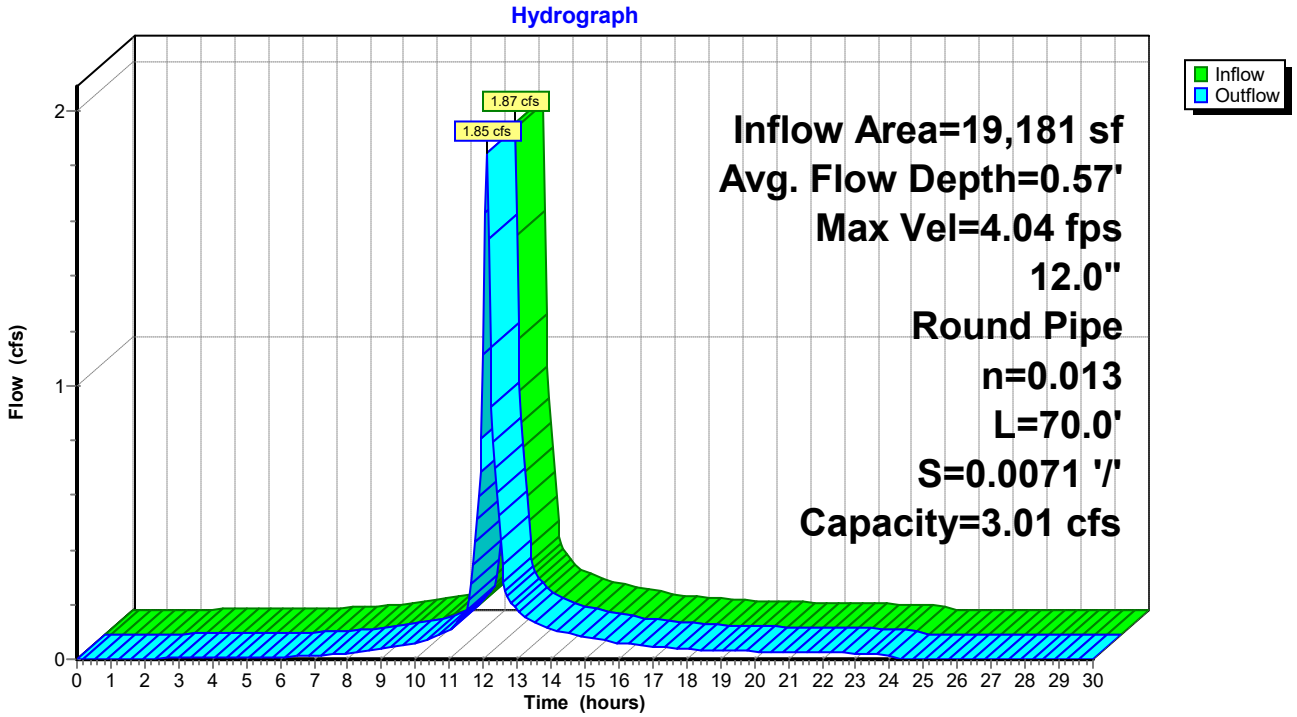
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.04 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.28 fps, Avg. Travel Time= 0.9 min

Peak Storage= 32 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.57'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.01 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 70.0' Slope= 0.0071 '/'
Inlet Invert= 350.90', Outlet Invert= 350.40'



Reach DMHD5: TO DMH#2



Stage-Discharge for Reach DMHD5: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.90	0.00	0.00
350.91	0.34	0.00
350.92	0.54	0.00
350.93	0.71	0.00
350.94	0.85	0.01
350.95	0.98	0.01
350.96	1.11	0.02
350.97	1.22	0.03
350.98	1.33	0.04
350.99	1.44	0.05
351.00	1.54	0.06
351.01	1.63	0.08
351.02	1.73	0.09
351.03	1.81	0.11
351.04	1.90	0.13
351.05	1.98	0.15
351.06	2.06	0.17
351.07	2.14	0.19
351.08	2.21	0.21
351.09	2.29	0.24
351.10	2.36	0.26
351.11	2.43	0.29
351.12	2.49	0.32
351.13	2.56	0.35
351.14	2.62	0.38
351.15	2.69	0.41
351.16	2.75	0.45
351.17	2.81	0.48
351.18	2.86	0.52
351.19	2.92	0.55
351.20	2.98	0.59
351.21	3.03	0.63
351.22	3.08	0.67
351.23	3.13	0.71
351.24	3.18	0.75
351.25	3.23	0.79
351.26	3.28	0.83
351.27	3.33	0.88
351.28	3.37	0.92
351.29	3.42	0.97
351.30	3.46	1.01
351.31	3.50	1.06
351.32	3.54	1.11
351.33	3.58	1.16
351.34	3.62	1.21
351.35	3.66	1.25
351.36	3.70	1.30
351.37	3.73	1.35
351.38	3.77	1.40
351.39	3.80	1.45
351.40	3.83	1.51
351.41	3.87	1.56
351.42	3.90	1.61
351.43	3.93	1.66
351.44	3.96	1.71
351.45	3.98	1.76
351.46	4.01	1.82
351.47	4.04	1.87
351.48	4.06	1.92
351.49	4.09	1.97
351.50	4.11	2.02
351.51	4.13	2.07
351.52	4.16	2.13
351.53	4.18	2.18
351.54	4.20	2.23
351.55	4.21	2.28
351.56	4.23	2.33
351.57	4.25	2.38
351.58	4.26	2.43
351.59	4.28	2.47
351.60	4.29	2.52
351.61	4.31	2.57
351.62	4.32	2.61
351.63	4.33	2.66
351.64	4.34	2.70
351.65	4.35	2.75
351.66	4.35	2.79
351.67	4.36	2.83
351.68	4.36	2.87
351.69	4.37	2.91
351.70	4.37	2.94
351.71	**4.37**	2.98
351.72	4.37	3.01
351.73	4.37	3.04
351.74	4.37	3.07
351.75	4.36	3.10
351.76	4.35	3.13
351.77	4.35	3.15
351.78	4.34	3.17
351.79	4.32	3.19
351.80	4.31	3.21
351.81	4.29	3.22
351.82	4.28	3.23
351.83	4.25	3.24
351.84	4.23	**3.24**
351.85	4.20	3.24
351.86	4.16	3.23
351.87	4.12	3.21
351.88	4.07	3.18
351.89	4.00	3.14
351.90	3.83	3.01

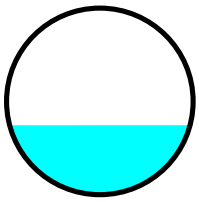
Summary for Reach DMHD6: TO DMH#5

Inflow Area = 8,503 sf, 83.97% Impervious, Inflow Depth = 4.01" for 25-Year event
Inflow = 0.86 cfs @ 12.08 hrs, Volume= 2,844 cf
Outflow = 0.86 cfs @ 12.09 hrs, Volume= 2,844 cf, Atten= 1%, Lag= 0.6 min

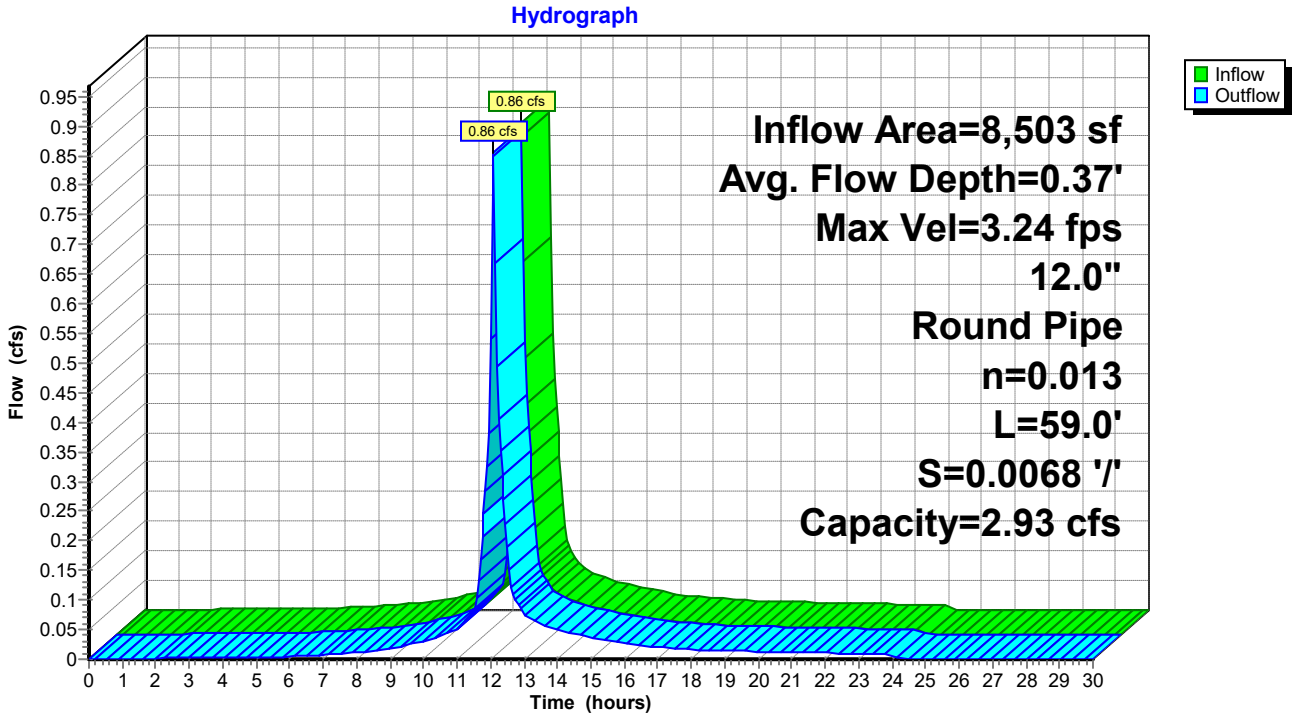
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.24 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.01 fps, Avg. Travel Time= 1.0 min

Peak Storage= 16 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.93 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 59.0' Slope= 0.0068 '/'
Inlet Invert= 351.40', Outlet Invert= 351.00'



Reach DMHD6: TO DMH#5



Stage-Discharge for Reach DMHD6: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.40	0.00	0.00
351.41	0.33	0.00
351.42	0.53	0.00
351.43	0.69	0.00
351.44	0.83	0.01
351.45	0.96	0.01
351.46	1.08	0.02
351.47	1.19	0.03
351.48	1.30	0.04
351.49	1.40	0.05
351.50	1.50	0.06
351.51	1.59	0.07
351.52	1.68	0.09
351.53	1.77	0.11
351.54	1.85	0.12
351.55	1.93	0.14
351.56	2.01	0.16
351.57	2.08	0.18
351.58	2.16	0.21
351.59	2.23	0.23
351.60	2.30	0.26
351.61	2.36	0.28
351.62	2.43	0.31
351.63	2.49	0.34
351.64	2.56	0.37
351.65	2.62	0.40
351.66	2.68	0.43
351.67	2.73	0.47
351.68	2.79	0.50
351.69	2.85	0.54
351.70	2.90	0.57
351.71	2.95	0.61
351.72	3.00	0.65
351.73	3.05	0.69
351.74	3.10	0.73
351.75	3.15	0.77
351.76	3.20	0.81
351.77	3.24	0.86
351.78	3.28	0.90
351.79	3.33	0.94
351.80	3.37	0.99
351.81	3.41	1.03
351.82	3.45	1.08
351.83	3.49	1.13
351.84	3.53	1.17
351.85	3.56	1.22
351.86	3.60	1.27
351.87	3.64	1.32
351.88	3.67	1.37
351.89	3.70	1.42
351.90	3.74	1.47
351.91	3.77	1.52
351.92	3.80	1.57
351.93	3.83	1.62
351.94	3.85	1.67
351.95	3.88	1.72
351.96	3.91	1.77
351.97	3.93	1.82
351.98	3.96	1.87
351.99	3.98	1.92
352.00	4.01	1.97
352.01	4.03	2.02
352.02	4.05	2.07
352.03	4.07	2.12
352.04	4.09	2.17
352.05	4.11	2.22
352.06	4.12	2.27
352.07	4.14	2.32
352.08	4.15	2.36
352.09	4.17	2.41
352.10	4.18	2.46
352.11	4.19	2.50
352.12	4.21	2.55
352.13	4.22	2.59
352.14	4.23	2.63
352.15	4.23	2.68
352.16	4.24	2.72
352.17	4.25	2.76
352.18	4.25	2.79
352.19	4.25	2.83
352.20	4.26	2.87
352.21	**4.26**	2.90
352.22	4.26	2.93
352.23	4.26	2.97
352.24	4.25	3.00
352.25	4.25	3.02
352.26	4.24	3.05
352.27	4.23	3.07
352.28	4.22	3.09
352.29	4.21	3.11
352.30	4.20	3.13
352.31	4.18	3.14
352.32	4.16	3.15
352.33	4.14	3.15
352.34	4.12	**3.16**
352.35	4.09	3.15
352.36	4.06	3.14
352.37	4.02	3.13
352.38	3.97	3.10
352.39	3.90	3.06
352.40	3.74	2.93

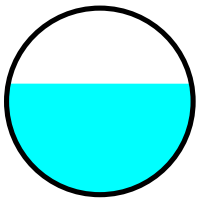
Summary for Reach DMHD7: TO UGS#1

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 3.37" for 25-Year event
Inflow = 4.80 cfs @ 12.09 hrs, Volume= 15,890 cf
Outflow = 4.80 cfs @ 12.10 hrs, Volume= 15,890 cf, Atten= 0%, Lag= 0.1 min

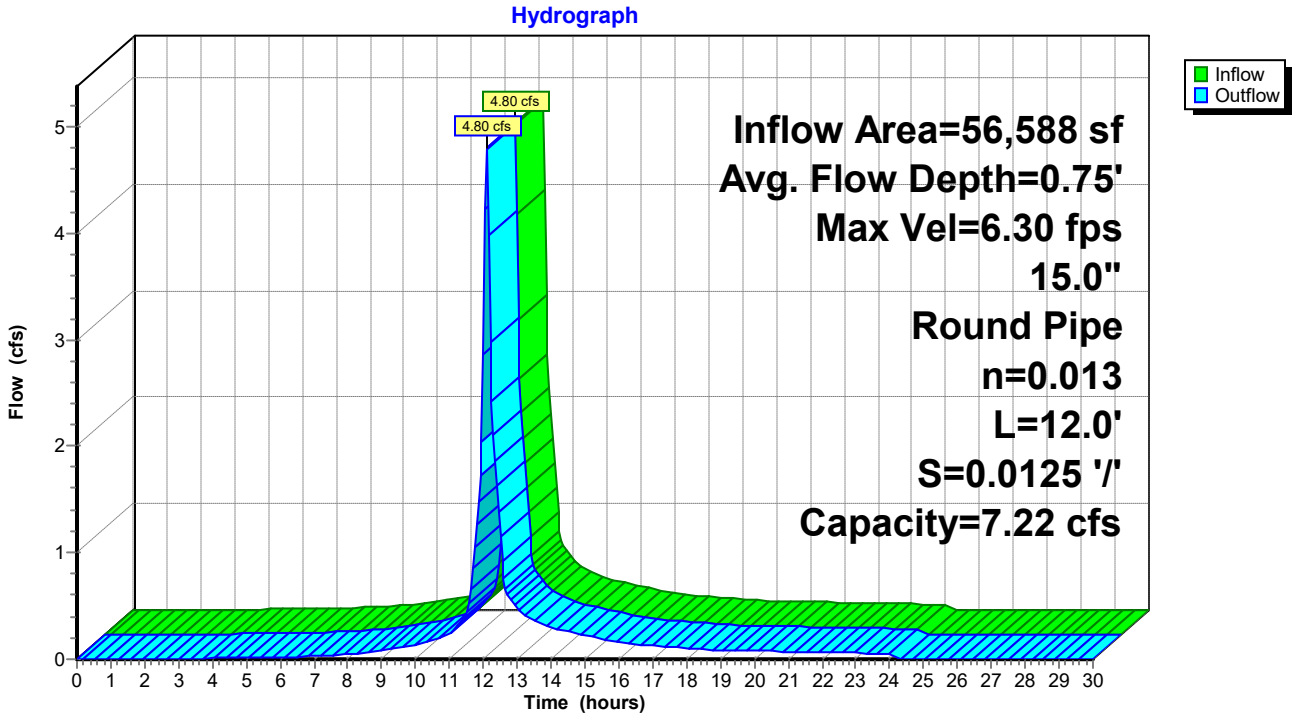
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.30 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.98 fps, Avg. Travel Time= 0.1 min

Peak Storage= 9 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.75'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.22 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 12.0' Slope= 0.0125 '/'
Inlet Invert= 350.15', Outlet Invert= 350.00'



Reach DMHD7: TO UGS#1



Stage-Discharge for Reach DMHD7: TO UGS#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.15	0.00	0.00
350.16	0.42	0.00
350.17	0.71	0.00
350.18	0.93	0.01
350.19	1.13	0.01
350.20	1.31	0.02
350.21	1.47	0.03
350.22	1.63	0.04
350.23	1.77	0.06
350.24	1.91	0.08
350.25	2.05	0.09
350.26	2.18	0.12
350.27	2.30	0.14
350.28	2.42	0.16
350.29	2.54	0.19
350.30	2.65	0.22
350.31	2.76	0.25
350.32	2.86	0.29
350.33	2.97	0.32
350.34	3.07	0.36
350.35	3.16	0.40
350.36	3.26	0.44
350.37	3.35	0.49
350.38	3.44	0.53
350.39	3.53	0.58
350.40	3.62	0.63
350.41	3.70	0.68
350.42	3.79	0.74
350.43	3.87	0.80
350.44	3.95	0.85
350.45	4.03	0.91
350.46	4.10	0.97
350.47	4.18	1.04
350.48	4.25	1.10
350.49	4.33	1.17
350.50	4.40	1.24
350.51	4.47	1.31
350.52	4.53	1.38
350.53	4.60	1.45
350.54	4.67	1.53
350.55	4.73	1.60
350.56	4.79	1.68
350.57	4.86	1.76
350.58	4.92	1.84
350.59	4.98	1.92
350.60	5.03	2.00
350.61	5.09	2.09
350.62	5.15	2.17
350.63	5.20	2.26
350.64	5.26	2.35
350.65	5.31	2.43
350.66	5.36	2.52
350.67	5.41	2.61
350.68	5.46	2.71
350.69	5.51	2.80
350.70	5.56	2.89
350.71	5.61	2.98
350.72	5.65	3.08
350.73	5.70	3.17
350.74	5.74	3.27
350.75	5.78	3.37
350.76	5.82	3.46
350.77	5.86	3.56
350.78	5.90	3.66
350.79	5.94	3.76
350.80	5.98	3.86
350.81	6.02	3.96
350.82	6.06	4.06
350.83	6.09	4.16
350.84	6.12	4.26
350.85	6.16	4.35
350.86	6.19	4.45
350.87	6.22	4.55
350.88	6.25	4.65
350.89	6.28	4.75
350.90	6.31	4.85
350.91	6.34	4.95
350.92	6.37	5.05
350.93	6.39	5.15
350.94	6.42	5.25
350.95	6.44	5.34
350.96	6.46	5.44
350.97	6.49	5.53
350.98	6.51	5.63
350.99	6.53	5.72
351.00	6.55	5.82
351.01	6.56	5.91
351.02	6.58	6.00
351.03	6.60	6.09
351.04	6.61	6.18
351.05	6.63	6.27
351.06	6.64	6.36
351.07	6.65	6.44
351.08	6.66	6.52
351.09	6.67	6.61
351.10	6.68	6.69
351.11	6.69	6.76
351.12	6.70	6.84
351.13	6.70	6.92
351.14	6.70	6.99
351.15	6.71	7.06
351.16	6.71	7.13
351.17	**6.71**	7.19
351.18	6.71	7.26
351.19	6.71	7.32
351.20	6.70	7.37
351.21	6.70	7.43
351.22	6.69	7.48
351.23	6.68	7.53
351.24	6.67	7.57
351.25	6.66	7.61
351.26	6.64	7.65
351.27	6.63	7.68
351.28	6.61	7.71
351.29	6.59	7.73
351.30	6.56	7.75
351.31	6.54	7.76
351.32	6.51	**7.77**
351.33	6.47	7.77
351.34	6.43	7.76
351.35	6.39	7.74
351.36	6.34	7.71
351.37	6.28	7.66
351.38	6.21	7.59
351.39	6.09	7.46
351.40	5.89	7.22

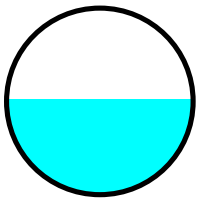
Summary for Reach DMHD8: TO DMH#2

Inflow Area = 28,085 sf, 64.50% Impervious, Inflow Depth = 2.93" for 25-Year event
Inflow = 2.10 cfs @ 12.09 hrs, Volume= 6,863 cf
Outflow = 2.10 cfs @ 12.09 hrs, Volume= 6,863 cf, Atten= 0%, Lag= 0.2 min

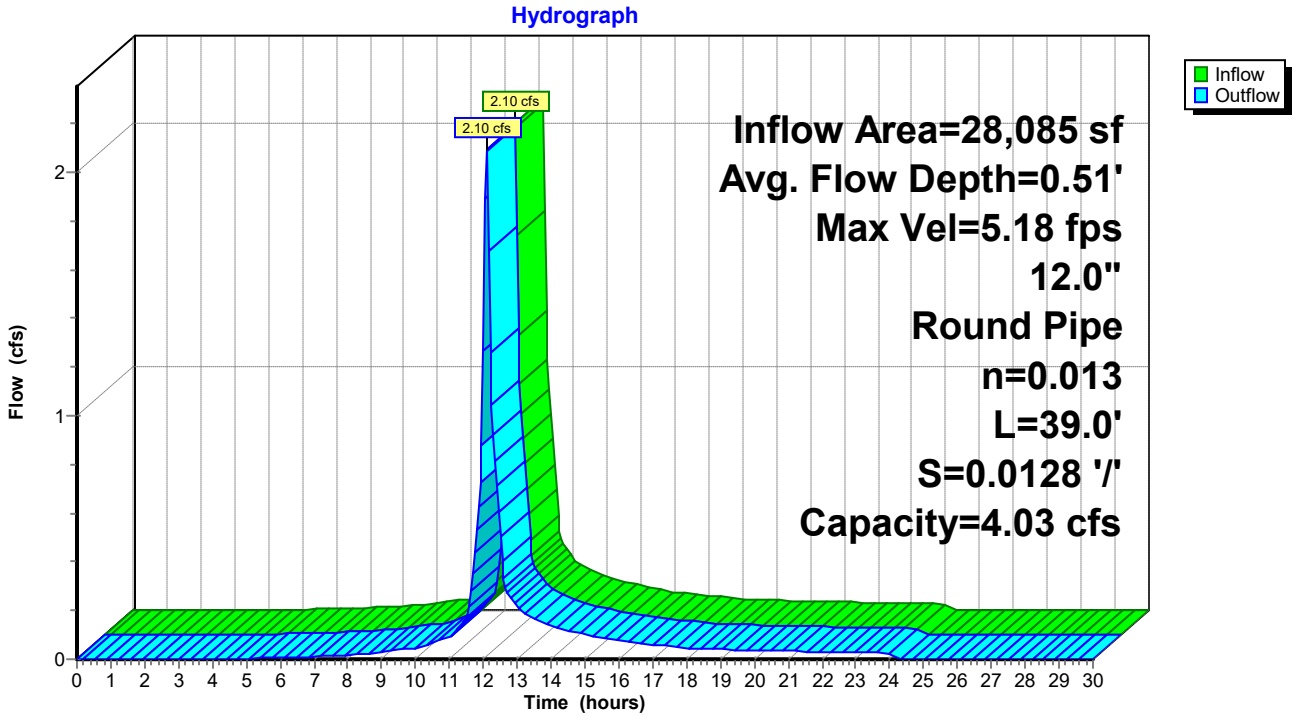
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.18 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.71 fps, Avg. Travel Time= 0.4 min

Peak Storage= 16 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.51'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.03 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 39.0' Slope= 0.0128 '/'
Inlet Invert= 351.00', Outlet Invert= 350.50'



Reach DMHD8: TO DMH#2



Stage-Discharge for Reach DMHD8: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.46	0.00
351.02	0.72	0.00
351.03	0.94	0.01
351.04	1.14	0.01
351.05	1.32	0.02
351.06	1.49	0.03
351.07	1.64	0.04
351.08	1.79	0.05
351.09	1.93	0.07
351.10	2.06	0.08
351.11	2.19	0.10
351.12	2.31	0.12
351.13	2.43	0.15
351.14	2.54	0.17
351.15	2.65	0.20
351.16	2.76	0.22
351.17	2.87	0.25
351.18	2.97	0.29
351.19	3.06	0.32
351.20	3.16	0.35
351.21	3.25	0.39
351.22	3.34	0.43
351.23	3.43	0.47
351.24	3.52	0.51
351.25	3.60	0.55
351.26	3.68	0.60
351.27	3.76	0.64
351.28	3.84	0.69
351.29	3.91	0.74
351.30	3.99	0.79
351.31	4.06	0.84
351.32	4.13	0.89
351.33	4.20	0.95
351.34	4.26	1.00
351.35	4.33	1.06
351.36	4.39	1.12
351.37	4.46	1.18
351.38	4.52	1.24
351.39	4.58	1.30
351.40	4.63	1.36
351.41	4.69	1.42
351.42	4.75	1.49
351.43	4.80	1.55
351.44	4.85	1.61
351.45	4.90	1.68
351.46	4.95	1.75
351.47	5.00	1.81
351.48	5.05	1.88
351.49	5.09	1.95
351.50	5.14	2.02
351.51	5.18	2.09
351.52	5.22	2.15
351.53	5.26	2.22
351.54	5.30	2.29
351.55	5.34	2.36
351.56	5.37	2.43
351.57	5.41	2.50
351.58	5.44	2.57
351.59	5.48	2.64
351.60	5.51	2.71
351.61	5.54	2.78
351.62	5.57	2.85
351.63	5.60	2.92
351.64	5.62	2.98
351.65	5.65	3.05
351.66	5.67	3.12
351.67	5.69	3.18
351.68	5.71	3.25
351.69	5.73	3.31
351.70	5.75	3.38
351.71	5.77	3.44
351.72	5.78	3.50
351.73	5.80	3.56
351.74	5.81	3.62
351.75	5.82	3.68
351.76	5.83	3.73
351.77	5.84	3.79
351.78	5.85	3.84
351.79	5.85	3.89
351.80	5.85	3.94
351.81	**5.86**	3.99
351.82	5.86	4.04
351.83	5.85	4.08
351.84	5.85	4.12
351.85	5.84	4.16
351.86	5.83	4.19
351.87	5.82	4.22
351.88	5.81	4.25
351.89	5.79	4.28
351.90	5.77	4.30
351.91	5.75	4.32
351.92	5.73	4.33
351.93	5.70	4.34
351.94	5.66	**4.34**
351.95	5.62	4.33
351.96	5.58	4.32
351.97	5.52	4.30
351.98	5.45	4.26
351.99	5.36	4.20
352.00	5.14	4.03

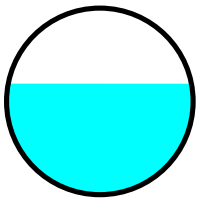
Summary for Reach DMHR100: TO DMH-R101

Inflow Area = 27,171 sf, 83.67% Impervious, Inflow Depth = 4.01" for 25-Year event
Inflow = 2.80 cfs @ 12.08 hrs, Volume= 9,087 cf
Outflow = 2.75 cfs @ 12.10 hrs, Volume= 9,087 cf, Atten= 2%, Lag= 1.0 min

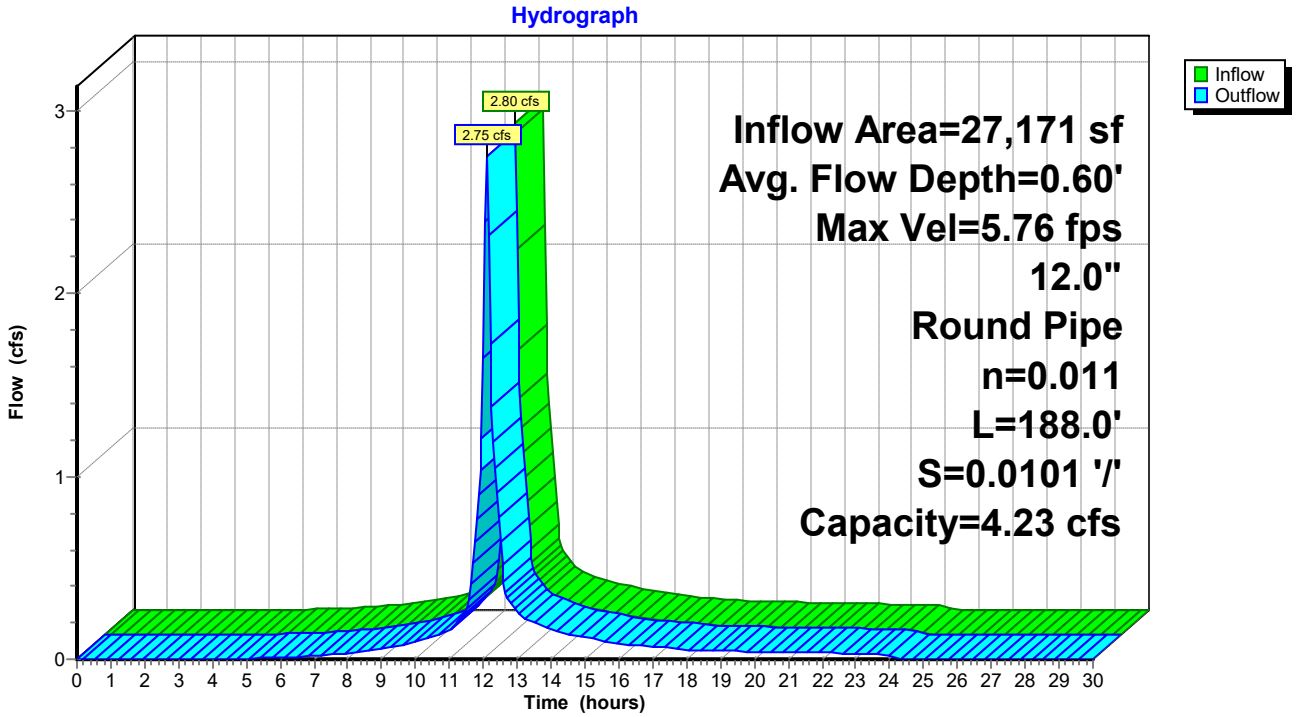
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.76 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.90 fps, Avg. Travel Time= 1.7 min

Peak Storage= 92 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.60'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.23 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 188.0' Slope= 0.0101 '/'
Inlet Invert= 353.00', Outlet Invert= 351.10'



Reach DMHR100: TO DMH-R101



Stage-Discharge for Reach DMHR100: TO DMH-R101

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.00	0.00	0.00
353.01	0.48	0.00
353.02	0.76	0.00
353.03	0.99	0.01
353.04	1.20	0.01
353.05	1.38	0.02
353.06	1.56	0.03
353.07	1.72	0.04
353.08	1.88	0.06
353.09	2.02	0.07
353.10	2.16	0.09
353.11	2.30	0.11
353.12	2.43	0.13
353.13	2.55	0.15
353.14	2.67	0.18
353.15	2.79	0.21
353.16	2.90	0.24
353.17	3.01	0.27
353.18	3.11	0.30
353.19	3.21	0.33
353.20	3.31	0.37
353.21	3.41	0.41
353.22	3.51	0.45
353.23	3.60	0.49
353.24	3.69	0.53
353.25	3.78	0.58
353.26	3.86	0.63
353.27	3.94	0.67
353.28	4.03	0.72
353.29	4.11	0.78
353.30	4.18	0.83
353.31	4.26	0.88
353.32	4.33	0.94
353.33	4.40	1.00
353.34	4.47	1.05
353.35	4.54	1.11
353.36	4.61	1.17
353.37	4.68	1.24
353.38	4.74	1.30
353.39	4.80	1.36
353.40	4.86	1.43
353.41	4.92	1.49
353.42	4.98	1.56
353.43	5.04	1.63
353.44	5.09	1.69
353.45	5.14	1.76
353.46	5.20	1.83
353.47	5.25	1.90
353.48	5.30	1.97
353.49	5.34	2.04
353.50	5.39	2.12
353.51	5.43	2.19
353.52	5.48	2.26
353.53	5.52	2.33
353.54	5.56	2.41
353.55	5.60	2.48
353.56	5.64	2.55
353.57	5.68	2.63
353.58	5.71	2.70
353.59	5.75	2.77
353.60	5.78	2.84
353.61	5.81	2.92
353.62	5.84	2.99
353.63	5.87	3.06
353.64	5.90	3.13
353.65	5.92	3.20
353.66	5.95	3.27
353.67	5.97	3.34
353.68	6.00	3.41
353.69	6.02	3.48
353.70	6.04	3.54
353.71	6.05	3.61
353.72	6.07	3.67
353.73	6.08	3.74
353.74	6.10	3.80
353.75	6.11	3.86
353.76	6.12	3.92
353.77	6.13	3.98
353.78	6.13	4.03
353.79	6.14	4.09
353.80	6.14	4.14
353.81	**6.14**	4.19
353.82	6.14	4.23
353.83	6.14	4.28
353.84	6.14	4.32
353.85	6.13	4.36
353.86	6.12	4.40
353.87	6.11	4.43
353.88	6.10	4.46
353.89	6.08	4.49
353.90	6.06	4.51
353.91	6.04	4.53
353.92	6.01	4.54
353.93	5.98	4.55
353.94	5.94	**4.55**
353.95	5.90	4.55
353.96	5.85	4.54
353.97	5.79	4.51
353.98	5.72	4.47
353.99	5.63	4.41
354.00	5.39	4.23

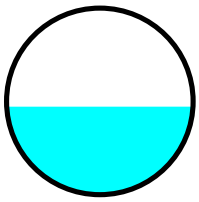
Summary for Reach DMHS10: TO DMH-S11

Inflow Area = 110,937 sf, 66.95% Impervious, Inflow Depth = 4.21" for 25-Year event
Inflow = 11.08 cfs @ 12.09 hrs, Volume= 38,963 cf
Outflow = 10.88 cfs @ 12.11 hrs, Volume= 38,963 cf, Atten= 2%, Lag= 0.9 min

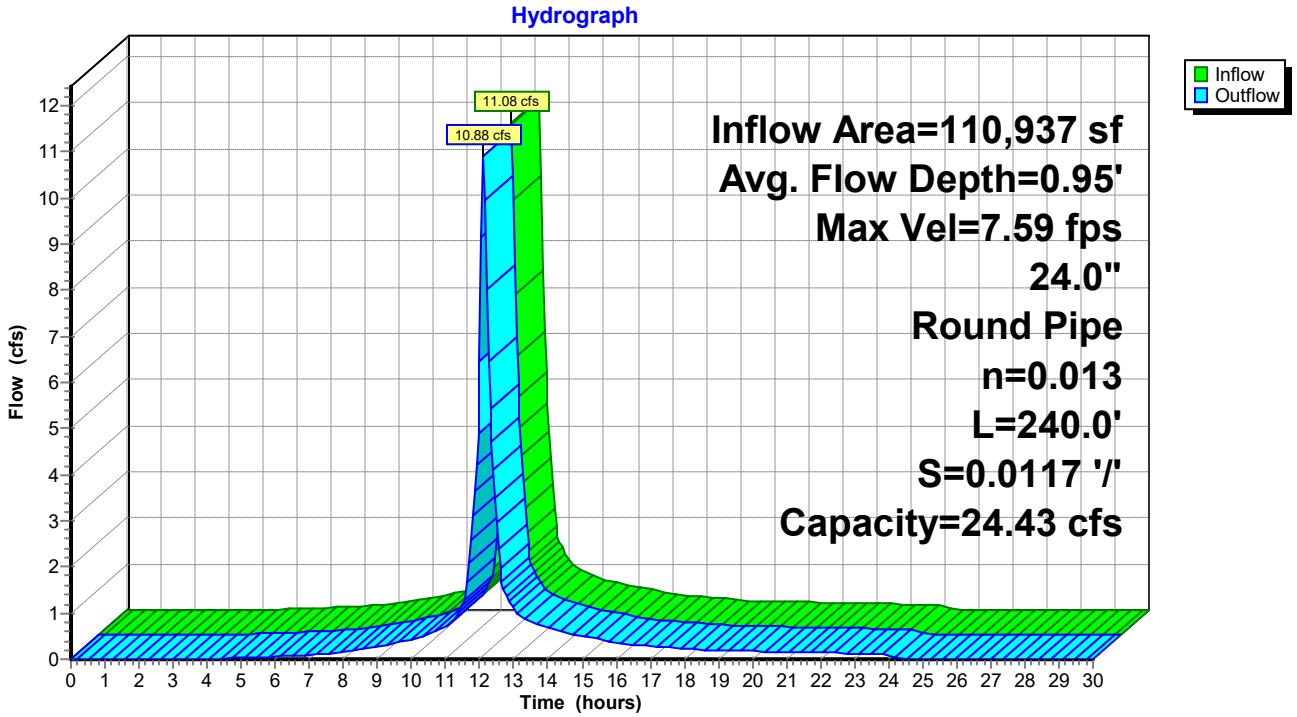
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.59 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.44 fps, Avg. Travel Time= 1.6 min

Peak Storage= 351 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.95'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 24.43 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 240.0' Slope= 0.0117 '/'
Inlet Invert= 343.30', Outlet Invert= 340.50'



Reach DMHS10: TO DMH-S11



Stage-Discharge for Reach DMHS10: TO DMH-S11

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
343.30	0.00	0.00
343.32	0.69	0.00
343.34	1.10	0.02
343.36	1.43	0.04
343.38	1.73	0.07
343.40	2.00	0.12
343.42	2.25	0.17
343.44	2.48	0.24
343.46	2.71	0.32
343.48	2.92	0.41
343.50	3.12	0.51
343.52	3.31	0.62
343.54	3.50	0.75
343.56	3.68	0.88
343.58	3.85	1.03
343.60	4.02	1.19
343.62	4.18	1.36
343.64	4.34	1.54
343.66	4.49	1.73
343.68	4.64	1.93
343.70	4.78	2.14
343.72	4.92	2.36
343.74	5.06	2.59
343.76	5.19	2.84
343.78	5.32	3.09
343.80	5.45	3.35
343.82	5.57	3.62
343.84	5.69	3.90
343.86	5.81	4.18
343.88	5.92	4.48
343.90	6.04	4.79
343.92	6.15	5.10
343.94	6.25	5.42
343.96	6.36	5.75
343.98	6.46	6.08
344.00	6.56	6.42
344.02	6.65	6.77
344.04	6.75	7.13
344.06	6.84	7.49
344.08	6.93	7.86
344.10	7.02	8.23
344.12	7.10	8.61
344.14	7.19	9.00
344.16	7.27	9.39
344.18	7.35	9.78
344.20	7.42	10.18
344.22	7.50	10.58
344.24	7.57	10.98
344.26	7.64	11.39
344.28	7.71	11.80
344.30	7.78	12.22
344.32	7.84	12.63
344.34	7.91	13.05
344.36	7.97	13.47
344.38	8.03	13.89
344.40	8.08	14.31
344.42	8.14	14.73
344.44	8.19	15.16
344.46	8.24	15.58
344.48	8.29	16.00
344.50	8.34	16.42
344.52	8.39	16.83
344.54	8.43	17.25
344.56	8.47	17.66
344.58	8.51	18.08
344.60	8.55	18.48
344.62	8.59	18.89
344.64	8.62	19.29
344.66	8.65	19.68
344.68	8.68	20.07
344.70	8.71	20.46
344.72	8.74	20.84
344.74	8.76	21.21
344.76	8.78	21.57
344.78	8.80	21.93
344.80	8.82	22.28
344.82	8.83	22.62
344.84	8.84	22.95
344.86	8.85	23.27
344.88	8.86	23.59
344.90	8.86	23.88
344.92	**8.87**	24.17
344.94	8.87	24.44
344.96	8.86	24.70
344.98	8.86	24.95
345.00	8.85	25.18
345.02	8.83	25.39
345.04	8.82	25.58
345.06	8.80	25.76
345.08	8.77	25.91
345.10	8.74	26.04
345.12	8.71	26.15
345.14	8.67	26.23
345.16	8.63	26.27
345.18	8.58	**26.28**
345.20	8.52	26.26
345.22	8.45	26.18
345.24	8.36	26.04
345.26	8.26	25.82
345.28	8.12	25.46
345.30	7.78	24.43

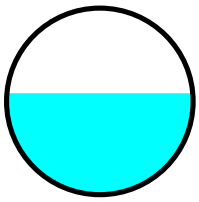
Summary for Reach DMHS11: TO DMH-D14

Inflow Area = 110,937 sf, 66.95% Impervious, Inflow Depth = 4.21" for 25-Year event
Inflow = 10.88 cfs @ 12.11 hrs, Volume= 38,963 cf
Outflow = 10.71 cfs @ 12.12 hrs, Volume= 38,963 cf, Atten= 2%, Lag= 0.6 min

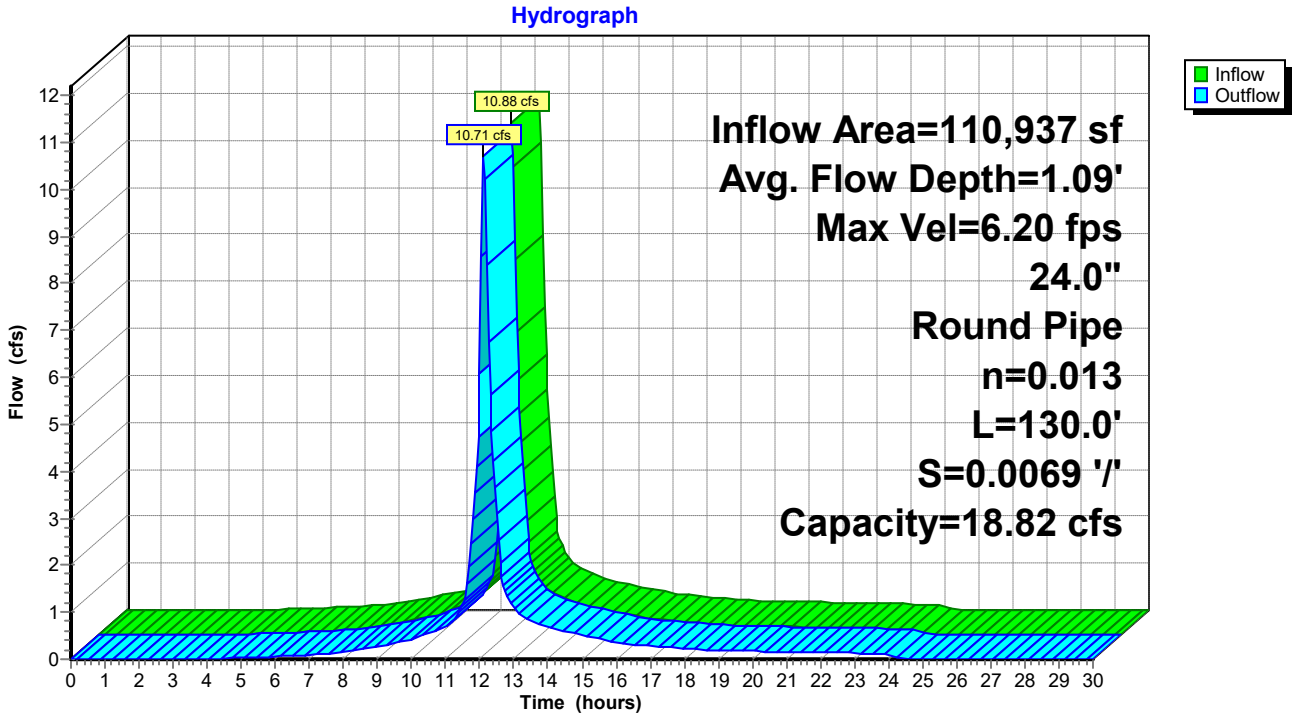
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.20 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.02 fps, Avg. Travel Time= 1.1 min

Peak Storage= 228 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.09'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 18.82 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 130.0' Slope= 0.0069 '/'
Inlet Invert= 339.20', Outlet Invert= 338.30'



Reach DMHS11: TO DMH-D14



Stage-Discharge for Reach DMHS11: TO DMH-D14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
339.20	0.00	0.00
339.22	0.53	0.00
339.24	0.84	0.01
339.26	1.10	0.03
339.28	1.33	0.06
339.30	1.54	0.09
339.32	1.73	0.13
339.34	1.91	0.19
339.36	2.09	0.25
339.38	2.25	0.31
339.40	2.40	0.39
339.42	2.55	0.48
339.44	2.70	0.58
339.46	2.83	0.68
339.48	2.97	0.79
339.50	3.10	0.91
339.52	3.22	1.05
339.54	3.34	1.18
339.56	3.46	1.33
339.58	3.57	1.49
339.60	3.69	1.65
339.62	3.79	1.82
339.64	3.90	2.00
339.66	4.00	2.18
339.68	4.10	2.38
339.70	4.20	2.58
339.72	4.29	2.79
339.74	4.39	3.00
339.76	4.48	3.22
339.78	4.56	3.45
339.80	4.65	3.69
339.82	4.73	3.93
339.84	4.82	4.17
339.86	4.90	4.43
339.88	4.97	4.69
339.90	5.05	4.95
339.92	5.13	5.22
339.94	5.20	5.49
339.96	5.27	5.77
339.98	5.34	6.06
340.00	5.41	6.34
340.02	5.47	6.64
340.04	5.54	6.93
340.06	5.60	7.23
340.08	5.66	7.53
340.10	5.72	7.84
340.12	5.78	8.15
340.14	5.83	8.46
340.16	5.89	8.78
340.18	5.94	9.09
340.20	5.99	9.41
340.22	6.04	9.73
340.24	6.09	10.05
340.26	6.14	10.38
340.28	6.18	10.70
340.30	6.23	11.02
340.32	6.27	11.35
340.34	6.31	11.67
340.36	6.35	12.00
340.38	6.39	12.32
340.40	6.43	12.65
340.42	6.46	12.97
340.44	6.49	13.29
340.46	6.53	13.61
340.48	6.56	13.92
340.50	6.59	14.24
340.52	6.61	14.55
340.54	6.64	14.86
340.56	6.66	15.16
340.58	6.69	15.46
340.60	6.71	15.76
340.62	6.73	16.05
340.64	6.75	16.34
340.66	6.76	16.62
340.68	6.78	16.90
340.70	6.79	17.16
340.72	6.80	17.43
340.74	6.81	17.68
340.76	6.82	17.93
340.78	6.83	18.17
340.80	6.83	18.40
340.82	**6.83**	18.62
340.84	6.83	18.83
340.86	6.83	19.03
340.88	6.82	19.22
340.90	6.81	19.40
340.92	6.81	19.56
340.94	6.79	19.71
340.96	6.78	19.84
340.98	6.76	19.96
341.00	6.74	20.06
341.02	6.71	20.14
341.04	6.68	20.20
341.06	6.65	20.24
341.08	6.61	**20.25**
341.10	6.56	20.23
341.12	6.51	20.17
341.14	6.44	20.06
341.16	6.36	19.89
341.18	6.25	19.61
341.20	5.99	18.82

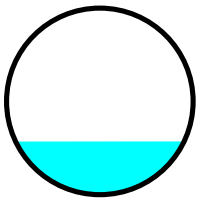
Summary for Reach DMHS4: TO DMH-S5

Inflow Area = 9,006 sf, 33.47% Impervious, Inflow Depth = 4.47" for 25-Year event
Inflow = 0.92 cfs @ 12.10 hrs, Volume= 3,352 cf
Outflow = 0.91 cfs @ 12.12 hrs, Volume= 3,352 cf, Atten= 2%, Lag= 0.7 min

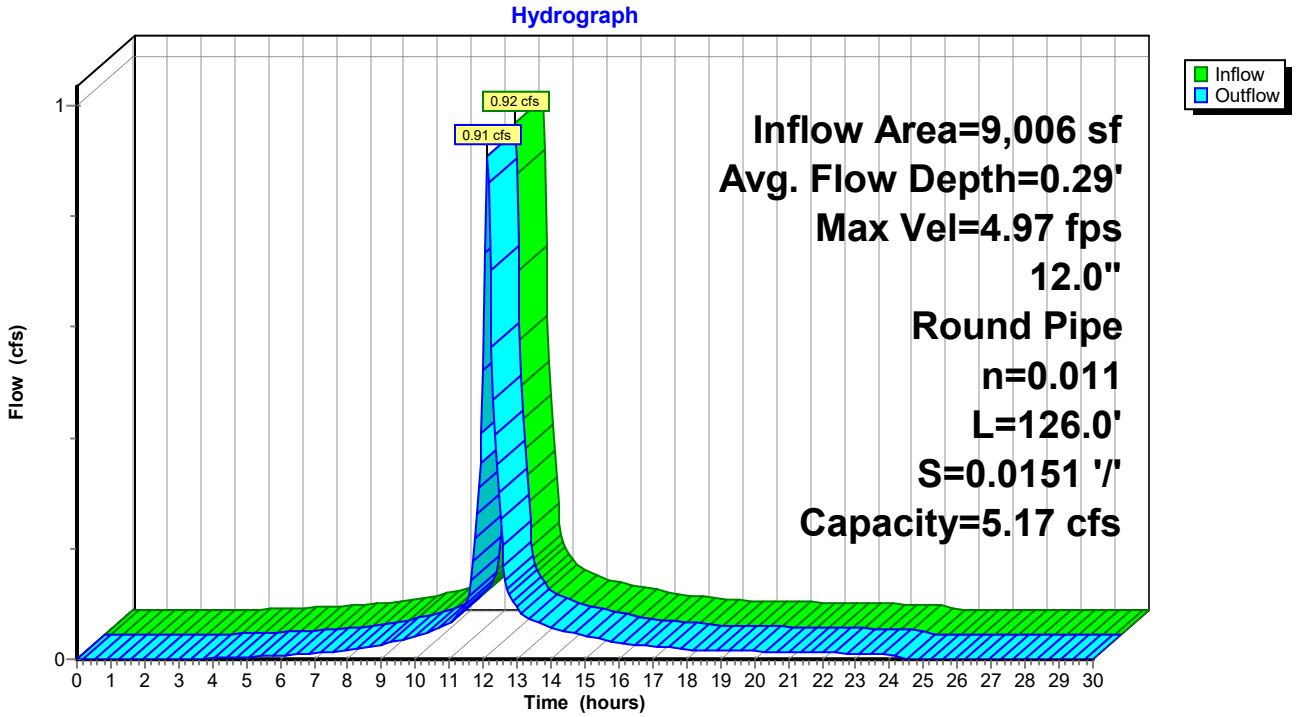
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.97 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.62 fps, Avg. Travel Time= 1.3 min

Peak Storage= 23 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.29'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.17 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 126.0' Slope= 0.0151 '/'
Inlet Invert= 352.00', Outlet Invert= 350.10'



Reach DMHS4: TO DMH-S5



Stage-Discharge for Reach DMHS4: TO DMH-S5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.00	0.00	0.00
352.01	0.59	0.00
352.02	0.93	0.00
352.03	1.21	0.01
352.04	1.46	0.02
352.05	1.69	0.02
352.06	1.90	0.04
352.07	2.10	0.05
352.08	2.29	0.07
352.09	2.47	0.09
352.10	2.64	0.11
352.11	2.80	0.13
352.12	2.96	0.16
352.13	3.11	0.19
352.14	3.26	0.22
352.15	3.40	0.25
352.16	3.54	0.29
352.17	3.67	0.33
352.18	3.80	0.37
352.19	3.93	0.41
352.20	4.05	0.45
352.21	4.17	0.50
352.22	4.28	0.55
352.23	4.40	0.60
352.24	4.51	0.65
352.25	4.61	0.71
352.26	4.72	0.77
352.27	4.82	0.82
352.28	4.92	0.89
352.29	5.01	0.95
352.30	5.11	1.01
352.31	5.20	1.08
352.32	5.29	1.15
352.33	5.38	1.22
352.34	5.47	1.29
352.35	5.55	1.36
352.36	5.63	1.43
352.37	5.71	1.51
352.38	5.79	1.59
352.39	5.87	1.66
352.40	5.94	1.74
352.41	6.01	1.82
352.42	6.08	1.90
352.43	6.15	1.99
352.44	6.22	2.07
352.45	6.28	2.15
352.46	6.35	2.24
352.47	6.41	2.32
352.48	6.47	2.41
352.49	6.53	2.50
352.50	6.58	2.59
352.51	6.64	2.67
352.52	6.69	2.76
352.53	6.74	2.85
352.54	6.79	2.94
352.55	6.84	3.03
352.56	6.89	3.12
352.57	6.93	3.21
352.58	6.98	3.30
352.59	7.02	3.39
352.60	7.06	3.47
352.61	7.10	3.56
352.62	7.14	3.65
352.63	7.17	3.74
352.64	7.20	3.82
352.65	7.24	3.91
352.66	7.27	4.00
352.67	7.30	4.08
352.68	7.32	4.16
352.69	7.35	4.25
352.70	7.37	4.33
352.71	7.39	4.41
352.72	7.41	4.49
352.73	7.43	4.57
352.74	7.45	4.64
352.75	7.46	4.71
352.76	7.47	4.79
352.77	7.48	4.86
352.78	7.49	4.93
352.79	7.50	4.99
352.80	7.50	5.05
352.81	**7.51**	5.11
352.82	7.50	5.17
352.83	7.50	5.23
352.84	7.50	5.28
352.85	7.49	5.33
352.86	7.48	5.37
352.87	7.46	5.41
352.88	7.45	5.45
352.89	7.43	5.48
352.90	7.40	5.51
352.91	7.37	5.53
352.92	7.34	5.55
352.93	7.30	5.56
352.94	7.26	**5.56**
352.95	7.21	5.56
352.96	7.15	5.54
352.97	7.08	5.51
352.98	6.99	5.46
352.99	6.87	5.39
353.00	6.58	5.17

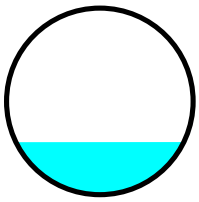
Summary for Reach DMHS5: TO DMH-S6

Inflow Area = 9,006 sf, 33.47% Impervious, Inflow Depth = 4.47" for 25-Year event
Inflow = 0.91 cfs @ 12.12 hrs, Volume= 3,352 cf
Outflow = 0.89 cfs @ 12.13 hrs, Volume= 3,352 cf, Atten= 2%, Lag= 0.8 min

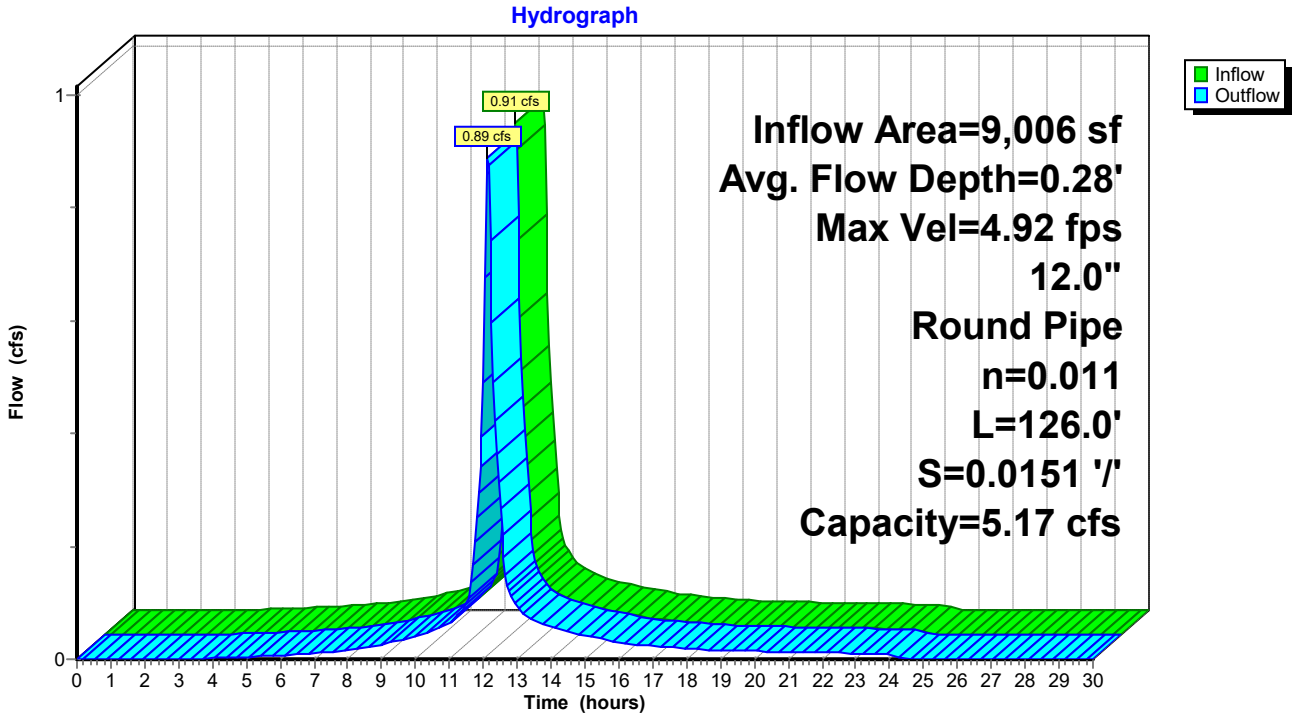
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.92 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.62 fps, Avg. Travel Time= 1.3 min

Peak Storage= 23 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.28'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.17 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 126.0' Slope= 0.0151 '/'
Inlet Invert= 350.00', Outlet Invert= 348.10'



Reach DMHS5: TO DMH-S6



Stage-Discharge for Reach DMHS5: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.00	0.00	0.00
350.01	0.59	0.00
350.02	0.93	0.00
350.03	1.21	0.01
350.04	1.46	0.02
350.05	1.69	0.02
350.06	1.90	0.04
350.07	2.10	0.05
350.08	2.29	0.07
350.09	2.47	0.09
350.10	2.64	0.11
350.11	2.80	0.13
350.12	2.96	0.16
350.13	3.11	0.19
350.14	3.26	0.22
350.15	3.40	0.25
350.16	3.54	0.29
350.17	3.67	0.33
350.18	3.80	0.37
350.19	3.93	0.41
350.20	4.05	0.45
350.21	4.17	0.50
350.22	4.28	0.55
350.23	4.40	0.60
350.24	4.51	0.65
350.25	4.61	0.71
350.26	4.72	0.77
350.27	4.82	0.82
350.28	4.92	0.89
350.29	5.01	0.95
350.30	5.11	1.01
350.31	5.20	1.08
350.32	5.29	1.15
350.33	5.38	1.22
350.34	5.47	1.29
350.35	5.55	1.36
350.36	5.63	1.43
350.37	5.71	1.51
350.38	5.79	1.59
350.39	5.87	1.66
350.40	5.94	1.74
350.41	6.01	1.82
350.42	6.08	1.90
350.43	6.15	1.99
350.44	6.22	2.07
350.45	6.28	2.15
350.46	6.35	2.24
350.47	6.41	2.32
350.48	6.47	2.41
350.49	6.53	2.50
350.50	6.58	2.59
350.51	6.64	2.67
350.52	6.69	2.76
350.53	6.74	2.85
350.54	6.79	2.94
350.55	6.84	3.03
350.56	6.89	3.12
350.57	6.93	3.21
350.58	6.98	3.30
350.59	7.02	3.39
350.60	7.06	3.47
350.61	7.10	3.56
350.62	7.14	3.65
350.63	7.17	3.74
350.64	7.20	3.82
350.65	7.24	3.91
350.66	7.27	4.00
350.67	7.30	4.08
350.68	7.32	4.16
350.69	7.35	4.25
350.70	7.37	4.33
350.71	7.39	4.41
350.72	7.41	4.49
350.73	7.43	4.57
350.74	7.45	4.64
350.75	7.46	4.71
350.76	7.47	4.79
350.77	7.48	4.86
350.78	7.49	4.93
350.79	7.50	4.99
350.80	7.50	5.05
350.81	**7.51**	5.11
350.82	7.50	5.17
350.83	7.50	5.23
350.84	7.50	5.28
350.85	7.49	5.33
350.86	7.48	5.37
350.87	7.46	5.41
350.88	7.45	5.45
350.89	7.43	5.48
350.90	7.40	5.51
350.91	7.37	5.53
350.92	7.34	5.55
350.93	7.30	5.56
350.94	7.26	**5.56**
350.95	7.21	5.56
350.96	7.15	5.54
350.97	7.08	5.51
350.98	6.99	5.46
350.99	6.87	5.39
351.00	6.58	5.17

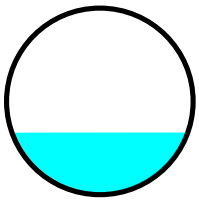
Summary for Reach DMHS6: TO DMH-S7

Inflow Area = 30,209 sf, 42.48% Impervious, Inflow Depth = 4.33" for 25-Year event
Inflow = 2.90 cfs @ 12.12 hrs, Volume= 10,892 cf
Outflow = 2.89 cfs @ 12.12 hrs, Volume= 10,892 cf, Atten= 0%, Lag= 0.1 min

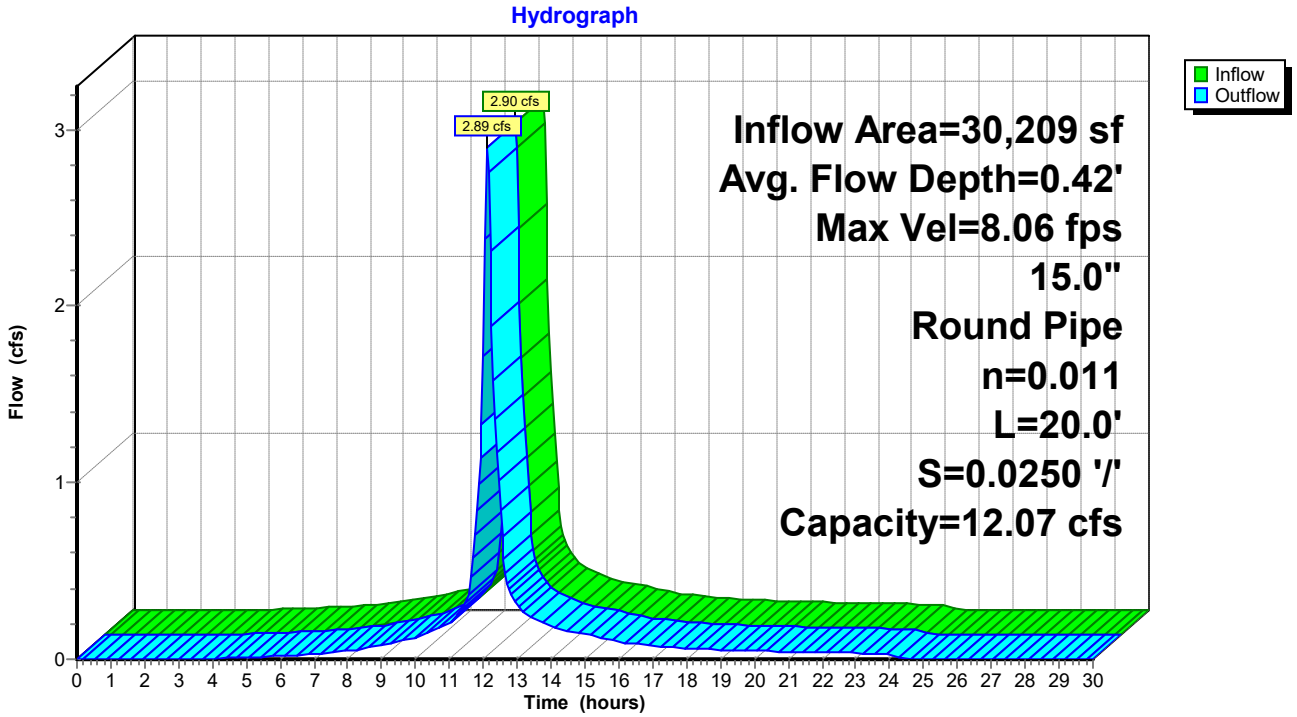
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.06 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.65 fps, Avg. Travel Time= 0.1 min

Peak Storage= 7 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.42'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 12.07 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0250 '/'
Inlet Invert= 348.00', Outlet Invert= 347.50'



Reach DMHS6: TO DMH-S7



Stage-Discharge for Reach DMHS6: TO DMH-S7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.00	0.00	0.00
348.01	0.70	0.00
348.02	1.18	0.01
348.03	1.55	0.01
348.04	1.88	0.02
348.05	2.18	0.04
348.06	2.46	0.05
348.07	2.72	0.07
348.08	2.96	0.10
348.09	3.20	0.13
348.10	3.42	0.16
348.11	3.64	0.19
348.12	3.84	0.23
348.13	4.04	0.27
348.14	4.24	0.32
348.15	4.43	0.37
348.16	4.61	0.42
348.17	4.78	0.48
348.18	4.96	0.54
348.19	5.12	0.60
348.20	5.29	0.67
348.21	5.45	0.74
348.22	5.60	0.82
348.23	5.76	0.89
348.24	5.90	0.97
348.25	6.05	1.06
348.26	6.19	1.14
348.27	6.33	1.24
348.28	6.47	1.33
348.29	6.60	1.43
348.30	6.73	1.52
348.31	6.86	1.63
348.32	6.99	1.73
348.33	7.11	1.84
348.34	7.23	1.95
348.35	7.35	2.07
348.36	7.46	2.18
348.37	7.58	2.30
348.38	7.69	2.43
348.39	7.80	2.55
348.40	7.91	2.68
348.41	8.01	2.81
348.42	8.12	2.94
348.43	8.22	3.07
348.44	8.32	3.21
348.45	8.41	3.35
348.46	8.51	3.49
348.47	8.60	3.63
348.48	8.70	3.77
348.49	8.79	3.92
348.50	8.87	4.07
348.51	8.96	4.22
348.52	9.05	4.37
348.53	9.13	4.52
348.54	9.21	4.68
348.55	9.29	4.83
348.56	9.37	4.99
348.57	9.44	5.15
348.58	9.52	5.31
348.59	9.59	5.47
348.60	9.66	5.63
348.61	9.73	5.79
348.62	9.80	5.95
348.63	9.87	6.12
348.64	9.93	6.28
348.65	10.00	6.45
348.66	10.06	6.61
348.67	10.12	6.78
348.68	10.18	6.95
348.69	10.24	7.11
348.70	10.29	7.28
348.71	10.35	7.44
348.72	10.40	7.61
348.73	10.45	7.78
348.74	10.50	7.94
348.75	10.55	8.11
348.76	10.59	8.27
348.77	10.64	8.44
348.78	10.68	8.60
348.79	10.72	8.77
348.80	10.77	8.93
348.81	10.80	9.09
348.82	10.84	9.25
348.83	10.88	9.41
348.84	10.91	9.57
348.85	10.94	9.72
348.86	10.97	9.88
348.87	11.00	10.03
348.88	11.03	10.18
348.89	11.05	10.33
348.90	11.08	10.48
348.91	11.10	10.62
348.92	11.12	10.76
348.93	11.14	10.90
348.94	11.15	11.04
348.95	11.17	11.18
348.96	11.18	11.31
348.97	11.19	11.43
348.98	11.20	11.56
348.99	11.21	11.68
349.00	11.21	11.80
349.01	11.21	11.91
349.02	**11.21**	12.02
349.03	11.21	12.13
349.04	11.21	12.23
349.05	11.20	12.33
349.06	11.19	12.42
349.07	11.18	12.50
349.08	11.16	12.58
349.09	11.15	12.66
349.10	11.13	12.73
349.11	11.10	12.79
349.12	11.07	12.84
349.13	11.04	12.89
349.14	11.01	12.92
349.15	10.97	12.96
349.16	10.92	12.97
349.17	10.87	**12.98**
349.18	10.82	12.98
349.19	10.75	12.96
349.20	10.68	12.93
349.21	10.60	12.88
349.22	10.50	12.80
349.23	10.37	12.68
349.24	10.18	12.48
349.25	9.84	12.07

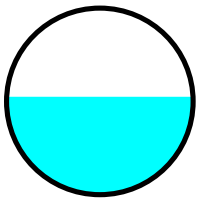
Summary for Reach DMHS7: TO DMH-S9

Inflow Area = 57,987 sf, 60.49% Impervious, Inflow Depth = 4.36" for 25-Year event
Inflow = 5.88 cfs @ 12.10 hrs, Volume= 21,049 cf
Outflow = 5.87 cfs @ 12.10 hrs, Volume= 21,049 cf, Atten= 0%, Lag= 0.1 min

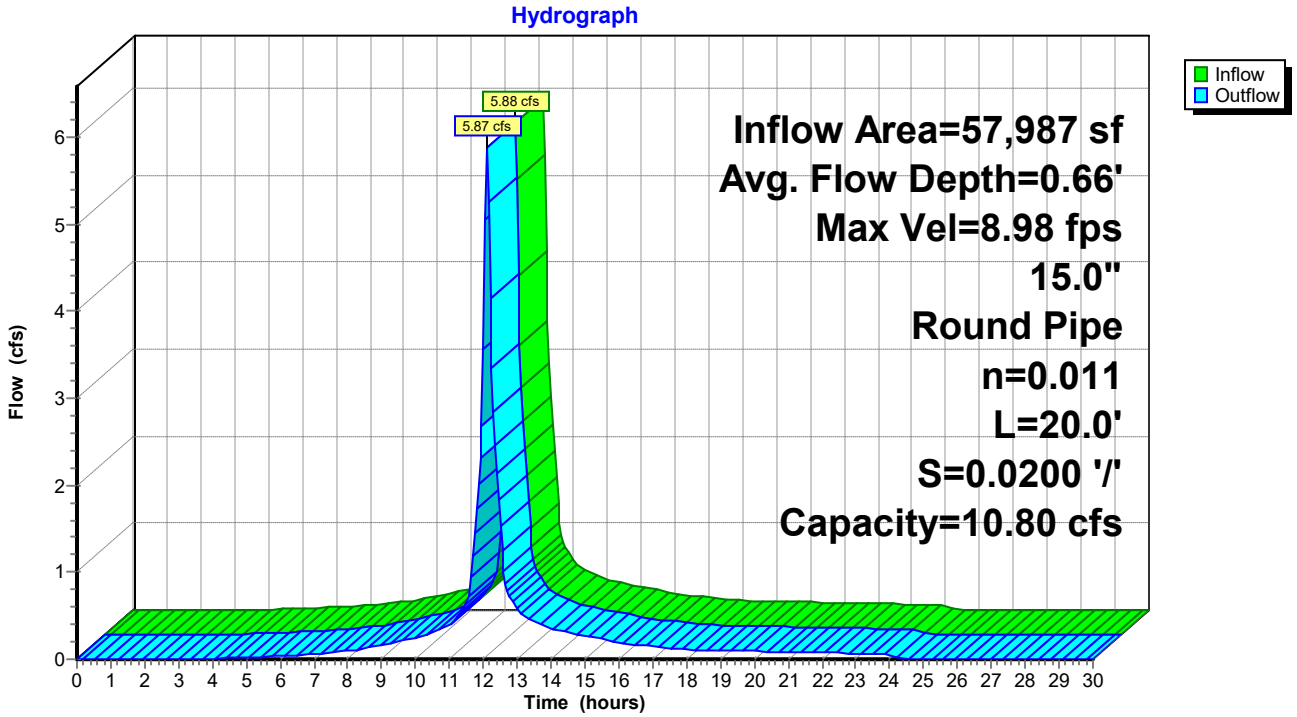
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.98 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.98 fps, Avg. Travel Time= 0.1 min

Peak Storage= 13 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.66'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.80 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0200 '/'
Inlet Invert= 344.90', Outlet Invert= 344.50'



Reach DMHS7: TO DMH-S9



Stage-Discharge for Reach DMHS7: TO DMH-S9

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
344.90	0.00	0.00
344.91	0.63	0.00
344.92	1.06	0.01
344.93	1.39	0.01
344.94	1.69	0.02
344.95	1.95	0.03
344.96	2.20	0.05
344.97	2.43	0.07
344.98	2.65	0.09
344.99	2.86	0.11
345.00	3.06	0.14
345.01	3.25	0.17
345.02	3.44	0.21
345.03	3.62	0.25
345.04	3.79	0.29
345.05	3.96	0.33
345.06	4.12	0.38
345.07	4.28	0.43
345.08	4.43	0.48
345.09	4.58	0.54
345.10	4.73	0.60
345.11	4.87	0.66
345.12	5.01	0.73
345.13	5.15	0.80
345.14	5.28	0.87
345.15	5.41	0.95
345.16	5.54	1.02
345.17	5.66	1.10
345.18	5.78	1.19
345.19	5.90	1.27
345.20	6.02	1.36
345.21	6.14	1.46
345.22	6.25	1.55
345.23	6.36	1.65
345.24	6.47	1.75
345.25	6.57	1.85
345.26	6.68	1.95
345.27	6.78	2.06
345.28	6.88	2.17
345.29	6.98	2.28
345.30	7.07	2.39
345.31	7.17	2.51
345.32	7.26	2.63
345.33	7.35	2.75
345.34	7.44	2.87
345.35	7.53	2.99
345.36	7.61	3.12
345.37	7.69	3.25
345.38	7.78	3.38
345.39	7.86	3.51
345.40	7.94	3.64
345.41	8.01	3.77
345.42	8.09	3.91
345.43	8.16	4.04
345.44	8.24	4.18
345.45	8.31	4.32
345.46	8.38	4.46
345.47	8.45	4.60
345.48	8.51	4.75
345.49	8.58	4.89
345.50	8.64	5.03
345.51	8.71	5.18
345.52	8.77	5.33
345.53	8.83	5.47
345.54	8.89	5.62
345.55	8.94	5.77
345.56	9.00	5.91
345.57	9.05	6.06
345.58	9.10	6.21
345.59	9.16	6.36
345.60	9.21	6.51
345.61	9.25	6.66
345.62	9.30	6.81
345.63	9.35	6.96
345.64	9.39	7.11
345.65	9.43	7.25
345.66	9.48	7.40
345.67	9.52	7.55
345.68	9.56	7.70
345.69	9.59	7.84
345.70	9.63	7.99
345.71	9.66	8.13
345.72	9.70	8.27
345.73	9.73	8.42
345.74	9.76	8.56
345.75	9.79	8.70
345.76	9.81	8.83
345.77	9.84	8.97
345.78	9.86	9.11
345.79	9.89	9.24
345.80	9.91	9.37
345.81	9.93	9.50
345.82	9.94	9.63
345.83	9.96	9.75
345.84	9.98	9.88
345.85	9.99	10.00
345.86	10.00	10.11
345.87	10.01	10.23
345.88	10.02	10.34
345.89	10.02	10.45
345.90	10.03	10.55
345.91	10.03	10.65
345.92	**10.03**	10.75
345.93	10.03	10.85
345.94	10.02	10.94
345.95	10.02	11.02
345.96	10.01	11.10
345.97	10.00	11.18
345.98	9.98	11.25
345.99	9.97	11.32
346.00	9.95	11.38
346.01	9.93	11.44
346.02	9.90	11.48
346.03	9.88	11.53
346.04	9.85	11.56
346.05	9.81	11.59
346.06	9.77	11.60
346.07	9.72	**11.61**
346.08	9.67	11.61
346.09	9.62	11.59
346.10	9.55	11.57
346.11	9.48	11.52
346.12	9.39	11.45
346.13	9.28	11.35
346.14	9.11	11.16
346.15	8.80	10.80

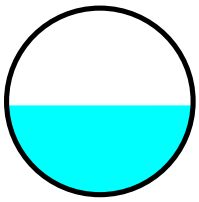
Summary for Reach DMHS8: TO DMH-S7

Inflow Area = 27,778 sf, 80.08% Impervious, Inflow Depth = 4.39" for 25-Year event
Inflow = 3.10 cfs @ 12.07 hrs, Volume= 10,157 cf
Outflow = 3.02 cfs @ 12.09 hrs, Volume= 10,157 cf, Atten= 3%, Lag= 1.2 min

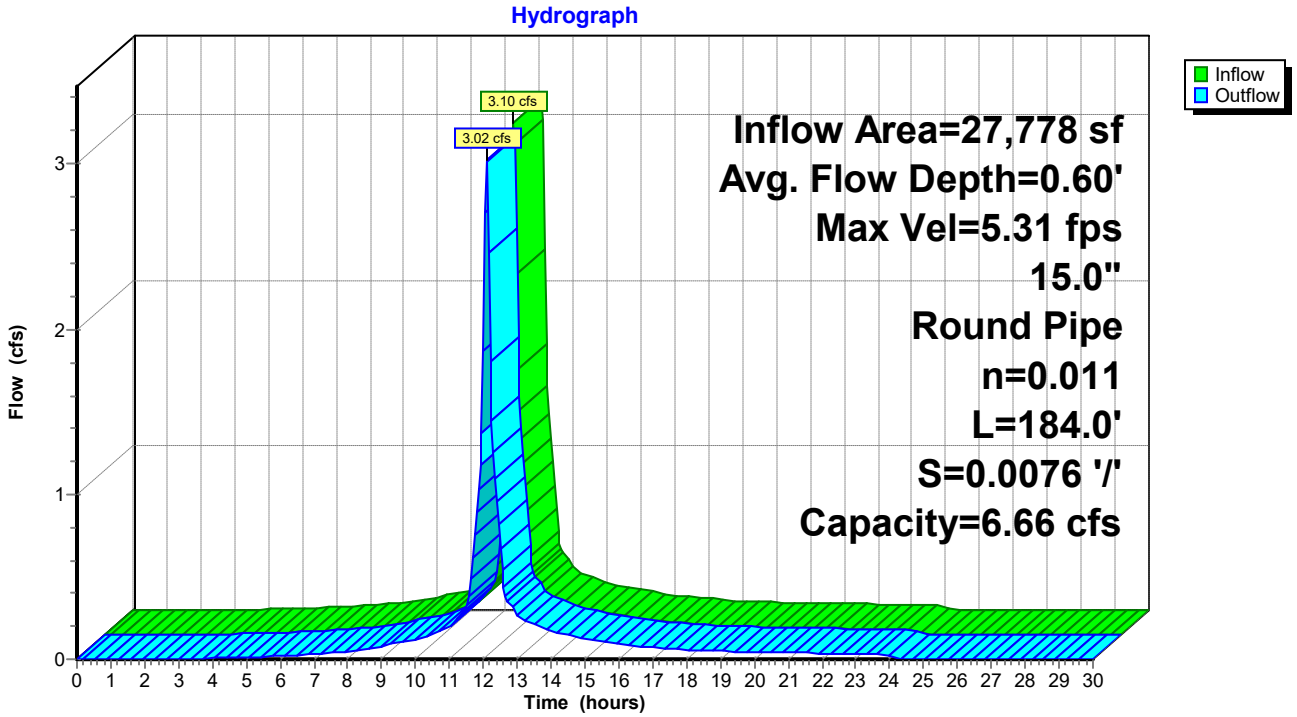
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.31 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.73 fps, Avg. Travel Time= 1.8 min

Peak Storage= 107 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.60'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.66 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 184.0' Slope= 0.0076 '/'
Inlet Invert= 346.40', Outlet Invert= 345.00'



Reach DMHS8: TO DMH-S7



Stage-Discharge for Reach DMHS8: TO DMH-S7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.40	0.00	0.00
346.41	0.39	0.00
346.42	0.65	0.00
346.43	0.86	0.01
346.44	1.04	0.01
346.45	1.21	0.02
346.46	1.36	0.03
346.47	1.50	0.04
346.48	1.63	0.05
346.49	1.76	0.07
346.50	1.89	0.09
346.51	2.01	0.11
346.52	2.12	0.13
346.53	2.23	0.15
346.54	2.34	0.18
346.55	2.44	0.20
346.56	2.54	0.23
346.57	2.64	0.26
346.58	2.73	0.30
346.59	2.83	0.33
346.60	2.92	0.37
346.61	3.01	0.41
346.62	3.09	0.45
346.63	3.17	0.49
346.64	3.26	0.54
346.65	3.34	0.58
346.66	3.42	0.63
346.67	3.49	0.68
346.68	3.57	0.73
346.69	3.64	0.79
346.70	3.71	0.84
346.71	3.78	0.90
346.72	3.85	0.96
346.73	3.92	1.02
346.74	3.99	1.08
346.75	4.05	1.14
346.76	4.12	1.20
346.77	4.18	1.27
346.78	4.24	1.34
346.79	4.30	1.41
346.80	4.36	1.48
346.81	4.42	1.55
346.82	4.48	1.62
346.83	4.53	1.69
346.84	4.59	1.77
346.85	4.64	1.85
346.86	4.69	1.92
346.87	4.75	2.00
346.88	4.80	2.08
346.89	4.85	2.16
346.90	4.90	2.24
346.91	4.94	2.33
346.92	4.99	2.41
346.93	5.04	2.49
346.94	5.08	2.58
346.95	5.13	2.67
346.96	5.17	2.75
346.97	5.21	2.84
346.98	5.25	2.93
346.99	5.29	3.02
347.00	5.33	3.10
347.01	5.37	3.19
347.02	5.41	3.28
347.03	5.44	3.37
347.04	5.48	3.47
347.05	5.52	3.56
347.06	5.55	3.65
347.07	5.58	3.74
347.08	5.62	3.83
347.09	5.65	3.92
347.10	5.68	4.02
347.11	5.71	4.11
347.12	5.74	4.20
347.13	5.77	4.29
347.14	5.79	4.38
347.15	5.82	4.47
347.16	5.84	4.57
347.17	5.87	4.66
347.18	5.89	4.75
347.19	5.92	4.84
347.20	5.94	4.93
347.21	5.96	5.01
347.22	5.98	5.10
347.23	6.00	5.19
347.24	6.02	5.28
347.25	6.04	5.36
347.26	6.05	5.45
347.27	6.07	5.53
347.28	6.08	5.62
347.29	6.10	5.70
347.30	6.11	5.78
347.31	6.12	5.86
347.32	6.13	5.94
347.33	6.14	6.02
347.34	6.15	6.09
347.35	6.16	6.17
347.36	6.17	6.24
347.37	6.17	6.31
347.38	6.18	6.38
347.39	6.18	6.44
347.40	6.18	6.51
347.41	6.19	6.57
347.42	**6.19**	6.63
347.43	6.18	6.69
347.44	6.18	6.75
347.45	6.18	6.80
347.46	6.17	6.85
347.47	6.17	6.90
347.48	6.16	6.94
347.49	6.15	6.98
347.50	6.14	7.02
347.51	6.12	7.05
347.52	6.11	7.08
347.53	6.09	7.11
347.54	6.07	7.13
347.55	6.05	7.15
347.56	6.03	7.16
347.57	6.00	**7.16**
347.58	5.97	7.16
347.59	5.93	7.15
347.60	5.89	7.13
347.61	5.85	7.10
347.62	5.79	7.06
347.63	5.72	7.00
347.64	5.62	6.88
347.65	5.43	6.66

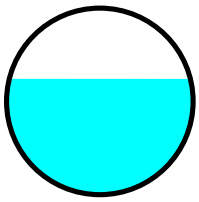
Summary for Reach DMHS9: TO DMH-S10

Inflow Area = 57,987 sf, 60.49% Impervious, Inflow Depth = 4.36" for 25-Year event
Inflow = 5.87 cfs @ 12.10 hrs, Volume= 21,049 cf
Outflow = 5.75 cfs @ 12.12 hrs, Volume= 21,049 cf, Atten= 2%, Lag= 0.7 min

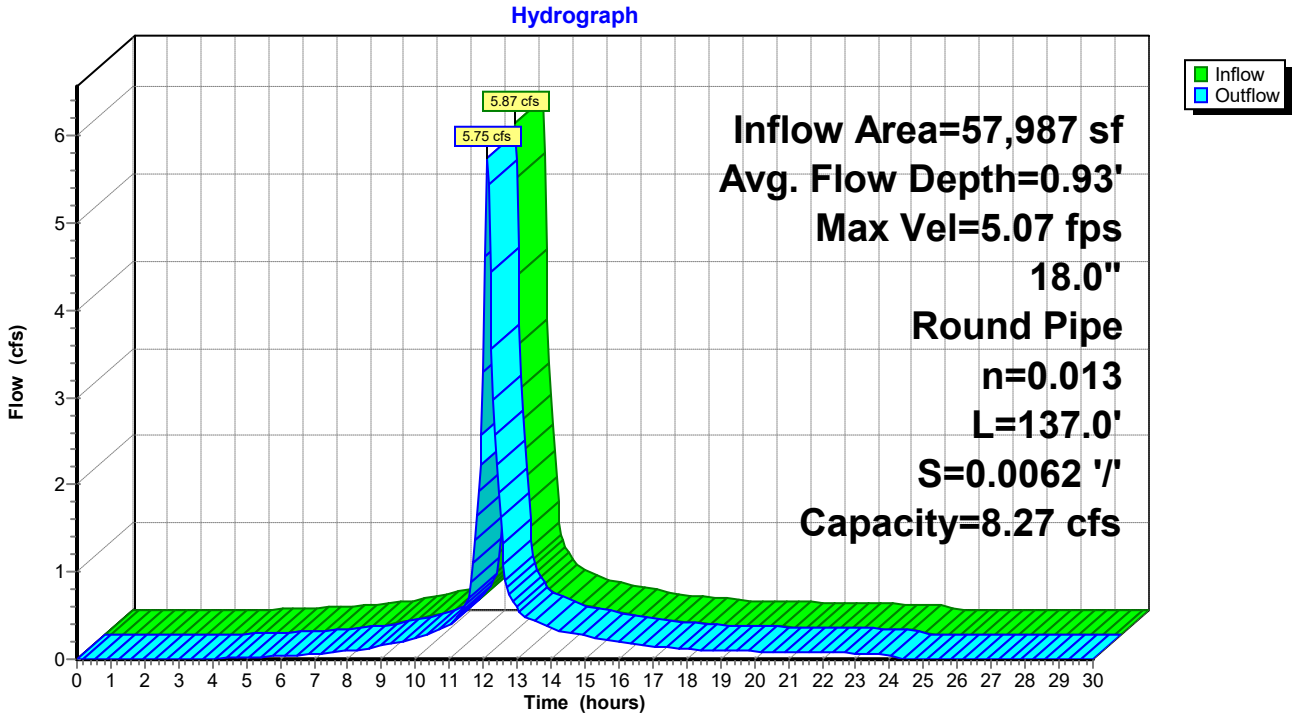
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.07 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.70 fps, Avg. Travel Time= 1.3 min

Peak Storage= 158 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.93'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.27 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 137.0' Slope= 0.0062 '/'
Inlet Invert= 344.25', Outlet Invert= 343.40'



Reach DMHS9: TO DMH-S10



Stage-Discharge for Reach DMHS9: TO DMH-S10

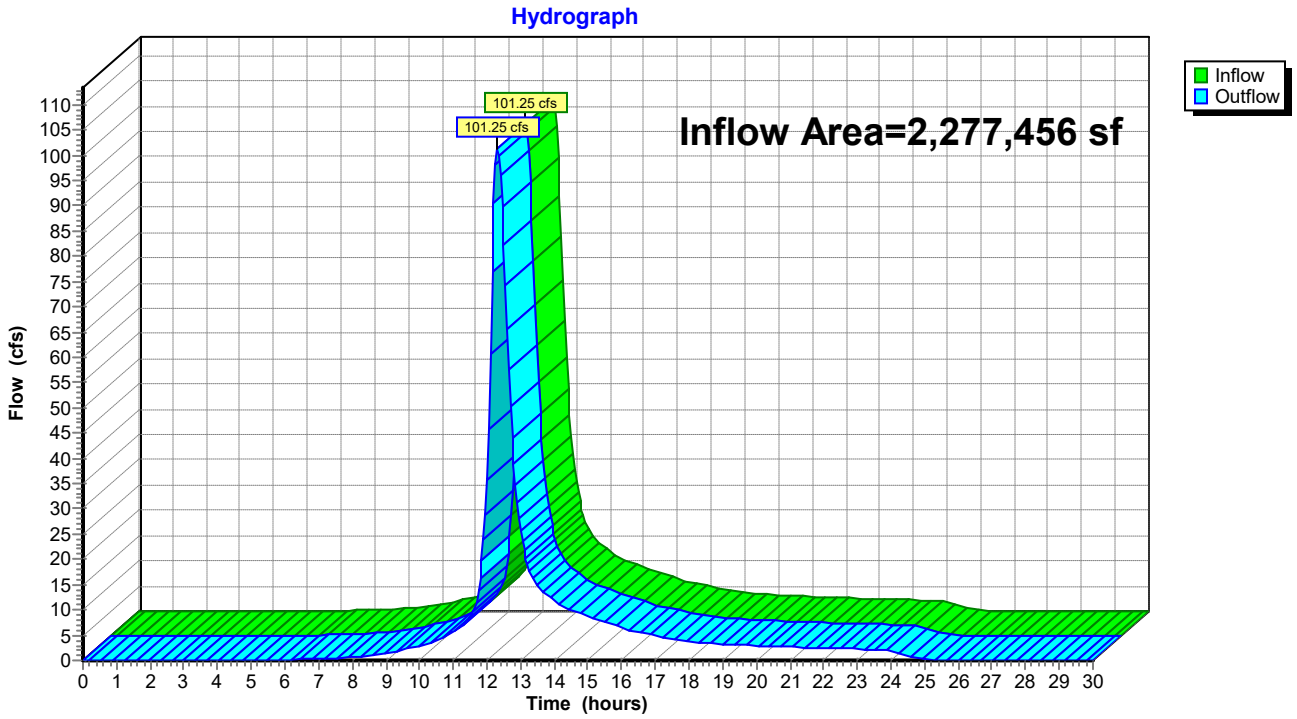
Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
344.25	0.00	0.00
344.26	0.28	0.00
344.27	0.50	0.00
344.28	0.66	0.01
344.29	0.79	0.01
344.30	0.92	0.02
344.31	1.04	0.02
344.32	1.15	0.03
344.33	1.25	0.05
344.34	1.35	0.06
344.35	1.45	0.07
344.36	1.54	0.09
344.37	1.63	0.11
344.38	1.71	0.13
344.39	1.80	0.15
344.40	1.88	0.17
344.41	1.96	0.20
344.42	2.03	0.23
344.43	2.11	0.25
344.44	2.18	0.28
344.45	2.25	0.32
344.46	2.32	0.35
344.47	2.39	0.38
344.48	2.45	0.42
344.49	2.52	0.46
344.50	2.58	0.50
344.51	2.64	0.54
344.52	2.70	0.58
344.53	2.76	0.63
344.54	2.82	0.68
344.55	2.88	0.72
344.56	2.94	0.77
344.57	2.99	0.83
344.58	3.05	0.88
344.59	3.10	0.93
344.60	3.15	0.99
344.61	3.20	1.05
344.62	3.26	1.10
344.63	3.31	1.16
344.64	3.35	1.22
344.65	3.40	1.29
344.66	3.45	1.35
344.67	3.50	1.42
344.68	3.54	1.48
344.69	3.59	1.55
344.70	3.63	1.62
344.71	3.68	1.69
344.72	3.72	1.76
344.73	3.76	1.83
344.74	3.81	1.91
344.75	3.85	1.98
344.76	3.89	2.06
344.77	3.93	2.14
344.78	3.97	2.22
344.79	4.01	2.29
344.80	4.04	2.37
344.81	4.08	2.46
344.82	4.12	2.54
344.83	4.15	2.62
344.84	4.19	2.70
344.85	4.22	2.79
344.86	4.26	2.87
344.87	4.29	2.96
344.88	4.33	3.05
344.89	4.36	3.13
344.90	4.39	3.22
344.91	4.42	3.31
344.92	4.45	3.40
344.93	4.48	3.49
344.94	4.51	3.58
344.95	4.54	3.67
344.96	4.57	3.77
344.97	4.60	3.86
344.98	4.63	3.95
344.99	4.66	4.04
345.00	4.68	4.14
345.01	4.71	4.23
345.02	4.73	4.32
345.03	4.76	4.42
345.04	4.78	4.51
345.05	4.81	4.61
345.06	4.83	4.70
345.07	4.85	4.80
345.08	4.88	4.89
345.09	4.90	4.99
345.10	4.92	5.08
345.11	4.94	5.18
345.12	4.96	5.27
345.13	4.98	5.37
345.14	5.00	5.46
345.15	5.02	5.56
345.16	5.04	5.65
345.17	5.06	5.75
345.18	5.08	5.84
345.19	5.09	5.93
345.20	5.11	6.03
345.21	5.12	6.12
345.22	5.14	6.21
345.23	5.15	6.30
345.24	5.17	6.40
345.25	5.18	6.49
345.26	5.20	6.58
345.27	5.21	6.66
345.28	5.22	6.75
345.29	5.23	6.84
345.30	5.24	6.93
345.31	5.25	7.01
345.32	5.26	7.10
345.33	5.27	7.18
345.34	5.28	7.26
345.35	5.29	7.35
345.36	5.30	7.43
345.37	5.30	7.51
345.38	5.31	7.58
345.39	5.32	7.66
345.40	5.32	7.74
345.41	5.33	7.81
345.42	5.33	7.88
345.43	5.33	7.95
345.44	5.33	8.02
345.45	5.34	8.09
345.46	5.34	8.15
345.47	**5.34**	8.22
345.48	5.34	8.28
345.49	5.34	8.34
345.50	5.33	8.39
345.51	5.33	8.45
345.52	5.33	8.50
345.53	5.32	8.55
345.54	5.32	8.60
345.55	5.31	8.64
345.56	5.30	8.68
345.57	5.30	8.72
345.58	5.29	8.76
345.59	5.28	8.79
345.60	5.26	8.82
345.61	5.25	8.84
345.62	5.24	8.86
345.63	5.22	8.88
345.64	5.20	8.89
345.65	5.18	8.90
345.66	5.16	**8.90**
345.67	5.14	8.89
345.68	5.11	8.88
345.69	5.08	8.86
345.70	5.05	8.83
345.71	5.01	8.79
345.72	4.97	8.74
345.73	4.92	8.66
345.74	4.82	8.51
345.75	4.68	8.27

Summary for Reach DP#1: DP#1

Inflow Area = 2,277,456 sf, 14.76% Impervious, Inflow Depth = 2.77" for 25-Year event
Inflow = 101.25 cfs @ 12.31 hrs, Volume= 524,907 cf
Outflow = 101.25 cfs @ 12.31 hrs, Volume= 524,907 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#1: DP#1

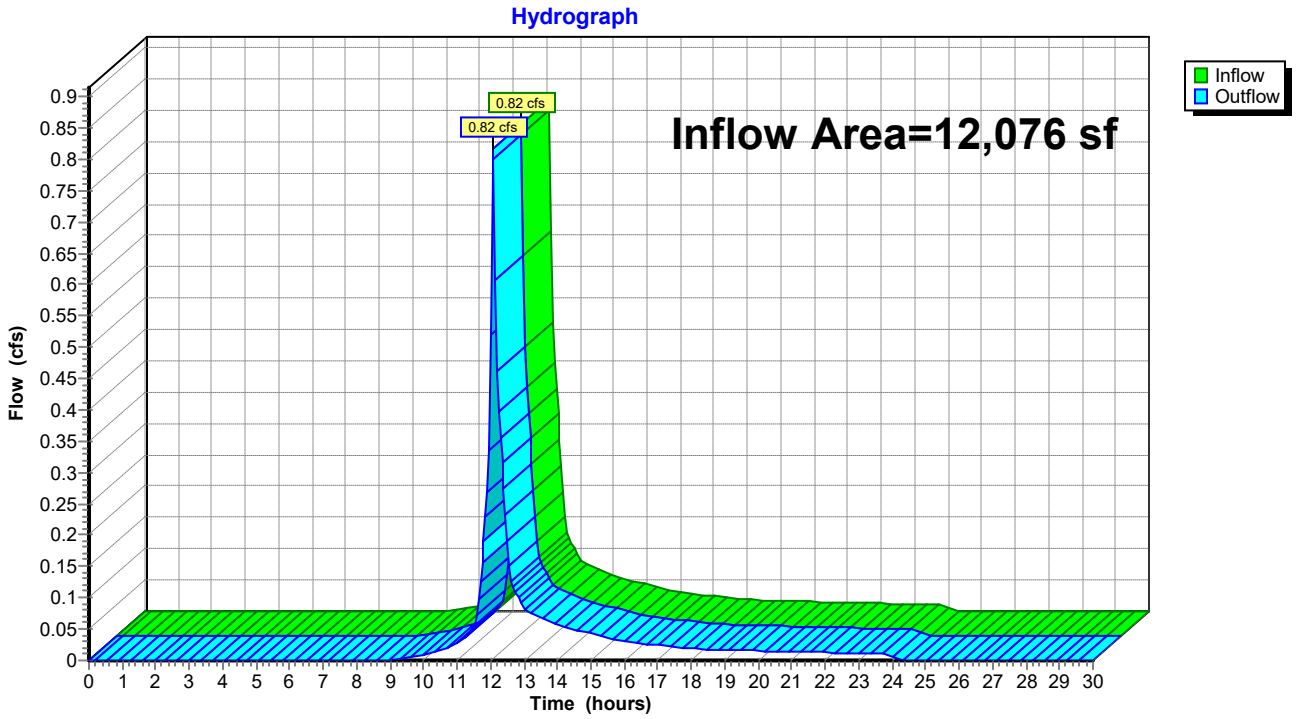


Summary for Reach DP#5: DITCH

Inflow Area = 12,076 sf, 57.69% Impervious, Inflow Depth = 2.52" for 25-Year event
Inflow = 0.82 cfs @ 12.08 hrs, Volume= 2,534 cf
Outflow = 0.82 cfs @ 12.08 hrs, Volume= 2,534 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#5: DITCH

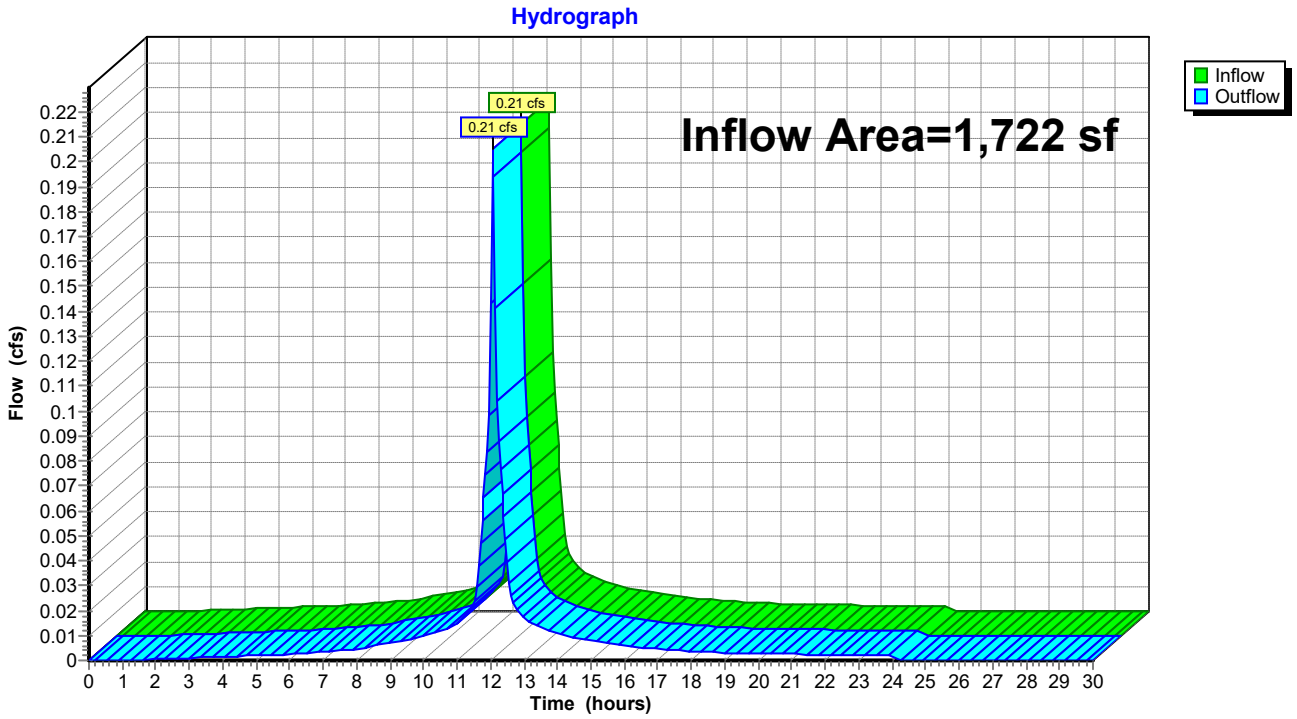


Summary for Reach DRIP: TO YD#1

Inflow Area = 1,722 sf, 96.81% Impervious, Inflow Depth = 4.95" for 25-Year event
Inflow = 0.21 cfs @ 12.07 hrs, Volume= 710 cf
Outflow = 0.21 cfs @ 12.07 hrs, Volume= 710 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DRIP: TO YD#1

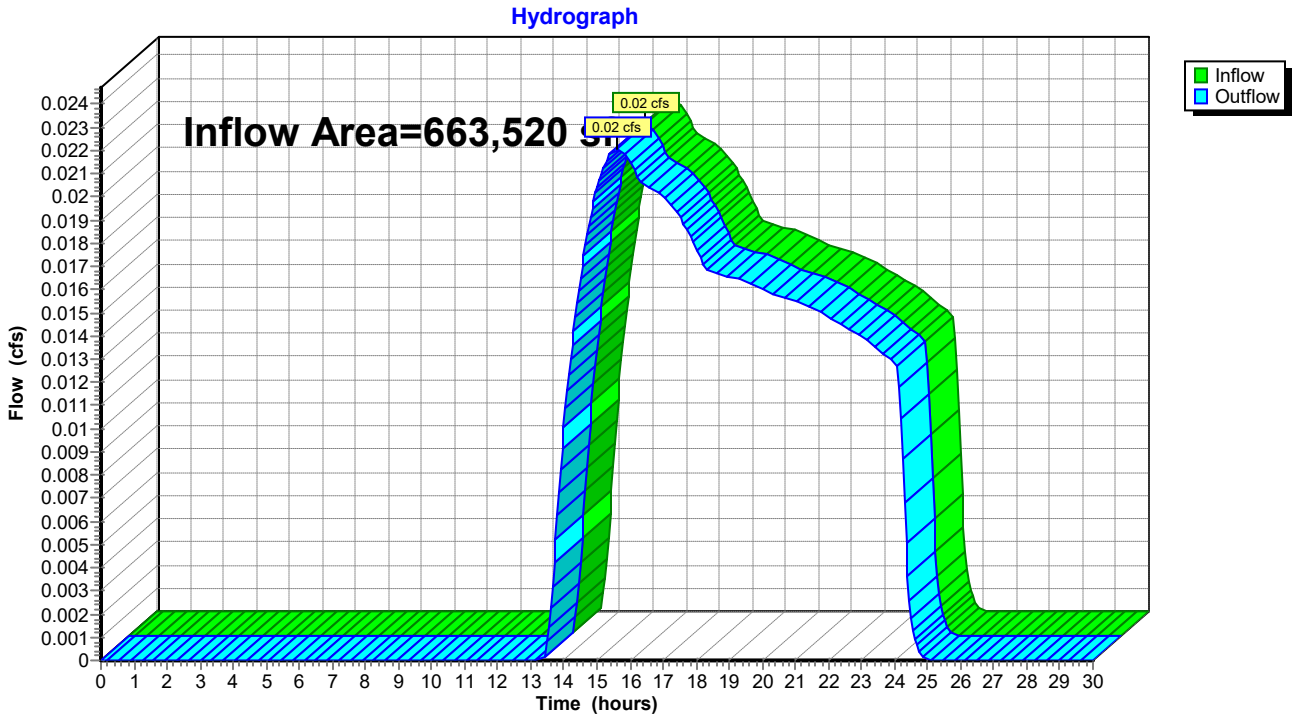


Summary for Reach R200: DP#2

Inflow Area = 663,520 sf, 33.87% Impervious, Inflow Depth = 0.01" for 25-Year event
Inflow = 0.02 cfs @ 15.63 hrs, Volume= 635 cf
Outflow = 0.02 cfs @ 15.63 hrs, Volume= 635 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R200: DP#2

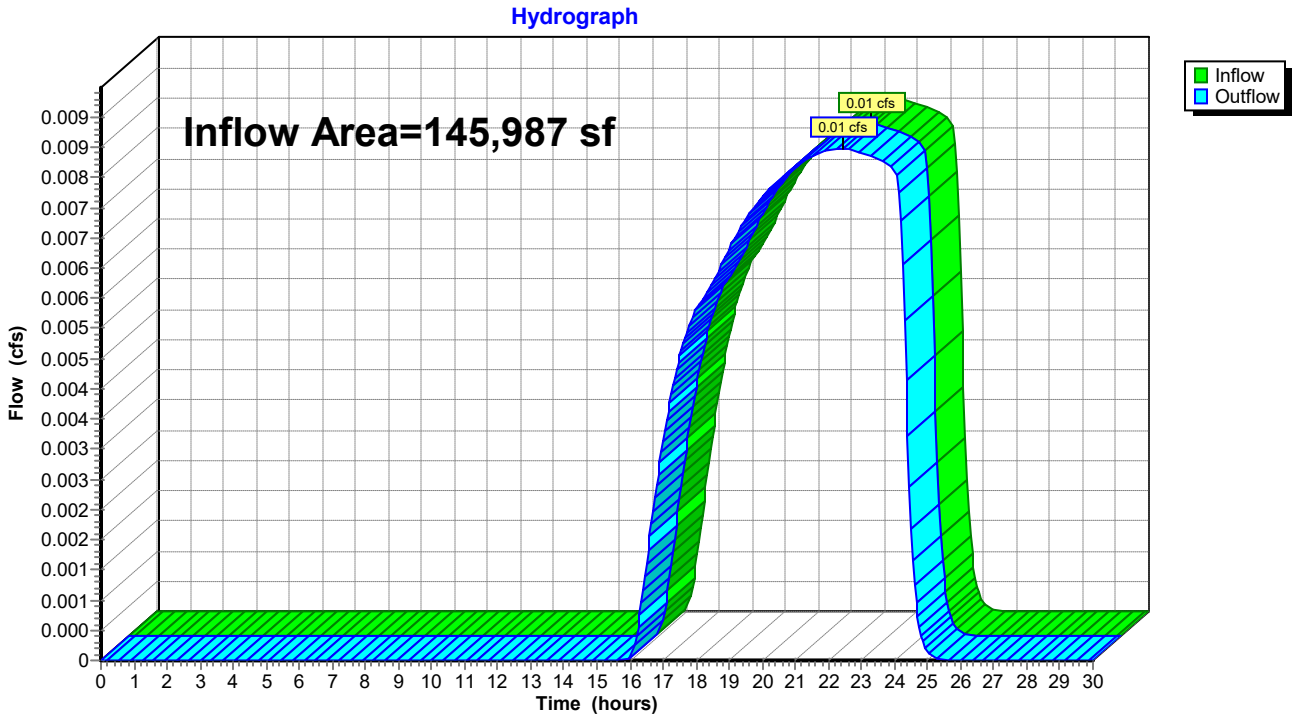


Summary for Reach R300: DP#3

Inflow Area = 145,987 sf, 0.00% Impervious, Inflow Depth = 0.02" for 25-Year event
Inflow = 0.01 cfs @ 22.46 hrs, Volume= 204 cf
Outflow = 0.01 cfs @ 22.46 hrs, Volume= 204 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R300: DP#3

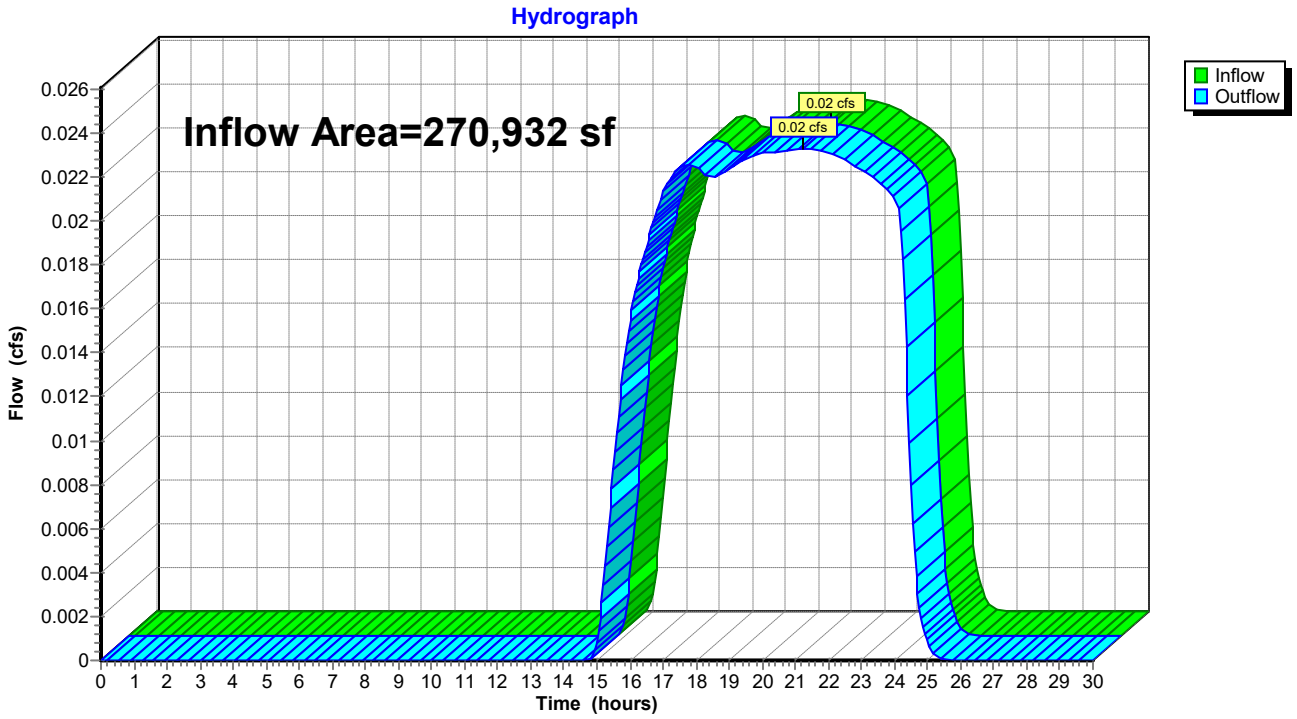


Summary for Reach R400: DP#4

Inflow Area = 270,932 sf, 0.59% Impervious, Inflow Depth = 0.03" for 25-Year event
Inflow = 0.02 cfs @ 21.24 hrs, Volume= 703 cf
Outflow = 0.02 cfs @ 21.24 hrs, Volume= 703 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R400: DP#4



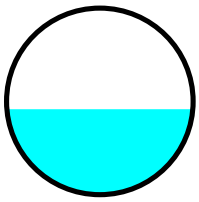
Summary for Reach RF-1: TO DMH#3

Inflow Area = 2,135 sf,100.00% Impervious, Inflow Depth = 5.06" for 25-Year event
Inflow = 0.25 cfs @ 12.09 hrs, Volume= 901 cf
Outflow = 0.24 cfs @ 12.10 hrs, Volume= 901 cf, Atten= 1%, Lag= 0.5 min

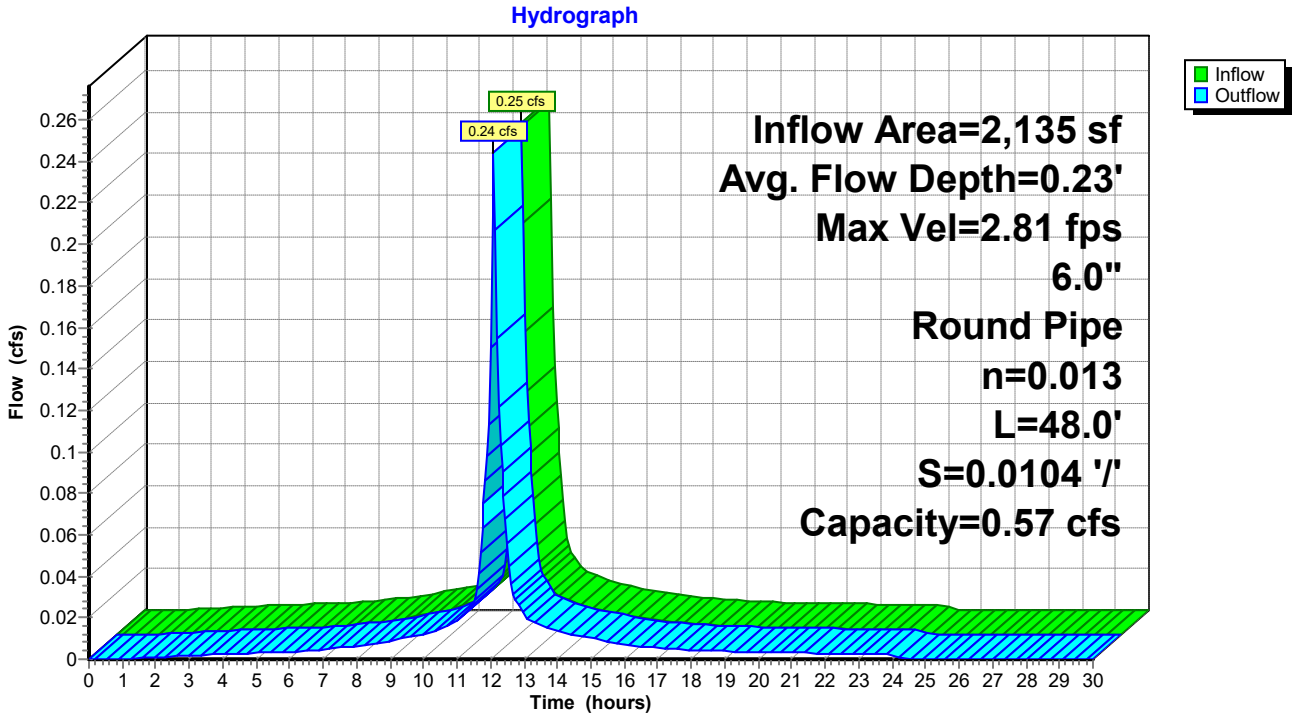
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.81 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 0.95 fps, Avg. Travel Time= 0.8 min

Peak Storage= 4 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.57 cfs

6.0" Round Pipe
n= 0.013 Cast iron, coated
Length= 48.0' Slope= 0.0104 '/'
Inlet Invert= 351.70', Outlet Invert= 351.20'



Reach RF-1: TO DMH#3



Stage-Discharge for Reach RF-1: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.41	0.00
351.72	0.65	0.00
351.73	0.84	0.00
351.74	1.02	0.01
351.75	1.17	0.01
351.76	1.31	0.02
351.77	1.44	0.02
351.78	1.57	0.03
351.79	1.68	0.04
351.80	1.79	0.05
351.81	1.90	0.06
351.82	2.00	0.07
351.83	2.09	0.08
351.84	2.18	0.10
351.85	2.26	0.11
351.86	2.34	0.13
351.87	2.42	0.14
351.88	2.49	0.16
351.89	2.56	0.18
351.90	2.63	0.19
351.91	2.69	0.21
351.92	2.75	0.23
351.93	2.81	0.25
351.94	2.87	0.27
351.95	2.92	0.29
351.96	2.96	0.31
351.97	3.01	0.33
351.98	3.05	0.35
351.99	3.09	0.37
352.00	3.13	0.38
352.01	3.16	0.40
352.02	3.19	0.42
352.03	3.22	0.44
352.04	3.24	0.46
352.05	3.27	0.48
352.06	3.28	0.50
352.07	3.30	0.51
352.08	3.31	0.53
352.09	3.32	0.55
352.10	3.32	0.56
352.11	**3.32**	0.57
352.12	3.32	0.58
352.13	3.31	0.60
352.14	3.30	0.60
352.15	3.28	0.61
352.16	3.25	0.61
352.17	3.22	**0.62**
352.18	3.17	0.61
352.19	3.10	0.61
352.20	2.92	0.57

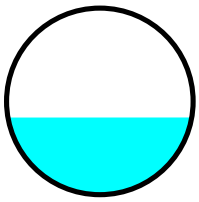
Summary for Reach RF-2: TO DMH#3

Inflow Area = 1,853 sf,100.00% Impervious, Inflow Depth = 5.06" for 25-Year event
Inflow = 0.22 cfs @ 12.08 hrs, Volume= 782 cf
Outflow = 0.21 cfs @ 12.09 hrs, Volume= 782 cf, Atten= 1%, Lag= 0.7 min

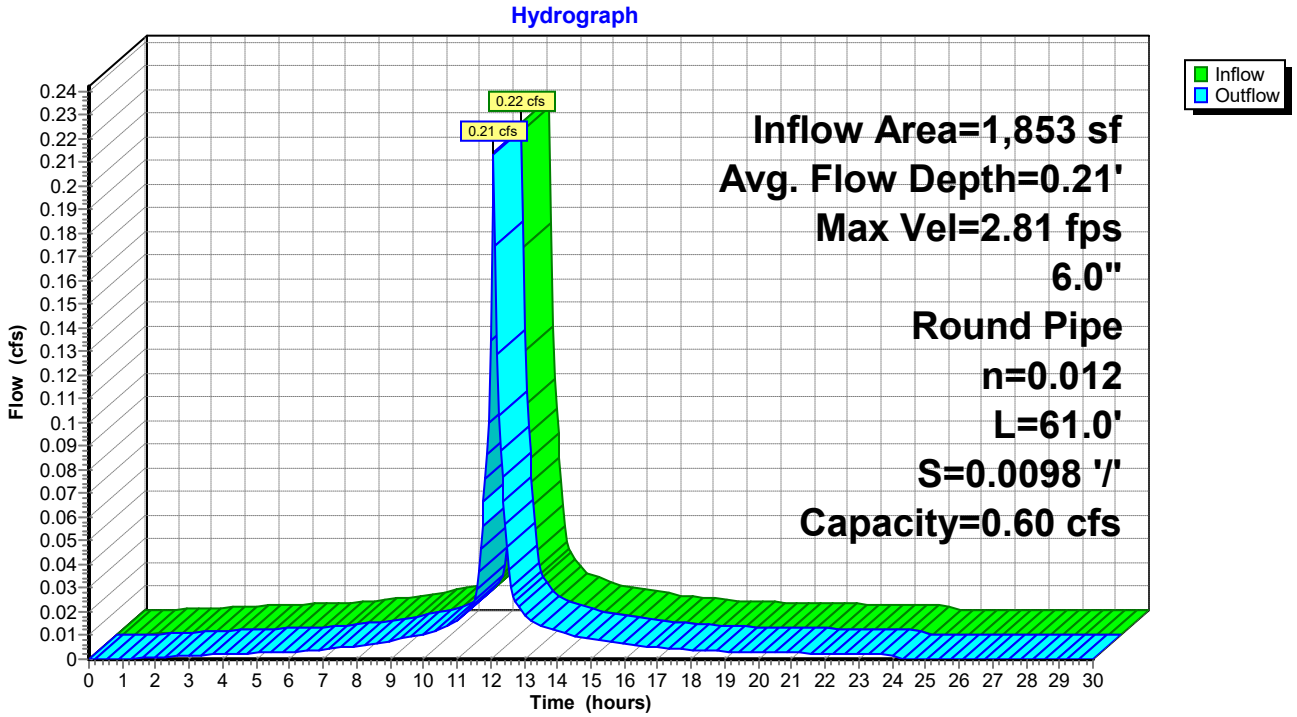
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.81 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.95 fps, Avg. Travel Time= 1.1 min

Peak Storage= 5 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.60 cfs

6.0" Round Pipe
n= 0.012 Steel, smooth
Length= 61.0' Slope= 0.0098 '/'
Inlet Invert= 351.80', Outlet Invert= 351.20'



Reach RF-2: TO DMH#3



Stage-Discharge for Reach RF-2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.43	0.00
351.82	0.68	0.00
351.83	0.89	0.00
351.84	1.07	0.01
351.85	1.23	0.01
351.86	1.38	0.02
351.87	1.52	0.03
351.88	1.65	0.03
351.89	1.77	0.04
351.90	1.89	0.05
351.91	2.00	0.06
351.92	2.10	0.08
351.93	2.20	0.09
351.94	2.29	0.10
351.95	2.38	0.12
351.96	2.47	0.13
351.97	2.55	0.15
351.98	2.63	0.17
351.99	2.70	0.18
352.00	2.77	0.20
352.01	2.84	0.22
352.02	2.90	0.24
352.03	2.96	0.26
352.04	3.02	0.28
352.05	3.07	0.30
352.06	3.12	0.32
352.07	3.17	0.34
352.08	3.21	0.36
352.09	3.25	0.38
352.10	3.29	0.41
352.11	3.33	0.43
352.12	3.36	0.45
352.13	3.39	0.47
352.14	3.42	0.49
352.15	3.44	0.50
352.16	3.46	0.52
352.17	3.47	0.54
352.18	3.49	0.56
352.19	3.49	0.57
352.20	3.50	0.59
352.21	**3.50**	0.60
352.22	3.50	0.62
352.23	3.49	0.63
352.24	3.47	0.64
352.25	3.45	0.64
352.26	3.42	0.65
352.27	3.39	**0.65**
352.28	3.33	0.65
352.29	3.26	0.64
352.30	3.07	0.60

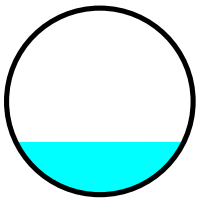
Summary for Reach RF3: TO DMH#3

Inflow Area = 933 sf,100.00% Impervious, Inflow Depth = 5.06" for 25-Year event
Inflow = 0.11 cfs @ 12.07 hrs, Volume= 394 cf
Outflow = 0.11 cfs @ 12.09 hrs, Volume= 394 cf, Atten= 3%, Lag= 1.3 min

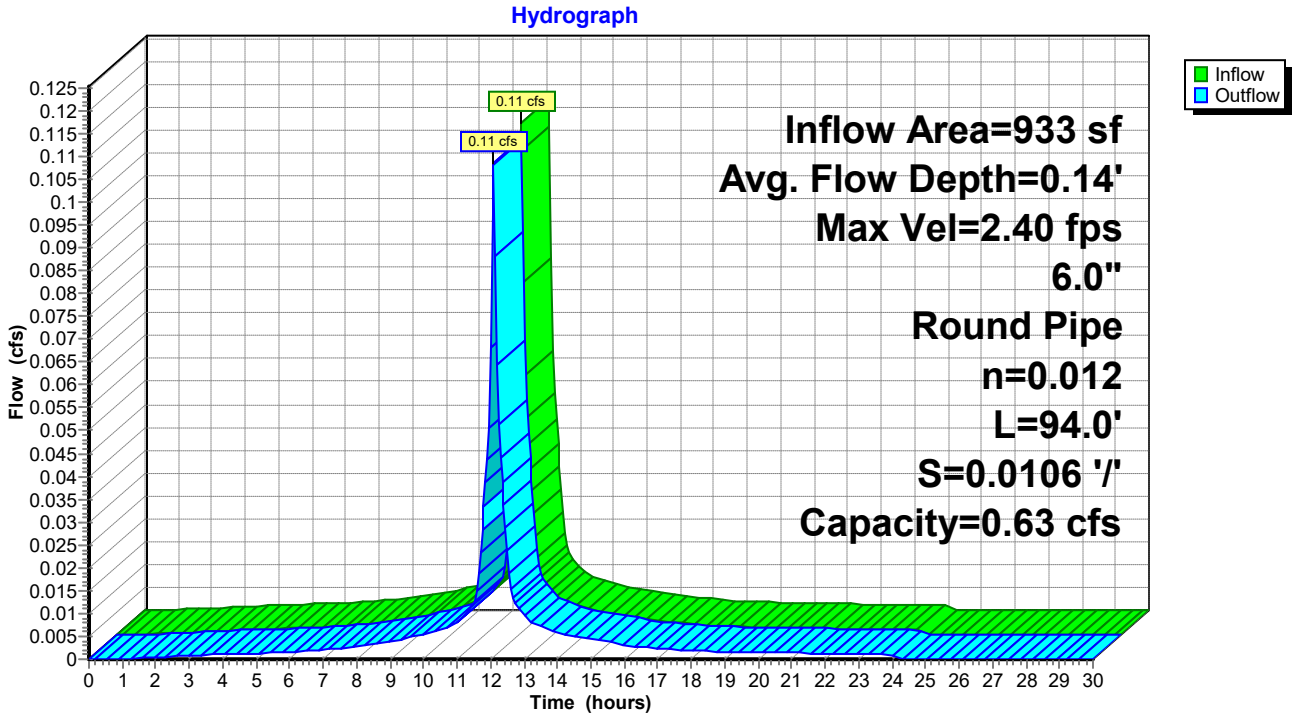
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.40 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 0.80 fps, Avg. Travel Time= 2.0 min

Peak Storage= 4 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.14'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.63 cfs

6.0" Round Pipe
n= 0.012 Steel, smooth
Length= 94.0' Slope= 0.0106 '/'
Inlet Invert= 352.10', Outlet Invert= 351.10'



Reach RF3: TO DMH#3



Stage-Discharge for Reach RF3: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.10	0.00	0.00
352.11	0.45	0.00
352.12	0.71	0.00
352.13	0.92	0.00
352.14	1.11	0.01
352.15	1.28	0.01
352.16	1.44	0.02
352.17	1.58	0.03
352.18	1.72	0.03
352.19	1.84	0.04
352.20	1.96	0.05
352.21	2.08	0.07
352.22	2.19	0.08
352.23	2.29	0.09
352.24	2.39	0.11
352.25	2.48	0.12
352.26	2.57	0.14
352.27	2.65	0.16
352.28	2.73	0.17
352.29	2.81	0.19
352.30	2.88	0.21
352.31	2.95	0.23
352.32	3.02	0.25
352.33	3.08	0.27
352.34	3.14	0.29
352.35	3.19	0.31
352.36	3.25	0.33
352.37	3.30	0.36
352.38	3.34	0.38
352.39	3.38	0.40
352.40	3.42	0.42
352.41	3.46	0.44
352.42	3.49	0.46
352.43	3.52	0.48
352.44	3.55	0.51
352.45	3.58	0.52
352.46	3.60	0.54
352.47	3.61	0.56
352.48	3.63	0.58
352.49	3.63	0.60
352.50	3.64	0.61
352.51	**3.64**	0.63
352.52	3.64	0.64
352.53	3.63	0.65
352.54	3.61	0.66
352.55	3.59	0.67
352.56	3.56	0.67
352.57	3.52	**0.67**
352.58	3.47	0.67
352.59	3.39	0.66
352.60	3.19	0.63

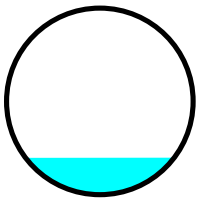
Summary for Reach YD1: TO CO#1

Inflow Area = 5,181 sf, 36.69% Impervious, Inflow Depth = 2.83" for 25-Year event
Inflow = 0.36 cfs @ 12.08 hrs, Volume= 1,222 cf
Outflow = 0.36 cfs @ 12.08 hrs, Volume= 1,222 cf, Atten= 0%, Lag= 0.1 min

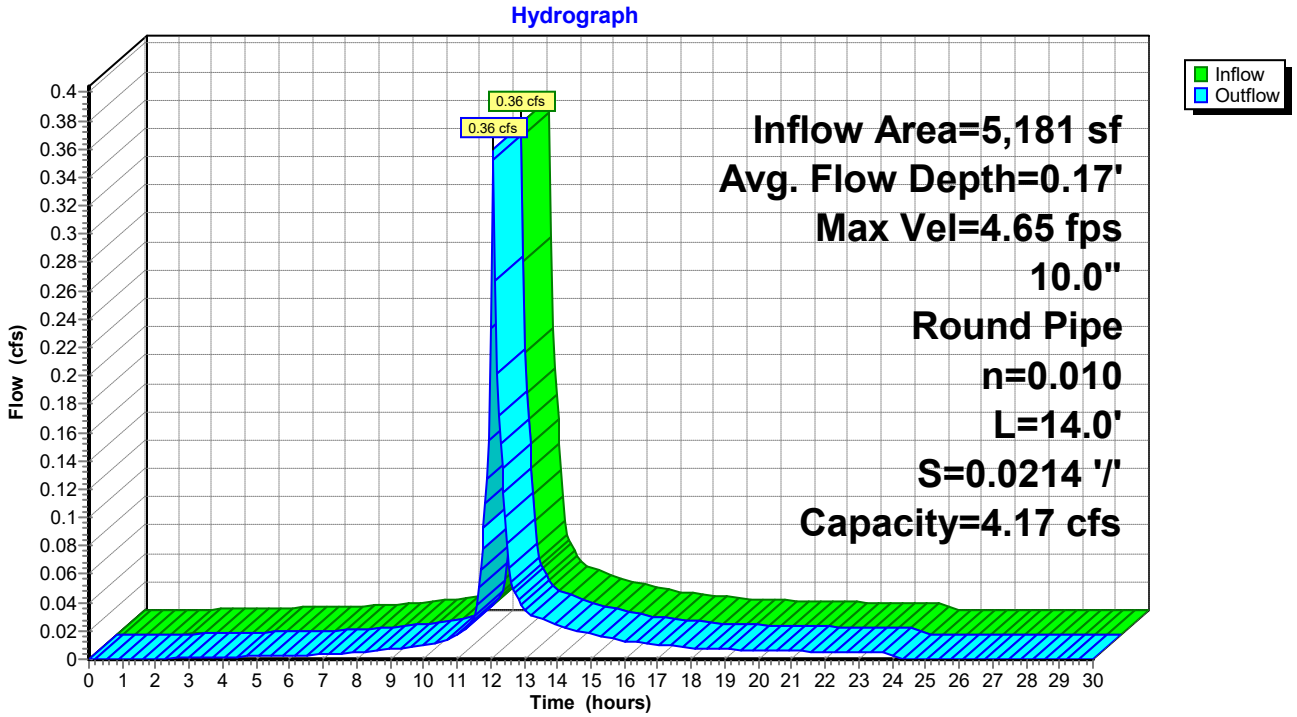
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.65 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.50 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.17 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 14.0' Slope= 0.0214 '/'
Inlet Invert= 350.80', Outlet Invert= 350.50'



Reach YD1: TO CO#1



Stage-Discharge for Reach YD1: TO CO#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.80	0.00	0.00
350.81	0.76	0.00
350.82	1.21	0.00
350.83	1.58	0.01
350.84	1.91	0.02
350.85	2.21	0.03
350.86	2.49	0.04
350.87	2.74	0.06
350.88	2.99	0.08
350.89	3.22	0.10
350.90	3.44	0.13
350.91	3.65	0.16
350.92	3.85	0.19
350.93	4.05	0.22
350.94	4.23	0.26
350.95	4.41	0.29
350.96	4.59	0.34
350.97	4.76	0.38
350.98	4.92	0.43
350.99	5.08	0.48
351.00	5.23	0.53
351.01	5.38	0.58
351.02	5.52	0.64
351.03	5.66	0.69
351.04	5.80	0.75
351.05	5.93	0.82
351.06	6.06	0.88
351.07	6.19	0.95
351.08	6.31	1.01
351.09	6.42	1.08
351.10	6.54	1.16
351.11	6.65	1.23
351.12	6.76	1.30
351.13	6.86	1.38
351.14	6.96	1.46
351.15	7.06	1.54
351.16	7.16	1.62
351.17	7.25	1.70
351.18	7.34	1.78
351.19	7.43	1.86
351.20	7.51	1.94
351.21	7.59	2.03
351.22	7.67	2.11
351.23	7.75	2.20
351.24	7.82	2.28
351.25	7.89	2.37
351.26	7.96	2.46
351.27	8.02	2.54
351.28	8.08	2.63
351.29	8.14	2.72
351.30	8.20	2.80
351.31	8.25	2.89
351.32	8.30	2.97
351.33	8.35	3.06
351.34	8.40	3.14
351.35	8.44	3.22
351.36	8.48	3.30
351.37	8.52	3.39
351.38	8.55	3.46
351.39	8.58	3.54
351.40	8.61	3.62
351.41	8.63	3.69
351.42	8.65	3.77
351.43	8.67	3.84
351.44	8.69	3.91
351.45	8.70	3.97
351.46	8.71	4.03
351.47	8.71	4.10
351.48	**8.71**	4.15
351.49	8.71	4.21
351.50	8.70	4.26
351.51	8.69	4.30
351.52	8.68	4.35
351.53	8.65	4.38
351.54	8.63	4.42
351.55	8.59	4.44
351.56	8.55	4.46
351.57	8.51	4.48
351.58	8.45	**4.48**
351.59	8.38	4.48
351.60	8.30	4.47
351.61	8.20	4.44
351.62	8.06	4.38
351.63	7.78	4.24

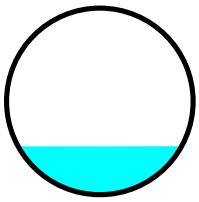
Summary for Reach YD2: TO D14

Inflow Area = 10,793 sf, 49.52% Impervious, Inflow Depth = 3.06" for 25-Year event
Inflow = 0.89 cfs @ 12.08 hrs, Volume= 2,754 cf
Outflow = 0.89 cfs @ 12.08 hrs, Volume= 2,754 cf, Atten= 0%, Lag= 0.0 min

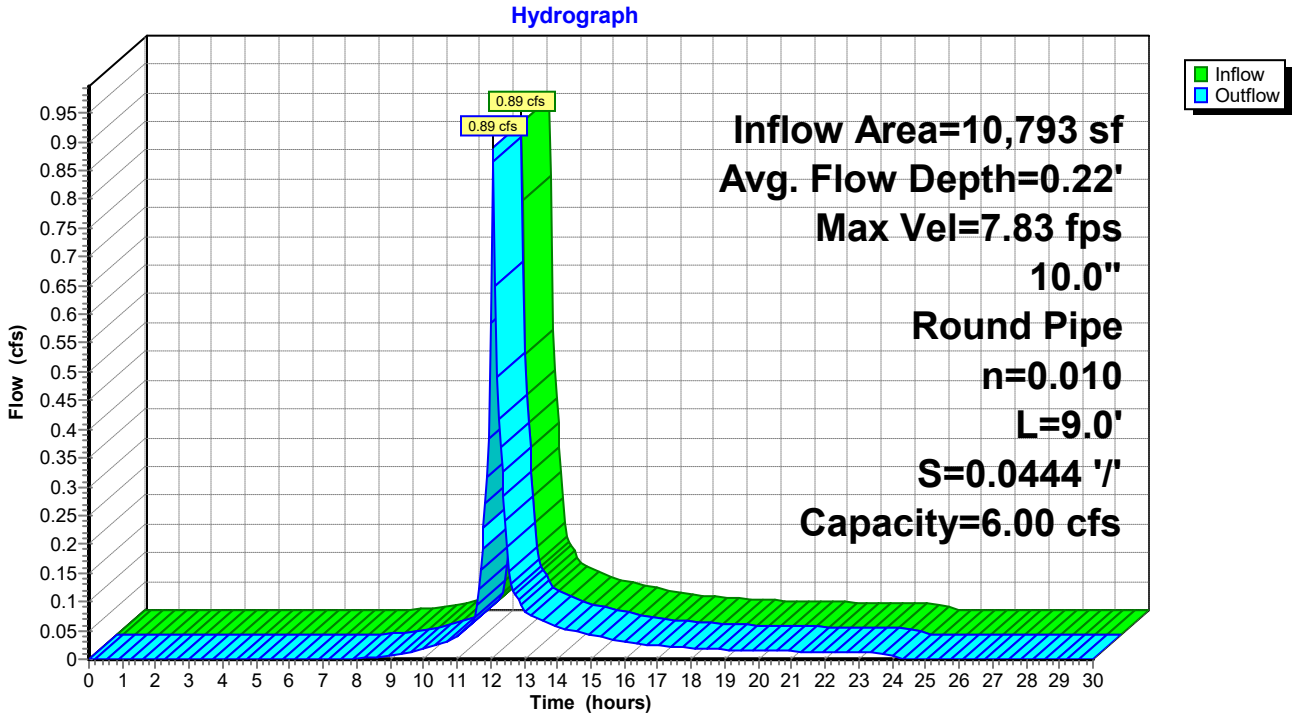
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.83 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.75 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.22'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 6.00 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 9.0' Slope= 0.0444 '/'
Inlet Invert= 347.80', Outlet Invert= 347.40'



Reach YD2: TO D14



Stage-Discharge for Reach YD2: TO D14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.80	0.00	0.00
347.81	1.09	0.00
347.82	1.74	0.01
347.83	2.28	0.01
347.84	2.75	0.03
347.85	3.18	0.04
347.86	3.58	0.06
347.87	3.95	0.09
347.88	4.30	0.12
347.89	4.64	0.15
347.90	4.95	0.18
347.91	5.26	0.22
347.92	5.55	0.27
347.93	5.83	0.32
347.94	6.10	0.37
347.95	6.36	0.42
347.96	6.61	0.48
347.97	6.85	0.55
347.98	7.09	0.61
347.99	7.31	0.68
348.00	7.54	0.76
348.01	7.75	0.84
348.02	7.96	0.92
348.03	8.16	1.00
348.04	8.35	1.09
348.05	8.54	1.18
348.06	8.73	1.27
348.07	8.91	1.36
348.08	9.08	1.46
348.09	9.25	1.56
348.10	9.42	1.66
348.11	9.58	1.77
348.12	9.73	1.88
348.13	9.88	1.99
348.14	10.03	2.10
348.15	10.17	2.21
348.16	10.31	2.33
348.17	10.44	2.44
348.18	10.57	2.56
348.19	10.70	2.68
348.20	10.82	2.80
348.21	10.93	2.92
348.22	11.05	3.04
348.23	11.16	3.17
348.24	11.26	3.29
348.25	11.36	3.41
348.26	11.46	3.54
348.27	11.55	3.66
348.28	11.64	3.79
348.29	11.73	3.91
348.30	11.81	4.03
348.31	11.88	4.16
348.32	11.96	4.28
348.33	12.03	4.40
348.34	12.09	4.52
348.35	12.15	4.64
348.36	12.21	4.76
348.37	12.26	4.88
348.38	12.31	4.99
348.39	12.36	5.10
348.40	12.40	5.21
348.41	12.43	5.32
348.42	12.46	5.42
348.43	12.49	5.53
348.44	12.51	5.62
348.45	12.53	5.72
348.46	12.54	5.81
348.47	12.55	5.90
348.48	**12.55**	5.98
348.49	12.55	6.06
348.50	12.54	6.13
348.51	12.52	6.20
348.52	12.49	6.26
348.53	12.46	6.31
348.54	12.43	6.36
348.55	12.38	6.40
348.56	12.32	6.43
348.57	12.25	6.45
348.58	12.17	**6.46**
348.59	12.07	6.45
348.60	11.96	6.43
348.61	11.81	6.39
348.62	11.61	6.31
348.63	11.20	6.11

Summary for Pond P1: BASIN#1

Inflow Area =	556,651 sf,	40.37% Impervious,	Inflow Depth =	2.48"	for 25-Year event
Inflow =	27.66 cfs @	12.16 hrs,	Volume=	114,925 cf	
Outflow =	5.11 cfs @	12.80 hrs,	Volume=	114,925 cf,	Atten= 82%, Lag= 38.6 min
Discarded =	5.11 cfs @	12.80 hrs,	Volume=	114,925 cf	
Primary =	0.00 cfs @	0.00 hrs,	Volume=	0 cf	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0 cf	

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 336.73' @ 12.80 hrs Surf.Area= 22,796 sf Storage= 35,548 cf

Plug-Flow detention time= 54.8 min calculated for 114,734 cf (100% of inflow)
Center-of-Mass det. time= 54.7 min (876.8 - 822.0)

Volume	Invert	Avail.Storage	Storage Description
#1	335.00'	119,716 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
335.00	17,284	0	0
336.00	21,521	19,403	19,403
338.00	25,021	46,542	65,945
340.00	28,750	53,771	119,716

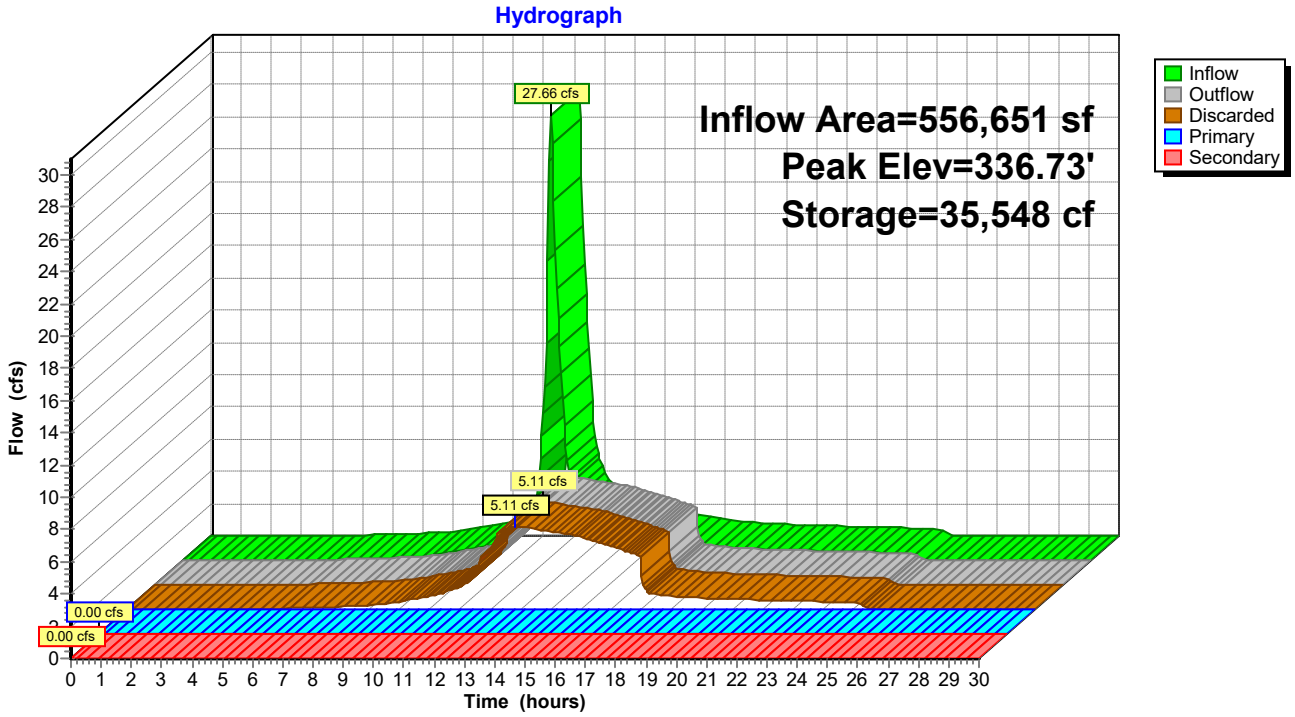
Device	Routing	Invert	Outlet Devices
#1	Primary	332.60'	**12.0" Round Culvert** L= 223.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 332.60' / 331.50' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	335.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 326.00'
#3	Device 1	338.00'	**6.0" Vert. Orifice/Grate X 3.00** C= 0.600
#4	Secondary	339.00'	**14.0' 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

Discarded OutFlow Max=5.11 cfs @ 12.80 hrs HW=336.73' (Free Discharge)
└─**2=Exfiltration** (Controls 5.11 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 3.34 cfs potential flow)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P1: BASIN#1



Stage-Discharge for Pond P1: BASIN#1

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
335.00	0.00	0.00	0.00	0.00
335.10	3.43	3.43	0.00	0.00
335.20	3.55	3.55	0.00	0.00
335.30	3.67	3.67	0.00	0.00
335.40	3.79	3.79	0.00	0.00
335.50	3.91	3.91	0.00	0.00
335.60	4.03	4.03	0.00	0.00
335.70	4.15	4.15	0.00	0.00
335.80	4.28	4.28	0.00	0.00
335.90	4.40	4.40	0.00	0.00
336.00	4.53	4.53	0.00	0.00
336.10	4.61	4.61	0.00	0.00
336.20	4.69	4.69	0.00	0.00
336.30	4.77	4.77	0.00	0.00
336.40	4.85	4.85	0.00	0.00
336.50	4.93	4.93	0.00	0.00
336.60	5.01	5.01	0.00	0.00
336.70	5.09	5.09	0.00	0.00
336.80	5.17	5.17	0.00	0.00
336.90	5.25	5.25	0.00	0.00
337.00	5.33	5.33	0.00	0.00
337.10	5.41	5.41	0.00	0.00
337.20	5.50	5.50	0.00	0.00
337.30	5.58	5.58	0.00	0.00
337.40	5.66	5.66	0.00	0.00
337.50	5.75	5.75	0.00	0.00
337.60	5.83	5.83	0.00	0.00
337.70	5.91	5.91	0.00	0.00
337.80	6.00	6.00	0.00	0.00
337.90	6.08	6.08	0.00	0.00
338.00	6.17	6.17	0.00	0.00
338.10	6.34	6.25	0.09	0.00
338.20	6.68	6.34	0.34	0.00
338.30	7.12	6.43	0.69	0.00
338.40	7.60	6.52	1.09	0.00
338.50	8.02	6.60	1.42	0.00
338.60	8.37	6.69	1.68	0.00
338.70	8.68	6.78	1.90	0.00
338.80	8.97	6.87	2.10	0.00
338.90	9.25	6.96	2.29	0.00
339.00	9.51	7.05	2.46	0.00
339.10	10.86	7.14	2.61	1.10
339.20	13.11	7.23	2.76	3.12
339.30	16.04	7.32	2.91	5.81
339.40	19.52	7.41	3.04	9.07
339.50	23.69	7.50	3.17	13.02
339.60	28.46	7.59	3.30	17.57
339.70	33.20	7.69	3.42	22.10
339.80	38.26	7.78	3.53	26.95
339.90	43.61	7.87	3.64	32.09
340.00	**49.23**	**7.96**	**3.75**	**37.52**

Summary for Pond P2: SETTLING POND

Inflow Area = 59,763 sf, 5.17% Impervious, Inflow Depth = 0.39" for 25-Year event
Inflow = 0.19 cfs @ 12.50 hrs, Volume= 1,963 cf
Outflow = 0.15 cfs @ 12.67 hrs, Volume= 1,963 cf, Atten= 20%, Lag= 10.0 min
Discarded = 0.15 cfs @ 12.67 hrs, Volume= 1,963 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 343.05' @ 12.67 hrs Surf.Area= 789 sf Storage= 40 cf

Plug-Flow detention time= 1.2 min calculated for 1,959 cf (100% of inflow)
Center-of-Mass det. time= 1.2 min (970.3 - 969.1)

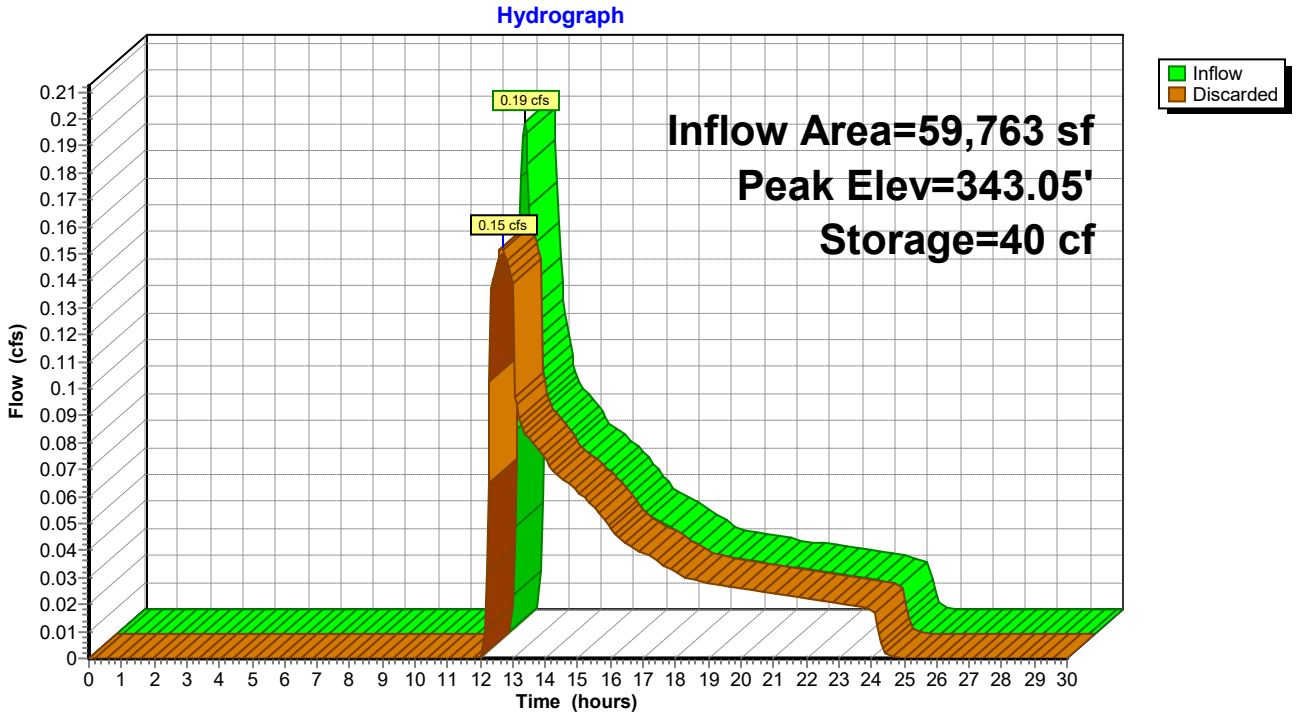
Volume	Invert	Avail.Storage	Storage Description
#1	343.00'	1,470 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
343.00	707	0	0
344.00	2,233	1,470	1,470

Device	Routing	Invert	Outlet Devices
#1	Discarded	343.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 337.80'

Discarded OutFlow Max=0.15 cfs @ 12.67 hrs HW=343.05' (Free Discharge)
└**1=Exfiltration** (Controls 0.15 cfs)

Pond P2: SETTLING POND



Stage-Discharge for Pond P2: SETTLING POND

Elevation (feet)	Discarded (cfs)	Elevation (feet)	Discarded (cfs)
343.00	0.00	343.52	0.31
343.01	0.14	343.53	0.31
343.02	0.14	343.54	0.31
343.03	0.14	343.55	0.32
343.04	0.15	343.56	0.32
343.05	0.15	343.57	0.33
343.06	0.15	343.58	0.33
343.07	0.16	343.59	0.33
343.08	0.16	343.60	0.34
343.09	0.16	343.61	0.34
343.10	0.17	343.62	0.34
343.11	0.17	343.63	0.35
343.12	0.17	343.64	0.35
343.13	0.18	343.65	0.35
343.14	0.18	343.66	0.36
343.15	0.18	343.67	0.36
343.16	0.19	343.68	0.36
343.17	0.19	343.69	0.37
343.18	0.19	343.70	0.37
343.19	0.20	343.71	0.37
343.20	0.20	343.72	0.38
343.21	0.20	343.73	0.38
343.22	0.21	343.74	0.39
343.23	0.21	343.75	0.39
343.24	0.21	343.76	0.39
343.25	0.22	343.77	0.40
343.26	0.22	343.78	0.40
343.27	0.22	343.79	0.40
343.28	0.23	343.80	0.41
343.29	0.23	343.81	0.41
343.30	0.23	343.82	0.41
343.31	0.24	343.83	0.42
343.32	0.24	343.84	0.42
343.33	0.24	343.85	0.42
343.34	0.25	343.86	0.43
343.35	0.25	343.87	0.43
343.36	0.25	343.88	0.44
343.37	0.26	343.89	0.44
343.38	0.26	343.90	0.44
343.39	0.26	343.91	0.45
343.40	0.27	343.92	0.45
343.41	0.27	343.93	0.45
343.42	0.27	343.94	0.46
343.43	0.28	343.95	0.46
343.44	0.28	343.96	0.46
343.45	0.28	343.97	0.47
343.46	0.29	343.98	0.47
343.47	0.29	343.99	0.48
343.48	0.29	344.00	**0.48**
343.49	0.30		
343.50	0.30		
343.51	0.30		

Summary for Pond UGS-B: TO DMH#8

Inflow Area =	67,684 sf, 89.07% Impervious, Inflow Depth = 4.35" for 25-Year event				
Inflow =	7.27 cfs @	12.09 hrs,	Volume=	24,518 cf	
Outflow =	3.16 cfs @	12.29 hrs,	Volume=	24,518 cf,	Atten= 57%, Lag= 12.0 min
Discarded =	1.11 cfs @	12.29 hrs,	Volume=	21,050 cf	
Primary =	2.05 cfs @	12.29 hrs,	Volume=	3,468 cf	

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 351.67' @ 12.29 hrs Surf.Area= 0.074 ac Storage= 0.134 af

Plug-Flow detention time= 27.8 min calculated for 24,518 cf (100% of inflow)
Center-of-Mass det. time= 27.8 min (810.2 - 782.4)

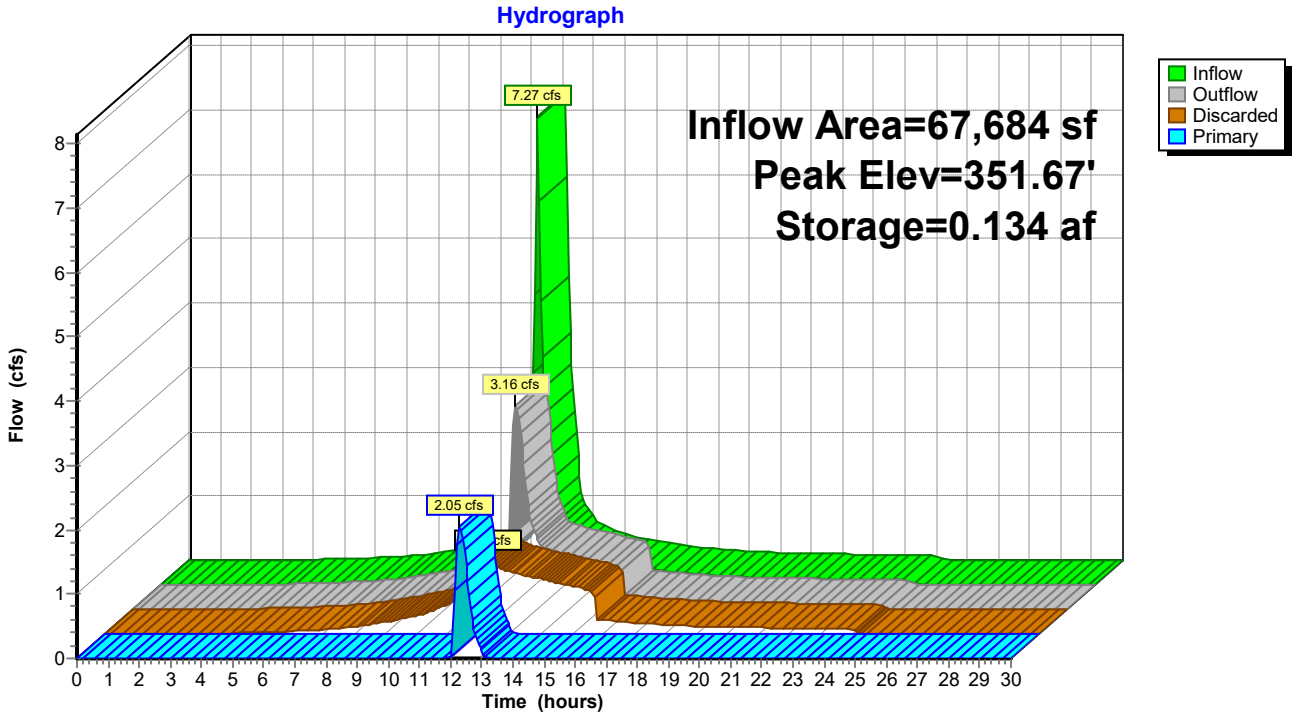
Volume	Invert	Avail.Storage	Storage Description
#1	349.00'	0.082 af	**54.00'W x 60.00'L x 4.00'H Prismatoid** 0.298 af Overall - 0.094 af Embedded = 0.204 af x 40.0% Voids
#2	349.50'	0.094 af	**ADS_StormTech SC-740** x 88 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 11 rows
		0.175 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Device 2	350.80'	**12.0" Round Culvert X 11.00** L= 3.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.80' / 350.80' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Primary	350.70'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.70' / 350.00' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Discarded	349.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 345.60'

Discarded OutFlow Max=1.11 cfs @ 12.29 hrs HW=351.66' (Free Discharge)
└─**3=Exfiltration** (Controls 1.11 cfs)

Primary OutFlow Max=2.05 cfs @ 12.29 hrs HW=351.66' (Free Discharge)
└─**2=Culvert** (Inlet Controls 2.05 cfs @ 2.64 fps)
  └─**1=Culvert** (Passes 2.05 cfs of 15.65 cfs potential flow)

Pond UGS-B: TO DMH#8



Stage-Discharge for Pond UGS-B: TO DMH#8

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
349.00	0.00	0.00	0.00
349.05	0.63	0.63	0.00
349.10	0.64	0.64	0.00
349.15	0.65	0.65	0.00
349.20	0.66	0.66	0.00
349.25	0.67	0.67	0.00
349.30	0.67	0.67	0.00
349.35	0.68	0.68	0.00
349.40	0.69	0.69	0.00
349.45	0.70	0.70	0.00
349.50	0.71	0.71	0.00
349.55	0.72	0.72	0.00
349.60	0.73	0.73	0.00
349.65	0.74	0.74	0.00
349.70	0.75	0.75	0.00
349.75	0.76	0.76	0.00
349.80	0.77	0.77	0.00
349.85	0.78	0.78	0.00
349.90	0.78	0.78	0.00
349.95	0.79	0.79	0.00
350.00	0.80	0.80	0.00
350.05	0.81	0.81	0.00
350.10	0.82	0.82	0.00
350.15	0.83	0.83	0.00
350.20	0.84	0.84	0.00
350.25	0.85	0.85	0.00
350.30	0.86	0.86	0.00
350.35	0.87	0.87	0.00
350.40	0.88	0.88	0.00
350.45	0.88	0.88	0.00
350.50	0.89	0.89	0.00
350.55	0.90	0.90	0.00
350.60	0.91	0.91	0.00
350.65	0.92	0.92	0.00
350.70	0.93	0.93	0.00
350.75	0.94	0.94	0.00
350.80	0.95	0.95	0.00
350.85	1.00	0.96	0.05
350.90	1.10	0.97	0.13
350.95	1.18	0.98	0.21
351.00	1.28	0.99	0.29
351.05	1.38	0.99	0.39
351.10	1.50	1.00	0.50
351.15	1.63	1.01	0.62
351.20	1.77	1.02	0.75
351.25	1.91	1.03	0.88
351.30	2.06	1.04	1.02
351.35	2.22	1.05	1.17
351.40	2.38	1.06	1.32
351.45	2.54	1.07	1.47
351.50	2.70	1.08	1.62
351.55	2.85	1.09	1.76
351.60	2.99	1.09	1.90
351.65	3.12	1.10	2.02
351.70	3.22	1.11	2.11
351.75	3.34	1.12	2.21
351.80	3.44	1.13	2.31
351.85	3.55	1.14	2.41
351.90	3.65	1.15	2.50
351.95	3.74	1.16	2.59
352.00	3.84	1.17	2.67
352.05	3.93	1.18	2.75
352.10	4.02	1.19	2.83
352.15	4.10	1.19	2.91
352.20	4.19	1.20	2.99
352.25	4.27	1.21	3.06
352.30	4.35	1.22	3.13
352.35	4.43	1.23	3.20
352.40	4.51	1.24	3.27
352.45	4.59	1.25	3.34
352.50	4.66	1.26	3.40
352.55	4.74	1.27	3.47
352.60	4.81	1.28	3.53
352.65	4.88	1.29	3.60
352.70	4.95	1.30	3.66
352.75	5.02	1.30	3.72
352.80	5.09	1.31	3.78
352.85	5.16	1.32	3.83
352.90	5.22	1.33	3.89
352.95	5.29	1.34	3.95
353.00	**5.36**	**1.35**	**4.01**

Summary for Pond USGD1: TO TEMP SETTLING BASIN

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 3.37" for 25-Year event
Inflow = 4.80 cfs @ 12.10 hrs, Volume= 15,890 cf
Outflow = 1.77 cfs @ 12.37 hrs, Volume= 9,980 cf, Atten= 63%, Lag= 16.5 min
Primary = 1.77 cfs @ 12.37 hrs, Volume= 9,980 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 350.85' @ 12.37 hrs Surf.Area= 0.110 ac Storage= 0.167 af

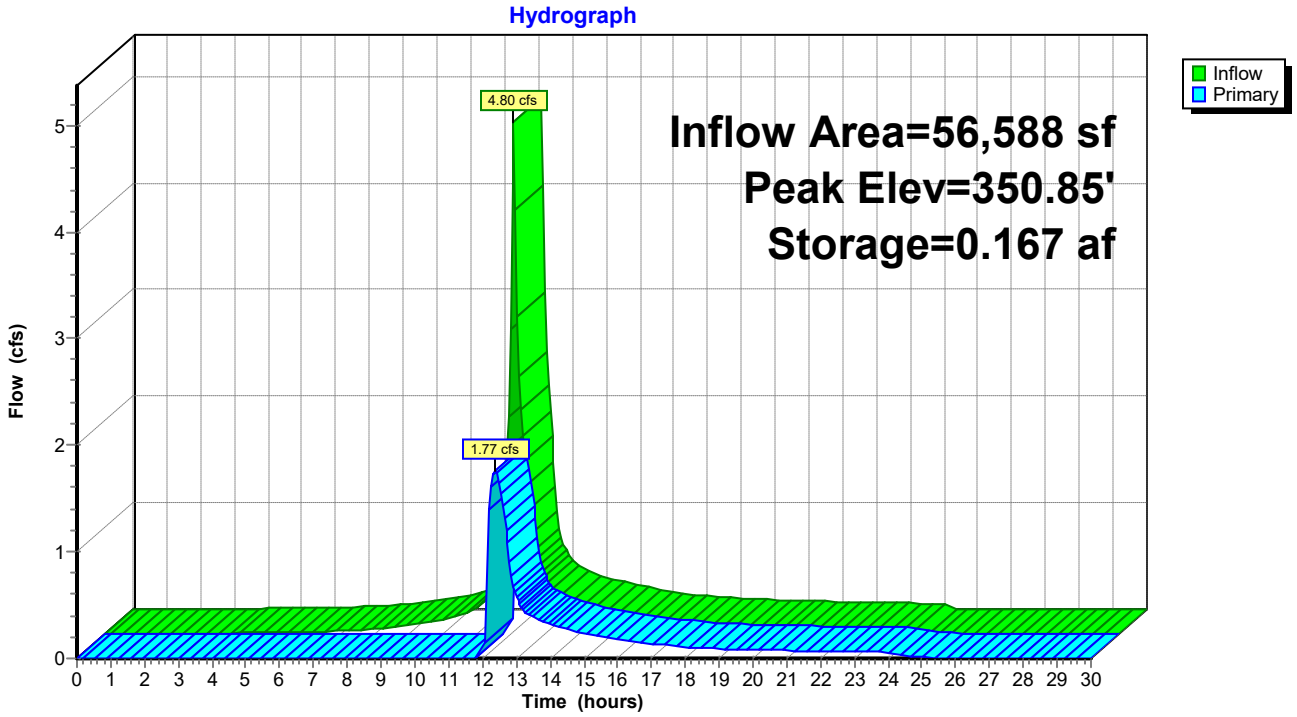
Plug-Flow detention time= 208.3 min calculated for 9,980 cf (63% of inflow)
Center-of-Mass det. time= 102.5 min (904.1 - 801.6)

Volume	Invert	Avail.Storage	Storage Description
#1	348.50'	0.107 af	**60.00'W x 80.00'L x 3.50'H Prismatoid** 0.386 af Overall - 0.118 af Embedded = 0.268 af x 40.0% Voids
#2	349.00'	0.118 af	**ADS_StormTech SC-740** x 111 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 11 rows
		0.225 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Device 2	350.40'	**10.0" Round Culvert X 11.00** L= 3.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.40' / 350.40' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Primary	350.00'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.00' / 349.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.76 cfs @ 12.37 hrs HW=350.85' (Free Discharge)
└─**2=Culvert** (Inlet Controls 1.76 cfs @ 2.48 fps)
  └─**1=Culvert** (Passes 1.76 cfs of 4.25 cfs potential flow)

Pond USGD1: TO TEMP SETTLING BASIN



Stage-Discharge for Pond USGD1: TO TEMP SETTLING BASIN

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
348.50	0.00	349.54	0.00	350.58	0.70	351.62	3.16
348.52	0.00	349.56	0.00	350.60	0.87	351.64	3.19
348.54	0.00	349.58	0.00	350.62	1.05	351.66	3.22
348.56	0.00	349.60	0.00	350.64	1.14	351.68	3.24
348.58	0.00	349.62	0.00	350.66	1.20	351.70	3.27
348.60	0.00	349.64	0.00	350.68	1.26	351.72	3.30
348.62	0.00	349.66	0.00	350.70	1.32	351.74	3.32
348.64	0.00	349.68	0.00	350.72	1.38	351.76	3.35
348.66	0.00	349.70	0.00	350.74	1.44	351.78	3.38
348.68	0.00	349.72	0.00	350.76	1.50	351.80	3.40
348.70	0.00	349.74	0.00	350.78	1.56	351.82	3.43
348.72	0.00	349.76	0.00	350.80	1.62	351.84	3.46
348.74	0.00	349.78	0.00	350.82	1.68	351.86	3.48
348.76	0.00	349.80	0.00	350.84	1.74	351.88	3.51
348.78	0.00	349.82	0.00	350.86	1.79	351.90	3.53
348.80	0.00	349.84	0.00	350.88	1.85	351.92	3.56
348.82	0.00	349.86	0.00	350.90	1.90	351.94	3.58
348.84	0.00	349.88	0.00	350.92	1.95	351.96	3.61
348.86	0.00	349.90	0.00	350.94	2.00	351.98	3.63
348.88	0.00	349.92	0.00	350.96	2.04	352.00	**3.66**
348.90	0.00	349.94	0.00	350.98	2.08		
348.92	0.00	349.96	0.00	351.00	2.11		
348.94	0.00	349.98	0.00	351.02	2.15		
348.96	0.00	350.00	0.00	351.04	2.19		
348.98	0.00	350.02	0.00	351.06	2.23		
349.00	0.00	350.04	0.00	351.08	2.27		
349.02	0.00	350.06	0.00	351.10	2.31		
349.04	0.00	350.08	0.00	351.12	2.35		
349.06	0.00	350.10	0.00	351.14	2.39		
349.08	0.00	350.12	0.00	351.16	2.43		
349.10	0.00	350.14	0.00	351.18	2.46		
349.12	0.00	350.16	0.00	351.20	2.50		
349.14	0.00	350.18	0.00	351.22	2.53		
349.16	0.00	350.20	0.00	351.24	2.57		
349.18	0.00	350.22	0.00	351.26	2.60		
349.20	0.00	350.24	0.00	351.28	2.64		
349.22	0.00	350.26	0.00	351.30	2.67		
349.24	0.00	350.28	0.00	351.32	2.70		
349.26	0.00	350.30	0.00	351.34	2.74		
349.28	0.00	350.32	0.00	351.36	2.77		
349.30	0.00	350.34	0.00	351.38	2.80		
349.32	0.00	350.36	0.00	351.40	2.83		
349.34	0.00	350.38	0.00	351.42	2.86		
349.36	0.00	350.40	0.00	351.44	2.89		
349.38	0.00	350.42	0.00	351.46	2.93		
349.40	0.00	350.44	0.02	351.48	2.96		
349.42	0.00	350.46	0.06	351.50	2.99		
349.44	0.00	350.48	0.12	351.52	3.02		
349.46	0.00	350.50	0.20	351.54	3.04		
349.48	0.00	350.52	0.30	351.56	3.07		
349.50	0.00	350.54	0.41	351.58	3.10		
349.52	0.00	350.56	0.55	351.60	3.13		

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 2S: TO DCB#4 Runoff Area=5,916 sf 84.47% Impervious Runoff Depth=4.64"
Flow Length=93' Slope=0.0340 '/' Tc=5.0 min CN=89 Runoff=0.71 cfs 2,287 cf

Subcatchment 3S: TO DCB#1 Runoff Area=3,582 sf 82.83% Impervious Runoff Depth=4.53"
Flow Length=77' Tc=5.0 min CN=88 Runoff=0.42 cfs 1,352 cf

Subcatchment P-D1: TO CB-D1 Runoff Area=6,833 sf 88.85% Impervious Runoff Depth=4.86"
Flow Length=90' Tc=5.0 min CN=91 Runoff=0.85 cfs 2,767 cf

Subcatchment P-D10*: TO CB-D8 Runoff Area=5,879 sf 76.82% Impervious Runoff Depth=4.10"
Flow Length=177' Slope=0.0200 '/' Tc=5.0 min CN=84 Runoff=0.64 cfs 2,010 cf

Subcatchment P-D11*: TO CB-D9 Runoff Area=4,151 sf 71.91% Impervious Runoff Depth=3.79"
Flow Length=153' Slope=0.0200 '/' Tc=5.0 min CN=81 Runoff=0.42 cfs 1,312 cf

Subcatchment P-D12*: TO CB-D5 Runoff Area=7,120 sf 71.57% Impervious Runoff Depth=3.79"
Flow Length=134' Tc=5.0 min CN=81 Runoff=0.73 cfs 2,250 cf

Subcatchment P-D2: TO CB-D2 Runoff Area=4,392 sf 76.55% Impervious Runoff Depth=4.10"
Flow Length=93' Slope=0.0170 '/' Tc=5.0 min CN=84 Runoff=0.48 cfs 1,502 cf

Subcatchment P-D3: TO CB-D3 Runoff Area=4,805 sf 87.24% Impervious Runoff Depth=4.75"
Flow Length=65' Tc=5.0 min CN=90 Runoff=0.59 cfs 1,901 cf

Subcatchment P-D4*: TO CB-D4 Runoff Area=16,447 sf 47.74% Impervious Runoff Depth=2.45"
Flow Length=105' Tc=5.0 min CN=67 Runoff=1.07 cfs 3,365 cf

Subcatchment P-D5*: TO CB-D6 Runoff Area=2,202 sf 100.00% Impervious Runoff Depth=5.66"
Flow Length=169' Tc=5.0 min CN=98 Runoff=0.29 cfs 1,039 cf

Subcatchment P-D6: TO CB-D7 Runoff Area=2,624 sf 100.00% Impervious Runoff Depth=5.66"
Flow Length=151' Tc=5.0 min CN=98 Runoff=0.35 cfs 1,238 cf

Subcatchment P-D7: TO ROOF DRAIN Runoff Area=933 sf 100.00% Impervious Runoff Depth=5.66"
Flow Length=39' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.12 cfs 440 cf

Subcatchment P-D8: TO ROOF DRAIN Runoff Area=920 sf 100.00% Impervious Runoff Depth=5.66"
Flow Length=39' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.12 cfs 434 cf

Subcatchment P-D9: TO ROOF DRAIN Runoff Area=282 sf 100.00% Impervious Runoff Depth=5.66"
Flow Length=40' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.04 cfs 133 cf

Subcatchment P-S106: TO DCB-R102 Runoff Area=13,651 sf 53.41% Impervious Runoff Depth=2.82"
Flow Length=246' Slope=0.0050 '/' Tc=5.0 min CN=71 Runoff=1.03 cfs 3,206 cf

Subcatchment P-S107: TO DCB-R101 Runoff Area=18,867 sf 80.97% Impervious Runoff Depth=4.42"
Flow Length=255' Slope=0.0050 '/' Tc=5.0 min CN=87 Runoff=2.20 cfs 6,952 cf

Subcatchment P-S108: TO DCB-R100 Runoff Area=8,304 sf 89.80% Impervious Runoff Depth=4.97"
Flow Length=315' Slope=0.0050 '/' Tc=5.0 min CN=92 Runoff=1.05 cfs 3,440 cf

Subcatchment P-S109: TO DRAINAGE Runoff Area=12,076 sf 57.69% Impervious Runoff Depth=3.01"
Flow Length=227' Slope=0.0050 '/' Tc=5.0 min CN=73 Runoff=0.98 cfs 3,025 cf

Subcatchment P-SUB1: TO DCB-S1 Runoff Area=8,226 sf 87.83% Impervious Runoff Depth=4.86"
Flow Length=203' Tc=5.0 min CN=91 Runoff=1.02 cfs 3,331 cf

Subcatchment P-SUB2: TO DMH-S1 Runoff Area=10,318 sf 80.45% Impervious Runoff Depth=4.31"
Flow Length=213' Tc=5.0 min CN=86 Runoff=1.18 cfs 3,710 cf

Subcatchment P-SUB3: TO DCB-S3 Runoff Area=18,672 sf 88.33% Impervious Runoff Depth=5.08"
Flow Length=296' Tc=5.0 min CN=93 Runoff=2.39 cfs 7,911 cf

Subcatchment P-SUB4: TO DCB-S4 Runoff Area=24,334 sf 83.66% Impervious Runoff Depth=4.75"
Flow Length=301' Tc=6.3 min CN=90 Runoff=2.88 cfs 9,629 cf

Subcatchment P-SUB5: TO DCB-S5 Runoff Area=13,730 sf 73.11% Impervious Runoff Depth=4.75"
Flow Length=223' Tc=5.0 min CN=90 Runoff=1.68 cfs 5,433 cf

Subcatchment P-SUB6: TO DCB-S6 Runoff Area=14,048 sf 86.89% Impervious Runoff Depth=5.20"
Flow Length=231' Tc=5.0 min CN=94 Runoff=1.82 cfs 6,085 cf

Subcatchment P-SUB7: TO DCB-S7 Runoff Area=14,635 sf 28.88% Impervious Runoff Depth=4.75"
Flow Length=382' Slope=0.0200 '/' Tc=9.8 min CN=90 Runoff=1.55 cfs 5,791 cf

Subcatchment P-SUB8: TO DCB-S8 Runoff Area=6,568 sf 85.14% Impervious Runoff Depth=5.08"
Flow Length=254' Tc=5.0 min CN=93 Runoff=0.84 cfs 2,783 cf

Subcatchment P-SUB9: TO DCB-S9 Runoff Area=6,737 sf 13.88% Impervious Runoff Depth=4.97"
Flow Length=159' Tc=8.5 min CN=92 Runoff=0.77 cfs 2,791 cf

Subcatchment P206: TO DMH6B Runoff Area=52,950 sf 74.01% Impervious Runoff Depth=4.64"
Tc=5.0 min CN=89 Runoff=6.39 cfs 20,468 cf

Subcatchment P207: TO DMH7 Runoff Area=3,621 sf 77.22% Impervious Runoff Depth=4.75"
Tc=5.0 min CN=90 Runoff=0.44 cfs 1,433 cf

Subcatchment P210: TO DMH10 Runoff Area=47,718 sf 68.99% Impervious Runoff Depth=4.42"
Tc=5.0 min CN=87 Runoff=5.56 cfs 17,582 cf

Subcatchment P211: TO DMH11 Runoff Area=39,805 sf 44.80% Impervious Runoff Depth=3.59"
Tc=5.0 min CN=79 Runoff=3.84 cfs 11,910 cf

Subcatchment P212: TO DMH12 Runoff Area=23,845 sf 77.66% Impervious Runoff Depth=4.75"
Tc=5.0 min CN=90 Runoff=2.93 cfs 9,436 cf

Subcatchment P213: TO DMH13 Runoff Area=12,176 sf 88.58% Impervious Runoff Depth=5.20"
Tc=5.0 min CN=94 Runoff=1.58 cfs 5,274 cf

Subcatchment P222: TO DP#2(2017) Runoff Area=106,869 sf 0.00% Impervious Runoff Depth=0.15"
Flow Length=711' Tc=22.1 min CN=33 Runoff=0.05 cfs 1,361 cf

Subcatchment P230: TO CB#21(2017) Runoff Area=16,502 sf 47.31% Impervious Runoff Depth=3.49"
Flow Length=306' Tc=5.0 min CN=78 Runoff=1.55 cfs 4,800 cf

Subcatchment P231: TO YD#1 Runoff Area=3,459 sf 6.76% Impervious Runoff Depth=2.19"
Flow Length=48' Slope=0.0300 '/' Tc=5.0 min CN=64 Runoff=0.20 cfs 632 cf

Subcatchment P232: TO CO#2 Runoff Area=2,490 sf 100.00% Impervious Runoff Depth=5.66"
Flow Length=88' Tc=5.0 min CN=98 Runoff=0.33 cfs 1,175 cf

Subcatchment P233: TO DRIP STRIP Runoff Area=1,722 sf 96.81% Impervious Runoff Depth=5.54"
Flow Length=55' Tc=5.0 min CN=97 Runoff=0.23 cfs 796 cf

Subcatchment P234: TO YD#2 Runoff Area=10,793 sf 49.52% Impervious Runoff Depth=3.59"
Flow Length=166' Tc=5.0 min CN=79 Runoff=1.04 cfs 3,229 cf

Subcatchment P235: TO CO#3 Runoff Area=670 sf 100.00% Impervious Runoff Depth=5.66"
Flow Length=25' Slope=0.0830 '/' Tc=5.0 min CN=98 Runoff=0.09 cfs 316 cf

Subcatchment P251: OVERLAND TO Runoff Area=59,763 sf 5.17% Impervious Runoff Depth=0.58"
Flow Length=294' Tc=16.4 min CN=42 Runoff=0.35 cfs 2,894 cf

Subcatchment P252: OVERLAND TO DB#1 Runoff Area=84,788 sf 3.33% Impervious Runoff Depth=0.52"
Flow Length=224' Tc=15.5 min CN=41 Runoff=0.42 cfs 3,706 cf

Subcatchment P253: OVERLAND TO DCB Runoff Area=198,125 sf 23.50% Impervious Runoff Depth=1.86"
Flow Length=393' Tc=17.3 min CN=60 Runoff=6.60 cfs 30,651 cf

Subcatchment p3: TO DCB#5 Runoff Area=13,229 sf 94.75% Impervious Runoff Depth=5.31"
Flow Length=141' Tc=5.0 min CN=95 Runoff=1.73 cfs 5,856 cf

Subcatchment P300: TO DP#3(2020) Runoff Area=145,987 sf 0.00% Impervious Runoff Depth=0.06"
Flow Length=566' Tc=27.1 min CN=30 Runoff=0.02 cfs 753 cf

Subcatchment P4: TO DCB#2 Runoff Area=12,397 sf 88.23% Impervious Runoff Depth=4.86"
Flow Length=162' Tc=5.0 min CN=91 Runoff=1.54 cfs 5,020 cf

Subcatchment P400: TO DP#4(2020) Runoff Area=270,932 sf 0.59% Impervious Runoff Depth=0.09"
Flow Length=487' Tc=31.1 min CN=31 Runoff=0.07 cfs 1,998 cf

Subcatchment P5: TO DCB#6 Runoff Area=18,802 sf 87.54% Impervious Runoff Depth=4.86"
Flow Length=124' Tc=5.0 min CN=91 Runoff=2.34 cfs 7,614 cf

Subcatchment P6: TO DCB#3 Runoff Area=13,758 sf 90.05% Impervious Runoff Depth=4.97"
Flow Length=267' Tc=5.0 min CN=92 Runoff=1.74 cfs 5,699 cf

Subcatchment PS101: TO TEMP Runoff Area=259,359 sf 0.00% Impervious Runoff Depth=4.97"
Flow Length=764' Tc=12.9 min CN=92 Runoff=26.07 cfs 107,443 cf

Subcatchment PS102: TO CULVERT Runoff Area=47,989 sf 0.00% Impervious Runoff Depth=3.29"
Flow Length=59' Slope=0.0400 '/' Tc=11.0 min CN=76 Runoff=3.58 cfs 13,173 cf

Subcatchment PS103: TO DP#1 Runoff Area=784,060 sf 17.42% Impervious Runoff Depth=3.20"
Flow Length=1,062' Tc=15.8 min CN=75 Runoff=49.83 cfs 208,888 cf

Subcatchment PS104: TO DP#1B Runoff Area=481,036 sf 3.31% Impervious Runoff Depth=1.62"
Flow Length=1,026' Tc=11.5 min CN=57 Runoff=15.49 cfs 64,765 cf

Subcatchment PS105: TO CULVERT Runoff Area=478,368 sf 0.00% Impervious Runoff Depth=4.21"
Flow Length=1,550' Tc=21.8 min CN=85 Runoff=34.67 cfs 167,758 cf

Subcatchment PSUB10: TO DCB-S10 Runoff Area=2,269 sf 91.63% Impervious Runoff Depth=5.31"
Flow Length=85' Slope=0.0300 '/' Tc=5.0 min CN=95 Runoff=0.30 cfs 1,004 cf

Reach BK-1: McGovern Brook Avg. Flow Depth=1.05' Max Vel=4.11 fps Inflow=69.47 cfs 339,034 cf
n=0.030 L=1,417.0' S=0.0085 '/' Capacity=6,024.18 cfs Outflow=65.43 cfs 339,031 cf

Reach CB-D4: TO DMH-1 Avg. Flow Depth=0.36' Max Vel=4.22 fps Inflow=1.07 cfs 3,365 cf
12.0" Round Pipe n=0.013 L=42.0' S=0.0119 '/' Capacity=3.89 cfs Outflow=1.07 cfs 3,365 cf

Reach CB-D7: TO DMH#6 Avg. Flow Depth=0.21' Max Vel=2.97 fps Inflow=0.35 cfs 1,238 cf
12.0" Round Pipe n=0.013 L=18.0' S=0.0111 '/' Capacity=3.76 cfs Outflow=0.35 cfs 1,238 cf

Reach CB-D8: TO DMH#6 Avg. Flow Depth=0.29' Max Vel=3.29 fps Inflow=0.64 cfs 2,010 cf
12.0" Round Pipe n=0.013 L=22.0' S=0.0091 '/' Capacity=3.40 cfs Outflow=0.64 cfs 2,010 cf

Reach CB21: TO DMH#21 Avg. Flow Depth=0.38' Max Vel=5.61 fps Inflow=1.55 cfs 4,800 cf
12.0" Round Pipe n=0.013 L=50.0' S=0.0200 '/' Capacity=5.04 cfs Outflow=1.54 cfs 4,800 cf

Reach CBD1: TO DMH#8 Avg. Flow Depth=0.25' Max Vel=5.58 fps Inflow=0.85 cfs 2,767 cf
12.0" Round Pipe n=0.013 L=22.0' S=0.0318 '/' Capacity=6.36 cfs Outflow=0.85 cfs 2,767 cf

Reach CBD2: TO DMH#3 Avg. Flow Depth=0.23' Max Vel=3.39 fps Inflow=0.48 cfs 1,502 cf
12.0" Round Pipe n=0.013 L=8.0' S=0.0125 '/' Capacity=3.98 cfs Outflow=0.48 cfs 1,502 cf

Reach CBD3: TO DMH-1 Avg. Flow Depth=0.18' Max Vel=6.07 fps Inflow=0.59 cfs 1,901 cf
12.0" Round Pipe n=0.013 L=11.0' S=0.0545 '/' Capacity=8.32 cfs Outflow=0.59 cfs 1,901 cf

Reach CBD5: TO DMH#4 Avg. Flow Depth=0.31' Max Vel=3.47 fps Inflow=0.73 cfs 2,250 cf
12.0" Round Pipe n=0.013 L=21.0' S=0.0095 '/' Capacity=3.48 cfs Outflow=0.72 cfs 2,250 cf

Reach CBD6: TO DMH#4 Avg. Flow Depth=0.19' Max Vel=2.82 fps Inflow=0.29 cfs 1,039 cf
12.0" Round Pipe n=0.013 L=18.0' S=0.0111 '/' Capacity=3.76 cfs Outflow=0.29 cfs 1,039 cf

Reach CBD9: TO DMH#5 Avg. Flow Depth=0.23' Max Vel=3.12 fps Inflow=0.42 cfs 1,312 cf
12.0" Round Pipe n=0.013 L=46.0' S=0.0109 '/' Capacity=3.71 cfs Outflow=0.42 cfs 1,312 cf

Reach CO1: TO CO#2 Avg. Flow Depth=0.18' Max Vel=4.80 fps Inflow=0.42 cfs 1,428 cf
10.0" Round Pipe n=0.010 L=74.0' S=0.0203 '/' Capacity=4.06 cfs Outflow=0.42 cfs 1,428 cf

Reach CO2: TO CO#3 Avg. Flow Depth=0.24' Max Vel=5.60 fps Inflow=0.75 cfs 2,602 cf
10.0" Round Pipe n=0.010 L=81.0' S=0.0198 '/' Capacity=4.00 cfs Outflow=0.74 cfs 2,602 cf

Reach CO3: TO DMH#21 Avg. Flow Depth=0.19' Max Vel=8.91 fps Inflow=0.83 cfs 2,919 cf
10.0" Round Pipe n=0.010 L=30.0' S=0.0667 '/' Capacity=7.35 cfs Outflow=0.83 cfs 2,919 cf

Reach cul: DP#1A Inflow=62.11 cfs 300,856 cf
Outflow=62.11 cfs 300,856 cf

Reach D10: (new Reach) Avg. Flow Depth=0.79' Max Vel=8.81 fps Inflow=5.95 cfs 19,015 cf
12.0" Round Pipe n=0.013 L=103.0' S=0.0291 '/' Capacity=6.08 cfs Outflow=5.88 cfs 19,015 cf

Reach D11: TO DMH12 Avg. Flow Depth=0.73' Max Vel=6.27 fps Inflow=3.84 cfs 11,910 cf
12.0" Round Pipe n=0.013 L=86.0' S=0.0151 '/' Capacity=4.38 cfs Outflow=3.81 cfs 11,910 cf

Reach D12: TO DMH13 Avg. Flow Depth=0.88' Max Vel=7.23 fps Inflow=6.70 cfs 21,346 cf
15.0" Round Pipe n=0.013 L=83.0' S=0.0151 '/' Capacity=7.93 cfs Outflow=6.66 cfs 21,346 cf

Reach D13: TO DMH14 Avg. Flow Depth=0.93' Max Vel=8.37 fps Inflow=8.21 cfs 26,619 cf
15.0" Round Pipe n=0.013 L=109.0' S=0.0197 '/' Capacity=9.07 cfs Outflow=8.16 cfs 26,619 cf

Reach D14: TO DMH15 Avg. Flow Depth=1.65' Max Vel=7.74 fps Inflow=26.92 cfs 93,219 cf
30.0" Round Pipe n=0.013 L=390.0' S=0.0071 '/' Capacity=34.44 cfs Outflow=25.87 cfs 93,219 cf

Reach D15: TO DMH16 Avg. Flow Depth=1.72' Max Vel=7.72 fps Inflow=28.13 cfs 100,938 cf
30.0" Round Pipe n=0.013 L=232.0' S=0.0069 '/' Capacity=34.06 cfs Outflow=27.57 cfs 100,938 cf

Reach D16: TO BASIN#1 Avg. Flow Depth=1.69' Max Vel=7.79 fps Inflow=27.57 cfs 100,938 cf
30.0" Round Pipe n=0.013 L=71.0' S=0.0070 '/' Capacity=34.42 cfs Outflow=27.47 cfs 100,938 cf

Reach D6: TO DMH14 Avg. Flow Depth=0.00' Max Vel=0.00 fps
24.0" Round Pipe n=0.013 L=14.0' S=0.0071 '/' Capacity=19.12 cfs Outflow=0.00 cfs 0 cf

Reach D7: TO DMH8 Avg. Flow Depth=0.18' Max Vel=4.66 fps Inflow=0.44 cfs 1,433 cf
12.0" Round Pipe n=0.013 L=87.0' S=0.0328 '/' Capacity=6.45 cfs Outflow=0.44 cfs 1,433 cf

Reach D8: TO DMH9 Avg. Flow Depth=0.18' Max Vel=4.54 fps Inflow=0.44 cfs 1,433 cf
12.0" Round Pipe n=0.013 L=113.0' S=0.0301 '/' Capacity=6.18 cfs Outflow=0.43 cfs 1,433 cf

Reach D9: TO DMH10 Avg. Flow Depth=0.21' Max Vel=3.48 fps Inflow=0.43 cfs 1,433 cf
12.0" Round Pipe n=0.013 L=70.0' S=0.0143 '/' Capacity=4.26 cfs Outflow=0.42 cfs 1,433 cf

Reach DCB-R101: TO DMH-R100 Avg. Flow Depth=0.40' Max Vel=7.54 fps Inflow=2.20 cfs 6,952 cf
12.0" Round Pipe n=0.011 L=8.0' S=0.0250 '/' Capacity=6.66 cfs Outflow=2.19 cfs 6,952 cf

Reach DCB-R102: TO DMH-R101 Avg. Flow Depth=0.30' Max Vel=5.12 fps Inflow=1.03 cfs 3,206 cf
12.0" Round Pipe n=0.011 L=80.0' S=0.0150 '/' Capacity=5.16 cfs Outflow=1.03 cfs 3,206 cf

Reach DCB-S1: TO DMH-S1 Avg. Flow Depth=0.32' Max Vel=4.75 fps Inflow=1.02 cfs 3,331 cf
12.0" Round Pipe n=0.011 L=24.0' S=0.0125 '/' Capacity=4.71 cfs Outflow=1.02 cfs 3,331 cf

Reach DCB-S2: TO DMH-S1 Avg. Flow Depth=0.30' Max Vel=5.99 fps Inflow=1.18 cfs 3,710 cf
12.0" Round Pipe n=0.011 L=14.0' S=0.0214 '/' Capacity=6.16 cfs Outflow=1.17 cfs 3,710 cf

Reach DCB-S3: TO DMH-S1 Avg. Flow Depth=0.55' Max Vel=5.39 fps Inflow=2.39 cfs 7,911 cf
12.0" Round Pipe n=0.011 L=21.0' S=0.0095 '/' Capacity=4.11 cfs Outflow=2.38 cfs 7,911 cf

Reach DCB-S4: TO DMH-S1 Avg. Flow Depth=0.44' Max Vel=8.58 fps Inflow=2.88 cfs 9,629 cf
12.0" Round Pipe n=0.011 L=7.0' S=0.0286 '/' Capacity=7.12 cfs Outflow=2.88 cfs 9,629 cf

Reach DCB1: TO DMH#1 Avg. Flow Depth=0.23' Max Vel=3.01 fps Inflow=0.42 cfs 1,352 cf
12.0" Round Pipe n=0.013 L=61.0' S=0.0098 '/' Capacity=3.53 cfs Outflow=0.42 cfs 1,352 cf

Reach DCB2: TO DMH#2 Avg. Flow Depth=0.42' Max Vel=4.82 fps Inflow=1.54 cfs 5,020 cf
12.0" Round Pipe n=0.013 L=30.0' S=0.0133 '/' Capacity=4.11 cfs Outflow=1.53 cfs 5,020 cf

Reach DCB3: TO DMH#3 Avg. Flow Depth=0.57' Max Vel=3.74 fps Inflow=1.74 cfs 5,699 cf
12.0" Round Pipe n=0.013 L=48.0' S=0.0062 '/' Capacity=2.82 cfs Outflow=1.71 cfs 5,699 cf

Reach DCB30: TO BASIN Avg. Flow Depth=0.87' Max Vel=7.21 fps Inflow=6.60 cfs 30,651 cf
15.0" Round Pipe n=0.013 L=140.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=6.57 cfs 30,651 cf

Reach DCB4: TO DMH#4 Avg. Flow Depth=0.32' Max Vel=3.34 fps Inflow=0.71 cfs 2,287 cf
12.0" Round Pipe n=0.013 L=23.0' S=0.0087 '/' Capacity=3.32 cfs Outflow=0.71 cfs 2,287 cf

Reach DCB5: TO DMH#5 Avg. Flow Depth=0.50' Max Vel=4.39 fps Inflow=1.73 cfs 5,856 cf
12.0" Round Pipe n=0.013 L=21.0' S=0.0095 '/' Capacity=3.48 cfs Outflow=1.72 cfs 5,856 cf

Reach DCB6: TO DMH#6 Avg. Flow Depth=0.51' Max Vel=5.84 fps Inflow=2.34 cfs 7,614 cf
12.0" Round Pipe n=0.013 L=6.0' S=0.0167 '/' Capacity=4.60 cfs Outflow=2.34 cfs 7,614 cf

Reach DCBR100: TO DMH R100 Avg. Flow Depth=0.35' Max Vel=4.20 fps Inflow=1.05 cfs 3,440 cf
12.0" Round Pipe n=0.011 L=162.0' S=0.0086 '/' Capacity=3.91 cfs Outflow=1.02 cfs 3,440 cf

Reach DCBS10: TO DMH-S4 Avg. Flow Depth=0.12' Max Vel=5.61 fps Inflow=0.30 cfs 1,004 cf
12.0" Round Pipe n=0.011 L=9.0' S=0.0556 '/' Capacity=9.92 cfs Outflow=0.30 cfs 1,004 cf

Reach DCBS5: TO DMH-S8 Avg. Flow Depth=0.36' Max Vel=6.66 fps Inflow=1.68 cfs 5,433 cf
12.0" Round Pipe n=0.011 L=23.0' S=0.0217 '/' Capacity=6.21 cfs Outflow=1.68 cfs 5,433 cf

Reach DCBS6: TO DMH-S8 Avg. Flow Depth=0.34' Max Vel=7.77 fps Inflow=1.82 cfs 6,085 cf
12.0" Round Pipe n=0.011 L=16.0' S=0.0313 '/' Capacity=7.44 cfs Outflow=1.81 cfs 6,085 cf

Reach DCBS7: TO DMH-S6 Avg. Flow Depth=0.38' Max Vel=5.73 fps Inflow=1.55 cfs 5,791 cf
12.0" Round Pipe n=0.011 L=20.0' S=0.0150 '/' Capacity=5.16 cfs Outflow=1.55 cfs 5,791 cf

Reach DCBS8: TO DMH-S6 Avg. Flow Depth=0.23' Max Vel=6.14 fps Inflow=0.84 cfs 2,783 cf
12.0" Round Pipe n=0.011 L=10.0' S=0.0300 '/' Capacity=7.29 cfs Outflow=0.84 cfs 2,783 cf

Reach DCBS9: TO DMH-S4 Avg. Flow Depth=0.22' Max Vel=5.84 fps Inflow=0.77 cfs 2,791 cf
12.0" Round Pipe n=0.011 L=18.0' S=0.0278 '/' Capacity=7.02 cfs Outflow=0.77 cfs 2,791 cf

Reach DMH-R101: TO DMH-S1 Avg. Flow Depth=0.68' Max Vel=6.11 fps Inflow=4.15 cfs 13,598 cf
15.0" Round Pipe n=0.011 L=265.0' S=0.0091 '/' Capacity=7.27 cfs Outflow=4.00 cfs 13,598 cf

Reach DMH-S1: TO DMH-S2 Avg. Flow Depth=0.86' Max Vel=5.77 fps Inflow=6.07 cfs 20,639 cf
18.0" Round Pipe n=0.011 L=279.0' S=0.0061 '/' Capacity=9.69 cfs Outflow=5.84 cfs 20,639 cf

Reach DMH-S2: TO DMH-S3 Avg. Flow Depth=1.02' Max Vel=8.52 fps Inflow=10.86 cfs 38,179 cf
18.0" Round Pipe n=0.011 L=42.0' S=0.0119 '/' Capacity=13.55 cfs Outflow=10.82 cfs 38,179 cf

Reach DMH-S3: TO FE-S1 Avg. Flow Depth=1.01' Max Vel=8.54 fps Inflow=10.82 cfs 38,179 cf
18.0" Round Pipe n=0.011 L=25.0' S=0.0120 '/' Capacity=13.60 cfs Outflow=10.80 cfs 38,179 cf

Reach DMH1: TO DMH#2 Avg. Flow Depth=0.19' Max Vel=3.88 fps Inflow=0.42 cfs 1,352 cf
12.0" Round Pipe n=0.013 L=65.0' S=0.0200 '/' Capacity=5.04 cfs Outflow=0.41 cfs 1,352 cf

Reach DMH2: TO DMH#3 Avg. Flow Depth=0.47' Max Vel=5.30 fps Inflow=1.93 cfs 6,372 cf
12.0" Round Pipe n=0.013 L=111.0' S=0.0144 '/' Capacity=4.28 cfs Outflow=1.91 cfs 6,372 cf

Reach DMH21: TO DMH#22 Avg. Flow Depth=0.48' Max Vel=6.34 fps Inflow=2.37 cfs 7,719 cf
12.0" Round Pipe n=0.013 L=168.0' S=0.0202 '/' Capacity=5.07 cfs Outflow=2.33 cfs 7,719 cf

Reach DMH22: TO DMH#15 Avg. Flow Depth=0.33' Max Vel=10.34 fps Inflow=2.33 cfs 7,719 cf
12.0" Round Pipe n=0.013 L=9.0' S=0.0778 '/' Capacity=9.94 cfs Outflow=2.33 cfs 7,719 cf

Reach DMH3: TO DMH#7 Avg. Flow Depth=0.87' Max Vel=8.95 fps Inflow=8.21 cfs 27,829 cf
15.0" Round Pipe n=0.013 L=13.0' S=0.0231 '/' Capacity=9.81 cfs Outflow=8.20 cfs 27,829 cf

Reach DMH4: TO DMH5 Avg. Flow Depth=0.32' Max Vel=3.22 fps Inflow=0.71 cfs 2,287 cf
12.0" Round Pipe n=0.013 L=77.0' S=0.0078 '/' Capacity=3.15 cfs Outflow=0.70 cfs 2,287 cf

Reach DMH5: TO DMH-6 Avg. Flow Depth=0.67' Max Vel=4.31 fps Inflow=2.40 cfs 8,143 cf
12.0" Round Pipe n=0.013 L=108.0' S=0.0074 '/' Capacity=3.07 cfs Outflow=2.37 cfs 8,143 cf

Reach DMH6: TO DMH#3 Avg. Flow Depth=0.77' Max Vel=5.88 fps Inflow=4.66 cfs 15,757 cf
15.0" Round Pipe n=0.013 L=150.0' S=0.0107 '/' Capacity=6.67 cfs Outflow=4.60 cfs 15,757 cf

Reach DMH7: TO UGS Avg. Flow Depth=0.92' Max Vel=8.42 fps Inflow=8.20 cfs 27,829 cf
15.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/' Capacity=9.14 cfs Outflow=8.20 cfs 27,829 cf

Reach DMH8: TO FE#B1 Avg. Flow Depth=0.55' Max Vel=6.31 fps Inflow=2.76 cfs 4,909 cf
12.0" Round Pipe n=0.013 L=50.0' S=0.0180 '/' Capacity=4.78 cfs Outflow=2.77 cfs 4,909 cf

Reach DMHd1: TO DMH#8 Avg. Flow Depth=0.45' Max Vel=4.78 fps Inflow=1.65 cfs 5,266 cf
12.0" Round Pipe n=0.013 L=82.0' S=0.0122 '/' Capacity=3.93 cfs Outflow=1.63 cfs 5,266 cf

Reach DMHD2: TO DMH#7 Avg. Flow Depth=0.82' Max Vel=6.49 fps Inflow=5.56 cfs 18,392 cf
15.0" Round Pipe n=0.013 L=8.0' S=0.0125 '/' Capacity=7.22 cfs Outflow=5.56 cfs 18,392 cf

Reach DMHd3: TO DMH#2 Avg. Flow Depth=0.20' Max Vel=6.42 fps Inflow=0.74 cfs 2,509 cf
12.0" Round Pipe n=0.013 L=27.0' S=0.0519 '/' Capacity=8.11 cfs Outflow=0.74 cfs 2,509 cf

Reach DMHD4: TO DMH#2 Avg. Flow Depth=0.39' Max Vel=3.52 fps Inflow=1.01 cfs 3,289 cf
12.0" Round Pipe n=0.013 L=133.0' S=0.0075 '/' Capacity=3.09 cfs Outflow=0.99 cfs 3,289 cf

Reach DMHD5: TO DMH#2 Avg. Flow Depth=0.62' Max Vel=4.16 fps Inflow=2.14 cfs 7,069 cf
12.0" Round Pipe n=0.013 L=70.0' S=0.0071 '/' Capacity=3.01 cfs Outflow=2.12 cfs 7,069 cf

Reach DMHD6: TO DMH#5 Avg. Flow Depth=0.40' Max Vel=3.35 fps Inflow=0.98 cfs 3,248 cf
12.0" Round Pipe n=0.013 L=59.0' S=0.0068 '/' Capacity=2.93 cfs Outflow=0.97 cfs 3,248 cf

Reach DMHD7: TO UGS#1 Avg. Flow Depth=0.82' Max Vel=6.49 fps Inflow=5.56 cfs 18,392 cf
15.0" Round Pipe n=0.013 L=12.0' S=0.0125 '/' Capacity=7.22 cfs Outflow=5.55 cfs 18,392 cf

Reach DMHD8: TO DMH#2 Avg. Flow Depth=0.57' Max Vel=5.39 fps Inflow=2.47 cfs 8,033 cf
12.0" Round Pipe n=0.013 L=39.0' S=0.0128 '/' Capacity=4.03 cfs Outflow=2.46 cfs 8,033 cf

Reach DMHR100: TO DMH-R101 Avg. Flow Depth=0.65' Max Vel=5.91 fps Inflow=3.18 cfs 10,392 cf
12.0" Round Pipe n=0.011 L=188.0' S=0.0101 '/' Capacity=4.23 cfs Outflow=3.13 cfs 10,392 cf

Reach DMHS10: TO DMH-S11 Avg. Flow Depth=1.02' Max Vel=7.83 fps Inflow=12.54 cfs 44,355 cf
24.0" Round Pipe n=0.013 L=240.0' S=0.0117 '/' Capacity=24.43 cfs Outflow=12.33 cfs 44,355 cf

Reach DMHS11: TO DMH-D14 Avg. Flow Depth=1.18' Max Vel=6.38 fps Inflow=12.33 cfs 44,355 cf
24.0" Round Pipe n=0.013 L=130.0' S=0.0069 '/' Capacity=18.82 cfs Outflow=12.14 cfs 44,355 cf

Reach DMHS4: TO DMH-S5 Avg. Flow Depth=0.30' Max Vel=5.14 fps Inflow=1.04 cfs 3,795 cf
12.0" Round Pipe n=0.011 L=126.0' S=0.0151 '/' Capacity=5.17 cfs Outflow=1.02 cfs 3,795 cf

Reach DMHS5: TO DMH-S6 Avg. Flow Depth=0.30' Max Vel=5.09 fps Inflow=1.02 cfs 3,795 cf
12.0" Round Pipe n=0.011 L=126.0' S=0.0151 '/' Capacity=5.17 cfs Outflow=1.00 cfs 3,795 cf

Reach DMHS6: TO DMH-S7 Avg. Flow Depth=0.44' Max Vel=8.34 fps Inflow=3.27 cfs 12,369 cf
15.0" Round Pipe n=0.011 L=20.0' S=0.0250 '/' Capacity=12.07 cfs Outflow=3.27 cfs 12,369 cf

Reach DMHS7: TO DMH-S9 Avg. Flow Depth=0.71' Max Vel=9.24 fps Inflow=6.63 cfs 23,887 cf
15.0" Round Pipe n=0.011 L=20.0' S=0.0200 '/' Capacity=10.80 cfs Outflow=6.62 cfs 23,887 cf

Reach DMHS8: TO DMH-S7 Avg. Flow Depth=0.64' Max Vel=5.47 fps Inflow=3.49 cfs 11,518 cf
15.0" Round Pipe n=0.011 L=184.0' S=0.0076 '/' Capacity=6.66 cfs Outflow=3.40 cfs 11,518 cf

Reach DMHS9: TO DMH-S10 Avg. Flow Depth=1.01' Max Vel=5.20 fps Inflow=6.62 cfs 23,887 cf
18.0" Round Pipe n=0.013 L=137.0' S=0.0062 '/' Capacity=8.27 cfs Outflow=6.49 cfs 23,887 cf

Reach DP#1: DP#1 Inflow=120.66 cfs 617,594 cf
Outflow=120.66 cfs 617,594 cf

Reach DP#5: DITCH Inflow=0.98 cfs 3,025 cf
Outflow=0.98 cfs 3,025 cf

Reach DRIP: TO YD#1 Inflow=0.23 cfs 796 cf
Outflow=0.23 cfs 796 cf

Reach R200: DP#2 Inflow=0.05 cfs 1,361 cf
Outflow=0.05 cfs 1,361 cf

Reach R300: DP#3 Inflow=0.02 cfs 753 cf
Outflow=0.02 cfs 753 cf

Reach R400: DP#4 Inflow=0.07 cfs 1,998 cf
Outflow=0.07 cfs 1,998 cf

Reach RF-1: TO DMH#3 Avg. Flow Depth=0.24' Max Vel=2.89 fps Inflow=0.28 cfs 1,007 cf
6.0" Round Pipe n=0.013 L=48.0' S=0.0104 '/' Capacity=0.57 cfs Outflow=0.27 cfs 1,007 cf

Reach RF-2: TO DMH#3 Avg. Flow Depth=0.22' Max Vel=2.89 fps Inflow=0.24 cfs 874 cf
6.0" Round Pipe n=0.012 L=61.0' S=0.0098 '/' Capacity=0.60 cfs Outflow=0.24 cfs 874 cf

Reach RF3: TO DMH#3 Avg. Flow Depth=0.15' Max Vel=2.47 fps Inflow=0.12 cfs 440 cf
6.0" Round Pipe n=0.012 L=94.0' S=0.0106 '/' Capacity=0.63 cfs Outflow=0.12 cfs 440 cf

Reach YD1: TO CO#1 Avg. Flow Depth=0.18' Max Vel=4.88 fps Inflow=0.42 cfs 1,428 cf
10.0" Round Pipe n=0.010 L=14.0' S=0.0214 '/' Capacity=4.17 cfs Outflow=0.42 cfs 1,428 cf

Reach YD2: TO D14 Avg. Flow Depth=0.24' Max Vel=8.19 fps Inflow=1.04 cfs 3,229 cf
10.0" Round Pipe n=0.010 L=9.0' S=0.0444 '/' Capacity=6.00 cfs Outflow=1.04 cfs 3,229 cf

Pond P1: BASIN#1 Peak Elev=337.11' Storage=44,440 cf Inflow=32.38 cfs 135,295 cf
Discarded=5.42 cfs 135,295 cf Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=5.42 cfs 135,295 cf

Pond P2: SETTLING POND Peak Elev=343.24' Storage=213 cf Inflow=0.35 cfs 2,894 cf
Outflow=0.21 cfs 2,894 cf

Pond UGS-B: TO DMH#8 Peak Elev=352.05' Storage=0.147 af Inflow=8.20 cfs 27,829 cf
Discarded=1.18 cfs 22,919 cf Primary=2.76 cfs 4,909 cf Outflow=3.93 cfs 27,829 cf

Pond USGD1: TO TEMP SETTLING BASIN Peak Elev=351.09' Storage=0.182 af Inflow=5.55 cfs 18,392 cf
Outflow=2.30 cfs 12,481 cf

Total Runoff Area = 3,429,734 sf Runoff Volume = 791,752 cf Average Runoff Depth = 2.77"
83.31% Pervious = 2,857,173 sf 16.69% Impervious = 572,561 sf

Summary for Subcatchment 2S: TO DCB#4

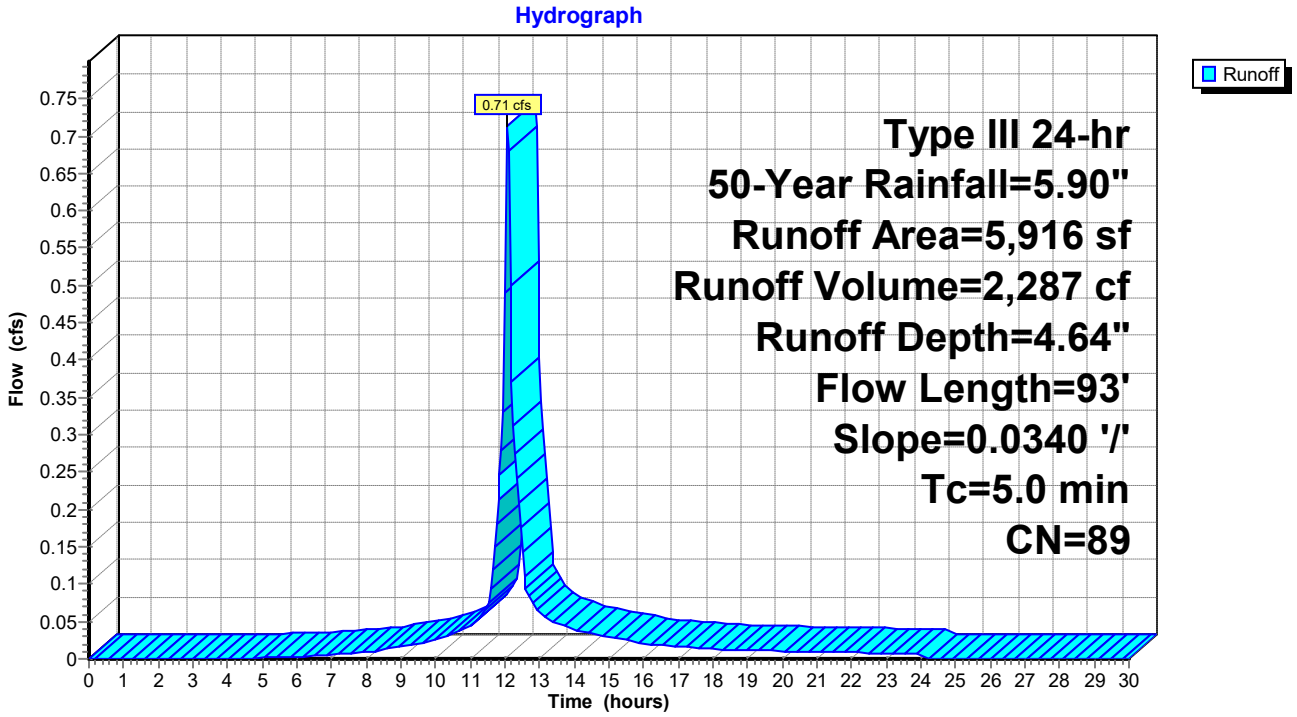
Runoff = 0.71 cfs @ 12.07 hrs, Volume= 2,287 cf, Depth= 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
919	39	>75% Grass cover, Good, HSG A
4,997	98	Paved parking, HSG A
5,916	89	Weighted Average
919		15.53% Pervious Area
4,997		84.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0340	1.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	43	0.0340	3.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	93	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: TO DCB#4



Summary for Subcatchment 3S: TO DCB#1

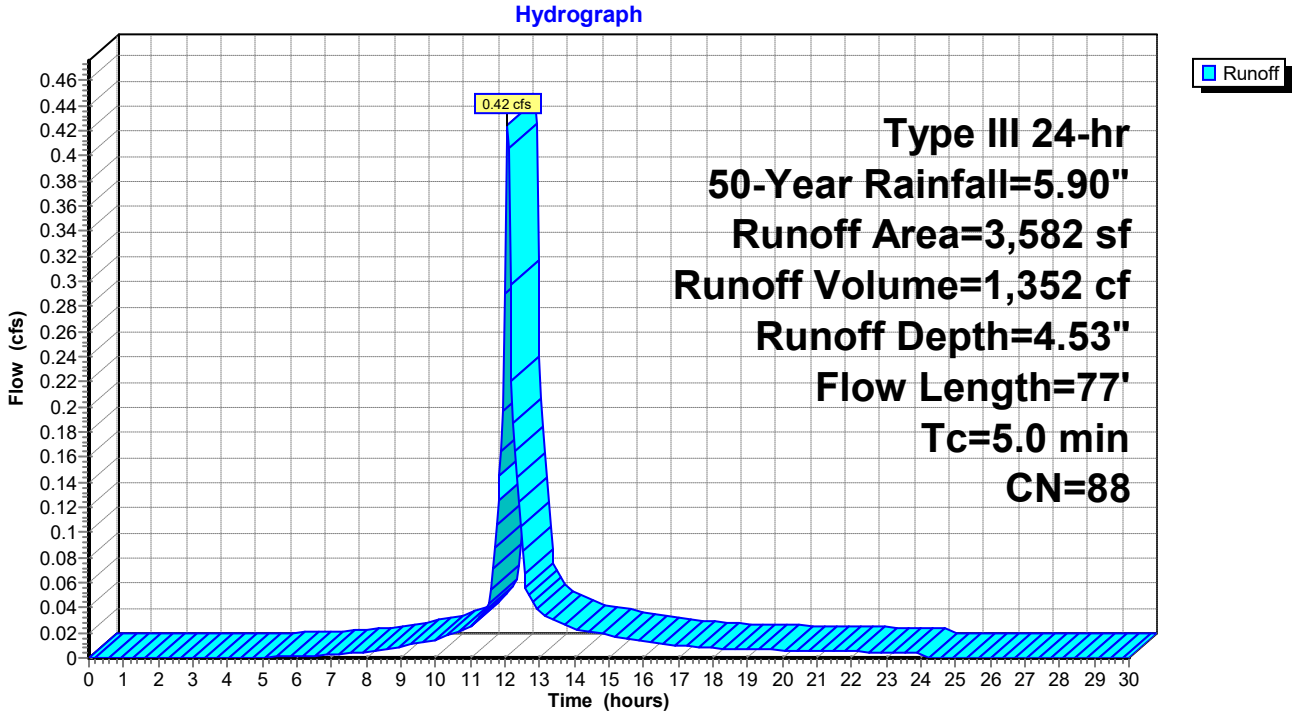
Runoff = 0.42 cfs @ 12.07 hrs, Volume= 1,352 cf, Depth= 4.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
615	39	>75% Grass cover, Good, HSG A
2,967	98	Paved parking, HSG A
3,582	88	Weighted Average
615		17.17% Pervious Area
2,967		82.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.9	44	0.0100	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	27	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	77	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: TO DCB#1



Summary for Subcatchment P-D1: TO CB-D1

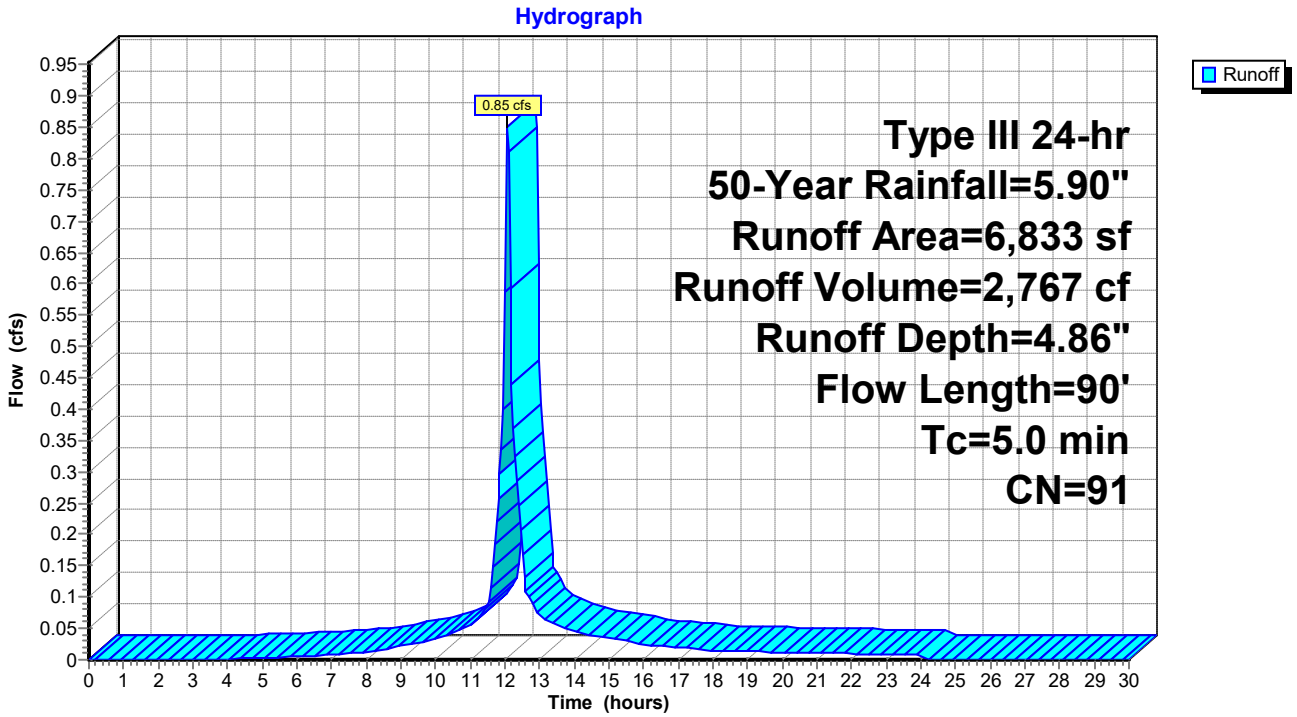
Runoff = 0.85 cfs @ 12.07 hrs, Volume= 2,767 cf, Depth= 4.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
762	39	>75% Grass cover, Good, HSG A
6,071	98	Paved parking, HSG A
6,833	91	Weighted Average
762		11.15% Pervious Area
6,071		88.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	16	0.0830	1.63		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	19	0.0100	0.72		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	15	0.0250	1.00		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	40	0.0250	3.21		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	90	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D1: TO CB-D1



Summary for Subcatchment P-D10*: TO CB-D8

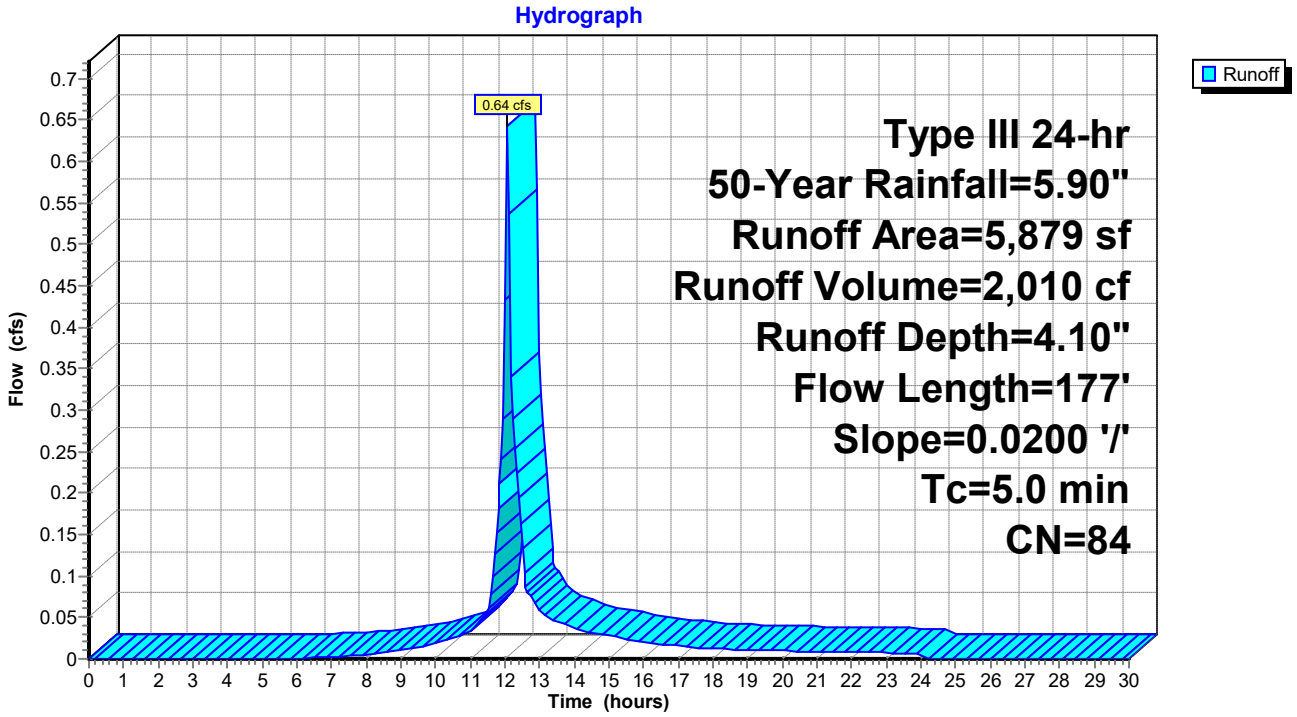
Runoff = 0.64 cfs @ 12.07 hrs, Volume= 2,010 cf, Depth= 4.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
1,363	39	>75% Grass cover, Good, HSG A
4,516	98	Paved parking, HSG A
5,879	84	Weighted Average
1,363		23.18% Pervious Area
4,516		76.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	127	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	177	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D10*: TO CB-D8



Summary for Subcatchment P-D11*: TO CB-D9

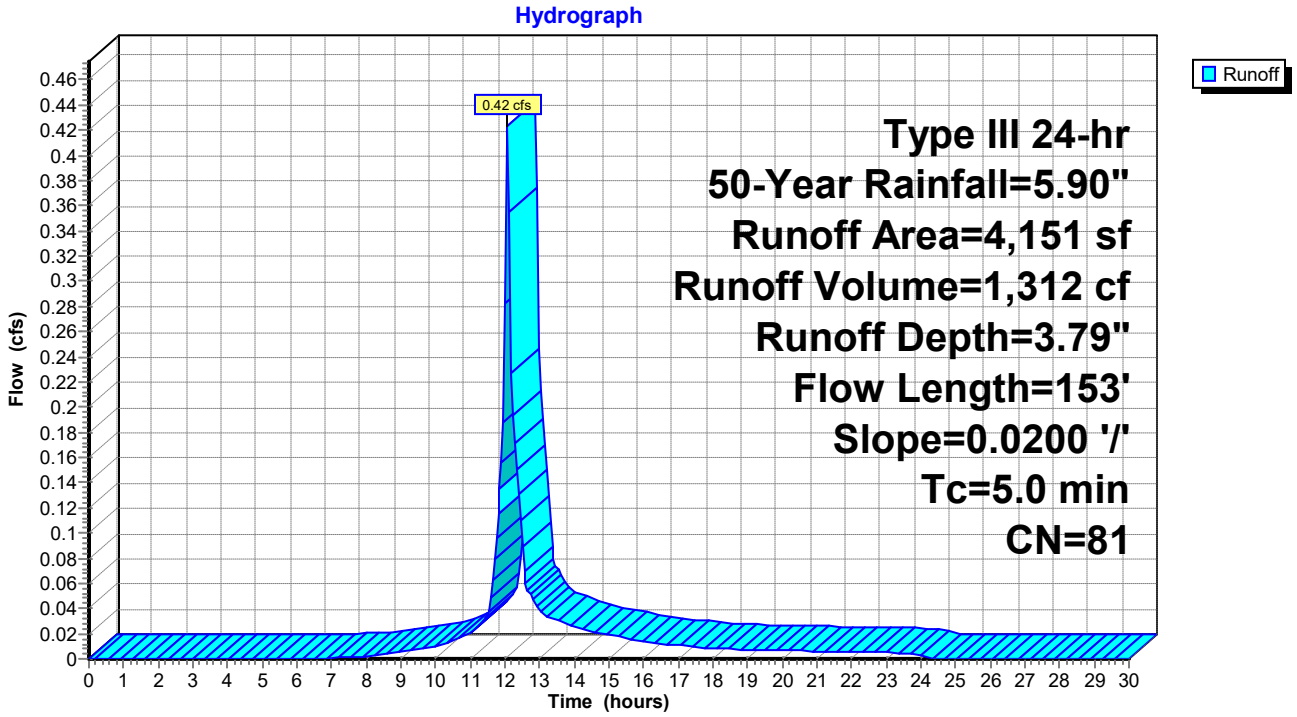
Runoff = 0.42 cfs @ 12.07 hrs, Volume= 1,312 cf, Depth= 3.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
1,166	39	>75% Grass cover, Good, HSG A
2,985	98	Paved parking, HSG A
4,151	81	Weighted Average
1,166		28.09% Pervious Area
2,985		71.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	153	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D11*: TO CB-D9



Summary for Subcatchment P-D12*: TO CB-D5

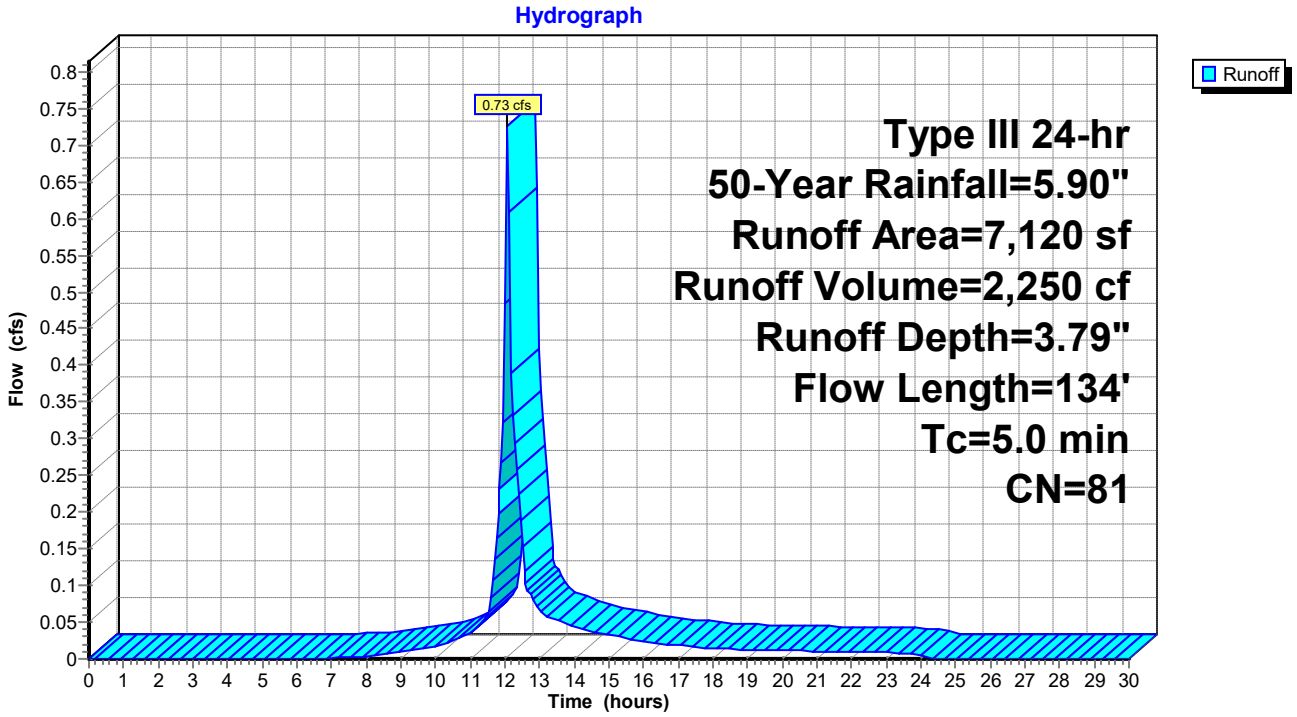
Runoff = 0.73 cfs @ 12.07 hrs, Volume= 2,250 cf, Depth= 3.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
2,024	39	>75% Grass cover, Good, HSG A
5,096	98	Paved parking, HSG A
7,120	81	Weighted Average
2,024		28.43% Pervious Area
5,096		71.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	84	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	134	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D12*: TO CB-D5



Summary for Subcatchment P-D2: TO CB-D2

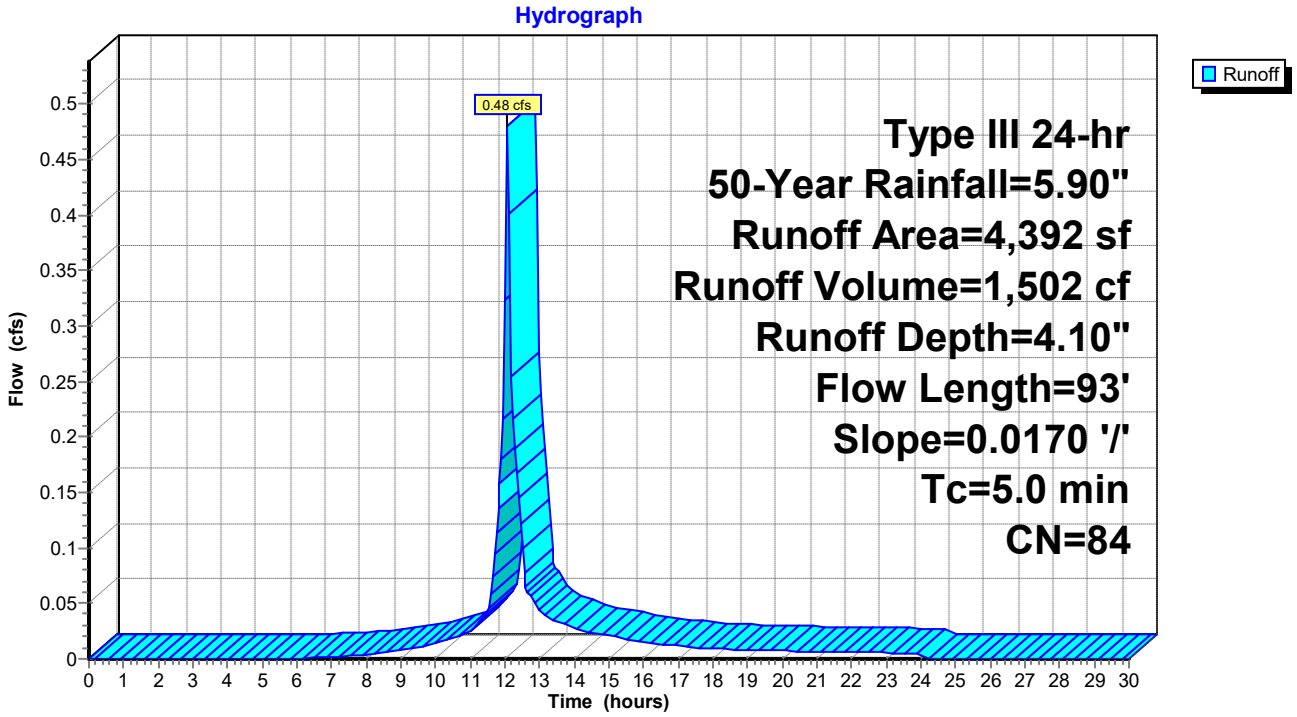
Runoff = 0.48 cfs @ 12.07 hrs, Volume= 1,502 cf, Depth= 4.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
1,030	39	>75% Grass cover, Good, HSG A
3,362	98	Paved parking, HSG A
4,392	84	Weighted Average
1,030		23.45% Pervious Area
3,362		76.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	50	0.0170	1.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	43	0.0170	2.65		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	93	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D2: TO CB-D2



Summary for Subcatchment P-D3: TO CB-D3

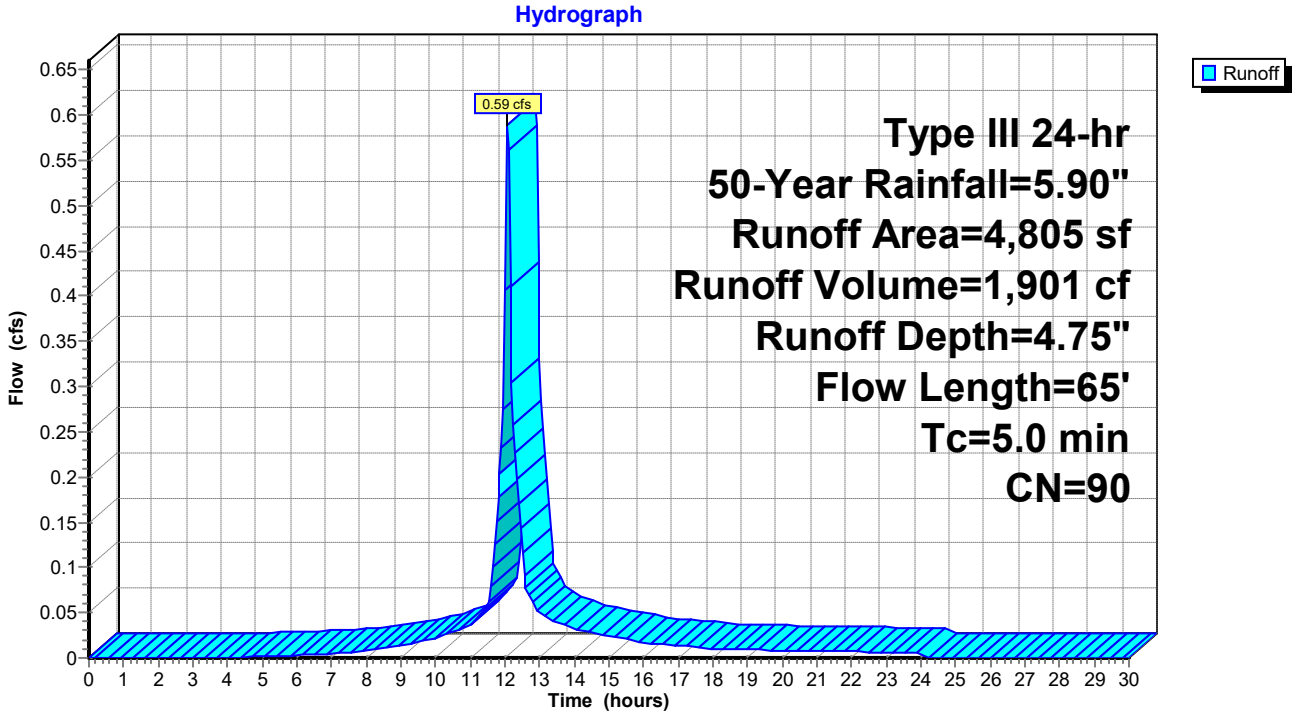
Runoff = 0.59 cfs @ 12.07 hrs, Volume= 1,901 cf, Depth= 4.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
613	39	>75% Grass cover, Good, HSG A
4,192	98	Paved parking, HSG A
4,805	90	Weighted Average
613		12.76% Pervious Area
4,192		87.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	8	0.0100	0.61		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	42	0.0250	1.22		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.1	15	0.0250	3.21		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	65	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D3: TO CB-D3



Summary for Subcatchment P-D4*: TO CB-D4

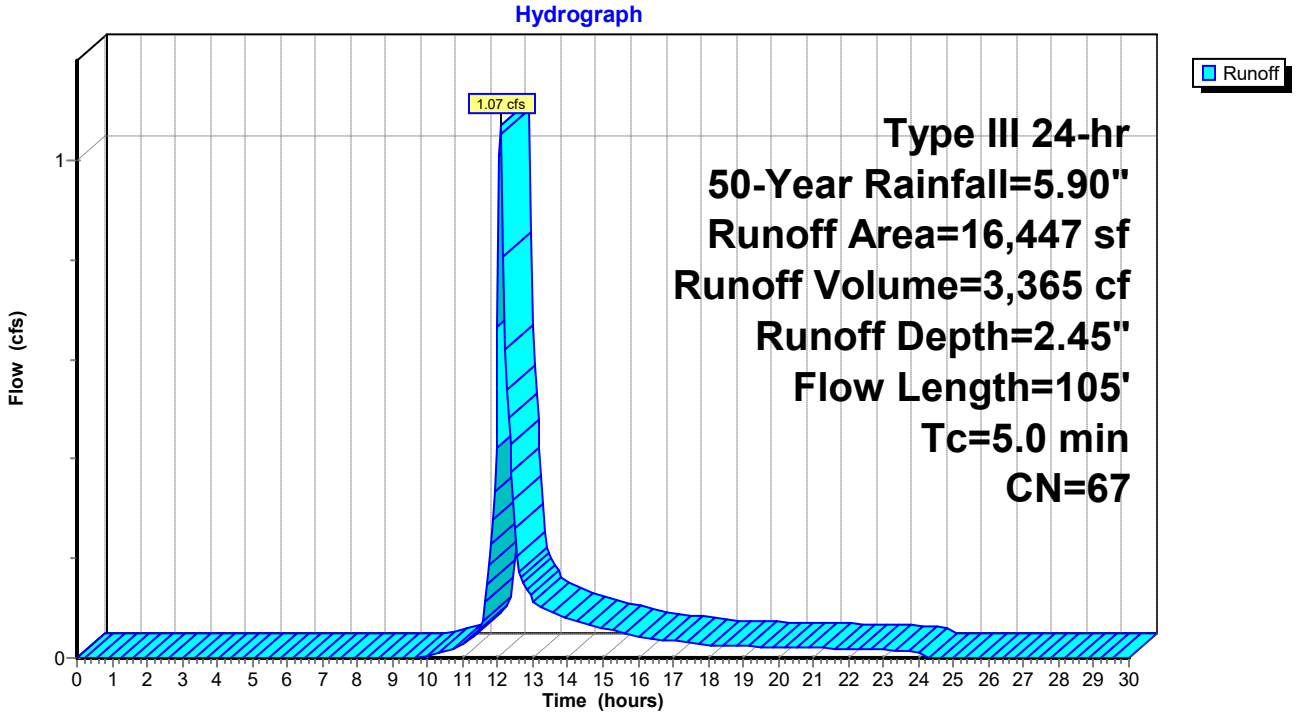
Runoff = 1.07 cfs @ 12.08 hrs, Volume= 3,365 cf, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
8,595	39	>75% Grass cover, Good, HSG A
7,852	98	Paved parking, HSG A
16,447	67	Weighted Average
8,595		52.26% Pervious Area
7,852		47.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	43	0.0800	0.24		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	7	0.0100	0.59		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	55	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.7	105	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D4*: TO CB-D4



Summary for Subcatchment P-D5*: TO CB-D6

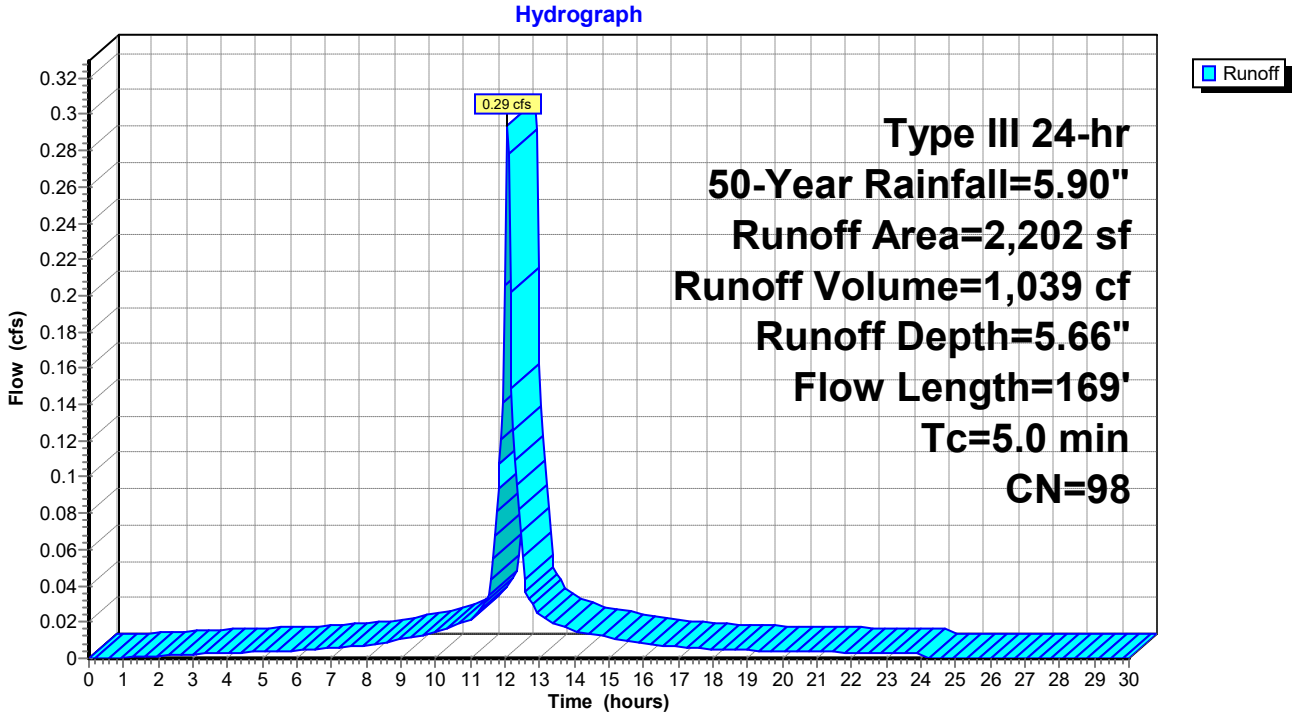
Runoff = 0.29 cfs @ 12.07 hrs, Volume= 1,039 cf, Depth= 5.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
2,202	98	Paved parking, HSG A
2,202		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.95		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	32	0.0190	1.04		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	119	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	169	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D5*: TO CB-D6



Summary for Subcatchment P-D6: TO CB-D7

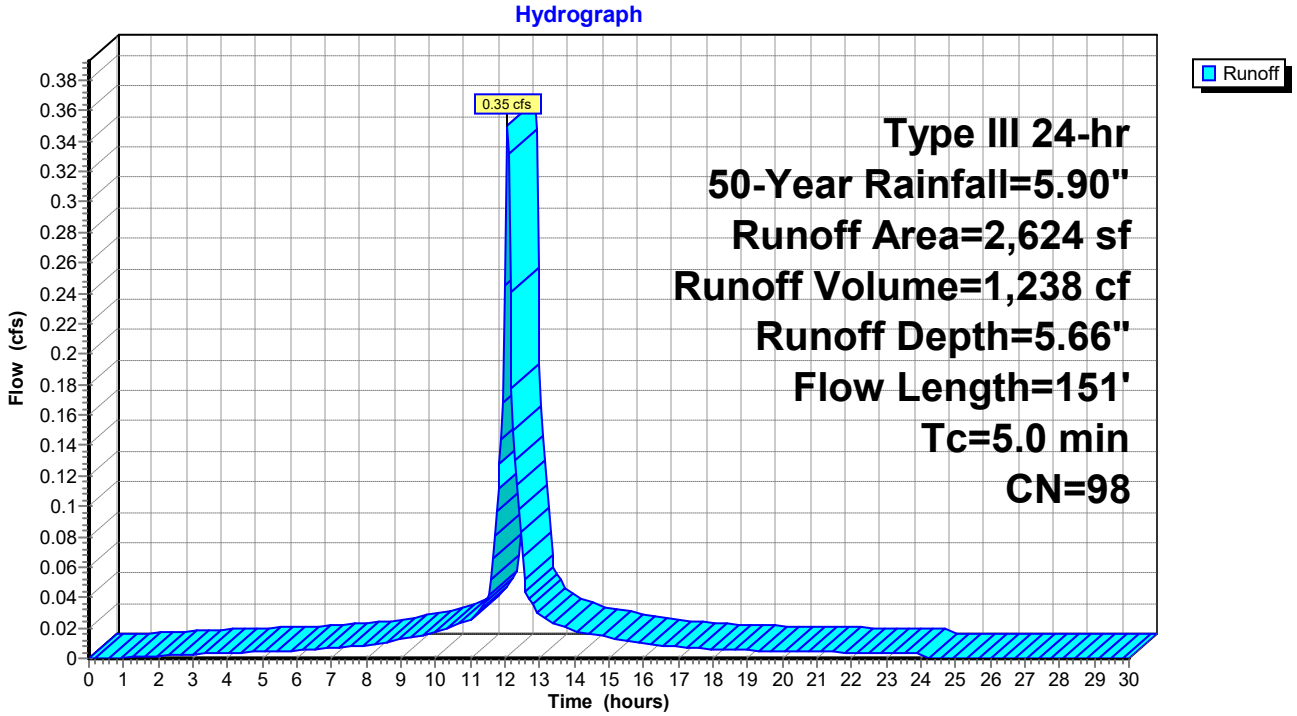
Runoff = 0.35 cfs @ 12.07 hrs, Volume= 1,238 cf, Depth= 5.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
2,624	98	Paved parking, HSG A
2,624		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.95		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	32	0.0190	1.04		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	101	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	151	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D6: TO CB-D7



Summary for Subcatchment P-D7: TO ROOF DRAIN

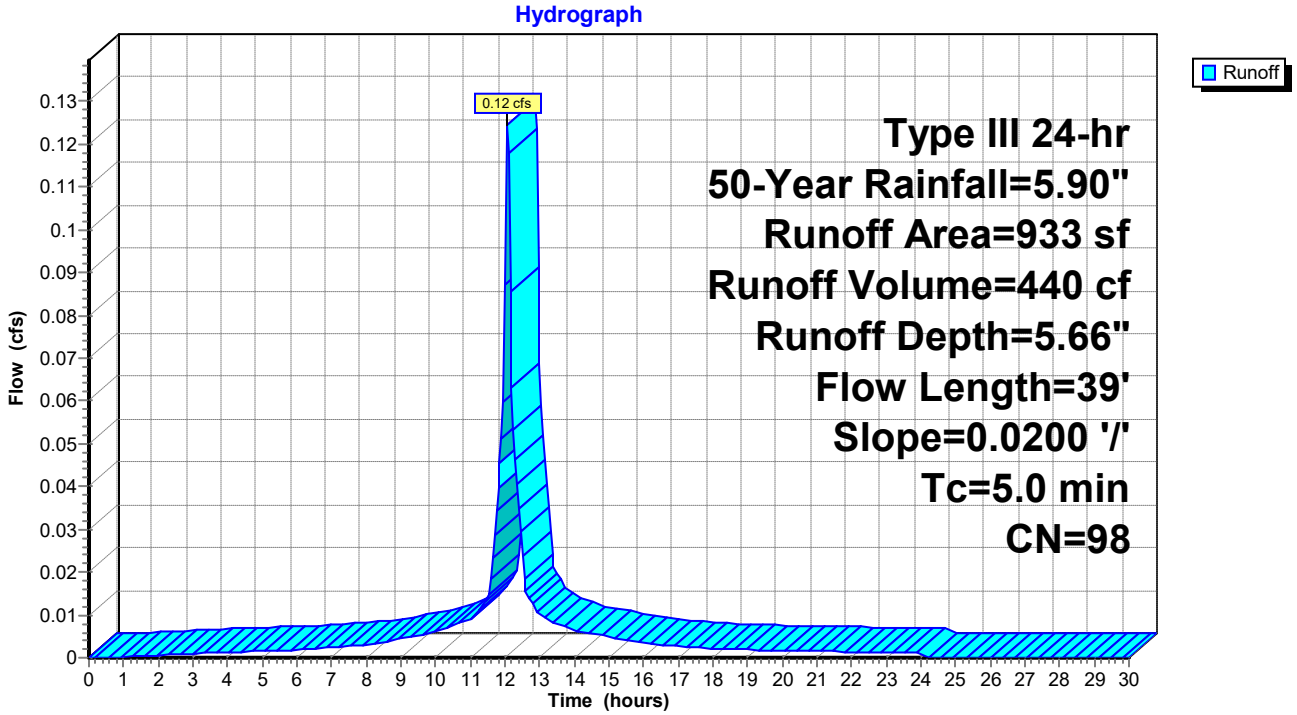
Runoff = 0.12 cfs @ 12.07 hrs, Volume= 440 cf, Depth= 5.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
933	98	Paved parking, HSG A
933		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D7: TO ROOF DRAIN



Summary for Subcatchment P-D8: TO ROOF DRAIN

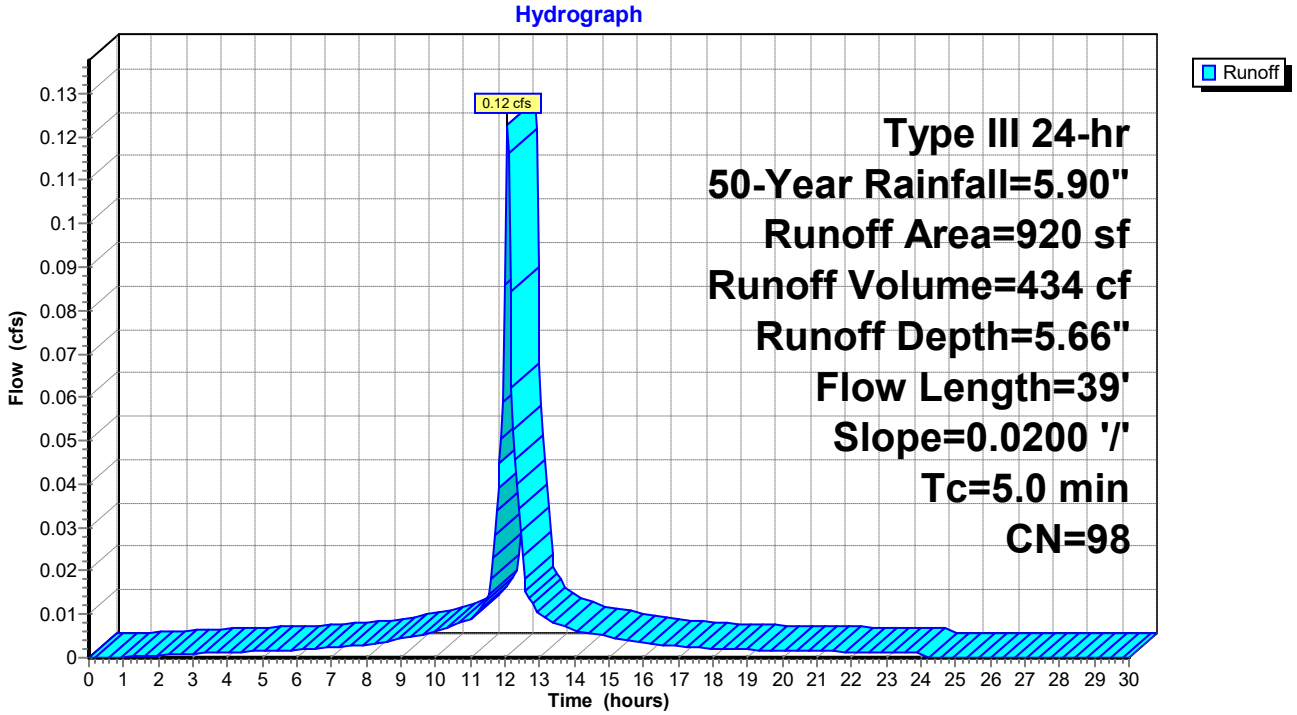
Runoff = 0.12 cfs @ 12.07 hrs, Volume= 434 cf, Depth= 5.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
920	98	Paved parking, HSG A
920		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D8: TO ROOF DRAIN



Summary for Subcatchment P-D9: TO ROOF DRAIN

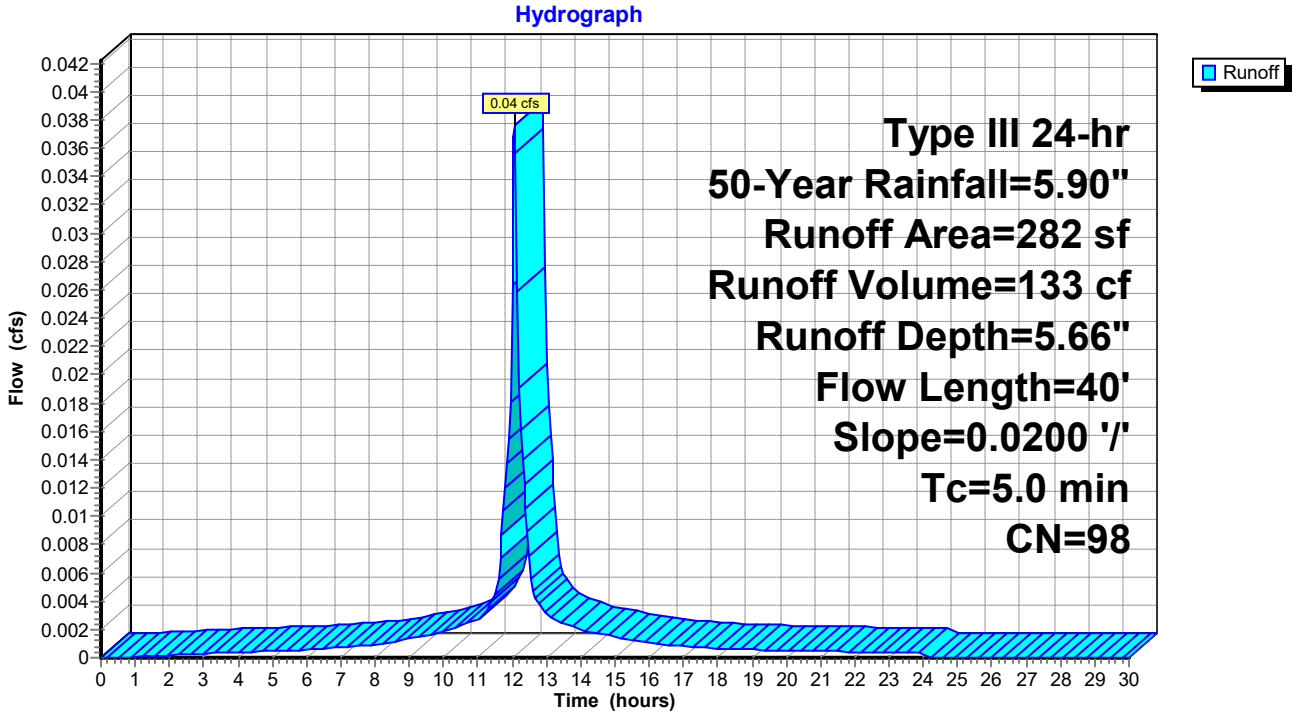
Runoff = 0.04 cfs @ 12.07 hrs, Volume= 133 cf, Depth= 5.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
282	98	Paved parking, HSG A
282		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.11		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	40	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D9: TO ROOF DRAIN



Summary for Subcatchment P-S106: TO DCB-R102

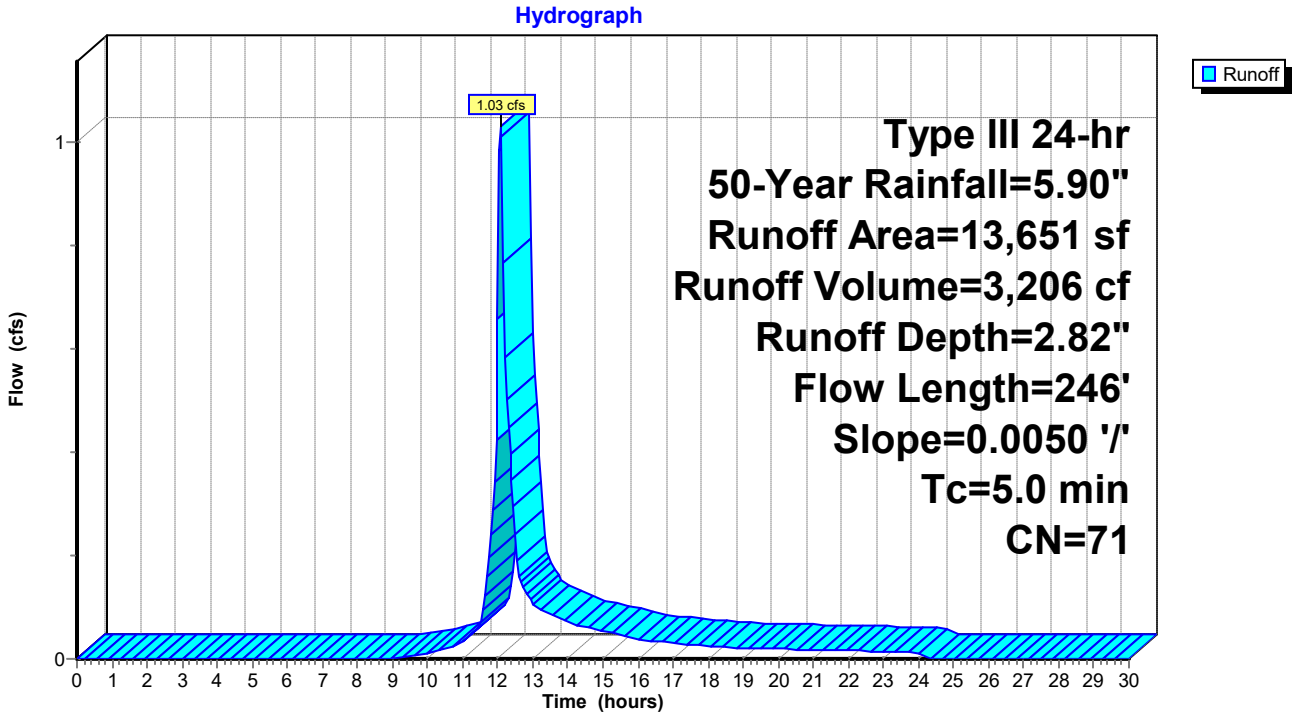
Runoff = 1.03 cfs @ 12.08 hrs, Volume= 3,206 cf, Depth= 2.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
6,360	39	>75% Grass cover, Good, HSG A
7,291	98	Paved parking, HSG A
13,651	71	Weighted Average
6,360		46.59% Pervious Area
7,291		53.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.3	196	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.6	246	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S106: TO DCB-R102



Summary for Subcatchment P-S107: TO DCB-R101

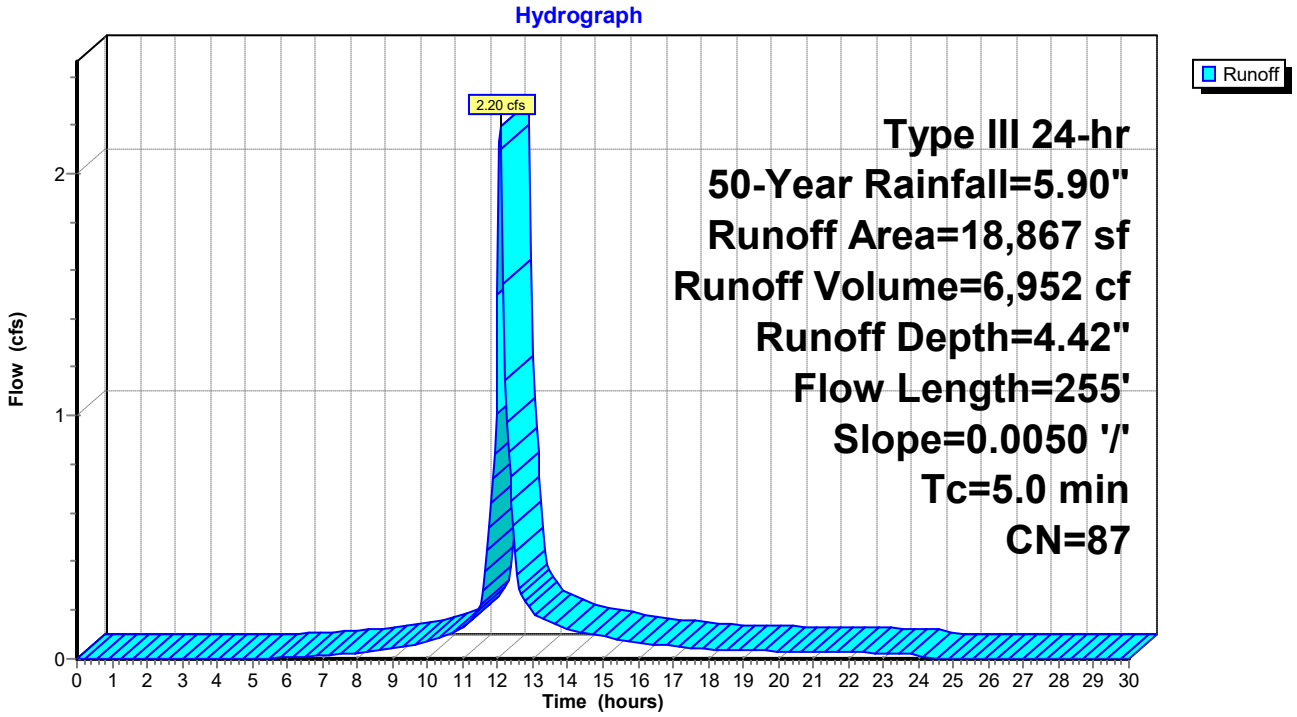
Runoff = 2.20 cfs @ 12.07 hrs, Volume= 6,952 cf, Depth= 4.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
3,590	39	>75% Grass cover, Good, HSG A
15,277	98	Paved parking, HSG A
18,867	87	Weighted Average
3,590		19.03% Pervious Area
15,277		80.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.4	205	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.7	255	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S107: TO DCB-R101



Summary for Subcatchment P-S108: TO DCB-R100

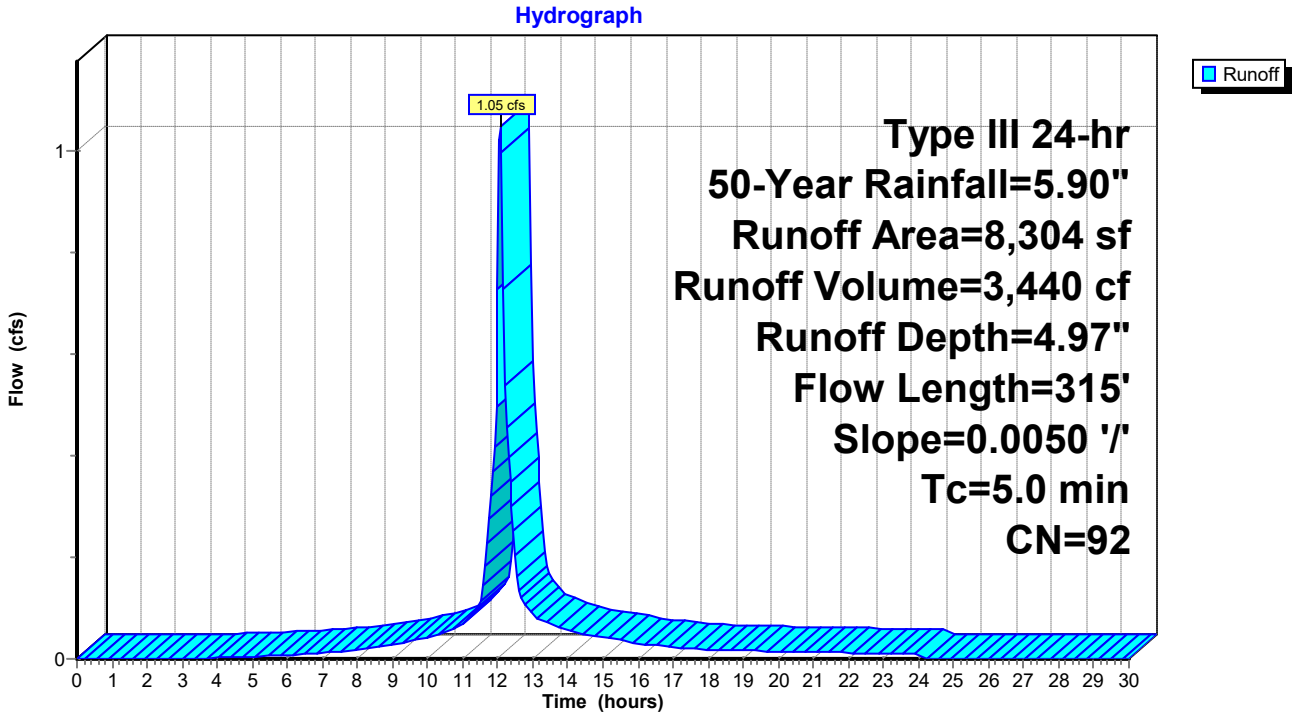
Runoff = 1.05 cfs @ 12.07 hrs, Volume= 3,440 cf, Depth= 4.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
847	39	>75% Grass cover, Good, HSG A
7,457	98	Paved parking, HSG A
8,304	92	Weighted Average
847		10.20% Pervious Area
7,457		89.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
3.1	265	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.4	315	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S108: TO DCB-R100



Summary for Subcatchment P-S109: TO DRAINAGE DITCH

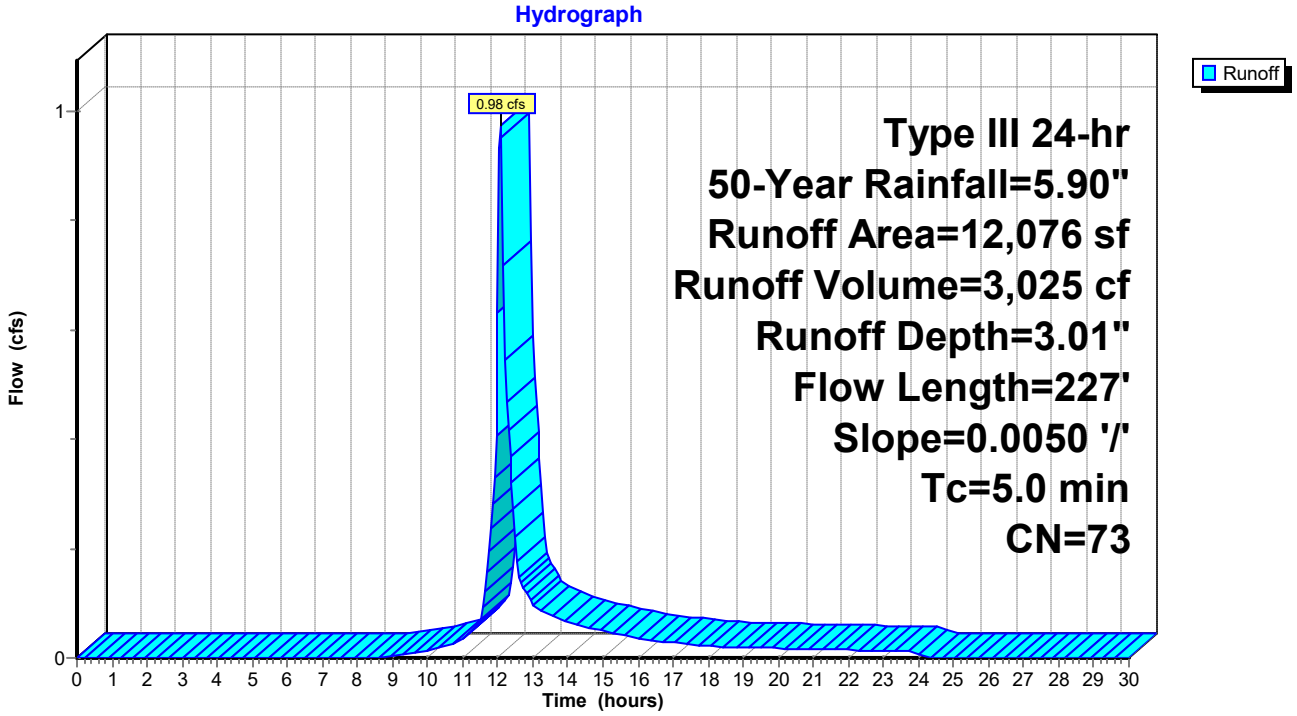
Runoff = 0.98 cfs @ 12.08 hrs, Volume= 3,025 cf, Depth= 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
4,506	39	>75% Grass cover, Good, HSG A
2,802	98	Paved parking, HSG A
4,165	98	Paved parking, HSG A
603	39	>75% Grass cover, Good, HSG A
12,076	73	Weighted Average
5,109		42.31% Pervious Area
6,967		57.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.1	177	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.4	227	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S109: TO DRAINAGE DITCH



Summary for Subcatchment P-SUB1: TO DCB-S1

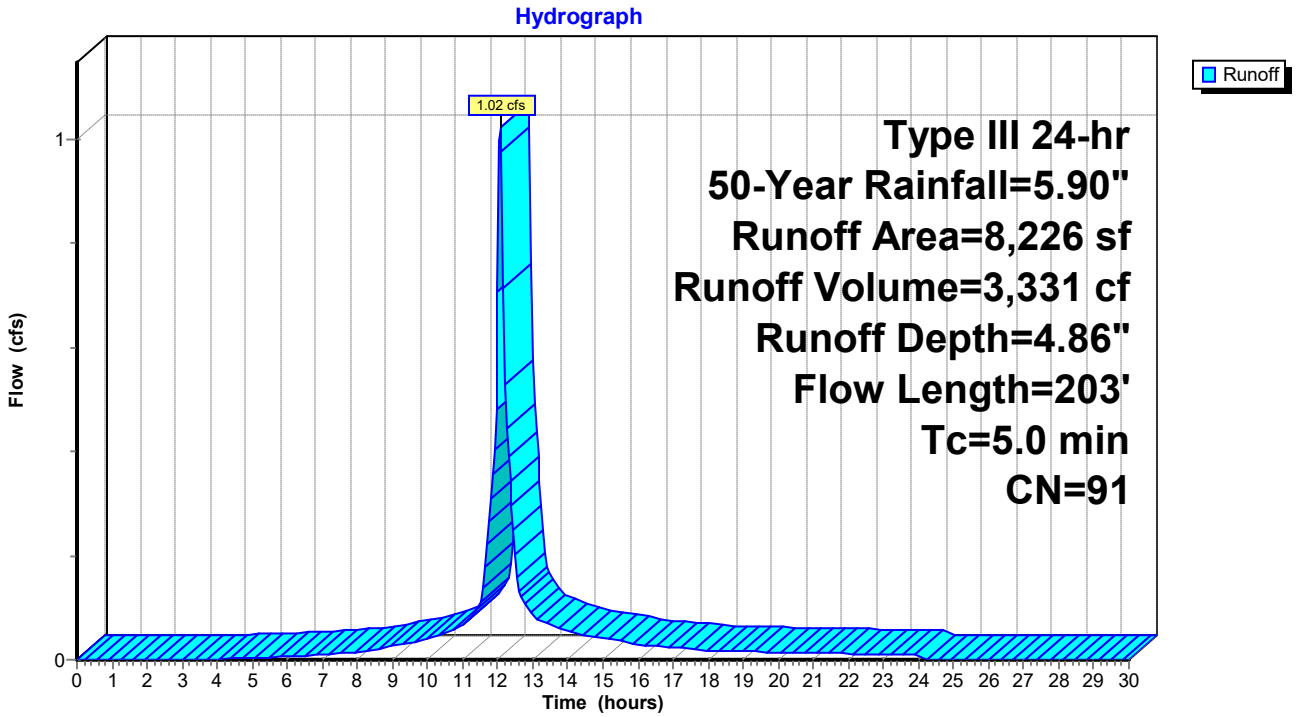
Runoff = 1.02 cfs @ 12.07 hrs, Volume= 3,331 cf, Depth= 4.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
1,001	39	>75% Grass cover, Good, HSG A
7,225	98	Paved parking, HSG A
8,226	91	Weighted Average
1,001		12.17% Pervious Area
7,225		87.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0200	0.10		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	10	0.0200	0.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	33	0.0300	1.25		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	153	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	203	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB1: TO DCB-S1



Summary for Subcatchment P-SUB2: TO DMH-S1

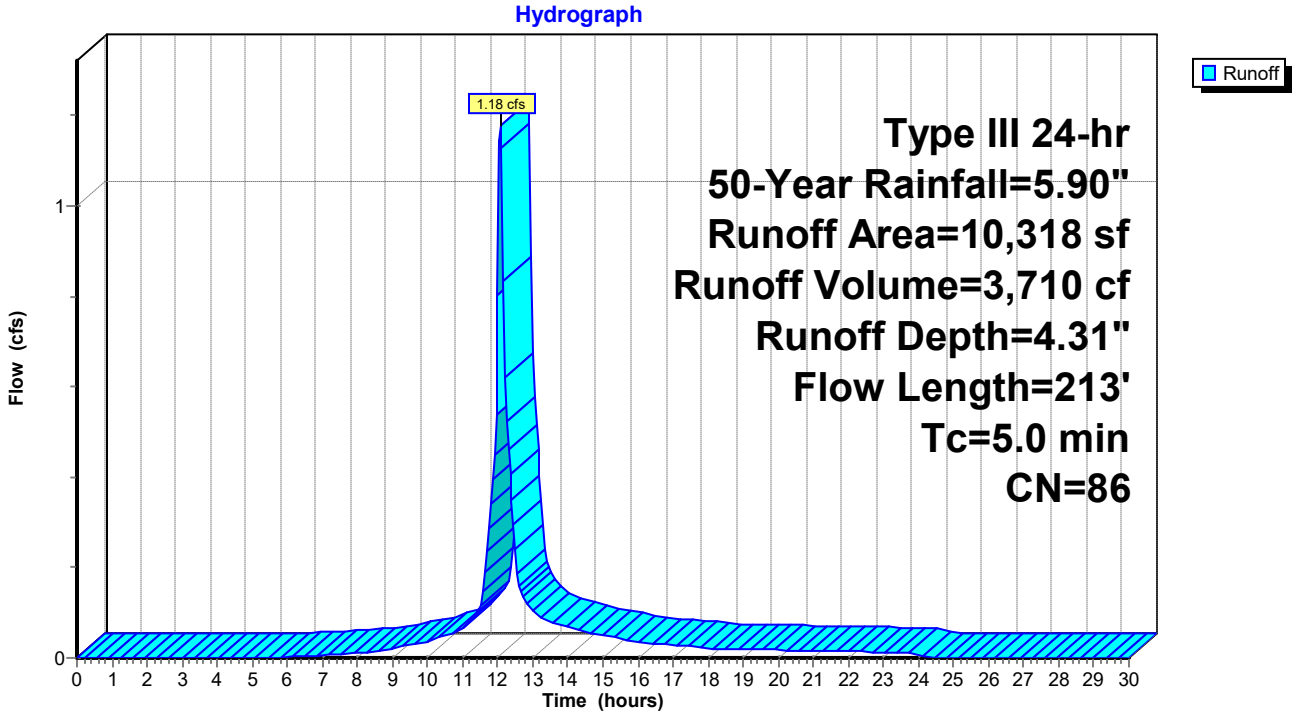
Runoff = 1.18 cfs @ 12.07 hrs, Volume= 3,710 cf, Depth= 4.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
2,017	39	>75% Grass cover, Good, HSG A
8,301	98	Paved parking, HSG A
10,318	86	Weighted Average
2,017		19.55% Pervious Area
8,301		80.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	25	0.0200	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	25	0.0300	1.19		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.8	163	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.5	213	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB2: TO DMH-S1



Summary for Subcatchment P-SUB3: TO DCB-S3

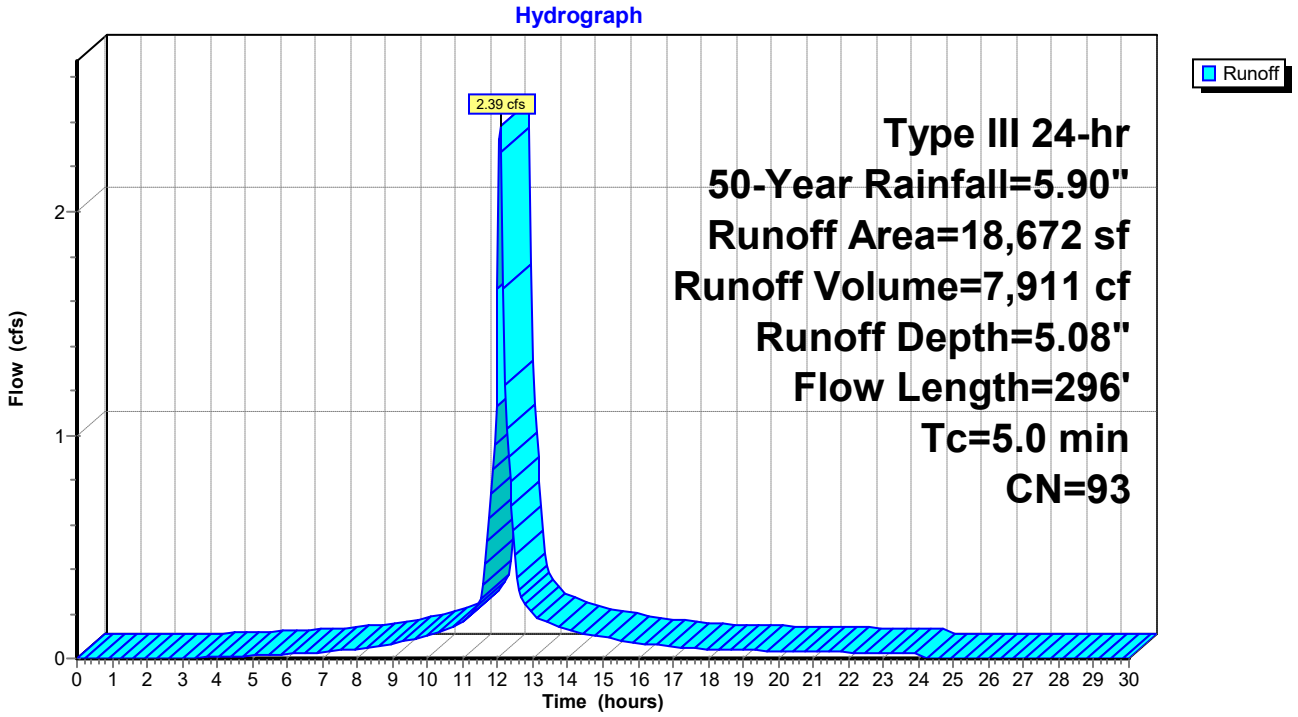
Runoff = 2.39 cfs @ 12.07 hrs, Volume= 7,911 cf, Depth= 5.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
1,241	39	>75% Grass cover, Good, HSG A
10,029	98	Paved parking, HSG A
938	80	>75% Grass cover, Good, HSG D
6,464	98	Paved parking, HSG D
18,672	93	Weighted Average
2,179		11.67% Pervious Area
16,493		88.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0200	0.10		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	10	0.0150	0.75		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	33	0.0130	0.90		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.8	246	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.8	296	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB3: TO DCB-S3



Summary for Subcatchment P-SUB4: TO DCB-S4

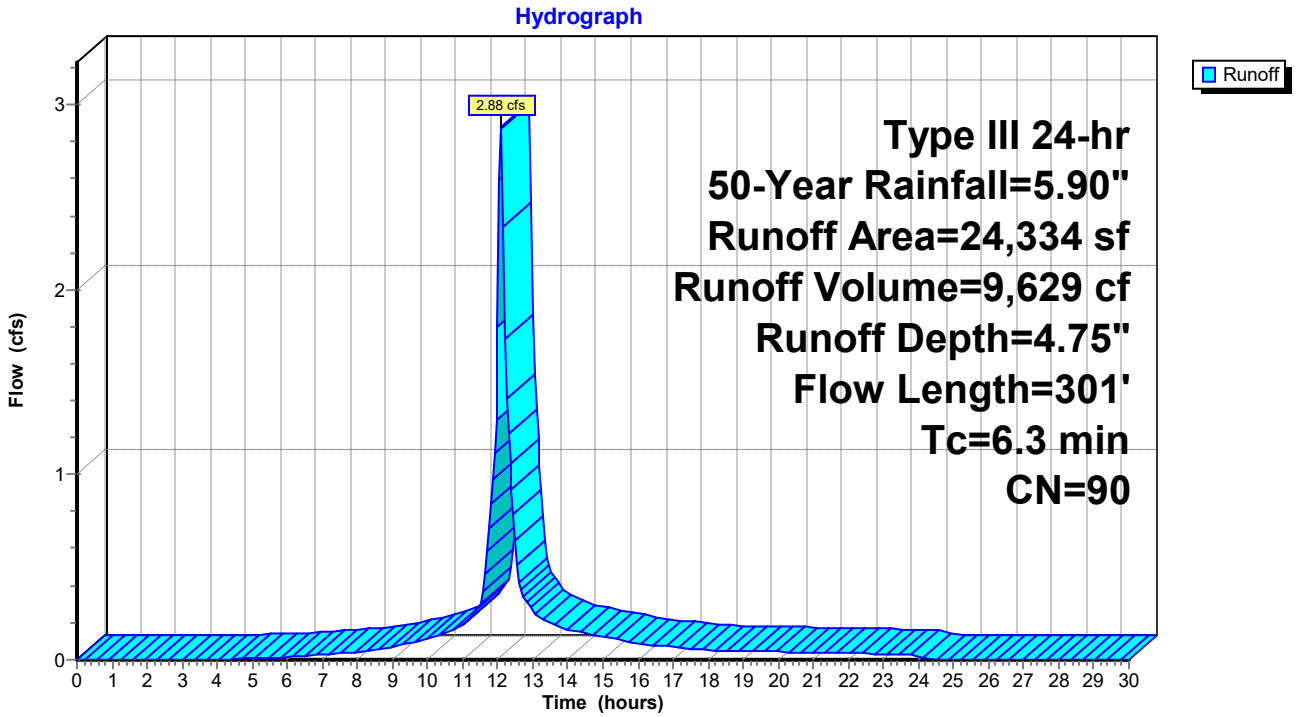
Runoff = 2.88 cfs @ 12.09 hrs, Volume= 9,629 cf, Depth= 4.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
3,109	39	>75% Grass cover, Good, HSG A
12,902	98	Paved parking, HSG A
867	80	>75% Grass cover, Good, HSG D
7,456	98	Paved parking, HSG D
24,334	90	Weighted Average
3,976		16.34% Pervious Area
20,358		83.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	32	0.0200	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	18	0.0150	0.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.8	251	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.3	301	Total			

Subcatchment P-SUB4: TO DCB-S4



Summary for Subcatchment P-SUB5: TO DCB-S5

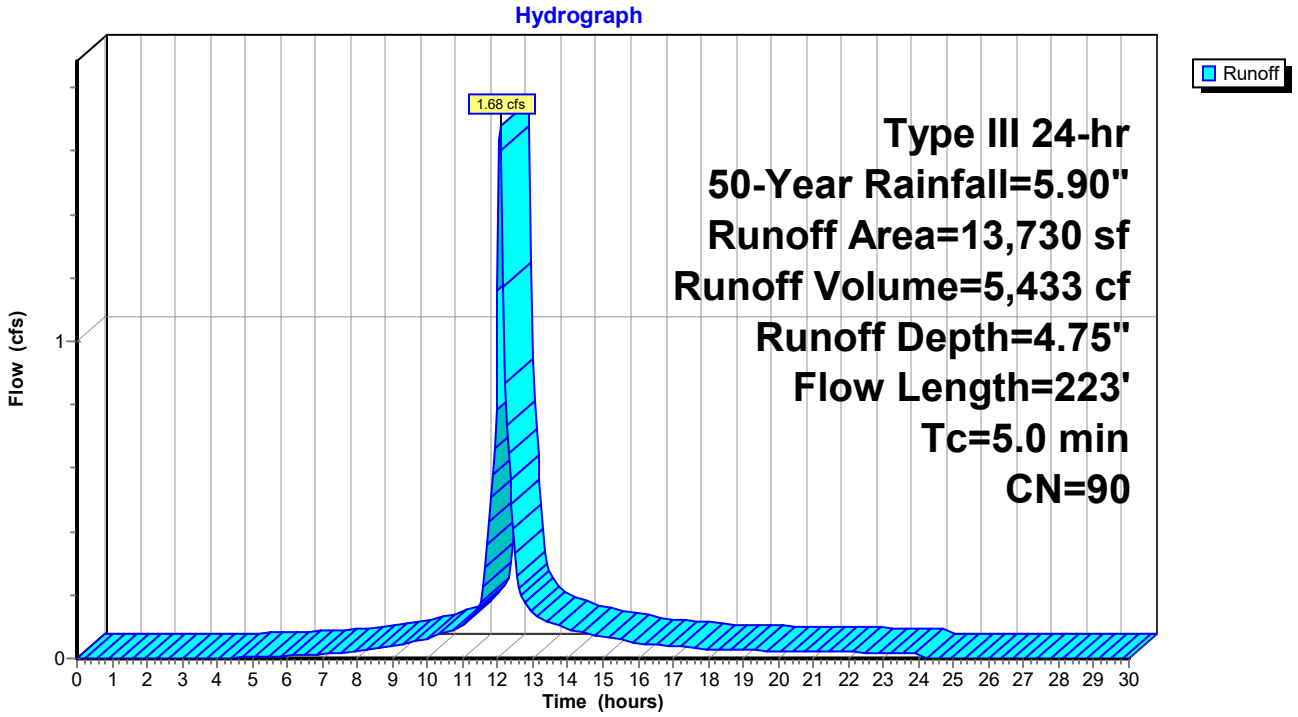
Runoff = 1.68 cfs @ 12.07 hrs, Volume= 5,433 cf, Depth= 4.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
2,180	61	>75% Grass cover, Good, HSG B
5,640	98	Paved parking, HSG B
1,094	74	>75% Grass cover, Good, HSG C
2,002	98	Paved parking, HSG C
418	80	>75% Grass cover, Good, HSG D
2,396	98	Paved parking, HSG D
13,730	90	Weighted Average
3,692		26.89% Pervious Area
10,038		73.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.0	173	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.9	223	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB5: TO DCB-S5



Summary for Subcatchment P-SUB6: TO DCB-S6

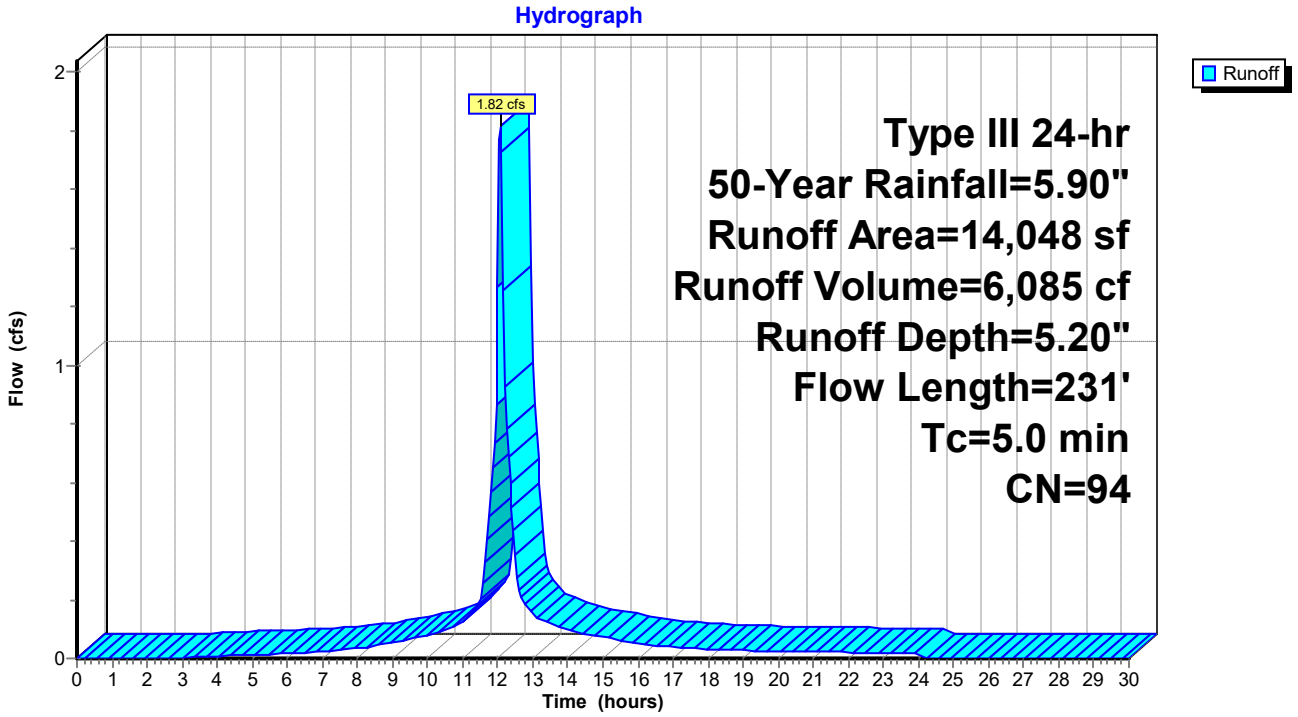
Runoff = 1.82 cfs @ 12.07 hrs, Volume= 6,085 cf, Depth= 5.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
1,127	61	>75% Grass cover, Good, HSG B
7,164	98	Paved parking, HSG B
397	74	>75% Grass cover, Good, HSG C
2,299	98	Paved parking, HSG C
318	80	>75% Grass cover, Good, HSG D
2,743	98	Paved parking, HSG D
14,048	94	Weighted Average
1,842		13.11% Pervious Area
12,206		86.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.1	181	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.0	231	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB6: TO DCB-S6



Summary for Subcatchment P-SUB7: TO DCB-S7

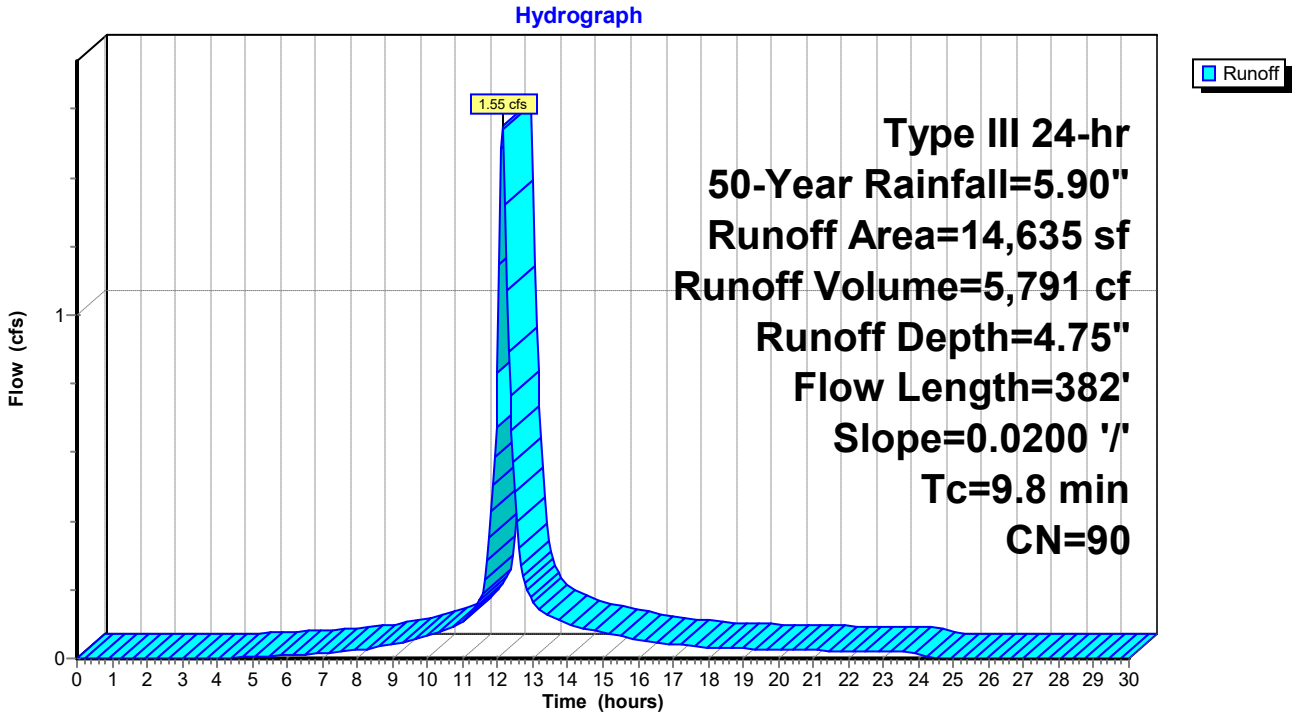
Runoff = 1.55 cfs @ 12.14 hrs, Volume= 5,791 cf, Depth= 4.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
2,073	61	>75% Grass cover, Good, HSG B
5,665	96	Gravel surface, HSG B
2,552	98	Paved parking, HSG B
824	74	>75% Grass cover, Good, HSG C
1,846	96	Gravel surface, HSG C
1,675	98	Paved parking, HSG C
14,635	90	Weighted Average
10,408		71.12% Pervious Area
4,227		28.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	75	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	61	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.4	246	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.8	382	Total			

Subcatchment P-SUB7: TO DCB-S7



Summary for Subcatchment P-SUB8: TO DCB-S8

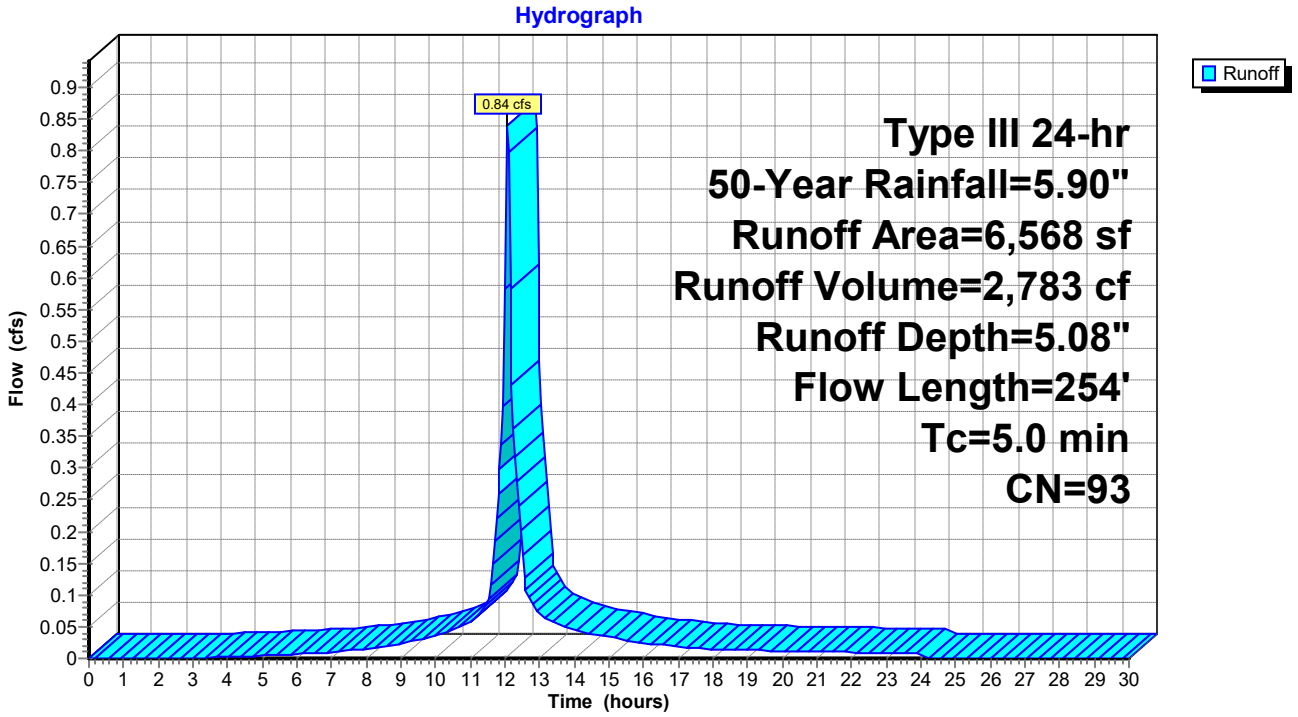
Runoff = 0.84 cfs @ 12.07 hrs, Volume= 2,783 cf, Depth= 5.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
592	61	>75% Grass cover, Good, HSG B
3,350	98	Paved parking, HSG B
384	74	>75% Grass cover, Good, HSG C
2,242	98	Paved parking, HSG C
6,568	93	Weighted Average
976		14.86% Pervious Area
5,592		85.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	204	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.1	254	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB8: TO DCB-S8



Summary for Subcatchment P-SUB9: TO DCB-S9

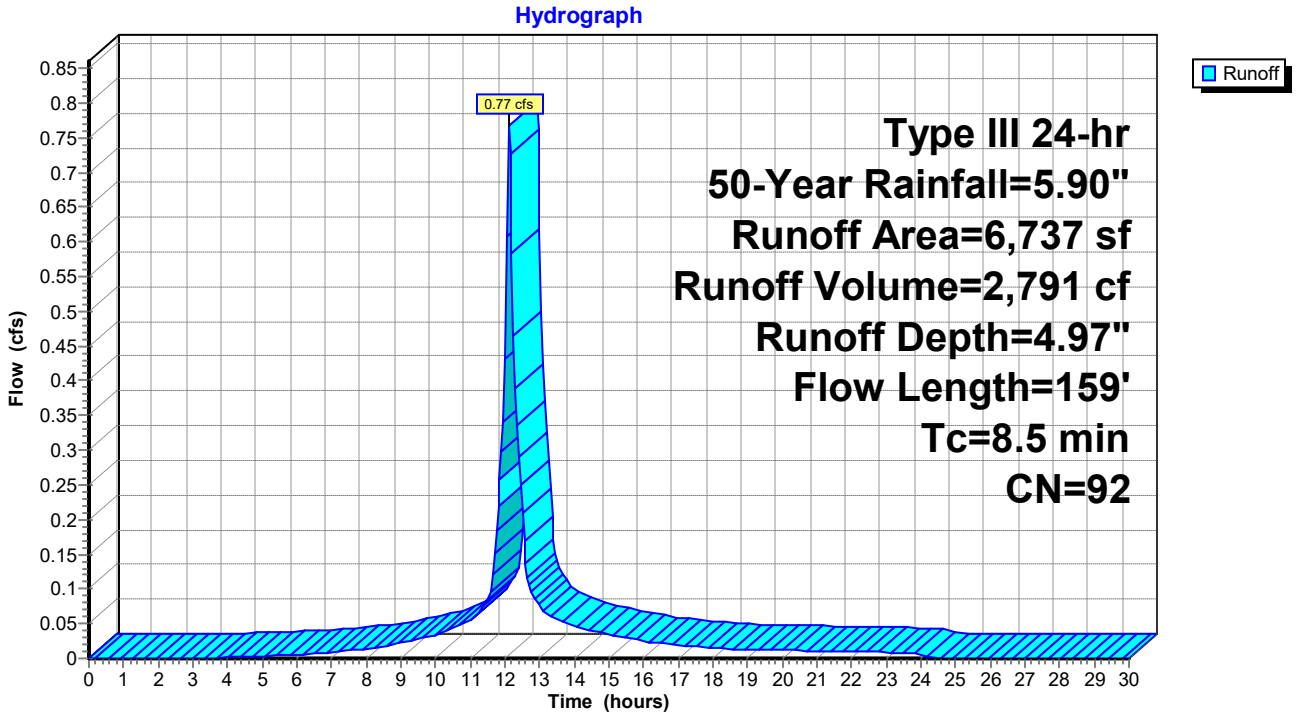
Runoff = 0.77 cfs @ 12.12 hrs, Volume= 2,791 cf, Depth= 4.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
615	61	>75% Grass cover, Good, HSG B
851	96	Gravel surface, HSG B
717	98	Paved parking, HSG B
435	74	>75% Grass cover, Good, HSG C
3,901	96	Gravel surface, HSG C
218	98	Paved parking, HSG C
6,737	92	Weighted Average
5,802		86.12% Pervious Area
935		13.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	75	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	55	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	29	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
8.5	159	Total			

Subcatchment P-SUB9: TO DCB-S9



Summary for Subcatchment P206: TO DMH6B

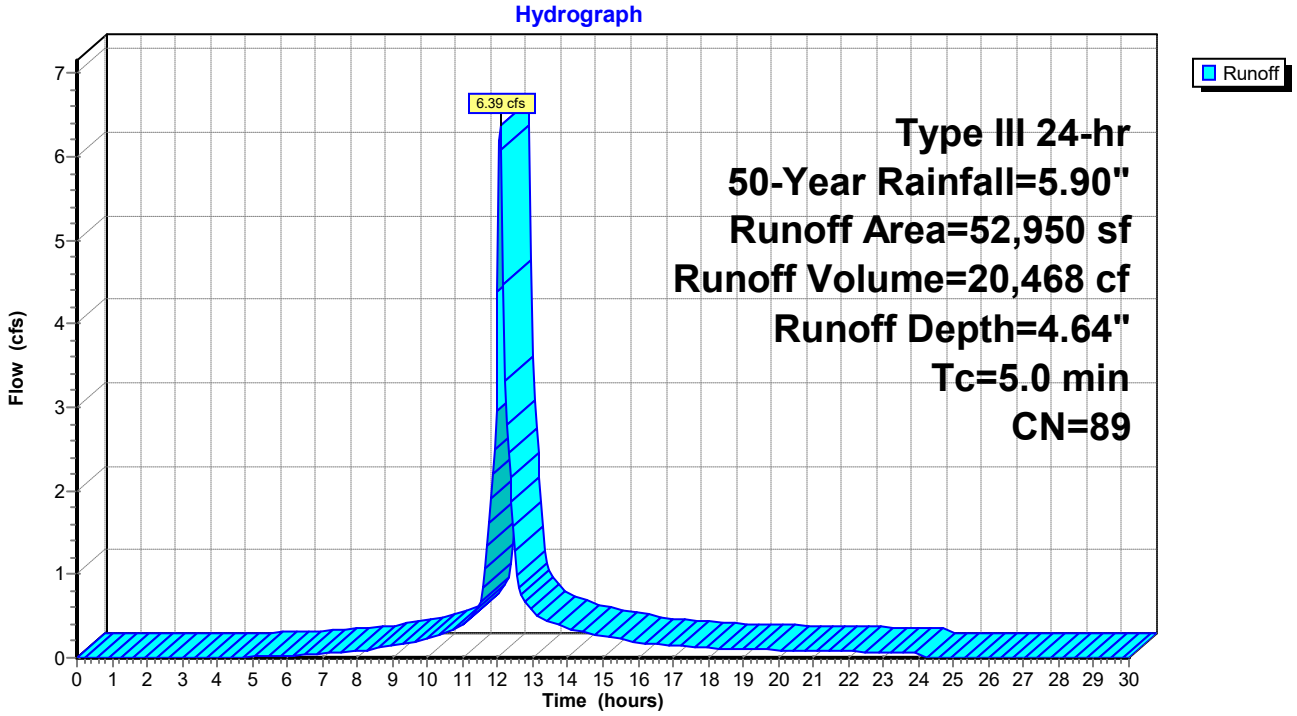
Runoff = 6.39 cfs @ 12.07 hrs, Volume= 20,468 cf, Depth= 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
3,483	61	>75% Grass cover, Good, HSG B
40,747	92	Urban commercial, 85% imp, HSG B
3,361	74	>75% Grass cover, Good, HSG C
5,359	94	Urban commercial, 85% imp, HSG C
52,950	89	Weighted Average
13,760		25.99% Pervious Area
39,190		74.01% Impervious Area

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

Subcatchment P206: TO DMH6B



Summary for Subcatchment P207: TO DMH7

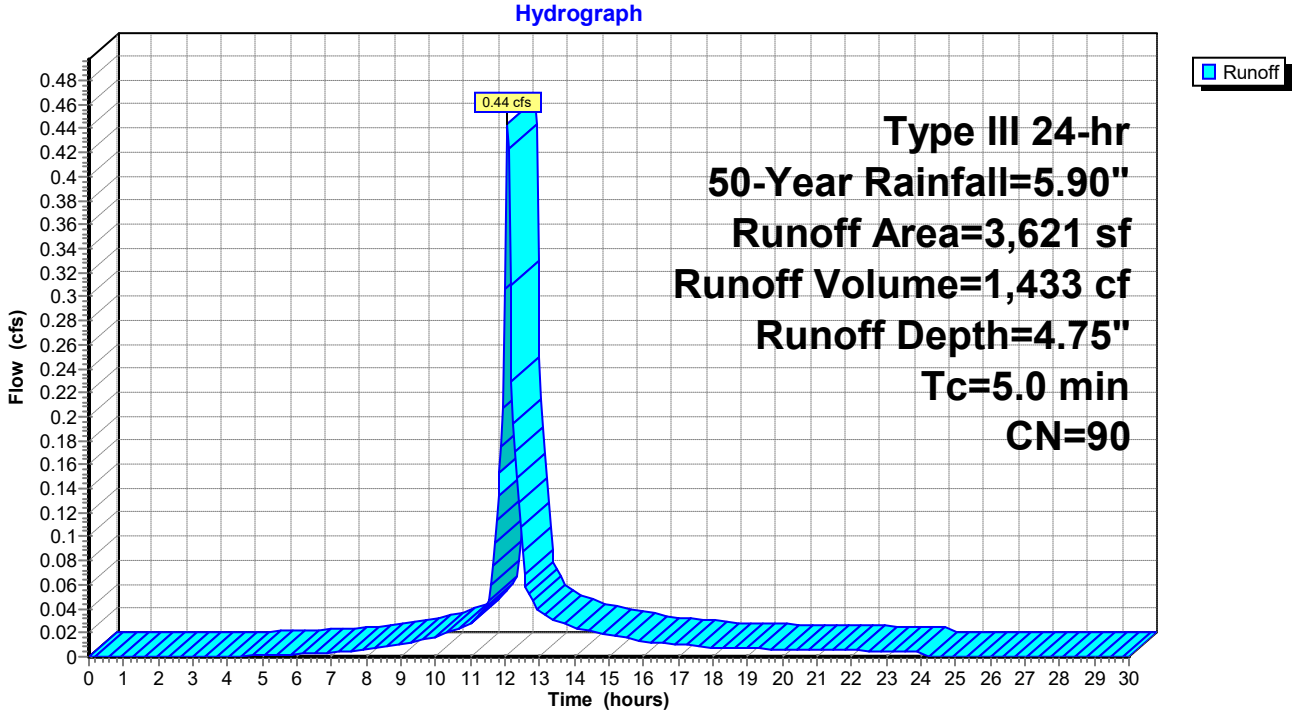
Runoff = 0.44 cfs @ 12.07 hrs, Volume= 1,433 cf, Depth= 4.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
825	61	>75% Grass cover, Good, HSG B
2,796	98	Paved parking, HSG B
3,621	90	Weighted Average
825		22.78% Pervious Area
2,796		77.22% Impervious Area

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

Subcatchment P207: TO DMH7



Summary for Subcatchment P210: TO DMH10

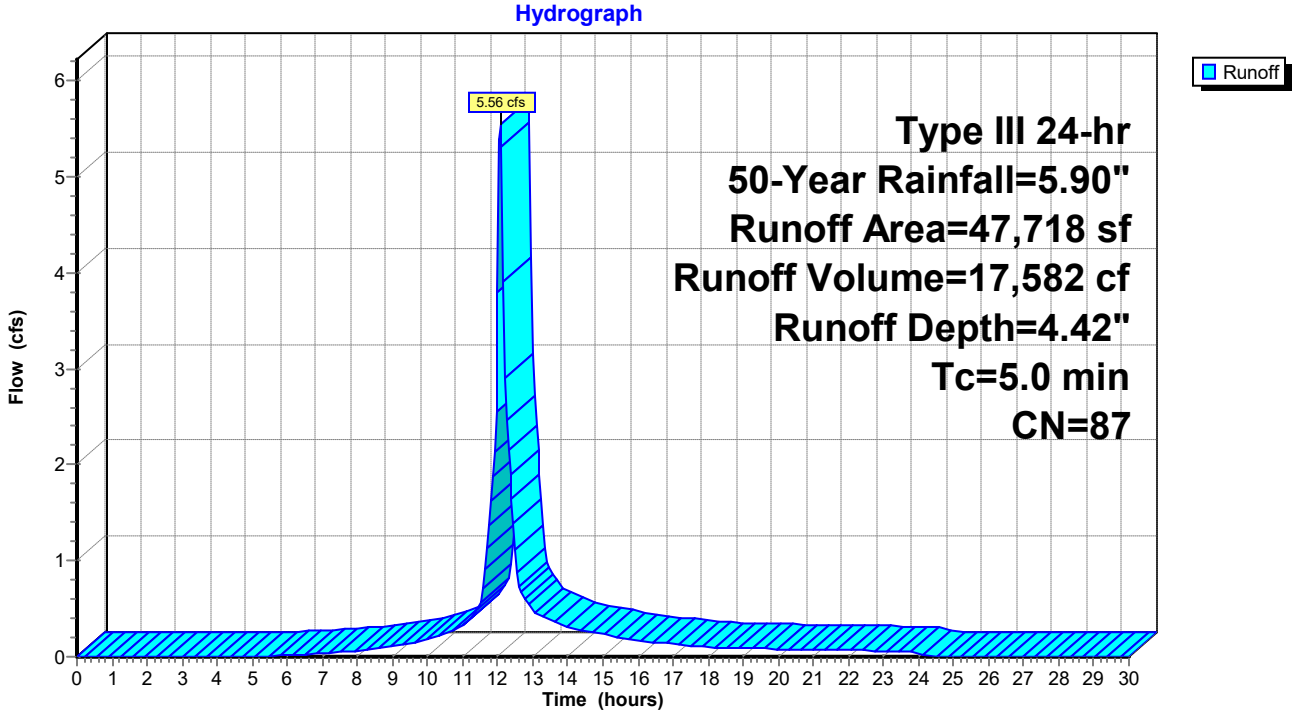
Runoff = 5.56 cfs @ 12.07 hrs, Volume= 17,582 cf, Depth= 4.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
14,798	61	>75% Grass cover, Good, HSG B
32,920	98	Paved parking, HSG B
47,718	87	Weighted Average
14,798		31.01% Pervious Area
32,920		68.99% Impervious Area

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

Subcatchment P210: TO DMH10



Summary for Subcatchment P211: TO DMH11

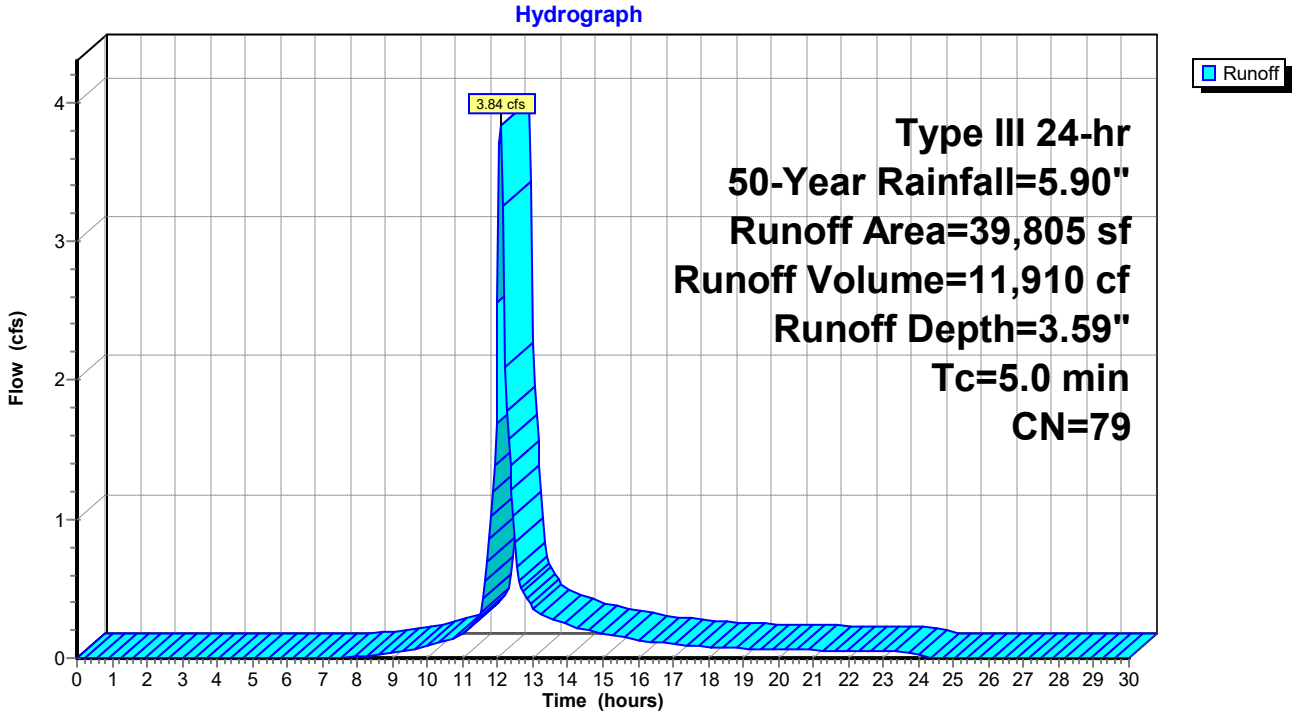
Runoff = 3.84 cfs @ 12.08 hrs, Volume= 11,910 cf, Depth= 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
16,145	61	>75% Grass cover, Good, HSG B
5,377	74	>75% Grass cover, Good, HSG C
841	92	Urban commercial, 85% imp, HSG B
2,153	94	Urban commercial, 85% imp, HSG C
15,289	98	Paved parking, HSG B
39,805	79	Weighted Average
21,971		55.20% Pervious Area
17,834		44.80% Impervious Area

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

Subcatchment P211: TO DMH11



Summary for Subcatchment P212: TO DMH12

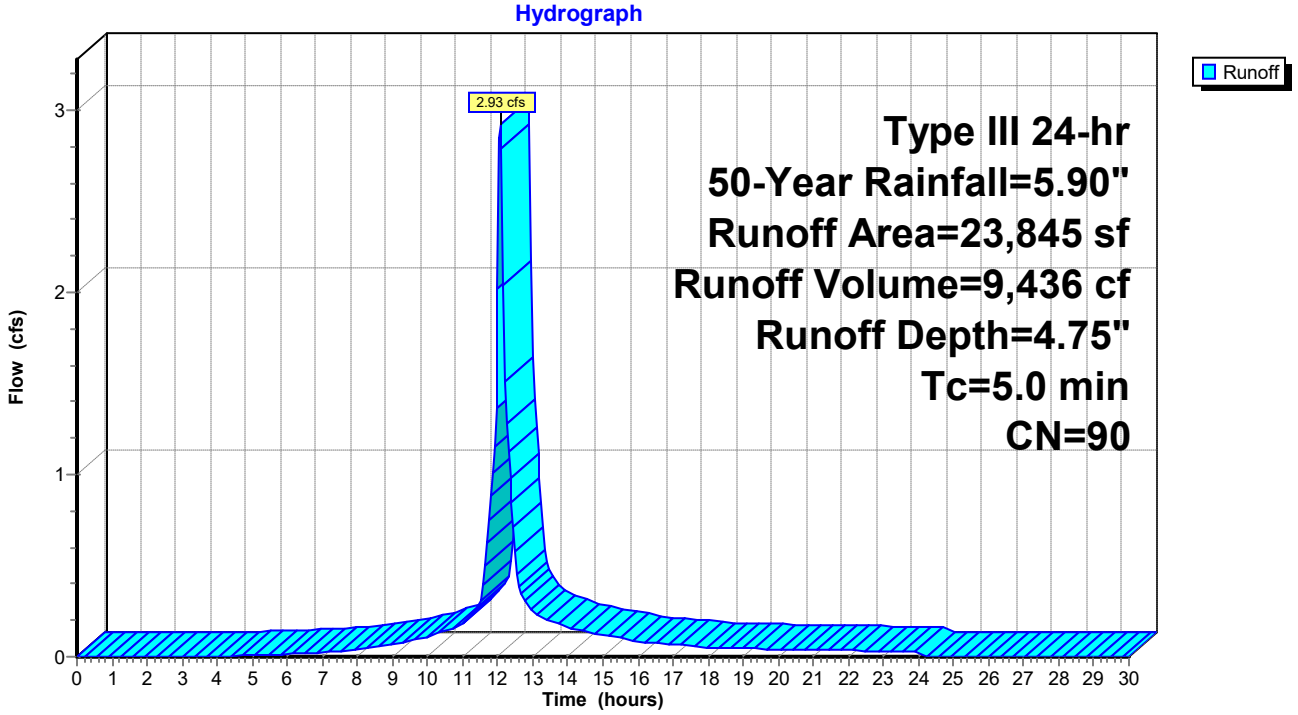
Runoff = 2.93 cfs @ 12.07 hrs, Volume= 9,436 cf, Depth= 4.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
5,327	61	>75% Grass cover, Good, HSG B
18,518	98	Paved parking, HSG B
23,845	90	Weighted Average
5,327		22.34% Pervious Area
18,518		77.66% Impervious Area

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

Subcatchment P212: TO DMH12



Summary for Subcatchment P213: TO DMH13

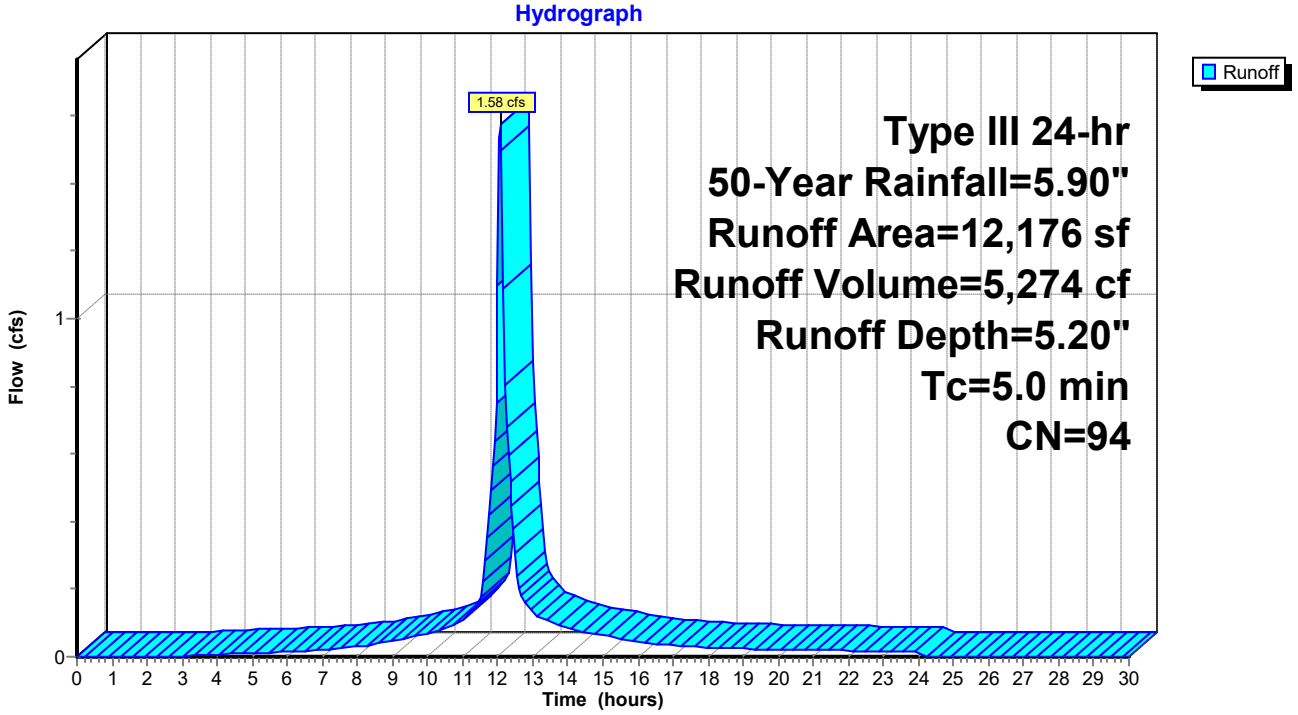
Runoff = 1.58 cfs @ 12.07 hrs, Volume= 5,274 cf, Depth= 5.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
1,390	61	>75% Grass cover, Good, HSG B
10,786	98	Paved parking, HSG B
12,176	94	Weighted Average
1,390		11.42% Pervious Area
10,786		88.58% Impervious Area

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

Subcatchment P213: TO DMH13



Summary for Subcatchment P222: TO DP#2(2017)

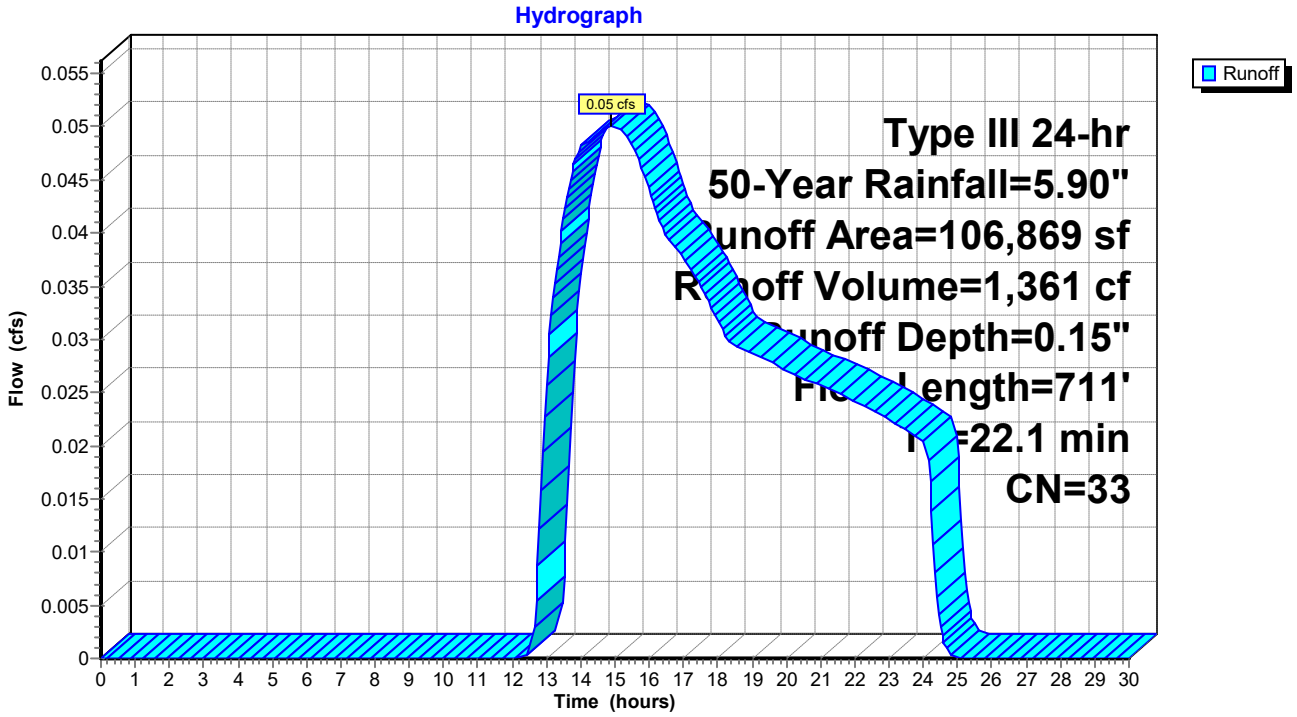
Runoff = 0.05 cfs @ 14.89 hrs, Volume= 1,361 cf, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
692	39	>75% Grass cover, Good, HSG A
93,055	30	Woods, Good, HSG A
1,977	61	>75% Grass cover, Good, HSG B
11,145	55	Woods, Good, HSG B
106,869	33	Weighted Average
106,869		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	47	0.0300	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.1	28	0.0300	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.5	85	0.0300	2.79		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
12.1	398	0.0120	0.55		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.7	153	0.0920	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
22.1	711	Total			

Subcatchment P222: TO DP#2(2017)



Summary for Subcatchment P230: TO CB#21(2017)

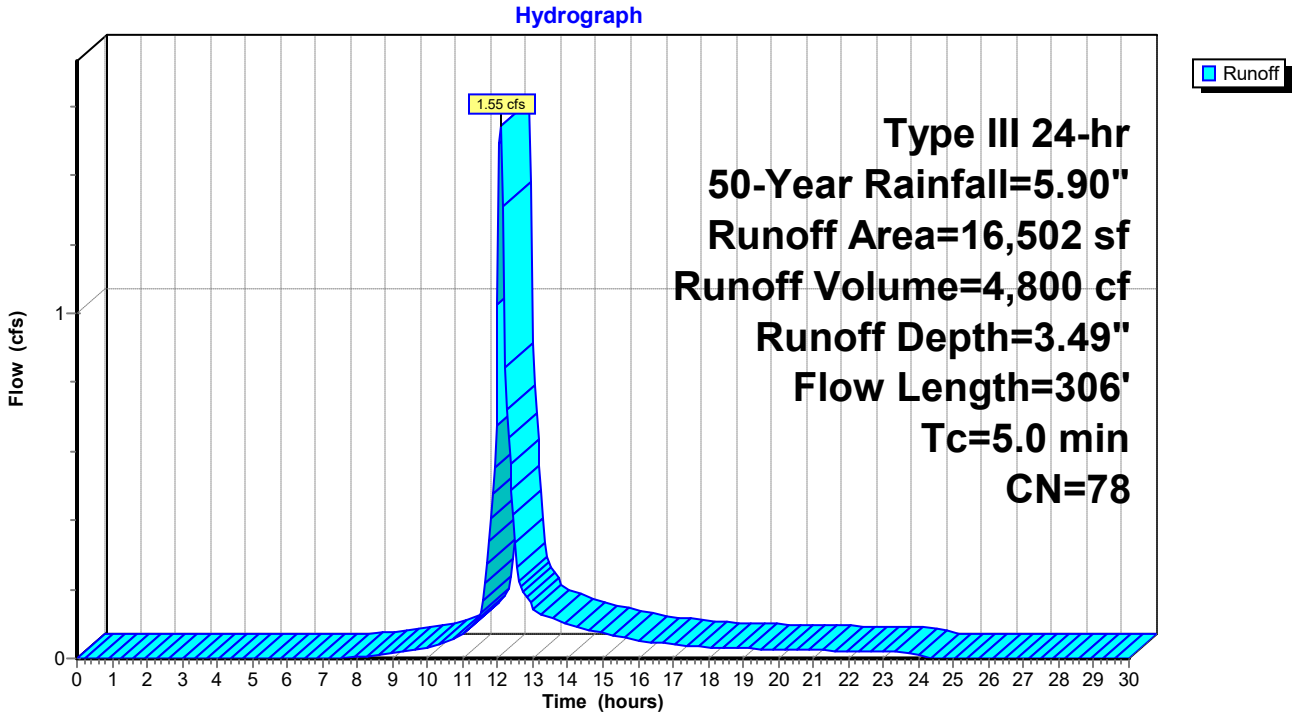
Runoff = 1.55 cfs @ 12.08 hrs, Volume= 4,800 cf, Depth= 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
8,396	61	>75% Grass cover, Good, HSG B
7,248	98	Paved parking, HSG B
299	39	>75% Grass cover, Good, HSG A
559	98	Paved parking, HSG A
16,502	78	Weighted Average
8,695		52.69% Pervious Area
7,807		47.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	20	0.0500	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	30	0.0270	1.18		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.0	10	0.0270	3.34		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.8	246	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.1	306	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P230: TO CB#21(2017)



Summary for Subcatchment P231: TO YD#1

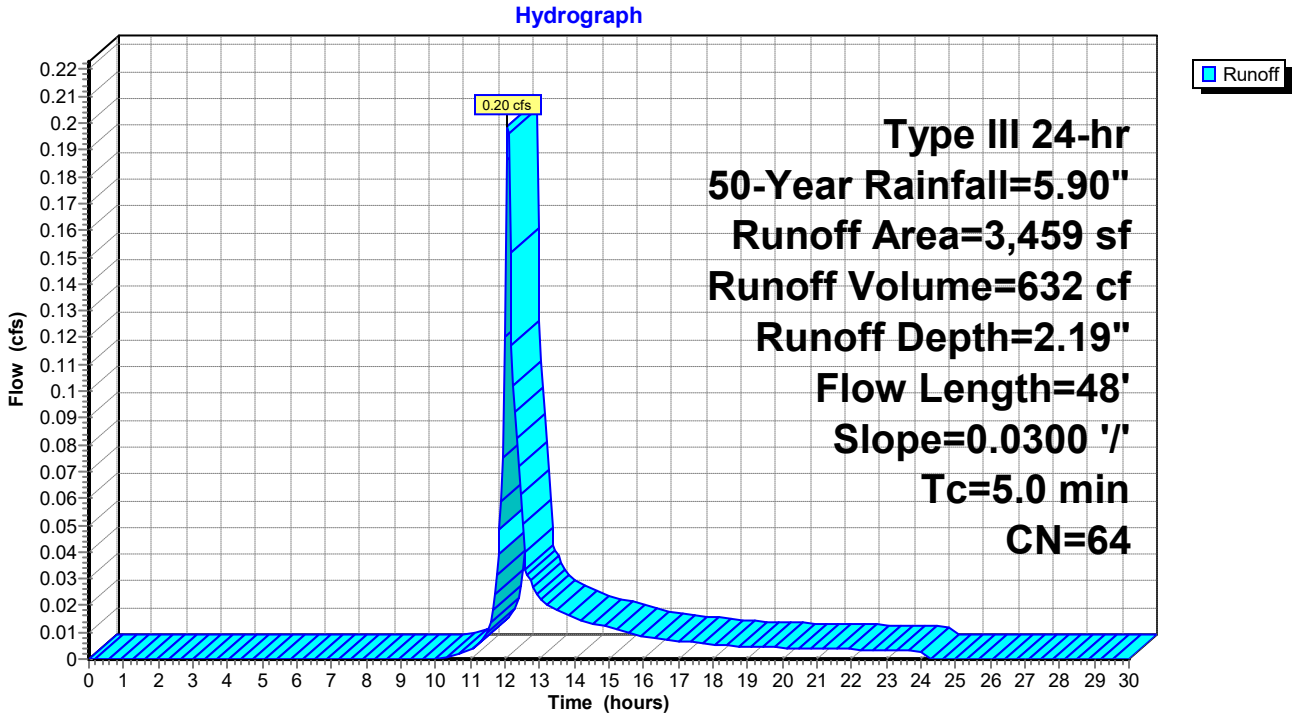
Runoff = 0.20 cfs @ 12.08 hrs, Volume= 632 cf, Depth= 2.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
3,225	61	>75% Grass cover, Good, HSG B
234	98	Paved parking, HSG B
3,459	64	Weighted Average
3,225		93.24% Pervious Area
234		6.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	48	0.0300	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
4.8	48	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P231: TO YD#1



Summary for Subcatchment P232: TO CO#2

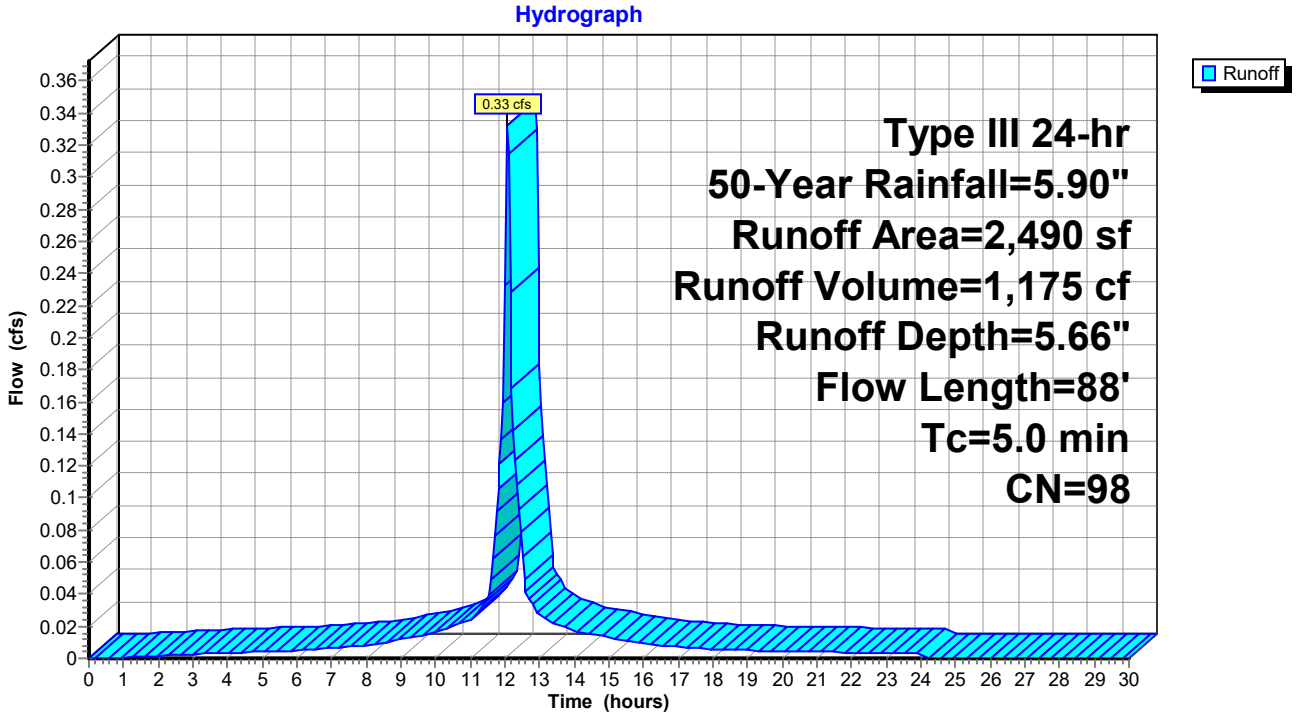
Runoff = 0.33 cfs @ 12.07 hrs, Volume= 1,175 cf, Depth= 5.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
2,490	98	Paved parking, HSG B
2,490		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0830	2.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.1	31	0.0800	5.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	7	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.6	88	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P232: TO CO#2



Summary for Subcatchment P233: TO DRIP STRIP

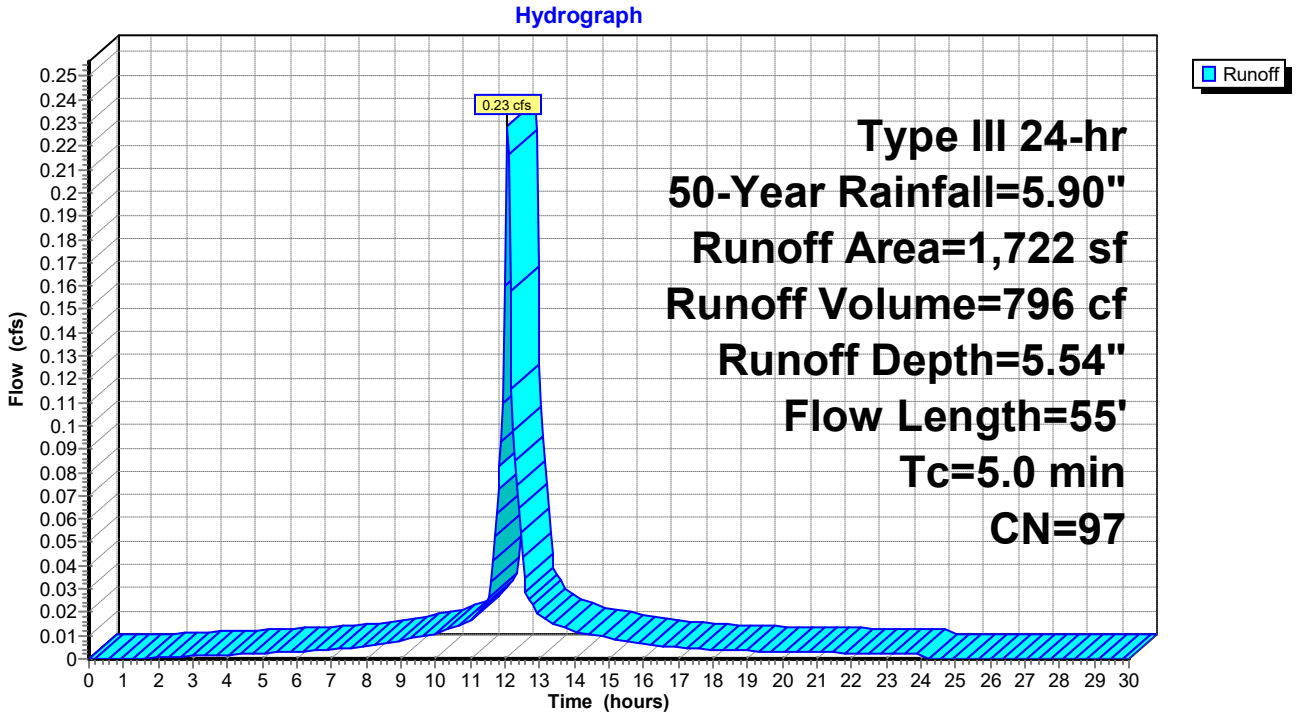
Runoff = 0.23 cfs @ 12.07 hrs, Volume= 796 cf, Depth= 5.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
55	61	>75% Grass cover, Good, HSG B
1,667	98	Paved parking, HSG B
1,722	97	Weighted Average
55		3.19% Pervious Area
1,667		96.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0800	2.02		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.0	5	0.0830	5.85		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	55	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P233: TO DRIP STRIP



Summary for Subcatchment P234: TO YD#2

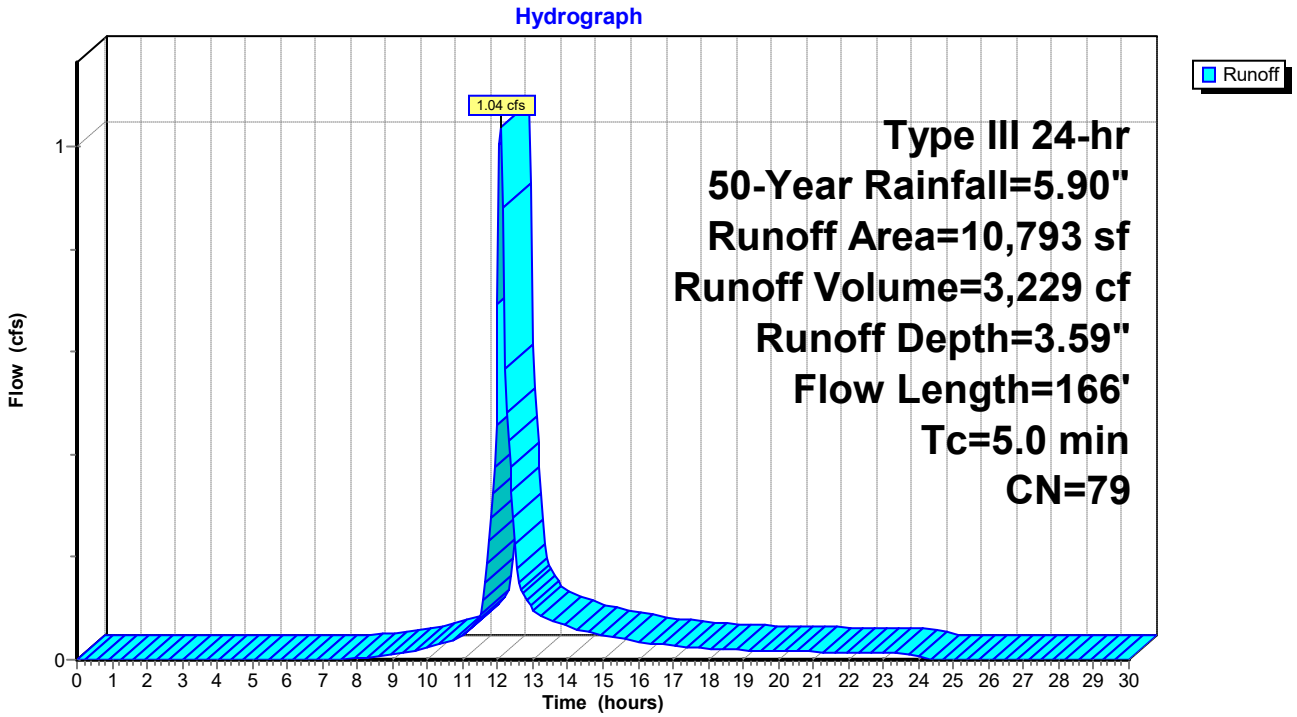
Runoff = 1.04 cfs @ 12.08 hrs, Volume= 3,229 cf, Depth= 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
5,448	61	>75% Grass cover, Good, HSG B
5,345	98	Paved parking, HSG B
10,793	79	Weighted Average
5,448		50.48% Pervious Area
5,345		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	28	0.0700	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.7	22	0.0040	0.52		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.3	98	0.0040	1.28		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.2	18	0.0110	1.69		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.4	166	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P234: TO YD#2



Summary for Subcatchment P235: TO CO#3

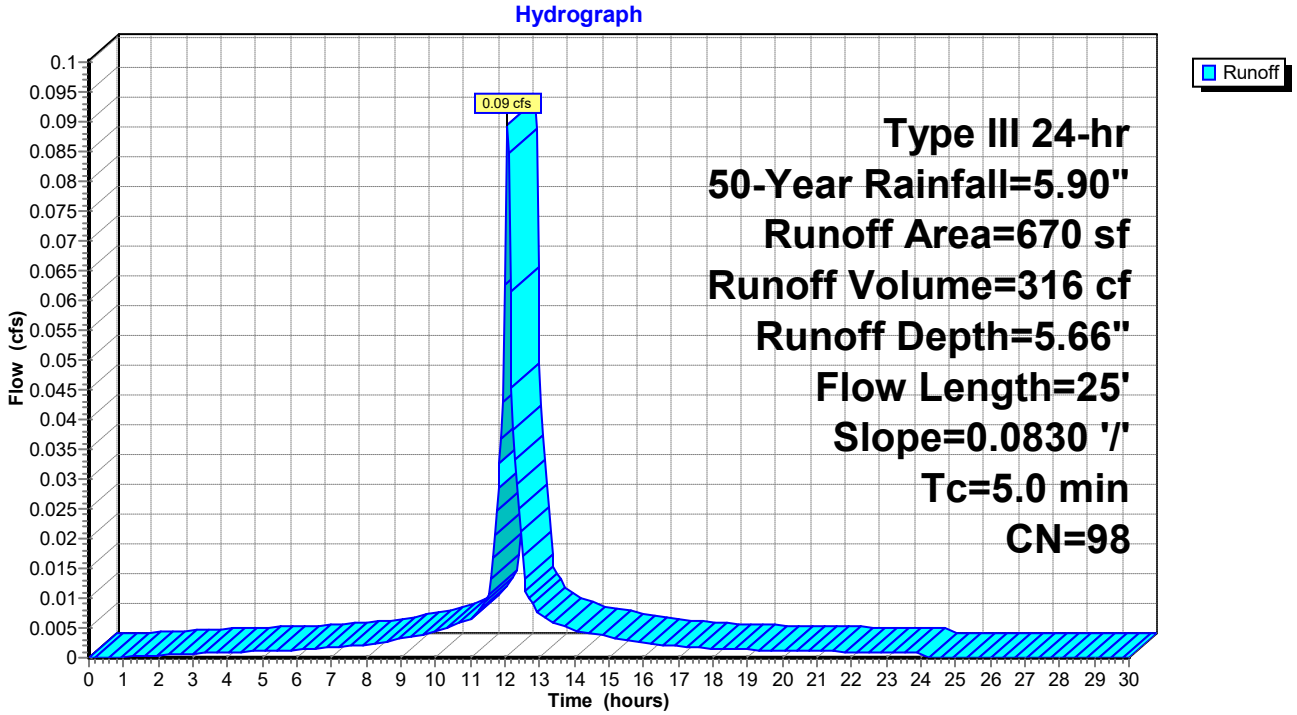
Runoff = 0.09 cfs @ 12.07 hrs, Volume= 316 cf, Depth= 5.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
670	98	Paved parking, HSG B
670		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	25	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P235: TO CO#3



Summary for Subcatchment P251: OVERLAND TO SETTLING POND

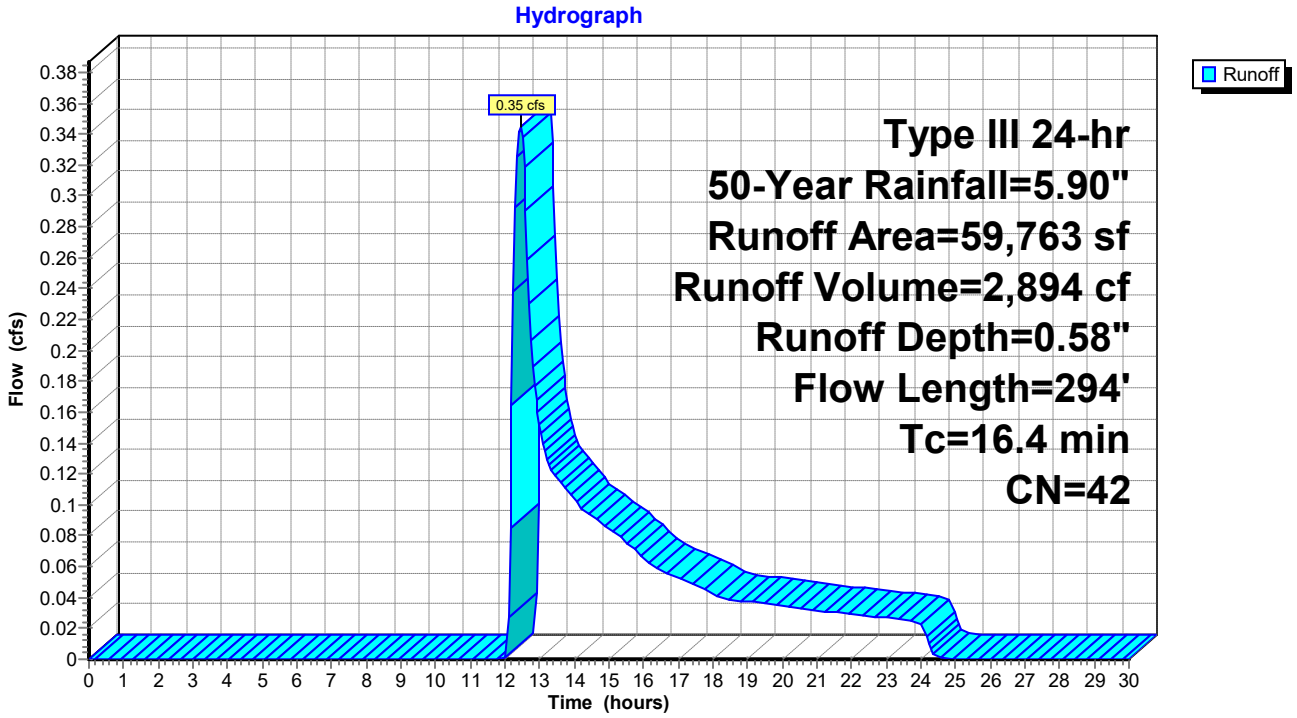
Runoff = 0.35 cfs @ 12.44 hrs, Volume= 2,894 cf, Depth= 0.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
53,277	39	>75% Grass cover, Good, HSG A
3,396	30	Woods, Good, HSG A
3,090	98	Paved parking, HSG A
59,763	42	Weighted Average
56,673		94.83% Pervious Area
3,090		5.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.4	99	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	13	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	107	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
16.4	294	Total			

Subcatchment P251: OVERLAND TO SETTLING POND



Summary for Subcatchment P252: OVERLAND TO DB#1

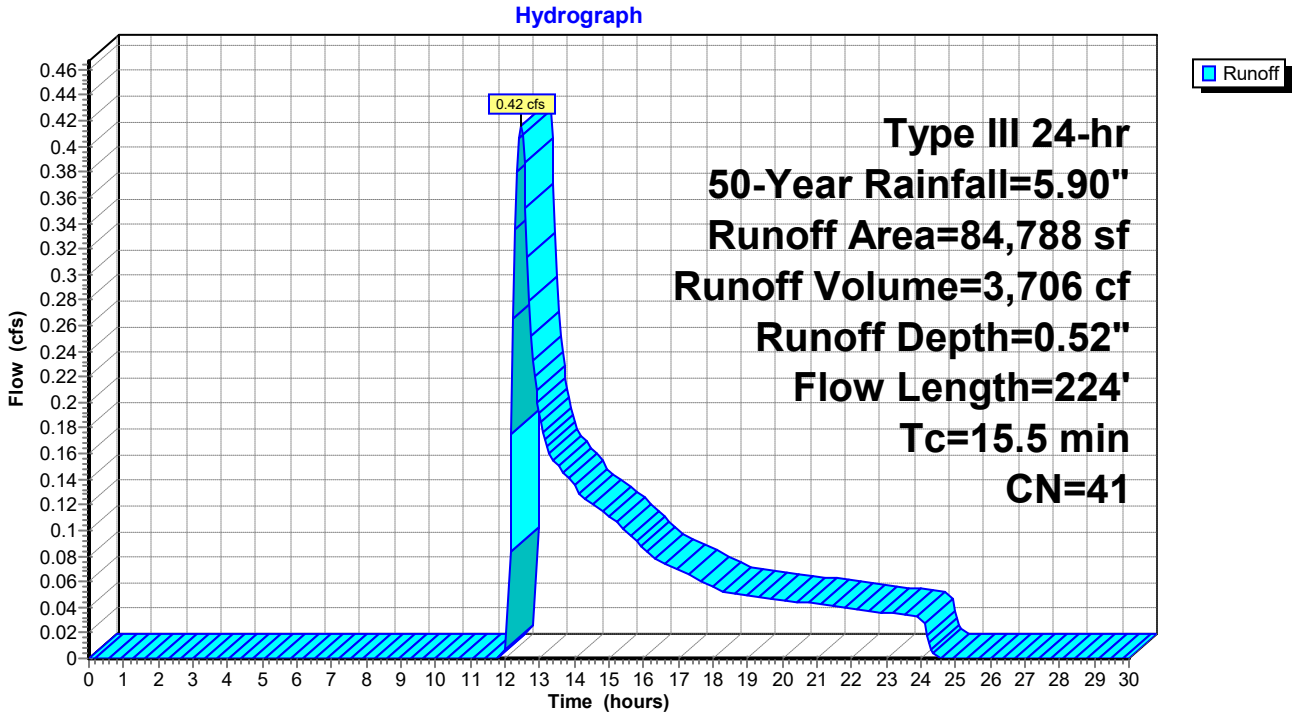
Runoff = 0.42 cfs @ 12.45 hrs, Volume= 3,706 cf, Depth= 0.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
77,531	39	>75% Grass cover, Good, HSG A
2,014	30	Woods, Good, HSG A
2,822	98	Paved parking, HSG A
2,421	55	Woods, Good, HSG B
84,788	41	Weighted Average
81,966		96.67% Pervious Area
2,822		3.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.2	79	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	13	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	57	0.3300	9.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
15.5	224	Total			

Subcatchment P252: OVERLAND TO DB#1



Summary for Subcatchment P253: OVERLAND TO DCB

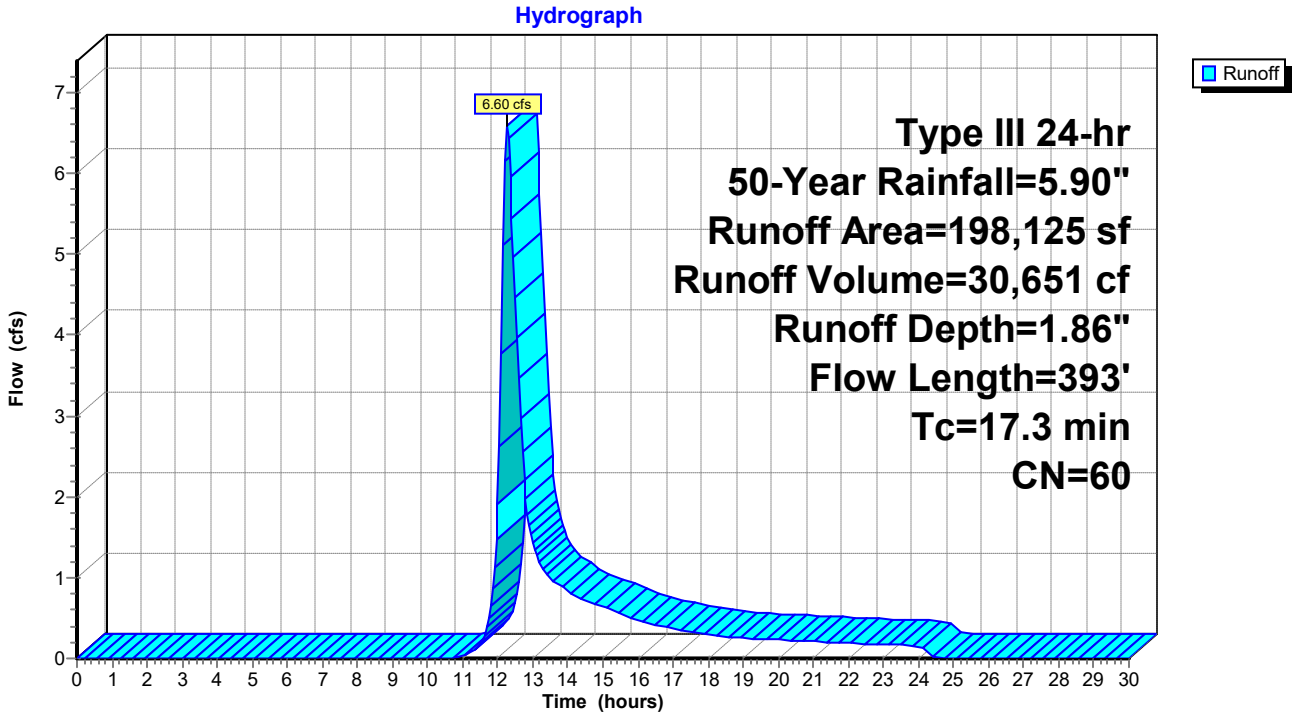
Runoff = 6.60 cfs @ 12.26 hrs, Volume= 30,651 cf, Depth= 1.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
85,790	39	>75% Grass cover, Good, HSG A
28,252	98	Paved parking, HSG A
65,778	61	>75% Grass cover, Good, HSG B
18,305	98	Paved parking, HSG B
198,125	60	Weighted Average
151,568		76.50% Pervious Area
46,557		23.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.8	125	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	15	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.6	60	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	118	0.0180	2.72		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
17.3	393	Total			

Subcatchment P253: OVERLAND TO DCB



Summary for Subcatchment p3: TO DCB#5

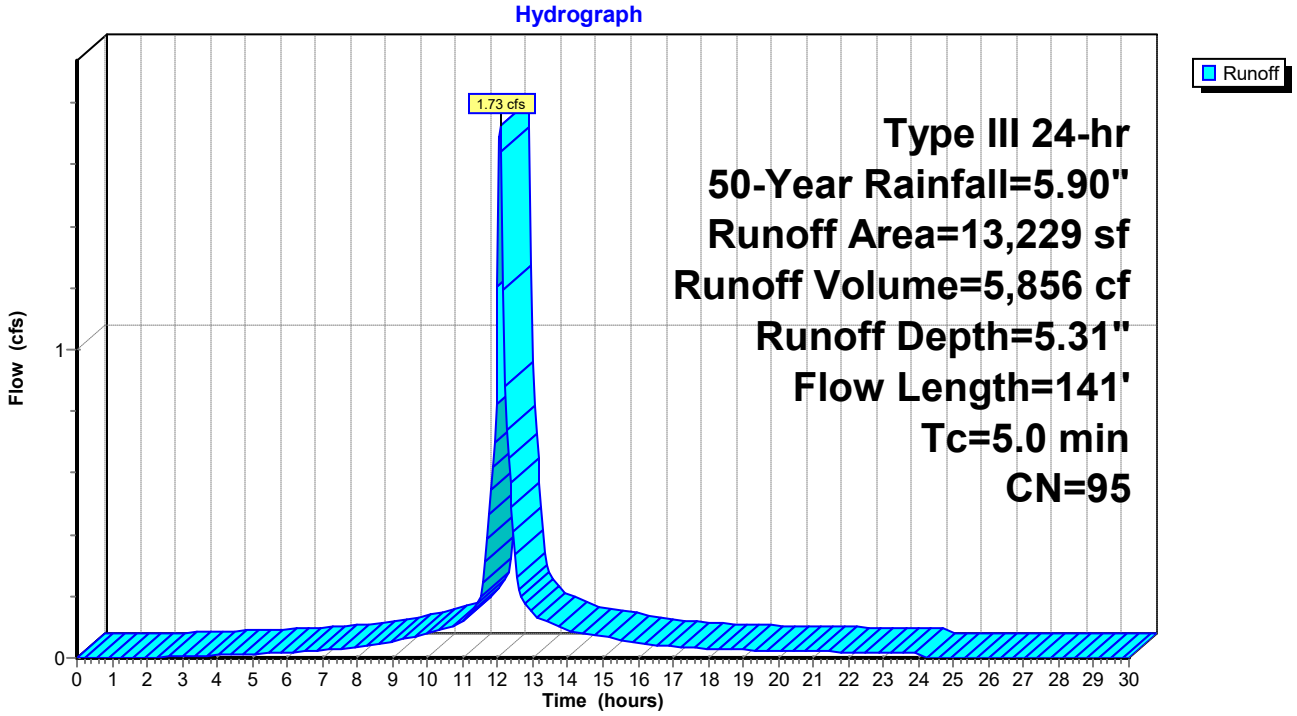
Runoff = 1.73 cfs @ 12.07 hrs, Volume= 5,856 cf, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
694	39	>75% Grass cover, Good, HSG A
12,535	98	Paved parking, HSG A
13,229	95	Weighted Average
694		5.25% Pervious Area
12,535		94.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	25	0.0100	0.76		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	91	0.0160	2.57		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	141	Total, Increased to minimum Tc = 5.0 min			

Subcatchment p3: TO DCB#5



Summary for Subcatchment P300: TO DP#3(2020)

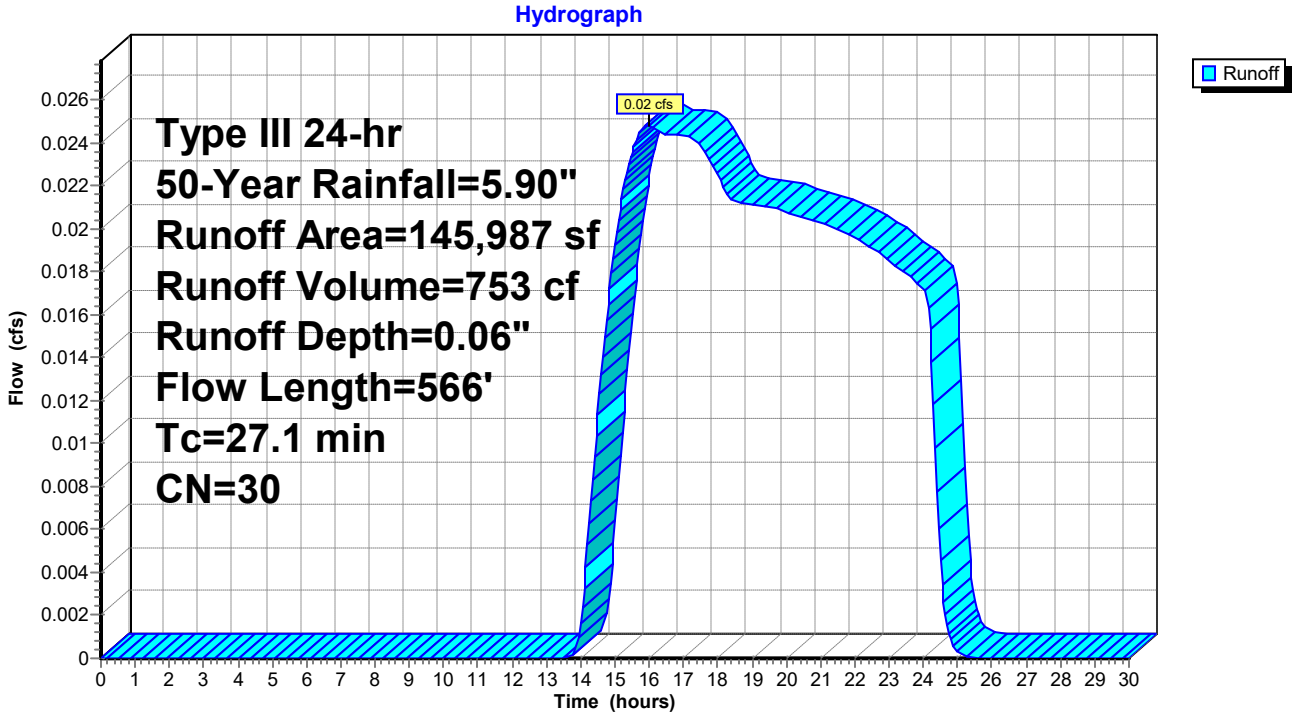
Runoff = 0.02 cfs @ 15.98 hrs, Volume= 753 cf, Depth= 0.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
145,987	30	Woods, Good, HSG A
145,987		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	75	0.0450	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
1.1	71	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.3	420	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
27.1	566	Total			

Subcatchment P300: TO DP#3(2020)



Summary for Subcatchment P4: TO DCB#2

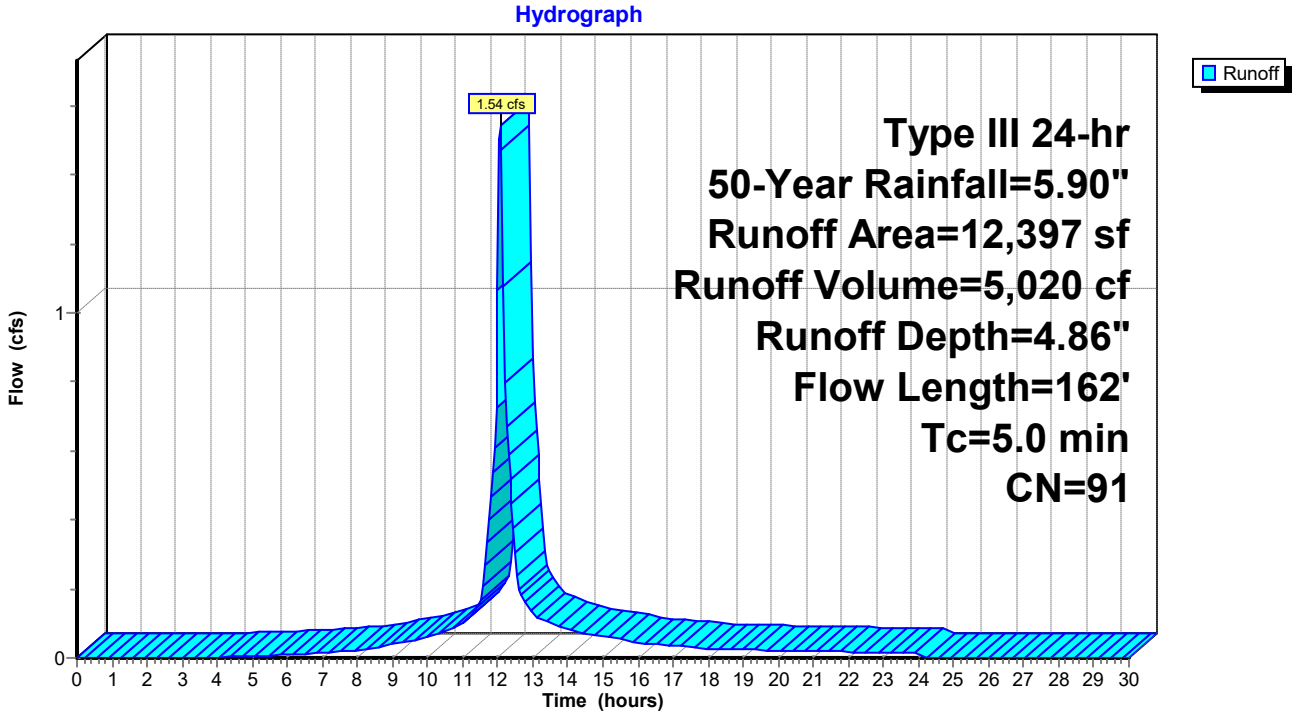
Runoff = 1.54 cfs @ 12.07 hrs, Volume= 5,020 cf, Depth= 4.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
1,459	39	>75% Grass cover, Good, HSG A
10,938	98	Paved parking, HSG A
12,397	91	Weighted Average
1,459		11.77% Pervious Area
10,938		88.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	25	0.0100	0.76		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	112	0.0160	2.57		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	162	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P4: TO DCB#2



Summary for Subcatchment P400: TO DP#4(2020)

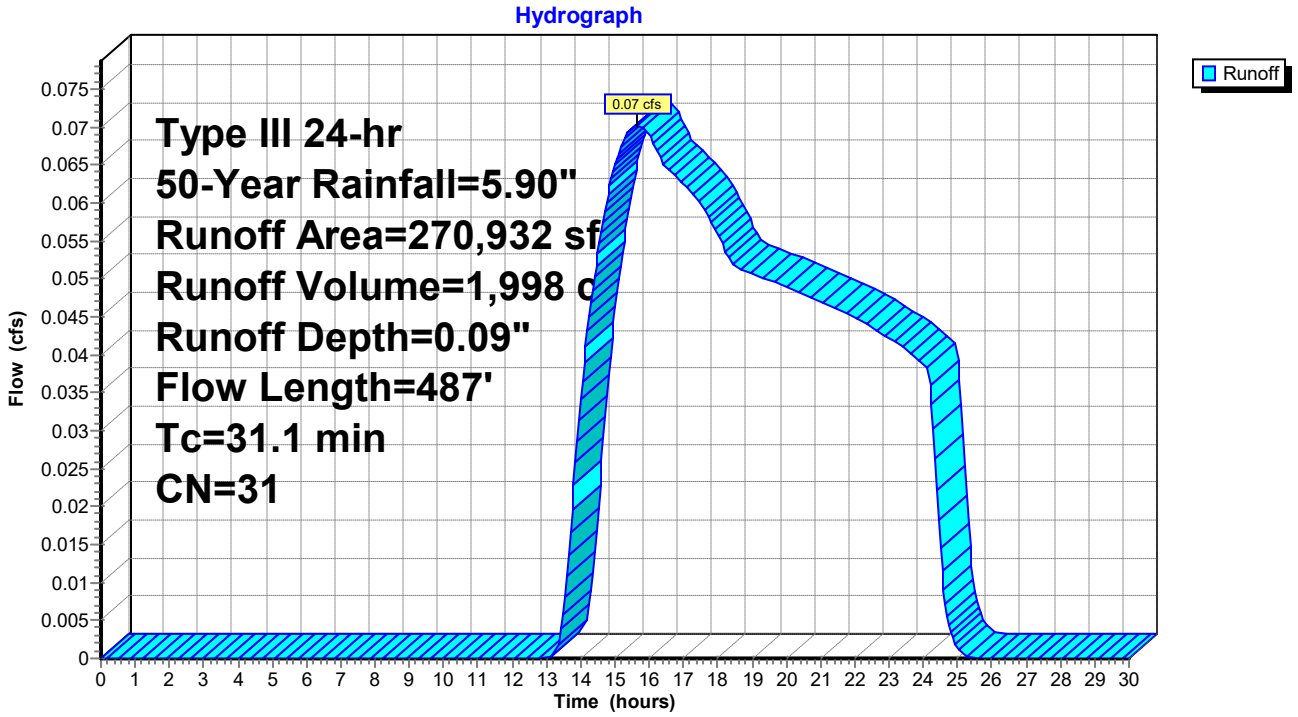
Runoff = 0.07 cfs @ 15.65 hrs, Volume= 1,998 cf, Depth= 0.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
13,230	39	>75% Grass cover, Good, HSG A
256,109	30	Woods, Good, HSG A
1,593	98	Paved parking, HSG A
270,932	31	Weighted Average
269,339		99.41% Pervious Area
1,593		0.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	75	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
5.8	275	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	56	0.1780	1.05		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.1	22	0.4500	3.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	59	0.1200	0.87		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
31.1	487	Total			

Subcatchment P400: TO DP#4(2020)



Summary for Subcatchment P5: TO DCB#6

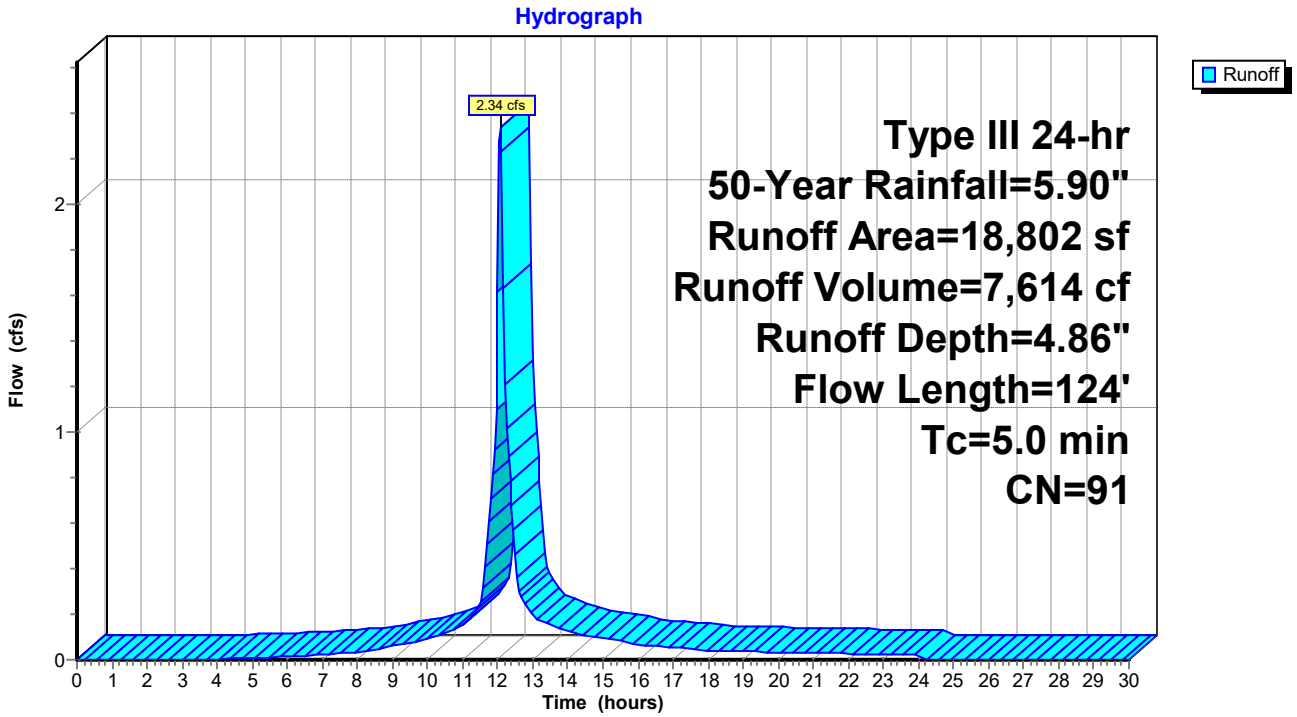
Runoff = 2.34 cfs @ 12.07 hrs, Volume= 7,614 cf, Depth= 4.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
2,343	39	>75% Grass cover, Good, HSG A
16,459	98	Paved parking, HSG A
18,802	91	Weighted Average
2,343		12.46% Pervious Area
16,459		87.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	11	0.0100	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	14	0.0300	1.06		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	74	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	124	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P5: TO DCB#6



Summary for Subcatchment P6: TO DCB#3

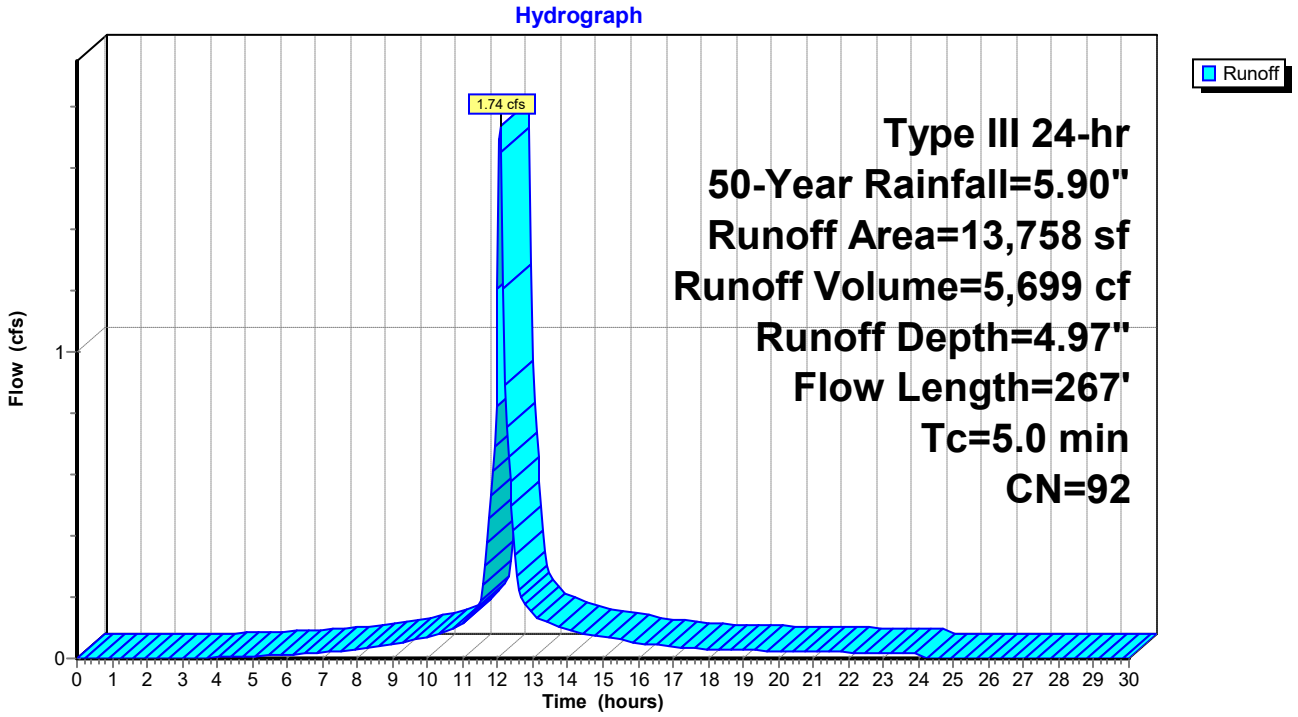
Runoff = 1.74 cfs @ 12.07 hrs, Volume= 5,699 cf, Depth= 4.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
1,369	39	>75% Grass cover, Good, HSG A
12,389	98	Paved parking, HSG A
13,758	92	Weighted Average
1,369		9.95% Pervious Area
12,389		90.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	5	0.0100	0.07		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.3	10	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	5	0.0100	0.07		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.5	30	0.0200	1.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	217	0.0240	3.14		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.4	267	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P6: TO DCB#3



Summary for Subcatchment PS101: TO TEMP SETTLING BASIN

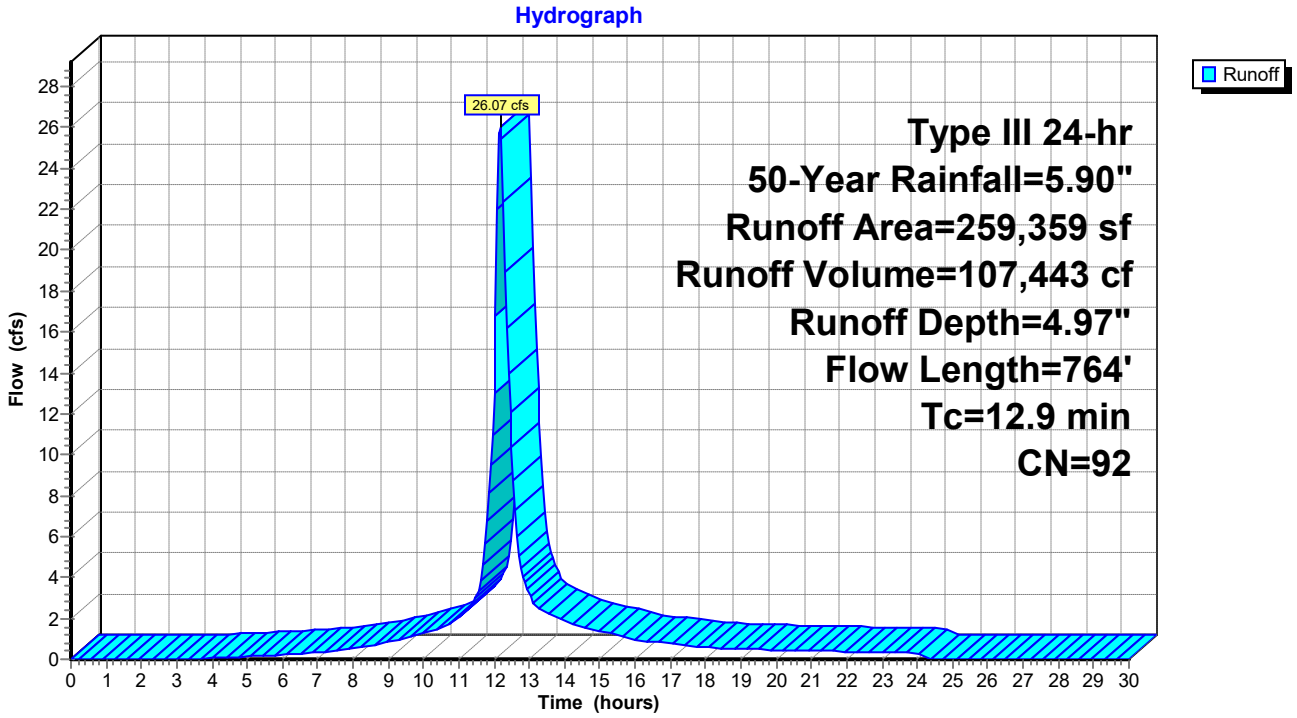
Runoff = 26.07 cfs @ 12.17 hrs, Volume= 107,443 cf, Depth= 4.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
604	30	Woods, Good, HSG A
218,879	96	Gravel surface, HSG A
7,125	30	Brush, Good, HSG A
20,834	80	>75% Grass cover, Good, HSG D
5,941	96	Gravel surface, HSG D
5,976	73	Brush, Good, HSG D
259,359	92	Weighted Average
259,359		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	75	0.0670	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.2	187	0.0270	2.65		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	502	0.0060	1.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
12.9	764	Total			

Subcatchment PS101: TO TEMP SETTLING BASIN



Summary for Subcatchment PS102: TO CULVERT

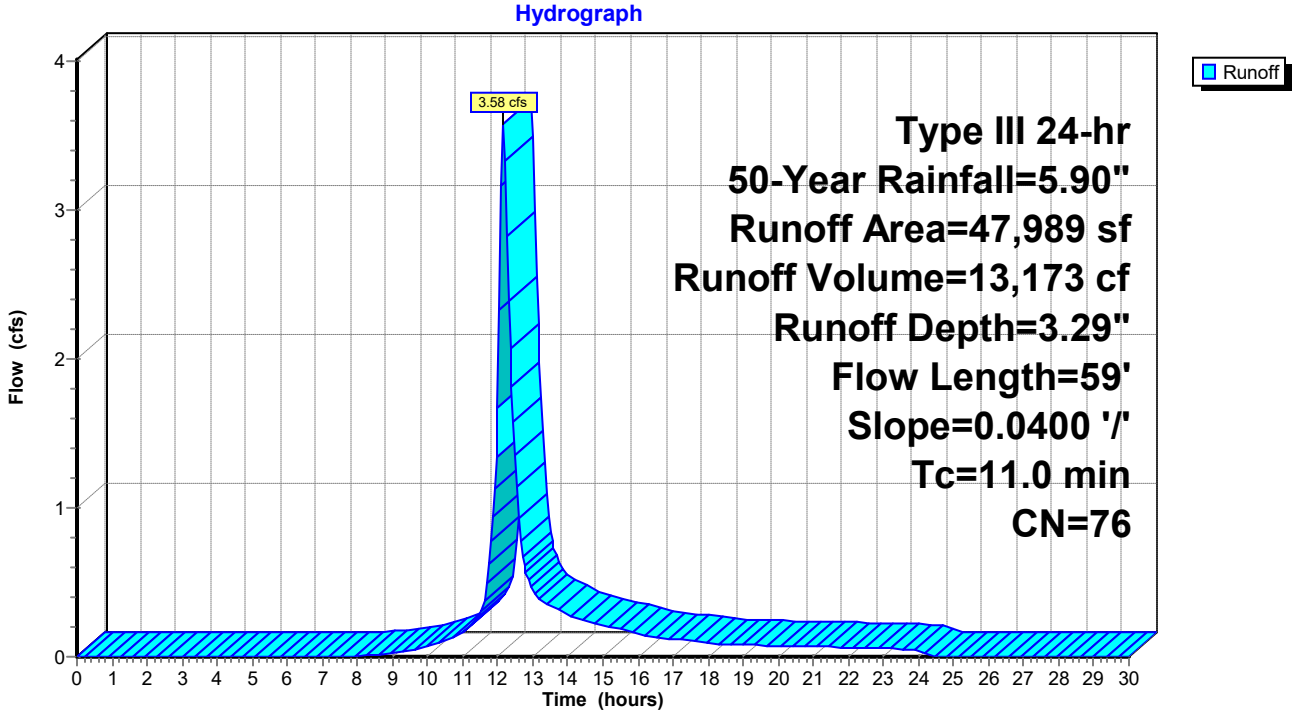
Runoff = 3.58 cfs @ 12.16 hrs, Volume= 13,173 cf, Depth= 3.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
10,627	73	Brush, Good, HSG D
37,362	77	Woods, Good, HSG D
47,989	76	Weighted Average
47,989		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	59	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"

Subcatchment PS102: TO CULVERT



Summary for Subcatchment PS103: TO DP#1

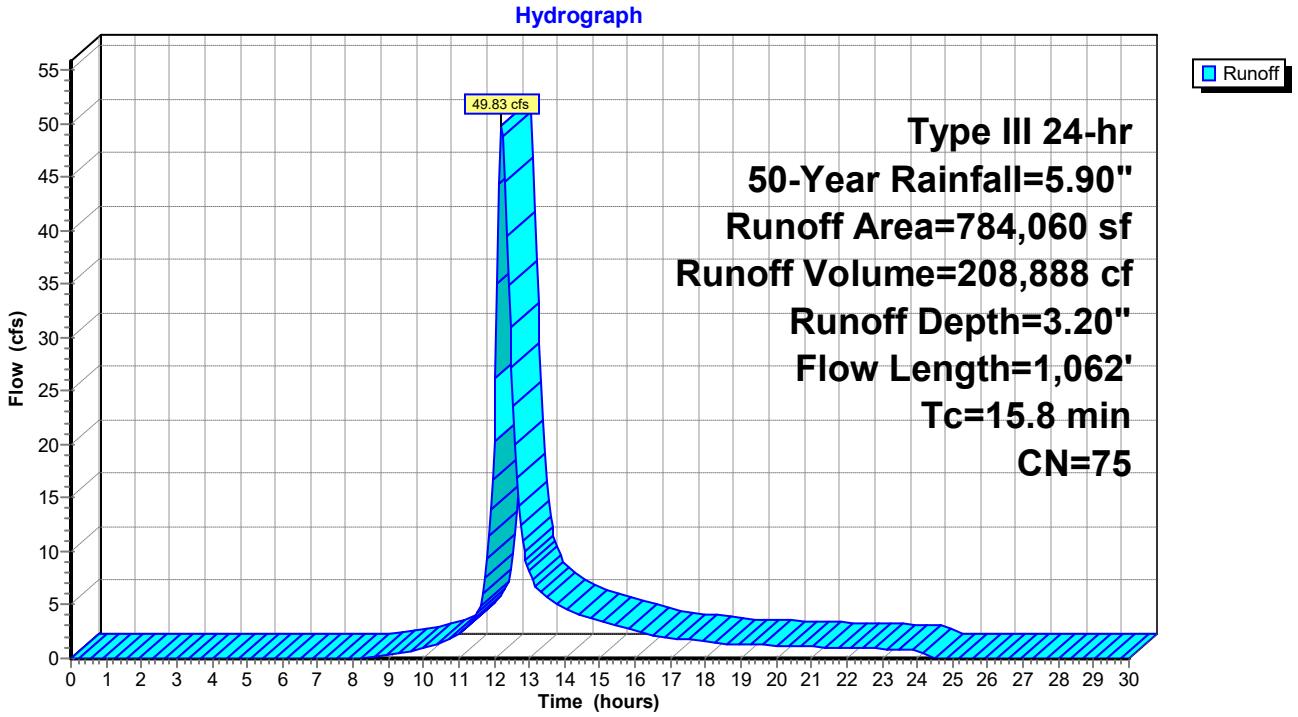
Runoff = 49.83 cfs @ 12.22 hrs, Volume= 208,888 cf, Depth= 3.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
51,017	39	>75% Grass cover, Good, HSG A
22,386	30	Brush, Good, HSG A
21,462	30	Woods, Good, HSG A
81,382	96	Gravel surface, HSG A
36,128	98	Paved parking, HSG A
49,340	61	>75% Grass cover, Good, HSG B
43,824	48	Brush, Good, HSG B
137,472	55	Woods, Good, HSG B
74,794	96	Gravel surface, HSG B
98,633	98	Paved parking, HSG B
686	80	>75% Grass cover, Good, HSG D
41,115	73	Brush, Good, HSG D
43,771	77	Woods, Good, HSG D
80,239	96	Gravel surface, HSG D
1,811	98	Paved parking, HSG D
784,060	75	Weighted Average
647,488		82.58% Pervious Area
136,572		17.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
12.3	841	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	15	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.7	156	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.8	1,062	Total			

Subcatchment PS103: TO DP#1



Summary for Subcatchment PS104: TO DP#1B

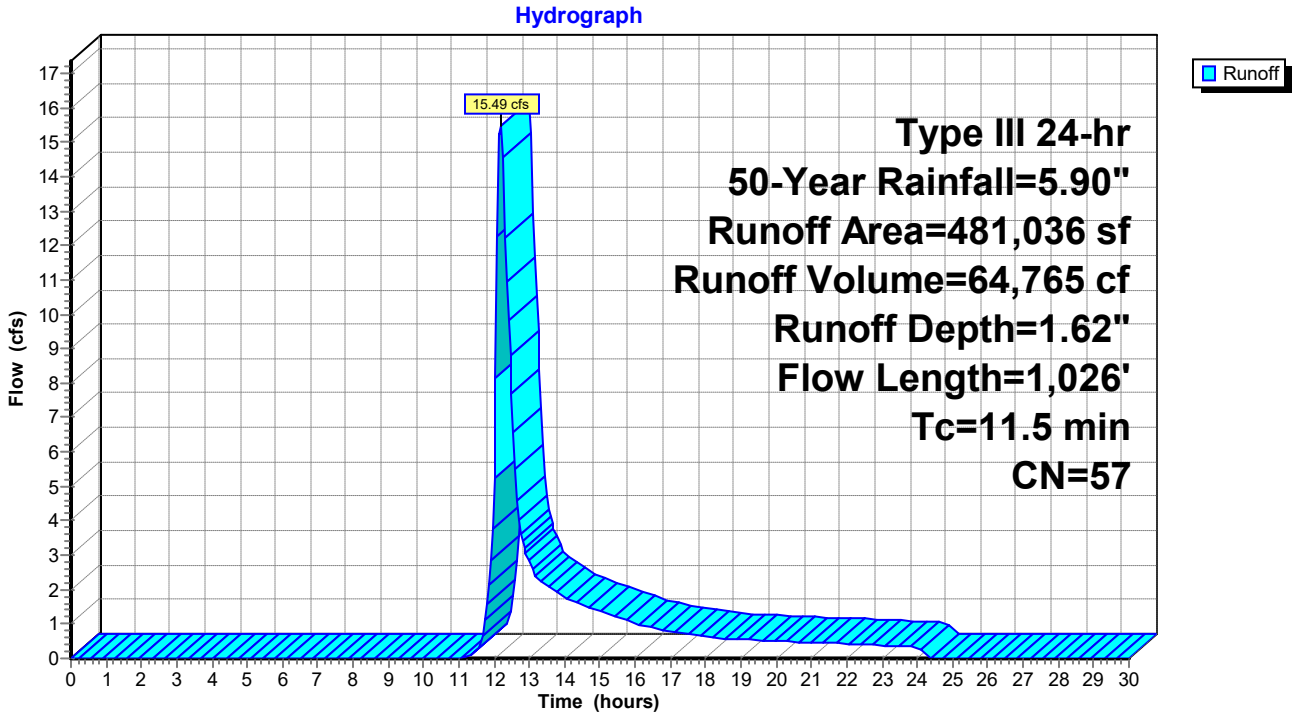
Runoff = 15.49 cfs @ 12.18 hrs, Volume= 64,765 cf, Depth= 1.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
146,483	39	>75% Grass cover, Good, HSG A
9,644	70	Woods, Good, HSG C
9,532	98	Paved parking, HSG A
195,535	61	>75% Grass cover, Good, HSG B
3,382	48	Brush, Good, HSG B
53,509	55	Woods, Good, HSG B
234	96	Gravel surface, HSG B
6,372	98	Paved parking, HSG B
14,879	73	Brush, Good, HSG D
40,619	77	Woods, Good, HSG D
847	96	Gravel surface, HSG D
481,036	57	Weighted Average
465,132		96.69% Pervious Area
15,904		3.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	75	0.0500	1.81		**Sheet Flow, gravel** Smooth surfaces n= 0.011 P2= 3.00"
0.1	25	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.1	304	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	84	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.3	25	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.0	93	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
11.5	1,026	Total			

Subcatchment PS104: TO DP#1B



Summary for Subcatchment PS105: TO CULVERT

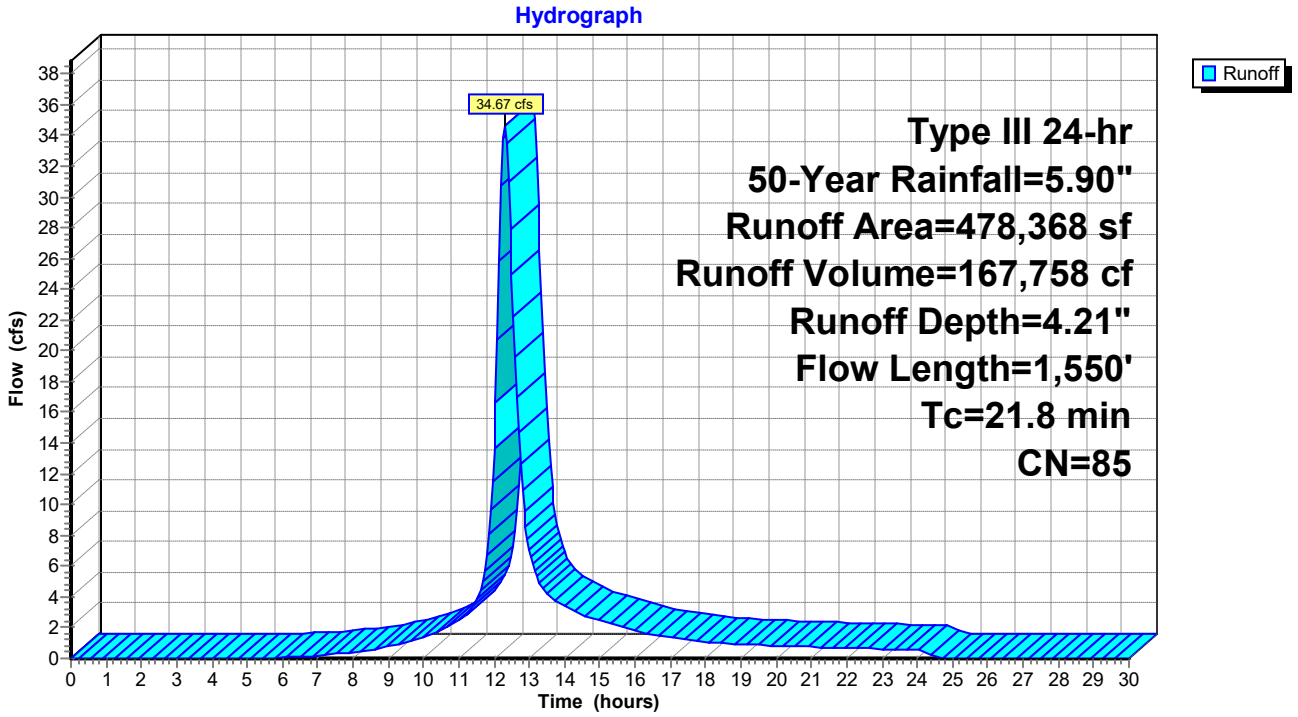
Runoff = 34.67 cfs @ 12.29 hrs, Volume= 167,758 cf, Depth= 4.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
46,071	96	Gravel surface, HSG B
704	74	>75% Grass cover, Good, HSG C
34,999	74	Pasture/grassland/range, Good, HSG C
176,119	70	Woods, Good, HSG C
219,495	96	Gravel surface, HSG C
980	96	Gravel surface, HSG D
478,368	85	Weighted Average
478,368		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	75	0.0770	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
3.8	314	0.0770	1.39		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	110	0.2000	2.24		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.6	107	0.3500	2.96		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.2	250	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	30	0.3300	9.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.6	163	0.0800	4.55		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.4	501	0.0230	2.44		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	1,550	Total			

Subcatchment PS105: TO CULVERT



Summary for Subcatchment PSUB10: TO DCB-S10

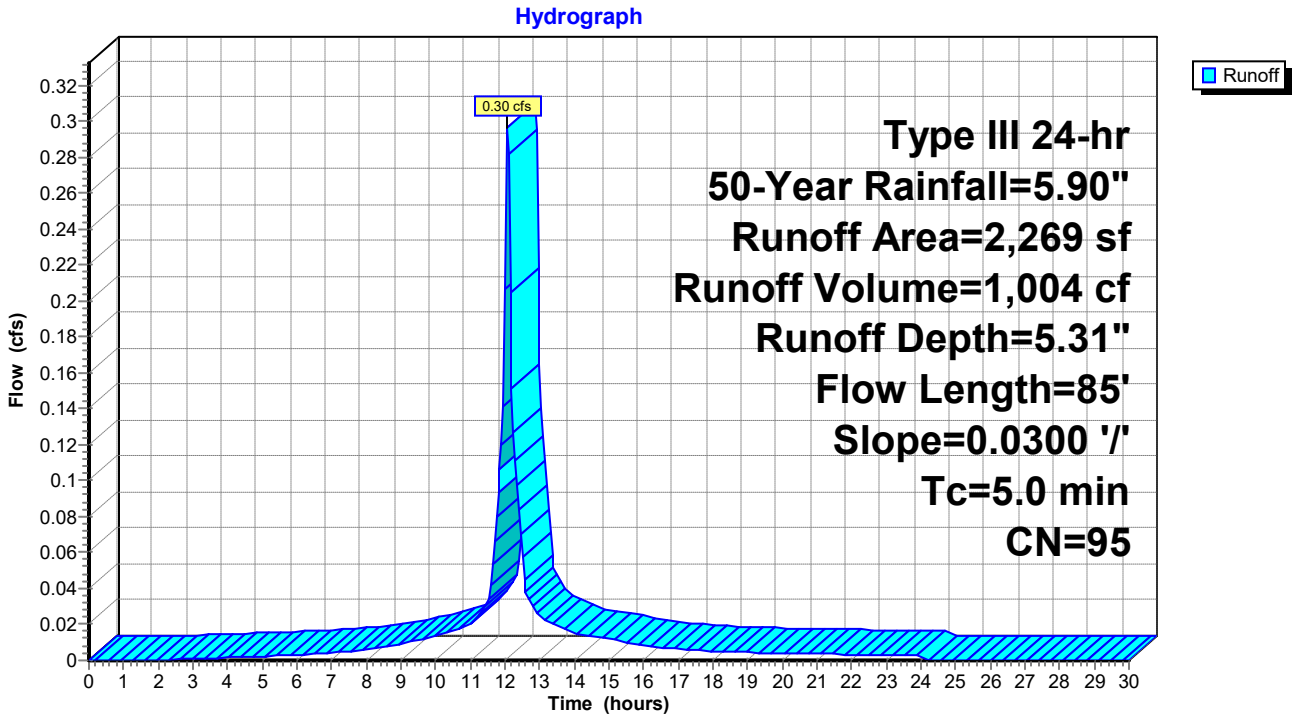
Runoff = 0.30 cfs @ 12.07 hrs, Volume= 1,004 cf, Depth= 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=5.90"

Area (sf)	CN	Description
190	61	>75% Grass cover, Good, HSG B
2,037	98	Paved parking, HSG B
42	98	Paved parking, HSG C
2,269	95	Weighted Average
190		8.37% Pervious Area
2,079		91.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0300	1.36		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	35	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	85	Total, Increased to minimum Tc = 5.0 min			

Subcatchment PSUB10: TO DCB-S10



Summary for Reach BK-1: McGovern Brook

Inflow Area = 944,676 sf, 13.07% Impervious, Inflow Depth = 4.31" for 50-Year event
Inflow = 69.47 cfs @ 12.20 hrs, Volume= 339,034 cf
Outflow = 65.43 cfs @ 12.38 hrs, Volume= 339,031 cf, Atten= 6%, Lag= 10.3 min

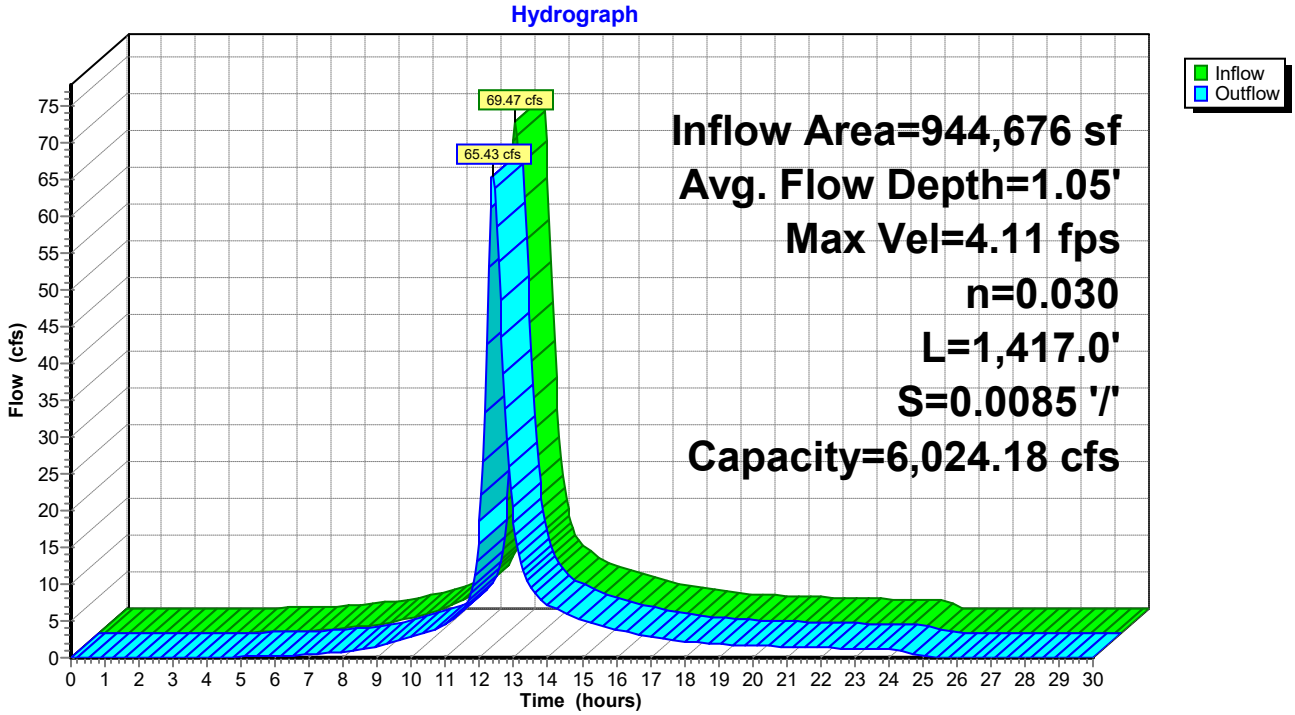
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.11 fps, Min. Travel Time= 5.8 min
Avg. Velocity = 1.28 fps, Avg. Travel Time= 18.4 min

Peak Storage= 22,598 cf @ 12.28 hrs
Average Depth at Peak Storage= 1.05'
Bank-Full Depth= 10.00' Flow Area= 420.0 sf, Capacity= 6,024.18 cfs

12.00' x 10.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 72.00'
Length= 1,417.0' Slope= 0.0085 '/'
Inlet Invert= 346.00', Outlet Invert= 334.00'

‡

Reach BK-1: McGovern Brook



Stage-Discharge for Reach BK-1: McGovern Brook

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.00	0.00	0.00
346.10	0.96	1.19
346.20	1.51	3.80
346.30	1.94	7.52
346.40	2.32	12.26
346.50	2.66	17.94
346.60	2.96	24.54
346.70	3.25	32.03
346.80	3.51	40.42
346.90	3.76	49.68
347.00	3.99	59.83
347.10	4.21	70.86
347.20	4.42	82.79
347.30	4.63	95.61
347.40	4.82	109.33
347.50	5.01	123.97
347.60	5.19	139.53
347.70	5.37	156.03
347.80	5.54	173.47
347.90	5.71	191.87
348.00	5.87	211.24
348.10	6.03	231.59
348.20	6.18	252.93
348.30	6.33	275.28
348.40	6.48	298.65
348.50	6.63	323.06
348.60	6.77	348.50
348.70	6.91	375.01
348.80	7.05	402.59
348.90	7.18	431.25
349.00	7.32	461.01
349.10	7.45	491.88
349.20	7.58	523.87
349.30	7.71	557.00
349.40	7.83	591.28
349.50	7.96	626.73
349.60	8.08	663.35
349.70	8.20	701.16
349.80	8.32	740.17
349.90	8.44	780.40
350.00	8.56	821.86
350.10	8.68	864.56
350.20	8.79	908.51
350.30	8.91	953.73
350.40	9.02	1,000.23
350.50	9.13	1,048.02
350.60	9.24	1,097.12
350.70	9.35	1,147.54
350.80	9.46	1,199.29
350.90	9.57	1,252.38
351.00	9.68	1,306.82
351.10	9.79	1,362.64
351.20	9.89	1,419.84
351.30	10.00	1,478.43
351.40	10.10	1,538.43
351.50	10.21	1,599.84
351.60	10.31	1,662.69
351.70	10.41	1,726.98
351.80	10.51	1,792.73
351.90	10.61	1,859.94
352.00	10.71	1,928.63
352.10	10.81	1,998.82
352.20	10.91	2,070.50
352.30	11.01	2,143.71
352.40	11.11	2,218.44
352.50	11.21	2,294.71
352.60	11.30	2,372.53
352.70	11.40	2,451.92
352.80	11.50	2,532.88
352.90	11.59	2,615.43
353.00	11.69	2,699.58
353.10	11.78	2,785.33
353.20	11.87	2,872.71
353.30	11.97	2,961.73
353.40	12.06	3,052.39
353.50	12.15	3,144.70
353.60	12.25	3,238.69
353.70	12.34	3,334.35
353.80	12.43	3,431.71
353.90	12.52	3,530.77
354.00	12.61	3,631.54
354.10	12.70	3,734.04
354.20	12.79	3,838.27
354.30	12.88	3,944.26
354.40	12.97	4,052.00
354.50	13.06	4,161.51
354.60	13.14	4,272.81
354.70	13.23	4,385.90
354.80	13.32	4,500.79
354.90	13.41	4,617.49
355.00	13.49	4,736.03
355.10	13.58	4,856.40
355.20	13.67	4,978.61
355.30	13.75	5,102.69
355.40	13.84	5,228.63
355.50	13.92	5,356.46
355.60	14.01	5,486.18
355.70	14.09	5,617.80
355.80	14.18	5,751.33
355.90	14.26	5,886.79
356.00	**14.34**	**6,024.18**

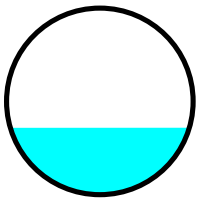
Summary for Reach CB-D4: TO DMH-1

Inflow Area = 16,447 sf, 47.74% Impervious, Inflow Depth = 2.45" for 50-Year event
Inflow = 1.07 cfs @ 12.08 hrs, Volume= 3,365 cf
Outflow = 1.07 cfs @ 12.09 hrs, Volume= 3,365 cf, Atten= 0%, Lag= 0.3 min

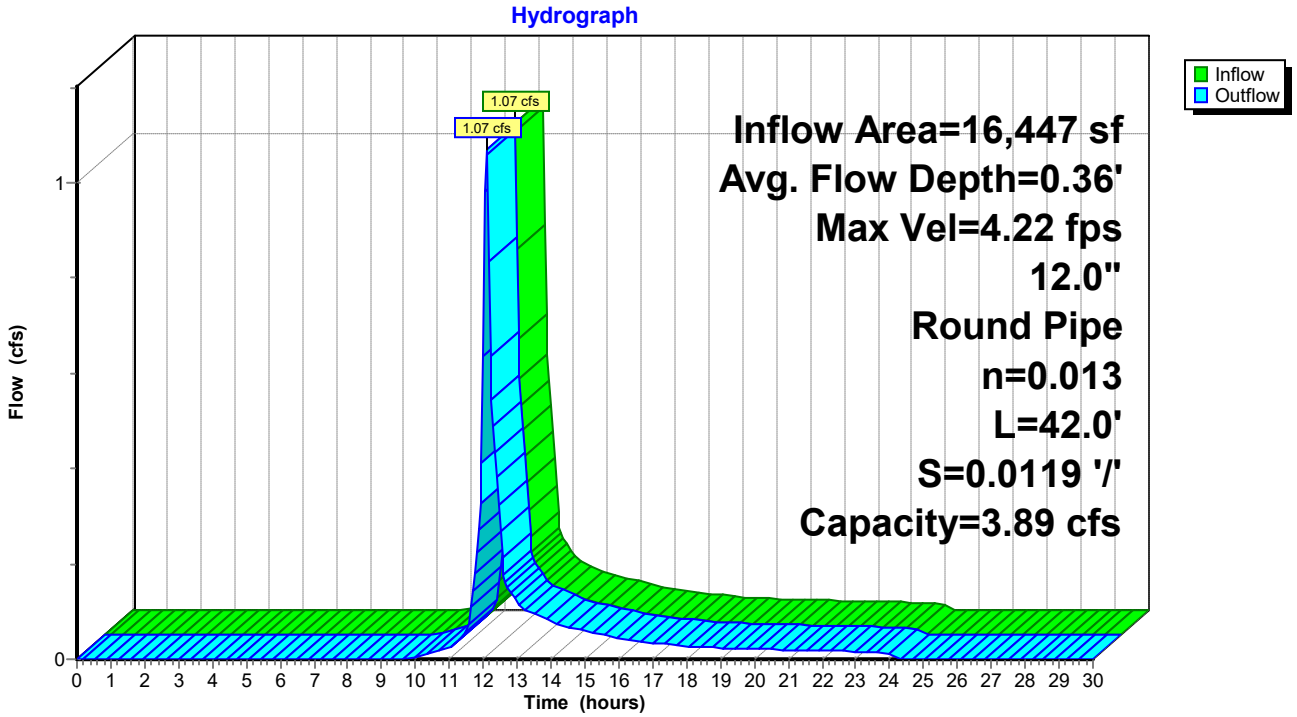
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.58 fps, Avg. Travel Time= 0.4 min

Peak Storage= 11 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.36'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.89 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 42.0' Slope= 0.0119 '/'
Inlet Invert= 352.70', Outlet Invert= 352.20'



Reach CB-D4: TO DMH-1



Stage-Discharge for Reach CB-D4: TO DMH-1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.70	0.00	0.00
352.71	0.44	0.00
352.72	0.70	0.00
352.73	0.91	0.01
352.74	1.10	0.01
352.75	1.27	0.02
352.76	1.43	0.03
352.77	1.58	0.04
352.78	1.72	0.05
352.79	1.86	0.07
352.80	1.99	0.08
352.81	2.11	0.10
352.82	2.23	0.12
352.83	2.34	0.14
352.84	2.45	0.16
352.85	2.56	0.19
352.86	2.66	0.22
352.87	2.76	0.24
352.88	2.86	0.27
352.89	2.95	0.31
352.90	3.04	0.34
352.91	3.13	0.38
352.92	3.22	0.41
352.93	3.31	0.45
352.94	3.39	0.49
352.95	3.47	0.53
352.96	3.55	0.58
352.97	3.62	0.62
352.98	3.70	0.67
352.99	3.77	0.71
353.00	3.84	0.76
353.01	3.91	0.81
353.02	3.98	0.86
353.03	4.04	0.91
353.04	4.11	0.97
353.05	4.17	1.02
353.06	4.23	1.08
353.07	4.29	1.13
353.08	4.35	1.19
353.09	4.41	1.25
353.10	4.47	1.31
353.11	4.52	1.37
353.12	4.57	1.43
353.13	4.62	1.49
353.14	4.67	1.56
353.15	4.72	1.62
353.16	4.77	1.68
353.17	4.82	1.75
353.18	4.86	1.81
353.19	4.91	1.88
353.20	4.95	1.94
353.21	4.99	2.01
353.22	5.03	2.08
353.23	5.07	2.14
353.24	5.11	2.21
353.25	5.14	2.28
353.26	5.18	2.34
353.27	5.21	2.41
353.28	5.25	2.48
353.29	5.28	2.54
353.30	5.31	2.61
353.31	5.34	2.68
353.32	5.36	2.74
353.33	5.39	2.81
353.34	5.42	2.88
353.35	5.44	2.94
353.36	5.46	3.00
353.37	5.49	3.07
353.38	5.51	3.13
353.39	5.52	3.19
353.40	5.54	3.25
353.41	5.56	3.31
353.42	5.57	3.37
353.43	5.59	3.43
353.44	5.60	3.49
353.45	5.61	3.54
353.46	5.62	3.60
353.47	5.63	3.65
353.48	5.63	3.70
353.49	5.64	3.75
353.50	5.64	3.80
353.51	**5.64**	3.85
353.52	5.64	3.89
353.53	5.64	3.93
353.54	5.64	3.97
353.55	5.63	4.01
353.56	5.62	4.04
353.57	5.61	4.07
353.58	5.60	4.10
353.59	5.58	4.12
353.60	5.56	4.14
353.61	5.54	4.16
353.62	5.52	4.17
353.63	5.49	4.18
353.64	5.46	**4.18**
353.65	5.42	4.18
353.66	5.37	4.16
353.67	5.32	4.14
353.68	5.26	4.11
353.69	5.17	4.05
353.70	4.95	3.89

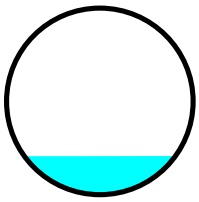
Summary for Reach CB-D7: TO DMH#6

Inflow Area = 2,624 sf,100.00% Impervious, Inflow Depth = 5.66" for 50-Year event
Inflow = 0.35 cfs @ 12.07 hrs, Volume= 1,238 cf
Outflow = 0.35 cfs @ 12.07 hrs, Volume= 1,238 cf, Atten= 1%, Lag= 0.2 min

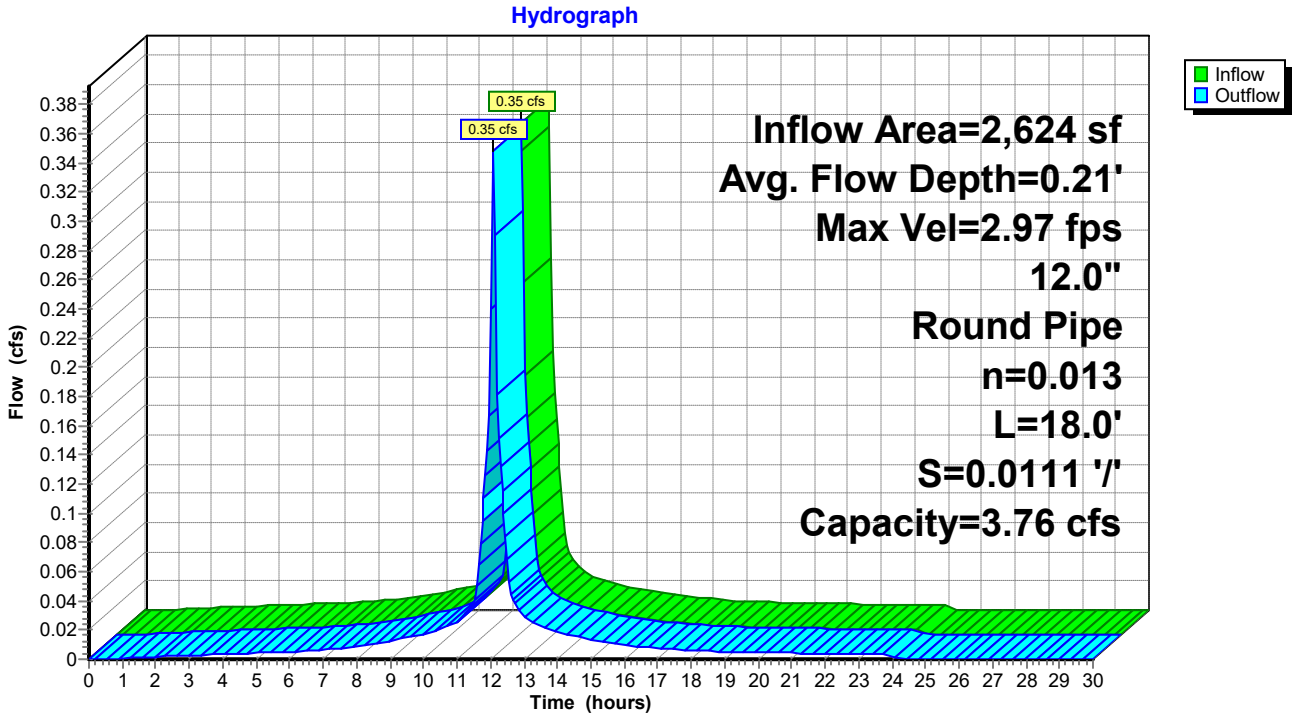
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.97 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.98 fps, Avg. Travel Time= 0.3 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.76 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 18.0' Slope= 0.0111 '/'
Inlet Invert= 351.70', Outlet Invert= 351.50'



Reach CB-D7: TO DMH#6



Stage-Discharge for Reach CB-D7: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.43	0.00
351.72	0.67	0.00
351.73	0.88	0.01
351.74	1.06	0.01
351.75	1.23	0.02
351.76	1.38	0.03
351.77	1.53	0.04
351.78	1.66	0.05
351.79	1.79	0.06
351.80	1.92	0.08
351.81	2.04	0.10
351.82	2.15	0.11
351.83	2.26	0.14
351.84	2.37	0.16
351.85	2.47	0.18
351.86	2.57	0.21
351.87	2.67	0.24
351.88	2.76	0.27
351.89	2.85	0.30
351.90	2.94	0.33
351.91	3.03	0.36
351.92	3.11	0.40
351.93	3.19	0.44
351.94	3.27	0.47
351.95	3.35	0.51
351.96	3.43	0.56
351.97	3.50	0.60
351.98	3.57	0.64
351.99	3.64	0.69
352.00	3.71	0.74
352.01	3.78	0.78
352.02	3.84	0.83
352.03	3.91	0.88
352.04	3.97	0.93
352.05	4.03	0.99
352.06	4.09	1.04
352.07	4.15	1.10
352.08	4.20	1.15
352.09	4.26	1.21
352.10	4.31	1.27
352.11	4.37	1.32
352.12	4.42	1.38
352.13	4.47	1.44
352.14	4.52	1.50
352.15	4.56	1.56
352.16	4.61	1.63
352.17	4.65	1.69
352.18	4.70	1.75
352.19	4.74	1.81
352.20	4.78	1.88
352.21	4.82	1.94
352.22	4.86	2.01
352.23	4.90	2.07
352.24	4.93	2.13
352.25	4.97	2.20
352.26	5.00	2.26
352.27	5.04	2.33
352.28	5.07	2.39
352.29	5.10	2.46
352.30	5.13	2.52
352.31	5.16	2.59
352.32	5.18	2.65
352.33	5.21	2.71
352.34	5.23	2.78
352.35	5.26	2.84
352.36	5.28	2.90
352.37	5.30	2.96
352.38	5.32	3.03
352.39	5.34	3.09
352.40	5.35	3.14
352.41	5.37	3.20
352.42	5.38	3.26
352.43	5.40	3.32
352.44	5.41	3.37
352.45	5.42	3.42
352.46	5.43	3.48
352.47	5.44	3.53
352.48	5.44	3.58
352.49	5.45	3.62
352.50	5.45	3.67
352.51	**5.45**	3.71
352.52	5.45	3.76
352.53	5.45	3.80
352.54	5.44	3.83
352.55	5.44	3.87
352.56	5.43	3.90
352.57	5.42	3.93
352.58	5.41	3.96
352.59	5.39	3.98
352.60	5.38	4.00
352.61	5.36	4.02
352.62	5.33	4.03
352.63	5.30	4.04
352.64	5.27	**4.04**
352.65	5.24	4.04
352.66	5.19	4.02
352.67	5.14	4.00
352.68	5.08	3.97
352.69	4.99	3.91
352.70	4.78	3.76

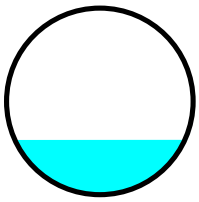
Summary for Reach CB-D8: TO DMH#6

Inflow Area = 5,879 sf, 76.82% Impervious, Inflow Depth = 4.10" for 50-Year event
Inflow = 0.64 cfs @ 12.07 hrs, Volume= 2,010 cf
Outflow = 0.64 cfs @ 12.08 hrs, Volume= 2,010 cf, Atten= 1%, Lag= 0.3 min

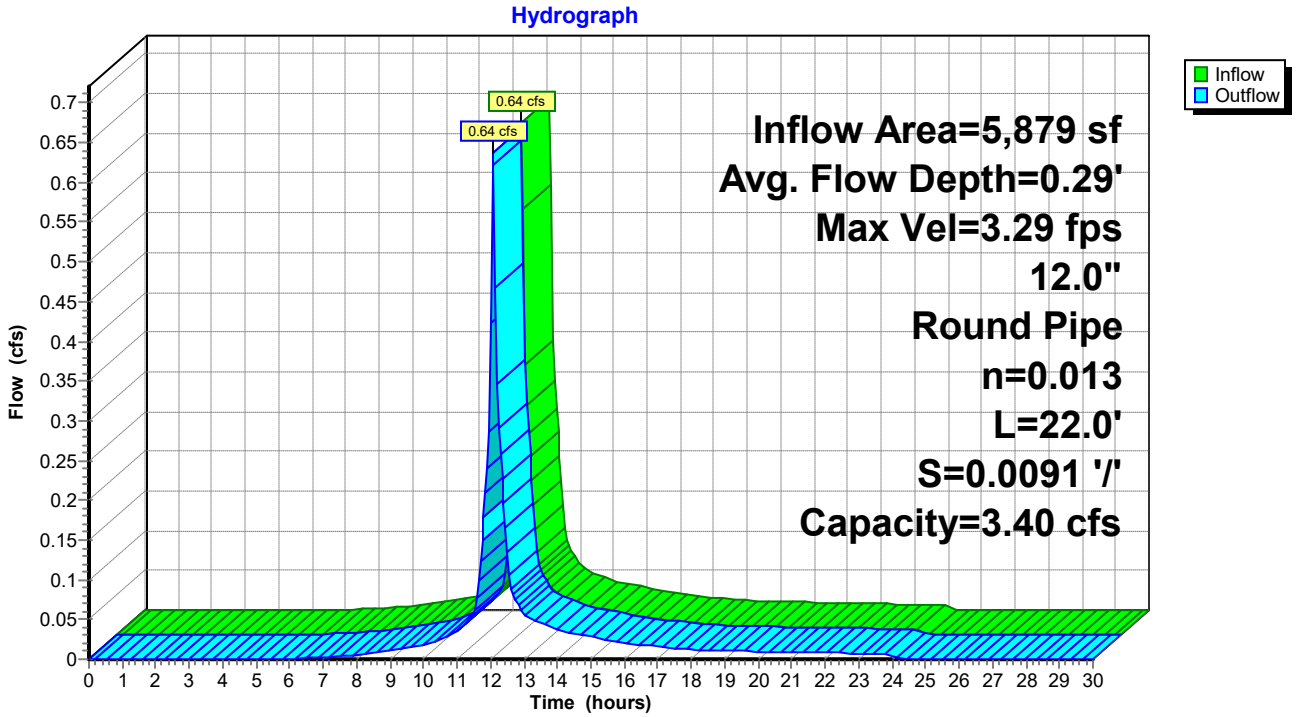
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.29 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.11 fps, Avg. Travel Time= 0.3 min

Peak Storage= 4 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.29'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.40 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 22.0' Slope= 0.0091 '/'
Inlet Invert= 351.70', Outlet Invert= 351.50'



Reach CB-D8: TO DMH#6



Stage-Discharge for Reach CB-D8: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.38	0.00
351.72	0.61	0.00
351.73	0.80	0.01
351.74	0.96	0.01
351.75	1.11	0.02
351.76	1.25	0.02
351.77	1.38	0.03
351.78	1.51	0.04
351.79	1.62	0.06
351.80	1.74	0.07
351.81	1.84	0.09
351.82	1.95	0.10
351.83	2.05	0.12
351.84	2.14	0.14
351.85	2.24	0.17
351.86	2.33	0.19
351.87	2.41	0.21
351.88	2.50	0.24
351.89	2.58	0.27
351.90	2.66	0.30
351.91	2.74	0.33
351.92	2.81	0.36
351.93	2.89	0.39
351.94	2.96	0.43
351.95	3.03	0.47
351.96	3.10	0.50
351.97	3.17	0.54
351.98	3.23	0.58
351.99	3.29	0.62
352.00	3.36	0.67
352.01	3.42	0.71
352.02	3.48	0.75
352.03	3.53	0.80
352.04	3.59	0.85
352.05	3.65	0.89
352.06	3.70	0.94
352.07	3.75	0.99
352.08	3.80	1.04
352.09	3.85	1.09
352.10	3.90	1.14
352.11	3.95	1.20
352.12	4.00	1.25
352.13	4.04	1.30
352.14	4.09	1.36
352.15	4.13	1.41
352.16	4.17	1.47
352.17	4.21	1.53
352.18	4.25	1.58
352.19	4.29	1.64
352.20	4.33	1.70
352.21	4.36	1.76
352.22	4.40	1.81
352.23	4.43	1.87
352.24	4.46	1.93
352.25	4.50	1.99
352.26	4.53	2.05
352.27	4.56	2.11
352.28	4.58	2.17
352.29	4.61	2.22
352.30	4.64	2.28
352.31	4.66	2.34
352.32	4.69	2.40
352.33	4.71	2.46
352.34	4.73	2.51
352.35	4.75	2.57
352.36	4.77	2.63
352.37	4.79	2.68
352.38	4.81	2.74
352.39	4.83	2.79
352.40	4.84	2.84
352.41	4.86	2.90
352.42	4.87	2.95
352.43	4.88	3.00
352.44	4.89	3.05
352.45	4.90	3.10
352.46	4.91	3.15
352.47	4.92	3.19
352.48	4.92	3.24
352.49	4.93	3.28
352.50	4.93	3.32
352.51	**4.93**	3.36
352.52	4.93	3.40
352.53	4.93	3.43
352.54	4.92	3.47
352.55	4.92	3.50
352.56	4.91	3.53
352.57	4.90	3.56
352.58	4.89	3.58
352.59	4.88	3.60
352.60	4.86	3.62
352.61	4.84	3.64
352.62	4.82	3.65
352.63	4.80	3.65
352.64	4.77	**3.65**
352.65	4.74	3.65
352.66	4.70	3.64
352.67	4.65	3.62
352.68	4.59	3.59
352.69	4.51	3.54
352.70	4.33	3.40

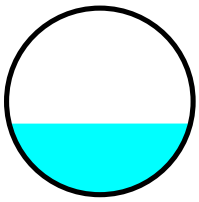
Summary for Reach CB21: TO DMH#21

Inflow Area = 16,502 sf, 47.31% Impervious, Inflow Depth = 3.49" for 50-Year event
Inflow = 1.55 cfs @ 12.08 hrs, Volume= 4,800 cf
Outflow = 1.54 cfs @ 12.08 hrs, Volume= 4,800 cf, Atten= 0%, Lag= 0.3 min

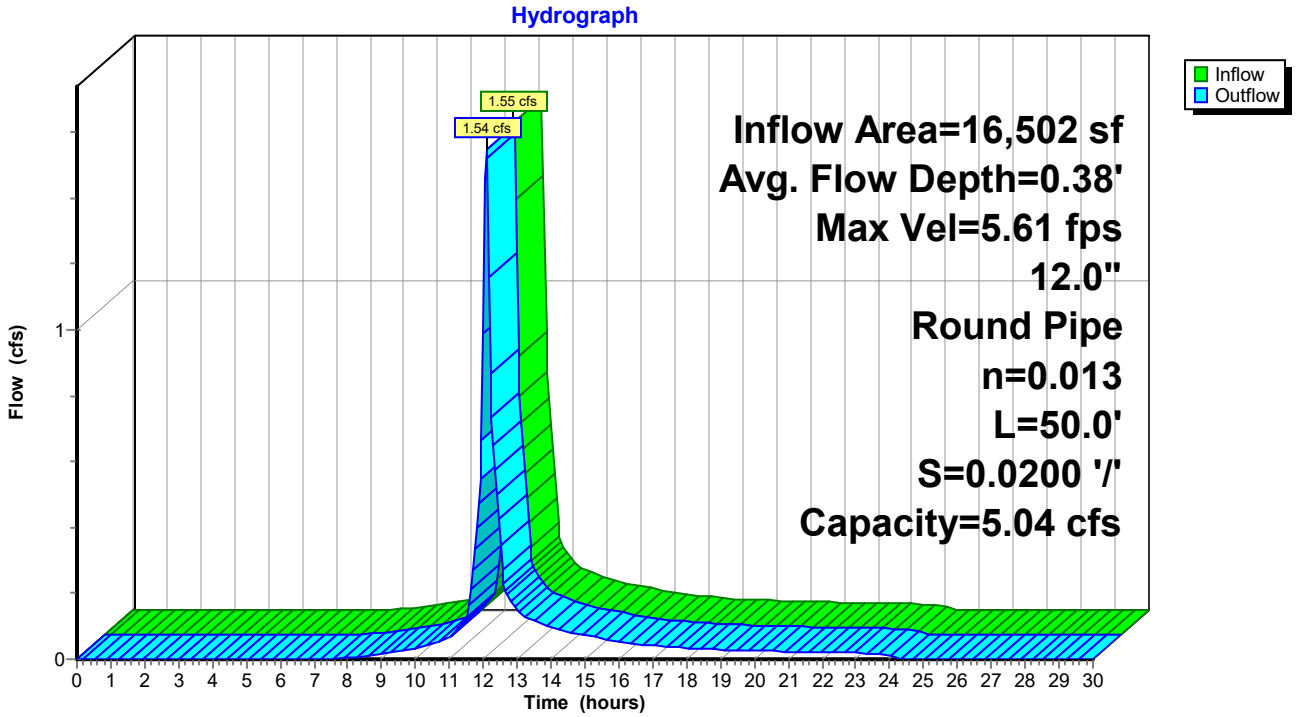
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.61 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.98 fps, Avg. Travel Time= 0.4 min

Peak Storage= 14 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.38'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.04 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 50.0' Slope= 0.0200 '/'
Inlet Invert= 346.40', Outlet Invert= 345.40'



Reach CB21: TO DMH#21



Stage-Discharge for Reach CB21: TO DMH#21

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.40	0.00	0.00
346.41	0.57	0.00
346.42	0.90	0.00
346.43	1.18	0.01
346.44	1.42	0.02
346.45	1.65	0.02
346.46	1.86	0.04
346.47	2.05	0.05
346.48	2.23	0.07
346.49	2.41	0.08
346.50	2.57	0.11
346.51	2.73	0.13
346.52	2.89	0.15
346.53	3.03	0.18
346.54	3.18	0.21
346.55	3.32	0.24
346.56	3.45	0.28
346.57	3.58	0.32
346.58	3.70	0.36
346.59	3.83	0.40
346.60	3.95	0.44
346.61	4.06	0.49
346.62	4.17	0.53
346.63	4.28	0.58
346.64	4.39	0.64
346.65	4.50	0.69
346.66	4.60	0.75
346.67	4.70	0.80
346.68	4.79	0.86
346.69	4.89	0.92
346.70	4.98	0.99
346.71	5.07	1.05
346.72	5.16	1.12
346.73	5.24	1.19
346.74	5.33	1.25
346.75	5.41	1.32
346.76	5.49	1.40
346.77	5.57	1.47
346.78	5.64	1.54
346.79	5.72	1.62
346.80	5.79	1.70
346.81	5.86	1.78
346.82	5.93	1.86
346.83	5.99	1.94
346.84	6.06	2.02
346.85	6.12	2.10
346.86	6.18	2.18
346.87	6.24	2.27
346.88	6.30	2.35
346.89	6.36	2.43
346.90	6.42	2.52
346.91	6.47	2.61
346.92	6.52	2.69
346.93	6.57	2.78
346.94	6.62	2.86
346.95	6.67	2.95
346.96	6.71	3.04
346.97	6.76	3.13
346.98	6.80	3.21
346.99	6.84	3.30
347.00	6.88	3.39
347.01	6.92	3.47
347.02	6.95	3.56
347.03	6.99	3.64
347.04	7.02	3.73
347.05	7.05	3.81
347.06	7.08	3.89
347.07	7.11	3.98
347.08	7.14	4.06
347.09	7.16	4.14
347.10	7.18	4.22
347.11	7.20	4.30
347.12	7.22	4.37
347.13	7.24	4.45
347.14	7.26	4.52
347.15	7.27	4.59
347.16	7.28	4.66
347.17	7.29	4.73
347.18	7.30	4.80
347.19	7.31	4.86
347.20	7.31	4.93
347.21	**7.31**	4.98
347.22	7.31	5.04
347.23	7.31	5.09
347.24	7.30	5.14
347.25	7.30	5.19
347.26	7.29	5.24
347.27	7.27	5.28
347.28	7.26	5.31
347.29	7.24	5.34
347.30	7.21	5.37
347.31	7.19	5.39
347.32	7.15	5.41
347.33	7.12	5.42
347.34	7.07	**5.42**
347.35	7.02	5.41
347.36	6.97	5.40
347.37	6.90	5.37
347.38	6.81	5.32
347.39	6.70	5.25
347.40	6.42	5.04

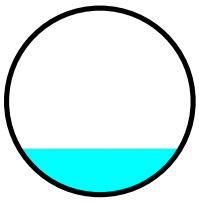
Summary for Reach CBD1: TO DMH#8

Inflow Area = 6,833 sf, 88.85% Impervious, Inflow Depth = 4.86" for 50-Year event
Inflow = 0.85 cfs @ 12.07 hrs, Volume= 2,767 cf
Outflow = 0.85 cfs @ 12.07 hrs, Volume= 2,767 cf, Atten= 0%, Lag= 0.1 min

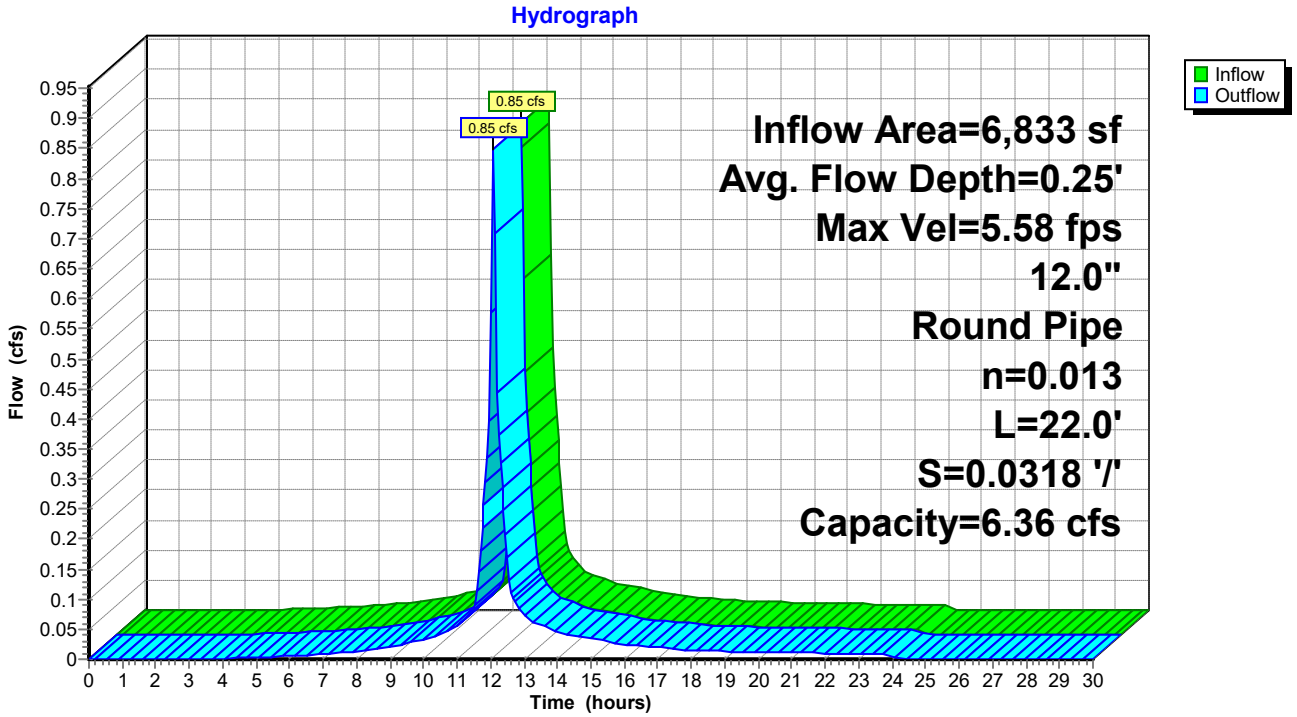
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.58 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.83 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.25'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.36 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 22.0' Slope= 0.0318 '/'
Inlet Invert= 352.70', Outlet Invert= 352.00'



Reach CBD1: TO DMH#8



Stage-Discharge for Reach CBD1: TO DMH#8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.70	0.00	0.00
352.71	0.72	0.00
352.72	1.14	0.00
352.73	1.49	0.01
352.74	1.80	0.02
352.75	2.08	0.03
352.76	2.34	0.05
352.77	2.58	0.06
352.78	2.82	0.08
352.79	3.04	0.11
352.80	3.25	0.13
352.81	3.45	0.16
352.82	3.64	0.19
352.83	3.83	0.23
352.84	4.01	0.27
352.85	4.18	0.31
352.86	4.35	0.35
352.87	4.51	0.40
352.88	4.67	0.45
352.89	4.83	0.50
352.90	4.98	0.56
352.91	5.12	0.61
352.92	5.26	0.67
352.93	5.40	0.74
352.94	5.54	0.80
352.95	5.67	0.87
352.96	5.80	0.94
352.97	5.92	1.01
352.98	6.04	1.09
352.99	6.16	1.17
353.00	6.28	1.24
353.01	6.39	1.33
353.02	6.50	1.41
353.03	6.61	1.49
353.04	6.72	1.58
353.05	6.82	1.67
353.06	6.92	1.76
353.07	7.02	1.85
353.08	7.12	1.95
353.09	7.21	2.04
353.10	7.30	2.14
353.11	7.39	2.24
353.12	7.48	2.34
353.13	7.56	2.44
353.14	7.64	2.54
353.15	7.72	2.65
353.16	7.80	2.75
353.17	7.88	2.86
353.18	7.95	2.96
353.19	8.02	3.07
353.20	8.09	3.18
353.21	8.16	3.29
353.22	8.23	3.39
353.23	8.29	3.50
353.24	8.35	3.61
353.25	8.41	3.72
353.26	8.47	3.83
353.27	8.52	3.94
353.28	8.58	4.05
353.29	8.63	4.16
353.30	8.68	4.27
353.31	8.73	4.38
353.32	8.77	4.49
353.33	8.81	4.59
353.34	8.86	4.70
353.35	8.90	4.81
353.36	8.93	4.91
353.37	8.97	5.02
353.38	9.00	5.12
353.39	9.03	5.22
353.40	9.06	5.32
353.41	9.09	5.42
353.42	9.11	5.52
353.43	9.13	5.61
353.44	9.15	5.70
353.45	9.17	5.80
353.46	9.19	5.88
353.47	9.20	5.97
353.48	9.21	6.05
353.49	9.22	6.13
353.50	9.22	6.21
353.51	**9.22**	6.29
353.52	9.22	6.36
353.53	9.22	6.43
353.54	9.21	6.49
353.55	9.20	6.55
353.56	9.19	6.60
353.57	9.17	6.65
353.58	9.15	6.70
353.59	9.13	6.74
353.60	9.10	6.77
353.61	9.06	6.80
353.62	9.02	6.82
353.63	8.98	6.83
353.64	8.92	**6.84**
353.65	8.86	6.83
353.66	8.79	6.81
353.67	8.70	6.77
353.68	8.59	6.72
353.69	8.45	6.62
353.70	8.09	6.36

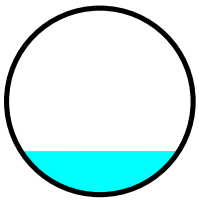
Summary for Reach CBD2: TO DMH#3

Inflow Area = 4,392 sf, 76.55% Impervious, Inflow Depth = 4.10" for 50-Year event
Inflow = 0.48 cfs @ 12.07 hrs, Volume= 1,502 cf
Outflow = 0.48 cfs @ 12.08 hrs, Volume= 1,502 cf, Atten= 1%, Lag= 0.1 min

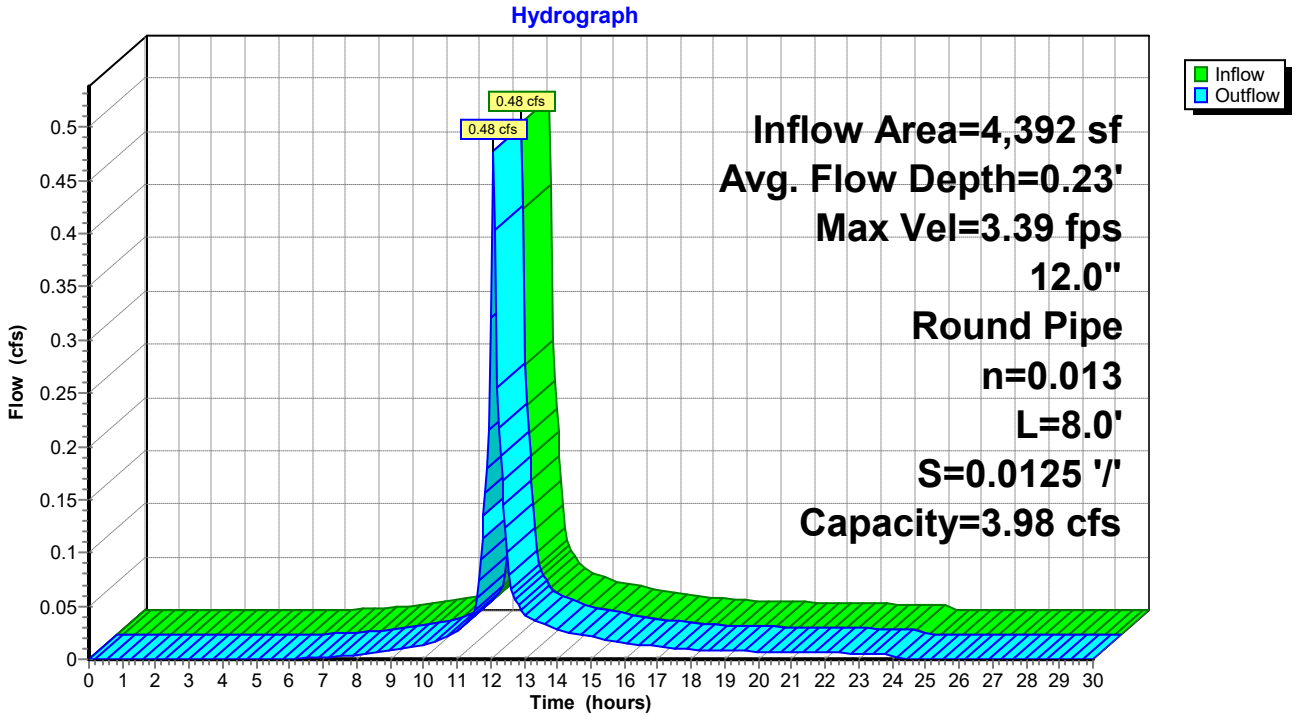
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.39 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.14 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.98 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 8.0' Slope= 0.0125 '/'
Inlet Invert= 353.10', Outlet Invert= 353.00'



Reach CBD2: TO DMH#3



Stage-Discharge for Reach CBD2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.10	0.00	0.00
353.11	0.45	0.00
353.12	0.71	0.00
353.13	0.93	0.01
353.14	1.13	0.01
353.15	1.30	0.02
353.16	1.47	0.03
353.17	1.62	0.04
353.18	1.77	0.05
353.19	1.90	0.07
353.20	2.03	0.08
353.21	2.16	0.10
353.22	2.28	0.12
353.23	2.40	0.14
353.24	2.51	0.17
353.25	2.62	0.19
353.26	2.73	0.22
353.27	2.83	0.25
353.28	2.93	0.28
353.29	3.03	0.31
353.30	3.12	0.35
353.31	3.21	0.38
353.32	3.30	0.42
353.33	3.39	0.46
353.34	3.47	0.50
353.35	3.55	0.55
353.36	3.63	0.59
353.37	3.71	0.64
353.38	3.79	0.68
353.39	3.86	0.73
353.40	3.94	0.78
353.41	4.01	0.83
353.42	4.08	0.88
353.43	4.14	0.94
353.44	4.21	0.99
353.45	4.28	1.05
353.46	4.34	1.10
353.47	4.40	1.16
353.48	4.46	1.22
353.49	4.52	1.28
353.50	4.58	1.34
353.51	4.63	1.40
353.52	4.69	1.47
353.53	4.74	1.53
353.54	4.79	1.59
353.55	4.84	1.66
353.56	4.89	1.72
353.57	4.94	1.79
353.58	4.98	1.86
353.59	5.03	1.92
353.60	5.07	1.99
353.61	5.11	2.06
353.62	5.16	2.13
353.63	5.20	2.20
353.64	5.23	2.26
353.65	5.27	2.33
353.66	5.31	2.40
353.67	5.34	2.47
353.68	5.38	2.54
353.69	5.41	2.61
353.70	5.44	2.68
353.71	5.47	2.74
353.72	5.50	2.81
353.73	5.52	2.88
353.74	5.55	2.95
353.75	5.58	3.01
353.76	5.60	3.08
353.77	5.62	3.14
353.78	5.64	3.21
353.79	5.66	3.27
353.80	5.68	3.33
353.81	5.70	3.40
353.82	5.71	3.46
353.83	5.73	3.52
353.84	5.74	3.58
353.85	5.75	3.63
353.86	5.76	3.69
353.87	5.77	3.74
353.88	5.77	3.79
353.89	5.78	3.84
353.90	5.78	3.89
353.91	**5.78**	3.94
353.92	5.78	3.98
353.93	5.78	4.03
353.94	5.77	4.07
353.95	5.77	4.10
353.96	5.76	4.14
353.97	5.75	4.17
353.98	5.74	4.20
353.99	5.72	4.22
354.00	5.70	4.25
354.01	5.68	4.26
354.02	5.66	4.28
354.03	5.63	4.28
354.04	5.59	**4.28**
354.05	5.55	4.28
354.06	5.51	4.27
354.07	5.45	4.25
354.08	5.38	4.21
354.09	5.29	4.15
354.10	5.07	3.98

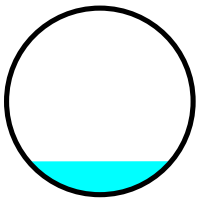
Summary for Reach CBD3: TO DMH-1

Inflow Area = 4,805 sf, 87.24% Impervious, Inflow Depth = 4.75" for 50-Year event
Inflow = 0.59 cfs @ 12.07 hrs, Volume= 1,901 cf
Outflow = 0.59 cfs @ 12.07 hrs, Volume= 1,901 cf, Atten= 0%, Lag= 0.1 min

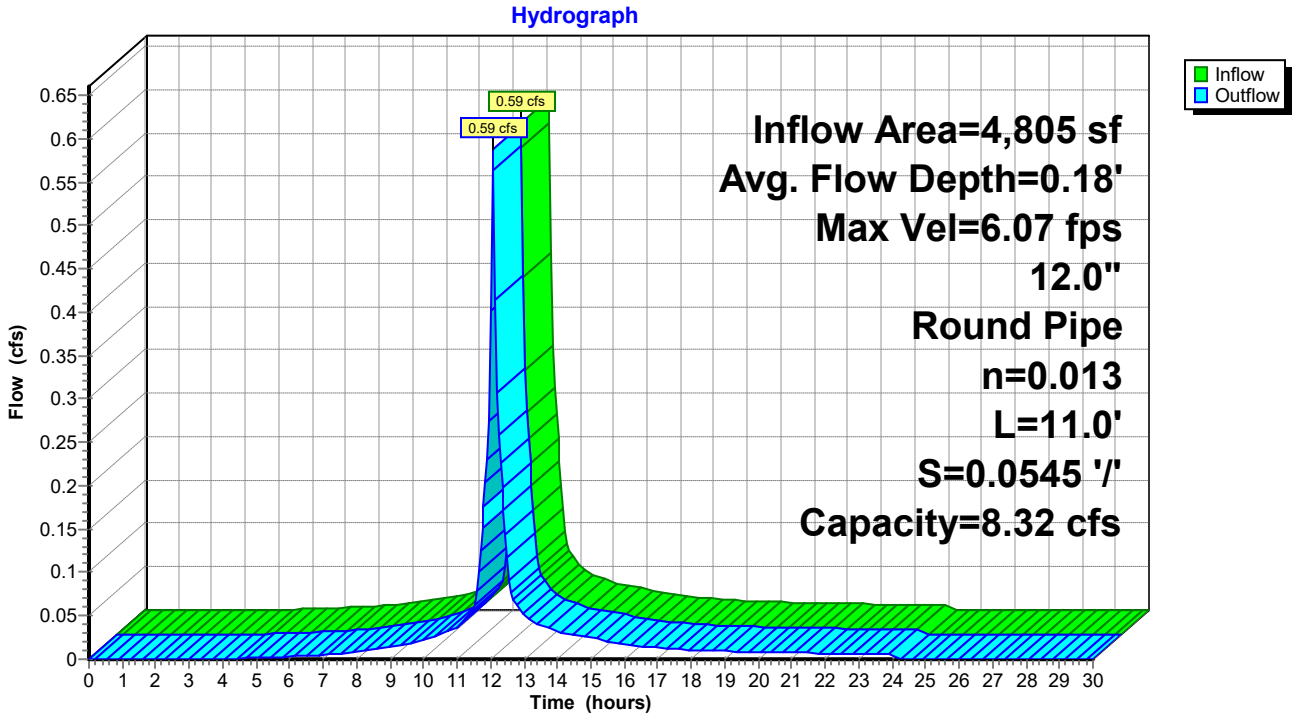
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.07 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.00 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.32 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 11.0' Slope= 0.0545 '/'
Inlet Invert= 352.80', Outlet Invert= 352.20'



Reach CBD3: TO DMH-1



Stage-Discharge for Reach CBD3: TO DMH-1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.80	0.00	0.00
352.81	0.94	0.00
352.82	1.49	0.01
352.83	1.95	0.01
352.84	2.35	0.02
352.85	2.72	0.04
352.86	3.06	0.06
352.87	3.38	0.08
352.88	3.69	0.11
352.89	3.97	0.14
352.90	4.25	0.17
352.91	4.51	0.21
352.92	4.77	0.25
352.93	5.01	0.30
352.94	5.25	0.35
352.95	5.48	0.40
352.96	5.70	0.46
352.97	5.91	0.52
352.98	6.12	0.59
352.99	6.32	0.66
353.00	6.52	0.73
353.01	6.71	0.80
353.02	6.89	0.88
353.03	7.07	0.97
353.04	7.25	1.05
353.05	7.42	1.14
353.06	7.59	1.23
353.07	7.75	1.33
353.08	7.91	1.42
353.09	8.07	1.53
353.10	8.22	1.63
353.11	8.37	1.74
353.12	8.52	1.85
353.13	8.66	1.96
353.14	8.80	2.07
353.15	8.93	2.19
353.16	9.06	2.31
353.17	9.19	2.43
353.18	9.32	2.55
353.19	9.44	2.68
353.20	9.56	2.80
353.21	9.67	2.93
353.22	9.79	3.06
353.23	9.90	3.20
353.24	10.01	3.33
353.25	10.11	3.47
353.26	10.21	3.60
353.27	10.31	3.74
353.28	10.41	3.88
353.29	10.50	4.02
353.30	10.59	4.16
353.31	10.68	4.30
353.32	10.77	4.44
353.33	10.85	4.59
353.34	10.93	4.73
353.35	11.01	4.87
353.36	11.09	5.02
353.37	11.16	5.16
353.38	11.23	5.30
353.39	11.30	5.45
353.40	11.36	5.59
353.41	11.42	5.73
353.42	11.48	5.87
353.43	11.54	6.02
353.44	11.59	6.16
353.45	11.65	6.29
353.46	11.70	6.43
353.47	11.74	6.57
353.48	11.79	6.70
353.49	11.83	6.84
353.50	11.86	6.97
353.51	11.90	7.10
353.52	11.93	7.22
353.53	11.96	7.35
353.54	11.99	7.47
353.55	12.01	7.59
353.56	12.03	7.70
353.57	12.05	7.82
353.58	12.06	7.93
353.59	12.07	8.03
353.60	12.08	8.13
353.61	**12.08**	8.23
353.62	12.08	8.32
353.63	12.07	8.41
353.64	12.06	8.50
353.65	12.05	8.57
353.66	12.03	8.65
353.67	12.01	8.71
353.68	11.98	8.77
353.69	11.95	8.82
353.70	11.91	8.87
353.71	11.87	8.90
353.72	11.81	8.93
353.73	11.75	8.95
353.74	11.68	**8.95**
353.75	11.60	8.94
353.76	11.51	8.91
353.77	11.39	8.87
353.78	11.25	8.79
353.79	11.06	8.67
353.80	10.59	8.32

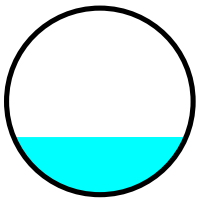
Summary for Reach CBD5: TO DMH#4

Inflow Area = 7,120 sf, 71.57% Impervious, Inflow Depth = 3.79" for 50-Year event
Inflow = 0.73 cfs @ 12.07 hrs, Volume= 2,250 cf
Outflow = 0.72 cfs @ 12.08 hrs, Volume= 2,250 cf, Atten= 1%, Lag= 0.2 min

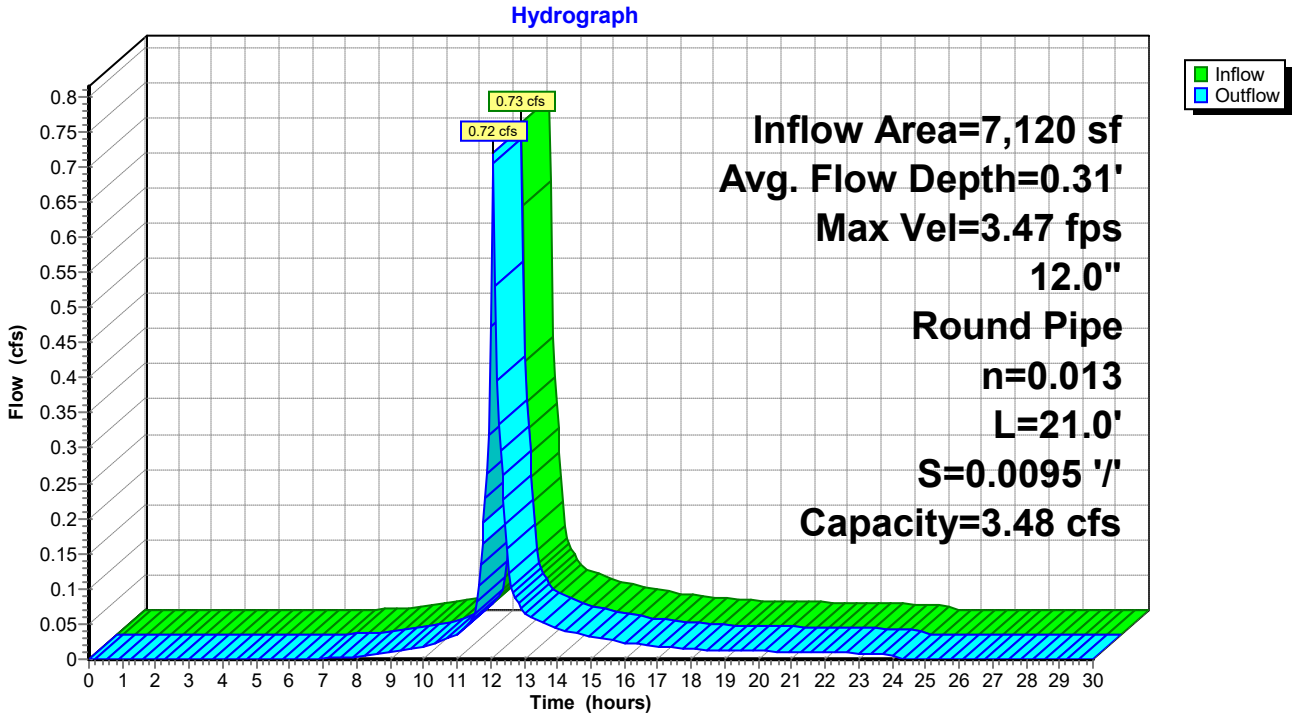
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.47 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.19 fps, Avg. Travel Time= 0.3 min

Peak Storage= 4 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.31'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.48 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 351.80', Outlet Invert= 351.60'



Reach CBD5: TO DMH#4



Stage-Discharge for Reach CBD5: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.39	0.00
351.82	0.62	0.00
351.83	0.81	0.01
351.84	0.98	0.01
351.85	1.14	0.02
351.86	1.28	0.02
351.87	1.41	0.03
351.88	1.54	0.05
351.89	1.66	0.06
351.90	1.78	0.07
351.91	1.89	0.09
351.92	1.99	0.11
351.93	2.09	0.13
351.94	2.19	0.15
351.95	2.29	0.17
351.96	2.38	0.19
351.97	2.47	0.22
351.98	2.56	0.25
351.99	2.64	0.27
352.00	2.72	0.30
352.01	2.80	0.34
352.02	2.88	0.37
352.03	2.96	0.40
352.04	3.03	0.44
352.05	3.10	0.48
352.06	3.17	0.51
352.07	3.24	0.55
352.08	3.31	0.60
352.09	3.37	0.64
352.10	3.44	0.68
352.11	3.50	0.73
352.12	3.56	0.77
352.13	3.62	0.82
352.14	3.68	0.87
352.15	3.73	0.91
352.16	3.79	0.96
352.17	3.84	1.01
352.18	3.89	1.07
352.19	3.94	1.12
352.20	3.99	1.17
352.21	4.04	1.23
352.22	4.09	1.28
352.23	4.14	1.34
352.24	4.18	1.39
352.25	4.22	1.45
352.26	4.27	1.51
352.27	4.31	1.56
352.28	4.35	1.62
352.29	4.39	1.68
352.30	4.43	1.74
352.31	4.46	1.80
352.32	4.50	1.86
352.33	4.53	1.92
352.34	4.57	1.98
352.35	4.60	2.04
352.36	4.63	2.10
352.37	4.66	2.16
352.38	4.69	2.22
352.39	4.72	2.28
352.40	4.75	2.34
352.41	4.77	2.40
352.42	4.80	2.45
352.43	4.82	2.51
352.44	4.85	2.57
352.45	4.87	2.63
352.46	4.89	2.69
352.47	4.91	2.74
352.48	4.92	2.80
352.49	4.94	2.86
352.50	4.96	2.91
352.51	4.97	2.96
352.52	4.99	3.02
352.53	5.00	3.07
352.54	5.01	3.12
352.55	5.02	3.17
352.56	5.03	3.22
352.57	5.03	3.27
352.58	5.04	3.31
352.59	5.04	3.36
352.60	5.05	3.40
352.61	**5.05**	3.44
352.62	5.05	3.48
352.63	5.04	3.52
352.64	5.04	3.55
352.65	5.04	3.58
352.66	5.03	3.61
352.67	5.02	3.64
352.68	5.01	3.67
352.69	4.99	3.69
352.70	4.98	3.71
352.71	4.96	3.72
352.72	4.94	3.73
352.73	4.91	3.74
352.74	4.88	**3.74**
352.75	4.85	3.74
352.76	4.81	3.73
352.77	4.76	3.71
352.78	4.70	3.67
352.79	4.62	3.62
352.80	4.43	3.48

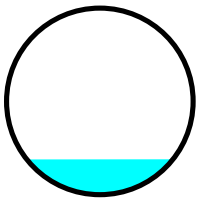
Summary for Reach CBD6: TO DMH#4

Inflow Area = 2,202 sf,100.00% Impervious, Inflow Depth = 5.66" for 50-Year event
Inflow = 0.29 cfs @ 12.07 hrs, Volume= 1,039 cf
Outflow = 0.29 cfs @ 12.07 hrs, Volume= 1,039 cf, Atten= 1%, Lag= 0.2 min

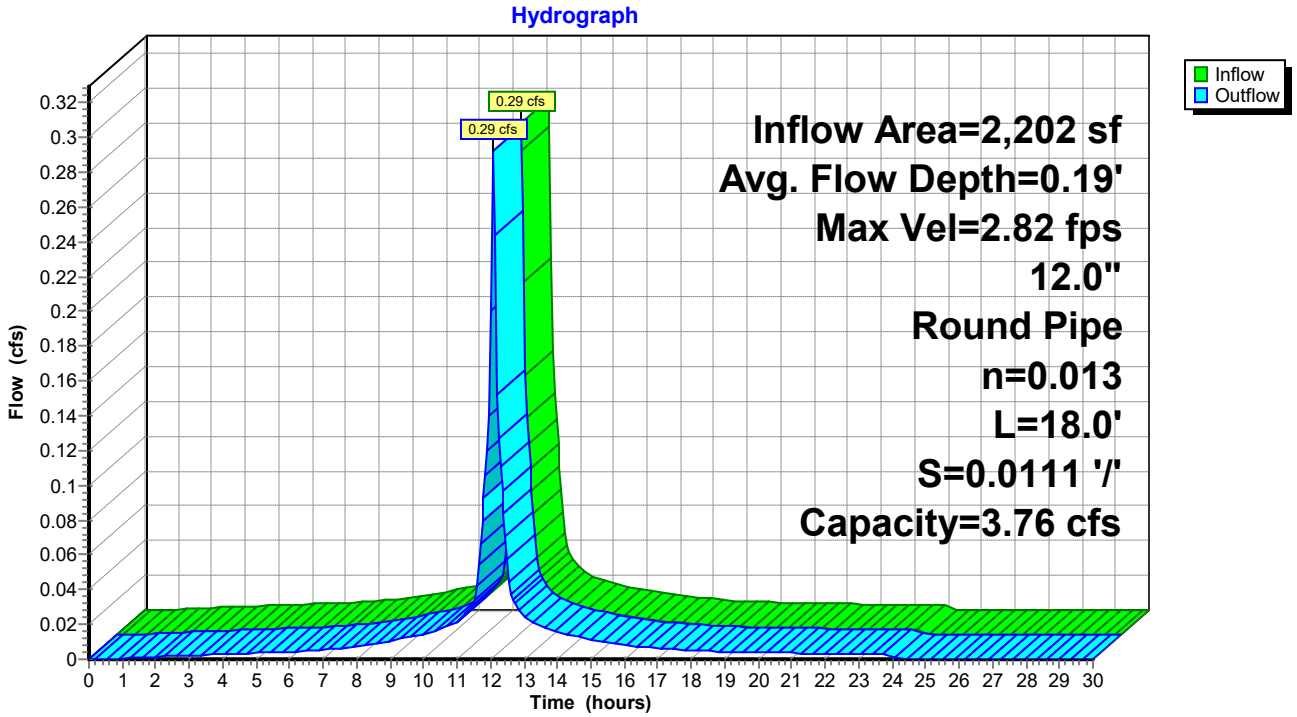
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.82 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.93 fps, Avg. Travel Time= 0.3 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.76 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 18.0' Slope= 0.0111 '/'
Inlet Invert= 351.80', Outlet Invert= 351.60'



Reach CBD6: TO DMH#4



Stage-Discharge for Reach CBD6: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.43	0.00
351.82	0.67	0.00
351.83	0.88	0.01
351.84	1.06	0.01
351.85	1.23	0.02
351.86	1.38	0.03
351.87	1.53	0.04
351.88	1.66	0.05
351.89	1.79	0.06
351.90	1.92	0.08
351.91	2.04	0.10
351.92	2.15	0.11
351.93	2.26	0.14
351.94	2.37	0.16
351.95	2.47	0.18
351.96	2.57	0.21
351.97	2.67	0.24
351.98	2.76	0.27
351.99	2.85	0.30
352.00	2.94	0.33
352.01	3.03	0.36
352.02	3.11	0.40
352.03	3.19	0.44
352.04	3.27	0.47
352.05	3.35	0.51
352.06	3.43	0.56
352.07	3.50	0.60
352.08	3.57	0.64
352.09	3.64	0.69
352.10	3.71	0.74
352.11	3.78	0.78
352.12	3.84	0.83
352.13	3.91	0.88
352.14	3.97	0.93
352.15	4.03	0.99
352.16	4.09	1.04
352.17	4.15	1.10
352.18	4.20	1.15
352.19	4.26	1.21
352.20	4.31	1.27
352.21	4.37	1.32
352.22	4.42	1.38
352.23	4.47	1.44
352.24	4.52	1.50
352.25	4.56	1.56
352.26	4.61	1.63
352.27	4.65	1.69
352.28	4.70	1.75
352.29	4.74	1.81
352.30	4.78	1.88
352.31	4.82	1.94
352.32	4.86	2.01
352.33	4.90	2.07
352.34	4.93	2.13
352.35	4.97	2.20
352.36	5.00	2.26
352.37	5.04	2.33
352.38	5.07	2.39
352.39	5.10	2.46
352.40	5.13	2.52
352.41	5.16	2.59
352.42	5.18	2.65
352.43	5.21	2.71
352.44	5.23	2.78
352.45	5.26	2.84
352.46	5.28	2.90
352.47	5.30	2.96
352.48	5.32	3.03
352.49	5.34	3.09
352.50	5.35	3.14
352.51	5.37	3.20
352.52	5.38	3.26
352.53	5.40	3.32
352.54	5.41	3.37
352.55	5.42	3.42
352.56	5.43	3.48
352.57	5.44	3.53
352.58	5.44	3.58
352.59	5.45	3.62
352.60	5.45	3.67
352.61	**5.45**	3.71
352.62	5.45	3.76
352.63	5.45	3.80
352.64	5.44	3.83
352.65	5.44	3.87
352.66	5.43	3.90
352.67	5.42	3.93
352.68	5.41	3.96
352.69	5.39	3.98
352.70	5.38	4.00
352.71	5.36	4.02
352.72	5.33	4.03
352.73	5.30	4.04
352.74	5.27	**4.04**
352.75	5.24	4.04
352.76	5.19	4.02
352.77	5.14	4.00
352.78	5.08	3.97
352.79	4.99	3.91
352.80	4.78	3.76

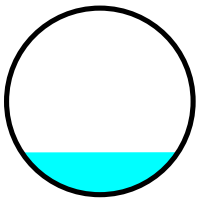
Summary for Reach CBD9: TO DMH#5

Inflow Area = 4,151 sf, 71.91% Impervious, Inflow Depth = 3.79" for 50-Year event
Inflow = 0.42 cfs @ 12.07 hrs, Volume= 1,312 cf
Outflow = 0.42 cfs @ 12.08 hrs, Volume= 1,312 cf, Atten= 1%, Lag= 0.6 min

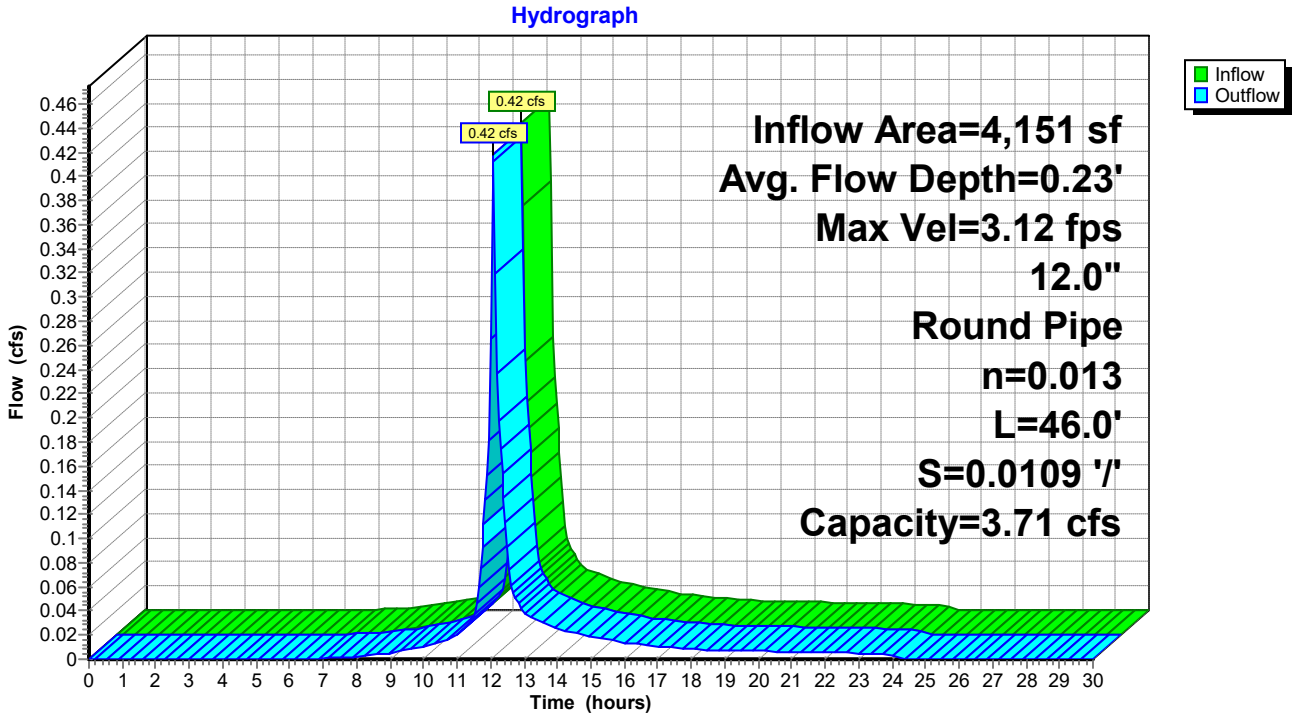
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.12 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.07 fps, Avg. Travel Time= 0.7 min

Peak Storage= 6 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.71 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 46.0' Slope= 0.0109 '/'
Inlet Invert= 352.50', Outlet Invert= 352.00'



Reach CBD9: TO DMH#5



Stage-Discharge for Reach CBD9: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.50	0.00	0.00
352.51	0.42	0.00
352.52	0.67	0.00
352.53	0.87	0.01
352.54	1.05	0.01
352.55	1.21	0.02
352.56	1.37	0.03
352.57	1.51	0.04
352.58	1.65	0.05
352.59	1.77	0.06
352.60	1.90	0.08
352.61	2.01	0.09
352.62	2.13	0.11
352.63	2.24	0.13
352.64	2.34	0.16
352.65	2.44	0.18
352.66	2.54	0.21
352.67	2.64	0.23
352.68	2.73	0.26
352.69	2.82	0.29
352.70	2.91	0.33
352.71	2.99	0.36
352.72	3.08	0.39
352.73	3.16	0.43
352.74	3.24	0.47
352.75	3.31	0.51
352.76	3.39	0.55
352.77	3.46	0.59
352.78	3.53	0.64
352.79	3.60	0.68
352.80	3.67	0.73
352.81	3.74	0.77
352.82	3.80	0.82
352.83	3.86	0.87
352.84	3.93	0.92
352.85	3.99	0.98
352.86	4.05	1.03
352.87	4.10	1.08
352.88	4.16	1.14
352.89	4.21	1.19
352.90	4.27	1.25
352.91	4.32	1.31
352.92	4.37	1.37
352.93	4.42	1.43
352.94	4.47	1.49
352.95	4.51	1.55
352.96	4.56	1.61
352.97	4.60	1.67
352.98	4.65	1.73
352.99	4.69	1.79
353.00	4.73	1.86
353.01	4.77	1.92
353.02	4.81	1.98
353.03	4.84	2.05
353.04	4.88	2.11
353.05	4.92	2.18
353.06	4.95	2.24
353.07	4.98	2.30
353.08	5.01	2.37
353.09	5.04	2.43
353.10	5.07	2.50
353.11	5.10	2.56
353.12	5.13	2.62
353.13	5.15	2.69
353.14	5.18	2.75
353.15	5.20	2.81
353.16	5.22	2.87
353.17	5.24	2.93
353.18	5.26	2.99
353.19	5.28	3.05
353.20	5.30	3.11
353.21	5.31	3.17
353.22	5.33	3.22
353.23	5.34	3.28
353.24	5.35	3.33
353.25	5.36	3.39
353.26	5.37	3.44
353.27	5.38	3.49
353.28	5.38	3.54
353.29	5.39	3.59
353.30	5.39	3.63
353.31	**5.39**	3.67
353.32	5.39	3.72
353.33	5.39	3.76
353.34	5.39	3.79
353.35	5.38	3.83
353.36	5.37	3.86
353.37	5.36	3.89
353.38	5.35	3.92
353.39	5.33	3.94
353.40	5.32	3.96
353.41	5.30	3.97
353.42	5.27	3.99
353.43	5.25	3.99
353.44	5.22	**4.00**
353.45	5.18	3.99
353.46	5.14	3.98
353.47	5.08	3.96
353.48	5.02	3.93
353.49	4.94	3.87
353.50	4.73	3.71

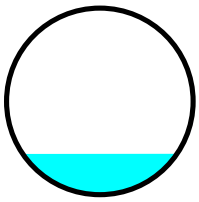
Summary for Reach CO1: TO CO#2

Inflow Area = 5,181 sf, 36.69% Impervious, Inflow Depth = 3.31" for 50-Year event
Inflow = 0.42 cfs @ 12.08 hrs, Volume= 1,428 cf
Outflow = 0.42 cfs @ 12.09 hrs, Volume= 1,428 cf, Atten= 1%, Lag= 0.5 min

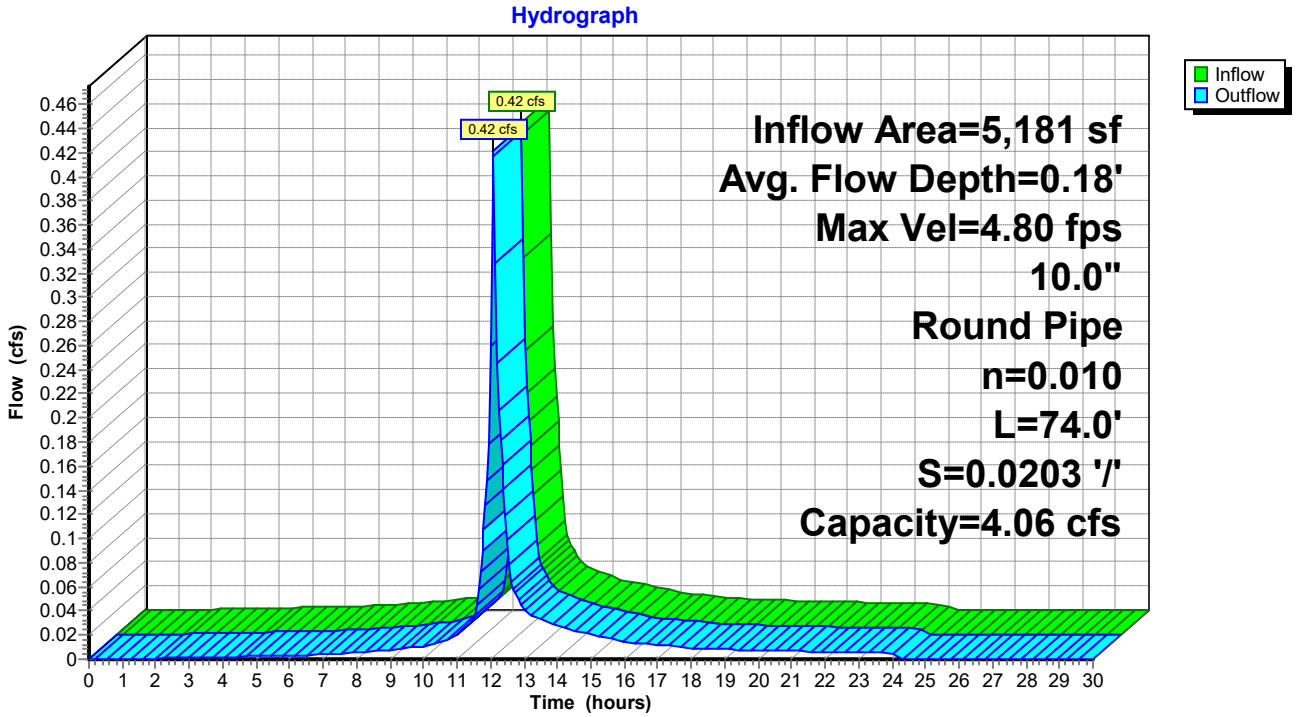
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.80 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.53 fps, Avg. Travel Time= 0.8 min

Peak Storage= 7 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.06 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 74.0' Slope= 0.0203 '/'
Inlet Invert= 350.50', Outlet Invert= 349.00'



Reach CO1: TO CO#2



Stage-Discharge for Reach CO1: TO CO#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.50	0.00	0.00
350.51	0.74	0.00
350.52	1.18	0.00
350.53	1.54	0.01
350.54	1.86	0.02
350.55	2.15	0.03
350.56	2.42	0.04
350.57	2.67	0.06
350.58	2.91	0.08
350.59	3.13	0.10
350.60	3.35	0.12
350.61	3.55	0.15
350.62	3.75	0.18
350.63	3.94	0.21
350.64	4.12	0.25
350.65	4.29	0.29
350.66	4.46	0.33
350.67	4.63	0.37
350.68	4.79	0.42
350.69	4.94	0.46
350.70	5.09	0.51
350.71	5.23	0.56
350.72	5.37	0.62
350.73	5.51	0.68
350.74	5.64	0.73
350.75	5.77	0.79
350.76	5.90	0.86
350.77	6.02	0.92
350.78	6.13	0.99
350.79	6.25	1.05
350.80	6.36	1.12
350.81	6.47	1.20
350.82	6.57	1.27
350.83	6.67	1.34
350.84	6.77	1.42
350.85	6.87	1.49
350.86	6.96	1.57
350.87	7.05	1.65
350.88	7.14	1.73
350.89	7.22	1.81
350.90	7.31	1.89
350.91	7.38	1.97
350.92	7.46	2.06
350.93	7.53	2.14
350.94	7.60	2.22
350.95	7.67	2.31
350.96	7.74	2.39
350.97	7.80	2.47
350.98	7.86	2.56
350.99	7.92	2.64
351.00	7.97	2.72
351.01	8.03	2.81
351.02	8.08	2.89
351.03	8.12	2.97
351.04	8.17	3.05
351.05	8.21	3.13
351.06	8.25	3.21
351.07	8.28	3.29
351.08	8.32	3.37
351.09	8.35	3.45
351.10	8.37	3.52
351.11	8.40	3.59
351.12	8.42	3.66
351.13	8.44	3.73
351.14	8.45	3.80
351.15	8.46	3.86
351.16	8.47	3.92
351.17	8.47	3.98
351.18	**8.48**	4.04
351.19	8.47	4.09
351.20	8.47	4.14
351.21	8.45	4.19
351.22	8.44	4.23
351.23	8.42	4.26
351.24	8.39	4.30
351.25	8.36	4.32
351.26	8.32	4.34
351.27	8.27	4.36
351.28	8.22	**4.36**
351.29	8.15	4.36
351.30	8.07	4.34
351.31	7.97	4.31
351.32	7.84	4.26
351.33	7.57	4.12

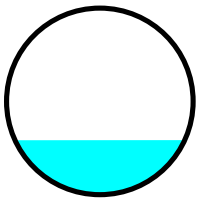
Summary for Reach CO2: TO CO#3

Inflow Area = 7,671 sf, 57.24% Impervious, Inflow Depth = 4.07" for 50-Year event
Inflow = 0.75 cfs @ 12.08 hrs, Volume= 2,602 cf
Outflow = 0.74 cfs @ 12.09 hrs, Volume= 2,602 cf, Atten= 1%, Lag= 0.5 min

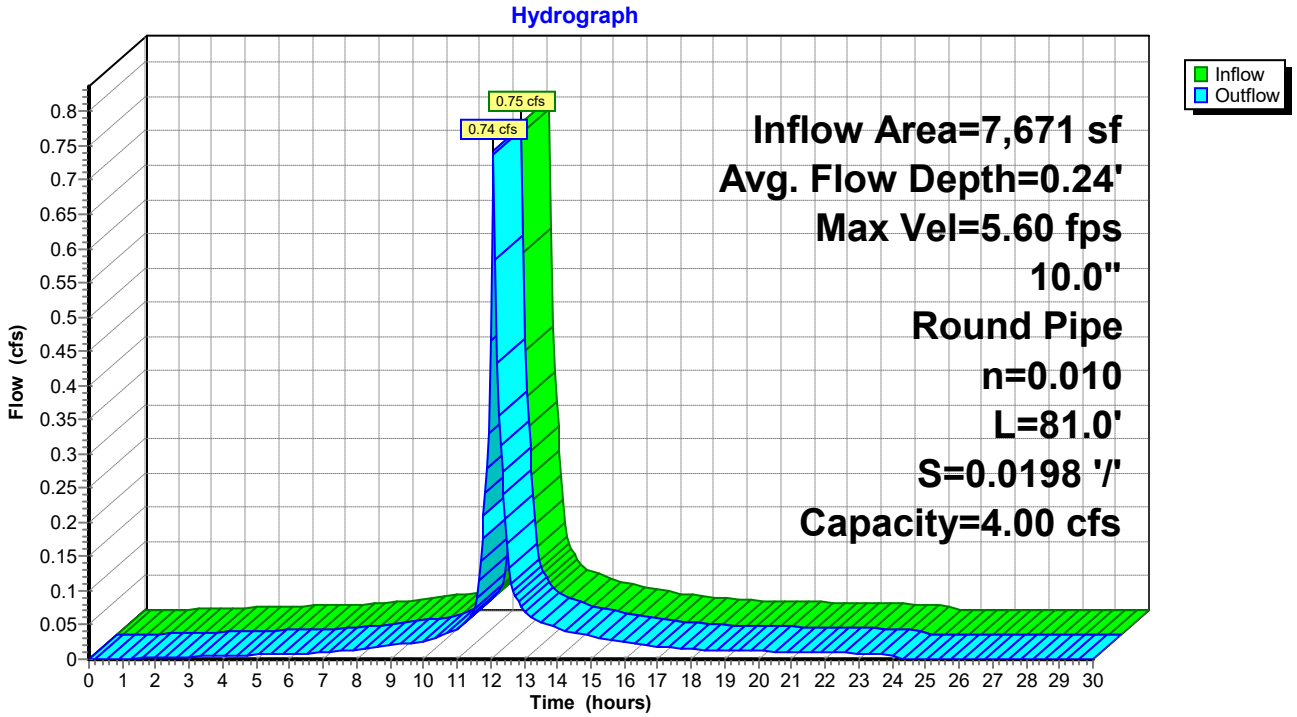
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.60 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.82 fps, Avg. Travel Time= 0.7 min

Peak Storage= 11 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.24'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.00 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 81.0' Slope= 0.0198 '/'
Inlet Invert= 349.00', Outlet Invert= 347.40'



Reach CO2: TO CO#3



Stage-Discharge for Reach CO2: TO CO#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
349.00	0.00	0.00
349.01	0.73	0.00
349.02	1.16	0.00
349.03	1.52	0.01
349.04	1.83	0.02
349.05	2.12	0.03
349.06	2.39	0.04
349.07	2.63	0.06
349.08	2.87	0.08
349.09	3.09	0.10
349.10	3.30	0.12
349.11	3.50	0.15
349.12	3.70	0.18
349.13	3.88	0.21
349.14	4.06	0.25
349.15	4.24	0.28
349.16	4.41	0.32
349.17	4.57	0.37
349.18	4.72	0.41
349.19	4.88	0.46
349.20	5.02	0.51
349.21	5.17	0.56
349.22	5.30	0.61
349.23	5.44	0.67
349.24	5.57	0.72
349.25	5.70	0.78
349.26	5.82	0.85
349.27	5.94	0.91
349.28	6.06	0.97
349.29	6.17	1.04
349.30	6.28	1.11
349.31	6.38	1.18
349.32	6.49	1.25
349.33	6.59	1.32
349.34	6.69	1.40
349.35	6.78	1.47
349.36	6.87	1.55
349.37	6.96	1.63
349.38	7.05	1.71
349.39	7.13	1.79
349.40	7.21	1.87
349.41	7.29	1.95
349.42	7.36	2.03
349.43	7.44	2.11
349.44	7.51	2.19
349.45	7.57	2.28
349.46	7.64	2.36
349.47	7.70	2.44
349.48	7.76	2.52
349.49	7.82	2.61
349.50	7.87	2.69
349.51	7.92	2.77
349.52	7.97	2.85
349.53	8.02	2.93
349.54	8.06	3.01
349.55	8.10	3.09
349.56	8.14	3.17
349.57	8.18	3.25
349.58	8.21	3.33
349.59	8.24	3.40
349.60	8.27	3.47
349.61	8.29	3.55
349.62	8.31	3.62
349.63	8.33	3.68
349.64	8.34	3.75
349.65	8.35	3.81
349.66	8.36	3.87
349.67	8.37	3.93
349.68	**8.37**	3.99
349.69	8.36	4.04
349.70	8.36	4.09
349.71	8.35	4.13
349.72	8.33	4.17
349.73	8.31	4.21
349.74	8.28	4.24
349.75	8.25	4.27
349.76	8.21	4.29
349.77	8.17	4.30
349.78	8.11	**4.31**
349.79	8.05	4.30
349.80	7.97	4.29
349.81	7.87	4.26
349.82	7.74	4.21
349.83	7.47	4.07

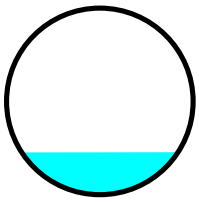
Summary for Reach CO3: TO DMH#21

Inflow Area = 8,341 sf, 60.68% Impervious, Inflow Depth = 4.20" for 50-Year event
Inflow = 0.83 cfs @ 12.09 hrs, Volume= 2,919 cf
Outflow = 0.83 cfs @ 12.09 hrs, Volume= 2,919 cf, Atten= 0%, Lag= 0.1 min

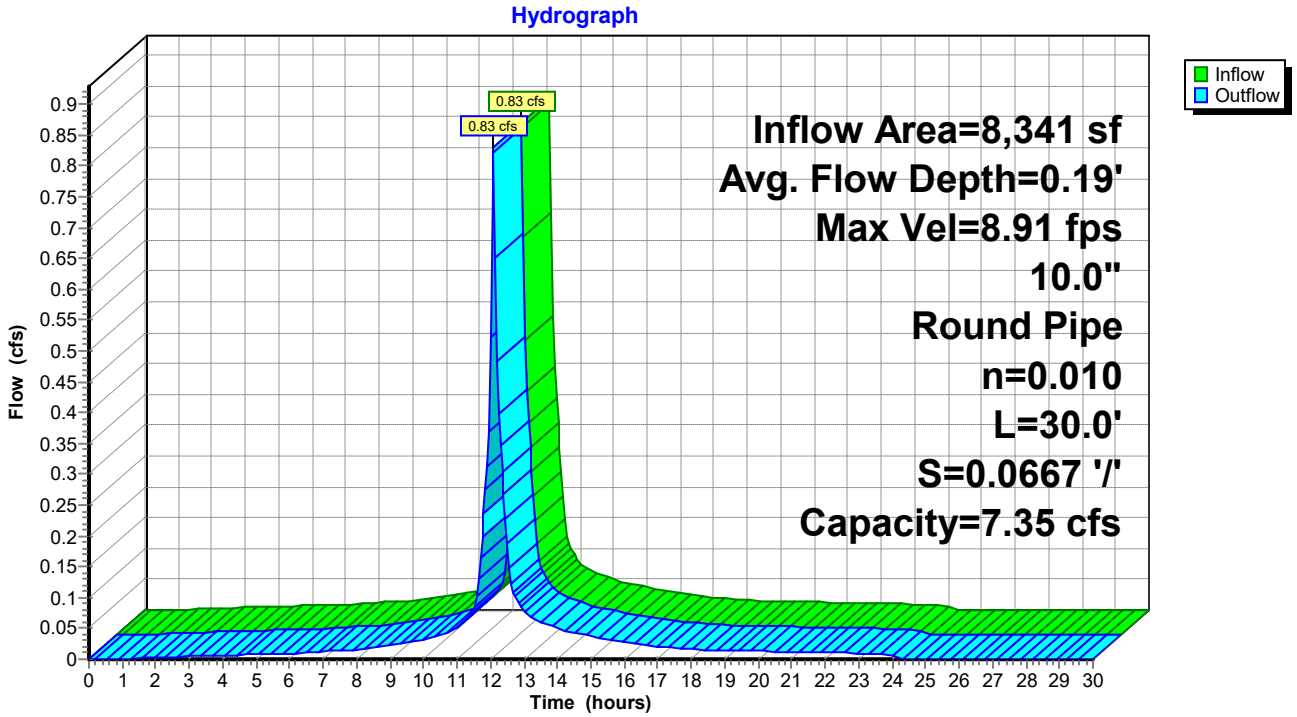
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.91 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.90 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 7.35 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 30.0' Slope= 0.0667 '/'
Inlet Invert= 347.40', Outlet Invert= 345.40'



Reach CO3: TO DMH#21



Stage-Discharge for Reach CO3: TO DMH#21

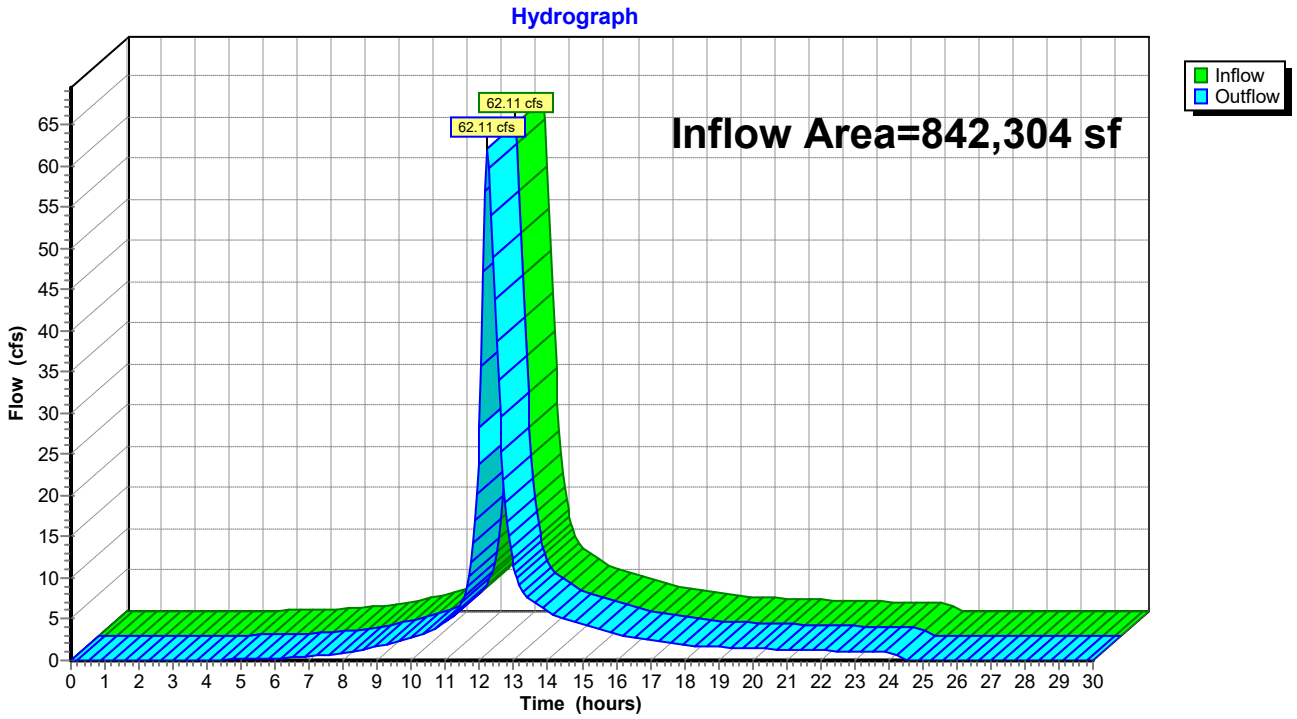
Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.40	0.00	0.00
347.41	1.34	0.00
347.42	2.13	0.01
347.43	2.79	0.02
347.44	3.37	0.03
347.45	3.90	0.05
347.46	4.38	0.08
347.47	4.84	0.11
347.48	5.27	0.14
347.49	5.68	0.18
347.50	6.07	0.22
347.51	6.44	0.27
347.52	6.79	0.33
347.53	7.14	0.39
347.54	7.47	0.45
347.55	7.79	0.52
347.56	8.09	0.59
347.57	8.39	0.67
347.58	8.68	0.75
347.59	8.96	0.84
347.60	9.23	0.93
347.61	9.49	1.02
347.62	9.74	1.12
347.63	9.99	1.22
347.64	10.23	1.33
347.65	10.47	1.44
347.66	10.69	1.55
347.67	10.91	1.67
347.68	11.12	1.79
347.69	11.33	1.91
347.70	11.53	2.04
347.71	11.73	2.17
347.72	11.92	2.30
347.73	12.10	2.43
347.74	12.28	2.57
347.75	12.46	2.71
347.76	12.63	2.85
347.77	12.79	2.99
347.78	12.95	3.14
347.79	13.10	3.28
347.80	13.25	3.43
347.81	13.39	3.58
347.82	13.53	3.73
347.83	13.66	3.88
347.84	13.79	4.03
347.85	13.91	4.18
347.86	14.03	4.33
347.87	14.15	4.49
347.88	14.26	4.64
347.89	14.36	4.79
347.90	14.46	4.94
347.91	14.55	5.09
347.92	14.64	5.24
347.93	14.73	5.39
347.94	14.81	5.54
347.95	14.88	5.68
347.96	14.95	5.83
347.97	15.02	5.97
347.98	15.08	6.11
347.99	15.13	6.25
348.00	15.18	6.38
348.01	15.23	6.51
348.02	15.27	6.64
348.03	15.30	6.77
348.04	15.33	6.89
348.05	15.35	7.01
348.06	15.36	7.12
348.07	15.37	7.22
348.08	**15.37**	7.32
348.09	15.37	7.42
348.10	15.35	7.51
348.11	15.33	7.59
348.12	15.30	7.67
348.13	15.27	7.73
348.14	15.22	7.79
348.15	15.16	7.84
348.16	15.09	7.87
348.17	15.00	7.90
348.18	14.90	**7.91**
348.19	14.79	7.90
348.20	14.64	7.88
348.21	14.46	7.82
348.22	14.22	7.73
348.23	13.72	7.48

Summary for Reach cul: DP#1A

Inflow Area = 842,304 sf, 4.87% Impervious, Inflow Depth = 4.29" for 50-Year event
Inflow = 62.11 cfs @ 12.22 hrs, Volume= 300,856 cf
Outflow = 62.11 cfs @ 12.22 hrs, Volume= 300,856 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach cul: DP#1A



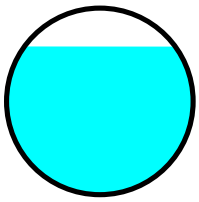
Summary for Reach D10: (new Reach)

Inflow Area = 51,339 sf, 69.57% Impervious, Inflow Depth = 4.44" for 50-Year event
Inflow = 5.95 cfs @ 12.07 hrs, Volume= 19,015 cf
Outflow = 5.88 cfs @ 12.08 hrs, Volume= 19,015 cf, Atten= 1%, Lag= 0.5 min

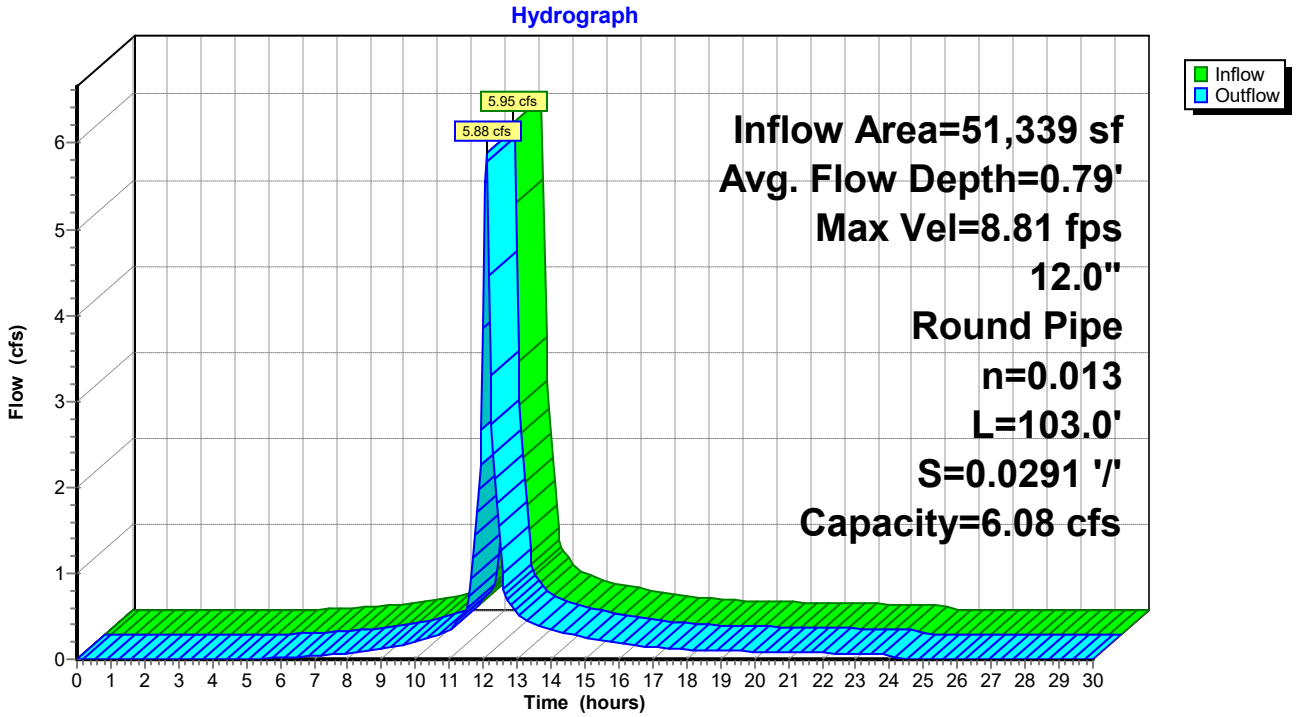
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.81 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.09 fps, Avg. Travel Time= 0.6 min

Peak Storage= 69 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.79'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.08 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 103.0' Slope= 0.0291 '/'
Inlet Invert= 346.60', Outlet Invert= 343.60'



Reach D10: (new Reach)



Stage-Discharge for Reach D10: (new Reach)

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.60	0.00	0.00
346.61	0.69	0.00
346.62	1.09	0.00
346.63	1.42	0.01
346.64	1.72	0.02
346.65	1.99	0.03
346.66	2.24	0.04
346.67	2.47	0.06
346.68	2.69	0.08
346.69	2.90	0.10
346.70	3.11	0.13
346.71	3.30	0.16
346.72	3.48	0.19
346.73	3.66	0.22
346.74	3.83	0.26
346.75	4.00	0.30
346.76	4.16	0.34
346.77	4.32	0.38
346.78	4.47	0.43
346.79	4.62	0.48
346.80	4.76	0.53
346.81	4.90	0.59
346.82	5.04	0.65
346.83	5.17	0.71
346.84	5.30	0.77
346.85	5.42	0.83
346.86	5.55	0.90
346.87	5.67	0.97
346.88	5.78	1.04
346.89	5.90	1.11
346.90	6.01	1.19
346.91	6.12	1.27
346.92	6.22	1.35
346.93	6.33	1.43
346.94	6.43	1.51
346.95	6.53	1.60
346.96	6.62	1.69
346.97	6.72	1.77
346.98	6.81	1.86
346.99	6.90	1.96
347.00	6.98	2.05
347.01	7.07	2.14
347.02	7.15	2.24
347.03	7.23	2.34
347.04	7.31	2.43
347.05	7.39	2.53
347.06	7.46	2.63
347.07	7.54	2.73
347.08	7.61	2.83
347.09	7.68	2.94
347.10	7.74	3.04
347.11	7.81	3.14
347.12	7.87	3.25
347.13	7.93	3.35
347.14	7.99	3.46
347.15	8.05	3.56
347.16	8.10	3.67
347.17	8.15	3.77
347.18	8.21	3.88
347.19	8.26	3.98
347.20	8.30	4.09
347.21	8.35	4.19
347.22	8.39	4.29
347.23	8.43	4.40
347.24	8.47	4.50
347.25	8.51	4.60
347.26	8.55	4.70
347.27	8.58	4.80
347.28	8.61	4.90
347.29	8.64	4.99
347.30	8.67	5.09
347.31	8.69	5.19
347.32	8.72	5.28
347.33	8.74	5.37
347.34	8.76	5.46
347.35	8.78	5.54
347.36	8.79	5.63
347.37	8.80	5.71
347.38	8.81	5.79
347.39	8.82	5.87
347.40	8.82	5.94
347.41	**8.83**	6.01
347.42	8.83	6.08
347.43	8.82	6.15
347.44	8.82	6.21
347.45	8.81	6.27
347.46	8.79	6.32
347.47	8.78	6.37
347.48	8.76	6.41
347.49	8.73	6.45
347.50	8.70	6.48
347.51	8.67	6.51
347.52	8.63	6.53
347.53	8.59	6.54
347.54	8.54	**6.54**
347.55	8.48	6.53
347.56	8.41	6.51
347.57	8.32	6.48
347.58	8.22	6.43
347.59	8.08	6.34
347.60	7.74	6.08

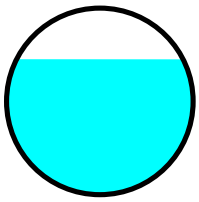
Summary for Reach D11: TO DMH12

Inflow Area = 39,805 sf, 44.80% Impervious, Inflow Depth = 3.59" for 50-Year event
Inflow = 3.84 cfs @ 12.08 hrs, Volume= 11,910 cf
Outflow = 3.81 cfs @ 12.09 hrs, Volume= 11,910 cf, Atten= 1%, Lag= 0.5 min

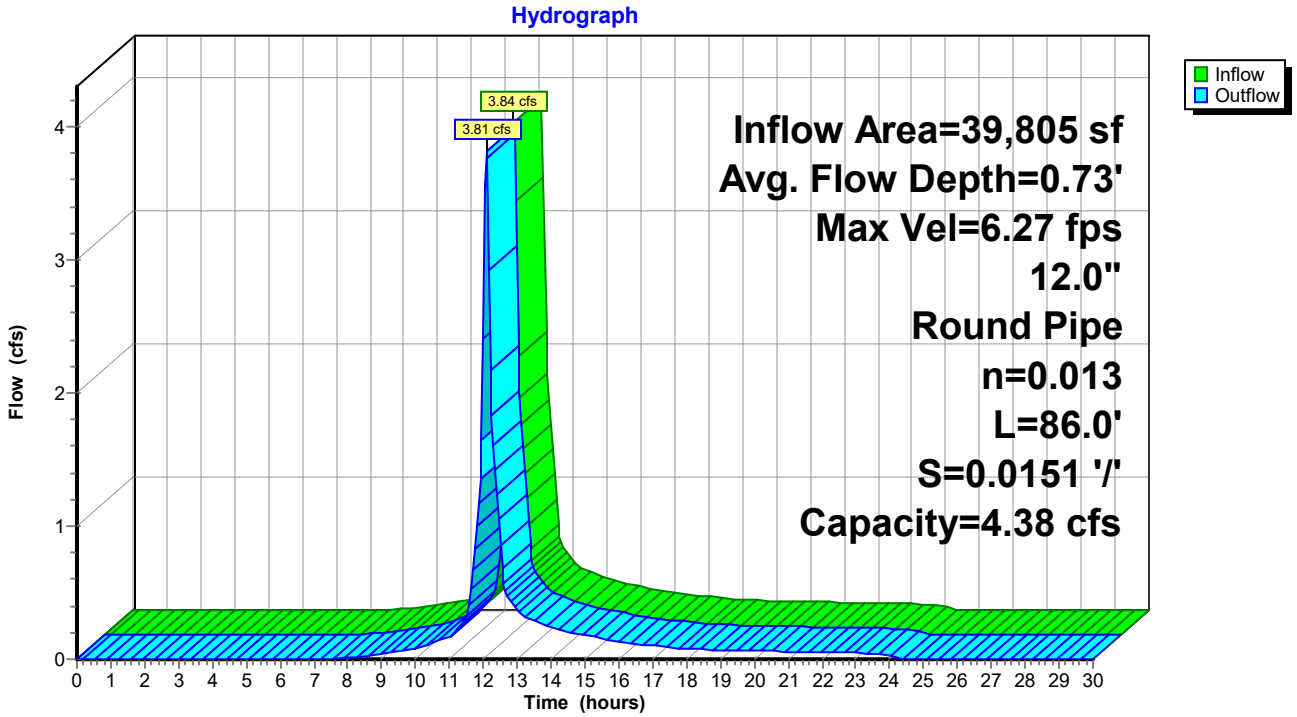
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.27 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.33 fps, Avg. Travel Time= 0.6 min

Peak Storage= 53 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.73'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.38 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 86.0' Slope= 0.0151 '/'
Inlet Invert= 348.50', Outlet Invert= 347.20'



Reach D11: TO DMH12



Stage-Discharge for Reach D11: TO DMH12

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.50	0.00	0.00
348.51	0.50	0.00
348.52	0.79	0.00
348.53	1.03	0.01
348.54	1.24	0.01
348.55	1.43	0.02
348.56	1.61	0.03
348.57	1.78	0.04
348.58	1.94	0.06
348.59	2.09	0.07
348.60	2.24	0.09
348.61	2.38	0.11
348.62	2.51	0.13
348.63	2.64	0.16
348.64	2.76	0.18
348.65	2.88	0.21
348.66	3.00	0.24
348.67	3.11	0.28
348.68	3.22	0.31
348.69	3.33	0.35
348.70	3.43	0.38
348.71	3.53	0.42
348.72	3.63	0.46
348.73	3.72	0.51
348.74	3.82	0.55
348.75	3.91	0.60
348.76	4.00	0.65
348.77	4.08	0.70
348.78	4.17	0.75
348.79	4.25	0.80
348.80	4.33	0.86
348.81	4.41	0.91
348.82	4.48	0.97
348.83	4.56	1.03
348.84	4.63	1.09
348.85	4.70	1.15
348.86	4.77	1.21
348.87	4.84	1.28
348.88	4.90	1.34
348.89	4.97	1.41
348.90	5.03	1.48
348.91	5.09	1.54
348.92	5.15	1.61
348.93	5.21	1.68
348.94	5.27	1.75
348.95	5.32	1.82
348.96	5.38	1.90
348.97	5.43	1.97
348.98	5.48	2.04
348.99	5.53	2.12
349.00	5.58	2.19
349.01	5.62	2.26
349.02	5.67	2.34
349.03	5.71	2.41
349.04	5.76	2.49
349.05	5.80	2.57
349.06	5.84	2.64
349.07	5.87	2.72
349.08	5.91	2.79
349.09	5.95	2.87
349.10	5.98	2.94
349.11	6.01	3.02
349.12	6.05	3.09
349.13	6.08	3.17
349.14	6.10	3.24
349.15	6.13	3.31
349.16	6.16	3.39
349.17	6.18	3.46
349.18	6.20	3.53
349.19	6.23	3.60
349.20	6.25	3.67
349.21	6.26	3.74
349.22	6.28	3.80
349.23	6.30	3.87
349.24	6.31	3.93
349.25	6.32	3.99
349.26	6.33	4.06
349.27	6.34	4.11
349.28	6.35	4.17
349.29	6.35	4.23
349.30	6.36	4.28
349.31	**6.36**	4.33
349.32	6.36	4.38
349.33	6.36	4.43
349.34	6.35	4.47
349.35	6.34	4.51
349.36	6.33	4.55
349.37	6.32	4.59
349.38	6.31	4.62
349.39	6.29	4.65
349.40	6.27	4.67
349.41	6.25	4.69
349.42	6.22	4.70
349.43	6.19	4.71
349.44	6.15	**4.71**
349.45	6.11	4.71
349.46	6.06	4.69
349.47	6.00	4.67
349.48	5.92	4.63
349.49	5.82	4.56
349.50	5.58	4.38

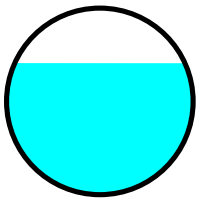
Summary for Reach D12: TO DMH13

Inflow Area = 63,650 sf, 57.11% Impervious, Inflow Depth = 4.02" for 50-Year event
Inflow = 6.70 cfs @ 12.08 hrs, Volume= 21,346 cf
Outflow = 6.66 cfs @ 12.09 hrs, Volume= 21,346 cf, Atten= 1%, Lag= 0.4 min

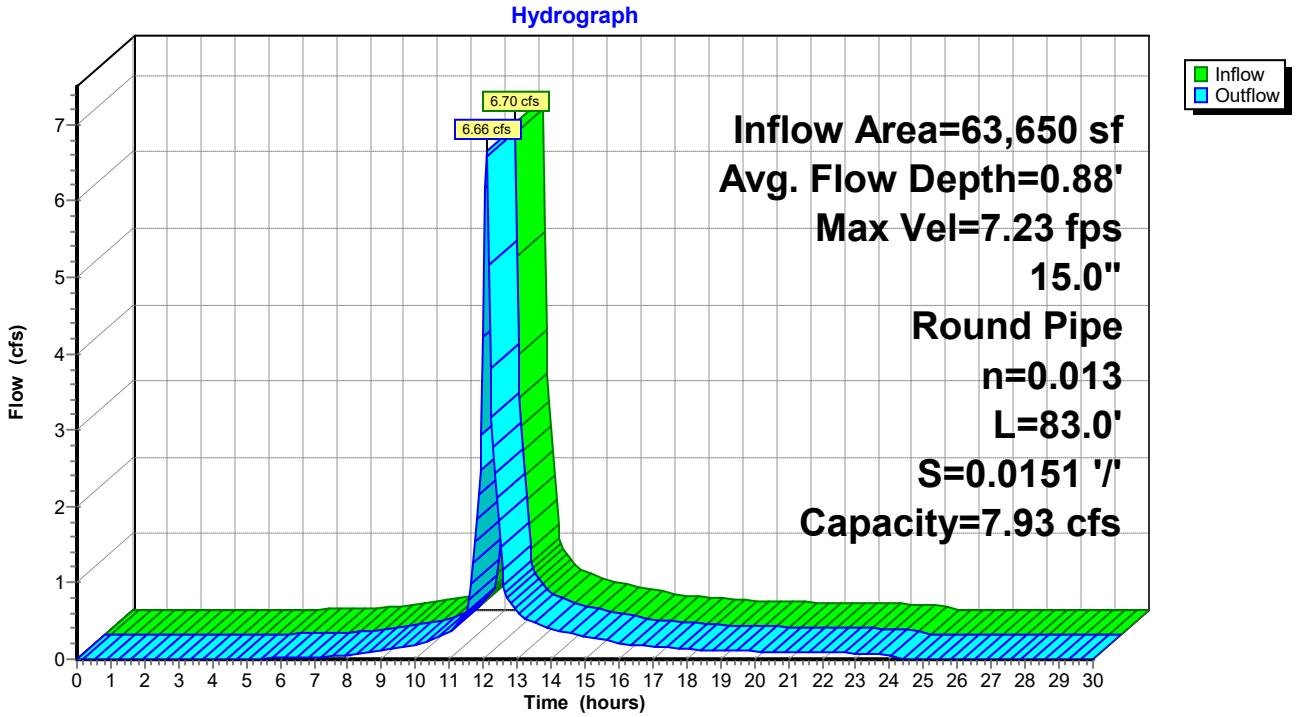
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.23 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.45 fps, Avg. Travel Time= 0.6 min

Peak Storage= 77 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.88'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.93 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0151 '/'
Inlet Invert= 347.10', Outlet Invert= 345.85'



Reach D12: TO DMH13



Stage-Discharge for Reach D12: TO DMH13

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.10	0.00	0.00
347.11	0.46	0.00
347.12	0.78	0.00
347.13	1.02	0.01
347.14	1.24	0.01
347.15	1.43	0.02
347.16	1.61	0.04
347.17	1.78	0.05
347.18	1.95	0.06
347.19	2.10	0.08
347.20	2.25	0.10
347.21	2.39	0.13
347.22	2.52	0.15
347.23	2.66	0.18
347.24	2.78	0.21
347.25	2.91	0.24
347.26	3.03	0.28
347.27	3.14	0.32
347.28	3.25	0.35
347.29	3.37	0.40
347.30	3.47	0.44
347.31	3.58	0.49
347.32	3.68	0.54
347.33	3.78	0.59
347.34	3.88	0.64
347.35	3.97	0.69
347.36	4.07	0.75
347.37	4.16	0.81
347.38	4.25	0.87
347.39	4.34	0.94
347.40	4.42	1.00
347.41	4.51	1.07
347.42	4.59	1.14
347.43	4.67	1.21
347.44	4.75	1.28
347.45	4.83	1.36
347.46	4.90	1.43
347.47	4.98	1.51
347.48	5.05	1.59
347.49	5.12	1.67
347.50	5.19	1.76
347.51	5.26	1.84
347.52	5.33	1.93
347.53	5.40	2.02
347.54	5.46	2.11
347.55	5.53	2.20
347.56	5.59	2.29
347.57	5.65	2.38
347.58	5.71	2.48
347.59	5.77	2.57
347.60	5.83	2.67
347.61	5.88	2.77
347.62	5.94	2.87
347.63	6.00	2.97
347.64	6.05	3.07
347.65	6.10	3.17
347.66	6.15	3.28
347.67	6.20	3.38
347.68	6.25	3.48
347.69	6.30	3.59
347.70	6.35	3.70
347.71	6.39	3.80
347.72	6.44	3.91
347.73	6.48	4.02
347.74	6.52	4.13
347.75	6.57	4.23
347.76	6.61	4.34
347.77	6.65	4.45
347.78	6.69	4.56
347.79	6.72	4.67
347.80	6.76	4.78
347.81	6.80	4.89
347.82	6.83	5.00
347.83	6.86	5.11
347.84	6.90	5.22
347.85	6.93	5.33
347.86	6.96	5.43
347.87	6.99	5.54
347.88	7.02	5.65
347.89	7.04	5.76
347.90	7.07	5.86
347.91	7.10	5.97
347.92	7.12	6.08
347.93	7.14	6.18
347.94	7.16	6.28
347.95	7.19	6.39
347.96	7.21	6.49
347.97	7.22	6.59
347.98	7.24	6.69
347.99	7.26	6.78
348.00	7.27	6.88
348.01	7.29	6.98
348.02	7.30	7.07
348.03	7.31	7.16
348.04	7.32	7.25
348.05	7.33	7.34
348.06	7.34	7.43
348.07	7.35	7.51
348.08	7.35	7.59
348.09	7.36	7.67
348.10	7.36	7.75
348.11	7.36	7.82
348.12	**7.36**	7.90
348.13	7.36	7.96
348.14	7.36	8.03
348.15	7.36	8.09
348.16	7.35	8.15
348.17	7.34	8.21
348.18	7.33	8.26
348.19	7.32	8.31
348.20	7.31	8.36
348.21	7.29	8.40
348.22	7.27	8.43
348.23	7.25	8.46
348.24	7.23	8.49
348.25	7.20	8.51
348.26	7.17	8.52
348.27	7.14	**8.53**
348.28	7.10	8.52
348.29	7.06	8.51
348.30	7.02	8.49
348.31	6.96	8.46
348.32	6.89	8.41
348.33	6.81	8.33
348.34	6.69	8.19
348.35	6.46	7.93

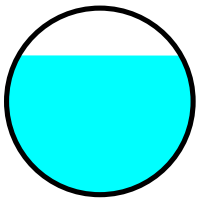
Summary for Reach D13: TO DMH14

Inflow Area = 75,826 sf, 62.17% Impervious, Inflow Depth = 4.21" for 50-Year event
Inflow = 8.21 cfs @ 12.08 hrs, Volume= 26,619 cf
Outflow = 8.16 cfs @ 12.09 hrs, Volume= 26,619 cf, Atten= 1%, Lag= 0.4 min

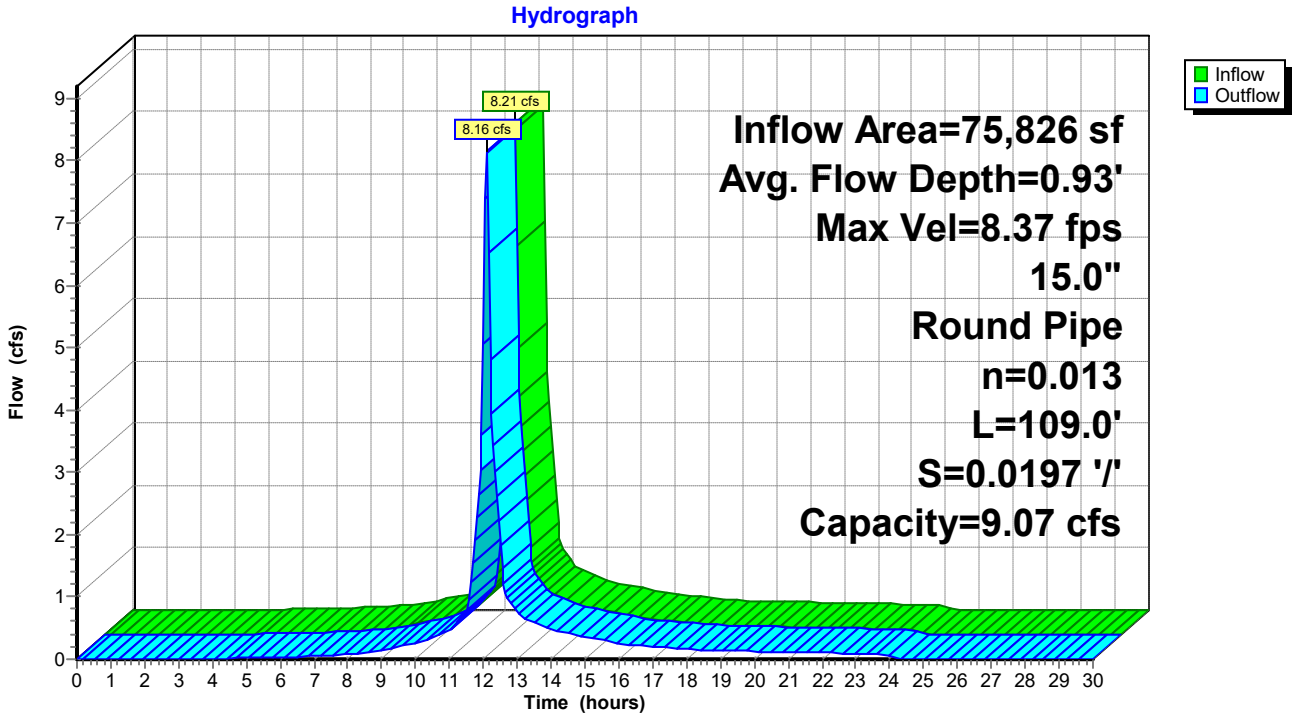
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.37 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.78 fps, Avg. Travel Time= 0.7 min

Peak Storage= 107 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.93'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.07 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 109.0' Slope= 0.0197 '/'
Inlet Invert= 345.75', Outlet Invert= 343.60'



Reach D13: TO DMH14



Stage-Discharge for Reach D13: TO DMH14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
345.75	0.00	0.00
345.76	0.53	0.00
345.77	0.89	0.00
345.78	1.17	0.01
345.79	1.42	0.02
345.80	1.64	0.03
345.81	1.85	0.04
345.82	2.04	0.06
345.83	2.23	0.07
345.84	2.40	0.10
345.85	2.57	0.12
345.86	2.73	0.15
345.87	2.89	0.17
345.88	3.04	0.21
345.89	3.19	0.24
345.90	3.33	0.28
345.91	3.46	0.32
345.92	3.60	0.36
345.93	3.73	0.41
345.94	3.85	0.45
345.95	3.97	0.50
345.96	4.09	0.56
345.97	4.21	0.61
345.98	4.33	0.67
345.99	4.44	0.73
346.00	4.55	0.79
346.01	4.65	0.86
346.02	4.76	0.93
346.03	4.86	1.00
346.04	4.96	1.07
346.05	5.06	1.15
346.06	5.16	1.22
346.07	5.25	1.30
346.08	5.34	1.38
346.09	5.43	1.47
346.10	5.52	1.55
346.11	5.61	1.64
346.12	5.70	1.73
346.13	5.78	1.82
346.14	5.86	1.92
346.15	5.94	2.01
346.16	6.02	2.11
346.17	6.10	2.21
346.18	6.18	2.31
346.19	6.25	2.41
346.20	6.32	2.52
346.21	6.40	2.62
346.22	6.47	2.73
346.23	6.54	2.84
346.24	6.60	2.95
346.25	6.67	3.06
346.26	6.73	3.17
346.27	6.80	3.28
346.28	6.86	3.40
346.29	6.92	3.51
346.30	6.98	3.63
346.31	7.04	3.75
346.32	7.10	3.87
346.33	7.15	3.99
346.34	7.21	4.11
346.35	7.26	4.23
346.36	7.32	4.35
346.37	7.37	4.47
346.38	7.42	4.60
346.39	7.47	4.72
346.40	7.51	4.85
346.41	7.56	4.97
346.42	7.61	5.10
346.43	7.65	5.22
346.44	7.69	5.35
346.45	7.74	5.47
346.46	7.78	5.60
346.47	7.82	5.72
346.48	7.85	5.85
346.49	7.89	5.97
346.50	7.93	6.10
346.51	7.96	6.22
346.52	8.00	6.34
346.53	8.03	6.47
346.54	8.06	6.59
346.55	8.09	6.71
346.56	8.12	6.83
346.57	8.15	6.95
346.58	8.17	7.07
346.59	8.20	7.19
346.60	8.22	7.31
346.61	8.25	7.42
346.62	8.27	7.54
346.63	8.29	7.65
346.64	8.31	7.76
346.65	8.33	7.87
346.66	8.34	7.98
346.67	8.36	8.09
346.68	8.37	8.20
346.69	8.38	8.30
346.70	8.39	8.40
346.71	8.40	8.50
346.72	8.41	8.59
346.73	8.42	8.69
346.74	8.42	8.78
346.75	8.43	8.87
346.76	8.43	8.95
346.77	**8.43**	9.04
346.78	8.43	9.11
346.79	8.42	9.19
346.80	8.42	9.26
346.81	8.41	9.33
346.82	8.40	9.40
346.83	8.39	9.46
346.84	8.38	9.51
346.85	8.36	9.56
346.86	8.34	9.61
346.87	8.32	9.65
346.88	8.30	9.69
346.89	8.27	9.71
346.90	8.24	9.74
346.91	8.21	9.75
346.92	8.17	**9.76**
346.93	8.13	9.75
346.94	8.08	9.74
346.95	8.03	9.72
346.96	7.96	9.68
346.97	7.89	9.62
346.98	7.80	9.53
346.99	7.65	9.38
347.00	7.39	9.07

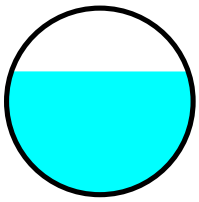
Summary for Reach D14: TO DMH15

Inflow Area = 248,895 sf, 65.27% Impervious, Inflow Depth = 4.49" for 50-Year event
Inflow = 26.92 cfs @ 12.10 hrs, Volume= 93,219 cf
Outflow = 25.87 cfs @ 12.12 hrs, Volume= 93,219 cf, Atten= 4%, Lag= 1.5 min

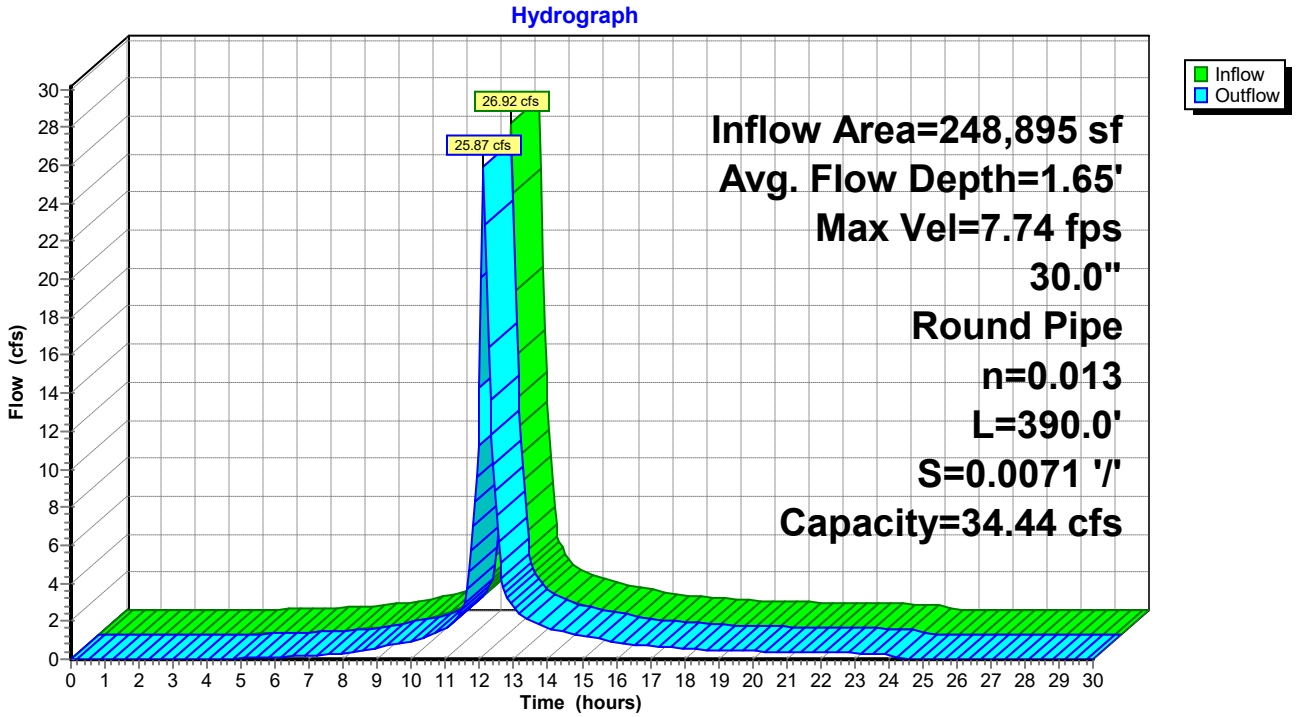
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.74 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 2.50 fps, Avg. Travel Time= 2.6 min

Peak Storage= 1,344 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.65'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.44 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 390.0' Slope= 0.0071 '/'
Inlet Invert= 338.20', Outlet Invert= 335.45'



Reach D14: TO DMH15



Stage-Discharge for Reach D14: TO DMH15

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
338.20	0.00	0.00
338.22	0.50	0.00
338.24	0.84	0.02
338.26	1.11	0.04
338.28	1.34	0.06
338.30	1.56	0.10
338.32	1.75	0.15
338.34	1.94	0.21
338.36	2.11	0.28
338.38	2.28	0.36
338.40	2.44	0.45
338.42	2.59	0.55
338.44	2.74	0.66
338.46	2.88	0.78
338.48	3.02	0.91
338.50	3.16	1.05
338.52	3.29	1.21
338.54	3.41	1.37
338.56	3.54	1.54
338.58	3.66	1.72
338.60	3.77	1.91
338.62	3.89	2.12
338.64	4.00	2.33
338.66	4.11	2.55
338.68	4.21	2.78
338.70	4.32	3.02
338.72	4.42	3.27
338.74	4.52	3.52
338.76	4.61	3.79
338.78	4.71	4.07
338.80	4.80	4.35
338.82	4.89	4.64
338.84	4.98	4.95
338.86	5.07	5.26
338.88	5.16	5.57
338.90	5.24	5.90
338.92	5.32	6.23
338.94	5.41	6.57
338.96	5.49	6.92
338.98	5.56	7.28
339.00	5.64	7.64
339.02	5.72	8.01
339.04	5.79	8.38
339.06	5.86	8.77
339.08	5.93	9.15
339.10	6.00	9.55
339.12	6.07	9.95
339.14	6.14	10.36
339.16	6.20	10.77
339.18	6.27	11.19
339.20	6.33	11.61
339.22	6.39	12.03
339.24	6.45	12.47
339.26	6.51	12.90
339.28	6.57	13.34
339.30	6.63	13.79
339.32	6.68	14.23
339.34	6.74	14.69
339.36	6.79	15.14
339.38	6.84	15.60
339.40	6.89	16.06
339.42	6.94	16.52
339.44	6.99	16.99
339.46	7.04	17.46
339.48	7.09	17.93
339.50	7.13	18.40
339.52	7.18	18.87
339.54	7.22	19.34
339.56	7.26	19.82
339.58	7.30	20.29
339.60	7.34	20.77
339.62	7.38	21.24
339.64	7.42	21.72
339.66	7.45	22.19
339.68	7.49	22.67
339.70	7.52	23.14
339.72	7.56	23.61
339.74	7.59	24.08
339.76	7.62	24.55
339.78	7.65	25.01
339.80	7.68	25.48
339.82	7.71	25.94
339.84	7.73	26.39
339.86	7.76	26.85
339.88	7.78	27.30
339.90	7.81	27.74
339.92	7.83	28.18
339.94	7.85	28.62
339.96	7.87	29.05
339.98	7.88	29.48
340.00	7.90	29.90
340.02	7.92	30.31
340.04	7.93	30.71
340.06	7.94	31.11
340.08	7.96	31.50
340.10	7.97	31.89
340.12	7.98	32.26
340.14	7.98	32.63
340.16	7.99	32.98
340.18	7.99	33.33
340.20	8.00	33.67
340.22	**8.00**	33.99
340.24	**8.00**	34.30
340.26	8.00	34.60
340.28	7.99	34.89
340.30	7.99	35.17
340.32	7.98	35.43
340.34	7.97	35.67
340.36	7.96	35.90
340.38	7.95	36.11
340.40	7.94	36.31
340.42	7.92	36.48
340.44	7.90	36.64
340.46	7.88	36.77
340.48	7.85	36.88
340.50	7.82	36.97
340.52	7.79	37.02
340.54	7.76	**37.04**
340.56	7.72	**37.03**
340.58	7.67	36.99
340.60	7.62	36.90
340.62	7.56	36.75
340.64	7.49	36.52
340.66	7.40	36.19
340.68	7.26	35.60
340.70	7.02	34.44

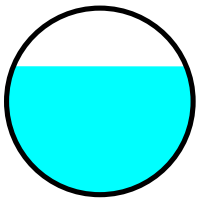
Summary for Reach D15: TO DMH16

Inflow Area = 273,738 sf, 64.05% Impervious, Inflow Depth = 4.42" for 50-Year event
Inflow = 28.13 cfs @ 12.12 hrs, Volume= 100,938 cf
Outflow = 27.57 cfs @ 12.14 hrs, Volume= 100,938 cf, Atten= 2%, Lag= 1.1 min

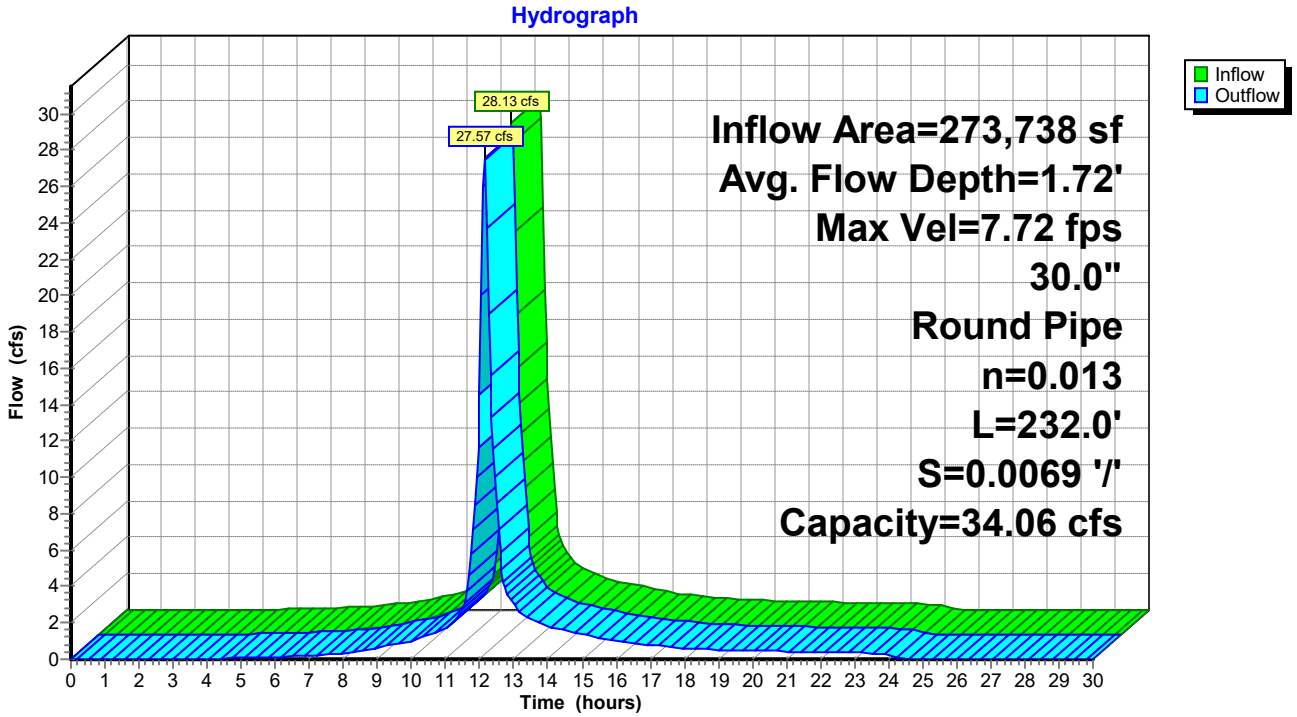
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.72 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.43 fps, Avg. Travel Time= 1.6 min

Peak Storage= 837 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.72'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.06 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 232.0' Slope= 0.0069 '/'
Inlet Invert= 335.35', Outlet Invert= 333.75'



Reach D15: TO DMH16



Stage-Discharge for Reach D15: TO DMH16

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
335.35	0.00	0.00
335.37	0.49	0.00
335.39	0.83	0.02
335.41	1.10	0.04
335.43	1.33	0.06
335.45	1.54	0.10
335.47	1.73	0.15
335.49	1.92	0.21
335.51	2.09	0.28
335.53	2.26	0.36
335.55	2.41	0.44
335.57	2.57	0.54
335.59	2.71	0.65
335.61	2.85	0.77
335.63	2.99	0.90
335.65	3.12	1.04
335.67	3.25	1.19
335.69	3.38	1.35
335.71	3.50	1.52
335.73	3.62	1.70
335.75	3.73	1.89
335.77	3.84	2.09
335.79	3.95	2.30
335.81	4.06	2.52
335.83	4.17	2.75
335.85	4.27	2.98
335.87	4.37	3.23
335.89	4.47	3.49
335.91	4.56	3.75
335.93	4.66	4.02
335.95	4.75	4.30
335.97	4.84	4.59
335.99	4.93	4.89
336.01	5.01	5.20
336.03	5.10	5.51
336.05	5.18	5.83
336.07	5.27	6.16
336.09	5.35	6.50
336.11	5.42	6.84
336.13	5.50	7.20
336.15	5.58	7.55
336.17	5.65	7.92
336.19	5.73	8.29
336.21	5.80	8.67
336.23	5.87	9.05
336.25	5.94	9.44
336.27	6.00	9.84
336.29	6.07	10.24
336.31	6.13	10.65
336.33	6.20	11.06
336.35	6.26	11.48
336.37	6.32	11.90
336.39	6.38	12.33
336.41	6.44	12.76
336.43	6.50	13.20
336.45	6.55	13.63
336.47	6.61	14.08
336.49	6.66	14.52
336.51	6.72	14.97
336.53	6.77	15.43
336.55	6.82	15.88
336.57	6.87	16.34
336.59	6.92	16.80
336.61	6.96	17.26
336.63	7.01	17.73
336.65	7.05	18.19
336.67	7.10	18.66
336.69	7.14	19.13
336.71	7.18	19.60
336.73	7.22	20.07
336.75	7.26	20.54
336.77	7.30	21.01
336.79	7.34	21.48
336.81	7.37	21.95
336.83	7.41	22.42
336.85	7.44	22.88
336.87	7.47	23.35
336.89	7.51	23.82
336.91	7.54	24.28
336.93	7.57	24.74
336.95	7.59	25.20
336.97	7.62	25.65
336.99	7.65	26.10
337.01	7.67	26.55
337.03	7.70	27.00
337.05	7.72	27.44
337.07	7.74	27.87
337.09	7.76	28.30
337.11	7.78	28.73
337.13	7.80	29.15
337.15	7.81	29.57
337.17	7.83	29.97
337.19	7.84	30.37
337.21	7.86	30.77
337.23	7.87	31.16
337.25	7.88	31.54
337.27	7.89	31.91
337.29	7.89	32.27
337.31	7.90	32.62
337.33	7.91	32.96
337.35	7.91	33.30
337.37	**7.91**	33.62
337.39	**7.91**	33.92
337.41	7.91	34.22
337.43	7.91	34.51
337.45	7.90	34.78
337.47	7.89	35.04
337.49	7.89	35.28
337.51	7.88	35.50
337.53	7.86	35.71
337.55	7.85	35.91
337.57	7.83	36.08
337.59	7.81	36.23
337.61	7.79	36.36
337.63	7.77	36.47
337.65	7.74	36.56
337.67	7.71	36.61
337.69	7.67	**36.63**
337.71	7.63	**36.62**
337.73	7.59	36.58
337.75	7.54	36.49
337.77	7.48	36.34
337.79	7.40	36.12
337.81	7.32	35.79
337.83	7.18	35.21
337.85	6.94	34.06

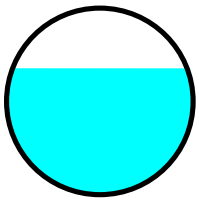
Summary for Reach D16: TO BASIN#1

Inflow Area = 273,738 sf, 64.05% Impervious, Inflow Depth = 4.42" for 50-Year event
Inflow = 27.57 cfs @ 12.14 hrs, Volume= 100,938 cf
Outflow = 27.47 cfs @ 12.14 hrs, Volume= 100,938 cf, Atten= 0%, Lag= 0.3 min

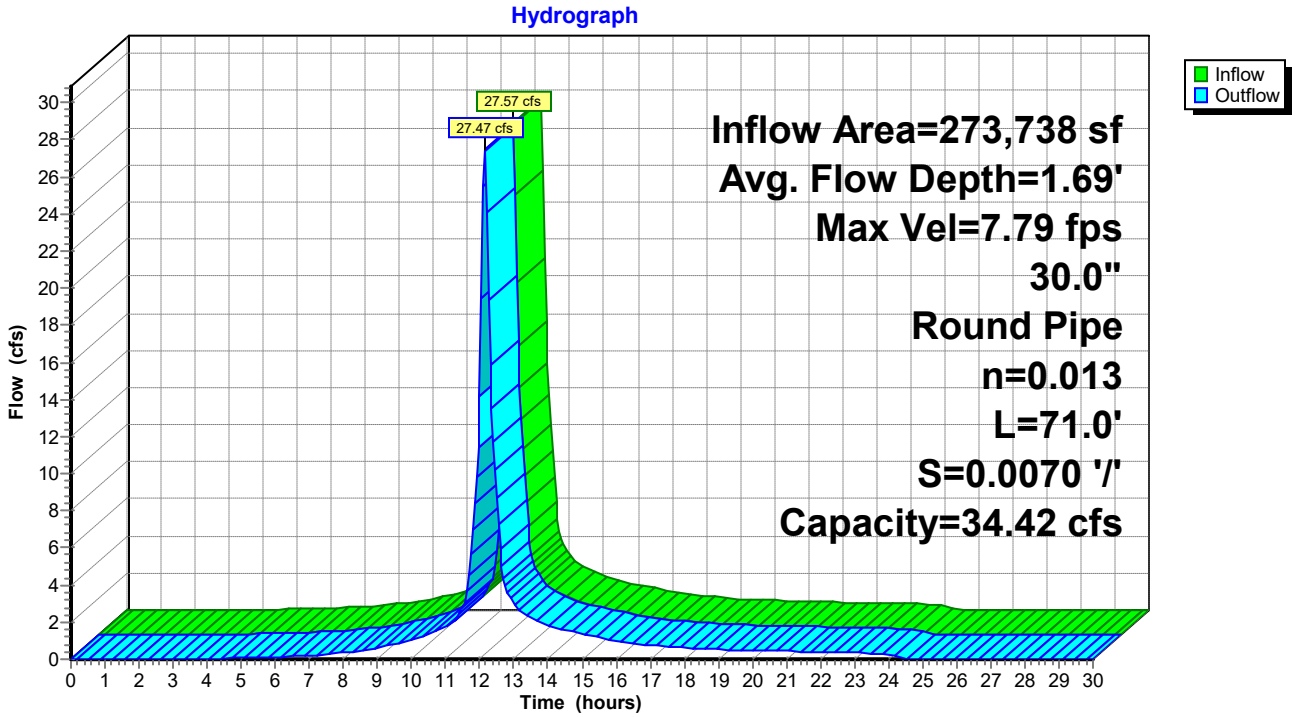
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.79 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.45 fps, Avg. Travel Time= 0.5 min

Peak Storage= 251 cf @ 12.14 hrs
Average Depth at Peak Storage= 1.69'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.42 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 71.0' Slope= 0.0070 '/'
Inlet Invert= 333.65', Outlet Invert= 333.15'



Reach D16: TO BASIN#1



Stage-Discharge for Reach D16: TO BASIN#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
333.65	0.00	0.00
333.67	0.50	0.00
333.69	0.84	0.02
333.71	1.11	0.04
333.73	1.34	0.06
333.75	1.56	0.10
333.77	1.75	0.15
333.79	1.94	0.21
333.81	2.11	0.28
333.83	2.28	0.36
333.85	2.44	0.45
333.87	2.59	0.55
333.89	2.74	0.66
333.91	2.88	0.78
333.93	3.02	0.91
333.95	3.16	1.05
333.97	3.28	1.21
333.99	3.41	1.37
334.01	3.53	1.54
334.03	3.65	1.72
334.05	3.77	1.91
334.07	3.88	2.11
334.09	3.99	2.33
334.11	4.10	2.55
334.13	4.21	2.78
334.15	4.31	3.01
334.17	4.41	3.26
334.19	4.51	3.52
334.21	4.61	3.79
334.23	4.71	4.06
334.25	4.80	4.35
334.27	4.89	4.64
334.29	4.98	4.94
334.31	5.07	5.25
334.33	5.15	5.57
334.35	5.24	5.89
334.37	5.32	6.23
334.39	5.40	6.57
334.41	5.48	6.92
334.43	5.56	7.27
334.45	5.64	7.63
334.47	5.71	8.00
334.49	5.79	8.38
334.51	5.86	8.76
334.53	5.93	9.15
334.55	6.00	9.54
334.57	6.07	9.94
334.59	6.13	10.35
334.61	6.20	10.76
334.63	6.26	11.18
334.65	6.33	11.60
334.67	6.39	12.03
334.69	6.45	12.46
334.71	6.51	12.89
334.73	6.57	13.33
334.75	6.62	13.78
334.77	6.68	14.23
334.79	6.73	14.68
334.81	6.79	15.13
334.83	6.84	15.59
334.85	6.89	16.05
334.87	6.94	16.51
334.89	6.99	16.98
334.91	7.04	17.44
334.93	7.08	17.91
334.95	7.13	18.38
334.97	7.17	18.86
334.99	7.21	19.33
335.01	7.26	19.80
335.03	7.30	20.28
335.05	7.34	20.75
335.07	7.38	21.23
335.09	7.41	21.70
335.11	7.45	22.18
335.13	7.49	22.65
335.15	7.52	23.13
335.17	7.55	23.60
335.19	7.58	24.07
335.21	7.62	24.53
335.23	7.65	25.00
335.25	7.67	25.46
335.27	7.70	25.92
335.29	7.73	26.38
335.31	7.75	26.83
335.33	7.78	27.28
335.35	7.80	27.73
335.37	7.82	28.17
335.39	7.84	28.60
335.41	7.86	29.03
335.43	7.88	29.46
335.45	7.90	29.88
335.47	7.91	30.29
335.49	7.93	30.69
335.51	7.94	31.09
335.53	7.95	31.48
335.55	7.96	31.87
335.57	7.97	32.24
335.59	7.98	32.61
335.61	7.98	32.96
335.63	7.99	33.31
335.65	7.99	33.65
335.67	**7.99**	33.97
335.69	**7.99**	34.28
335.71	7.99	34.58
335.73	7.99	34.87
335.75	7.98	35.15
335.77	7.98	35.40
335.79	7.97	35.65
335.81	7.96	35.88
335.83	7.95	36.09
335.85	7.93	36.29
335.87	7.91	36.46
335.89	7.89	36.61
335.91	7.87	36.74
335.93	7.85	36.86
335.95	7.82	36.94
335.97	7.79	37.00
335.99	7.75	**37.02**
336.01	7.71	**37.01**
336.03	7.67	36.96
336.05	7.61	36.88
336.07	7.55	36.72
336.09	7.48	36.50
336.11	7.39	36.17
336.13	7.26	35.58
336.15	7.01	34.42

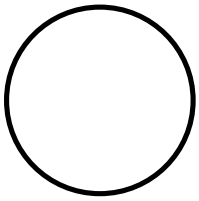
Summary for Reach D6: TO DMH14

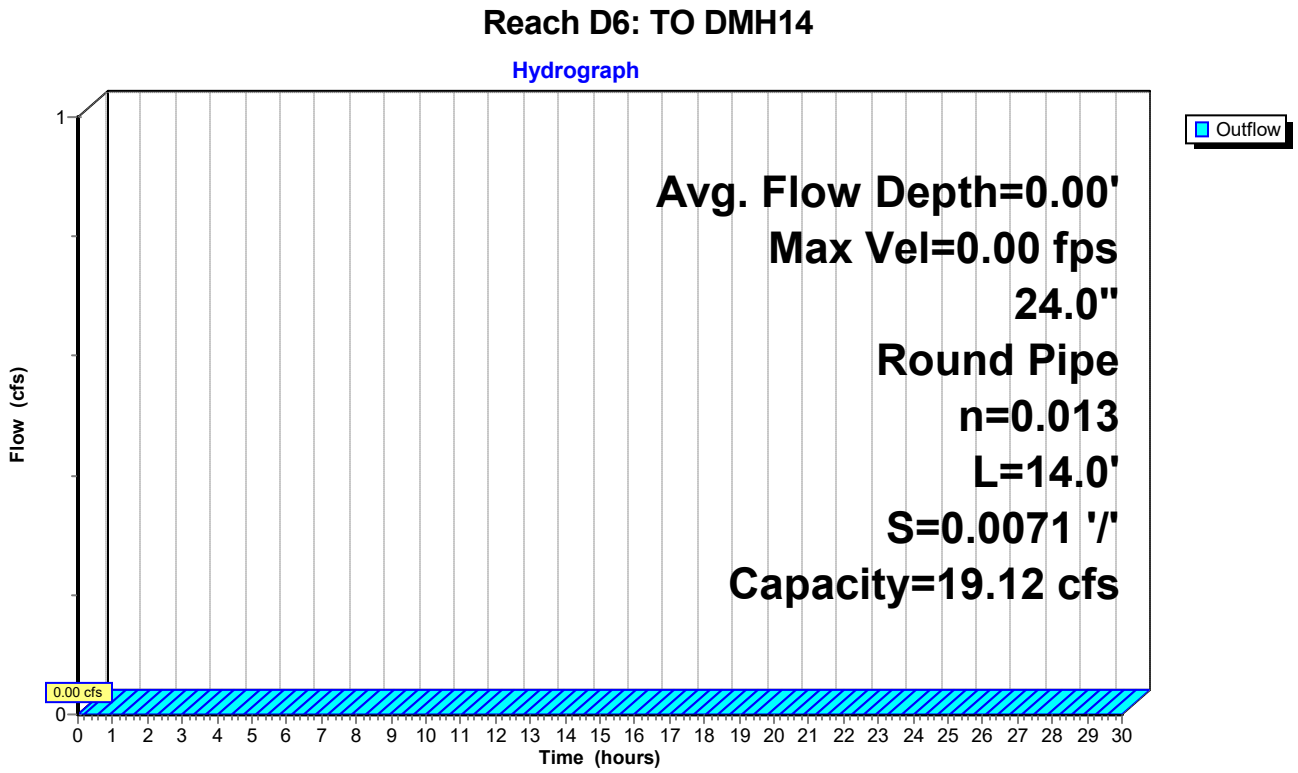
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 19.12 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 14.0' Slope= 0.0071 '/'
Inlet Invert= 339.60', Outlet Invert= 339.50'





Stage-Discharge for Reach D6: TO DMH14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
339.60	0.00	0.00
339.62	0.54	0.00
339.64	0.86	0.01
339.66	1.12	0.03
339.68	1.35	0.06
339.70	1.56	0.09
339.72	1.76	0.14
339.74	1.94	0.19
339.76	2.12	0.25
339.78	2.28	0.32
339.80	2.44	0.40
339.82	2.59	0.49
339.84	2.74	0.58
339.86	2.88	0.69
339.88	3.01	0.81
339.90	3.15	0.93
339.92	3.27	1.06
339.94	3.39	1.20
339.96	3.51	1.35
339.98	3.63	1.51
340.00	3.74	1.67
340.02	3.85	1.85
340.04	3.96	2.03
340.06	4.06	2.22
340.08	4.17	2.41
340.10	4.26	2.62
340.12	4.36	2.83
340.14	4.45	3.05
340.16	4.55	3.27
340.18	4.64	3.51
340.20	4.72	3.74
340.22	4.81	3.99
340.24	4.89	4.24
340.26	4.97	4.50
340.28	5.05	4.76
340.30	5.13	5.03
340.32	5.21	5.30
340.34	5.28	5.58
340.36	5.35	5.86
340.38	5.42	6.15
340.40	5.49	6.44
340.42	5.56	6.74
340.44	5.62	7.04
340.46	5.69	7.34
340.48	5.75	7.65
340.50	5.81	7.96
340.52	5.87	8.28
340.54	5.92	8.59
340.56	5.98	8.91
340.58	6.03	9.24
340.60	6.09	9.56
340.62	6.14	9.89
340.64	6.19	10.21
340.66	6.23	10.54
340.68	6.28	10.87
340.70	6.33	11.20
340.72	6.37	11.53
340.74	6.41	11.86
340.76	6.45	12.19
340.78	6.49	12.52
340.80	6.53	12.85
340.82	6.56	13.17
340.84	6.60	13.50
340.86	6.63	13.82
340.88	6.66	14.14
340.90	6.69	14.46
340.92	6.72	14.78
340.94	6.74	15.09
340.96	6.77	15.40
340.98	6.79	15.71
341.00	6.81	16.01
341.02	6.83	16.30
341.04	6.85	16.60
341.06	6.87	16.88
341.08	6.88	17.16
341.10	6.90	17.43
341.12	6.91	17.70
341.14	6.92	17.96
341.16	6.93	18.21
341.18	6.93	18.45
341.20	6.94	18.69
341.22	**6.94**	18.91
341.24	6.94	19.13
341.26	6.93	19.33
341.28	6.93	19.52
341.30	6.92	19.70
341.32	6.91	19.87
341.34	6.90	20.02
341.36	6.88	20.16
341.38	6.86	20.28
341.40	6.84	20.38
341.42	6.82	20.46
341.44	6.79	20.52
341.46	6.75	20.56
341.48	6.71	**20.57**
341.50	6.66	20.54
341.52	6.61	20.48
341.54	6.54	20.38
341.56	6.46	20.20
341.58	6.35	19.92
341.60	6.09	19.12

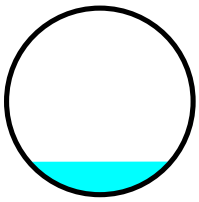
Summary for Reach D7: TO DMH8

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 4.75" for 50-Year event
Inflow = 0.44 cfs @ 12.07 hrs, Volume= 1,433 cf
Outflow = 0.44 cfs @ 12.08 hrs, Volume= 1,433 cf, Atten= 2%, Lag= 0.7 min

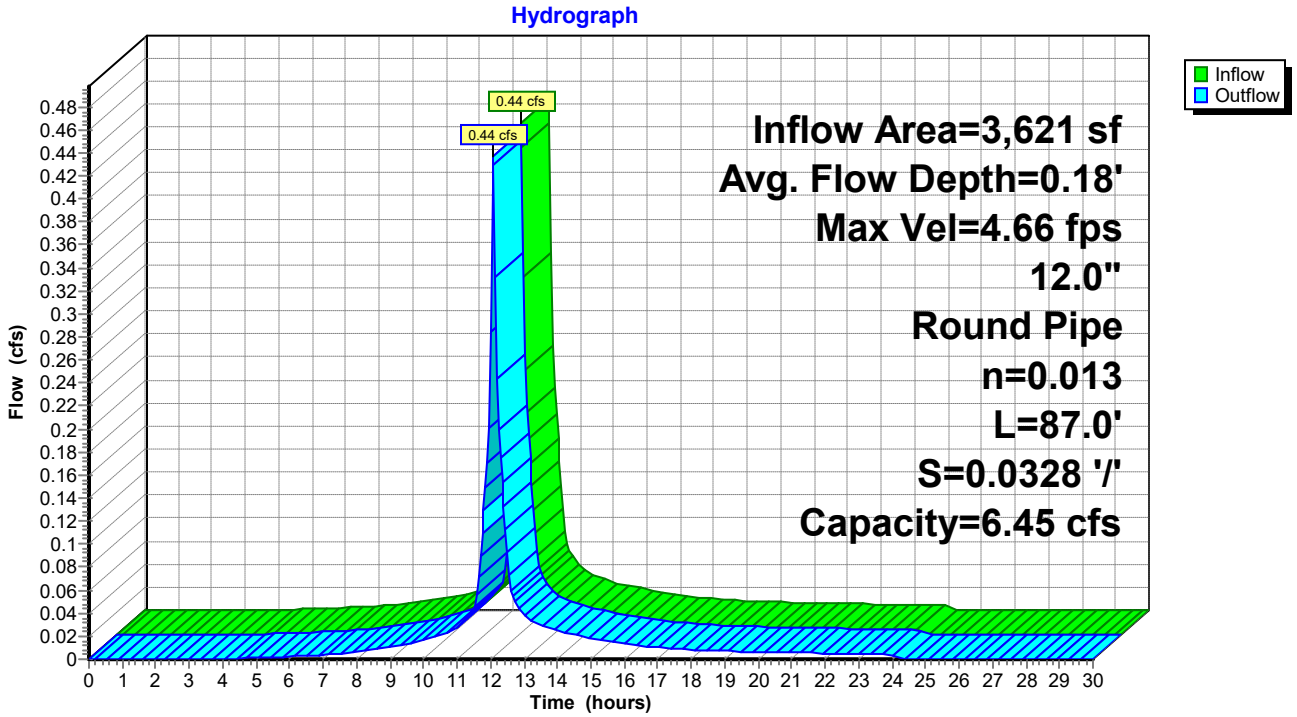
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.66 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 0.9 min

Peak Storage= 8 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.45 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 87.0' Slope= 0.0328 '/'
Inlet Invert= 354.15', Outlet Invert= 351.30'



Reach D7: TO DMH8



Stage-Discharge for Reach D7: TO DMH8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.15	0.00	0.00
354.16	0.73	0.00
354.17	1.16	0.00
354.18	1.51	0.01
354.19	1.82	0.02
354.20	2.11	0.03
354.21	2.37	0.05
354.22	2.62	0.06
354.23	2.86	0.08
354.24	3.08	0.11
354.25	3.29	0.13
354.26	3.50	0.16
354.27	3.69	0.20
354.28	3.88	0.23
354.29	4.07	0.27
354.30	4.24	0.31
354.31	4.41	0.36
354.32	4.58	0.41
354.33	4.74	0.46
354.34	4.90	0.51
354.35	5.05	0.56
354.36	5.20	0.62
354.37	5.34	0.68
354.38	5.48	0.75
354.39	5.62	0.81
354.40	5.75	0.88
354.41	5.88	0.95
354.42	6.01	1.03
354.43	6.13	1.10
354.44	6.25	1.18
354.45	6.37	1.26
354.46	6.49	1.35
354.47	6.60	1.43
354.48	6.71	1.52
354.49	6.82	1.61
354.50	6.92	1.70
354.51	7.02	1.79
354.52	7.12	1.88
354.53	7.22	1.98
354.54	7.31	2.07
354.55	7.41	2.17
354.56	7.50	2.27
354.57	7.59	2.37
354.58	7.67	2.48
354.59	7.75	2.58
354.60	7.84	2.69
354.61	7.91	2.79
354.62	7.99	2.90
354.63	8.07	3.01
354.64	8.14	3.12
354.65	8.21	3.22
354.66	8.28	3.33
354.67	8.35	3.44
354.68	8.41	3.55
354.69	8.47	3.67
354.70	8.53	3.78
354.71	8.59	3.89
354.72	8.65	4.00
354.73	8.70	4.11
354.74	8.75	4.22
354.75	8.81	4.33
354.76	8.85	4.44
354.77	8.90	4.55
354.78	8.94	4.66
354.79	8.99	4.77
354.80	9.03	4.88
354.81	9.06	4.98
354.82	9.10	5.09
354.83	9.13	5.19
354.84	9.16	5.30
354.85	9.19	5.40
354.86	9.22	5.50
354.87	9.25	5.60
354.88	9.27	5.69
354.89	9.29	5.79
354.90	9.31	5.88
354.91	9.32	5.97
354.92	9.33	6.06
354.93	9.34	6.14
354.94	9.35	6.22
354.95	9.36	6.30
354.96	**9.36**	6.38
354.97	9.36	6.45
354.98	9.36	6.52
354.99	9.35	6.58
355.00	9.34	6.64
355.01	9.33	6.70
355.02	9.31	6.75
355.03	9.29	6.80
355.04	9.26	6.84
355.05	9.23	6.87
355.06	9.20	6.90
355.07	9.16	6.92
355.08	9.11	6.93
355.09	9.05	**6.94**
355.10	8.99	6.93
355.11	8.92	6.91
355.12	8.83	6.87
355.13	8.72	6.81
355.14	8.57	6.72
355.15	8.21	6.45

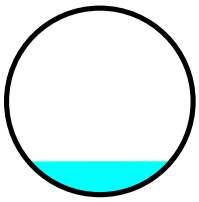
Summary for Reach D8: TO DMH9

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 4.75" for 50-Year event
Inflow = 0.44 cfs @ 12.08 hrs, Volume= 1,433 cf
Outflow = 0.43 cfs @ 12.10 hrs, Volume= 1,433 cf, Atten= 1%, Lag= 0.7 min

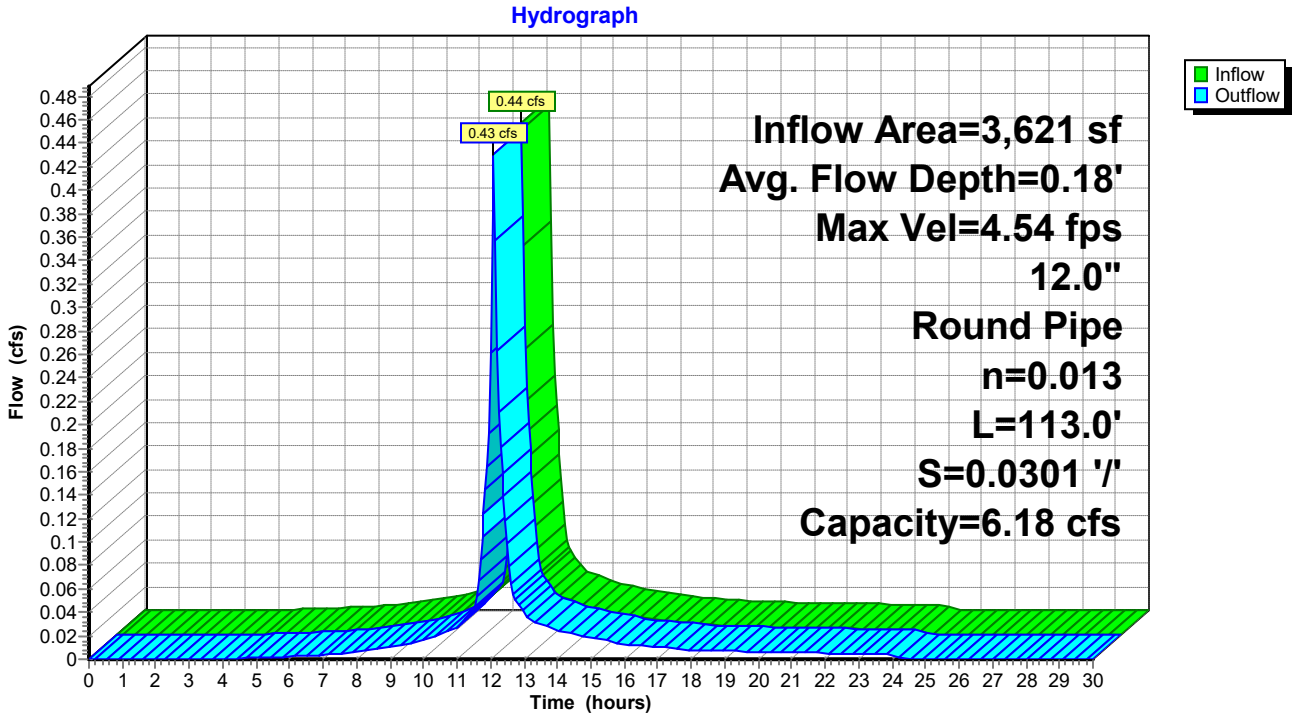
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.54 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.49 fps, Avg. Travel Time= 1.3 min

Peak Storage= 11 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.18 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 113.0' Slope= 0.0301 '/'
Inlet Invert= 351.20', Outlet Invert= 347.80'



Reach D8: TO DMH9



Stage-Discharge for Reach D8: TO DMH9

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.70	0.00
351.22	1.11	0.00
351.23	1.45	0.01
351.24	1.75	0.02
351.25	2.02	0.03
351.26	2.28	0.04
351.27	2.51	0.06
351.28	2.74	0.08
351.29	2.95	0.10
351.30	3.16	0.13
351.31	3.35	0.16
351.32	3.54	0.19
351.33	3.72	0.22
351.34	3.90	0.26
351.35	4.07	0.30
351.36	4.23	0.34
351.37	4.39	0.39
351.38	4.54	0.44
351.39	4.69	0.49
351.40	4.84	0.54
351.41	4.98	0.60
351.42	5.12	0.66
351.43	5.25	0.72
351.44	5.39	0.78
351.45	5.51	0.85
351.46	5.64	0.91
351.47	5.76	0.99
351.48	5.88	1.06
351.49	5.99	1.13
351.50	6.11	1.21
351.51	6.22	1.29
351.52	6.33	1.37
351.53	6.43	1.45
351.54	6.53	1.54
351.55	6.63	1.62
351.56	6.73	1.71
351.57	6.83	1.80
351.58	6.92	1.89
351.59	7.01	1.99
351.60	7.10	2.08
351.61	7.19	2.18
351.62	7.27	2.28
351.63	7.35	2.37
351.64	7.43	2.47
351.65	7.51	2.57
351.66	7.59	2.68
351.67	7.66	2.78
351.68	7.73	2.88
351.69	7.80	2.99
351.70	7.87	3.09
351.71	7.93	3.20
351.72	8.00	3.30
351.73	8.06	3.41
351.74	8.12	3.51
351.75	8.18	3.62
351.76	8.23	3.73
351.77	8.29	3.83
351.78	8.34	3.94
351.79	8.39	4.05
351.80	8.44	4.15
351.81	8.48	4.26
351.82	8.53	4.36
351.83	8.57	4.47
351.84	8.61	4.57
351.85	8.65	4.67
351.86	8.69	4.78
351.87	8.72	4.88
351.88	8.75	4.98
351.89	8.78	5.08
351.90	8.81	5.17
351.91	8.84	5.27
351.92	8.86	5.36
351.93	8.88	5.46
351.94	8.90	5.55
351.95	8.92	5.64
351.96	8.93	5.72
351.97	8.95	5.81
351.98	8.96	5.89
351.99	8.96	5.97
352.00	8.97	6.04
352.01	**8.97**	6.11
352.02	8.97	6.18
352.03	8.97	6.25
352.04	8.96	6.31
352.05	8.95	6.37
352.06	8.94	6.42
352.07	8.92	6.47
352.08	8.90	6.51
352.09	8.88	6.55
352.10	8.85	6.59
352.11	8.81	6.61
352.12	8.77	6.63
352.13	8.73	6.64
352.14	8.68	**6.65**
352.15	8.62	6.64
352.16	8.54	6.62
352.17	8.46	6.59
352.18	8.35	6.53
352.19	8.21	6.44
352.20	7.87	6.18

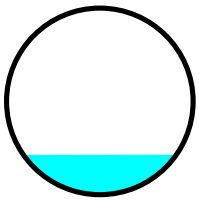
Summary for Reach D9: TO DMH10

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 4.75" for 50-Year event
Inflow = 0.43 cfs @ 12.10 hrs, Volume= 1,433 cf
Outflow = 0.42 cfs @ 12.10 hrs, Volume= 1,433 cf, Atten= 1%, Lag= 0.5 min

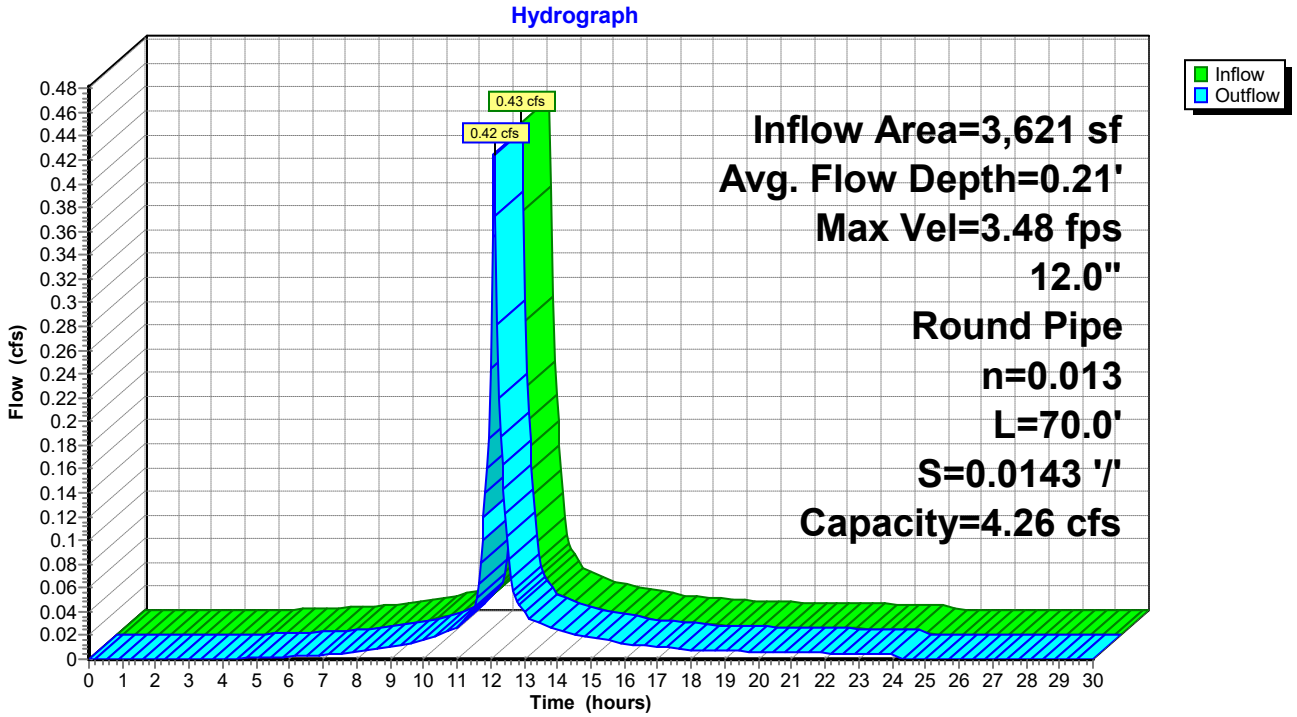
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.48 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.14 fps, Avg. Travel Time= 1.0 min

Peak Storage= 9 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.26 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 70.0' Slope= 0.0143 '/'
Inlet Invert= 347.70', Outlet Invert= 346.70'



Reach D9: TO DMH10



Stage-Discharge for Reach D9: TO DMH10

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.70	0.00	0.00
347.71	0.48	0.00
347.72	0.76	0.00
347.73	1.00	0.01
347.74	1.20	0.01
347.75	1.39	0.02
347.76	1.57	0.03
347.77	1.73	0.04
347.78	1.89	0.06
347.79	2.03	0.07
347.80	2.18	0.09
347.81	2.31	0.11
347.82	2.44	0.13
347.83	2.56	0.15
347.84	2.69	0.18
347.85	2.80	0.21
347.86	2.92	0.24
347.87	3.02	0.27
347.88	3.13	0.30
347.89	3.23	0.34
347.90	3.33	0.37
347.91	3.43	0.41
347.92	3.53	0.45
347.93	3.62	0.49
347.94	3.71	0.54
347.95	3.80	0.58
347.96	3.88	0.63
347.97	3.97	0.68
347.98	4.05	0.73
347.99	4.13	0.78
348.00	4.21	0.83
348.01	4.28	0.89
348.02	4.36	0.94
348.03	4.43	1.00
348.04	4.50	1.06
348.05	4.57	1.12
348.06	4.64	1.18
348.07	4.70	1.24
348.08	4.77	1.31
348.09	4.83	1.37
348.10	4.89	1.44
348.11	4.95	1.50
348.12	5.01	1.57
348.13	5.07	1.64
348.14	5.12	1.70
348.15	5.17	1.77
348.16	5.23	1.84
348.17	5.28	1.91
348.18	5.33	1.99
348.19	5.38	2.06
348.20	5.42	2.13
348.21	5.47	2.20
348.22	5.51	2.27
348.23	5.55	2.35
348.24	5.60	2.42
348.25	5.64	2.49
348.26	5.67	2.57
348.27	5.71	2.64
348.28	5.75	2.71
348.29	5.78	2.79
348.30	5.81	2.86
348.31	5.85	2.93
348.32	5.88	3.01
348.33	5.91	3.08
348.34	5.93	3.15
348.35	5.96	3.22
348.36	5.99	3.29
348.37	6.01	3.36
348.38	6.03	3.43
348.39	6.05	3.50
348.40	6.07	3.57
348.41	6.09	3.63
348.42	6.11	3.70
348.43	6.12	3.76
348.44	6.13	3.82
348.45	6.15	3.88
348.46	6.16	3.94
348.47	6.16	4.00
348.48	6.17	4.06
348.49	6.18	4.11
348.50	6.18	4.16
348.51	**6.18**	4.21
348.52	6.18	4.26
348.53	6.18	4.31
348.54	6.17	4.35
348.55	6.17	4.39
348.56	6.16	4.42
348.57	6.15	4.46
348.58	6.13	4.49
348.59	6.12	4.52
348.60	6.10	4.54
348.61	6.07	4.56
348.62	6.05	4.57
348.63	6.01	4.58
348.64	5.98	**4.58**
348.65	5.94	4.58
348.66	5.89	4.56
348.67	5.83	4.54
348.68	5.76	4.50
348.69	5.66	4.44
348.70	5.42	4.26

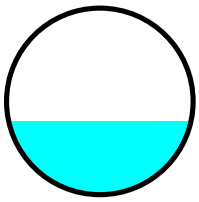
Summary for Reach DCB-R101: TO DMH-R100

Inflow Area = 18,867 sf, 80.97% Impervious, Inflow Depth = 4.42" for 50-Year event
Inflow = 2.20 cfs @ 12.07 hrs, Volume= 6,952 cf
Outflow = 2.19 cfs @ 12.07 hrs, Volume= 6,952 cf, Atten= 0%, Lag= 0.0 min

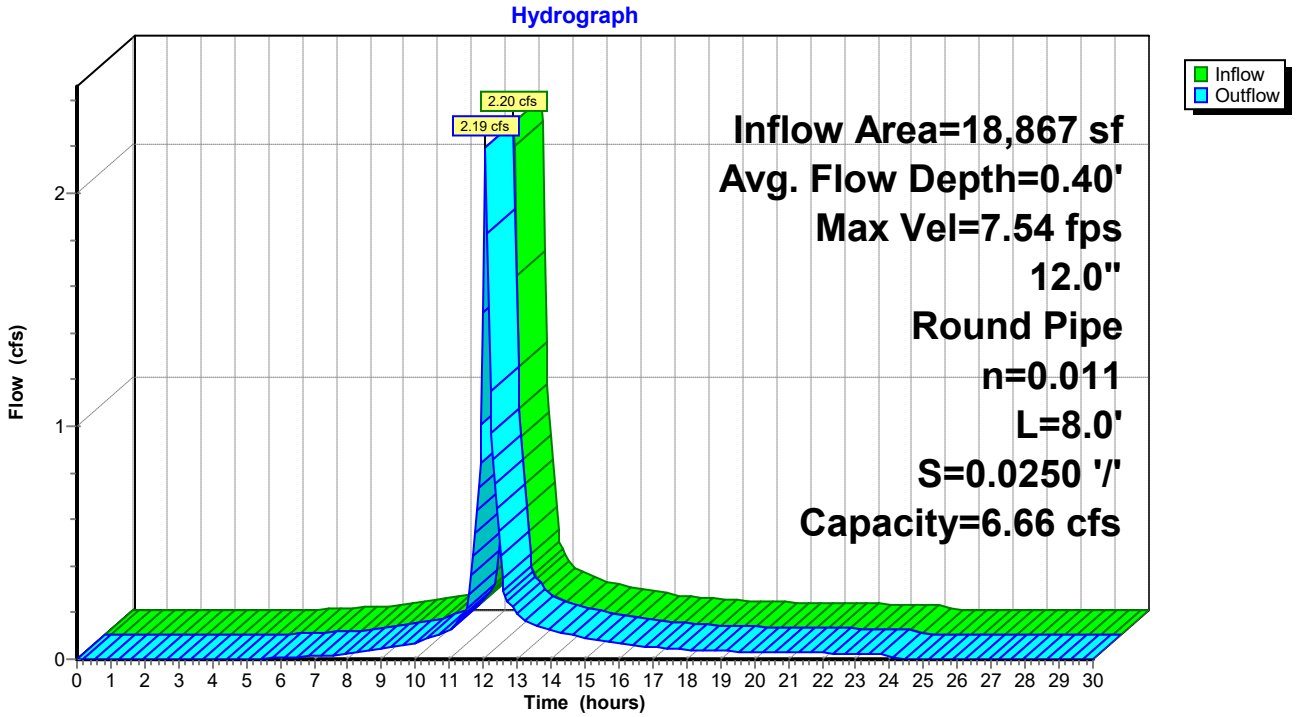
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.54 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.54 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.40'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.66 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 8.0' Slope= 0.0250 '/'
Inlet Invert= 355.50', Outlet Invert= 355.30'



Reach DCB-R101: TO DMH-R100



Stage-Discharge for Reach DCB-R101: TO DMH-R100

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.50	0.00	0.00
355.51	0.75	0.00
355.52	1.19	0.00
355.53	1.56	0.01
355.54	1.88	0.02
355.55	2.18	0.03
355.56	2.45	0.05
355.57	2.71	0.07
355.58	2.95	0.09
355.59	3.18	0.11
355.60	3.40	0.14
355.61	3.61	0.17
355.62	3.81	0.20
355.63	4.01	0.24
355.64	4.20	0.28
355.65	4.38	0.32
355.66	4.56	0.37
355.67	4.73	0.42
355.68	4.89	0.47
355.69	5.06	0.53
355.70	5.21	0.58
355.71	5.37	0.64
355.72	5.52	0.71
355.73	5.66	0.77
355.74	5.80	0.84
355.75	5.94	0.91
355.76	6.07	0.99
355.77	6.20	1.06
355.78	6.33	1.14
355.79	6.46	1.22
355.80	6.58	1.30
355.81	6.70	1.39
355.82	6.81	1.48
355.83	6.93	1.57
355.84	7.04	1.66
355.85	7.15	1.75
355.86	7.25	1.85
355.87	7.35	1.94
355.88	7.45	2.04
355.89	7.55	2.14
355.90	7.65	2.24
355.91	7.74	2.35
355.92	7.83	2.45
355.93	7.92	2.56
355.94	8.01	2.66
355.95	8.09	2.77
355.96	8.17	2.88
355.97	8.25	2.99
355.98	8.33	3.10
355.99	8.40	3.22
356.00	8.48	3.33
356.01	8.55	3.44
356.02	8.62	3.56
356.03	8.68	3.67
356.04	8.75	3.78
356.05	8.81	3.90
356.06	8.87	4.01
356.07	8.93	4.13
356.08	8.98	4.24
356.09	9.04	4.36
356.10	9.09	4.47
356.11	9.14	4.59
356.12	9.19	4.70
356.13	9.23	4.81
356.14	9.28	4.92
356.15	9.32	5.04
356.16	9.36	5.15
356.17	9.39	5.25
356.18	9.43	5.36
356.19	9.46	5.47
356.20	9.49	5.57
356.21	9.52	5.68
356.22	9.55	5.78
356.23	9.57	5.88
356.24	9.59	5.98
356.25	9.61	6.07
356.26	9.62	6.16
356.27	9.64	6.25
356.28	9.65	6.34
356.29	9.66	6.43
356.30	9.66	6.51
356.31	**9.66**	6.59
356.32	9.66	6.66
356.33	9.66	6.73
356.34	9.65	6.80
356.35	9.64	6.86
356.36	9.63	6.92
356.37	9.61	6.97
356.38	9.59	7.02
356.39	9.56	7.06
356.40	9.53	7.10
356.41	9.49	7.12
356.42	9.45	7.15
356.43	9.40	7.16
356.44	9.35	**7.16**
356.45	9.28	7.15
356.46	9.21	7.13
356.47	9.11	7.10
356.48	9.00	7.03
356.49	8.85	6.94
356.50	8.48	6.66

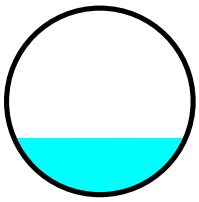
Summary for Reach DCB-R102: TO DMH-R101

Inflow Area = 13,651 sf, 53.41% Impervious, Inflow Depth = 2.82" for 50-Year event
Inflow = 1.03 cfs @ 12.08 hrs, Volume= 3,206 cf
Outflow = 1.03 cfs @ 12.09 hrs, Volume= 3,206 cf, Atten= 1%, Lag= 0.5 min

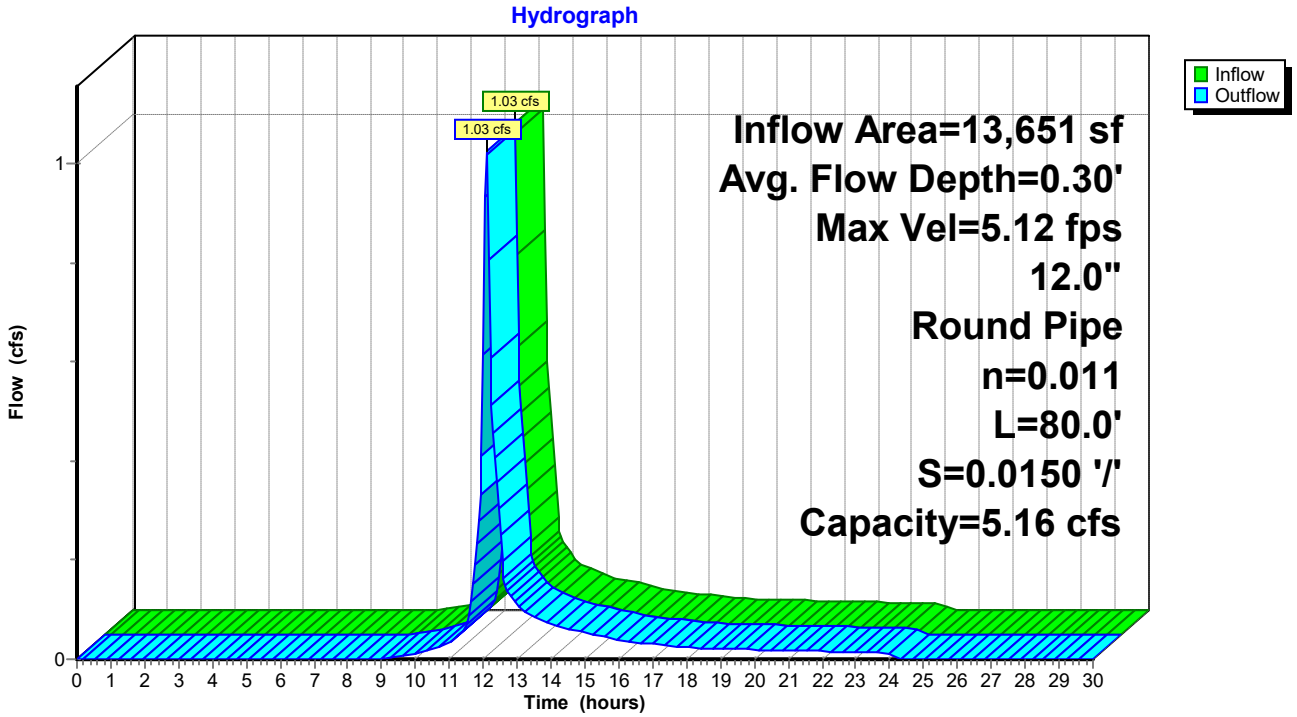
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.12 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.86 fps, Avg. Travel Time= 0.7 min

Peak Storage= 16 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 80.0' Slope= 0.0150 '/'
Inlet Invert= 357.20', Outlet Invert= 356.00'



Reach DCB-R102: TO DMH-R101



Stage-Discharge for Reach DCB-R102: TO DMH-R101

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
357.20	0.00	0.00
357.21	0.58	0.00
357.22	0.92	0.00
357.23	1.21	0.01
357.24	1.46	0.02
357.25	1.69	0.02
357.26	1.90	0.04
357.27	2.10	0.05
357.28	2.29	0.07
357.29	2.46	0.09
357.30	2.63	0.11
357.31	2.80	0.13
357.32	2.95	0.16
357.33	3.11	0.19
357.34	3.25	0.22
357.35	3.39	0.25
357.36	3.53	0.29
357.37	3.66	0.32
357.38	3.79	0.36
357.39	3.92	0.41
357.40	4.04	0.45
357.41	4.16	0.50
357.42	4.27	0.55
357.43	4.38	0.60
357.44	4.49	0.65
357.45	4.60	0.71
357.46	4.70	0.76
357.47	4.81	0.82
357.48	4.91	0.88
357.49	5.00	0.95
357.50	5.10	1.01
357.51	5.19	1.08
357.52	5.28	1.14
357.53	5.37	1.21
357.54	5.45	1.28
357.55	5.53	1.36
357.56	5.62	1.43
357.57	5.70	1.50
357.58	5.77	1.58
357.59	5.85	1.66
357.60	5.92	1.74
357.61	6.00	1.82
357.62	6.07	1.90
357.63	6.13	1.98
357.64	6.20	2.06
357.65	6.27	2.15
357.66	6.33	2.23
357.67	6.39	2.32
357.68	6.45	2.40
357.69	6.51	2.49
357.70	6.57	2.58
357.71	6.62	2.67
357.72	6.67	2.75
357.73	6.73	2.84
357.74	6.78	2.93
357.75	6.82	3.02
357.76	6.87	3.11
357.77	6.92	3.20
357.78	6.96	3.29
357.79	7.00	3.38
357.80	7.04	3.46
357.81	7.08	3.55
357.82	7.12	3.64
357.83	7.15	3.73
357.84	7.19	3.81
357.85	7.22	3.90
357.86	7.25	3.99
357.87	7.28	4.07
357.88	7.30	4.15
357.89	7.33	4.24
357.90	7.35	4.32
357.91	7.37	4.40
357.92	7.39	4.48
357.93	7.41	4.55
357.94	7.43	4.63
357.95	7.44	4.70
357.96	7.45	4.77
357.97	7.46	4.84
357.98	7.47	4.91
357.99	7.48	4.98
358.00	7.48	5.04
358.01	**7.49**	5.10
358.02	7.48	5.16
358.03	7.48	5.21
358.04	7.48	5.27
358.05	7.47	5.31
358.06	7.46	5.36
358.07	7.44	5.40
358.08	7.43	5.44
358.09	7.41	5.47
358.10	7.38	5.50
358.11	7.35	5.52
358.12	7.32	5.53
358.13	7.28	5.54
358.14	7.24	**5.55**
358.15	7.19	5.54
358.16	7.13	5.52
358.17	7.06	5.50
358.18	6.97	5.45
358.19	6.85	5.37
358.20	6.57	5.16

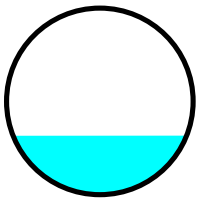
Summary for Reach DCB-S1: TO DMH-S1

Inflow Area = 8,226 sf, 87.83% Impervious, Inflow Depth = 4.86" for 50-Year event
Inflow = 1.02 cfs @ 12.07 hrs, Volume= 3,331 cf
Outflow = 1.02 cfs @ 12.07 hrs, Volume= 3,331 cf, Atten= 1%, Lag= 0.2 min

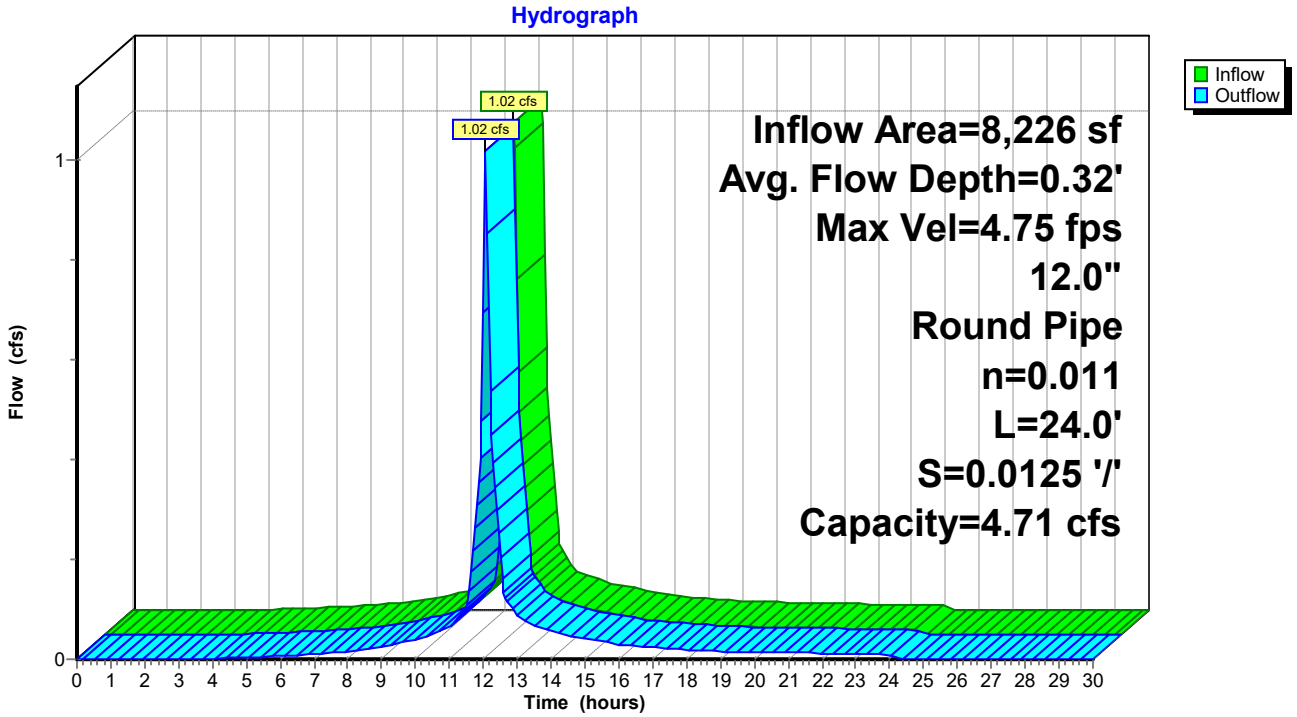
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.75 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.57 fps, Avg. Travel Time= 0.3 min

Peak Storage= 5 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.71 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 24.0' Slope= 0.0125 '/'
Inlet Invert= 351.20', Outlet Invert= 350.90'



Reach DCB-S1: TO DMH-S1



Stage-Discharge for Reach DCB-S1: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.53	0.00
351.22	0.84	0.00
351.23	1.10	0.01
351.24	1.33	0.01
351.25	1.54	0.02
351.26	1.73	0.03
351.27	1.91	0.05
351.28	2.09	0.06
351.29	2.25	0.08
351.30	2.40	0.10
351.31	2.55	0.12
351.32	2.70	0.14
351.33	2.84	0.17
351.34	2.97	0.20
351.35	3.10	0.23
351.36	3.22	0.26
351.37	3.34	0.30
351.38	3.46	0.33
351.39	3.58	0.37
351.40	3.69	0.41
351.41	3.79	0.45
351.42	3.90	0.50
351.43	4.00	0.55
351.44	4.10	0.59
351.45	4.20	0.64
351.46	4.29	0.70
351.47	4.39	0.75
351.48	4.48	0.81
351.49	4.57	0.86
351.50	4.65	0.92
351.51	4.74	0.98
351.52	4.82	1.04
351.53	4.90	1.11
351.54	4.98	1.17
351.55	5.05	1.24
351.56	5.13	1.31
351.57	5.20	1.37
351.58	5.27	1.44
351.59	5.34	1.51
351.60	5.41	1.59
351.61	5.47	1.66
351.62	5.54	1.73
351.63	5.60	1.81
351.64	5.66	1.88
351.65	5.72	1.96
351.66	5.78	2.04
351.67	5.83	2.12
351.68	5.89	2.19
351.69	5.94	2.27
351.70	5.99	2.35
351.71	6.04	2.43
351.72	6.09	2.51
351.73	6.14	2.60
351.74	6.19	2.68
351.75	6.23	2.76
351.76	6.27	2.84
351.77	6.31	2.92
351.78	6.35	3.00
351.79	6.39	3.08
351.80	6.43	3.16
351.81	6.46	3.24
351.82	6.50	3.32
351.83	6.53	3.40
351.84	6.56	3.48
351.85	6.59	3.56
351.86	6.62	3.64
351.87	6.64	3.72
351.88	6.67	3.79
351.89	6.69	3.87
351.90	6.71	3.94
351.91	6.73	4.01
351.92	6.75	4.09
351.93	6.77	4.16
351.94	6.78	4.23
351.95	6.79	4.29
351.96	6.81	4.36
351.97	6.81	4.42
351.98	6.82	4.48
351.99	6.83	4.54
352.00	6.83	4.60
352.01	**6.83**	4.66
352.02	6.83	4.71
352.03	6.83	4.76
352.04	6.82	4.81
352.05	6.82	4.85
352.06	6.81	4.89
352.07	6.80	4.93
352.08	6.78	4.96
352.09	6.76	4.99
352.10	6.74	5.02
352.11	6.71	5.04
352.12	6.68	5.05
352.13	6.65	5.06
352.14	6.61	**5.06**
352.15	6.56	5.06
352.16	6.51	5.04
352.17	6.44	5.02
352.18	6.36	4.97
352.19	6.26	4.91
352.20	5.99	4.71

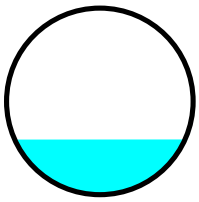
Summary for Reach DCB-S2: TO DMH-S1

Inflow Area = 10,318 sf, 80.45% Impervious, Inflow Depth = 4.31" for 50-Year event
Inflow = 1.18 cfs @ 12.07 hrs, Volume= 3,710 cf
Outflow = 1.17 cfs @ 12.07 hrs, Volume= 3,710 cf, Atten= 0%, Lag= 0.1 min

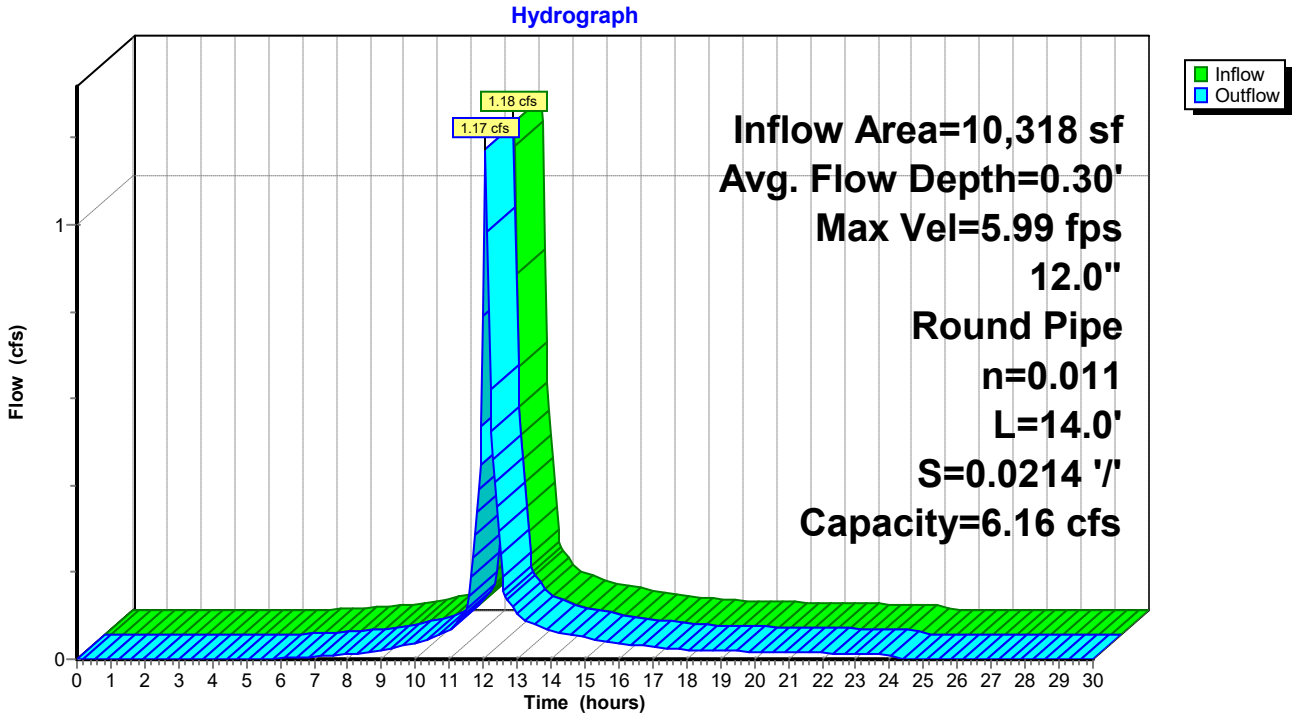
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.99 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.01 fps, Avg. Travel Time= 0.1 min

Peak Storage= 3 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 14.0' Slope= 0.0214 '/'
Inlet Invert= 351.20', Outlet Invert= 350.90'



Reach DCB-S2: TO DMH-S1



Stage-Discharge for Reach DCB-S2: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.70	0.00
351.22	1.10	0.00
351.23	1.44	0.01
351.24	1.74	0.02
351.25	2.02	0.03
351.26	2.27	0.04
351.27	2.51	0.06
351.28	2.73	0.08
351.29	2.94	0.10
351.30	3.15	0.13
351.31	3.34	0.16
351.32	3.53	0.19
351.33	3.71	0.22
351.34	3.89	0.26
351.35	4.06	0.30
351.36	4.22	0.34
351.37	4.38	0.39
351.38	4.53	0.44
351.39	4.68	0.49
351.40	4.83	0.54
351.41	4.97	0.60
351.42	5.11	0.65
351.43	5.24	0.72
351.44	5.37	0.78
351.45	5.50	0.84
351.46	5.62	0.91
351.47	5.74	0.98
351.48	5.86	1.06
351.49	5.98	1.13
351.50	6.09	1.21
351.51	6.20	1.29
351.52	6.31	1.37
351.53	6.41	1.45
351.54	6.52	1.53
351.55	6.62	1.62
351.56	6.71	1.71
351.57	6.81	1.80
351.58	6.90	1.89
351.59	6.99	1.98
351.60	7.08	2.08
351.61	7.17	2.17
351.62	7.25	2.27
351.63	7.33	2.37
351.64	7.41	2.47
351.65	7.49	2.57
351.66	7.57	2.67
351.67	7.64	2.77
351.68	7.71	2.87
351.69	7.78	2.98
351.70	7.85	3.08
351.71	7.91	3.19
351.72	7.98	3.29
351.73	8.04	3.40
351.74	8.10	3.50
351.75	8.16	3.61
351.76	8.21	3.72
351.77	8.27	3.82
351.78	8.32	3.93
351.79	8.37	4.04
351.80	8.42	4.14
351.81	8.46	4.25
351.82	8.51	4.35
351.83	8.55	4.46
351.84	8.59	4.56
351.85	8.63	4.66
351.86	8.66	4.76
351.87	8.70	4.87
351.88	8.73	4.96
351.89	8.76	5.06
351.90	8.79	5.16
351.91	8.81	5.26
351.92	8.84	5.35
351.93	8.86	5.44
351.94	8.88	5.53
351.95	8.90	5.62
351.96	8.91	5.71
351.97	8.92	5.79
351.98	8.93	5.87
351.99	8.94	5.95
352.00	8.94	6.02
352.01	**8.95**	6.10
352.02	8.95	6.17
352.03	8.94	6.23
352.04	8.94	6.29
352.05	8.93	6.35
352.06	8.91	6.40
352.07	8.90	6.45
352.08	8.88	6.50
352.09	8.85	6.54
352.10	8.82	6.57
352.11	8.79	6.60
352.12	8.75	6.62
352.13	8.71	6.63
352.14	8.65	**6.63**
352.15	8.59	6.62
352.16	8.52	6.60
352.17	8.44	6.57
352.18	8.33	6.51
352.19	8.19	6.42
352.20	7.85	6.16

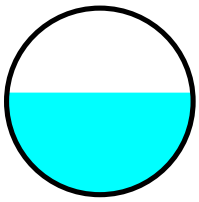
Summary for Reach DCB-S3: TO DMH-S1

Inflow Area = 18,672 sf, 88.33% Impervious, Inflow Depth = 5.08" for 50-Year event
Inflow = 2.39 cfs @ 12.07 hrs, Volume= 7,911 cf
Outflow = 2.38 cfs @ 12.07 hrs, Volume= 7,911 cf, Atten= 0%, Lag= 0.1 min

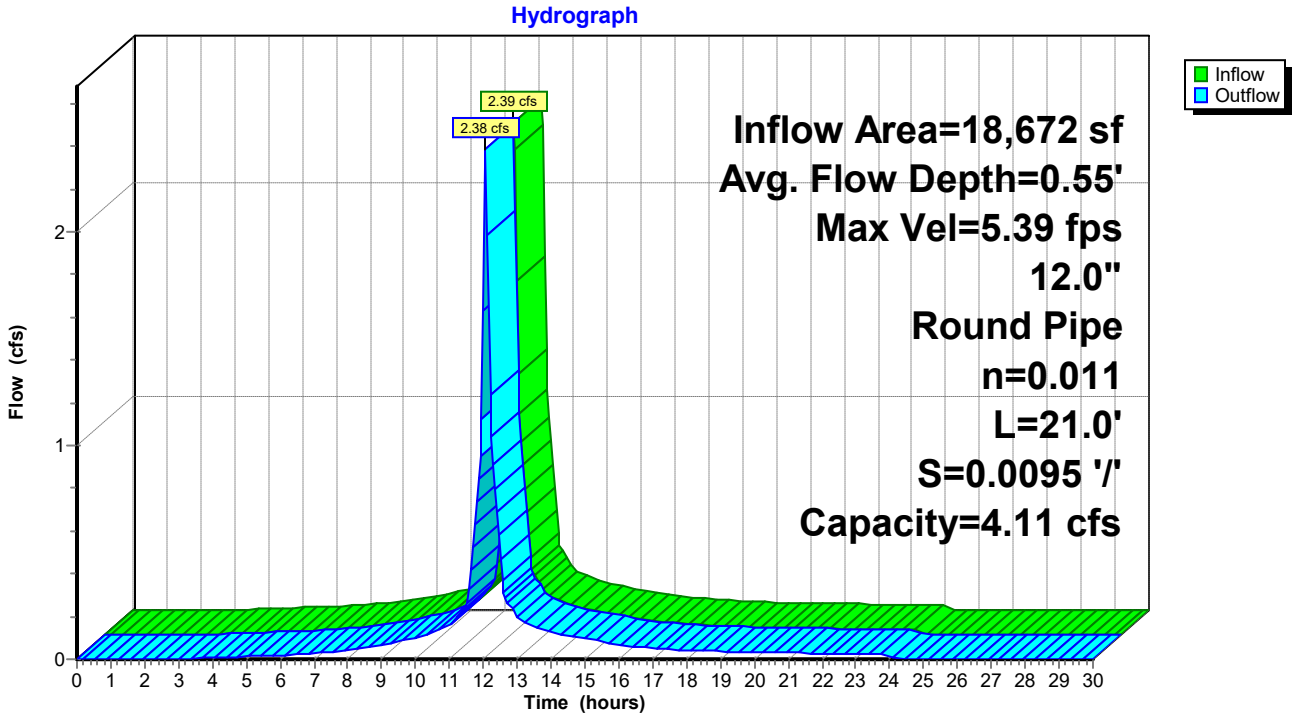
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.39 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.83 fps, Avg. Travel Time= 0.2 min

Peak Storage= 9 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.55'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.11 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 346.90', Outlet Invert= 346.70'



Reach DCB-S3: TO DMH-S1



Stage-Discharge for Reach DCB-S3: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.90	0.00	0.00
346.91	0.47	0.00
346.92	0.74	0.00
346.93	0.96	0.01
346.94	1.16	0.01
346.95	1.34	0.02
346.96	1.51	0.03
346.97	1.67	0.04
346.98	1.82	0.05
346.99	1.96	0.07
347.00	2.10	0.09
347.01	2.23	0.10
347.02	2.35	0.13
347.03	2.47	0.15
347.04	2.59	0.17
347.05	2.70	0.20
347.06	2.81	0.23
347.07	2.92	0.26
347.08	3.02	0.29
347.09	3.12	0.32
347.10	3.22	0.36
347.11	3.31	0.40
347.12	3.40	0.44
347.13	3.49	0.48
347.14	3.58	0.52
347.15	3.67	0.56
347.16	3.75	0.61
347.17	3.83	0.66
347.18	3.91	0.70
347.19	3.99	0.75
347.20	4.06	0.80
347.21	4.13	0.86
347.22	4.21	0.91
347.23	4.28	0.97
347.24	4.34	1.02
347.25	4.41	1.08
347.26	4.48	1.14
347.27	4.54	1.20
347.28	4.60	1.26
347.29	4.66	1.32
347.30	4.72	1.38
347.31	4.78	1.45
347.32	4.83	1.51
347.33	4.89	1.58
347.34	4.94	1.64
347.35	4.99	1.71
347.36	5.04	1.78
347.37	5.09	1.85
347.38	5.14	1.92
347.39	5.19	1.98
347.40	5.23	2.05
347.41	5.28	2.12
347.42	5.32	2.19
347.43	5.36	2.27
347.44	5.40	2.34
347.45	5.44	2.41
347.46	5.47	2.48
347.47	5.51	2.55
347.48	5.55	2.62
347.49	5.58	2.69
347.50	5.61	2.76
347.51	5.64	2.83
347.52	5.67	2.90
347.53	5.70	2.97
347.54	5.73	3.04
347.55	5.75	3.11
347.56	5.78	3.18
347.57	5.80	3.24
347.58	5.82	3.31
347.59	5.84	3.38
347.60	5.86	3.44
347.61	5.88	3.50
347.62	5.89	3.57
347.63	5.91	3.63
347.64	5.92	3.69
347.65	5.93	3.75
347.66	5.94	3.80
347.67	5.95	3.86
347.68	5.95	3.91
347.69	5.96	3.97
347.70	5.96	4.02
347.71	**5.96**	4.06
347.72	5.96	4.11
347.73	5.96	4.15
347.74	5.96	4.20
347.75	5.95	4.23
347.76	5.94	4.27
347.77	5.93	4.30
347.78	5.92	4.33
347.79	5.90	4.36
347.80	5.88	4.38
347.81	5.86	4.40
347.82	5.83	4.41
347.83	5.80	4.42
347.84	5.77	**4.42**
347.85	5.73	4.42
347.86	5.68	4.40
347.87	5.63	4.38
347.88	5.56	4.34
347.89	5.46	4.28
347.90	5.23	4.11

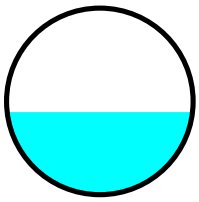
Summary for Reach DCB-S4: TO DMH-S1

Inflow Area = 24,334 sf, 83.66% Impervious, Inflow Depth = 4.75" for 50-Year event
Inflow = 2.88 cfs @ 12.09 hrs, Volume= 9,629 cf
Outflow = 2.88 cfs @ 12.09 hrs, Volume= 9,629 cf, Atten= 0%, Lag= 0.0 min

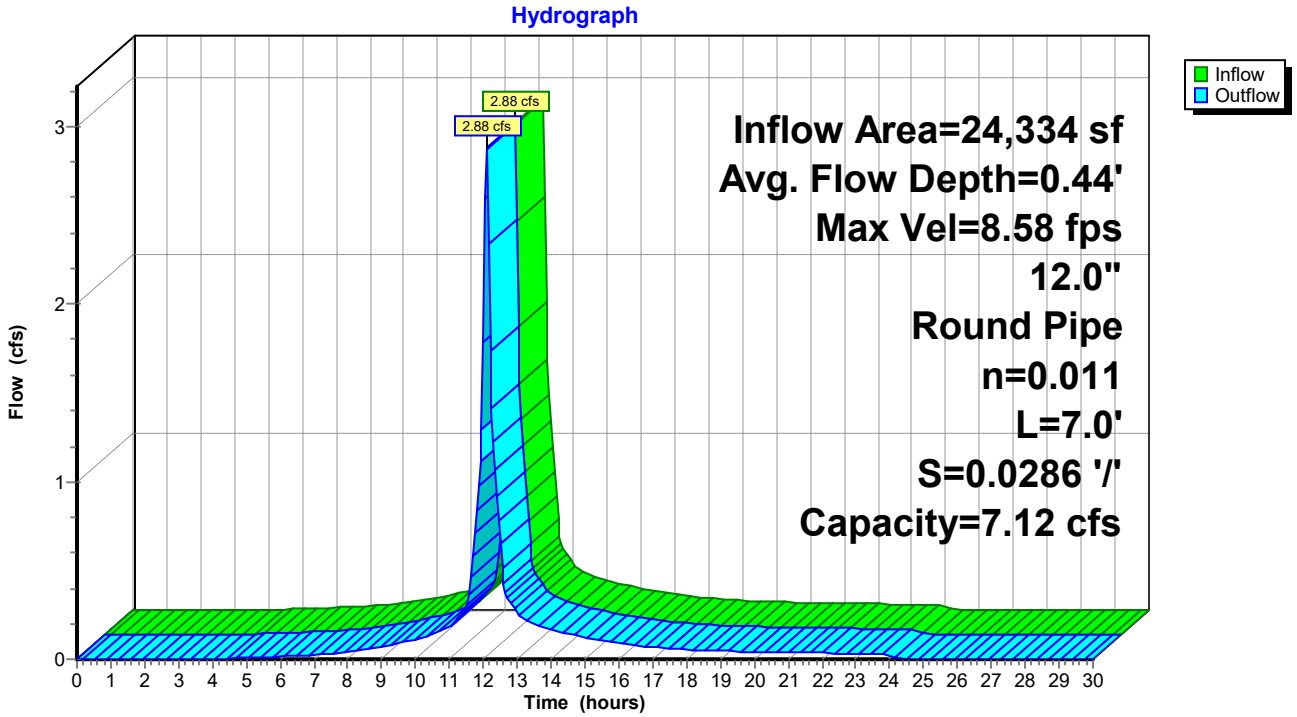
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.58 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.88 fps, Avg. Travel Time= 0.0 min

Peak Storage= 2 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.44'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.12 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 7.0' Slope= 0.0286 '/'
Inlet Invert= 346.90', Outlet Invert= 346.70'



Reach DCB-S4: TO DMH-S1



Stage-Discharge for Reach DCB-S4: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.90	0.00	0.00
346.91	0.81	0.00
346.92	1.28	0.00
346.93	1.67	0.01
346.94	2.01	0.02
346.95	2.33	0.03
346.96	2.62	0.05
346.97	2.89	0.07
346.98	3.15	0.09
346.99	3.40	0.12
347.00	3.64	0.15
347.01	3.86	0.18
347.02	4.08	0.22
347.03	4.29	0.26
347.04	4.49	0.30
347.05	4.68	0.35
347.06	4.87	0.40
347.07	5.06	0.45
347.08	5.23	0.50
347.09	5.41	0.56
347.10	5.57	0.62
347.11	5.74	0.69
347.12	5.90	0.76
347.13	6.05	0.83
347.14	6.20	0.90
347.15	6.35	0.97
347.16	6.49	1.05
347.17	6.63	1.13
347.18	6.77	1.22
347.19	6.90	1.31
347.20	7.03	1.39
347.21	7.16	1.48
347.22	7.28	1.58
347.23	7.41	1.67
347.24	7.52	1.77
347.25	7.64	1.87
347.26	7.75	1.97
347.27	7.86	2.08
347.28	7.97	2.18
347.29	8.07	2.29
347.30	8.18	2.40
347.31	8.27	2.51
347.32	8.37	2.62
347.33	8.47	2.73
347.34	8.56	2.85
347.35	8.65	2.96
347.36	8.74	3.08
347.37	8.82	3.20
347.38	8.90	3.32
347.39	8.98	3.44
347.40	9.06	3.56
347.41	9.14	3.68
347.42	9.21	3.80
347.43	9.28	3.92
347.44	9.35	4.05
347.45	9.42	4.17
347.46	9.48	4.29
347.47	9.54	4.41
347.48	9.60	4.54
347.49	9.66	4.66
347.50	9.72	4.78
347.51	9.77	4.90
347.52	9.82	5.02
347.53	9.87	5.15
347.54	9.92	5.26
347.55	9.96	5.38
347.56	10.00	5.50
347.57	10.04	5.62
347.58	10.08	5.73
347.59	10.11	5.85
347.60	10.15	5.96
347.61	10.18	6.07
347.62	10.20	6.18
347.63	10.23	6.28
347.64	10.25	6.39
347.65	10.27	6.49
347.66	10.29	6.59
347.67	10.30	6.69
347.68	10.31	6.78
347.69	10.32	6.87
347.70	10.33	6.96
347.71	**10.33**	7.04
347.72	10.33	7.12
347.73	10.33	7.20
347.74	10.32	7.27
347.75	10.31	7.33
347.76	10.29	7.40
347.77	10.27	7.45
347.78	10.25	7.50
347.79	10.22	7.55
347.80	10.19	7.59
347.81	10.15	7.62
347.82	10.10	7.64
347.83	10.05	7.65
347.84	9.99	**7.66**
347.85	9.92	7.65
347.86	9.84	7.63
347.87	9.74	7.59
347.88	9.62	7.52
347.89	9.46	7.42
347.90	9.06	7.12

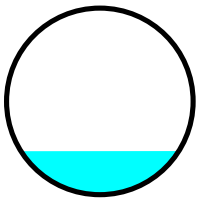
Summary for Reach DCB1: TO DMH#1

Inflow Area = 3,582 sf, 82.83% Impervious, Inflow Depth = 4.53" for 50-Year event
Inflow = 0.42 cfs @ 12.07 hrs, Volume= 1,352 cf
Outflow = 0.42 cfs @ 12.08 hrs, Volume= 1,352 cf, Atten= 2%, Lag= 0.7 min

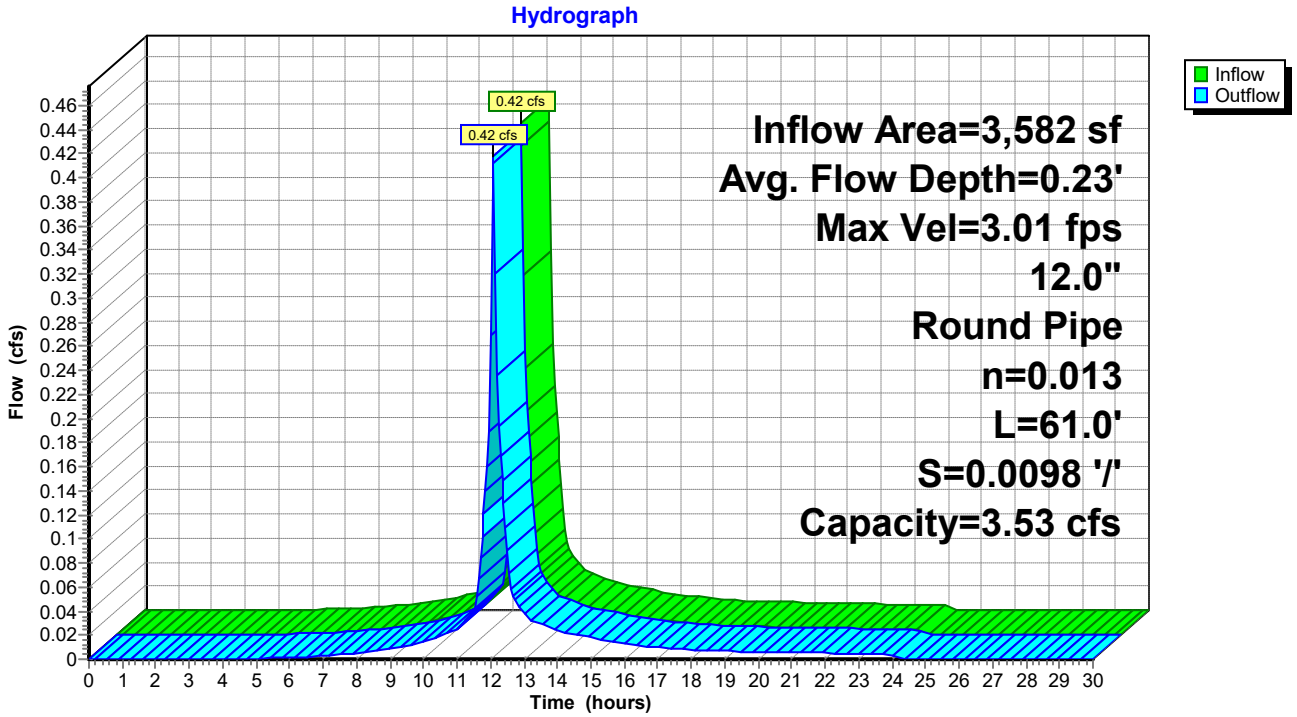
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.01 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.00 fps, Avg. Travel Time= 1.0 min

Peak Storage= 9 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.53 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 61.0' Slope= 0.0098 '/'
Inlet Invert= 355.30', Outlet Invert= 354.70'



Reach DCB1: TO DMH#1



Stage-Discharge for Reach DCB1: TO DMH#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.30	0.00	0.00
355.31	0.40	0.00
355.32	0.63	0.00
355.33	0.83	0.01
355.34	1.00	0.01
355.35	1.16	0.02
355.36	1.30	0.03
355.37	1.44	0.03
355.38	1.57	0.05
355.39	1.69	0.06
355.40	1.80	0.07
355.41	1.92	0.09
355.42	2.02	0.11
355.43	2.13	0.13
355.44	2.23	0.15
355.45	2.33	0.17
355.46	2.42	0.20
355.47	2.51	0.22
355.48	2.60	0.25
355.49	2.68	0.28
355.50	2.77	0.31
355.51	2.85	0.34
355.52	2.93	0.38
355.53	3.00	0.41
355.54	3.08	0.45
355.55	3.15	0.48
355.56	3.22	0.52
355.57	3.29	0.56
355.58	3.36	0.61
355.59	3.43	0.65
355.60	3.49	0.69
355.61	3.55	0.74
355.62	3.62	0.78
355.63	3.68	0.83
355.64	3.74	0.88
355.65	3.79	0.93
355.66	3.85	0.98
355.67	3.90	1.03
355.68	3.96	1.08
355.69	4.01	1.14
355.70	4.06	1.19
355.71	4.11	1.25
355.72	4.16	1.30
355.73	4.20	1.36
355.74	4.25	1.41
355.75	4.29	1.47
355.76	4.34	1.53
355.77	4.38	1.59
355.78	4.42	1.65
355.79	4.46	1.71
355.80	4.50	1.77
355.81	4.54	1.83
355.82	4.57	1.89
355.83	4.61	1.95
355.84	4.64	2.01
355.85	4.68	2.07
355.86	4.71	2.13
355.87	4.74	2.19
355.88	4.77	2.25
355.89	4.80	2.31
355.90	4.82	2.37
355.91	4.85	2.43
355.92	4.88	2.49
355.93	4.90	2.55
355.94	4.92	2.61
355.95	4.95	2.67
355.96	4.97	2.73
355.97	4.99	2.79
355.98	5.00	2.85
355.99	5.02	2.90
356.00	5.04	2.96
356.01	5.05	3.01
356.02	5.07	3.07
356.03	5.08	3.12
356.04	5.09	3.17
356.05	5.10	3.22
356.06	5.11	3.27
356.07	5.11	3.32
356.08	5.12	3.37
356.09	5.12	3.41
356.10	5.13	3.45
356.11	**5.13**	3.50
356.12	5.13	3.53
356.13	5.13	3.57
356.14	5.12	3.61
356.15	5.12	3.64
356.16	5.11	3.67
356.17	5.10	3.70
356.18	5.09	3.72
356.19	5.07	3.75
356.20	5.06	3.77
356.21	5.04	3.78
356.22	5.02	3.79
356.23	4.99	3.80
356.24	4.96	**3.80**
356.25	4.93	3.80
356.26	4.89	3.79
356.27	4.84	3.77
356.28	4.78	3.73
356.29	4.70	3.68
356.30	4.50	3.53

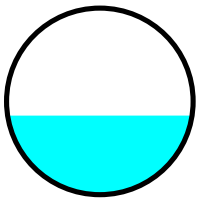
Summary for Reach DCB2: TO DMH#2

Inflow Area = 12,397 sf, 88.23% Impervious, Inflow Depth = 4.86" for 50-Year event
Inflow = 1.54 cfs @ 12.07 hrs, Volume= 5,020 cf
Outflow = 1.53 cfs @ 12.08 hrs, Volume= 5,020 cf, Atten= 1%, Lag= 0.2 min

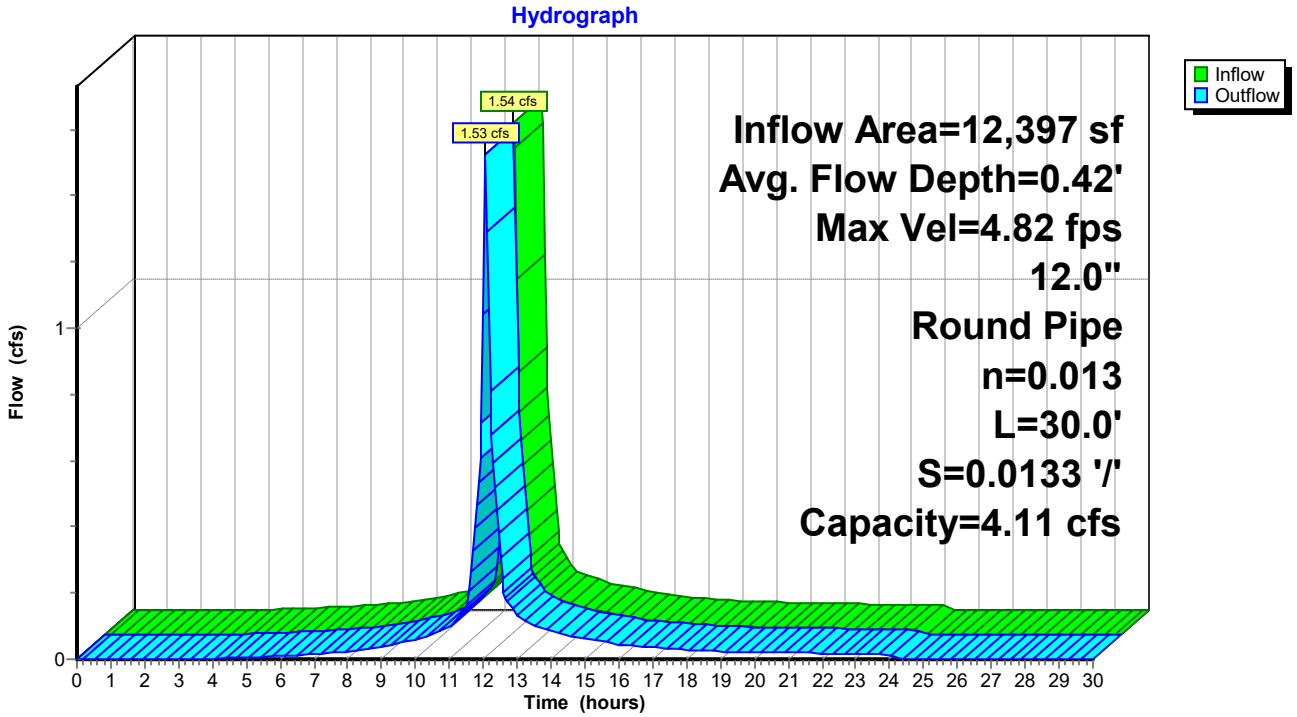
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.82 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.61 fps, Avg. Travel Time= 0.3 min

Peak Storage= 10 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.42'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.11 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 30.0' Slope= 0.0133 '/'
Inlet Invert= 354.40', Outlet Invert= 354.00'



Reach DCB2: TO DMH#2



Stage-Discharge for Reach DCB2: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.40	0.00	0.00
354.41	0.47	0.00
354.42	0.74	0.00
354.43	0.96	0.01
354.44	1.16	0.01
354.45	1.35	0.02
354.46	1.51	0.03
354.47	1.67	0.04
354.48	1.82	0.05
354.49	1.97	0.07
354.50	2.10	0.09
354.51	2.23	0.10
354.52	2.36	0.13
354.53	2.48	0.15
354.54	2.59	0.17
354.55	2.71	0.20
354.56	2.82	0.23
354.57	2.92	0.26
354.58	3.02	0.29
354.59	3.12	0.32
354.60	3.22	0.36
354.61	3.32	0.40
354.62	3.41	0.44
354.63	3.50	0.48
354.64	3.59	0.52
354.65	3.67	0.56
354.66	3.75	0.61
354.67	3.83	0.66
354.68	3.91	0.70
354.69	3.99	0.75
354.70	4.07	0.81
354.71	4.14	0.86
354.72	4.21	0.91
354.73	4.28	0.97
354.74	4.35	1.02
354.75	4.42	1.08
354.76	4.48	1.14
354.77	4.54	1.20
354.78	4.61	1.26
354.79	4.67	1.32
354.80	4.73	1.39
354.81	4.78	1.45
354.82	4.84	1.51
354.83	4.89	1.58
354.84	4.95	1.65
354.85	5.00	1.71
354.86	5.05	1.78
354.87	5.10	1.85
354.88	5.15	1.92
354.89	5.19	1.99
354.90	5.24	2.06
354.91	5.28	2.13
354.92	5.32	2.20
354.93	5.37	2.27
354.94	5.41	2.34
354.95	5.44	2.41
354.96	5.48	2.48
354.97	5.52	2.55
354.98	5.55	2.62
354.99	5.59	2.69
355.00	5.62	2.76
355.01	5.65	2.83
355.02	5.68	2.90
355.03	5.71	2.97
355.04	5.73	3.04
355.05	5.76	3.11
355.06	5.78	3.18
355.07	5.81	3.25
355.08	5.83	3.31
355.09	5.85	3.38
355.10	5.87	3.44
355.11	5.88	3.51
355.12	5.90	3.57
355.13	5.91	3.63
355.14	5.93	3.69
355.15	5.94	3.75
355.16	5.95	3.81
355.17	5.96	3.86
355.18	5.96	3.92
355.19	5.97	3.97
355.20	5.97	4.02
355.21	**5.97**	4.07
355.22	5.97	4.12
355.23	5.97	4.16
355.24	5.96	4.20
355.25	5.96	4.24
355.26	5.95	4.27
355.27	5.94	4.31
355.28	5.92	4.34
355.29	5.91	4.36
355.30	5.89	4.38
355.31	5.87	4.40
355.32	5.84	4.42
355.33	5.81	4.42
355.34	5.78	**4.43**
355.35	5.74	4.42
355.36	5.69	4.41
355.37	5.63	4.38
355.38	5.56	4.35
355.39	5.47	4.29
355.40	5.24	4.11

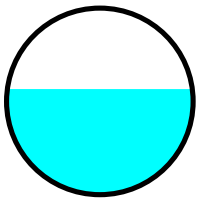
Summary for Reach DCB3: TO DMH#3

Inflow Area = 13,758 sf, 90.05% Impervious, Inflow Depth = 4.97" for 50-Year event
Inflow = 1.74 cfs @ 12.07 hrs, Volume= 5,699 cf
Outflow = 1.71 cfs @ 12.08 hrs, Volume= 5,699 cf, Atten= 2%, Lag= 0.5 min

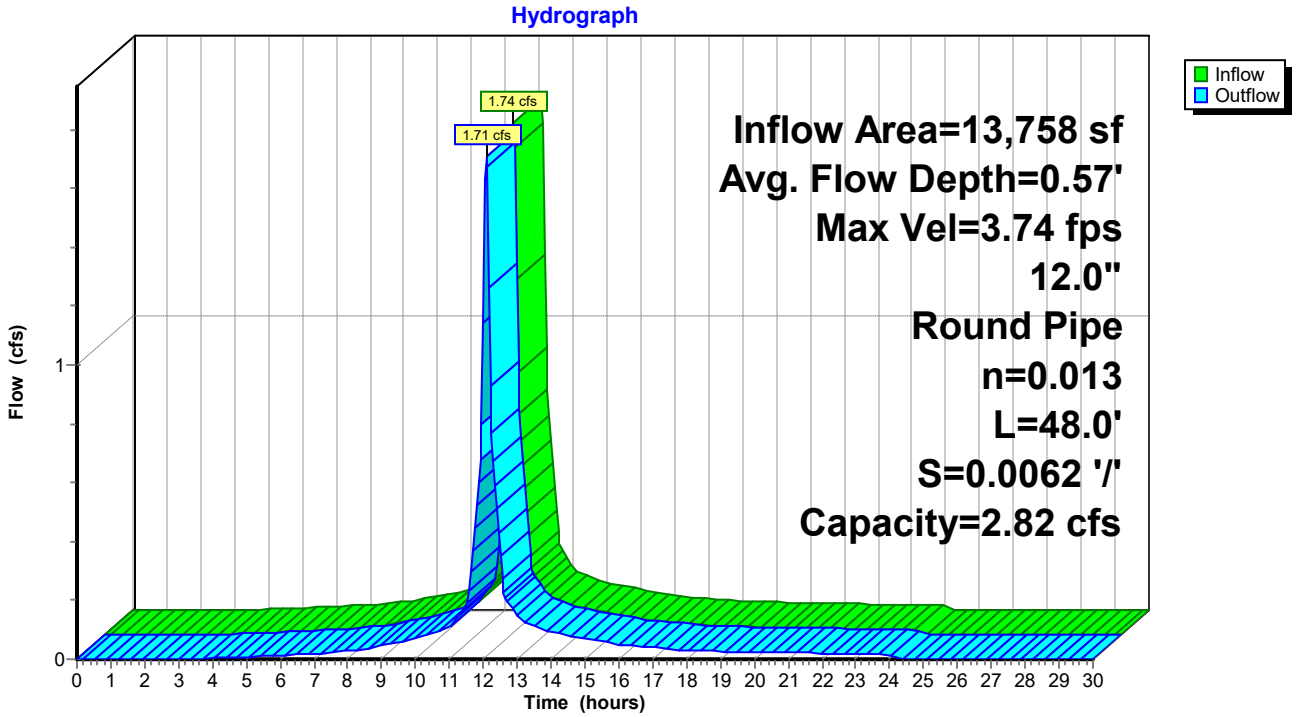
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.74 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.27 fps, Avg. Travel Time= 0.6 min

Peak Storage= 22 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.57'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.82 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 48.0' Slope= 0.0062 '/'
Inlet Invert= 351.90', Outlet Invert= 351.60'



Reach DCB3: TO DMH#3



Stage-Discharge for Reach DCB3: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.90	0.00	0.00
351.91	0.32	0.00
351.92	0.50	0.00
351.93	0.66	0.00
351.94	0.80	0.01
351.95	0.92	0.01
351.96	1.04	0.02
351.97	1.15	0.03
351.98	1.25	0.04
351.99	1.35	0.05
352.00	1.44	0.06
352.01	1.53	0.07
352.02	1.61	0.09
352.03	1.70	0.10
352.04	1.78	0.12
352.05	1.85	0.14
352.06	1.93	0.16
352.07	2.00	0.18
352.08	2.07	0.20
352.09	2.14	0.22
352.10	2.21	0.25
352.11	2.27	0.27
352.12	2.33	0.30
352.13	2.39	0.33
352.14	2.45	0.36
352.15	2.51	0.39
352.16	2.57	0.42
352.17	2.63	0.45
352.18	2.68	0.48
352.19	2.73	0.52
352.20	2.78	0.55
352.21	2.83	0.59
352.22	2.88	0.62
352.23	2.93	0.66
352.24	2.98	0.70
352.25	3.02	0.74
352.26	3.07	0.78
352.27	3.11	0.82
352.28	3.15	0.86
352.29	3.20	0.91
352.30	3.24	0.95
352.31	3.27	0.99
352.32	3.31	1.04
352.33	3.35	1.08
352.34	3.39	1.13
352.35	3.42	1.17
352.36	3.46	1.22
352.37	3.49	1.27
352.38	3.52	1.31
352.39	3.56	1.36
352.40	3.59	1.41
352.41	3.62	1.46
352.42	3.65	1.50
352.43	3.67	1.55
352.44	3.70	1.60
352.45	3.73	1.65
352.46	3.75	1.70
352.47	3.78	1.75
352.48	3.80	1.80
352.49	3.82	1.84
352.50	3.85	1.89
352.51	3.87	1.94
352.52	3.89	1.99
352.53	3.91	2.04
352.54	3.92	2.08
352.55	3.94	2.13
352.56	3.96	2.18
352.57	3.97	2.22
352.58	3.99	2.27
352.59	4.00	2.31
352.60	4.02	2.36
352.61	4.03	2.40
352.62	4.04	2.44
352.63	4.05	2.49
352.64	4.06	2.53
352.65	4.06	2.57
352.66	4.07	2.61
352.67	4.08	2.65
352.68	4.08	2.68
352.69	4.09	2.72
352.70	4.09	2.75
352.71	**4.09**	2.79
352.72	4.09	2.82
352.73	4.09	2.85
352.74	4.08	2.88
352.75	4.08	2.90
352.76	4.07	2.93
352.77	4.07	2.95
352.78	4.06	2.97
352.79	4.05	2.99
352.80	4.03	3.00
352.81	4.02	3.01
352.82	4.00	3.02
352.83	3.98	3.03
352.84	3.95	**3.03**
352.85	3.93	3.03
352.86	3.89	3.02
352.87	3.86	3.00
352.88	3.81	2.98
352.89	3.74	2.93
352.90	3.59	2.82

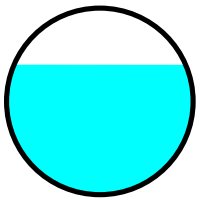
Summary for Reach DCB30: TO BASIN

Inflow Area = 198,125 sf, 23.50% Impervious, Inflow Depth = 1.86" for 50-Year event
Inflow = 6.60 cfs @ 12.26 hrs, Volume= 30,651 cf
Outflow = 6.57 cfs @ 12.27 hrs, Volume= 30,651 cf, Atten= 0%, Lag= 0.6 min

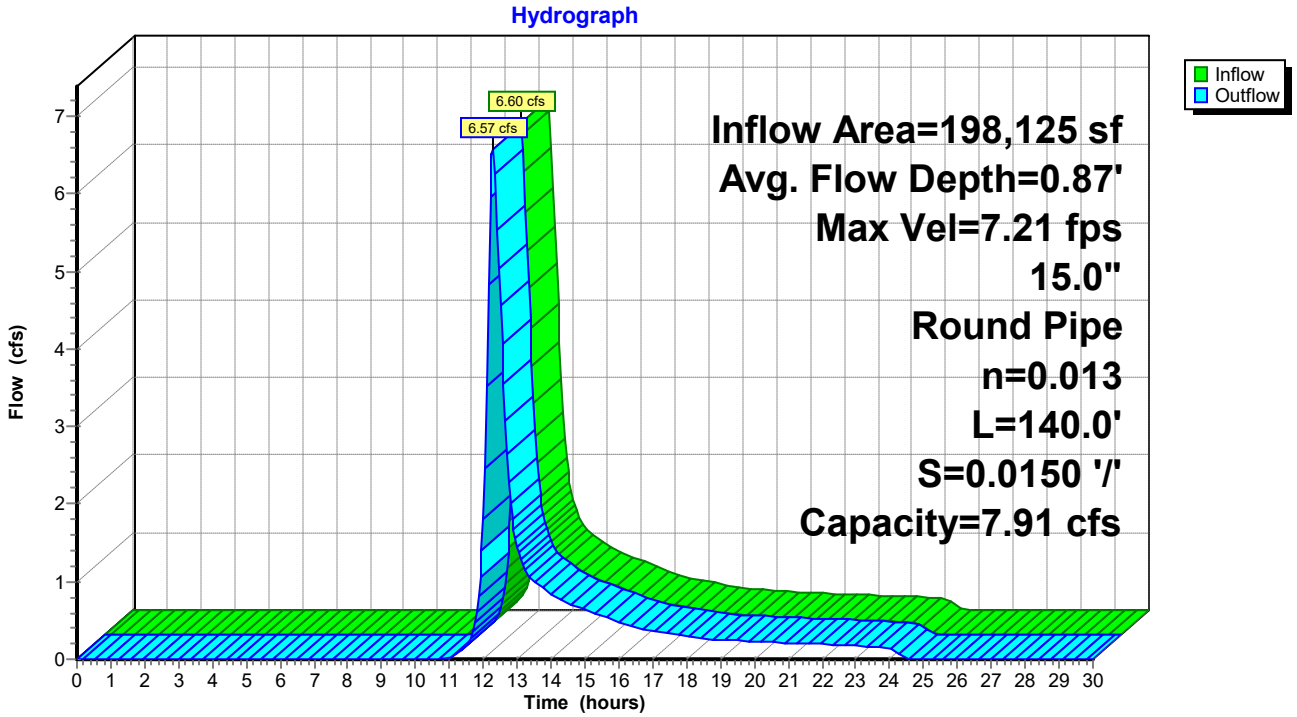
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.21 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.22 fps, Avg. Travel Time= 0.7 min

Peak Storage= 128 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.87'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.91 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 140.0' Slope= 0.0150 '/'
Inlet Invert= 338.00', Outlet Invert= 335.90'



Reach DCB30: TO BASIN



Stage-Discharge for Reach DCB30: TO BASIN

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
338.00	0.00	0.00
338.01	0.46	0.00
338.02	0.77	0.00
338.03	1.02	0.01
338.04	1.23	0.01
338.05	1.43	0.02
338.06	1.61	0.04
338.07	1.78	0.05
338.08	1.94	0.06
338.09	2.10	0.08
338.10	2.24	0.10
338.11	2.38	0.13
338.12	2.52	0.15
338.13	2.65	0.18
338.14	2.78	0.21
338.15	2.90	0.24
338.16	3.02	0.28
338.17	3.14	0.31
338.18	3.25	0.35
338.19	3.36	0.40
338.20	3.47	0.44
338.21	3.57	0.49
338.22	3.67	0.53
338.23	3.77	0.59
338.24	3.87	0.64
338.25	3.97	0.69
338.26	4.06	0.75
338.27	4.15	0.81
338.28	4.24	0.87
338.29	4.33	0.93
338.30	4.41	1.00
338.31	4.50	1.07
338.32	4.58	1.14
338.33	4.66	1.21
338.34	4.74	1.28
338.35	4.82	1.35
338.36	4.89	1.43
338.37	4.97	1.51
338.38	5.04	1.59
338.39	5.11	1.67
338.40	5.18	1.75
338.41	5.25	1.84
338.42	5.32	1.93
338.43	5.39	2.01
338.44	5.45	2.10
338.45	5.51	2.19
338.46	5.58	2.29
338.47	5.64	2.38
338.48	5.70	2.47
338.49	5.76	2.57
338.50	5.82	2.67
338.51	5.87	2.76
338.52	5.93	2.86
338.53	5.98	2.96
338.54	6.04	3.06
338.55	6.09	3.17
338.56	6.14	3.27
338.57	6.19	3.37
338.58	6.24	3.48
338.59	6.29	3.58
338.60	6.33	3.69
338.61	6.38	3.80
338.62	6.42	3.90
338.63	6.47	4.01
338.64	6.51	4.12
338.65	6.55	4.23
338.66	6.59	4.33
338.67	6.63	4.44
338.68	6.67	4.55
338.69	6.71	4.66
338.70	6.75	4.77
338.71	6.78	4.88
338.72	6.82	4.99
338.73	6.85	5.10
338.74	6.88	5.21
338.75	6.91	5.32
338.76	6.94	5.42
338.77	6.97	5.53
338.78	7.00	5.64
338.79	7.03	5.75
338.80	7.06	5.85
338.81	7.08	5.96
338.82	7.10	6.06
338.83	7.13	6.17
338.84	7.15	6.27
338.85	7.17	6.37
338.86	7.19	6.47
338.87	7.21	6.57
338.88	7.23	6.67
338.89	7.24	6.77
338.90	7.26	6.87
338.91	7.27	6.96
338.92	7.29	7.05
338.93	7.30	7.15
338.94	7.31	7.24
338.95	7.32	7.32
338.96	7.33	7.41
338.97	7.33	7.49
338.98	7.34	7.58
338.99	7.34	7.66
339.00	7.35	7.73
339.01	7.35	7.81
339.02	**7.35**	7.88
339.03	7.35	7.95
339.04	7.35	8.01
339.05	7.34	8.08
339.06	7.33	8.14
339.07	7.33	8.19
339.08	7.32	8.25
339.09	7.31	8.30
339.10	7.29	8.34
339.11	7.28	8.38
339.12	7.26	8.42
339.13	7.24	8.45
339.14	7.21	8.47
339.15	7.19	8.49
339.16	7.16	8.50
339.17	7.13	**8.51**
339.18	7.09	8.51
339.19	7.05	8.50
339.20	7.00	8.48
339.21	6.95	8.44
339.22	6.88	8.39
339.23	6.80	8.31
339.24	6.67	8.18
339.25	6.45	7.91

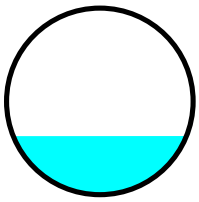
Summary for Reach DCB4: TO DMH#4

Inflow Area = 5,916 sf, 84.47% Impervious, Inflow Depth = 4.64" for 50-Year event
Inflow = 0.71 cfs @ 12.07 hrs, Volume= 2,287 cf
Outflow = 0.71 cfs @ 12.08 hrs, Volume= 2,287 cf, Atten= 1%, Lag= 0.3 min

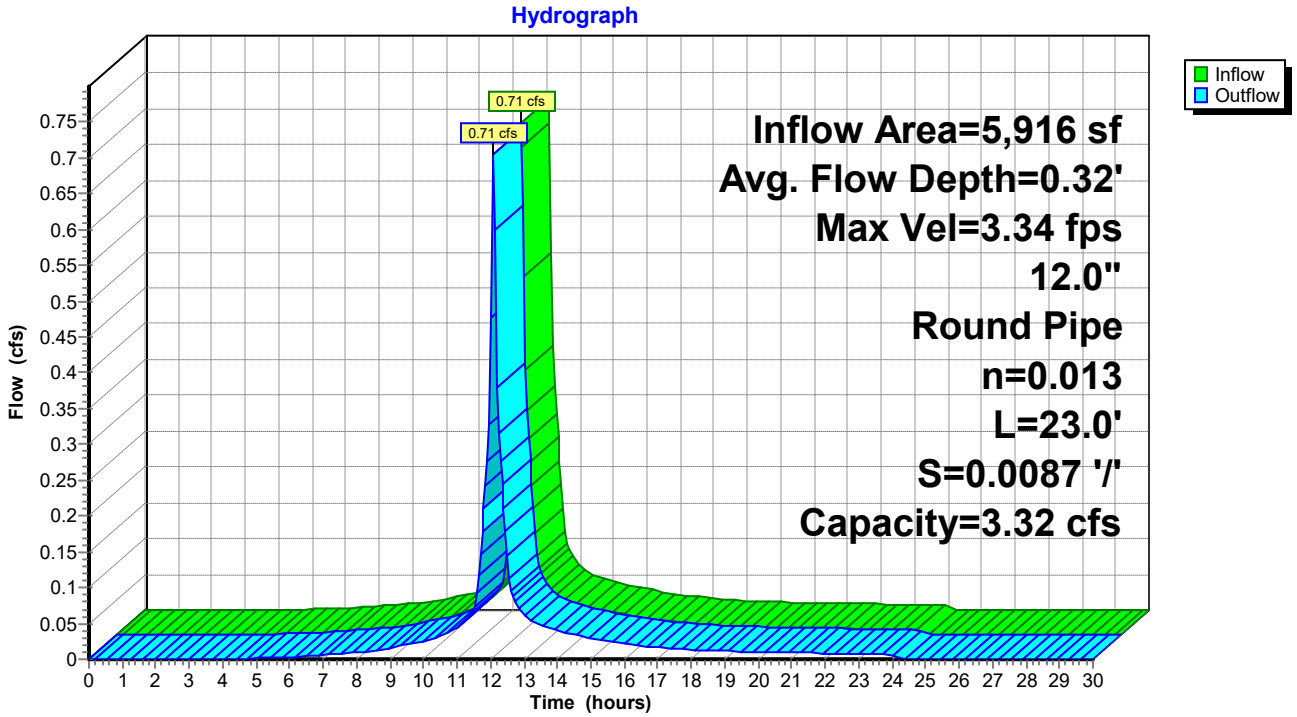
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.34 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.11 fps, Avg. Travel Time= 0.3 min

Peak Storage= 5 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.32 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 23.0' Slope= 0.0087 '/'
Inlet Invert= 355.50', Outlet Invert= 355.30'



Reach DCB4: TO DMH#4



Stage-Discharge for Reach DCB4: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.50	0.00	0.00
355.51	0.38	0.00
355.52	0.60	0.00
355.53	0.78	0.01
355.54	0.94	0.01
355.55	1.09	0.02
355.56	1.22	0.02
355.57	1.35	0.03
355.58	1.47	0.04
355.59	1.59	0.06
355.60	1.70	0.07
355.61	1.80	0.08
355.62	1.90	0.10
355.63	2.00	0.12
355.64	2.10	0.14
355.65	2.19	0.16
355.66	2.27	0.18
355.67	2.36	0.21
355.68	2.44	0.23
355.69	2.52	0.26
355.70	2.60	0.29
355.71	2.68	0.32
355.72	2.75	0.35
355.73	2.82	0.39
355.74	2.90	0.42
355.75	2.96	0.46
355.76	3.03	0.49
355.77	3.10	0.53
355.78	3.16	0.57
355.79	3.22	0.61
355.80	3.28	0.65
355.81	3.34	0.69
355.82	3.40	0.74
355.83	3.46	0.78
355.84	3.51	0.83
355.85	3.57	0.87
355.86	3.62	0.92
355.87	3.67	0.97
355.88	3.72	1.02
355.89	3.77	1.07
355.90	3.82	1.12
355.91	3.86	1.17
355.92	3.91	1.22
355.93	3.95	1.28
355.94	4.00	1.33
355.95	4.04	1.38
355.96	4.08	1.44
355.97	4.12	1.49
355.98	4.16	1.55
355.99	4.19	1.60
356.00	4.23	1.66
356.01	4.27	1.72
356.02	4.30	1.77
356.03	4.33	1.83
356.04	4.37	1.89
356.05	4.40	1.95
356.06	4.43	2.00
356.07	4.46	2.06
356.08	4.48	2.12
356.09	4.51	2.18
356.10	4.54	2.23
356.11	4.56	2.29
356.12	4.59	2.35
356.13	4.61	2.40
356.14	4.63	2.46
356.15	4.65	2.51
356.16	4.67	2.57
356.17	4.69	2.62
356.18	4.71	2.68
356.19	4.72	2.73
356.20	4.74	2.78
356.21	4.75	2.83
356.22	4.76	2.88
356.23	4.78	2.93
356.24	4.79	2.98
356.25	4.79	3.03
356.26	4.80	3.08
356.27	4.81	3.12
356.28	4.81	3.16
356.29	4.82	3.21
356.30	4.82	3.25
356.31	**4.82**	3.29
356.32	4.82	3.32
356.33	4.82	3.36
356.34	4.82	3.39
356.35	4.81	3.42
356.36	4.80	3.45
356.37	4.80	3.48
356.38	4.78	3.50
356.39	4.77	3.52
356.40	4.76	3.54
356.41	4.74	3.56
356.42	4.72	3.57
356.43	4.69	3.57
356.44	4.66	**3.57**
356.45	4.63	3.57
356.46	4.59	3.56
356.47	4.55	3.54
356.48	4.49	3.51
356.49	4.42	3.46
356.50	4.23	3.32

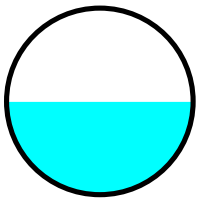
Summary for Reach DCB5: TO DMH#5

Inflow Area = 13,229 sf, 94.75% Impervious, Inflow Depth = 5.31" for 50-Year event
Inflow = 1.73 cfs @ 12.07 hrs, Volume= 5,856 cf
Outflow = 1.72 cfs @ 12.07 hrs, Volume= 5,856 cf, Atten= 1%, Lag= 0.2 min

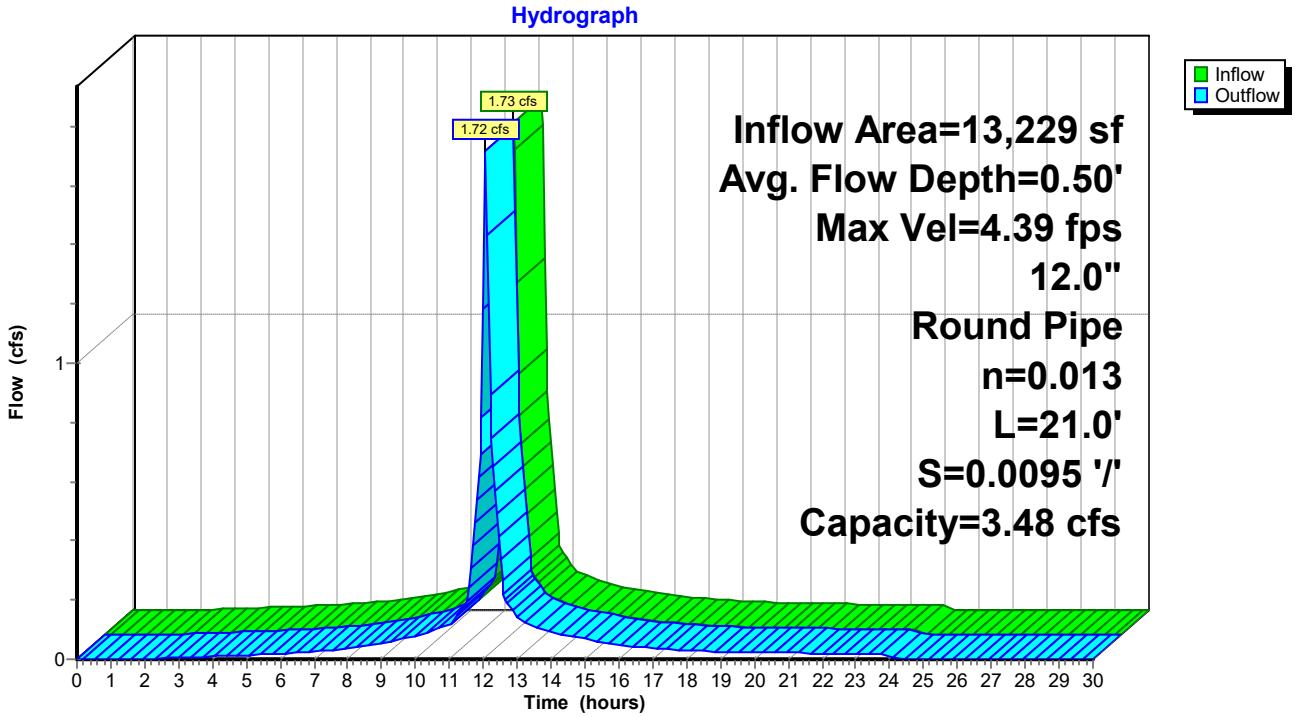
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.39 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.48 fps, Avg. Travel Time= 0.2 min

Peak Storage= 8 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.50'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.48 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 354.80', Outlet Invert= 354.60'



Reach DCB5: TO DMH#5



Stage-Discharge for Reach DCB5: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.80	0.00	0.00
354.81	0.39	0.00
354.82	0.62	0.00
354.83	0.81	0.01
354.84	0.98	0.01
354.85	1.14	0.02
354.86	1.28	0.02
354.87	1.41	0.03
354.88	1.54	0.05
354.89	1.66	0.06
354.90	1.78	0.07
354.91	1.89	0.09
354.92	1.99	0.11
354.93	2.09	0.13
354.94	2.19	0.15
354.95	2.29	0.17
354.96	2.38	0.19
354.97	2.47	0.22
354.98	2.56	0.25
354.99	2.64	0.27
355.00	2.72	0.30
355.01	2.80	0.34
355.02	2.88	0.37
355.03	2.96	0.40
355.04	3.03	0.44
355.05	3.10	0.48
355.06	3.17	0.51
355.07	3.24	0.55
355.08	3.31	0.60
355.09	3.37	0.64
355.10	3.44	0.68
355.11	3.50	0.73
355.12	3.56	0.77
355.13	3.62	0.82
355.14	3.68	0.87
355.15	3.73	0.91
355.16	3.79	0.96
355.17	3.84	1.01
355.18	3.89	1.07
355.19	3.94	1.12
355.20	3.99	1.17
355.21	4.04	1.23
355.22	4.09	1.28
355.23	4.14	1.34
355.24	4.18	1.39
355.25	4.22	1.45
355.26	4.27	1.51
355.27	4.31	1.56
355.28	4.35	1.62
355.29	4.39	1.68
355.30	4.43	1.74
355.31	4.46	1.80
355.32	4.50	1.86
355.33	4.53	1.92
355.34	4.57	1.98
355.35	4.60	2.04
355.36	4.63	2.10
355.37	4.66	2.16
355.38	4.69	2.22
355.39	4.72	2.28
355.40	4.75	2.34
355.41	4.77	2.40
355.42	4.80	2.45
355.43	4.82	2.51
355.44	4.85	2.57
355.45	4.87	2.63
355.46	4.89	2.69
355.47	4.91	2.74
355.48	4.92	2.80
355.49	4.94	2.86
355.50	4.96	2.91
355.51	4.97	2.96
355.52	4.99	3.02
355.53	5.00	3.07
355.54	5.01	3.12
355.55	5.02	3.17
355.56	5.03	3.22
355.57	5.03	3.27
355.58	5.04	3.31
355.59	5.04	3.36
355.60	5.05	3.40
355.61	**5.05**	3.44
355.62	5.05	3.48
355.63	5.04	3.52
355.64	5.04	3.55
355.65	5.04	3.58
355.66	5.03	3.61
355.67	5.02	3.64
355.68	5.01	3.67
355.69	4.99	3.69
355.70	4.98	3.71
355.71	4.96	3.72
355.72	4.94	3.73
355.73	4.91	3.74
355.74	4.88	**3.74**
355.75	4.85	3.74
355.76	4.81	3.73
355.77	4.76	3.71
355.78	4.70	3.67
355.79	4.62	3.62
355.80	4.43	3.48

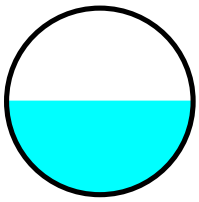
Summary for Reach DCB6: TO DMH#6

Inflow Area = 18,802 sf, 87.54% Impervious, Inflow Depth = 4.86" for 50-Year event
Inflow = 2.34 cfs @ 12.07 hrs, Volume= 7,614 cf
Outflow = 2.34 cfs @ 12.07 hrs, Volume= 7,614 cf, Atten= 0%, Lag= 0.0 min

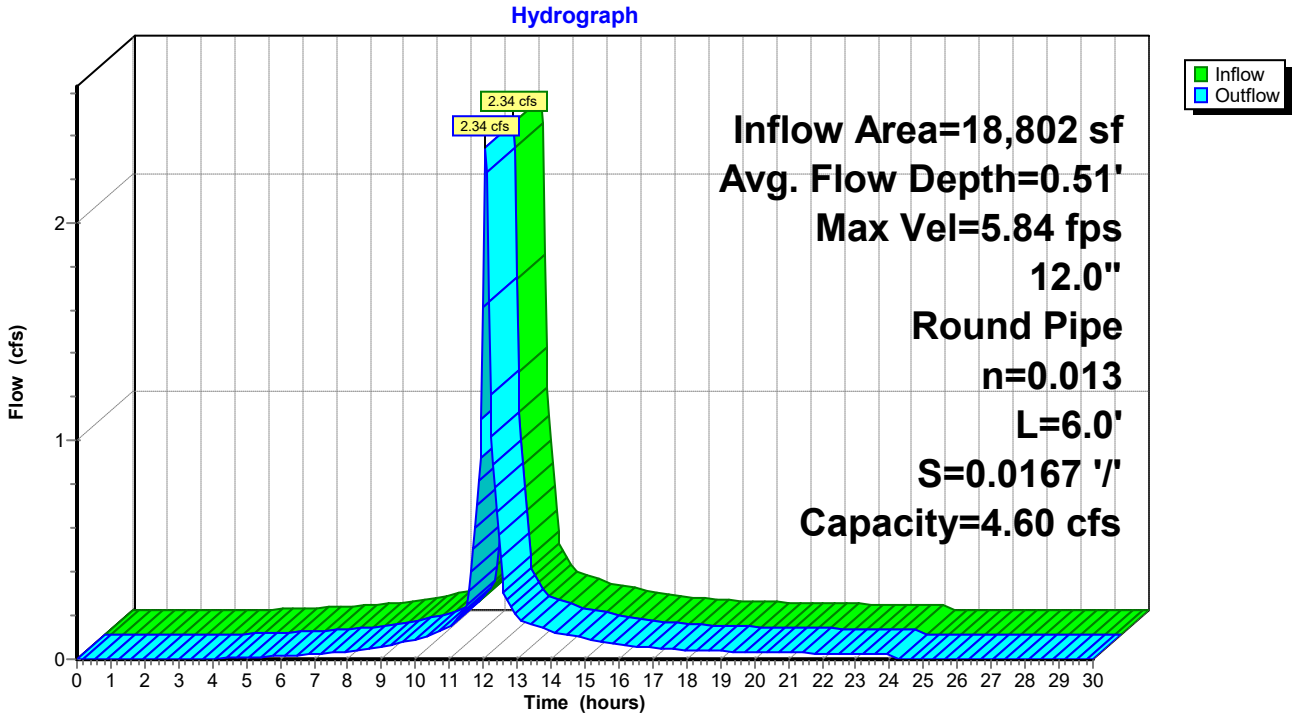
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.84 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.97 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.51'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.60 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 6.0' Slope= 0.0167 '/'
Inlet Invert= 353.40', Outlet Invert= 353.30'



Reach DCB6: TO DMH#6



Stage-Discharge for Reach DCB6: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.40	0.00	0.00
353.41	0.52	0.00
353.42	0.82	0.00
353.43	1.08	0.01
353.44	1.30	0.01
353.45	1.50	0.02
353.46	1.69	0.03
353.47	1.87	0.05
353.48	2.04	0.06
353.49	2.20	0.08
353.50	2.35	0.10
353.51	2.50	0.12
353.52	2.64	0.14
353.53	2.77	0.17
353.54	2.90	0.19
353.55	3.03	0.22
353.56	3.15	0.26
353.57	3.27	0.29
353.58	3.38	0.33
353.59	3.49	0.36
353.60	3.60	0.40
353.61	3.71	0.44
353.62	3.81	0.49
353.63	3.91	0.53
353.64	4.01	0.58
353.65	4.10	0.63
353.66	4.20	0.68
353.67	4.29	0.73
353.68	4.38	0.79
353.69	4.46	0.84
353.70	4.55	0.90
353.71	4.63	0.96
353.72	4.71	1.02
353.73	4.79	1.08
353.74	4.86	1.14
353.75	4.94	1.21
353.76	5.01	1.28
353.77	5.08	1.34
353.78	5.15	1.41
353.79	5.22	1.48
353.80	5.28	1.55
353.81	5.35	1.62
353.82	5.41	1.69
353.83	5.47	1.77
353.84	5.53	1.84
353.85	5.59	1.92
353.86	5.65	1.99
353.87	5.70	2.07
353.88	5.75	2.14
353.89	5.81	2.22
353.90	5.86	2.30
353.91	5.91	2.38
353.92	5.95	2.46
353.93	6.00	2.54
353.94	6.04	2.61
353.95	6.09	2.69
353.96	6.13	2.77
353.97	6.17	2.85
353.98	6.21	2.93
353.99	6.24	3.01
354.00	6.28	3.09
354.01	6.31	3.17
354.02	6.35	3.25
354.03	6.38	3.33
354.04	6.41	3.40
354.05	6.44	3.48
354.06	6.46	3.56
354.07	6.49	3.63
354.08	6.51	3.70
354.09	6.54	3.78
354.10	6.56	3.85
354.11	6.58	3.92
354.12	6.59	3.99
354.13	6.61	4.06
354.14	6.63	4.13
354.15	6.64	4.19
354.16	6.65	4.26
354.17	6.66	4.32
354.18	6.67	4.38
354.19	6.67	4.44
354.20	6.67	4.50
354.21	**6.68**	4.55
354.22	6.68	4.60
354.23	6.67	4.65
354.24	6.67	4.70
354.25	6.66	4.74
354.26	6.65	4.78
354.27	6.64	4.82
354.28	6.62	4.85
354.29	6.61	4.88
354.30	6.58	4.90
354.31	6.56	4.92
354.32	6.53	4.94
354.33	6.50	4.95
354.34	6.46	**4.95**
354.35	6.41	4.94
354.36	6.36	4.93
354.37	6.30	4.90
354.38	6.22	4.86
354.39	6.11	4.79
354.40	5.86	4.60

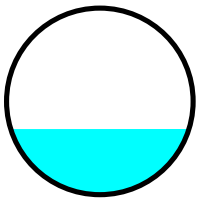
Summary for Reach DCBR100: TO DMH R100

Inflow Area = 8,304 sf, 89.80% Impervious, Inflow Depth = 4.97" for 50-Year event
Inflow = 1.05 cfs @ 12.07 hrs, Volume= 3,440 cf
Outflow = 1.02 cfs @ 12.09 hrs, Volume= 3,440 cf, Atten= 3%, Lag= 1.3 min

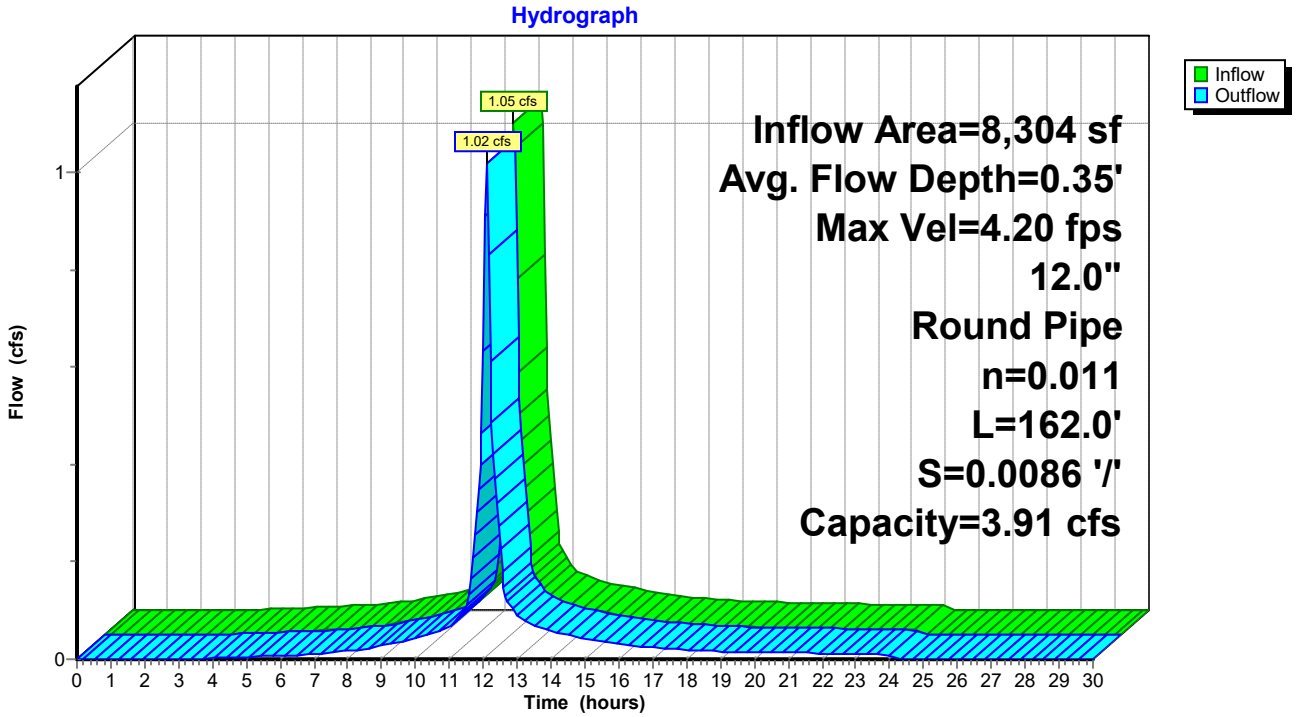
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.20 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.37 fps, Avg. Travel Time= 2.0 min

Peak Storage= 40 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.35'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.91 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 162.0' Slope= 0.0086 '/'
Inlet Invert= 354.50', Outlet Invert= 353.10'



Reach DCBR100: TO DMH R100



Stage-Discharge for Reach DCBR100: TO DMH R100

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.50	0.00	0.00
354.51	0.44	0.00
354.52	0.70	0.00
354.53	0.92	0.01
354.54	1.11	0.01
354.55	1.28	0.02
354.56	1.44	0.03
354.57	1.59	0.04
354.58	1.73	0.05
354.59	1.87	0.07
354.60	2.00	0.08
354.61	2.12	0.10
354.62	2.24	0.12
354.63	2.36	0.14
354.64	2.47	0.16
354.65	2.58	0.19
354.66	2.68	0.22
354.67	2.78	0.25
354.68	2.88	0.28
354.69	2.97	0.31
354.70	3.07	0.34
354.71	3.16	0.38
354.72	3.24	0.42
354.73	3.33	0.45
354.74	3.41	0.49
354.75	3.49	0.54
354.76	3.57	0.58
354.77	3.65	0.62
354.78	3.72	0.67
354.79	3.80	0.72
354.80	3.87	0.77
354.81	3.94	0.82
354.82	4.01	0.87
354.83	4.07	0.92
354.84	4.14	0.97
354.85	4.20	1.03
354.86	4.26	1.09
354.87	4.32	1.14
354.88	4.38	1.20
354.89	4.44	1.26
354.90	4.50	1.32
354.91	4.55	1.38
354.92	4.60	1.44
354.93	4.66	1.50
354.94	4.71	1.57
354.95	4.76	1.63
354.96	4.80	1.69
354.97	4.85	1.76
354.98	4.90	1.83
354.99	4.94	1.89
355.00	4.98	1.96
355.01	5.03	2.02
355.02	5.07	2.09
355.03	5.11	2.16
355.04	5.14	2.23
355.05	5.18	2.29
355.06	5.22	2.36
355.07	5.25	2.43
355.08	5.28	2.50
355.09	5.31	2.56
355.10	5.34	2.63
355.11	5.37	2.70
355.12	5.40	2.76
355.13	5.43	2.83
355.14	5.45	2.90
355.15	5.48	2.96
355.16	5.50	3.03
355.17	5.52	3.09
355.18	5.54	3.15
355.19	5.56	3.22
355.20	5.58	3.28
355.21	5.60	3.34
355.22	5.61	3.40
355.23	5.63	3.46
355.24	5.64	3.51
355.25	5.65	3.57
355.26	5.66	3.62
355.27	5.67	3.68
355.28	5.67	3.73
355.29	5.68	3.78
355.30	5.68	3.83
355.31	**5.68**	3.87
355.32	5.68	3.92
355.33	5.68	3.96
355.34	5.67	4.00
355.35	5.67	4.03
355.36	5.66	4.07
355.37	5.65	4.10
355.38	5.64	4.13
355.39	5.62	4.15
355.40	5.60	4.17
355.41	5.58	4.19
355.42	5.56	4.20
355.43	5.53	4.21
355.44	5.50	**4.21**
355.45	5.46	4.21
355.46	5.41	4.19
355.47	5.36	4.17
355.48	5.29	4.14
355.49	5.20	4.08
355.50	4.98	3.91

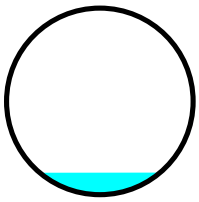
Summary for Reach DCBS10: TO DMH-S4

Inflow Area = 2,269 sf, 91.63% Impervious, Inflow Depth = 5.31" for 50-Year event
Inflow = 0.30 cfs @ 12.07 hrs, Volume= 1,004 cf
Outflow = 0.30 cfs @ 12.07 hrs, Volume= 1,004 cf, Atten= 0%, Lag= 0.0 min

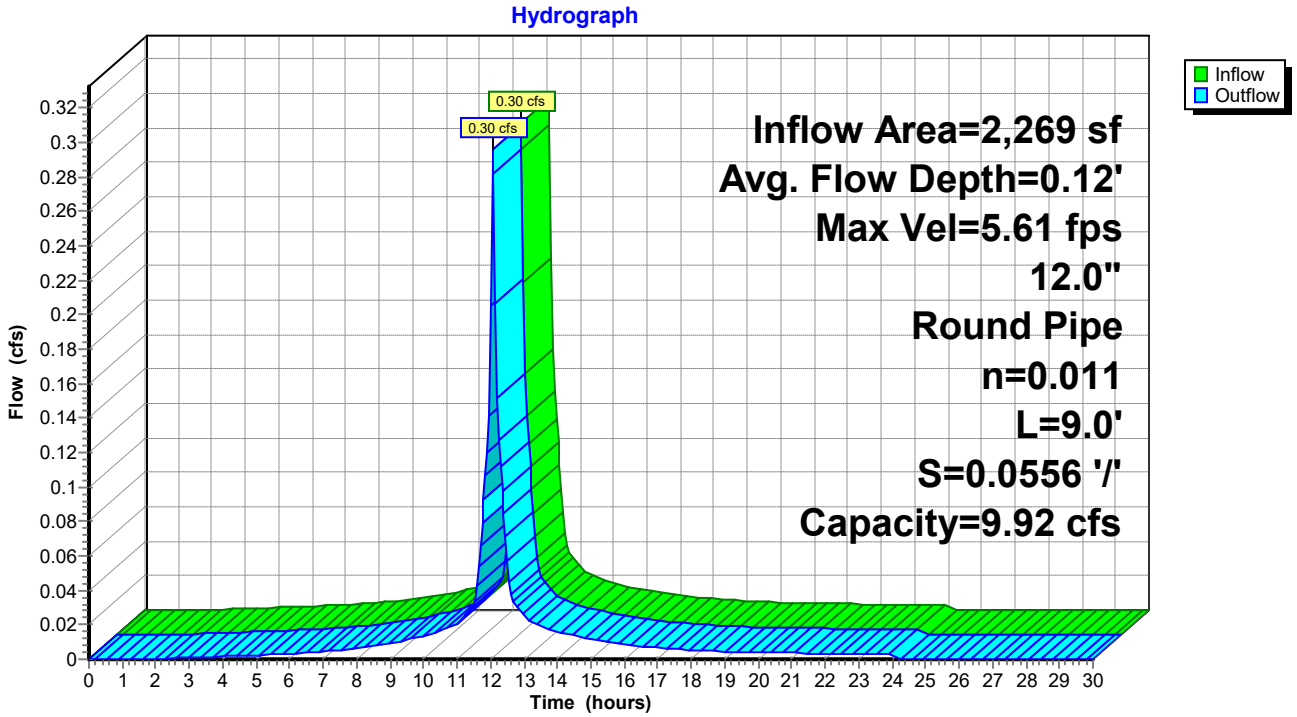
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.61 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.87 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.92 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 9.0' Slope= 0.0556 '/'
Inlet Invert= 356.50', Outlet Invert= 356.00'



Reach DCBS10: TO DMH-S4



Stage-Discharge for Reach DCBS10: TO DMH-S4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
356.50	0.00	0.00
356.51	1.12	0.00
356.52	1.78	0.01
356.53	2.32	0.02
356.54	2.81	0.03
356.55	3.25	0.05
356.56	3.65	0.07
356.57	4.04	0.10
356.58	4.40	0.13
356.59	4.74	0.17
356.60	5.07	0.21
356.61	5.38	0.25
356.62	5.69	0.30
356.63	5.98	0.36
356.64	6.26	0.42
356.65	6.53	0.48
356.66	6.79	0.55
356.67	7.05	0.62
356.68	7.30	0.70
356.69	7.54	0.78
356.70	7.77	0.87
356.71	8.00	0.96
356.72	8.22	1.05
356.73	8.44	1.15
356.74	8.65	1.25
356.75	8.85	1.36
356.76	9.05	1.47
356.77	9.25	1.58
356.78	9.44	1.70
356.79	9.63	1.82
356.80	9.81	1.94
356.81	9.98	2.07
356.82	10.16	2.20
356.83	10.33	2.33
356.84	10.49	2.47
356.85	10.65	2.61
356.86	10.81	2.75
356.87	10.96	2.90
356.88	11.11	3.04
356.89	11.26	3.19
356.90	11.40	3.34
356.91	11.54	3.50
356.92	11.67	3.65
356.93	11.81	3.81
356.94	11.93	3.97
356.95	12.06	4.13
356.96	12.18	4.30
356.97	12.30	4.46
356.98	12.42	4.63
356.99	12.53	4.79
357.00	12.64	4.96
357.01	12.74	5.13
357.02	12.84	5.30
357.03	12.94	5.47
357.04	13.04	5.64
357.05	13.13	5.81
357.06	13.22	5.98
357.07	13.31	6.16
357.08	13.39	6.33
357.09	13.47	6.50
357.10	13.55	6.67
357.11	13.63	6.84
357.12	13.70	7.01
357.13	13.76	7.17
357.14	13.83	7.34
357.15	13.89	7.51
357.16	13.95	7.67
357.17	14.00	7.83
357.18	14.06	7.99
357.19	14.10	8.15
357.20	14.15	8.31
357.21	14.19	8.46
357.22	14.23	8.61
357.23	14.26	8.76
357.24	14.30	8.91
357.25	14.32	9.05
357.26	14.35	9.19
357.27	14.37	9.32
357.28	14.38	9.45
357.29	14.39	9.58
357.30	14.40	9.70
357.31	**14.41**	9.82
357.32	14.40	9.93
357.33	14.40	10.03
357.34	14.39	10.13
357.35	14.37	10.23
357.36	14.35	10.31
357.37	14.33	10.39
357.38	14.29	10.46
357.39	14.25	10.52
357.40	14.21	10.58
357.41	14.15	10.62
357.42	14.09	10.65
357.43	14.02	10.67
357.44	13.93	**10.68**
357.45	13.84	10.66
357.46	13.72	10.63
357.47	13.59	10.58
357.48	13.42	10.49
357.49	13.19	10.34
357.50	12.64	9.92

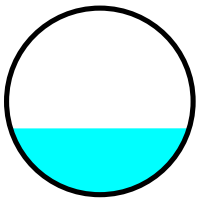
Summary for Reach DCBS5: TO DMH-S8

Inflow Area = 13,730 sf, 73.11% Impervious, Inflow Depth = 4.75" for 50-Year event
Inflow = 1.68 cfs @ 12.07 hrs, Volume= 5,433 cf
Outflow = 1.68 cfs @ 12.07 hrs, Volume= 5,433 cf, Atten= 0%, Lag= 0.1 min

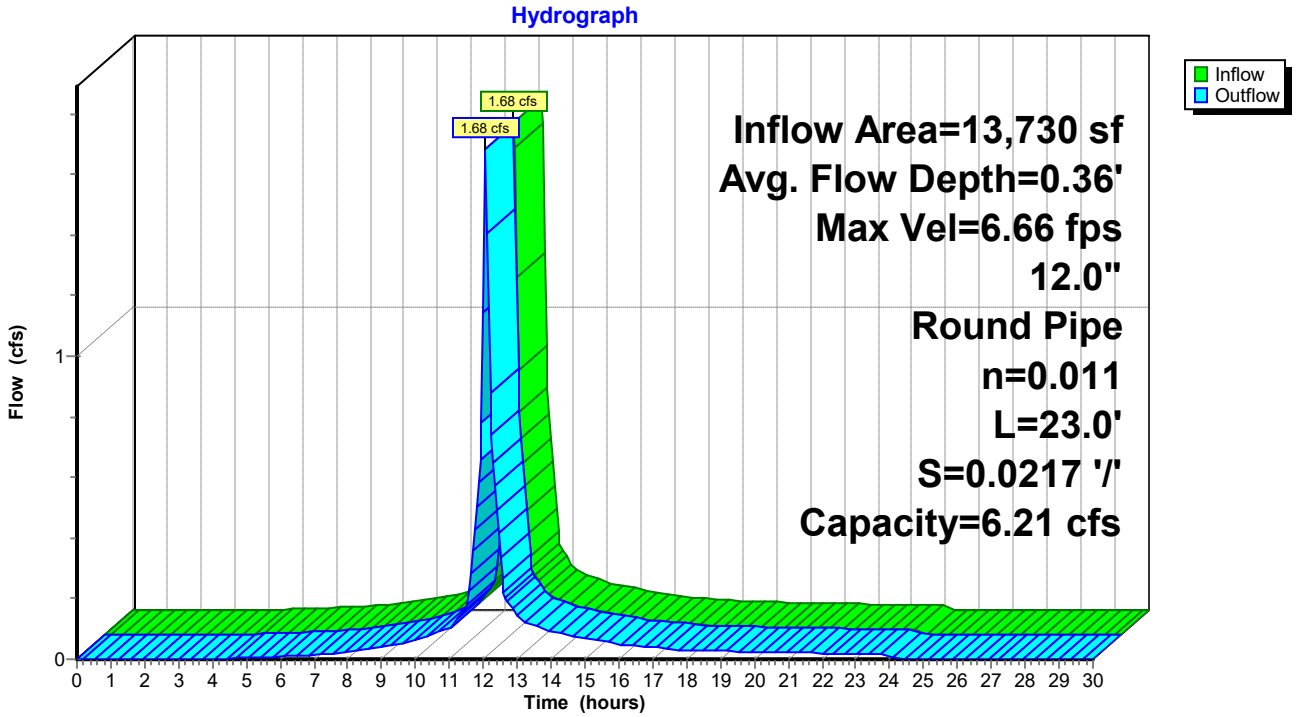
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.66 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.21 fps, Avg. Travel Time= 0.2 min

Peak Storage= 6 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.36'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.21 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 23.0' Slope= 0.0217 '/'
Inlet Invert= 347.00', Outlet Invert= 346.50'



Reach DCBS5: TO DMH-S8



Stage-Discharge for Reach DCBS5: TO DMH-S8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.00	0.00	0.00
347.01	0.70	0.00
347.02	1.11	0.00
347.03	1.45	0.01
347.04	1.76	0.02
347.05	2.03	0.03
347.06	2.29	0.04
347.07	2.52	0.06
347.08	2.75	0.08
347.09	2.97	0.10
347.10	3.17	0.13
347.11	3.37	0.16
347.12	3.56	0.19
347.13	3.74	0.22
347.14	3.91	0.26
347.15	4.08	0.30
347.16	4.25	0.34
347.17	4.41	0.39
347.18	4.56	0.44
347.19	4.72	0.49
347.20	4.86	0.54
347.21	5.00	0.60
347.22	5.14	0.66
347.23	5.28	0.72
347.24	5.41	0.78
347.25	5.54	0.85
347.26	5.66	0.92
347.27	5.79	0.99
347.28	5.91	1.06
347.29	6.02	1.14
347.30	6.13	1.22
347.31	6.25	1.30
347.32	6.35	1.38
347.33	6.46	1.46
347.34	6.56	1.55
347.35	6.66	1.63
347.36	6.76	1.72
347.37	6.86	1.81
347.38	6.95	1.90
347.39	7.04	2.00
347.40	7.13	2.09
347.41	7.22	2.19
347.42	7.30	2.29
347.43	7.39	2.38
347.44	7.47	2.48
347.45	7.54	2.59
347.46	7.62	2.69
347.47	7.69	2.79
347.48	7.77	2.89
347.49	7.84	3.00
347.50	7.90	3.10
347.51	7.97	3.21
347.52	8.03	3.32
347.53	8.10	3.42
347.54	8.16	3.53
347.55	8.22	3.64
347.56	8.27	3.74
347.57	8.33	3.85
347.58	8.38	3.96
347.59	8.43	4.06
347.60	8.48	4.17
347.61	8.52	4.28
347.62	8.57	4.38
347.63	8.61	4.49
347.64	8.65	4.59
347.65	8.69	4.70
347.66	8.73	4.80
347.67	8.76	4.90
347.68	8.79	5.00
347.69	8.82	5.10
347.70	8.85	5.20
347.71	8.88	5.29
347.72	8.90	5.39
347.73	8.92	5.48
347.74	8.94	5.57
347.75	8.96	5.66
347.76	8.97	5.75
347.77	8.99	5.83
347.78	9.00	5.91
347.79	9.00	5.99
347.80	9.01	6.07
347.81	**9.01**	6.14
347.82	9.01	6.21
347.83	9.01	6.28
347.84	9.00	6.34
347.85	8.99	6.40
347.86	8.98	6.45
347.87	8.96	6.50
347.88	8.94	6.54
347.89	8.92	6.58
347.90	8.89	6.62
347.91	8.85	6.64
347.92	8.81	6.66
347.93	8.77	6.67
347.94	8.72	**6.68**
347.95	8.66	6.67
347.96	8.58	6.65
347.97	8.50	6.62
347.98	8.39	6.56
347.99	8.25	6.47
348.00	7.90	6.21

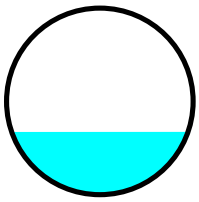
Summary for Reach DCBS6: TO DMH-S8

Inflow Area = 14,048 sf, 86.89% Impervious, Inflow Depth = 5.20" for 50-Year event
Inflow = 1.82 cfs @ 12.07 hrs, Volume= 6,085 cf
Outflow = 1.81 cfs @ 12.07 hrs, Volume= 6,085 cf, Atten= 0%, Lag= 0.1 min

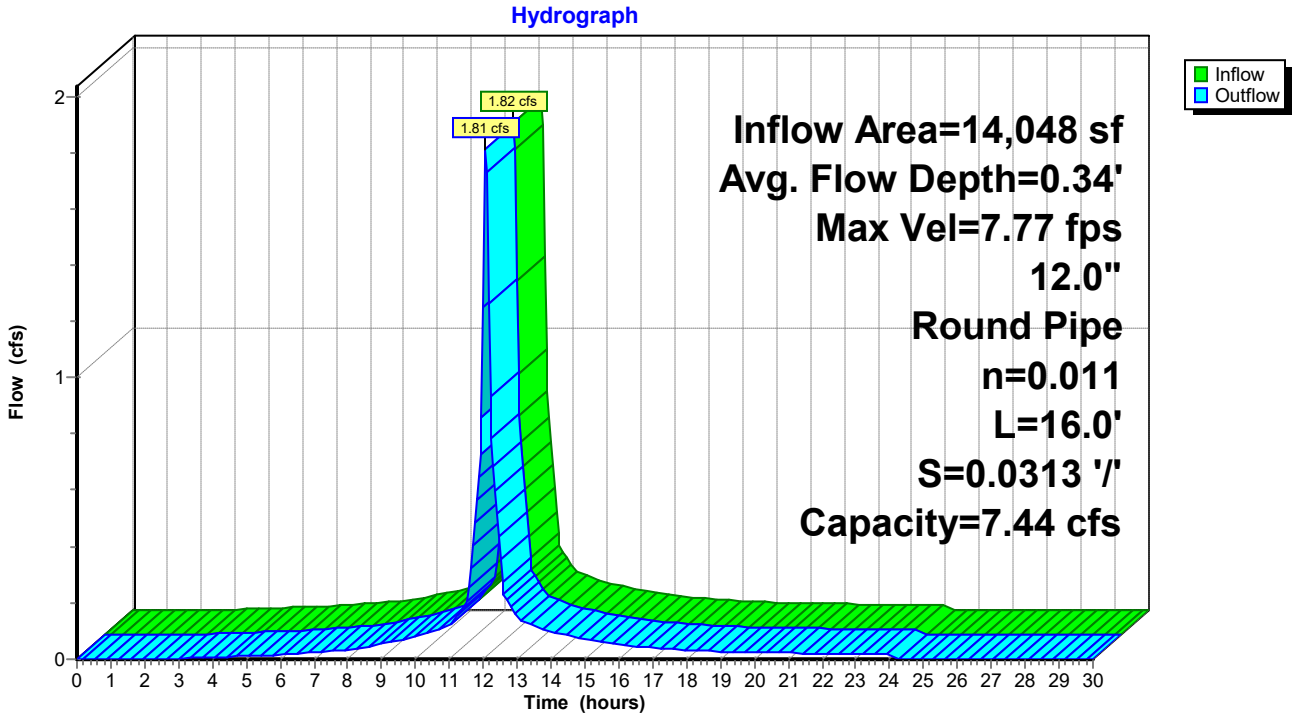
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.77 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.56 fps, Avg. Travel Time= 0.1 min

Peak Storage= 4 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.44 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 16.0' Slope= 0.0313 '/'
Inlet Invert= 347.00', Outlet Invert= 346.50'



Reach DCBS6: TO DMH-S8



Stage-Discharge for Reach DCBS6: TO DMH-S8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.00	0.00	0.00
347.01	0.84	0.00
347.02	1.33	0.01
347.03	1.74	0.01
347.04	2.10	0.02
347.05	2.43	0.04
347.06	2.74	0.05
347.07	3.03	0.07
347.08	3.30	0.10
347.09	3.56	0.12
347.10	3.80	0.16
347.11	4.04	0.19
347.12	4.26	0.23
347.13	4.48	0.27
347.14	4.69	0.31
347.15	4.90	0.36
347.16	5.10	0.41
347.17	5.29	0.47
347.18	5.47	0.53
347.19	5.65	0.59
347.20	5.83	0.65
347.21	6.00	0.72
347.22	6.17	0.79
347.23	6.33	0.86
347.24	6.49	0.94
347.25	6.64	1.02
347.26	6.79	1.10
347.27	6.94	1.19
347.28	7.08	1.27
347.29	7.22	1.36
347.30	7.36	1.46
347.31	7.49	1.55
347.32	7.62	1.65
347.33	7.74	1.75
347.34	7.87	1.85
347.35	7.99	1.96
347.36	8.11	2.06
347.37	8.22	2.17
347.38	8.33	2.28
347.39	8.44	2.39
347.40	8.55	2.51
347.41	8.65	2.62
347.42	8.76	2.74
347.43	8.85	2.86
347.44	8.95	2.98
347.45	9.04	3.10
347.46	9.14	3.22
347.47	9.22	3.35
347.48	9.31	3.47
347.49	9.40	3.60
347.50	9.48	3.72
347.51	9.56	3.85
347.52	9.63	3.98
347.53	9.71	4.10
347.54	9.78	4.23
347.55	9.85	4.36
347.56	9.92	4.49
347.57	9.98	4.62
347.58	10.05	4.74
347.59	10.11	4.87
347.60	10.16	5.00
347.61	10.22	5.13
347.62	10.27	5.25
347.63	10.32	5.38
347.64	10.37	5.51
347.65	10.42	5.63
347.66	10.46	5.75
347.67	10.50	5.88
347.68	10.54	6.00
347.69	10.58	6.11
347.70	10.61	6.23
347.71	10.64	6.35
347.72	10.67	6.46
347.73	10.70	6.57
347.74	10.72	6.68
347.75	10.74	6.79
347.76	10.76	6.89
347.77	10.77	6.99
347.78	10.79	7.09
347.79	10.80	7.18
347.80	10.80	7.28
347.81	**10.80**	7.36
347.82	10.80	7.45
347.83	10.80	7.53
347.84	10.79	7.60
347.85	10.78	7.67
347.86	10.76	7.73
347.87	10.74	7.79
347.88	10.72	7.85
347.89	10.69	7.89
347.90	10.66	7.93
347.91	10.61	7.97
347.92	10.57	7.99
347.93	10.51	8.00
347.94	10.45	**8.01**
347.95	10.38	8.00
347.96	10.29	7.97
347.97	10.19	7.93
347.98	10.06	7.87
347.99	9.89	7.76
348.00	9.48	7.44

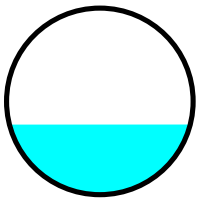
Summary for Reach DCBS7: TO DMH-S6

Inflow Area = 14,635 sf, 28.88% Impervious, Inflow Depth = 4.75" for 50-Year event
Inflow = 1.55 cfs @ 12.14 hrs, Volume= 5,791 cf
Outflow = 1.55 cfs @ 12.14 hrs, Volume= 5,791 cf, Atten= 0%, Lag= 0.1 min

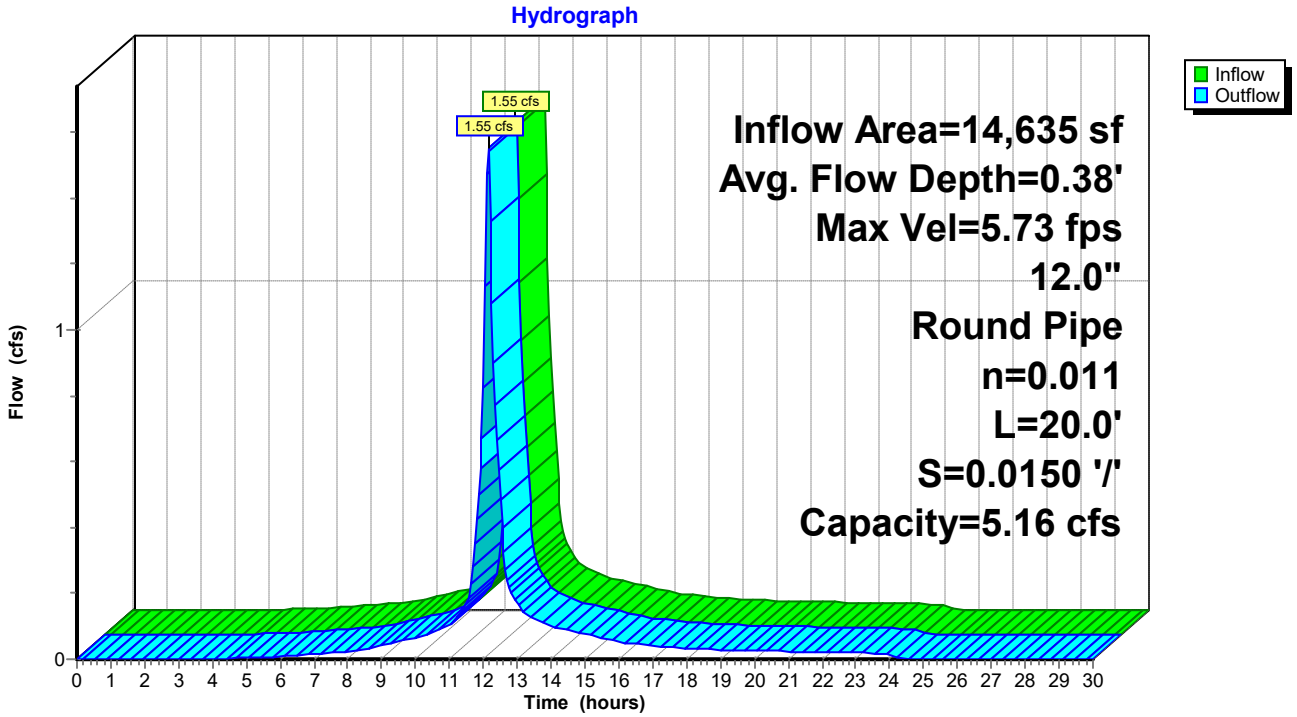
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.73 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.97 fps, Avg. Travel Time= 0.2 min

Peak Storage= 5 cf @ 12.14 hrs
Average Depth at Peak Storage= 0.38'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0150 '/'
Inlet Invert= 350.10', Outlet Invert= 349.80'



Reach DCBS7: TO DMH-S6



Stage-Discharge for Reach DCBS7: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.10	0.00	0.00
350.11	0.58	0.00
350.12	0.92	0.00
350.13	1.21	0.01
350.14	1.46	0.02
350.15	1.69	0.02
350.16	1.90	0.04
350.17	2.10	0.05
350.18	2.29	0.07
350.19	2.46	0.09
350.20	2.63	0.11
350.21	2.80	0.13
350.22	2.95	0.16
350.23	3.11	0.19
350.24	3.25	0.22
350.25	3.39	0.25
350.26	3.53	0.29
350.27	3.66	0.32
350.28	3.79	0.36
350.29	3.92	0.41
350.30	4.04	0.45
350.31	4.16	0.50
350.32	4.27	0.55
350.33	4.38	0.60
350.34	4.49	0.65
350.35	4.60	0.71
350.36	4.70	0.76
350.37	4.81	0.82
350.38	4.91	0.88
350.39	5.00	0.95
350.40	5.10	1.01
350.41	5.19	1.08
350.42	5.28	1.14
350.43	5.37	1.21
350.44	5.45	1.28
350.45	5.53	1.36
350.46	5.62	1.43
350.47	5.70	1.50
350.48	5.77	1.58
350.49	5.85	1.66
350.50	5.92	1.74
350.51	6.00	1.82
350.52	6.07	1.90
350.53	6.13	1.98
350.54	6.20	2.06
350.55	6.27	2.15
350.56	6.33	2.23
350.57	6.39	2.32
350.58	6.45	2.40
350.59	6.51	2.49
350.60	6.57	2.58
350.61	6.62	2.67
350.62	6.67	2.75
350.63	6.73	2.84
350.64	6.78	2.93
350.65	6.82	3.02
350.66	6.87	3.11
350.67	6.92	3.20
350.68	6.96	3.29
350.69	7.00	3.38
350.70	7.04	3.46
350.71	7.08	3.55
350.72	7.12	3.64
350.73	7.15	3.73
350.74	7.19	3.81
350.75	7.22	3.90
350.76	7.25	3.99
350.77	7.28	4.07
350.78	7.30	4.15
350.79	7.33	4.24
350.80	7.35	4.32
350.81	7.37	4.40
350.82	7.39	4.48
350.83	7.41	4.55
350.84	7.43	4.63
350.85	7.44	4.70
350.86	7.45	4.77
350.87	7.46	4.84
350.88	7.47	4.91
350.89	7.48	4.98
350.90	7.48	5.04
350.91	**7.49**	5.10
350.92	7.48	5.16
350.93	7.48	5.21
350.94	7.48	5.27
350.95	7.47	5.31
350.96	7.46	5.36
350.97	7.44	5.40
350.98	7.43	5.44
350.99	7.41	5.47
351.00	7.38	5.50
351.01	7.35	5.52
351.02	7.32	5.53
351.03	7.28	5.54
351.04	7.24	**5.55**
351.05	7.19	5.54
351.06	7.13	5.52
351.07	7.06	5.50
351.08	6.97	5.45
351.09	6.85	5.37
351.10	6.57	5.16

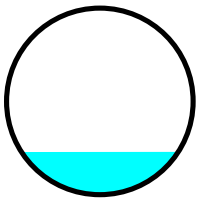
Summary for Reach DCBS8: TO DMH-S6

Inflow Area = 6,568 sf, 85.14% Impervious, Inflow Depth = 5.08" for 50-Year event
Inflow = 0.84 cfs @ 12.07 hrs, Volume= 2,783 cf
Outflow = 0.84 cfs @ 12.07 hrs, Volume= 2,783 cf, Atten= 0%, Lag= 0.1 min

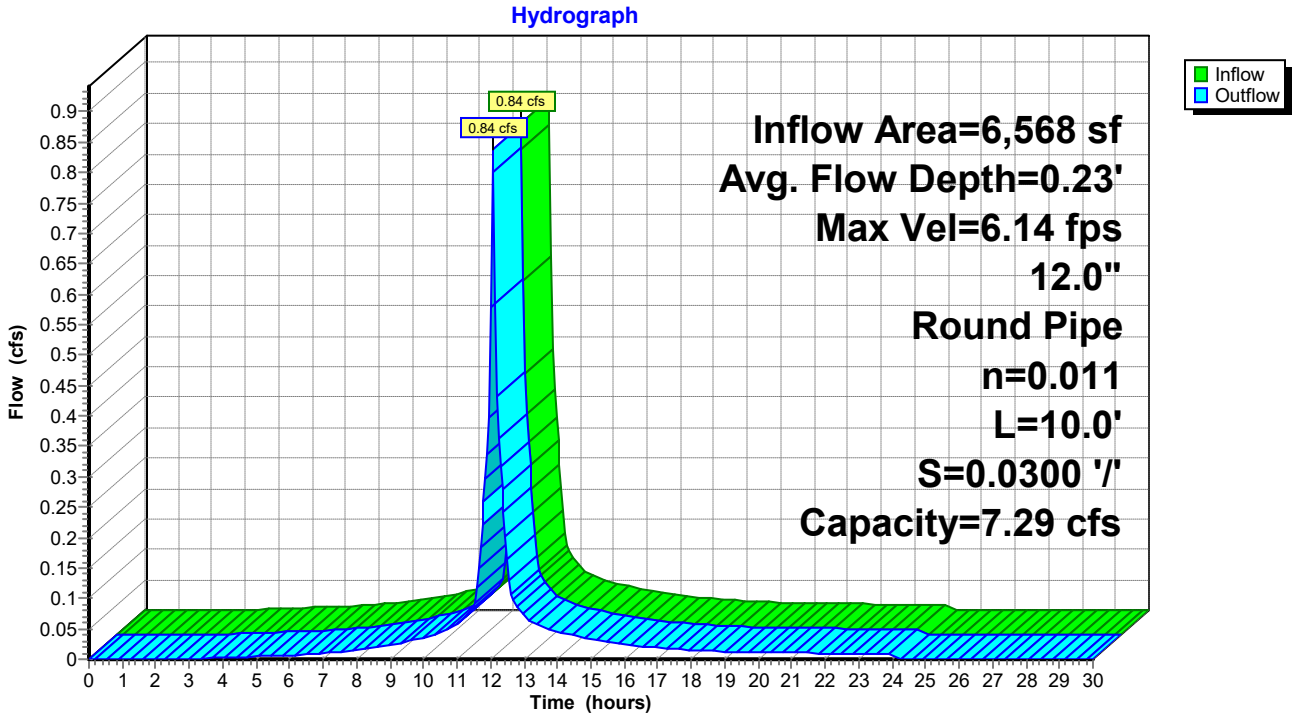
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.14 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.01 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.29 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 10.0' Slope= 0.0300 '/'
Inlet Invert= 350.10', Outlet Invert= 349.80'



Reach DCBS8: TO DMH-S6



Stage-Discharge for Reach DCBS8: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.10	0.00	0.00
350.11	0.83	0.00
350.12	1.31	0.00
350.13	1.71	0.01
350.14	2.06	0.02
350.15	2.39	0.04
350.16	2.69	0.05
350.17	2.97	0.07
350.18	3.23	0.10
350.19	3.48	0.12
350.20	3.73	0.15
350.21	3.96	0.19
350.22	4.18	0.22
350.23	4.39	0.26
350.24	4.60	0.31
350.25	4.80	0.35
350.26	4.99	0.40
350.27	5.18	0.46
350.28	5.36	0.52
350.29	5.54	0.58
350.30	5.71	0.64
350.31	5.88	0.70
350.32	6.04	0.77
350.33	6.20	0.85
350.34	6.36	0.92
350.35	6.51	1.00
350.36	6.65	1.08
350.37	6.80	1.16
350.38	6.94	1.25
350.39	7.07	1.34
350.40	7.21	1.43
350.41	7.34	1.52
350.42	7.46	1.62
350.43	7.59	1.72
350.44	7.71	1.82
350.45	7.83	1.92
350.46	7.94	2.02
350.47	8.06	2.13
350.48	8.17	2.24
350.49	8.27	2.35
350.50	8.38	2.46
350.51	8.48	2.57
350.52	8.58	2.69
350.53	8.68	2.80
350.54	8.77	2.92
350.55	8.86	3.04
350.56	8.95	3.16
350.57	9.04	3.28
350.58	9.12	3.40
350.59	9.21	3.52
350.60	9.29	3.65
350.61	9.36	3.77
350.62	9.44	3.90
350.63	9.51	4.02
350.64	9.58	4.15
350.65	9.65	4.27
350.66	9.72	4.40
350.67	9.78	4.52
350.68	9.84	4.65
350.69	9.90	4.77
350.70	9.96	4.90
350.71	10.01	5.02
350.72	10.06	5.15
350.73	10.11	5.27
350.74	10.16	5.39
350.75	10.21	5.52
350.76	10.25	5.64
350.77	10.29	5.76
350.78	10.33	5.87
350.79	10.36	5.99
350.80	10.40	6.11
350.81	10.43	6.22
350.82	10.46	6.33
350.83	10.48	6.44
350.84	10.50	6.55
350.85	10.53	6.65
350.86	10.54	6.75
350.87	10.56	6.85
350.88	10.57	6.95
350.89	10.58	7.04
350.90	10.58	7.13
350.91	**10.59**	7.21
350.92	10.59	7.30
350.93	10.58	7.37
350.94	10.57	7.45
350.95	10.56	7.51
350.96	10.55	7.58
350.97	10.53	7.64
350.98	10.50	7.69
350.99	10.47	7.73
351.00	10.44	7.77
351.01	10.40	7.80
351.02	10.35	7.83
351.03	10.30	7.84
351.04	10.24	**7.84**
351.05	10.17	7.84
351.06	10.08	7.81
351.07	9.98	7.77
351.08	9.86	7.71
351.09	9.69	7.60
351.10	9.29	7.29

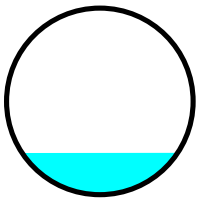
Summary for Reach DCBS9: TO DMH-S4

Inflow Area = 6,737 sf, 13.88% Impervious, Inflow Depth = 4.97" for 50-Year event
Inflow = 0.77 cfs @ 12.12 hrs, Volume= 2,791 cf
Outflow = 0.77 cfs @ 12.12 hrs, Volume= 2,791 cf, Atten= 0%, Lag= 0.1 min

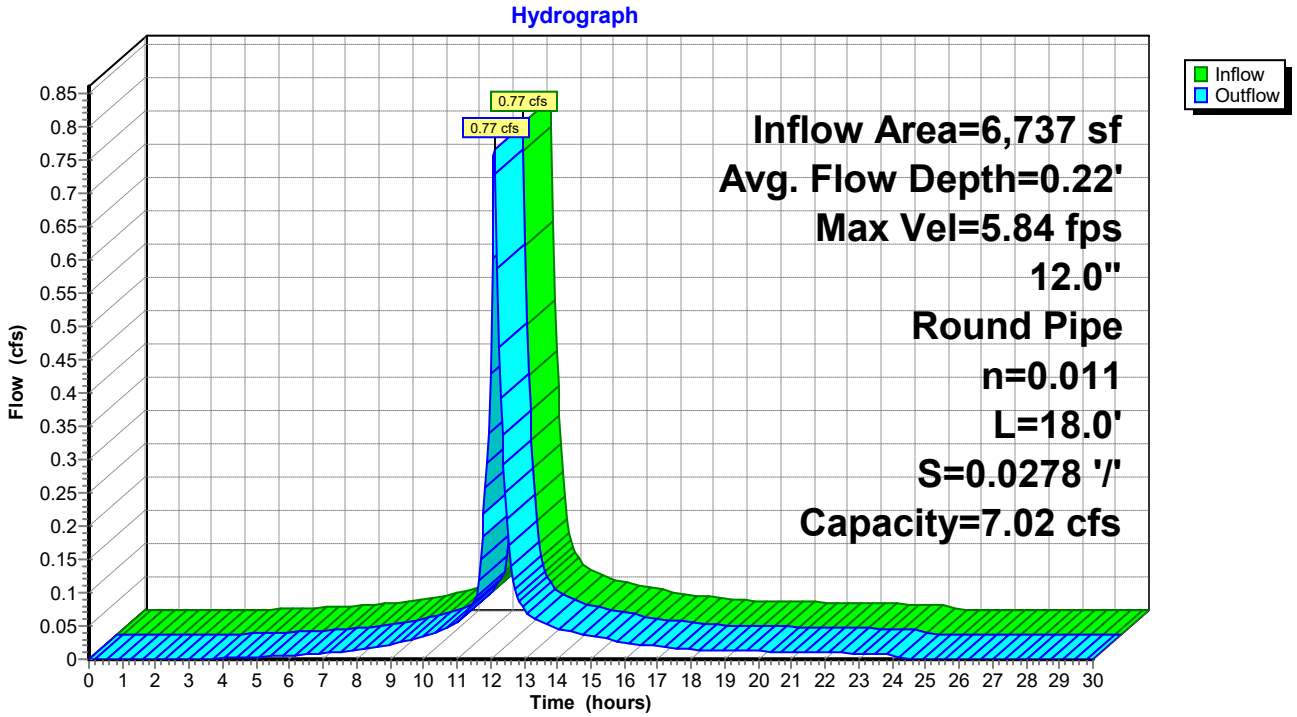
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.84 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.96 fps, Avg. Travel Time= 0.2 min

Peak Storage= 2 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.22'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.02 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 18.0' Slope= 0.0278 '/'
Inlet Invert= 356.50', Outlet Invert= 356.00'



Reach DCBS9: TO DMH-S4



Stage-Discharge for Reach DCBS9: TO DMH-S4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
356.50	0.00	0.00
356.51	0.80	0.00
356.52	1.26	0.00
356.53	1.64	0.01
356.54	1.98	0.02
356.55	2.30	0.03
356.56	2.58	0.05
356.57	2.85	0.07
356.58	3.11	0.09
356.59	3.35	0.12
356.60	3.58	0.15
356.61	3.81	0.18
356.62	4.02	0.21
356.63	4.23	0.25
356.64	4.43	0.30
356.65	4.62	0.34
356.66	4.80	0.39
356.67	4.98	0.44
356.68	5.16	0.50
356.69	5.33	0.55
356.70	5.50	0.61
356.71	5.66	0.68
356.72	5.81	0.74
356.73	5.97	0.81
356.74	6.12	0.89
356.75	6.26	0.96
356.76	6.40	1.04
356.77	6.54	1.12
356.78	6.68	1.20
356.79	6.81	1.29
356.80	6.93	1.37
356.81	7.06	1.46
356.82	7.18	1.56
356.83	7.30	1.65
356.84	7.42	1.75
356.85	7.53	1.85
356.86	7.64	1.95
356.87	7.75	2.05
356.88	7.86	2.15
356.89	7.96	2.26
356.90	8.06	2.36
356.91	8.16	2.47
356.92	8.25	2.58
356.93	8.35	2.70
356.94	8.44	2.81
356.95	8.53	2.92
356.96	8.61	3.04
356.97	8.70	3.15
356.98	8.78	3.27
356.99	8.86	3.39
357.00	8.94	3.51
357.01	9.01	3.63
357.02	9.08	3.75
357.03	9.15	3.87
357.04	9.22	3.99
357.05	9.29	4.11
357.06	9.35	4.23
357.07	9.41	4.35
357.08	9.47	4.47
357.09	9.53	4.59
357.10	9.58	4.71
357.11	9.63	4.83
357.12	9.69	4.95
357.13	9.73	5.07
357.14	9.78	5.19
357.15	9.82	5.31
357.16	9.86	5.42
357.17	9.90	5.54
357.18	9.94	5.65
357.19	9.97	5.76
357.20	10.01	5.88
357.21	10.03	5.98
357.22	10.06	6.09
357.23	10.09	6.20
357.24	10.11	6.30
357.25	10.13	6.40
357.26	10.14	6.50
357.27	10.16	6.59
357.28	10.17	6.68
357.29	10.18	6.77
357.30	10.18	6.86
357.31	**10.19**	6.94
357.32	10.19	7.02
357.33	10.18	7.10
357.34	10.17	7.17
357.35	10.16	7.23
357.36	10.15	7.29
357.37	10.13	7.35
357.38	10.11	7.40
357.39	10.08	7.44
357.40	10.05	7.48
357.41	10.01	7.51
357.42	9.96	7.53
357.43	9.91	7.55
357.44	9.85	**7.55**
357.45	9.78	7.54
357.46	9.70	7.52
357.47	9.61	7.48
357.48	9.49	7.42
357.49	9.33	7.31
357.50	8.94	7.02

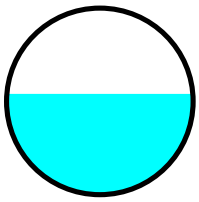
Summary for Reach DMH-R101: TO DMH-S1

Inflow Area = 40,822 sf, 73.55% Impervious, Inflow Depth = 4.00" for 50-Year event
Inflow = 4.15 cfs @ 12.09 hrs, Volume= 13,598 cf
Outflow = 4.00 cfs @ 12.11 hrs, Volume= 13,598 cf, Atten= 3%, Lag= 1.2 min

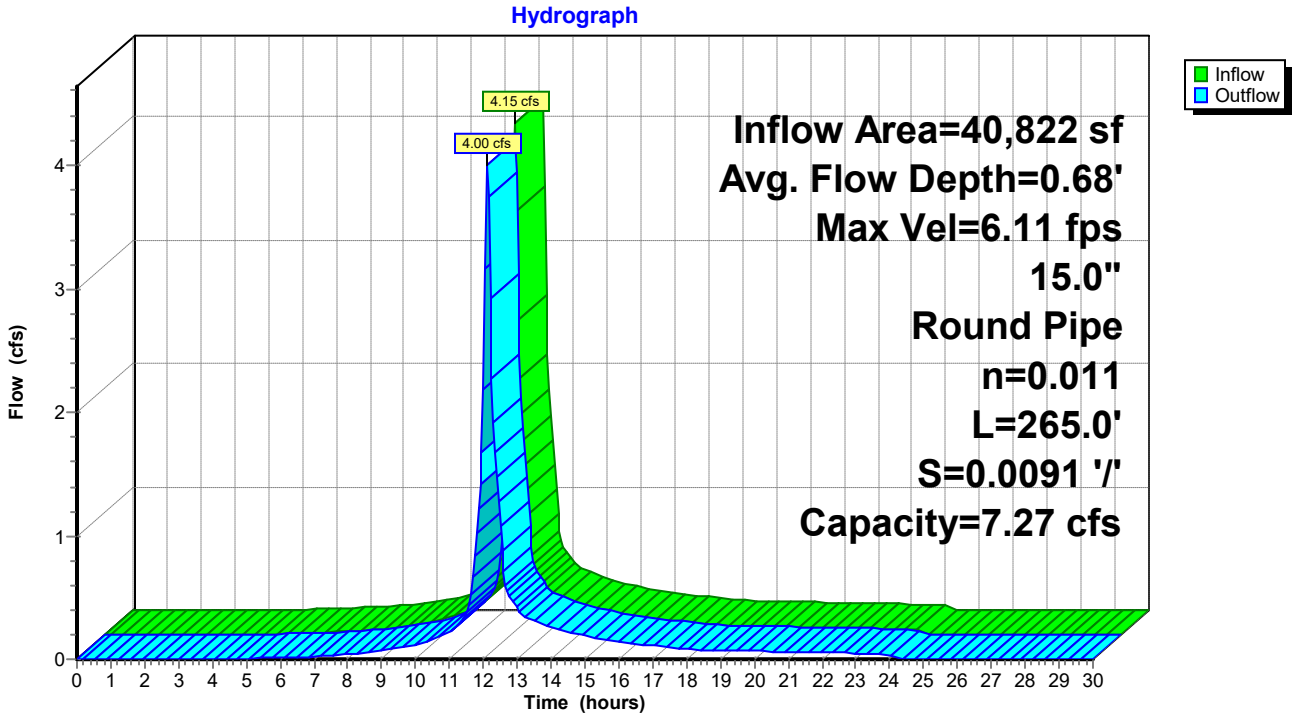
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.11 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.97 fps, Avg. Travel Time= 2.2 min

Peak Storage= 179 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.68'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.27 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 265.0' Slope= 0.0091 '/'
Inlet Invert= 351.00', Outlet Invert= 348.60'



Reach DMH-R101: TO DMH-S1



Stage-Discharge for Reach DMH-R101: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.42	0.00
351.02	0.71	0.00
351.03	0.94	0.01
351.04	1.13	0.01
351.05	1.31	0.02
351.06	1.48	0.03
351.07	1.64	0.04
351.08	1.78	0.06
351.09	1.92	0.08
351.10	2.06	0.09
351.11	2.19	0.12
351.12	2.31	0.14
351.13	2.43	0.17
351.14	2.55	0.19
351.15	2.66	0.22
351.16	2.77	0.25
351.17	2.88	0.29
351.18	2.98	0.32
351.19	3.08	0.36
351.20	3.18	0.40
351.21	3.28	0.45
351.22	3.37	0.49
351.23	3.46	0.54
351.24	3.55	0.59
351.25	3.64	0.64
351.26	3.73	0.69
351.27	3.81	0.74
351.28	3.89	0.80
351.29	3.97	0.86
351.30	4.05	0.92
351.31	4.13	0.98
351.32	4.20	1.04
351.33	4.28	1.11
351.34	4.35	1.18
351.35	4.42	1.24
351.36	4.49	1.31
351.37	4.56	1.39
351.38	4.63	1.46
351.39	4.69	1.53
351.40	4.76	1.61
351.41	4.82	1.69
351.42	4.88	1.77
351.43	4.95	1.85
351.44	5.01	1.93
351.45	5.06	2.01
351.46	5.12	2.10
351.47	5.18	2.18
351.48	5.23	2.27
351.49	5.29	2.36
351.50	5.34	2.45
351.51	5.39	2.54
351.52	5.44	2.63
351.53	5.49	2.72
351.54	5.54	2.81
351.55	5.59	2.91
351.56	5.64	3.00
351.57	5.68	3.10
351.58	5.73	3.19
351.59	5.77	3.29
351.60	5.82	3.39
351.61	5.86	3.49
351.62	5.90	3.58
351.63	5.94	3.68
351.64	5.98	3.78
351.65	6.02	3.88
351.66	6.06	3.98
351.67	6.09	4.08
351.68	6.13	4.18
351.69	6.16	4.28
351.70	6.20	4.38
351.71	6.23	4.48
351.72	6.26	4.58
351.73	6.29	4.68
351.74	6.32	4.78
351.75	6.35	4.88
351.76	6.38	4.98
351.77	6.40	5.08
351.78	6.43	5.18
351.79	6.46	5.28
351.80	6.48	5.37
351.81	6.50	5.47
351.82	6.52	5.57
351.83	6.55	5.66
351.84	6.57	5.76
351.85	6.59	5.85
351.86	6.60	5.95
351.87	6.62	6.04
351.88	6.64	6.13
351.89	6.65	6.22
351.90	6.67	6.31
351.91	6.68	6.39
351.92	6.69	6.48
351.93	6.70	6.56
351.94	6.71	6.65
351.95	6.72	6.73
351.96	6.73	6.81
351.97	6.74	6.88
351.98	6.74	6.96
351.99	6.74	7.03
352.00	6.75	7.10
352.01	6.75	7.17
352.02	**6.75**	7.24
352.03	6.75	7.30
352.04	6.75	7.36
352.05	6.74	7.42
352.06	6.74	7.47
352.07	6.73	7.52
352.08	6.72	7.57
352.09	6.71	7.62
352.10	6.70	7.66
352.11	6.68	7.70
352.12	6.66	7.73
352.13	6.65	7.76
352.14	6.63	7.78
352.15	6.60	7.80
352.16	6.57	7.81
352.17	6.54	**7.81**
352.18	6.51	7.81
352.19	6.47	7.80
352.20	6.43	7.78
352.21	6.38	7.75
352.22	6.32	7.70
352.23	6.24	7.63
352.24	6.13	7.51
352.25	5.92	7.27

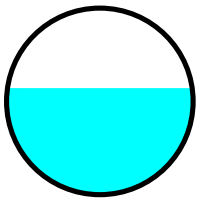
Summary for Reach DMH-S1: TO DMH-S2

Inflow Area = 59,366 sf, 76.73% Impervious, Inflow Depth = 4.17" for 50-Year event
Inflow = 6.07 cfs @ 12.10 hrs, Volume= 20,639 cf
Outflow = 5.84 cfs @ 12.12 hrs, Volume= 20,639 cf, Atten= 4%, Lag= 1.4 min

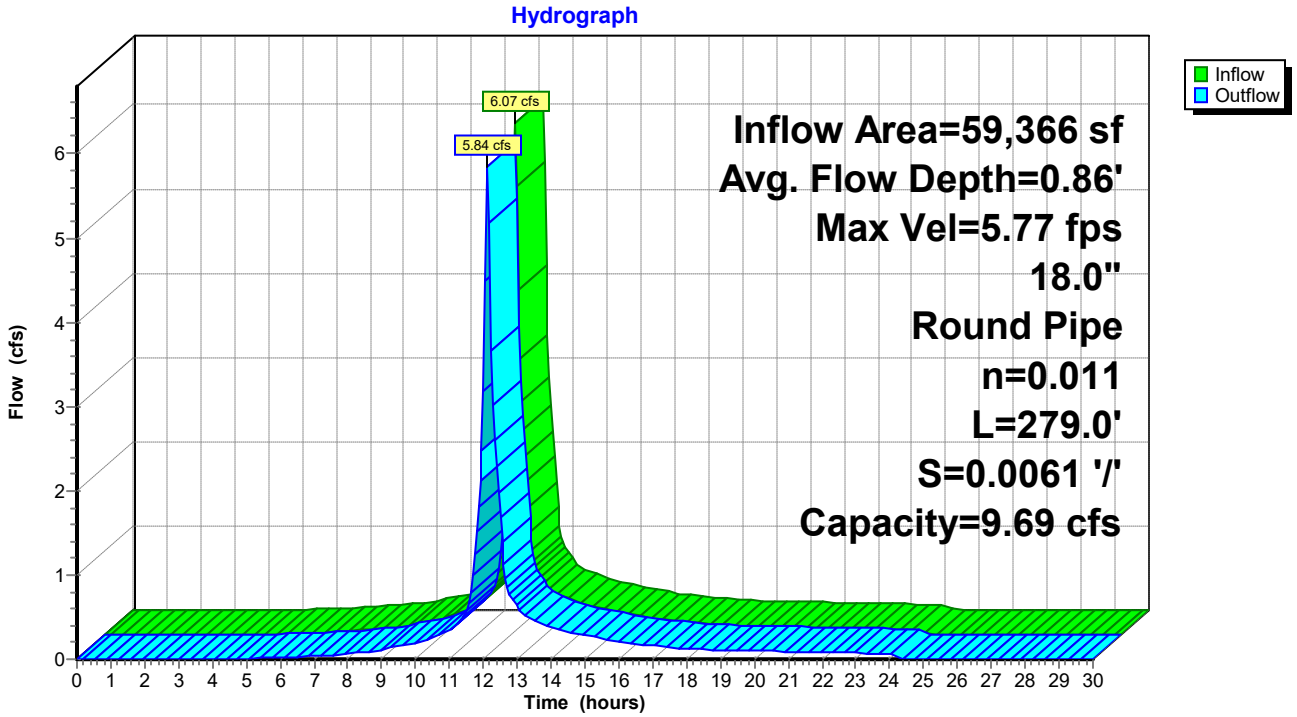
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.77 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.88 fps, Avg. Travel Time= 2.5 min

Peak Storage= 291 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.86'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 9.69 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 279.0' Slope= 0.0061 '/'
Inlet Invert= 348.50', Outlet Invert= 346.80'



Reach DMH-S1: TO DMH-S2



Stage-Discharge for Reach DMH-S1: TO DMH-S2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.50	0.00	0.00
348.51	0.33	0.00
348.52	0.58	0.00
348.53	0.77	0.01
348.54	0.93	0.01
348.55	1.08	0.02
348.56	1.22	0.03
348.57	1.35	0.04
348.58	1.47	0.05
348.59	1.59	0.07
348.60	1.70	0.09
348.61	1.80	0.11
348.62	1.91	0.13
348.63	2.01	0.15
348.64	2.10	0.18
348.65	2.20	0.20
348.66	2.29	0.23
348.67	2.38	0.26
348.68	2.47	0.30
348.69	2.55	0.33
348.70	2.63	0.37
348.71	2.72	0.41
348.72	2.79	0.45
348.73	2.87	0.49
348.74	2.95	0.54
348.75	3.02	0.59
348.76	3.09	0.63
348.77	3.17	0.68
348.78	3.24	0.74
348.79	3.31	0.79
348.80	3.37	0.85
348.81	3.44	0.91
348.82	3.50	0.97
348.83	3.57	1.03
348.84	3.63	1.09
348.85	3.69	1.16
348.86	3.75	1.22
348.87	3.81	1.29
348.88	3.87	1.36
348.89	3.93	1.43
348.90	3.99	1.51
348.91	4.04	1.58
348.92	4.10	1.66
348.93	4.15	1.74
348.94	4.20	1.82
348.95	4.26	1.90
348.96	4.31	1.98
348.97	4.36	2.06
348.98	4.41	2.15
348.99	4.46	2.24
349.00	4.51	2.32
349.01	4.55	2.41
349.02	4.60	2.50
349.03	4.65	2.59
349.04	4.69	2.69
349.05	4.74	2.78
349.06	4.78	2.88
349.07	4.82	2.97
349.08	4.86	3.07
349.09	4.91	3.17
349.10	4.95	3.27
349.11	4.99	3.37
349.12	5.03	3.47
349.13	5.07	3.57
349.14	5.10	3.67
349.15	5.14	3.77
349.16	5.18	3.88
349.17	5.22	3.98
349.18	5.25	4.09
349.19	5.29	4.20
349.20	5.32	4.30
349.21	5.35	4.41
349.22	5.39	4.52
349.23	5.42	4.63
349.24	5.45	4.74
349.25	5.48	4.85
349.26	5.51	4.96
349.27	5.54	5.07
349.28	5.57	5.18
349.29	5.60	5.29
349.30	5.63	5.40
349.31	5.66	5.51
349.32	5.69	5.62
349.33	5.71	5.73
349.34	5.74	5.84
349.35	5.76	5.95
349.36	5.79	6.07
349.37	5.81	6.18
349.38	5.84	6.29
349.39	5.86	6.40
349.40	5.88	6.51
349.41	5.90	6.62
349.42	5.92	6.73
349.43	5.94	6.84
349.44	5.96	6.95
349.45	5.98	7.06
349.46	6.00	7.17
349.47	6.02	7.28
349.48	6.04	7.38
349.49	6.05	7.49
349.50	6.07	7.60
349.51	6.08	7.70
349.52	6.10	7.81
349.53	6.11	7.91
349.54	6.13	8.01
349.55	6.14	8.11
349.56	6.15	8.21
349.57	6.16	8.31
349.58	6.18	8.41
349.59	6.19	8.51
349.60	6.19	8.60
349.61	6.20	8.70
349.62	6.21	8.79
349.63	6.22	8.88
349.64	6.23	8.97
349.65	6.23	9.06
349.66	6.24	9.15
349.67	6.24	9.23
349.68	6.24	9.31
349.69	6.25	9.39
349.70	6.25	9.47
349.71	6.25	9.55
349.72	**6.25**	9.62
349.73	6.25	9.69
349.74	6.25	9.76
349.75	6.25	9.83
349.76	6.24	9.89
349.77	6.24	9.96
349.78	6.23	10.01
349.79	6.23	10.07
349.80	6.22	10.12
349.81	6.21	10.17
349.82	6.20	10.22
349.83	6.19	10.26
349.84	6.18	10.29
349.85	6.17	10.33
349.86	6.15	10.36
349.87	6.13	10.38
349.88	6.11	10.40
349.89	6.09	10.41
349.90	6.07	10.42
349.91	6.05	**10.42**
349.92	6.02	10.42
349.93	5.99	10.40
349.94	5.95	10.38
349.95	5.92	10.35
349.96	5.87	10.30
349.97	5.82	10.24
349.98	5.76	10.14
349.99	5.64	9.96
350.00	5.48	9.69

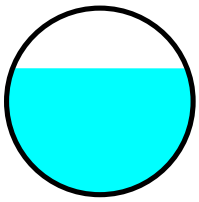
Summary for Reach DMH-S2: TO DMH-S3

Inflow Area = 102,372 sf, 80.49% Impervious, Inflow Depth = 4.48" for 50-Year event
Inflow = 10.86 cfs @ 12.10 hrs, Volume= 38,179 cf
Outflow = 10.82 cfs @ 12.11 hrs, Volume= 38,179 cf, Atten= 0%, Lag= 0.1 min

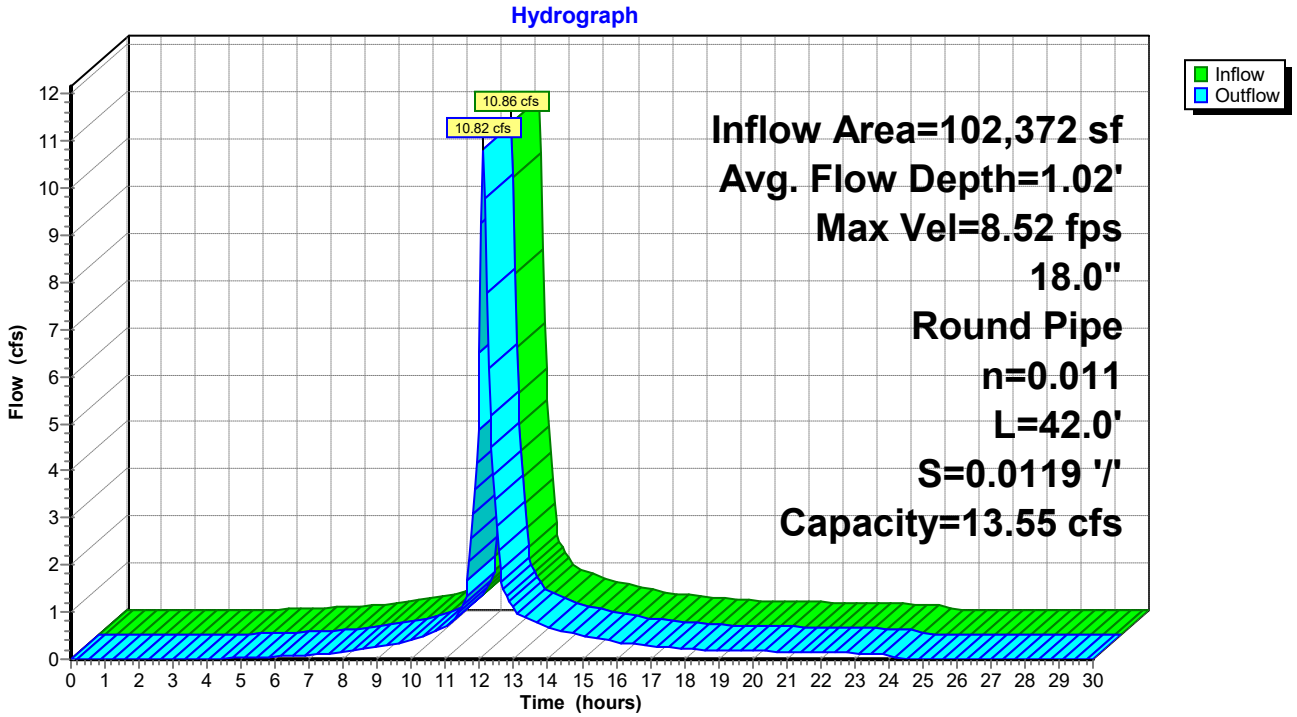
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.52 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.84 fps, Avg. Travel Time= 0.2 min

Peak Storage= 54 cf @ 12.10 hrs
Average Depth at Peak Storage= 1.02'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.55 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 42.0' Slope= 0.0119 '/'
Inlet Invert= 346.70', Outlet Invert= 346.20'



Reach DMH-S2: TO DMH-S3



Stage-Discharge for Reach DMH-S2: TO DMH-S3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.70	0.00	0.00
346.71	0.45	0.00
346.72	0.81	0.00
346.73	1.08	0.01
346.74	1.30	0.02
346.75	1.51	0.03
346.76	1.70	0.04
346.77	1.88	0.06
346.78	2.05	0.08
346.79	2.22	0.10
346.80	2.37	0.12
346.81	2.52	0.15
346.82	2.67	0.18
346.83	2.81	0.21
346.84	2.94	0.25
346.85	3.07	0.28
346.86	3.20	0.32
346.87	3.33	0.37
346.88	3.45	0.41
346.89	3.57	0.46
346.90	3.68	0.52
346.91	3.80	0.57
346.92	3.91	0.63
346.93	4.01	0.69
346.94	4.12	0.75
346.95	4.22	0.82
346.96	4.33	0.89
346.97	4.43	0.96
346.98	4.52	1.03
346.99	4.62	1.11
347.00	4.71	1.19
347.01	4.81	1.27
347.02	4.90	1.35
347.03	4.99	1.44
347.04	5.07	1.53
347.05	5.16	1.62
347.06	5.25	1.71
347.07	5.33	1.81
347.08	5.41	1.91
347.09	5.49	2.01
347.10	5.57	2.11
347.11	5.65	2.21
347.12	5.73	2.32
347.13	5.80	2.43
347.14	5.88	2.54
347.15	5.95	2.65
347.16	6.02	2.77
347.17	6.09	2.89
347.18	6.16	3.00
347.19	6.23	3.12
347.20	6.30	3.25
347.21	6.36	3.37
347.22	6.43	3.50
347.23	6.49	3.63
347.24	6.56	3.76
347.25	6.62	3.89
347.26	6.68	4.02
347.27	6.74	4.15
347.28	6.80	4.29
347.29	6.86	4.43
347.30	6.92	4.56
347.31	6.97	4.70
347.32	7.03	4.85
347.33	7.08	4.99
347.34	7.13	5.13
347.35	7.19	5.28
347.36	7.24	5.42
347.37	7.29	5.57
347.38	7.34	5.72
347.39	7.39	5.86
347.40	7.44	6.01
347.41	7.48	6.16
347.42	7.53	6.32
347.43	7.58	6.47
347.44	7.62	6.62
347.45	7.66	6.77
347.46	7.71	6.93
347.47	7.75	7.08
347.48	7.79	7.23
347.49	7.83	7.39
347.50	7.87	7.54
347.51	7.91	7.70
347.52	7.95	7.86
347.53	7.98	8.01
347.54	8.02	8.17
347.55	8.06	8.32
347.56	8.09	8.48
347.57	8.12	8.63
347.58	8.16	8.79
347.59	8.19	8.95
347.60	8.22	9.10
347.61	8.25	9.25
347.62	8.28	9.41
347.63	8.31	9.56
347.64	8.34	9.72
347.65	8.36	9.87
347.66	8.39	10.02
347.67	8.41	10.17
347.68	8.44	10.32
347.69	8.46	10.47
347.70	8.48	10.62
347.71	8.51	10.76
347.72	8.53	10.91
347.73	8.55	11.05
347.74	8.56	11.20
347.75	8.58	11.34
347.76	8.60	11.48
347.77	8.62	11.62
347.78	8.63	11.76
347.79	8.65	11.89
347.80	8.66	12.03
347.81	8.67	12.16
347.82	8.68	12.29
347.83	8.69	12.41
347.84	8.70	12.54
347.85	8.71	12.66
347.86	8.72	12.78
347.87	8.72	12.90
347.88	8.73	13.02
347.89	8.73	13.13
347.90	8.74	13.24
347.91	8.74	13.35
347.92	**8.74**	13.45
347.93	8.74	13.55
347.94	8.74	13.65
347.95	8.73	13.74
347.96	8.73	13.83
347.97	8.72	13.92
347.98	8.71	14.00
347.99	8.71	14.07
348.00	8.69	14.15
348.01	8.68	14.21
348.02	8.67	14.28
348.03	8.65	14.34
348.04	8.64	14.39
348.05	8.62	14.44
348.06	8.60	14.48
348.07	8.57	14.51
348.08	8.55	14.54
348.09	8.52	14.55
348.10	8.49	14.57
348.11	8.45	**14.57**
348.12	8.41	14.56
348.13	8.37	14.54
348.14	8.32	14.51
348.15	8.27	14.46
348.16	8.21	14.39
348.17	8.14	14.31
348.18	8.05	14.18
348.19	7.89	13.92
348.20	7.66	13.55

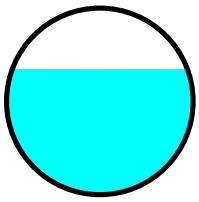
Summary for Reach DMH-S3: TO FE-S1

Inflow Area = 102,372 sf, 80.49% Impervious, Inflow Depth = 4.48" for 50-Year event
Inflow = 10.82 cfs @ 12.11 hrs, Volume= 38,179 cf
Outflow = 10.80 cfs @ 12.11 hrs, Volume= 38,179 cf, Atten= 0%, Lag= 0.1 min

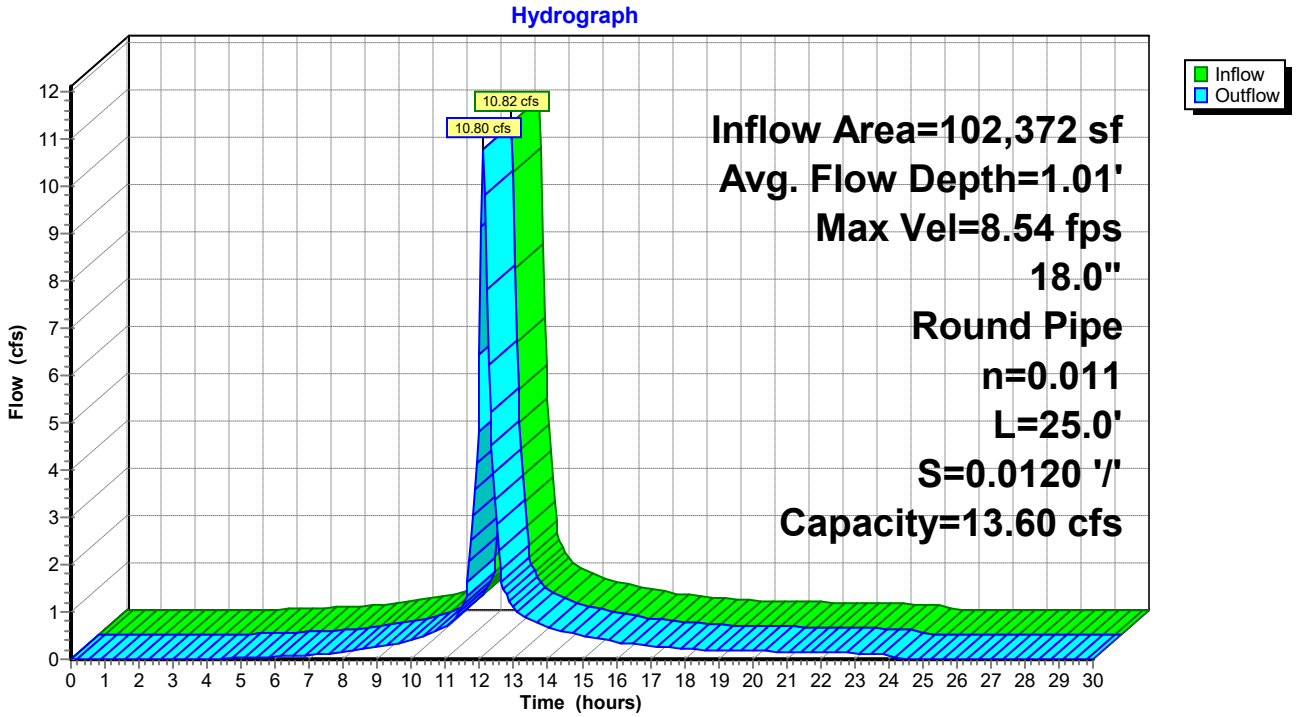
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.54 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.84 fps, Avg. Travel Time= 0.1 min

Peak Storage= 32 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.01'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.60 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 25.0' Slope= 0.0120 '/'
Inlet Invert= 346.00', Outlet Invert= 345.70'



Reach DMH-S3: TO FE-S1



Stage-Discharge for Reach DMH-S3: TO FE-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.00	0.00	0.00
346.01	0.46	0.00
346.02	0.82	0.00
346.03	1.08	0.01
346.04	1.30	0.02
346.05	1.51	0.03
346.06	1.71	0.04
346.07	1.89	0.06
346.08	2.06	0.08
346.09	2.23	0.10
346.10	2.38	0.12
346.11	2.53	0.15
346.12	2.68	0.18
346.13	2.82	0.21
346.14	2.95	0.25
346.15	3.09	0.28
346.16	3.21	0.33
346.17	3.34	0.37
346.18	3.46	0.42
346.19	3.58	0.47
346.20	3.70	0.52
346.21	3.81	0.57
346.22	3.92	0.63
346.23	4.03	0.69
346.24	4.14	0.76
346.25	4.24	0.82
346.26	4.34	0.89
346.27	4.44	0.96
346.28	4.54	1.04
346.29	4.64	1.11
346.30	4.73	1.19
346.31	4.83	1.27
346.32	4.92	1.36
346.33	5.01	1.44
346.34	5.09	1.53
346.35	5.18	1.62
346.36	5.27	1.72
346.37	5.35	1.81
346.38	5.43	1.91
346.39	5.51	2.01
346.40	5.59	2.12
346.41	5.67	2.22
346.42	5.75	2.33
346.43	5.82	2.44
346.44	5.90	2.55
346.45	5.97	2.66
346.46	6.04	2.78
346.47	6.12	2.90
346.48	6.19	3.02
346.49	6.25	3.14
346.50	6.32	3.26
346.51	6.39	3.39
346.52	6.45	3.51
346.53	6.52	3.64
346.54	6.58	3.77
346.55	6.64	3.90
346.56	6.71	4.04
346.57	6.77	4.17
346.58	6.83	4.31
346.59	6.88	4.44
346.60	6.94	4.58
346.61	7.00	4.72
346.62	7.05	4.87
346.63	7.11	5.01
346.64	7.16	5.15
346.65	7.22	5.30
346.66	7.27	5.44
346.67	7.32	5.59
346.68	7.37	5.74
346.69	7.42	5.89
346.70	7.47	6.04
346.71	7.51	6.19
346.72	7.56	6.34
346.73	7.61	6.49
346.74	7.65	6.65
346.75	7.70	6.80
346.76	7.74	6.95
346.77	7.78	7.11
346.78	7.82	7.26
346.79	7.86	7.42
346.80	7.90	7.57
346.81	7.94	7.73
346.82	7.98	7.89
346.83	8.02	8.04
346.84	8.05	8.20
346.85	8.09	8.36
346.86	8.12	8.51
346.87	8.16	8.67
346.88	8.19	8.82
346.89	8.22	8.98
346.90	8.25	9.14
346.91	8.28	9.29
346.92	8.31	9.45
346.93	8.34	9.60
346.94	8.37	9.75
346.95	8.40	9.91
346.96	8.42	10.06
346.97	8.45	10.21
346.98	8.47	10.36
346.99	8.50	10.51
347.00	8.52	10.66
347.01	8.54	10.81
347.02	8.56	10.95
347.03	8.58	11.10
347.04	8.60	11.24
347.05	8.62	11.39
347.06	8.63	11.53
347.07	8.65	11.67
347.08	8.67	11.80
347.09	8.68	11.94
347.10	8.69	12.07
347.11	8.71	12.21
347.12	8.72	12.34
347.13	8.73	12.46
347.14	8.74	12.59
347.15	8.75	12.71
347.16	8.75	12.83
347.17	8.76	12.95
347.18	8.76	13.07
347.19	8.77	13.18
347.20	8.77	13.29
347.21	8.77	13.40
347.22	**8.77**	13.50
347.23	8.77	13.60
347.24	8.77	13.70
347.25	8.77	13.79
347.26	8.76	13.89
347.27	8.76	13.97
347.28	8.75	14.05
347.29	8.74	14.13
347.30	8.73	14.20
347.31	8.72	14.27
347.32	8.70	14.34
347.33	8.69	14.39
347.34	8.67	14.45
347.35	8.65	14.49
347.36	8.63	14.53
347.37	8.61	14.57
347.38	8.58	14.60
347.39	8.55	14.61
347.40	8.52	14.62
347.41	8.49	**14.63**
347.42	8.45	14.62
347.43	8.40	14.60
347.44	8.36	14.57
347.45	8.30	14.52
347.46	8.24	14.45
347.47	8.17	14.37
347.48	8.08	14.24
347.49	7.92	13.98
347.50	7.70	13.60

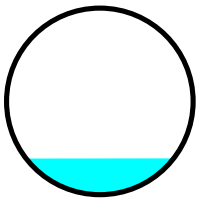
Summary for Reach DMH1: TO DMH#2

Inflow Area = 3,582 sf, 82.83% Impervious, Inflow Depth = 4.53" for 50-Year event
Inflow = 0.42 cfs @ 12.08 hrs, Volume= 1,352 cf
Outflow = 0.41 cfs @ 12.09 hrs, Volume= 1,352 cf, Atten= 1%, Lag= 0.5 min

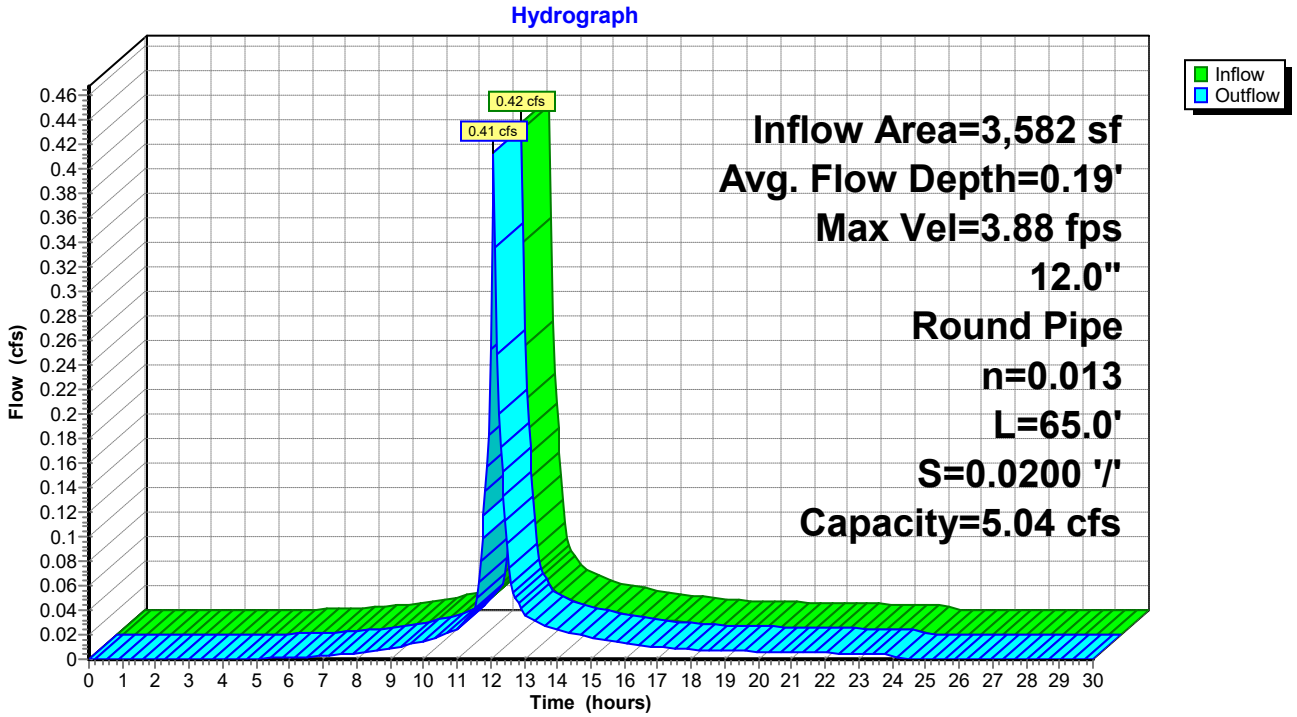
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.88 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.28 fps, Avg. Travel Time= 0.8 min

Peak Storage= 7 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.04 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 65.0' Slope= 0.0200 '/'
Inlet Invert= 354.60', Outlet Invert= 353.30'



Reach DMH1: TO DMH#2



Stage-Discharge for Reach DMH1: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.60	0.00	0.00
354.61	0.57	0.00
354.62	0.90	0.00
354.63	1.18	0.01
354.64	1.42	0.02
354.65	1.65	0.02
354.66	1.86	0.04
354.67	2.05	0.05
354.68	2.23	0.07
354.69	2.41	0.08
354.70	2.57	0.11
354.71	2.73	0.13
354.72	2.89	0.15
354.73	3.03	0.18
354.74	3.18	0.21
354.75	3.32	0.24
354.76	3.45	0.28
354.77	3.58	0.32
354.78	3.70	0.36
354.79	3.83	0.40
354.80	3.95	0.44
354.81	4.06	0.49
354.82	4.17	0.53
354.83	4.28	0.58
354.84	4.39	0.64
354.85	4.50	0.69
354.86	4.60	0.75
354.87	4.70	0.80
354.88	4.79	0.86
354.89	4.89	0.92
354.90	4.98	0.99
354.91	5.07	1.05
354.92	5.16	1.12
354.93	5.24	1.19
354.94	5.33	1.25
354.95	5.41	1.32
354.96	5.49	1.40
354.97	5.57	1.47
354.98	5.64	1.54
354.99	5.72	1.62
355.00	5.79	1.70
355.01	5.86	1.78
355.02	5.93	1.86
355.03	5.99	1.94
355.04	6.06	2.02
355.05	6.12	2.10
355.06	6.18	2.18
355.07	6.24	2.27
355.08	6.30	2.35
355.09	6.36	2.43
355.10	6.42	2.52
355.11	6.47	2.61
355.12	6.52	2.69
355.13	6.57	2.78
355.14	6.62	2.86
355.15	6.67	2.95
355.16	6.71	3.04
355.17	6.76	3.13
355.18	6.80	3.21
355.19	6.84	3.30
355.20	6.88	3.39
355.21	6.92	3.47
355.22	6.95	3.56
355.23	6.99	3.64
355.24	7.02	3.73
355.25	7.05	3.81
355.26	7.08	3.89
355.27	7.11	3.98
355.28	7.14	4.06
355.29	7.16	4.14
355.30	7.18	4.22
355.31	7.20	4.30
355.32	7.22	4.37
355.33	7.24	4.45
355.34	7.26	4.52
355.35	7.27	4.59
355.36	7.28	4.66
355.37	7.29	4.73
355.38	7.30	4.80
355.39	7.31	4.86
355.40	7.31	4.93
355.41	**7.31**	4.98
355.42	7.31	5.04
355.43	7.31	5.09
355.44	7.30	5.14
355.45	7.30	5.19
355.46	7.29	5.24
355.47	7.27	5.28
355.48	7.26	5.31
355.49	7.24	5.34
355.50	7.21	5.37
355.51	7.19	5.39
355.52	7.15	5.41
355.53	7.12	5.42
355.54	7.07	**5.42**
355.55	7.02	5.41
355.56	6.97	5.40
355.57	6.90	5.37
355.58	6.81	5.32
355.59	6.70	5.25
355.60	6.42	5.04

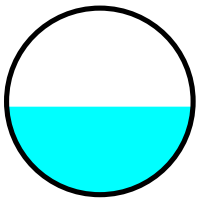
Summary for Reach DMH2: TO DMH#3

Inflow Area = 15,979 sf, 87.02% Impervious, Inflow Depth = 4.79" for 50-Year event
Inflow = 1.93 cfs @ 12.08 hrs, Volume= 6,372 cf
Outflow = 1.91 cfs @ 12.09 hrs, Volume= 6,372 cf, Atten= 1%, Lag= 0.7 min

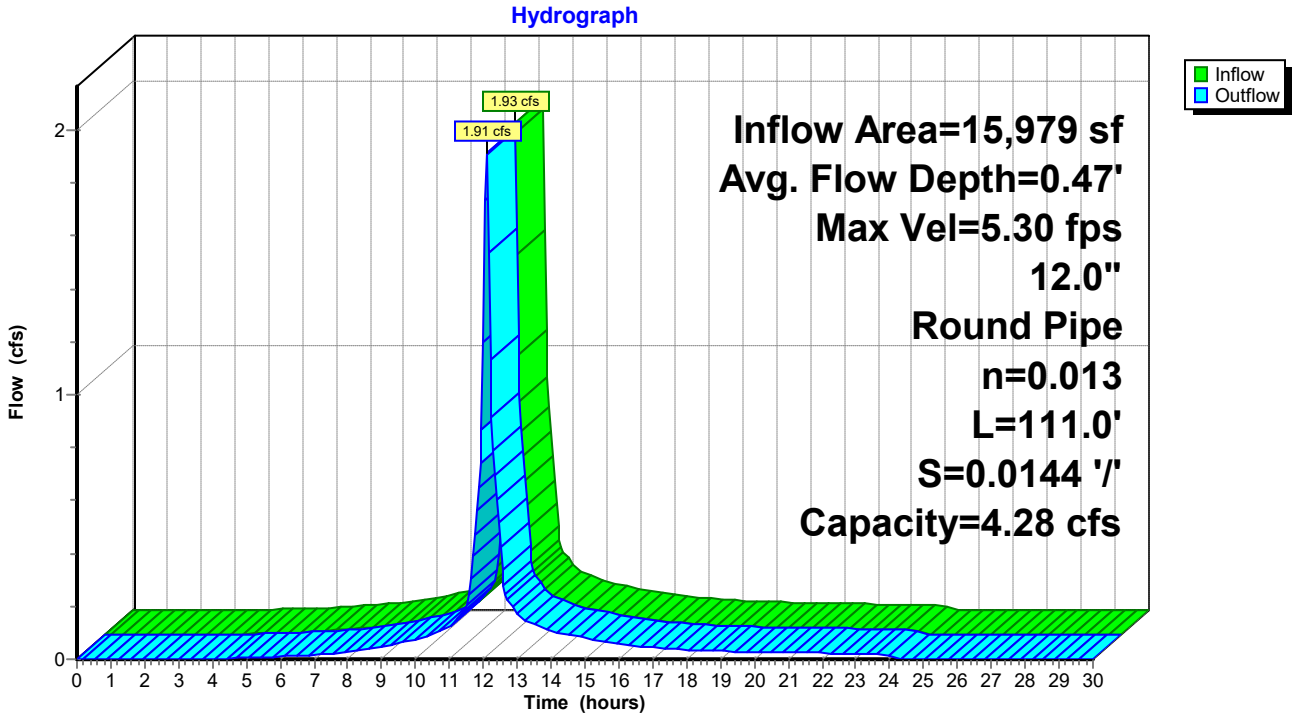
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.30 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.76 fps, Avg. Travel Time= 1.1 min

Peak Storage= 41 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.47'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.28 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 111.0' Slope= 0.0144 '/'
Inlet Invert= 353.20', Outlet Invert= 351.60'



Reach DMH2: TO DMH#3



Stage-Discharge for Reach DMH2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.20	0.00	0.00
353.21	0.48	0.00
353.22	0.77	0.00
353.23	1.00	0.01
353.24	1.21	0.01
353.25	1.40	0.02
353.26	1.57	0.03
353.27	1.74	0.04
353.28	1.90	0.06
353.29	2.04	0.07
353.30	2.18	0.09
353.31	2.32	0.11
353.32	2.45	0.13
353.33	2.58	0.15
353.34	2.70	0.18
353.35	2.81	0.21
353.36	2.93	0.24
353.37	3.04	0.27
353.38	3.15	0.30
353.39	3.25	0.34
353.40	3.35	0.37
353.41	3.45	0.41
353.42	3.54	0.45
353.43	3.64	0.50
353.44	3.73	0.54
353.45	3.82	0.59
353.46	3.90	0.63
353.47	3.99	0.68
353.48	4.07	0.73
353.49	4.15	0.78
353.50	4.23	0.84
353.51	4.30	0.89
353.52	4.38	0.95
353.53	4.45	1.01
353.54	4.52	1.06
353.55	4.59	1.12
353.56	4.66	1.19
353.57	4.72	1.25
353.58	4.79	1.31
353.59	4.85	1.38
353.60	4.91	1.44
353.61	4.97	1.51
353.62	5.03	1.58
353.63	5.09	1.64
353.64	5.14	1.71
353.65	5.20	1.78
353.66	5.25	1.85
353.67	5.30	1.92
353.68	5.35	1.99
353.69	5.40	2.07
353.70	5.45	2.14
353.71	5.49	2.21
353.72	5.54	2.28
353.73	5.58	2.36
353.74	5.62	2.43
353.75	5.66	2.51
353.76	5.70	2.58
353.77	5.74	2.65
353.78	5.77	2.73
353.79	5.81	2.80
353.80	5.84	2.87
353.81	5.87	2.95
353.82	5.90	3.02
353.83	5.93	3.09
353.84	5.96	3.16
353.85	5.99	3.24
353.86	6.01	3.31
353.87	6.04	3.38
353.88	6.06	3.45
353.89	6.08	3.51
353.90	6.10	3.58
353.91	6.12	3.65
353.92	6.13	3.71
353.93	6.15	3.78
353.94	6.16	3.84
353.95	6.17	3.90
353.96	6.18	3.96
353.97	6.19	4.02
353.98	6.20	4.07
353.99	6.20	4.13
354.00	6.21	4.18
354.01	**6.21**	4.23
354.02	6.21	4.28
354.03	6.21	4.32
354.04	6.20	4.37
354.05	6.19	4.41
354.06	6.19	4.44
354.07	6.17	4.48
354.08	6.16	4.51
354.09	6.14	4.54
354.10	6.12	4.56
354.11	6.10	4.58
354.12	6.07	4.59
354.13	6.04	4.60
354.14	6.01	**4.60**
354.15	5.96	4.60
354.16	5.91	4.58
354.17	5.86	4.56
354.18	5.78	4.52
354.19	5.68	4.46
354.20	5.45	4.28

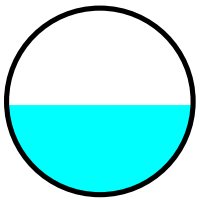
Summary for Reach DMH21: TO DMH#22

Inflow Area = 24,843 sf, 51.80% Impervious, Inflow Depth = 3.73" for 50-Year event
Inflow = 2.37 cfs @ 12.08 hrs, Volume= 7,719 cf
Outflow = 2.33 cfs @ 12.10 hrs, Volume= 7,719 cf, Atten= 1%, Lag= 0.8 min

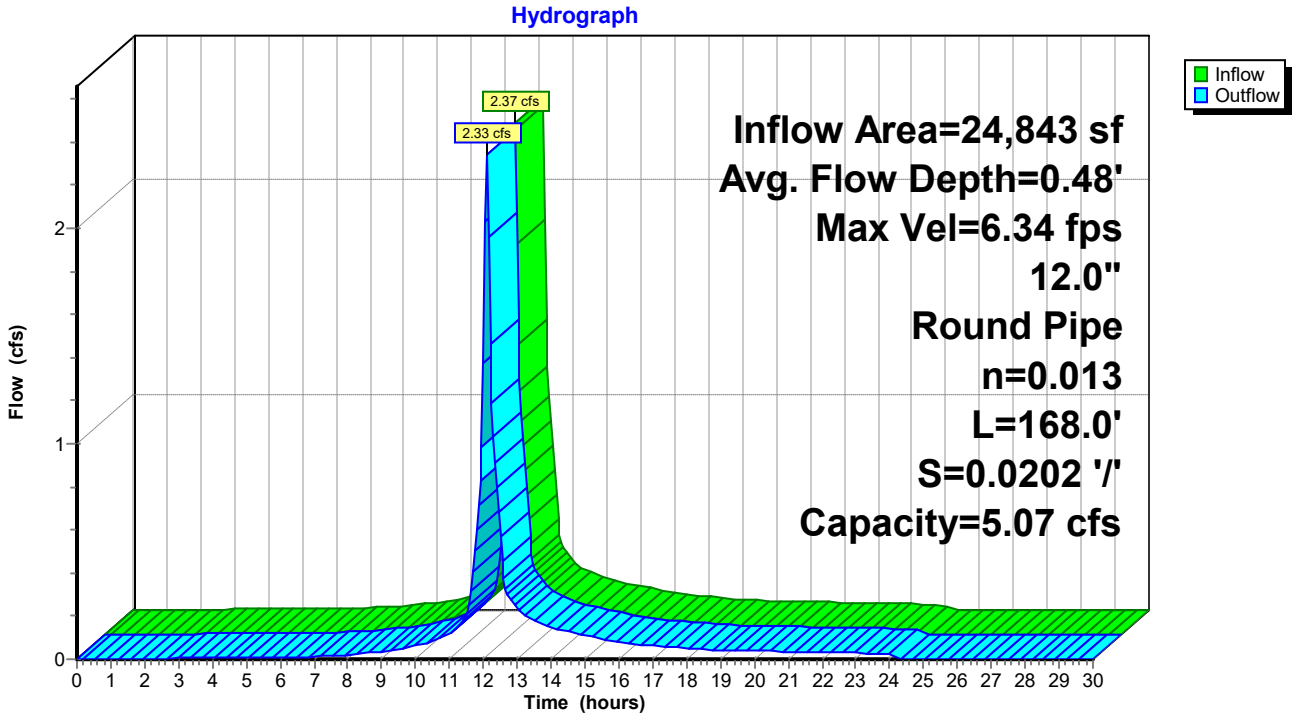
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.34 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.96 fps, Avg. Travel Time= 1.4 min

Peak Storage= 63 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.48'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.07 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 168.0' Slope= 0.0202 '/'
Inlet Invert= 345.20', Outlet Invert= 341.80'



Reach DMH21: TO DMH#22



Stage-Discharge for Reach DMH21: TO DMH#22

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
345.20	0.00	0.00
345.21	0.57	0.00
345.22	0.91	0.00
345.23	1.19	0.01
345.24	1.43	0.02
345.25	1.66	0.02
345.26	1.87	0.04
345.27	2.06	0.05
345.28	2.25	0.07
345.29	2.42	0.08
345.30	2.59	0.11
345.31	2.75	0.13
345.32	2.90	0.16
345.33	3.05	0.18
345.34	3.20	0.21
345.35	3.34	0.25
345.36	3.47	0.28
345.37	3.60	0.32
345.38	3.73	0.36
345.39	3.85	0.40
345.40	3.97	0.44
345.41	4.09	0.49
345.42	4.20	0.54
345.43	4.31	0.59
345.44	4.42	0.64
345.45	4.52	0.69
345.46	4.62	0.75
345.47	4.72	0.81
345.48	4.82	0.87
345.49	4.92	0.93
345.50	5.01	0.99
345.51	5.10	1.06
345.52	5.19	1.12
345.53	5.27	1.19
345.54	5.36	1.26
345.55	5.44	1.33
345.56	5.52	1.41
345.57	5.60	1.48
345.58	5.67	1.55
345.59	5.75	1.63
345.60	5.82	1.71
345.61	5.89	1.79
345.62	5.96	1.87
345.63	6.03	1.95
345.64	6.10	2.03
345.65	6.16	2.11
345.66	6.22	2.19
345.67	6.28	2.28
345.68	6.34	2.36
345.69	6.40	2.45
345.70	6.45	2.53
345.71	6.51	2.62
345.72	6.56	2.71
345.73	6.61	2.79
345.74	6.66	2.88
345.75	6.71	2.97
345.76	6.75	3.06
345.77	6.80	3.14
345.78	6.84	3.23
345.79	6.88	3.32
345.80	6.92	3.41
345.81	6.96	3.49
345.82	6.99	3.58
345.83	7.03	3.66
345.84	7.06	3.75
345.85	7.09	3.83
345.86	7.12	3.92
345.87	7.15	4.00
345.88	7.18	4.08
345.89	7.20	4.16
345.90	7.23	4.24
345.91	7.25	4.32
345.92	7.27	4.40
345.93	7.28	4.48
345.94	7.30	4.55
345.95	7.31	4.62
345.96	7.33	4.69
345.97	7.34	4.76
345.98	7.35	4.83
345.99	7.35	4.89
346.00	7.36	4.95
346.01	**7.36**	5.01
346.02	7.36	5.07
346.03	7.35	5.12
346.04	7.35	5.18
346.05	7.34	5.22
346.06	7.33	5.27
346.07	7.32	5.31
346.08	7.30	5.34
346.09	7.28	5.37
346.10	7.26	5.40
346.11	7.23	5.42
346.12	7.20	5.44
346.13	7.16	5.45
346.14	7.12	**5.45**
346.15	7.07	5.45
346.16	7.01	5.43
346.17	6.94	5.40
346.18	6.85	5.36
346.19	6.74	5.28
346.20	6.45	5.07

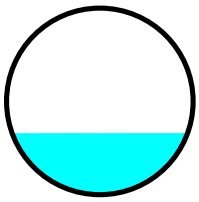
Summary for Reach DMH22: TO DMH#15

Inflow Area = 24,843 sf, 51.80% Impervious, Inflow Depth = 3.73" for 50-Year event
Inflow = 2.33 cfs @ 12.10 hrs, Volume= 7,719 cf
Outflow = 2.33 cfs @ 12.10 hrs, Volume= 7,719 cf, Atten= 0%, Lag= 0.0 min

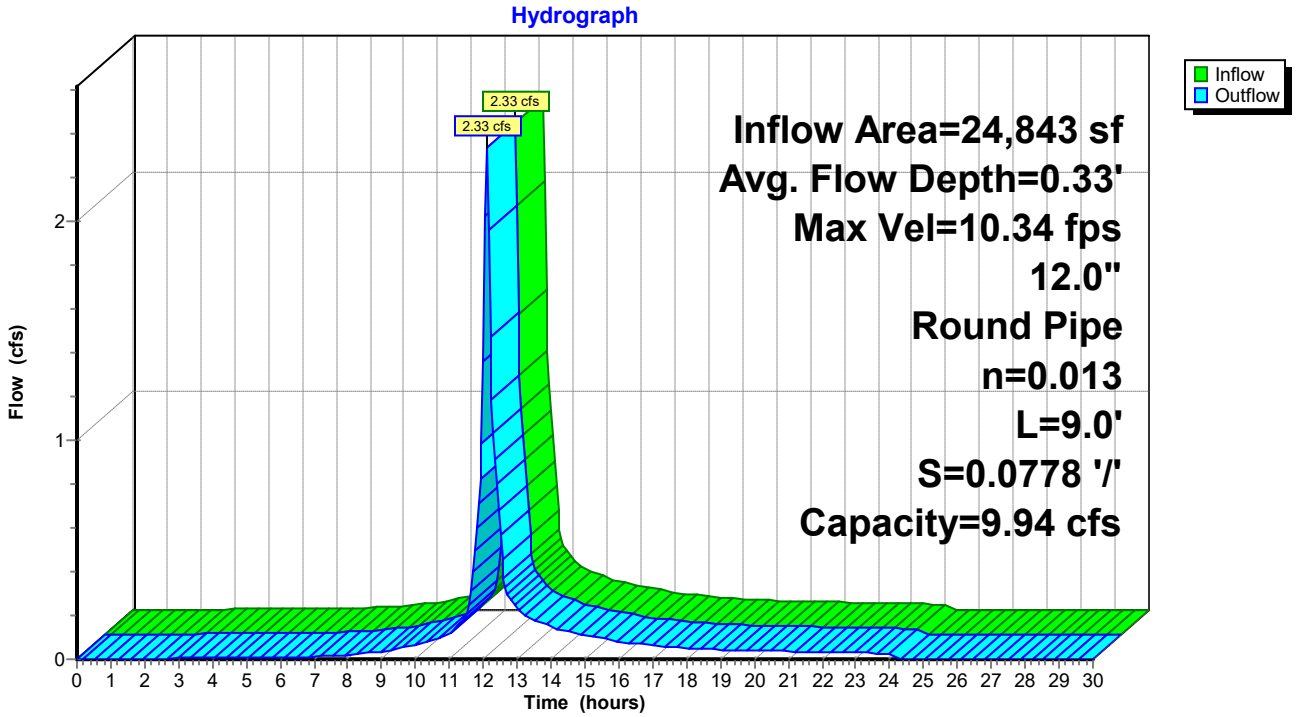
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.34 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.15 fps, Avg. Travel Time= 0.0 min

Peak Storage= 2 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.94 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 9.0' Slope= 0.0778 '/'
Inlet Invert= 341.70', Outlet Invert= 341.00'



Reach DMH22: TO DMH#15



Stage-Discharge for Reach DMH22: TO DMH#15

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
341.70	0.00	0.00
341.71	1.13	0.00
341.72	1.78	0.01
341.73	2.33	0.02
341.74	2.81	0.03
341.75	3.25	0.05
341.76	3.66	0.07
341.77	4.04	0.10
341.78	4.40	0.13
341.79	4.75	0.17
341.80	5.08	0.21
341.81	5.39	0.25
341.82	5.69	0.30
341.83	5.98	0.36
341.84	6.27	0.42
341.85	6.54	0.48
341.86	6.80	0.55
341.87	7.06	0.62
341.88	7.31	0.70
341.89	7.55	0.78
341.90	7.78	0.87
341.91	8.01	0.96
341.92	8.23	1.05
341.93	8.45	1.15
341.94	8.66	1.26
341.95	8.86	1.36
341.96	9.06	1.47
341.97	9.26	1.58
341.98	9.45	1.70
341.99	9.64	1.82
342.00	9.82	1.95
342.01	10.00	2.07
342.02	10.17	2.20
342.03	10.34	2.34
342.04	10.50	2.47
342.05	10.66	2.61
342.06	10.82	2.75
342.07	10.98	2.90
342.08	11.12	3.05
342.09	11.27	3.20
342.10	11.41	3.35
342.11	11.55	3.50
342.12	11.69	3.66
342.13	11.82	3.82
342.14	11.95	3.98
342.15	12.07	4.14
342.16	12.20	4.30
342.17	12.31	4.47
342.18	12.43	4.63
342.19	12.54	4.80
342.20	12.65	4.97
342.21	12.76	5.14
342.22	12.86	5.31
342.23	12.96	5.48
342.24	13.06	5.65
342.25	13.15	5.82
342.26	13.24	5.99
342.27	13.33	6.16
342.28	13.41	6.33
342.29	13.49	6.50
342.30	13.57	6.68
342.31	13.64	6.85
342.32	13.71	7.01
342.33	13.78	7.18
342.34	13.85	7.35
342.35	13.91	7.52
342.36	13.97	7.68
342.37	14.02	7.84
342.38	14.07	8.00
342.39	14.12	8.16
342.40	14.17	8.32
342.41	14.21	8.47
342.42	14.25	8.62
342.43	14.28	8.77
342.44	14.31	8.92
342.45	14.34	9.06
342.46	14.36	9.20
342.47	14.38	9.33
342.48	14.40	9.46
342.49	14.41	9.59
342.50	14.42	9.71
342.51	**14.42**	9.83
342.52	14.42	9.94
342.53	14.42	10.05
342.54	14.41	10.15
342.55	14.39	10.24
342.56	14.37	10.32
342.57	14.34	10.40
342.58	14.31	10.47
342.59	14.27	10.54
342.60	14.22	10.59
342.61	14.17	10.63
342.62	14.11	10.66
342.63	14.03	10.68
342.64	13.95	**10.69**
342.65	13.85	10.68
342.66	13.74	10.65
342.67	13.60	10.59
342.68	13.43	10.50
342.69	13.20	10.35
342.70	12.65	9.94

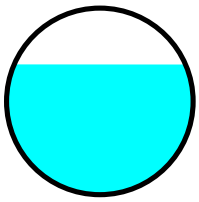
Summary for Reach DMH3: TO DMH#7

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 4.93" for 50-Year event
Inflow = 8.21 cfs @ 12.09 hrs, Volume= 27,829 cf
Outflow = 8.20 cfs @ 12.09 hrs, Volume= 27,829 cf, Atten= 0%, Lag= 0.0 min

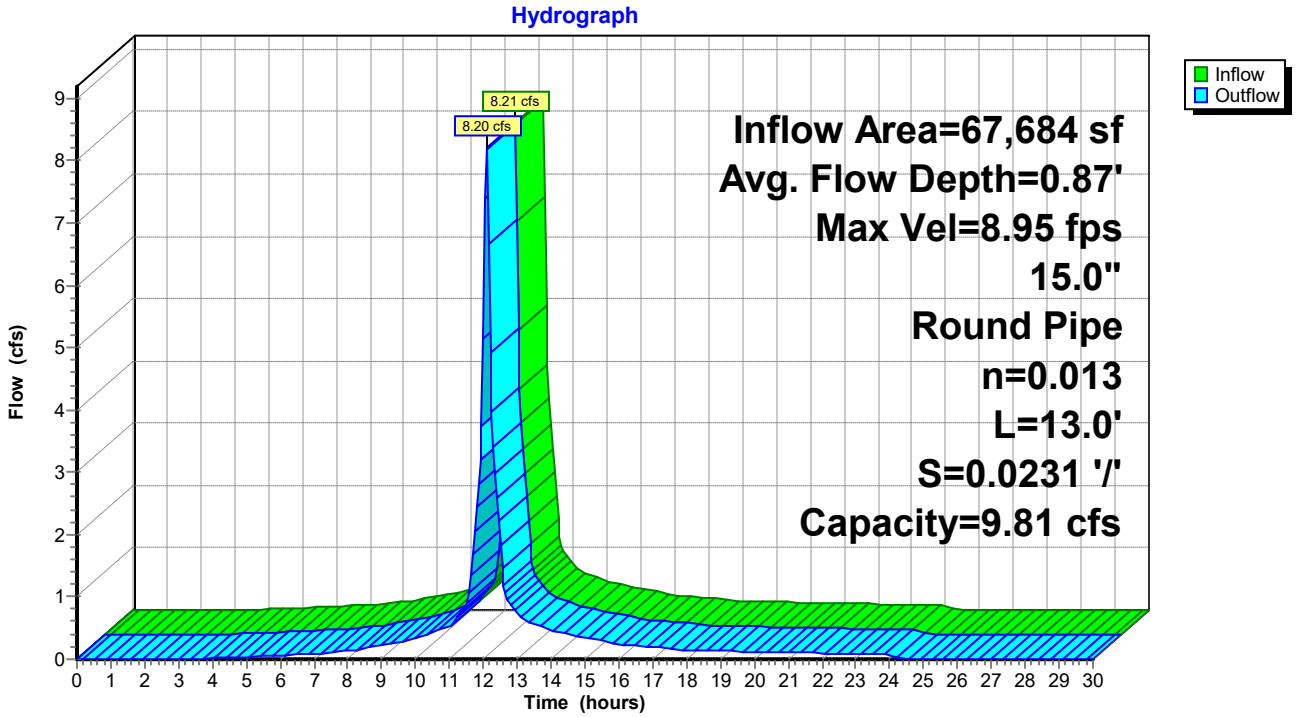
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.95 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.00 fps, Avg. Travel Time= 0.1 min

Peak Storage= 12 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.87'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.81 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 13.0' Slope= 0.0231 '/'
Inlet Invert= 351.50', Outlet Invert= 351.20'



Reach DMH3: TO DMH#7



Stage-Discharge for Reach DMH3: TO DMH#7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.50	0.00	0.00
351.51	0.57	0.00
351.52	0.96	0.00
351.53	1.26	0.01
351.54	1.53	0.02
351.55	1.78	0.03
351.56	2.00	0.04
351.57	2.21	0.06
351.58	2.41	0.08
351.59	2.60	0.10
351.60	2.78	0.13
351.61	2.96	0.16
351.62	3.12	0.19
351.63	3.29	0.22
351.64	3.45	0.26
351.65	3.60	0.30
351.66	3.75	0.34
351.67	3.89	0.39
351.68	4.03	0.44
351.69	4.17	0.49
351.70	4.30	0.54
351.71	4.43	0.60
351.72	4.55	0.66
351.73	4.68	0.73
351.74	4.80	0.79
351.75	4.92	0.86
351.76	5.03	0.93
351.77	5.15	1.00
351.78	5.26	1.08
351.79	5.37	1.16
351.80	5.47	1.24
351.81	5.58	1.32
351.82	5.68	1.41
351.83	5.78	1.50
351.84	5.88	1.59
351.85	5.97	1.68
351.86	6.07	1.78
351.87	6.16	1.87
351.88	6.25	1.97
351.89	6.34	2.07
351.90	6.43	2.18
351.91	6.51	2.28
351.92	6.60	2.39
351.93	6.68	2.50
351.94	6.76	2.61
351.95	6.84	2.72
351.96	6.92	2.83
351.97	6.99	2.95
351.98	7.07	3.07
351.99	7.14	3.19
352.00	7.21	3.31
352.01	7.28	3.43
352.02	7.35	3.55
352.03	7.42	3.68
352.04	7.49	3.80
352.05	7.55	3.93
352.06	7.62	4.06
352.07	7.68	4.18
352.08	7.74	4.31
352.09	7.80	4.44
352.10	7.86	4.58
352.11	7.91	4.71
352.12	7.97	4.84
352.13	8.02	4.97
352.14	8.08	5.11
352.15	8.13	5.24
352.16	8.18	5.38
352.17	8.23	5.51
352.18	8.28	5.65
352.19	8.32	5.78
352.20	8.37	5.92
352.21	8.41	6.05
352.22	8.45	6.19
352.23	8.50	6.32
352.24	8.54	6.46
352.25	8.58	6.59
352.26	8.61	6.73
352.27	8.65	6.86
352.28	8.68	6.99
352.29	8.72	7.13
352.30	8.75	7.26
352.31	8.78	7.39
352.32	8.81	7.52
352.33	8.84	7.65
352.34	8.87	7.78
352.35	8.90	7.90
352.36	8.92	8.03
352.37	8.94	8.15
352.38	8.96	8.28
352.39	8.99	8.40
352.40	9.00	8.52
352.41	9.02	8.64
352.42	9.04	8.75
352.43	9.05	8.86
352.44	9.07	8.98
352.45	9.08	9.09
352.46	9.09	9.19
352.47	9.10	9.30
352.48	9.10	9.40
352.49	9.11	9.50
352.50	9.11	9.59
352.51	9.12	9.68
352.52	**9.12**	9.77
352.53	9.11	9.86
352.54	9.11	9.94
352.55	9.11	10.02
352.56	9.10	10.09
352.57	9.09	10.16
352.58	9.08	10.23
352.59	9.06	10.29
352.60	9.04	10.34
352.61	9.02	10.39
352.62	9.00	10.44
352.63	8.98	10.48
352.64	8.95	10.51
352.65	8.92	10.53
352.66	8.88	10.55
352.67	8.84	**10.55**
352.68	8.79	10.55
352.69	8.74	10.54
352.70	8.68	10.51
352.71	8.61	10.47
352.72	8.53	10.41
352.73	8.43	10.31
352.74	8.28	10.14
352.75	8.00	9.81

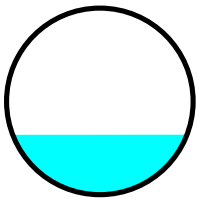
Summary for Reach DMH4: TO DMH5

Inflow Area = 5,916 sf, 84.47% Impervious, Inflow Depth = 4.64" for 50-Year event
Inflow = 0.71 cfs @ 12.08 hrs, Volume= 2,287 cf
Outflow = 0.70 cfs @ 12.09 hrs, Volume= 2,287 cf, Atten= 1%, Lag= 0.8 min

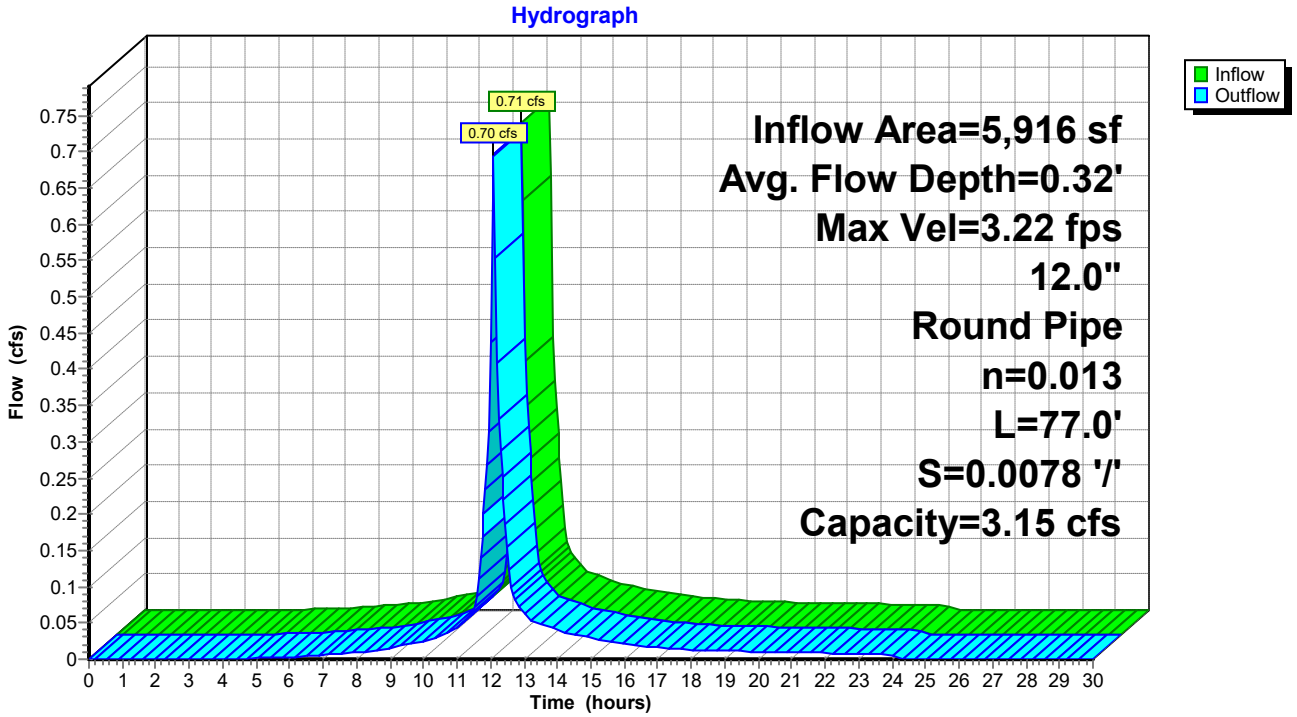
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.22 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.06 fps, Avg. Travel Time= 1.2 min

Peak Storage= 17 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.15 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 77.0' Slope= 0.0078 '/'
Inlet Invert= 355.20', Outlet Invert= 354.60'



Reach DMH4: TO DMH5



Stage-Discharge for Reach DMH4: TO DMH5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.20	0.00	0.00
355.21	0.36	0.00
355.22	0.56	0.00
355.23	0.74	0.01
355.24	0.89	0.01
355.25	1.03	0.02
355.26	1.16	0.02
355.27	1.28	0.03
355.28	1.39	0.04
355.29	1.50	0.05
355.30	1.61	0.07
355.31	1.71	0.08
355.32	1.80	0.10
355.33	1.89	0.11
355.34	1.98	0.13
355.35	2.07	0.15
355.36	2.15	0.17
355.37	2.23	0.20
355.38	2.31	0.22
355.39	2.39	0.25
355.40	2.46	0.28
355.41	2.54	0.30
355.42	2.61	0.33
355.43	2.67	0.36
355.44	2.74	0.40
355.45	2.81	0.43
355.46	2.87	0.47
355.47	2.93	0.50
355.48	2.99	0.54
355.49	3.05	0.58
355.50	3.11	0.62
355.51	3.16	0.66
355.52	3.22	0.70
355.53	3.27	0.74
355.54	3.32	0.78
355.55	3.38	0.83
355.56	3.43	0.87
355.57	3.47	0.92
355.58	3.52	0.96
355.59	3.57	1.01
355.60	3.61	1.06
355.61	3.66	1.11
355.62	3.70	1.16
355.63	3.74	1.21
355.64	3.78	1.26
355.65	3.82	1.31
355.66	3.86	1.36
355.67	3.90	1.41
355.68	3.93	1.47
355.69	3.97	1.52
355.70	4.00	1.57
355.71	4.04	1.63
355.72	4.07	1.68
355.73	4.10	1.73
355.74	4.13	1.79
355.75	4.16	1.84
355.76	4.19	1.90
355.77	4.22	1.95
355.78	4.24	2.00
355.79	4.27	2.06
355.80	4.29	2.11
355.81	4.32	2.17
355.82	4.34	2.22
355.83	4.36	2.27
355.84	4.38	2.33
355.85	4.40	2.38
355.86	4.42	2.43
355.87	4.44	2.48
355.88	4.45	2.53
355.89	4.47	2.58
355.90	4.48	2.63
355.91	4.50	2.68
355.92	4.51	2.73
355.93	4.52	2.78
355.94	4.53	2.82
355.95	4.54	2.87
355.96	4.55	2.91
355.97	4.55	2.95
355.98	4.56	3.00
355.99	4.56	3.04
356.00	4.56	3.07
356.01	**4.57**	3.11
356.02	4.56	3.15
356.03	4.56	3.18
356.04	4.56	3.21
356.05	4.55	3.24
356.06	4.55	3.27
356.07	4.54	3.29
356.08	4.53	3.32
356.09	4.52	3.34
356.10	4.50	3.35
356.11	4.49	3.37
356.12	4.47	3.38
356.13	4.44	3.38
356.14	4.42	**3.38**
356.15	4.38	3.38
356.16	4.35	3.37
356.17	4.31	3.35
356.18	4.25	3.32
356.19	4.18	3.28
356.20	4.00	3.15

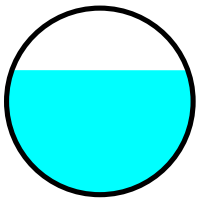
Summary for Reach DMH5: TO DMH-6

Inflow Area = 19,145 sf, 91.57% Impervious, Inflow Depth = 5.10" for 50-Year event
Inflow = 2.40 cfs @ 12.08 hrs, Volume= 8,143 cf
Outflow = 2.37 cfs @ 12.09 hrs, Volume= 8,143 cf, Atten= 1%, Lag= 0.8 min

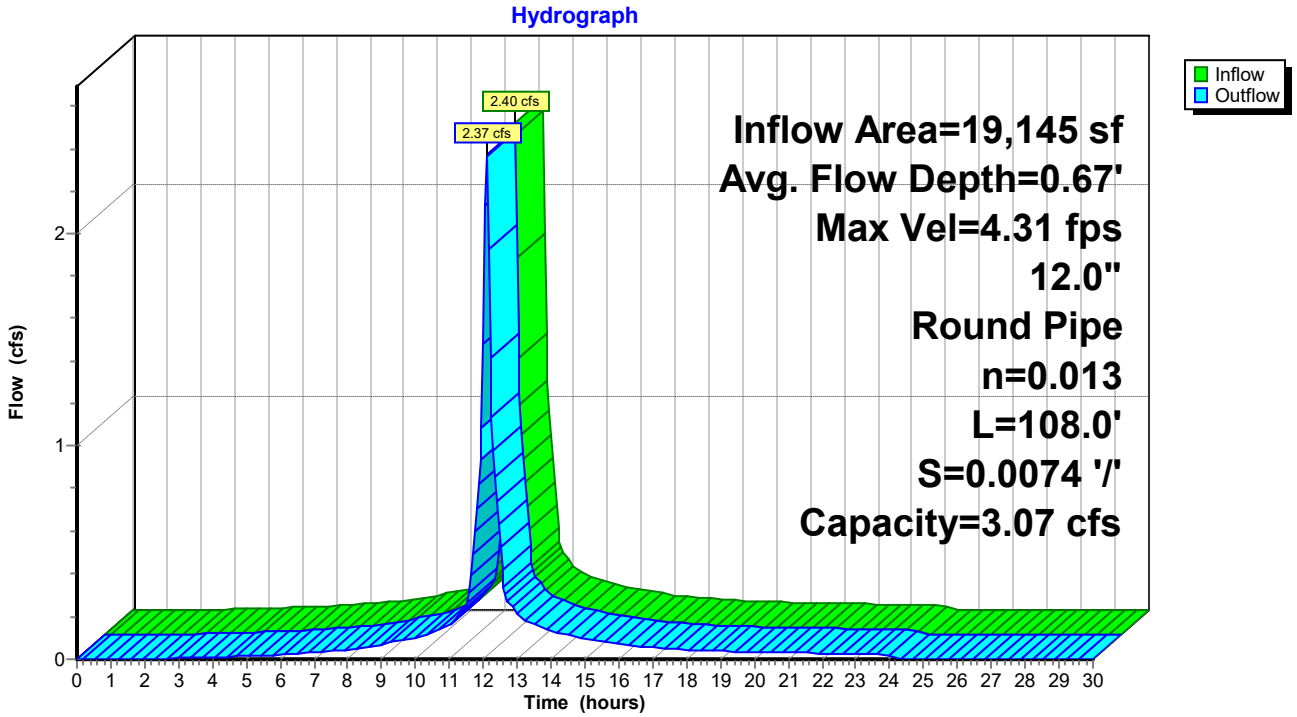
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.31 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.46 fps, Avg. Travel Time= 1.2 min

Peak Storage= 60 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.67'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.07 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 108.0' Slope= 0.0074 '/'
Inlet Invert= 354.10', Outlet Invert= 353.30'



Reach DMH5: TO DMH-6



Stage-Discharge for Reach DMH5: TO DMH-6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.10	0.00	0.00
354.11	0.35	0.00
354.12	0.55	0.00
354.13	0.72	0.00
354.14	0.87	0.01
354.15	1.00	0.01
354.16	1.13	0.02
354.17	1.25	0.03
354.18	1.36	0.04
354.19	1.46	0.05
354.20	1.57	0.06
354.21	1.66	0.08
354.22	1.76	0.09
354.23	1.85	0.11
354.24	1.93	0.13
354.25	2.02	0.15
354.26	2.10	0.17
354.27	2.18	0.19
354.28	2.25	0.22
354.29	2.33	0.24
354.30	2.40	0.27
354.31	2.47	0.30
354.32	2.54	0.33
354.33	2.61	0.36
354.34	2.67	0.39
354.35	2.74	0.42
354.36	2.80	0.45
354.37	2.86	0.49
354.38	2.92	0.53
354.39	2.97	0.56
354.40	3.03	0.60
354.41	3.08	0.64
354.42	3.14	0.68
354.43	3.19	0.72
354.44	3.24	0.76
354.45	3.29	0.81
354.46	3.34	0.85
354.47	3.39	0.89
354.48	3.43	0.94
354.49	3.48	0.99
354.50	3.52	1.03
354.51	3.57	1.08
354.52	3.61	1.13
354.53	3.65	1.18
354.54	3.69	1.23
354.55	3.73	1.28
354.56	3.76	1.33
354.57	3.80	1.38
354.58	3.84	1.43
354.59	3.87	1.48
354.60	3.90	1.53
354.61	3.94	1.59
354.62	3.97	1.64
354.63	4.00	1.69
354.64	4.03	1.74
354.65	4.06	1.80
354.66	4.09	1.85
354.67	4.11	1.90
354.68	4.14	1.95
354.69	4.16	2.01
354.70	4.19	2.06
354.71	4.21	2.11
354.72	4.23	2.16
354.73	4.25	2.22
354.74	4.27	2.27
354.75	4.29	2.32
354.76	4.31	2.37
354.77	4.33	2.42
354.78	4.34	2.47
354.79	4.36	2.52
354.80	4.37	2.57
354.81	4.38	2.61
354.82	4.40	2.66
354.83	4.41	2.71
354.84	4.42	2.75
354.85	4.43	2.80
354.86	4.43	2.84
354.87	4.44	2.88
354.88	4.44	2.92
354.89	4.45	2.96
354.90	4.45	3.00
354.91	**4.45**	3.03
354.92	4.45	3.07
354.93	4.45	3.10
354.94	4.45	3.13
354.95	4.44	3.16
354.96	4.43	3.19
354.97	4.43	3.21
354.98	4.42	3.23
354.99	4.40	3.25
355.00	4.39	3.27
355.01	4.37	3.28
355.02	4.35	3.29
355.03	4.33	3.30
355.04	4.31	**3.30**
355.05	4.28	3.29
355.06	4.24	3.29
355.07	4.20	3.27
355.08	4.15	3.24
355.09	4.07	3.20
355.10	3.90	3.07

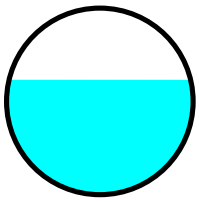
Summary for Reach DMH6: TO DMH#3

Inflow Area = 37,947 sf, 89.57% Impervious, Inflow Depth = 4.98" for 50-Year event
Inflow = 4.66 cfs @ 12.08 hrs, Volume= 15,757 cf
Outflow = 4.60 cfs @ 12.10 hrs, Volume= 15,757 cf, Atten= 1%, Lag= 0.8 min

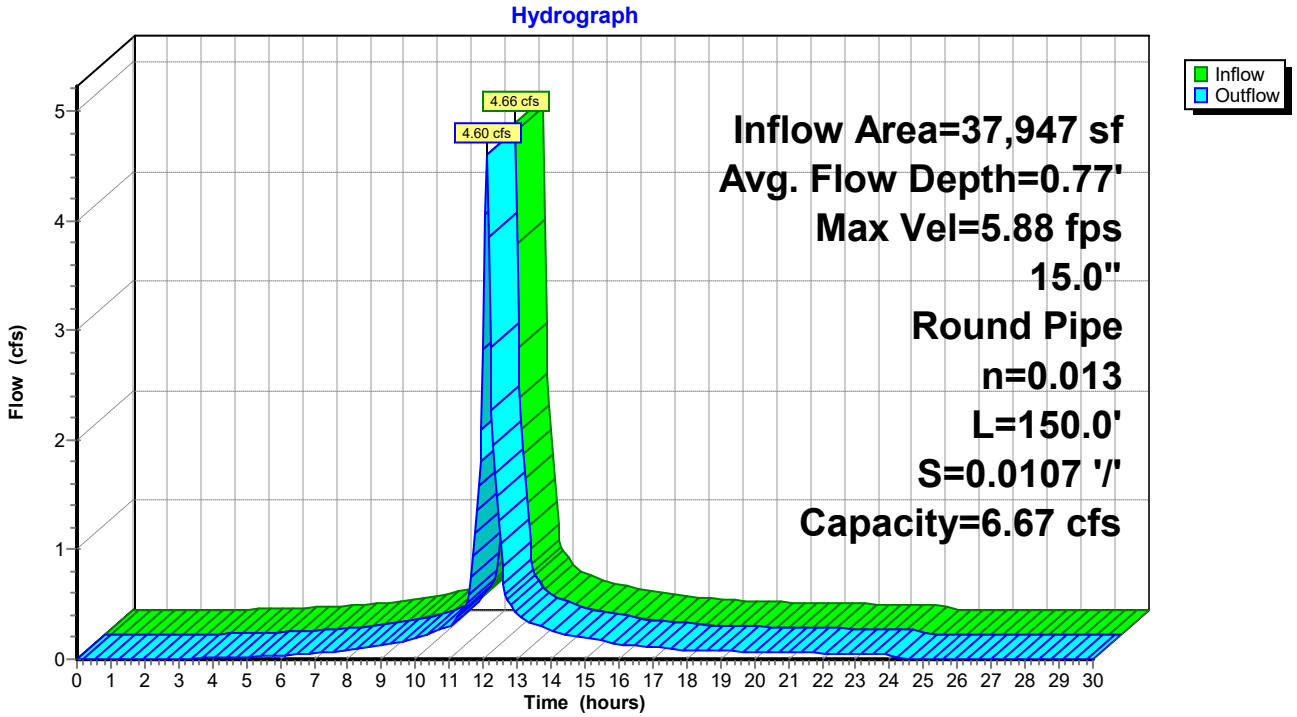
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.88 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 1.3 min

Peak Storage= 119 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.77'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.67 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 150.0' Slope= 0.0107 '/'
Inlet Invert= 353.20', Outlet Invert= 351.60'



Reach DMH6: TO DMH#3



Stage-Discharge for Reach DMH6: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.20	0.00	0.00
353.21	0.39	0.00
353.22	0.65	0.00
353.23	0.86	0.01
353.24	1.04	0.01
353.25	1.21	0.02
353.26	1.36	0.03
353.27	1.50	0.04
353.28	1.64	0.05
353.29	1.77	0.07
353.30	1.89	0.09
353.31	2.01	0.11
353.32	2.12	0.13
353.33	2.24	0.15
353.34	2.34	0.18
353.35	2.45	0.20
353.36	2.55	0.23
353.37	2.64	0.27
353.38	2.74	0.30
353.39	2.83	0.33
353.40	2.92	0.37
353.41	3.01	0.41
353.42	3.10	0.45
353.43	3.18	0.49
353.44	3.26	0.54
353.45	3.34	0.58
353.46	3.42	0.63
353.47	3.50	0.68
353.48	3.57	0.73
353.49	3.65	0.79
353.50	3.72	0.84
353.51	3.79	0.90
353.52	3.86	0.96
353.53	3.93	1.02
353.54	4.00	1.08
353.55	4.06	1.14
353.56	4.13	1.21
353.57	4.19	1.27
353.58	4.25	1.34
353.59	4.31	1.41
353.60	4.37	1.48
353.61	4.43	1.55
353.62	4.49	1.62
353.63	4.54	1.70
353.64	4.60	1.77
353.65	4.65	1.85
353.66	4.70	1.93
353.67	4.75	2.01
353.68	4.81	2.09
353.69	4.86	2.17
353.70	4.90	2.25
353.71	4.95	2.33
353.72	5.00	2.41
353.73	5.05	2.50
353.74	5.09	2.58
353.75	5.13	2.67
353.76	5.18	2.76
353.77	5.22	2.84
353.78	5.26	2.93
353.79	5.30	3.02
353.80	5.34	3.11
353.81	5.38	3.20
353.82	5.42	3.29
353.83	5.45	3.38
353.84	5.49	3.47
353.85	5.53	3.56
353.86	5.56	3.65
353.87	5.59	3.75
353.88	5.63	3.84
353.89	5.66	3.93
353.90	5.69	4.02
353.91	5.72	4.11
353.92	5.75	4.21
353.93	5.78	4.30
353.94	5.80	4.39
353.95	5.83	4.48
353.96	5.86	4.57
353.97	5.88	4.66
353.98	5.90	4.76
353.99	5.93	4.85
354.00	5.95	4.94
354.01	5.97	5.02
354.02	5.99	5.11
354.03	6.01	5.20
354.04	6.03	5.29
354.05	6.05	5.37
354.06	6.06	5.46
354.07	6.08	5.54
354.08	6.09	5.63
354.09	6.11	5.71
354.10	6.12	5.79
354.11	6.13	5.87
354.12	6.15	5.95
354.13	6.16	6.03
354.14	6.16	6.10
354.15	6.17	6.18
354.16	6.18	6.25
354.17	6.19	6.32
354.18	6.19	6.39
354.19	6.19	6.46
354.20	6.20	6.52
354.21	6.20	6.58
354.22	**6.20**	6.64
354.23	6.20	6.70
354.24	6.19	6.76
354.25	6.19	6.81
354.26	6.19	6.86
354.27	6.18	6.91
354.28	6.17	6.95
354.29	6.16	7.00
354.30	6.15	7.03
354.31	6.14	7.07
354.32	6.12	7.10
354.33	6.10	7.12
354.34	6.08	7.14
354.35	6.06	7.16
354.36	6.04	7.17
354.37	6.01	**7.18**
354.38	5.98	7.17
354.39	5.94	7.16
354.40	5.90	7.15
354.41	5.86	7.12
354.42	5.80	7.07
354.43	5.73	7.01
354.44	5.63	6.90
354.45	5.44	6.67

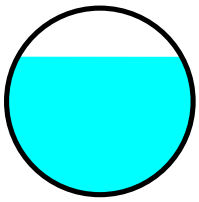
Summary for Reach DMH7: TO UGS

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 4.93" for 50-Year event
Inflow = 8.20 cfs @ 12.09 hrs, Volume= 27,829 cf
Outflow = 8.20 cfs @ 12.09 hrs, Volume= 27,829 cf, Atten= 0%, Lag= 0.0 min

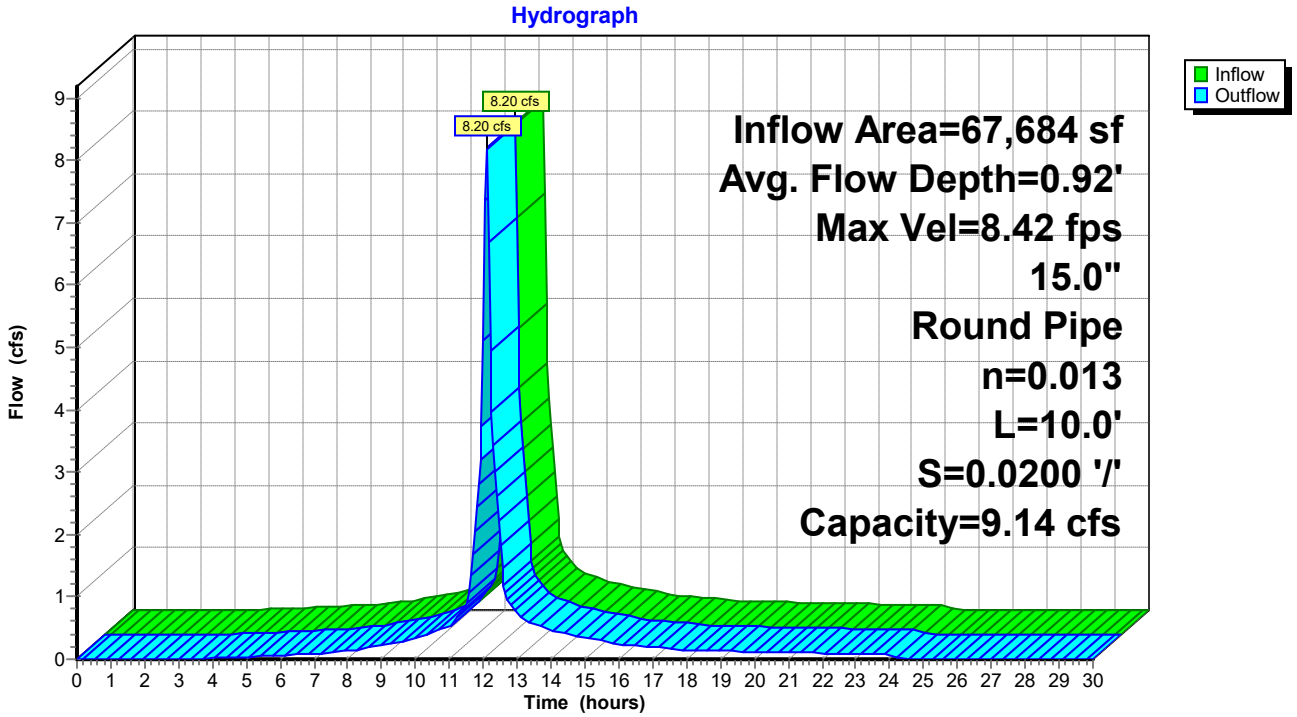
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.42 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.85 fps, Avg. Travel Time= 0.1 min

Peak Storage= 10 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.92'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.14 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 10.0' Slope= 0.0200 '/'
Inlet Invert= 351.00', Outlet Invert= 350.80'



Reach DMH7: TO UGS



Stage-Discharge for Reach DMH7: TO UGS

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.53	0.00
351.02	0.89	0.00
351.03	1.18	0.01
351.04	1.43	0.02
351.05	1.65	0.03
351.06	1.86	0.04
351.07	2.06	0.06
351.08	2.24	0.07
351.09	2.42	0.10
351.10	2.59	0.12
351.11	2.75	0.15
351.12	2.91	0.18
351.13	3.06	0.21
351.14	3.21	0.24
351.15	3.35	0.28
351.16	3.49	0.32
351.17	3.62	0.36
351.18	3.75	0.41
351.19	3.88	0.46
351.20	4.00	0.51
351.21	4.12	0.56
351.22	4.24	0.62
351.23	4.36	0.68
351.24	4.47	0.74
351.25	4.58	0.80
351.26	4.69	0.87
351.27	4.79	0.93
351.28	4.89	1.01
351.29	5.00	1.08
351.30	5.10	1.15
351.31	5.19	1.23
351.32	5.29	1.31
351.33	5.38	1.39
351.34	5.47	1.48
351.35	5.56	1.56
351.36	5.65	1.65
351.37	5.74	1.74
351.38	5.82	1.84
351.39	5.90	1.93
351.40	5.98	2.03
351.41	6.06	2.12
351.42	6.14	2.22
351.43	6.22	2.33
351.44	6.29	2.43
351.45	6.37	2.53
351.46	6.44	2.64
351.47	6.51	2.75
351.48	6.58	2.86
351.49	6.65	2.97
351.50	6.72	3.08
351.51	6.78	3.19
351.52	6.85	3.31
351.53	6.91	3.42
351.54	6.97	3.54
351.55	7.03	3.66
351.56	7.09	3.78
351.57	7.15	3.90
351.58	7.20	4.02
351.59	7.26	4.14
351.60	7.31	4.26
351.61	7.37	4.38
351.62	7.42	4.51
351.63	7.47	4.63
351.64	7.52	4.75
351.65	7.57	4.88
351.66	7.61	5.00
351.67	7.66	5.13
351.68	7.70	5.26
351.69	7.75	5.38
351.70	7.79	5.51
351.71	7.83	5.63
351.72	7.87	5.76
351.73	7.91	5.89
351.74	7.95	6.01
351.75	7.98	6.14
351.76	8.02	6.26
351.77	8.05	6.39
351.78	8.09	6.51
351.79	8.12	6.63
351.80	8.15	6.76
351.81	8.18	6.88
351.82	8.20	7.00
351.83	8.23	7.12
351.84	8.26	7.24
351.85	8.28	7.36
351.86	8.30	7.48
351.87	8.33	7.59
351.88	8.35	7.71
351.89	8.36	7.82
351.90	8.38	7.93
351.91	8.40	8.04
351.92	8.41	8.15
351.93	8.43	8.25
351.94	8.44	8.36
351.95	8.45	8.46
351.96	8.46	8.56
351.97	8.47	8.65
351.98	8.48	8.75
351.99	8.48	8.84
352.00	8.48	8.93
352.01	8.49	9.02
352.02	**8.49**	9.10
352.03	8.48	9.18
352.04	8.48	9.25
352.05	8.48	9.33
352.06	8.47	9.40
352.07	8.46	9.46
352.08	8.45	9.52
352.09	8.44	9.58
352.10	8.42	9.63
352.11	8.40	9.68
352.12	8.38	9.72
352.13	8.36	9.75
352.14	8.33	9.78
352.15	8.30	9.80
352.16	8.27	9.82
352.17	8.23	**9.83**
352.18	8.19	9.82
352.19	8.14	9.81
352.20	8.08	9.79
352.21	8.02	9.75
352.22	7.94	9.69
352.23	7.85	9.60
352.24	7.70	9.44
352.25	7.44	9.14

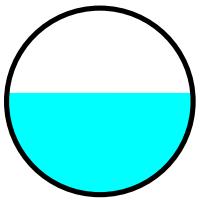
Summary for Reach DMH8: TO FE#B1

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 0.87" for 50-Year event
Inflow = 2.76 cfs @ 12.26 hrs, Volume= 4,909 cf
Outflow = 2.77 cfs @ 12.26 hrs, Volume= 4,909 cf, Atten= 0%, Lag= 0.1 min

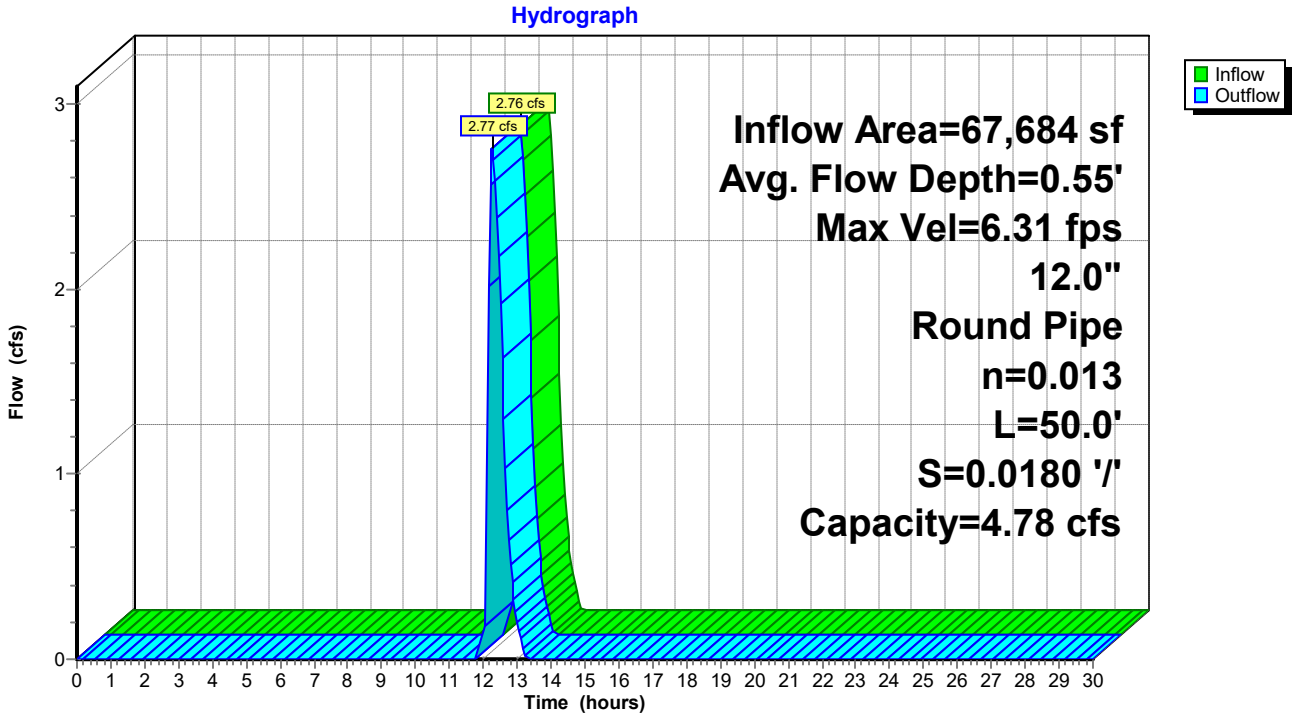
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.31 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.34 fps, Avg. Travel Time= 0.2 min

Peak Storage= 22 cf @ 12.26 hrs
Average Depth at Peak Storage= 0.55'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.78 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 50.0' Slope= 0.0180 '/'
Inlet Invert= 349.90', Outlet Invert= 349.00'



Reach DMH8: TO FE#B1



Stage-Discharge for Reach DMH8: TO FE#B1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
349.90	0.00	0.00
349.91	0.54	0.00
349.92	0.86	0.00
349.93	1.12	0.01
349.94	1.35	0.01
349.95	1.56	0.02
349.96	1.76	0.03
349.97	1.94	0.05
349.98	2.12	0.06
349.99	2.28	0.08
350.00	2.44	0.10
350.01	2.59	0.12
350.02	2.74	0.15
350.03	2.88	0.17
350.04	3.01	0.20
350.05	3.15	0.23
350.06	3.27	0.27
350.07	3.40	0.30
350.08	3.51	0.34
350.09	3.63	0.38
350.10	3.74	0.42
350.11	3.85	0.46
350.12	3.96	0.51
350.13	4.06	0.55
350.14	4.17	0.60
350.15	4.26	0.65
350.16	4.36	0.71
350.17	4.45	0.76
350.18	4.55	0.82
350.19	4.64	0.88
350.20	4.72	0.94
350.21	4.81	1.00
350.22	4.89	1.06
350.23	4.97	1.12
350.24	5.05	1.19
350.25	5.13	1.26
350.26	5.21	1.33
350.27	5.28	1.39
350.28	5.35	1.47
350.29	5.42	1.54
350.30	5.49	1.61
350.31	5.56	1.68
350.32	5.62	1.76
350.33	5.69	1.84
350.34	5.75	1.91
350.35	5.81	1.99
350.36	5.87	2.07
350.37	5.92	2.15
350.38	5.98	2.23
350.39	6.03	2.31
350.40	6.09	2.39
350.41	6.14	2.47
350.42	6.19	2.55
350.43	6.23	2.64
350.44	6.28	2.72
350.45	6.33	2.80
350.46	6.37	2.88
350.47	6.41	2.96
350.48	6.45	3.05
350.49	6.49	3.13
350.50	6.53	3.21
350.51	6.56	3.29
350.52	6.60	3.37
350.53	6.63	3.46
350.54	6.66	3.54
350.55	6.69	3.62
350.56	6.72	3.69
350.57	6.75	3.77
350.58	6.77	3.85
350.59	6.79	3.93
350.60	6.82	4.00
350.61	6.84	4.08
350.62	6.85	4.15
350.63	6.87	4.22
350.64	6.89	4.29
350.65	6.90	4.36
350.66	6.91	4.43
350.67	6.92	4.49
350.68	6.93	4.55
350.69	6.93	4.61
350.70	6.94	4.67
350.71	**6.94**	4.73
350.72	6.94	4.78
350.73	6.94	4.83
350.74	6.93	4.88
350.75	6.92	4.93
350.76	6.91	4.97
350.77	6.90	5.00
350.78	6.88	5.04
350.79	6.86	5.07
350.80	6.84	5.09
350.81	6.82	5.12
350.82	6.79	5.13
350.83	6.75	5.14
350.84	6.71	**5.14**
350.85	6.66	5.14
350.86	6.61	5.12
350.87	6.54	5.09
350.88	6.46	5.05
350.89	6.35	4.98
350.90	6.09	4.78

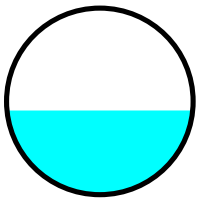
Summary for Reach DMHd1: TO DMH#8

Inflow Area = 21,252 sf, 56.67% Impervious, Inflow Depth = 2.97" for 50-Year event
Inflow = 1.65 cfs @ 12.08 hrs, Volume= 5,266 cf
Outflow = 1.63 cfs @ 12.09 hrs, Volume= 5,266 cf, Atten= 1%, Lag= 0.5 min

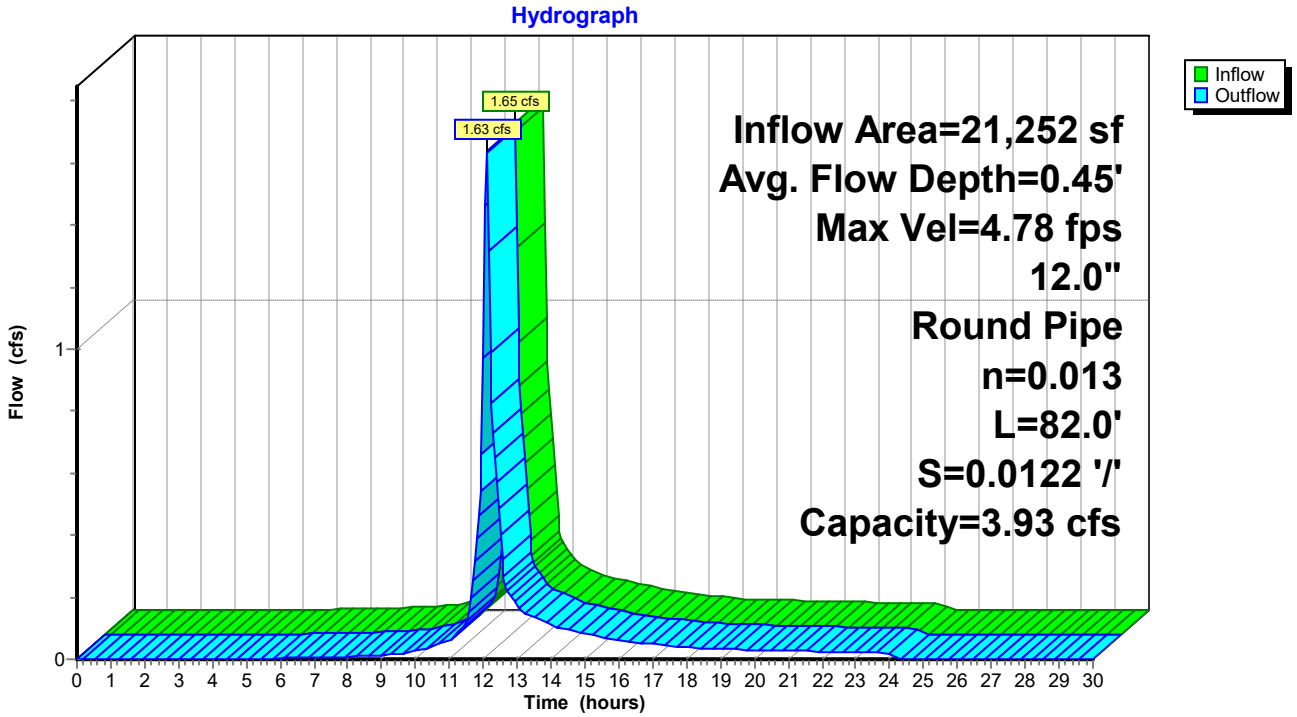
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.78 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 0.9 min

Peak Storage= 28 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.45'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.93 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 82.0' Slope= 0.0122 '/'
Inlet Invert= 352.10', Outlet Invert= 351.10'



Reach DMHd1: TO DMH#8



Stage-Discharge for Reach DMHd1: TO DMH#8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.10	0.00	0.00
352.11	0.45	0.00
352.12	0.71	0.00
352.13	0.92	0.01
352.14	1.11	0.01
352.15	1.29	0.02
352.16	1.45	0.03
352.17	1.60	0.04
352.18	1.74	0.05
352.19	1.88	0.07
352.20	2.01	0.08
352.21	2.13	0.10
352.22	2.25	0.12
352.23	2.37	0.14
352.24	2.48	0.17
352.25	2.59	0.19
352.26	2.69	0.22
352.27	2.79	0.25
352.28	2.89	0.28
352.29	2.99	0.31
352.30	3.08	0.34
352.31	3.17	0.38
352.32	3.26	0.42
352.33	3.35	0.46
352.34	3.43	0.50
352.35	3.51	0.54
352.36	3.59	0.58
352.37	3.67	0.63
352.38	3.74	0.67
352.39	3.82	0.72
352.40	3.89	0.77
352.41	3.96	0.82
352.42	4.03	0.87
352.43	4.09	0.93
352.44	4.16	0.98
352.45	4.22	1.03
352.46	4.29	1.09
352.47	4.35	1.15
352.48	4.41	1.21
352.49	4.46	1.27
352.50	4.52	1.33
352.51	4.57	1.39
352.52	4.63	1.45
352.53	4.68	1.51
352.54	4.73	1.57
352.55	4.78	1.64
352.56	4.83	1.70
352.57	4.88	1.77
352.58	4.92	1.83
352.59	4.97	1.90
352.60	5.01	1.97
352.61	5.05	2.03
352.62	5.09	2.10
352.63	5.13	2.17
352.64	5.17	2.24
352.65	5.21	2.30
352.66	5.24	2.37
352.67	5.28	2.44
352.68	5.31	2.51
352.69	5.34	2.58
352.70	5.37	2.64
352.71	5.40	2.71
352.72	5.43	2.78
352.73	5.46	2.84
352.74	5.48	2.91
352.75	5.51	2.98
352.76	5.53	3.04
352.77	5.55	3.11
352.78	5.57	3.17
352.79	5.59	3.23
352.80	5.61	3.29
352.81	5.63	3.36
352.82	5.64	3.42
352.83	5.65	3.47
352.84	5.67	3.53
352.85	5.68	3.59
352.86	5.69	3.64
352.87	5.70	3.70
352.88	5.70	3.75
352.89	5.71	3.80
352.90	5.71	3.85
352.91	**5.71**	3.89
352.92	5.71	3.94
352.93	5.71	3.98
352.94	5.70	4.02
352.95	5.70	4.05
352.96	5.69	4.09
352.97	5.68	4.12
352.98	5.67	4.15
352.99	5.65	4.17
353.00	5.63	4.19
353.01	5.61	4.21
353.02	5.59	4.22
353.03	5.56	4.23
353.04	5.52	**4.23**
353.05	5.49	4.23
353.06	5.44	4.22
353.07	5.39	4.19
353.08	5.32	4.16
353.09	5.23	4.10
353.10	5.01	3.93

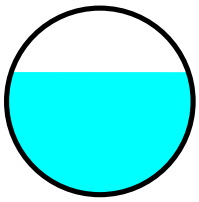
Summary for Reach DMHD2: TO DMH#7

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 3.90" for 50-Year event
Inflow = 5.56 cfs @ 12.09 hrs, Volume= 18,392 cf
Outflow = 5.56 cfs @ 12.09 hrs, Volume= 18,392 cf, Atten= 0%, Lag= 0.0 min

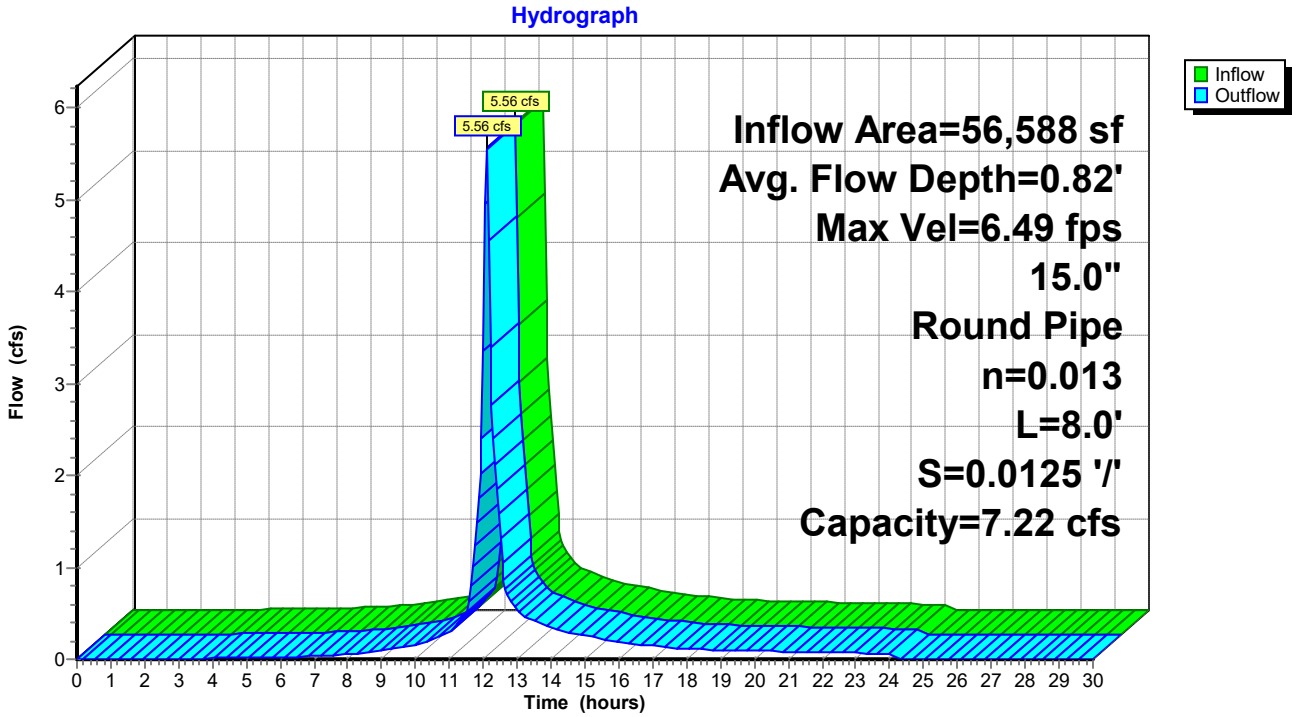
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.49 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.07 fps, Avg. Travel Time= 0.1 min

Peak Storage= 7 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.82'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.22 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 8.0' Slope= 0.0125 '/'
Inlet Invert= 350.40', Outlet Invert= 350.30'



Reach DMHD2: TO DMH#7



Stage-Discharge for Reach DMHD2: TO DMH#7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.40	0.00	0.00
350.41	0.42	0.00
350.42	0.71	0.00
350.43	0.93	0.01
350.44	1.13	0.01
350.45	1.31	0.02
350.46	1.47	0.03
350.47	1.63	0.04
350.48	1.77	0.06
350.49	1.91	0.08
350.50	2.05	0.09
350.51	2.18	0.12
350.52	2.30	0.14
350.53	2.42	0.16
350.54	2.54	0.19
350.55	2.65	0.22
350.56	2.76	0.25
350.57	2.86	0.29
350.58	2.97	0.32
350.59	3.07	0.36
350.60	3.16	0.40
350.61	3.26	0.44
350.62	3.35	0.49
350.63	3.44	0.53
350.64	3.53	0.58
350.65	3.62	0.63
350.66	3.70	0.68
350.67	3.79	0.74
350.68	3.87	0.80
350.69	3.95	0.85
350.70	4.03	0.91
350.71	4.10	0.97
350.72	4.18	1.04
350.73	4.25	1.10
350.74	4.33	1.17
350.75	4.40	1.24
350.76	4.47	1.31
350.77	4.53	1.38
350.78	4.60	1.45
350.79	4.67	1.53
350.80	4.73	1.60
350.81	4.79	1.68
350.82	4.86	1.76
350.83	4.92	1.84
350.84	4.98	1.92
350.85	5.03	2.00
350.86	5.09	2.09
350.87	5.15	2.17
350.88	5.20	2.26
350.89	5.26	2.35
350.90	5.31	2.43
350.91	5.36	2.52
350.92	5.41	2.61
350.93	5.46	2.71
350.94	5.51	2.80
350.95	5.56	2.89
350.96	5.61	2.98
350.97	5.65	3.08
350.98	5.70	3.17
350.99	5.74	3.27
351.00	5.78	3.37
351.01	5.82	3.46
351.02	5.86	3.56
351.03	5.90	3.66
351.04	5.94	3.76
351.05	5.98	3.86
351.06	6.02	3.96
351.07	6.06	4.06
351.08	6.09	4.16
351.09	6.12	4.26
351.10	6.16	4.35
351.11	6.19	4.45
351.12	6.22	4.55
351.13	6.25	4.65
351.14	6.28	4.75
351.15	6.31	4.85
351.16	6.34	4.95
351.17	6.37	5.05
351.18	6.39	5.15
351.19	6.42	5.25
351.20	6.44	5.34
351.21	6.46	5.44
351.22	6.49	5.53
351.23	6.51	5.63
351.24	6.53	5.72
351.25	6.55	5.82
351.26	6.56	5.91
351.27	6.58	6.00
351.28	6.60	6.09
351.29	6.61	6.18
351.30	6.63	6.27
351.31	6.64	6.36
351.32	6.65	6.44
351.33	6.66	6.52
351.34	6.67	6.61
351.35	6.68	6.69
351.36	6.69	6.76
351.37	6.70	6.84
351.38	6.70	6.92
351.39	6.70	6.99
351.40	6.71	7.06
351.41	6.71	7.13
351.42	**6.71**	7.19
351.43	6.71	7.26
351.44	6.71	7.32
351.45	6.70	7.37
351.46	6.70	7.43
351.47	6.69	7.48
351.48	6.68	7.53
351.49	6.67	7.57
351.50	6.66	7.61
351.51	6.64	7.65
351.52	6.63	7.68
351.53	6.61	7.71
351.54	6.59	7.73
351.55	6.56	7.75
351.56	6.54	7.76
351.57	6.51	**7.77**
351.58	6.47	7.77
351.59	6.43	7.76
351.60	6.39	7.74
351.61	6.34	7.71
351.62	6.28	7.66
351.63	6.21	7.59
351.64	6.09	7.46
351.65	5.89	7.22

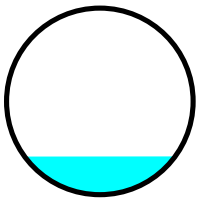
Summary for Reach DMHd3: TO DMH#2

Inflow Area = 6,527 sf, 84.22% Impervious, Inflow Depth = 4.61" for 50-Year event
Inflow = 0.74 cfs @ 12.08 hrs, Volume= 2,509 cf
Outflow = 0.74 cfs @ 12.09 hrs, Volume= 2,509 cf, Atten= 0%, Lag= 0.1 min

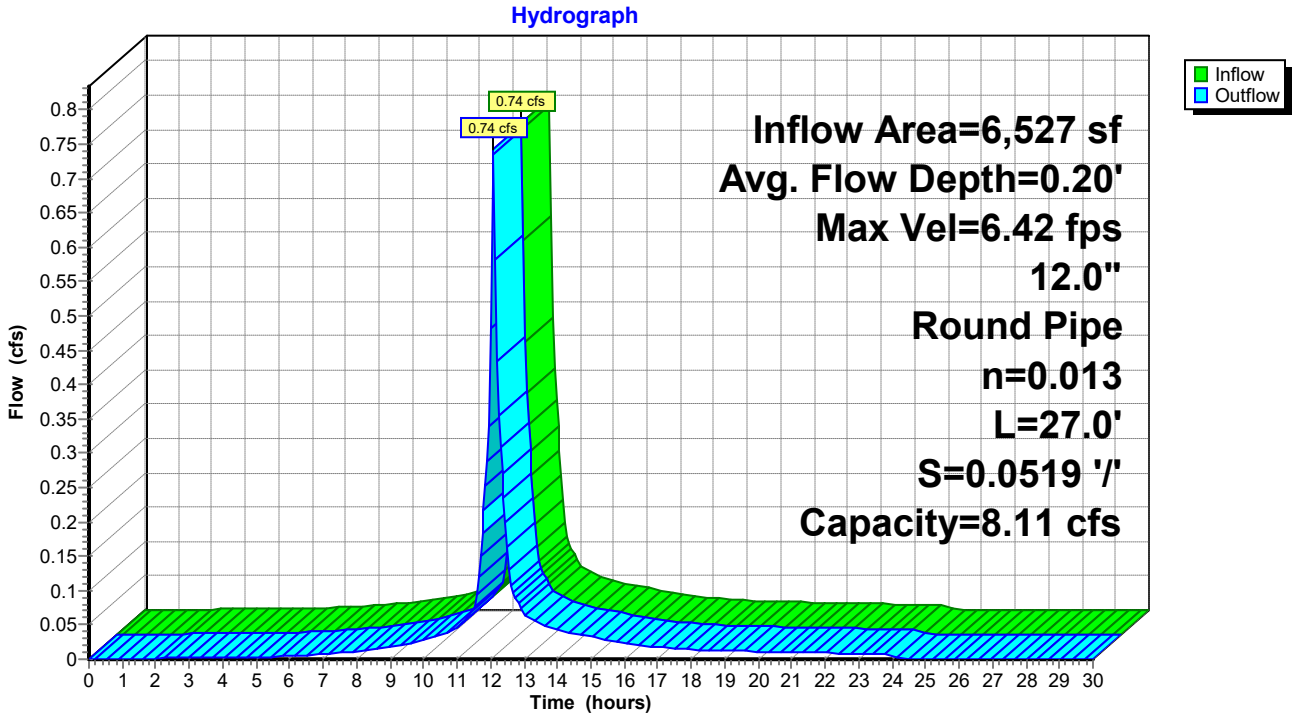
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.42 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.01 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.20'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.11 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 27.0' Slope= 0.0519 '/'
Inlet Invert= 352.40', Outlet Invert= 351.00'



Reach DMHd3: TO DMH#2



Stage-Discharge for Reach DMHd3: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.40	0.00	0.00
352.41	0.92	0.00
352.42	1.45	0.01
352.43	1.90	0.01
352.44	2.29	0.02
352.45	2.65	0.04
352.46	2.99	0.06
352.47	3.30	0.08
352.48	3.59	0.11
352.49	3.88	0.14
352.50	4.14	0.17
352.51	4.40	0.21
352.52	4.65	0.25
352.53	4.89	0.29
352.54	5.12	0.34
352.55	5.34	0.39
352.56	5.55	0.45
352.57	5.76	0.51
352.58	5.96	0.57
352.59	6.16	0.64
352.60	6.35	0.71
352.61	6.54	0.78
352.62	6.72	0.86
352.63	6.90	0.94
352.64	7.07	1.02
352.65	7.24	1.11
352.66	7.40	1.20
352.67	7.56	1.29
352.68	7.72	1.39
352.69	7.87	1.49
352.70	8.02	1.59
352.71	8.16	1.69
352.72	8.30	1.80
352.73	8.44	1.91
352.74	8.58	2.02
352.75	8.71	2.13
352.76	8.84	2.25
352.77	8.96	2.37
352.78	9.08	2.49
352.79	9.20	2.61
352.80	9.32	2.73
352.81	9.43	2.86
352.82	9.54	2.99
352.83	9.65	3.12
352.84	9.76	3.25
352.85	9.86	3.38
352.86	9.96	3.51
352.87	10.05	3.65
352.88	10.15	3.78
352.89	10.24	3.92
352.90	10.33	4.06
352.91	10.42	4.19
352.92	10.50	4.33
352.93	10.58	4.47
352.94	10.66	4.61
352.95	10.74	4.75
352.96	10.81	4.89
352.97	10.88	5.03
352.98	10.95	5.17
352.99	11.01	5.31
353.00	11.08	5.45
353.01	11.14	5.59
353.02	11.20	5.73
353.03	11.25	5.86
353.04	11.31	6.00
353.05	11.36	6.14
353.06	11.40	6.27
353.07	11.45	6.40
353.08	11.49	6.53
353.09	11.53	6.66
353.10	11.57	6.79
353.11	11.60	6.92
353.12	11.63	7.04
353.13	11.66	7.16
353.14	11.69	7.28
353.15	11.71	7.40
353.16	11.73	7.51
353.17	11.74	7.62
353.18	11.76	7.73
353.19	11.77	7.83
353.20	11.77	7.93
353.21	**11.78**	8.03
353.22	11.78	8.12
353.23	11.77	8.20
353.24	11.76	8.28
353.25	11.75	8.36
353.26	11.73	8.43
353.27	11.71	8.49
353.28	11.68	8.55
353.29	11.65	8.60
353.30	11.61	8.65
353.31	11.57	8.68
353.32	11.52	8.71
353.33	11.46	8.72
353.34	11.39	**8.73**
353.35	11.31	8.72
353.36	11.22	8.69
353.37	11.11	8.65
353.38	10.97	8.57
353.39	10.78	8.45
353.40	10.33	8.11

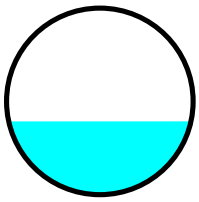
Summary for Reach DMHD4: TO DMH#2

Inflow Area = 9,322 sf, 78.29% Impervious, Inflow Depth = 4.23" for 50-Year event
Inflow = 1.01 cfs @ 12.08 hrs, Volume= 3,289 cf
Outflow = 0.99 cfs @ 12.10 hrs, Volume= 3,289 cf, Atten= 2%, Lag= 1.2 min

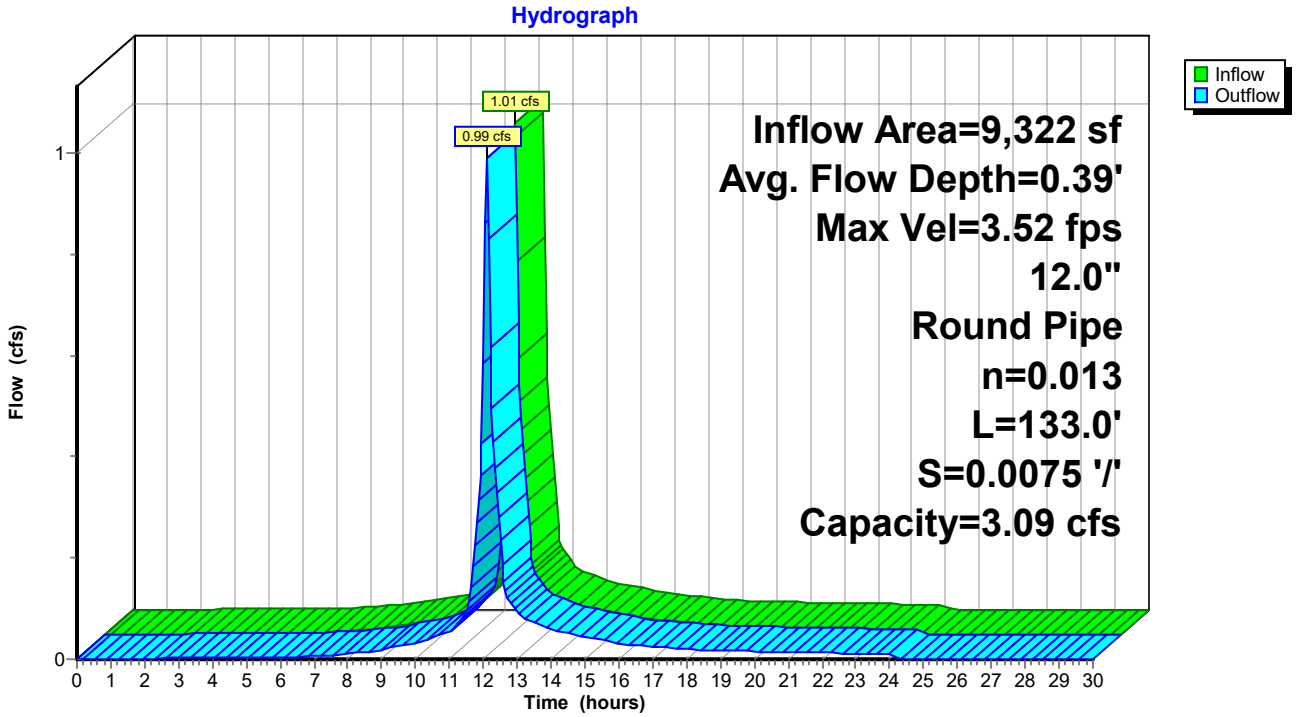
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.52 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.08 fps, Avg. Travel Time= 2.1 min

Peak Storage= 38 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.39'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.09 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 133.0' Slope= 0.0075 '/'
Inlet Invert= 351.50', Outlet Invert= 350.50'



Reach DMHD4: TO DMH#2



Stage-Discharge for Reach DMHD4: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.50	0.00	0.00
351.51	0.35	0.00
351.52	0.55	0.00
351.53	0.72	0.00
351.54	0.87	0.01
351.55	1.01	0.01
351.56	1.14	0.02
351.57	1.26	0.03
351.58	1.37	0.04
351.59	1.48	0.05
351.60	1.58	0.06
351.61	1.68	0.08
351.62	1.77	0.09
351.63	1.86	0.11
351.64	1.95	0.13
351.65	2.03	0.15
351.66	2.11	0.17
351.67	2.19	0.19
351.68	2.27	0.22
351.69	2.35	0.24
351.70	2.42	0.27
351.71	2.49	0.30
351.72	2.56	0.33
351.73	2.63	0.36
351.74	2.69	0.39
351.75	2.76	0.42
351.76	2.82	0.46
351.77	2.88	0.49
351.78	2.94	0.53
351.79	3.00	0.57
351.80	3.05	0.60
351.81	3.11	0.64
351.82	3.16	0.69
351.83	3.21	0.73
351.84	3.27	0.77
351.85	3.32	0.81
351.86	3.36	0.86
351.87	3.41	0.90
351.88	3.46	0.95
351.89	3.50	0.99
351.90	3.55	1.04
351.91	3.59	1.09
351.92	3.63	1.14
351.93	3.68	1.19
351.94	3.72	1.24
351.95	3.75	1.29
351.96	3.79	1.34
351.97	3.83	1.39
351.98	3.86	1.44
351.99	3.90	1.49
352.00	3.93	1.54
352.01	3.97	1.60
352.02	4.00	1.65
352.03	4.03	1.70
352.04	4.06	1.76
352.05	4.09	1.81
352.06	4.12	1.86
352.07	4.14	1.92
352.08	4.17	1.97
352.09	4.19	2.02
352.10	4.22	2.08
352.11	4.24	2.13
352.12	4.26	2.18
352.13	4.28	2.23
352.14	4.30	2.29
352.15	4.32	2.34
352.16	4.34	2.39
352.17	4.36	2.44
352.18	4.38	2.49
352.19	4.39	2.54
352.20	4.40	2.59
352.21	4.42	2.63
352.22	4.43	2.68
352.23	4.44	2.73
352.24	4.45	2.77
352.25	4.46	2.82
352.26	4.47	2.86
352.27	4.47	2.90
352.28	4.48	2.94
352.29	4.48	2.98
352.30	4.48	3.02
352.31	**4.48**	3.06
352.32	4.48	3.09
352.33	4.48	3.12
352.34	4.48	3.15
352.35	4.47	3.18
352.36	4.47	3.21
352.37	4.46	3.23
352.38	4.45	3.26
352.39	4.44	3.28
352.40	4.42	3.29
352.41	4.41	3.31
352.42	4.39	3.32
352.43	4.36	3.32
352.44	4.34	**3.32**
352.45	4.31	3.32
352.46	4.27	3.31
352.47	4.23	3.29
352.48	4.18	3.26
352.49	4.11	3.22
352.50	3.93	3.09

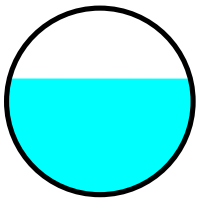
Summary for Reach DMHD5: TO DMH#2

Inflow Area = 19,181 sf, 81.45% Impervious, Inflow Depth = 4.42" for 50-Year event
Inflow = 2.14 cfs @ 12.09 hrs, Volume= 7,069 cf
Outflow = 2.12 cfs @ 12.09 hrs, Volume= 7,069 cf, Atten= 1%, Lag= 0.5 min

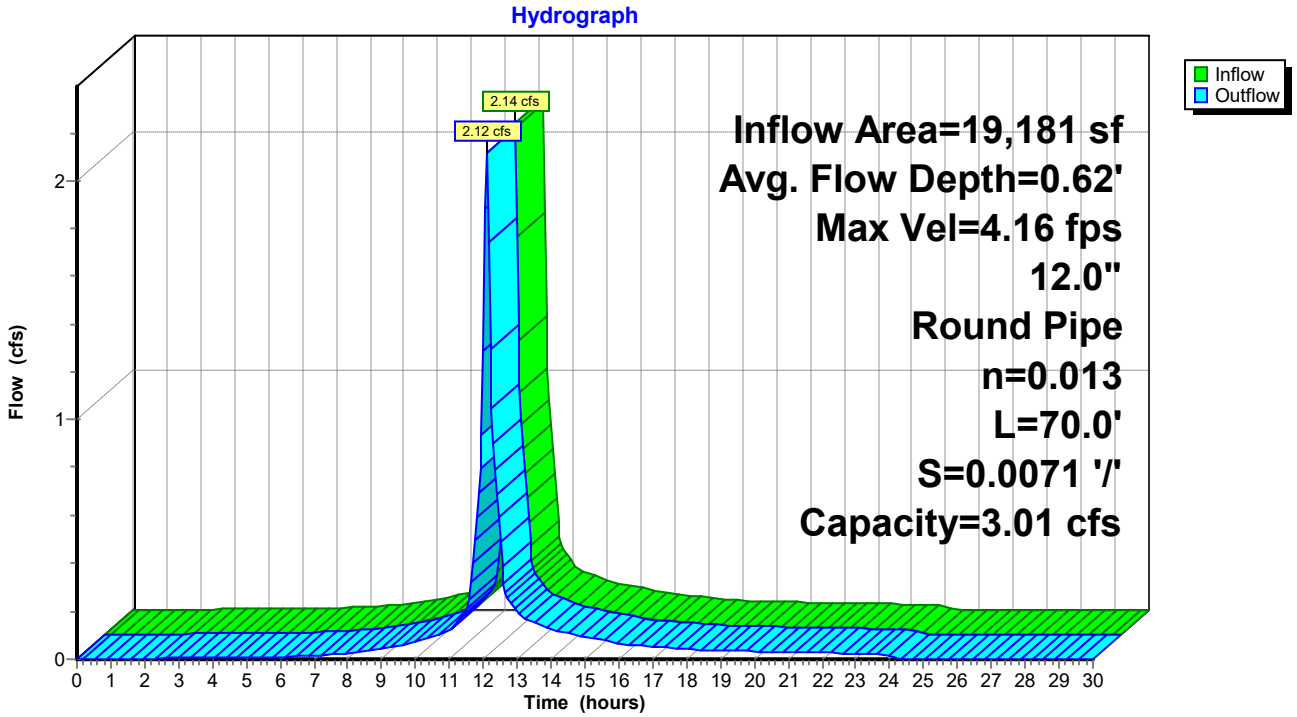
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.16 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.33 fps, Avg. Travel Time= 0.9 min

Peak Storage= 36 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.62'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.01 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 70.0' Slope= 0.0071 '/'
Inlet Invert= 350.90', Outlet Invert= 350.40'



Reach DMHD5: TO DMH#2



Stage-Discharge for Reach DMHD5: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.90	0.00	0.00
350.91	0.34	0.00
350.92	0.54	0.00
350.93	0.71	0.00
350.94	0.85	0.01
350.95	0.98	0.01
350.96	1.11	0.02
350.97	1.22	0.03
350.98	1.33	0.04
350.99	1.44	0.05
351.00	1.54	0.06
351.01	1.63	0.08
351.02	1.73	0.09
351.03	1.81	0.11
351.04	1.90	0.13
351.05	1.98	0.15
351.06	2.06	0.17
351.07	2.14	0.19
351.08	2.21	0.21
351.09	2.29	0.24
351.10	2.36	0.26
351.11	2.43	0.29
351.12	2.49	0.32
351.13	2.56	0.35
351.14	2.62	0.38
351.15	2.69	0.41
351.16	2.75	0.45
351.17	2.81	0.48
351.18	2.86	0.52
351.19	2.92	0.55
351.20	2.98	0.59
351.21	3.03	0.63
351.22	3.08	0.67
351.23	3.13	0.71
351.24	3.18	0.75
351.25	3.23	0.79
351.26	3.28	0.83
351.27	3.33	0.88
351.28	3.37	0.92
351.29	3.42	0.97
351.30	3.46	1.01
351.31	3.50	1.06
351.32	3.54	1.11
351.33	3.58	1.16
351.34	3.62	1.21
351.35	3.66	1.25
351.36	3.70	1.30
351.37	3.73	1.35
351.38	3.77	1.40
351.39	3.80	1.45
351.40	3.83	1.51
351.41	3.87	1.56
351.42	3.90	1.61
351.43	3.93	1.66
351.44	3.96	1.71
351.45	3.98	1.76
351.46	4.01	1.82
351.47	4.04	1.87
351.48	4.06	1.92
351.49	4.09	1.97
351.50	4.11	2.02
351.51	4.13	2.07
351.52	4.16	2.13
351.53	4.18	2.18
351.54	4.20	2.23
351.55	4.21	2.28
351.56	4.23	2.33
351.57	4.25	2.38
351.58	4.26	2.43
351.59	4.28	2.47
351.60	4.29	2.52
351.61	4.31	2.57
351.62	4.32	2.61
351.63	4.33	2.66
351.64	4.34	2.70
351.65	4.35	2.75
351.66	4.35	2.79
351.67	4.36	2.83
351.68	4.36	2.87
351.69	4.37	2.91
351.70	4.37	2.94
351.71	**4.37**	2.98
351.72	4.37	3.01
351.73	4.37	3.04
351.74	4.37	3.07
351.75	4.36	3.10
351.76	4.35	3.13
351.77	4.35	3.15
351.78	4.34	3.17
351.79	4.32	3.19
351.80	4.31	3.21
351.81	4.29	3.22
351.82	4.28	3.23
351.83	4.25	3.24
351.84	4.23	**3.24**
351.85	4.20	3.24
351.86	4.16	3.23
351.87	4.12	3.21
351.88	4.07	3.18
351.89	4.00	3.14
351.90	3.83	3.01

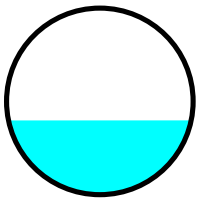
Summary for Reach DMHD6: TO DMH#5

Inflow Area = 8,503 sf, 83.97% Impervious, Inflow Depth = 4.58" for 50-Year event
Inflow = 0.98 cfs @ 12.08 hrs, Volume= 3,248 cf
Outflow = 0.97 cfs @ 12.09 hrs, Volume= 3,248 cf, Atten= 1%, Lag= 0.6 min

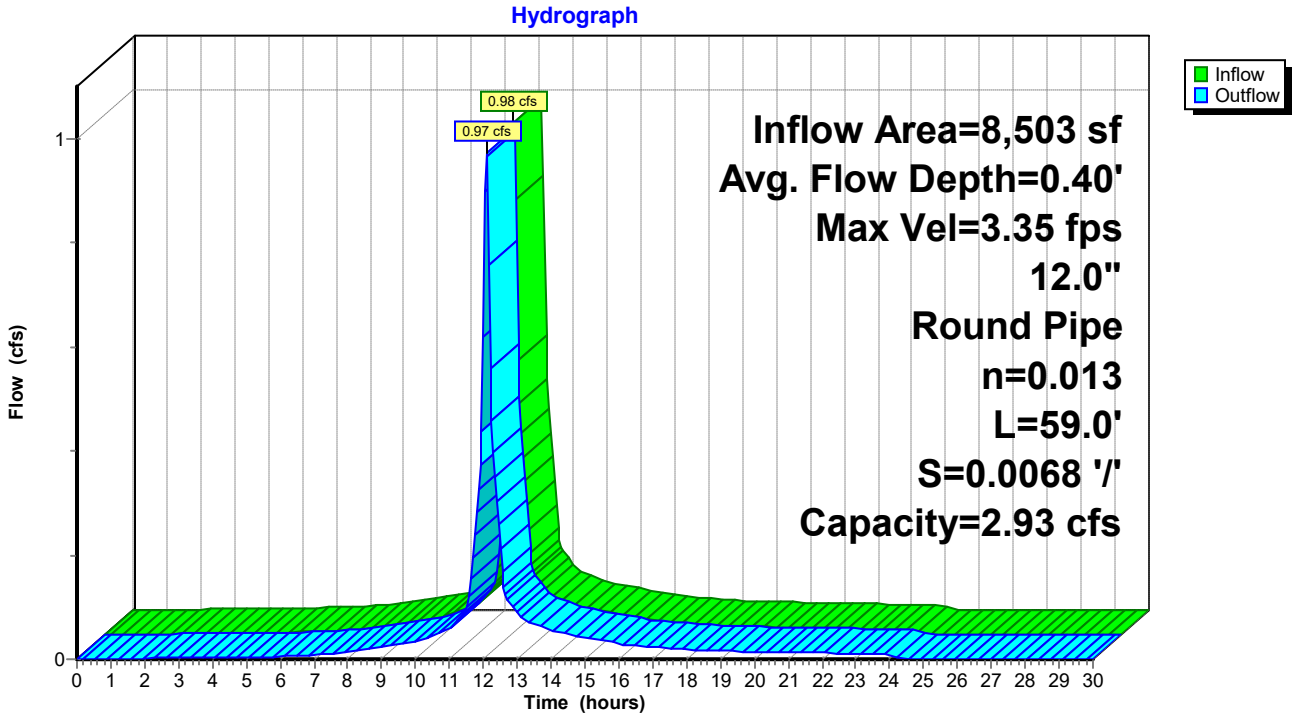
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.35 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.05 fps, Avg. Travel Time= 0.9 min

Peak Storage= 17 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.40'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.93 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 59.0' Slope= 0.0068 '/'
Inlet Invert= 351.40', Outlet Invert= 351.00'



Reach DMHD6: TO DMH#5



Stage-Discharge for Reach DMHD6: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.40	0.00	0.00
351.41	0.33	0.00
351.42	0.53	0.00
351.43	0.69	0.00
351.44	0.83	0.01
351.45	0.96	0.01
351.46	1.08	0.02
351.47	1.19	0.03
351.48	1.30	0.04
351.49	1.40	0.05
351.50	1.50	0.06
351.51	1.59	0.07
351.52	1.68	0.09
351.53	1.77	0.11
351.54	1.85	0.12
351.55	1.93	0.14
351.56	2.01	0.16
351.57	2.08	0.18
351.58	2.16	0.21
351.59	2.23	0.23
351.60	2.30	0.26
351.61	2.36	0.28
351.62	2.43	0.31
351.63	2.49	0.34
351.64	2.56	0.37
351.65	2.62	0.40
351.66	2.68	0.43
351.67	2.73	0.47
351.68	2.79	0.50
351.69	2.85	0.54
351.70	2.90	0.57
351.71	2.95	0.61
351.72	3.00	0.65
351.73	3.05	0.69
351.74	3.10	0.73
351.75	3.15	0.77
351.76	3.20	0.81
351.77	3.24	0.86
351.78	3.28	0.90
351.79	3.33	0.94
351.80	3.37	0.99
351.81	3.41	1.03
351.82	3.45	1.08
351.83	3.49	1.13
351.84	3.53	1.17
351.85	3.56	1.22
351.86	3.60	1.27
351.87	3.64	1.32
351.88	3.67	1.37
351.89	3.70	1.42
351.90	3.74	1.47
351.91	3.77	1.52
351.92	3.80	1.57
351.93	3.83	1.62
351.94	3.85	1.67
351.95	3.88	1.72
351.96	3.91	1.77
351.97	3.93	1.82
351.98	3.96	1.87
351.99	3.98	1.92
352.00	4.01	1.97
352.01	4.03	2.02
352.02	4.05	2.07
352.03	4.07	2.12
352.04	4.09	2.17
352.05	4.11	2.22
352.06	4.12	2.27
352.07	4.14	2.32
352.08	4.15	2.36
352.09	4.17	2.41
352.10	4.18	2.46
352.11	4.19	2.50
352.12	4.21	2.55
352.13	4.22	2.59
352.14	4.23	2.63
352.15	4.23	2.68
352.16	4.24	2.72
352.17	4.25	2.76
352.18	4.25	2.79
352.19	4.25	2.83
352.20	4.26	2.87
352.21	**4.26**	2.90
352.22	4.26	2.93
352.23	4.26	2.97
352.24	4.25	3.00
352.25	4.25	3.02
352.26	4.24	3.05
352.27	4.23	3.07
352.28	4.22	3.09
352.29	4.21	3.11
352.30	4.20	3.13
352.31	4.18	3.14
352.32	4.16	3.15
352.33	4.14	3.15
352.34	4.12	**3.16**
352.35	4.09	3.15
352.36	4.06	3.14
352.37	4.02	3.13
352.38	3.97	3.10
352.39	3.90	3.06
352.40	3.74	2.93

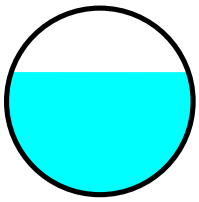
Summary for Reach DMHD7: TO UGS#1

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 3.90" for 50-Year event
Inflow = 5.56 cfs @ 12.09 hrs, Volume= 18,392 cf
Outflow = 5.55 cfs @ 12.09 hrs, Volume= 18,392 cf, Atten= 0%, Lag= 0.1 min

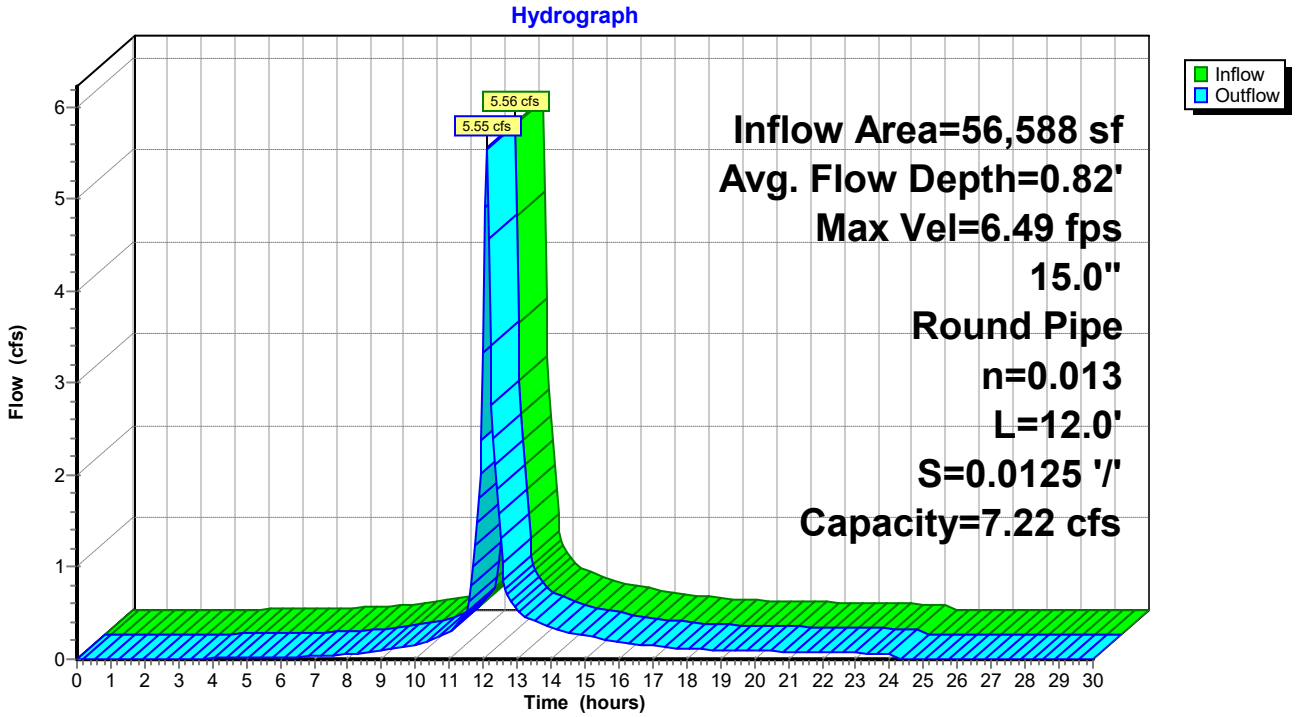
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.49 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.06 fps, Avg. Travel Time= 0.1 min

Peak Storage= 10 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.82'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.22 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 12.0' Slope= 0.0125 '/'
Inlet Invert= 350.15', Outlet Invert= 350.00'



Reach DMHD7: TO UGS#1



Stage-Discharge for Reach DMHD7: TO UGS#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.15	0.00	0.00
350.16	0.42	0.00
350.17	0.71	0.00
350.18	0.93	0.01
350.19	1.13	0.01
350.20	1.31	0.02
350.21	1.47	0.03
350.22	1.63	0.04
350.23	1.77	0.06
350.24	1.91	0.08
350.25	2.05	0.09
350.26	2.18	0.12
350.27	2.30	0.14
350.28	2.42	0.16
350.29	2.54	0.19
350.30	2.65	0.22
350.31	2.76	0.25
350.32	2.86	0.29
350.33	2.97	0.32
350.34	3.07	0.36
350.35	3.16	0.40
350.36	3.26	0.44
350.37	3.35	0.49
350.38	3.44	0.53
350.39	3.53	0.58
350.40	3.62	0.63
350.41	3.70	0.68
350.42	3.79	0.74
350.43	3.87	0.80
350.44	3.95	0.85
350.45	4.03	0.91
350.46	4.10	0.97
350.47	4.18	1.04
350.48	4.25	1.10
350.49	4.33	1.17
350.50	4.40	1.24
350.51	4.47	1.31
350.52	4.53	1.38
350.53	4.60	1.45
350.54	4.67	1.53
350.55	4.73	1.60
350.56	4.79	1.68
350.57	4.86	1.76
350.58	4.92	1.84
350.59	4.98	1.92
350.60	5.03	2.00
350.61	5.09	2.09
350.62	5.15	2.17
350.63	5.20	2.26
350.64	5.26	2.35
350.65	5.31	2.43
350.66	5.36	2.52
350.67	5.41	2.61
350.68	5.46	2.71
350.69	5.51	2.80
350.70	5.56	2.89
350.71	5.61	2.98
350.72	5.65	3.08
350.73	5.70	3.17
350.74	5.74	3.27
350.75	5.78	3.37
350.76	5.82	3.46
350.77	5.86	3.56
350.78	5.90	3.66
350.79	5.94	3.76
350.80	5.98	3.86
350.81	6.02	3.96
350.82	6.06	4.06
350.83	6.09	4.16
350.84	6.12	4.26
350.85	6.16	4.35
350.86	6.19	4.45
350.87	6.22	4.55
350.88	6.25	4.65
350.89	6.28	4.75
350.90	6.31	4.85
350.91	6.34	4.95
350.92	6.37	5.05
350.93	6.39	5.15
350.94	6.42	5.25
350.95	6.44	5.34
350.96	6.46	5.44
350.97	6.49	5.53
350.98	6.51	5.63
350.99	6.53	5.72
351.00	6.55	5.82
351.01	6.56	5.91
351.02	6.58	6.00
351.03	6.60	6.09
351.04	6.61	6.18
351.05	6.63	6.27
351.06	6.64	6.36
351.07	6.65	6.44
351.08	6.66	6.52
351.09	6.67	6.61
351.10	6.68	6.69
351.11	6.69	6.76
351.12	6.70	6.84
351.13	6.70	6.92
351.14	6.70	6.99
351.15	6.71	7.06
351.16	6.71	7.13
351.17	**6.71**	7.19
351.18	6.71	7.26
351.19	6.71	7.32
351.20	6.70	7.37
351.21	6.70	7.43
351.22	6.69	7.48
351.23	6.68	7.53
351.24	6.67	7.57
351.25	6.66	7.61
351.26	6.64	7.65
351.27	6.63	7.68
351.28	6.61	7.71
351.29	6.59	7.73
351.30	6.56	7.75
351.31	6.54	7.76
351.32	6.51	**7.77**
351.33	6.47	7.77
351.34	6.43	7.76
351.35	6.39	7.74
351.36	6.34	7.71
351.37	6.28	7.66
351.38	6.21	7.59
351.39	6.09	7.46
351.40	5.89	7.22

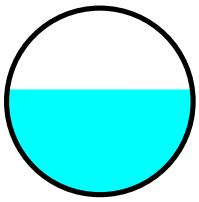
Summary for Reach DMHD8: TO DMH#2

Inflow Area = 28,085 sf, 64.50% Impervious, Inflow Depth = 3.43" for 50-Year event
Inflow = 2.47 cfs @ 12.09 hrs, Volume= 8,033 cf
Outflow = 2.46 cfs @ 12.09 hrs, Volume= 8,033 cf, Atten= 0%, Lag= 0.2 min

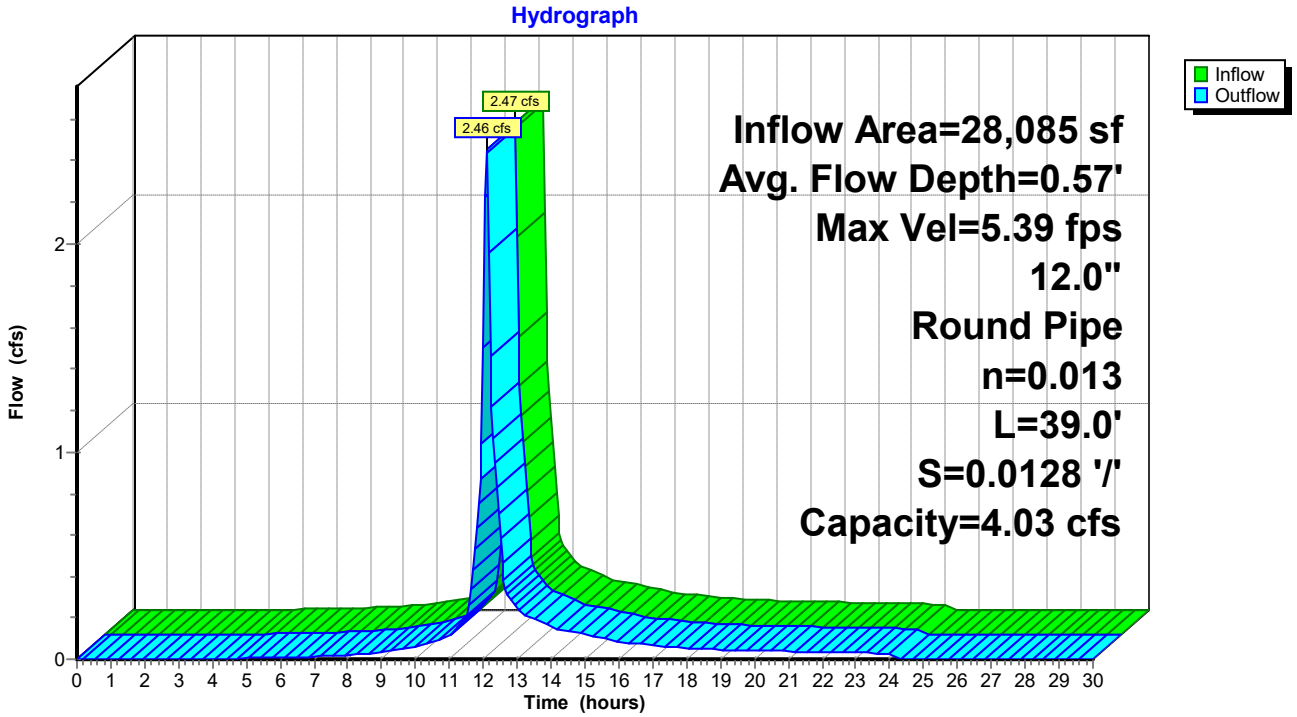
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.39 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.79 fps, Avg. Travel Time= 0.4 min

Peak Storage= 18 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.57'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.03 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 39.0' Slope= 0.0128 '/'
Inlet Invert= 351.00', Outlet Invert= 350.50'



Reach DMHD8: TO DMH#2



Stage-Discharge for Reach DMHD8: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.46	0.00
351.02	0.72	0.00
351.03	0.94	0.01
351.04	1.14	0.01
351.05	1.32	0.02
351.06	1.49	0.03
351.07	1.64	0.04
351.08	1.79	0.05
351.09	1.93	0.07
351.10	2.06	0.08
351.11	2.19	0.10
351.12	2.31	0.12
351.13	2.43	0.15
351.14	2.54	0.17
351.15	2.65	0.20
351.16	2.76	0.22
351.17	2.87	0.25
351.18	2.97	0.29
351.19	3.06	0.32
351.20	3.16	0.35
351.21	3.25	0.39
351.22	3.34	0.43
351.23	3.43	0.47
351.24	3.52	0.51
351.25	3.60	0.55
351.26	3.68	0.60
351.27	3.76	0.64
351.28	3.84	0.69
351.29	3.91	0.74
351.30	3.99	0.79
351.31	4.06	0.84
351.32	4.13	0.89
351.33	4.20	0.95
351.34	4.26	1.00
351.35	4.33	1.06
351.36	4.39	1.12
351.37	4.46	1.18
351.38	4.52	1.24
351.39	4.58	1.30
351.40	4.63	1.36
351.41	4.69	1.42
351.42	4.75	1.49
351.43	4.80	1.55
351.44	4.85	1.61
351.45	4.90	1.68
351.46	4.95	1.75
351.47	5.00	1.81
351.48	5.05	1.88
351.49	5.09	1.95
351.50	5.14	2.02
351.51	5.18	2.09
351.52	5.22	2.15
351.53	5.26	2.22
351.54	5.30	2.29
351.55	5.34	2.36
351.56	5.37	2.43
351.57	5.41	2.50
351.58	5.44	2.57
351.59	5.48	2.64
351.60	5.51	2.71
351.61	5.54	2.78
351.62	5.57	2.85
351.63	5.60	2.92
351.64	5.62	2.98
351.65	5.65	3.05
351.66	5.67	3.12
351.67	5.69	3.18
351.68	5.71	3.25
351.69	5.73	3.31
351.70	5.75	3.38
351.71	5.77	3.44
351.72	5.78	3.50
351.73	5.80	3.56
351.74	5.81	3.62
351.75	5.82	3.68
351.76	5.83	3.73
351.77	5.84	3.79
351.78	5.85	3.84
351.79	5.85	3.89
351.80	5.85	3.94
351.81	**5.86**	3.99
351.82	5.86	4.04
351.83	5.85	4.08
351.84	5.85	4.12
351.85	5.84	4.16
351.86	5.83	4.19
351.87	5.82	4.22
351.88	5.81	4.25
351.89	5.79	4.28
351.90	5.77	4.30
351.91	5.75	4.32
351.92	5.73	4.33
351.93	5.70	4.34
351.94	5.66	**4.34**
351.95	5.62	4.33
351.96	5.58	4.32
351.97	5.52	4.30
351.98	5.45	4.26
351.99	5.36	4.20
352.00	5.14	4.03

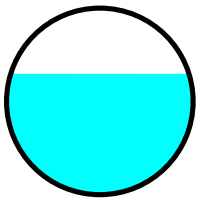
Summary for Reach DMHR100: TO DMH-R101

Inflow Area = 27,171 sf, 83.67% Impervious, Inflow Depth = 4.59" for 50-Year event
Inflow = 3.18 cfs @ 12.08 hrs, Volume= 10,392 cf
Outflow = 3.13 cfs @ 12.10 hrs, Volume= 10,392 cf, Atten= 2%, Lag= 1.0 min

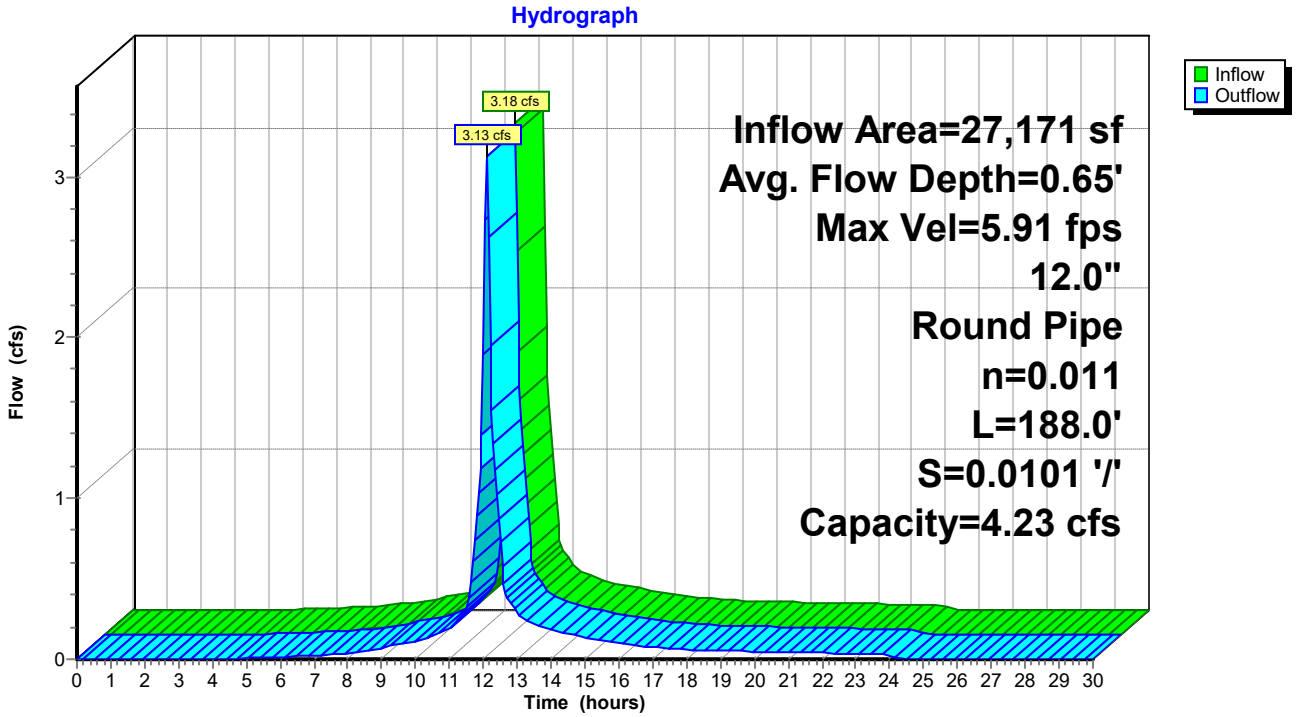
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.91 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.97 fps, Avg. Travel Time= 1.6 min

Peak Storage= 101 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.65'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.23 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 188.0' Slope= 0.0101 '/'
Inlet Invert= 353.00', Outlet Invert= 351.10'



Reach DMHR100: TO DMH-R101



Stage-Discharge for Reach DMHR100: TO DMH-R101

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.00	0.00	0.00
353.01	0.48	0.00
353.02	0.76	0.00
353.03	0.99	0.01
353.04	1.20	0.01
353.05	1.38	0.02
353.06	1.56	0.03
353.07	1.72	0.04
353.08	1.88	0.06
353.09	2.02	0.07
353.10	2.16	0.09
353.11	2.30	0.11
353.12	2.43	0.13
353.13	2.55	0.15
353.14	2.67	0.18
353.15	2.79	0.21
353.16	2.90	0.24
353.17	3.01	0.27
353.18	3.11	0.30
353.19	3.21	0.33
353.20	3.31	0.37
353.21	3.41	0.41
353.22	3.51	0.45
353.23	3.60	0.49
353.24	3.69	0.53
353.25	3.78	0.58
353.26	3.86	0.63
353.27	3.94	0.67
353.28	4.03	0.72
353.29	4.11	0.78
353.30	4.18	0.83
353.31	4.26	0.88
353.32	4.33	0.94
353.33	4.40	1.00
353.34	4.47	1.05
353.35	4.54	1.11
353.36	4.61	1.17
353.37	4.68	1.24
353.38	4.74	1.30
353.39	4.80	1.36
353.40	4.86	1.43
353.41	4.92	1.49
353.42	4.98	1.56
353.43	5.04	1.63
353.44	5.09	1.69
353.45	5.14	1.76
353.46	5.20	1.83
353.47	5.25	1.90
353.48	5.30	1.97
353.49	5.34	2.04
353.50	5.39	2.12
353.51	5.43	2.19
353.52	5.48	2.26
353.53	5.52	2.33
353.54	5.56	2.41
353.55	5.60	2.48
353.56	5.64	2.55
353.57	5.68	2.63
353.58	5.71	2.70
353.59	5.75	2.77
353.60	5.78	2.84
353.61	5.81	2.92
353.62	5.84	2.99
353.63	5.87	3.06
353.64	5.90	3.13
353.65	5.92	3.20
353.66	5.95	3.27
353.67	5.97	3.34
353.68	6.00	3.41
353.69	6.02	3.48
353.70	6.04	3.54
353.71	6.05	3.61
353.72	6.07	3.67
353.73	6.08	3.74
353.74	6.10	3.80
353.75	6.11	3.86
353.76	6.12	3.92
353.77	6.13	3.98
353.78	6.13	4.03
353.79	6.14	4.09
353.80	6.14	4.14
353.81	**6.14**	4.19
353.82	6.14	4.23
353.83	6.14	4.28
353.84	6.14	4.32
353.85	6.13	4.36
353.86	6.12	4.40
353.87	6.11	4.43
353.88	6.10	4.46
353.89	6.08	4.49
353.90	6.06	4.51
353.91	6.04	4.53
353.92	6.01	4.54
353.93	5.98	4.55
353.94	5.94	**4.55**
353.95	5.90	4.55
353.96	5.85	4.54
353.97	5.79	4.51
353.98	5.72	4.47
353.99	5.63	4.41
354.00	5.39	4.23

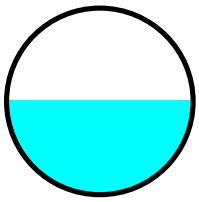
Summary for Reach DMHS10: TO DMH-S11

Inflow Area = 110,937 sf, 66.95% Impervious, Inflow Depth = 4.80" for 50-Year event
Inflow = 12.54 cfs @ 12.09 hrs, Volume= 44,355 cf
Outflow = 12.33 cfs @ 12.11 hrs, Volume= 44,355 cf, Atten= 2%, Lag= 0.8 min

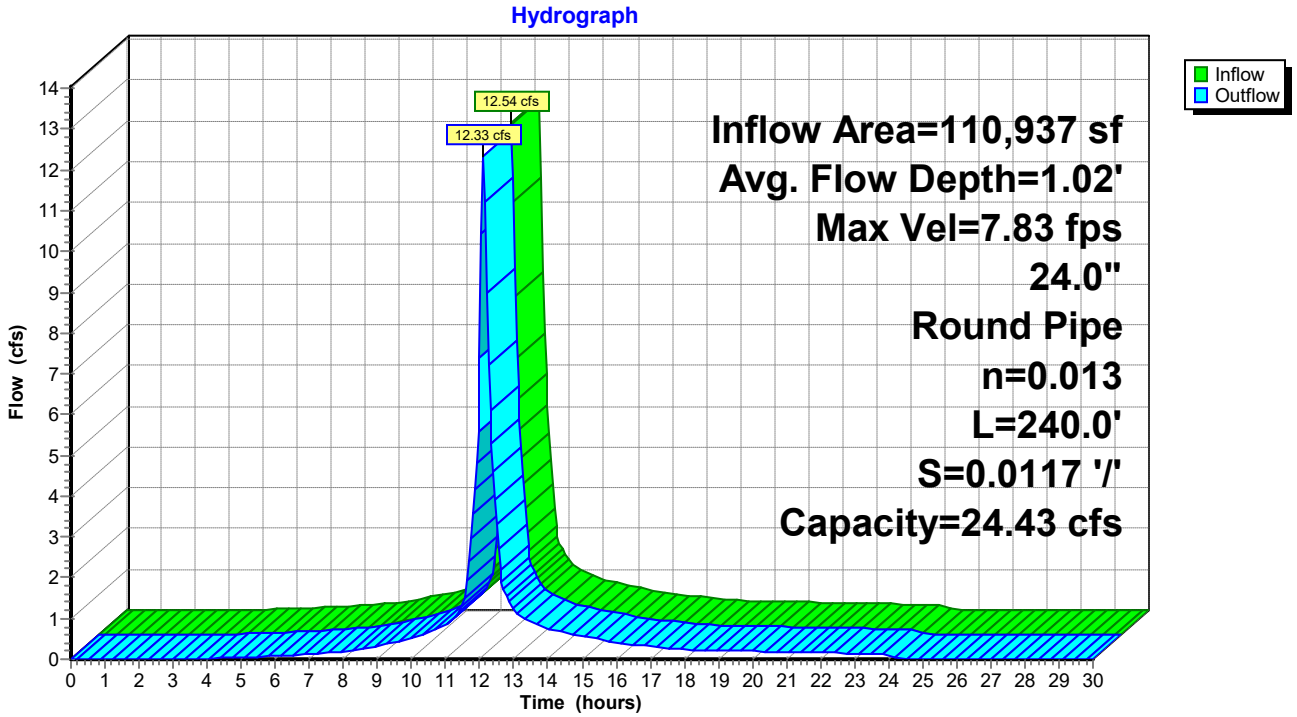
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.83 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.53 fps, Avg. Travel Time= 1.6 min

Peak Storage= 385 cf @ 12.10 hrs
Average Depth at Peak Storage= 1.02'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 24.43 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 240.0' Slope= 0.0117 '/'
Inlet Invert= 343.30', Outlet Invert= 340.50'



Reach DMHS10: TO DMH-S11



Stage-Discharge for Reach DMHS10: TO DMH-S11

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
343.30	0.00	0.00
343.32	0.69	0.00
343.34	1.10	0.02
343.36	1.43	0.04
343.38	1.73	0.07
343.40	2.00	0.12
343.42	2.25	0.17
343.44	2.48	0.24
343.46	2.71	0.32
343.48	2.92	0.41
343.50	3.12	0.51
343.52	3.31	0.62
343.54	3.50	0.75
343.56	3.68	0.88
343.58	3.85	1.03
343.60	4.02	1.19
343.62	4.18	1.36
343.64	4.34	1.54
343.66	4.49	1.73
343.68	4.64	1.93
343.70	4.78	2.14
343.72	4.92	2.36
343.74	5.06	2.59
343.76	5.19	2.84
343.78	5.32	3.09
343.80	5.45	3.35
343.82	5.57	3.62
343.84	5.69	3.90
343.86	5.81	4.18
343.88	5.92	4.48
343.90	6.04	4.79
343.92	6.15	5.10
343.94	6.25	5.42
343.96	6.36	5.75
343.98	6.46	6.08
344.00	6.56	6.42
344.02	6.65	6.77
344.04	6.75	7.13
344.06	6.84	7.49
344.08	6.93	7.86
344.10	7.02	8.23
344.12	7.10	8.61
344.14	7.19	9.00
344.16	7.27	9.39
344.18	7.35	9.78
344.20	7.42	10.18
344.22	7.50	10.58
344.24	7.57	10.98
344.26	7.64	11.39
344.28	7.71	11.80
344.30	7.78	12.22
344.32	7.84	12.63
344.34	7.91	13.05
344.36	7.97	13.47
344.38	8.03	13.89
344.40	8.08	14.31
344.42	8.14	14.73
344.44	8.19	15.16
344.46	8.24	15.58
344.48	8.29	16.00
344.50	8.34	16.42
344.52	8.39	16.83
344.54	8.43	17.25
344.56	8.47	17.66
344.58	8.51	18.08
344.60	8.55	18.48
344.62	8.59	18.89
344.64	8.62	19.29
344.66	8.65	19.68
344.68	8.68	20.07
344.70	8.71	20.46
344.72	8.74	20.84
344.74	8.76	21.21
344.76	8.78	21.57
344.78	8.80	21.93
344.80	8.82	22.28
344.82	8.83	22.62
344.84	8.84	22.95
344.86	8.85	23.27
344.88	8.86	23.59
344.90	8.86	23.88
344.92	**8.87**	24.17
344.94	8.87	24.44
344.96	8.86	24.70
344.98	8.86	24.95
345.00	8.85	25.18
345.02	8.83	25.39
345.04	8.82	25.58
345.06	8.80	25.76
345.08	8.77	25.91
345.10	8.74	26.04
345.12	8.71	26.15
345.14	8.67	26.23
345.16	8.63	26.27
345.18	8.58	**26.28**
345.20	8.52	26.26
345.22	8.45	26.18
345.24	8.36	26.04
345.26	8.26	25.82
345.28	8.12	25.46
345.30	7.78	24.43

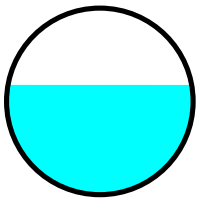
Summary for Reach DMHS11: TO DMH-D14

Inflow Area = 110,937 sf, 66.95% Impervious, Inflow Depth = 4.80" for 50-Year event
Inflow = 12.33 cfs @ 12.11 hrs, Volume= 44,355 cf
Outflow = 12.14 cfs @ 12.12 hrs, Volume= 44,355 cf, Atten= 2%, Lag= 0.6 min

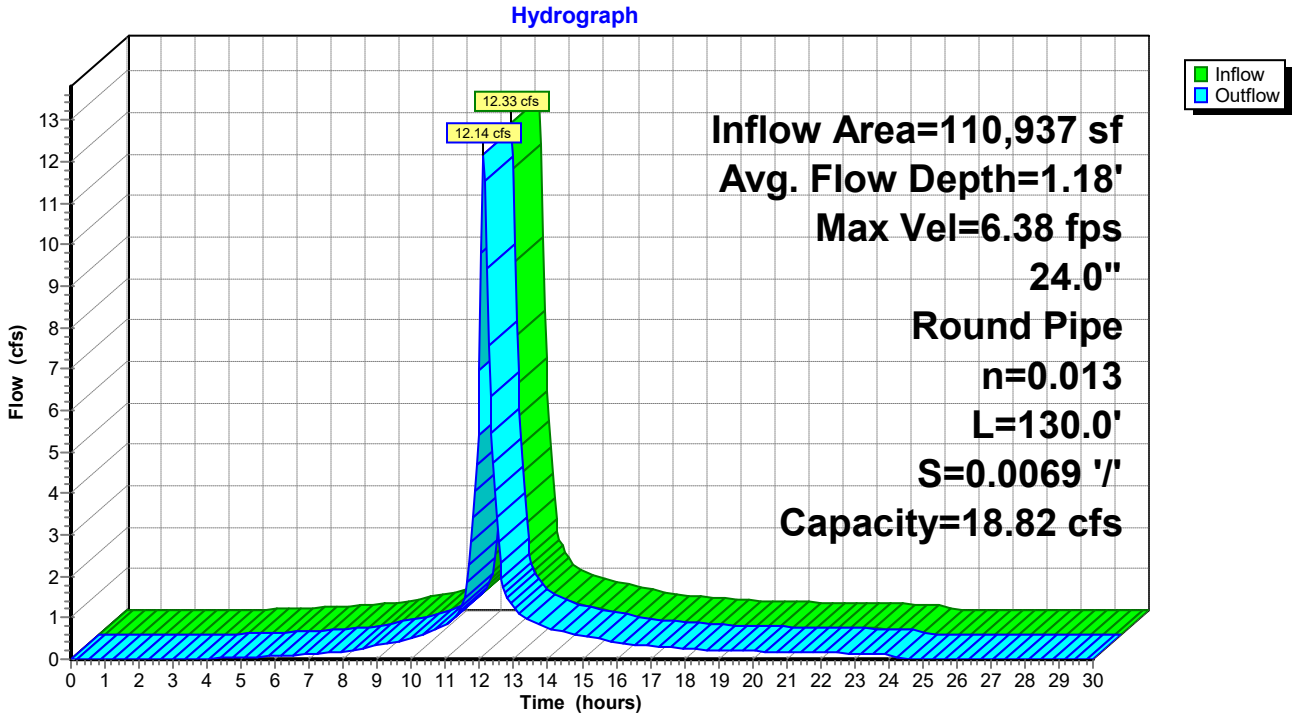
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.38 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.10 fps, Avg. Travel Time= 1.0 min

Peak Storage= 251 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.18'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 18.82 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 130.0' Slope= 0.0069 '/'
Inlet Invert= 339.20', Outlet Invert= 338.30'



Reach DMHS11: TO DMH-D14



Stage-Discharge for Reach DMHS11: TO DMH-D14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
339.20	0.00	0.00
339.22	0.53	0.00
339.24	0.84	0.01
339.26	1.10	0.03
339.28	1.33	0.06
339.30	1.54	0.09
339.32	1.73	0.13
339.34	1.91	0.19
339.36	2.09	0.25
339.38	2.25	0.31
339.40	2.40	0.39
339.42	2.55	0.48
339.44	2.70	0.58
339.46	2.83	0.68
339.48	2.97	0.79
339.50	3.10	0.91
339.52	3.22	1.05
339.54	3.34	1.18
339.56	3.46	1.33
339.58	3.57	1.49
339.60	3.69	1.65
339.62	3.79	1.82
339.64	3.90	2.00
339.66	4.00	2.18
339.68	4.10	2.38
339.70	4.20	2.58
339.72	4.29	2.79
339.74	4.39	3.00
339.76	4.48	3.22
339.78	4.56	3.45
339.80	4.65	3.69
339.82	4.73	3.93
339.84	4.82	4.17
339.86	4.90	4.43
339.88	4.97	4.69
339.90	5.05	4.95
339.92	5.13	5.22
339.94	5.20	5.49
339.96	5.27	5.77
339.98	5.34	6.06
340.00	5.41	6.34
340.02	5.47	6.64
340.04	5.54	6.93
340.06	5.60	7.23
340.08	5.66	7.53
340.10	5.72	7.84
340.12	5.78	8.15
340.14	5.83	8.46
340.16	5.89	8.78
340.18	5.94	9.09
340.20	5.99	9.41
340.22	6.04	9.73
340.24	6.09	10.05
340.26	6.14	10.38
340.28	6.18	10.70
340.30	6.23	11.02
340.32	6.27	11.35
340.34	6.31	11.67
340.36	6.35	12.00
340.38	6.39	12.32
340.40	6.43	12.65
340.42	6.46	12.97
340.44	6.49	13.29
340.46	6.53	13.61
340.48	6.56	13.92
340.50	6.59	14.24
340.52	6.61	14.55
340.54	6.64	14.86
340.56	6.66	15.16
340.58	6.69	15.46
340.60	6.71	15.76
340.62	6.73	16.05
340.64	6.75	16.34
340.66	6.76	16.62
340.68	6.78	16.90
340.70	6.79	17.16
340.72	6.80	17.43
340.74	6.81	17.68
340.76	6.82	17.93
340.78	6.83	18.17
340.80	6.83	18.40
340.82	**6.83**	18.62
340.84	6.83	18.83
340.86	6.83	19.03
340.88	6.82	19.22
340.90	6.81	19.40
340.92	6.81	19.56
340.94	6.79	19.71
340.96	6.78	19.84
340.98	6.76	19.96
341.00	6.74	20.06
341.02	6.71	20.14
341.04	6.68	20.20
341.06	6.65	20.24
341.08	6.61	**20.25**
341.10	6.56	20.23
341.12	6.51	20.17
341.14	6.44	20.06
341.16	6.36	19.89
341.18	6.25	19.61
341.20	5.99	18.82

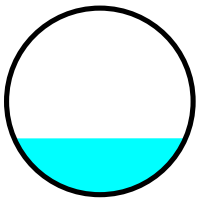
Summary for Reach DMHS4: TO DMH-S5

Inflow Area = 9,006 sf, 33.47% Impervious, Inflow Depth = 5.06" for 50-Year event
Inflow = 1.04 cfs @ 12.10 hrs, Volume= 3,795 cf
Outflow = 1.02 cfs @ 12.12 hrs, Volume= 3,795 cf, Atten= 2%, Lag= 0.7 min

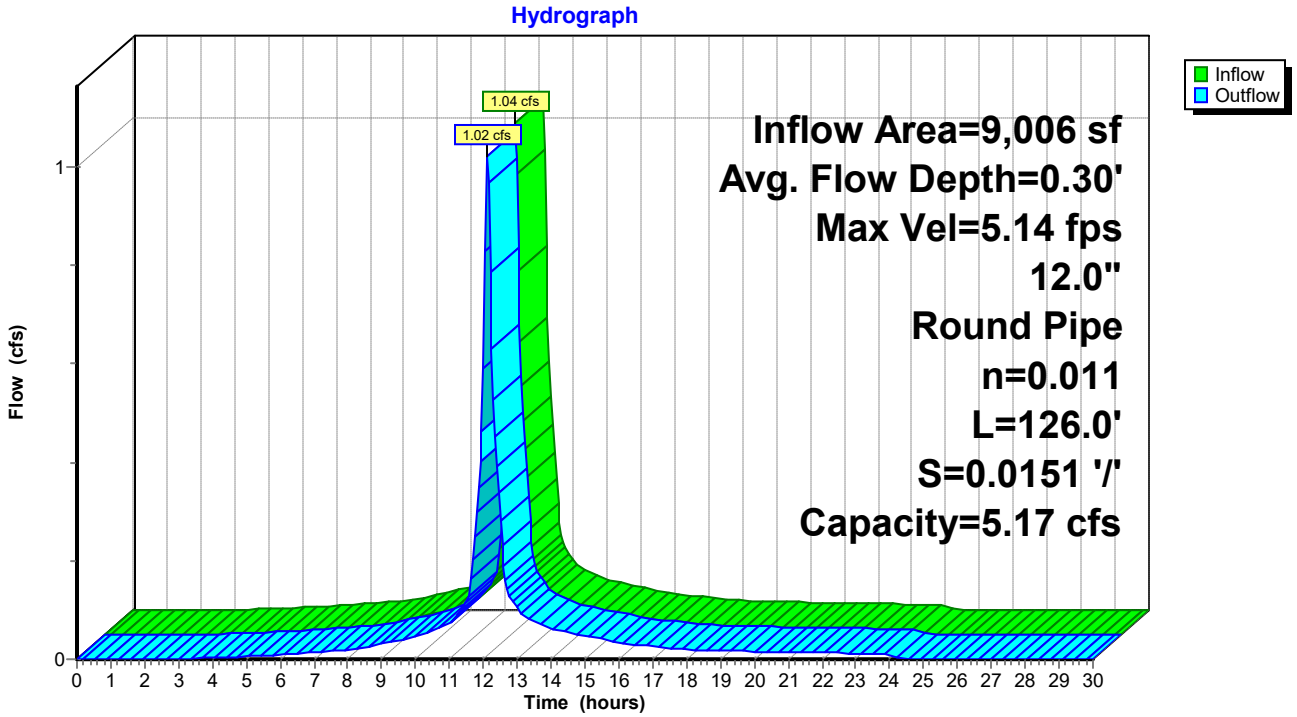
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.14 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.68 fps, Avg. Travel Time= 1.2 min

Peak Storage= 25 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.17 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 126.0' Slope= 0.0151 '/'
Inlet Invert= 352.00', Outlet Invert= 350.10'



Reach DMHS4: TO DMH-S5



Stage-Discharge for Reach DMHS4: TO DMH-S5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.00	0.00	0.00
352.01	0.59	0.00
352.02	0.93	0.00
352.03	1.21	0.01
352.04	1.46	0.02
352.05	1.69	0.02
352.06	1.90	0.04
352.07	2.10	0.05
352.08	2.29	0.07
352.09	2.47	0.09
352.10	2.64	0.11
352.11	2.80	0.13
352.12	2.96	0.16
352.13	3.11	0.19
352.14	3.26	0.22
352.15	3.40	0.25
352.16	3.54	0.29
352.17	3.67	0.33
352.18	3.80	0.37
352.19	3.93	0.41
352.20	4.05	0.45
352.21	4.17	0.50
352.22	4.28	0.55
352.23	4.40	0.60
352.24	4.51	0.65
352.25	4.61	0.71
352.26	4.72	0.77
352.27	4.82	0.82
352.28	4.92	0.89
352.29	5.01	0.95
352.30	5.11	1.01
352.31	5.20	1.08
352.32	5.29	1.15
352.33	5.38	1.22
352.34	5.47	1.29
352.35	5.55	1.36
352.36	5.63	1.43
352.37	5.71	1.51
352.38	5.79	1.59
352.39	5.87	1.66
352.40	5.94	1.74
352.41	6.01	1.82
352.42	6.08	1.90
352.43	6.15	1.99
352.44	6.22	2.07
352.45	6.28	2.15
352.46	6.35	2.24
352.47	6.41	2.32
352.48	6.47	2.41
352.49	6.53	2.50
352.50	6.58	2.59
352.51	6.64	2.67
352.52	6.69	2.76
352.53	6.74	2.85
352.54	6.79	2.94
352.55	6.84	3.03
352.56	6.89	3.12
352.57	6.93	3.21
352.58	6.98	3.30
352.59	7.02	3.39
352.60	7.06	3.47
352.61	7.10	3.56
352.62	7.14	3.65
352.63	7.17	3.74
352.64	7.20	3.82
352.65	7.24	3.91
352.66	7.27	4.00
352.67	7.30	4.08
352.68	7.32	4.16
352.69	7.35	4.25
352.70	7.37	4.33
352.71	7.39	4.41
352.72	7.41	4.49
352.73	7.43	4.57
352.74	7.45	4.64
352.75	7.46	4.71
352.76	7.47	4.79
352.77	7.48	4.86
352.78	7.49	4.93
352.79	7.50	4.99
352.80	7.50	5.05
352.81	**7.51**	5.11
352.82	7.50	5.17
352.83	7.50	5.23
352.84	7.50	5.28
352.85	7.49	5.33
352.86	7.48	5.37
352.87	7.46	5.41
352.88	7.45	5.45
352.89	7.43	5.48
352.90	7.40	5.51
352.91	7.37	5.53
352.92	7.34	5.55
352.93	7.30	5.56
352.94	7.26	**5.56**
352.95	7.21	5.56
352.96	7.15	5.54
352.97	7.08	5.51
352.98	6.99	5.46
352.99	6.87	5.39
353.00	6.58	5.17

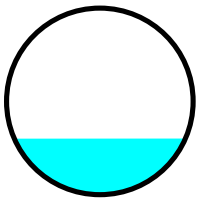
Summary for Reach DMHS5: TO DMH-S6

Inflow Area = 9,006 sf, 33.47% Impervious, Inflow Depth = 5.06" for 50-Year event
Inflow = 1.02 cfs @ 12.12 hrs, Volume= 3,795 cf
Outflow = 1.00 cfs @ 12.13 hrs, Volume= 3,795 cf, Atten= 2%, Lag= 0.8 min

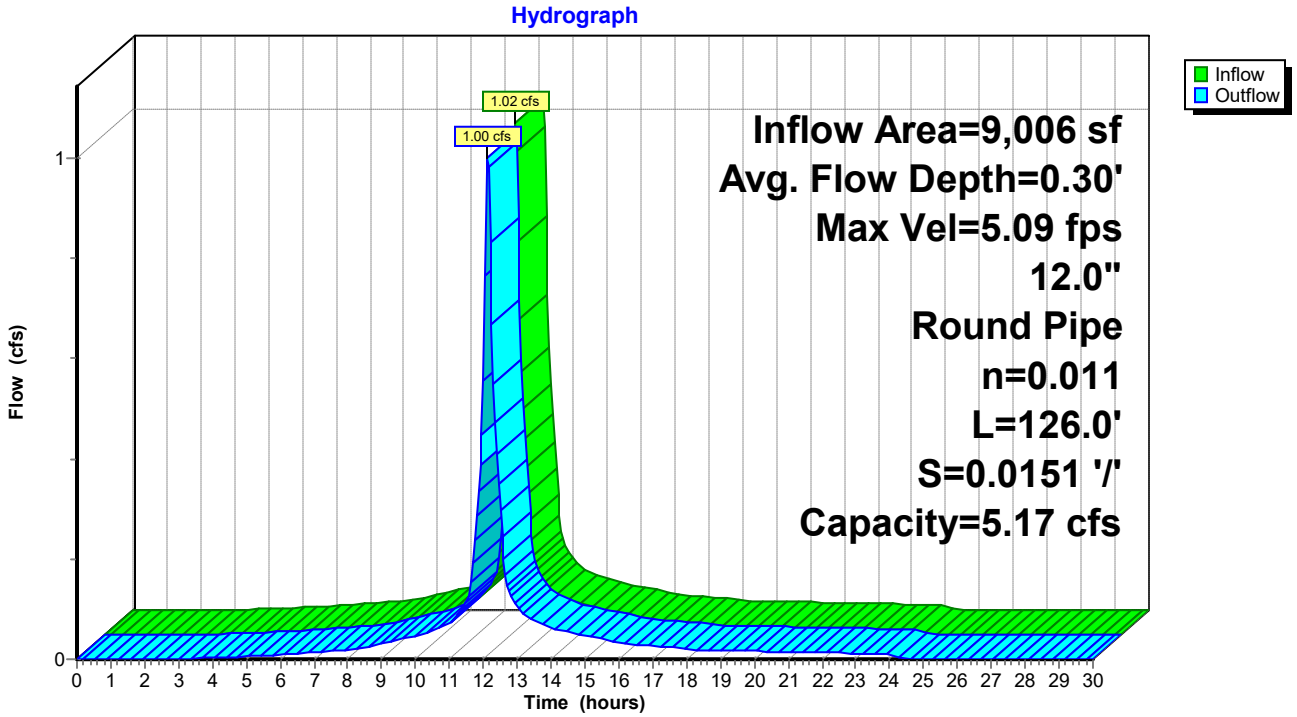
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.09 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.68 fps, Avg. Travel Time= 1.2 min

Peak Storage= 25 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.17 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 126.0' Slope= 0.0151 '/'
Inlet Invert= 350.00', Outlet Invert= 348.10'



Reach DMHS5: TO DMH-S6



Stage-Discharge for Reach DMHS5: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.00	0.00	0.00
350.01	0.59	0.00
350.02	0.93	0.00
350.03	1.21	0.01
350.04	1.46	0.02
350.05	1.69	0.02
350.06	1.90	0.04
350.07	2.10	0.05
350.08	2.29	0.07
350.09	2.47	0.09
350.10	2.64	0.11
350.11	2.80	0.13
350.12	2.96	0.16
350.13	3.11	0.19
350.14	3.26	0.22
350.15	3.40	0.25
350.16	3.54	0.29
350.17	3.67	0.33
350.18	3.80	0.37
350.19	3.93	0.41
350.20	4.05	0.45
350.21	4.17	0.50
350.22	4.28	0.55
350.23	4.40	0.60
350.24	4.51	0.65
350.25	4.61	0.71
350.26	4.72	0.77
350.27	4.82	0.82
350.28	4.92	0.89
350.29	5.01	0.95
350.30	5.11	1.01
350.31	5.20	1.08
350.32	5.29	1.15
350.33	5.38	1.22
350.34	5.47	1.29
350.35	5.55	1.36
350.36	5.63	1.43
350.37	5.71	1.51
350.38	5.79	1.59
350.39	5.87	1.66
350.40	5.94	1.74
350.41	6.01	1.82
350.42	6.08	1.90
350.43	6.15	1.99
350.44	6.22	2.07
350.45	6.28	2.15
350.46	6.35	2.24
350.47	6.41	2.32
350.48	6.47	2.41
350.49	6.53	2.50
350.50	6.58	2.59
350.51	6.64	2.67
350.52	6.69	2.76
350.53	6.74	2.85
350.54	6.79	2.94
350.55	6.84	3.03
350.56	6.89	3.12
350.57	6.93	3.21
350.58	6.98	3.30
350.59	7.02	3.39
350.60	7.06	3.47
350.61	7.10	3.56
350.62	7.14	3.65
350.63	7.17	3.74
350.64	7.20	3.82
350.65	7.24	3.91
350.66	7.27	4.00
350.67	7.30	4.08
350.68	7.32	4.16
350.69	7.35	4.25
350.70	7.37	4.33
350.71	7.39	4.41
350.72	7.41	4.49
350.73	7.43	4.57
350.74	7.45	4.64
350.75	7.46	4.71
350.76	7.47	4.79
350.77	7.48	4.86
350.78	7.49	4.93
350.79	7.50	4.99
350.80	7.50	5.05
350.81	**7.51**	5.11
350.82	7.50	5.17
350.83	7.50	5.23
350.84	7.50	5.28
350.85	7.49	5.33
350.86	7.48	5.37
350.87	7.46	5.41
350.88	7.45	5.45
350.89	7.43	5.48
350.90	7.40	5.51
350.91	7.37	5.53
350.92	7.34	5.55
350.93	7.30	5.56
350.94	7.26	**5.56**
350.95	7.21	5.56
350.96	7.15	5.54
350.97	7.08	5.51
350.98	6.99	5.46
350.99	6.87	5.39
351.00	6.58	5.17

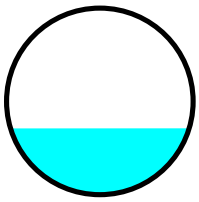
Summary for Reach DMHS6: TO DMH-S7

Inflow Area = 30,209 sf, 42.48% Impervious, Inflow Depth = 4.91" for 50-Year event
Inflow = 3.27 cfs @ 12.11 hrs, Volume= 12,369 cf
Outflow = 3.27 cfs @ 12.12 hrs, Volume= 12,369 cf, Atten= 0%, Lag= 0.1 min

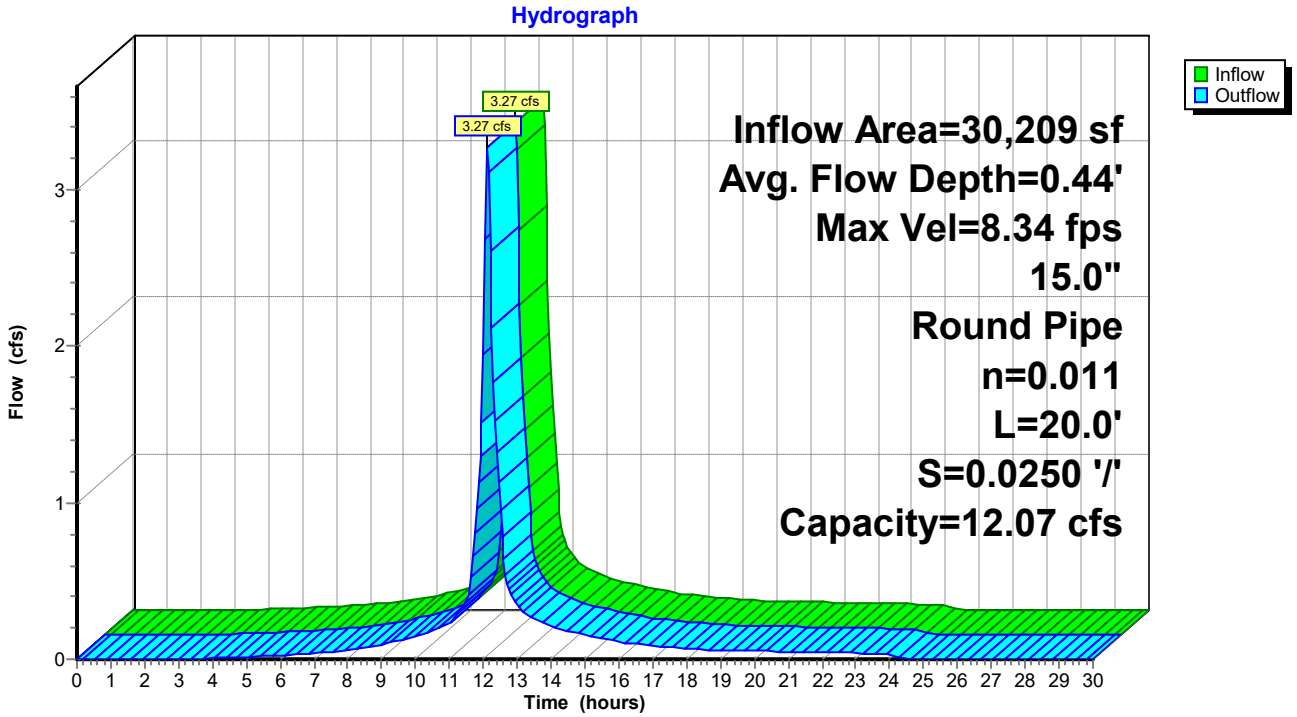
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.34 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.75 fps, Avg. Travel Time= 0.1 min

Peak Storage= 8 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.44'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 12.07 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0250 '/'
Inlet Invert= 348.00', Outlet Invert= 347.50'



Reach DMHS6: TO DMH-S7



Stage-Discharge for Reach DMHS6: TO DMH-S7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.00	0.00	0.00
348.01	0.70	0.00
348.02	1.18	0.01
348.03	1.55	0.01
348.04	1.88	0.02
348.05	2.18	0.04
348.06	2.46	0.05
348.07	2.72	0.07
348.08	2.96	0.10
348.09	3.20	0.13
348.10	3.42	0.16
348.11	3.64	0.19
348.12	3.84	0.23
348.13	4.04	0.27
348.14	4.24	0.32
348.15	4.43	0.37
348.16	4.61	0.42
348.17	4.78	0.48
348.18	4.96	0.54
348.19	5.12	0.60
348.20	5.29	0.67
348.21	5.45	0.74
348.22	5.60	0.82
348.23	5.76	0.89
348.24	5.90	0.97
348.25	6.05	1.06
348.26	6.19	1.14
348.27	6.33	1.24
348.28	6.47	1.33
348.29	6.60	1.43
348.30	6.73	1.52
348.31	6.86	1.63
348.32	6.99	1.73
348.33	7.11	1.84
348.34	7.23	1.95
348.35	7.35	2.07
348.36	7.46	2.18
348.37	7.58	2.30
348.38	7.69	2.43
348.39	7.80	2.55
348.40	7.91	2.68
348.41	8.01	2.81
348.42	8.12	2.94
348.43	8.22	3.07
348.44	8.32	3.21
348.45	8.41	3.35
348.46	8.51	3.49
348.47	8.60	3.63
348.48	8.70	3.77
348.49	8.79	3.92
348.50	8.87	4.07
348.51	8.96	4.22
348.52	9.05	4.37
348.53	9.13	4.52
348.54	9.21	4.68
348.55	9.29	4.83
348.56	9.37	4.99
348.57	9.44	5.15
348.58	9.52	5.31
348.59	9.59	5.47
348.60	9.66	5.63
348.61	9.73	5.79
348.62	9.80	5.95
348.63	9.87	6.12
348.64	9.93	6.28
348.65	10.00	6.45
348.66	10.06	6.61
348.67	10.12	6.78
348.68	10.18	6.95
348.69	10.24	7.11
348.70	10.29	7.28
348.71	10.35	7.44
348.72	10.40	7.61
348.73	10.45	7.78
348.74	10.50	7.94
348.75	10.55	8.11
348.76	10.59	8.27
348.77	10.64	8.44
348.78	10.68	8.60
348.79	10.72	8.77
348.80	10.77	8.93
348.81	10.80	9.09
348.82	10.84	9.25
348.83	10.88	9.41
348.84	10.91	9.57
348.85	10.94	9.72
348.86	10.97	9.88
348.87	11.00	10.03
348.88	11.03	10.18
348.89	11.05	10.33
348.90	11.08	10.48
348.91	11.10	10.62
348.92	11.12	10.76
348.93	11.14	10.90
348.94	11.15	11.04
348.95	11.17	11.18
348.96	11.18	11.31
348.97	11.19	11.43
348.98	11.20	11.56
348.99	11.21	11.68
349.00	11.21	11.80
349.01	11.21	11.91
349.02	**11.21**	12.02
349.03	11.21	12.13
349.04	11.21	12.23
349.05	11.20	12.33
349.06	11.19	12.42
349.07	11.18	12.50
349.08	11.16	12.58
349.09	11.15	12.66
349.10	11.13	12.73
349.11	11.10	12.79
349.12	11.07	12.84
349.13	11.04	12.89
349.14	11.01	12.92
349.15	10.97	12.96
349.16	10.92	12.97
349.17	10.87	**12.98**
349.18	10.82	12.98
349.19	10.75	12.96
349.20	10.68	12.93
349.21	10.60	12.88
349.22	10.50	12.80
349.23	10.37	12.68
349.24	10.18	12.48
349.25	9.84	12.07

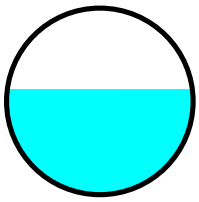
Summary for Reach DMHS7: TO DMH-S9

Inflow Area = 57,987 sf, 60.49% Impervious, Inflow Depth = 4.94" for 50-Year event
Inflow = 6.63 cfs @ 12.10 hrs, Volume= 23,887 cf
Outflow = 6.62 cfs @ 12.10 hrs, Volume= 23,887 cf, Atten= 0%, Lag= 0.1 min

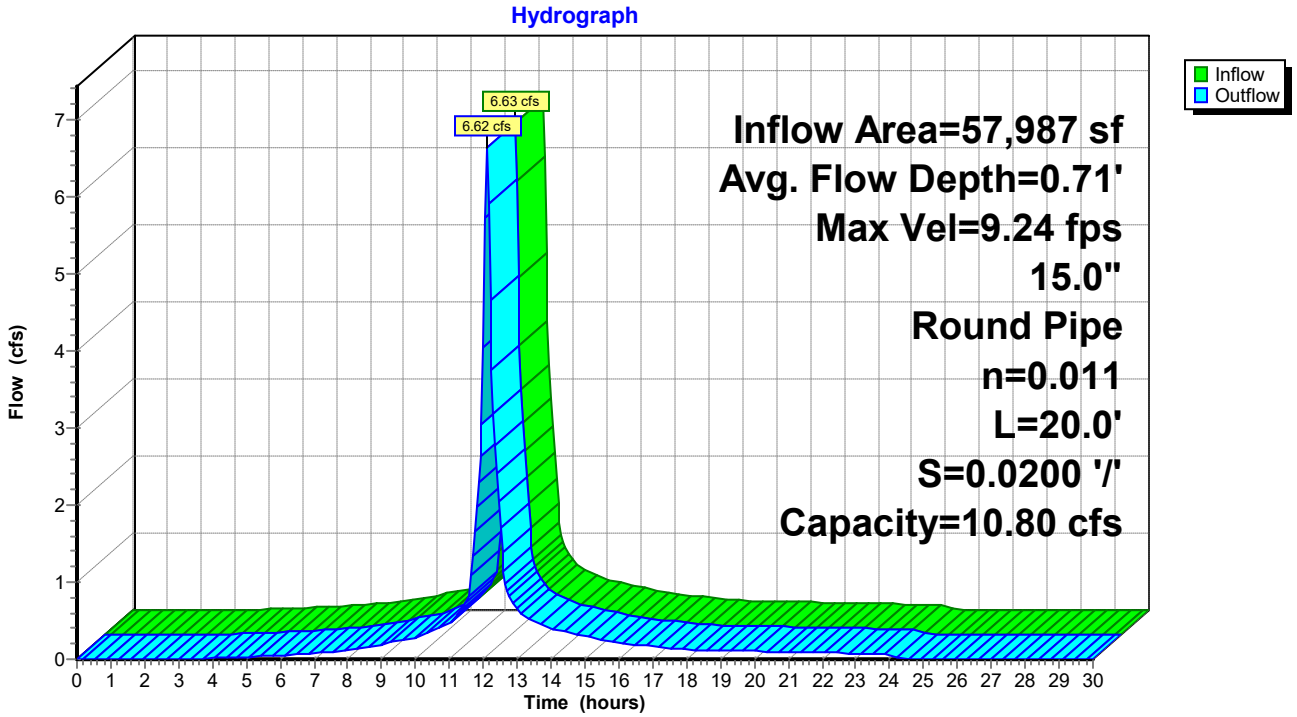
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.24 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.09 fps, Avg. Travel Time= 0.1 min

Peak Storage= 14 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.71'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.80 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0200 '/'
Inlet Invert= 344.90', Outlet Invert= 344.50'



Reach DMHS7: TO DMH-S9



Stage-Discharge for Reach DMHS7: TO DMH-S9

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
344.90	0.00	0.00
344.91	0.63	0.00
344.92	1.06	0.01
344.93	1.39	0.01
344.94	1.69	0.02
344.95	1.95	0.03
344.96	2.20	0.05
344.97	2.43	0.07
344.98	2.65	0.09
344.99	2.86	0.11
345.00	3.06	0.14
345.01	3.25	0.17
345.02	3.44	0.21
345.03	3.62	0.25
345.04	3.79	0.29
345.05	3.96	0.33
345.06	4.12	0.38
345.07	4.28	0.43
345.08	4.43	0.48
345.09	4.58	0.54
345.10	4.73	0.60
345.11	4.87	0.66
345.12	5.01	0.73
345.13	5.15	0.80
345.14	5.28	0.87
345.15	5.41	0.95
345.16	5.54	1.02
345.17	5.66	1.10
345.18	5.78	1.19
345.19	5.90	1.27
345.20	6.02	1.36
345.21	6.14	1.46
345.22	6.25	1.55
345.23	6.36	1.65
345.24	6.47	1.75
345.25	6.57	1.85
345.26	6.68	1.95
345.27	6.78	2.06
345.28	6.88	2.17
345.29	6.98	2.28
345.30	7.07	2.39
345.31	7.17	2.51
345.32	7.26	2.63
345.33	7.35	2.75
345.34	7.44	2.87
345.35	7.53	2.99
345.36	7.61	3.12
345.37	7.69	3.25
345.38	7.78	3.38
345.39	7.86	3.51
345.40	7.94	3.64
345.41	8.01	3.77
345.42	8.09	3.91
345.43	8.16	4.04
345.44	8.24	4.18
345.45	8.31	4.32
345.46	8.38	4.46
345.47	8.45	4.60
345.48	8.51	4.75
345.49	8.58	4.89
345.50	8.64	5.03
345.51	8.71	5.18
345.52	8.77	5.33
345.53	8.83	5.47
345.54	8.89	5.62
345.55	8.94	5.77
345.56	9.00	5.91
345.57	9.05	6.06
345.58	9.10	6.21
345.59	9.16	6.36
345.60	9.21	6.51
345.61	9.25	6.66
345.62	9.30	6.81
345.63	9.35	6.96
345.64	9.39	7.11
345.65	9.43	7.25
345.66	9.48	7.40
345.67	9.52	7.55
345.68	9.56	7.70
345.69	9.59	7.84
345.70	9.63	7.99
345.71	9.66	8.13
345.72	9.70	8.27
345.73	9.73	8.42
345.74	9.76	8.56
345.75	9.79	8.70
345.76	9.81	8.83
345.77	9.84	8.97
345.78	9.86	9.11
345.79	9.89	9.24
345.80	9.91	9.37
345.81	9.93	9.50
345.82	9.94	9.63
345.83	9.96	9.75
345.84	9.98	9.88
345.85	9.99	10.00
345.86	10.00	10.11
345.87	10.01	10.23
345.88	10.02	10.34
345.89	10.02	10.45
345.90	10.03	10.55
345.91	10.03	10.65
345.92	**10.03**	10.75
345.93	10.03	10.85
345.94	10.02	10.94
345.95	10.02	11.02
345.96	10.01	11.10
345.97	10.00	11.18
345.98	9.98	11.25
345.99	9.97	11.32
346.00	9.95	11.38
346.01	9.93	11.44
346.02	9.90	11.48
346.03	9.88	11.53
346.04	9.85	11.56
346.05	9.81	11.59
346.06	9.77	11.60
346.07	9.72	**11.61**
346.08	9.67	11.61
346.09	9.62	11.59
346.10	9.55	11.57
346.11	9.48	11.52
346.12	9.39	11.45
346.13	9.28	11.35
346.14	9.11	11.16
346.15	8.80	10.80

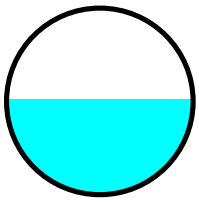
Summary for Reach DMHS8: TO DMH-S7

Inflow Area = 27,778 sf, 80.08% Impervious, Inflow Depth = 4.98" for 50-Year event
Inflow = 3.49 cfs @ 12.07 hrs, Volume= 11,518 cf
Outflow = 3.40 cfs @ 12.09 hrs, Volume= 11,518 cf, Atten= 2%, Lag= 1.2 min

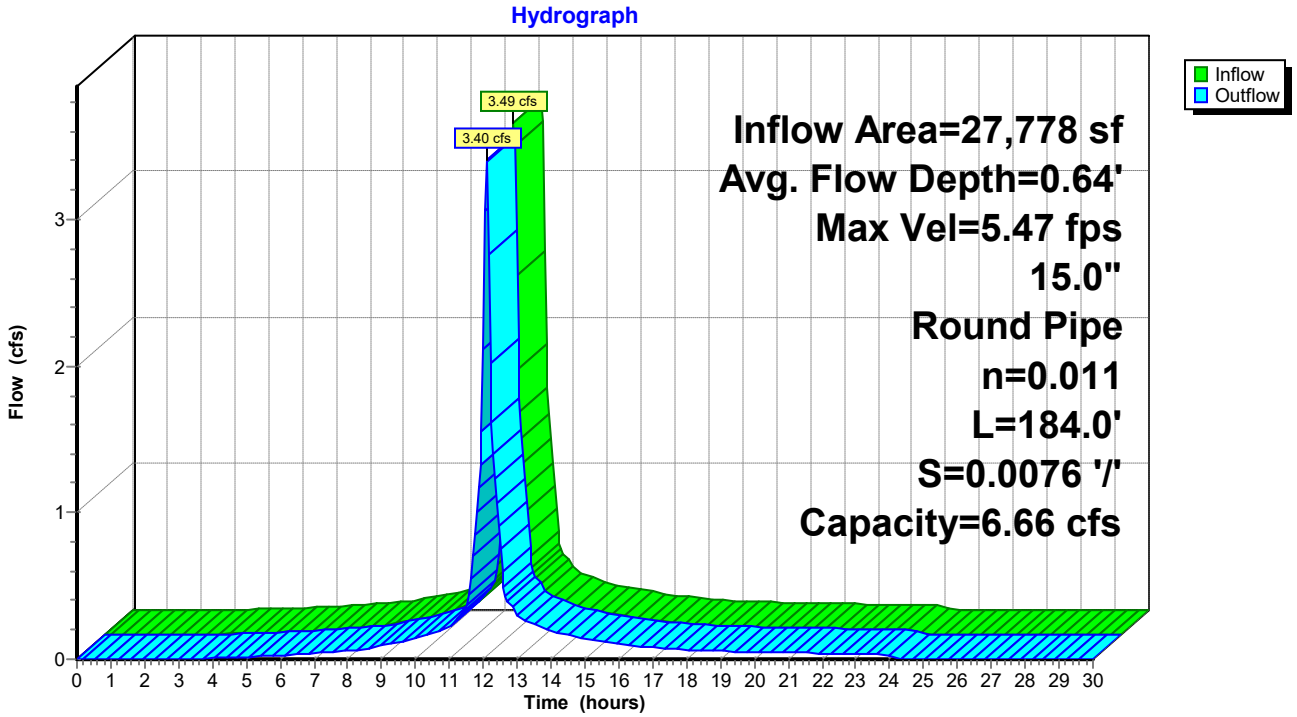
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.47 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.79 fps, Avg. Travel Time= 1.7 min

Peak Storage= 117 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.64'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.66 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 184.0' Slope= 0.0076 '/'
Inlet Invert= 346.40', Outlet Invert= 345.00'



Reach DMHS8: TO DMH-S7



Stage-Discharge for Reach DMHS8: TO DMH-S7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.40	0.00	0.00
346.41	0.39	0.00
346.42	0.65	0.00
346.43	0.86	0.01
346.44	1.04	0.01
346.45	1.21	0.02
346.46	1.36	0.03
346.47	1.50	0.04
346.48	1.63	0.05
346.49	1.76	0.07
346.50	1.89	0.09
346.51	2.01	0.11
346.52	2.12	0.13
346.53	2.23	0.15
346.54	2.34	0.18
346.55	2.44	0.20
346.56	2.54	0.23
346.57	2.64	0.26
346.58	2.73	0.30
346.59	2.83	0.33
346.60	2.92	0.37
346.61	3.01	0.41
346.62	3.09	0.45
346.63	3.17	0.49
346.64	3.26	0.54
346.65	3.34	0.58
346.66	3.42	0.63
346.67	3.49	0.68
346.68	3.57	0.73
346.69	3.64	0.79
346.70	3.71	0.84
346.71	3.78	0.90
346.72	3.85	0.96
346.73	3.92	1.02
346.74	3.99	1.08
346.75	4.05	1.14
346.76	4.12	1.20
346.77	4.18	1.27
346.78	4.24	1.34
346.79	4.30	1.41
346.80	4.36	1.48
346.81	4.42	1.55
346.82	4.48	1.62
346.83	4.53	1.69
346.84	4.59	1.77
346.85	4.64	1.85
346.86	4.69	1.92
346.87	4.75	2.00
346.88	4.80	2.08
346.89	4.85	2.16
346.90	4.90	2.24
346.91	4.94	2.33
346.92	4.99	2.41
346.93	5.04	2.49
346.94	5.08	2.58
346.95	5.13	2.67
346.96	5.17	2.75
346.97	5.21	2.84
346.98	5.25	2.93
346.99	5.29	3.02
347.00	5.33	3.10
347.01	5.37	3.19
347.02	5.41	3.28
347.03	5.44	3.37
347.04	5.48	3.47
347.05	5.52	3.56
347.06	5.55	3.65
347.07	5.58	3.74
347.08	5.62	3.83
347.09	5.65	3.92
347.10	5.68	4.02
347.11	5.71	4.11
347.12	5.74	4.20
347.13	5.77	4.29
347.14	5.79	4.38
347.15	5.82	4.47
347.16	5.84	4.57
347.17	5.87	4.66
347.18	5.89	4.75
347.19	5.92	4.84
347.20	5.94	4.93
347.21	5.96	5.01
347.22	5.98	5.10
347.23	6.00	5.19
347.24	6.02	5.28
347.25	6.04	5.36
347.26	6.05	5.45
347.27	6.07	5.53
347.28	6.08	5.62
347.29	6.10	5.70
347.30	6.11	5.78
347.31	6.12	5.86
347.32	6.13	5.94
347.33	6.14	6.02
347.34	6.15	6.09
347.35	6.16	6.17
347.36	6.17	6.24
347.37	6.17	6.31
347.38	6.18	6.38
347.39	6.18	6.44
347.40	6.18	6.51
347.41	6.19	6.57
347.42	**6.19**	6.63
347.43	6.18	6.69
347.44	6.18	6.75
347.45	6.18	6.80
347.46	6.17	6.85
347.47	6.17	6.90
347.48	6.16	6.94
347.49	6.15	6.98
347.50	6.14	7.02
347.51	6.12	7.05
347.52	6.11	7.08
347.53	6.09	7.11
347.54	6.07	7.13
347.55	6.05	7.15
347.56	6.03	7.16
347.57	6.00	**7.16**
347.58	5.97	7.16
347.59	5.93	7.15
347.60	5.89	7.13
347.61	5.85	7.10
347.62	5.79	7.06
347.63	5.72	7.00
347.64	5.62	6.88
347.65	5.43	6.66

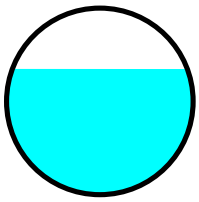
Summary for Reach DMHS9: TO DMH-S10

Inflow Area = 57,987 sf, 60.49% Impervious, Inflow Depth = 4.94" for 50-Year event
Inflow = 6.62 cfs @ 12.10 hrs, Volume= 23,887 cf
Outflow = 6.49 cfs @ 12.12 hrs, Volume= 23,887 cf, Atten= 2%, Lag= 0.7 min

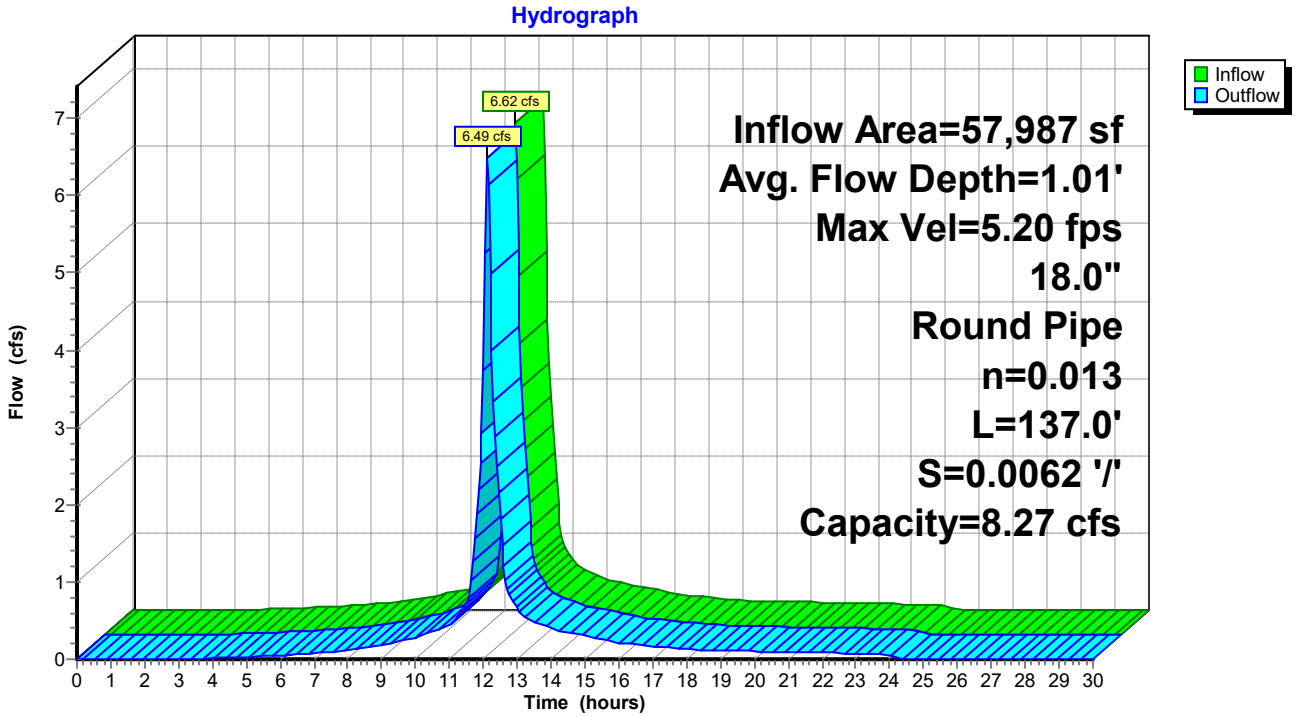
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.20 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.76 fps, Avg. Travel Time= 1.3 min

Peak Storage= 174 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.01'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.27 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 137.0' Slope= 0.0062 '/'
Inlet Invert= 344.25', Outlet Invert= 343.40'



Reach DMHS9: TO DMH-S10



Stage-Discharge for Reach DMHS9: TO DMH-S10

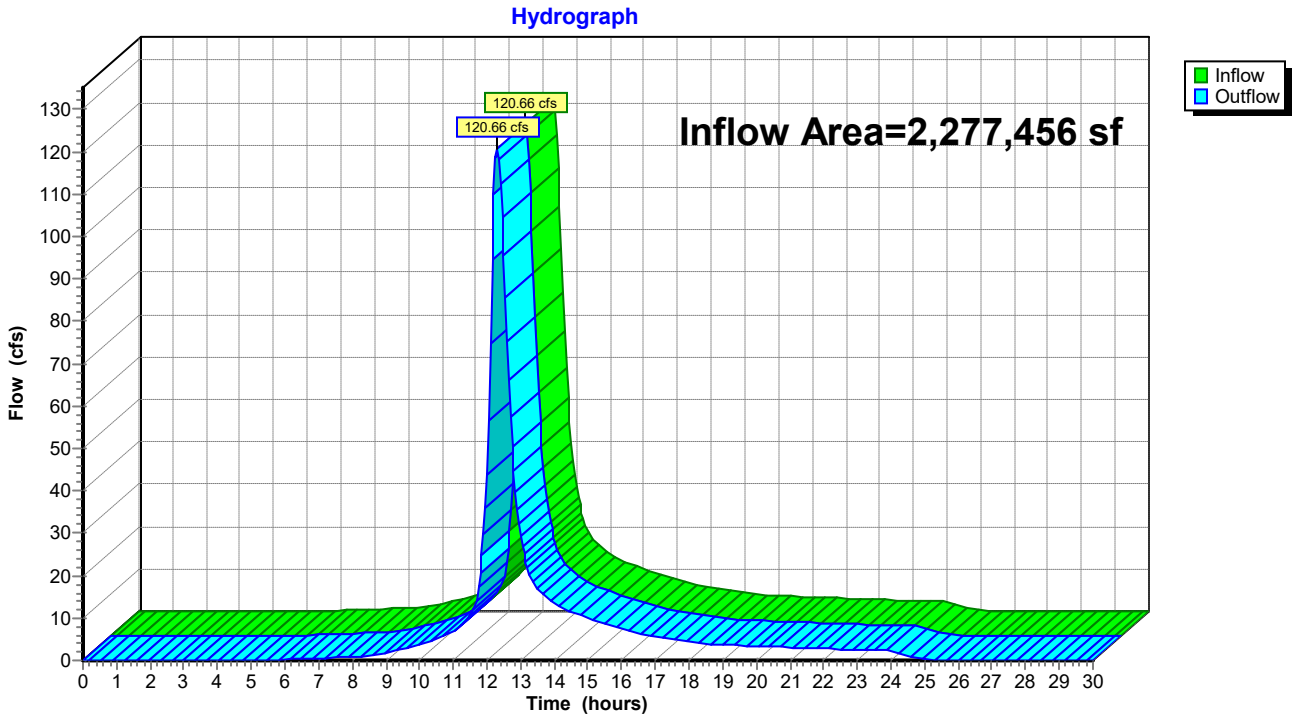
Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
344.25	0.00	0.00
344.26	0.28	0.00
344.27	0.50	0.00
344.28	0.66	0.01
344.29	0.79	0.01
344.30	0.92	0.02
344.31	1.04	0.02
344.32	1.15	0.03
344.33	1.25	0.05
344.34	1.35	0.06
344.35	1.45	0.07
344.36	1.54	0.09
344.37	1.63	0.11
344.38	1.71	0.13
344.39	1.80	0.15
344.40	1.88	0.17
344.41	1.96	0.20
344.42	2.03	0.23
344.43	2.11	0.25
344.44	2.18	0.28
344.45	2.25	0.32
344.46	2.32	0.35
344.47	2.39	0.38
344.48	2.45	0.42
344.49	2.52	0.46
344.50	2.58	0.50
344.51	2.64	0.54
344.52	2.70	0.58
344.53	2.76	0.63
344.54	2.82	0.68
344.55	2.88	0.72
344.56	2.94	0.77
344.57	2.99	0.83
344.58	3.05	0.88
344.59	3.10	0.93
344.60	3.15	0.99
344.61	3.20	1.05
344.62	3.26	1.10
344.63	3.31	1.16
344.64	3.35	1.22
344.65	3.40	1.29
344.66	3.45	1.35
344.67	3.50	1.42
344.68	3.54	1.48
344.69	3.59	1.55
344.70	3.63	1.62
344.71	3.68	1.69
344.72	3.72	1.76
344.73	3.76	1.83
344.74	3.81	1.91
344.75	3.85	1.98
344.76	3.89	2.06
344.77	3.93	2.14
344.78	3.97	2.22
344.79	4.01	2.29
344.80	4.04	2.37
344.81	4.08	2.46
344.82	4.12	2.54
344.83	4.15	2.62
344.84	4.19	2.70
344.85	4.22	2.79
344.86	4.26	2.87
344.87	4.29	2.96
344.88	4.33	3.05
344.89	4.36	3.13
344.90	4.39	3.22
344.91	4.42	3.31
344.92	4.45	3.40
344.93	4.48	3.49
344.94	4.51	3.58
344.95	4.54	3.67
344.96	4.57	3.77
344.97	4.60	3.86
344.98	4.63	3.95
344.99	4.66	4.04
345.00	4.68	4.14
345.01	4.71	4.23
345.02	4.73	4.32
345.03	4.76	4.42
345.04	4.78	4.51
345.05	4.81	4.61
345.06	4.83	4.70
345.07	4.85	4.80
345.08	4.88	4.89
345.09	4.90	4.99
345.10	4.92	5.08
345.11	4.94	5.18
345.12	4.96	5.27
345.13	4.98	5.37
345.14	5.00	5.46
345.15	5.02	5.56
345.16	5.04	5.65
345.17	5.06	5.75
345.18	5.08	5.84
345.19	5.09	5.93
345.20	5.11	6.03
345.21	5.12	6.12
345.22	5.14	6.21
345.23	5.15	6.30
345.24	5.17	6.40
345.25	5.18	6.49
345.26	5.20	6.58
345.27	5.21	6.66
345.28	5.22	6.75
345.29	5.23	6.84
345.30	5.24	6.93
345.31	5.25	7.01
345.32	5.26	7.10
345.33	5.27	7.18
345.34	5.28	7.26
345.35	5.29	7.35
345.36	5.30	7.43
345.37	5.30	7.51
345.38	5.31	7.58
345.39	5.32	7.66
345.40	5.32	7.74
345.41	5.33	7.81
345.42	5.33	7.88
345.43	5.33	7.95
345.44	5.33	8.02
345.45	5.34	8.09
345.46	5.34	8.15
345.47	**5.34**	8.22
345.48	5.34	8.28
345.49	5.34	8.34
345.50	5.33	8.39
345.51	5.33	8.45
345.52	5.33	8.50
345.53	5.32	8.55
345.54	5.32	8.60
345.55	5.31	8.64
345.56	5.30	8.68
345.57	5.30	8.72
345.58	5.29	8.76
345.59	5.28	8.79
345.60	5.26	8.82
345.61	5.25	8.84
345.62	5.24	8.86
345.63	5.22	8.88
345.64	5.20	8.89
345.65	5.18	8.90
345.66	5.16	**8.90**
345.67	5.14	8.89
345.68	5.11	8.88
345.69	5.08	8.86
345.70	5.05	8.83
345.71	5.01	8.79
345.72	4.97	8.74
345.73	4.92	8.66
345.74	4.82	8.51
345.75	4.68	8.27

Summary for Reach DP#1: DP#1

Inflow Area = 2,277,456 sf, 14.76% Impervious, Inflow Depth = 3.25" for 50-Year event
Inflow = 120.66 cfs @ 12.30 hrs, Volume= 617,594 cf
Outflow = 120.66 cfs @ 12.30 hrs, Volume= 617,594 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#1: DP#1

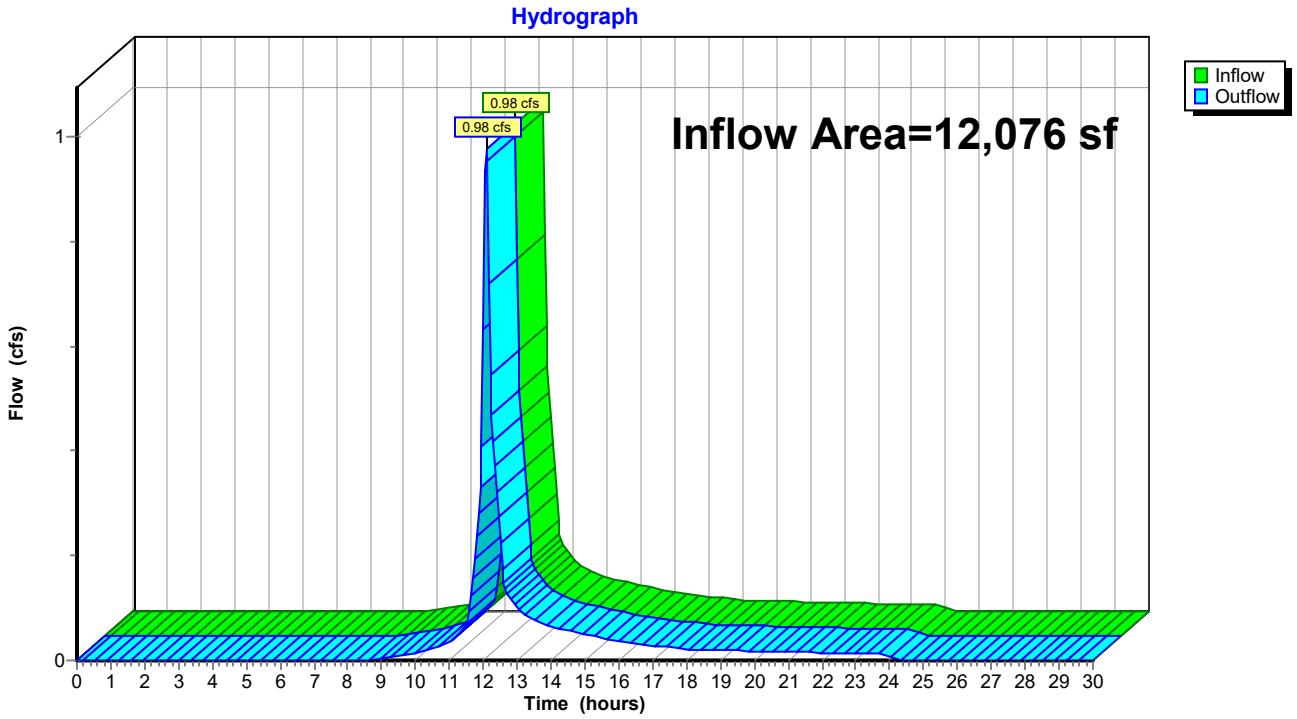


Summary for Reach DP#5: DITCH

Inflow Area = 12,076 sf, 57.69% Impervious, Inflow Depth = 3.01" for 50-Year event
Inflow = 0.98 cfs @ 12.08 hrs, Volume= 3,025 cf
Outflow = 0.98 cfs @ 12.08 hrs, Volume= 3,025 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#5: DITCH

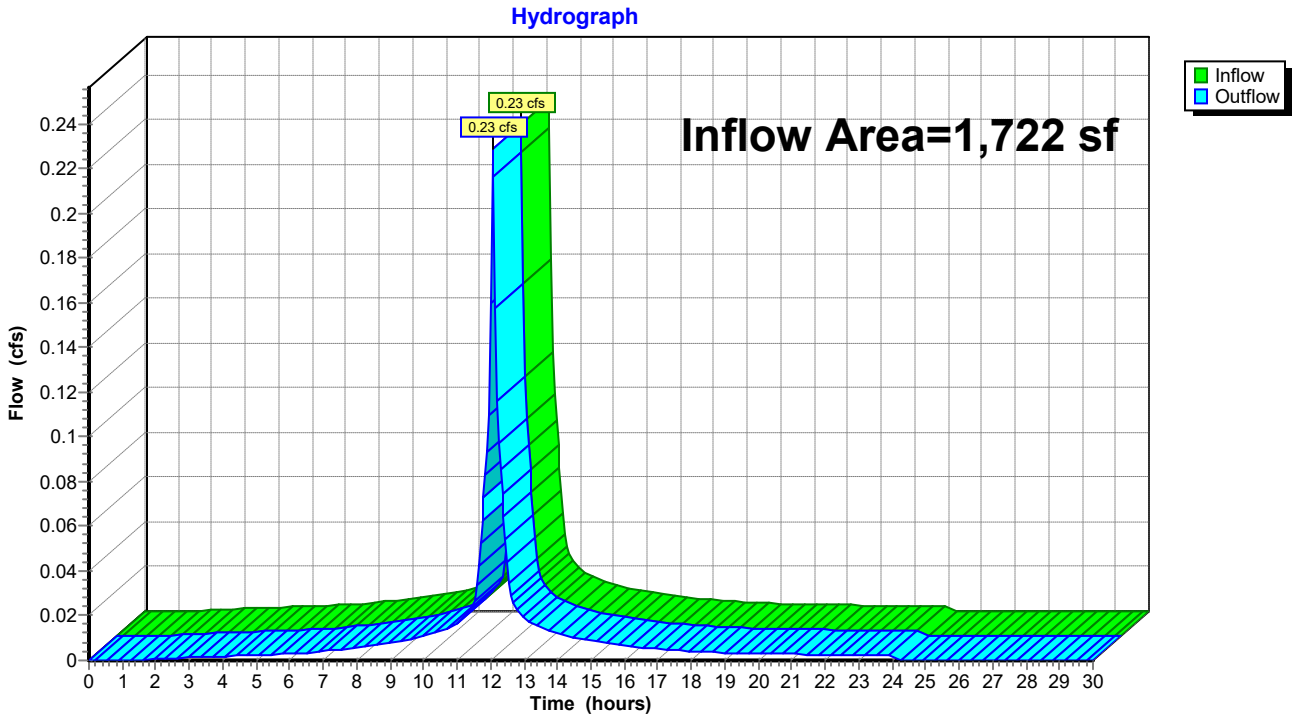


Summary for Reach DRIP: TO YD#1

Inflow Area = 1,722 sf, 96.81% Impervious, Inflow Depth = 5.54" for 50-Year event
Inflow = 0.23 cfs @ 12.07 hrs, Volume= 796 cf
Outflow = 0.23 cfs @ 12.07 hrs, Volume= 796 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DRIP: TO YD#1

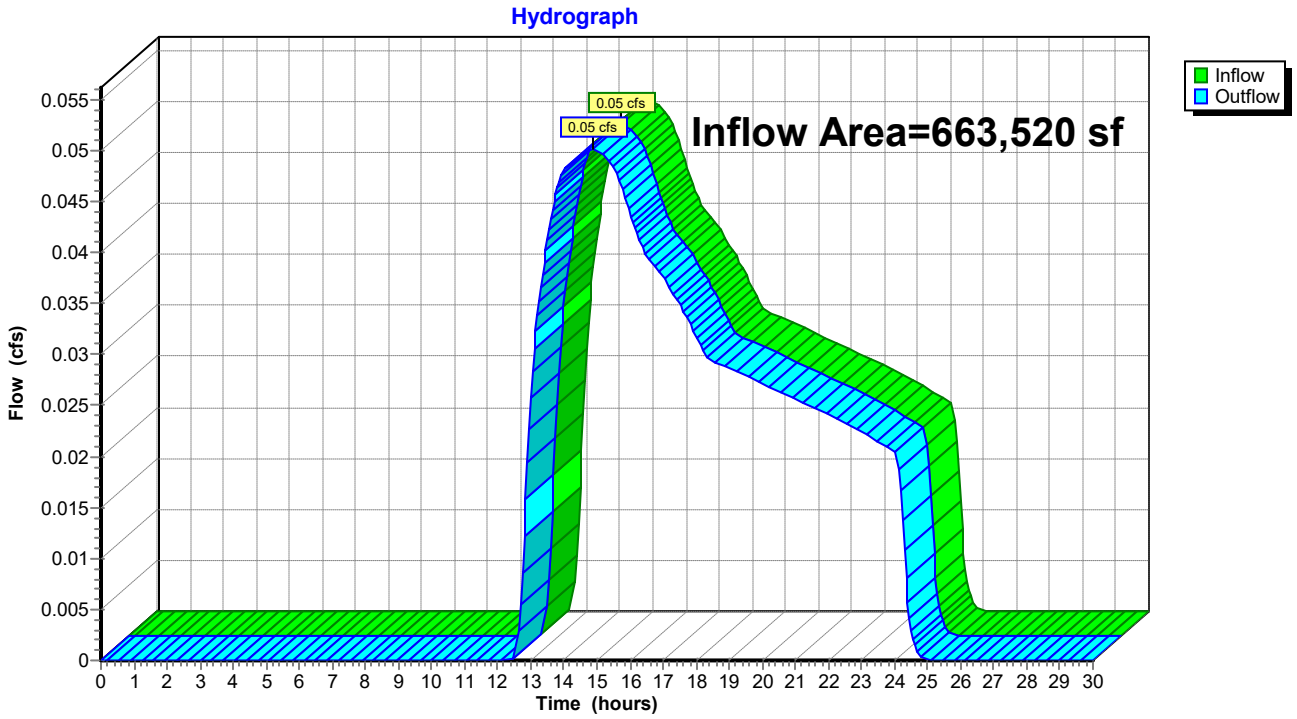


Summary for Reach R200: DP#2

Inflow Area = 663,520 sf, 33.87% Impervious, Inflow Depth = 0.02" for 50-Year event
Inflow = 0.05 cfs @ 14.89 hrs, Volume= 1,361 cf
Outflow = 0.05 cfs @ 14.89 hrs, Volume= 1,361 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R200: DP#2

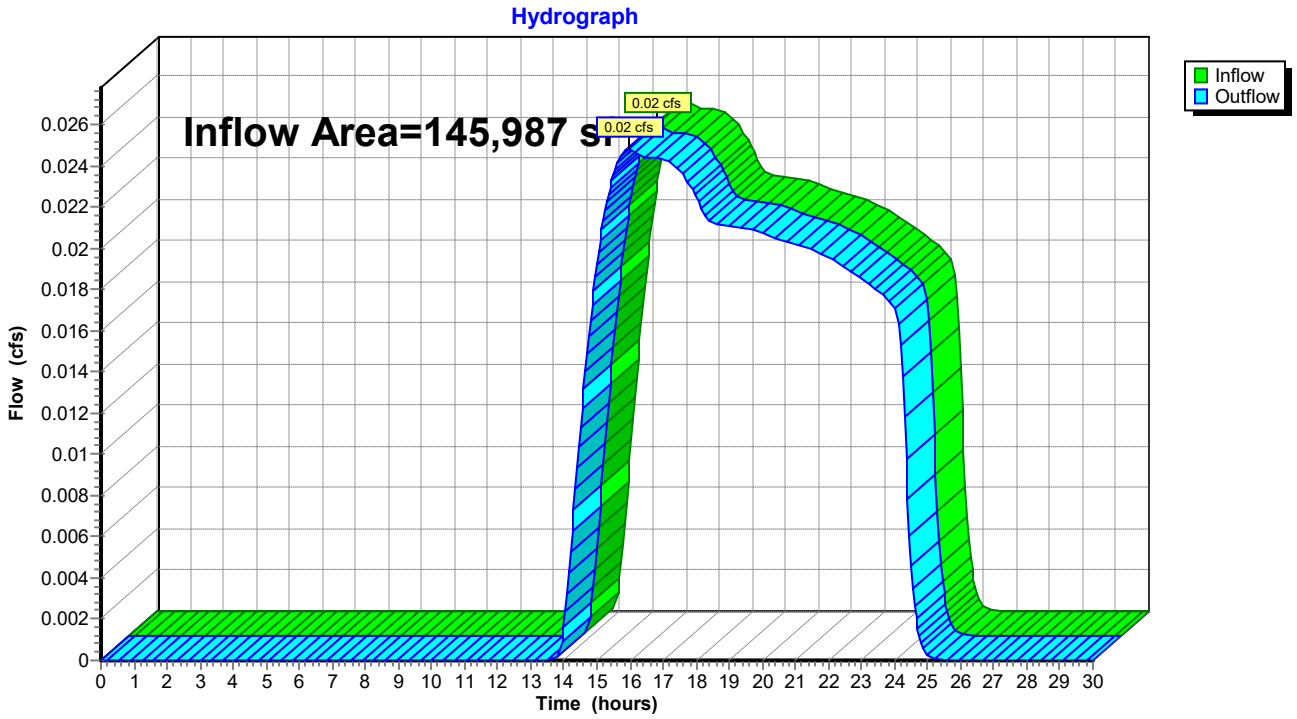


Summary for Reach R300: DP#3

Inflow Area = 145,987 sf, 0.00% Impervious, Inflow Depth = 0.06" for 50-Year event
Inflow = 0.02 cfs @ 15.98 hrs, Volume= 753 cf
Outflow = 0.02 cfs @ 15.98 hrs, Volume= 753 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R300: DP#3

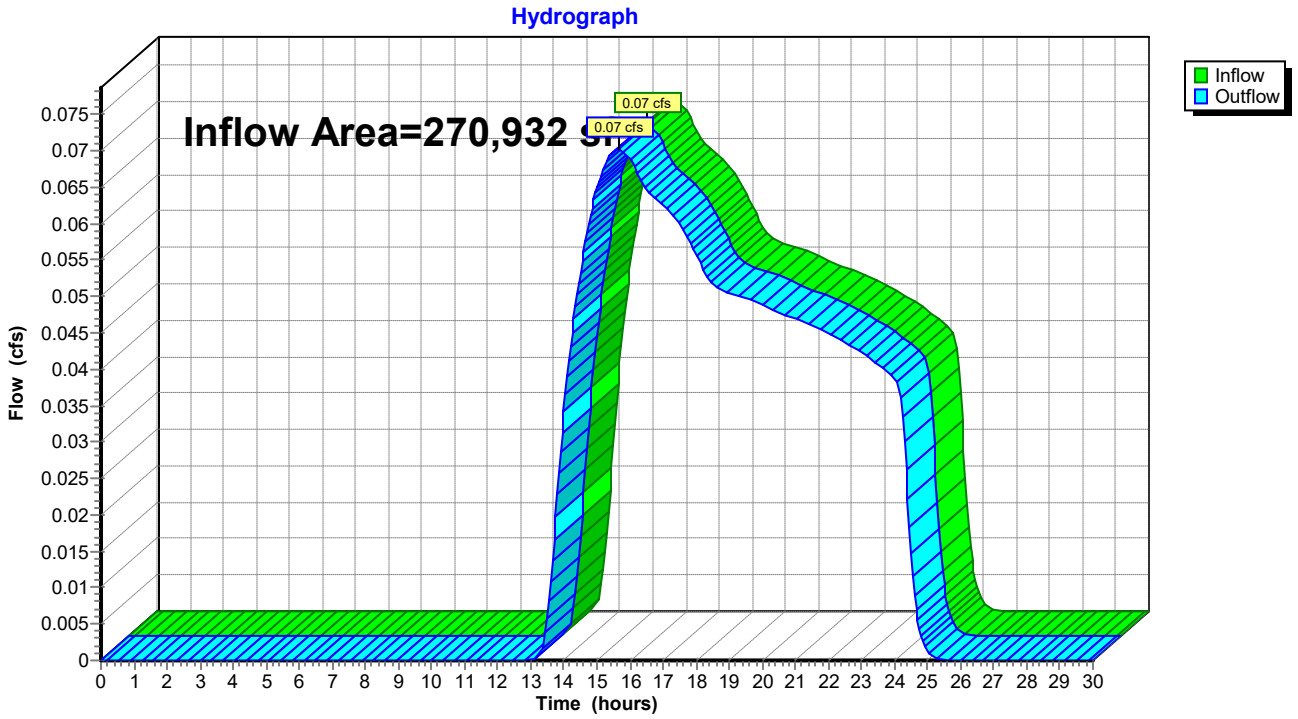


Summary for Reach R400: DP#4

Inflow Area = 270,932 sf, 0.59% Impervious, Inflow Depth = 0.09" for 50-Year event
Inflow = 0.07 cfs @ 15.65 hrs, Volume= 1,998 cf
Outflow = 0.07 cfs @ 15.65 hrs, Volume= 1,998 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R400: DP#4



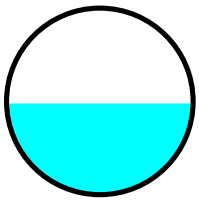
Summary for Reach RF-1: TO DMH#3

Inflow Area = 2,135 sf,100.00% Impervious, Inflow Depth = 5.66" for 50-Year event
Inflow = 0.28 cfs @ 12.09 hrs, Volume= 1,007 cf
Outflow = 0.27 cfs @ 12.10 hrs, Volume= 1,007 cf, Atten= 1%, Lag= 0.5 min

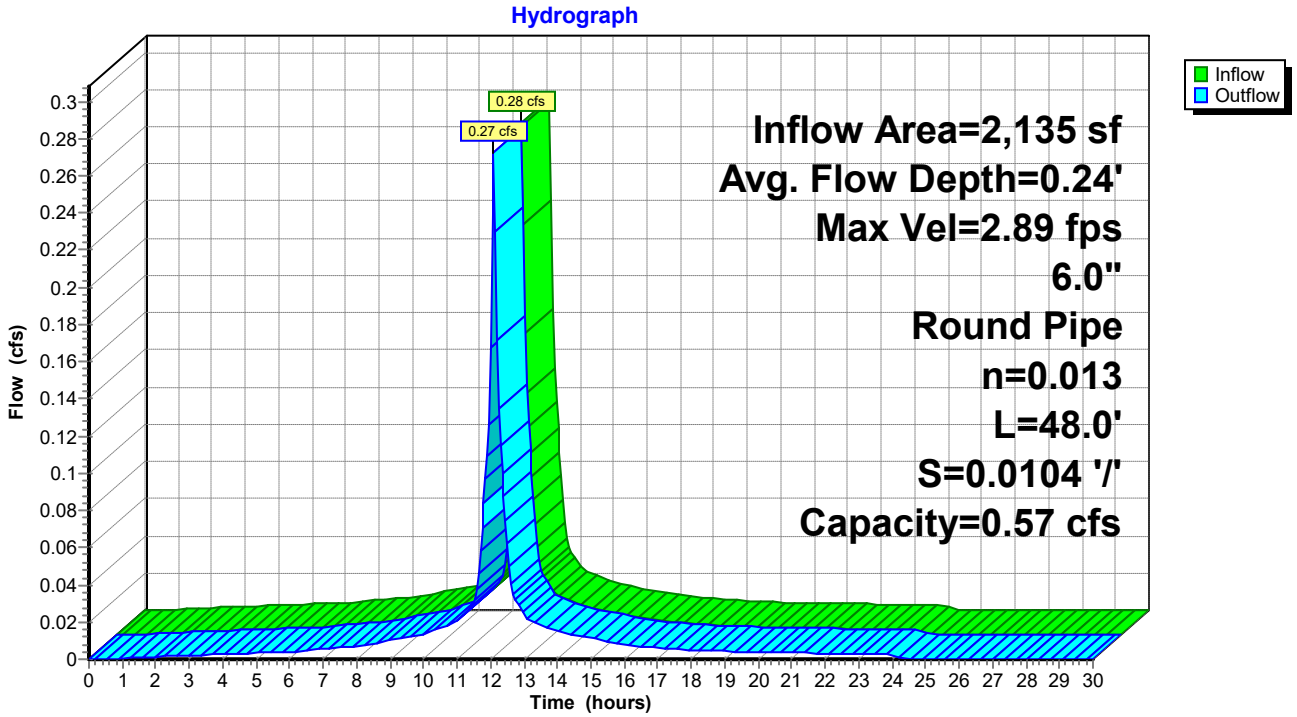
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.89 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 0.98 fps, Avg. Travel Time= 0.8 min

Peak Storage= 5 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.24'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.57 cfs

6.0" Round Pipe
n= 0.013 Cast iron, coated
Length= 48.0' Slope= 0.0104 '/'
Inlet Invert= 351.70', Outlet Invert= 351.20'



Reach RF-1: TO DMH#3



Stage-Discharge for Reach RF-1: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.41	0.00
351.72	0.65	0.00
351.73	0.84	0.00
351.74	1.02	0.01
351.75	1.17	0.01
351.76	1.31	0.02
351.77	1.44	0.02
351.78	1.57	0.03
351.79	1.68	0.04
351.80	1.79	0.05
351.81	1.90	0.06
351.82	2.00	0.07
351.83	2.09	0.08
351.84	2.18	0.10
351.85	2.26	0.11
351.86	2.34	0.13
351.87	2.42	0.14
351.88	2.49	0.16
351.89	2.56	0.18
351.90	2.63	0.19
351.91	2.69	0.21
351.92	2.75	0.23
351.93	2.81	0.25
351.94	2.87	0.27
351.95	2.92	0.29
351.96	2.96	0.31
351.97	3.01	0.33
351.98	3.05	0.35
351.99	3.09	0.37
352.00	3.13	0.38
352.01	3.16	0.40
352.02	3.19	0.42
352.03	3.22	0.44
352.04	3.24	0.46
352.05	3.27	0.48
352.06	3.28	0.50
352.07	3.30	0.51
352.08	3.31	0.53
352.09	3.32	0.55
352.10	3.32	0.56
352.11	**3.32**	0.57
352.12	3.32	0.58
352.13	3.31	0.60
352.14	3.30	0.60
352.15	3.28	0.61
352.16	3.25	0.61
352.17	3.22	**0.62**
352.18	3.17	0.61
352.19	3.10	0.61
352.20	2.92	0.57

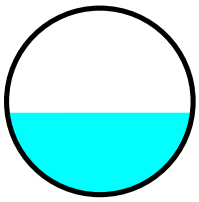
Summary for Reach RF-2: TO DMH#3

Inflow Area = 1,853 sf,100.00% Impervious, Inflow Depth = 5.66" for 50-Year event
Inflow = 0.24 cfs @ 12.08 hrs, Volume= 874 cf
Outflow = 0.24 cfs @ 12.09 hrs, Volume= 874 cf, Atten= 1%, Lag= 0.6 min

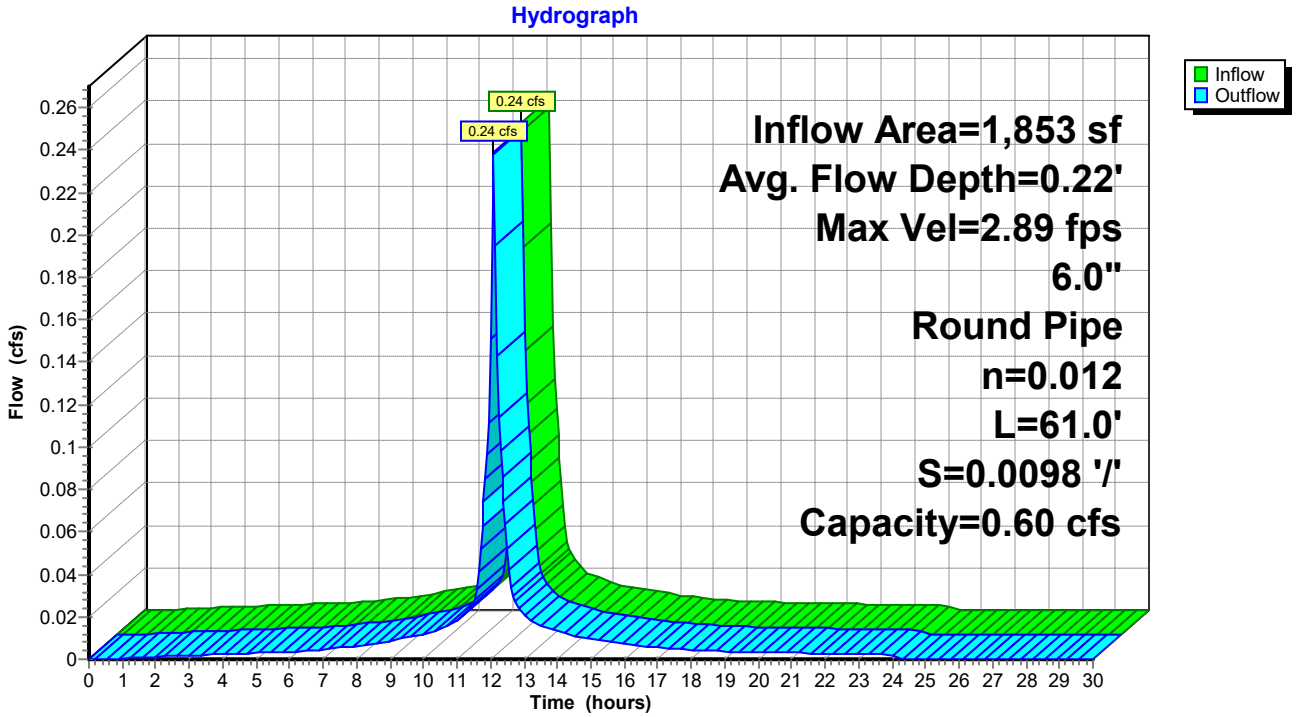
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.89 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.98 fps, Avg. Travel Time= 1.0 min

Peak Storage= 5 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.22'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.60 cfs

6.0" Round Pipe
n= 0.012 Steel, smooth
Length= 61.0' Slope= 0.0098 '/'
Inlet Invert= 351.80', Outlet Invert= 351.20'



Reach RF-2: TO DMH#3



Stage-Discharge for Reach RF-2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.43	0.00
351.82	0.68	0.00
351.83	0.89	0.00
351.84	1.07	0.01
351.85	1.23	0.01
351.86	1.38	0.02
351.87	1.52	0.03
351.88	1.65	0.03
351.89	1.77	0.04
351.90	1.89	0.05
351.91	2.00	0.06
351.92	2.10	0.08
351.93	2.20	0.09
351.94	2.29	0.10
351.95	2.38	0.12
351.96	2.47	0.13
351.97	2.55	0.15
351.98	2.63	0.17
351.99	2.70	0.18
352.00	2.77	0.20
352.01	2.84	0.22
352.02	2.90	0.24
352.03	2.96	0.26
352.04	3.02	0.28
352.05	3.07	0.30
352.06	3.12	0.32
352.07	3.17	0.34
352.08	3.21	0.36
352.09	3.25	0.38
352.10	3.29	0.41
352.11	3.33	0.43
352.12	3.36	0.45
352.13	3.39	0.47
352.14	3.42	0.49
352.15	3.44	0.50
352.16	3.46	0.52
352.17	3.47	0.54
352.18	3.49	0.56
352.19	3.49	0.57
352.20	3.50	0.59
352.21	**3.50**	0.60
352.22	3.50	0.62
352.23	3.49	0.63
352.24	3.47	0.64
352.25	3.45	0.64
352.26	3.42	0.65
352.27	3.39	**0.65**
352.28	3.33	0.65
352.29	3.26	0.64
352.30	3.07	0.60

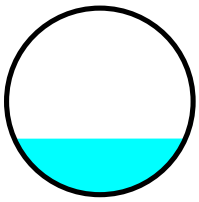
Summary for Reach RF3: TO DMH#3

Inflow Area = 933 sf,100.00% Impervious, Inflow Depth = 5.66" for 50-Year event
Inflow = 0.12 cfs @ 12.07 hrs, Volume= 440 cf
Outflow = 0.12 cfs @ 12.09 hrs, Volume= 440 cf, Atten= 3%, Lag= 1.3 min

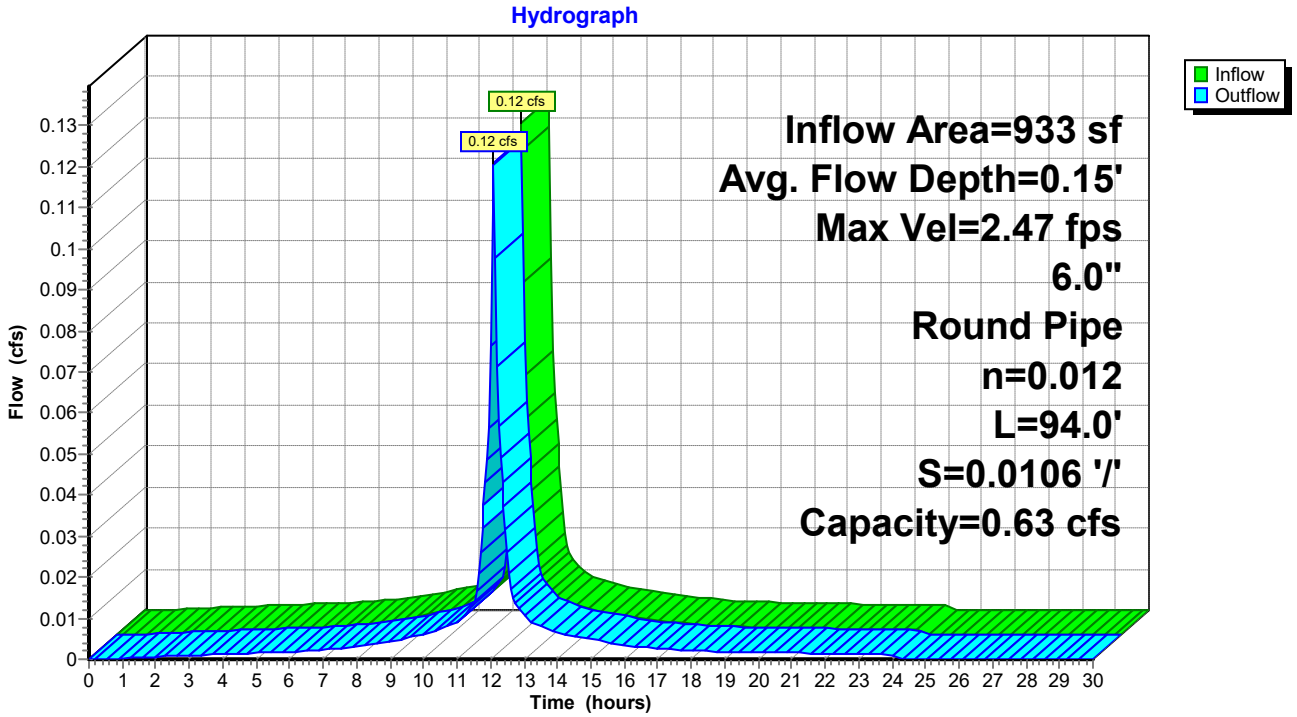
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.47 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 0.82 fps, Avg. Travel Time= 1.9 min

Peak Storage= 5 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.15'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.63 cfs

6.0" Round Pipe
n= 0.012 Steel, smooth
Length= 94.0' Slope= 0.0106 '/'
Inlet Invert= 352.10', Outlet Invert= 351.10'



Reach RF3: TO DMH#3



Stage-Discharge for Reach RF3: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.10	0.00	0.00
352.11	0.45	0.00
352.12	0.71	0.00
352.13	0.92	0.00
352.14	1.11	0.01
352.15	1.28	0.01
352.16	1.44	0.02
352.17	1.58	0.03
352.18	1.72	0.03
352.19	1.84	0.04
352.20	1.96	0.05
352.21	2.08	0.07
352.22	2.19	0.08
352.23	2.29	0.09
352.24	2.39	0.11
352.25	2.48	0.12
352.26	2.57	0.14
352.27	2.65	0.16
352.28	2.73	0.17
352.29	2.81	0.19
352.30	2.88	0.21
352.31	2.95	0.23
352.32	3.02	0.25
352.33	3.08	0.27
352.34	3.14	0.29
352.35	3.19	0.31
352.36	3.25	0.33
352.37	3.30	0.36
352.38	3.34	0.38
352.39	3.38	0.40
352.40	3.42	0.42
352.41	3.46	0.44
352.42	3.49	0.46
352.43	3.52	0.48
352.44	3.55	0.51
352.45	3.58	0.52
352.46	3.60	0.54
352.47	3.61	0.56
352.48	3.63	0.58
352.49	3.63	0.60
352.50	3.64	0.61
352.51	**3.64**	0.63
352.52	3.64	0.64
352.53	3.63	0.65
352.54	3.61	0.66
352.55	3.59	0.67
352.56	3.56	0.67
352.57	3.52	**0.67**
352.58	3.47	0.67
352.59	3.39	0.66
352.60	3.19	0.63

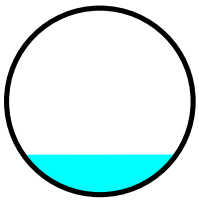
Summary for Reach YD1: TO CO#1

Inflow Area = 5,181 sf, 36.69% Impervious, Inflow Depth = 3.31" for 50-Year event
Inflow = 0.42 cfs @ 12.08 hrs, Volume= 1,428 cf
Outflow = 0.42 cfs @ 12.08 hrs, Volume= 1,428 cf, Atten= 0%, Lag= 0.1 min

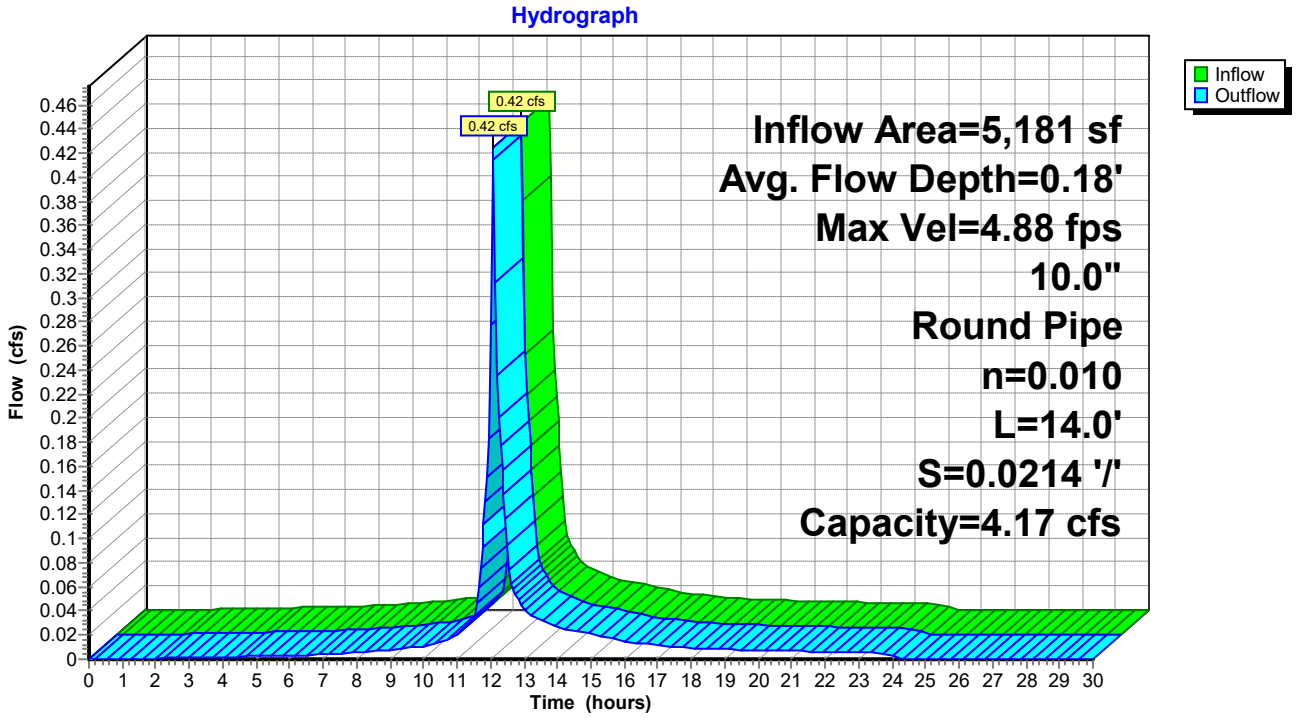
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.88 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.56 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.17 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 14.0' Slope= 0.0214 '/'
Inlet Invert= 350.80', Outlet Invert= 350.50'



Reach YD1: TO CO#1



Stage-Discharge for Reach YD1: TO CO#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.80	0.00	0.00
350.81	0.76	0.00
350.82	1.21	0.00
350.83	1.58	0.01
350.84	1.91	0.02
350.85	2.21	0.03
350.86	2.49	0.04
350.87	2.74	0.06
350.88	2.99	0.08
350.89	3.22	0.10
350.90	3.44	0.13
350.91	3.65	0.16
350.92	3.85	0.19
350.93	4.05	0.22
350.94	4.23	0.26
350.95	4.41	0.29
350.96	4.59	0.34
350.97	4.76	0.38
350.98	4.92	0.43
350.99	5.08	0.48
351.00	5.23	0.53
351.01	5.38	0.58
351.02	5.52	0.64
351.03	5.66	0.69
351.04	5.80	0.75
351.05	5.93	0.82
351.06	6.06	0.88
351.07	6.19	0.95
351.08	6.31	1.01
351.09	6.42	1.08
351.10	6.54	1.16
351.11	6.65	1.23
351.12	6.76	1.30
351.13	6.86	1.38
351.14	6.96	1.46
351.15	7.06	1.54
351.16	7.16	1.62
351.17	7.25	1.70
351.18	7.34	1.78
351.19	7.43	1.86
351.20	7.51	1.94
351.21	7.59	2.03
351.22	7.67	2.11
351.23	7.75	2.20
351.24	7.82	2.28
351.25	7.89	2.37
351.26	7.96	2.46
351.27	8.02	2.54
351.28	8.08	2.63
351.29	8.14	2.72
351.30	8.20	2.80
351.31	8.25	2.89
351.32	8.30	2.97
351.33	8.35	3.06
351.34	8.40	3.14
351.35	8.44	3.22
351.36	8.48	3.30
351.37	8.52	3.39
351.38	8.55	3.46
351.39	8.58	3.54
351.40	8.61	3.62
351.41	8.63	3.69
351.42	8.65	3.77
351.43	8.67	3.84
351.44	8.69	3.91
351.45	8.70	3.97
351.46	8.71	4.03
351.47	8.71	4.10
351.48	**8.71**	4.15
351.49	8.71	4.21
351.50	8.70	4.26
351.51	8.69	4.30
351.52	8.68	4.35
351.53	8.65	4.38
351.54	8.63	4.42
351.55	8.59	4.44
351.56	8.55	4.46
351.57	8.51	4.48
351.58	8.45	**4.48**
351.59	8.38	4.48
351.60	8.30	4.47
351.61	8.20	4.44
351.62	8.06	4.38
351.63	7.78	4.24

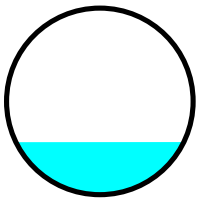
Summary for Reach YD2: TO D14

Inflow Area = 10,793 sf, 49.52% Impervious, Inflow Depth = 3.59" for 50-Year event
Inflow = 1.04 cfs @ 12.08 hrs, Volume= 3,229 cf
Outflow = 1.04 cfs @ 12.08 hrs, Volume= 3,229 cf, Atten= 0%, Lag= 0.0 min

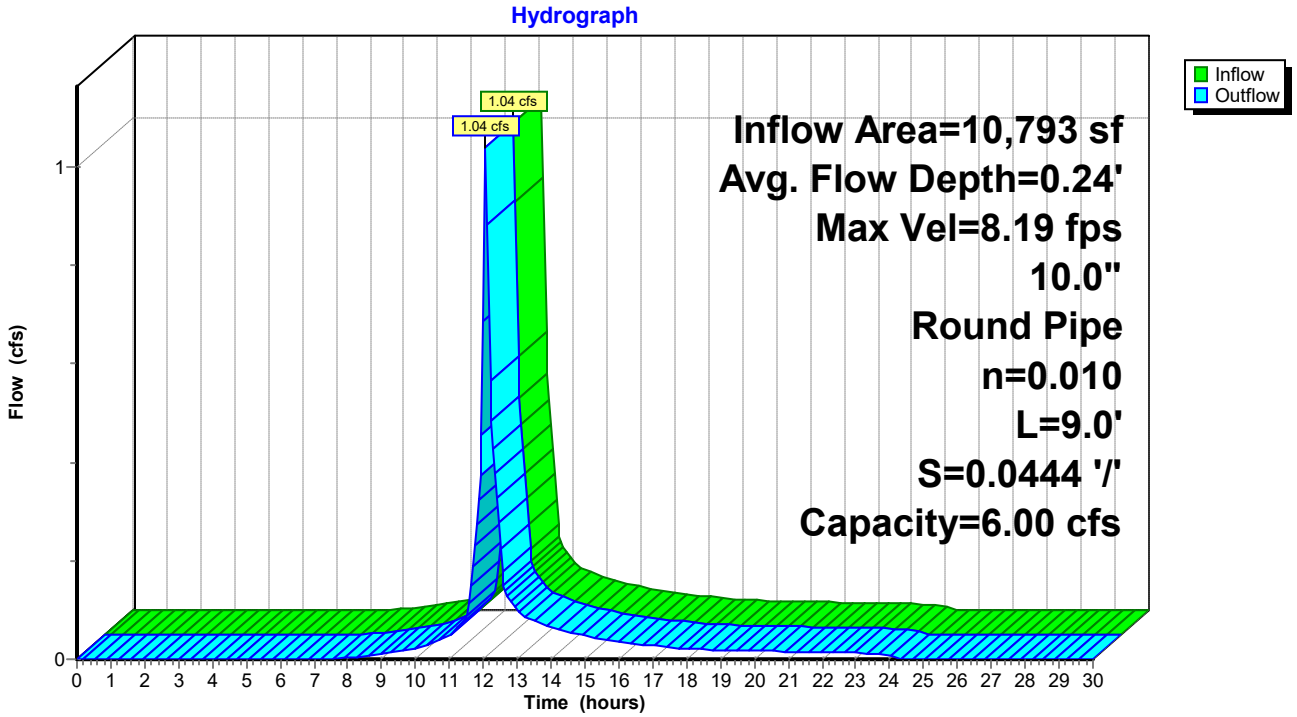
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.19 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.85 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.24'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 6.00 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 9.0' Slope= 0.0444 '/'
Inlet Invert= 347.80', Outlet Invert= 347.40'



Reach YD2: TO D14



Stage-Discharge for Reach YD2: TO D14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.80	0.00	0.00
347.81	1.09	0.00
347.82	1.74	0.01
347.83	2.28	0.01
347.84	2.75	0.03
347.85	3.18	0.04
347.86	3.58	0.06
347.87	3.95	0.09
347.88	4.30	0.12
347.89	4.64	0.15
347.90	4.95	0.18
347.91	5.26	0.22
347.92	5.55	0.27
347.93	5.83	0.32
347.94	6.10	0.37
347.95	6.36	0.42
347.96	6.61	0.48
347.97	6.85	0.55
347.98	7.09	0.61
347.99	7.31	0.68
348.00	7.54	0.76
348.01	7.75	0.84
348.02	7.96	0.92
348.03	8.16	1.00
348.04	8.35	1.09
348.05	8.54	1.18
348.06	8.73	1.27
348.07	8.91	1.36
348.08	9.08	1.46
348.09	9.25	1.56
348.10	9.42	1.66
348.11	9.58	1.77
348.12	9.73	1.88
348.13	9.88	1.99
348.14	10.03	2.10
348.15	10.17	2.21
348.16	10.31	2.33
348.17	10.44	2.44
348.18	10.57	2.56
348.19	10.70	2.68
348.20	10.82	2.80
348.21	10.93	2.92
348.22	11.05	3.04
348.23	11.16	3.17
348.24	11.26	3.29
348.25	11.36	3.41
348.26	11.46	3.54
348.27	11.55	3.66
348.28	11.64	3.79
348.29	11.73	3.91
348.30	11.81	4.03
348.31	11.88	4.16
348.32	11.96	4.28
348.33	12.03	4.40
348.34	12.09	4.52
348.35	12.15	4.64
348.36	12.21	4.76
348.37	12.26	4.88
348.38	12.31	4.99
348.39	12.36	5.10
348.40	12.40	5.21
348.41	12.43	5.32
348.42	12.46	5.42
348.43	12.49	5.53
348.44	12.51	5.62
348.45	12.53	5.72
348.46	12.54	5.81
348.47	12.55	5.90
348.48	**12.55**	5.98
348.49	12.55	6.06
348.50	12.54	6.13
348.51	12.52	6.20
348.52	12.49	6.26
348.53	12.46	6.31
348.54	12.43	6.36
348.55	12.38	6.40
348.56	12.32	6.43
348.57	12.25	6.45
348.58	12.17	**6.46**
348.59	12.07	6.45
348.60	11.96	6.43
348.61	11.81	6.39
348.62	11.61	6.31
348.63	11.20	6.11

Summary for Pond P1: BASIN#1

Inflow Area =	556,651 sf,	40.37% Impervious,	Inflow Depth =	2.92"	for 50-Year event
Inflow =	32.38 cfs @	12.16 hrs,	Volume=	135,295 cf	
Outflow =	5.42 cfs @	12.87 hrs,	Volume=	135,295 cf,	Atten= 83%, Lag= 42.9 min
Discarded =	5.42 cfs @	12.87 hrs,	Volume=	135,295 cf	
Primary =	0.00 cfs @	0.00 hrs,	Volume=	0 cf	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0 cf	

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 337.11' @ 12.87 hrs Surf.Area= 23,469 sf Storage= 44,440 cf

Plug-Flow detention time= 67.8 min calculated for 135,070 cf (100% of inflow)
Center-of-Mass det. time= 67.7 min (886.9 - 819.2)

Volume	Invert	Avail.Storage	Storage Description
#1	335.00'	119,716 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
335.00	17,284	0	0
336.00	21,521	19,403	19,403
338.00	25,021	46,542	65,945
340.00	28,750	53,771	119,716

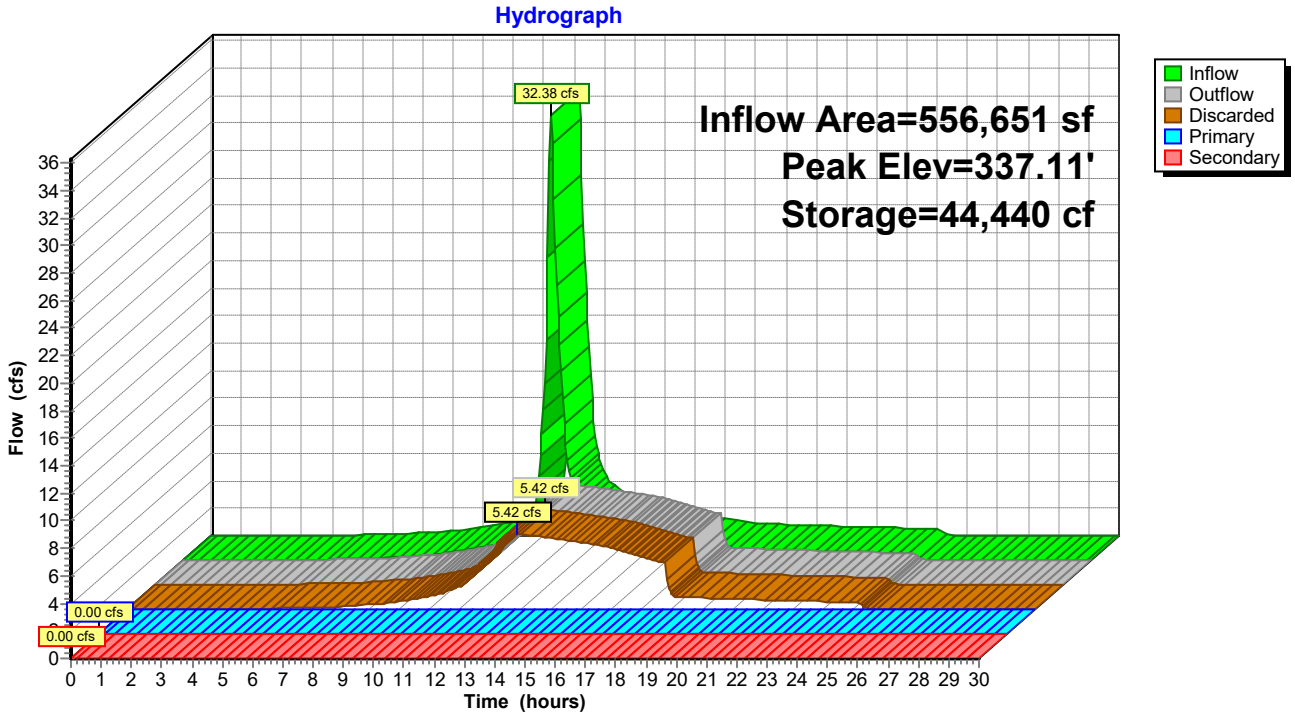
Device	Routing	Invert	Outlet Devices
#1	Primary	332.60'	**12.0" Round Culvert** L= 223.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 332.60' / 331.50' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	335.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 326.00'
#3	Device 1	338.00'	**6.0" Vert. Orifice/Grate X 3.00** C= 0.600
#4	Secondary	339.00'	**14.0' 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

Discarded OutFlow Max=5.42 cfs @ 12.87 hrs HW=337.11' (Free Discharge)
└─**2=Exfiltration** (Controls 5.42 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 3.34 cfs potential flow)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P1: BASIN#1



Stage-Discharge for Pond P1: BASIN#1

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
335.00	0.00	0.00	0.00	0.00
335.10	3.43	3.43	0.00	0.00
335.20	3.55	3.55	0.00	0.00
335.30	3.67	3.67	0.00	0.00
335.40	3.79	3.79	0.00	0.00
335.50	3.91	3.91	0.00	0.00
335.60	4.03	4.03	0.00	0.00
335.70	4.15	4.15	0.00	0.00
335.80	4.28	4.28	0.00	0.00
335.90	4.40	4.40	0.00	0.00
336.00	4.53	4.53	0.00	0.00
336.10	4.61	4.61	0.00	0.00
336.20	4.69	4.69	0.00	0.00
336.30	4.77	4.77	0.00	0.00
336.40	4.85	4.85	0.00	0.00
336.50	4.93	4.93	0.00	0.00
336.60	5.01	5.01	0.00	0.00
336.70	5.09	5.09	0.00	0.00
336.80	5.17	5.17	0.00	0.00
336.90	5.25	5.25	0.00	0.00
337.00	5.33	5.33	0.00	0.00
337.10	5.41	5.41	0.00	0.00
337.20	5.50	5.50	0.00	0.00
337.30	5.58	5.58	0.00	0.00
337.40	5.66	5.66	0.00	0.00
337.50	5.75	5.75	0.00	0.00
337.60	5.83	5.83	0.00	0.00
337.70	5.91	5.91	0.00	0.00
337.80	6.00	6.00	0.00	0.00
337.90	6.08	6.08	0.00	0.00
338.00	6.17	6.17	0.00	0.00
338.10	6.34	6.25	0.09	0.00
338.20	6.68	6.34	0.34	0.00
338.30	7.12	6.43	0.69	0.00
338.40	7.60	6.52	1.09	0.00
338.50	8.02	6.60	1.42	0.00
338.60	8.37	6.69	1.68	0.00
338.70	8.68	6.78	1.90	0.00
338.80	8.97	6.87	2.10	0.00
338.90	9.25	6.96	2.29	0.00
339.00	9.51	7.05	2.46	0.00
339.10	10.86	7.14	2.61	1.10
339.20	13.11	7.23	2.76	3.12
339.30	16.04	7.32	2.91	5.81
339.40	19.52	7.41	3.04	9.07
339.50	23.69	7.50	3.17	13.02
339.60	28.46	7.59	3.30	17.57
339.70	33.20	7.69	3.42	22.10
339.80	38.26	7.78	3.53	26.95
339.90	43.61	7.87	3.64	32.09
340.00	**49.23**	**7.96**	**3.75**	**37.52**

Summary for Pond P2: SETTLING POND

Inflow Area = 59,763 sf, 5.17% Impervious, Inflow Depth = 0.58" for 50-Year event
Inflow = 0.35 cfs @ 12.44 hrs, Volume= 2,894 cf
Outflow = 0.21 cfs @ 12.74 hrs, Volume= 2,894 cf, Atten= 38%, Lag= 17.7 min
Discarded = 0.21 cfs @ 12.74 hrs, Volume= 2,894 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 343.24' @ 12.74 hrs Surf.Area= 1,073 sf Storage= 213 cf

Plug-Flow detention time= 4.8 min calculated for 2,889 cf (100% of inflow)
Center-of-Mass det. time= 4.8 min (952.9 - 948.1)

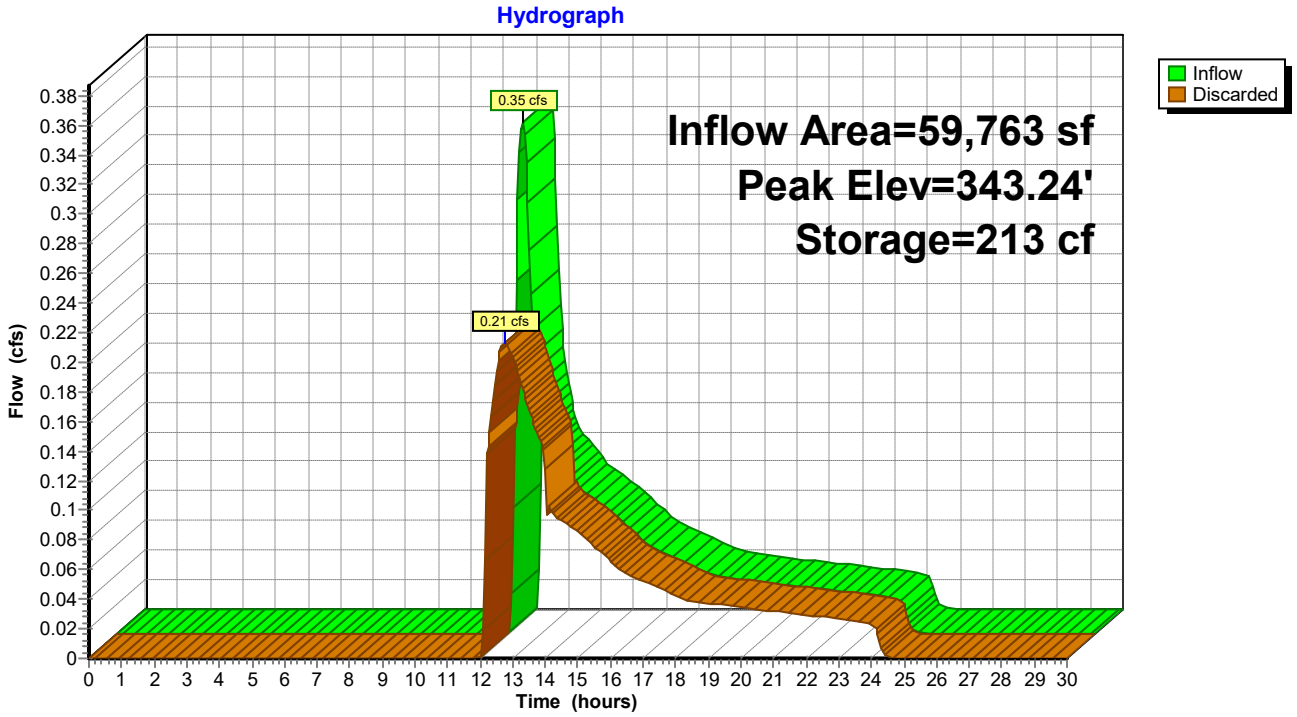
Volume	Invert	Avail.Storage	Storage Description
#1	343.00'	1,470 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
343.00	707	0	0
344.00	2,233	1,470	1,470

Device	Routing	Invert	Outlet Devices
#1	Discarded	343.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 337.80'

Discarded OutFlow Max=0.21 cfs @ 12.74 hrs HW=343.24' (Free Discharge)
└**1=Exfiltration** (Controls 0.21 cfs)

Pond P2: SETTLING POND



Stage-Discharge for Pond P2: SETTLING POND

Elevation (feet)	Discarded (cfs)	Elevation (feet)	Discarded (cfs)
343.00	0.00	343.52	0.31
343.01	0.14	343.53	0.31
343.02	0.14	343.54	0.31
343.03	0.14	343.55	0.32
343.04	0.15	343.56	0.32
343.05	0.15	343.57	0.33
343.06	0.15	343.58	0.33
343.07	0.16	343.59	0.33
343.08	0.16	343.60	0.34
343.09	0.16	343.61	0.34
343.10	0.17	343.62	0.34
343.11	0.17	343.63	0.35
343.12	0.17	343.64	0.35
343.13	0.18	343.65	0.35
343.14	0.18	343.66	0.36
343.15	0.18	343.67	0.36
343.16	0.19	343.68	0.36
343.17	0.19	343.69	0.37
343.18	0.19	343.70	0.37
343.19	0.20	343.71	0.37
343.20	0.20	343.72	0.38
343.21	0.20	343.73	0.38
343.22	0.21	343.74	0.39
343.23	0.21	343.75	0.39
343.24	0.21	343.76	0.39
343.25	0.22	343.77	0.40
343.26	0.22	343.78	0.40
343.27	0.22	343.79	0.40
343.28	0.23	343.80	0.41
343.29	0.23	343.81	0.41
343.30	0.23	343.82	0.41
343.31	0.24	343.83	0.42
343.32	0.24	343.84	0.42
343.33	0.24	343.85	0.42
343.34	0.25	343.86	0.43
343.35	0.25	343.87	0.43
343.36	0.25	343.88	0.44
343.37	0.26	343.89	0.44
343.38	0.26	343.90	0.44
343.39	0.26	343.91	0.45
343.40	0.27	343.92	0.45
343.41	0.27	343.93	0.45
343.42	0.27	343.94	0.46
343.43	0.28	343.95	0.46
343.44	0.28	343.96	0.46
343.45	0.28	343.97	0.47
343.46	0.29	343.98	0.47
343.47	0.29	343.99	0.48
343.48	0.29	344.00	**0.48**
343.49	0.30		
343.50	0.30		
343.51	0.30		

Summary for Pond UGS-B: TO DMH#8

Inflow Area =	67,684 sf, 89.07% Impervious, Inflow Depth = 4.93" for 50-Year event				
Inflow =	8.20 cfs @	12.09 hrs,	Volume=	27,829 cf	
Outflow =	3.93 cfs @	12.26 hrs,	Volume=	27,829 cf,	Atten= 52%, Lag= 10.2 min
Discarded =	1.18 cfs @	12.26 hrs,	Volume=	22,919 cf	
Primary =	2.76 cfs @	12.26 hrs,	Volume=	4,909 cf	

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 352.05' @ 12.26 hrs Surf.Area= 0.074 ac Storage= 0.147 af

Plug-Flow detention time= 27.2 min calculated for 27,829 cf (100% of inflow)
Center-of-Mass det. time= 27.2 min (806.4 - 779.2)

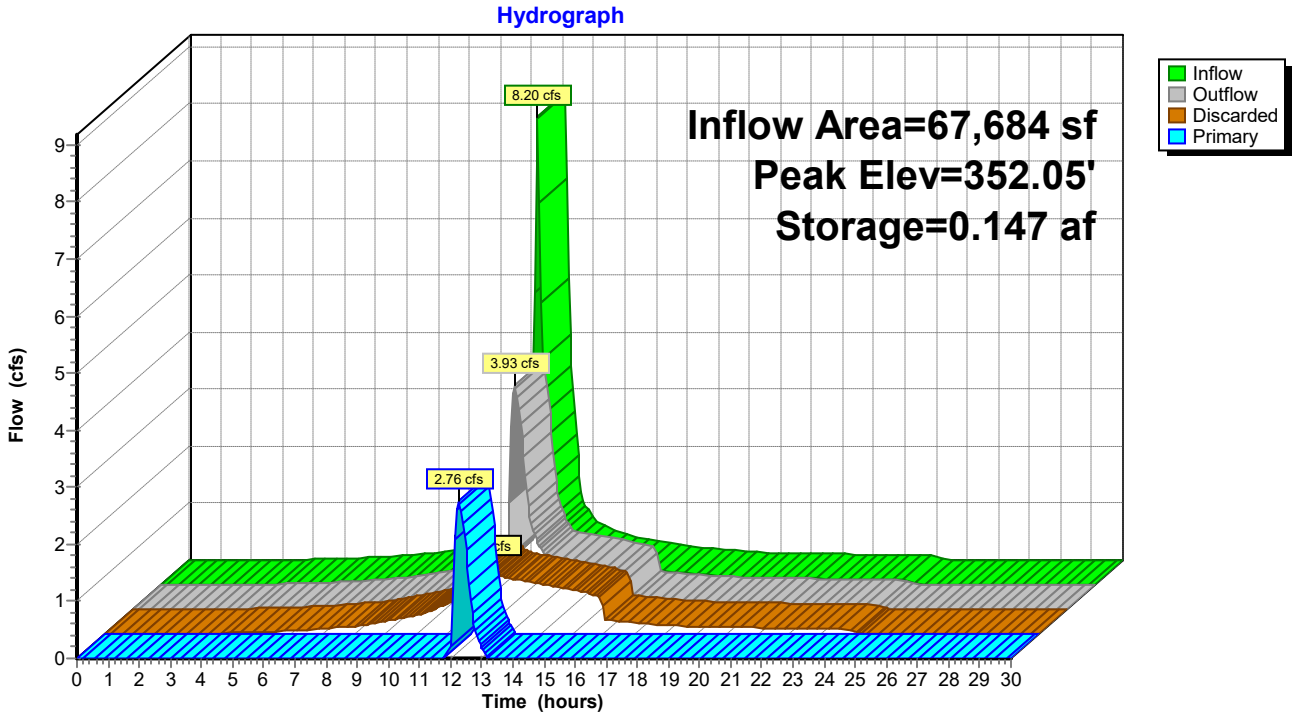
Volume	Invert	Avail.Storage	Storage Description
#1	349.00'	0.082 af	**54.00'W x 60.00'L x 4.00'H Prismatoid** 0.298 af Overall - 0.094 af Embedded = 0.204 af x 40.0% Voids
#2	349.50'	0.094 af	**ADS_StormTech SC-740** x 88 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 11 rows
		0.175 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Device 2	350.80'	**12.0" Round Culvert X 11.00** L= 3.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.80' / 350.80' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Primary	350.70'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.70' / 350.00' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Discarded	349.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 345.60'

Discarded OutFlow Max=1.18 cfs @ 12.26 hrs HW=352.04' (Free Discharge)
└─**3=Exfiltration** (Controls 1.18 cfs)

Primary OutFlow Max=2.74 cfs @ 12.26 hrs HW=352.04' (Free Discharge)
└─**2=Culvert** (Inlet Controls 2.74 cfs @ 3.49 fps)
  └─**1=Culvert** (Passes 2.74 cfs of 26.61 cfs potential flow)

Pond UGS-B: TO DMH#8



Stage-Discharge for Pond UGS-B: TO DMH#8

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
349.00	0.00	0.00	0.00
349.05	0.63	0.63	0.00
349.10	0.64	0.64	0.00
349.15	0.65	0.65	0.00
349.20	0.66	0.66	0.00
349.25	0.67	0.67	0.00
349.30	0.67	0.67	0.00
349.35	0.68	0.68	0.00
349.40	0.69	0.69	0.00
349.45	0.70	0.70	0.00
349.50	0.71	0.71	0.00
349.55	0.72	0.72	0.00
349.60	0.73	0.73	0.00
349.65	0.74	0.74	0.00
349.70	0.75	0.75	0.00
349.75	0.76	0.76	0.00
349.80	0.77	0.77	0.00
349.85	0.78	0.78	0.00
349.90	0.78	0.78	0.00
349.95	0.79	0.79	0.00
350.00	0.80	0.80	0.00
350.05	0.81	0.81	0.00
350.10	0.82	0.82	0.00
350.15	0.83	0.83	0.00
350.20	0.84	0.84	0.00
350.25	0.85	0.85	0.00
350.30	0.86	0.86	0.00
350.35	0.87	0.87	0.00
350.40	0.88	0.88	0.00
350.45	0.88	0.88	0.00
350.50	0.89	0.89	0.00
350.55	0.90	0.90	0.00
350.60	0.91	0.91	0.00
350.65	0.92	0.92	0.00
350.70	0.93	0.93	0.00
350.75	0.94	0.94	0.00
350.80	0.95	0.95	0.00
350.85	1.00	0.96	0.05
350.90	1.10	0.97	0.13
350.95	1.18	0.98	0.21
351.00	1.28	0.99	0.29
351.05	1.38	0.99	0.39
351.10	1.50	1.00	0.50
351.15	1.63	1.01	0.62
351.20	1.77	1.02	0.75
351.25	1.91	1.03	0.88
351.30	2.06	1.04	1.02
351.35	2.22	1.05	1.17
351.40	2.38	1.06	1.32
351.45	2.54	1.07	1.47
351.50	2.70	1.08	1.62
351.55	2.85	1.09	1.76
351.60	2.99	1.09	1.90
351.65	3.12	1.10	2.02
351.70	3.22	1.11	2.11
351.75	3.34	1.12	2.21
351.80	3.44	1.13	2.31
351.85	3.55	1.14	2.41
351.90	3.65	1.15	2.50
351.95	3.74	1.16	2.59
352.00	3.84	1.17	2.67
352.05	3.93	1.18	2.75
352.10	4.02	1.19	2.83
352.15	4.10	1.19	2.91
352.20	4.19	1.20	2.99
352.25	4.27	1.21	3.06
352.30	4.35	1.22	3.13
352.35	4.43	1.23	3.20
352.40	4.51	1.24	3.27
352.45	4.59	1.25	3.34
352.50	4.66	1.26	3.40
352.55	4.74	1.27	3.47
352.60	4.81	1.28	3.53
352.65	4.88	1.29	3.60
352.70	4.95	1.30	3.66
352.75	5.02	1.30	3.72
352.80	5.09	1.31	3.78
352.85	5.16	1.32	3.83
352.90	5.22	1.33	3.89
352.95	5.29	1.34	3.95
353.00	**5.36**	**1.35**	**4.01**

Summary for Pond USGD1: TO TEMP SETTLING BASIN

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 3.90" for 50-Year event
Inflow = 5.55 cfs @ 12.09 hrs, Volume= 18,392 cf
Outflow = 2.30 cfs @ 12.32 hrs, Volume= 12,481 cf, Atten= 59%, Lag= 13.6 min
Primary = 2.30 cfs @ 12.32 hrs, Volume= 12,481 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 351.09' @ 12.32 hrs Surf.Area= 0.110 ac Storage= 0.182 af

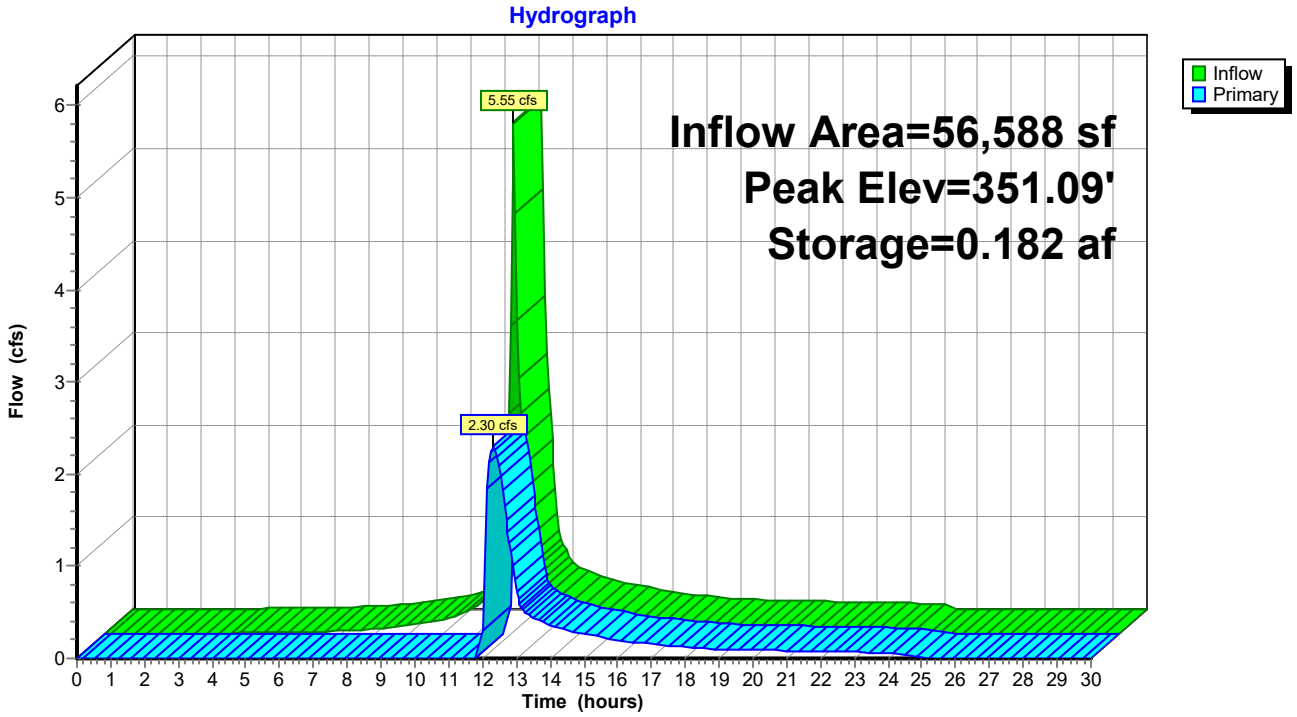
Plug-Flow detention time= 187.4 min calculated for 12,460 cf (68% of inflow)
Center-of-Mass det. time= 89.8 min (888.3 - 798.5)

Volume	Invert	Avail.Storage	Storage Description
#1	348.50'	0.107 af	**60.00'W x 80.00'L x 3.50'H Prismatoid** 0.386 af Overall - 0.118 af Embedded = 0.268 af x 40.0% Voids
#2	349.00'	0.118 af	**ADS_StormTech SC-740** x 111 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 11 rows
		0.225 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Device 2	350.40'	**10.0" Round Culvert X 11.00** L= 3.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.40' / 350.40' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Primary	350.00'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.00' / 349.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.29 cfs @ 12.32 hrs HW=351.09' (Free Discharge)
└─**2=Culvert** (Inlet Controls 2.29 cfs @ 2.92 fps)
  └─**1=Culvert** (Passes 2.29 cfs of 9.15 cfs potential flow)

Pond USGD1: TO TEMP SETTLING BASIN



Stage-Discharge for Pond USGD1: TO TEMP SETTLING BASIN

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
348.50	0.00	349.54	0.00	350.58	0.70	351.62	3.16
348.52	0.00	349.56	0.00	350.60	0.87	351.64	3.19
348.54	0.00	349.58	0.00	350.62	1.05	351.66	3.22
348.56	0.00	349.60	0.00	350.64	1.14	351.68	3.24
348.58	0.00	349.62	0.00	350.66	1.20	351.70	3.27
348.60	0.00	349.64	0.00	350.68	1.26	351.72	3.30
348.62	0.00	349.66	0.00	350.70	1.32	351.74	3.32
348.64	0.00	349.68	0.00	350.72	1.38	351.76	3.35
348.66	0.00	349.70	0.00	350.74	1.44	351.78	3.38
348.68	0.00	349.72	0.00	350.76	1.50	351.80	3.40
348.70	0.00	349.74	0.00	350.78	1.56	351.82	3.43
348.72	0.00	349.76	0.00	350.80	1.62	351.84	3.46
348.74	0.00	349.78	0.00	350.82	1.68	351.86	3.48
348.76	0.00	349.80	0.00	350.84	1.74	351.88	3.51
348.78	0.00	349.82	0.00	350.86	1.79	351.90	3.53
348.80	0.00	349.84	0.00	350.88	1.85	351.92	3.56
348.82	0.00	349.86	0.00	350.90	1.90	351.94	3.58
348.84	0.00	349.88	0.00	350.92	1.95	351.96	3.61
348.86	0.00	349.90	0.00	350.94	2.00	351.98	3.63
348.88	0.00	349.92	0.00	350.96	2.04	352.00	**3.66**
348.90	0.00	349.94	0.00	350.98	2.08		
348.92	0.00	349.96	0.00	351.00	2.11		
348.94	0.00	349.98	0.00	351.02	2.15		
348.96	0.00	350.00	0.00	351.04	2.19		
348.98	0.00	350.02	0.00	351.06	2.23		
349.00	0.00	350.04	0.00	351.08	2.27		
349.02	0.00	350.06	0.00	351.10	2.31		
349.04	0.00	350.08	0.00	351.12	2.35		
349.06	0.00	350.10	0.00	351.14	2.39		
349.08	0.00	350.12	0.00	351.16	2.43		
349.10	0.00	350.14	0.00	351.18	2.46		
349.12	0.00	350.16	0.00	351.20	2.50		
349.14	0.00	350.18	0.00	351.22	2.53		
349.16	0.00	350.20	0.00	351.24	2.57		
349.18	0.00	350.22	0.00	351.26	2.60		
349.20	0.00	350.24	0.00	351.28	2.64		
349.22	0.00	350.26	0.00	351.30	2.67		
349.24	0.00	350.28	0.00	351.32	2.70		
349.26	0.00	350.30	0.00	351.34	2.74		
349.28	0.00	350.32	0.00	351.36	2.77		
349.30	0.00	350.34	0.00	351.38	2.80		
349.32	0.00	350.36	0.00	351.40	2.83		
349.34	0.00	350.38	0.00	351.42	2.86		
349.36	0.00	350.40	0.00	351.44	2.89		
349.38	0.00	350.42	0.00	351.46	2.93		
349.40	0.00	350.44	0.02	351.48	2.96		
349.42	0.00	350.46	0.06	351.50	2.99		
349.44	0.00	350.48	0.12	351.52	3.02		
349.46	0.00	350.50	0.20	351.54	3.04		
349.48	0.00	350.52	0.30	351.56	3.07		
349.50	0.00	350.54	0.41	351.58	3.10		
349.52	0.00	350.56	0.55	351.60	3.13		

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 2S: TO DCB#4 Runoff Area=5,916 sf 84.47% Impervious Runoff Depth=5.22"
Flow Length=93' Slope=0.0340 '/' Tc=5.0 min CN=89 Runoff=0.80 cfs 2,574 cf

Subcatchment 3S: TO DCB#1 Runoff Area=3,582 sf 82.83% Impervious Runoff Depth=5.11"
Flow Length=77' Tc=5.0 min CN=88 Runoff=0.48 cfs 1,525 cf

Subcatchment P-D1: TO CB-D1 Runoff Area=6,833 sf 88.85% Impervious Runoff Depth=5.45"
Flow Length=90' Tc=5.0 min CN=91 Runoff=0.95 cfs 3,102 cf

Subcatchment P-D10*: TO CB-D8 Runoff Area=5,879 sf 76.82% Impervious Runoff Depth=4.67"
Flow Length=177' Slope=0.0200 '/' Tc=5.0 min CN=84 Runoff=0.73 cfs 2,286 cf

Subcatchment P-D11*: TO CB-D9 Runoff Area=4,151 sf 71.91% Impervious Runoff Depth=4.34"
Flow Length=153' Slope=0.0200 '/' Tc=5.0 min CN=81 Runoff=0.48 cfs 1,502 cf

Subcatchment P-D12*: TO CB-D5 Runoff Area=7,120 sf 71.57% Impervious Runoff Depth=4.34"
Flow Length=134' Tc=5.0 min CN=81 Runoff=0.83 cfs 2,576 cf

Subcatchment P-D2: TO CB-D2 Runoff Area=4,392 sf 76.55% Impervious Runoff Depth=4.67"
Flow Length=93' Slope=0.0170 '/' Tc=5.0 min CN=84 Runoff=0.54 cfs 1,708 cf

Subcatchment P-D3: TO CB-D3 Runoff Area=4,805 sf 87.24% Impervious Runoff Depth=5.33"
Flow Length=65' Tc=5.0 min CN=90 Runoff=0.66 cfs 2,136 cf

Subcatchment P-D4*: TO CB-D4 Runoff Area=16,447 sf 47.74% Impervious Runoff Depth=2.91"
Flow Length=105' Tc=5.0 min CN=67 Runoff=1.28 cfs 3,993 cf

Subcatchment P-D5*: TO CB-D6 Runoff Area=2,202 sf 100.00% Impervious Runoff Depth=6.26"
Flow Length=169' Tc=5.0 min CN=98 Runoff=0.32 cfs 1,149 cf

Subcatchment P-D6: TO CB-D7 Runoff Area=2,624 sf 100.00% Impervious Runoff Depth=6.26"
Flow Length=151' Tc=5.0 min CN=98 Runoff=0.39 cfs 1,369 cf

Subcatchment P-D7: TO ROOF DRAIN Runoff Area=933 sf 100.00% Impervious Runoff Depth=6.26"
Flow Length=39' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.14 cfs 487 cf

Subcatchment P-D8: TO ROOF DRAIN Runoff Area=920 sf 100.00% Impervious Runoff Depth=6.26"
Flow Length=39' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.14 cfs 480 cf

Subcatchment P-D9: TO ROOF DRAIN Runoff Area=282 sf 100.00% Impervious Runoff Depth=6.26"
Flow Length=40' Slope=0.0200 '/' Tc=5.0 min CN=98 Runoff=0.04 cfs 147 cf

Subcatchment P-S106: TO DCB-R102 Runoff Area=13,651 sf 53.41% Impervious Runoff Depth=3.31"
Flow Length=246' Slope=0.0050 '/' Tc=5.0 min CN=71 Runoff=1.22 cfs 3,762 cf

Subcatchment P-S107: TO DCB-R101 Runoff Area=18,867 sf 80.97% Impervious Runoff Depth=5.00"
Flow Length=255' Slope=0.0050 '/' Tc=5.0 min CN=87 Runoff=2.47 cfs 7,857 cf

Subcatchment P-S108: TO DCB-R100 Runoff Area=8,304 sf 89.80% Impervious Runoff Depth=5.56"
Flow Length=315' Slope=0.0050 '/' Tc=5.0 min CN=92 Runoff=1.17 cfs 3,849 cf

Subcatchment P-S109: TO DRAINAGE Runoff Area=12,076 sf 57.69% Impervious Runoff Depth=3.51"
Flow Length=227' Slope=0.0050 '/' Tc=5.0 min CN=73 Runoff=1.14 cfs 3,530 cf

Subcatchment P-SUB1: TO DCB-S1 Runoff Area=8,226 sf 87.83% Impervious Runoff Depth=5.45"
Flow Length=203' Tc=5.0 min CN=91 Runoff=1.14 cfs 3,734 cf

Subcatchment P-SUB2: TO DMH-S1 Runoff Area=10,318 sf 80.45% Impervious Runoff Depth=4.89"
Flow Length=213' Tc=5.0 min CN=86 Runoff=1.33 cfs 4,201 cf

Subcatchment P-SUB3: TO DCB-S3 Runoff Area=18,672 sf 88.33% Impervious Runoff Depth=5.68"
Flow Length=296' Tc=5.0 min CN=93 Runoff=2.65 cfs 8,833 cf

Subcatchment P-SUB4: TO DCB-S4 Runoff Area=24,334 sf 83.66% Impervious Runoff Depth=5.33"
Flow Length=301' Tc=6.3 min CN=90 Runoff=3.21 cfs 10,816 cf

Subcatchment P-SUB5: TO DCB-S5 Runoff Area=13,730 sf 73.11% Impervious Runoff Depth=5.33"
Flow Length=223' Tc=5.0 min CN=90 Runoff=1.88 cfs 6,103 cf

Subcatchment P-SUB6: TO DCB-S6 Runoff Area=14,048 sf 86.89% Impervious Runoff Depth=5.79"
Flow Length=231' Tc=5.0 min CN=94 Runoff=2.02 cfs 6,781 cf

Subcatchment P-SUB7: TO DCB-S7 Runoff Area=14,635 sf 28.88% Impervious Runoff Depth=5.33"
Flow Length=382' Slope=0.0200 '/' Tc=9.8 min CN=90 Runoff=1.73 cfs 6,505 cf

Subcatchment P-SUB8: TO DCB-S8 Runoff Area=6,568 sf 85.14% Impervious Runoff Depth=5.68"
Flow Length=254' Tc=5.0 min CN=93 Runoff=0.93 cfs 3,107 cf

Subcatchment P-SUB9: TO DCB-S9 Runoff Area=6,737 sf 13.88% Impervious Runoff Depth=5.56"
Flow Length=159' Tc=8.5 min CN=92 Runoff=0.85 cfs 3,122 cf

Subcatchment P206: TO DMH6B Runoff Area=52,950 sf 74.01% Impervious Runoff Depth=5.22"
Tc=5.0 min CN=89 Runoff=7.15 cfs 23,037 cf

Subcatchment P207: TO DMH7 Runoff Area=3,621 sf 77.22% Impervious Runoff Depth=5.33"
Tc=5.0 min CN=90 Runoff=0.50 cfs 1,609 cf

Subcatchment P210: TO DMH10 Runoff Area=47,718 sf 68.99% Impervious Runoff Depth=5.00"
Tc=5.0 min CN=87 Runoff=6.24 cfs 19,871 cf

Subcatchment P211: TO DMH11 Runoff Area=39,805 sf 44.80% Impervious Runoff Depth=4.13"
Tc=5.0 min CN=79 Runoff=4.40 cfs 13,697 cf

Subcatchment P212: TO DMH12 Runoff Area=23,845 sf 77.66% Impervious Runoff Depth=5.33"
Tc=5.0 min CN=90 Runoff=3.26 cfs 10,599 cf

Subcatchment P213: TO DMH13 Runoff Area=12,176 sf 88.58% Impervious Runoff Depth=5.79"
Tc=5.0 min CN=94 Runoff=1.75 cfs 5,877 cf

Subcatchment P222: TO DP#2(2017) Runoff Area=106,869 sf 0.00% Impervious Runoff Depth=0.26"
Flow Length=711' Tc=22.1 min CN=33 Runoff=0.10 cfs 2,330 cf

Subcatchment P230: TO CB#21(2017) Runoff Area=16,502 sf 47.31% Impervious Runoff Depth=4.02"
Flow Length=306' Tc=5.0 min CN=78 Runoff=1.78 cfs 5,534 cf

Subcatchment P231: TO YD#1 Runoff Area=3,459 sf 6.76% Impervious Runoff Depth=2.63"
Flow Length=48' Slope=0.0300 '/' Tc=5.0 min CN=64 Runoff=0.24 cfs 757 cf

Subcatchment P232: TO CO#2 Runoff Area=2,490 sf 100.00% Impervious Runoff Depth=6.26"
Flow Length=88' Tc=5.0 min CN=98 Runoff=0.37 cfs 1,299 cf

Subcatchment P233: TO DRIP STRIP Runoff Area=1,722 sf 96.81% Impervious Runoff Depth=6.14"
Flow Length=55' Tc=5.0 min CN=97 Runoff=0.25 cfs 882 cf

Subcatchment P234: TO YD#2 Runoff Area=10,793 sf 49.52% Impervious Runoff Depth=4.13"
Flow Length=166' Tc=5.0 min CN=79 Runoff=1.19 cfs 3,714 cf

Subcatchment P235: TO CO#3 Runoff Area=670 sf 100.00% Impervious Runoff Depth=6.26"
Flow Length=25' Slope=0.0830 '/' Tc=5.0 min CN=98 Runoff=0.10 cfs 350 cf

Subcatchment P251: OVERLAND TO Runoff Area=59,763 sf 5.17% Impervious Runoff Depth=0.80"
Flow Length=294' Tc=16.4 min CN=42 Runoff=0.55 cfs 3,966 cf

Subcatchment P252: OVERLAND TO DB#1 Runoff Area=84,788 sf 3.33% Impervious Runoff Depth=0.73"
Flow Length=224' Tc=15.5 min CN=41 Runoff=0.68 cfs 5,146 cf

Subcatchment P253: OVERLAND TO DCB Runoff Area=198,125 sf 23.50% Impervious Runoff Depth=2.26"
Flow Length=393' Tc=17.3 min CN=60 Runoff=8.17 cfs 37,245 cf

Subcatchment p3: TO DCB#5 Runoff Area=13,229 sf 94.75% Impervious Runoff Depth=5.91"
Flow Length=141' Tc=5.0 min CN=95 Runoff=1.91 cfs 6,514 cf

Subcatchment P300: TO DP#3(2020) Runoff Area=145,987 sf 0.00% Impervious Runoff Depth=0.13"
Flow Length=566' Tc=27.1 min CN=30 Runoff=0.06 cfs 1,625 cf

Subcatchment P4: TO DCB#2 Runoff Area=12,397 sf 88.23% Impervious Runoff Depth=5.45"
Flow Length=162' Tc=5.0 min CN=91 Runoff=1.72 cfs 5,628 cf

Subcatchment P400: TO DP#4(2020) Runoff Area=270,932 sf 0.59% Impervious Runoff Depth=0.17"
Flow Length=487' Tc=31.1 min CN=31 Runoff=0.14 cfs 3,897 cf

Subcatchment P5: TO DCB#6 Runoff Area=18,802 sf 87.54% Impervious Runoff Depth=5.45"
Flow Length=124' Tc=5.0 min CN=91 Runoff=2.61 cfs 8,535 cf

Subcatchment P6: TO DCB#3 Runoff Area=13,758 sf 90.05% Impervious Runoff Depth=5.56"
Flow Length=267' Tc=5.0 min CN=92 Runoff=1.93 cfs 6,376 cf

Subcatchment PS101: TO TEMP Runoff Area=259,359 sf 0.00% Impervious Runoff Depth=5.56"
Flow Length=764' Tc=12.9 min CN=92 Runoff=28.99 cfs 120,204 cf

Subcatchment PS102: TO CULVERT Runoff Area=47,989 sf 0.00% Impervious Runoff Depth=3.82"
Flow Length=59' Slope=0.0400 '/' Tc=11.0 min CN=76 Runoff=4.14 cfs 15,258 cf

Subcatchment PS103: TO DP#1 Runoff Area=784,060 sf 17.42% Impervious Runoff Depth=3.71"
Flow Length=1,062' Tc=15.8 min CN=75 Runoff=57.90 cfs 242,544 cf

Subcatchment PS104: TO DP#1B Runoff Area=481,036 sf 3.31% Impervious Runoff Depth=1.99"
Flow Length=1,026' Tc=11.5 min CN=57 Runoff=19.81 cfs 79,668 cf

Subcatchment PS105: TO CULVERT Runoff Area=478,368 sf 0.00% Impervious Runoff Depth=4.78"
Flow Length=1,550' Tc=21.8 min CN=85 Runoff=39.16 cfs 190,389 cf

Subcatchment PSUB10: TO DCB-S10 Runoff Area=2,269 sf 91.63% Impervious Runoff Depth=5.91"
Flow Length=85' Slope=0.0300 '/' Tc=5.0 min CN=95 Runoff=0.33 cfs 1,117 cf

Reach BK-1: McGovern Brook Avg. Flow Depth=1.13' Max Vel=4.27 fps Inflow=78.40 cfs 383,926 cf
n=0.030 L=1,417.0' S=0.0085 '/' Capacity=6,024.18 cfs Outflow=74.22 cfs 383,923 cf

Reach CB-D4: TO DMH-1 Avg. Flow Depth=0.40' Max Vel=4.43 fps Inflow=1.28 cfs 3,993 cf
12.0" Round Pipe n=0.013 L=42.0' S=0.0119 '/' Capacity=3.89 cfs Outflow=1.28 cfs 3,993 cf

Reach CB-D7: TO DMH#6 Avg. Flow Depth=0.22' Max Vel=3.06 fps Inflow=0.39 cfs 1,369 cf
12.0" Round Pipe n=0.013 L=18.0' S=0.0111 '/' Capacity=3.76 cfs Outflow=0.38 cfs 1,369 cf

Reach CB-D8: TO DMH#6 Avg. Flow Depth=0.31' Max Vel=3.41 fps Inflow=0.73 cfs 2,286 cf
12.0" Round Pipe n=0.013 L=22.0' S=0.0091 '/' Capacity=3.40 cfs Outflow=0.72 cfs 2,286 cf

Reach CB21: TO DMH#21 Avg. Flow Depth=0.41' Max Vel=5.83 fps Inflow=1.78 cfs 5,534 cf
12.0" Round Pipe n=0.013 L=50.0' S=0.0200 '/' Capacity=5.04 cfs Outflow=1.77 cfs 5,534 cf

Reach CBD1: TO DMH#8 Avg. Flow Depth=0.26' Max Vel=5.76 fps Inflow=0.95 cfs 3,102 cf
12.0" Round Pipe n=0.013 L=22.0' S=0.0318 '/' Capacity=6.36 cfs Outflow=0.94 cfs 3,102 cf

Reach CBD2: TO DMH#3 Avg. Flow Depth=0.25' Max Vel=3.52 fps Inflow=0.54 cfs 1,708 cf
12.0" Round Pipe n=0.013 L=8.0' S=0.0125 '/' Capacity=3.98 cfs Outflow=0.54 cfs 1,708 cf

Reach CBD3: TO DMH-1 Avg. Flow Depth=0.19' Max Vel=6.27 fps Inflow=0.66 cfs 2,136 cf
12.0" Round Pipe n=0.013 L=11.0' S=0.0545 '/' Capacity=8.32 cfs Outflow=0.66 cfs 2,136 cf

Reach CBD5: TO DMH#4 Avg. Flow Depth=0.33' Max Vel=3.60 fps Inflow=0.83 cfs 2,576 cf
12.0" Round Pipe n=0.013 L=21.0' S=0.0095 '/' Capacity=3.48 cfs Outflow=0.82 cfs 2,576 cf

Reach CBD6: TO DMH#4 Avg. Flow Depth=0.20' Max Vel=2.90 fps Inflow=0.32 cfs 1,149 cf
12.0" Round Pipe n=0.013 L=18.0' S=0.0111 '/' Capacity=3.76 cfs Outflow=0.32 cfs 1,149 cf

Reach CBD9: TO DMH#5 Avg. Flow Depth=0.24' Max Vel=3.24 fps Inflow=0.48 cfs 1,502 cf
12.0" Round Pipe n=0.013 L=46.0' S=0.0109 '/' Capacity=3.71 cfs Outflow=0.48 cfs 1,502 cf

Reach CO1: TO CO#2 Avg. Flow Depth=0.20' Max Vel=5.00 fps Inflow=0.49 cfs 1,639 cf
10.0" Round Pipe n=0.010 L=74.0' S=0.0203 '/' Capacity=4.06 cfs Outflow=0.49 cfs 1,639 cf

Reach CO2: TO CO#3 Avg. Flow Depth=0.26' Max Vel=5.80 fps Inflow=0.85 cfs 2,938 cf
10.0" Round Pipe n=0.010 L=81.0' S=0.0198 '/' Capacity=4.00 cfs Outflow=0.84 cfs 2,938 cf

Reach CO3: TO DMH#21 Avg. Flow Depth=0.20' Max Vel=9.23 fps Inflow=0.94 cfs 3,287 cf
10.0" Round Pipe n=0.010 L=30.0' S=0.0667 '/' Capacity=7.35 cfs Outflow=0.94 cfs 3,287 cf

Reach cul: DP#1A Inflow=70.16 cfs 340,876 cf
Outflow=70.16 cfs 340,876 cf

Reach D10: (new Reach) Avg. Flow Depth=0.93' Max Vel=8.79 fps Inflow=6.68 cfs 21,480 cf
12.0" Round Pipe n=0.013 L=103.0' S=0.0291 '/' Capacity=6.08 cfs Outflow=6.60 cfs 21,480 cf

Reach D11: TO DMH12 Avg. Flow Depth=0.82' Max Vel=6.36 fps Inflow=4.40 cfs 13,697 cf
12.0" Round Pipe n=0.013 L=86.0' S=0.0151 '/' Capacity=4.38 cfs Outflow=4.37 cfs 13,697 cf

Reach D12: TO DMH13 Avg. Flow Depth=0.98' Max Vel=7.35 fps Inflow=7.59 cfs 24,296 cf
15.0" Round Pipe n=0.013 L=83.0' S=0.0151 '/' Capacity=7.93 cfs Outflow=7.55 cfs 24,296 cf

Reach D13: TO DMH14 Avg. Flow Depth=1.05' Max Vel=8.42 fps Inflow=9.27 cfs 30,173 cf
15.0" Round Pipe n=0.013 L=109.0' S=0.0197 '/' Capacity=9.07 cfs Outflow=9.20 cfs 30,173 cf

Reach D14: TO DMH15 Avg. Flow Depth=1.80' Max Vel=7.90 fps Inflow=30.24 cfs 105,139 cf
30.0" Round Pipe n=0.013 L=390.0' S=0.0071 '/' Capacity=34.44 cfs Outflow=29.07 cfs 105,139 cf

Reach D15: TO DMH16 Avg. Flow Depth=1.89' Max Vel=7.86 fps Inflow=31.65 cfs 113,960 cf
30.0" Round Pipe n=0.013 L=232.0' S=0.0069 '/' Capacity=34.06 cfs Outflow=31.02 cfs 113,960 cf

Reach D16: TO BASIN#1 Avg. Flow Depth=1.86' Max Vel=7.93 fps Inflow=31.02 cfs 113,960 cf
30.0" Round Pipe n=0.013 L=71.0' S=0.0070 '/' Capacity=34.42 cfs Outflow=30.90 cfs 113,960 cf

Reach D6: TO DMH14 Avg. Flow Depth=0.00' Max Vel=0.00 fps
24.0" Round Pipe n=0.013 L=14.0' S=0.0071 '/' Capacity=19.12 cfs Outflow=0.00 cfs 0 cf

Reach D7: TO DMH8 Avg. Flow Depth=0.19' Max Vel=4.81 fps Inflow=0.50 cfs 1,609 cf
12.0" Round Pipe n=0.013 L=87.0' S=0.0328 '/' Capacity=6.45 cfs Outflow=0.49 cfs 1,609 cf

Reach D8: TO DMH9 Avg. Flow Depth=0.19' Max Vel=4.69 fps Inflow=0.49 cfs 1,609 cf
12.0" Round Pipe n=0.013 L=113.0' S=0.0301 '/' Capacity=6.18 cfs Outflow=0.48 cfs 1,609 cf

Reach D9: TO DMH10 Avg. Flow Depth=0.23' Max Vel=3.59 fps Inflow=0.48 cfs 1,609 cf
12.0" Round Pipe n=0.013 L=70.0' S=0.0143 '/' Capacity=4.26 cfs Outflow=0.47 cfs 1,609 cf

Reach DCB-R101: TO DMH-R100 Avg. Flow Depth=0.42' Max Vel=7.78 fps Inflow=2.47 cfs 7,857 cf
12.0" Round Pipe n=0.011 L=8.0' S=0.0250 '/' Capacity=6.66 cfs Outflow=2.46 cfs 7,857 cf

Reach DCB-R102: TO DMH-R101 Avg. Flow Depth=0.33' Max Vel=5.35 fps Inflow=1.22 cfs 3,762 cf
12.0" Round Pipe n=0.011 L=80.0' S=0.0150 '/' Capacity=5.16 cfs Outflow=1.21 cfs 3,762 cf

Reach DCB-S1: TO DMH-S1 Avg. Flow Depth=0.34' Max Vel=4.90 fps Inflow=1.14 cfs 3,734 cf
12.0" Round Pipe n=0.011 L=24.0' S=0.0125 '/' Capacity=4.71 cfs Outflow=1.13 cfs 3,734 cf

Reach DCB-S2: TO DMH-S1 Avg. Flow Depth=0.32' Max Vel=6.20 fps Inflow=1.33 cfs 4,201 cf
12.0" Round Pipe n=0.011 L=14.0' S=0.0214 '/' Capacity=6.16 cfs Outflow=1.32 cfs 4,201 cf

Reach DCB-S3: TO DMH-S1 Avg. Flow Depth=0.58' Max Vel=5.52 fps Inflow=2.65 cfs 8,833 cf
12.0" Round Pipe n=0.011 L=21.0' S=0.0095 '/' Capacity=4.11 cfs Outflow=2.64 cfs 8,833 cf

Reach DCB-S4: TO DMH-S1 Avg. Flow Depth=0.47' Max Vel=8.82 fps Inflow=3.21 cfs 10,816 cf
12.0" Round Pipe n=0.011 L=7.0' S=0.0286 '/' Capacity=7.12 cfs Outflow=3.21 cfs 10,816 cf

Reach DCB1: TO DMH#1 Avg. Flow Depth=0.25' Max Vel=3.11 fps Inflow=0.48 cfs 1,525 cf
12.0" Round Pipe n=0.013 L=61.0' S=0.0098 '/' Capacity=3.53 cfs Outflow=0.47 cfs 1,525 cf

Reach DCB2: TO DMH#2 Avg. Flow Depth=0.45' Max Vel=4.96 fps Inflow=1.72 cfs 5,628 cf
12.0" Round Pipe n=0.013 L=30.0' S=0.0133 '/' Capacity=4.11 cfs Outflow=1.71 cfs 5,628 cf

Reach DCB3: TO DMH#3 Avg. Flow Depth=0.61' Max Vel=3.83 fps Inflow=1.93 cfs 6,376 cf
12.0" Round Pipe n=0.013 L=48.0' S=0.0062 '/' Capacity=2.82 cfs Outflow=1.90 cfs 6,376 cf

Reach DCB30: TO BASIN Avg. Flow Depth=1.06' Max Vel=7.35 fps Inflow=8.17 cfs 37,245 cf
15.0" Round Pipe n=0.013 L=140.0' S=0.0150 '/' Capacity=7.91 cfs Outflow=8.14 cfs 37,245 cf

Reach DCB4: TO DMH#4 Avg. Flow Depth=0.33' Max Vel=3.44 fps Inflow=0.80 cfs 2,574 cf
12.0" Round Pipe n=0.013 L=23.0' S=0.0087 '/' Capacity=3.32 cfs Outflow=0.79 cfs 2,574 cf

Reach DCB5: TO DMH#5 Avg. Flow Depth=0.53' Max Vel=4.50 fps Inflow=1.91 cfs 6,514 cf
12.0" Round Pipe n=0.013 L=21.0' S=0.0095 '/' Capacity=3.48 cfs Outflow=1.90 cfs 6,514 cf

Reach DCB6: TO DMH#6 Avg. Flow Depth=0.54' Max Vel=6.00 fps Inflow=2.61 cfs 8,535 cf
12.0" Round Pipe n=0.013 L=6.0' S=0.0167 '/' Capacity=4.60 cfs Outflow=2.61 cfs 8,535 cf

Reach DCBR100: TO DMH R100 Avg. Flow Depth=0.37' Max Vel=4.32 fps Inflow=1.17 cfs 3,849 cf
12.0" Round Pipe n=0.011 L=162.0' S=0.0086 '/' Capacity=3.91 cfs Outflow=1.13 cfs 3,849 cf

Reach DCBS10: TO DMH-S4 Avg. Flow Depth=0.12' Max Vel=5.78 fps Inflow=0.33 cfs 1,117 cf
12.0" Round Pipe n=0.011 L=9.0' S=0.0556 '/' Capacity=9.92 cfs Outflow=0.33 cfs 1,117 cf

Reach DCBS5: TO DMH-S8 Avg. Flow Depth=0.38' Max Vel=6.87 fps Inflow=1.88 cfs 6,103 cf
12.0" Round Pipe n=0.011 L=23.0' S=0.0217 '/' Capacity=6.21 cfs Outflow=1.87 cfs 6,103 cf

Reach DCBS6: TO DMH-S8 Avg. Flow Depth=0.36' Max Vel=7.99 fps Inflow=2.02 cfs 6,781 cf
12.0" Round Pipe n=0.011 L=16.0' S=0.0313 '/' Capacity=7.44 cfs Outflow=2.01 cfs 6,781 cf

Reach DCBS7: TO DMH-S6 Avg. Flow Depth=0.40' Max Vel=5.91 fps Inflow=1.73 cfs 6,505 cf
12.0" Round Pipe n=0.011 L=20.0' S=0.0150 '/' Capacity=5.16 cfs Outflow=1.73 cfs 6,505 cf

Reach DCBS8: TO DMH-S6 Avg. Flow Depth=0.24' Max Vel=6.33 fps Inflow=0.93 cfs 3,107 cf
12.0" Round Pipe n=0.011 L=10.0' S=0.0300 '/' Capacity=7.29 cfs Outflow=0.93 cfs 3,107 cf

Reach DCBS9: TO DMH-S4 Avg. Flow Depth=0.24' Max Vel=6.03 fps Inflow=0.85 cfs 3,122 cf
12.0" Round Pipe n=0.011 L=18.0' S=0.0278 '/' Capacity=7.02 cfs Outflow=0.85 cfs 3,122 cf

Reach DMH-R101: TO DMH-S1 Avg. Flow Depth=0.73' Max Vel=6.29 fps Inflow=4.70 cfs 15,467 cf
15.0" Round Pipe n=0.011 L=265.0' S=0.0091 '/' Capacity=7.27 cfs Outflow=4.55 cfs 15,467 cf

Reach DMH-S1: TO DMH-S2 Avg. Flow Depth=0.93' Max Vel=5.93 fps Inflow=6.87 cfs 23,402 cf
18.0" Round Pipe n=0.011 L=279.0' S=0.0061 '/' Capacity=9.69 cfs Outflow=6.62 cfs 23,402 cf

Reach DMH-S2: TO DMH-S3 Avg. Flow Depth=1.11' Max Vel=8.68 fps Inflow=12.21 cfs 43,051 cf
18.0" Round Pipe n=0.011 L=42.0' S=0.0119 '/' Capacity=13.55 cfs Outflow=12.17 cfs 43,051 cf

Reach DMH-S3: TO FE-S1 Avg. Flow Depth=1.11' Max Vel=8.70 fps Inflow=12.17 cfs 43,051 cf
18.0" Round Pipe n=0.011 L=25.0' S=0.0120 '/' Capacity=13.60 cfs Outflow=12.15 cfs 43,051 cf

Reach DMH1: TO DMH#2 Avg. Flow Depth=0.21' Max Vel=4.01 fps Inflow=0.47 cfs 1,525 cf
12.0" Round Pipe n=0.013 L=65.0' S=0.0200 '/' Capacity=5.04 cfs Outflow=0.46 cfs 1,525 cf

Reach DMH2: TO DMH#3 Avg. Flow Depth=0.50' Max Vel=5.45 fps Inflow=2.16 cfs 7,152 cf
12.0" Round Pipe n=0.013 L=111.0' S=0.0144 '/' Capacity=4.28 cfs Outflow=2.14 cfs 7,152 cf

Reach DMH21: TO DMH#22 Avg. Flow Depth=0.52' Max Vel=6.56 fps Inflow=2.71 cfs 8,821 cf
12.0" Round Pipe n=0.013 L=168.0' S=0.0202 '/' Capacity=5.07 cfs Outflow=2.67 cfs 8,821 cf

Reach DMH22: TO DMH#15 Avg. Flow Depth=0.35' Max Vel=10.73 fps Inflow=2.67 cfs 8,821 cf
12.0" Round Pipe n=0.013 L=9.0' S=0.0778 '/' Capacity=9.94 cfs Outflow=2.67 cfs 8,821 cf

Reach DMH3: TO DMH#7 Avg. Flow Depth=0.95' Max Vel=9.08 fps Inflow=9.13 cfs 31,151 cf
15.0" Round Pipe n=0.013 L=13.0' S=0.0231 '/' Capacity=9.81 cfs Outflow=9.13 cfs 31,151 cf

Reach DMH4: TO DMH5 Avg. Flow Depth=0.34' Max Vel=3.32 fps Inflow=0.79 cfs 2,574 cf
12.0" Round Pipe n=0.013 L=77.0' S=0.0078 '/' Capacity=3.15 cfs Outflow=0.78 cfs 2,574 cf

Reach DMH5: TO DMH-6 Avg. Flow Depth=0.72' Max Vel=4.39 fps Inflow=2.66 cfs 9,087 cf
12.0" Round Pipe n=0.013 L=108.0' S=0.0074 '/' Capacity=3.07 cfs Outflow=2.63 cfs 9,087 cf

Reach DMH6: TO DMH#3 Avg. Flow Depth=0.83' Max Vel=6.00 fps Inflow=5.19 cfs 17,623 cf
15.0" Round Pipe n=0.013 L=150.0' S=0.0107 '/' Capacity=6.67 cfs Outflow=5.12 cfs 17,623 cf

Reach DMH7: TO UGS Avg. Flow Depth=1.02' Max Vel=8.49 fps Inflow=9.13 cfs 31,151 cf
15.0" Round Pipe n=0.013 L=10.0' S=0.0200 '/' Capacity=9.14 cfs Outflow=9.12 cfs 31,151 cf

Reach DMH8: TO FE#B1 Avg. Flow Depth=0.62' Max Vel=6.61 fps Inflow=3.39 cfs 6,387 cf
12.0" Round Pipe n=0.013 L=50.0' S=0.0180 '/' Capacity=4.78 cfs Outflow=3.40 cfs 6,387 cf

Reach DMHd1: TO DMH#8 Avg. Flow Depth=0.49' Max Vel=4.97 fps Inflow=1.92 cfs 6,128 cf
12.0" Round Pipe n=0.013 L=82.0' S=0.0122 '/' Capacity=3.93 cfs Outflow=1.91 cfs 6,128 cf

Reach DMHD2: TO DMH#7 Avg. Flow Depth=0.91' Max Vel=6.63 fps Inflow=6.32 cfs 20,935 cf
15.0" Round Pipe n=0.013 L=8.0' S=0.0125 '/' Capacity=7.22 cfs Outflow=6.32 cfs 20,935 cf

Reach DMHd3: TO DMH#2 Avg. Flow Depth=0.22' Max Vel=6.64 fps Inflow=0.84 cfs 2,822 cf
12.0" Round Pipe n=0.013 L=27.0' S=0.0519 '/' Capacity=8.11 cfs Outflow=0.83 cfs 2,822 cf

Reach DMHD4: TO DMH#2 Avg. Flow Depth=0.42' Max Vel=3.63 fps Inflow=1.14 cfs 3,725 cf
12.0" Round Pipe n=0.013 L=133.0' S=0.0075 '/' Capacity=3.09 cfs Outflow=1.12 cfs 3,725 cf

Reach DMHD5: TO DMH#2 Avg. Flow Depth=0.68' Max Vel=4.26 fps Inflow=2.40 cfs 7,979 cf
12.0" Round Pipe n=0.013 L=70.0' S=0.0071 '/' Capacity=3.01 cfs Outflow=2.38 cfs 7,979 cf

Reach DMHD6: TO DMH#5 Avg. Flow Depth=0.43' Max Vel=3.45 fps Inflow=1.10 cfs 3,655 cf
12.0" Round Pipe n=0.013 L=59.0' S=0.0068 '/' Capacity=2.93 cfs Outflow=1.09 cfs 3,655 cf

Reach DMHD7: TO UGS#1 Avg. Flow Depth=0.91' Max Vel=6.63 fps Inflow=6.32 cfs 20,935 cf
15.0" Round Pipe n=0.013 L=12.0' S=0.0125 '/' Capacity=7.22 cfs Outflow=6.31 cfs 20,935 cf

Reach DMHD8: TO DMH#2 Avg. Flow Depth=0.62' Max Vel=5.55 fps Inflow=2.84 cfs 9,230 cf
12.0" Round Pipe n=0.013 L=39.0' S=0.0128 '/' Capacity=4.03 cfs Outflow=2.83 cfs 9,230 cf

Reach DMHR100: TO DMH-R101 Avg. Flow Depth=0.70' Max Vel=6.04 fps Inflow=3.56 cfs 11,705 cf
12.0" Round Pipe n=0.011 L=188.0' S=0.0101 '/' Capacity=4.23 cfs Outflow=3.50 cfs 11,705 cf

Reach DMHS10: TO DMH-S11 Avg. Flow Depth=1.09' Max Vel=8.05 fps Inflow=14.00 cfs 49,772 cf
24.0" Round Pipe n=0.013 L=240.0' S=0.0117 '/' Capacity=24.43 cfs Outflow=13.77 cfs 49,772 cf

Reach DMHS11: TO DMH-D14 Avg. Flow Depth=1.27' Max Vel=6.53 fps Inflow=13.77 cfs 49,772 cf
24.0" Round Pipe n=0.013 L=130.0' S=0.0069 '/' Capacity=18.82 cfs Outflow=13.56 cfs 49,772 cf

Reach DMHS4: TO DMH-S5 Avg. Flow Depth=0.32' Max Vel=5.29 fps Inflow=1.15 cfs 4,240 cf
12.0" Round Pipe n=0.011 L=126.0' S=0.0151 '/' Capacity=5.17 cfs Outflow=1.13 cfs 4,240 cf

Reach DMHS5: TO DMH-S6 Avg. Flow Depth=0.32' Max Vel=5.24 fps Inflow=1.13 cfs 4,240 cf
12.0" Round Pipe n=0.011 L=126.0' S=0.0151 '/' Capacity=5.17 cfs Outflow=1.11 cfs 4,240 cf

Reach DMHS6: TO DMH-S7 Avg. Flow Depth=0.47' Max Vel=8.59 fps Inflow=3.64 cfs 13,851 cf
15.0" Round Pipe n=0.011 L=20.0' S=0.0250 '/' Capacity=12.07 cfs Outflow=3.64 cfs 13,851 cf

Reach DMHS7: TO DMH-S9 Avg. Flow Depth=0.76' Max Vel=9.47 fps Inflow=7.37 cfs 26,735 cf
15.0" Round Pipe n=0.011 L=20.0' S=0.0200 '/' Capacity=10.80 cfs Outflow=7.36 cfs 26,735 cf

Reach DMHS8: TO DMH-S7 Avg. Flow Depth=0.68' Max Vel=5.61 fps Inflow=3.88 cfs 12,883 cf
15.0" Round Pipe n=0.011 L=184.0' S=0.0076 '/' Capacity=6.66 cfs Outflow=3.79 cfs 12,883 cf

Reach DMHS9: TO DMH-S10 Avg. Flow Depth=1.10' Max Vel=5.29 fps Inflow=7.36 cfs 26,735 cf
18.0" Round Pipe n=0.013 L=137.0' S=0.0062 '/' Capacity=8.27 cfs Outflow=7.22 cfs 26,735 cf

Reach DP#1: DP#1 Inflow=140.37 cfs 712,522 cf
Outflow=140.37 cfs 712,522 cf

Reach DP#5: DITCH Inflow=1.14 cfs 3,530 cf
Outflow=1.14 cfs 3,530 cf

Reach DRIP: TO YD#1 Inflow=0.25 cfs 882 cf
Outflow=0.25 cfs 882 cf

Reach R200: DP#2 Inflow=0.10 cfs 2,330 cf
Outflow=0.10 cfs 2,330 cf

Reach R300: DP#3 Inflow=0.06 cfs 1,625 cf
Outflow=0.06 cfs 1,625 cf

Reach R400: DP#4 Inflow=0.14 cfs 3,897 cf
Outflow=0.14 cfs 3,897 cf

Reach RF-1: TO DMH#3 Avg. Flow Depth=0.26' Max Vel=2.96 fps Inflow=0.30 cfs 1,114 cf
6.0" Round Pipe n=0.013 L=48.0' S=0.0104 '/' Capacity=0.57 cfs Outflow=0.30 cfs 1,114 cf

Reach RF-2: TO DMH#3 Avg. Flow Depth=0.23' Max Vel=2.97 fps Inflow=0.27 cfs 967 cf
6.0" Round Pipe n=0.012 L=61.0' S=0.0098 '/' Capacity=0.60 cfs Outflow=0.26 cfs 967 cf

Reach RF3: TO DMH#3 Avg. Flow Depth=0.16' Max Vel=2.54 fps Inflow=0.14 cfs 487 cf
6.0" Round Pipe n=0.012 L=94.0' S=0.0106 '/' Capacity=0.63 cfs Outflow=0.13 cfs 487 cf

Reach YD1: TO CO#1 Avg. Flow Depth=0.19' Max Vel=5.08 fps Inflow=0.49 cfs 1,639 cf
10.0" Round Pipe n=0.010 L=14.0' S=0.0214 '/' Capacity=4.17 cfs Outflow=0.49 cfs 1,639 cf

Reach YD2: TO D14 Avg. Flow Depth=0.25' Max Vel=8.51 fps Inflow=1.19 cfs 3,714 cf
10.0" Round Pipe n=0.010 L=9.0' S=0.0444 '/' Capacity=6.00 cfs Outflow=1.19 cfs 3,714 cf

Pond P1: BASIN#1 Peak Elev=337.51' Storage=53,937 cf Inflow=37.29 cfs 156,351 cf
Discarded=5.76 cfs 156,351 cf Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=5.76 cfs 156,351 cf

Pond P2: SETTLING POND Peak Elev=343.45' Storage=477 cf Inflow=0.55 cfs 3,966 cf
Outflow=0.28 cfs 3,966 cf

Pond UGS-B: TO DMH#8 Peak Elev=352.49' Storage=0.160 af Inflow=9.12 cfs 31,151 cf
Discarded=1.26 cfs 24,764 cf Primary=3.39 cfs 6,387 cf Outflow=4.64 cfs 31,151 cf

Pond USGD1: TO TEMP SETTLING BASIN Peak Elev=351.40' Storage=0.198 af Inflow=6.31 cfs 20,935 cf
Outflow=2.83 cfs 15,024 cf

Total Runoff Area = 3,429,734 sf Runoff Volume = 914,899 cf Average Runoff Depth = 3.20"
83.31% Pervious = 2,857,173 sf 16.69% Impervious = 572,561 sf

Summary for Subcatchment 2S: TO DCB#4

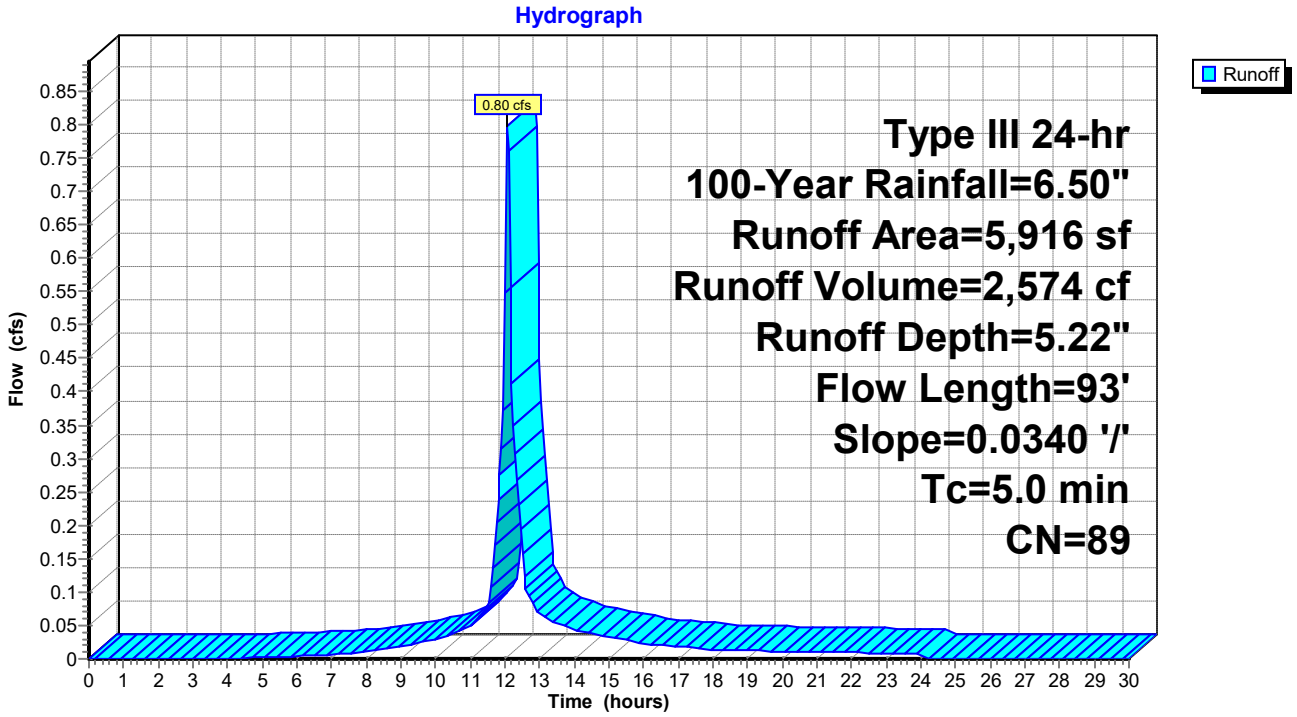
Runoff = 0.80 cfs @ 12.07 hrs, Volume= 2,574 cf, Depth= 5.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
919	39	>75% Grass cover, Good, HSG A
4,997	98	Paved parking, HSG A
5,916	89	Weighted Average
919		15.53% Pervious Area
4,997		84.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0340	1.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	43	0.0340	3.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	93	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 2S: TO DCB#4



Summary for Subcatchment 3S: TO DCB#1

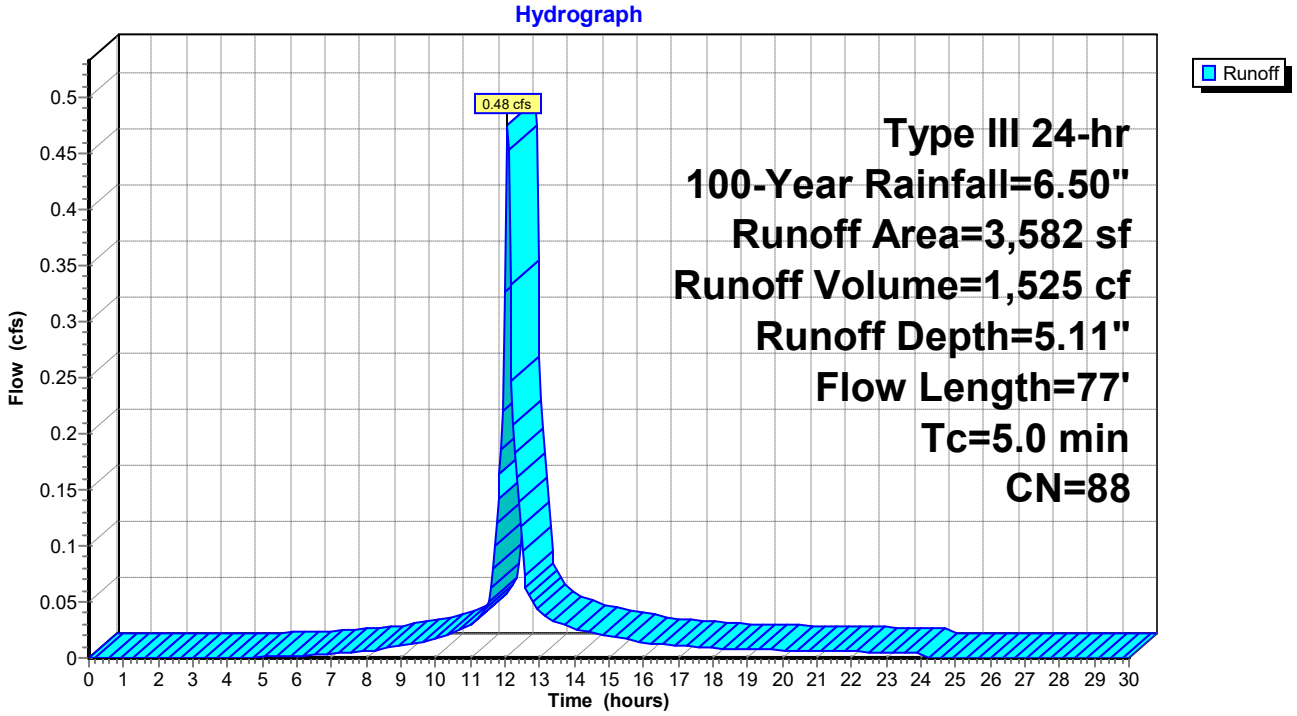
Runoff = 0.48 cfs @ 12.07 hrs, Volume= 1,525 cf, Depth= 5.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
615	39	>75% Grass cover, Good, HSG A
2,967	98	Paved parking, HSG A
3,582	88	Weighted Average
615		17.17% Pervious Area
2,967		82.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.9	44	0.0100	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	27	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	77	Total, Increased to minimum Tc = 5.0 min			

Subcatchment 3S: TO DCB#1



Summary for Subcatchment P-D1: TO CB-D1

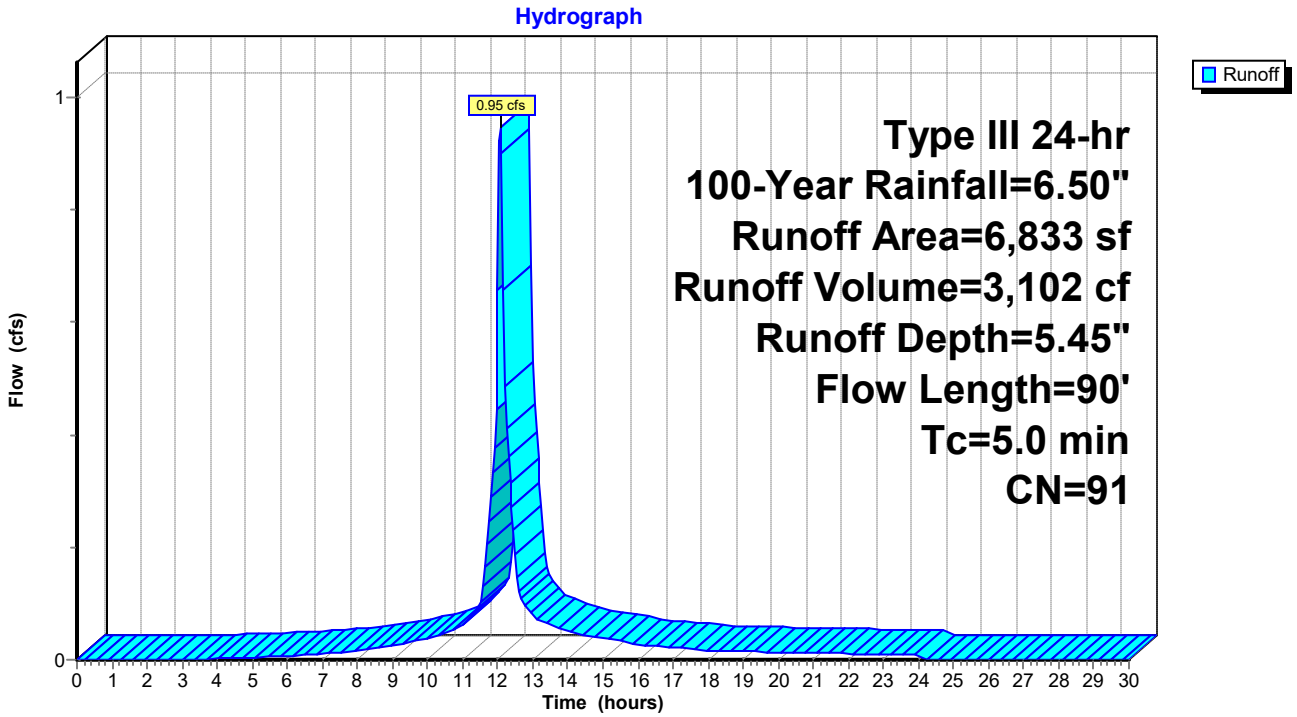
Runoff = 0.95 cfs @ 12.07 hrs, Volume= 3,102 cf, Depth= 5.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
762	39	>75% Grass cover, Good, HSG A
6,071	98	Paved parking, HSG A
6,833	91	Weighted Average
762		11.15% Pervious Area
6,071		88.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	16	0.0830	1.63		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	19	0.0100	0.72		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	15	0.0250	1.00		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	40	0.0250	3.21		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	90	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D1: TO CB-D1



Summary for Subcatchment P-D10*: TO CB-D8

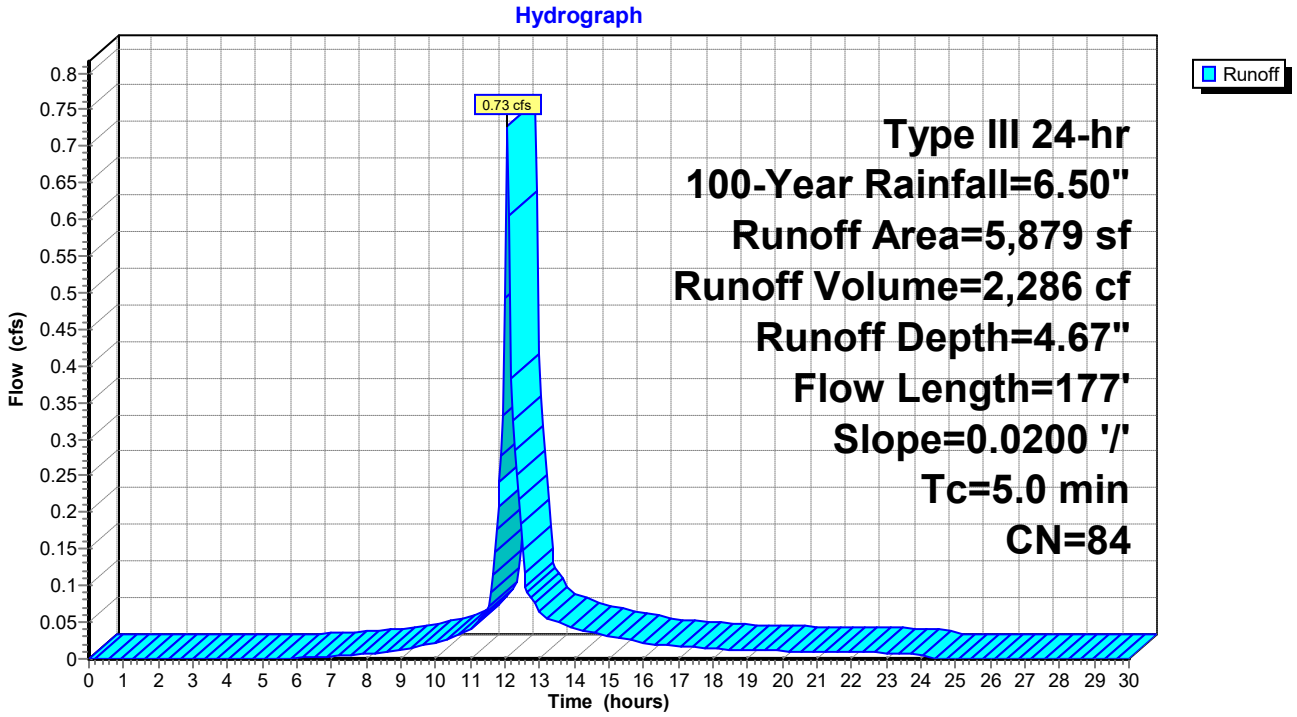
Runoff = 0.73 cfs @ 12.07 hrs, Volume= 2,286 cf, Depth= 4.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
1,363	39	>75% Grass cover, Good, HSG A
4,516	98	Paved parking, HSG A
5,879	84	Weighted Average
1,363		23.18% Pervious Area
4,516		76.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	127	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	177	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D10*: TO CB-D8



Summary for Subcatchment P-D11*: TO CB-D9

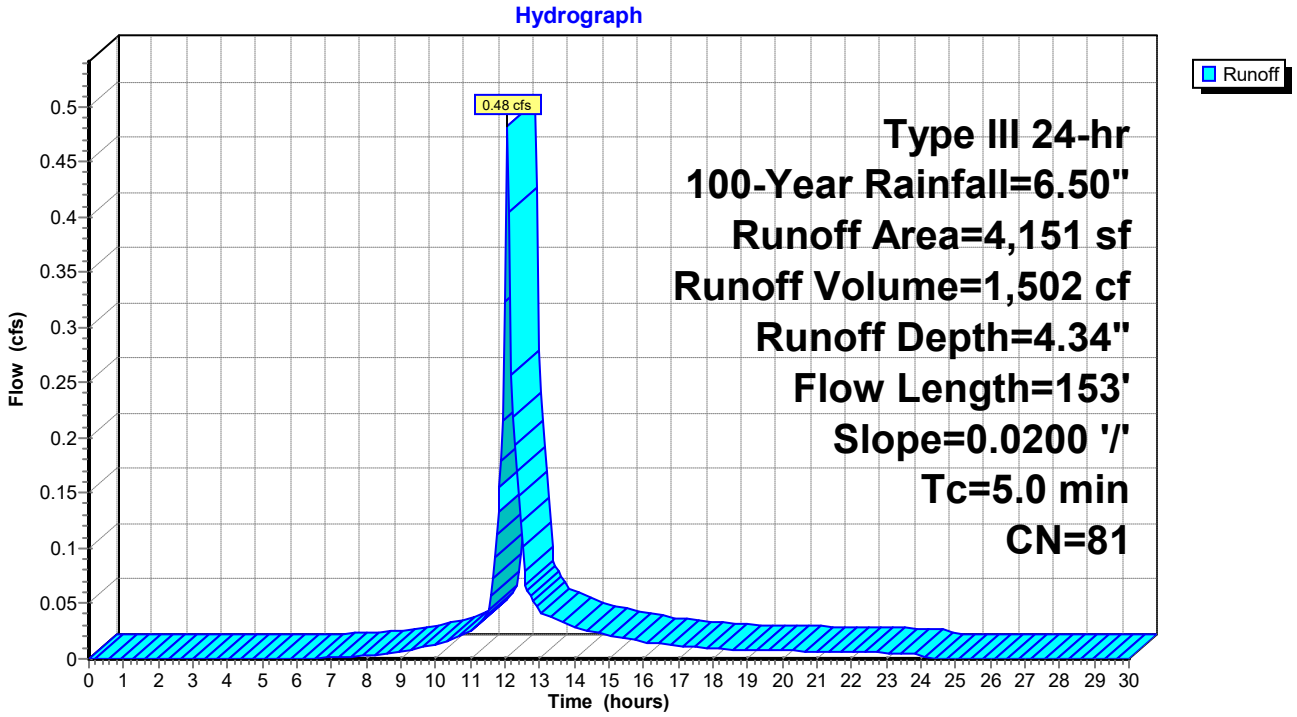
Runoff = 0.48 cfs @ 12.07 hrs, Volume= 1,502 cf, Depth= 4.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
1,166	39	>75% Grass cover, Good, HSG A
2,985	98	Paved parking, HSG A
4,151	81	Weighted Average
1,166		28.09% Pervious Area
2,985		71.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	103	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	153	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D11*: TO CB-D9



Summary for Subcatchment P-D12*: TO CB-D5

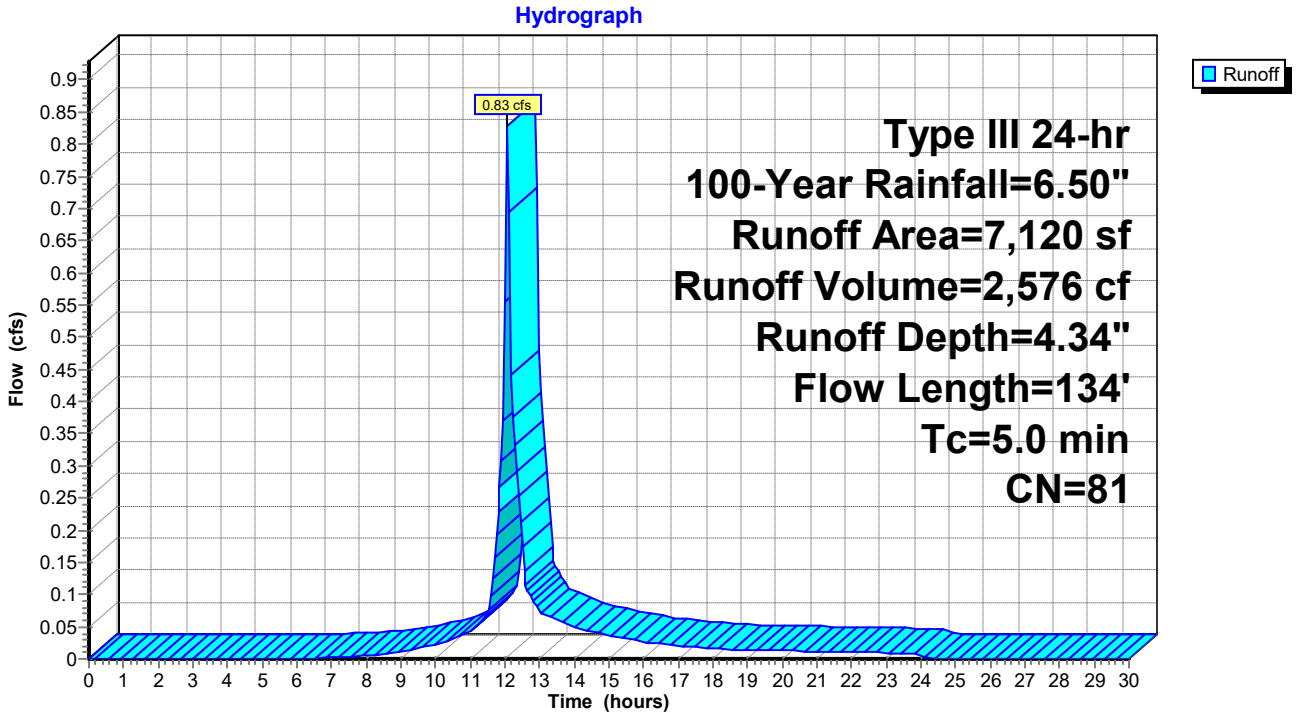
Runoff = 0.83 cfs @ 12.07 hrs, Volume= 2,576 cf, Depth= 4.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
2,024	39	>75% Grass cover, Good, HSG A
5,096	98	Paved parking, HSG A
7,120	81	Weighted Average
2,024		28.43% Pervious Area
5,096		71.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	84	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	134	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D12*: TO CB-D5



Summary for Subcatchment P-D2: TO CB-D2

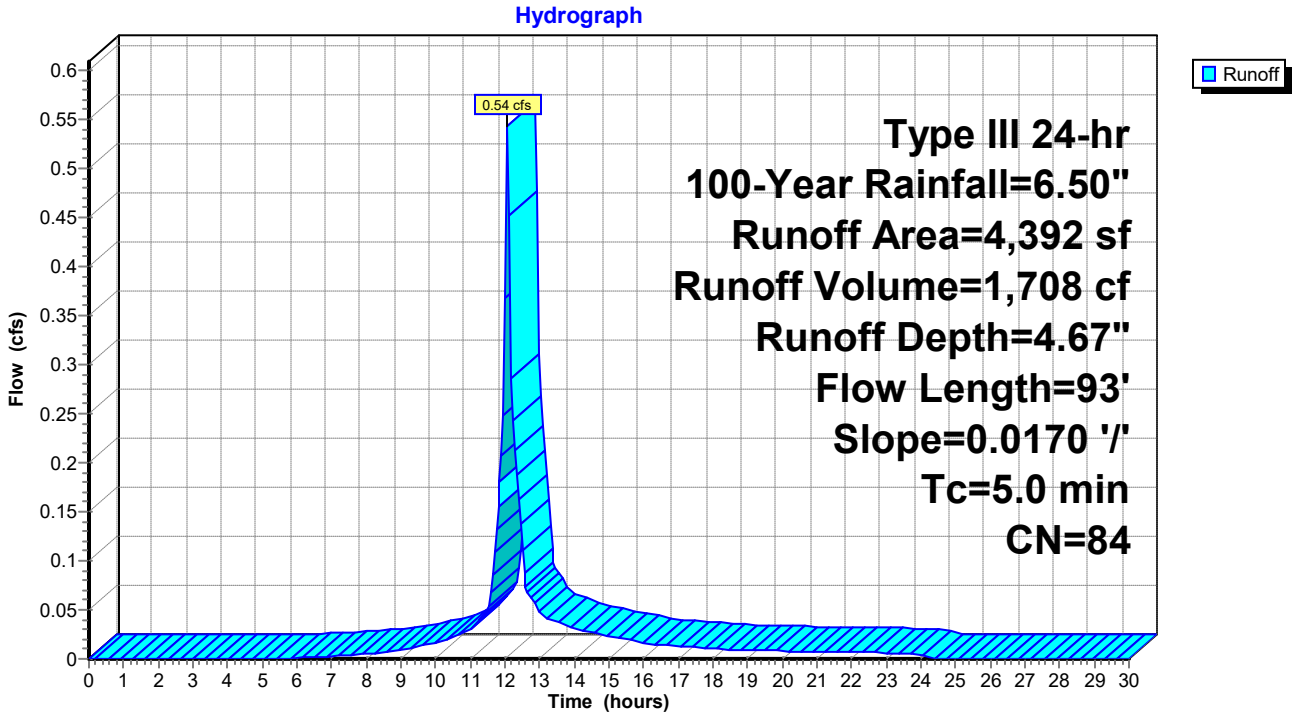
Runoff = 0.54 cfs @ 12.07 hrs, Volume= 1,708 cf, Depth= 4.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
1,030	39	>75% Grass cover, Good, HSG A
3,362	98	Paved parking, HSG A
4,392	84	Weighted Average
1,030		23.45% Pervious Area
3,362		76.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	50	0.0170	1.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	43	0.0170	2.65		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	93	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D2: TO CB-D2



Summary for Subcatchment P-D3: TO CB-D3

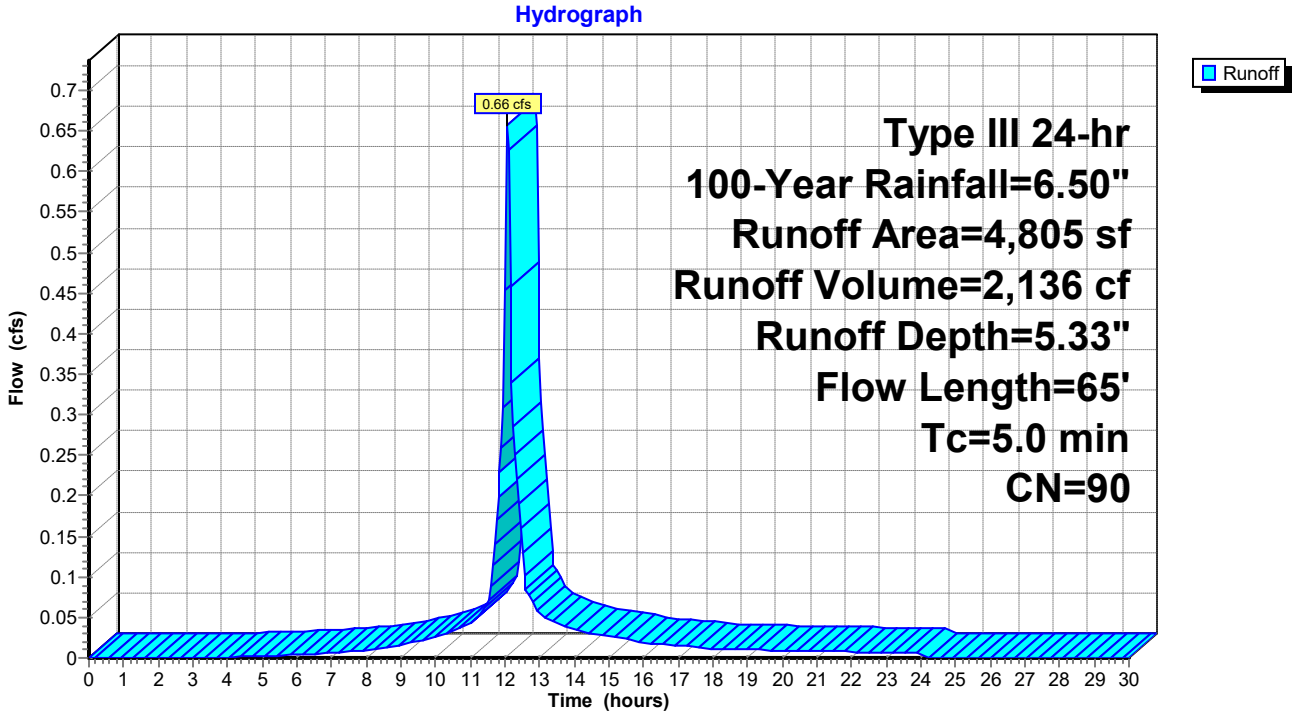
Runoff = 0.66 cfs @ 12.07 hrs, Volume= 2,136 cf, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
613	39	>75% Grass cover, Good, HSG A
4,192	98	Paved parking, HSG A
4,805	90	Weighted Average
613		12.76% Pervious Area
4,192		87.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	8	0.0100	0.61		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	42	0.0250	1.22		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.1	15	0.0250	3.21		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.9	65	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D3: TO CB-D3



Summary for Subcatchment P-D4*: TO CB-D4

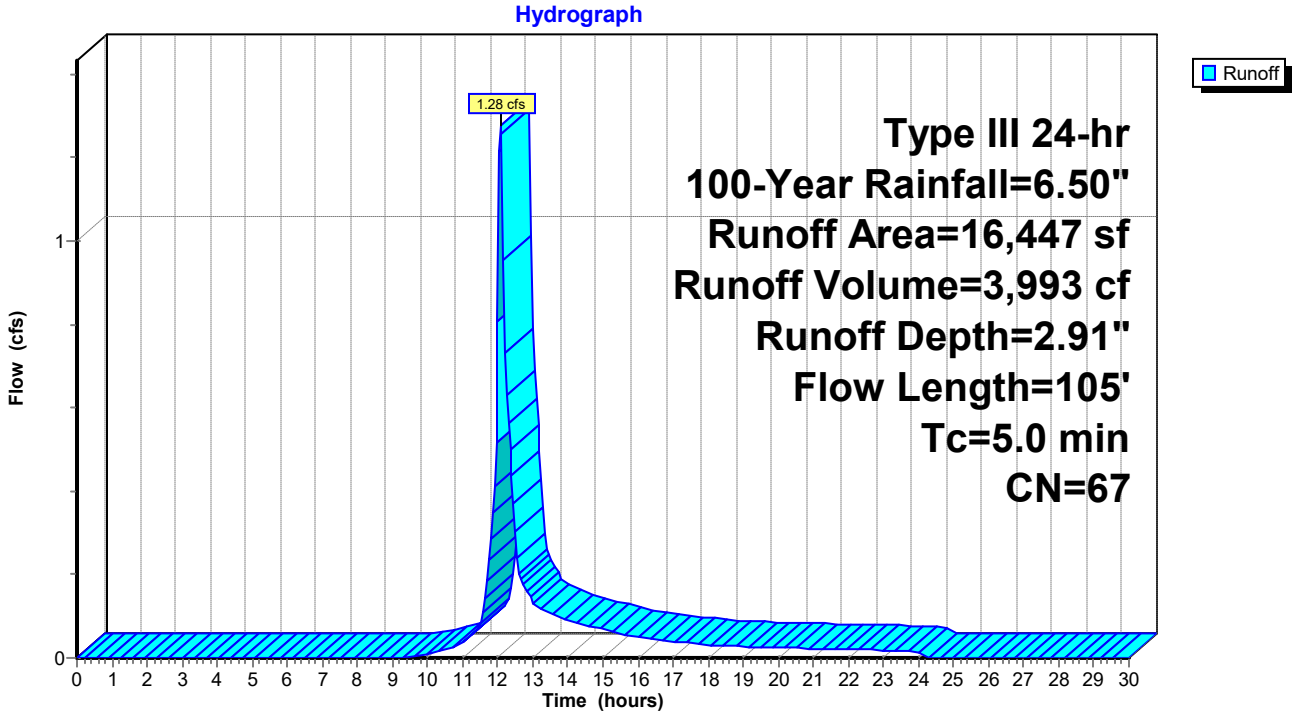
Runoff = 1.28 cfs @ 12.08 hrs, Volume= 3,993 cf, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
8,595	39	>75% Grass cover, Good, HSG A
7,852	98	Paved parking, HSG A
16,447	67	Weighted Average
8,595		52.26% Pervious Area
7,852		47.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	43	0.0800	0.24		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	7	0.0100	0.59		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	55	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.7	105	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D4*: TO CB-D4



Summary for Subcatchment P-D5*: TO CB-D6

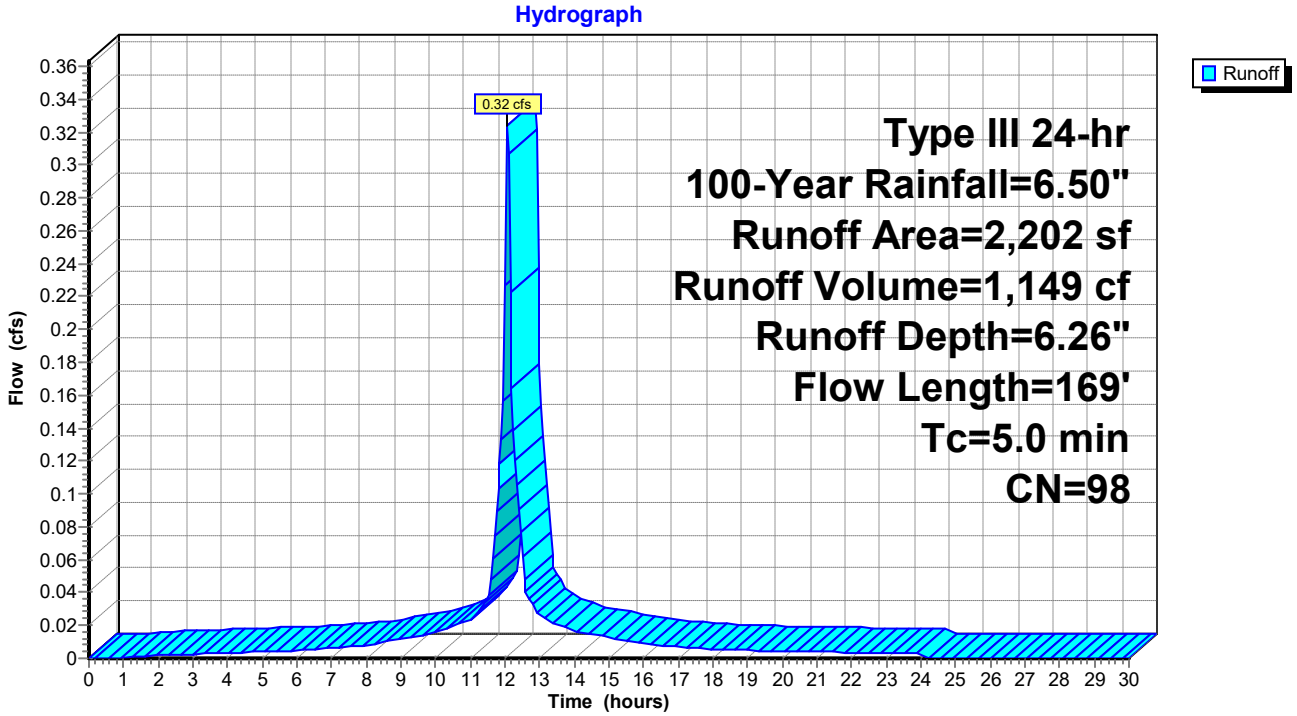
Runoff = 0.32 cfs @ 12.07 hrs, Volume= 1,149 cf, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
2,202	98	Paved parking, HSG A
2,202		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.95		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	32	0.0190	1.04		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	119	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	169	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D5*: TO CB-D6



Summary for Subcatchment P-D6: TO CB-D7

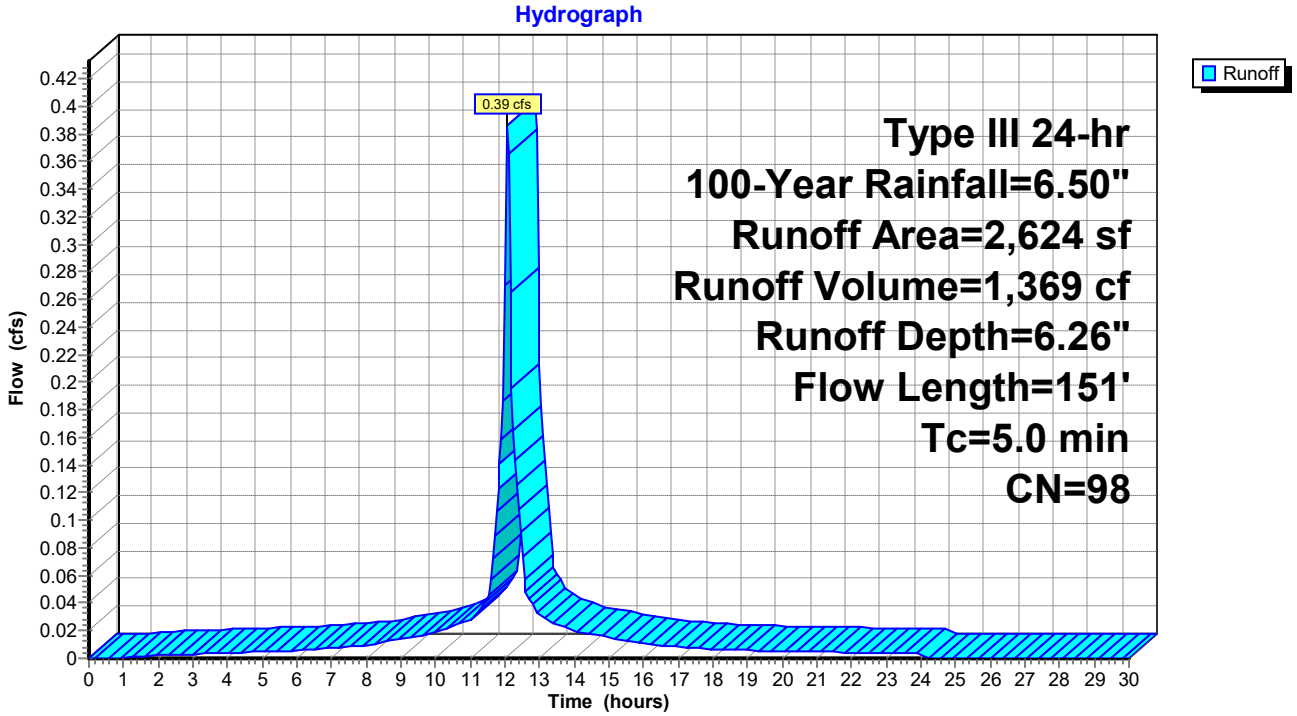
Runoff = 0.39 cfs @ 12.07 hrs, Volume= 1,369 cf, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
2,624	98	Paved parking, HSG A
2,624		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.95		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	32	0.0190	1.04		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	101	0.0190	2.80		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	151	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D6: TO CB-D7



Summary for Subcatchment P-D7: TO ROOF DRAIN

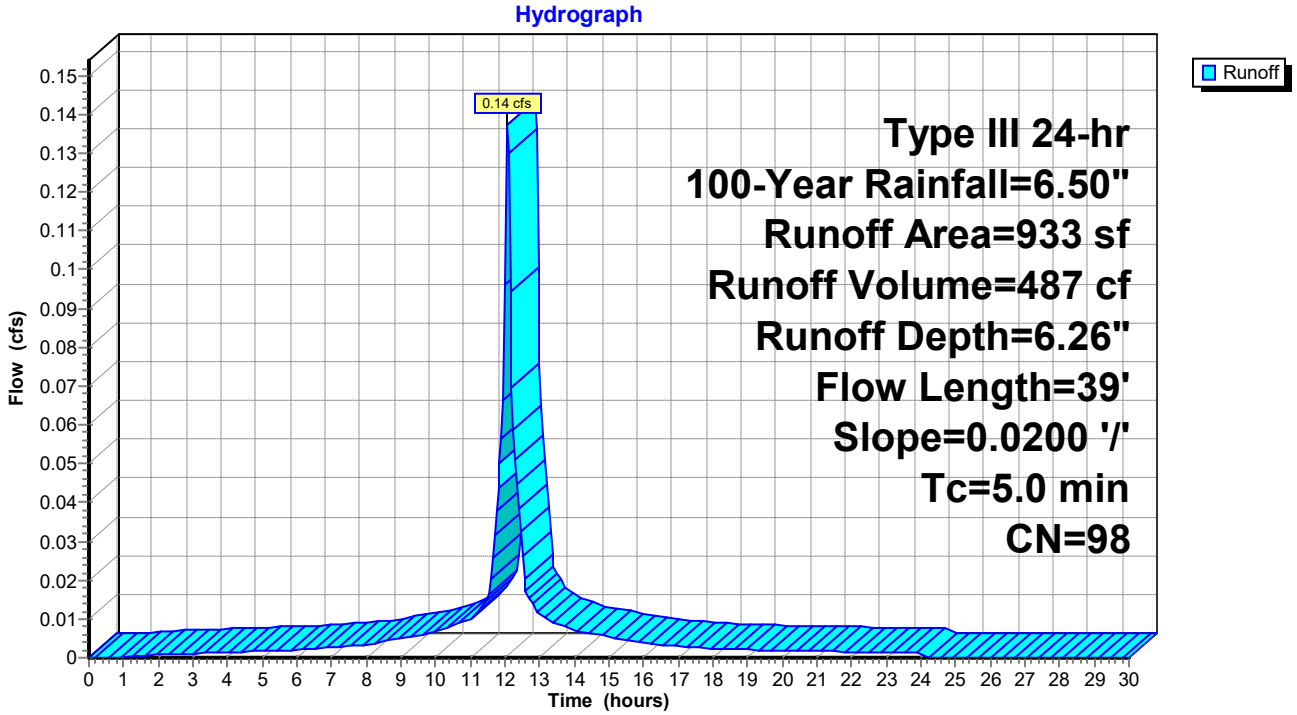
Runoff = 0.14 cfs @ 12.07 hrs, Volume= 487 cf, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
933	98	Paved parking, HSG A
933		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D7: TO ROOF DRAIN



Summary for Subcatchment P-D8: TO ROOF DRAIN

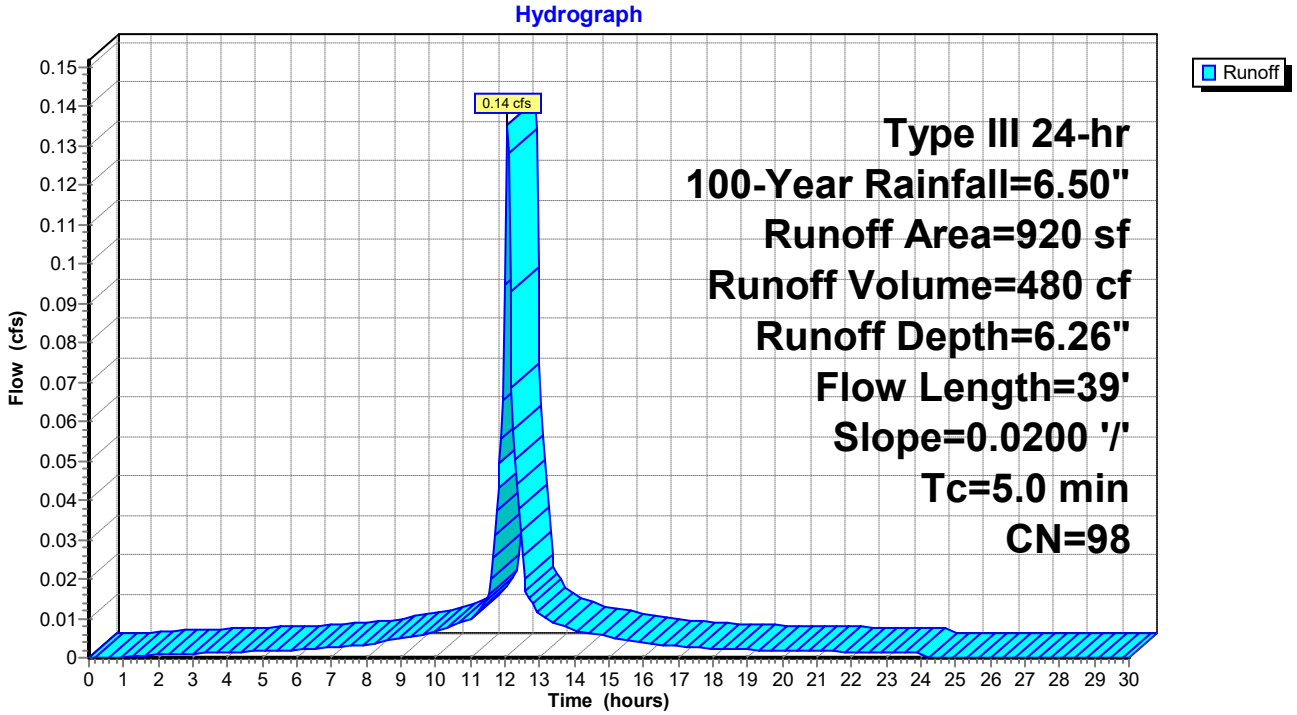
Runoff = 0.14 cfs @ 12.07 hrs, Volume= 480 cf, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
920	98	Paved parking, HSG A
920		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D8: TO ROOF DRAIN



Summary for Subcatchment P-D9: TO ROOF DRAIN

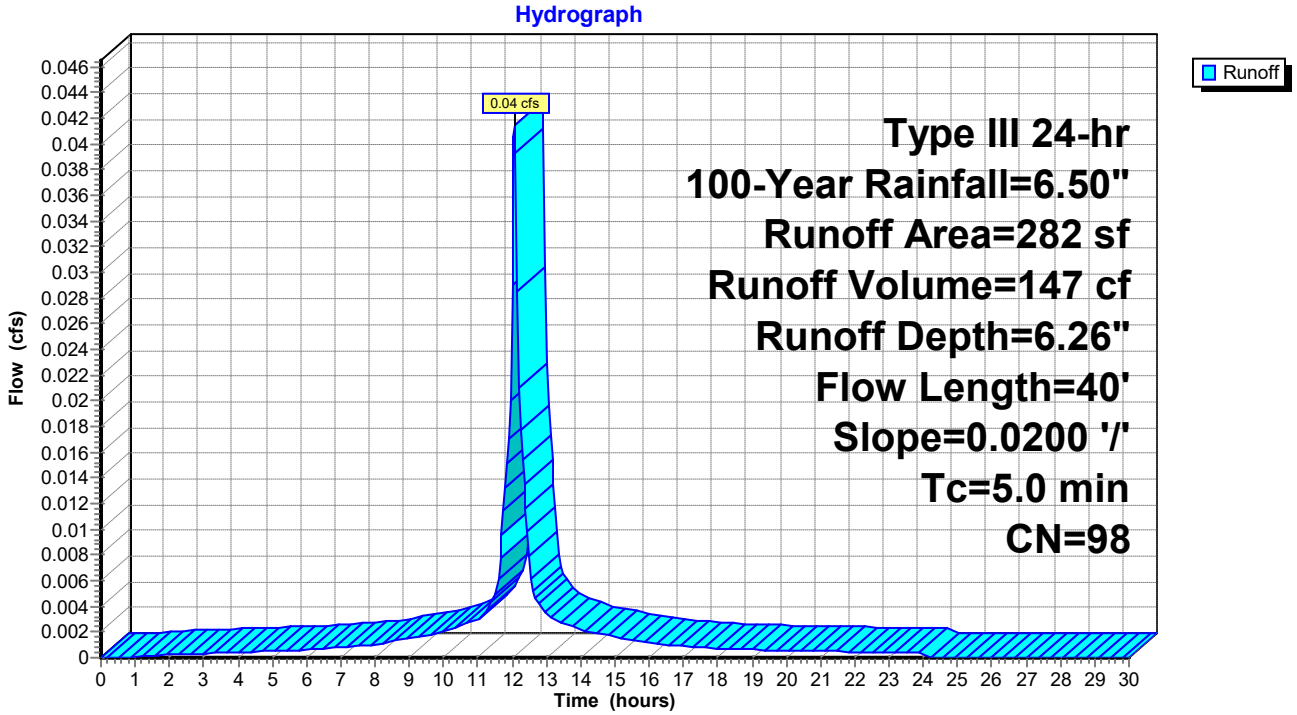
Runoff = 0.04 cfs @ 12.07 hrs, Volume= 147 cf, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
282	98	Paved parking, HSG A
282		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	40	0.0200	1.11		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	40	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-D9: TO ROOF DRAIN



Summary for Subcatchment P-S106: TO DCB-R102

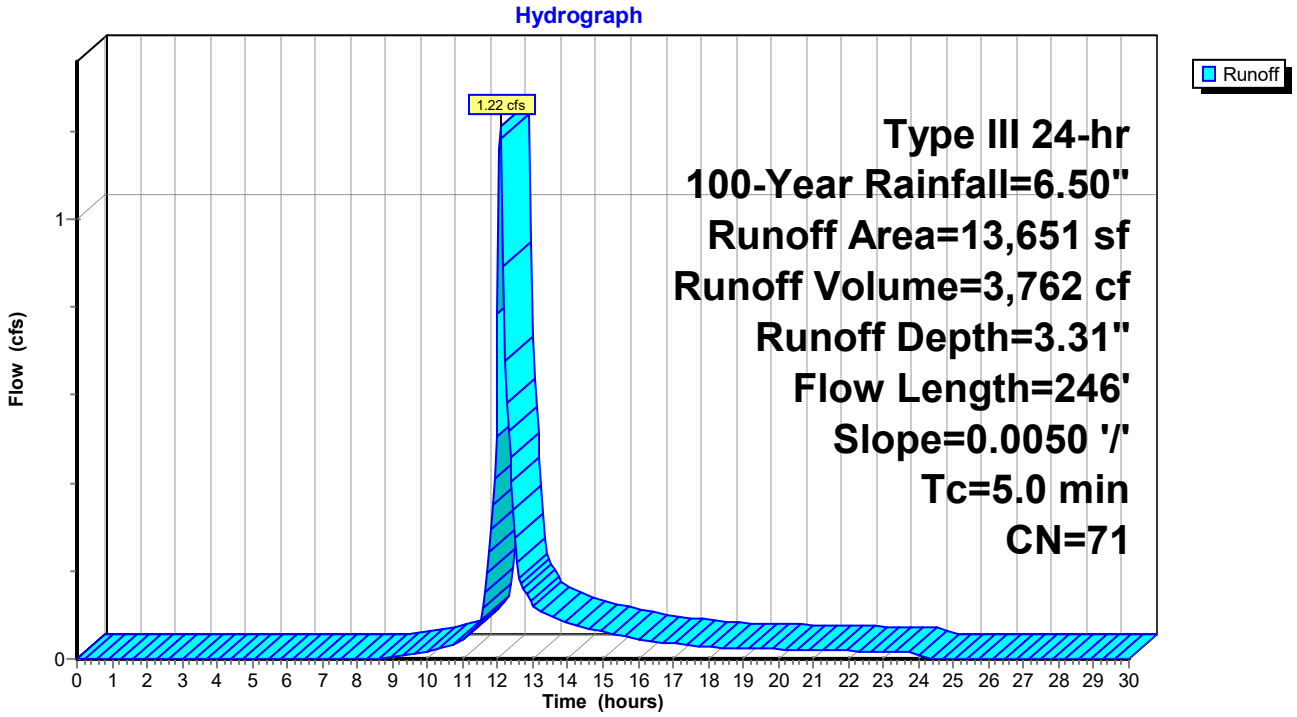
Runoff = 1.22 cfs @ 12.08 hrs, Volume= 3,762 cf, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
6,360	39	>75% Grass cover, Good, HSG A
7,291	98	Paved parking, HSG A
13,651	71	Weighted Average
6,360		46.59% Pervious Area
7,291		53.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.3	196	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.6	246	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S106: TO DCB-R102



Summary for Subcatchment P-S107: TO DCB-R101

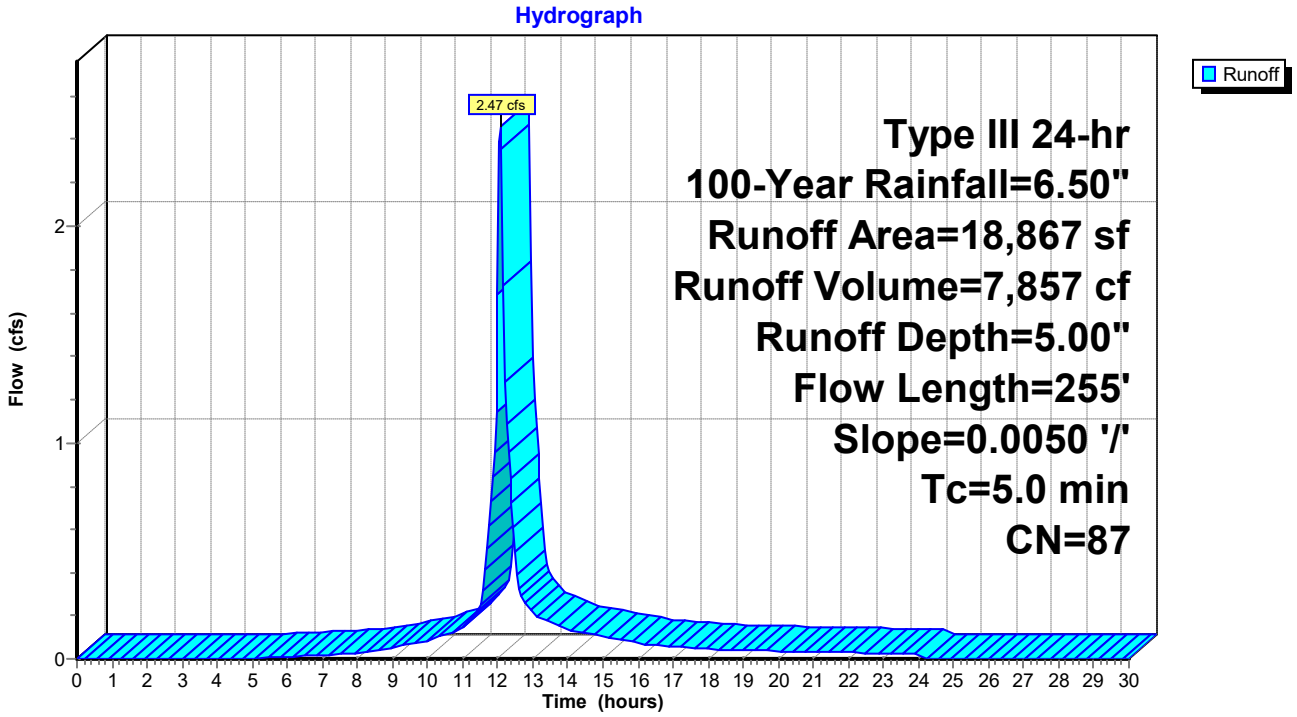
Runoff = 2.47 cfs @ 12.07 hrs, Volume= 7,857 cf, Depth= 5.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
3,590	39	>75% Grass cover, Good, HSG A
15,277	98	Paved parking, HSG A
18,867	87	Weighted Average
3,590		19.03% Pervious Area
15,277		80.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.4	205	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.7	255	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S107: TO DCB-R101



Summary for Subcatchment P-S108: TO DCB-R100

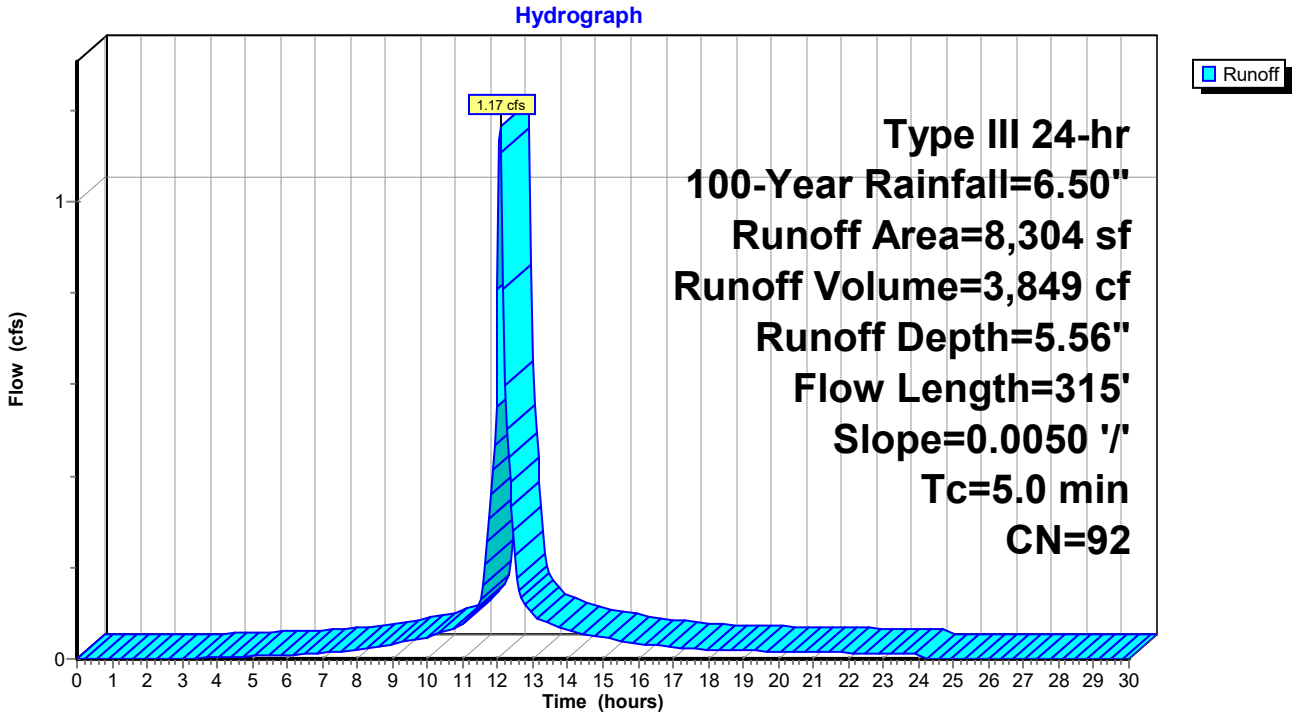
Runoff = 1.17 cfs @ 12.07 hrs, Volume= 3,849 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
847	39	>75% Grass cover, Good, HSG A
7,457	98	Paved parking, HSG A
8,304	92	Weighted Average
847		10.20% Pervious Area
7,457		89.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
3.1	265	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.4	315	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S108: TO DCB-R100



Summary for Subcatchment P-S109: TO DRAINAGE DITCH

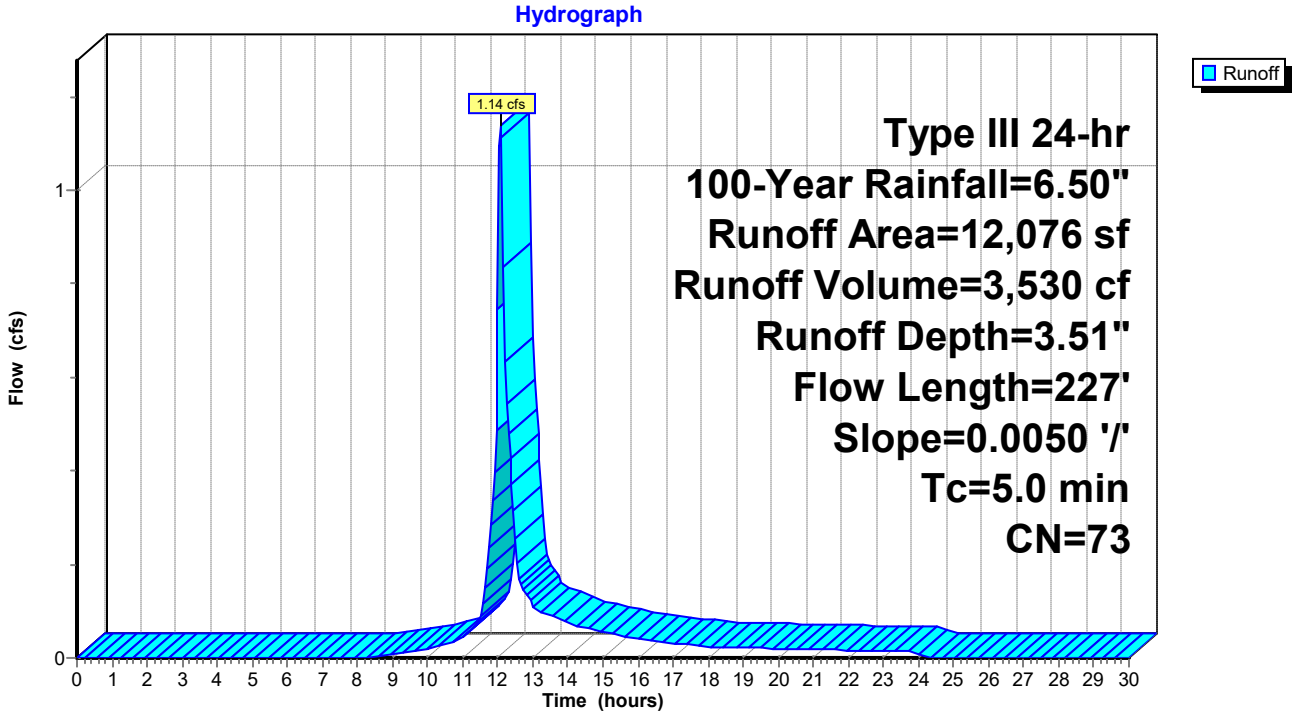
Runoff = 1.14 cfs @ 12.08 hrs, Volume= 3,530 cf, Depth= 3.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
4,506	39	>75% Grass cover, Good, HSG A
2,802	98	Paved parking, HSG A
4,165	98	Paved parking, HSG A
603	39	>75% Grass cover, Good, HSG A
12,076	73	Weighted Average
5,109		42.31% Pervious Area
6,967		57.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.1	177	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.4	227	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-S109: TO DRAINAGE DITCH



Summary for Subcatchment P-SUB1: TO DCB-S1

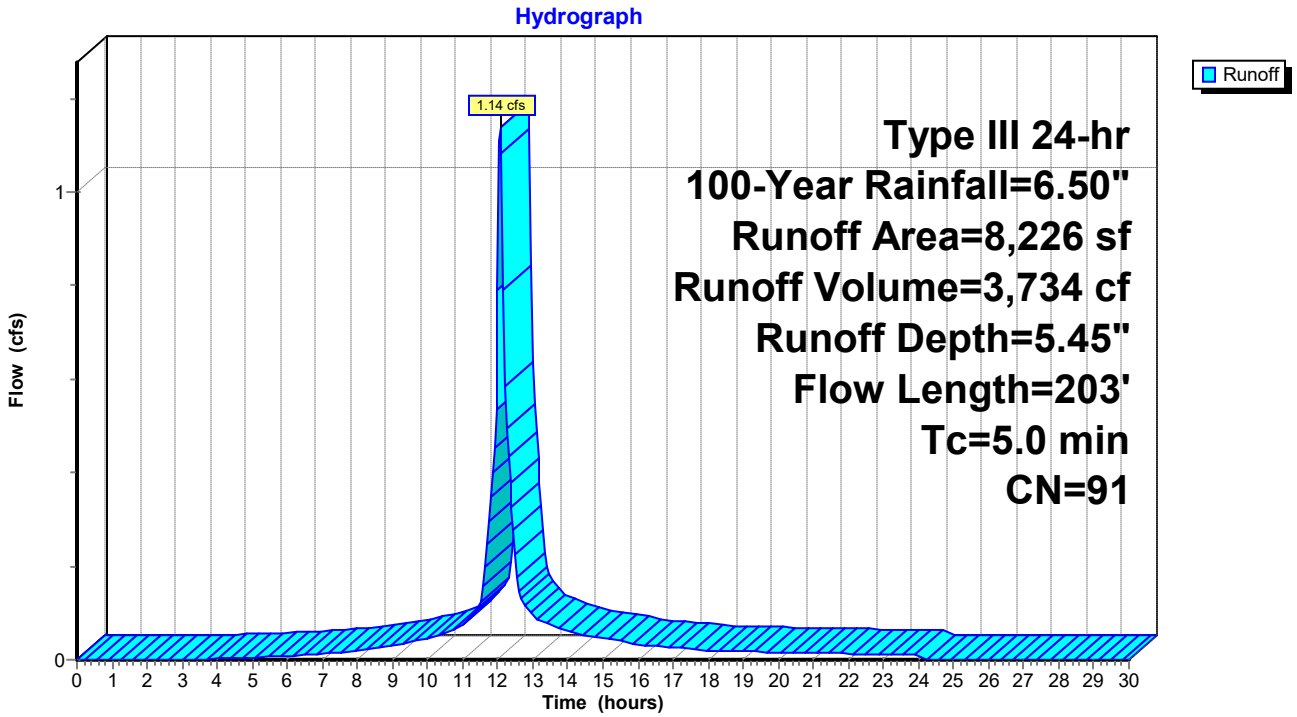
Runoff = 1.14 cfs @ 12.07 hrs, Volume= 3,734 cf, Depth= 5.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
1,001	39	>75% Grass cover, Good, HSG A
7,225	98	Paved parking, HSG A
8,226	91	Weighted Average
1,001		12.17% Pervious Area
7,225		87.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0200	0.10		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	10	0.0200	0.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	33	0.0300	1.25		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	153	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.5	203	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB1: TO DCB-S1



Summary for Subcatchment P-SUB2: TO DMH-S1

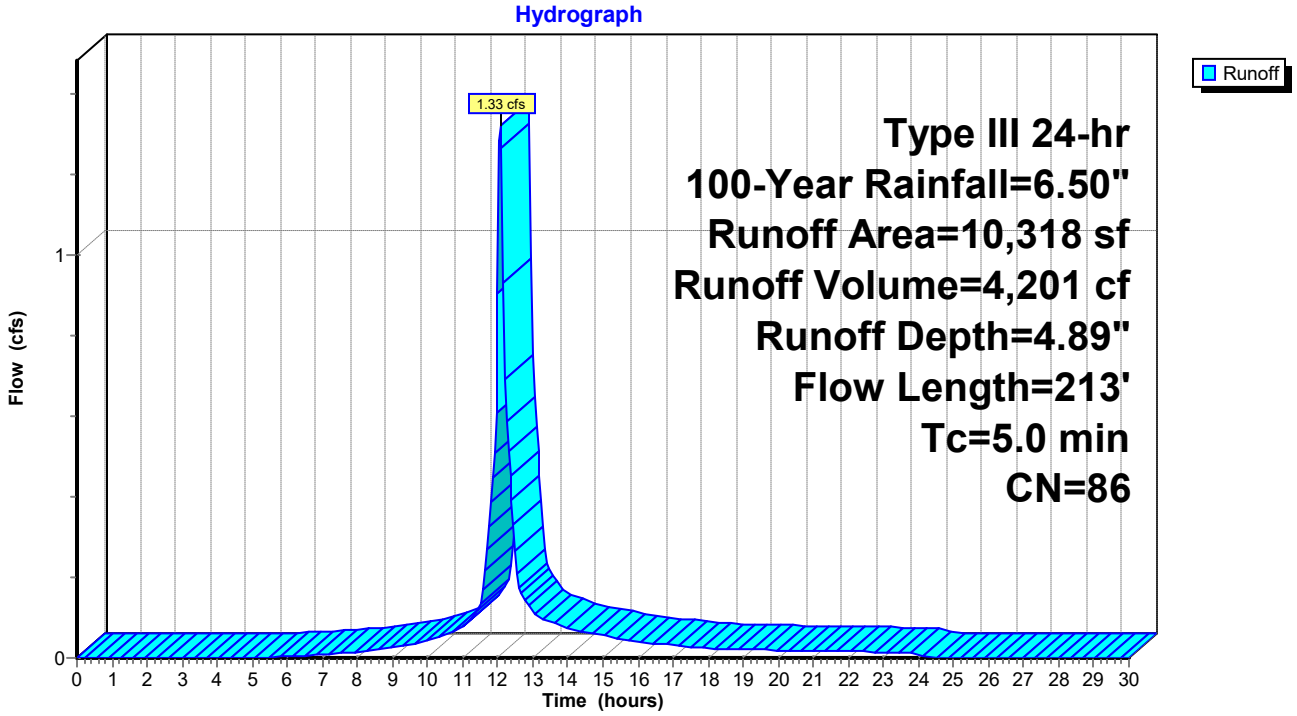
Runoff = 1.33 cfs @ 12.07 hrs, Volume= 4,201 cf, Depth= 4.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
2,017	39	>75% Grass cover, Good, HSG A
8,301	98	Paved parking, HSG A
10,318	86	Weighted Average
2,017		19.55% Pervious Area
8,301		80.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	25	0.0200	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	25	0.0300	1.19		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.8	163	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.5	213	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB2: TO DMH-S1



Summary for Subcatchment P-SUB3: TO DCB-S3

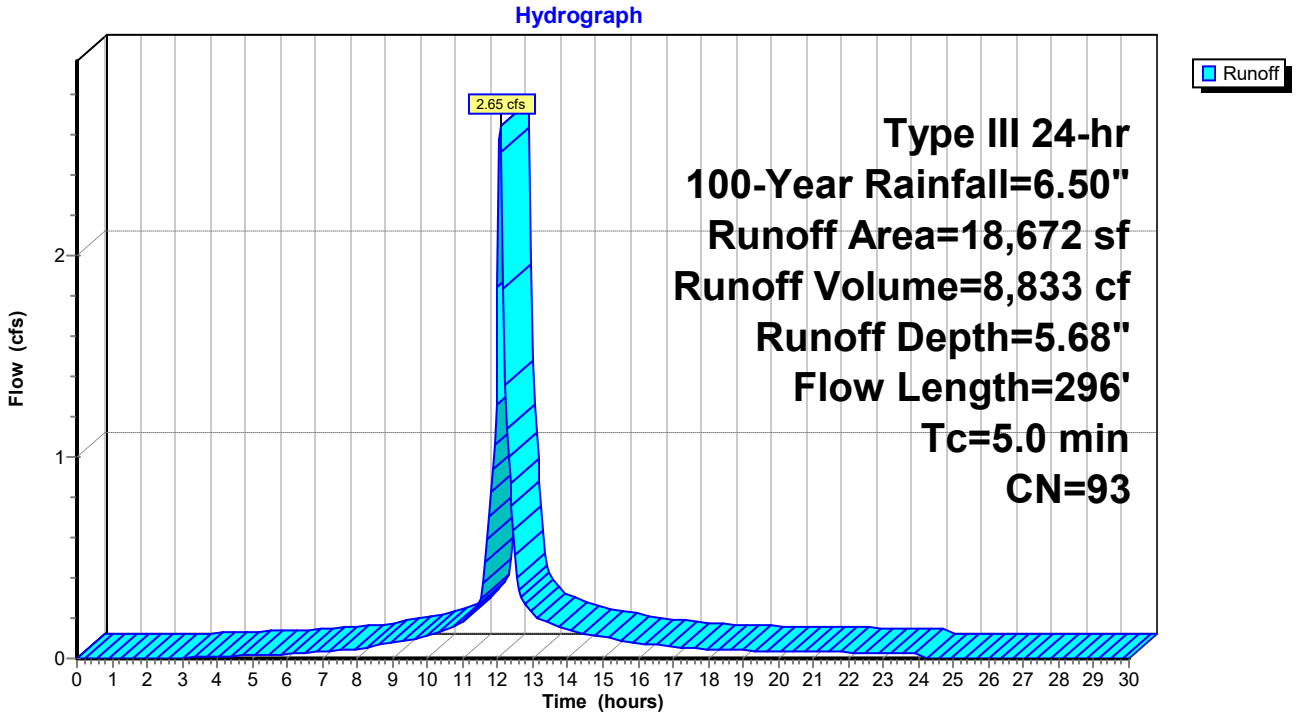
Runoff = 2.65 cfs @ 12.07 hrs, Volume= 8,833 cf, Depth= 5.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
1,241	39	>75% Grass cover, Good, HSG A
10,029	98	Paved parking, HSG A
938	80	>75% Grass cover, Good, HSG D
6,464	98	Paved parking, HSG D
18,672	93	Weighted Average
2,179		11.67% Pervious Area
16,493		88.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0200	0.10		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.2	10	0.0150	0.75		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	33	0.0130	0.90		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.8	246	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.8	296	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB3: TO DCB-S3



Summary for Subcatchment P-SUB4: TO DCB-S4

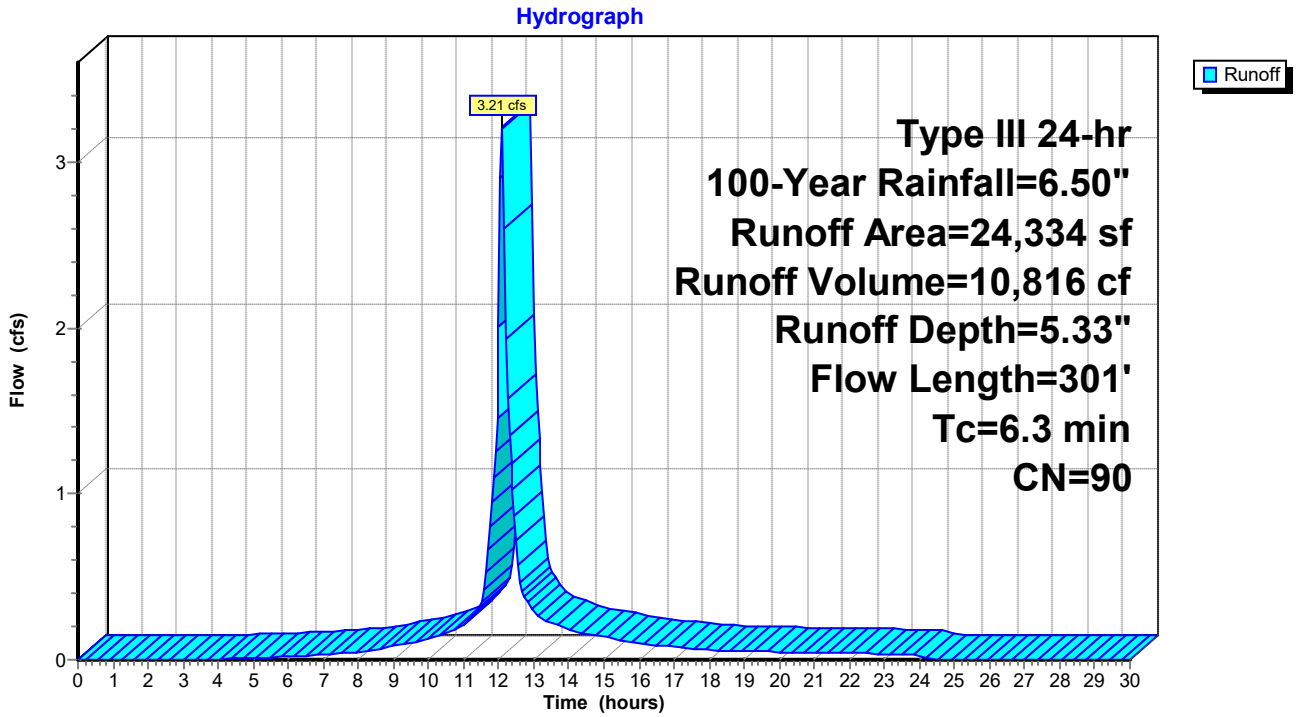
Runoff = 3.21 cfs @ 12.09 hrs, Volume= 10,816 cf, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
3,109	39	>75% Grass cover, Good, HSG A
12,902	98	Paved parking, HSG A
867	80	>75% Grass cover, Good, HSG D
7,456	98	Paved parking, HSG D
24,334	90	Weighted Average
3,976		16.34% Pervious Area
20,358		83.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	32	0.0200	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	18	0.0150	0.84		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.8	251	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.3	301	Total			

Subcatchment P-SUB4: TO DCB-S4



Summary for Subcatchment P-SUB5: TO DCB-S5

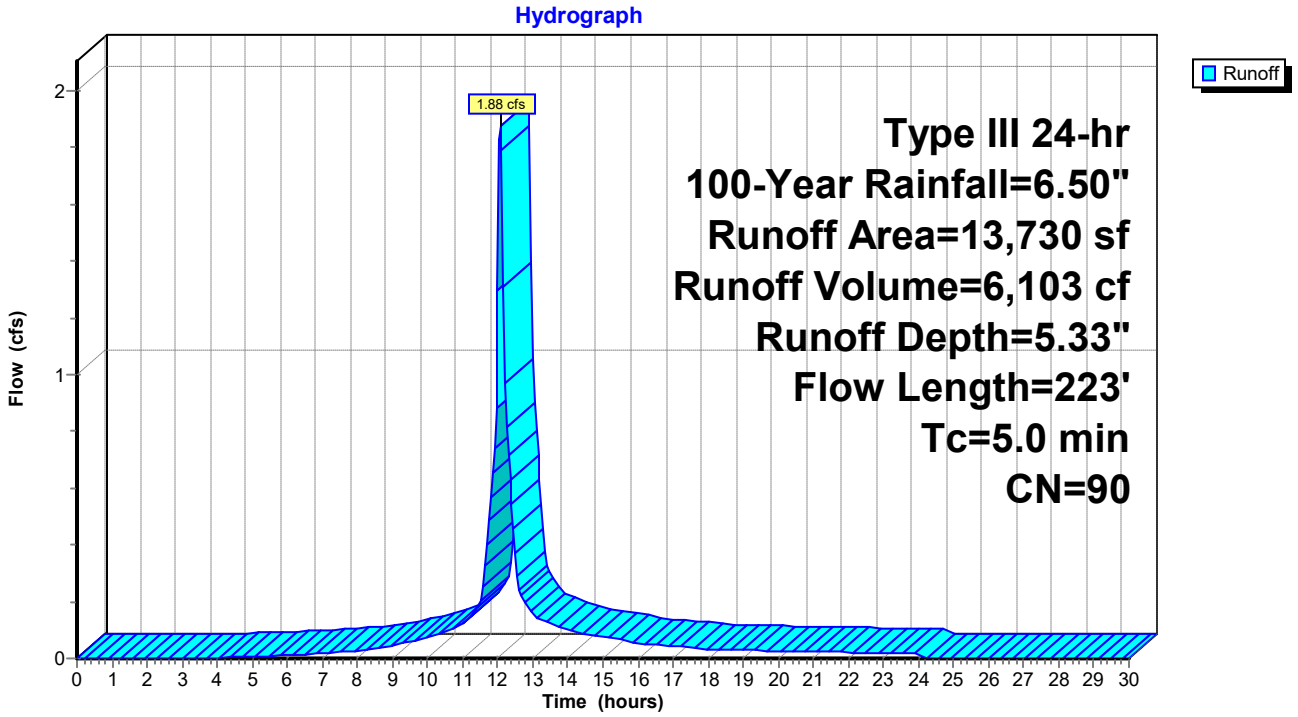
Runoff = 1.88 cfs @ 12.07 hrs, Volume= 6,103 cf, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
2,180	61	>75% Grass cover, Good, HSG B
5,640	98	Paved parking, HSG B
1,094	74	>75% Grass cover, Good, HSG C
2,002	98	Paved parking, HSG C
418	80	>75% Grass cover, Good, HSG D
2,396	98	Paved parking, HSG D
13,730	90	Weighted Average
3,692		26.89% Pervious Area
10,038		73.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.0	173	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.9	223	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB5: TO DCB-S5



Summary for Subcatchment P-SUB6: TO DCB-S6

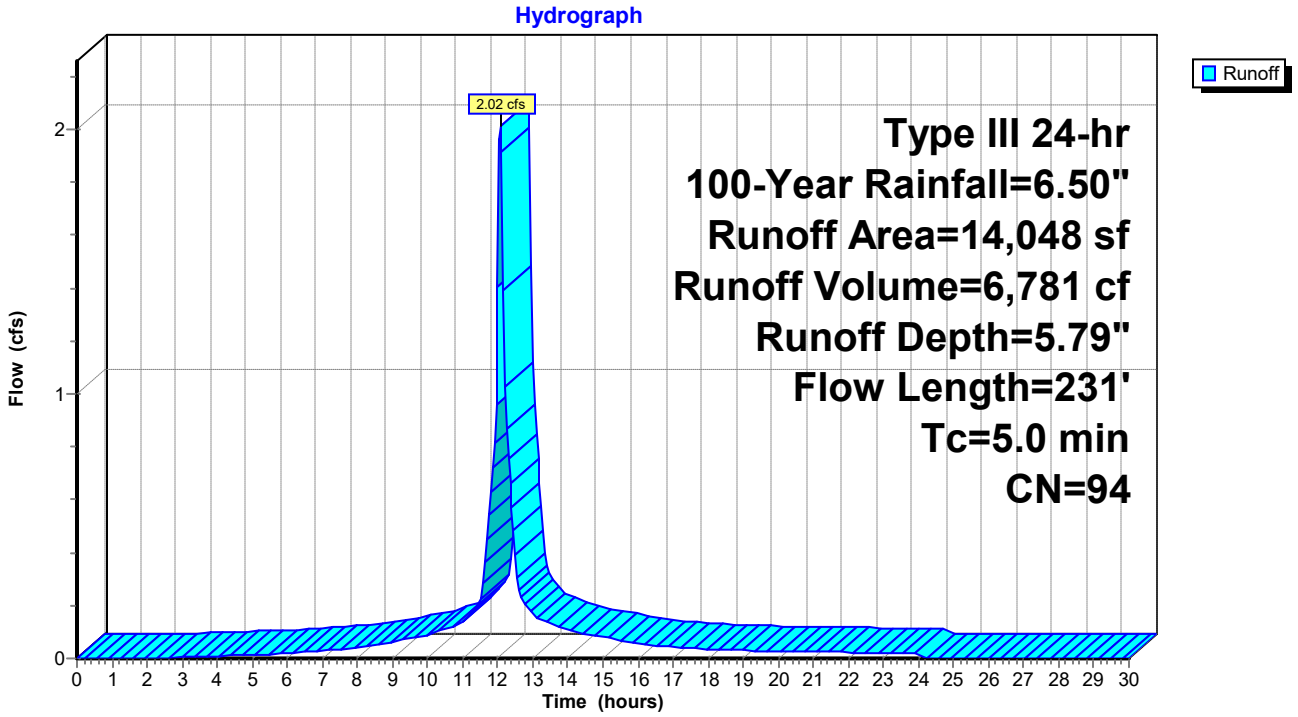
Runoff = 2.02 cfs @ 12.07 hrs, Volume= 6,781 cf, Depth= 5.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
1,127	61	>75% Grass cover, Good, HSG B
7,164	98	Paved parking, HSG B
397	74	>75% Grass cover, Good, HSG C
2,299	98	Paved parking, HSG C
318	80	>75% Grass cover, Good, HSG D
2,743	98	Paved parking, HSG D
14,048	94	Weighted Average
1,842		13.11% Pervious Area
12,206		86.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.1	181	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.0	231	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB6: TO DCB-S6



Summary for Subcatchment P-SUB7: TO DCB-S7

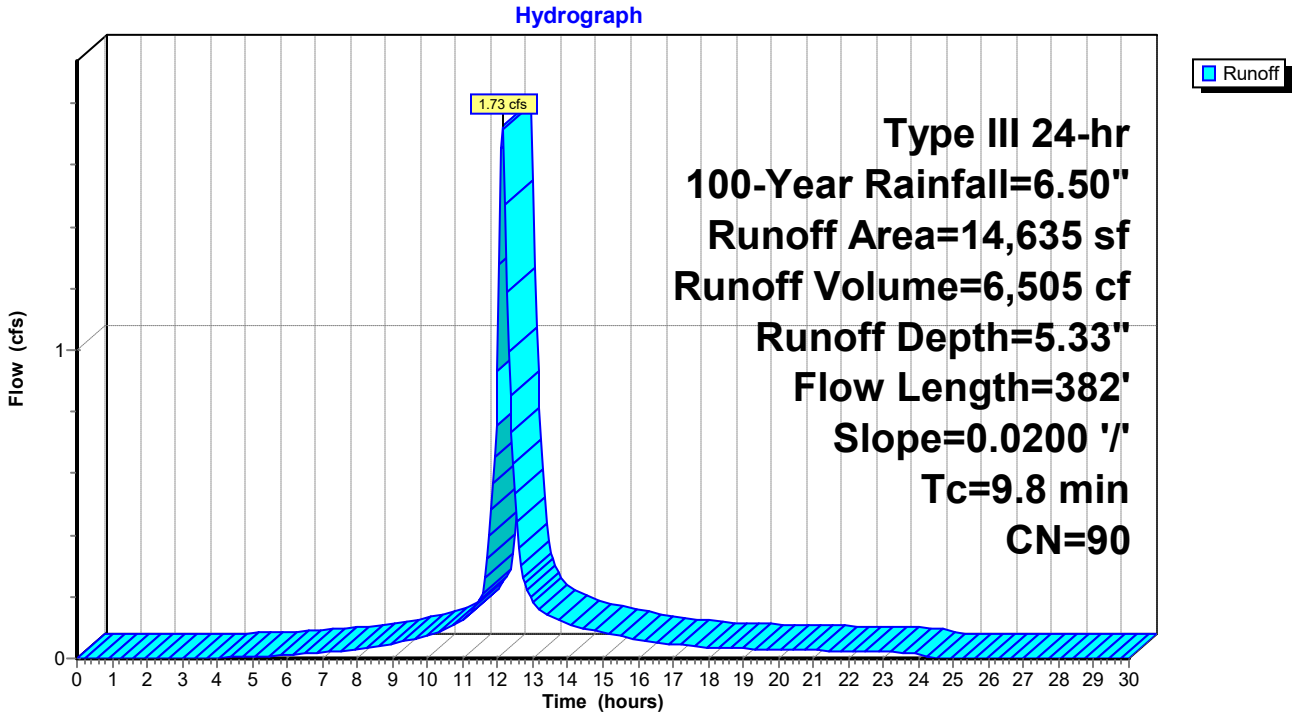
Runoff = 1.73 cfs @ 12.14 hrs, Volume= 6,505 cf, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
2,073	61	>75% Grass cover, Good, HSG B
5,665	96	Gravel surface, HSG B
2,552	98	Paved parking, HSG B
824	74	>75% Grass cover, Good, HSG C
1,846	96	Gravel surface, HSG C
1,675	98	Paved parking, HSG C
14,635	90	Weighted Average
10,408		71.12% Pervious Area
4,227		28.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	75	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	61	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.4	246	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
9.8	382	Total			

Subcatchment P-SUB7: TO DCB-S7



Summary for Subcatchment P-SUB8: TO DCB-S8

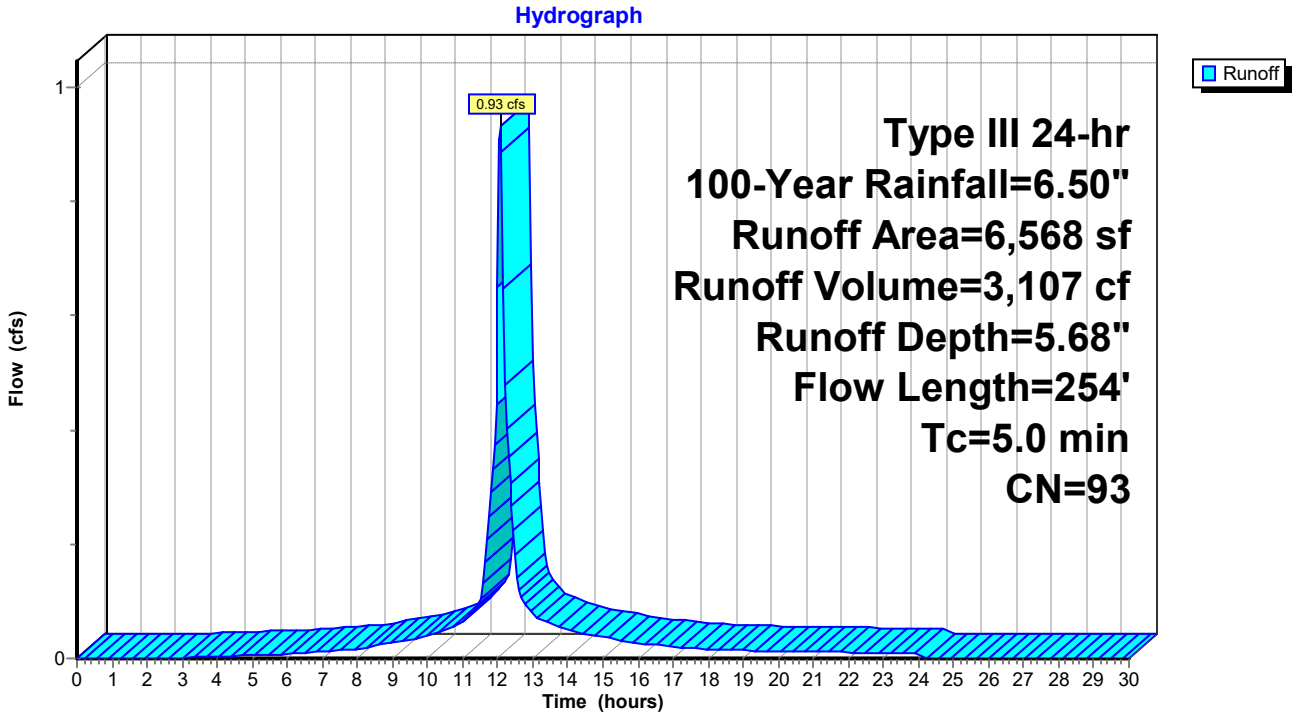
Runoff = 0.93 cfs @ 12.07 hrs, Volume= 3,107 cf, Depth= 5.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
592	61	>75% Grass cover, Good, HSG B
3,350	98	Paved parking, HSG B
384	74	>75% Grass cover, Good, HSG C
2,242	98	Paved parking, HSG C
6,568	93	Weighted Average
976		14.86% Pervious Area
5,592		85.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	6	0.0150	0.08		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0150	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	39	0.0200	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	204	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
3.1	254	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P-SUB8: TO DCB-S8



Summary for Subcatchment P-SUB9: TO DCB-S9

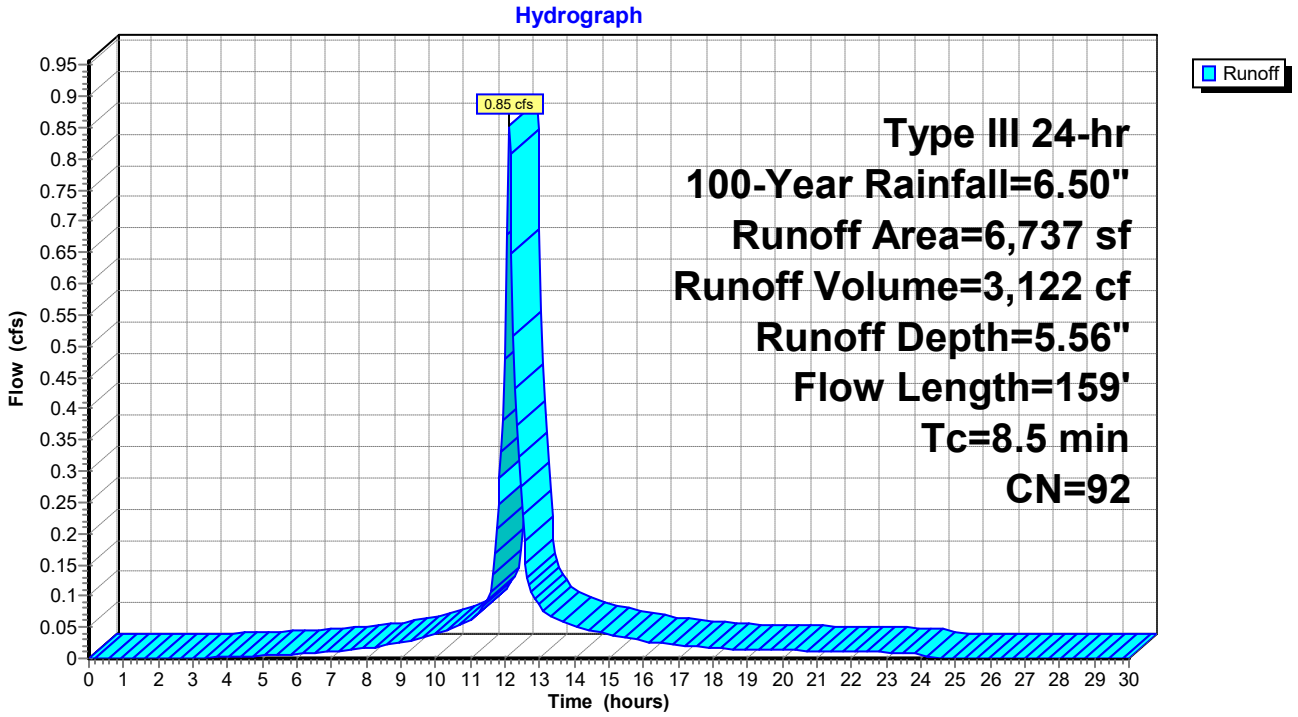
Runoff = 0.85 cfs @ 12.12 hrs, Volume= 3,122 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
615	61	>75% Grass cover, Good, HSG B
851	96	Gravel surface, HSG B
717	98	Paved parking, HSG B
435	74	>75% Grass cover, Good, HSG C
3,901	96	Gravel surface, HSG C
218	98	Paved parking, HSG C
6,737	92	Weighted Average
5,802		86.12% Pervious Area
935		13.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	75	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	55	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	29	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
8.5	159	Total			

Subcatchment P-SUB9: TO DCB-S9



Summary for Subcatchment P206: TO DMH6B

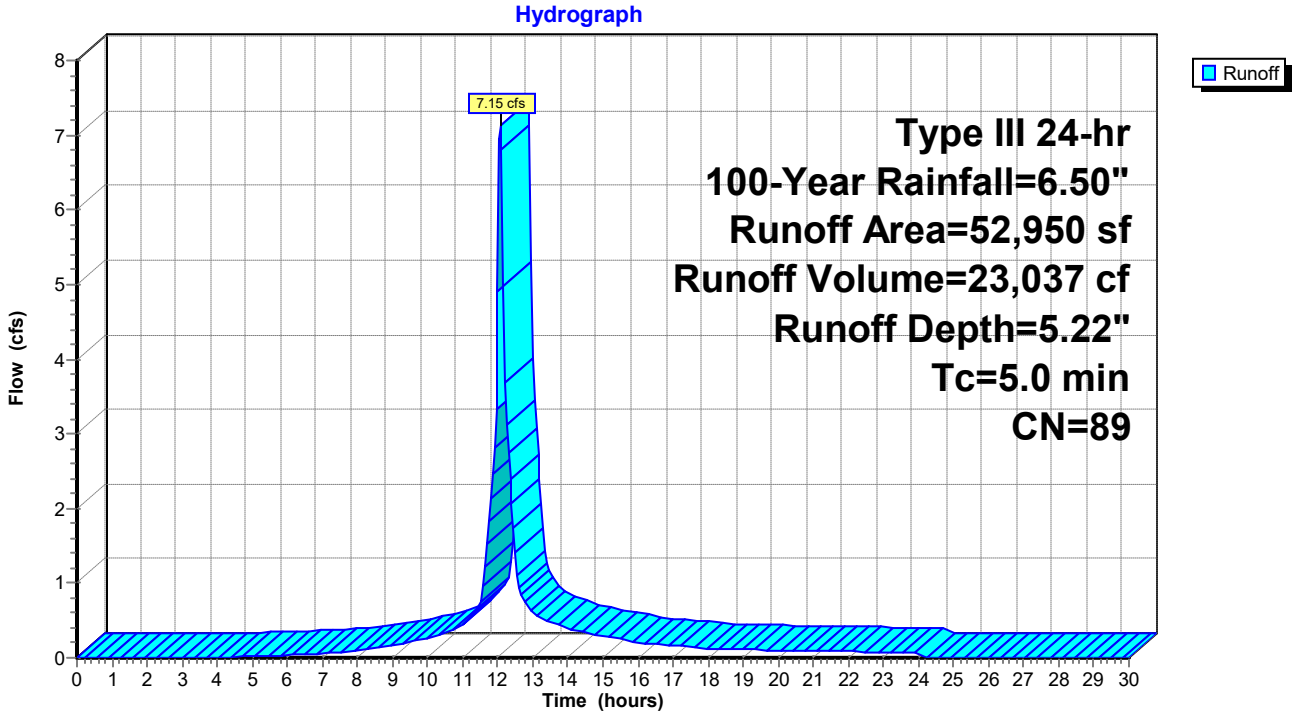
Runoff = 7.15 cfs @ 12.07 hrs, Volume= 23,037 cf, Depth= 5.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
3,483	61	>75% Grass cover, Good, HSG B
40,747	92	Urban commercial, 85% imp, HSG B
3,361	74	>75% Grass cover, Good, HSG C
5,359	94	Urban commercial, 85% imp, HSG C
52,950	89	Weighted Average
13,760		25.99% Pervious Area
39,190		74.01% Impervious Area

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

Subcatchment P206: TO DMH6B



Summary for Subcatchment P207: TO DMH7

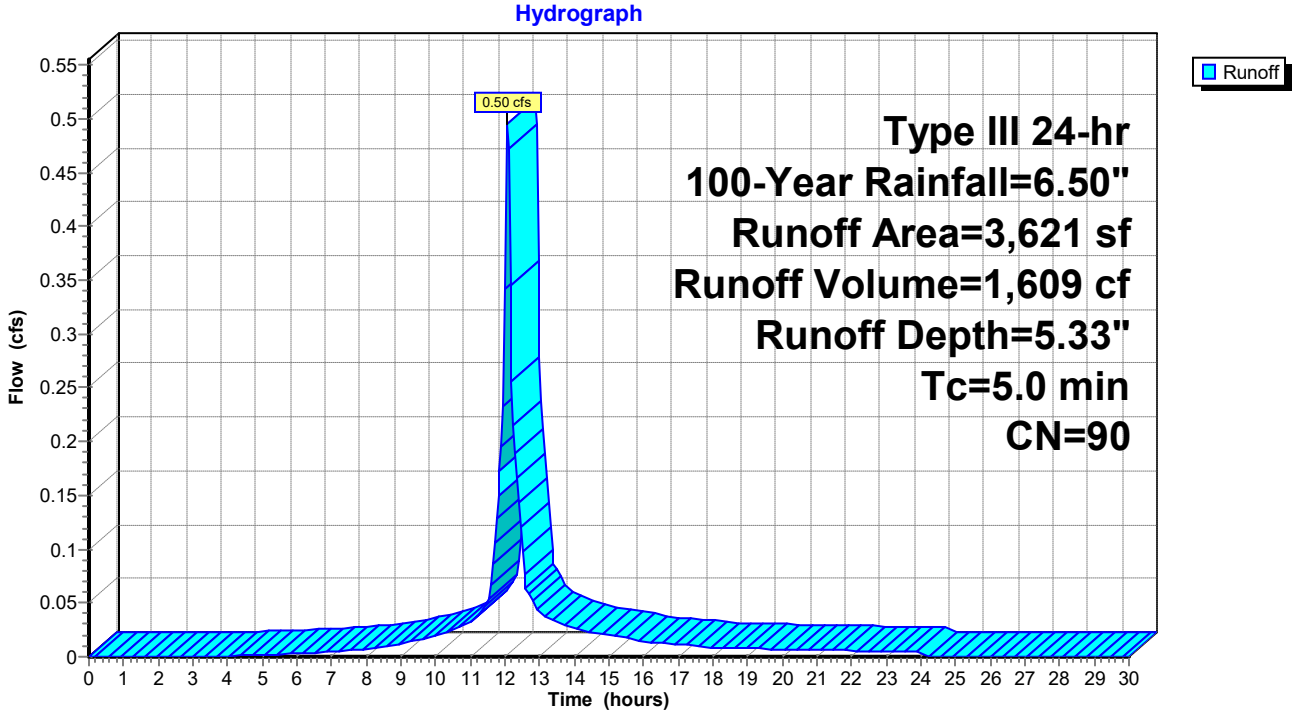
Runoff = 0.50 cfs @ 12.07 hrs, Volume= 1,609 cf, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
825	61	>75% Grass cover, Good, HSG B
2,796	98	Paved parking, HSG B
3,621	90	Weighted Average
825		22.78% Pervious Area
2,796		77.22% Impervious Area

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

Subcatchment P207: TO DMH7



Summary for Subcatchment P210: TO DMH10

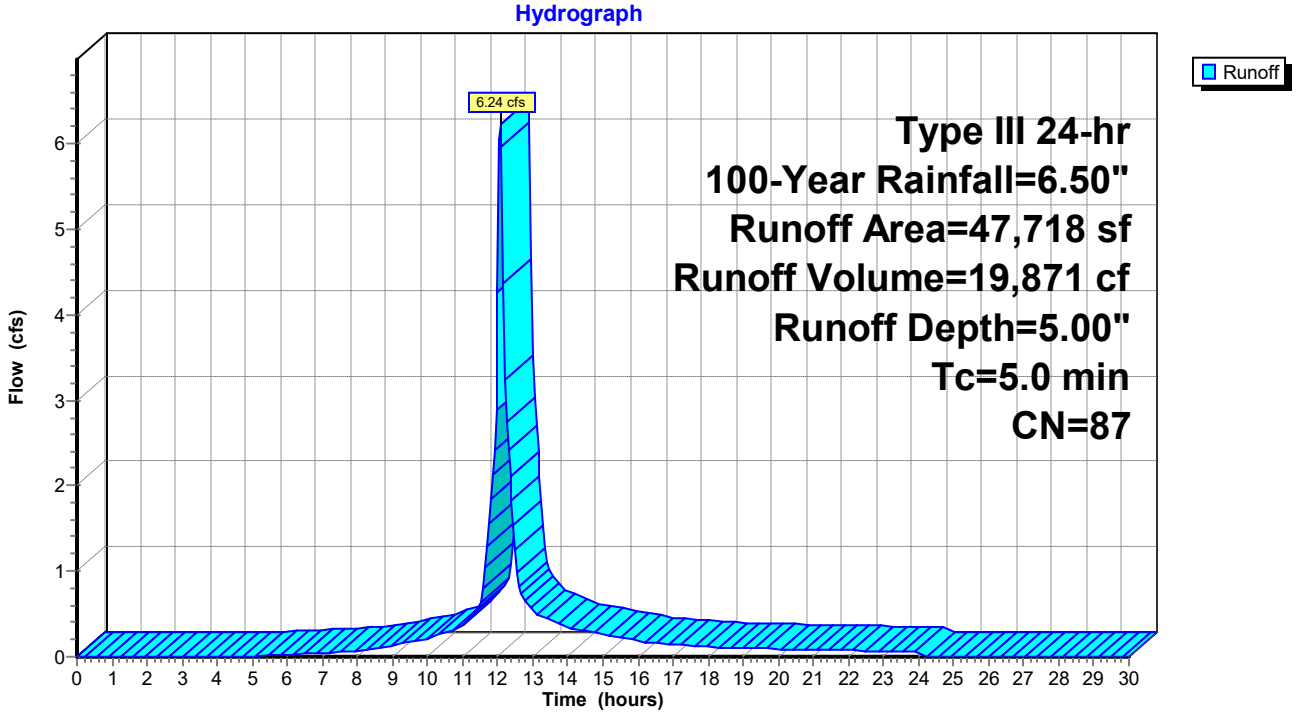
Runoff = 6.24 cfs @ 12.07 hrs, Volume= 19,871 cf, Depth= 5.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
14,798	61	>75% Grass cover, Good, HSG B
32,920	98	Paved parking, HSG B
47,718	87	Weighted Average
14,798		31.01% Pervious Area
32,920		68.99% Impervious Area

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

Subcatchment P210: TO DMH10



Summary for Subcatchment P211: TO DMH11

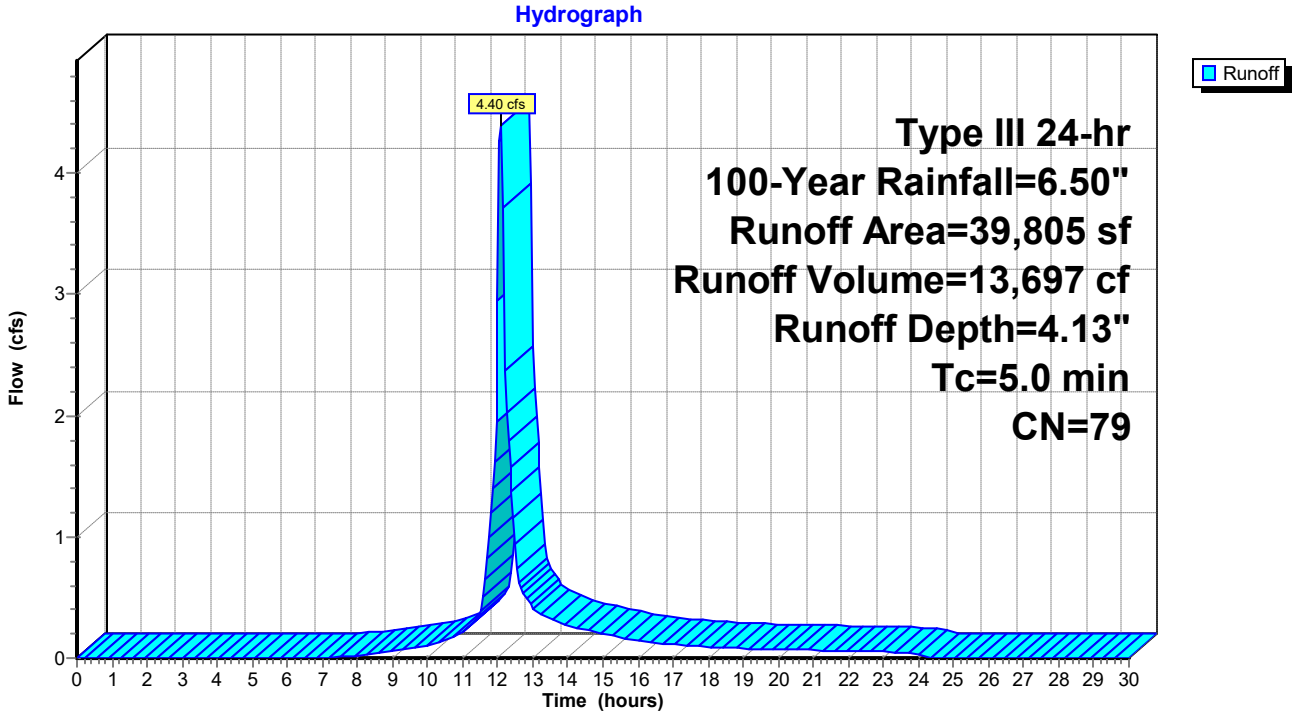
Runoff = 4.40 cfs @ 12.08 hrs, Volume= 13,697 cf, Depth= 4.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
16,145	61	>75% Grass cover, Good, HSG B
5,377	74	>75% Grass cover, Good, HSG C
841	92	Urban commercial, 85% imp, HSG B
2,153	94	Urban commercial, 85% imp, HSG C
15,289	98	Paved parking, HSG B
39,805	79	Weighted Average
21,971		55.20% Pervious Area
17,834		44.80% Impervious Area

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

Subcatchment P211: TO DMH11



Summary for Subcatchment P212: TO DMH12

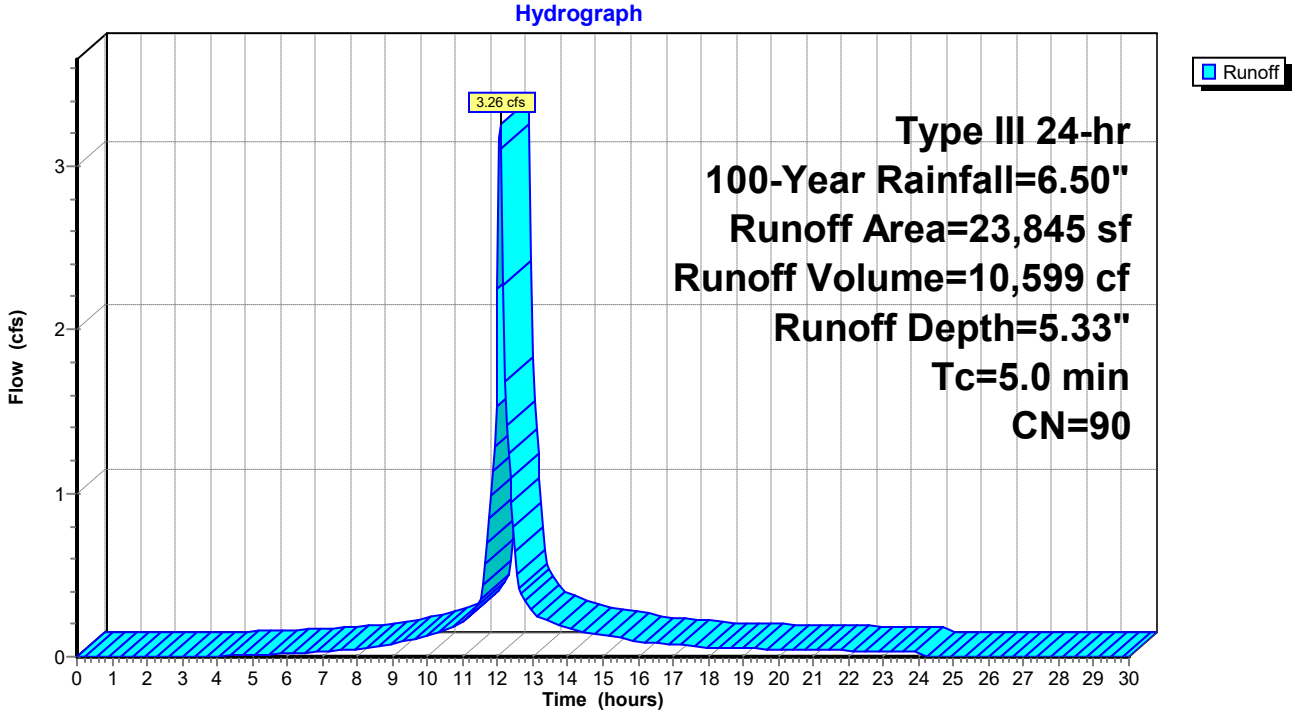
Runoff = 3.26 cfs @ 12.07 hrs, Volume= 10,599 cf, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
5,327	61	>75% Grass cover, Good, HSG B
18,518	98	Paved parking, HSG B
23,845	90	Weighted Average
5,327		22.34% Pervious Area
18,518		77.66% Impervious Area

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

Subcatchment P212: TO DMH12



Summary for Subcatchment P213: TO DMH13

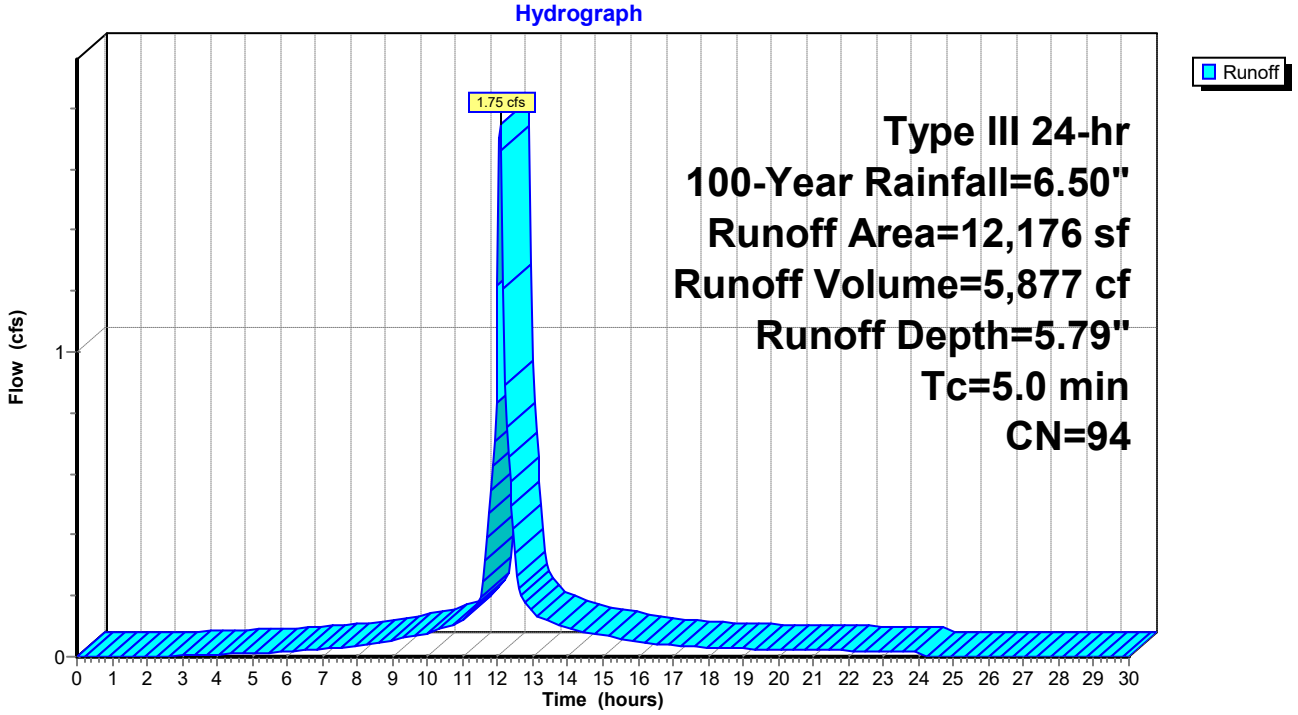
Runoff = 1.75 cfs @ 12.07 hrs, Volume= 5,877 cf, Depth= 5.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
1,390	61	>75% Grass cover, Good, HSG B
10,786	98	Paved parking, HSG B
12,176	94	Weighted Average
1,390		11.42% Pervious Area
10,786		88.58% Impervious Area

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

Subcatchment P213: TO DMH13



Summary for Subcatchment P222: TO DP#2(2017)

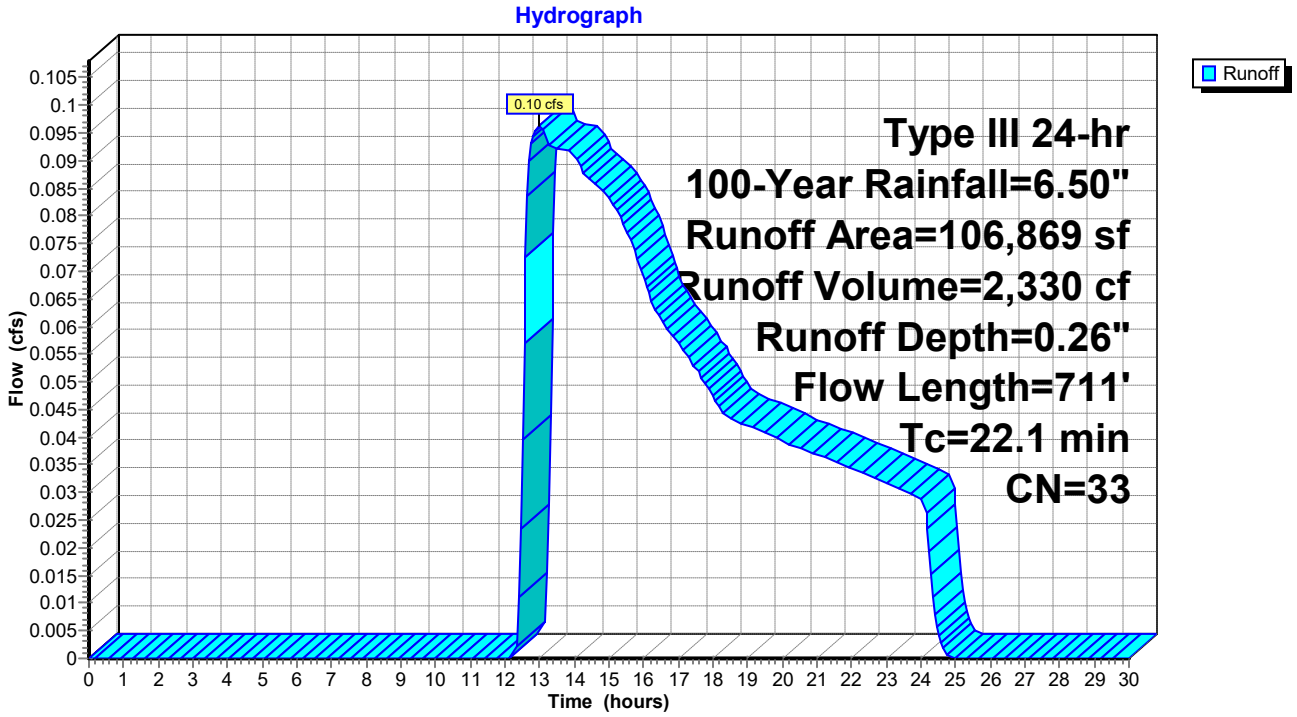
Runoff = 0.10 cfs @ 13.01 hrs, Volume= 2,330 cf, Depth= 0.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
692	39	>75% Grass cover, Good, HSG A
93,055	30	Woods, Good, HSG A
1,977	61	>75% Grass cover, Good, HSG B
11,145	55	Woods, Good, HSG B
106,869	33	Weighted Average
106,869		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	47	0.0300	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.1	28	0.0300	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.5	85	0.0300	2.79		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
12.1	398	0.0120	0.55		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.7	153	0.0920	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
22.1	711	Total			

Subcatchment P222: TO DP#2(2017)



Summary for Subcatchment P230: TO CB#21(2017)

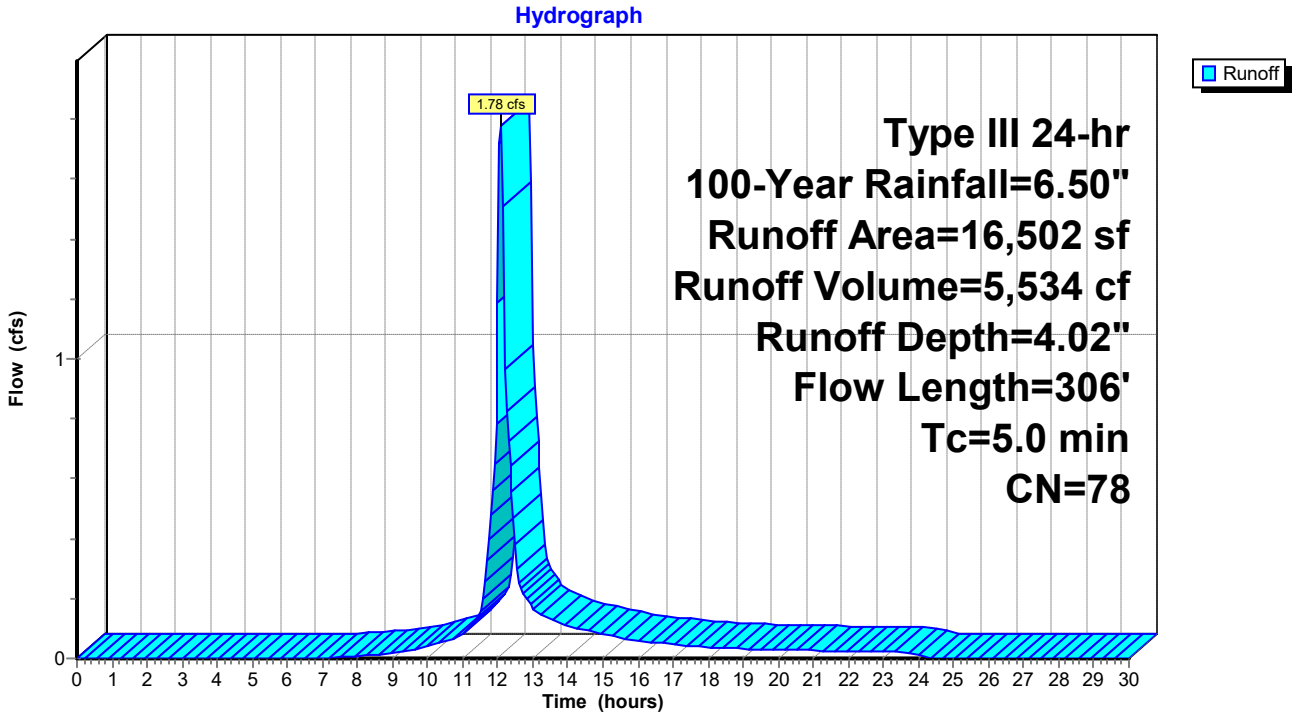
Runoff = 1.78 cfs @ 12.08 hrs, Volume= 5,534 cf, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
8,396	61	>75% Grass cover, Good, HSG B
7,248	98	Paved parking, HSG B
299	39	>75% Grass cover, Good, HSG A
559	98	Paved parking, HSG A
16,502	78	Weighted Average
8,695		52.69% Pervious Area
7,807		47.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	20	0.0500	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	30	0.0270	1.18		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.0	10	0.0270	3.34		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.8	246	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.1	306	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P230: TO CB#21(2017)



Summary for Subcatchment P231: TO YD#1

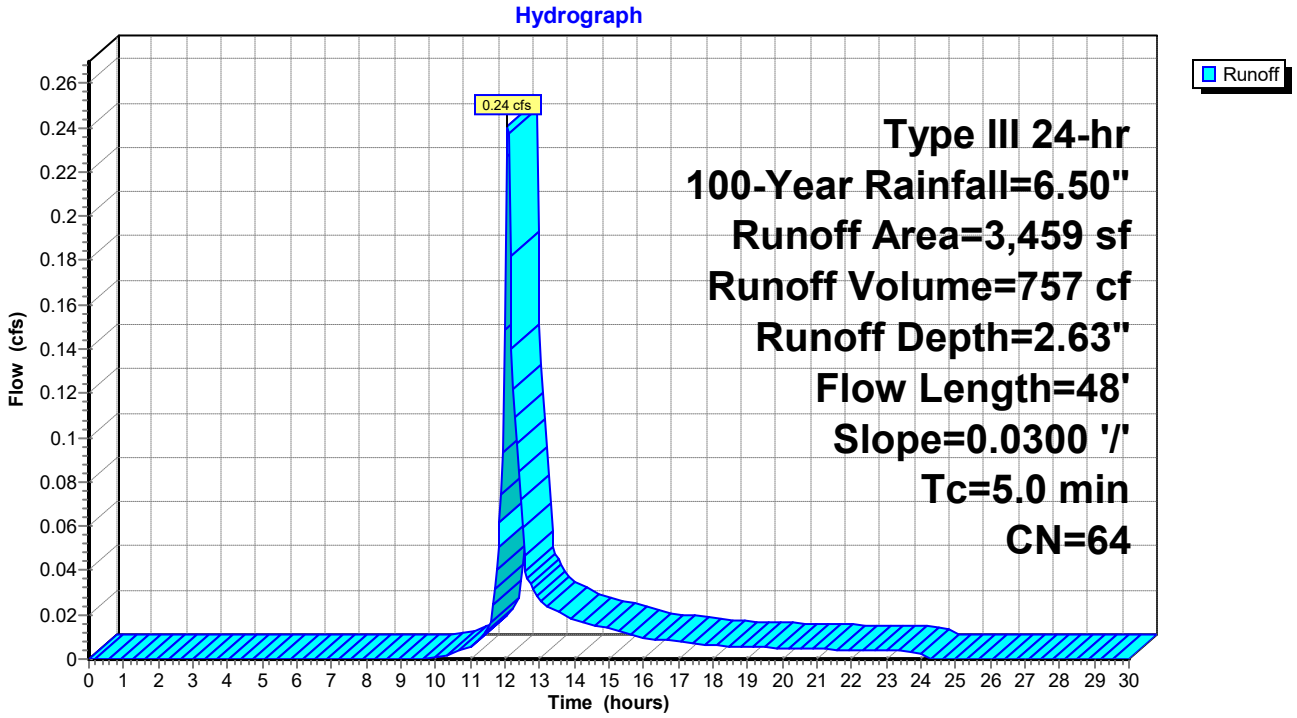
Runoff = 0.24 cfs @ 12.08 hrs, Volume= 757 cf, Depth= 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
3,225	61	>75% Grass cover, Good, HSG B
234	98	Paved parking, HSG B
3,459	64	Weighted Average
3,225		93.24% Pervious Area
234		6.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	48	0.0300	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
4.8	48	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P231: TO YD#1



Summary for Subcatchment P232: TO CO#2

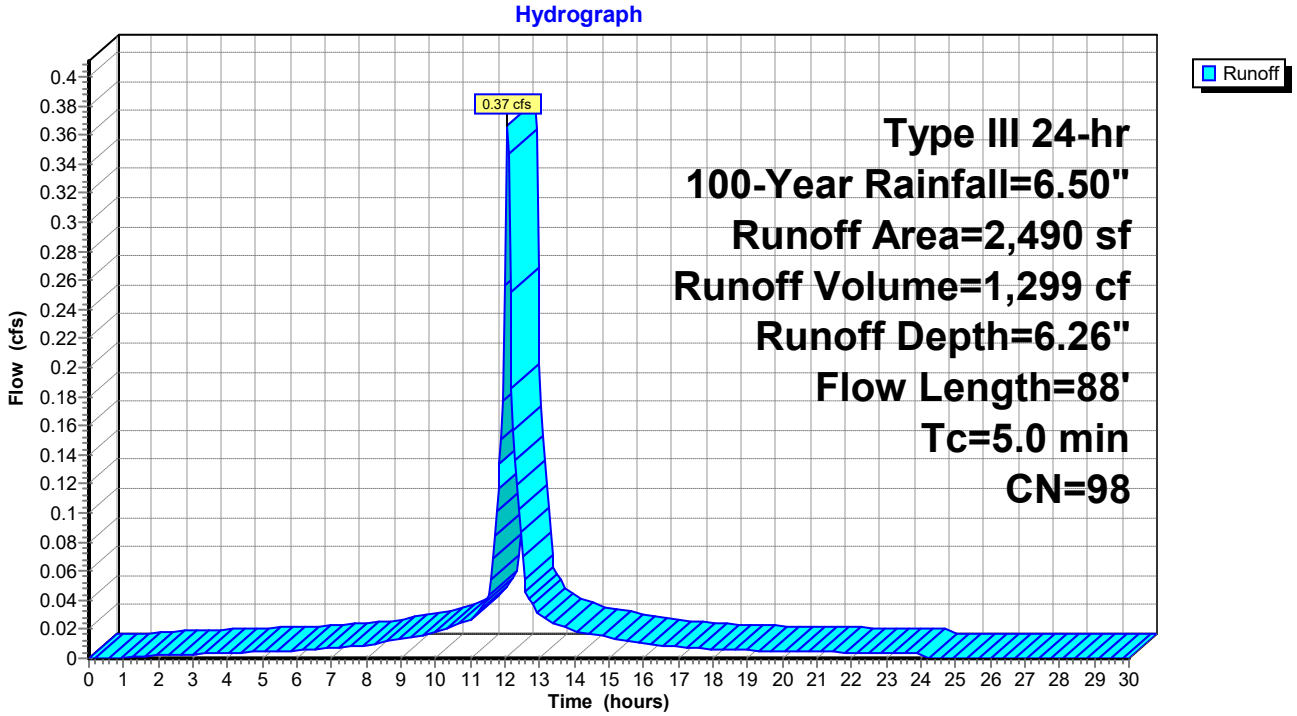
Runoff = 0.37 cfs @ 12.07 hrs, Volume= 1,299 cf, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
2,490	98	Paved parking, HSG B
2,490		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0830	2.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.1	31	0.0800	5.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	7	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.6	88	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P232: TO CO#2



Summary for Subcatchment P233: TO DRIP STRIP

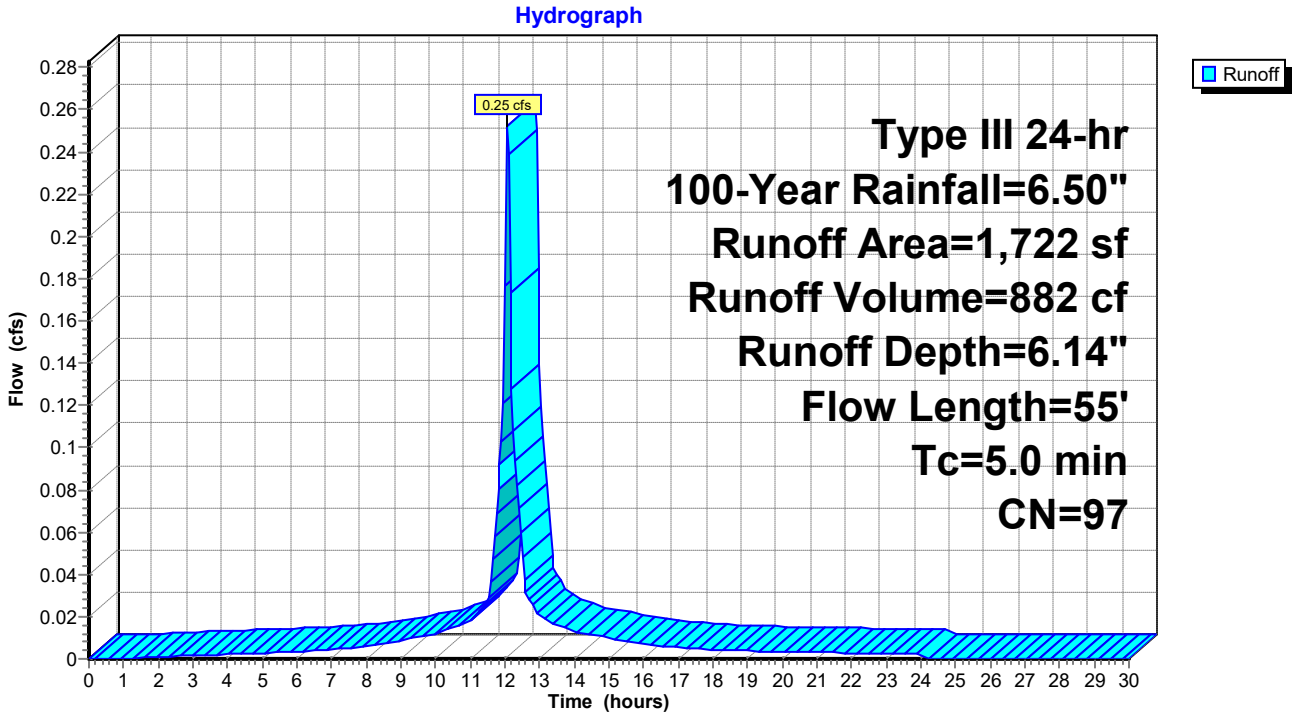
Runoff = 0.25 cfs @ 12.07 hrs, Volume= 882 cf, Depth= 6.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
55	61	>75% Grass cover, Good, HSG B
1,667	98	Paved parking, HSG B
1,722	97	Weighted Average
55		3.19% Pervious Area
1,667		96.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0800	2.02		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.0	5	0.0830	5.85		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	55	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P233: TO DRIP STRIP



Summary for Subcatchment P234: TO YD#2

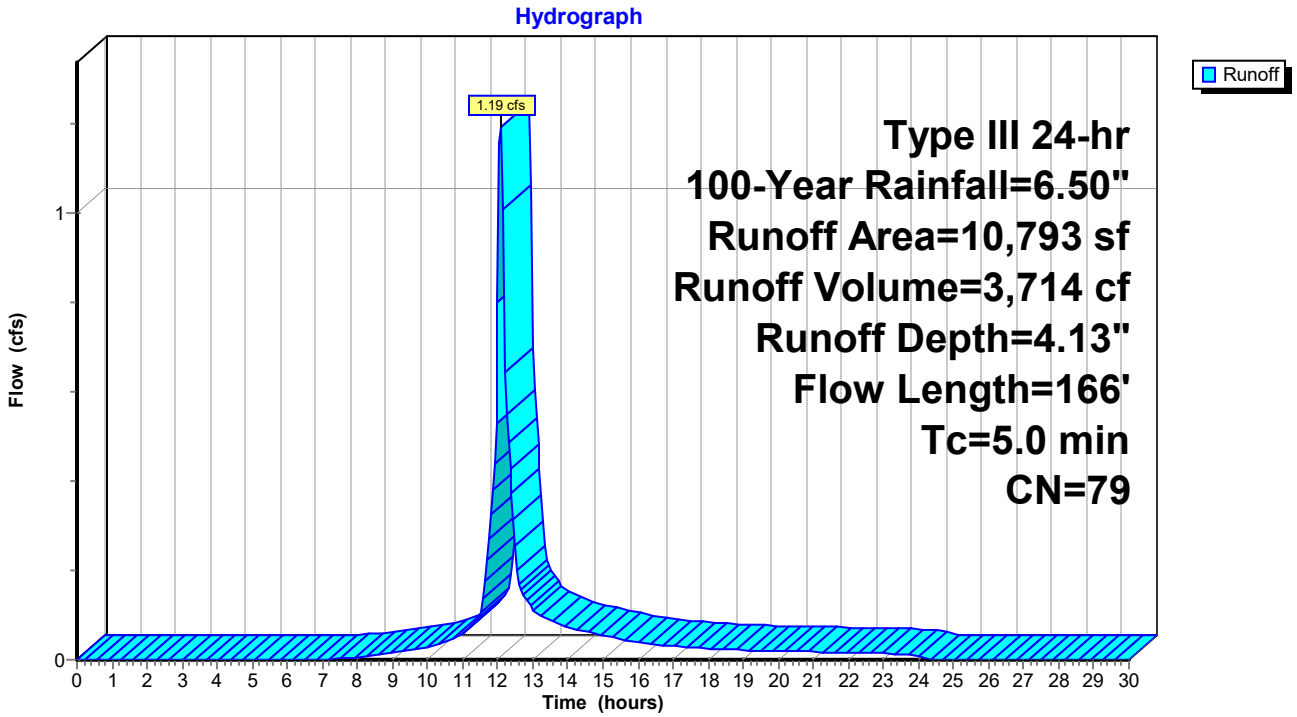
Runoff = 1.19 cfs @ 12.08 hrs, Volume= 3,714 cf, Depth= 4.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
5,448	61	>75% Grass cover, Good, HSG B
5,345	98	Paved parking, HSG B
10,793	79	Weighted Average
5,448		50.48% Pervious Area
5,345		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.2	28	0.0700	0.21		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.7	22	0.0040	0.52		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.3	98	0.0040	1.28		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.2	18	0.0110	1.69		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.4	166	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P234: TO YD#2



Summary for Subcatchment P235: TO CO#3

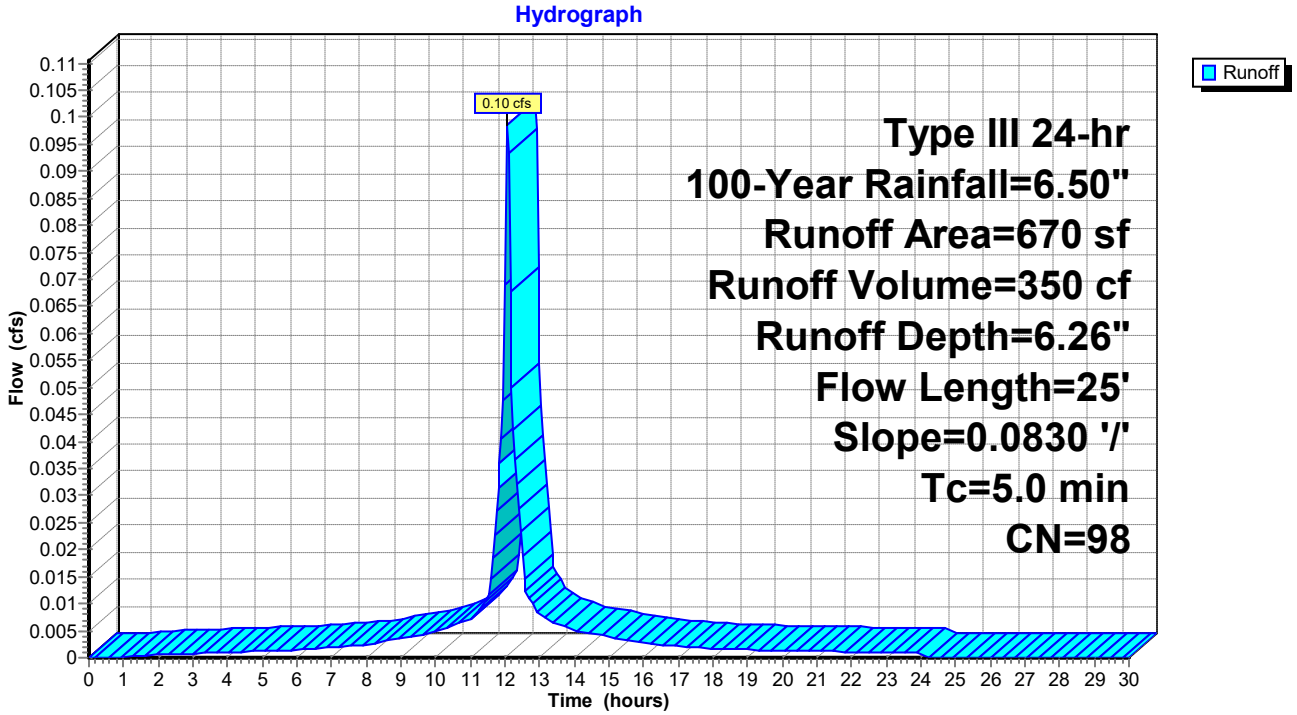
Runoff = 0.10 cfs @ 12.07 hrs, Volume= 350 cf, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
670	98	Paved parking, HSG B
670		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	25	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P235: TO CO#3



Summary for Subcatchment P251: OVERLAND TO SETTLING POND

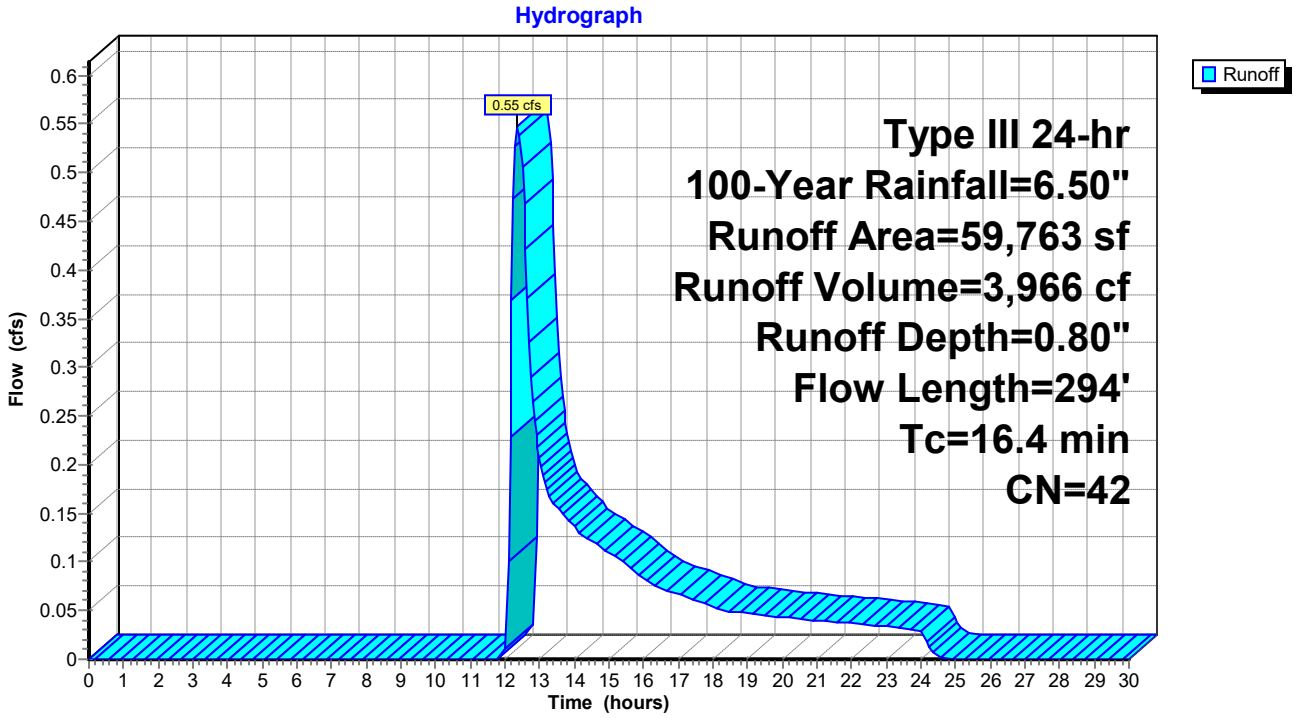
Runoff = 0.55 cfs @ 12.37 hrs, Volume= 3,966 cf, Depth= 0.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
53,277	39	>75% Grass cover, Good, HSG A
3,396	30	Woods, Good, HSG A
3,090	98	Paved parking, HSG A
59,763	42	Weighted Average
56,673		94.83% Pervious Area
3,090		5.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.4	99	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	13	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	107	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
16.4	294	Total			

Subcatchment P251: OVERLAND TO SETTLING POND



Summary for Subcatchment P252: OVERLAND TO DB#1

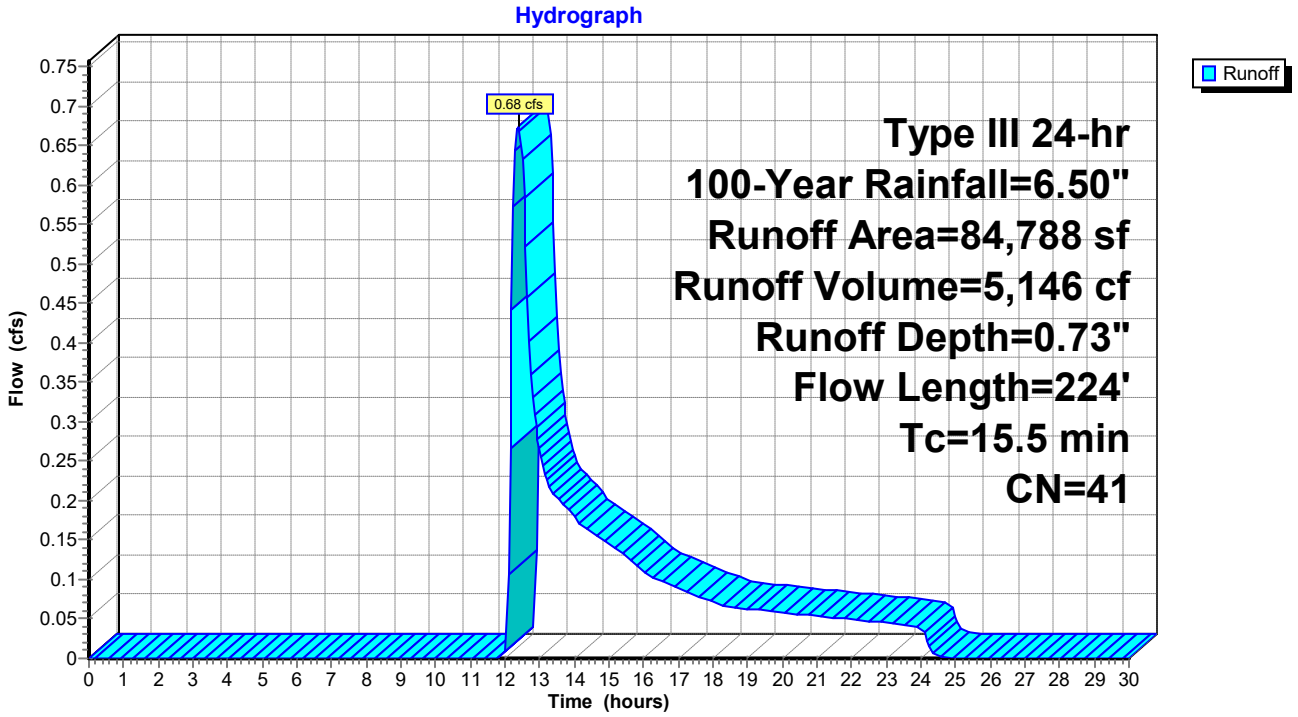
Runoff = 0.68 cfs @ 12.39 hrs, Volume= 5,146 cf, Depth= 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
77,531	39	>75% Grass cover, Good, HSG A
2,014	30	Woods, Good, HSG A
2,822	98	Paved parking, HSG A
2,421	55	Woods, Good, HSG B
84,788	41	Weighted Average
81,966		96.67% Pervious Area
2,822		3.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.2	79	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	13	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	57	0.3300	9.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
15.5	224	Total			

Subcatchment P252: OVERLAND TO DB#1



Summary for Subcatchment P253: OVERLAND TO DCB

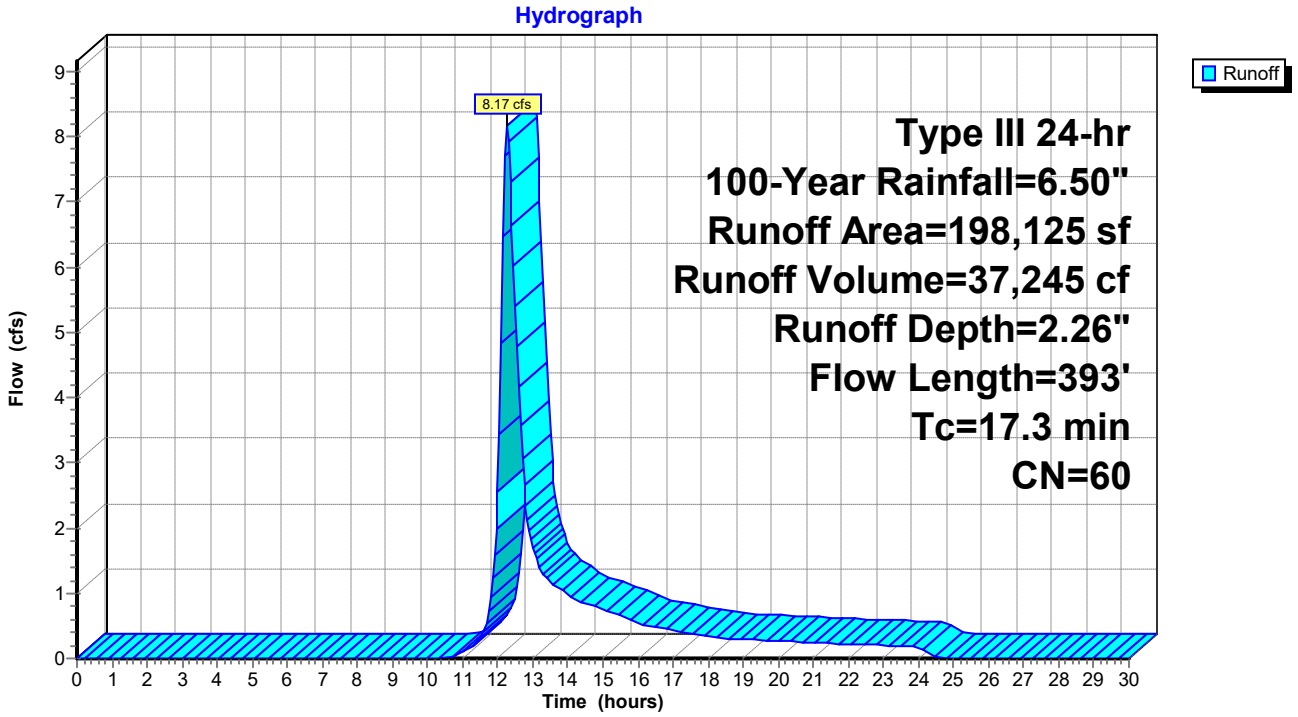
Runoff = 8.17 cfs @ 12.26 hrs, Volume= 37,245 cf, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
85,790	39	>75% Grass cover, Good, HSG A
28,252	98	Paved parking, HSG A
65,778	61	>75% Grass cover, Good, HSG B
18,305	98	Paved parking, HSG B
198,125	60	Weighted Average
151,568		76.50% Pervious Area
46,557		23.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	75	0.0050	0.09		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.8	125	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	15	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.6	60	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	118	0.0180	2.72		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
17.3	393	Total			

Subcatchment P253: OVERLAND TO DCB



Summary for Subcatchment p3: TO DCB#5

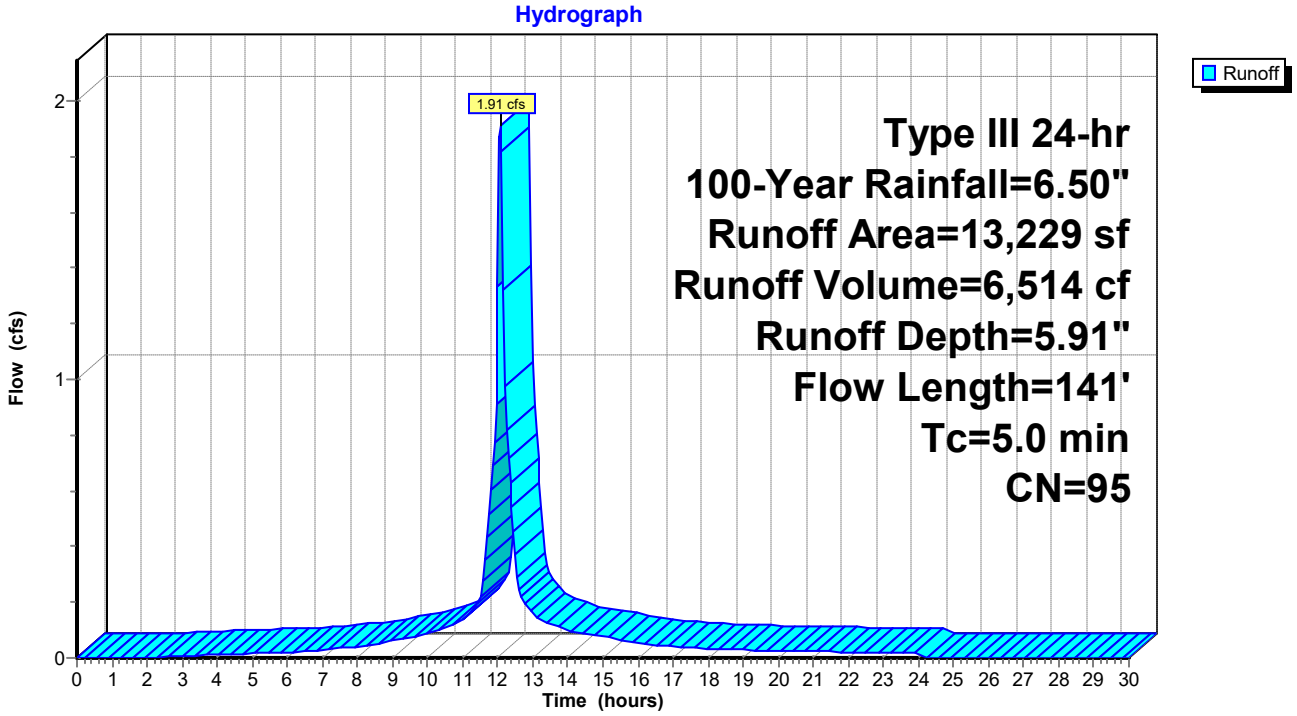
Runoff = 1.91 cfs @ 12.07 hrs, Volume= 6,514 cf, Depth= 5.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
694	39	>75% Grass cover, Good, HSG A
12,535	98	Paved parking, HSG A
13,229	95	Weighted Average
694		5.25% Pervious Area
12,535		94.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	25	0.0100	0.76		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.6	91	0.0160	2.57		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	141	Total, Increased to minimum Tc = 5.0 min			

Subcatchment p3: TO DCB#5



Summary for Subcatchment P300: TO DP#3(2020)

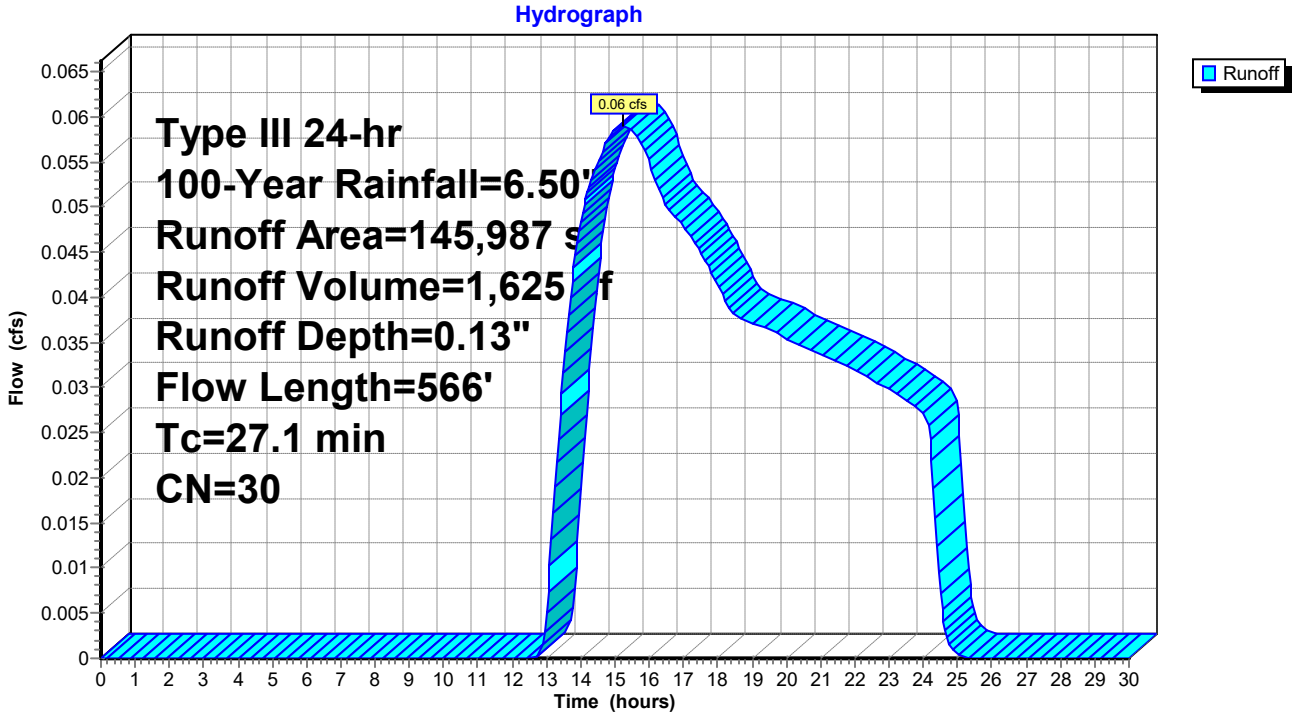
Runoff = 0.06 cfs @ 15.23 hrs, Volume= 1,625 cf, Depth= 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
145,987	30	Woods, Good, HSG A
145,987		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	75	0.0450	0.10		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
1.1	71	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
13.3	420	0.0110	0.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
27.1	566	Total			

Subcatchment P300: TO DP#3(2020)



Summary for Subcatchment P4: TO DCB#2

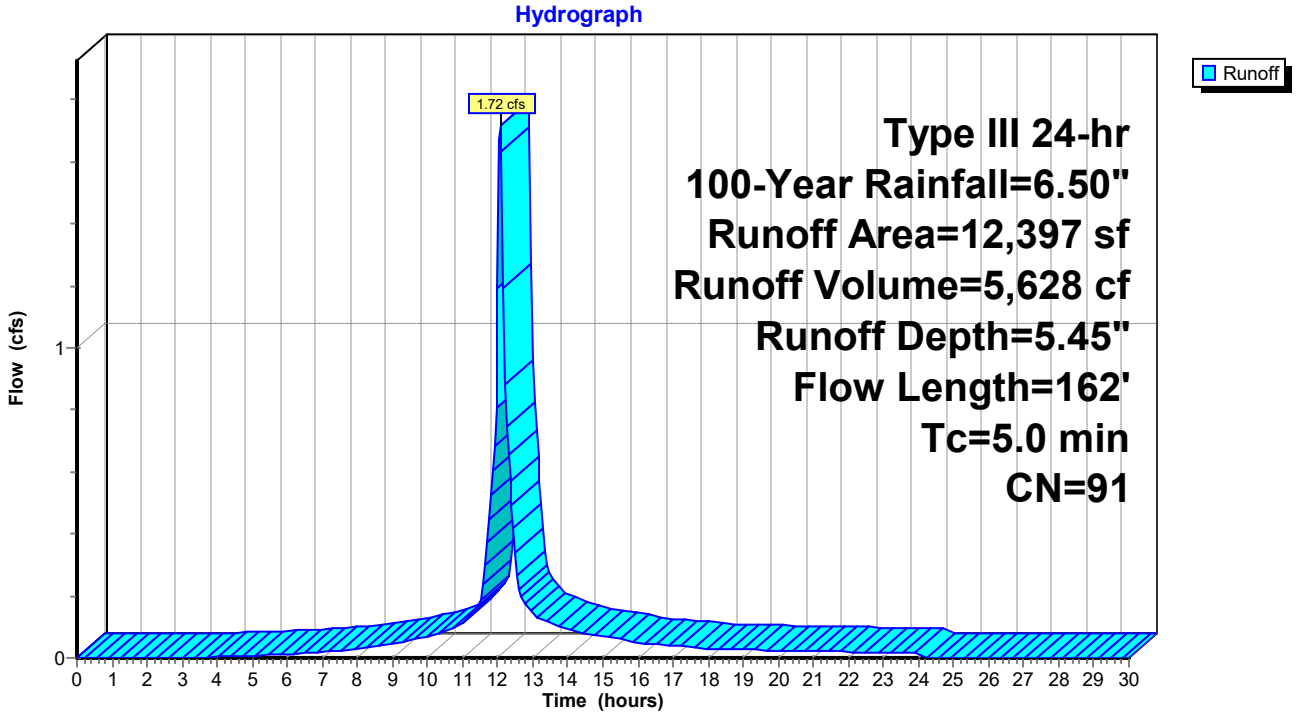
Runoff = 1.72 cfs @ 12.07 hrs, Volume= 5,628 cf, Depth= 5.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
1,459	39	>75% Grass cover, Good, HSG A
10,938	98	Paved parking, HSG A
12,397	91	Weighted Average
1,459		11.77% Pervious Area
10,938		88.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.5	25	0.0100	0.76		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.7	112	0.0160	2.57		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.4	162	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P4: TO DCB#2



Summary for Subcatchment P400: TO DP#4(2020)

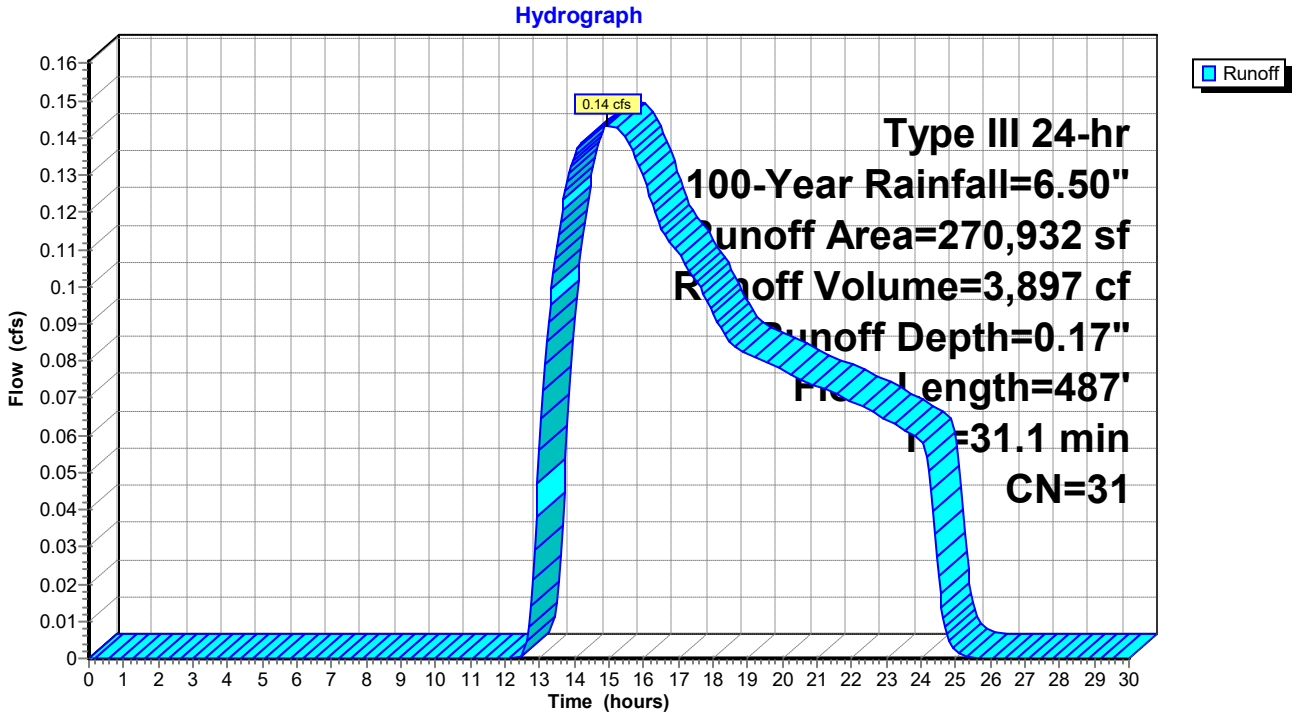
Runoff = 0.14 cfs @ 14.96 hrs, Volume= 3,897 cf, Depth= 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
13,230	39	>75% Grass cover, Good, HSG A
256,109	30	Woods, Good, HSG A
1,593	98	Paved parking, HSG A
270,932	31	Weighted Average
269,339		99.41% Pervious Area
1,593		0.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.2	75	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
5.8	275	0.0250	0.79		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.9	56	0.1780	1.05		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.1	22	0.4500	3.35		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.1	59	0.1200	0.87		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
31.1	487	Total			

Subcatchment P400: TO DP#4(2020)



Summary for Subcatchment P5: TO DCB#6

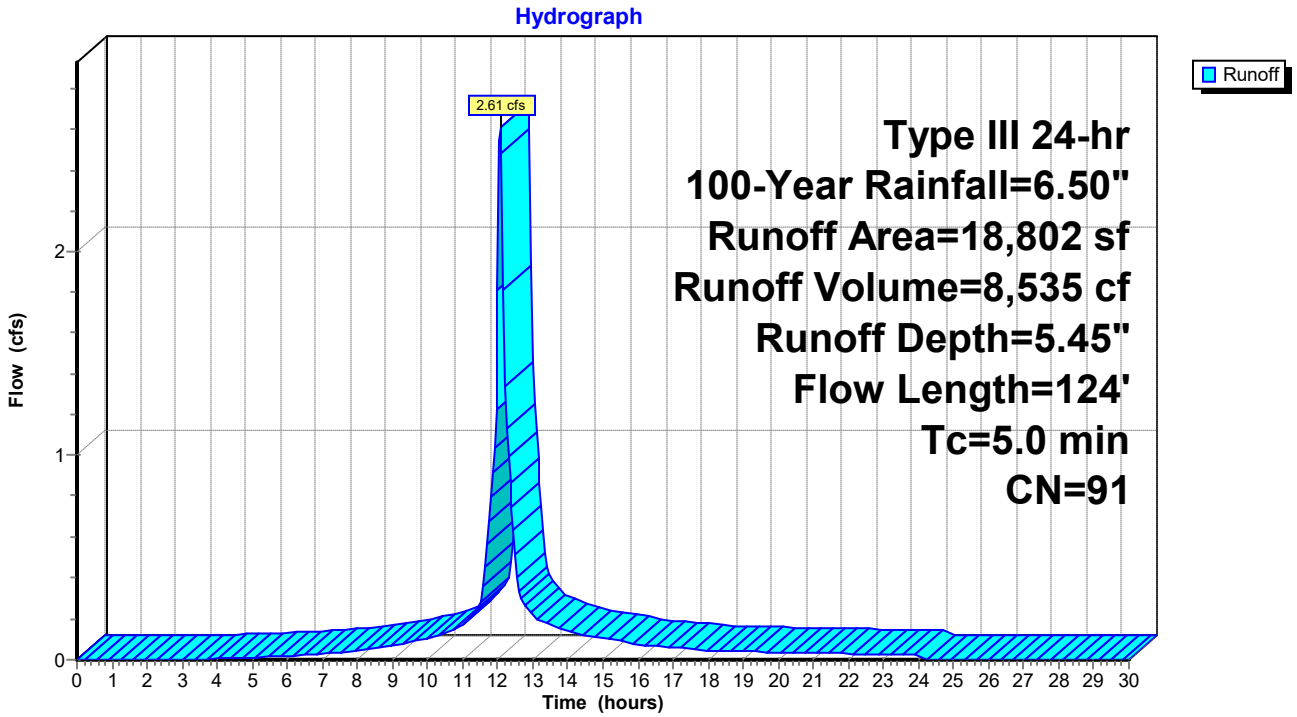
Runoff = 2.61 cfs @ 12.07 hrs, Volume= 8,535 cf, Depth= 5.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
2,343	39	>75% Grass cover, Good, HSG A
16,459	98	Paved parking, HSG A
18,802	91	Weighted Average
2,343		12.46% Pervious Area
16,459		87.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	25	0.0830	1.78		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.3	11	0.0100	0.65		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	14	0.0300	1.06		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.4	74	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	124	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P5: TO DCB#6



Summary for Subcatchment P6: TO DCB#3

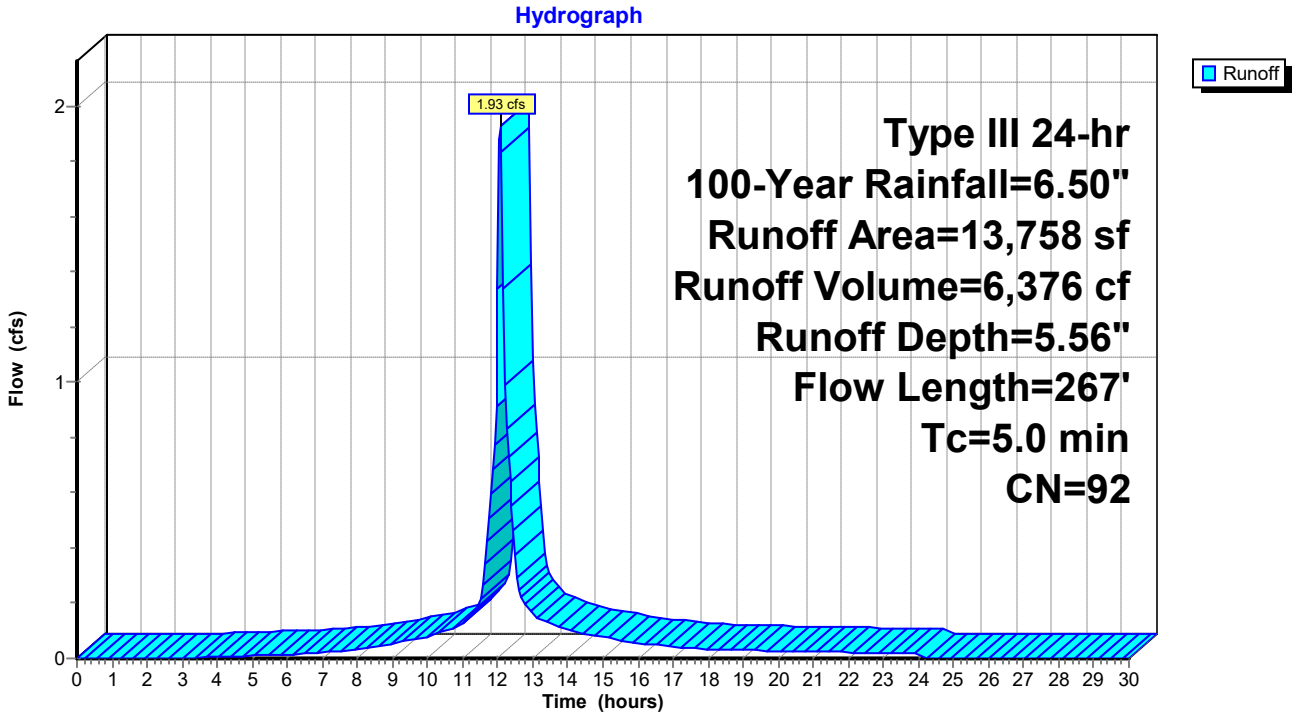
Runoff = 1.93 cfs @ 12.07 hrs, Volume= 6,376 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
1,369	39	>75% Grass cover, Good, HSG A
12,389	98	Paved parking, HSG A
13,758	92	Weighted Average
1,369		9.95% Pervious Area
12,389		90.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	5	0.0100	0.07		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.3	10	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	5	0.0100	0.07		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.5	30	0.0200	1.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
1.2	217	0.0240	3.14		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.4	267	Total, Increased to minimum Tc = 5.0 min			

Subcatchment P6: TO DCB#3



Summary for Subcatchment PS101: TO TEMP SETTLING BASIN

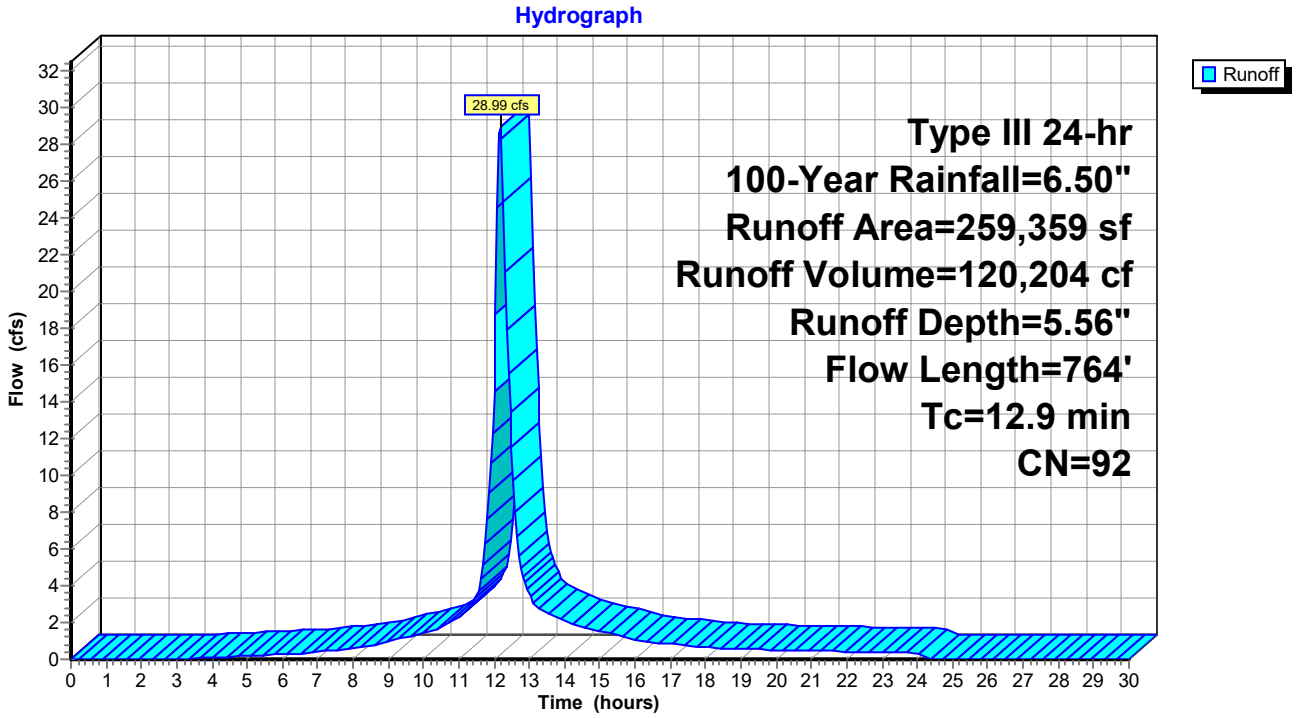
Runoff = 28.99 cfs @ 12.17 hrs, Volume= 120,204 cf, Depth= 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
604	30	Woods, Good, HSG A
218,879	96	Gravel surface, HSG A
7,125	30	Brush, Good, HSG A
20,834	80	>75% Grass cover, Good, HSG D
5,941	96	Gravel surface, HSG D
5,976	73	Brush, Good, HSG D
259,359	92	Weighted Average
259,359		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	75	0.0670	0.25		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
1.2	187	0.0270	2.65		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
6.7	502	0.0060	1.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
12.9	764	Total			

Subcatchment PS101: TO TEMP SETTLING BASIN



Summary for Subcatchment PS102: TO CULVERT

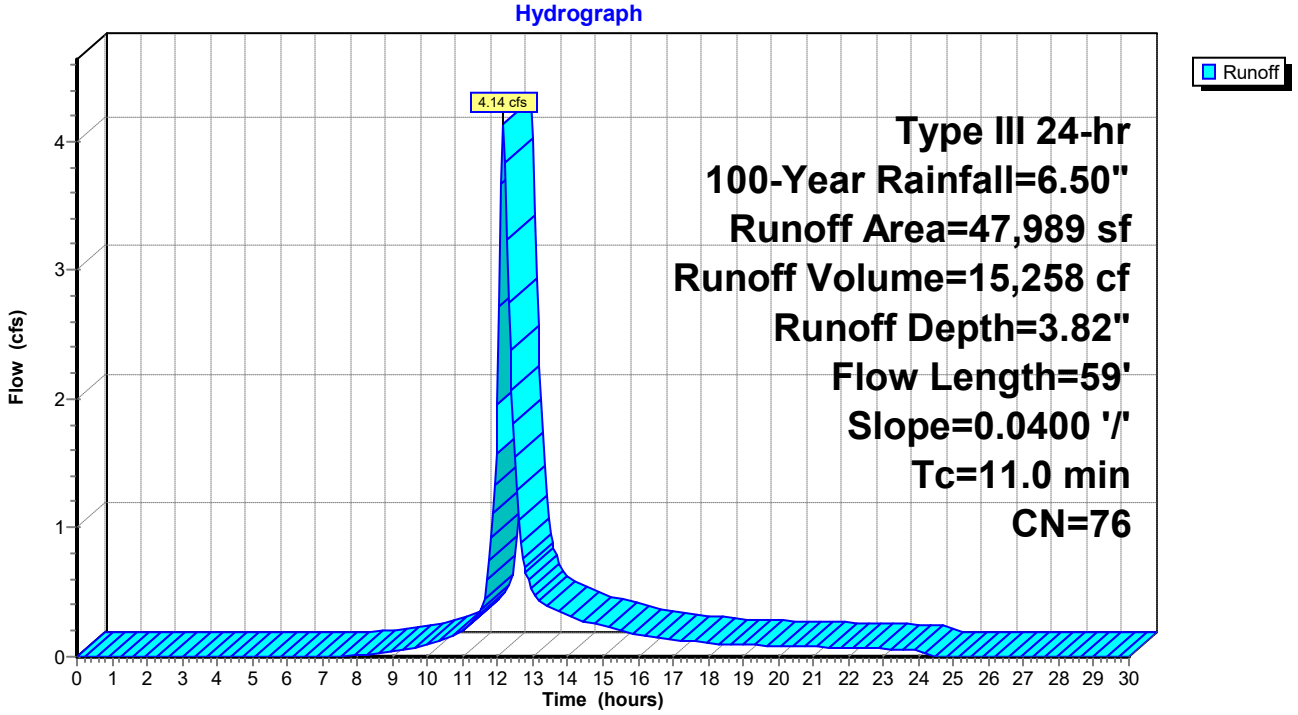
Runoff = 4.14 cfs @ 12.16 hrs, Volume= 15,258 cf, Depth= 3.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
10,627	73	Brush, Good, HSG D
37,362	77	Woods, Good, HSG D
47,989	76	Weighted Average
47,989		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	59	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"

Subcatchment PS102: TO CULVERT



Summary for Subcatchment PS103: TO DP#1

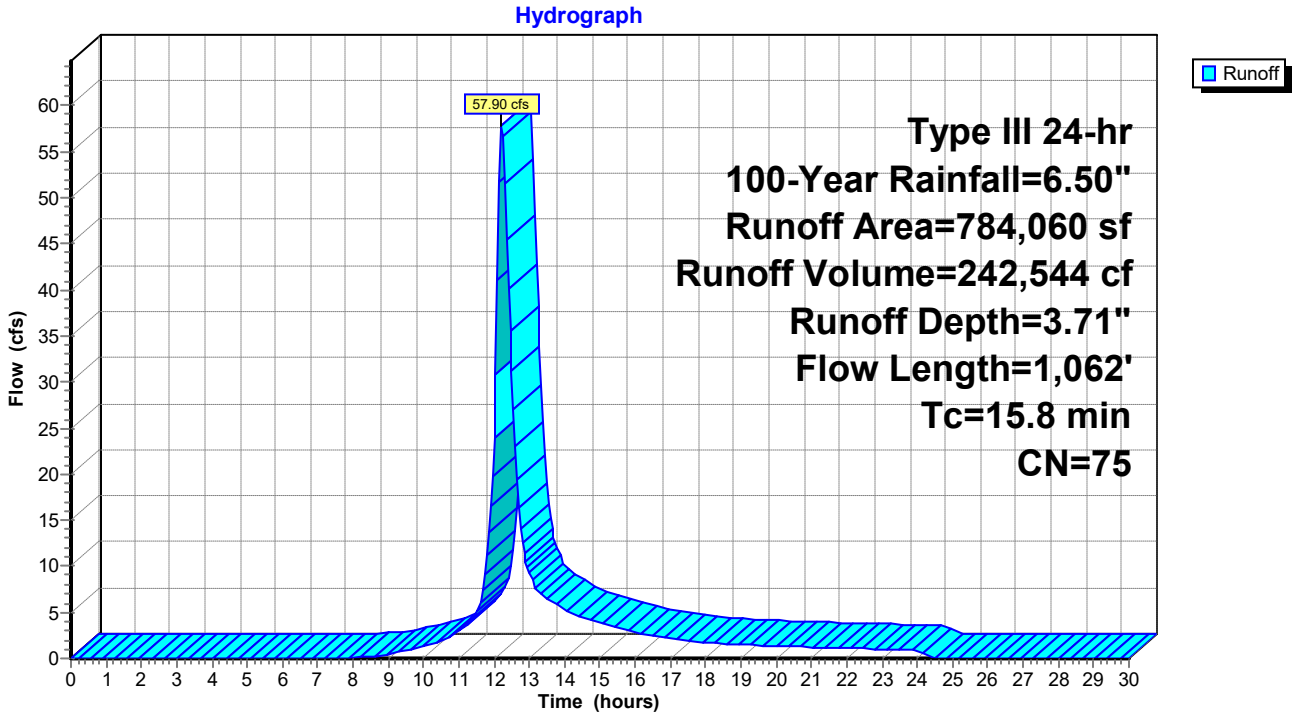
Runoff = 57.90 cfs @ 12.22 hrs, Volume= 242,544 cf, Depth= 3.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
51,017	39	>75% Grass cover, Good, HSG A
22,386	30	Brush, Good, HSG A
21,462	30	Woods, Good, HSG A
81,382	96	Gravel surface, HSG A
36,128	98	Paved parking, HSG A
49,340	61	>75% Grass cover, Good, HSG B
43,824	48	Brush, Good, HSG B
137,472	55	Woods, Good, HSG B
74,794	96	Gravel surface, HSG B
98,633	98	Paved parking, HSG B
686	80	>75% Grass cover, Good, HSG D
41,115	73	Brush, Good, HSG D
43,771	77	Woods, Good, HSG D
80,239	96	Gravel surface, HSG D
1,811	98	Paved parking, HSG D
784,060	75	Weighted Average
647,488		82.58% Pervious Area
136,572		17.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
12.3	841	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	15	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.7	156	0.0380	0.97		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.8	1,062	Total			

Subcatchment PS103: TO DP#1



Summary for Subcatchment PS104: TO DP#1B

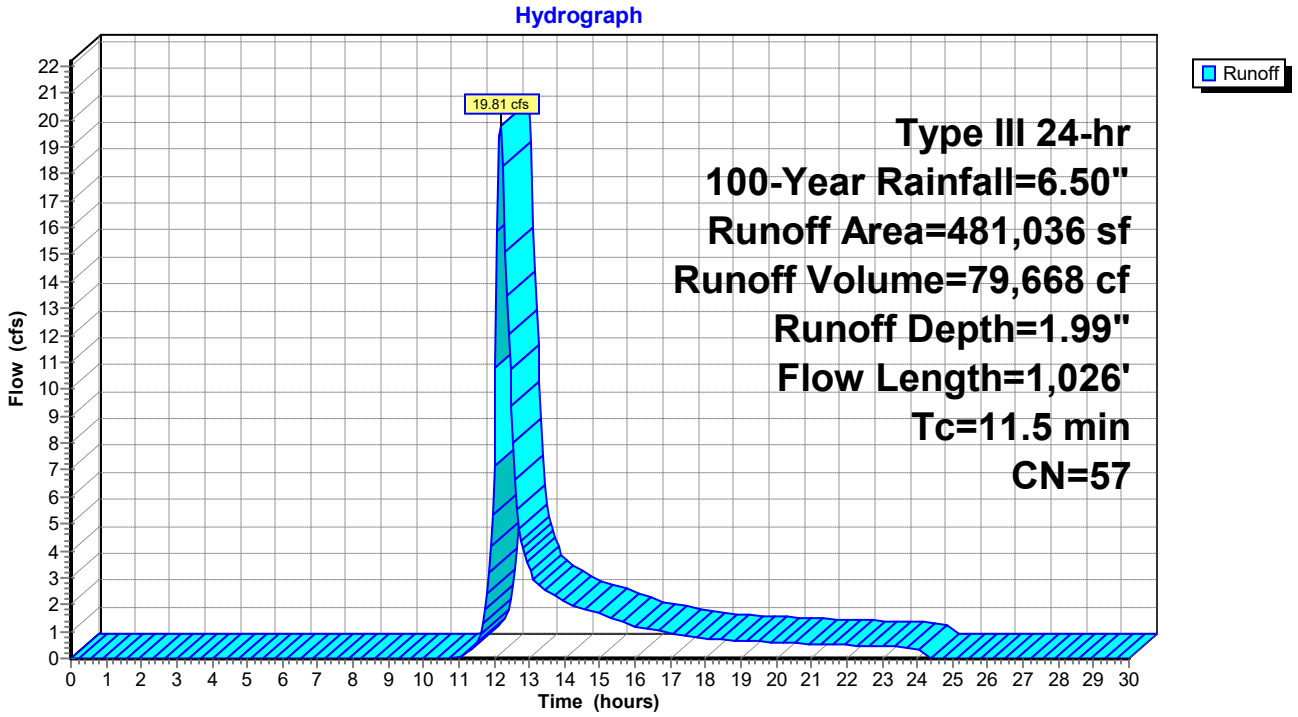
Runoff = 19.81 cfs @ 12.17 hrs, Volume= 79,668 cf, Depth= 1.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
146,483	39	>75% Grass cover, Good, HSG A
9,644	70	Woods, Good, HSG C
9,532	98	Paved parking, HSG A
195,535	61	>75% Grass cover, Good, HSG B
3,382	48	Brush, Good, HSG B
53,509	55	Woods, Good, HSG B
234	96	Gravel surface, HSG B
6,372	98	Paved parking, HSG B
14,879	73	Brush, Good, HSG D
40,619	77	Woods, Good, HSG D
847	96	Gravel surface, HSG D
481,036	57	Weighted Average
465,132		96.69% Pervious Area
15,904		3.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	75	0.0500	1.81		**Sheet Flow, gravel** Smooth surfaces n= 0.011 P2= 3.00"
0.1	25	0.0500	4.54		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.1	304	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	84	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.3	25	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.0	93	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
11.5	1,026	Total			

Subcatchment PS104: TO DP#1B



Summary for Subcatchment PS105: TO CULVERT

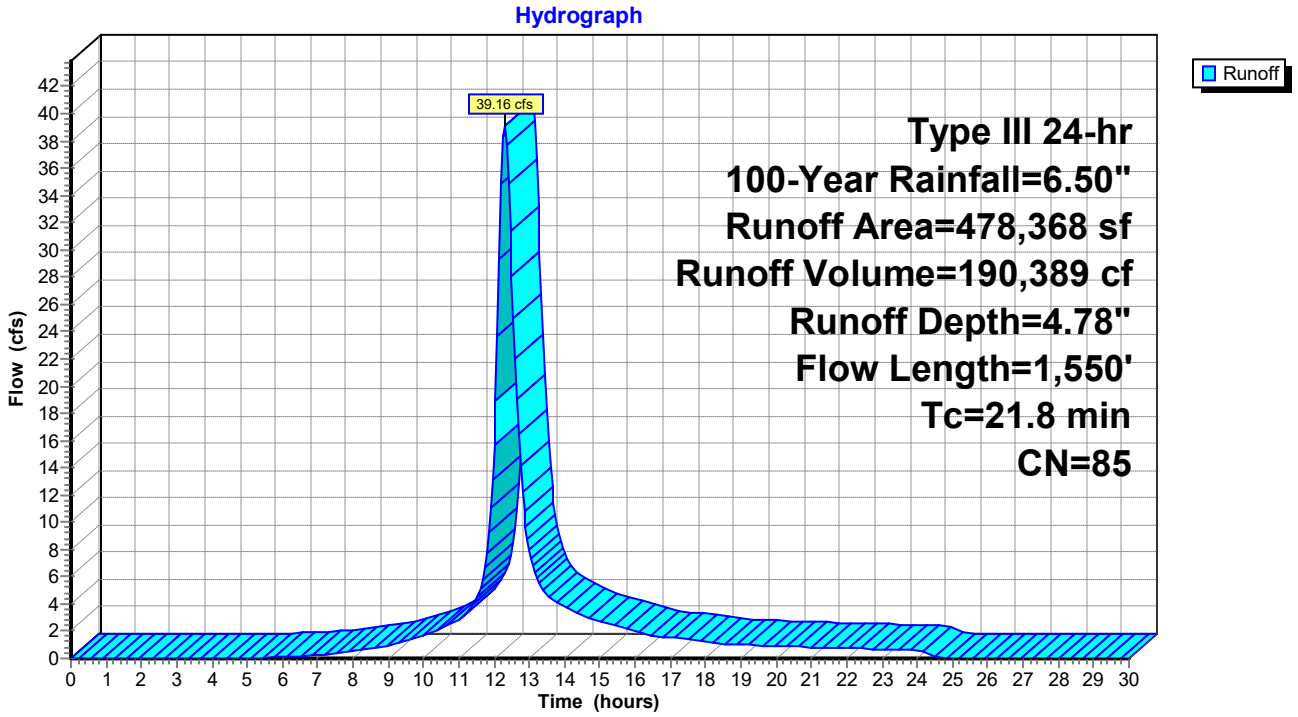
Runoff = 39.16 cfs @ 12.29 hrs, Volume= 190,389 cf, Depth= 4.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
46,071	96	Gravel surface, HSG B
704	74	>75% Grass cover, Good, HSG C
34,999	74	Pasture/grassland/range, Good, HSG C
176,119	70	Woods, Good, HSG C
219,495	96	Gravel surface, HSG C
980	96	Gravel surface, HSG D
478,368	85	Weighted Average
478,368		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	75	0.0770	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.00"
3.8	314	0.0770	1.39		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	110	0.2000	2.24		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.6	107	0.3500	2.96		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
2.2	250	0.1400	1.87		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.1	30	0.3300	9.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.6	163	0.0800	4.55		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.4	501	0.0230	2.44		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	1,550	Total			

Subcatchment PS105: TO CULVERT



Summary for Subcatchment PSUB10: TO DCB-S10

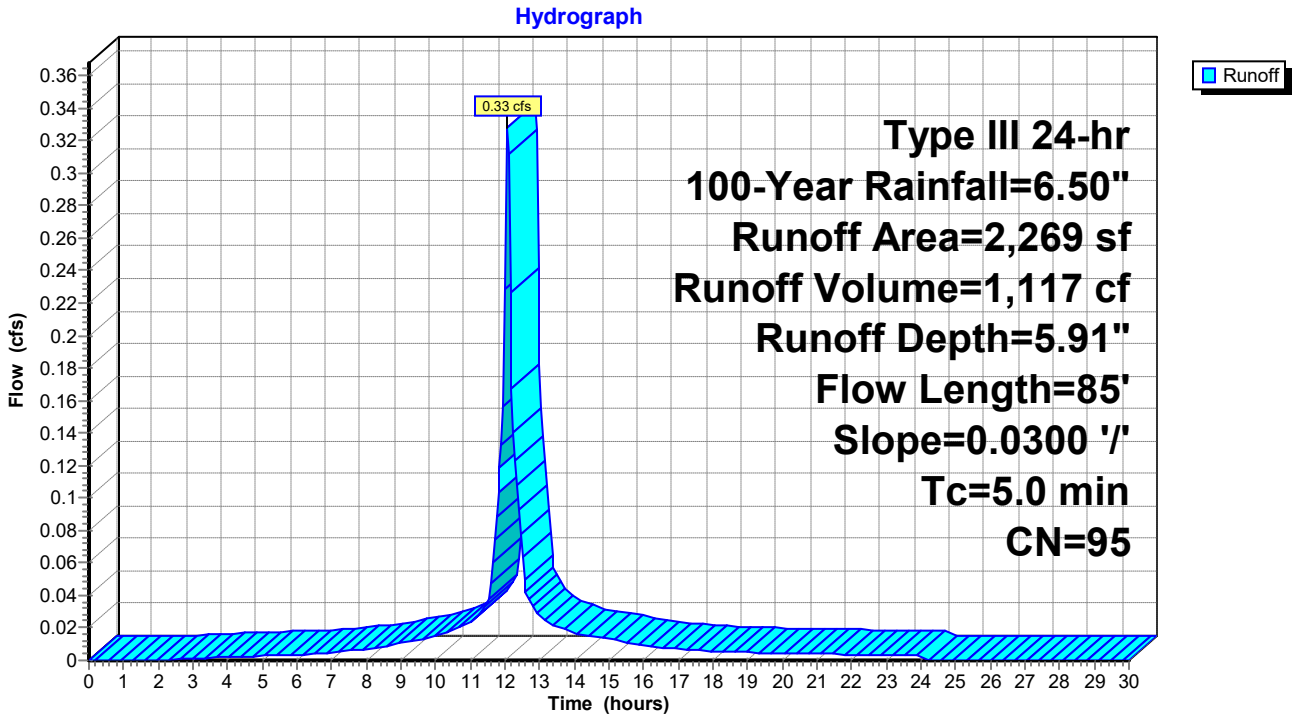
Runoff = 0.33 cfs @ 12.07 hrs, Volume= 1,117 cf, Depth= 5.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.50"

Area (sf)	CN	Description
190	61	>75% Grass cover, Good, HSG B
2,037	98	Paved parking, HSG B
42	98	Paved parking, HSG C
2,269	95	Weighted Average
190		8.37% Pervious Area
2,079		91.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0300	1.36		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
0.2	35	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	85	Total, Increased to minimum Tc = 5.0 min			

Subcatchment PSUB10: TO DCB-S10



Summary for Reach BK-1: McGovern Brook

Inflow Area = 944,676 sf, 13.07% Impervious, Inflow Depth = 4.88" for 100-Year event
Inflow = 78.40 cfs @ 12.20 hrs, Volume= 383,926 cf
Outflow = 74.22 cfs @ 12.37 hrs, Volume= 383,923 cf, Atten= 5%, Lag= 10.0 min

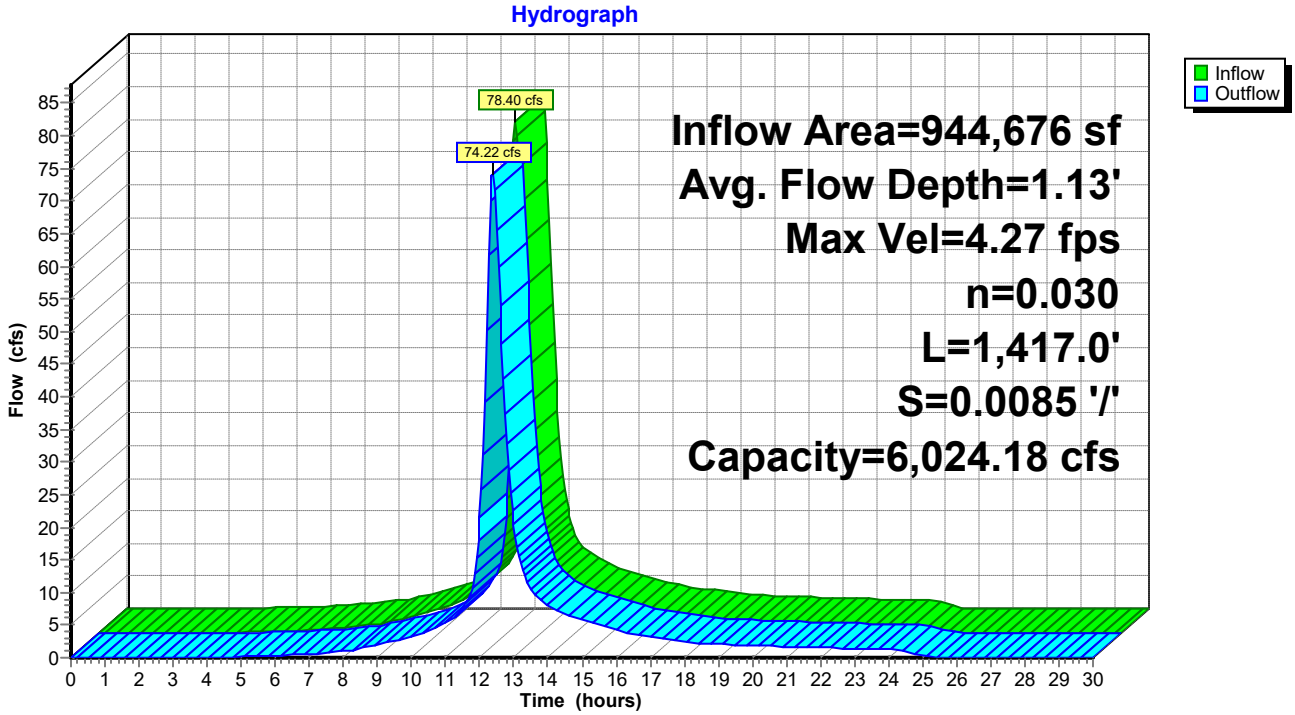
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.27 fps, Min. Travel Time= 5.5 min
Avg. Velocity = 1.32 fps, Avg. Travel Time= 17.9 min

Peak Storage= 24,656 cf @ 12.27 hrs
Average Depth at Peak Storage= 1.13'
Bank-Full Depth= 10.00' Flow Area= 420.0 sf, Capacity= 6,024.18 cfs

12.00' x 10.00' deep channel, n= 0.030 Stream, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 72.00'
Length= 1,417.0' Slope= 0.0085 '/'
Inlet Invert= 346.00', Outlet Invert= 334.00'

‡

Reach BK-1: McGovern Brook



Stage-Discharge for Reach BK-1: McGovern Brook

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.00	0.00	0.00
346.10	0.96	1.19
346.20	1.51	3.80
346.30	1.94	7.52
346.40	2.32	12.26
346.50	2.66	17.94
346.60	2.96	24.54
346.70	3.25	32.03
346.80	3.51	40.42
346.90	3.76	49.68
347.00	3.99	59.83
347.10	4.21	70.86
347.20	4.42	82.79
347.30	4.63	95.61
347.40	4.82	109.33
347.50	5.01	123.97
347.60	5.19	139.53
347.70	5.37	156.03
347.80	5.54	173.47
347.90	5.71	191.87
348.00	5.87	211.24
348.10	6.03	231.59
348.20	6.18	252.93
348.30	6.33	275.28
348.40	6.48	298.65
348.50	6.63	323.06
348.60	6.77	348.50
348.70	6.91	375.01
348.80	7.05	402.59
348.90	7.18	431.25
349.00	7.32	461.01
349.10	7.45	491.88
349.20	7.58	523.87
349.30	7.71	557.00
349.40	7.83	591.28
349.50	7.96	626.73
349.60	8.08	663.35
349.70	8.20	701.16
349.80	8.32	740.17
349.90	8.44	780.40
350.00	8.56	821.86
350.10	8.68	864.56
350.20	8.79	908.51
350.30	8.91	953.73
350.40	9.02	1,000.23
350.50	9.13	1,048.02
350.60	9.24	1,097.12
350.70	9.35	1,147.54
350.80	9.46	1,199.29
350.90	9.57	1,252.38
351.00	9.68	1,306.82
351.10	9.79	1,362.64
351.20	9.89	1,419.84
351.30	10.00	1,478.43
351.40	10.10	1,538.43
351.50	10.21	1,599.84
351.60	10.31	1,662.69
351.70	10.41	1,726.98
351.80	10.51	1,792.73
351.90	10.61	1,859.94
352.00	10.71	1,928.63
352.10	10.81	1,998.82
352.20	10.91	2,070.50
352.30	11.01	2,143.71
352.40	11.11	2,218.44
352.50	11.21	2,294.71
352.60	11.30	2,372.53
352.70	11.40	2,451.92
352.80	11.50	2,532.88
352.90	11.59	2,615.43
353.00	11.69	2,699.58
353.10	11.78	2,785.33
353.20	11.87	2,872.71
353.30	11.97	2,961.73
353.40	12.06	3,052.39
353.50	12.15	3,144.70
353.60	12.25	3,238.69
353.70	12.34	3,334.35
353.80	12.43	3,431.71
353.90	12.52	3,530.77
354.00	12.61	3,631.54
354.10	12.70	3,734.04
354.20	12.79	3,838.27
354.30	12.88	3,944.26
354.40	12.97	4,052.00
354.50	13.06	4,161.51
354.60	13.14	4,272.81
354.70	13.23	4,385.90
354.80	13.32	4,500.79
354.90	13.41	4,617.49
355.00	13.49	4,736.03
355.10	13.58	4,856.40
355.20	13.67	4,978.61
355.30	13.75	5,102.69
355.40	13.84	5,228.63
355.50	13.92	5,356.46
355.60	14.01	5,486.18
355.70	14.09	5,617.80
355.80	14.18	5,751.33
355.90	14.26	5,886.79
356.00	**14.34**	**6,024.18**

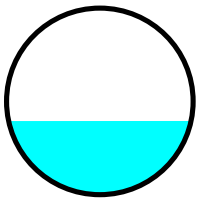
Summary for Reach CB-D4: TO DMH-1

Inflow Area = 16,447 sf, 47.74% Impervious, Inflow Depth = 2.91" for 100-Year event
Inflow = 1.28 cfs @ 12.08 hrs, Volume= 3,993 cf
Outflow = 1.28 cfs @ 12.09 hrs, Volume= 3,993 cf, Atten= 0%, Lag= 0.3 min

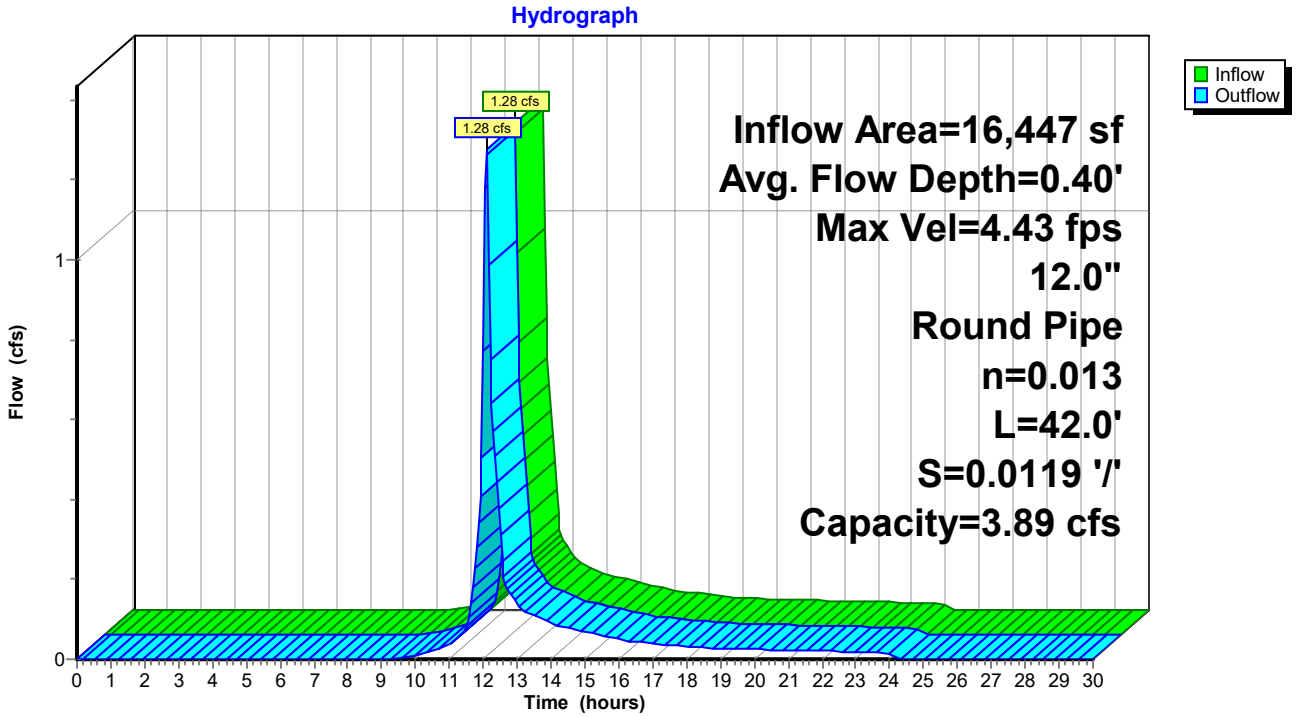
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.43 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.64 fps, Avg. Travel Time= 0.4 min

Peak Storage= 12 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.40'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.89 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 42.0' Slope= 0.0119 '/'
Inlet Invert= 352.70', Outlet Invert= 352.20'



Reach CB-D4: TO DMH-1



Stage-Discharge for Reach CB-D4: TO DMH-1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.70	0.00	0.00
352.71	0.44	0.00
352.72	0.70	0.00
352.73	0.91	0.01
352.74	1.10	0.01
352.75	1.27	0.02
352.76	1.43	0.03
352.77	1.58	0.04
352.78	1.72	0.05
352.79	1.86	0.07
352.80	1.99	0.08
352.81	2.11	0.10
352.82	2.23	0.12
352.83	2.34	0.14
352.84	2.45	0.16
352.85	2.56	0.19
352.86	2.66	0.22
352.87	2.76	0.24
352.88	2.86	0.27
352.89	2.95	0.31
352.90	3.04	0.34
352.91	3.13	0.38
352.92	3.22	0.41
352.93	3.31	0.45
352.94	3.39	0.49
352.95	3.47	0.53
352.96	3.55	0.58
352.97	3.62	0.62
352.98	3.70	0.67
352.99	3.77	0.71
353.00	3.84	0.76
353.01	3.91	0.81
353.02	3.98	0.86
353.03	4.04	0.91
353.04	4.11	0.97
353.05	4.17	1.02
353.06	4.23	1.08
353.07	4.29	1.13
353.08	4.35	1.19
353.09	4.41	1.25
353.10	4.47	1.31
353.11	4.52	1.37
353.12	4.57	1.43
353.13	4.62	1.49
353.14	4.67	1.56
353.15	4.72	1.62
353.16	4.77	1.68
353.17	4.82	1.75
353.18	4.86	1.81
353.19	4.91	1.88
353.20	4.95	1.94
353.21	4.99	2.01
353.22	5.03	2.08
353.23	5.07	2.14
353.24	5.11	2.21
353.25	5.14	2.28
353.26	5.18	2.34
353.27	5.21	2.41
353.28	5.25	2.48
353.29	5.28	2.54
353.30	5.31	2.61
353.31	5.34	2.68
353.32	5.36	2.74
353.33	5.39	2.81
353.34	5.42	2.88
353.35	5.44	2.94
353.36	5.46	3.00
353.37	5.49	3.07
353.38	5.51	3.13
353.39	5.52	3.19
353.40	5.54	3.25
353.41	5.56	3.31
353.42	5.57	3.37
353.43	5.59	3.43
353.44	5.60	3.49
353.45	5.61	3.54
353.46	5.62	3.60
353.47	5.63	3.65
353.48	5.63	3.70
353.49	5.64	3.75
353.50	5.64	3.80
353.51	**5.64**	3.85
353.52	5.64	3.89
353.53	5.64	3.93
353.54	5.64	3.97
353.55	5.63	4.01
353.56	5.62	4.04
353.57	5.61	4.07
353.58	5.60	4.10
353.59	5.58	4.12
353.60	5.56	4.14
353.61	5.54	4.16
353.62	5.52	4.17
353.63	5.49	4.18
353.64	5.46	**4.18**
353.65	5.42	4.18
353.66	5.37	4.16
353.67	5.32	4.14
353.68	5.26	4.11
353.69	5.17	4.05
353.70	4.95	3.89

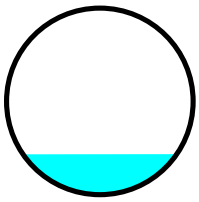
Summary for Reach CB-D7: TO DMH#6

Inflow Area = 2,624 sf,100.00% Impervious, Inflow Depth = 6.26" for 100-Year event
Inflow = 0.39 cfs @ 12.07 hrs, Volume= 1,369 cf
Outflow = 0.38 cfs @ 12.07 hrs, Volume= 1,369 cf, Atten= 1%, Lag= 0.2 min

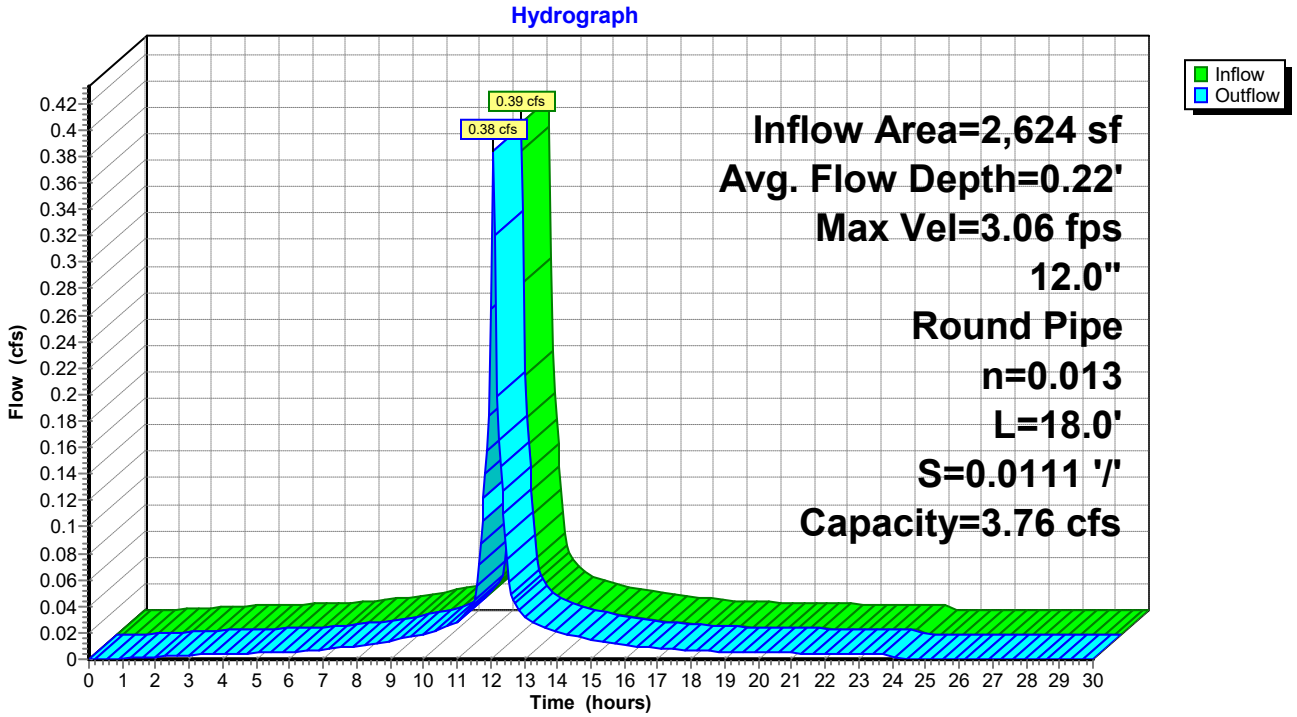
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.06 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.01 fps, Avg. Travel Time= 0.3 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.22'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.76 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 18.0' Slope= 0.0111 '/'
Inlet Invert= 351.70', Outlet Invert= 351.50'



Reach CB-D7: TO DMH#6



Stage-Discharge for Reach CB-D7: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.43	0.00
351.72	0.67	0.00
351.73	0.88	0.01
351.74	1.06	0.01
351.75	1.23	0.02
351.76	1.38	0.03
351.77	1.53	0.04
351.78	1.66	0.05
351.79	1.79	0.06
351.80	1.92	0.08
351.81	2.04	0.10
351.82	2.15	0.11
351.83	2.26	0.14
351.84	2.37	0.16
351.85	2.47	0.18
351.86	2.57	0.21
351.87	2.67	0.24
351.88	2.76	0.27
351.89	2.85	0.30
351.90	2.94	0.33
351.91	3.03	0.36
351.92	3.11	0.40
351.93	3.19	0.44
351.94	3.27	0.47
351.95	3.35	0.51
351.96	3.43	0.56
351.97	3.50	0.60
351.98	3.57	0.64
351.99	3.64	0.69
352.00	3.71	0.74
352.01	3.78	0.78
352.02	3.84	0.83
352.03	3.91	0.88
352.04	3.97	0.93
352.05	4.03	0.99
352.06	4.09	1.04
352.07	4.15	1.10
352.08	4.20	1.15
352.09	4.26	1.21
352.10	4.31	1.27
352.11	4.37	1.32
352.12	4.42	1.38
352.13	4.47	1.44
352.14	4.52	1.50
352.15	4.56	1.56
352.16	4.61	1.63
352.17	4.65	1.69
352.18	4.70	1.75
352.19	4.74	1.81
352.20	4.78	1.88
352.21	4.82	1.94
352.22	4.86	2.01
352.23	4.90	2.07
352.24	4.93	2.13
352.25	4.97	2.20
352.26	5.00	2.26
352.27	5.04	2.33
352.28	5.07	2.39
352.29	5.10	2.46
352.30	5.13	2.52
352.31	5.16	2.59
352.32	5.18	2.65
352.33	5.21	2.71
352.34	5.23	2.78
352.35	5.26	2.84
352.36	5.28	2.90
352.37	5.30	2.96
352.38	5.32	3.03
352.39	5.34	3.09
352.40	5.35	3.14
352.41	5.37	3.20
352.42	5.38	3.26
352.43	5.40	3.32
352.44	5.41	3.37
352.45	5.42	3.42
352.46	5.43	3.48
352.47	5.44	3.53
352.48	5.44	3.58
352.49	5.45	3.62
352.50	5.45	3.67
352.51	**5.45**	3.71
352.52	5.45	3.76
352.53	5.45	3.80
352.54	5.44	3.83
352.55	5.44	3.87
352.56	5.43	3.90
352.57	5.42	3.93
352.58	5.41	3.96
352.59	5.39	3.98
352.60	5.38	4.00
352.61	5.36	4.02
352.62	5.33	4.03
352.63	5.30	4.04
352.64	5.27	**4.04**
352.65	5.24	4.04
352.66	5.19	4.02
352.67	5.14	4.00
352.68	5.08	3.97
352.69	4.99	3.91
352.70	4.78	3.76

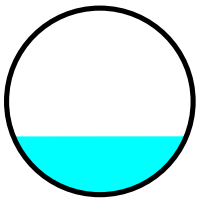
Summary for Reach CB-D8: TO DMH#6

Inflow Area = 5,879 sf, 76.82% Impervious, Inflow Depth = 4.67" for 100-Year event
Inflow = 0.73 cfs @ 12.07 hrs, Volume= 2,286 cf
Outflow = 0.72 cfs @ 12.08 hrs, Volume= 2,286 cf, Atten= 1%, Lag= 0.2 min

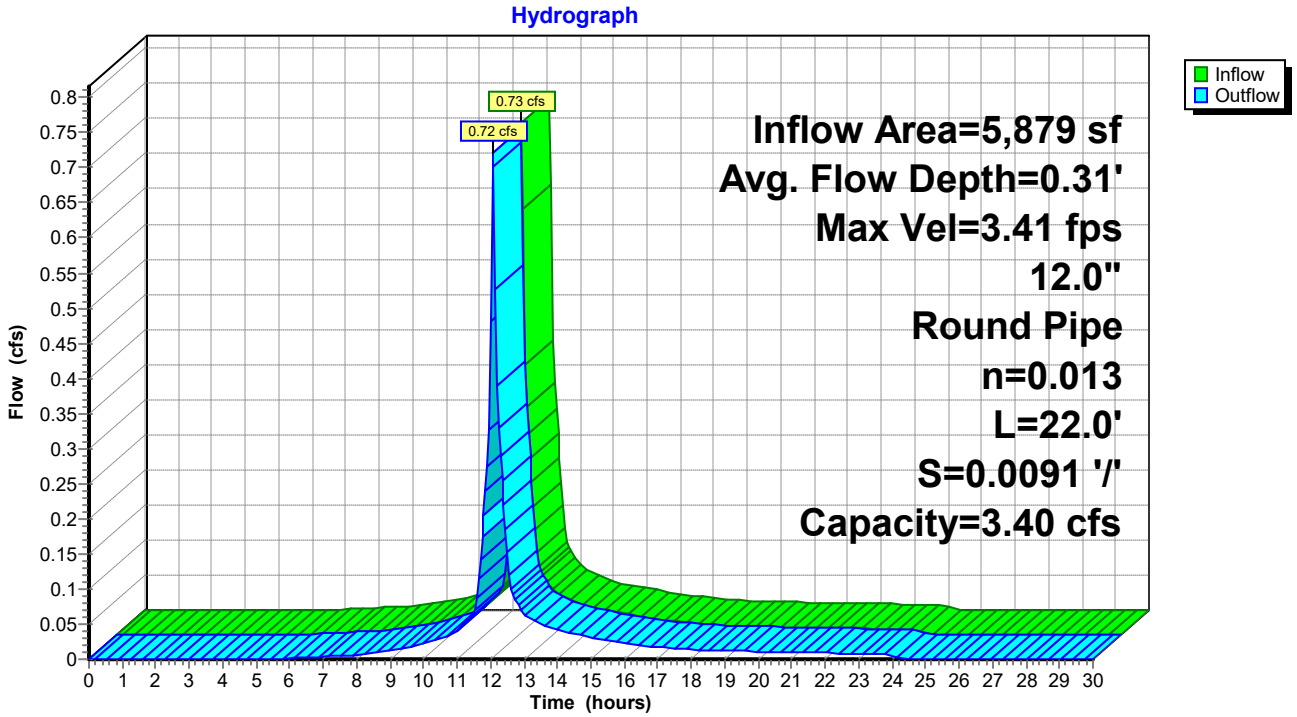
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.41 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.15 fps, Avg. Travel Time= 0.3 min

Peak Storage= 5 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.31'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.40 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 22.0' Slope= 0.0091 '/'
Inlet Invert= 351.70', Outlet Invert= 351.50'



Reach CB-D8: TO DMH#6



Stage-Discharge for Reach CB-D8: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.38	0.00
351.72	0.61	0.00
351.73	0.80	0.01
351.74	0.96	0.01
351.75	1.11	0.02
351.76	1.25	0.02
351.77	1.38	0.03
351.78	1.51	0.04
351.79	1.62	0.06
351.80	1.74	0.07
351.81	1.84	0.09
351.82	1.95	0.10
351.83	2.05	0.12
351.84	2.14	0.14
351.85	2.24	0.17
351.86	2.33	0.19
351.87	2.41	0.21
351.88	2.50	0.24
351.89	2.58	0.27
351.90	2.66	0.30
351.91	2.74	0.33
351.92	2.81	0.36
351.93	2.89	0.39
351.94	2.96	0.43
351.95	3.03	0.47
351.96	3.10	0.50
351.97	3.17	0.54
351.98	3.23	0.58
351.99	3.29	0.62
352.00	3.36	0.67
352.01	3.42	0.71
352.02	3.48	0.75
352.03	3.53	0.80
352.04	3.59	0.85
352.05	3.65	0.89
352.06	3.70	0.94
352.07	3.75	0.99
352.08	3.80	1.04
352.09	3.85	1.09
352.10	3.90	1.14
352.11	3.95	1.20
352.12	4.00	1.25
352.13	4.04	1.30
352.14	4.09	1.36
352.15	4.13	1.41
352.16	4.17	1.47
352.17	4.21	1.53
352.18	4.25	1.58
352.19	4.29	1.64
352.20	4.33	1.70
352.21	4.36	1.76
352.22	4.40	1.81
352.23	4.43	1.87
352.24	4.46	1.93
352.25	4.50	1.99
352.26	4.53	2.05
352.27	4.56	2.11
352.28	4.58	2.17
352.29	4.61	2.22
352.30	4.64	2.28
352.31	4.66	2.34
352.32	4.69	2.40
352.33	4.71	2.46
352.34	4.73	2.51
352.35	4.75	2.57
352.36	4.77	2.63
352.37	4.79	2.68
352.38	4.81	2.74
352.39	4.83	2.79
352.40	4.84	2.84
352.41	4.86	2.90
352.42	4.87	2.95
352.43	4.88	3.00
352.44	4.89	3.05
352.45	4.90	3.10
352.46	4.91	3.15
352.47	4.92	3.19
352.48	4.92	3.24
352.49	4.93	3.28
352.50	4.93	3.32
352.51	**4.93**	3.36
352.52	4.93	3.40
352.53	4.93	3.43
352.54	4.92	3.47
352.55	4.92	3.50
352.56	4.91	3.53
352.57	4.90	3.56
352.58	4.89	3.58
352.59	4.88	3.60
352.60	4.86	3.62
352.61	4.84	3.64
352.62	4.82	3.65
352.63	4.80	3.65
352.64	4.77	**3.65**
352.65	4.74	3.65
352.66	4.70	3.64
352.67	4.65	3.62
352.68	4.59	3.59
352.69	4.51	3.54
352.70	4.33	3.40

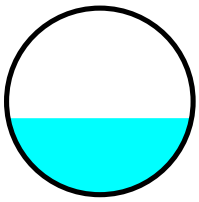
Summary for Reach CB21: TO DMH#21

Inflow Area = 16,502 sf, 47.31% Impervious, Inflow Depth = 4.02" for 100-Year event
Inflow = 1.78 cfs @ 12.08 hrs, Volume= 5,534 cf
Outflow = 1.77 cfs @ 12.08 hrs, Volume= 5,534 cf, Atten= 0%, Lag= 0.3 min

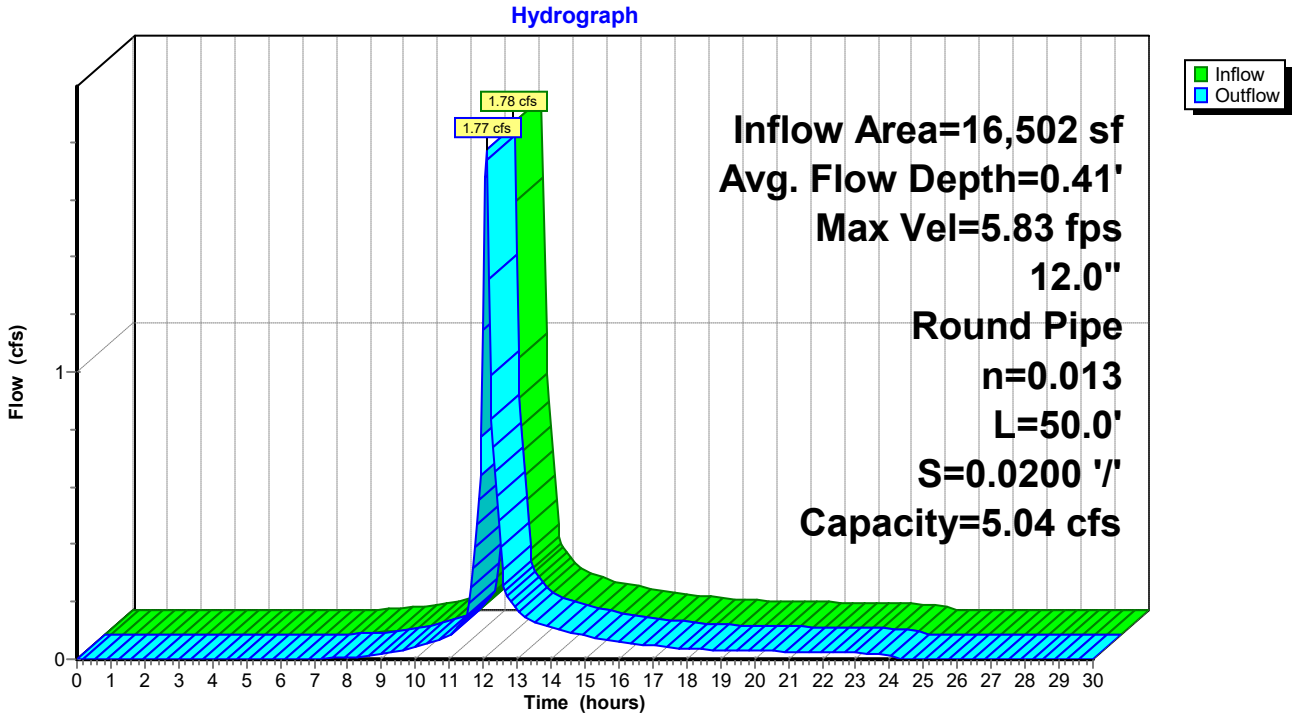
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.83 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.04 fps, Avg. Travel Time= 0.4 min

Peak Storage= 15 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.41'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.04 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 50.0' Slope= 0.0200 '/'
Inlet Invert= 346.40', Outlet Invert= 345.40'



Reach CB21: TO DMH#21



Stage-Discharge for Reach CB21: TO DMH#21

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.40	0.00	0.00
346.41	0.57	0.00
346.42	0.90	0.00
346.43	1.18	0.01
346.44	1.42	0.02
346.45	1.65	0.02
346.46	1.86	0.04
346.47	2.05	0.05
346.48	2.23	0.07
346.49	2.41	0.08
346.50	2.57	0.11
346.51	2.73	0.13
346.52	2.89	0.15
346.53	3.03	0.18
346.54	3.18	0.21
346.55	3.32	0.24
346.56	3.45	0.28
346.57	3.58	0.32
346.58	3.70	0.36
346.59	3.83	0.40
346.60	3.95	0.44
346.61	4.06	0.49
346.62	4.17	0.53
346.63	4.28	0.58
346.64	4.39	0.64
346.65	4.50	0.69
346.66	4.60	0.75
346.67	4.70	0.80
346.68	4.79	0.86
346.69	4.89	0.92
346.70	4.98	0.99
346.71	5.07	1.05
346.72	5.16	1.12
346.73	5.24	1.19
346.74	5.33	1.25
346.75	5.41	1.32
346.76	5.49	1.40
346.77	5.57	1.47
346.78	5.64	1.54
346.79	5.72	1.62
346.80	5.79	1.70
346.81	5.86	1.78
346.82	5.93	1.86
346.83	5.99	1.94
346.84	6.06	2.02
346.85	6.12	2.10
346.86	6.18	2.18
346.87	6.24	2.27
346.88	6.30	2.35
346.89	6.36	2.43
346.90	6.42	2.52
346.91	6.47	2.61
346.92	6.52	2.69
346.93	6.57	2.78
346.94	6.62	2.86
346.95	6.67	2.95
346.96	6.71	3.04
346.97	6.76	3.13
346.98	6.80	3.21
346.99	6.84	3.30
347.00	6.88	3.39
347.01	6.92	3.47
347.02	6.95	3.56
347.03	6.99	3.64
347.04	7.02	3.73
347.05	7.05	3.81
347.06	7.08	3.89
347.07	7.11	3.98
347.08	7.14	4.06
347.09	7.16	4.14
347.10	7.18	4.22
347.11	7.20	4.30
347.12	7.22	4.37
347.13	7.24	4.45
347.14	7.26	4.52
347.15	7.27	4.59
347.16	7.28	4.66
347.17	7.29	4.73
347.18	7.30	4.80
347.19	7.31	4.86
347.20	7.31	4.93
347.21	**7.31**	4.98
347.22	7.31	5.04
347.23	7.31	5.09
347.24	7.30	5.14
347.25	7.30	5.19
347.26	7.29	5.24
347.27	7.27	5.28
347.28	7.26	5.31
347.29	7.24	5.34
347.30	7.21	5.37
347.31	7.19	5.39
347.32	7.15	5.41
347.33	7.12	5.42
347.34	7.07	**5.42**
347.35	7.02	5.41
347.36	6.97	5.40
347.37	6.90	5.37
347.38	6.81	5.32
347.39	6.70	5.25
347.40	6.42	5.04

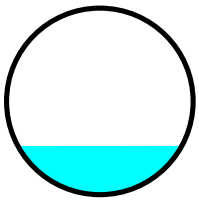
Summary for Reach CBD1: TO DMH#8

Inflow Area = 6,833 sf, 88.85% Impervious, Inflow Depth = 5.45" for 100-Year event
Inflow = 0.95 cfs @ 12.07 hrs, Volume= 3,102 cf
Outflow = 0.94 cfs @ 12.07 hrs, Volume= 3,102 cf, Atten= 0%, Lag= 0.1 min

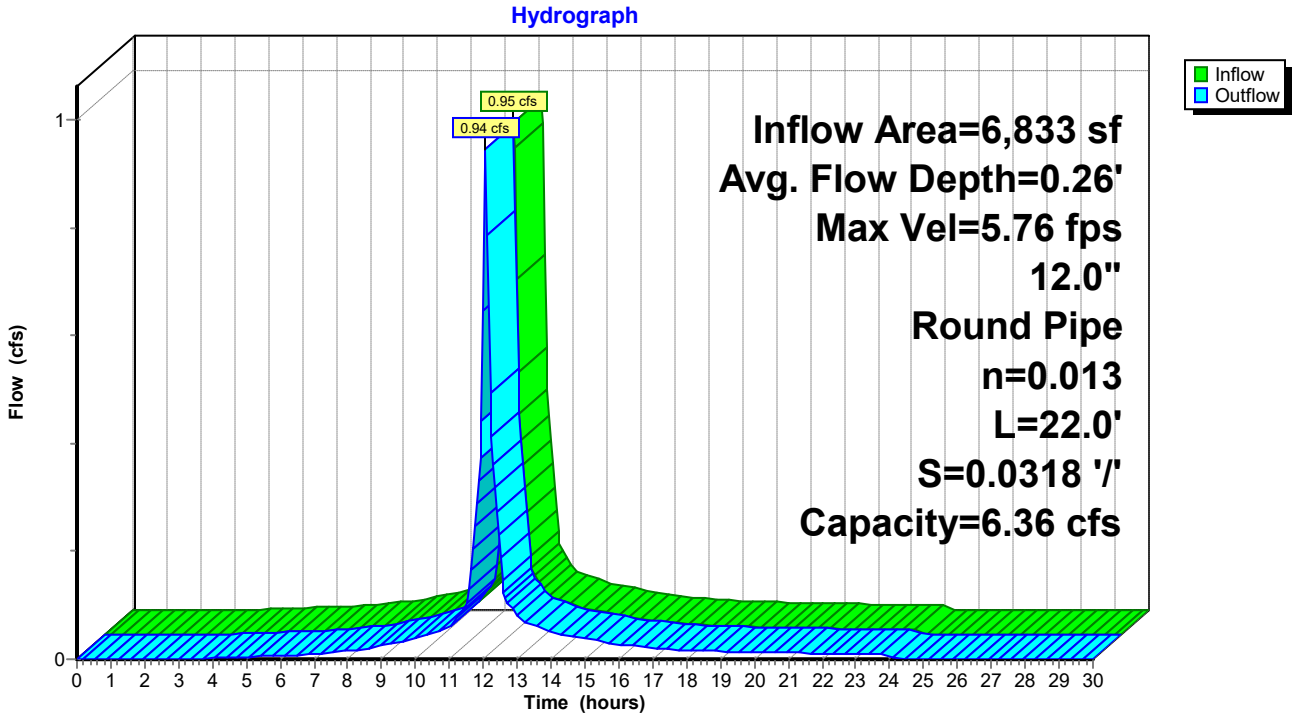
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.76 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.89 fps, Avg. Travel Time= 0.2 min

Peak Storage= 4 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.26'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.36 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 22.0' Slope= 0.0318 '/'
Inlet Invert= 352.70', Outlet Invert= 352.00'



Reach CBD1: TO DMH#8



Stage-Discharge for Reach CBD1: TO DMH#8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.70	0.00	0.00
352.71	0.72	0.00
352.72	1.14	0.00
352.73	1.49	0.01
352.74	1.80	0.02
352.75	2.08	0.03
352.76	2.34	0.05
352.77	2.58	0.06
352.78	2.82	0.08
352.79	3.04	0.11
352.80	3.25	0.13
352.81	3.45	0.16
352.82	3.64	0.19
352.83	3.83	0.23
352.84	4.01	0.27
352.85	4.18	0.31
352.86	4.35	0.35
352.87	4.51	0.40
352.88	4.67	0.45
352.89	4.83	0.50
352.90	4.98	0.56
352.91	5.12	0.61
352.92	5.26	0.67
352.93	5.40	0.74
352.94	5.54	0.80
352.95	5.67	0.87
352.96	5.80	0.94
352.97	5.92	1.01
352.98	6.04	1.09
352.99	6.16	1.17
353.00	6.28	1.24
353.01	6.39	1.33
353.02	6.50	1.41
353.03	6.61	1.49
353.04	6.72	1.58
353.05	6.82	1.67
353.06	6.92	1.76
353.07	7.02	1.85
353.08	7.12	1.95
353.09	7.21	2.04
353.10	7.30	2.14
353.11	7.39	2.24
353.12	7.48	2.34
353.13	7.56	2.44
353.14	7.64	2.54
353.15	7.72	2.65
353.16	7.80	2.75
353.17	7.88	2.86
353.18	7.95	2.96
353.19	8.02	3.07
353.20	8.09	3.18
353.21	8.16	3.29
353.22	8.23	3.39
353.23	8.29	3.50
353.24	8.35	3.61
353.25	8.41	3.72
353.26	8.47	3.83
353.27	8.52	3.94
353.28	8.58	4.05
353.29	8.63	4.16
353.30	8.68	4.27
353.31	8.73	4.38
353.32	8.77	4.49
353.33	8.81	4.59
353.34	8.86	4.70
353.35	8.90	4.81
353.36	8.93	4.91
353.37	8.97	5.02
353.38	9.00	5.12
353.39	9.03	5.22
353.40	9.06	5.32
353.41	9.09	5.42
353.42	9.11	5.52
353.43	9.13	5.61
353.44	9.15	5.70
353.45	9.17	5.80
353.46	9.19	5.88
353.47	9.20	5.97
353.48	9.21	6.05
353.49	9.22	6.13
353.50	9.22	6.21
353.51	**9.22**	6.29
353.52	9.22	6.36
353.53	9.22	6.43
353.54	9.21	6.49
353.55	9.20	6.55
353.56	9.19	6.60
353.57	9.17	6.65
353.58	9.15	6.70
353.59	9.13	6.74
353.60	9.10	6.77
353.61	9.06	6.80
353.62	9.02	6.82
353.63	8.98	6.83
353.64	8.92	**6.84**
353.65	8.86	6.83
353.66	8.79	6.81
353.67	8.70	6.77
353.68	8.59	6.72
353.69	8.45	6.62
353.70	8.09	6.36

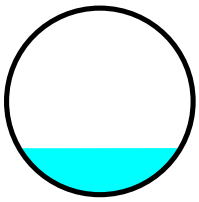
Summary for Reach CBD2: TO DMH#3

Inflow Area = 4,392 sf, 76.55% Impervious, Inflow Depth = 4.67" for 100-Year event
Inflow = 0.54 cfs @ 12.07 hrs, Volume= 1,708 cf
Outflow = 0.54 cfs @ 12.07 hrs, Volume= 1,708 cf, Atten= 0%, Lag= 0.1 min

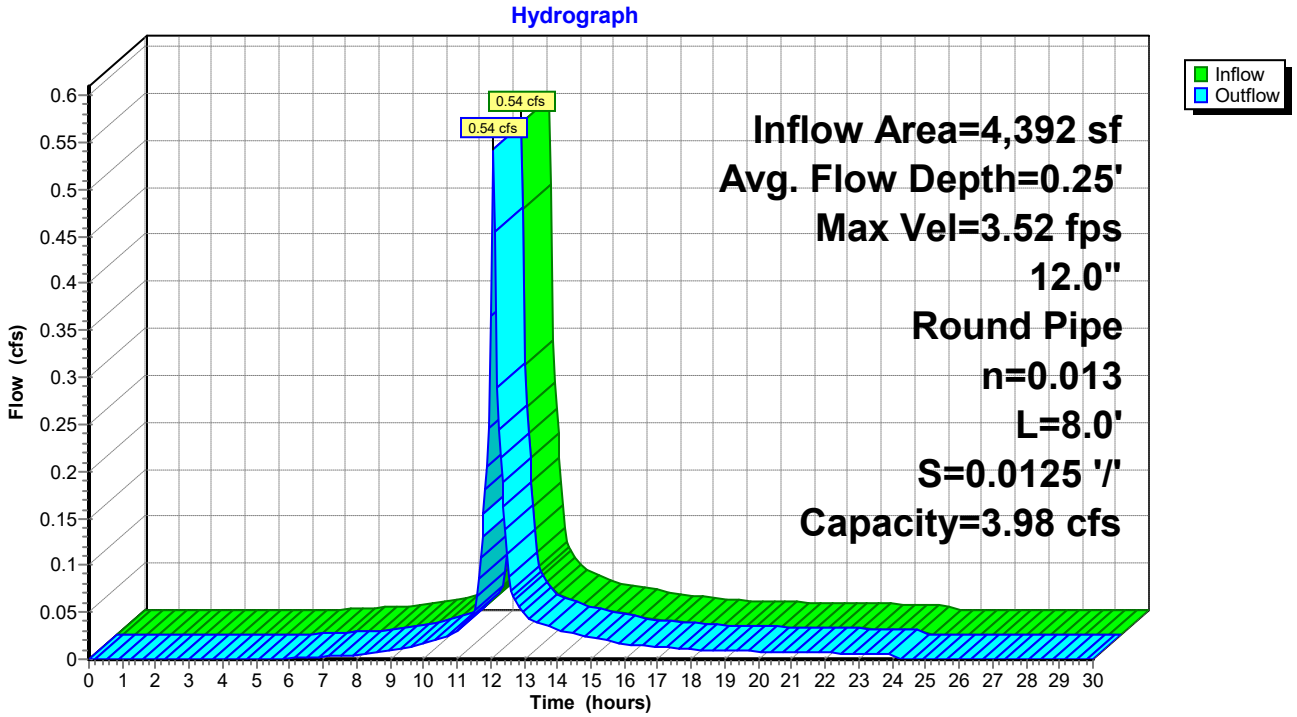
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.52 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.18 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.25'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.98 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 8.0' Slope= 0.0125 '/'
Inlet Invert= 353.10', Outlet Invert= 353.00'



Reach CBD2: TO DMH#3



Stage-Discharge for Reach CBD2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.10	0.00	0.00
353.11	0.45	0.00
353.12	0.71	0.00
353.13	0.93	0.01
353.14	1.13	0.01
353.15	1.30	0.02
353.16	1.47	0.03
353.17	1.62	0.04
353.18	1.77	0.05
353.19	1.90	0.07
353.20	2.03	0.08
353.21	2.16	0.10
353.22	2.28	0.12
353.23	2.40	0.14
353.24	2.51	0.17
353.25	2.62	0.19
353.26	2.73	0.22
353.27	2.83	0.25
353.28	2.93	0.28
353.29	3.03	0.31
353.30	3.12	0.35
353.31	3.21	0.38
353.32	3.30	0.42
353.33	3.39	0.46
353.34	3.47	0.50
353.35	3.55	0.55
353.36	3.63	0.59
353.37	3.71	0.64
353.38	3.79	0.68
353.39	3.86	0.73
353.40	3.94	0.78
353.41	4.01	0.83
353.42	4.08	0.88
353.43	4.14	0.94
353.44	4.21	0.99
353.45	4.28	1.05
353.46	4.34	1.10
353.47	4.40	1.16
353.48	4.46	1.22
353.49	4.52	1.28
353.50	4.58	1.34
353.51	4.63	1.40
353.52	4.69	1.47
353.53	4.74	1.53
353.54	4.79	1.59
353.55	4.84	1.66
353.56	4.89	1.72
353.57	4.94	1.79
353.58	4.98	1.86
353.59	5.03	1.92
353.60	5.07	1.99
353.61	5.11	2.06
353.62	5.16	2.13
353.63	5.20	2.20
353.64	5.23	2.26
353.65	5.27	2.33
353.66	5.31	2.40
353.67	5.34	2.47
353.68	5.38	2.54
353.69	5.41	2.61
353.70	5.44	2.68
353.71	5.47	2.74
353.72	5.50	2.81
353.73	5.52	2.88
353.74	5.55	2.95
353.75	5.58	3.01
353.76	5.60	3.08
353.77	5.62	3.14
353.78	5.64	3.21
353.79	5.66	3.27
353.80	5.68	3.33
353.81	5.70	3.40
353.82	5.71	3.46
353.83	5.73	3.52
353.84	5.74	3.58
353.85	5.75	3.63
353.86	5.76	3.69
353.87	5.77	3.74
353.88	5.77	3.79
353.89	5.78	3.84
353.90	5.78	3.89
353.91	**5.78**	3.94
353.92	5.78	3.98
353.93	5.78	4.03
353.94	5.77	4.07
353.95	5.77	4.10
353.96	5.76	4.14
353.97	5.75	4.17
353.98	5.74	4.20
353.99	5.72	4.22
354.00	5.70	4.25
354.01	5.68	4.26
354.02	5.66	4.28
354.03	5.63	4.28
354.04	5.59	**4.28**
354.05	5.55	4.28
354.06	5.51	4.27
354.07	5.45	4.25
354.08	5.38	4.21
354.09	5.29	4.15
354.10	5.07	3.98

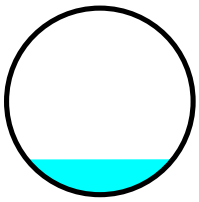
Summary for Reach CBD3: TO DMH-1

Inflow Area = 4,805 sf, 87.24% Impervious, Inflow Depth = 5.33" for 100-Year event
Inflow = 0.66 cfs @ 12.07 hrs, Volume= 2,136 cf
Outflow = 0.66 cfs @ 12.07 hrs, Volume= 2,136 cf, Atten= 0%, Lag= 0.1 min

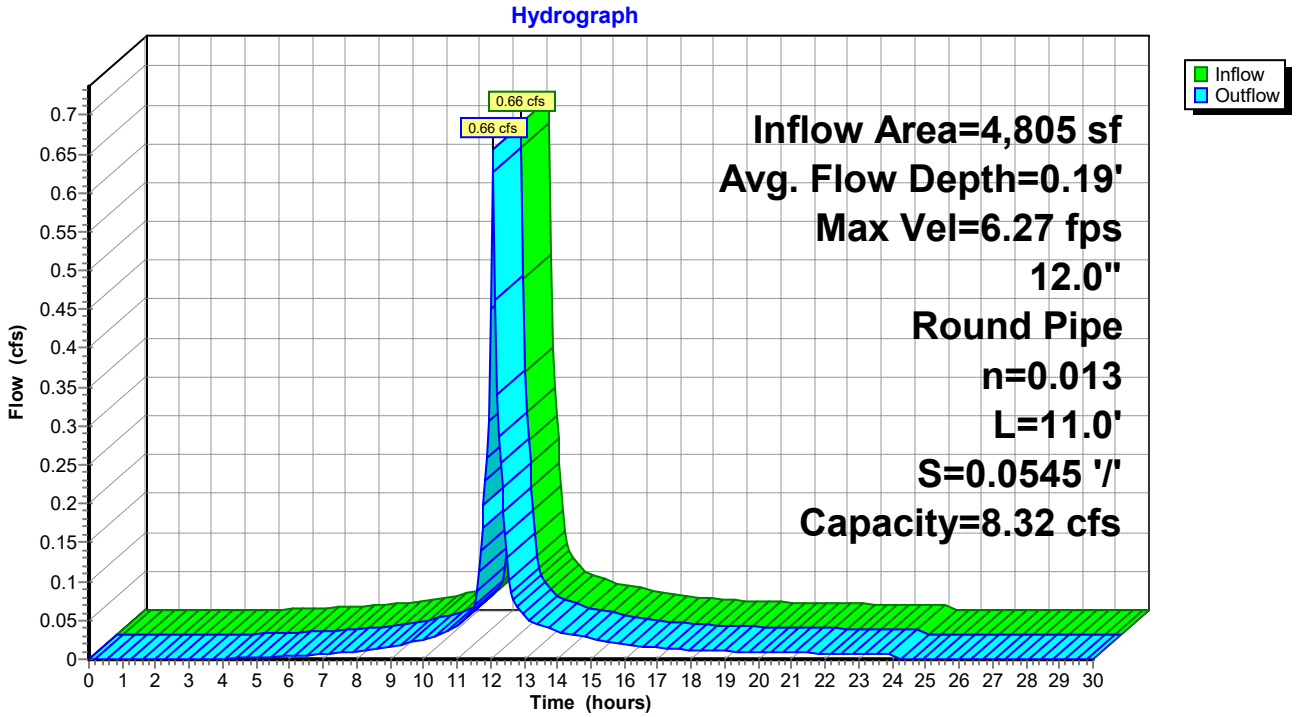
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.27 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.06 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.32 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 11.0' Slope= 0.0545 '/'
Inlet Invert= 352.80', Outlet Invert= 352.20'



Reach CBD3: TO DMH-1



Stage-Discharge for Reach CBD3: TO DMH-1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.80	0.00	0.00
352.81	0.94	0.00
352.82	1.49	0.01
352.83	1.95	0.01
352.84	2.35	0.02
352.85	2.72	0.04
352.86	3.06	0.06
352.87	3.38	0.08
352.88	3.69	0.11
352.89	3.97	0.14
352.90	4.25	0.17
352.91	4.51	0.21
352.92	4.77	0.25
352.93	5.01	0.30
352.94	5.25	0.35
352.95	5.48	0.40
352.96	5.70	0.46
352.97	5.91	0.52
352.98	6.12	0.59
352.99	6.32	0.66
353.00	6.52	0.73
353.01	6.71	0.80
353.02	6.89	0.88
353.03	7.07	0.97
353.04	7.25	1.05
353.05	7.42	1.14
353.06	7.59	1.23
353.07	7.75	1.33
353.08	7.91	1.42
353.09	8.07	1.53
353.10	8.22	1.63
353.11	8.37	1.74
353.12	8.52	1.85
353.13	8.66	1.96
353.14	8.80	2.07
353.15	8.93	2.19
353.16	9.06	2.31
353.17	9.19	2.43
353.18	9.32	2.55
353.19	9.44	2.68
353.20	9.56	2.80
353.21	9.67	2.93
353.22	9.79	3.06
353.23	9.90	3.20
353.24	10.01	3.33
353.25	10.11	3.47
353.26	10.21	3.60
353.27	10.31	3.74
353.28	10.41	3.88
353.29	10.50	4.02
353.30	10.59	4.16
353.31	10.68	4.30
353.32	10.77	4.44
353.33	10.85	4.59
353.34	10.93	4.73
353.35	11.01	4.87
353.36	11.09	5.02
353.37	11.16	5.16
353.38	11.23	5.30
353.39	11.30	5.45
353.40	11.36	5.59
353.41	11.42	5.73
353.42	11.48	5.87
353.43	11.54	6.02
353.44	11.59	6.16
353.45	11.65	6.29
353.46	11.70	6.43
353.47	11.74	6.57
353.48	11.79	6.70
353.49	11.83	6.84
353.50	11.86	6.97
353.51	11.90	7.10
353.52	11.93	7.22
353.53	11.96	7.35
353.54	11.99	7.47
353.55	12.01	7.59
353.56	12.03	7.70
353.57	12.05	7.82
353.58	12.06	7.93
353.59	12.07	8.03
353.60	12.08	8.13
353.61	**12.08**	8.23
353.62	12.08	8.32
353.63	12.07	8.41
353.64	12.06	8.50
353.65	12.05	8.57
353.66	12.03	8.65
353.67	12.01	8.71
353.68	11.98	8.77
353.69	11.95	8.82
353.70	11.91	8.87
353.71	11.87	8.90
353.72	11.81	8.93
353.73	11.75	8.95
353.74	11.68	**8.95**
353.75	11.60	8.94
353.76	11.51	8.91
353.77	11.39	8.87
353.78	11.25	8.79
353.79	11.06	8.67
353.80	10.59	8.32

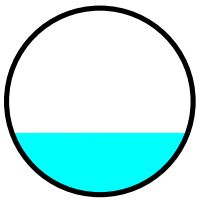
Summary for Reach CBD5: TO DMH#4

Inflow Area = 7,120 sf, 71.57% Impervious, Inflow Depth = 4.34" for 100-Year event
Inflow = 0.83 cfs @ 12.07 hrs, Volume= 2,576 cf
Outflow = 0.82 cfs @ 12.08 hrs, Volume= 2,576 cf, Atten= 1%, Lag= 0.2 min

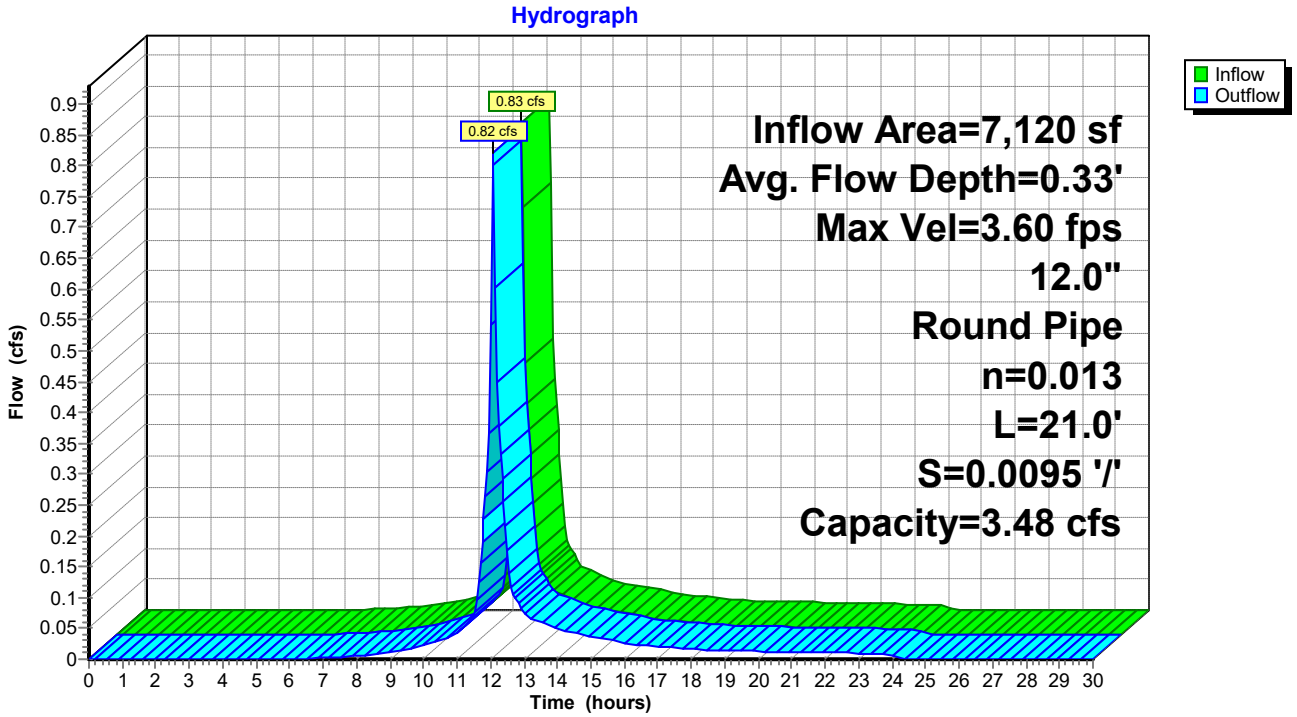
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.60 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.23 fps, Avg. Travel Time= 0.3 min

Peak Storage= 5 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.48 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 351.80', Outlet Invert= 351.60'



Reach CBD5: TO DMH#4



Stage-Discharge for Reach CBD5: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.39	0.00
351.82	0.62	0.00
351.83	0.81	0.01
351.84	0.98	0.01
351.85	1.14	0.02
351.86	1.28	0.02
351.87	1.41	0.03
351.88	1.54	0.05
351.89	1.66	0.06
351.90	1.78	0.07
351.91	1.89	0.09
351.92	1.99	0.11
351.93	2.09	0.13
351.94	2.19	0.15
351.95	2.29	0.17
351.96	2.38	0.19
351.97	2.47	0.22
351.98	2.56	0.25
351.99	2.64	0.27
352.00	2.72	0.30
352.01	2.80	0.34
352.02	2.88	0.37
352.03	2.96	0.40
352.04	3.03	0.44
352.05	3.10	0.48
352.06	3.17	0.51
352.07	3.24	0.55
352.08	3.31	0.60
352.09	3.37	0.64
352.10	3.44	0.68
352.11	3.50	0.73
352.12	3.56	0.77
352.13	3.62	0.82
352.14	3.68	0.87
352.15	3.73	0.91
352.16	3.79	0.96
352.17	3.84	1.01
352.18	3.89	1.07
352.19	3.94	1.12
352.20	3.99	1.17
352.21	4.04	1.23
352.22	4.09	1.28
352.23	4.14	1.34
352.24	4.18	1.39
352.25	4.22	1.45
352.26	4.27	1.51
352.27	4.31	1.56
352.28	4.35	1.62
352.29	4.39	1.68
352.30	4.43	1.74
352.31	4.46	1.80
352.32	4.50	1.86
352.33	4.53	1.92
352.34	4.57	1.98
352.35	4.60	2.04
352.36	4.63	2.10
352.37	4.66	2.16
352.38	4.69	2.22
352.39	4.72	2.28
352.40	4.75	2.34
352.41	4.77	2.40
352.42	4.80	2.45
352.43	4.82	2.51
352.44	4.85	2.57
352.45	4.87	2.63
352.46	4.89	2.69
352.47	4.91	2.74
352.48	4.92	2.80
352.49	4.94	2.86
352.50	4.96	2.91
352.51	4.97	2.96
352.52	4.99	3.02
352.53	5.00	3.07
352.54	5.01	3.12
352.55	5.02	3.17
352.56	5.03	3.22
352.57	5.03	3.27
352.58	5.04	3.31
352.59	5.04	3.36
352.60	5.05	3.40
352.61	**5.05**	3.44
352.62	5.05	3.48
352.63	5.04	3.52
352.64	5.04	3.55
352.65	5.04	3.58
352.66	5.03	3.61
352.67	5.02	3.64
352.68	5.01	3.67
352.69	4.99	3.69
352.70	4.98	3.71
352.71	4.96	3.72
352.72	4.94	3.73
352.73	4.91	3.74
352.74	4.88	**3.74**
352.75	4.85	3.74
352.76	4.81	3.73
352.77	4.76	3.71
352.78	4.70	3.67
352.79	4.62	3.62
352.80	4.43	3.48

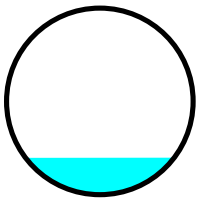
Summary for Reach CBD6: TO DMH#4

Inflow Area = 2,202 sf,100.00% Impervious, Inflow Depth = 6.26" for 100-Year event
Inflow = 0.32 cfs @ 12.07 hrs, Volume= 1,149 cf
Outflow = 0.32 cfs @ 12.07 hrs, Volume= 1,149 cf, Atten= 1%, Lag= 0.2 min

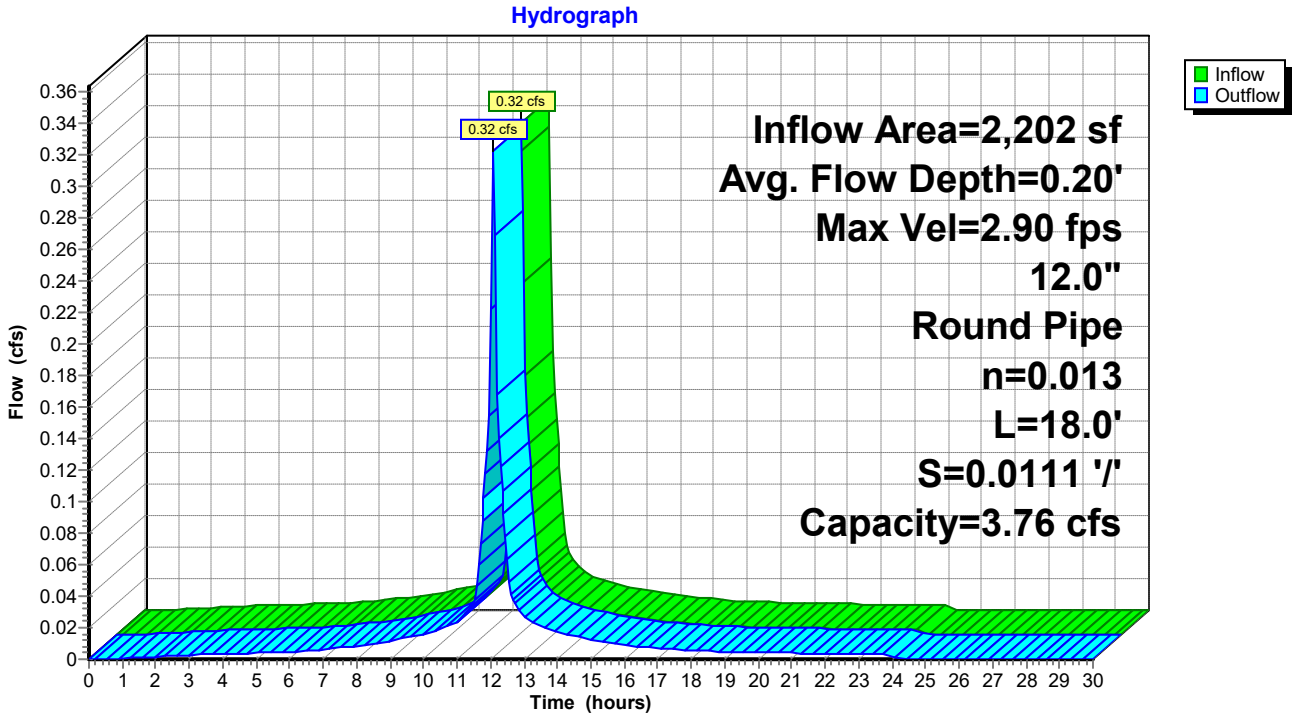
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.90 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.96 fps, Avg. Travel Time= 0.3 min

Peak Storage= 2 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.20'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.76 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 18.0' Slope= 0.0111 '/'
Inlet Invert= 351.80', Outlet Invert= 351.60'



Reach CBD6: TO DMH#4



Stage-Discharge for Reach CBD6: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.43	0.00
351.82	0.67	0.00
351.83	0.88	0.01
351.84	1.06	0.01
351.85	1.23	0.02
351.86	1.38	0.03
351.87	1.53	0.04
351.88	1.66	0.05
351.89	1.79	0.06
351.90	1.92	0.08
351.91	2.04	0.10
351.92	2.15	0.11
351.93	2.26	0.14
351.94	2.37	0.16
351.95	2.47	0.18
351.96	2.57	0.21
351.97	2.67	0.24
351.98	2.76	0.27
351.99	2.85	0.30
352.00	2.94	0.33
352.01	3.03	0.36
352.02	3.11	0.40
352.03	3.19	0.44
352.04	3.27	0.47
352.05	3.35	0.51
352.06	3.43	0.56
352.07	3.50	0.60
352.08	3.57	0.64
352.09	3.64	0.69
352.10	3.71	0.74
352.11	3.78	0.78
352.12	3.84	0.83
352.13	3.91	0.88
352.14	3.97	0.93
352.15	4.03	0.99
352.16	4.09	1.04
352.17	4.15	1.10
352.18	4.20	1.15
352.19	4.26	1.21
352.20	4.31	1.27
352.21	4.37	1.32
352.22	4.42	1.38
352.23	4.47	1.44
352.24	4.52	1.50
352.25	4.56	1.56
352.26	4.61	1.63
352.27	4.65	1.69
352.28	4.70	1.75
352.29	4.74	1.81
352.30	4.78	1.88
352.31	4.82	1.94
352.32	4.86	2.01
352.33	4.90	2.07
352.34	4.93	2.13
352.35	4.97	2.20
352.36	5.00	2.26
352.37	5.04	2.33
352.38	5.07	2.39
352.39	5.10	2.46
352.40	5.13	2.52
352.41	5.16	2.59
352.42	5.18	2.65
352.43	5.21	2.71
352.44	5.23	2.78
352.45	5.26	2.84
352.46	5.28	2.90
352.47	5.30	2.96
352.48	5.32	3.03
352.49	5.34	3.09
352.50	5.35	3.14
352.51	5.37	3.20
352.52	5.38	3.26
352.53	5.40	3.32
352.54	5.41	3.37
352.55	5.42	3.42
352.56	5.43	3.48
352.57	5.44	3.53
352.58	5.44	3.58
352.59	5.45	3.62
352.60	5.45	3.67
352.61	**5.45**	3.71
352.62	5.45	3.76
352.63	5.45	3.80
352.64	5.44	3.83
352.65	5.44	3.87
352.66	5.43	3.90
352.67	5.42	3.93
352.68	5.41	3.96
352.69	5.39	3.98
352.70	5.38	4.00
352.71	5.36	4.02
352.72	5.33	4.03
352.73	5.30	4.04
352.74	5.27	**4.04**
352.75	5.24	4.04
352.76	5.19	4.02
352.77	5.14	4.00
352.78	5.08	3.97
352.79	4.99	3.91
352.80	4.78	3.76

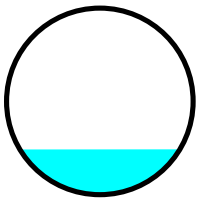
Summary for Reach CBD9: TO DMH#5

Inflow Area = 4,151 sf, 71.91% Impervious, Inflow Depth = 4.34" for 100-Year event
Inflow = 0.48 cfs @ 12.07 hrs, Volume= 1,502 cf
Outflow = 0.48 cfs @ 12.08 hrs, Volume= 1,502 cf, Atten= 1%, Lag= 0.5 min

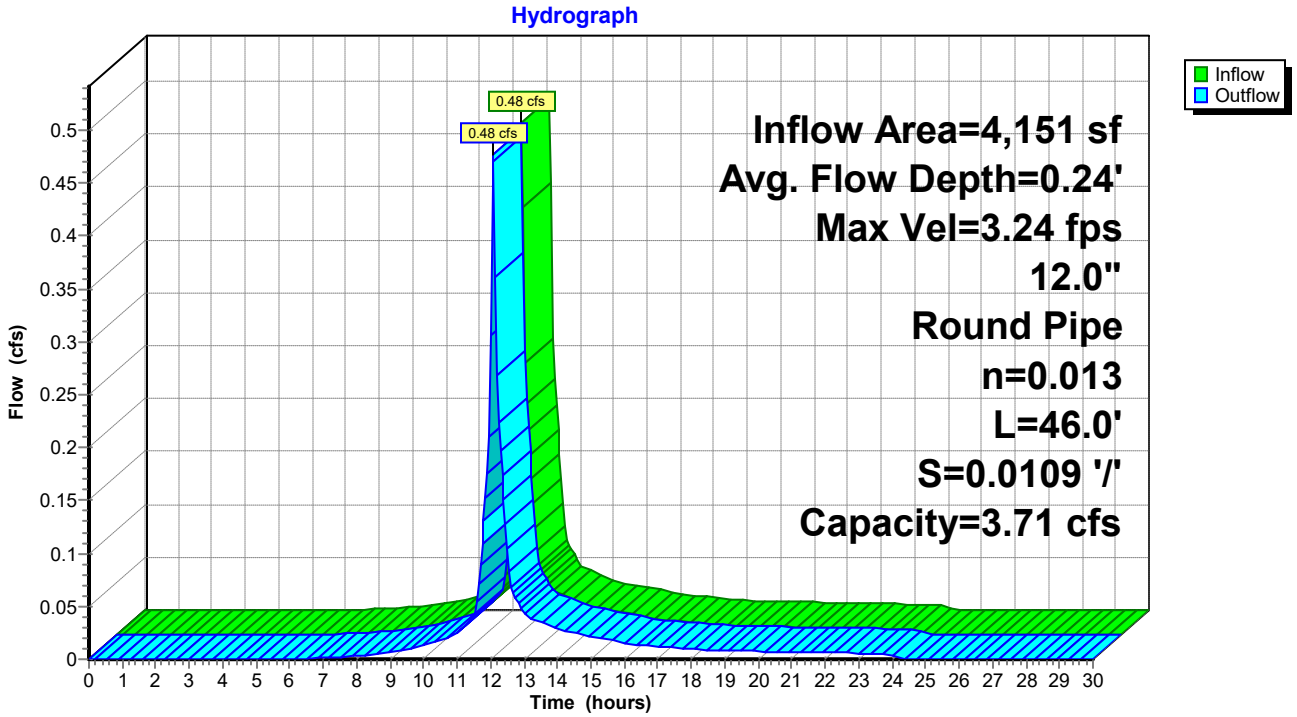
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.24 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.10 fps, Avg. Travel Time= 0.7 min

Peak Storage= 7 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.24'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.71 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 46.0' Slope= 0.0109 '/'
Inlet Invert= 352.50', Outlet Invert= 352.00'



Reach CBD9: TO DMH#5



Stage-Discharge for Reach CBD9: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.50	0.00	0.00
352.51	0.42	0.00
352.52	0.67	0.00
352.53	0.87	0.01
352.54	1.05	0.01
352.55	1.21	0.02
352.56	1.37	0.03
352.57	1.51	0.04
352.58	1.65	0.05
352.59	1.77	0.06
352.60	1.90	0.08
352.61	2.01	0.09
352.62	2.13	0.11
352.63	2.24	0.13
352.64	2.34	0.16
352.65	2.44	0.18
352.66	2.54	0.21
352.67	2.64	0.23
352.68	2.73	0.26
352.69	2.82	0.29
352.70	2.91	0.33
352.71	2.99	0.36
352.72	3.08	0.39
352.73	3.16	0.43
352.74	3.24	0.47
352.75	3.31	0.51
352.76	3.39	0.55
352.77	3.46	0.59
352.78	3.53	0.64
352.79	3.60	0.68
352.80	3.67	0.73
352.81	3.74	0.77
352.82	3.80	0.82
352.83	3.86	0.87
352.84	3.93	0.92
352.85	3.99	0.98
352.86	4.05	1.03
352.87	4.10	1.08
352.88	4.16	1.14
352.89	4.21	1.19
352.90	4.27	1.25
352.91	4.32	1.31
352.92	4.37	1.37
352.93	4.42	1.43
352.94	4.47	1.49
352.95	4.51	1.55
352.96	4.56	1.61
352.97	4.60	1.67
352.98	4.65	1.73
352.99	4.69	1.79
353.00	4.73	1.86
353.01	4.77	1.92
353.02	4.81	1.98
353.03	4.84	2.05
353.04	4.88	2.11
353.05	4.92	2.18
353.06	4.95	2.24
353.07	4.98	2.30
353.08	5.01	2.37
353.09	5.04	2.43
353.10	5.07	2.50
353.11	5.10	2.56
353.12	5.13	2.62
353.13	5.15	2.69
353.14	5.18	2.75
353.15	5.20	2.81
353.16	5.22	2.87
353.17	5.24	2.93
353.18	5.26	2.99
353.19	5.28	3.05
353.20	5.30	3.11
353.21	5.31	3.17
353.22	5.33	3.22
353.23	5.34	3.28
353.24	5.35	3.33
353.25	5.36	3.39
353.26	5.37	3.44
353.27	5.38	3.49
353.28	5.38	3.54
353.29	5.39	3.59
353.30	5.39	3.63
353.31	**5.39**	3.67
353.32	5.39	3.72
353.33	5.39	3.76
353.34	5.39	3.79
353.35	5.38	3.83
353.36	5.37	3.86
353.37	5.36	3.89
353.38	5.35	3.92
353.39	5.33	3.94
353.40	5.32	3.96
353.41	5.30	3.97
353.42	5.27	3.99
353.43	5.25	3.99
353.44	5.22	**4.00**
353.45	5.18	3.99
353.46	5.14	3.98
353.47	5.08	3.96
353.48	5.02	3.93
353.49	4.94	3.87
353.50	4.73	3.71

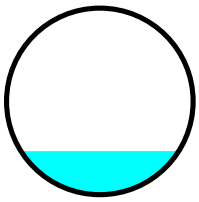
Summary for Reach CO1: TO CO#2

Inflow Area = 5,181 sf, 36.69% Impervious, Inflow Depth = 3.80" for 100-Year event
Inflow = 0.49 cfs @ 12.08 hrs, Volume= 1,639 cf
Outflow = 0.49 cfs @ 12.09 hrs, Volume= 1,639 cf, Atten= 1%, Lag= 0.5 min

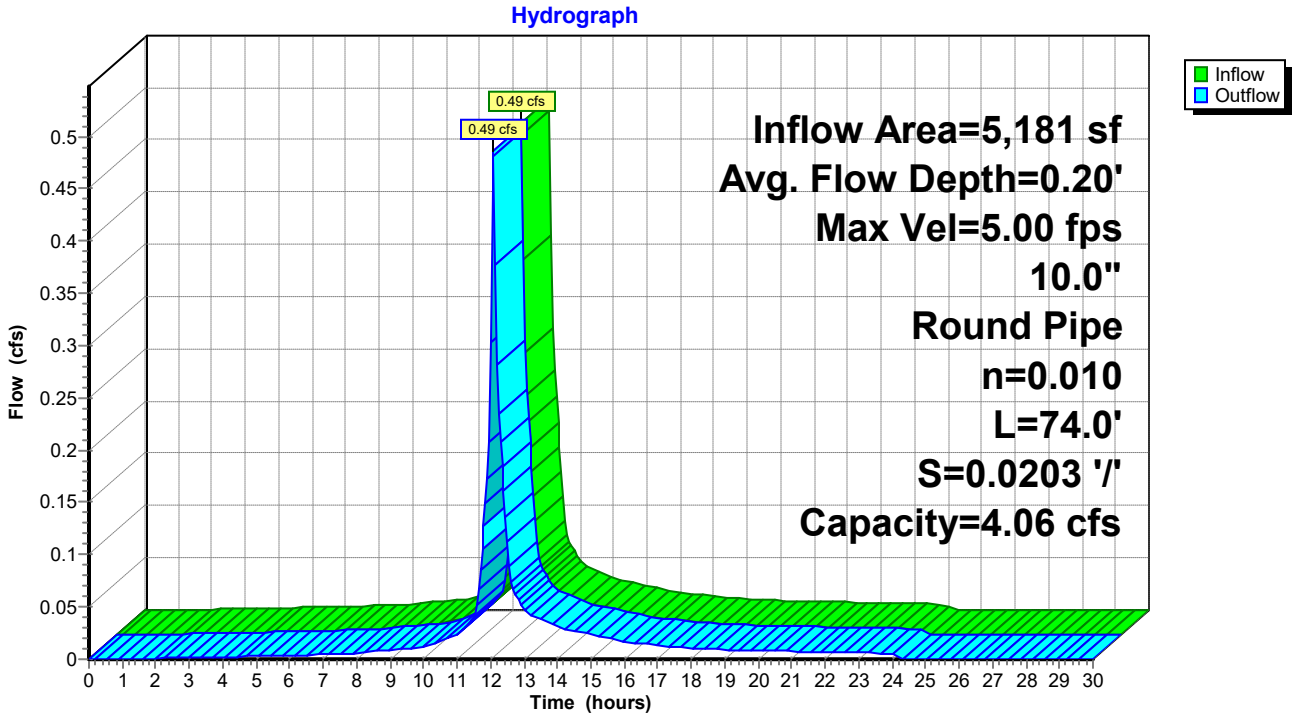
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.00 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.59 fps, Avg. Travel Time= 0.8 min

Peak Storage= 7 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.20'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.06 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 74.0' Slope= 0.0203 '/'
Inlet Invert= 350.50', Outlet Invert= 349.00'



Reach CO1: TO CO#2



Stage-Discharge for Reach CO1: TO CO#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.50	0.00	0.00
350.51	0.74	0.00
350.52	1.18	0.00
350.53	1.54	0.01
350.54	1.86	0.02
350.55	2.15	0.03
350.56	2.42	0.04
350.57	2.67	0.06
350.58	2.91	0.08
350.59	3.13	0.10
350.60	3.35	0.12
350.61	3.55	0.15
350.62	3.75	0.18
350.63	3.94	0.21
350.64	4.12	0.25
350.65	4.29	0.29
350.66	4.46	0.33
350.67	4.63	0.37
350.68	4.79	0.42
350.69	4.94	0.46
350.70	5.09	0.51
350.71	5.23	0.56
350.72	5.37	0.62
350.73	5.51	0.68
350.74	5.64	0.73
350.75	5.77	0.79
350.76	5.90	0.86
350.77	6.02	0.92
350.78	6.13	0.99
350.79	6.25	1.05
350.80	6.36	1.12
350.81	6.47	1.20
350.82	6.57	1.27
350.83	6.67	1.34
350.84	6.77	1.42
350.85	6.87	1.49
350.86	6.96	1.57
350.87	7.05	1.65
350.88	7.14	1.73
350.89	7.22	1.81
350.90	7.31	1.89
350.91	7.38	1.97
350.92	7.46	2.06
350.93	7.53	2.14
350.94	7.60	2.22
350.95	7.67	2.31
350.96	7.74	2.39
350.97	7.80	2.47
350.98	7.86	2.56
350.99	7.92	2.64
351.00	7.97	2.72
351.01	8.03	2.81
351.02	8.08	2.89
351.03	8.12	2.97
351.04	8.17	3.05
351.05	8.21	3.13
351.06	8.25	3.21
351.07	8.28	3.29
351.08	8.32	3.37
351.09	8.35	3.45
351.10	8.37	3.52
351.11	8.40	3.59
351.12	8.42	3.66
351.13	8.44	3.73
351.14	8.45	3.80
351.15	8.46	3.86
351.16	8.47	3.92
351.17	8.47	3.98
351.18	**8.48**	4.04
351.19	8.47	4.09
351.20	8.47	4.14
351.21	8.45	4.19
351.22	8.44	4.23
351.23	8.42	4.26
351.24	8.39	4.30
351.25	8.36	4.32
351.26	8.32	4.34
351.27	8.27	4.36
351.28	8.22	**4.36**
351.29	8.15	4.36
351.30	8.07	4.34
351.31	7.97	4.31
351.32	7.84	4.26
351.33	7.57	4.12

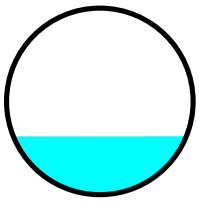
Summary for Reach CO2: TO CO#3

Inflow Area = 7,671 sf, 57.24% Impervious, Inflow Depth = 4.60" for 100-Year event
Inflow = 0.85 cfs @ 12.08 hrs, Volume= 2,938 cf
Outflow = 0.84 cfs @ 12.09 hrs, Volume= 2,938 cf, Atten= 1%, Lag= 0.5 min

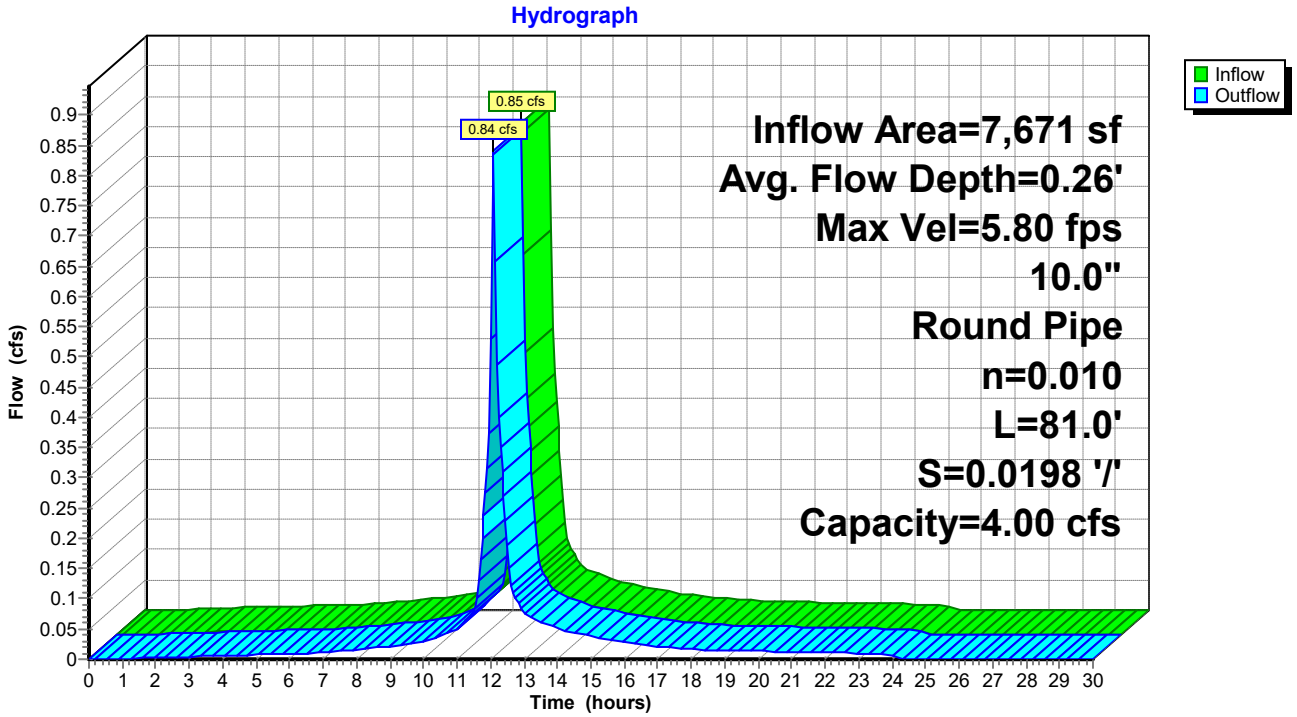
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.80 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.89 fps, Avg. Travel Time= 0.7 min

Peak Storage= 12 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.26'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.00 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 81.0' Slope= 0.0198 '/'
Inlet Invert= 349.00', Outlet Invert= 347.40'



Reach CO2: TO CO#3



Stage-Discharge for Reach CO2: TO CO#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
349.00	0.00	0.00
349.01	0.73	0.00
349.02	1.16	0.00
349.03	1.52	0.01
349.04	1.83	0.02
349.05	2.12	0.03
349.06	2.39	0.04
349.07	2.63	0.06
349.08	2.87	0.08
349.09	3.09	0.10
349.10	3.30	0.12
349.11	3.50	0.15
349.12	3.70	0.18
349.13	3.88	0.21
349.14	4.06	0.25
349.15	4.24	0.28
349.16	4.41	0.32
349.17	4.57	0.37
349.18	4.72	0.41
349.19	4.88	0.46
349.20	5.02	0.51
349.21	5.17	0.56
349.22	5.30	0.61
349.23	5.44	0.67
349.24	5.57	0.72
349.25	5.70	0.78
349.26	5.82	0.85
349.27	5.94	0.91
349.28	6.06	0.97
349.29	6.17	1.04
349.30	6.28	1.11
349.31	6.38	1.18
349.32	6.49	1.25
349.33	6.59	1.32
349.34	6.69	1.40
349.35	6.78	1.47
349.36	6.87	1.55
349.37	6.96	1.63
349.38	7.05	1.71
349.39	7.13	1.79
349.40	7.21	1.87
349.41	7.29	1.95
349.42	7.36	2.03
349.43	7.44	2.11
349.44	7.51	2.19
349.45	7.57	2.28
349.46	7.64	2.36
349.47	7.70	2.44
349.48	7.76	2.52
349.49	7.82	2.61
349.50	7.87	2.69
349.51	7.92	2.77
349.52	7.97	2.85
349.53	8.02	2.93
349.54	8.06	3.01
349.55	8.10	3.09
349.56	8.14	3.17
349.57	8.18	3.25
349.58	8.21	3.33
349.59	8.24	3.40
349.60	8.27	3.47
349.61	8.29	3.55
349.62	8.31	3.62
349.63	8.33	3.68
349.64	8.34	3.75
349.65	8.35	3.81
349.66	8.36	3.87
349.67	8.37	3.93
349.68	**8.37**	3.99
349.69	8.36	4.04
349.70	8.36	4.09
349.71	8.35	4.13
349.72	8.33	4.17
349.73	8.31	4.21
349.74	8.28	4.24
349.75	8.25	4.27
349.76	8.21	4.29
349.77	8.17	4.30
349.78	8.11	**4.31**
349.79	8.05	4.30
349.80	7.97	4.29
349.81	7.87	4.26
349.82	7.74	4.21
349.83	7.47	4.07

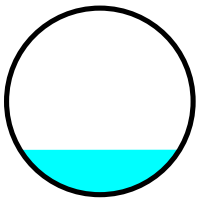
Summary for Reach CO3: TO DMH#21

Inflow Area = 8,341 sf, 60.68% Impervious, Inflow Depth = 4.73" for 100-Year event
Inflow = 0.94 cfs @ 12.09 hrs, Volume= 3,287 cf
Outflow = 0.94 cfs @ 12.09 hrs, Volume= 3,287 cf, Atten= 0%, Lag= 0.1 min

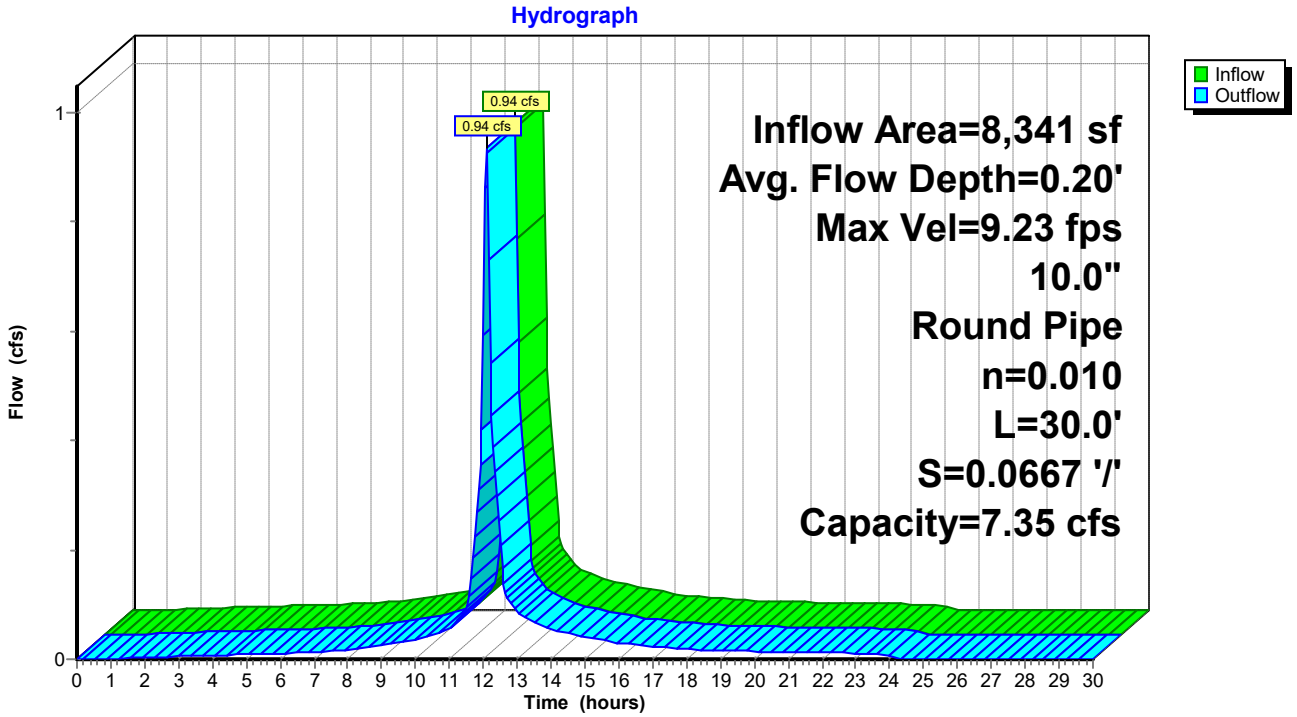
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.23 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.00 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.20'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 7.35 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 30.0' Slope= 0.0667 '/'
Inlet Invert= 347.40', Outlet Invert= 345.40'



Reach CO3: TO DMH#21



Stage-Discharge for Reach CO3: TO DMH#21

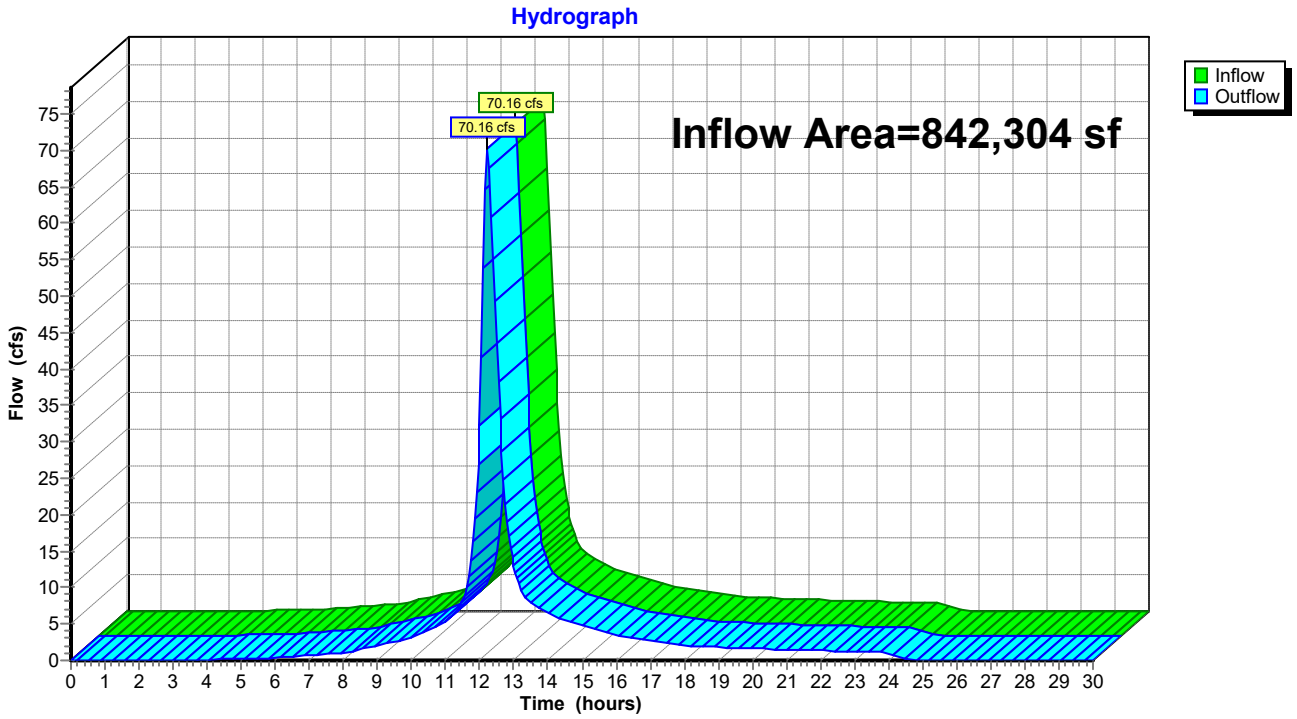
Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.40	0.00	0.00
347.41	1.34	0.00
347.42	2.13	0.01
347.43	2.79	0.02
347.44	3.37	0.03
347.45	3.90	0.05
347.46	4.38	0.08
347.47	4.84	0.11
347.48	5.27	0.14
347.49	5.68	0.18
347.50	6.07	0.22
347.51	6.44	0.27
347.52	6.79	0.33
347.53	7.14	0.39
347.54	7.47	0.45
347.55	7.79	0.52
347.56	8.09	0.59
347.57	8.39	0.67
347.58	8.68	0.75
347.59	8.96	0.84
347.60	9.23	0.93
347.61	9.49	1.02
347.62	9.74	1.12
347.63	9.99	1.22
347.64	10.23	1.33
347.65	10.47	1.44
347.66	10.69	1.55
347.67	10.91	1.67
347.68	11.12	1.79
347.69	11.33	1.91
347.70	11.53	2.04
347.71	11.73	2.17
347.72	11.92	2.30
347.73	12.10	2.43
347.74	12.28	2.57
347.75	12.46	2.71
347.76	12.63	2.85
347.77	12.79	2.99
347.78	12.95	3.14
347.79	13.10	3.28
347.80	13.25	3.43
347.81	13.39	3.58
347.82	13.53	3.73
347.83	13.66	3.88
347.84	13.79	4.03
347.85	13.91	4.18
347.86	14.03	4.33
347.87	14.15	4.49
347.88	14.26	4.64
347.89	14.36	4.79
347.90	14.46	4.94
347.91	14.55	5.09
347.92	14.64	5.24
347.93	14.73	5.39
347.94	14.81	5.54
347.95	14.88	5.68
347.96	14.95	5.83
347.97	15.02	5.97
347.98	15.08	6.11
347.99	15.13	6.25
348.00	15.18	6.38
348.01	15.23	6.51
348.02	15.27	6.64
348.03	15.30	6.77
348.04	15.33	6.89
348.05	15.35	7.01
348.06	15.36	7.12
348.07	15.37	7.22
348.08	**15.37**	7.32
348.09	15.37	7.42
348.10	15.35	7.51
348.11	15.33	7.59
348.12	15.30	7.67
348.13	15.27	7.73
348.14	15.22	7.79
348.15	15.16	7.84
348.16	15.09	7.87
348.17	15.00	7.90
348.18	14.90	**7.91**
348.19	14.79	7.90
348.20	14.64	7.88
348.21	14.46	7.82
348.22	14.22	7.73
348.23	13.72	7.48

Summary for Reach cul: DP#1A

Inflow Area = 842,304 sf, 4.87% Impervious, Inflow Depth = 4.86" for 100-Year event
Inflow = 70.16 cfs @ 12.22 hrs, Volume= 340,876 cf
Outflow = 70.16 cfs @ 12.22 hrs, Volume= 340,876 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach cul: DP#1A



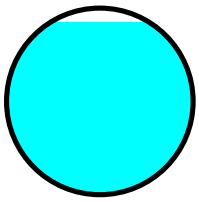
Summary for Reach D10: (new Reach)

Inflow Area = 51,339 sf, 69.57% Impervious, Inflow Depth = 5.02" for 100-Year event
Inflow = 6.68 cfs @ 12.07 hrs, Volume= 21,480 cf
Outflow = 6.60 cfs @ 12.08 hrs, Volume= 21,480 cf, Atten= 1%, Lag= 0.5 min

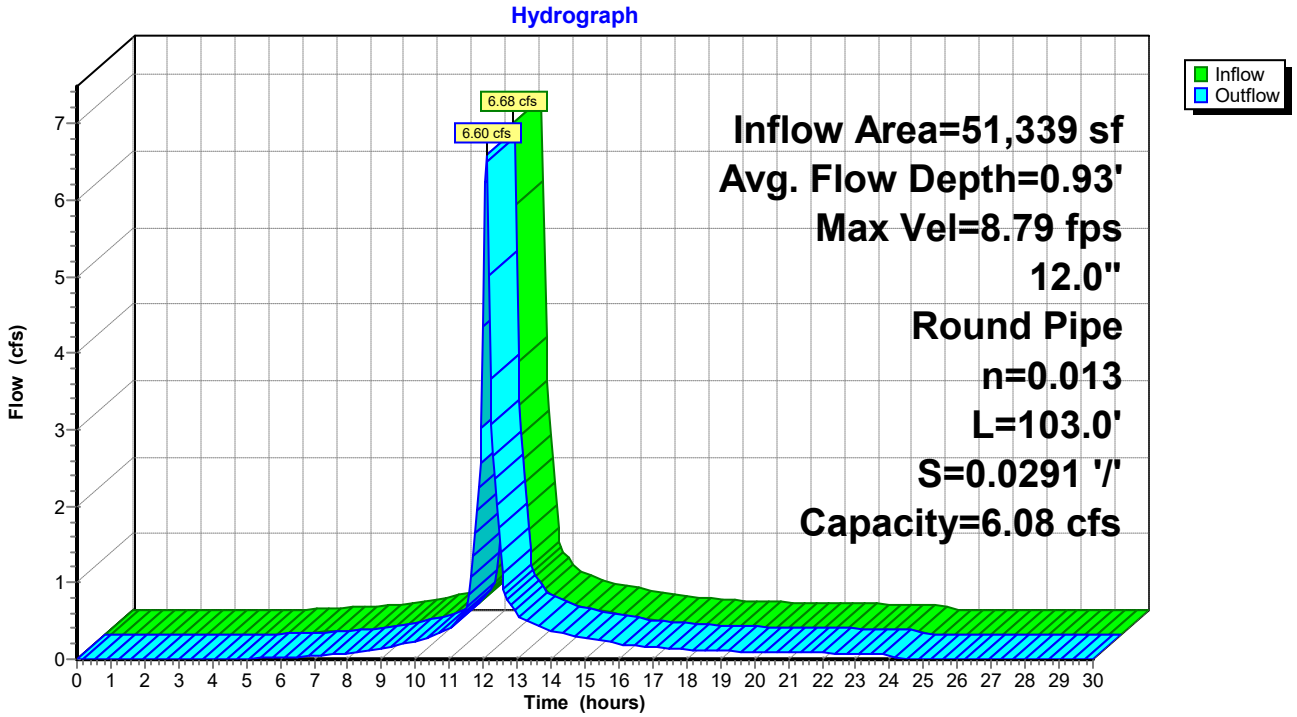
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.79 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.19 fps, Avg. Travel Time= 0.5 min

Peak Storage= 79 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.93'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.08 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 103.0' Slope= 0.0291 '/'
Inlet Invert= 346.60', Outlet Invert= 343.60'



Reach D10: (new Reach)



Stage-Discharge for Reach D10: (new Reach)

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.60	0.00	0.00
346.61	0.69	0.00
346.62	1.09	0.00
346.63	1.42	0.01
346.64	1.72	0.02
346.65	1.99	0.03
346.66	2.24	0.04
346.67	2.47	0.06
346.68	2.69	0.08
346.69	2.90	0.10
346.70	3.11	0.13
346.71	3.30	0.16
346.72	3.48	0.19
346.73	3.66	0.22
346.74	3.83	0.26
346.75	4.00	0.30
346.76	4.16	0.34
346.77	4.32	0.38
346.78	4.47	0.43
346.79	4.62	0.48
346.80	4.76	0.53
346.81	4.90	0.59
346.82	5.04	0.65
346.83	5.17	0.71
346.84	5.30	0.77
346.85	5.42	0.83
346.86	5.55	0.90
346.87	5.67	0.97
346.88	5.78	1.04
346.89	5.90	1.11
346.90	6.01	1.19
346.91	6.12	1.27
346.92	6.22	1.35
346.93	6.33	1.43
346.94	6.43	1.51
346.95	6.53	1.60
346.96	6.62	1.69
346.97	6.72	1.77
346.98	6.81	1.86
346.99	6.90	1.96
347.00	6.98	2.05
347.01	7.07	2.14
347.02	7.15	2.24
347.03	7.23	2.34
347.04	7.31	2.43
347.05	7.39	2.53
347.06	7.46	2.63
347.07	7.54	2.73
347.08	7.61	2.83
347.09	7.68	2.94
347.10	7.74	3.04
347.11	7.81	3.14
347.12	7.87	3.25
347.13	7.93	3.35
347.14	7.99	3.46
347.15	8.05	3.56
347.16	8.10	3.67
347.17	8.15	3.77
347.18	8.21	3.88
347.19	8.26	3.98
347.20	8.30	4.09
347.21	8.35	4.19
347.22	8.39	4.29
347.23	8.43	4.40
347.24	8.47	4.50
347.25	8.51	4.60
347.26	8.55	4.70
347.27	8.58	4.80
347.28	8.61	4.90
347.29	8.64	4.99
347.30	8.67	5.09
347.31	8.69	5.19
347.32	8.72	5.28
347.33	8.74	5.37
347.34	8.76	5.46
347.35	8.78	5.54
347.36	8.79	5.63
347.37	8.80	5.71
347.38	8.81	5.79
347.39	8.82	5.87
347.40	8.82	5.94
347.41	**8.83**	6.01
347.42	8.83	6.08
347.43	8.82	6.15
347.44	8.82	6.21
347.45	8.81	6.27
347.46	8.79	6.32
347.47	8.78	6.37
347.48	8.76	6.41
347.49	8.73	6.45
347.50	8.70	6.48
347.51	8.67	6.51
347.52	8.63	6.53
347.53	8.59	6.54
347.54	8.54	**6.54**
347.55	8.48	6.53
347.56	8.41	6.51
347.57	8.32	6.48
347.58	8.22	6.43
347.59	8.08	6.34
347.60	7.74	6.08

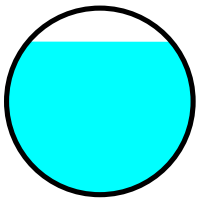
Summary for Reach D11: TO DMH12

Inflow Area = 39,805 sf, 44.80% Impervious, Inflow Depth = 4.13" for 100-Year event
Inflow = 4.40 cfs @ 12.08 hrs, Volume= 13,697 cf
Outflow = 4.37 cfs @ 12.08 hrs, Volume= 13,697 cf, Atten= 1%, Lag= 0.6 min

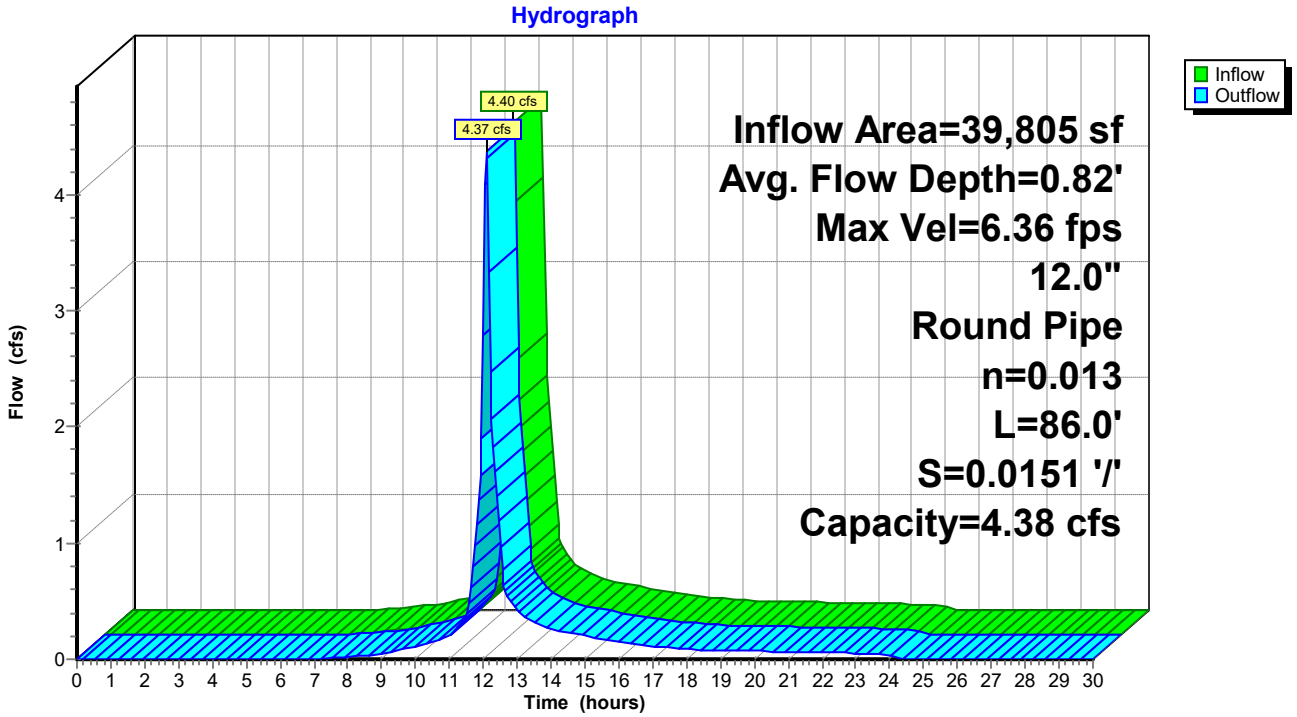
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.36 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.40 fps, Avg. Travel Time= 0.6 min

Peak Storage= 60 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.82'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.38 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 86.0' Slope= 0.0151 '/'
Inlet Invert= 348.50', Outlet Invert= 347.20'



Reach D11: TO DMH12



Stage-Discharge for Reach D11: TO DMH12

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.50	0.00	0.00
348.51	0.50	0.00
348.52	0.79	0.00
348.53	1.03	0.01
348.54	1.24	0.01
348.55	1.43	0.02
348.56	1.61	0.03
348.57	1.78	0.04
348.58	1.94	0.06
348.59	2.09	0.07
348.60	2.24	0.09
348.61	2.38	0.11
348.62	2.51	0.13
348.63	2.64	0.16
348.64	2.76	0.18
348.65	2.88	0.21
348.66	3.00	0.24
348.67	3.11	0.28
348.68	3.22	0.31
348.69	3.33	0.35
348.70	3.43	0.38
348.71	3.53	0.42
348.72	3.63	0.46
348.73	3.72	0.51
348.74	3.82	0.55
348.75	3.91	0.60
348.76	4.00	0.65
348.77	4.08	0.70
348.78	4.17	0.75
348.79	4.25	0.80
348.80	4.33	0.86
348.81	4.41	0.91
348.82	4.48	0.97
348.83	4.56	1.03
348.84	4.63	1.09
348.85	4.70	1.15
348.86	4.77	1.21
348.87	4.84	1.28
348.88	4.90	1.34
348.89	4.97	1.41
348.90	5.03	1.48
348.91	5.09	1.54
348.92	5.15	1.61
348.93	5.21	1.68
348.94	5.27	1.75
348.95	5.32	1.82
348.96	5.38	1.90
348.97	5.43	1.97
348.98	5.48	2.04
348.99	5.53	2.12
349.00	5.58	2.19
349.01	5.62	2.26
349.02	5.67	2.34
349.03	5.71	2.41
349.04	5.76	2.49
349.05	5.80	2.57
349.06	5.84	2.64
349.07	5.87	2.72
349.08	5.91	2.79
349.09	5.95	2.87
349.10	5.98	2.94
349.11	6.01	3.02
349.12	6.05	3.09
349.13	6.08	3.17
349.14	6.10	3.24
349.15	6.13	3.31
349.16	6.16	3.39
349.17	6.18	3.46
349.18	6.20	3.53
349.19	6.23	3.60
349.20	6.25	3.67
349.21	6.26	3.74
349.22	6.28	3.80
349.23	6.30	3.87
349.24	6.31	3.93
349.25	6.32	3.99
349.26	6.33	4.06
349.27	6.34	4.11
349.28	6.35	4.17
349.29	6.35	4.23
349.30	6.36	4.28
349.31	**6.36**	4.33
349.32	6.36	4.38
349.33	6.36	4.43
349.34	6.35	4.47
349.35	6.34	4.51
349.36	6.33	4.55
349.37	6.32	4.59
349.38	6.31	4.62
349.39	6.29	4.65
349.40	6.27	4.67
349.41	6.25	4.69
349.42	6.22	4.70
349.43	6.19	4.71
349.44	6.15	**4.71**
349.45	6.11	4.71
349.46	6.06	4.69
349.47	6.00	4.67
349.48	5.92	4.63
349.49	5.82	4.56
349.50	5.58	4.38

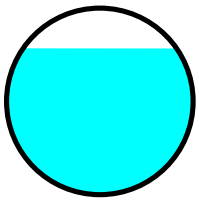
Summary for Reach D12: TO DMH13

Inflow Area = 63,650 sf, 57.11% Impervious, Inflow Depth = 4.58" for 100-Year event
Inflow = 7.59 cfs @ 12.08 hrs, Volume= 24,296 cf
Outflow = 7.55 cfs @ 12.09 hrs, Volume= 24,296 cf, Atten= 1%, Lag= 0.4 min

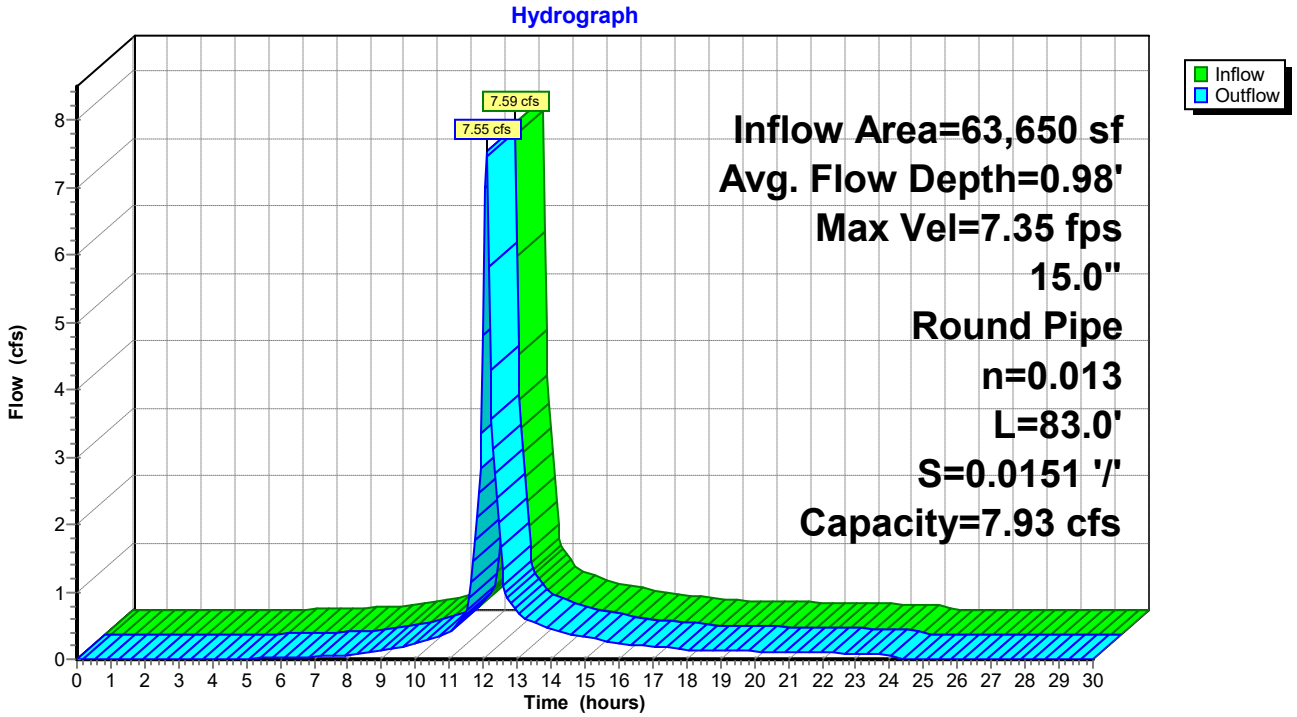
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.35 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.53 fps, Avg. Travel Time= 0.5 min

Peak Storage= 86 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.98'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.93 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 83.0' Slope= 0.0151 '/'
Inlet Invert= 347.10', Outlet Invert= 345.85'



Reach D12: TO DMH13



Stage-Discharge for Reach D12: TO DMH13

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.10	0.00	0.00
347.11	0.46	0.00
347.12	0.78	0.00
347.13	1.02	0.01
347.14	1.24	0.01
347.15	1.43	0.02
347.16	1.61	0.04
347.17	1.78	0.05
347.18	1.95	0.06
347.19	2.10	0.08
347.20	2.25	0.10
347.21	2.39	0.13
347.22	2.52	0.15
347.23	2.66	0.18
347.24	2.78	0.21
347.25	2.91	0.24
347.26	3.03	0.28
347.27	3.14	0.32
347.28	3.25	0.35
347.29	3.37	0.40
347.30	3.47	0.44
347.31	3.58	0.49
347.32	3.68	0.54
347.33	3.78	0.59
347.34	3.88	0.64
347.35	3.97	0.69
347.36	4.07	0.75
347.37	4.16	0.81
347.38	4.25	0.87
347.39	4.34	0.94
347.40	4.42	1.00
347.41	4.51	1.07
347.42	4.59	1.14
347.43	4.67	1.21
347.44	4.75	1.28
347.45	4.83	1.36
347.46	4.90	1.43
347.47	4.98	1.51
347.48	5.05	1.59
347.49	5.12	1.67
347.50	5.19	1.76
347.51	5.26	1.84
347.52	5.33	1.93
347.53	5.40	2.02
347.54	5.46	2.11
347.55	5.53	2.20
347.56	5.59	2.29
347.57	5.65	2.38
347.58	5.71	2.48
347.59	5.77	2.57
347.60	5.83	2.67
347.61	5.88	2.77
347.62	5.94	2.87
347.63	6.00	2.97
347.64	6.05	3.07
347.65	6.10	3.17
347.66	6.15	3.28
347.67	6.20	3.38
347.68	6.25	3.48
347.69	6.30	3.59
347.70	6.35	3.70
347.71	6.39	3.80
347.72	6.44	3.91
347.73	6.48	4.02
347.74	6.52	4.13
347.75	6.57	4.23
347.76	6.61	4.34
347.77	6.65	4.45
347.78	6.69	4.56
347.79	6.72	4.67
347.80	6.76	4.78
347.81	6.80	4.89
347.82	6.83	5.00
347.83	6.86	5.11
347.84	6.90	5.22
347.85	6.93	5.33
347.86	6.96	5.43
347.87	6.99	5.54
347.88	7.02	5.65
347.89	7.04	5.76
347.90	7.07	5.86
347.91	7.10	5.97
347.92	7.12	6.08
347.93	7.14	6.18
347.94	7.16	6.28
347.95	7.19	6.39
347.96	7.21	6.49
347.97	7.22	6.59
347.98	7.24	6.69
347.99	7.26	6.78
348.00	7.27	6.88
348.01	7.29	6.98
348.02	7.30	7.07
348.03	7.31	7.16
348.04	7.32	7.25
348.05	7.33	7.34
348.06	7.34	7.43
348.07	7.35	7.51
348.08	7.35	7.59
348.09	7.36	7.67
348.10	7.36	7.75
348.11	7.36	7.82
348.12	**7.36**	7.90
348.13	7.36	7.96
348.14	7.36	8.03
348.15	7.36	8.09
348.16	7.35	8.15
348.17	7.34	8.21
348.18	7.33	8.26
348.19	7.32	8.31
348.20	7.31	8.36
348.21	7.29	8.40
348.22	7.27	8.43
348.23	7.25	8.46
348.24	7.23	8.49
348.25	7.20	8.51
348.26	7.17	8.52
348.27	7.14	**8.53**
348.28	7.10	8.52
348.29	7.06	8.51
348.30	7.02	8.49
348.31	6.96	8.46
348.32	6.89	8.41
348.33	6.81	8.33
348.34	6.69	8.19
348.35	6.46	7.93

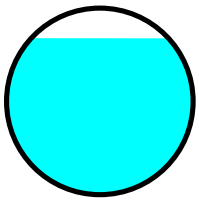
Summary for Reach D13: TO DMH14

Inflow Area = 75,826 sf, 62.17% Impervious, Inflow Depth = 4.78" for 100-Year event
Inflow = 9.27 cfs @ 12.08 hrs, Volume= 30,173 cf
Outflow = 9.20 cfs @ 12.09 hrs, Volume= 30,173 cf, Atten= 1%, Lag= 0.4 min

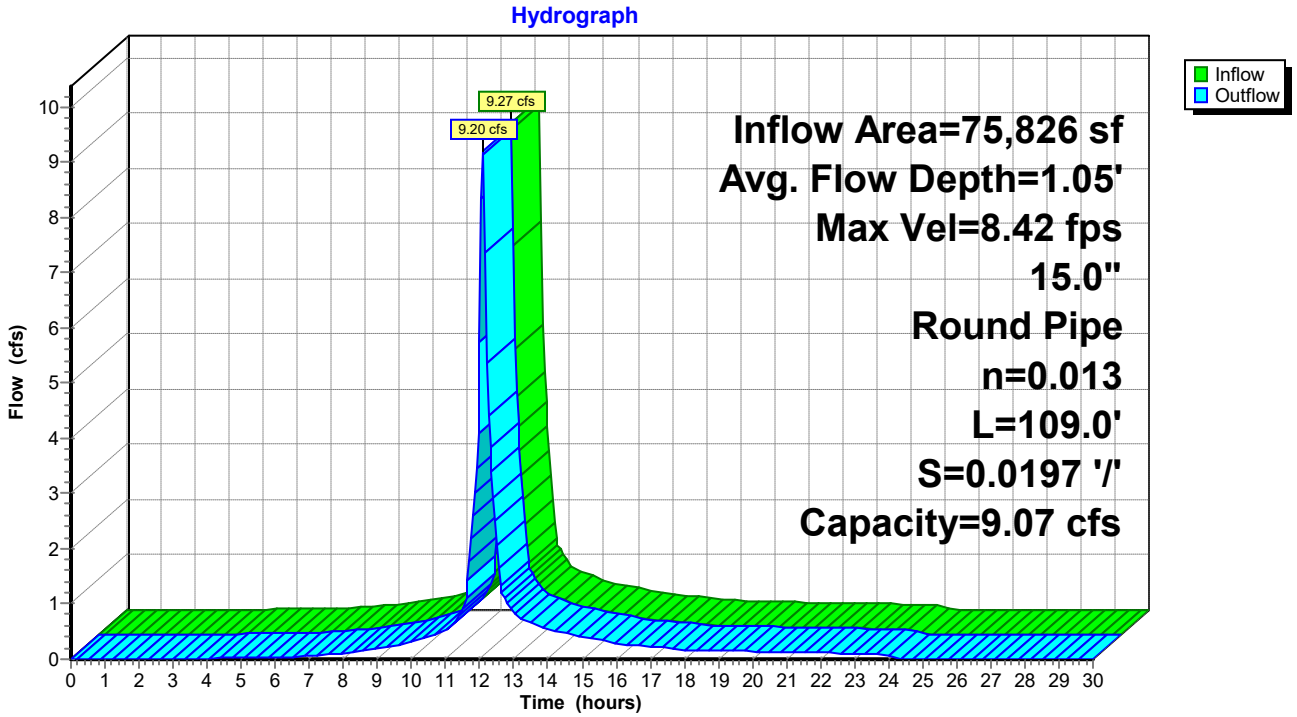
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.42 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.88 fps, Avg. Travel Time= 0.6 min

Peak Storage= 120 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.05'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.07 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 109.0' Slope= 0.0197 '/'
Inlet Invert= 345.75', Outlet Invert= 343.60'



Reach D13: TO DMH14



Stage-Discharge for Reach D13: TO DMH14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
345.75	0.00	0.00
345.76	0.53	0.00
345.77	0.89	0.00
345.78	1.17	0.01
345.79	1.42	0.02
345.80	1.64	0.03
345.81	1.85	0.04
345.82	2.04	0.06
345.83	2.23	0.07
345.84	2.40	0.10
345.85	2.57	0.12
345.86	2.73	0.15
345.87	2.89	0.17
345.88	3.04	0.21
345.89	3.19	0.24
345.90	3.33	0.28
345.91	3.46	0.32
345.92	3.60	0.36
345.93	3.73	0.41
345.94	3.85	0.45
345.95	3.97	0.50
345.96	4.09	0.56
345.97	4.21	0.61
345.98	4.33	0.67
345.99	4.44	0.73
346.00	4.55	0.79
346.01	4.65	0.86
346.02	4.76	0.93
346.03	4.86	1.00
346.04	4.96	1.07
346.05	5.06	1.15
346.06	5.16	1.22
346.07	5.25	1.30
346.08	5.34	1.38
346.09	5.43	1.47
346.10	5.52	1.55
346.11	5.61	1.64
346.12	5.70	1.73
346.13	5.78	1.82
346.14	5.86	1.92
346.15	5.94	2.01
346.16	6.02	2.11
346.17	6.10	2.21
346.18	6.18	2.31
346.19	6.25	2.41
346.20	6.32	2.52
346.21	6.40	2.62
346.22	6.47	2.73
346.23	6.54	2.84
346.24	6.60	2.95
346.25	6.67	3.06
346.26	6.73	3.17
346.27	6.80	3.28
346.28	6.86	3.40
346.29	6.92	3.51
346.30	6.98	3.63
346.31	7.04	3.75
346.32	7.10	3.87
346.33	7.15	3.99
346.34	7.21	4.11
346.35	7.26	4.23
346.36	7.32	4.35
346.37	7.37	4.47
346.38	7.42	4.60
346.39	7.47	4.72
346.40	7.51	4.85
346.41	7.56	4.97
346.42	7.61	5.10
346.43	7.65	5.22
346.44	7.69	5.35
346.45	7.74	5.47
346.46	7.78	5.60
346.47	7.82	5.72
346.48	7.85	5.85
346.49	7.89	5.97
346.50	7.93	6.10
346.51	7.96	6.22
346.52	8.00	6.34
346.53	8.03	6.47
346.54	8.06	6.59
346.55	8.09	6.71
346.56	8.12	6.83
346.57	8.15	6.95
346.58	8.17	7.07
346.59	8.20	7.19
346.60	8.22	7.31
346.61	8.25	7.42
346.62	8.27	7.54
346.63	8.29	7.65
346.64	8.31	7.76
346.65	8.33	7.87
346.66	8.34	7.98
346.67	8.36	8.09
346.68	8.37	8.20
346.69	8.38	8.30
346.70	8.39	8.40
346.71	8.40	8.50
346.72	8.41	8.59
346.73	8.42	8.69
346.74	8.42	8.78
346.75	8.43	8.87
346.76	8.43	8.95
346.77	**8.43**	9.04
346.78	8.43	9.11
346.79	8.42	9.19
346.80	8.42	9.26
346.81	8.41	9.33
346.82	8.40	9.40
346.83	8.39	9.46
346.84	8.38	9.51
346.85	8.36	9.56
346.86	8.34	9.61
346.87	8.32	9.65
346.88	8.30	9.69
346.89	8.27	9.71
346.90	8.24	9.74
346.91	8.21	9.75
346.92	8.17	**9.76**
346.93	8.13	9.75
346.94	8.08	9.74
346.95	8.03	9.72
346.96	7.96	9.68
346.97	7.89	9.62
346.98	7.80	9.53
346.99	7.65	9.38
347.00	7.39	9.07

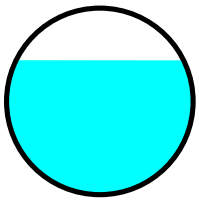
Summary for Reach D14: TO DMH15

Inflow Area = 248,895 sf, 65.27% Impervious, Inflow Depth = 5.07" for 100-Year event
Inflow = 30.24 cfs @ 12.10 hrs, Volume= 105,139 cf
Outflow = 29.07 cfs @ 12.12 hrs, Volume= 105,139 cf, Atten= 4%, Lag= 1.5 min

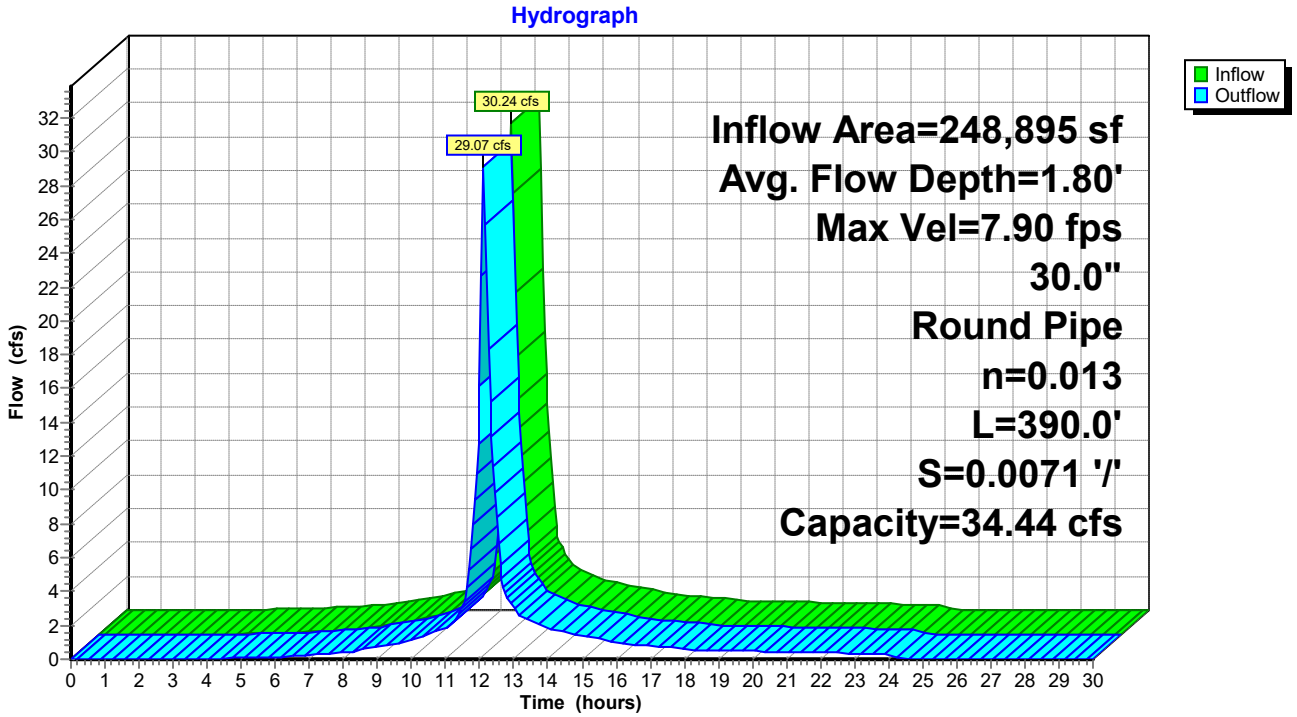
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.90 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 2.59 fps, Avg. Travel Time= 2.5 min

Peak Storage= 1,479 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.80'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.44 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 390.0' Slope= 0.0071 '/'
Inlet Invert= 338.20', Outlet Invert= 335.45'



Reach D14: TO DMH15



Stage-Discharge for Reach D14: TO DMH15

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
338.20	0.00	0.00
338.22	0.50	0.00
338.24	0.84	0.02
338.26	1.11	0.04
338.28	1.34	0.06
338.30	1.56	0.10
338.32	1.75	0.15
338.34	1.94	0.21
338.36	2.11	0.28
338.38	2.28	0.36
338.40	2.44	0.45
338.42	2.59	0.55
338.44	2.74	0.66
338.46	2.88	0.78
338.48	3.02	0.91
338.50	3.16	1.05
338.52	3.29	1.21
338.54	3.41	1.37
338.56	3.54	1.54
338.58	3.66	1.72
338.60	3.77	1.91
338.62	3.89	2.12
338.64	4.00	2.33
338.66	4.11	2.55
338.68	4.21	2.78
338.70	4.32	3.02
338.72	4.42	3.27
338.74	4.52	3.52
338.76	4.61	3.79
338.78	4.71	4.07
338.80	4.80	4.35
338.82	4.89	4.64
338.84	4.98	4.95
338.86	5.07	5.26
338.88	5.16	5.57
338.90	5.24	5.90
338.92	5.32	6.23
338.94	5.41	6.57
338.96	5.49	6.92
338.98	5.56	7.28
339.00	5.64	7.64
339.02	5.72	8.01
339.04	5.79	8.38
339.06	5.86	8.77
339.08	5.93	9.15
339.10	6.00	9.55
339.12	6.07	9.95
339.14	6.14	10.36
339.16	6.20	10.77
339.18	6.27	11.19
339.20	6.33	11.61
339.22	6.39	12.03
339.24	6.45	12.47
339.26	6.51	12.90
339.28	6.57	13.34
339.30	6.63	13.79
339.32	6.68	14.23
339.34	6.74	14.69
339.36	6.79	15.14
339.38	6.84	15.60
339.40	6.89	16.06
339.42	6.94	16.52
339.44	6.99	16.99
339.46	7.04	17.46
339.48	7.09	17.93
339.50	7.13	18.40
339.52	7.18	18.87
339.54	7.22	19.34
339.56	7.26	19.82
339.58	7.30	20.29
339.60	7.34	20.77
339.62	7.38	21.24
339.64	7.42	21.72
339.66	7.45	22.19
339.68	7.49	22.67
339.70	7.52	23.14
339.72	7.56	23.61
339.74	7.59	24.08
339.76	7.62	24.55
339.78	7.65	25.01
339.80	7.68	25.48
339.82	7.71	25.94
339.84	7.73	26.39
339.86	7.76	26.85
339.88	7.78	27.30
339.90	7.81	27.74
339.92	7.83	28.18
339.94	7.85	28.62
339.96	7.87	29.05
339.98	7.88	29.48
340.00	7.90	29.90
340.02	7.92	30.31
340.04	7.93	30.71
340.06	7.94	31.11
340.08	7.96	31.50
340.10	7.97	31.89
340.12	7.98	32.26
340.14	7.98	32.63
340.16	7.99	32.98
340.18	7.99	33.33
340.20	8.00	33.67
340.22	**8.00**	33.99
340.24	**8.00**	34.30
340.26	8.00	34.60
340.28	7.99	34.89
340.30	7.99	35.17
340.32	7.98	35.43
340.34	7.97	35.67
340.36	7.96	35.90
340.38	7.95	36.11
340.40	7.94	36.31
340.42	7.92	36.48
340.44	7.90	36.64
340.46	7.88	36.77
340.48	7.85	36.88
340.50	7.82	36.97
340.52	7.79	37.02
340.54	7.76	**37.04**
340.56	7.72	**37.03**
340.58	7.67	36.99
340.60	7.62	36.90
340.62	7.56	36.75
340.64	7.49	36.52
340.66	7.40	36.19
340.68	7.26	35.60
340.70	7.02	34.44

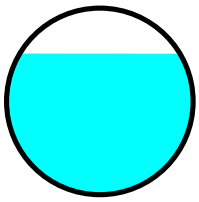
Summary for Reach D15: TO DMH16

Inflow Area = 273,738 sf, 64.05% Impervious, Inflow Depth = 5.00" for 100-Year event
Inflow = 31.65 cfs @ 12.12 hrs, Volume= 113,960 cf
Outflow = 31.02 cfs @ 12.14 hrs, Volume= 113,960 cf, Atten= 2%, Lag= 1.1 min

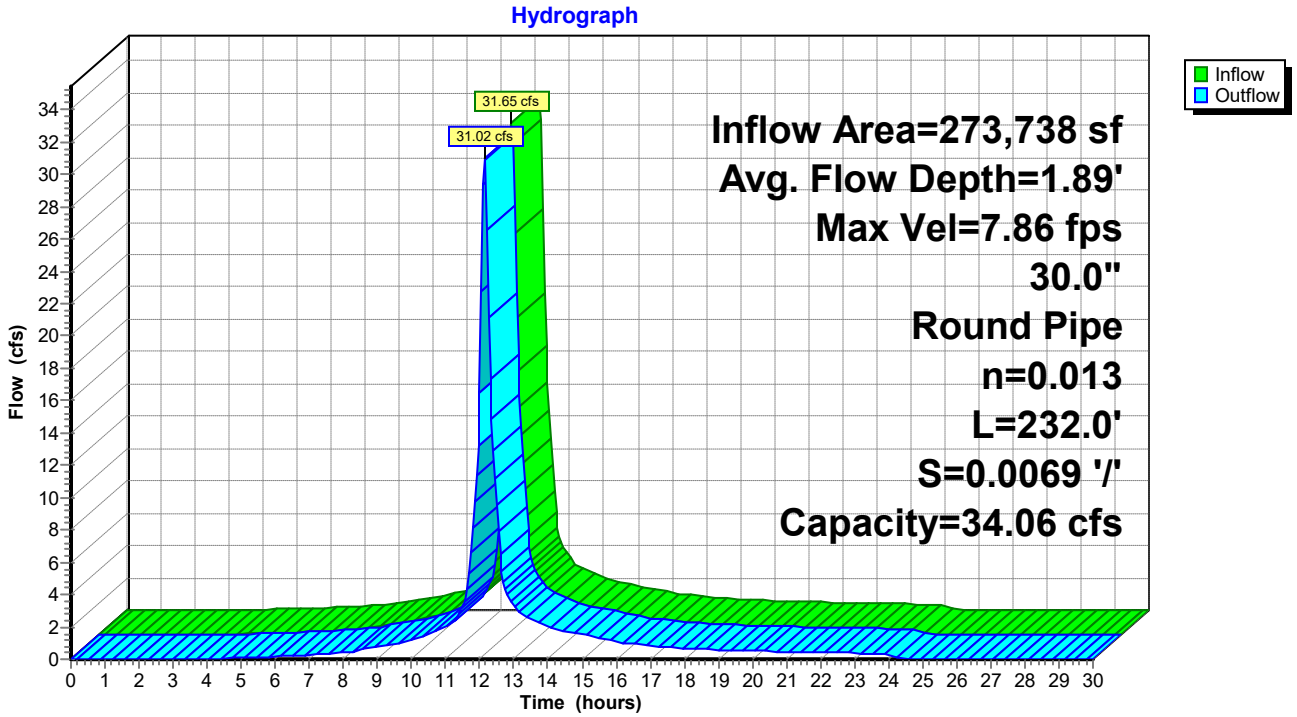
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.86 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.52 fps, Avg. Travel Time= 1.5 min

Peak Storage= 925 cf @ 12.13 hrs
Average Depth at Peak Storage= 1.89'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.06 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 232.0' Slope= 0.0069 '/'
Inlet Invert= 335.35', Outlet Invert= 333.75'



Reach D15: TO DMH16



Stage-Discharge for Reach D15: TO DMH16

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
335.35	0.00	0.00
335.37	0.49	0.00
335.39	0.83	0.02
335.41	1.10	0.04
335.43	1.33	0.06
335.45	1.54	0.10
335.47	1.73	0.15
335.49	1.92	0.21
335.51	2.09	0.28
335.53	2.26	0.36
335.55	2.41	0.44
335.57	2.57	0.54
335.59	2.71	0.65
335.61	2.85	0.77
335.63	2.99	0.90
335.65	3.12	1.04
335.67	3.25	1.19
335.69	3.38	1.35
335.71	3.50	1.52
335.73	3.62	1.70
335.75	3.73	1.89
335.77	3.84	2.09
335.79	3.95	2.30
335.81	4.06	2.52
335.83	4.17	2.75
335.85	4.27	2.98
335.87	4.37	3.23
335.89	4.47	3.49
335.91	4.56	3.75
335.93	4.66	4.02
335.95	4.75	4.30
335.97	4.84	4.59
335.99	4.93	4.89
336.01	5.01	5.20
336.03	5.10	5.51
336.05	5.18	5.83
336.07	5.27	6.16
336.09	5.35	6.50
336.11	5.42	6.84
336.13	5.50	7.20
336.15	5.58	7.55
336.17	5.65	7.92
336.19	5.73	8.29
336.21	5.80	8.67
336.23	5.87	9.05
336.25	5.94	9.44
336.27	6.00	9.84
336.29	6.07	10.24
336.31	6.13	10.65
336.33	6.20	11.06
336.35	6.26	11.48
336.37	6.32	11.90
336.39	6.38	12.33
336.41	6.44	12.76
336.43	6.50	13.20
336.45	6.55	13.63
336.47	6.61	14.08
336.49	6.66	14.52
336.51	6.72	14.97
336.53	6.77	15.43
336.55	6.82	15.88
336.57	6.87	16.34
336.59	6.92	16.80
336.61	6.96	17.26
336.63	7.01	17.73
336.65	7.05	18.19
336.67	7.10	18.66
336.69	7.14	19.13
336.71	7.18	19.60
336.73	7.22	20.07
336.75	7.26	20.54
336.77	7.30	21.01
336.79	7.34	21.48
336.81	7.37	21.95
336.83	7.41	22.42
336.85	7.44	22.88
336.87	7.47	23.35
336.89	7.51	23.82
336.91	7.54	24.28
336.93	7.57	24.74
336.95	7.59	25.20
336.97	7.62	25.65
336.99	7.65	26.10
337.01	7.67	26.55
337.03	7.70	27.00
337.05	7.72	27.44
337.07	7.74	27.87
337.09	7.76	28.30
337.11	7.78	28.73
337.13	7.80	29.15
337.15	7.81	29.57
337.17	7.83	29.97
337.19	7.84	30.37
337.21	7.86	30.77
337.23	7.87	31.16
337.25	7.88	31.54
337.27	7.89	31.91
337.29	7.89	32.27
337.31	7.90	32.62
337.33	7.91	32.96
337.35	7.91	33.30
337.37	**7.91**	33.62
337.39	**7.91**	33.92
337.41	7.91	34.22
337.43	7.91	34.51
337.45	7.90	34.78
337.47	7.89	35.04
337.49	7.89	35.28
337.51	7.88	35.50
337.53	7.86	35.71
337.55	7.85	35.91
337.57	7.83	36.08
337.59	7.81	36.23
337.61	7.79	36.36
337.63	7.77	36.47
337.65	7.74	36.56
337.67	7.71	36.61
337.69	7.67	**36.63**
337.71	7.63	**36.62**
337.73	7.59	36.58
337.75	7.54	36.49
337.77	7.48	36.34
337.79	7.40	36.12
337.81	7.32	35.79
337.83	7.18	35.21
337.85	6.94	34.06

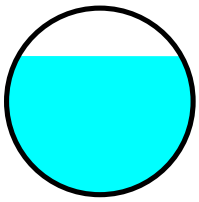
Summary for Reach D16: TO BASIN#1

Inflow Area = 273,738 sf, 64.05% Impervious, Inflow Depth = 5.00" for 100-Year event
Inflow = 31.02 cfs @ 12.14 hrs, Volume= 113,960 cf
Outflow = 30.90 cfs @ 12.14 hrs, Volume= 113,960 cf, Atten= 0%, Lag= 0.3 min

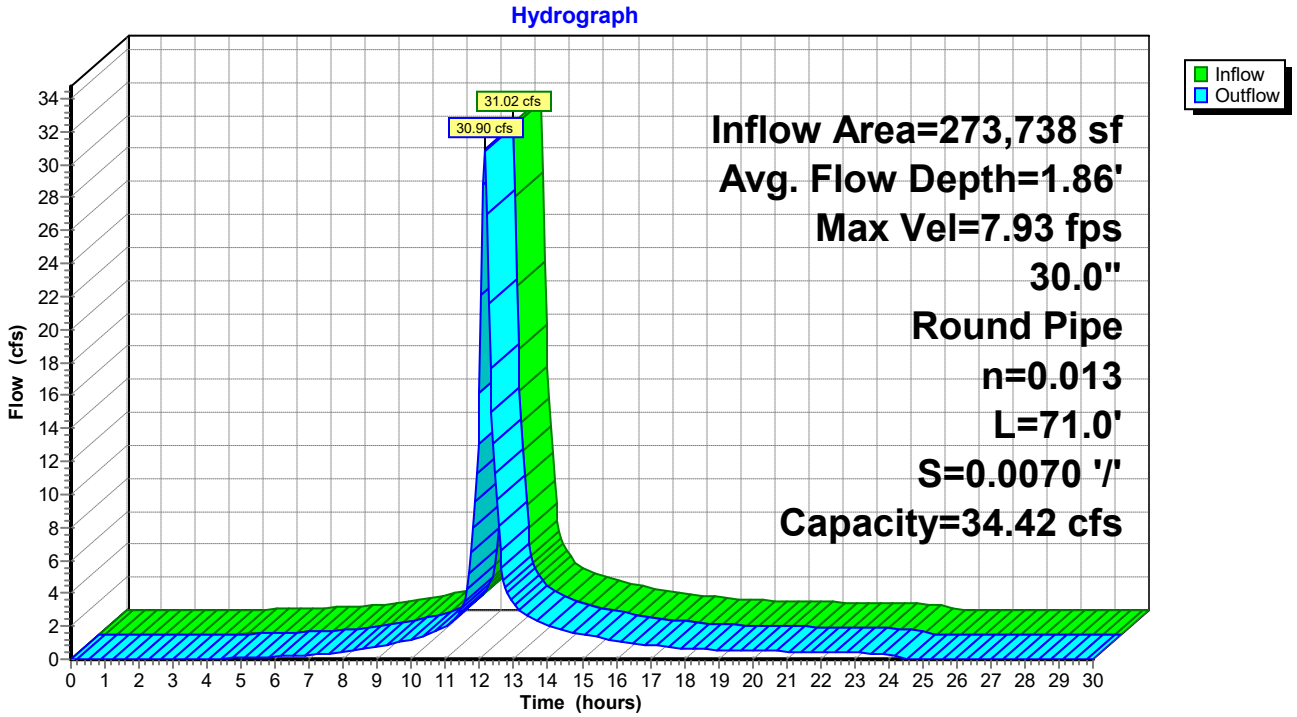
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.93 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.54 fps, Avg. Travel Time= 0.5 min

Peak Storage= 278 cf @ 12.14 hrs
Average Depth at Peak Storage= 1.86'
Bank-Full Depth= 2.50' Flow Area= 4.9 sf, Capacity= 34.42 cfs

30.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 71.0' Slope= 0.0070 '/'
Inlet Invert= 333.65', Outlet Invert= 333.15'



Reach D16: TO BASIN#1



Stage-Discharge for Reach D16: TO BASIN#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
333.65	0.00	0.00
333.67	0.50	0.00
333.69	0.84	0.02
333.71	1.11	0.04
333.73	1.34	0.06
333.75	1.56	0.10
333.77	1.75	0.15
333.79	1.94	0.21
333.81	2.11	0.28
333.83	2.28	0.36
333.85	2.44	0.45
333.87	2.59	0.55
333.89	2.74	0.66
333.91	2.88	0.78
333.93	3.02	0.91
333.95	3.16	1.05
333.97	3.28	1.21
333.99	3.41	1.37
334.01	3.53	1.54
334.03	3.65	1.72
334.05	3.77	1.91
334.07	3.88	2.11
334.09	3.99	2.33
334.11	4.10	2.55
334.13	4.21	2.78
334.15	4.31	3.01
334.17	4.41	3.26
334.19	4.51	3.52
334.21	4.61	3.79
334.23	4.71	4.06
334.25	4.80	4.35
334.27	4.89	4.64
334.29	4.98	4.94
334.31	5.07	5.25
334.33	5.15	5.57
334.35	5.24	5.89
334.37	5.32	6.23
334.39	5.40	6.57
334.41	5.48	6.92
334.43	5.56	7.27
334.45	5.64	7.63
334.47	5.71	8.00
334.49	5.79	8.38
334.51	5.86	8.76
334.53	5.93	9.15
334.55	6.00	9.54
334.57	6.07	9.94
334.59	6.13	10.35
334.61	6.20	10.76
334.63	6.26	11.18
334.65	6.33	11.60
334.67	6.39	12.03
334.69	6.45	12.46
334.71	6.51	12.89
334.73	6.57	13.33
334.75	6.62	13.78
334.77	6.68	14.23
334.79	6.73	14.68
334.81	6.79	15.13
334.83	6.84	15.59
334.85	6.89	16.05
334.87	6.94	16.51
334.89	6.99	16.98
334.91	7.04	17.44
334.93	7.08	17.91
334.95	7.13	18.38
334.97	7.17	18.86
334.99	7.21	19.33
335.01	7.26	19.80
335.03	7.30	20.28
335.05	7.34	20.75
335.07	7.38	21.23
335.09	7.41	21.70
335.11	7.45	22.18
335.13	7.49	22.65
335.15	7.52	23.13
335.17	7.55	23.60
335.19	7.58	24.07
335.21	7.62	24.53
335.23	7.65	25.00
335.25	7.67	25.46
335.27	7.70	25.92
335.29	7.73	26.38
335.31	7.75	26.83
335.33	7.78	27.28
335.35	7.80	27.73
335.37	7.82	28.17
335.39	7.84	28.60
335.41	7.86	29.03
335.43	7.88	29.46
335.45	7.90	29.88
335.47	7.91	30.29
335.49	7.93	30.69
335.51	7.94	31.09
335.53	7.95	31.48
335.55	7.96	31.87
335.57	7.97	32.24
335.59	7.98	32.61
335.61	7.98	32.96
335.63	7.99	33.31
335.65	7.99	33.65
335.67	**7.99**	33.97
335.69	**7.99**	34.28
335.71	7.99	34.58
335.73	7.99	34.87
335.75	7.98	35.15
335.77	7.98	35.40
335.79	7.97	35.65
335.81	7.96	35.88
335.83	7.95	36.09
335.85	7.93	36.29
335.87	7.91	36.46
335.89	7.89	36.61
335.91	7.87	36.74
335.93	7.85	36.86
335.95	7.82	36.94
335.97	7.79	37.00
335.99	7.75	**37.02**
336.01	7.71	**37.01**
336.03	7.67	36.96
336.05	7.61	36.88
336.07	7.55	36.72
336.09	7.48	36.50
336.11	7.39	36.17
336.13	7.26	35.58
336.15	7.01	34.42

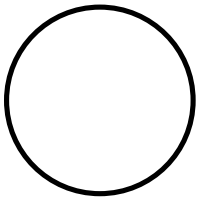
Summary for Reach D6: TO DMH14

Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

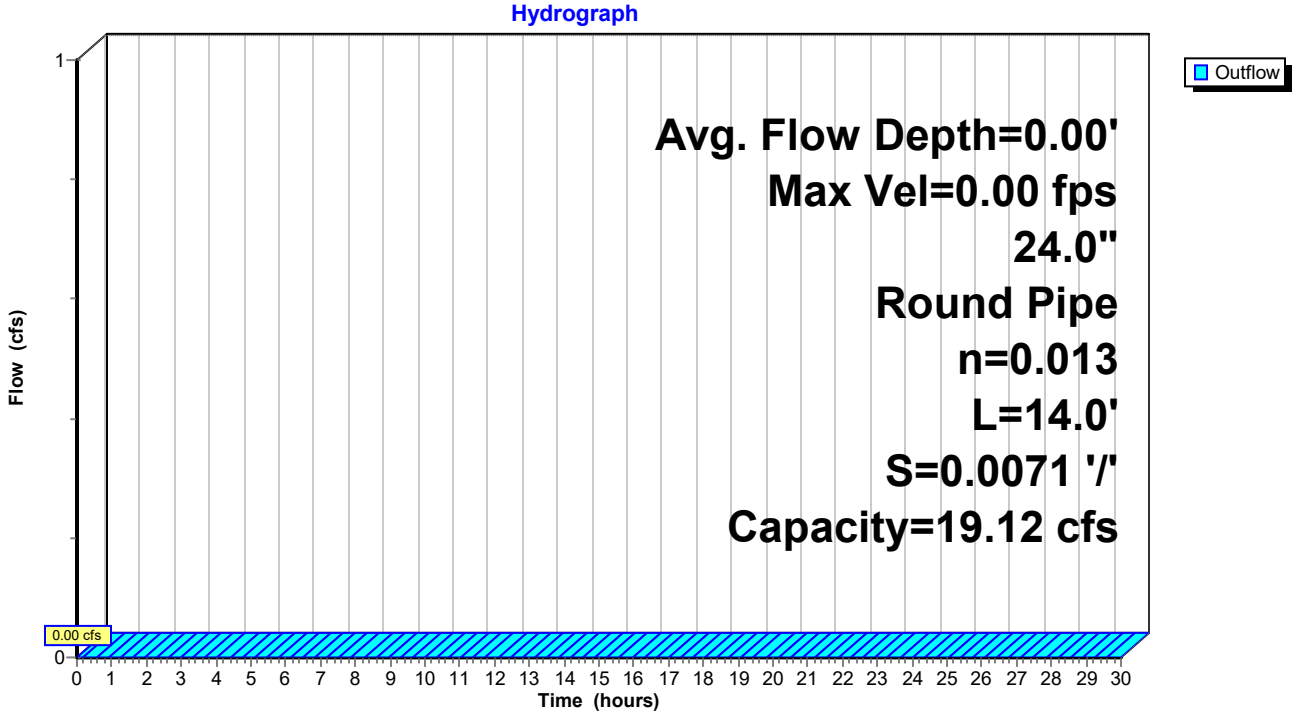
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 19.12 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 14.0' Slope= 0.0071 '/'
Inlet Invert= 339.60', Outlet Invert= 339.50'



Reach D6: TO DMH14



Stage-Discharge for Reach D6: TO DMH14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
339.60	0.00	0.00
339.62	0.54	0.00
339.64	0.86	0.01
339.66	1.12	0.03
339.68	1.35	0.06
339.70	1.56	0.09
339.72	1.76	0.14
339.74	1.94	0.19
339.76	2.12	0.25
339.78	2.28	0.32
339.80	2.44	0.40
339.82	2.59	0.49
339.84	2.74	0.58
339.86	2.88	0.69
339.88	3.01	0.81
339.90	3.15	0.93
339.92	3.27	1.06
339.94	3.39	1.20
339.96	3.51	1.35
339.98	3.63	1.51
340.00	3.74	1.67
340.02	3.85	1.85
340.04	3.96	2.03
340.06	4.06	2.22
340.08	4.17	2.41
340.10	4.26	2.62
340.12	4.36	2.83
340.14	4.45	3.05
340.16	4.55	3.27
340.18	4.64	3.51
340.20	4.72	3.74
340.22	4.81	3.99
340.24	4.89	4.24
340.26	4.97	4.50
340.28	5.05	4.76
340.30	5.13	5.03
340.32	5.21	5.30
340.34	5.28	5.58
340.36	5.35	5.86
340.38	5.42	6.15
340.40	5.49	6.44
340.42	5.56	6.74
340.44	5.62	7.04
340.46	5.69	7.34
340.48	5.75	7.65
340.50	5.81	7.96
340.52	5.87	8.28
340.54	5.92	8.59
340.56	5.98	8.91
340.58	6.03	9.24
340.60	6.09	9.56
340.62	6.14	9.89
340.64	6.19	10.21
340.66	6.23	10.54
340.68	6.28	10.87
340.70	6.33	11.20
340.72	6.37	11.53
340.74	6.41	11.86
340.76	6.45	12.19
340.78	6.49	12.52
340.80	6.53	12.85
340.82	6.56	13.17
340.84	6.60	13.50
340.86	6.63	13.82
340.88	6.66	14.14
340.90	6.69	14.46
340.92	6.72	14.78
340.94	6.74	15.09
340.96	6.77	15.40
340.98	6.79	15.71
341.00	6.81	16.01
341.02	6.83	16.30
341.04	6.85	16.60
341.06	6.87	16.88
341.08	6.88	17.16
341.10	6.90	17.43
341.12	6.91	17.70
341.14	6.92	17.96
341.16	6.93	18.21
341.18	6.93	18.45
341.20	6.94	18.69
341.22	**6.94**	18.91
341.24	6.94	19.13
341.26	6.93	19.33
341.28	6.93	19.52
341.30	6.92	19.70
341.32	6.91	19.87
341.34	6.90	20.02
341.36	6.88	20.16
341.38	6.86	20.28
341.40	6.84	20.38
341.42	6.82	20.46
341.44	6.79	20.52
341.46	6.75	20.56
341.48	6.71	**20.57**
341.50	6.66	20.54
341.52	6.61	20.48
341.54	6.54	20.38
341.56	6.46	20.20
341.58	6.35	19.92
341.60	6.09	19.12

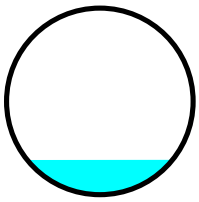
Summary for Reach D7: TO DMH8

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 5.33" for 100-Year event
Inflow = 0.50 cfs @ 12.07 hrs, Volume= 1,609 cf
Outflow = 0.49 cfs @ 12.08 hrs, Volume= 1,609 cf, Atten= 2%, Lag= 0.7 min

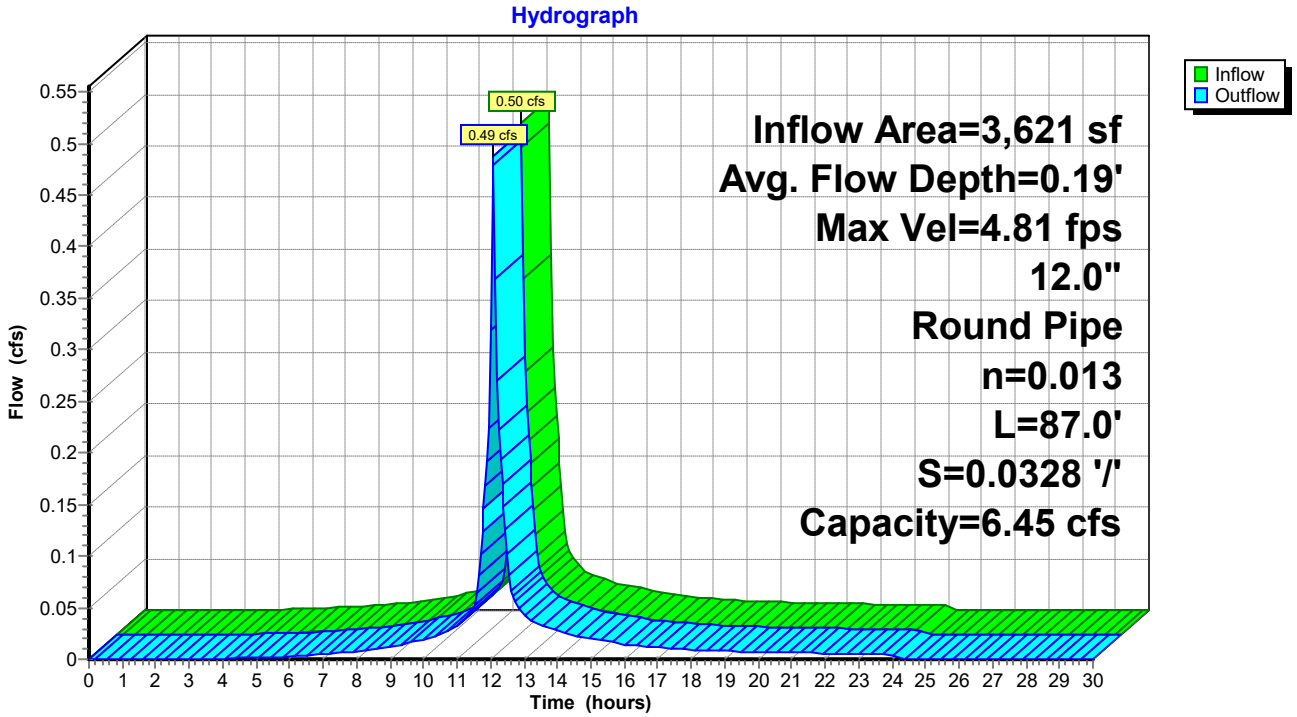
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.81 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.58 fps, Avg. Travel Time= 0.9 min

Peak Storage= 9 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.45 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 87.0' Slope= 0.0328 '/'
Inlet Invert= 354.15', Outlet Invert= 351.30'



Reach D7: TO DMH8



Stage-Discharge for Reach D7: TO DMH8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.15	0.00	0.00
354.16	0.73	0.00
354.17	1.16	0.00
354.18	1.51	0.01
354.19	1.82	0.02
354.20	2.11	0.03
354.21	2.37	0.05
354.22	2.62	0.06
354.23	2.86	0.08
354.24	3.08	0.11
354.25	3.29	0.13
354.26	3.50	0.16
354.27	3.69	0.20
354.28	3.88	0.23
354.29	4.07	0.27
354.30	4.24	0.31
354.31	4.41	0.36
354.32	4.58	0.41
354.33	4.74	0.46
354.34	4.90	0.51
354.35	5.05	0.56
354.36	5.20	0.62
354.37	5.34	0.68
354.38	5.48	0.75
354.39	5.62	0.81
354.40	5.75	0.88
354.41	5.88	0.95
354.42	6.01	1.03
354.43	6.13	1.10
354.44	6.25	1.18
354.45	6.37	1.26
354.46	6.49	1.35
354.47	6.60	1.43
354.48	6.71	1.52
354.49	6.82	1.61
354.50	6.92	1.70
354.51	7.02	1.79
354.52	7.12	1.88
354.53	7.22	1.98
354.54	7.31	2.07
354.55	7.41	2.17
354.56	7.50	2.27
354.57	7.59	2.37
354.58	7.67	2.48
354.59	7.75	2.58
354.60	7.84	2.69
354.61	7.91	2.79
354.62	7.99	2.90
354.63	8.07	3.01
354.64	8.14	3.12
354.65	8.21	3.22
354.66	8.28	3.33
354.67	8.35	3.44
354.68	8.41	3.55
354.69	8.47	3.67
354.70	8.53	3.78
354.71	8.59	3.89
354.72	8.65	4.00
354.73	8.70	4.11
354.74	8.75	4.22
354.75	8.81	4.33
354.76	8.85	4.44
354.77	8.90	4.55
354.78	8.94	4.66
354.79	8.99	4.77
354.80	9.03	4.88
354.81	9.06	4.98
354.82	9.10	5.09
354.83	9.13	5.19
354.84	9.16	5.30
354.85	9.19	5.40
354.86	9.22	5.50
354.87	9.25	5.60
354.88	9.27	5.69
354.89	9.29	5.79
354.90	9.31	5.88
354.91	9.32	5.97
354.92	9.33	6.06
354.93	9.34	6.14
354.94	9.35	6.22
354.95	9.36	6.30
354.96	**9.36**	6.38
354.97	9.36	6.45
354.98	9.36	6.52
354.99	9.35	6.58
355.00	9.34	6.64
355.01	9.33	6.70
355.02	9.31	6.75
355.03	9.29	6.80
355.04	9.26	6.84
355.05	9.23	6.87
355.06	9.20	6.90
355.07	9.16	6.92
355.08	9.11	6.93
355.09	9.05	**6.94**
355.10	8.99	6.93
355.11	8.92	6.91
355.12	8.83	6.87
355.13	8.72	6.81
355.14	8.57	6.72
355.15	8.21	6.45

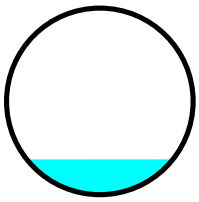
Summary for Reach D8: TO DMH9

Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 5.33" for 100-Year event
Inflow = 0.49 cfs @ 12.08 hrs, Volume= 1,609 cf
Outflow = 0.48 cfs @ 12.09 hrs, Volume= 1,609 cf, Atten= 1%, Lag= 0.7 min

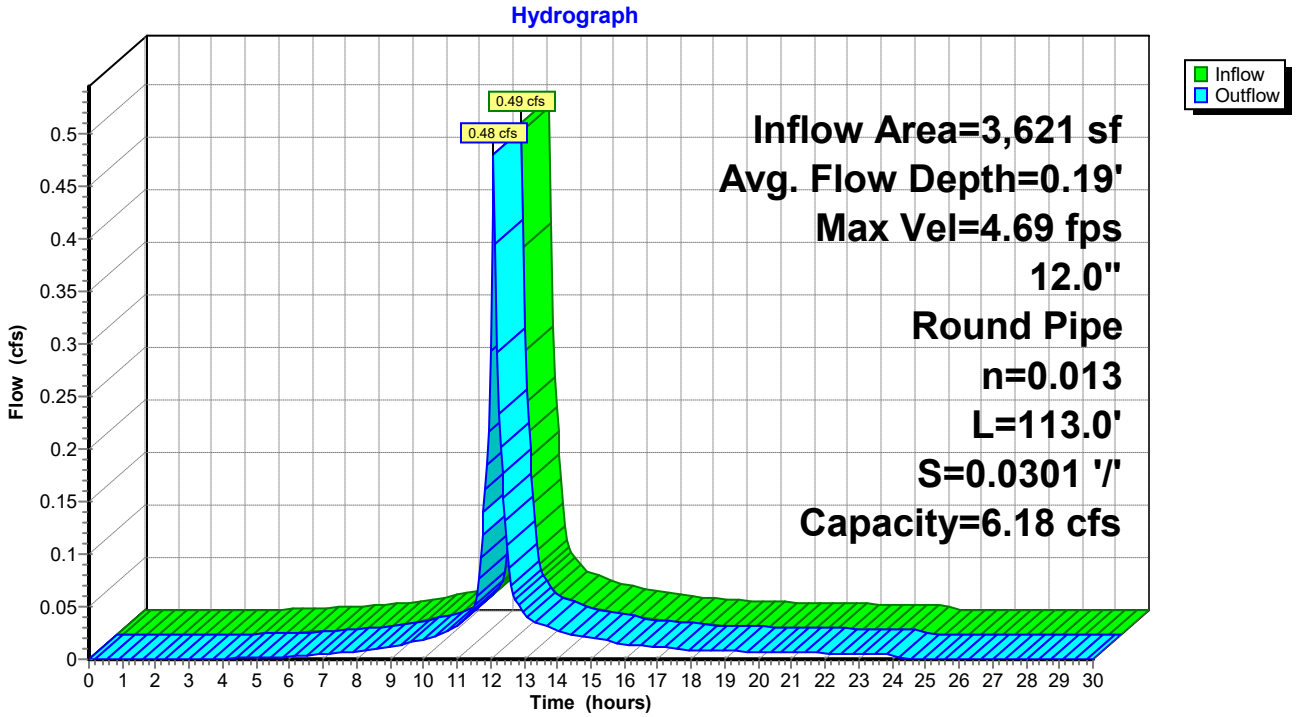
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.69 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.54 fps, Avg. Travel Time= 1.2 min

Peak Storage= 12 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.18 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 113.0' Slope= 0.0301 '/'
Inlet Invert= 351.20', Outlet Invert= 347.80'



Reach D8: TO DMH9



Stage-Discharge for Reach D8: TO DMH9

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.70	0.00
351.22	1.11	0.00
351.23	1.45	0.01
351.24	1.75	0.02
351.25	2.02	0.03
351.26	2.28	0.04
351.27	2.51	0.06
351.28	2.74	0.08
351.29	2.95	0.10
351.30	3.16	0.13
351.31	3.35	0.16
351.32	3.54	0.19
351.33	3.72	0.22
351.34	3.90	0.26
351.35	4.07	0.30
351.36	4.23	0.34
351.37	4.39	0.39
351.38	4.54	0.44
351.39	4.69	0.49
351.40	4.84	0.54
351.41	4.98	0.60
351.42	5.12	0.66
351.43	5.25	0.72
351.44	5.39	0.78
351.45	5.51	0.85
351.46	5.64	0.91
351.47	5.76	0.99
351.48	5.88	1.06
351.49	5.99	1.13
351.50	6.11	1.21
351.51	6.22	1.29
351.52	6.33	1.37
351.53	6.43	1.45
351.54	6.53	1.54
351.55	6.63	1.62
351.56	6.73	1.71
351.57	6.83	1.80
351.58	6.92	1.89
351.59	7.01	1.99
351.60	7.10	2.08
351.61	7.19	2.18
351.62	7.27	2.28
351.63	7.35	2.37
351.64	7.43	2.47
351.65	7.51	2.57
351.66	7.59	2.68
351.67	7.66	2.78
351.68	7.73	2.88
351.69	7.80	2.99
351.70	7.87	3.09
351.71	7.93	3.20
351.72	8.00	3.30
351.73	8.06	3.41
351.74	8.12	3.51
351.75	8.18	3.62
351.76	8.23	3.73
351.77	8.29	3.83
351.78	8.34	3.94
351.79	8.39	4.05
351.80	8.44	4.15
351.81	8.48	4.26
351.82	8.53	4.36
351.83	8.57	4.47
351.84	8.61	4.57
351.85	8.65	4.67
351.86	8.69	4.78
351.87	8.72	4.88
351.88	8.75	4.98
351.89	8.78	5.08
351.90	8.81	5.17
351.91	8.84	5.27
351.92	8.86	5.36
351.93	8.88	5.46
351.94	8.90	5.55
351.95	8.92	5.64
351.96	8.93	5.72
351.97	8.95	5.81
351.98	8.96	5.89
351.99	8.96	5.97
352.00	8.97	6.04
352.01	**8.97**	6.11
352.02	8.97	6.18
352.03	8.97	6.25
352.04	8.96	6.31
352.05	8.95	6.37
352.06	8.94	6.42
352.07	8.92	6.47
352.08	8.90	6.51
352.09	8.88	6.55
352.10	8.85	6.59
352.11	8.81	6.61
352.12	8.77	6.63
352.13	8.73	6.64
352.14	8.68	**6.65**
352.15	8.62	6.64
352.16	8.54	6.62
352.17	8.46	6.59
352.18	8.35	6.53
352.19	8.21	6.44
352.20	7.87	6.18

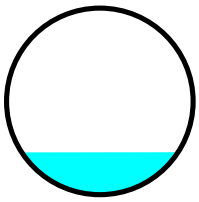
Summary for Reach D9: TO DMH10

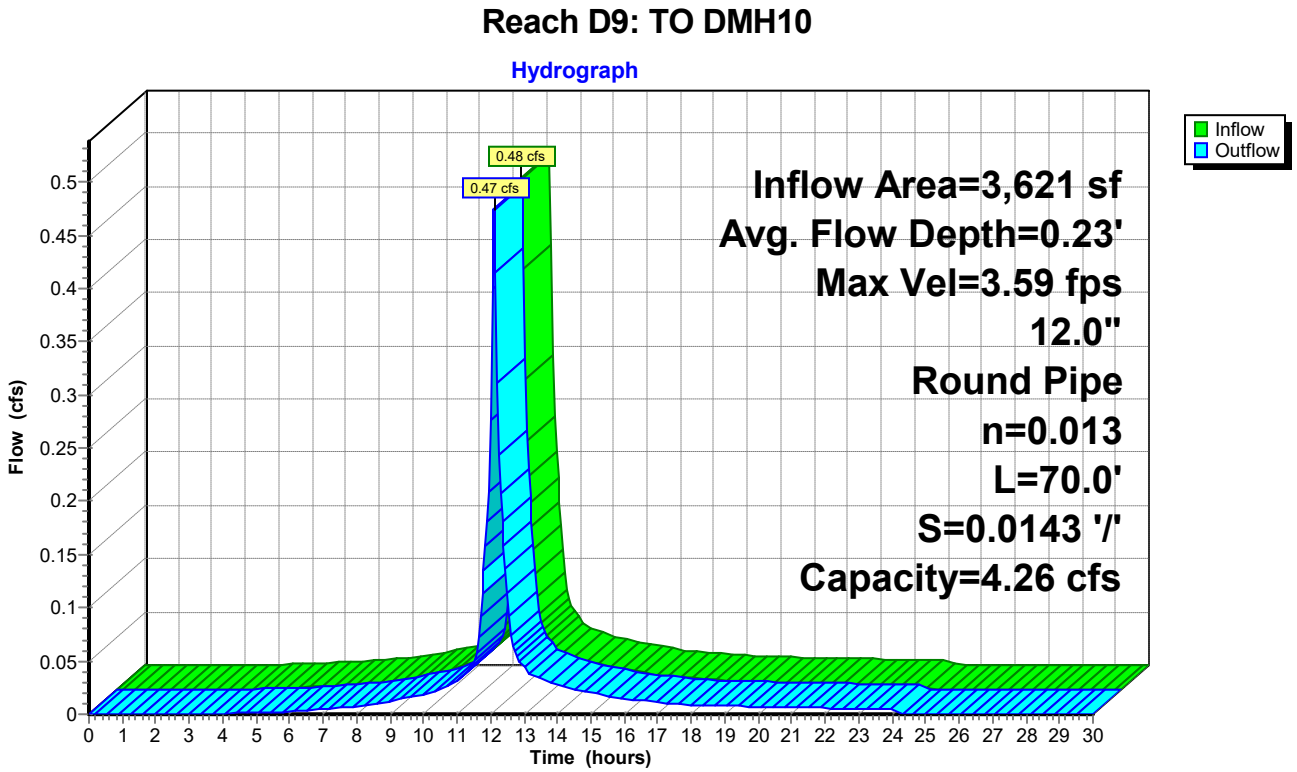
Inflow Area = 3,621 sf, 77.22% Impervious, Inflow Depth = 5.33" for 100-Year event
Inflow = 0.48 cfs @ 12.09 hrs, Volume= 1,609 cf
Outflow = 0.47 cfs @ 12.10 hrs, Volume= 1,609 cf, Atten= 1%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.59 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.18 fps, Avg. Travel Time= 1.0 min

Peak Storage= 9 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.26 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 70.0' Slope= 0.0143 '/'
Inlet Invert= 347.70', Outlet Invert= 346.70'





Stage-Discharge for Reach D9: TO DMH10

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.70	0.00	0.00
347.71	0.48	0.00
347.72	0.76	0.00
347.73	1.00	0.01
347.74	1.20	0.01
347.75	1.39	0.02
347.76	1.57	0.03
347.77	1.73	0.04
347.78	1.89	0.06
347.79	2.03	0.07
347.80	2.18	0.09
347.81	2.31	0.11
347.82	2.44	0.13
347.83	2.56	0.15
347.84	2.69	0.18
347.85	2.80	0.21
347.86	2.92	0.24
347.87	3.02	0.27
347.88	3.13	0.30
347.89	3.23	0.34
347.90	3.33	0.37
347.91	3.43	0.41
347.92	3.53	0.45
347.93	3.62	0.49
347.94	3.71	0.54
347.95	3.80	0.58
347.96	3.88	0.63
347.97	3.97	0.68
347.98	4.05	0.73
347.99	4.13	0.78
348.00	4.21	0.83
348.01	4.28	0.89
348.02	4.36	0.94
348.03	4.43	1.00
348.04	4.50	1.06
348.05	4.57	1.12
348.06	4.64	1.18
348.07	4.70	1.24
348.08	4.77	1.31
348.09	4.83	1.37
348.10	4.89	1.44
348.11	4.95	1.50
348.12	5.01	1.57
348.13	5.07	1.64
348.14	5.12	1.70
348.15	5.17	1.77
348.16	5.23	1.84
348.17	5.28	1.91
348.18	5.33	1.99
348.19	5.38	2.06
348.20	5.42	2.13
348.21	5.47	2.20
348.22	5.51	2.27
348.23	5.55	2.35
348.24	5.60	2.42
348.25	5.64	2.49
348.26	5.67	2.57
348.27	5.71	2.64
348.28	5.75	2.71
348.29	5.78	2.79
348.30	5.81	2.86
348.31	5.85	2.93
348.32	5.88	3.01
348.33	5.91	3.08
348.34	5.93	3.15
348.35	5.96	3.22
348.36	5.99	3.29
348.37	6.01	3.36
348.38	6.03	3.43
348.39	6.05	3.50
348.40	6.07	3.57
348.41	6.09	3.63
348.42	6.11	3.70
348.43	6.12	3.76
348.44	6.13	3.82
348.45	6.15	3.88
348.46	6.16	3.94
348.47	6.16	4.00
348.48	6.17	4.06
348.49	6.18	4.11
348.50	6.18	4.16
348.51	**6.18**	4.21
348.52	6.18	4.26
348.53	6.18	4.31
348.54	6.17	4.35
348.55	6.17	4.39
348.56	6.16	4.42
348.57	6.15	4.46
348.58	6.13	4.49
348.59	6.12	4.52
348.60	6.10	4.54
348.61	6.07	4.56
348.62	6.05	4.57
348.63	6.01	4.58
348.64	5.98	**4.58**
348.65	5.94	4.58
348.66	5.89	4.56
348.67	5.83	4.54
348.68	5.76	4.50
348.69	5.66	4.44
348.70	5.42	4.26

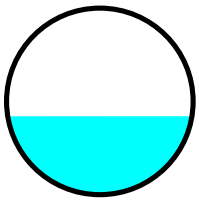
Summary for Reach DCB-R101: TO DMH-R100

Inflow Area = 18,867 sf, 80.97% Impervious, Inflow Depth = 5.00" for 100-Year event
Inflow = 2.47 cfs @ 12.07 hrs, Volume= 7,857 cf
Outflow = 2.46 cfs @ 12.07 hrs, Volume= 7,857 cf, Atten= 0%, Lag= 0.0 min

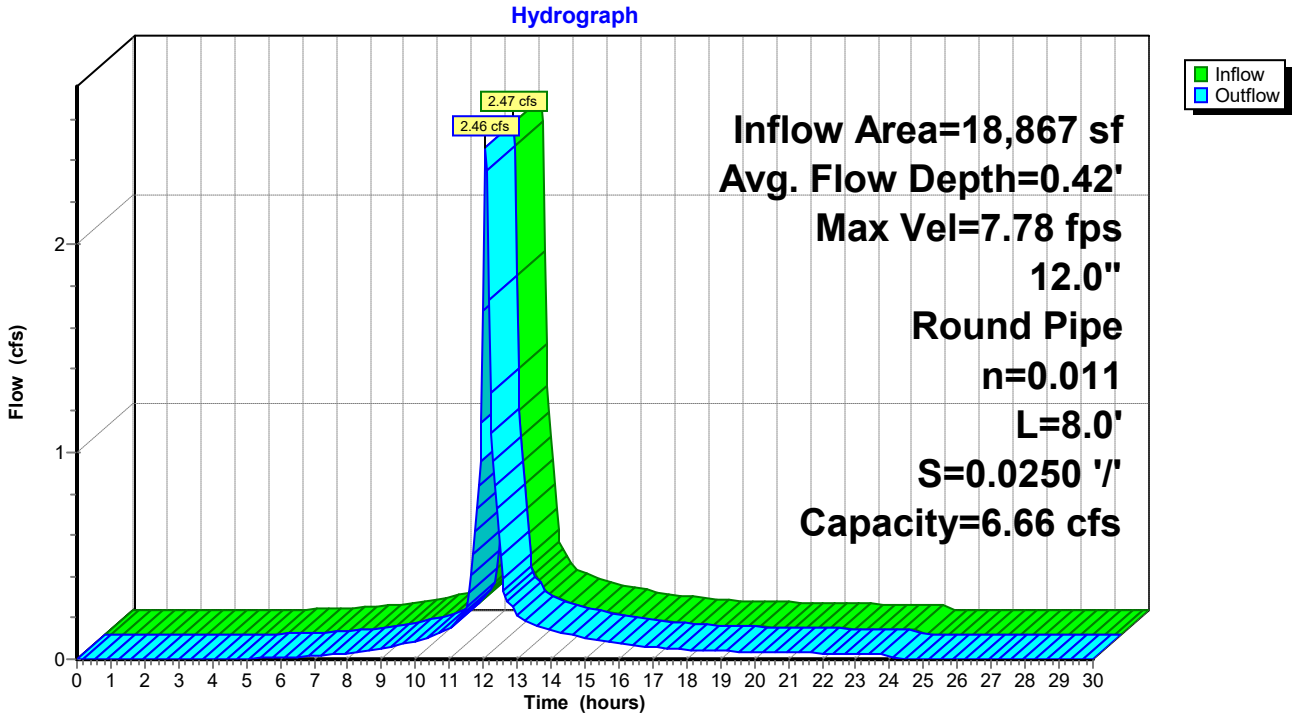
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.78 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.62 fps, Avg. Travel Time= 0.1 min

Peak Storage= 3 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.42'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.66 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 8.0' Slope= 0.0250 '/'
Inlet Invert= 355.50', Outlet Invert= 355.30'



Reach DCB-R101: TO DMH-R100



Stage-Discharge for Reach DCB-R101: TO DMH-R100

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.50	0.00	0.00
355.51	0.75	0.00
355.52	1.19	0.00
355.53	1.56	0.01
355.54	1.88	0.02
355.55	2.18	0.03
355.56	2.45	0.05
355.57	2.71	0.07
355.58	2.95	0.09
355.59	3.18	0.11
355.60	3.40	0.14
355.61	3.61	0.17
355.62	3.81	0.20
355.63	4.01	0.24
355.64	4.20	0.28
355.65	4.38	0.32
355.66	4.56	0.37
355.67	4.73	0.42
355.68	4.89	0.47
355.69	5.06	0.53
355.70	5.21	0.58
355.71	5.37	0.64
355.72	5.52	0.71
355.73	5.66	0.77
355.74	5.80	0.84
355.75	5.94	0.91
355.76	6.07	0.99
355.77	6.20	1.06
355.78	6.33	1.14
355.79	6.46	1.22
355.80	6.58	1.30
355.81	6.70	1.39
355.82	6.81	1.48
355.83	6.93	1.57
355.84	7.04	1.66
355.85	7.15	1.75
355.86	7.25	1.85
355.87	7.35	1.94
355.88	7.45	2.04
355.89	7.55	2.14
355.90	7.65	2.24
355.91	7.74	2.35
355.92	7.83	2.45
355.93	7.92	2.56
355.94	8.01	2.66
355.95	8.09	2.77
355.96	8.17	2.88
355.97	8.25	2.99
355.98	8.33	3.10
355.99	8.40	3.22
356.00	8.48	3.33
356.01	8.55	3.44
356.02	8.62	3.56
356.03	8.68	3.67
356.04	8.75	3.78
356.05	8.81	3.90
356.06	8.87	4.01
356.07	8.93	4.13
356.08	8.98	4.24
356.09	9.04	4.36
356.10	9.09	4.47
356.11	9.14	4.59
356.12	9.19	4.70
356.13	9.23	4.81
356.14	9.28	4.92
356.15	9.32	5.04
356.16	9.36	5.15
356.17	9.39	5.25
356.18	9.43	5.36
356.19	9.46	5.47
356.20	9.49	5.57
356.21	9.52	5.68
356.22	9.55	5.78
356.23	9.57	5.88
356.24	9.59	5.98
356.25	9.61	6.07
356.26	9.62	6.16
356.27	9.64	6.25
356.28	9.65	6.34
356.29	9.66	6.43
356.30	9.66	6.51
356.31	**9.66**	6.59
356.32	9.66	6.66
356.33	9.66	6.73
356.34	9.65	6.80
356.35	9.64	6.86
356.36	9.63	6.92
356.37	9.61	6.97
356.38	9.59	7.02
356.39	9.56	7.06
356.40	9.53	7.10
356.41	9.49	7.12
356.42	9.45	7.15
356.43	9.40	7.16
356.44	9.35	**7.16**
356.45	9.28	7.15
356.46	9.21	7.13
356.47	9.11	7.10
356.48	9.00	7.03
356.49	8.85	6.94
356.50	8.48	6.66

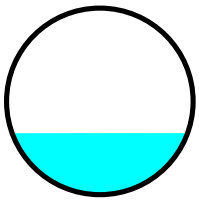
Summary for Reach DCB-R102: TO DMH-R101

Inflow Area = 13,651 sf, 53.41% Impervious, Inflow Depth = 3.31" for 100-Year event
Inflow = 1.22 cfs @ 12.08 hrs, Volume= 3,762 cf
Outflow = 1.21 cfs @ 12.09 hrs, Volume= 3,762 cf, Atten= 1%, Lag= 0.5 min

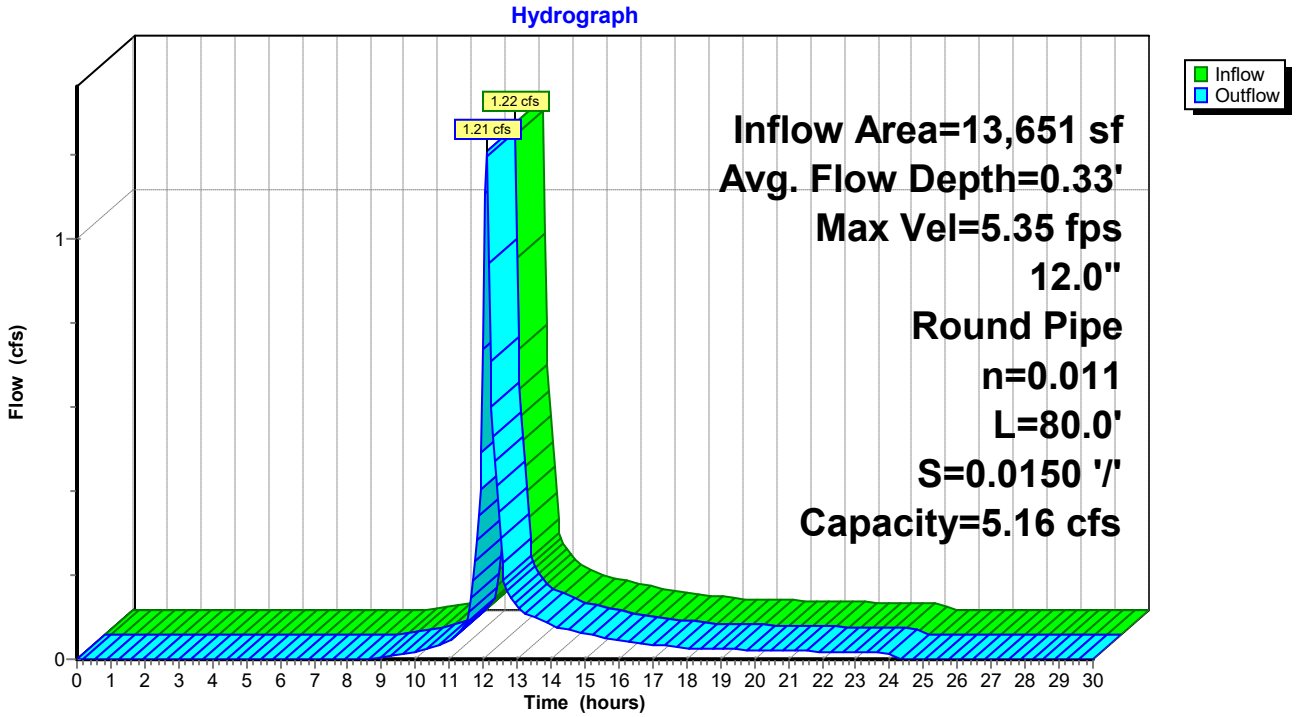
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.35 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.93 fps, Avg. Travel Time= 0.7 min

Peak Storage= 18 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 80.0' Slope= 0.0150 '/'
Inlet Invert= 357.20', Outlet Invert= 356.00'



Reach DCB-R102: TO DMH-R101



Stage-Discharge for Reach DCB-R102: TO DMH-R101

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
357.20	0.00	0.00
357.21	0.58	0.00
357.22	0.92	0.00
357.23	1.21	0.01
357.24	1.46	0.02
357.25	1.69	0.02
357.26	1.90	0.04
357.27	2.10	0.05
357.28	2.29	0.07
357.29	2.46	0.09
357.30	2.63	0.11
357.31	2.80	0.13
357.32	2.95	0.16
357.33	3.11	0.19
357.34	3.25	0.22
357.35	3.39	0.25
357.36	3.53	0.29
357.37	3.66	0.32
357.38	3.79	0.36
357.39	3.92	0.41
357.40	4.04	0.45
357.41	4.16	0.50
357.42	4.27	0.55
357.43	4.38	0.60
357.44	4.49	0.65
357.45	4.60	0.71
357.46	4.70	0.76
357.47	4.81	0.82
357.48	4.91	0.88
357.49	5.00	0.95
357.50	5.10	1.01
357.51	5.19	1.08
357.52	5.28	1.14
357.53	5.37	1.21
357.54	5.45	1.28
357.55	5.53	1.36
357.56	5.62	1.43
357.57	5.70	1.50
357.58	5.77	1.58
357.59	5.85	1.66
357.60	5.92	1.74
357.61	6.00	1.82
357.62	6.07	1.90
357.63	6.13	1.98
357.64	6.20	2.06
357.65	6.27	2.15
357.66	6.33	2.23
357.67	6.39	2.32
357.68	6.45	2.40
357.69	6.51	2.49
357.70	6.57	2.58
357.71	6.62	2.67
357.72	6.67	2.75
357.73	6.73	2.84
357.74	6.78	2.93
357.75	6.82	3.02
357.76	6.87	3.11
357.77	6.92	3.20
357.78	6.96	3.29
357.79	7.00	3.38
357.80	7.04	3.46
357.81	7.08	3.55
357.82	7.12	3.64
357.83	7.15	3.73
357.84	7.19	3.81
357.85	7.22	3.90
357.86	7.25	3.99
357.87	7.28	4.07
357.88	7.30	4.15
357.89	7.33	4.24
357.90	7.35	4.32
357.91	7.37	4.40
357.92	7.39	4.48
357.93	7.41	4.55
357.94	7.43	4.63
357.95	7.44	4.70
357.96	7.45	4.77
357.97	7.46	4.84
357.98	7.47	4.91
357.99	7.48	4.98
358.00	7.48	5.04
358.01	**7.49**	5.10
358.02	7.48	5.16
358.03	7.48	5.21
358.04	7.48	5.27
358.05	7.47	5.31
358.06	7.46	5.36
358.07	7.44	5.40
358.08	7.43	5.44
358.09	7.41	5.47
358.10	7.38	5.50
358.11	7.35	5.52
358.12	7.32	5.53
358.13	7.28	5.54
358.14	7.24	**5.55**
358.15	7.19	5.54
358.16	7.13	5.52
358.17	7.06	5.50
358.18	6.97	5.45
358.19	6.85	5.37
358.20	6.57	5.16

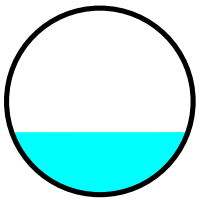
Summary for Reach DCB-S1: TO DMH-S1

Inflow Area = 8,226 sf, 87.83% Impervious, Inflow Depth = 5.45" for 100-Year event
Inflow = 1.14 cfs @ 12.07 hrs, Volume= 3,734 cf
Outflow = 1.13 cfs @ 12.07 hrs, Volume= 3,734 cf, Atten= 1%, Lag= 0.2 min

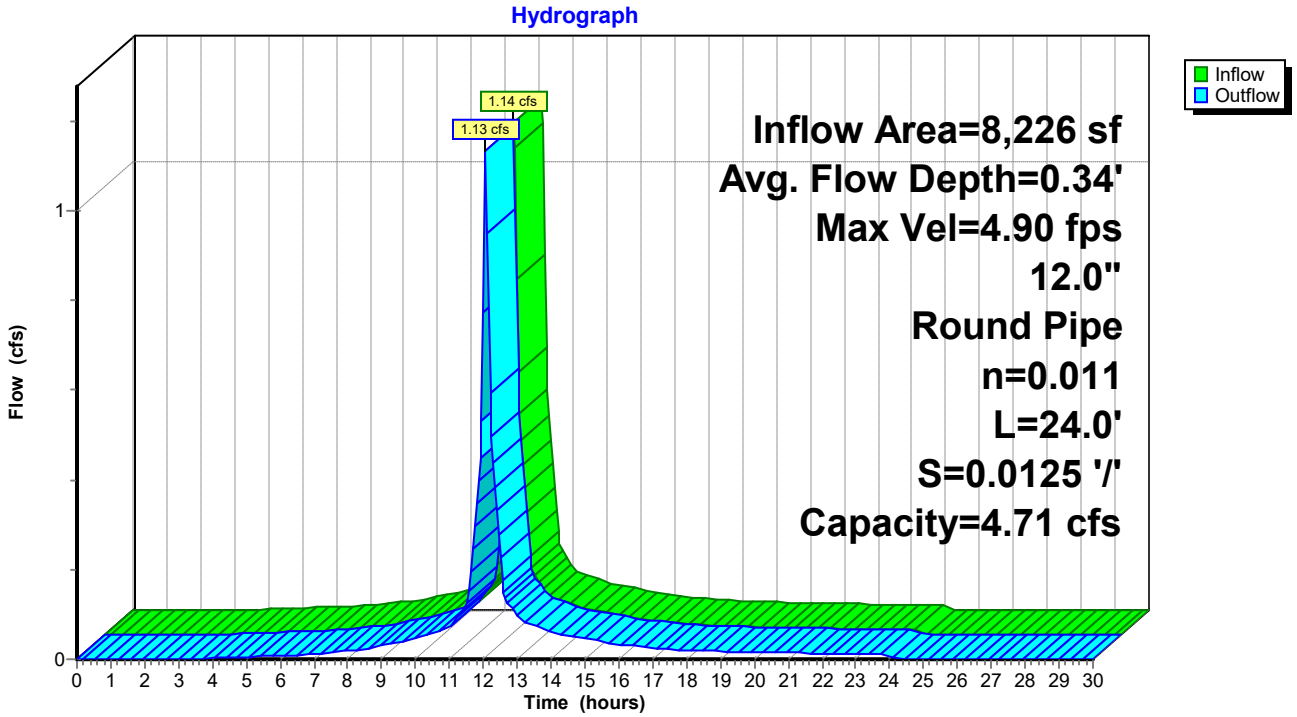
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.90 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.62 fps, Avg. Travel Time= 0.2 min

Peak Storage= 6 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.71 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 24.0' Slope= 0.0125 '/'
Inlet Invert= 351.20', Outlet Invert= 350.90'



Reach DCB-S1: TO DMH-S1



Stage-Discharge for Reach DCB-S1: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.53	0.00
351.22	0.84	0.00
351.23	1.10	0.01
351.24	1.33	0.01
351.25	1.54	0.02
351.26	1.73	0.03
351.27	1.91	0.05
351.28	2.09	0.06
351.29	2.25	0.08
351.30	2.40	0.10
351.31	2.55	0.12
351.32	2.70	0.14
351.33	2.84	0.17
351.34	2.97	0.20
351.35	3.10	0.23
351.36	3.22	0.26
351.37	3.34	0.30
351.38	3.46	0.33
351.39	3.58	0.37
351.40	3.69	0.41
351.41	3.79	0.45
351.42	3.90	0.50
351.43	4.00	0.55
351.44	4.10	0.59
351.45	4.20	0.64
351.46	4.29	0.70
351.47	4.39	0.75
351.48	4.48	0.81
351.49	4.57	0.86
351.50	4.65	0.92
351.51	4.74	0.98
351.52	4.82	1.04
351.53	4.90	1.11
351.54	4.98	1.17
351.55	5.05	1.24
351.56	5.13	1.31
351.57	5.20	1.37
351.58	5.27	1.44
351.59	5.34	1.51
351.60	5.41	1.59
351.61	5.47	1.66
351.62	5.54	1.73
351.63	5.60	1.81
351.64	5.66	1.88
351.65	5.72	1.96
351.66	5.78	2.04
351.67	5.83	2.12
351.68	5.89	2.19
351.69	5.94	2.27
351.70	5.99	2.35
351.71	6.04	2.43
351.72	6.09	2.51
351.73	6.14	2.60
351.74	6.19	2.68
351.75	6.23	2.76
351.76	6.27	2.84
351.77	6.31	2.92
351.78	6.35	3.00
351.79	6.39	3.08
351.80	6.43	3.16
351.81	6.46	3.24
351.82	6.50	3.32
351.83	6.53	3.40
351.84	6.56	3.48
351.85	6.59	3.56
351.86	6.62	3.64
351.87	6.64	3.72
351.88	6.67	3.79
351.89	6.69	3.87
351.90	6.71	3.94
351.91	6.73	4.01
351.92	6.75	4.09
351.93	6.77	4.16
351.94	6.78	4.23
351.95	6.79	4.29
351.96	6.81	4.36
351.97	6.81	4.42
351.98	6.82	4.48
351.99	6.83	4.54
352.00	6.83	4.60
352.01	**6.83**	4.66
352.02	6.83	4.71
352.03	6.83	4.76
352.04	6.82	4.81
352.05	6.82	4.85
352.06	6.81	4.89
352.07	6.80	4.93
352.08	6.78	4.96
352.09	6.76	4.99
352.10	6.74	5.02
352.11	6.71	5.04
352.12	6.68	5.05
352.13	6.65	5.06
352.14	6.61	**5.06**
352.15	6.56	5.06
352.16	6.51	5.04
352.17	6.44	5.02
352.18	6.36	4.97
352.19	6.26	4.91
352.20	5.99	4.71

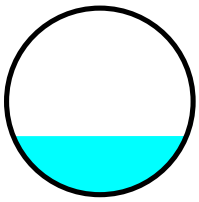
Summary for Reach DCB-S2: TO DMH-S1

Inflow Area = 10,318 sf, 80.45% Impervious, Inflow Depth = 4.89" for 100-Year event
Inflow = 1.33 cfs @ 12.07 hrs, Volume= 4,201 cf
Outflow = 1.32 cfs @ 12.07 hrs, Volume= 4,201 cf, Atten= 0%, Lag= 0.1 min

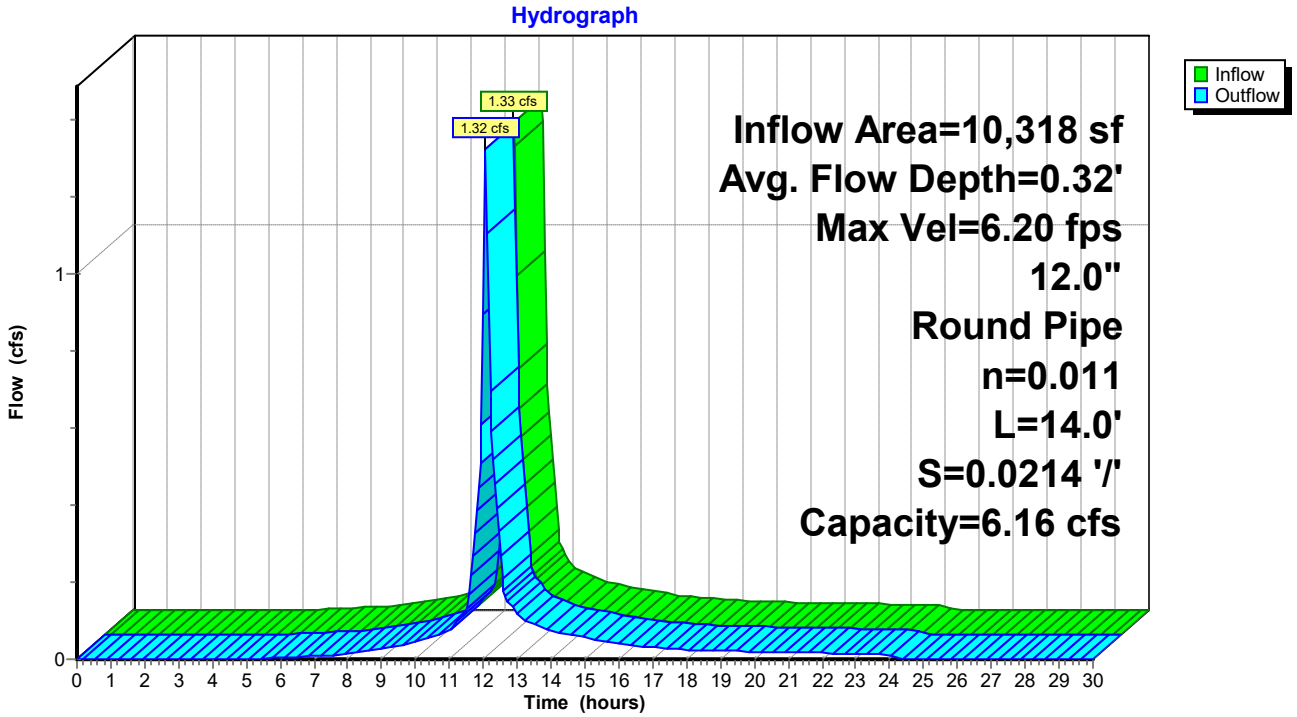
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.20 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.07 fps, Avg. Travel Time= 0.1 min

Peak Storage= 3 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 14.0' Slope= 0.0214 '/'
Inlet Invert= 351.20', Outlet Invert= 350.90'



Reach DCB-S2: TO DMH-S1



Stage-Discharge for Reach DCB-S2: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.20	0.00	0.00
351.21	0.70	0.00
351.22	1.10	0.00
351.23	1.44	0.01
351.24	1.74	0.02
351.25	2.02	0.03
351.26	2.27	0.04
351.27	2.51	0.06
351.28	2.73	0.08
351.29	2.94	0.10
351.30	3.15	0.13
351.31	3.34	0.16
351.32	3.53	0.19
351.33	3.71	0.22
351.34	3.89	0.26
351.35	4.06	0.30
351.36	4.22	0.34
351.37	4.38	0.39
351.38	4.53	0.44
351.39	4.68	0.49
351.40	4.83	0.54
351.41	4.97	0.60
351.42	5.11	0.65
351.43	5.24	0.72
351.44	5.37	0.78
351.45	5.50	0.84
351.46	5.62	0.91
351.47	5.74	0.98
351.48	5.86	1.06
351.49	5.98	1.13
351.50	6.09	1.21
351.51	6.20	1.29
351.52	6.31	1.37
351.53	6.41	1.45
351.54	6.52	1.53
351.55	6.62	1.62
351.56	6.71	1.71
351.57	6.81	1.80
351.58	6.90	1.89
351.59	6.99	1.98
351.60	7.08	2.08
351.61	7.17	2.17
351.62	7.25	2.27
351.63	7.33	2.37
351.64	7.41	2.47
351.65	7.49	2.57
351.66	7.57	2.67
351.67	7.64	2.77
351.68	7.71	2.87
351.69	7.78	2.98
351.70	7.85	3.08
351.71	7.91	3.19
351.72	7.98	3.29
351.73	8.04	3.40
351.74	8.10	3.50
351.75	8.16	3.61
351.76	8.21	3.72
351.77	8.27	3.82
351.78	8.32	3.93
351.79	8.37	4.04
351.80	8.42	4.14
351.81	8.46	4.25
351.82	8.51	4.35
351.83	8.55	4.46
351.84	8.59	4.56
351.85	8.63	4.66
351.86	8.66	4.76
351.87	8.70	4.87
351.88	8.73	4.96
351.89	8.76	5.06
351.90	8.79	5.16
351.91	8.81	5.26
351.92	8.84	5.35
351.93	8.86	5.44
351.94	8.88	5.53
351.95	8.90	5.62
351.96	8.91	5.71
351.97	8.92	5.79
351.98	8.93	5.87
351.99	8.94	5.95
352.00	8.94	6.02
352.01	**8.95**	6.10
352.02	8.95	6.17
352.03	8.94	6.23
352.04	8.94	6.29
352.05	8.93	6.35
352.06	8.91	6.40
352.07	8.90	6.45
352.08	8.88	6.50
352.09	8.85	6.54
352.10	8.82	6.57
352.11	8.79	6.60
352.12	8.75	6.62
352.13	8.71	6.63
352.14	8.65	**6.63**
352.15	8.59	6.62
352.16	8.52	6.60
352.17	8.44	6.57
352.18	8.33	6.51
352.19	8.19	6.42
352.20	7.85	6.16

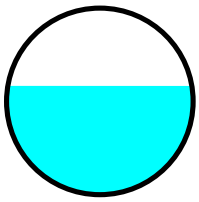
Summary for Reach DCB-S3: TO DMH-S1

Inflow Area = 18,672 sf, 88.33% Impervious, Inflow Depth = 5.68" for 100-Year event
Inflow = 2.65 cfs @ 12.07 hrs, Volume= 8,833 cf
Outflow = 2.64 cfs @ 12.07 hrs, Volume= 8,833 cf, Atten= 0%, Lag= 0.1 min

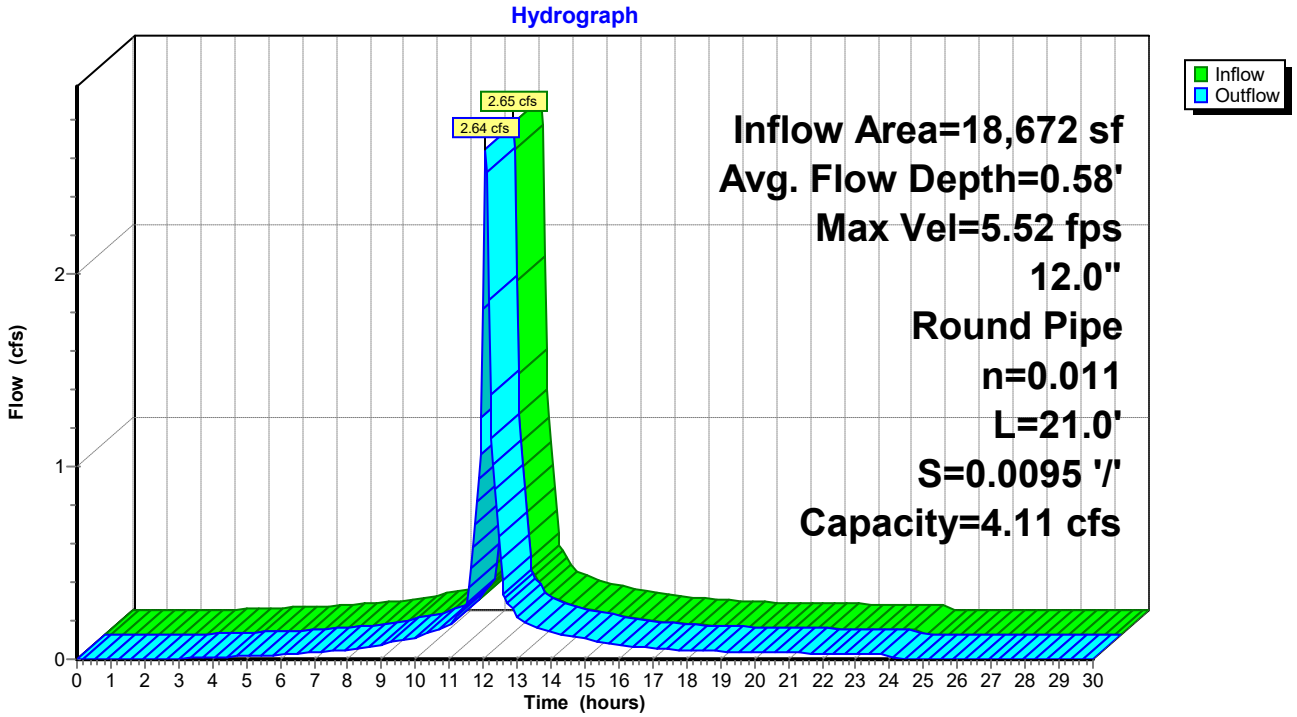
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.52 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.88 fps, Avg. Travel Time= 0.2 min

Peak Storage= 10 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.58'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.11 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 346.90', Outlet Invert= 346.70'



Reach DCB-S3: TO DMH-S1



Stage-Discharge for Reach DCB-S3: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.90	0.00	0.00
346.91	0.47	0.00
346.92	0.74	0.00
346.93	0.96	0.01
346.94	1.16	0.01
346.95	1.34	0.02
346.96	1.51	0.03
346.97	1.67	0.04
346.98	1.82	0.05
346.99	1.96	0.07
347.00	2.10	0.09
347.01	2.23	0.10
347.02	2.35	0.13
347.03	2.47	0.15
347.04	2.59	0.17
347.05	2.70	0.20
347.06	2.81	0.23
347.07	2.92	0.26
347.08	3.02	0.29
347.09	3.12	0.32
347.10	3.22	0.36
347.11	3.31	0.40
347.12	3.40	0.44
347.13	3.49	0.48
347.14	3.58	0.52
347.15	3.67	0.56
347.16	3.75	0.61
347.17	3.83	0.66
347.18	3.91	0.70
347.19	3.99	0.75
347.20	4.06	0.80
347.21	4.13	0.86
347.22	4.21	0.91
347.23	4.28	0.97
347.24	4.34	1.02
347.25	4.41	1.08
347.26	4.48	1.14
347.27	4.54	1.20
347.28	4.60	1.26
347.29	4.66	1.32
347.30	4.72	1.38
347.31	4.78	1.45
347.32	4.83	1.51
347.33	4.89	1.58
347.34	4.94	1.64
347.35	4.99	1.71
347.36	5.04	1.78
347.37	5.09	1.85
347.38	5.14	1.92
347.39	5.19	1.98
347.40	5.23	2.05
347.41	5.28	2.12
347.42	5.32	2.19
347.43	5.36	2.27
347.44	5.40	2.34
347.45	5.44	2.41
347.46	5.47	2.48
347.47	5.51	2.55
347.48	5.55	2.62
347.49	5.58	2.69
347.50	5.61	2.76
347.51	5.64	2.83
347.52	5.67	2.90
347.53	5.70	2.97
347.54	5.73	3.04
347.55	5.75	3.11
347.56	5.78	3.18
347.57	5.80	3.24
347.58	5.82	3.31
347.59	5.84	3.38
347.60	5.86	3.44
347.61	5.88	3.50
347.62	5.89	3.57
347.63	5.91	3.63
347.64	5.92	3.69
347.65	5.93	3.75
347.66	5.94	3.80
347.67	5.95	3.86
347.68	5.95	3.91
347.69	5.96	3.97
347.70	5.96	4.02
347.71	**5.96**	4.06
347.72	5.96	4.11
347.73	5.96	4.15
347.74	5.96	4.20
347.75	5.95	4.23
347.76	5.94	4.27
347.77	5.93	4.30
347.78	5.92	4.33
347.79	5.90	4.36
347.80	5.88	4.38
347.81	5.86	4.40
347.82	5.83	4.41
347.83	5.80	4.42
347.84	5.77	**4.42**
347.85	5.73	4.42
347.86	5.68	4.40
347.87	5.63	4.38
347.88	5.56	4.34
347.89	5.46	4.28
347.90	5.23	4.11

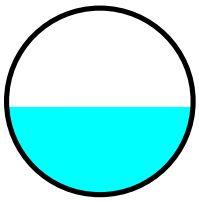
Summary for Reach DCB-S4: TO DMH-S1

Inflow Area = 24,334 sf, 83.66% Impervious, Inflow Depth = 5.33" for 100-Year event
Inflow = 3.21 cfs @ 12.09 hrs, Volume= 10,816 cf
Outflow = 3.21 cfs @ 12.09 hrs, Volume= 10,816 cf, Atten= 0%, Lag= 0.0 min

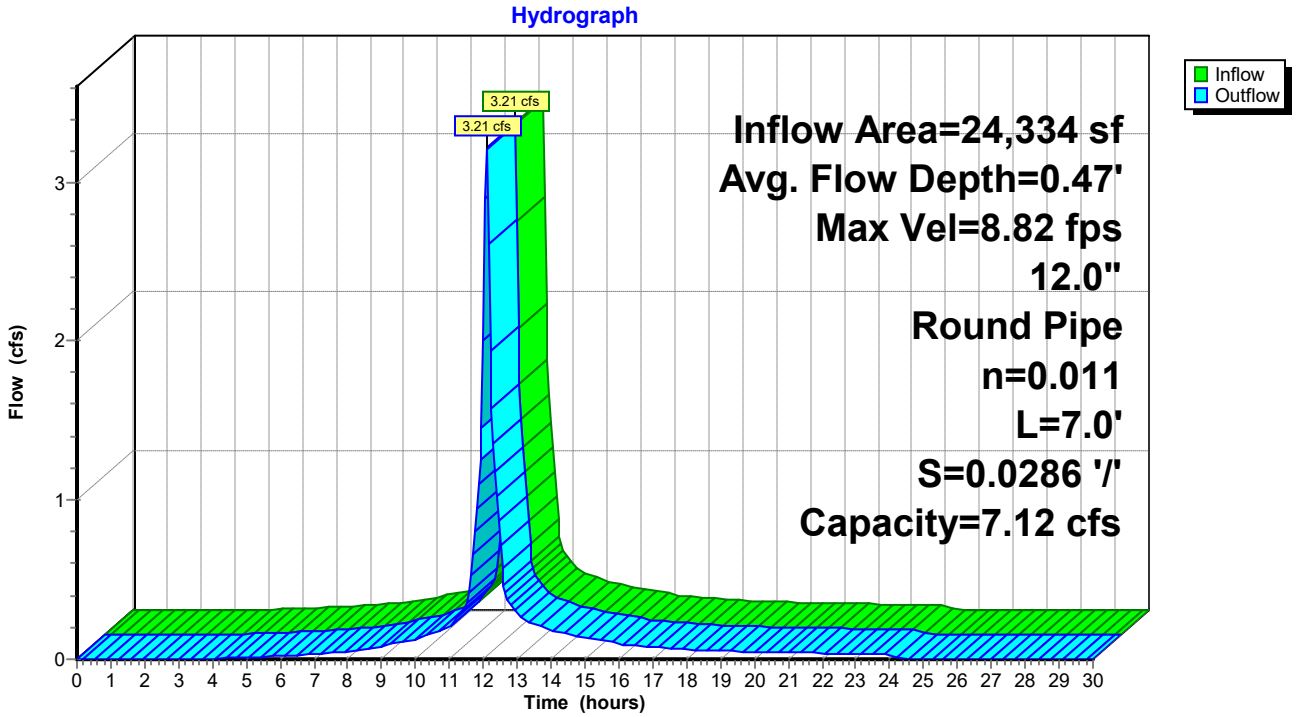
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.82 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.97 fps, Avg. Travel Time= 0.0 min

Peak Storage= 3 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.47'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.12 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 7.0' Slope= 0.0286 '/'
Inlet Invert= 346.90', Outlet Invert= 346.70'



Reach DCB-S4: TO DMH-S1



Stage-Discharge for Reach DCB-S4: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.90	0.00	0.00
346.91	0.81	0.00
346.92	1.28	0.00
346.93	1.67	0.01
346.94	2.01	0.02
346.95	2.33	0.03
346.96	2.62	0.05
346.97	2.89	0.07
346.98	3.15	0.09
346.99	3.40	0.12
347.00	3.64	0.15
347.01	3.86	0.18
347.02	4.08	0.22
347.03	4.29	0.26
347.04	4.49	0.30
347.05	4.68	0.35
347.06	4.87	0.40
347.07	5.06	0.45
347.08	5.23	0.50
347.09	5.41	0.56
347.10	5.57	0.62
347.11	5.74	0.69
347.12	5.90	0.76
347.13	6.05	0.83
347.14	6.20	0.90
347.15	6.35	0.97
347.16	6.49	1.05
347.17	6.63	1.13
347.18	6.77	1.22
347.19	6.90	1.31
347.20	7.03	1.39
347.21	7.16	1.48
347.22	7.28	1.58
347.23	7.41	1.67
347.24	7.52	1.77
347.25	7.64	1.87
347.26	7.75	1.97
347.27	7.86	2.08
347.28	7.97	2.18
347.29	8.07	2.29
347.30	8.18	2.40
347.31	8.27	2.51
347.32	8.37	2.62
347.33	8.47	2.73
347.34	8.56	2.85
347.35	8.65	2.96
347.36	8.74	3.08
347.37	8.82	3.20
347.38	8.90	3.32
347.39	8.98	3.44
347.40	9.06	3.56
347.41	9.14	3.68
347.42	9.21	3.80
347.43	9.28	3.92
347.44	9.35	4.05
347.45	9.42	4.17
347.46	9.48	4.29
347.47	9.54	4.41
347.48	9.60	4.54
347.49	9.66	4.66
347.50	9.72	4.78
347.51	9.77	4.90
347.52	9.82	5.02
347.53	9.87	5.15
347.54	9.92	5.26
347.55	9.96	5.38
347.56	10.00	5.50
347.57	10.04	5.62
347.58	10.08	5.73
347.59	10.11	5.85
347.60	10.15	5.96
347.61	10.18	6.07
347.62	10.20	6.18
347.63	10.23	6.28
347.64	10.25	6.39
347.65	10.27	6.49
347.66	10.29	6.59
347.67	10.30	6.69
347.68	10.31	6.78
347.69	10.32	6.87
347.70	10.33	6.96
347.71	**10.33**	7.04
347.72	10.33	7.12
347.73	10.33	7.20
347.74	10.32	7.27
347.75	10.31	7.33
347.76	10.29	7.40
347.77	10.27	7.45
347.78	10.25	7.50
347.79	10.22	7.55
347.80	10.19	7.59
347.81	10.15	7.62
347.82	10.10	7.64
347.83	10.05	7.65
347.84	9.99	**7.66**
347.85	9.92	7.65
347.86	9.84	7.63
347.87	9.74	7.59
347.88	9.62	7.52
347.89	9.46	7.42
347.90	9.06	7.12

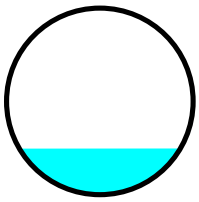
Summary for Reach DCB1: TO DMH#1

Inflow Area = 3,582 sf, 82.83% Impervious, Inflow Depth = 5.11" for 100-Year event
Inflow = 0.48 cfs @ 12.07 hrs, Volume= 1,525 cf
Outflow = 0.47 cfs @ 12.08 hrs, Volume= 1,525 cf, Atten= 2%, Lag= 0.7 min

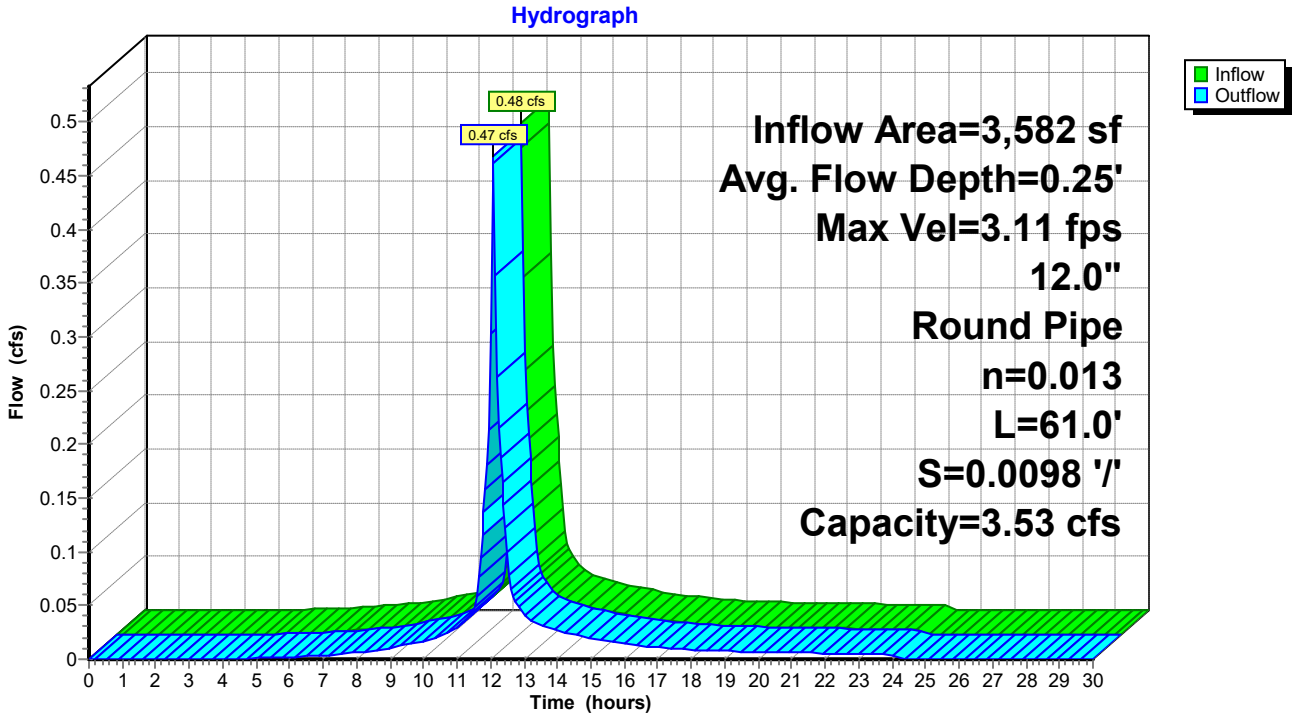
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.11 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.03 fps, Avg. Travel Time= 1.0 min

Peak Storage= 9 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.25'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.53 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 61.0' Slope= 0.0098 '/'
Inlet Invert= 355.30', Outlet Invert= 354.70'



Reach DCB1: TO DMH#1



Stage-Discharge for Reach DCB1: TO DMH#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.30	0.00	0.00
355.31	0.40	0.00
355.32	0.63	0.00
355.33	0.83	0.01
355.34	1.00	0.01
355.35	1.16	0.02
355.36	1.30	0.03
355.37	1.44	0.03
355.38	1.57	0.05
355.39	1.69	0.06
355.40	1.80	0.07
355.41	1.92	0.09
355.42	2.02	0.11
355.43	2.13	0.13
355.44	2.23	0.15
355.45	2.33	0.17
355.46	2.42	0.20
355.47	2.51	0.22
355.48	2.60	0.25
355.49	2.68	0.28
355.50	2.77	0.31
355.51	2.85	0.34
355.52	2.93	0.38
355.53	3.00	0.41
355.54	3.08	0.45
355.55	3.15	0.48
355.56	3.22	0.52
355.57	3.29	0.56
355.58	3.36	0.61
355.59	3.43	0.65
355.60	3.49	0.69
355.61	3.55	0.74
355.62	3.62	0.78
355.63	3.68	0.83
355.64	3.74	0.88
355.65	3.79	0.93
355.66	3.85	0.98
355.67	3.90	1.03
355.68	3.96	1.08
355.69	4.01	1.14
355.70	4.06	1.19
355.71	4.11	1.25
355.72	4.16	1.30
355.73	4.20	1.36
355.74	4.25	1.41
355.75	4.29	1.47
355.76	4.34	1.53
355.77	4.38	1.59
355.78	4.42	1.65
355.79	4.46	1.71
355.80	4.50	1.77
355.81	4.54	1.83
355.82	4.57	1.89
355.83	4.61	1.95
355.84	4.64	2.01
355.85	4.68	2.07
355.86	4.71	2.13
355.87	4.74	2.19
355.88	4.77	2.25
355.89	4.80	2.31
355.90	4.82	2.37
355.91	4.85	2.43
355.92	4.88	2.49
355.93	4.90	2.55
355.94	4.92	2.61
355.95	4.95	2.67
355.96	4.97	2.73
355.97	4.99	2.79
355.98	5.00	2.85
355.99	5.02	2.90
356.00	5.04	2.96
356.01	5.05	3.01
356.02	5.07	3.07
356.03	5.08	3.12
356.04	5.09	3.17
356.05	5.10	3.22
356.06	5.11	3.27
356.07	5.11	3.32
356.08	5.12	3.37
356.09	5.12	3.41
356.10	5.13	3.45
356.11	**5.13**	3.50
356.12	5.13	3.53
356.13	5.13	3.57
356.14	5.12	3.61
356.15	5.12	3.64
356.16	5.11	3.67
356.17	5.10	3.70
356.18	5.09	3.72
356.19	5.07	3.75
356.20	5.06	3.77
356.21	5.04	3.78
356.22	5.02	3.79
356.23	4.99	3.80
356.24	4.96	**3.80**
356.25	4.93	3.80
356.26	4.89	3.79
356.27	4.84	3.77
356.28	4.78	3.73
356.29	4.70	3.68
356.30	4.50	3.53

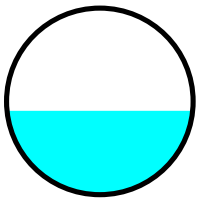
Summary for Reach DCB2: TO DMH#2

Inflow Area = 12,397 sf, 88.23% Impervious, Inflow Depth = 5.45" for 100-Year event
Inflow = 1.72 cfs @ 12.07 hrs, Volume= 5,628 cf
Outflow = 1.71 cfs @ 12.07 hrs, Volume= 5,628 cf, Atten= 1%, Lag= 0.2 min

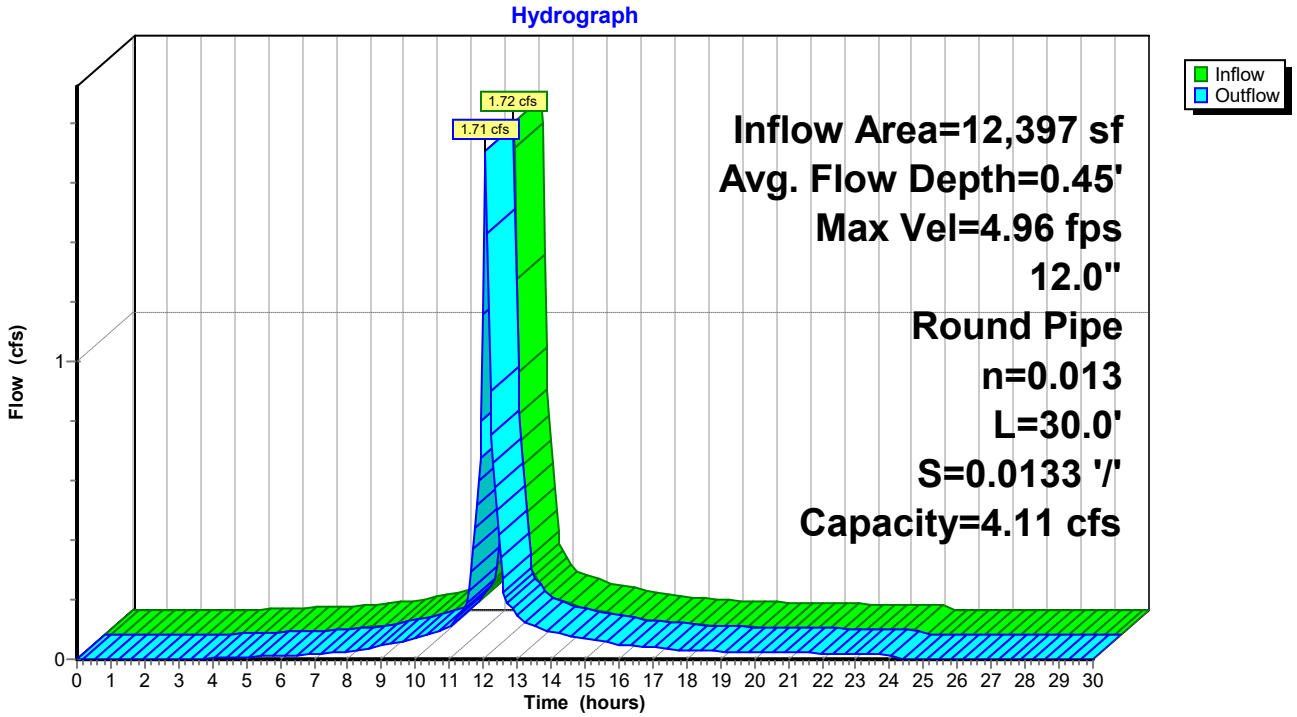
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.96 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.66 fps, Avg. Travel Time= 0.3 min

Peak Storage= 10 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.45'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.11 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 30.0' Slope= 0.0133 '/'
Inlet Invert= 354.40', Outlet Invert= 354.00'



Reach DCB2: TO DMH#2



Stage-Discharge for Reach DCB2: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.40	0.00	0.00
354.41	0.47	0.00
354.42	0.74	0.00
354.43	0.96	0.01
354.44	1.16	0.01
354.45	1.35	0.02
354.46	1.51	0.03
354.47	1.67	0.04
354.48	1.82	0.05
354.49	1.97	0.07
354.50	2.10	0.09
354.51	2.23	0.10
354.52	2.36	0.13
354.53	2.48	0.15
354.54	2.59	0.17
354.55	2.71	0.20
354.56	2.82	0.23
354.57	2.92	0.26
354.58	3.02	0.29
354.59	3.12	0.32
354.60	3.22	0.36
354.61	3.32	0.40
354.62	3.41	0.44
354.63	3.50	0.48
354.64	3.59	0.52
354.65	3.67	0.56
354.66	3.75	0.61
354.67	3.83	0.66
354.68	3.91	0.70
354.69	3.99	0.75
354.70	4.07	0.81
354.71	4.14	0.86
354.72	4.21	0.91
354.73	4.28	0.97
354.74	4.35	1.02
354.75	4.42	1.08
354.76	4.48	1.14
354.77	4.54	1.20
354.78	4.61	1.26
354.79	4.67	1.32
354.80	4.73	1.39
354.81	4.78	1.45
354.82	4.84	1.51
354.83	4.89	1.58
354.84	4.95	1.65
354.85	5.00	1.71
354.86	5.05	1.78
354.87	5.10	1.85
354.88	5.15	1.92
354.89	5.19	1.99
354.90	5.24	2.06
354.91	5.28	2.13
354.92	5.32	2.20
354.93	5.37	2.27
354.94	5.41	2.34
354.95	5.44	2.41
354.96	5.48	2.48
354.97	5.52	2.55
354.98	5.55	2.62
354.99	5.59	2.69
355.00	5.62	2.76
355.01	5.65	2.83
355.02	5.68	2.90
355.03	5.71	2.97
355.04	5.73	3.04
355.05	5.76	3.11
355.06	5.78	3.18
355.07	5.81	3.25
355.08	5.83	3.31
355.09	5.85	3.38
355.10	5.87	3.44
355.11	5.88	3.51
355.12	5.90	3.57
355.13	5.91	3.63
355.14	5.93	3.69
355.15	5.94	3.75
355.16	5.95	3.81
355.17	5.96	3.86
355.18	5.96	3.92
355.19	5.97	3.97
355.20	5.97	4.02
355.21	**5.97**	4.07
355.22	5.97	4.12
355.23	5.97	4.16
355.24	5.96	4.20
355.25	5.96	4.24
355.26	5.95	4.27
355.27	5.94	4.31
355.28	5.92	4.34
355.29	5.91	4.36
355.30	5.89	4.38
355.31	5.87	4.40
355.32	5.84	4.42
355.33	5.81	4.42
355.34	5.78	**4.43**
355.35	5.74	4.42
355.36	5.69	4.41
355.37	5.63	4.38
355.38	5.56	4.35
355.39	5.47	4.29
355.40	5.24	4.11

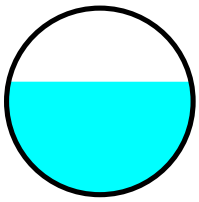
Summary for Reach DCB3: TO DMH#3

Inflow Area = 13,758 sf, 90.05% Impervious, Inflow Depth = 5.56" for 100-Year event
Inflow = 1.93 cfs @ 12.07 hrs, Volume= 6,376 cf
Outflow = 1.90 cfs @ 12.08 hrs, Volume= 6,376 cf, Atten= 2%, Lag= 0.5 min

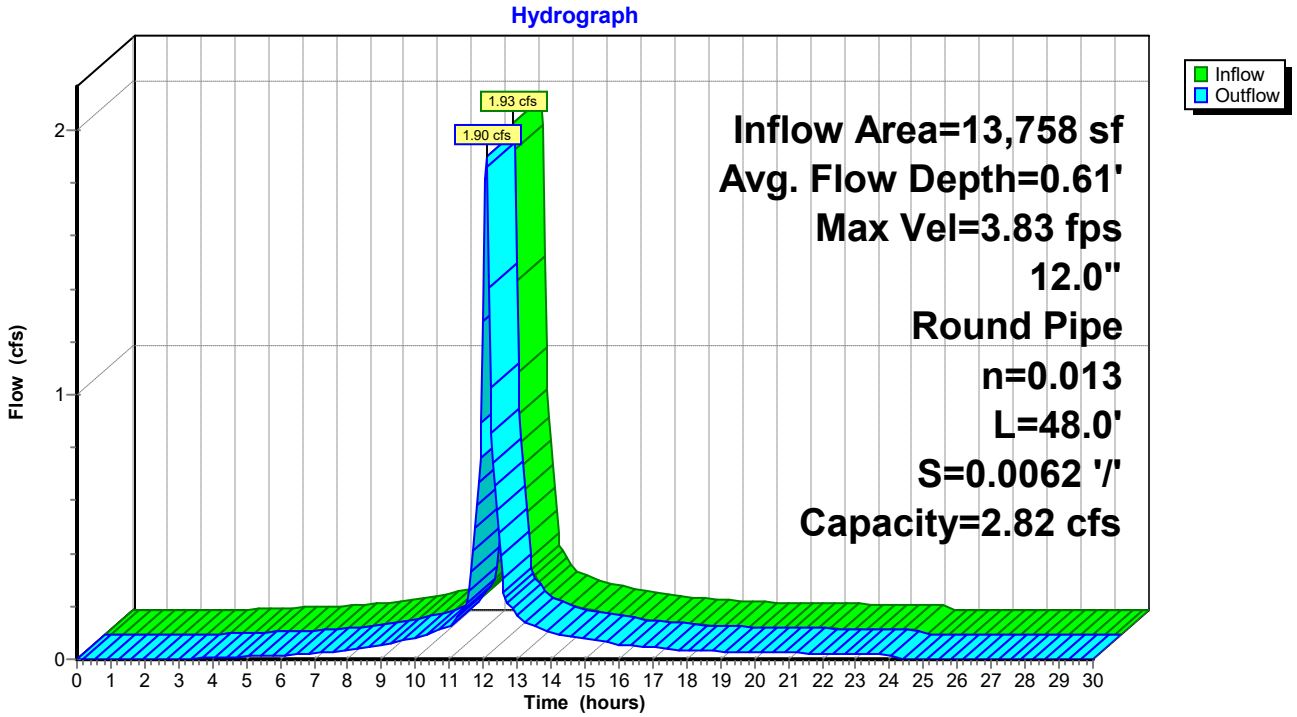
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.83 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.31 fps, Avg. Travel Time= 0.6 min

Peak Storage= 24 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.61'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.82 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 48.0' Slope= 0.0062 '/'
Inlet Invert= 351.90', Outlet Invert= 351.60'



Reach DCB3: TO DMH#3



Stage-Discharge for Reach DCB3: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.90	0.00	0.00
351.91	0.32	0.00
351.92	0.50	0.00
351.93	0.66	0.00
351.94	0.80	0.01
351.95	0.92	0.01
351.96	1.04	0.02
351.97	1.15	0.03
351.98	1.25	0.04
351.99	1.35	0.05
352.00	1.44	0.06
352.01	1.53	0.07
352.02	1.61	0.09
352.03	1.70	0.10
352.04	1.78	0.12
352.05	1.85	0.14
352.06	1.93	0.16
352.07	2.00	0.18
352.08	2.07	0.20
352.09	2.14	0.22
352.10	2.21	0.25
352.11	2.27	0.27
352.12	2.33	0.30
352.13	2.39	0.33
352.14	2.45	0.36
352.15	2.51	0.39
352.16	2.57	0.42
352.17	2.63	0.45
352.18	2.68	0.48
352.19	2.73	0.52
352.20	2.78	0.55
352.21	2.83	0.59
352.22	2.88	0.62
352.23	2.93	0.66
352.24	2.98	0.70
352.25	3.02	0.74
352.26	3.07	0.78
352.27	3.11	0.82
352.28	3.15	0.86
352.29	3.20	0.91
352.30	3.24	0.95
352.31	3.27	0.99
352.32	3.31	1.04
352.33	3.35	1.08
352.34	3.39	1.13
352.35	3.42	1.17
352.36	3.46	1.22
352.37	3.49	1.27
352.38	3.52	1.31
352.39	3.56	1.36
352.40	3.59	1.41
352.41	3.62	1.46
352.42	3.65	1.50
352.43	3.67	1.55
352.44	3.70	1.60
352.45	3.73	1.65
352.46	3.75	1.70
352.47	3.78	1.75
352.48	3.80	1.80
352.49	3.82	1.84
352.50	3.85	1.89
352.51	3.87	1.94
352.52	3.89	1.99
352.53	3.91	2.04
352.54	3.92	2.08
352.55	3.94	2.13
352.56	3.96	2.18
352.57	3.97	2.22
352.58	3.99	2.27
352.59	4.00	2.31
352.60	4.02	2.36
352.61	4.03	2.40
352.62	4.04	2.44
352.63	4.05	2.49
352.64	4.06	2.53
352.65	4.06	2.57
352.66	4.07	2.61
352.67	4.08	2.65
352.68	4.08	2.68
352.69	4.09	2.72
352.70	4.09	2.75
352.71	**4.09**	2.79
352.72	4.09	2.82
352.73	4.09	2.85
352.74	4.08	2.88
352.75	4.08	2.90
352.76	4.07	2.93
352.77	4.07	2.95
352.78	4.06	2.97
352.79	4.05	2.99
352.80	4.03	3.00
352.81	4.02	3.01
352.82	4.00	3.02
352.83	3.98	3.03
352.84	3.95	**3.03**
352.85	3.93	3.03
352.86	3.89	3.02
352.87	3.86	3.00
352.88	3.81	2.98
352.89	3.74	2.93
352.90	3.59	2.82

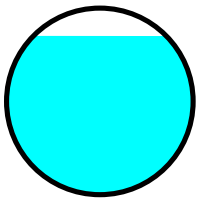
Summary for Reach DCB30: TO BASIN

Inflow Area = 198,125 sf, 23.50% Impervious, Inflow Depth = 2.26" for 100-Year event
Inflow = 8.17 cfs @ 12.26 hrs, Volume= 37,245 cf
Outflow = 8.14 cfs @ 12.27 hrs, Volume= 37,245 cf, Atten= 0%, Lag= 0.7 min

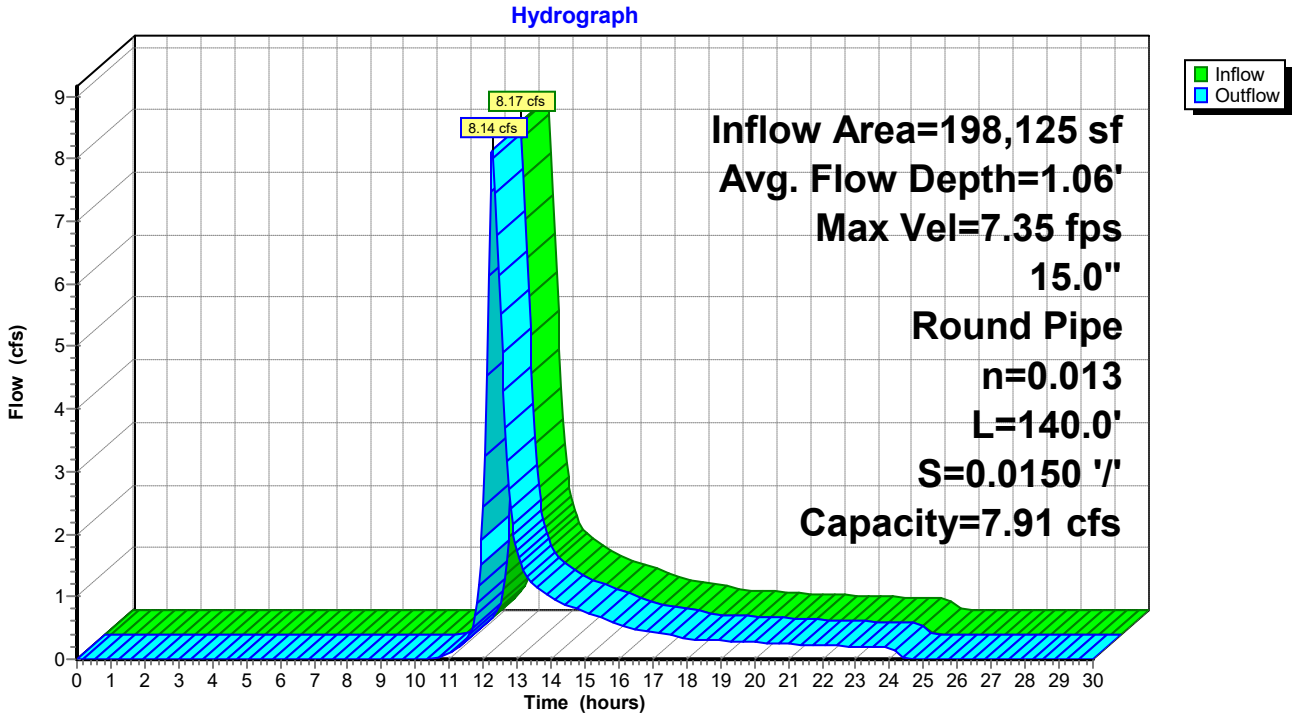
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.35 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.37 fps, Avg. Travel Time= 0.7 min

Peak Storage= 156 cf @ 12.26 hrs
Average Depth at Peak Storage= 1.06'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.91 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 140.0' Slope= 0.0150 '/'
Inlet Invert= 338.00', Outlet Invert= 335.90'



Reach DCB30: TO BASIN



Stage-Discharge for Reach DCB30: TO BASIN

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
338.00	0.00	0.00
338.01	0.46	0.00
338.02	0.77	0.00
338.03	1.02	0.01
338.04	1.23	0.01
338.05	1.43	0.02
338.06	1.61	0.04
338.07	1.78	0.05
338.08	1.94	0.06
338.09	2.10	0.08
338.10	2.24	0.10
338.11	2.38	0.13
338.12	2.52	0.15
338.13	2.65	0.18
338.14	2.78	0.21
338.15	2.90	0.24
338.16	3.02	0.28
338.17	3.14	0.31
338.18	3.25	0.35
338.19	3.36	0.40
338.20	3.47	0.44
338.21	3.57	0.49
338.22	3.67	0.53
338.23	3.77	0.59
338.24	3.87	0.64
338.25	3.97	0.69
338.26	4.06	0.75
338.27	4.15	0.81
338.28	4.24	0.87
338.29	4.33	0.93
338.30	4.41	1.00
338.31	4.50	1.07
338.32	4.58	1.14
338.33	4.66	1.21
338.34	4.74	1.28
338.35	4.82	1.35
338.36	4.89	1.43
338.37	4.97	1.51
338.38	5.04	1.59
338.39	5.11	1.67
338.40	5.18	1.75
338.41	5.25	1.84
338.42	5.32	1.93
338.43	5.39	2.01
338.44	5.45	2.10
338.45	5.51	2.19
338.46	5.58	2.29
338.47	5.64	2.38
338.48	5.70	2.47
338.49	5.76	2.57
338.50	5.82	2.67
338.51	5.87	2.76
338.52	5.93	2.86
338.53	5.98	2.96
338.54	6.04	3.06
338.55	6.09	3.17
338.56	6.14	3.27
338.57	6.19	3.37
338.58	6.24	3.48
338.59	6.29	3.58
338.60	6.33	3.69
338.61	6.38	3.80
338.62	6.42	3.90
338.63	6.47	4.01
338.64	6.51	4.12
338.65	6.55	4.23
338.66	6.59	4.33
338.67	6.63	4.44
338.68	6.67	4.55
338.69	6.71	4.66
338.70	6.75	4.77
338.71	6.78	4.88
338.72	6.82	4.99
338.73	6.85	5.10
338.74	6.88	5.21
338.75	6.91	5.32
338.76	6.94	5.42
338.77	6.97	5.53
338.78	7.00	5.64
338.79	7.03	5.75
338.80	7.06	5.85
338.81	7.08	5.96
338.82	7.10	6.06
338.83	7.13	6.17
338.84	7.15	6.27
338.85	7.17	6.37
338.86	7.19	6.47
338.87	7.21	6.57
338.88	7.23	6.67
338.89	7.24	6.77
338.90	7.26	6.87
338.91	7.27	6.96
338.92	7.29	7.05
338.93	7.30	7.15
338.94	7.31	7.24
338.95	7.32	7.32
338.96	7.33	7.41
338.97	7.33	7.49
338.98	7.34	7.58
338.99	7.34	7.66
339.00	7.35	7.73
339.01	7.35	7.81
339.02	**7.35**	7.88
339.03	7.35	7.95
339.04	7.35	8.01
339.05	7.34	8.08
339.06	7.33	8.14
339.07	7.33	8.19
339.08	7.32	8.25
339.09	7.31	8.30
339.10	7.29	8.34
339.11	7.28	8.38
339.12	7.26	8.42
339.13	7.24	8.45
339.14	7.21	8.47
339.15	7.19	8.49
339.16	7.16	8.50
339.17	7.13	**8.51**
339.18	7.09	8.51
339.19	7.05	8.50
339.20	7.00	8.48
339.21	6.95	8.44
339.22	6.88	8.39
339.23	6.80	8.31
339.24	6.67	8.18
339.25	6.45	7.91

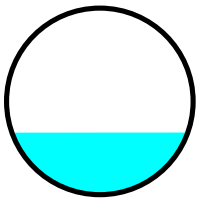
Summary for Reach DCB4: TO DMH#4

Inflow Area = 5,916 sf, 84.47% Impervious, Inflow Depth = 5.22" for 100-Year event
Inflow = 0.80 cfs @ 12.07 hrs, Volume= 2,574 cf
Outflow = 0.79 cfs @ 12.08 hrs, Volume= 2,574 cf, Atten= 1%, Lag= 0.2 min

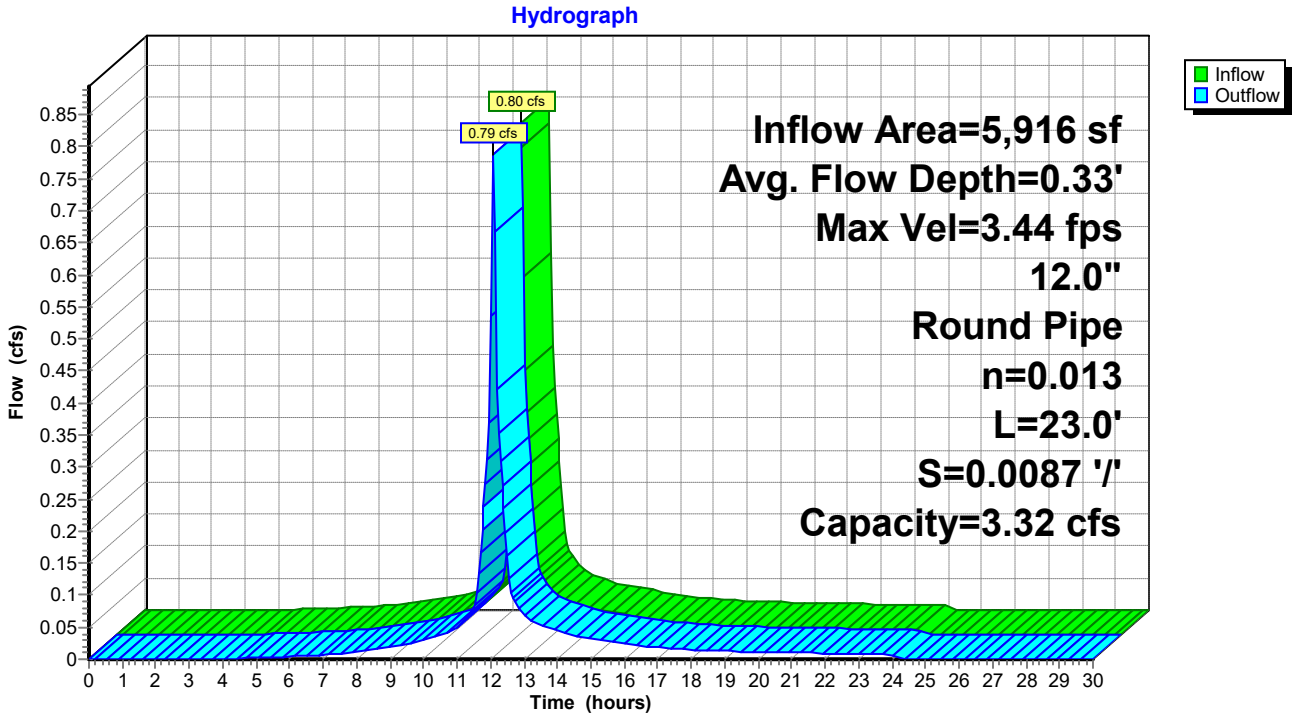
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.44 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.14 fps, Avg. Travel Time= 0.3 min

Peak Storage= 5 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.32 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 23.0' Slope= 0.0087 '/'
Inlet Invert= 355.50', Outlet Invert= 355.30'



Reach DCB4: TO DMH#4



Stage-Discharge for Reach DCB4: TO DMH#4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.50	0.00	0.00
355.51	0.38	0.00
355.52	0.60	0.00
355.53	0.78	0.01
355.54	0.94	0.01
355.55	1.09	0.02
355.56	1.22	0.02
355.57	1.35	0.03
355.58	1.47	0.04
355.59	1.59	0.06
355.60	1.70	0.07
355.61	1.80	0.08
355.62	1.90	0.10
355.63	2.00	0.12
355.64	2.10	0.14
355.65	2.19	0.16
355.66	2.27	0.18
355.67	2.36	0.21
355.68	2.44	0.23
355.69	2.52	0.26
355.70	2.60	0.29
355.71	2.68	0.32
355.72	2.75	0.35
355.73	2.82	0.39
355.74	2.90	0.42
355.75	2.96	0.46
355.76	3.03	0.49
355.77	3.10	0.53
355.78	3.16	0.57
355.79	3.22	0.61
355.80	3.28	0.65
355.81	3.34	0.69
355.82	3.40	0.74
355.83	3.46	0.78
355.84	3.51	0.83
355.85	3.57	0.87
355.86	3.62	0.92
355.87	3.67	0.97
355.88	3.72	1.02
355.89	3.77	1.07
355.90	3.82	1.12
355.91	3.86	1.17
355.92	3.91	1.22
355.93	3.95	1.28
355.94	4.00	1.33
355.95	4.04	1.38
355.96	4.08	1.44
355.97	4.12	1.49
355.98	4.16	1.55
355.99	4.19	1.60
356.00	4.23	1.66
356.01	4.27	1.72
356.02	4.30	1.77
356.03	4.33	1.83
356.04	4.37	1.89
356.05	4.40	1.95
356.06	4.43	2.00
356.07	4.46	2.06
356.08	4.48	2.12
356.09	4.51	2.18
356.10	4.54	2.23
356.11	4.56	2.29
356.12	4.59	2.35
356.13	4.61	2.40
356.14	4.63	2.46
356.15	4.65	2.51
356.16	4.67	2.57
356.17	4.69	2.62
356.18	4.71	2.68
356.19	4.72	2.73
356.20	4.74	2.78
356.21	4.75	2.83
356.22	4.76	2.88
356.23	4.78	2.93
356.24	4.79	2.98
356.25	4.79	3.03
356.26	4.80	3.08
356.27	4.81	3.12
356.28	4.81	3.16
356.29	4.82	3.21
356.30	4.82	3.25
356.31	**4.82**	3.29
356.32	4.82	3.32
356.33	4.82	3.36
356.34	4.82	3.39
356.35	4.81	3.42
356.36	4.80	3.45
356.37	4.80	3.48
356.38	4.78	3.50
356.39	4.77	3.52
356.40	4.76	3.54
356.41	4.74	3.56
356.42	4.72	3.57
356.43	4.69	3.57
356.44	4.66	**3.57**
356.45	4.63	3.57
356.46	4.59	3.56
356.47	4.55	3.54
356.48	4.49	3.51
356.49	4.42	3.46
356.50	4.23	3.32

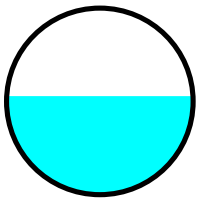
Summary for Reach DCB5: TO DMH#5

Inflow Area = 13,229 sf, 94.75% Impervious, Inflow Depth = 5.91" for 100-Year event
Inflow = 1.91 cfs @ 12.07 hrs, Volume= 6,514 cf
Outflow = 1.90 cfs @ 12.07 hrs, Volume= 6,514 cf, Atten= 1%, Lag= 0.2 min

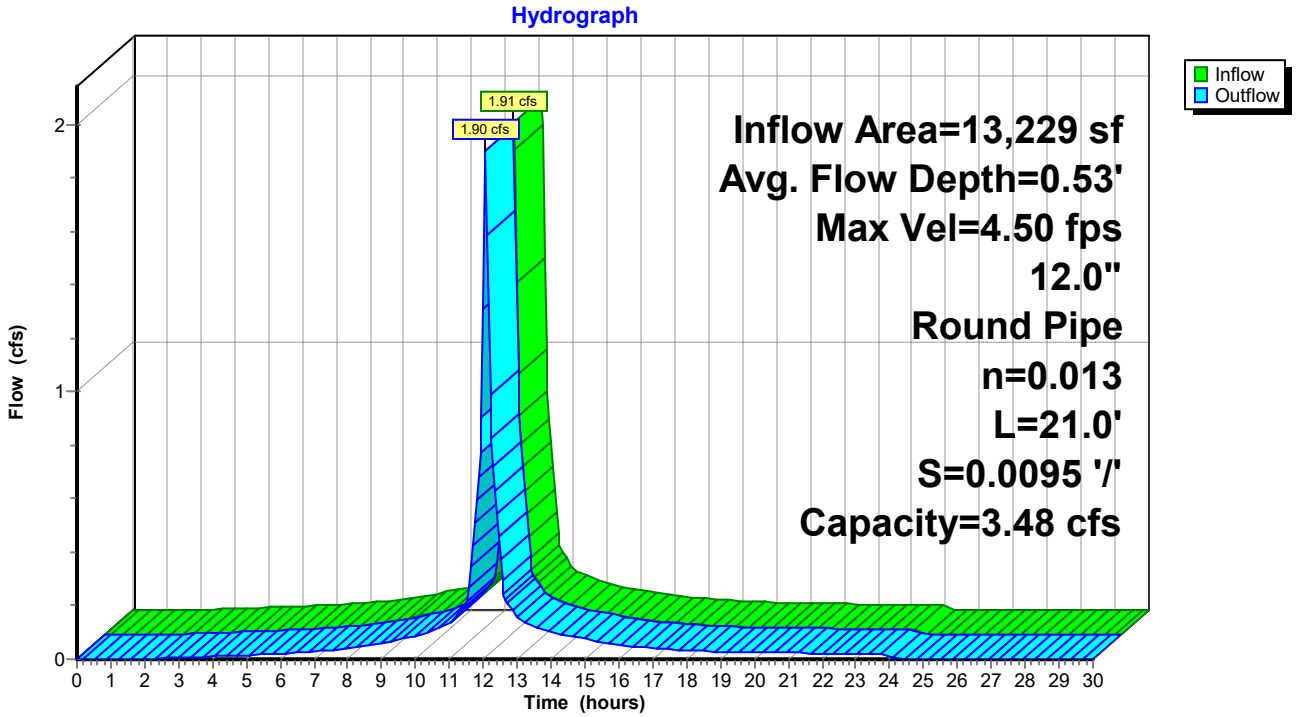
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.50 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.52 fps, Avg. Travel Time= 0.2 min

Peak Storage= 9 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.53'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.48 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 21.0' Slope= 0.0095 '/'
Inlet Invert= 354.80', Outlet Invert= 354.60'



Reach DCB5: TO DMH#5



Stage-Discharge for Reach DCB5: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.80	0.00	0.00
354.81	0.39	0.00
354.82	0.62	0.00
354.83	0.81	0.01
354.84	0.98	0.01
354.85	1.14	0.02
354.86	1.28	0.02
354.87	1.41	0.03
354.88	1.54	0.05
354.89	1.66	0.06
354.90	1.78	0.07
354.91	1.89	0.09
354.92	1.99	0.11
354.93	2.09	0.13
354.94	2.19	0.15
354.95	2.29	0.17
354.96	2.38	0.19
354.97	2.47	0.22
354.98	2.56	0.25
354.99	2.64	0.27
355.00	2.72	0.30
355.01	2.80	0.34
355.02	2.88	0.37
355.03	2.96	0.40
355.04	3.03	0.44
355.05	3.10	0.48
355.06	3.17	0.51
355.07	3.24	0.55
355.08	3.31	0.60
355.09	3.37	0.64
355.10	3.44	0.68
355.11	3.50	0.73
355.12	3.56	0.77
355.13	3.62	0.82
355.14	3.68	0.87
355.15	3.73	0.91
355.16	3.79	0.96
355.17	3.84	1.01
355.18	3.89	1.07
355.19	3.94	1.12
355.20	3.99	1.17
355.21	4.04	1.23
355.22	4.09	1.28
355.23	4.14	1.34
355.24	4.18	1.39
355.25	4.22	1.45
355.26	4.27	1.51
355.27	4.31	1.56
355.28	4.35	1.62
355.29	4.39	1.68
355.30	4.43	1.74
355.31	4.46	1.80
355.32	4.50	1.86
355.33	4.53	1.92
355.34	4.57	1.98
355.35	4.60	2.04
355.36	4.63	2.10
355.37	4.66	2.16
355.38	4.69	2.22
355.39	4.72	2.28
355.40	4.75	2.34
355.41	4.77	2.40
355.42	4.80	2.45
355.43	4.82	2.51
355.44	4.85	2.57
355.45	4.87	2.63
355.46	4.89	2.69
355.47	4.91	2.74
355.48	4.92	2.80
355.49	4.94	2.86
355.50	4.96	2.91
355.51	4.97	2.96
355.52	4.99	3.02
355.53	5.00	3.07
355.54	5.01	3.12
355.55	5.02	3.17
355.56	5.03	3.22
355.57	5.03	3.27
355.58	5.04	3.31
355.59	5.04	3.36
355.60	5.05	3.40
355.61	**5.05**	3.44
355.62	5.05	3.48
355.63	5.04	3.52
355.64	5.04	3.55
355.65	5.04	3.58
355.66	5.03	3.61
355.67	5.02	3.64
355.68	5.01	3.67
355.69	4.99	3.69
355.70	4.98	3.71
355.71	4.96	3.72
355.72	4.94	3.73
355.73	4.91	3.74
355.74	4.88	**3.74**
355.75	4.85	3.74
355.76	4.81	3.73
355.77	4.76	3.71
355.78	4.70	3.67
355.79	4.62	3.62
355.80	4.43	3.48

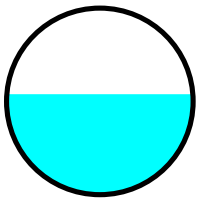
Summary for Reach DCB6: TO DMH#6

Inflow Area = 18,802 sf, 87.54% Impervious, Inflow Depth = 5.45" for 100-Year event
Inflow = 2.61 cfs @ 12.07 hrs, Volume= 8,535 cf
Outflow = 2.61 cfs @ 12.07 hrs, Volume= 8,535 cf, Atten= 0%, Lag= 0.0 min

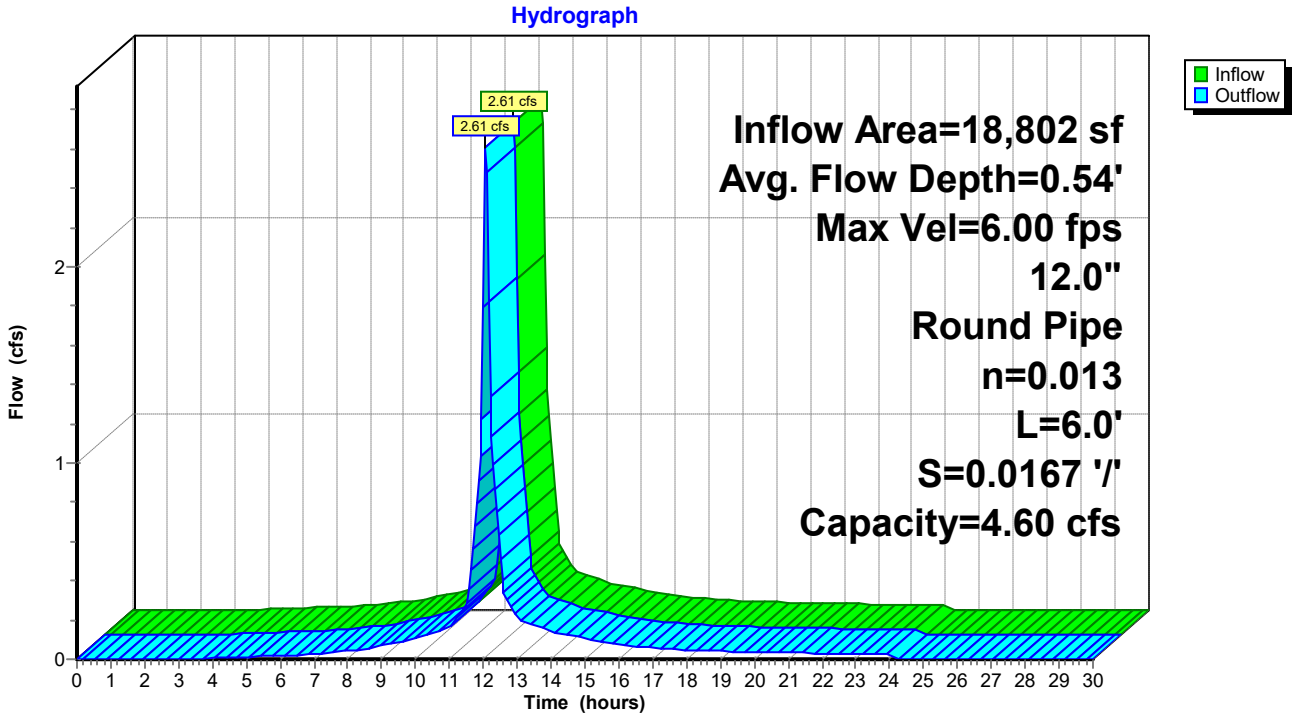
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.03 fps, Avg. Travel Time= 0.0 min

Peak Storage= 3 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.54'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.60 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 6.0' Slope= 0.0167 '/'
Inlet Invert= 353.40', Outlet Invert= 353.30'



Reach DCB6: TO DMH#6



Stage-Discharge for Reach DCB6: TO DMH#6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.40	0.00	0.00
353.41	0.52	0.00
353.42	0.82	0.00
353.43	1.08	0.01
353.44	1.30	0.01
353.45	1.50	0.02
353.46	1.69	0.03
353.47	1.87	0.05
353.48	2.04	0.06
353.49	2.20	0.08
353.50	2.35	0.10
353.51	2.50	0.12
353.52	2.64	0.14
353.53	2.77	0.17
353.54	2.90	0.19
353.55	3.03	0.22
353.56	3.15	0.26
353.57	3.27	0.29
353.58	3.38	0.33
353.59	3.49	0.36
353.60	3.60	0.40
353.61	3.71	0.44
353.62	3.81	0.49
353.63	3.91	0.53
353.64	4.01	0.58
353.65	4.10	0.63
353.66	4.20	0.68
353.67	4.29	0.73
353.68	4.38	0.79
353.69	4.46	0.84
353.70	4.55	0.90
353.71	4.63	0.96
353.72	4.71	1.02
353.73	4.79	1.08
353.74	4.86	1.14
353.75	4.94	1.21
353.76	5.01	1.28
353.77	5.08	1.34
353.78	5.15	1.41
353.79	5.22	1.48
353.80	5.28	1.55
353.81	5.35	1.62
353.82	5.41	1.69
353.83	5.47	1.77
353.84	5.53	1.84
353.85	5.59	1.92
353.86	5.65	1.99
353.87	5.70	2.07
353.88	5.75	2.14
353.89	5.81	2.22
353.90	5.86	2.30
353.91	5.91	2.38
353.92	5.95	2.46
353.93	6.00	2.54
353.94	6.04	2.61
353.95	6.09	2.69
353.96	6.13	2.77
353.97	6.17	2.85
353.98	6.21	2.93
353.99	6.24	3.01
354.00	6.28	3.09
354.01	6.31	3.17
354.02	6.35	3.25
354.03	6.38	3.33
354.04	6.41	3.40
354.05	6.44	3.48
354.06	6.46	3.56
354.07	6.49	3.63
354.08	6.51	3.70
354.09	6.54	3.78
354.10	6.56	3.85
354.11	6.58	3.92
354.12	6.59	3.99
354.13	6.61	4.06
354.14	6.63	4.13
354.15	6.64	4.19
354.16	6.65	4.26
354.17	6.66	4.32
354.18	6.67	4.38
354.19	6.67	4.44
354.20	6.67	4.50
354.21	**6.68**	4.55
354.22	6.68	4.60
354.23	6.67	4.65
354.24	6.67	4.70
354.25	6.66	4.74
354.26	6.65	4.78
354.27	6.64	4.82
354.28	6.62	4.85
354.29	6.61	4.88
354.30	6.58	4.90
354.31	6.56	4.92
354.32	6.53	4.94
354.33	6.50	4.95
354.34	6.46	**4.95**
354.35	6.41	4.94
354.36	6.36	4.93
354.37	6.30	4.90
354.38	6.22	4.86
354.39	6.11	4.79
354.40	5.86	4.60

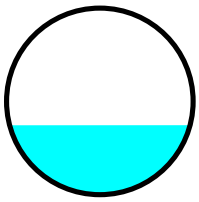
Summary for Reach DCBR100: TO DMH R100

Inflow Area = 8,304 sf, 89.80% Impervious, Inflow Depth = 5.56" for 100-Year event
Inflow = 1.17 cfs @ 12.07 hrs, Volume= 3,849 cf
Outflow = 1.13 cfs @ 12.09 hrs, Volume= 3,849 cf, Atten= 3%, Lag= 1.3 min

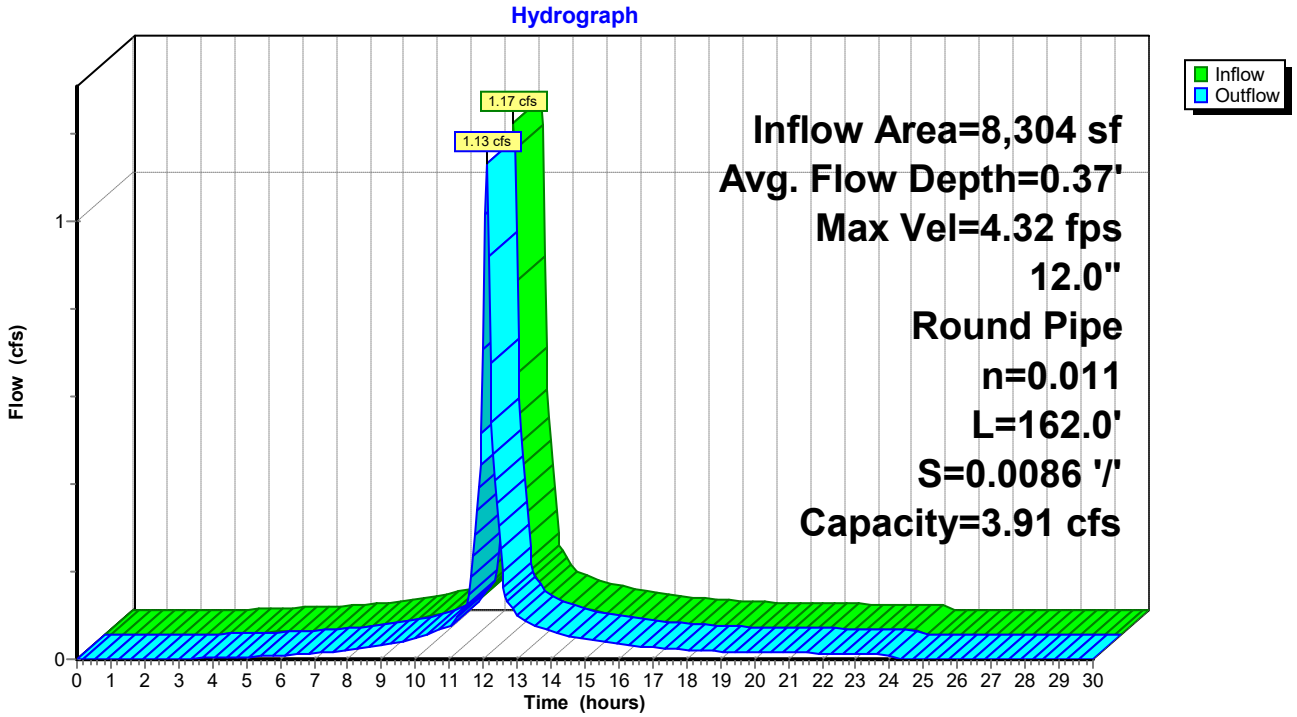
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.32 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.42 fps, Avg. Travel Time= 1.9 min

Peak Storage= 43 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.91 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 162.0' Slope= 0.0086 '/'
Inlet Invert= 354.50', Outlet Invert= 353.10'



Reach DCBR100: TO DMH R100



Stage-Discharge for Reach DCBR100: TO DMH R100

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.50	0.00	0.00
354.51	0.44	0.00
354.52	0.70	0.00
354.53	0.92	0.01
354.54	1.11	0.01
354.55	1.28	0.02
354.56	1.44	0.03
354.57	1.59	0.04
354.58	1.73	0.05
354.59	1.87	0.07
354.60	2.00	0.08
354.61	2.12	0.10
354.62	2.24	0.12
354.63	2.36	0.14
354.64	2.47	0.16
354.65	2.58	0.19
354.66	2.68	0.22
354.67	2.78	0.25
354.68	2.88	0.28
354.69	2.97	0.31
354.70	3.07	0.34
354.71	3.16	0.38
354.72	3.24	0.42
354.73	3.33	0.45
354.74	3.41	0.49
354.75	3.49	0.54
354.76	3.57	0.58
354.77	3.65	0.62
354.78	3.72	0.67
354.79	3.80	0.72
354.80	3.87	0.77
354.81	3.94	0.82
354.82	4.01	0.87
354.83	4.07	0.92
354.84	4.14	0.97
354.85	4.20	1.03
354.86	4.26	1.09
354.87	4.32	1.14
354.88	4.38	1.20
354.89	4.44	1.26
354.90	4.50	1.32
354.91	4.55	1.38
354.92	4.60	1.44
354.93	4.66	1.50
354.94	4.71	1.57
354.95	4.76	1.63
354.96	4.80	1.69
354.97	4.85	1.76
354.98	4.90	1.83
354.99	4.94	1.89
355.00	4.98	1.96
355.01	5.03	2.02
355.02	5.07	2.09
355.03	5.11	2.16
355.04	5.14	2.23
355.05	5.18	2.29
355.06	5.22	2.36
355.07	5.25	2.43
355.08	5.28	2.50
355.09	5.31	2.56
355.10	5.34	2.63
355.11	5.37	2.70
355.12	5.40	2.76
355.13	5.43	2.83
355.14	5.45	2.90
355.15	5.48	2.96
355.16	5.50	3.03
355.17	5.52	3.09
355.18	5.54	3.15
355.19	5.56	3.22
355.20	5.58	3.28
355.21	5.60	3.34
355.22	5.61	3.40
355.23	5.63	3.46
355.24	5.64	3.51
355.25	5.65	3.57
355.26	5.66	3.62
355.27	5.67	3.68
355.28	5.67	3.73
355.29	5.68	3.78
355.30	5.68	3.83
355.31	**5.68**	3.87
355.32	5.68	3.92
355.33	5.68	3.96
355.34	5.67	4.00
355.35	5.67	4.03
355.36	5.66	4.07
355.37	5.65	4.10
355.38	5.64	4.13
355.39	5.62	4.15
355.40	5.60	4.17
355.41	5.58	4.19
355.42	5.56	4.20
355.43	5.53	4.21
355.44	5.50	**4.21**
355.45	5.46	4.21
355.46	5.41	4.19
355.47	5.36	4.17
355.48	5.29	4.14
355.49	5.20	4.08
355.50	4.98	3.91

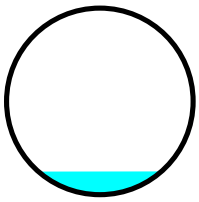
Summary for Reach DCBS10: TO DMH-S4

Inflow Area = 2,269 sf, 91.63% Impervious, Inflow Depth = 5.91" for 100-Year event
Inflow = 0.33 cfs @ 12.07 hrs, Volume= 1,117 cf
Outflow = 0.33 cfs @ 12.07 hrs, Volume= 1,117 cf, Atten= 0%, Lag= 0.0 min

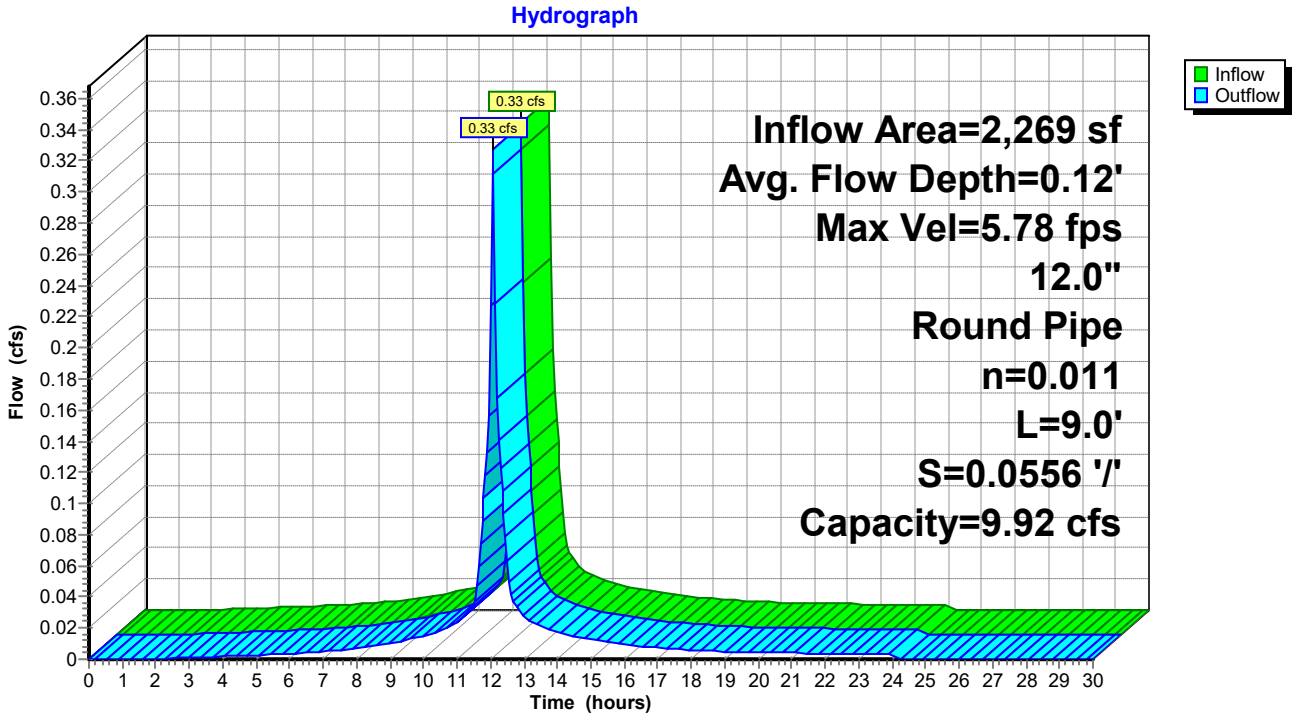
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.78 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.92 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.92 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 9.0' Slope= 0.0556 '/'
Inlet Invert= 356.50', Outlet Invert= 356.00'



Reach DCBS10: TO DMH-S4



Stage-Discharge for Reach DCBS10: TO DMH-S4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
356.50	0.00	0.00
356.51	1.12	0.00
356.52	1.78	0.01
356.53	2.32	0.02
356.54	2.81	0.03
356.55	3.25	0.05
356.56	3.65	0.07
356.57	4.04	0.10
356.58	4.40	0.13
356.59	4.74	0.17
356.60	5.07	0.21
356.61	5.38	0.25
356.62	5.69	0.30
356.63	5.98	0.36
356.64	6.26	0.42
356.65	6.53	0.48
356.66	6.79	0.55
356.67	7.05	0.62
356.68	7.30	0.70
356.69	7.54	0.78
356.70	7.77	0.87
356.71	8.00	0.96
356.72	8.22	1.05
356.73	8.44	1.15
356.74	8.65	1.25
356.75	8.85	1.36
356.76	9.05	1.47
356.77	9.25	1.58
356.78	9.44	1.70
356.79	9.63	1.82
356.80	9.81	1.94
356.81	9.98	2.07
356.82	10.16	2.20
356.83	10.33	2.33
356.84	10.49	2.47
356.85	10.65	2.61
356.86	10.81	2.75
356.87	10.96	2.90
356.88	11.11	3.04
356.89	11.26	3.19
356.90	11.40	3.34
356.91	11.54	3.50
356.92	11.67	3.65
356.93	11.81	3.81
356.94	11.93	3.97
356.95	12.06	4.13
356.96	12.18	4.30
356.97	12.30	4.46
356.98	12.42	4.63
356.99	12.53	4.79
357.00	12.64	4.96
357.01	12.74	5.13
357.02	12.84	5.30
357.03	12.94	5.47
357.04	13.04	5.64
357.05	13.13	5.81
357.06	13.22	5.98
357.07	13.31	6.16
357.08	13.39	6.33
357.09	13.47	6.50
357.10	13.55	6.67
357.11	13.63	6.84
357.12	13.70	7.01
357.13	13.76	7.17
357.14	13.83	7.34
357.15	13.89	7.51
357.16	13.95	7.67
357.17	14.00	7.83
357.18	14.06	7.99
357.19	14.10	8.15
357.20	14.15	8.31
357.21	14.19	8.46
357.22	14.23	8.61
357.23	14.26	8.76
357.24	14.30	8.91
357.25	14.32	9.05
357.26	14.35	9.19
357.27	14.37	9.32
357.28	14.38	9.45
357.29	14.39	9.58
357.30	14.40	9.70
357.31	**14.41**	9.82
357.32	14.40	9.93
357.33	14.40	10.03
357.34	14.39	10.13
357.35	14.37	10.23
357.36	14.35	10.31
357.37	14.33	10.39
357.38	14.29	10.46
357.39	14.25	10.52
357.40	14.21	10.58
357.41	14.15	10.62
357.42	14.09	10.65
357.43	14.02	10.67
357.44	13.93	**10.68**
357.45	13.84	10.66
357.46	13.72	10.63
357.47	13.59	10.58
357.48	13.42	10.49
357.49	13.19	10.34
357.50	12.64	9.92

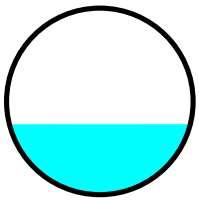
Summary for Reach DCBS5: TO DMH-S8

Inflow Area = 13,730 sf, 73.11% Impervious, Inflow Depth = 5.33" for 100-Year event
Inflow = 1.88 cfs @ 12.07 hrs, Volume= 6,103 cf
Outflow = 1.87 cfs @ 12.07 hrs, Volume= 6,103 cf, Atten= 0%, Lag= 0.1 min

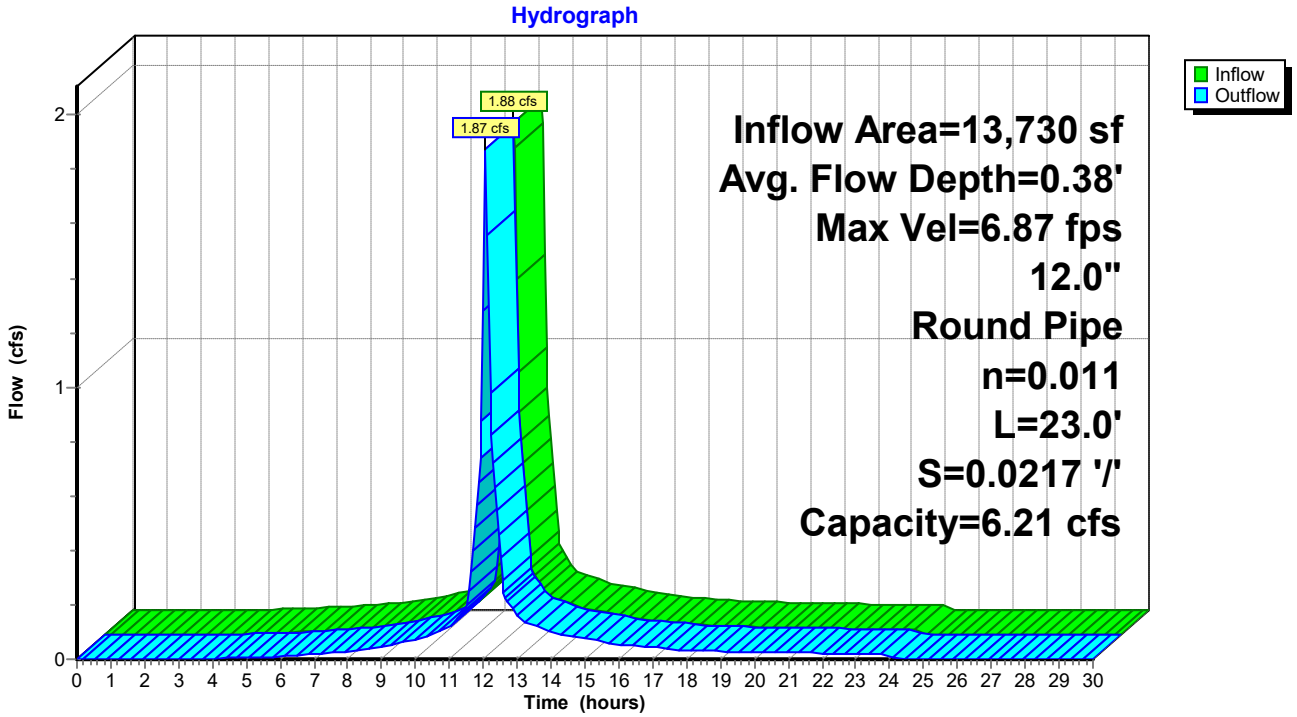
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.87 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.28 fps, Avg. Travel Time= 0.2 min

Peak Storage= 6 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.38'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 6.21 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 23.0' Slope= 0.0217 '/'
Inlet Invert= 347.00', Outlet Invert= 346.50'



Reach DCBS5: TO DMH-S8



Stage-Discharge for Reach DCBS5: TO DMH-S8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.00	0.00	0.00
347.01	0.70	0.00
347.02	1.11	0.00
347.03	1.45	0.01
347.04	1.76	0.02
347.05	2.03	0.03
347.06	2.29	0.04
347.07	2.52	0.06
347.08	2.75	0.08
347.09	2.97	0.10
347.10	3.17	0.13
347.11	3.37	0.16
347.12	3.56	0.19
347.13	3.74	0.22
347.14	3.91	0.26
347.15	4.08	0.30
347.16	4.25	0.34
347.17	4.41	0.39
347.18	4.56	0.44
347.19	4.72	0.49
347.20	4.86	0.54
347.21	5.00	0.60
347.22	5.14	0.66
347.23	5.28	0.72
347.24	5.41	0.78
347.25	5.54	0.85
347.26	5.66	0.92
347.27	5.79	0.99
347.28	5.91	1.06
347.29	6.02	1.14
347.30	6.13	1.22
347.31	6.25	1.30
347.32	6.35	1.38
347.33	6.46	1.46
347.34	6.56	1.55
347.35	6.66	1.63
347.36	6.76	1.72
347.37	6.86	1.81
347.38	6.95	1.90
347.39	7.04	2.00
347.40	7.13	2.09
347.41	7.22	2.19
347.42	7.30	2.29
347.43	7.39	2.38
347.44	7.47	2.48
347.45	7.54	2.59
347.46	7.62	2.69
347.47	7.69	2.79
347.48	7.77	2.89
347.49	7.84	3.00
347.50	7.90	3.10
347.51	7.97	3.21
347.52	8.03	3.32
347.53	8.10	3.42
347.54	8.16	3.53
347.55	8.22	3.64
347.56	8.27	3.74
347.57	8.33	3.85
347.58	8.38	3.96
347.59	8.43	4.06
347.60	8.48	4.17
347.61	8.52	4.28
347.62	8.57	4.38
347.63	8.61	4.49
347.64	8.65	4.59
347.65	8.69	4.70
347.66	8.73	4.80
347.67	8.76	4.90
347.68	8.79	5.00
347.69	8.82	5.10
347.70	8.85	5.20
347.71	8.88	5.29
347.72	8.90	5.39
347.73	8.92	5.48
347.74	8.94	5.57
347.75	8.96	5.66
347.76	8.97	5.75
347.77	8.99	5.83
347.78	9.00	5.91
347.79	9.00	5.99
347.80	9.01	6.07
347.81	**9.01**	6.14
347.82	9.01	6.21
347.83	9.01	6.28
347.84	9.00	6.34
347.85	8.99	6.40
347.86	8.98	6.45
347.87	8.96	6.50
347.88	8.94	6.54
347.89	8.92	6.58
347.90	8.89	6.62
347.91	8.85	6.64
347.92	8.81	6.66
347.93	8.77	6.67
347.94	8.72	**6.68**
347.95	8.66	6.67
347.96	8.58	6.65
347.97	8.50	6.62
347.98	8.39	6.56
347.99	8.25	6.47
348.00	7.90	6.21

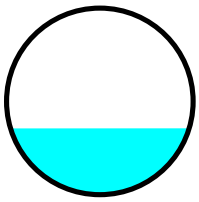
Summary for Reach DCBS6: TO DMH-S8

Inflow Area = 14,048 sf, 86.89% Impervious, Inflow Depth = 5.79" for 100-Year event
Inflow = 2.02 cfs @ 12.07 hrs, Volume= 6,781 cf
Outflow = 2.01 cfs @ 12.07 hrs, Volume= 6,781 cf, Atten= 0%, Lag= 0.1 min

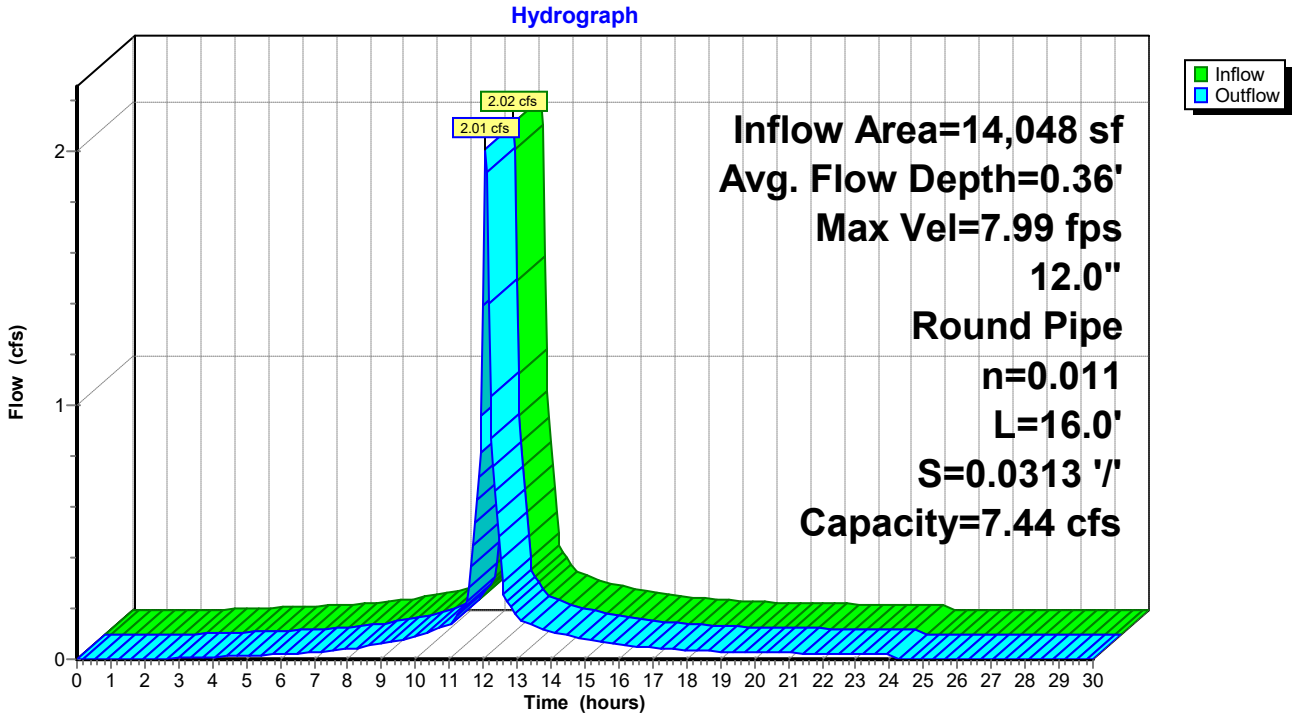
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.99 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.64 fps, Avg. Travel Time= 0.1 min

Peak Storage= 4 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.36'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.44 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 16.0' Slope= 0.0313 '/'
Inlet Invert= 347.00', Outlet Invert= 346.50'



Reach DCBS6: TO DMH-S8



Stage-Discharge for Reach DCBS6: TO DMH-S8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.00	0.00	0.00
347.01	0.84	0.00
347.02	1.33	0.01
347.03	1.74	0.01
347.04	2.10	0.02
347.05	2.43	0.04
347.06	2.74	0.05
347.07	3.03	0.07
347.08	3.30	0.10
347.09	3.56	0.12
347.10	3.80	0.16
347.11	4.04	0.19
347.12	4.26	0.23
347.13	4.48	0.27
347.14	4.69	0.31
347.15	4.90	0.36
347.16	5.10	0.41
347.17	5.29	0.47
347.18	5.47	0.53
347.19	5.65	0.59
347.20	5.83	0.65
347.21	6.00	0.72
347.22	6.17	0.79
347.23	6.33	0.86
347.24	6.49	0.94
347.25	6.64	1.02
347.26	6.79	1.10
347.27	6.94	1.19
347.28	7.08	1.27
347.29	7.22	1.36
347.30	7.36	1.46
347.31	7.49	1.55
347.32	7.62	1.65
347.33	7.74	1.75
347.34	7.87	1.85
347.35	7.99	1.96
347.36	8.11	2.06
347.37	8.22	2.17
347.38	8.33	2.28
347.39	8.44	2.39
347.40	8.55	2.51
347.41	8.65	2.62
347.42	8.76	2.74
347.43	8.85	2.86
347.44	8.95	2.98
347.45	9.04	3.10
347.46	9.14	3.22
347.47	9.22	3.35
347.48	9.31	3.47
347.49	9.40	3.60
347.50	9.48	3.72
347.51	9.56	3.85
347.52	9.63	3.98
347.53	9.71	4.10
347.54	9.78	4.23
347.55	9.85	4.36
347.56	9.92	4.49
347.57	9.98	4.62
347.58	10.05	4.74
347.59	10.11	4.87
347.60	10.16	5.00
347.61	10.22	5.13
347.62	10.27	5.25
347.63	10.32	5.38
347.64	10.37	5.51
347.65	10.42	5.63
347.66	10.46	5.75
347.67	10.50	5.88
347.68	10.54	6.00
347.69	10.58	6.11
347.70	10.61	6.23
347.71	10.64	6.35
347.72	10.67	6.46
347.73	10.70	6.57
347.74	10.72	6.68
347.75	10.74	6.79
347.76	10.76	6.89
347.77	10.77	6.99
347.78	10.79	7.09
347.79	10.80	7.18
347.80	10.80	7.28
347.81	**10.80**	7.36
347.82	10.80	7.45
347.83	10.80	7.53
347.84	10.79	7.60
347.85	10.78	7.67
347.86	10.76	7.73
347.87	10.74	7.79
347.88	10.72	7.85
347.89	10.69	7.89
347.90	10.66	7.93
347.91	10.61	7.97
347.92	10.57	7.99
347.93	10.51	8.00
347.94	10.45	**8.01**
347.95	10.38	8.00
347.96	10.29	7.97
347.97	10.19	7.93
347.98	10.06	7.87
347.99	9.89	7.76
348.00	9.48	7.44

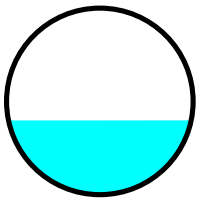
Summary for Reach DCBS7: TO DMH-S6

Inflow Area = 14,635 sf, 28.88% Impervious, Inflow Depth = 5.33" for 100-Year event
Inflow = 1.73 cfs @ 12.14 hrs, Volume= 6,505 cf
Outflow = 1.73 cfs @ 12.14 hrs, Volume= 6,505 cf, Atten= 0%, Lag= 0.1 min

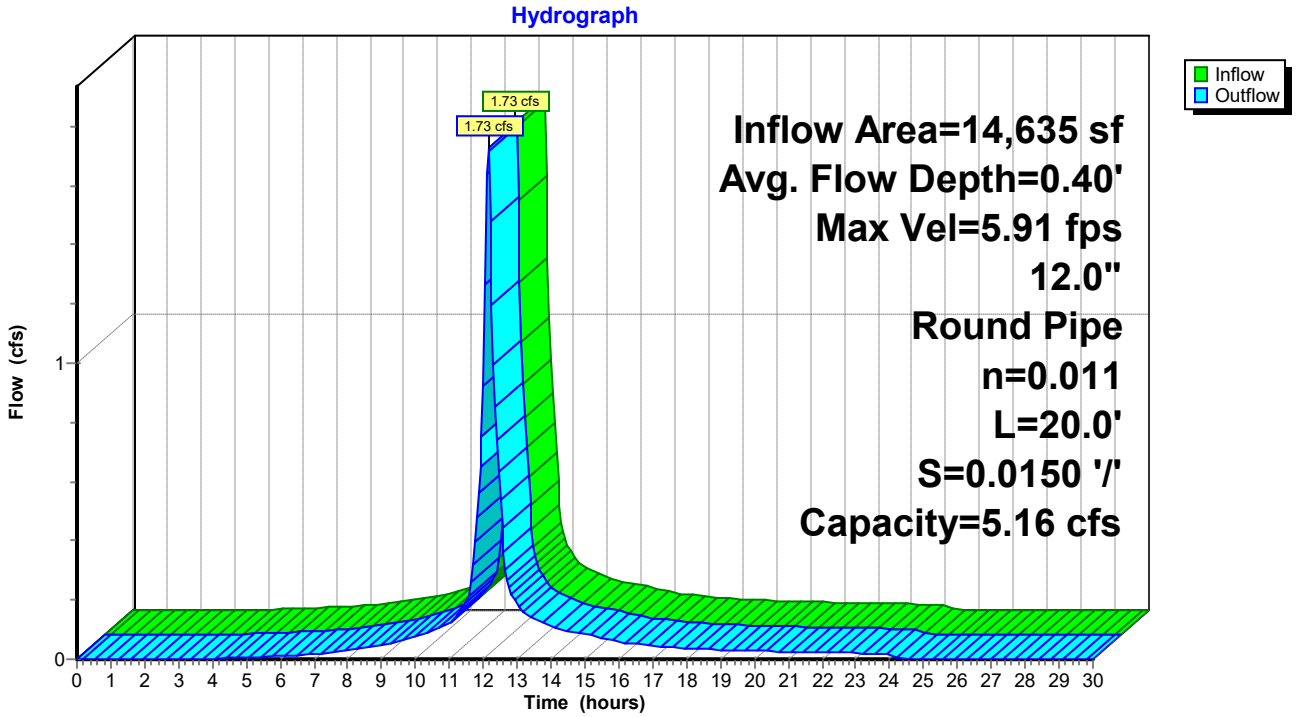
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.91 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.03 fps, Avg. Travel Time= 0.2 min

Peak Storage= 6 cf @ 12.14 hrs
Average Depth at Peak Storage= 0.40'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.16 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0150 '/'
Inlet Invert= 350.10', Outlet Invert= 349.80'



Reach DCBS7: TO DMH-S6



Stage-Discharge for Reach DCBS7: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.10	0.00	0.00
350.11	0.58	0.00
350.12	0.92	0.00
350.13	1.21	0.01
350.14	1.46	0.02
350.15	1.69	0.02
350.16	1.90	0.04
350.17	2.10	0.05
350.18	2.29	0.07
350.19	2.46	0.09
350.20	2.63	0.11
350.21	2.80	0.13
350.22	2.95	0.16
350.23	3.11	0.19
350.24	3.25	0.22
350.25	3.39	0.25
350.26	3.53	0.29
350.27	3.66	0.32
350.28	3.79	0.36
350.29	3.92	0.41
350.30	4.04	0.45
350.31	4.16	0.50
350.32	4.27	0.55
350.33	4.38	0.60
350.34	4.49	0.65
350.35	4.60	0.71
350.36	4.70	0.76
350.37	4.81	0.82
350.38	4.91	0.88
350.39	5.00	0.95
350.40	5.10	1.01
350.41	5.19	1.08
350.42	5.28	1.14
350.43	5.37	1.21
350.44	5.45	1.28
350.45	5.53	1.36
350.46	5.62	1.43
350.47	5.70	1.50
350.48	5.77	1.58
350.49	5.85	1.66
350.50	5.92	1.74
350.51	6.00	1.82
350.52	6.07	1.90
350.53	6.13	1.98
350.54	6.20	2.06
350.55	6.27	2.15
350.56	6.33	2.23
350.57	6.39	2.32
350.58	6.45	2.40
350.59	6.51	2.49
350.60	6.57	2.58
350.61	6.62	2.67
350.62	6.67	2.75
350.63	6.73	2.84
350.64	6.78	2.93
350.65	6.82	3.02
350.66	6.87	3.11
350.67	6.92	3.20
350.68	6.96	3.29
350.69	7.00	3.38
350.70	7.04	3.46
350.71	7.08	3.55
350.72	7.12	3.64
350.73	7.15	3.73
350.74	7.19	3.81
350.75	7.22	3.90
350.76	7.25	3.99
350.77	7.28	4.07
350.78	7.30	4.15
350.79	7.33	4.24
350.80	7.35	4.32
350.81	7.37	4.40
350.82	7.39	4.48
350.83	7.41	4.55
350.84	7.43	4.63
350.85	7.44	4.70
350.86	7.45	4.77
350.87	7.46	4.84
350.88	7.47	4.91
350.89	7.48	4.98
350.90	7.48	5.04
350.91	**7.49**	5.10
350.92	7.48	5.16
350.93	7.48	5.21
350.94	7.48	5.27
350.95	7.47	5.31
350.96	7.46	5.36
350.97	7.44	5.40
350.98	7.43	5.44
350.99	7.41	5.47
351.00	7.38	5.50
351.01	7.35	5.52
351.02	7.32	5.53
351.03	7.28	5.54
351.04	7.24	**5.55**
351.05	7.19	5.54
351.06	7.13	5.52
351.07	7.06	5.50
351.08	6.97	5.45
351.09	6.85	5.37
351.10	6.57	5.16

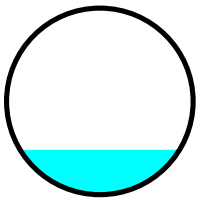
Summary for Reach DCBS8: TO DMH-S6

Inflow Area = 6,568 sf, 85.14% Impervious, Inflow Depth = 5.68" for 100-Year event
Inflow = 0.93 cfs @ 12.07 hrs, Volume= 3,107 cf
Outflow = 0.93 cfs @ 12.07 hrs, Volume= 3,107 cf, Atten= 0%, Lag= 0.1 min

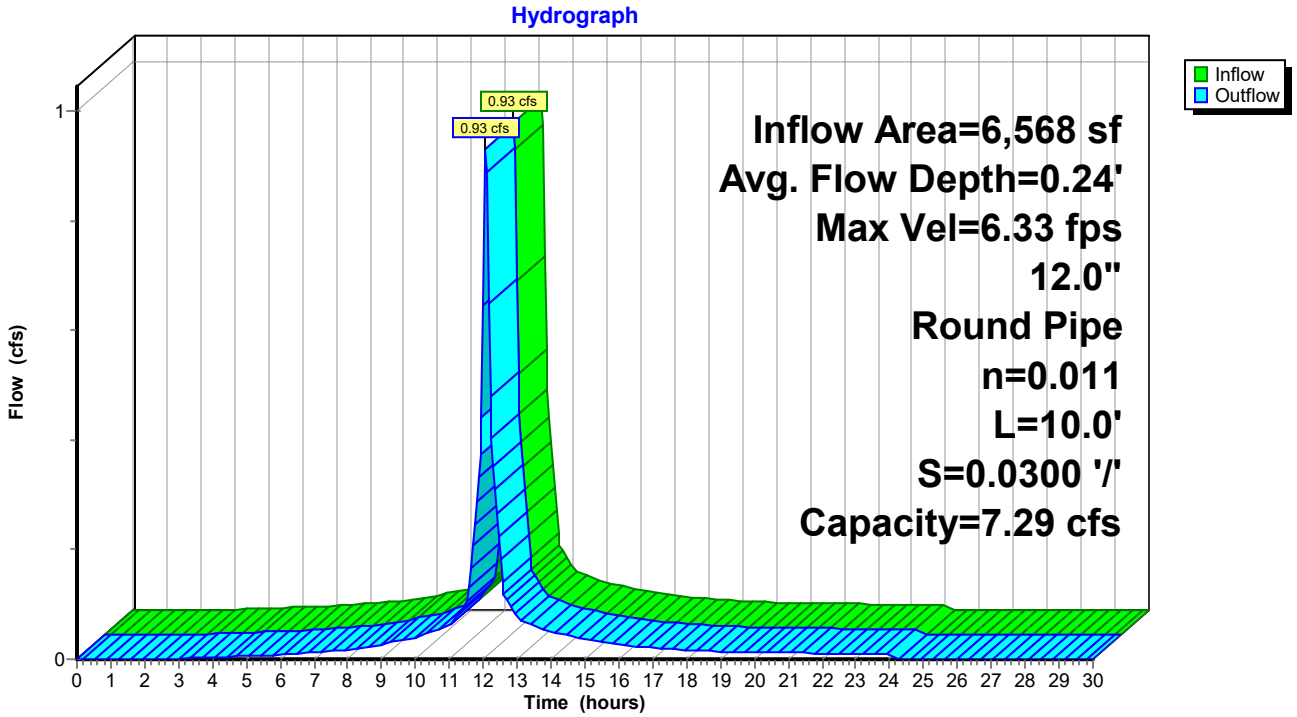
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.33 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.07 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.24'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.29 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 10.0' Slope= 0.0300 '/'
Inlet Invert= 350.10', Outlet Invert= 349.80'



Reach DCBS8: TO DMH-S6



Stage-Discharge for Reach DCBS8: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.10	0.00	0.00
350.11	0.83	0.00
350.12	1.31	0.00
350.13	1.71	0.01
350.14	2.06	0.02
350.15	2.39	0.04
350.16	2.69	0.05
350.17	2.97	0.07
350.18	3.23	0.10
350.19	3.48	0.12
350.20	3.73	0.15
350.21	3.96	0.19
350.22	4.18	0.22
350.23	4.39	0.26
350.24	4.60	0.31
350.25	4.80	0.35
350.26	4.99	0.40
350.27	5.18	0.46
350.28	5.36	0.52
350.29	5.54	0.58
350.30	5.71	0.64
350.31	5.88	0.70
350.32	6.04	0.77
350.33	6.20	0.85
350.34	6.36	0.92
350.35	6.51	1.00
350.36	6.65	1.08
350.37	6.80	1.16
350.38	6.94	1.25
350.39	7.07	1.34
350.40	7.21	1.43
350.41	7.34	1.52
350.42	7.46	1.62
350.43	7.59	1.72
350.44	7.71	1.82
350.45	7.83	1.92
350.46	7.94	2.02
350.47	8.06	2.13
350.48	8.17	2.24
350.49	8.27	2.35
350.50	8.38	2.46
350.51	8.48	2.57
350.52	8.58	2.69
350.53	8.68	2.80
350.54	8.77	2.92
350.55	8.86	3.04
350.56	8.95	3.16
350.57	9.04	3.28
350.58	9.12	3.40
350.59	9.21	3.52
350.60	9.29	3.65
350.61	9.36	3.77
350.62	9.44	3.90
350.63	9.51	4.02
350.64	9.58	4.15
350.65	9.65	4.27
350.66	9.72	4.40
350.67	9.78	4.52
350.68	9.84	4.65
350.69	9.90	4.77
350.70	9.96	4.90
350.71	10.01	5.02
350.72	10.06	5.15
350.73	10.11	5.27
350.74	10.16	5.39
350.75	10.21	5.52
350.76	10.25	5.64
350.77	10.29	5.76
350.78	10.33	5.87
350.79	10.36	5.99
350.80	10.40	6.11
350.81	10.43	6.22
350.82	10.46	6.33
350.83	10.48	6.44
350.84	10.50	6.55
350.85	10.53	6.65
350.86	10.54	6.75
350.87	10.56	6.85
350.88	10.57	6.95
350.89	10.58	7.04
350.90	10.58	7.13
350.91	**10.59**	7.21
350.92	10.59	7.30
350.93	10.58	7.37
350.94	10.57	7.45
350.95	10.56	7.51
350.96	10.55	7.58
350.97	10.53	7.64
350.98	10.50	7.69
350.99	10.47	7.73
351.00	10.44	7.77
351.01	10.40	7.80
351.02	10.35	7.83
351.03	10.30	7.84
351.04	10.24	**7.84**
351.05	10.17	7.84
351.06	10.08	7.81
351.07	9.98	7.77
351.08	9.86	7.71
351.09	9.69	7.60
351.10	9.29	7.29

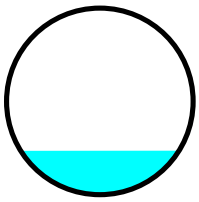
Summary for Reach DCBS9: TO DMH-S4

Inflow Area = 6,737 sf, 13.88% Impervious, Inflow Depth = 5.56" for 100-Year event
Inflow = 0.85 cfs @ 12.12 hrs, Volume= 3,122 cf
Outflow = 0.85 cfs @ 12.12 hrs, Volume= 3,122 cf, Atten= 0%, Lag= 0.1 min

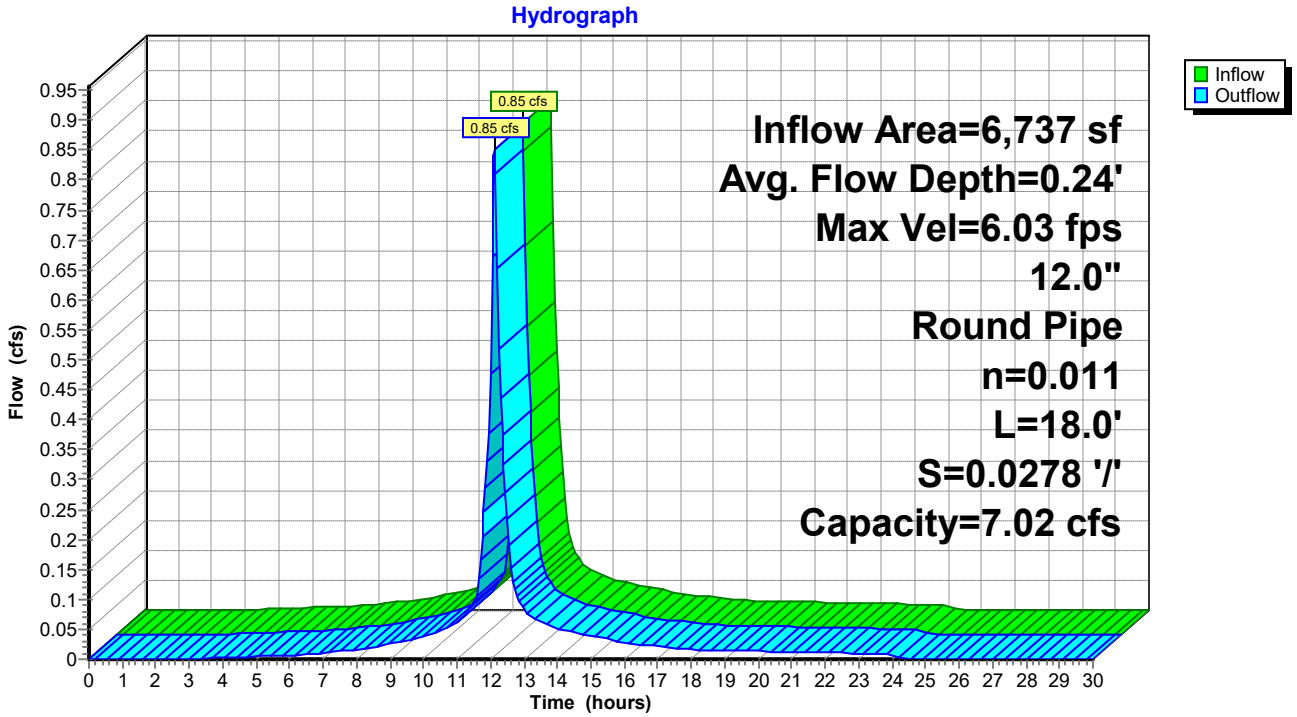
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.03 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.02 fps, Avg. Travel Time= 0.1 min

Peak Storage= 3 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.24'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.02 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 18.0' Slope= 0.0278 '/'
Inlet Invert= 356.50', Outlet Invert= 356.00'



Reach DCBS9: TO DMH-S4



Stage-Discharge for Reach DCBS9: TO DMH-S4

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
356.50	0.00	0.00
356.51	0.80	0.00
356.52	1.26	0.00
356.53	1.64	0.01
356.54	1.98	0.02
356.55	2.30	0.03
356.56	2.58	0.05
356.57	2.85	0.07
356.58	3.11	0.09
356.59	3.35	0.12
356.60	3.58	0.15
356.61	3.81	0.18
356.62	4.02	0.21
356.63	4.23	0.25
356.64	4.43	0.30
356.65	4.62	0.34
356.66	4.80	0.39
356.67	4.98	0.44
356.68	5.16	0.50
356.69	5.33	0.55
356.70	5.50	0.61
356.71	5.66	0.68
356.72	5.81	0.74
356.73	5.97	0.81
356.74	6.12	0.89
356.75	6.26	0.96
356.76	6.40	1.04
356.77	6.54	1.12
356.78	6.68	1.20
356.79	6.81	1.29
356.80	6.93	1.37
356.81	7.06	1.46
356.82	7.18	1.56
356.83	7.30	1.65
356.84	7.42	1.75
356.85	7.53	1.85
356.86	7.64	1.95
356.87	7.75	2.05
356.88	7.86	2.15
356.89	7.96	2.26
356.90	8.06	2.36
356.91	8.16	2.47
356.92	8.25	2.58
356.93	8.35	2.70
356.94	8.44	2.81
356.95	8.53	2.92
356.96	8.61	3.04
356.97	8.70	3.15
356.98	8.78	3.27
356.99	8.86	3.39
357.00	8.94	3.51
357.01	9.01	3.63
357.02	9.08	3.75
357.03	9.15	3.87
357.04	9.22	3.99
357.05	9.29	4.11
357.06	9.35	4.23
357.07	9.41	4.35
357.08	9.47	4.47
357.09	9.53	4.59
357.10	9.58	4.71
357.11	9.63	4.83
357.12	9.69	4.95
357.13	9.73	5.07
357.14	9.78	5.19
357.15	9.82	5.31
357.16	9.86	5.42
357.17	9.90	5.54
357.18	9.94	5.65
357.19	9.97	5.76
357.20	10.01	5.88
357.21	10.03	5.98
357.22	10.06	6.09
357.23	10.09	6.20
357.24	10.11	6.30
357.25	10.13	6.40
357.26	10.14	6.50
357.27	10.16	6.59
357.28	10.17	6.68
357.29	10.18	6.77
357.30	10.18	6.86
357.31	**10.19**	6.94
357.32	10.19	7.02
357.33	10.18	7.10
357.34	10.17	7.17
357.35	10.16	7.23
357.36	10.15	7.29
357.37	10.13	7.35
357.38	10.11	7.40
357.39	10.08	7.44
357.40	10.05	7.48
357.41	10.01	7.51
357.42	9.96	7.53
357.43	9.91	7.55
357.44	9.85	**7.55**
357.45	9.78	7.54
357.46	9.70	7.52
357.47	9.61	7.48
357.48	9.49	7.42
357.49	9.33	7.31
357.50	8.94	7.02

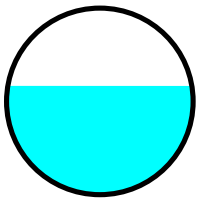
Summary for Reach DMH-R101: TO DMH-S1

Inflow Area = 40,822 sf, 73.55% Impervious, Inflow Depth = 4.55" for 100-Year event
Inflow = 4.70 cfs @ 12.09 hrs, Volume= 15,467 cf
Outflow = 4.55 cfs @ 12.11 hrs, Volume= 15,467 cf, Atten= 3%, Lag= 1.2 min

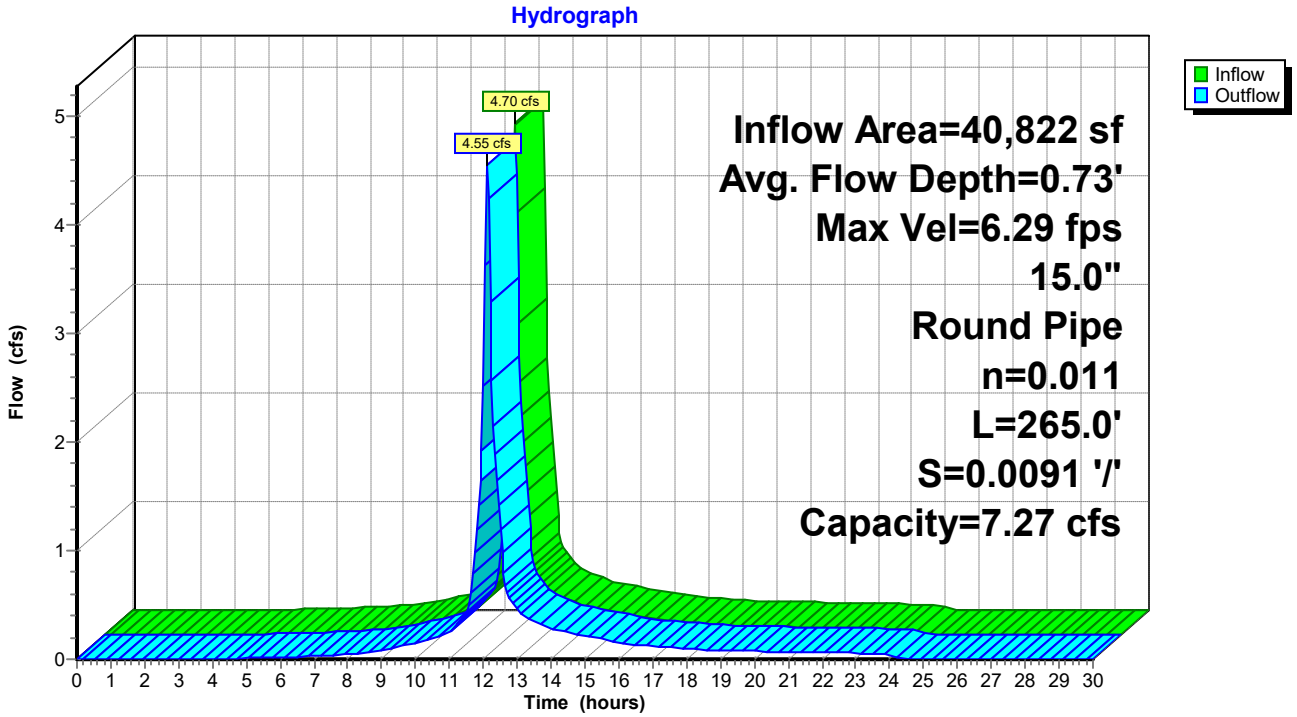
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.29 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 2.04 fps, Avg. Travel Time= 2.2 min

Peak Storage= 197 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.73'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.27 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 265.0' Slope= 0.0091 '/'
Inlet Invert= 351.00', Outlet Invert= 348.60'



Reach DMH-R101: TO DMH-S1



Stage-Discharge for Reach DMH-R101: TO DMH-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.42	0.00
351.02	0.71	0.00
351.03	0.94	0.01
351.04	1.13	0.01
351.05	1.31	0.02
351.06	1.48	0.03
351.07	1.64	0.04
351.08	1.78	0.06
351.09	1.92	0.08
351.10	2.06	0.09
351.11	2.19	0.12
351.12	2.31	0.14
351.13	2.43	0.17
351.14	2.55	0.19
351.15	2.66	0.22
351.16	2.77	0.25
351.17	2.88	0.29
351.18	2.98	0.32
351.19	3.08	0.36
351.20	3.18	0.40
351.21	3.28	0.45
351.22	3.37	0.49
351.23	3.46	0.54
351.24	3.55	0.59
351.25	3.64	0.64
351.26	3.73	0.69
351.27	3.81	0.74
351.28	3.89	0.80
351.29	3.97	0.86
351.30	4.05	0.92
351.31	4.13	0.98
351.32	4.20	1.04
351.33	4.28	1.11
351.34	4.35	1.18
351.35	4.42	1.24
351.36	4.49	1.31
351.37	4.56	1.39
351.38	4.63	1.46
351.39	4.69	1.53
351.40	4.76	1.61
351.41	4.82	1.69
351.42	4.88	1.77
351.43	4.95	1.85
351.44	5.01	1.93
351.45	5.06	2.01
351.46	5.12	2.10
351.47	5.18	2.18
351.48	5.23	2.27
351.49	5.29	2.36
351.50	5.34	2.45
351.51	5.39	2.54
351.52	5.44	2.63
351.53	5.49	2.72
351.54	5.54	2.81
351.55	5.59	2.91
351.56	5.64	3.00
351.57	5.68	3.10
351.58	5.73	3.19
351.59	5.77	3.29
351.60	5.82	3.39
351.61	5.86	3.49
351.62	5.90	3.58
351.63	5.94	3.68
351.64	5.98	3.78
351.65	6.02	3.88
351.66	6.06	3.98
351.67	6.09	4.08
351.68	6.13	4.18
351.69	6.16	4.28
351.70	6.20	4.38
351.71	6.23	4.48
351.72	6.26	4.58
351.73	6.29	4.68
351.74	6.32	4.78
351.75	6.35	4.88
351.76	6.38	4.98
351.77	6.40	5.08
351.78	6.43	5.18
351.79	6.46	5.28
351.80	6.48	5.37
351.81	6.50	5.47
351.82	6.52	5.57
351.83	6.55	5.66
351.84	6.57	5.76
351.85	6.59	5.85
351.86	6.60	5.95
351.87	6.62	6.04
351.88	6.64	6.13
351.89	6.65	6.22
351.90	6.67	6.31
351.91	6.68	6.39
351.92	6.69	6.48
351.93	6.70	6.56
351.94	6.71	6.65
351.95	6.72	6.73
351.96	6.73	6.81
351.97	6.74	6.88
351.98	6.74	6.96
351.99	6.74	7.03
352.00	6.75	7.10
352.01	6.75	7.17
352.02	**6.75**	7.24
352.03	6.75	7.30
352.04	6.75	7.36
352.05	6.74	7.42
352.06	6.74	7.47
352.07	6.73	7.52
352.08	6.72	7.57
352.09	6.71	7.62
352.10	6.70	7.66
352.11	6.68	7.70
352.12	6.66	7.73
352.13	6.65	7.76
352.14	6.63	7.78
352.15	6.60	7.80
352.16	6.57	7.81
352.17	6.54	**7.81**
352.18	6.51	7.81
352.19	6.47	7.80
352.20	6.43	7.78
352.21	6.38	7.75
352.22	6.32	7.70
352.23	6.24	7.63
352.24	6.13	7.51
352.25	5.92	7.27

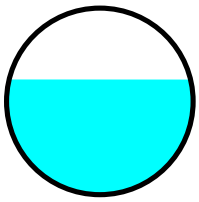
Summary for Reach DMH-S1: TO DMH-S2

Inflow Area = 59,366 sf, 76.73% Impervious, Inflow Depth = 4.73" for 100-Year event
Inflow = 6.87 cfs @ 12.10 hrs, Volume= 23,402 cf
Outflow = 6.62 cfs @ 12.12 hrs, Volume= 23,402 cf, Atten= 4%, Lag= 1.4 min

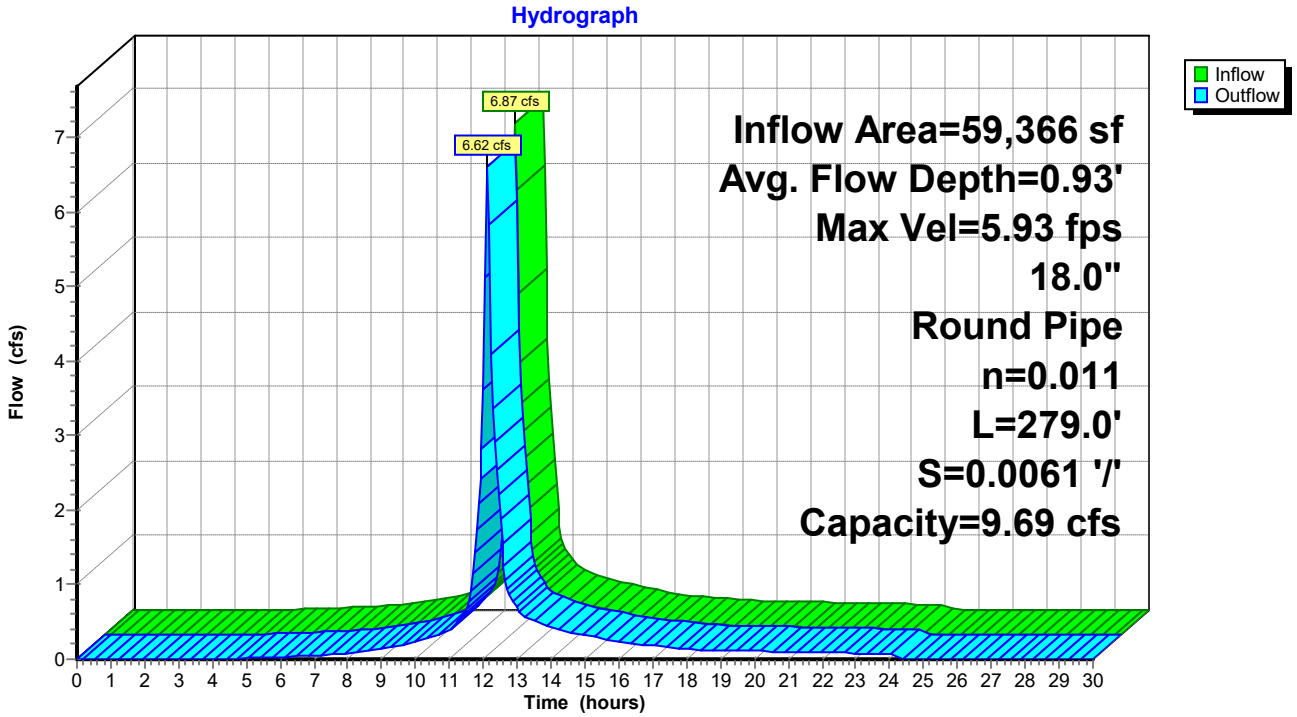
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.93 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.95 fps, Avg. Travel Time= 2.4 min

Peak Storage= 321 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.93'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 9.69 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 279.0' Slope= 0.0061 '/'
Inlet Invert= 348.50', Outlet Invert= 346.80'



Reach DMH-S1: TO DMH-S2



Stage-Discharge for Reach DMH-S1: TO DMH-S2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.50	0.00	0.00
348.51	0.33	0.00
348.52	0.58	0.00
348.53	0.77	0.01
348.54	0.93	0.01
348.55	1.08	0.02
348.56	1.22	0.03
348.57	1.35	0.04
348.58	1.47	0.05
348.59	1.59	0.07
348.60	1.70	0.09
348.61	1.80	0.11
348.62	1.91	0.13
348.63	2.01	0.15
348.64	2.10	0.18
348.65	2.20	0.20
348.66	2.29	0.23
348.67	2.38	0.26
348.68	2.47	0.30
348.69	2.55	0.33
348.70	2.63	0.37
348.71	2.72	0.41
348.72	2.79	0.45
348.73	2.87	0.49
348.74	2.95	0.54
348.75	3.02	0.59
348.76	3.09	0.63
348.77	3.17	0.68
348.78	3.24	0.74
348.79	3.31	0.79
348.80	3.37	0.85
348.81	3.44	0.91
348.82	3.50	0.97
348.83	3.57	1.03
348.84	3.63	1.09
348.85	3.69	1.16
348.86	3.75	1.22
348.87	3.81	1.29
348.88	3.87	1.36
348.89	3.93	1.43
348.90	3.99	1.51
348.91	4.04	1.58
348.92	4.10	1.66
348.93	4.15	1.74
348.94	4.20	1.82
348.95	4.26	1.90
348.96	4.31	1.98
348.97	4.36	2.06
348.98	4.41	2.15
348.99	4.46	2.24
349.00	4.51	2.32
349.01	4.55	2.41
349.02	4.60	2.50
349.03	4.65	2.59
349.04	4.69	2.69
349.05	4.74	2.78
349.06	4.78	2.88
349.07	4.82	2.97
349.08	4.86	3.07
349.09	4.91	3.17
349.10	4.95	3.27
349.11	4.99	3.37
349.12	5.03	3.47
349.13	5.07	3.57
349.14	5.10	3.67
349.15	5.14	3.77
349.16	5.18	3.88
349.17	5.22	3.98
349.18	5.25	4.09
349.19	5.29	4.20
349.20	5.32	4.30
349.21	5.35	4.41
349.22	5.39	4.52
349.23	5.42	4.63
349.24	5.45	4.74
349.25	5.48	4.85
349.26	5.51	4.96
349.27	5.54	5.07
349.28	5.57	5.18
349.29	5.60	5.29
349.30	5.63	5.40
349.31	5.66	5.51
349.32	5.69	5.62
349.33	5.71	5.73
349.34	5.74	5.84
349.35	5.76	5.95
349.36	5.79	6.07
349.37	5.81	6.18
349.38	5.84	6.29
349.39	5.86	6.40
349.40	5.88	6.51
349.41	5.90	6.62
349.42	5.92	6.73
349.43	5.94	6.84
349.44	5.96	6.95
349.45	5.98	7.06
349.46	6.00	7.17
349.47	6.02	7.28
349.48	6.04	7.38
349.49	6.05	7.49
349.50	6.07	7.60
349.51	6.08	7.70
349.52	6.10	7.81
349.53	6.11	7.91
349.54	6.13	8.01
349.55	6.14	8.11
349.56	6.15	8.21
349.57	6.16	8.31
349.58	6.18	8.41
349.59	6.19	8.51
349.60	6.19	8.60
349.61	6.20	8.70
349.62	6.21	8.79
349.63	6.22	8.88
349.64	6.23	8.97
349.65	6.23	9.06
349.66	6.24	9.15
349.67	6.24	9.23
349.68	6.24	9.31
349.69	6.25	9.39
349.70	6.25	9.47
349.71	6.25	9.55
349.72	**6.25**	9.62
349.73	6.25	9.69
349.74	6.25	9.76
349.75	6.25	9.83
349.76	6.24	9.89
349.77	6.24	9.96
349.78	6.23	10.01
349.79	6.23	10.07
349.80	6.22	10.12
349.81	6.21	10.17
349.82	6.20	10.22
349.83	6.19	10.26
349.84	6.18	10.29
349.85	6.17	10.33
349.86	6.15	10.36
349.87	6.13	10.38
349.88	6.11	10.40
349.89	6.09	10.41
349.90	6.07	10.42
349.91	6.05	**10.42**
349.92	6.02	10.42
349.93	5.99	10.40
349.94	5.95	10.38
349.95	5.92	10.35
349.96	5.87	10.30
349.97	5.82	10.24
349.98	5.76	10.14
349.99	5.64	9.96
350.00	5.48	9.69

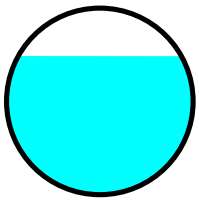
Summary for Reach DMH-S2: TO DMH-S3

Inflow Area = 102,372 sf, 80.49% Impervious, Inflow Depth = 5.05" for 100-Year event
Inflow = 12.21 cfs @ 12.10 hrs, Volume= 43,051 cf
Outflow = 12.17 cfs @ 12.10 hrs, Volume= 43,051 cf, Atten= 0%, Lag= 0.1 min

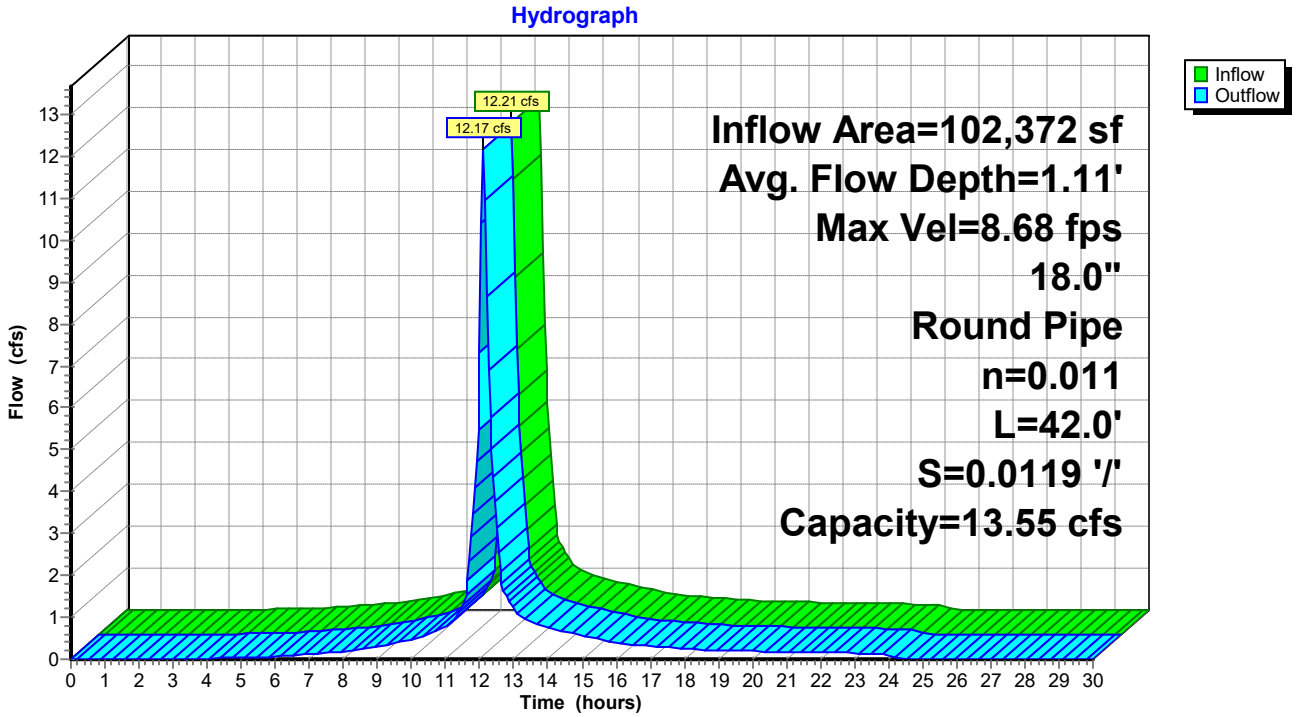
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.68 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.93 fps, Avg. Travel Time= 0.2 min

Peak Storage= 59 cf @ 12.10 hrs
Average Depth at Peak Storage= 1.11'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.55 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 42.0' Slope= 0.0119 '/'
Inlet Invert= 346.70', Outlet Invert= 346.20'



Reach DMH-S2: TO DMH-S3



Stage-Discharge for Reach DMH-S2: TO DMH-S3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.70	0.00	0.00
346.71	0.45	0.00
346.72	0.81	0.00
346.73	1.08	0.01
346.74	1.30	0.02
346.75	1.51	0.03
346.76	1.70	0.04
346.77	1.88	0.06
346.78	2.05	0.08
346.79	2.22	0.10
346.80	2.37	0.12
346.81	2.52	0.15
346.82	2.67	0.18
346.83	2.81	0.21
346.84	2.94	0.25
346.85	3.07	0.28
346.86	3.20	0.32
346.87	3.33	0.37
346.88	3.45	0.41
346.89	3.57	0.46
346.90	3.68	0.52
346.91	3.80	0.57
346.92	3.91	0.63
346.93	4.01	0.69
346.94	4.12	0.75
346.95	4.22	0.82
346.96	4.33	0.89
346.97	4.43	0.96
346.98	4.52	1.03
346.99	4.62	1.11
347.00	4.71	1.19
347.01	4.81	1.27
347.02	4.90	1.35
347.03	4.99	1.44
347.04	5.07	1.53
347.05	5.16	1.62
347.06	5.25	1.71
347.07	5.33	1.81
347.08	5.41	1.91
347.09	5.49	2.01
347.10	5.57	2.11
347.11	5.65	2.21
347.12	5.73	2.32
347.13	5.80	2.43
347.14	5.88	2.54
347.15	5.95	2.65
347.16	6.02	2.77
347.17	6.09	2.89
347.18	6.16	3.00
347.19	6.23	3.12
347.20	6.30	3.25
347.21	6.36	3.37
347.22	6.43	3.50
347.23	6.49	3.63
347.24	6.56	3.76
347.25	6.62	3.89
347.26	6.68	4.02
347.27	6.74	4.15
347.28	6.80	4.29
347.29	6.86	4.43
347.30	6.92	4.56
347.31	6.97	4.70
347.32	7.03	4.85
347.33	7.08	4.99
347.34	7.13	5.13
347.35	7.19	5.28
347.36	7.24	5.42
347.37	7.29	5.57
347.38	7.34	5.72
347.39	7.39	5.86
347.40	7.44	6.01
347.41	7.48	6.16
347.42	7.53	6.32
347.43	7.58	6.47
347.44	7.62	6.62
347.45	7.66	6.77
347.46	7.71	6.93
347.47	7.75	7.08
347.48	7.79	7.23
347.49	7.83	7.39
347.50	7.87	7.54
347.51	7.91	7.70
347.52	7.95	7.86
347.53	7.98	8.01
347.54	8.02	8.17
347.55	8.06	8.32
347.56	8.09	8.48
347.57	8.12	8.63
347.58	8.16	8.79
347.59	8.19	8.95
347.60	8.22	9.10
347.61	8.25	9.25
347.62	8.28	9.41
347.63	8.31	9.56
347.64	8.34	9.72
347.65	8.36	9.87
347.66	8.39	10.02
347.67	8.41	10.17
347.68	8.44	10.32
347.69	8.46	10.47
347.70	8.48	10.62
347.71	8.51	10.76
347.72	8.53	10.91
347.73	8.55	11.05
347.74	8.56	11.20
347.75	8.58	11.34
347.76	8.60	11.48
347.77	8.62	11.62
347.78	8.63	11.76
347.79	8.65	11.89
347.80	8.66	12.03
347.81	8.67	12.16
347.82	8.68	12.29
347.83	8.69	12.41
347.84	8.70	12.54
347.85	8.71	12.66
347.86	8.72	12.78
347.87	8.72	12.90
347.88	8.73	13.02
347.89	8.73	13.13
347.90	8.74	13.24
347.91	8.74	13.35
347.92	**8.74**	13.45
347.93	8.74	13.55
347.94	8.74	13.65
347.95	8.73	13.74
347.96	8.73	13.83
347.97	8.72	13.92
347.98	8.71	14.00
347.99	8.71	14.07
348.00	8.69	14.15
348.01	8.68	14.21
348.02	8.67	14.28
348.03	8.65	14.34
348.04	8.64	14.39
348.05	8.62	14.44
348.06	8.60	14.48
348.07	8.57	14.51
348.08	8.55	14.54
348.09	8.52	14.55
348.10	8.49	14.57
348.11	8.45	**14.57**
348.12	8.41	14.56
348.13	8.37	14.54
348.14	8.32	14.51
348.15	8.27	14.46
348.16	8.21	14.39
348.17	8.14	14.31
348.18	8.05	14.18
348.19	7.89	13.92
348.20	7.66	13.55

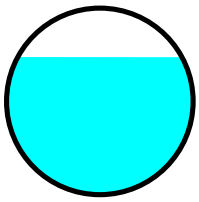
Summary for Reach DMH-S3: TO FE-S1

Inflow Area = 102,372 sf, 80.49% Impervious, Inflow Depth = 5.05" for 100-Year event
Inflow = 12.17 cfs @ 12.10 hrs, Volume= 43,051 cf
Outflow = 12.15 cfs @ 12.11 hrs, Volume= 43,051 cf, Atten= 0%, Lag= 0.1 min

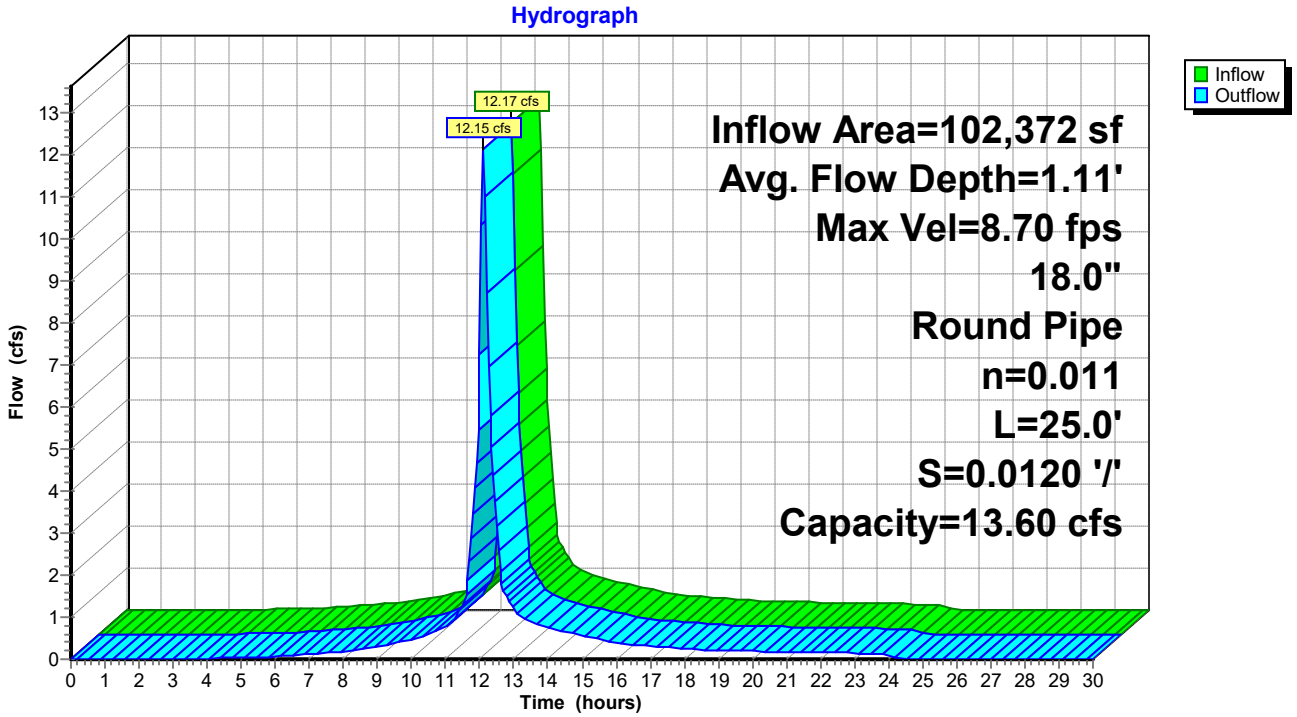
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.70 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.94 fps, Avg. Travel Time= 0.1 min

Peak Storage= 35 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.11'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.60 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 25.0' Slope= 0.0120 '/'
Inlet Invert= 346.00', Outlet Invert= 345.70'



Reach DMH-S3: TO FE-S1



Stage-Discharge for Reach DMH-S3: TO FE-S1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.00	0.00	0.00
346.01	0.46	0.00
346.02	0.82	0.00
346.03	1.08	0.01
346.04	1.30	0.02
346.05	1.51	0.03
346.06	1.71	0.04
346.07	1.89	0.06
346.08	2.06	0.08
346.09	2.23	0.10
346.10	2.38	0.12
346.11	2.53	0.15
346.12	2.68	0.18
346.13	2.82	0.21
346.14	2.95	0.25
346.15	3.09	0.28
346.16	3.21	0.33
346.17	3.34	0.37
346.18	3.46	0.42
346.19	3.58	0.47
346.20	3.70	0.52
346.21	3.81	0.57
346.22	3.92	0.63
346.23	4.03	0.69
346.24	4.14	0.76
346.25	4.24	0.82
346.26	4.34	0.89
346.27	4.44	0.96
346.28	4.54	1.04
346.29	4.64	1.11
346.30	4.73	1.19
346.31	4.83	1.27
346.32	4.92	1.36
346.33	5.01	1.44
346.34	5.09	1.53
346.35	5.18	1.62
346.36	5.27	1.72
346.37	5.35	1.81
346.38	5.43	1.91
346.39	5.51	2.01
346.40	5.59	2.12
346.41	5.67	2.22
346.42	5.75	2.33
346.43	5.82	2.44
346.44	5.90	2.55
346.45	5.97	2.66
346.46	6.04	2.78
346.47	6.12	2.90
346.48	6.19	3.02
346.49	6.25	3.14
346.50	6.32	3.26
346.51	6.39	3.39
346.52	6.45	3.51
346.53	6.52	3.64
346.54	6.58	3.77
346.55	6.64	3.90
346.56	6.71	4.04
346.57	6.77	4.17
346.58	6.83	4.31
346.59	6.88	4.44
346.60	6.94	4.58
346.61	7.00	4.72
346.62	7.05	4.87
346.63	7.11	5.01
346.64	7.16	5.15
346.65	7.22	5.30
346.66	7.27	5.44
346.67	7.32	5.59
346.68	7.37	5.74
346.69	7.42	5.89
346.70	7.47	6.04
346.71	7.51	6.19
346.72	7.56	6.34
346.73	7.61	6.49
346.74	7.65	6.65
346.75	7.70	6.80
346.76	7.74	6.95
346.77	7.78	7.11
346.78	7.82	7.26
346.79	7.86	7.42
346.80	7.90	7.57
346.81	7.94	7.73
346.82	7.98	7.89
346.83	8.02	8.04
346.84	8.05	8.20
346.85	8.09	8.36
346.86	8.12	8.51
346.87	8.16	8.67
346.88	8.19	8.82
346.89	8.22	8.98
346.90	8.25	9.14
346.91	8.28	9.29
346.92	8.31	9.45
346.93	8.34	9.60
346.94	8.37	9.75
346.95	8.40	9.91
346.96	8.42	10.06
346.97	8.45	10.21
346.98	8.47	10.36
346.99	8.50	10.51
347.00	8.52	10.66
347.01	8.54	10.81
347.02	8.56	10.95
347.03	8.58	11.10
347.04	8.60	11.24
347.05	8.62	11.39
347.06	8.63	11.53
347.07	8.65	11.67
347.08	8.67	11.80
347.09	8.68	11.94
347.10	8.69	12.07
347.11	8.71	12.21
347.12	8.72	12.34
347.13	8.73	12.46
347.14	8.74	12.59
347.15	8.75	12.71
347.16	8.75	12.83
347.17	8.76	12.95
347.18	8.76	13.07
347.19	8.77	13.18
347.20	8.77	13.29
347.21	8.77	13.40
347.22	**8.77**	13.50
347.23	8.77	13.60
347.24	8.77	13.70
347.25	8.77	13.79
347.26	8.76	13.89
347.27	8.76	13.97
347.28	8.75	14.05
347.29	8.74	14.13
347.30	8.73	14.20
347.31	8.72	14.27
347.32	8.70	14.34
347.33	8.69	14.39
347.34	8.67	14.45
347.35	8.65	14.49
347.36	8.63	14.53
347.37	8.61	14.57
347.38	8.58	14.60
347.39	8.55	14.61
347.40	8.52	14.62
347.41	8.49	**14.63**
347.42	8.45	14.62
347.43	8.40	14.60
347.44	8.36	14.57
347.45	8.30	14.52
347.46	8.24	14.45
347.47	8.17	14.37
347.48	8.08	14.24
347.49	7.92	13.98
347.50	7.70	13.60

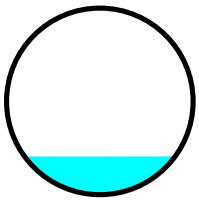
Summary for Reach DMH1: TO DMH#2

Inflow Area = 3,582 sf, 82.83% Impervious, Inflow Depth = 5.11" for 100-Year event
Inflow = 0.47 cfs @ 12.08 hrs, Volume= 1,525 cf
Outflow = 0.46 cfs @ 12.09 hrs, Volume= 1,525 cf, Atten= 1%, Lag= 0.5 min

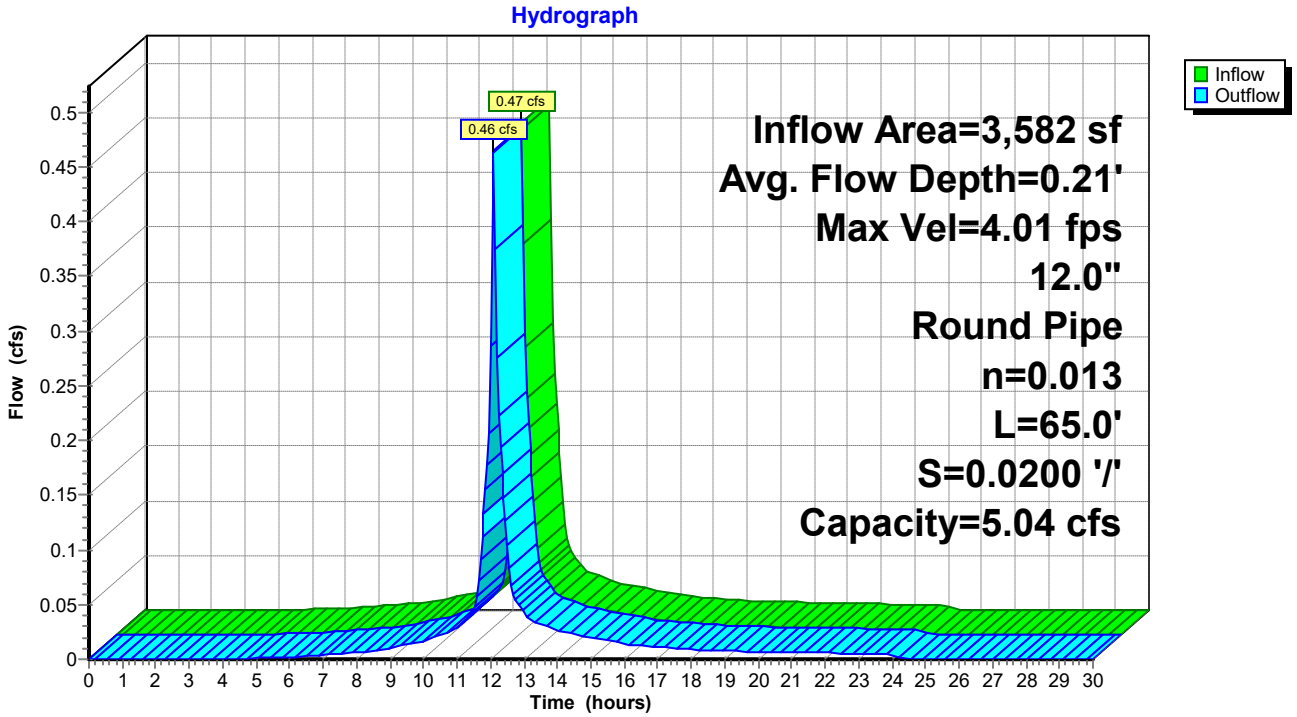
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.01 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.32 fps, Avg. Travel Time= 0.8 min

Peak Storage= 8 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.04 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 65.0' Slope= 0.0200 '/'
Inlet Invert= 354.60', Outlet Invert= 353.30'



Reach DMH1: TO DMH#2



Stage-Discharge for Reach DMH1: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.60	0.00	0.00
354.61	0.57	0.00
354.62	0.90	0.00
354.63	1.18	0.01
354.64	1.42	0.02
354.65	1.65	0.02
354.66	1.86	0.04
354.67	2.05	0.05
354.68	2.23	0.07
354.69	2.41	0.08
354.70	2.57	0.11
354.71	2.73	0.13
354.72	2.89	0.15
354.73	3.03	0.18
354.74	3.18	0.21
354.75	3.32	0.24
354.76	3.45	0.28
354.77	3.58	0.32
354.78	3.70	0.36
354.79	3.83	0.40
354.80	3.95	0.44
354.81	4.06	0.49
354.82	4.17	0.53
354.83	4.28	0.58
354.84	4.39	0.64
354.85	4.50	0.69
354.86	4.60	0.75
354.87	4.70	0.80
354.88	4.79	0.86
354.89	4.89	0.92
354.90	4.98	0.99
354.91	5.07	1.05
354.92	5.16	1.12
354.93	5.24	1.19
354.94	5.33	1.25
354.95	5.41	1.32
354.96	5.49	1.40
354.97	5.57	1.47
354.98	5.64	1.54
354.99	5.72	1.62
355.00	5.79	1.70
355.01	5.86	1.78
355.02	5.93	1.86
355.03	5.99	1.94
355.04	6.06	2.02
355.05	6.12	2.10
355.06	6.18	2.18
355.07	6.24	2.27
355.08	6.30	2.35
355.09	6.36	2.43
355.10	6.42	2.52
355.11	6.47	2.61
355.12	6.52	2.69
355.13	6.57	2.78
355.14	6.62	2.86
355.15	6.67	2.95
355.16	6.71	3.04
355.17	6.76	3.13
355.18	6.80	3.21
355.19	6.84	3.30
355.20	6.88	3.39
355.21	6.92	3.47
355.22	6.95	3.56
355.23	6.99	3.64
355.24	7.02	3.73
355.25	7.05	3.81
355.26	7.08	3.89
355.27	7.11	3.98
355.28	7.14	4.06
355.29	7.16	4.14
355.30	7.18	4.22
355.31	7.20	4.30
355.32	7.22	4.37
355.33	7.24	4.45
355.34	7.26	4.52
355.35	7.27	4.59
355.36	7.28	4.66
355.37	7.29	4.73
355.38	7.30	4.80
355.39	7.31	4.86
355.40	7.31	4.93
355.41	**7.31**	4.98
355.42	7.31	5.04
355.43	7.31	5.09
355.44	7.30	5.14
355.45	7.30	5.19
355.46	7.29	5.24
355.47	7.27	5.28
355.48	7.26	5.31
355.49	7.24	5.34
355.50	7.21	5.37
355.51	7.19	5.39
355.52	7.15	5.41
355.53	7.12	5.42
355.54	7.07	**5.42**
355.55	7.02	5.41
355.56	6.97	5.40
355.57	6.90	5.37
355.58	6.81	5.32
355.59	6.70	5.25
355.60	6.42	5.04

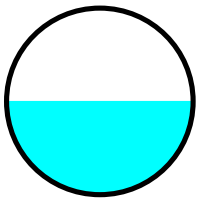
Summary for Reach DMH2: TO DMH#3

Inflow Area = 15,979 sf, 87.02% Impervious, Inflow Depth = 5.37" for 100-Year event
Inflow = 2.16 cfs @ 12.08 hrs, Volume= 7,152 cf
Outflow = 2.14 cfs @ 12.09 hrs, Volume= 7,152 cf, Atten= 1%, Lag= 0.7 min

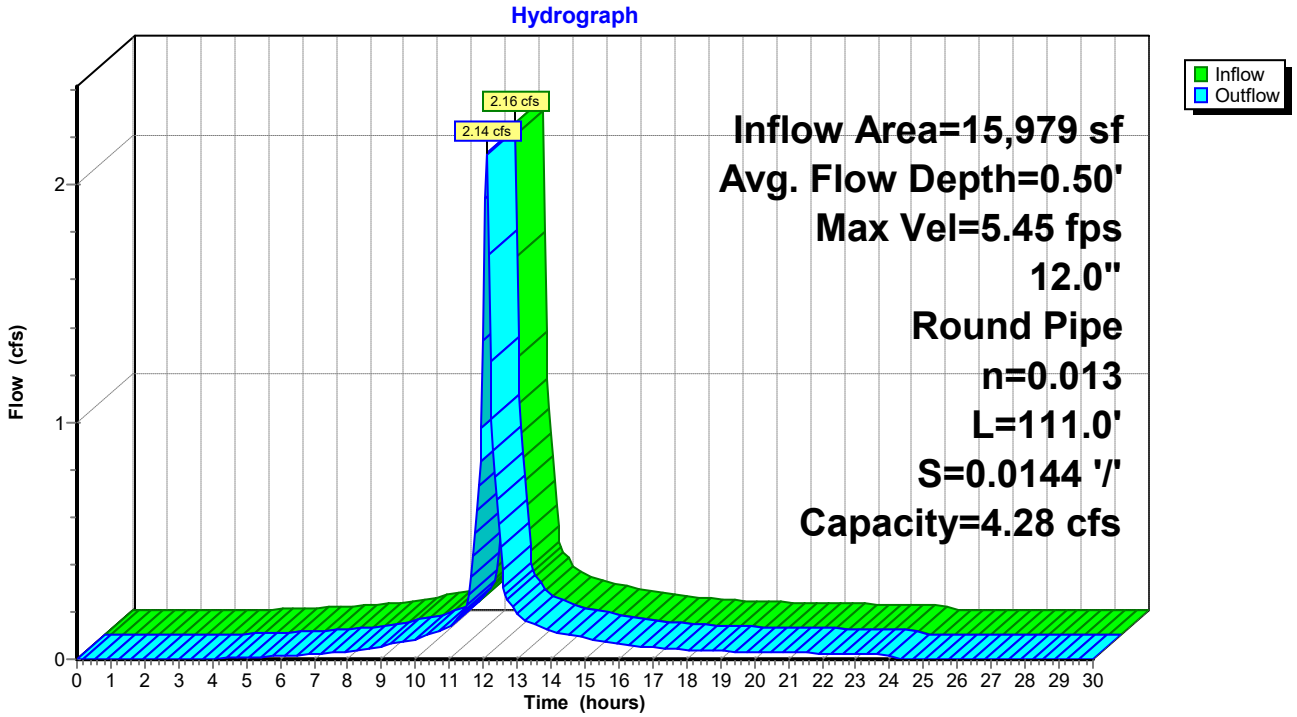
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.45 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.82 fps, Avg. Travel Time= 1.0 min

Peak Storage= 44 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.50'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.28 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 111.0' Slope= 0.0144 '/'
Inlet Invert= 353.20', Outlet Invert= 351.60'



Reach DMH2: TO DMH#3



Stage-Discharge for Reach DMH2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.20	0.00	0.00
353.21	0.48	0.00
353.22	0.77	0.00
353.23	1.00	0.01
353.24	1.21	0.01
353.25	1.40	0.02
353.26	1.57	0.03
353.27	1.74	0.04
353.28	1.90	0.06
353.29	2.04	0.07
353.30	2.18	0.09
353.31	2.32	0.11
353.32	2.45	0.13
353.33	2.58	0.15
353.34	2.70	0.18
353.35	2.81	0.21
353.36	2.93	0.24
353.37	3.04	0.27
353.38	3.15	0.30
353.39	3.25	0.34
353.40	3.35	0.37
353.41	3.45	0.41
353.42	3.54	0.45
353.43	3.64	0.50
353.44	3.73	0.54
353.45	3.82	0.59
353.46	3.90	0.63
353.47	3.99	0.68
353.48	4.07	0.73
353.49	4.15	0.78
353.50	4.23	0.84
353.51	4.30	0.89
353.52	4.38	0.95
353.53	4.45	1.01
353.54	4.52	1.06
353.55	4.59	1.12
353.56	4.66	1.19
353.57	4.72	1.25
353.58	4.79	1.31
353.59	4.85	1.38
353.60	4.91	1.44
353.61	4.97	1.51
353.62	5.03	1.58
353.63	5.09	1.64
353.64	5.14	1.71
353.65	5.20	1.78
353.66	5.25	1.85
353.67	5.30	1.92
353.68	5.35	1.99
353.69	5.40	2.07
353.70	5.45	2.14
353.71	5.49	2.21
353.72	5.54	2.28
353.73	5.58	2.36
353.74	5.62	2.43
353.75	5.66	2.51
353.76	5.70	2.58
353.77	5.74	2.65
353.78	5.77	2.73
353.79	5.81	2.80
353.80	5.84	2.87
353.81	5.87	2.95
353.82	5.90	3.02
353.83	5.93	3.09
353.84	5.96	3.16
353.85	5.99	3.24
353.86	6.01	3.31
353.87	6.04	3.38
353.88	6.06	3.45
353.89	6.08	3.51
353.90	6.10	3.58
353.91	6.12	3.65
353.92	6.13	3.71
353.93	6.15	3.78
353.94	6.16	3.84
353.95	6.17	3.90
353.96	6.18	3.96
353.97	6.19	4.02
353.98	6.20	4.07
353.99	6.20	4.13
354.00	6.21	4.18
354.01	**6.21**	4.23
354.02	6.21	4.28
354.03	6.21	4.32
354.04	6.20	4.37
354.05	6.19	4.41
354.06	6.19	4.44
354.07	6.17	4.48
354.08	6.16	4.51
354.09	6.14	4.54
354.10	6.12	4.56
354.11	6.10	4.58
354.12	6.07	4.59
354.13	6.04	4.60
354.14	6.01	**4.60**
354.15	5.96	4.60
354.16	5.91	4.58
354.17	5.86	4.56
354.18	5.78	4.52
354.19	5.68	4.46
354.20	5.45	4.28

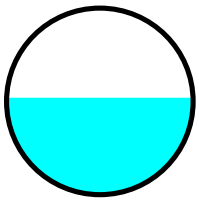
Summary for Reach DMH21: TO DMH#22

Inflow Area = 24,843 sf, 51.80% Impervious, Inflow Depth = 4.26" for 100-Year event
Inflow = 2.71 cfs @ 12.08 hrs, Volume= 8,821 cf
Outflow = 2.67 cfs @ 12.10 hrs, Volume= 8,821 cf, Atten= 1%, Lag= 0.8 min

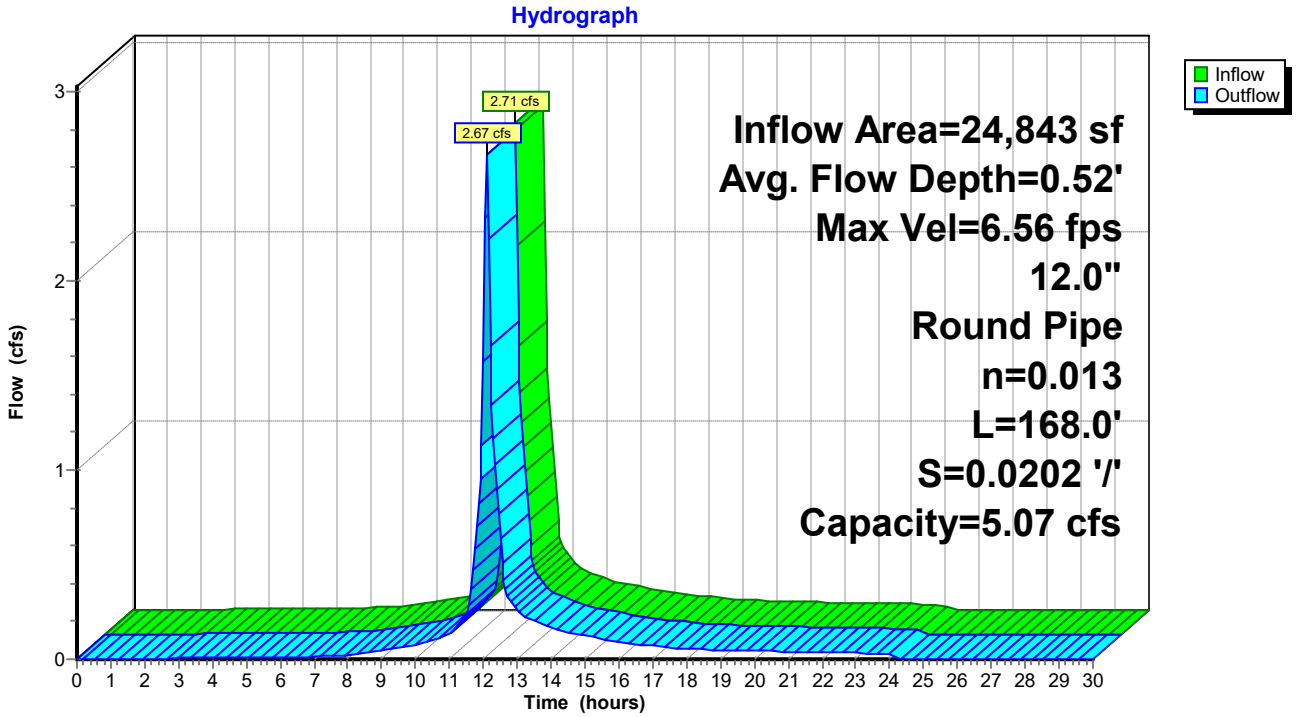
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.56 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.03 fps, Avg. Travel Time= 1.4 min

Peak Storage= 70 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.52'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.07 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 168.0' Slope= 0.0202 '/'
Inlet Invert= 345.20', Outlet Invert= 341.80'



Reach DMH21: TO DMH#22



Stage-Discharge for Reach DMH21: TO DMH#22

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
345.20	0.00	0.00
345.21	0.57	0.00
345.22	0.91	0.00
345.23	1.19	0.01
345.24	1.43	0.02
345.25	1.66	0.02
345.26	1.87	0.04
345.27	2.06	0.05
345.28	2.25	0.07
345.29	2.42	0.08
345.30	2.59	0.11
345.31	2.75	0.13
345.32	2.90	0.16
345.33	3.05	0.18
345.34	3.20	0.21
345.35	3.34	0.25
345.36	3.47	0.28
345.37	3.60	0.32
345.38	3.73	0.36
345.39	3.85	0.40
345.40	3.97	0.44
345.41	4.09	0.49
345.42	4.20	0.54
345.43	4.31	0.59
345.44	4.42	0.64
345.45	4.52	0.69
345.46	4.62	0.75
345.47	4.72	0.81
345.48	4.82	0.87
345.49	4.92	0.93
345.50	5.01	0.99
345.51	5.10	1.06
345.52	5.19	1.12
345.53	5.27	1.19
345.54	5.36	1.26
345.55	5.44	1.33
345.56	5.52	1.41
345.57	5.60	1.48
345.58	5.67	1.55
345.59	5.75	1.63
345.60	5.82	1.71
345.61	5.89	1.79
345.62	5.96	1.87
345.63	6.03	1.95
345.64	6.10	2.03
345.65	6.16	2.11
345.66	6.22	2.19
345.67	6.28	2.28
345.68	6.34	2.36
345.69	6.40	2.45
345.70	6.45	2.53
345.71	6.51	2.62
345.72	6.56	2.71
345.73	6.61	2.79
345.74	6.66	2.88
345.75	6.71	2.97
345.76	6.75	3.06
345.77	6.80	3.14
345.78	6.84	3.23
345.79	6.88	3.32
345.80	6.92	3.41
345.81	6.96	3.49
345.82	6.99	3.58
345.83	7.03	3.66
345.84	7.06	3.75
345.85	7.09	3.83
345.86	7.12	3.92
345.87	7.15	4.00
345.88	7.18	4.08
345.89	7.20	4.16
345.90	7.23	4.24
345.91	7.25	4.32
345.92	7.27	4.40
345.93	7.28	4.48
345.94	7.30	4.55
345.95	7.31	4.62
345.96	7.33	4.69
345.97	7.34	4.76
345.98	7.35	4.83
345.99	7.35	4.89
346.00	7.36	4.95
346.01	**7.36**	5.01
346.02	7.36	5.07
346.03	7.35	5.12
346.04	7.35	5.18
346.05	7.34	5.22
346.06	7.33	5.27
346.07	7.32	5.31
346.08	7.30	5.34
346.09	7.28	5.37
346.10	7.26	5.40
346.11	7.23	5.42
346.12	7.20	5.44
346.13	7.16	5.45
346.14	7.12	**5.45**
346.15	7.07	5.45
346.16	7.01	5.43
346.17	6.94	5.40
346.18	6.85	5.36
346.19	6.74	5.28
346.20	6.45	5.07

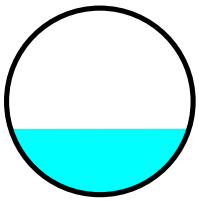
Summary for Reach DMH22: TO DMH#15

Inflow Area = 24,843 sf, 51.80% Impervious, Inflow Depth = 4.26" for 100-Year event
Inflow = 2.67 cfs @ 12.10 hrs, Volume= 8,821 cf
Outflow = 2.67 cfs @ 12.10 hrs, Volume= 8,821 cf, Atten= 0%, Lag= 0.0 min

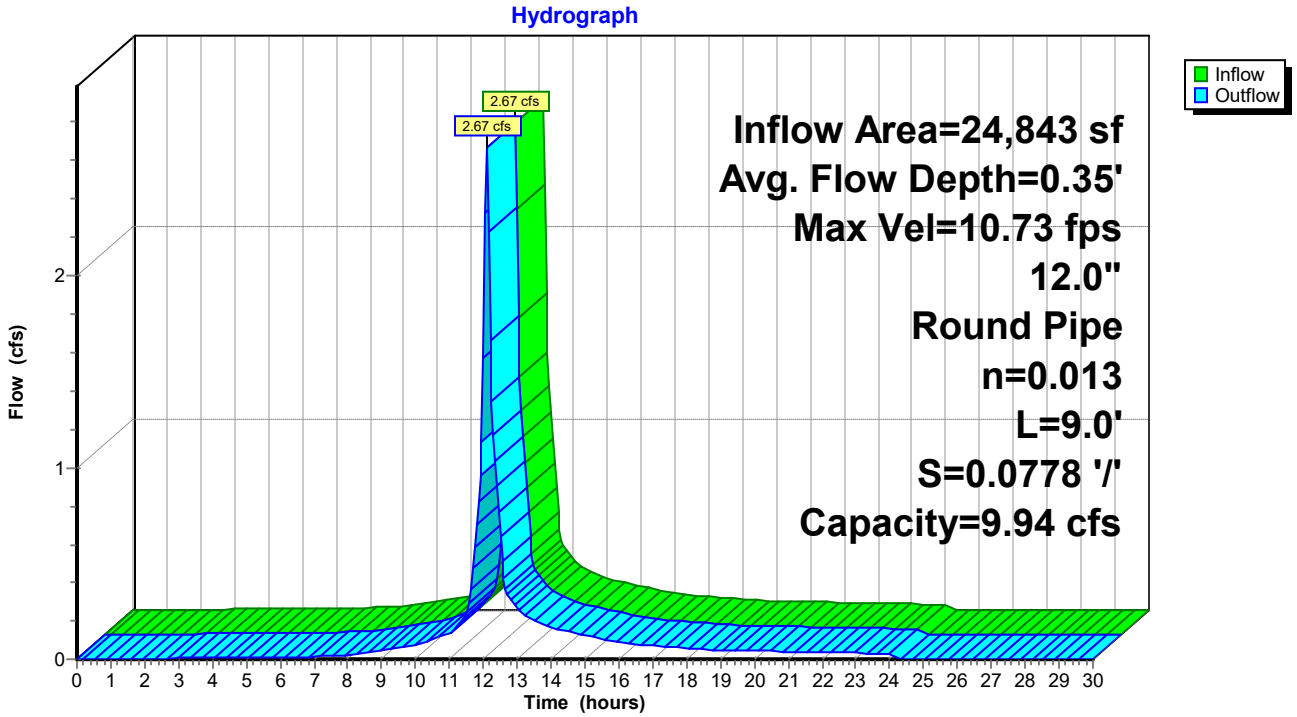
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.73 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.28 fps, Avg. Travel Time= 0.0 min

Peak Storage= 2 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.35'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.94 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 9.0' Slope= 0.0778 '/'
Inlet Invert= 341.70', Outlet Invert= 341.00'



Reach DMH22: TO DMH#15



Stage-Discharge for Reach DMH22: TO DMH#15

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
341.70	0.00	0.00
341.71	1.13	0.00
341.72	1.78	0.01
341.73	2.33	0.02
341.74	2.81	0.03
341.75	3.25	0.05
341.76	3.66	0.07
341.77	4.04	0.10
341.78	4.40	0.13
341.79	4.75	0.17
341.80	5.08	0.21
341.81	5.39	0.25
341.82	5.69	0.30
341.83	5.98	0.36
341.84	6.27	0.42
341.85	6.54	0.48
341.86	6.80	0.55
341.87	7.06	0.62
341.88	7.31	0.70
341.89	7.55	0.78
341.90	7.78	0.87
341.91	8.01	0.96
341.92	8.23	1.05
341.93	8.45	1.15
341.94	8.66	1.26
341.95	8.86	1.36
341.96	9.06	1.47
341.97	9.26	1.58
341.98	9.45	1.70
341.99	9.64	1.82
342.00	9.82	1.95
342.01	10.00	2.07
342.02	10.17	2.20
342.03	10.34	2.34
342.04	10.50	2.47
342.05	10.66	2.61
342.06	10.82	2.75
342.07	10.98	2.90
342.08	11.12	3.05
342.09	11.27	3.20
342.10	11.41	3.35
342.11	11.55	3.50
342.12	11.69	3.66
342.13	11.82	3.82
342.14	11.95	3.98
342.15	12.07	4.14
342.16	12.20	4.30
342.17	12.31	4.47
342.18	12.43	4.63
342.19	12.54	4.80
342.20	12.65	4.97
342.21	12.76	5.14
342.22	12.86	5.31
342.23	12.96	5.48
342.24	13.06	5.65
342.25	13.15	5.82
342.26	13.24	5.99
342.27	13.33	6.16
342.28	13.41	6.33
342.29	13.49	6.50
342.30	13.57	6.68
342.31	13.64	6.85
342.32	13.71	7.01
342.33	13.78	7.18
342.34	13.85	7.35
342.35	13.91	7.52
342.36	13.97	7.68
342.37	14.02	7.84
342.38	14.07	8.00
342.39	14.12	8.16
342.40	14.17	8.32
342.41	14.21	8.47
342.42	14.25	8.62
342.43	14.28	8.77
342.44	14.31	8.92
342.45	14.34	9.06
342.46	14.36	9.20
342.47	14.38	9.33
342.48	14.40	9.46
342.49	14.41	9.59
342.50	14.42	9.71
342.51	**14.42**	9.83
342.52	14.42	9.94
342.53	14.42	10.05
342.54	14.41	10.15
342.55	14.39	10.24
342.56	14.37	10.32
342.57	14.34	10.40
342.58	14.31	10.47
342.59	14.27	10.54
342.60	14.22	10.59
342.61	14.17	10.63
342.62	14.11	10.66
342.63	14.03	10.68
342.64	13.95	**10.69**
342.65	13.85	10.68
342.66	13.74	10.65
342.67	13.60	10.59
342.68	13.43	10.50
342.69	13.20	10.35
342.70	12.65	9.94

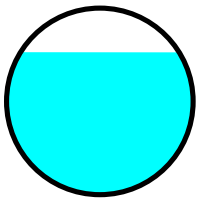
Summary for Reach DMH3: TO DMH#7

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 5.52" for 100-Year event
Inflow = 9.13 cfs @ 12.09 hrs, Volume= 31,151 cf
Outflow = 9.13 cfs @ 12.09 hrs, Volume= 31,151 cf, Atten= 0%, Lag= 0.0 min

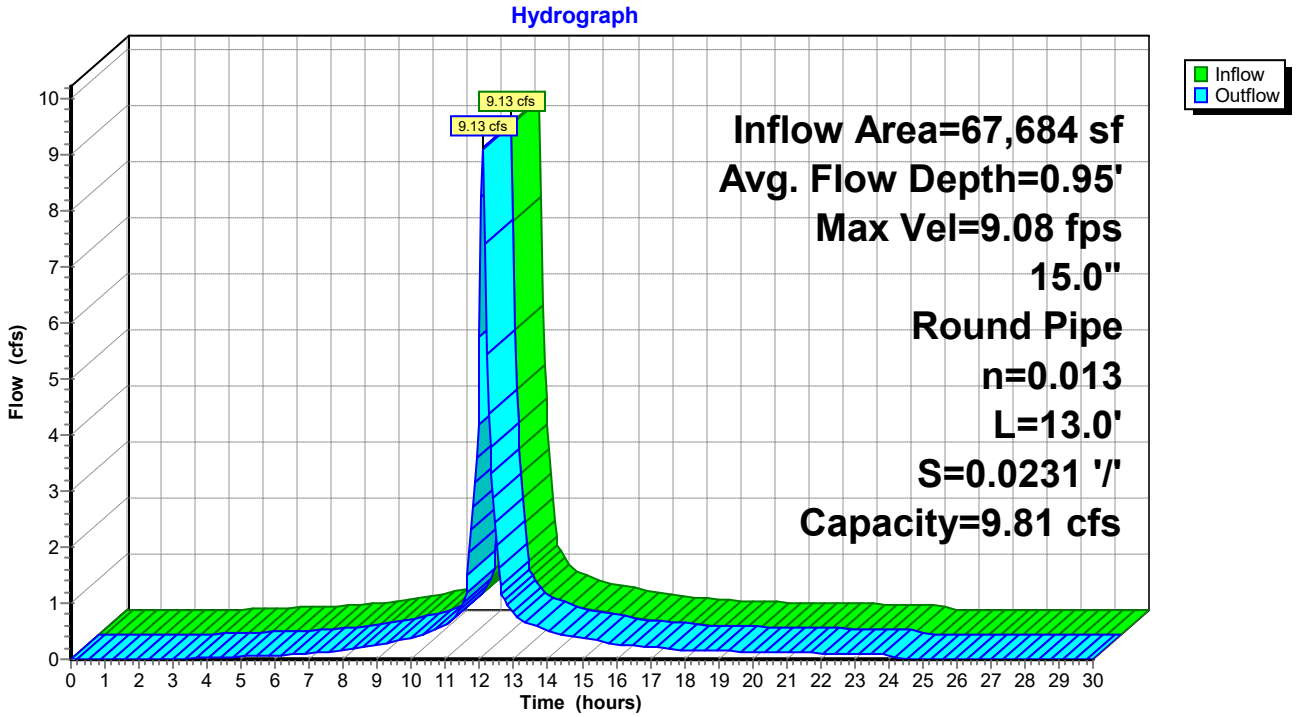
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.08 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.10 fps, Avg. Travel Time= 0.1 min

Peak Storage= 13 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.95'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.81 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 13.0' Slope= 0.0231 '/'
Inlet Invert= 351.50', Outlet Invert= 351.20'



Reach DMH3: TO DMH#7



Stage-Discharge for Reach DMH3: TO DMH#7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.50	0.00	0.00
351.51	0.57	0.00
351.52	0.96	0.00
351.53	1.26	0.01
351.54	1.53	0.02
351.55	1.78	0.03
351.56	2.00	0.04
351.57	2.21	0.06
351.58	2.41	0.08
351.59	2.60	0.10
351.60	2.78	0.13
351.61	2.96	0.16
351.62	3.12	0.19
351.63	3.29	0.22
351.64	3.45	0.26
351.65	3.60	0.30
351.66	3.75	0.34
351.67	3.89	0.39
351.68	4.03	0.44
351.69	4.17	0.49
351.70	4.30	0.54
351.71	4.43	0.60
351.72	4.55	0.66
351.73	4.68	0.73
351.74	4.80	0.79
351.75	4.92	0.86
351.76	5.03	0.93
351.77	5.15	1.00
351.78	5.26	1.08
351.79	5.37	1.16
351.80	5.47	1.24
351.81	5.58	1.32
351.82	5.68	1.41
351.83	5.78	1.50
351.84	5.88	1.59
351.85	5.97	1.68
351.86	6.07	1.78
351.87	6.16	1.87
351.88	6.25	1.97
351.89	6.34	2.07
351.90	6.43	2.18
351.91	6.51	2.28
351.92	6.60	2.39
351.93	6.68	2.50
351.94	6.76	2.61
351.95	6.84	2.72
351.96	6.92	2.83
351.97	6.99	2.95
351.98	7.07	3.07
351.99	7.14	3.19
352.00	7.21	3.31
352.01	7.28	3.43
352.02	7.35	3.55
352.03	7.42	3.68
352.04	7.49	3.80
352.05	7.55	3.93
352.06	7.62	4.06
352.07	7.68	4.18
352.08	7.74	4.31
352.09	7.80	4.44
352.10	7.86	4.58
352.11	7.91	4.71
352.12	7.97	4.84
352.13	8.02	4.97
352.14	8.08	5.11
352.15	8.13	5.24
352.16	8.18	5.38
352.17	8.23	5.51
352.18	8.28	5.65
352.19	8.32	5.78
352.20	8.37	5.92
352.21	8.41	6.05
352.22	8.45	6.19
352.23	8.50	6.32
352.24	8.54	6.46
352.25	8.58	6.59
352.26	8.61	6.73
352.27	8.65	6.86
352.28	8.68	6.99
352.29	8.72	7.13
352.30	8.75	7.26
352.31	8.78	7.39
352.32	8.81	7.52
352.33	8.84	7.65
352.34	8.87	7.78
352.35	8.90	7.90
352.36	8.92	8.03
352.37	8.94	8.15
352.38	8.96	8.28
352.39	8.99	8.40
352.40	9.00	8.52
352.41	9.02	8.64
352.42	9.04	8.75
352.43	9.05	8.86
352.44	9.07	8.98
352.45	9.08	9.09
352.46	9.09	9.19
352.47	9.10	9.30
352.48	9.10	9.40
352.49	9.11	9.50
352.50	9.11	9.59
352.51	9.12	9.68
352.52	**9.12**	9.77
352.53	9.11	9.86
352.54	9.11	9.94
352.55	9.11	10.02
352.56	9.10	10.09
352.57	9.09	10.16
352.58	9.08	10.23
352.59	9.06	10.29
352.60	9.04	10.34
352.61	9.02	10.39
352.62	9.00	10.44
352.63	8.98	10.48
352.64	8.95	10.51
352.65	8.92	10.53
352.66	8.88	10.55
352.67	8.84	**10.55**
352.68	8.79	10.55
352.69	8.74	10.54
352.70	8.68	10.51
352.71	8.61	10.47
352.72	8.53	10.41
352.73	8.43	10.31
352.74	8.28	10.14
352.75	8.00	9.81

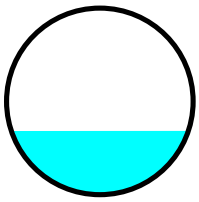
Summary for Reach DMH4: TO DMH5

Inflow Area = 5,916 sf, 84.47% Impervious, Inflow Depth = 5.22" for 100-Year event
Inflow = 0.79 cfs @ 12.08 hrs, Volume= 2,574 cf
Outflow = 0.78 cfs @ 12.09 hrs, Volume= 2,574 cf, Atten= 1%, Lag= 0.8 min

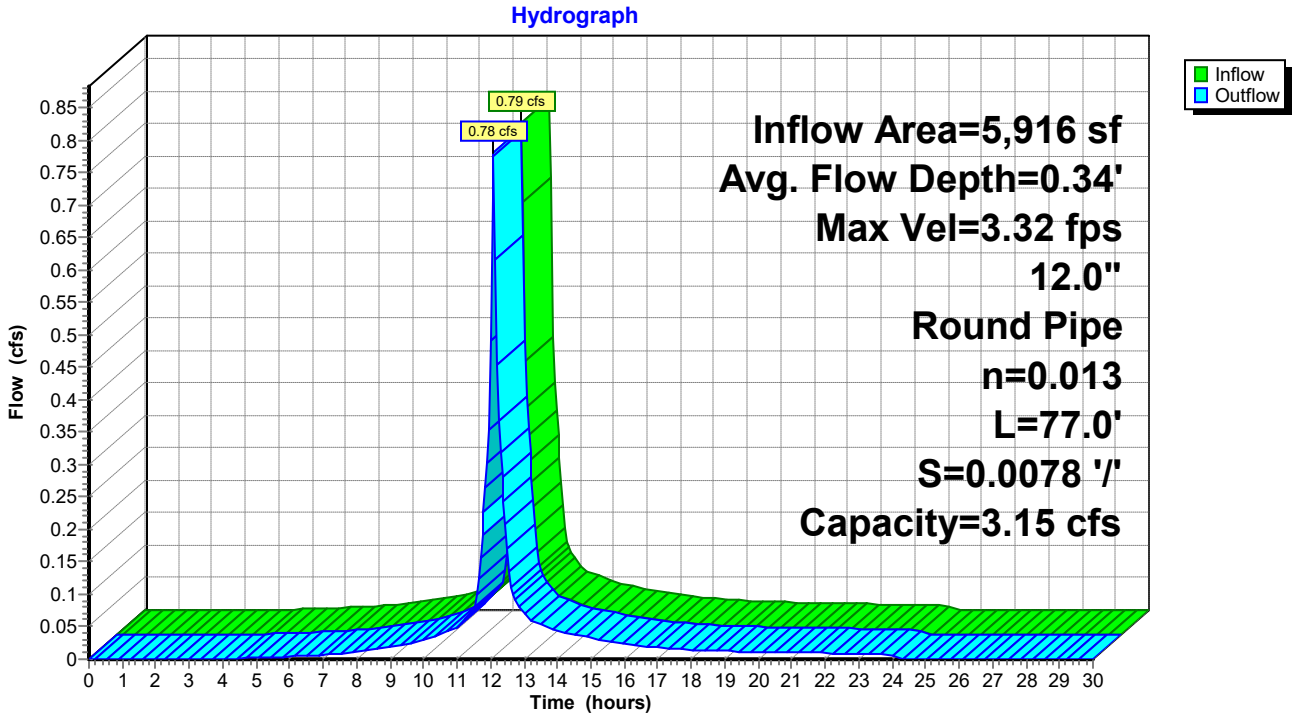
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.32 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.10 fps, Avg. Travel Time= 1.2 min

Peak Storage= 18 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.15 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 77.0' Slope= 0.0078 '/'
Inlet Invert= 355.20', Outlet Invert= 354.60'



Reach DMH4: TO DMH5



Stage-Discharge for Reach DMH4: TO DMH5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
355.20	0.00	0.00
355.21	0.36	0.00
355.22	0.56	0.00
355.23	0.74	0.01
355.24	0.89	0.01
355.25	1.03	0.02
355.26	1.16	0.02
355.27	1.28	0.03
355.28	1.39	0.04
355.29	1.50	0.05
355.30	1.61	0.07
355.31	1.71	0.08
355.32	1.80	0.10
355.33	1.89	0.11
355.34	1.98	0.13
355.35	2.07	0.15
355.36	2.15	0.17
355.37	2.23	0.20
355.38	2.31	0.22
355.39	2.39	0.25
355.40	2.46	0.28
355.41	2.54	0.30
355.42	2.61	0.33
355.43	2.67	0.36
355.44	2.74	0.40
355.45	2.81	0.43
355.46	2.87	0.47
355.47	2.93	0.50
355.48	2.99	0.54
355.49	3.05	0.58
355.50	3.11	0.62
355.51	3.16	0.66
355.52	3.22	0.70
355.53	3.27	0.74
355.54	3.32	0.78
355.55	3.38	0.83
355.56	3.43	0.87
355.57	3.47	0.92
355.58	3.52	0.96
355.59	3.57	1.01
355.60	3.61	1.06
355.61	3.66	1.11
355.62	3.70	1.16
355.63	3.74	1.21
355.64	3.78	1.26
355.65	3.82	1.31
355.66	3.86	1.36
355.67	3.90	1.41
355.68	3.93	1.47
355.69	3.97	1.52
355.70	4.00	1.57
355.71	4.04	1.63
355.72	4.07	1.68
355.73	4.10	1.73
355.74	4.13	1.79
355.75	4.16	1.84
355.76	4.19	1.90
355.77	4.22	1.95
355.78	4.24	2.00
355.79	4.27	2.06
355.80	4.29	2.11
355.81	4.32	2.17
355.82	4.34	2.22
355.83	4.36	2.27
355.84	4.38	2.33
355.85	4.40	2.38
355.86	4.42	2.43
355.87	4.44	2.48
355.88	4.45	2.53
355.89	4.47	2.58
355.90	4.48	2.63
355.91	4.50	2.68
355.92	4.51	2.73
355.93	4.52	2.78
355.94	4.53	2.82
355.95	4.54	2.87
355.96	4.55	2.91
355.97	4.55	2.95
355.98	4.56	3.00
355.99	4.56	3.04
356.00	4.56	3.07
356.01	**4.57**	3.11
356.02	4.56	3.15
356.03	4.56	3.18
356.04	4.56	3.21
356.05	4.55	3.24
356.06	4.55	3.27
356.07	4.54	3.29
356.08	4.53	3.32
356.09	4.52	3.34
356.10	4.50	3.35
356.11	4.49	3.37
356.12	4.47	3.38
356.13	4.44	3.38
356.14	4.42	**3.38**
356.15	4.38	3.38
356.16	4.35	3.37
356.17	4.31	3.35
356.18	4.25	3.32
356.19	4.18	3.28
356.20	4.00	3.15

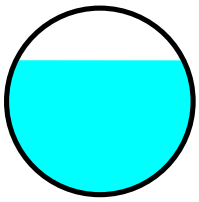
Summary for Reach DMH5: TO DMH-6

Inflow Area = 19,145 sf, 91.57% Impervious, Inflow Depth = 5.70" for 100-Year event
Inflow = 2.66 cfs @ 12.08 hrs, Volume= 9,087 cf
Outflow = 2.63 cfs @ 12.09 hrs, Volume= 9,087 cf, Atten= 1%, Lag= 0.8 min

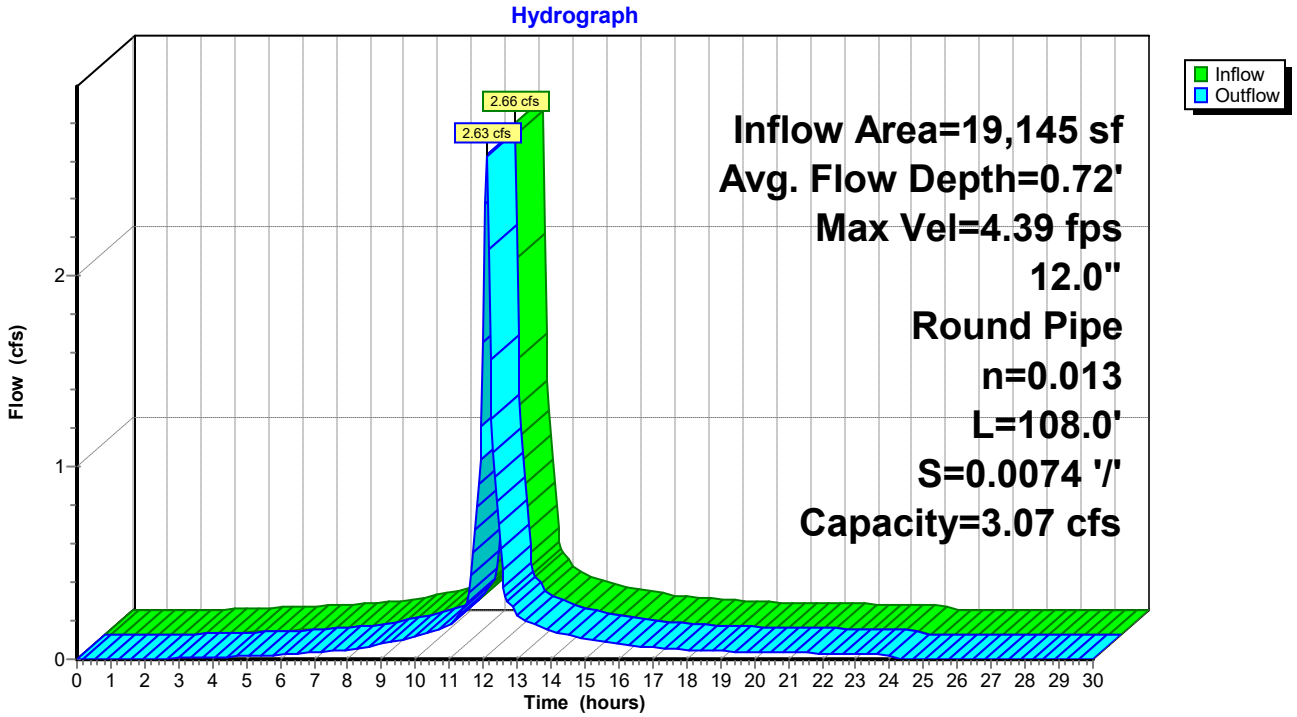
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.39 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.51 fps, Avg. Travel Time= 1.2 min

Peak Storage= 66 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.72'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.07 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 108.0' Slope= 0.0074 '/'
Inlet Invert= 354.10', Outlet Invert= 353.30'



Reach DMH5: TO DMH-6



Stage-Discharge for Reach DMH5: TO DMH-6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
354.10	0.00	0.00
354.11	0.35	0.00
354.12	0.55	0.00
354.13	0.72	0.00
354.14	0.87	0.01
354.15	1.00	0.01
354.16	1.13	0.02
354.17	1.25	0.03
354.18	1.36	0.04
354.19	1.46	0.05
354.20	1.57	0.06
354.21	1.66	0.08
354.22	1.76	0.09
354.23	1.85	0.11
354.24	1.93	0.13
354.25	2.02	0.15
354.26	2.10	0.17
354.27	2.18	0.19
354.28	2.25	0.22
354.29	2.33	0.24
354.30	2.40	0.27
354.31	2.47	0.30
354.32	2.54	0.33
354.33	2.61	0.36
354.34	2.67	0.39
354.35	2.74	0.42
354.36	2.80	0.45
354.37	2.86	0.49
354.38	2.92	0.53
354.39	2.97	0.56
354.40	3.03	0.60
354.41	3.08	0.64
354.42	3.14	0.68
354.43	3.19	0.72
354.44	3.24	0.76
354.45	3.29	0.81
354.46	3.34	0.85
354.47	3.39	0.89
354.48	3.43	0.94
354.49	3.48	0.99
354.50	3.52	1.03
354.51	3.57	1.08
354.52	3.61	1.13
354.53	3.65	1.18
354.54	3.69	1.23
354.55	3.73	1.28
354.56	3.76	1.33
354.57	3.80	1.38
354.58	3.84	1.43
354.59	3.87	1.48
354.60	3.90	1.53
354.61	3.94	1.59
354.62	3.97	1.64
354.63	4.00	1.69
354.64	4.03	1.74
354.65	4.06	1.80
354.66	4.09	1.85
354.67	4.11	1.90
354.68	4.14	1.95
354.69	4.16	2.01
354.70	4.19	2.06
354.71	4.21	2.11
354.72	4.23	2.16
354.73	4.25	2.22
354.74	4.27	2.27
354.75	4.29	2.32
354.76	4.31	2.37
354.77	4.33	2.42
354.78	4.34	2.47
354.79	4.36	2.52
354.80	4.37	2.57
354.81	4.38	2.61
354.82	4.40	2.66
354.83	4.41	2.71
354.84	4.42	2.75
354.85	4.43	2.80
354.86	4.43	2.84
354.87	4.44	2.88
354.88	4.44	2.92
354.89	4.45	2.96
354.90	4.45	3.00
354.91	**4.45**	3.03
354.92	4.45	3.07
354.93	4.45	3.10
354.94	4.45	3.13
354.95	4.44	3.16
354.96	4.43	3.19
354.97	4.43	3.21
354.98	4.42	3.23
354.99	4.40	3.25
355.00	4.39	3.27
355.01	4.37	3.28
355.02	4.35	3.29
355.03	4.33	3.30
355.04	4.31	**3.30**
355.05	4.28	3.29
355.06	4.24	3.29
355.07	4.20	3.27
355.08	4.15	3.24
355.09	4.07	3.20
355.10	3.90	3.07

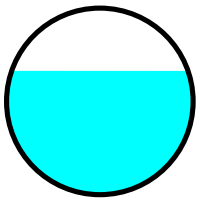
Summary for Reach DMH6: TO DMH#3

Inflow Area = 37,947 sf, 89.57% Impervious, Inflow Depth = 5.57" for 100-Year event
Inflow = 5.19 cfs @ 12.08 hrs, Volume= 17,623 cf
Outflow = 5.12 cfs @ 12.10 hrs, Volume= 17,623 cf, Atten= 1%, Lag= 0.8 min

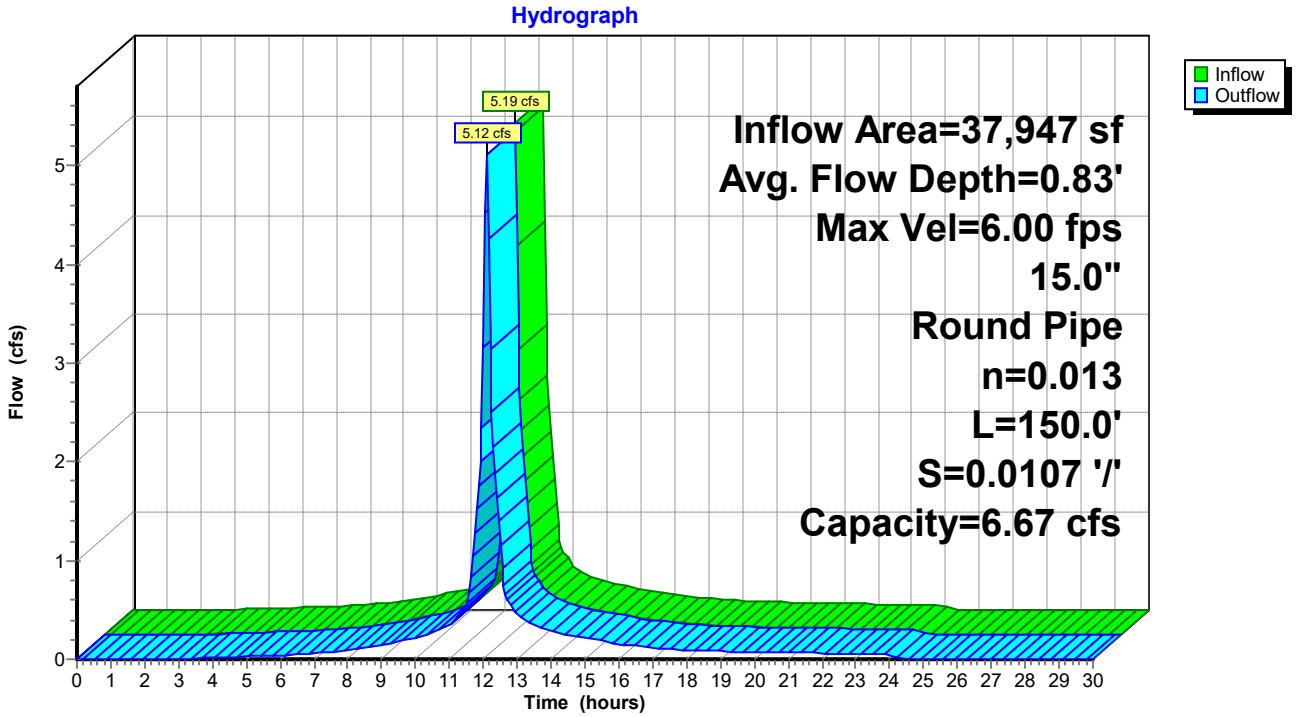
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.00 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.01 fps, Avg. Travel Time= 1.2 min

Peak Storage= 130 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.83'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.67 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 150.0' Slope= 0.0107 '/'
Inlet Invert= 353.20', Outlet Invert= 351.60'



Reach DMH6: TO DMH#3



Stage-Discharge for Reach DMH6: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.20	0.00	0.00
353.21	0.39	0.00
353.22	0.65	0.00
353.23	0.86	0.01
353.24	1.04	0.01
353.25	1.21	0.02
353.26	1.36	0.03
353.27	1.50	0.04
353.28	1.64	0.05
353.29	1.77	0.07
353.30	1.89	0.09
353.31	2.01	0.11
353.32	2.12	0.13
353.33	2.24	0.15
353.34	2.34	0.18
353.35	2.45	0.20
353.36	2.55	0.23
353.37	2.64	0.27
353.38	2.74	0.30
353.39	2.83	0.33
353.40	2.92	0.37
353.41	3.01	0.41
353.42	3.10	0.45
353.43	3.18	0.49
353.44	3.26	0.54
353.45	3.34	0.58
353.46	3.42	0.63
353.47	3.50	0.68
353.48	3.57	0.73
353.49	3.65	0.79
353.50	3.72	0.84
353.51	3.79	0.90
353.52	3.86	0.96
353.53	3.93	1.02
353.54	4.00	1.08
353.55	4.06	1.14
353.56	4.13	1.21
353.57	4.19	1.27
353.58	4.25	1.34
353.59	4.31	1.41
353.60	4.37	1.48
353.61	4.43	1.55
353.62	4.49	1.62
353.63	4.54	1.70
353.64	4.60	1.77
353.65	4.65	1.85
353.66	4.70	1.93
353.67	4.75	2.01
353.68	4.81	2.09
353.69	4.86	2.17
353.70	4.90	2.25
353.71	4.95	2.33
353.72	5.00	2.41
353.73	5.05	2.50
353.74	5.09	2.58
353.75	5.13	2.67
353.76	5.18	2.76
353.77	5.22	2.84
353.78	5.26	2.93
353.79	5.30	3.02
353.80	5.34	3.11
353.81	5.38	3.20
353.82	5.42	3.29
353.83	5.45	3.38
353.84	5.49	3.47
353.85	5.53	3.56
353.86	5.56	3.65
353.87	5.59	3.75
353.88	5.63	3.84
353.89	5.66	3.93
353.90	5.69	4.02
353.91	5.72	4.11
353.92	5.75	4.21
353.93	5.78	4.30
353.94	5.80	4.39
353.95	5.83	4.48
353.96	5.86	4.57
353.97	5.88	4.66
353.98	5.90	4.76
353.99	5.93	4.85
354.00	5.95	4.94
354.01	5.97	5.02
354.02	5.99	5.11
354.03	6.01	5.20
354.04	6.03	5.29
354.05	6.05	5.37
354.06	6.06	5.46
354.07	6.08	5.54
354.08	6.09	5.63
354.09	6.11	5.71
354.10	6.12	5.79
354.11	6.13	5.87
354.12	6.15	5.95
354.13	6.16	6.03
354.14	6.16	6.10
354.15	6.17	6.18
354.16	6.18	6.25
354.17	6.19	6.32
354.18	6.19	6.39
354.19	6.19	6.46
354.20	6.20	6.52
354.21	6.20	6.58
354.22	**6.20**	6.64
354.23	6.20	6.70
354.24	6.19	6.76
354.25	6.19	6.81
354.26	6.19	6.86
354.27	6.18	6.91
354.28	6.17	6.95
354.29	6.16	7.00
354.30	6.15	7.03
354.31	6.14	7.07
354.32	6.12	7.10
354.33	6.10	7.12
354.34	6.08	7.14
354.35	6.06	7.16
354.36	6.04	7.17
354.37	6.01	**7.18**
354.38	5.98	7.17
354.39	5.94	7.16
354.40	5.90	7.15
354.41	5.86	7.12
354.42	5.80	7.07
354.43	5.73	7.01
354.44	5.63	6.90
354.45	5.44	6.67

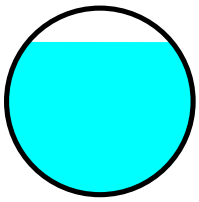
Summary for Reach DMH7: TO UGS

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 5.52" for 100-Year event
Inflow = 9.13 cfs @ 12.09 hrs, Volume= 31,151 cf
Outflow = 9.12 cfs @ 12.09 hrs, Volume= 31,151 cf, Atten= 0%, Lag= 0.0 min

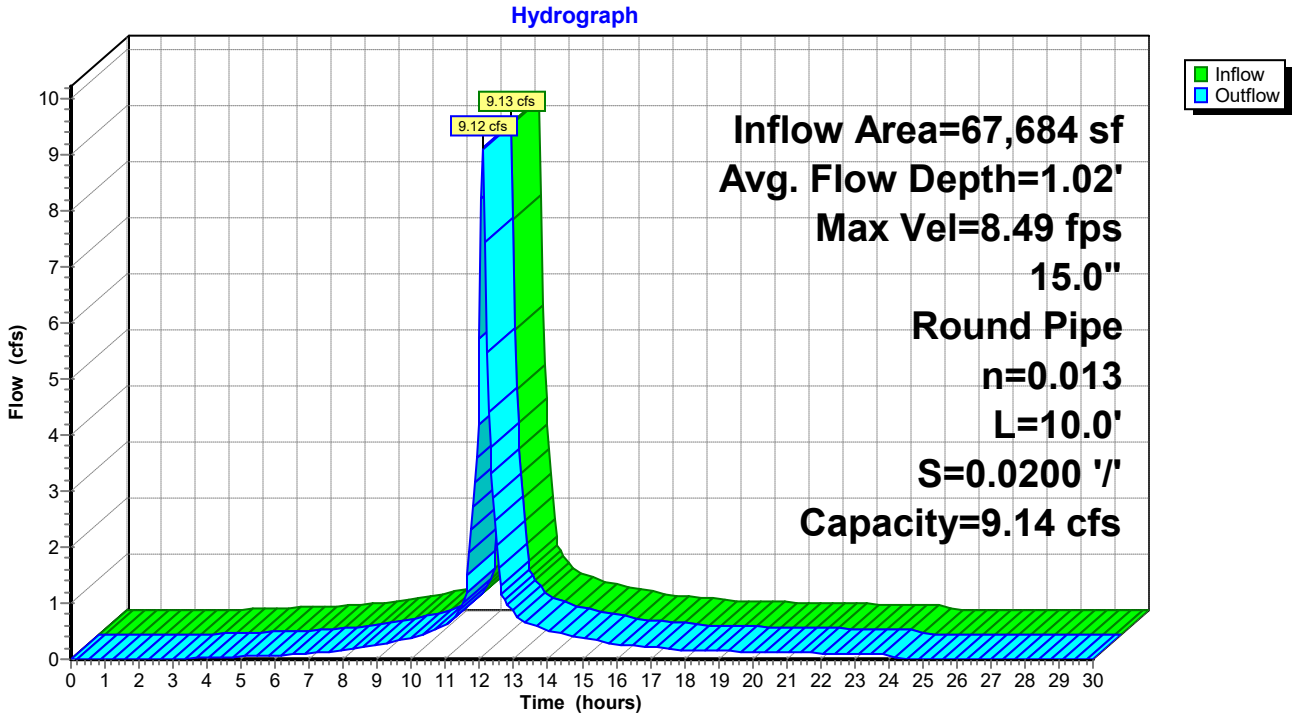
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.49 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.95 fps, Avg. Travel Time= 0.1 min

Peak Storage= 11 cf @ 12.09 hrs
Average Depth at Peak Storage= 1.02'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 9.14 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 10.0' Slope= 0.0200 '/'
Inlet Invert= 351.00', Outlet Invert= 350.80'



Reach DMH7: TO UGS



Stage-Discharge for Reach DMH7: TO UGS

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.53	0.00
351.02	0.89	0.00
351.03	1.18	0.01
351.04	1.43	0.02
351.05	1.65	0.03
351.06	1.86	0.04
351.07	2.06	0.06
351.08	2.24	0.07
351.09	2.42	0.10
351.10	2.59	0.12
351.11	2.75	0.15
351.12	2.91	0.18
351.13	3.06	0.21
351.14	3.21	0.24
351.15	3.35	0.28
351.16	3.49	0.32
351.17	3.62	0.36
351.18	3.75	0.41
351.19	3.88	0.46
351.20	4.00	0.51
351.21	4.12	0.56
351.22	4.24	0.62
351.23	4.36	0.68
351.24	4.47	0.74
351.25	4.58	0.80
351.26	4.69	0.87
351.27	4.79	0.93
351.28	4.89	1.01
351.29	5.00	1.08
351.30	5.10	1.15
351.31	5.19	1.23
351.32	5.29	1.31
351.33	5.38	1.39
351.34	5.47	1.48
351.35	5.56	1.56
351.36	5.65	1.65
351.37	5.74	1.74
351.38	5.82	1.84
351.39	5.90	1.93
351.40	5.98	2.03
351.41	6.06	2.12
351.42	6.14	2.22
351.43	6.22	2.33
351.44	6.29	2.43
351.45	6.37	2.53
351.46	6.44	2.64
351.47	6.51	2.75
351.48	6.58	2.86
351.49	6.65	2.97
351.50	6.72	3.08
351.51	6.78	3.19
351.52	6.85	3.31
351.53	6.91	3.42
351.54	6.97	3.54
351.55	7.03	3.66
351.56	7.09	3.78
351.57	7.15	3.90
351.58	7.20	4.02
351.59	7.26	4.14
351.60	7.31	4.26
351.61	7.37	4.38
351.62	7.42	4.51
351.63	7.47	4.63
351.64	7.52	4.75
351.65	7.57	4.88
351.66	7.61	5.00
351.67	7.66	5.13
351.68	7.70	5.26
351.69	7.75	5.38
351.70	7.79	5.51
351.71	7.83	5.63
351.72	7.87	5.76
351.73	7.91	5.89
351.74	7.95	6.01
351.75	7.98	6.14
351.76	8.02	6.26
351.77	8.05	6.39
351.78	8.09	6.51
351.79	8.12	6.63
351.80	8.15	6.76
351.81	8.18	6.88
351.82	8.20	7.00
351.83	8.23	7.12
351.84	8.26	7.24
351.85	8.28	7.36
351.86	8.30	7.48
351.87	8.33	7.59
351.88	8.35	7.71
351.89	8.36	7.82
351.90	8.38	7.93
351.91	8.40	8.04
351.92	8.41	8.15
351.93	8.43	8.25
351.94	8.44	8.36
351.95	8.45	8.46
351.96	8.46	8.56
351.97	8.47	8.65
351.98	8.48	8.75
351.99	8.48	8.84
352.00	8.48	8.93
352.01	8.49	9.02
352.02	**8.49**	9.10
352.03	8.48	9.18
352.04	8.48	9.25
352.05	8.48	9.33
352.06	8.47	9.40
352.07	8.46	9.46
352.08	8.45	9.52
352.09	8.44	9.58
352.10	8.42	9.63
352.11	8.40	9.68
352.12	8.38	9.72
352.13	8.36	9.75
352.14	8.33	9.78
352.15	8.30	9.80
352.16	8.27	9.82
352.17	8.23	**9.83**
352.18	8.19	9.82
352.19	8.14	9.81
352.20	8.08	9.79
352.21	8.02	9.75
352.22	7.94	9.69
352.23	7.85	9.60
352.24	7.70	9.44
352.25	7.44	9.14

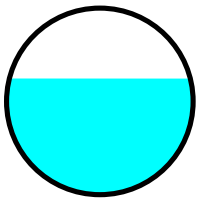
Summary for Reach DMH8: TO FE#B1

Inflow Area = 67,684 sf, 89.07% Impervious, Inflow Depth = 1.13" for 100-Year event
Inflow = 3.39 cfs @ 12.24 hrs, Volume= 6,387 cf
Outflow = 3.40 cfs @ 12.25 hrs, Volume= 6,387 cf, Atten= 0%, Lag= 0.3 min

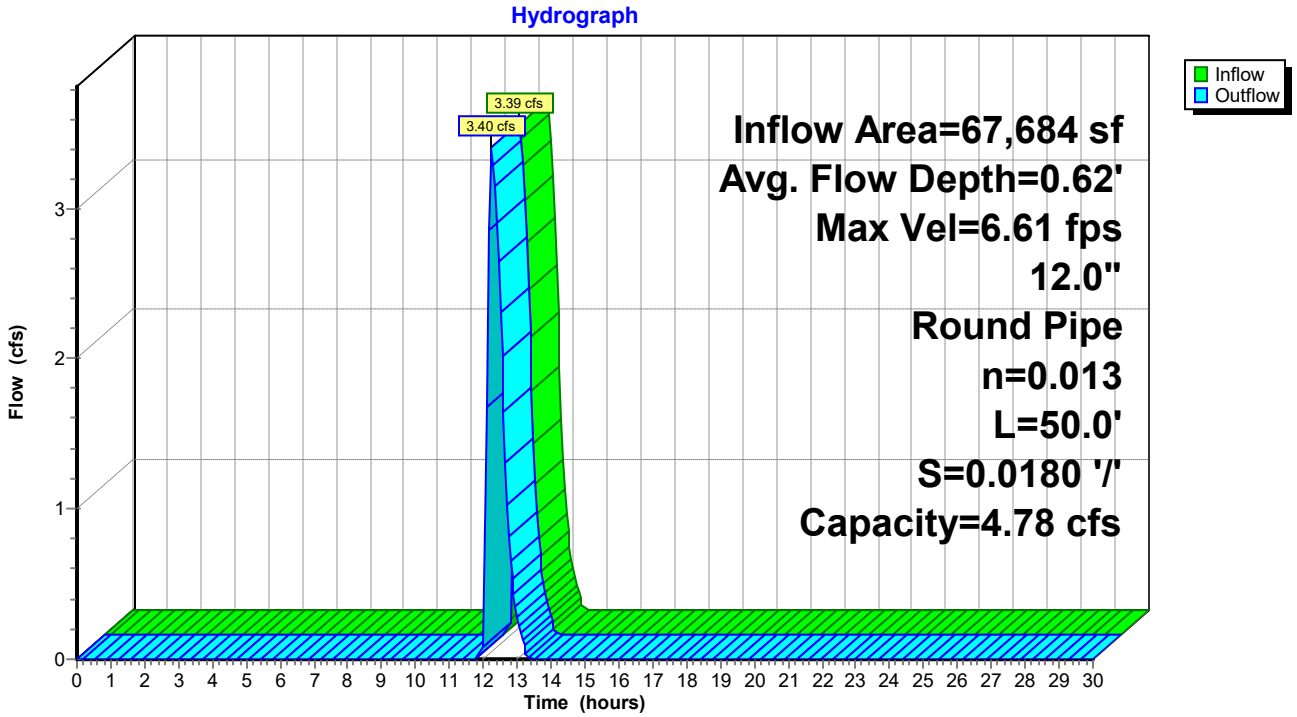
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.61 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.43 fps, Avg. Travel Time= 0.2 min

Peak Storage= 26 cf @ 12.25 hrs
Average Depth at Peak Storage= 0.62'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.78 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 50.0' Slope= 0.0180 '/'
Inlet Invert= 349.90', Outlet Invert= 349.00'



Reach DMH8: TO FE#B1



Stage-Discharge for Reach DMH8: TO FE#B1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
349.90	0.00	0.00
349.91	0.54	0.00
349.92	0.86	0.00
349.93	1.12	0.01
349.94	1.35	0.01
349.95	1.56	0.02
349.96	1.76	0.03
349.97	1.94	0.05
349.98	2.12	0.06
349.99	2.28	0.08
350.00	2.44	0.10
350.01	2.59	0.12
350.02	2.74	0.15
350.03	2.88	0.17
350.04	3.01	0.20
350.05	3.15	0.23
350.06	3.27	0.27
350.07	3.40	0.30
350.08	3.51	0.34
350.09	3.63	0.38
350.10	3.74	0.42
350.11	3.85	0.46
350.12	3.96	0.51
350.13	4.06	0.55
350.14	4.17	0.60
350.15	4.26	0.65
350.16	4.36	0.71
350.17	4.45	0.76
350.18	4.55	0.82
350.19	4.64	0.88
350.20	4.72	0.94
350.21	4.81	1.00
350.22	4.89	1.06
350.23	4.97	1.12
350.24	5.05	1.19
350.25	5.13	1.26
350.26	5.21	1.33
350.27	5.28	1.39
350.28	5.35	1.47
350.29	5.42	1.54
350.30	5.49	1.61
350.31	5.56	1.68
350.32	5.62	1.76
350.33	5.69	1.84
350.34	5.75	1.91
350.35	5.81	1.99
350.36	5.87	2.07
350.37	5.92	2.15
350.38	5.98	2.23
350.39	6.03	2.31
350.40	6.09	2.39
350.41	6.14	2.47
350.42	6.19	2.55
350.43	6.23	2.64
350.44	6.28	2.72
350.45	6.33	2.80
350.46	6.37	2.88
350.47	6.41	2.96
350.48	6.45	3.05
350.49	6.49	3.13
350.50	6.53	3.21
350.51	6.56	3.29
350.52	6.60	3.37
350.53	6.63	3.46
350.54	6.66	3.54
350.55	6.69	3.62
350.56	6.72	3.69
350.57	6.75	3.77
350.58	6.77	3.85
350.59	6.79	3.93
350.60	6.82	4.00
350.61	6.84	4.08
350.62	6.85	4.15
350.63	6.87	4.22
350.64	6.89	4.29
350.65	6.90	4.36
350.66	6.91	4.43
350.67	6.92	4.49
350.68	6.93	4.55
350.69	6.93	4.61
350.70	6.94	4.67
350.71	**6.94**	4.73
350.72	6.94	4.78
350.73	6.94	4.83
350.74	6.93	4.88
350.75	6.92	4.93
350.76	6.91	4.97
350.77	6.90	5.00
350.78	6.88	5.04
350.79	6.86	5.07
350.80	6.84	5.09
350.81	6.82	5.12
350.82	6.79	5.13
350.83	6.75	5.14
350.84	6.71	**5.14**
350.85	6.66	5.14
350.86	6.61	5.12
350.87	6.54	5.09
350.88	6.46	5.05
350.89	6.35	4.98
350.90	6.09	4.78

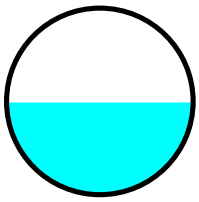
Summary for Reach DMHd1: TO DMH#8

Inflow Area = 21,252 sf, 56.67% Impervious, Inflow Depth = 3.46" for 100-Year event
Inflow = 1.92 cfs @ 12.08 hrs, Volume= 6,128 cf
Outflow = 1.91 cfs @ 12.09 hrs, Volume= 6,128 cf, Atten= 1%, Lag= 0.5 min

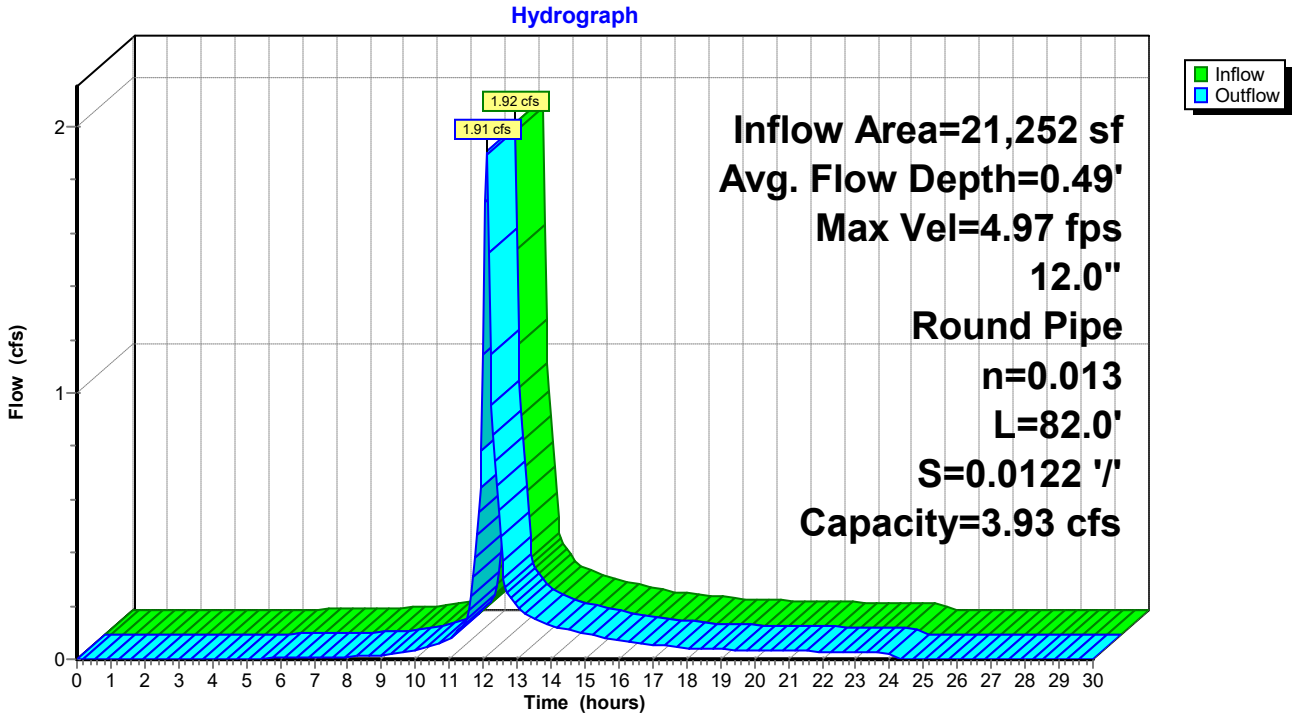
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.97 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.59 fps, Avg. Travel Time= 0.9 min

Peak Storage= 32 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.49'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.93 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 82.0' Slope= 0.0122 '/'
Inlet Invert= 352.10', Outlet Invert= 351.10'



Reach DMHd1: TO DMH#8



Stage-Discharge for Reach DMHd1: TO DMH#8

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.10	0.00	0.00
352.11	0.45	0.00
352.12	0.71	0.00
352.13	0.92	0.01
352.14	1.11	0.01
352.15	1.29	0.02
352.16	1.45	0.03
352.17	1.60	0.04
352.18	1.74	0.05
352.19	1.88	0.07
352.20	2.01	0.08
352.21	2.13	0.10
352.22	2.25	0.12
352.23	2.37	0.14
352.24	2.48	0.17
352.25	2.59	0.19
352.26	2.69	0.22
352.27	2.79	0.25
352.28	2.89	0.28
352.29	2.99	0.31
352.30	3.08	0.34
352.31	3.17	0.38
352.32	3.26	0.42
352.33	3.35	0.46
352.34	3.43	0.50
352.35	3.51	0.54
352.36	3.59	0.58
352.37	3.67	0.63
352.38	3.74	0.67
352.39	3.82	0.72
352.40	3.89	0.77
352.41	3.96	0.82
352.42	4.03	0.87
352.43	4.09	0.93
352.44	4.16	0.98
352.45	4.22	1.03
352.46	4.29	1.09
352.47	4.35	1.15
352.48	4.41	1.21
352.49	4.46	1.27
352.50	4.52	1.33
352.51	4.57	1.39
352.52	4.63	1.45
352.53	4.68	1.51
352.54	4.73	1.57
352.55	4.78	1.64
352.56	4.83	1.70
352.57	4.88	1.77
352.58	4.92	1.83
352.59	4.97	1.90
352.60	5.01	1.97
352.61	5.05	2.03
352.62	5.09	2.10
352.63	5.13	2.17
352.64	5.17	2.24
352.65	5.21	2.30
352.66	5.24	2.37
352.67	5.28	2.44
352.68	5.31	2.51
352.69	5.34	2.58
352.70	5.37	2.64
352.71	5.40	2.71
352.72	5.43	2.78
352.73	5.46	2.84
352.74	5.48	2.91
352.75	5.51	2.98
352.76	5.53	3.04
352.77	5.55	3.11
352.78	5.57	3.17
352.79	5.59	3.23
352.80	5.61	3.29
352.81	5.63	3.36
352.82	5.64	3.42
352.83	5.65	3.47
352.84	5.67	3.53
352.85	5.68	3.59
352.86	5.69	3.64
352.87	5.70	3.70
352.88	5.70	3.75
352.89	5.71	3.80
352.90	5.71	3.85
352.91	**5.71**	3.89
352.92	5.71	3.94
352.93	5.71	3.98
352.94	5.70	4.02
352.95	5.70	4.05
352.96	5.69	4.09
352.97	5.68	4.12
352.98	5.67	4.15
352.99	5.65	4.17
353.00	5.63	4.19
353.01	5.61	4.21
353.02	5.59	4.22
353.03	5.56	4.23
353.04	5.52	**4.23**
353.05	5.49	4.23
353.06	5.44	4.22
353.07	5.39	4.19
353.08	5.32	4.16
353.09	5.23	4.10
353.10	5.01	3.93

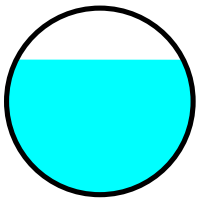
Summary for Reach DMHD2: TO DMH#7

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 4.44" for 100-Year event
Inflow = 6.32 cfs @ 12.09 hrs, Volume= 20,935 cf
Outflow = 6.32 cfs @ 12.09 hrs, Volume= 20,935 cf, Atten= 0%, Lag= 0.0 min

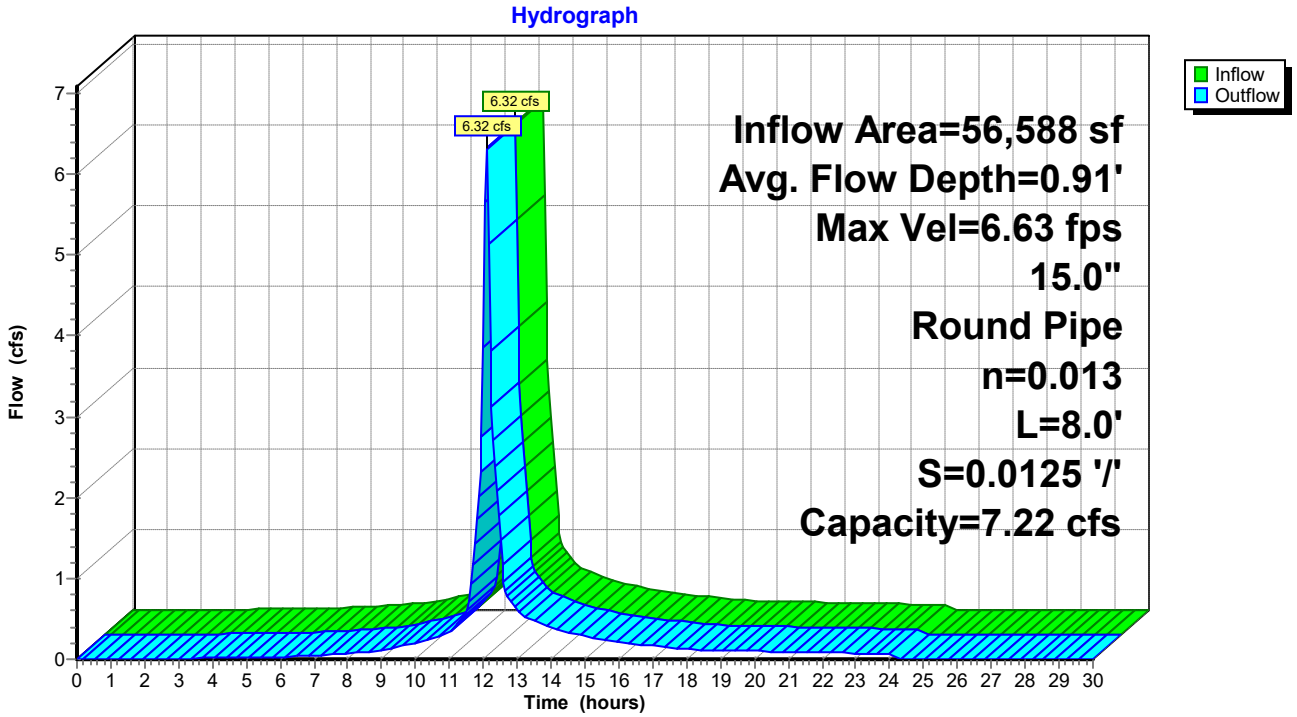
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.63 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.15 fps, Avg. Travel Time= 0.1 min

Peak Storage= 8 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.91'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.22 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 8.0' Slope= 0.0125 '/'
Inlet Invert= 350.40', Outlet Invert= 350.30'



Reach DMHD2: TO DMH#7



Stage-Discharge for Reach DMHD2: TO DMH#7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.40	0.00	0.00
350.41	0.42	0.00
350.42	0.71	0.00
350.43	0.93	0.01
350.44	1.13	0.01
350.45	1.31	0.02
350.46	1.47	0.03
350.47	1.63	0.04
350.48	1.77	0.06
350.49	1.91	0.08
350.50	2.05	0.09
350.51	2.18	0.12
350.52	2.30	0.14
350.53	2.42	0.16
350.54	2.54	0.19
350.55	2.65	0.22
350.56	2.76	0.25
350.57	2.86	0.29
350.58	2.97	0.32
350.59	3.07	0.36
350.60	3.16	0.40
350.61	3.26	0.44
350.62	3.35	0.49
350.63	3.44	0.53
350.64	3.53	0.58
350.65	3.62	0.63
350.66	3.70	0.68
350.67	3.79	0.74
350.68	3.87	0.80
350.69	3.95	0.85
350.70	4.03	0.91
350.71	4.10	0.97
350.72	4.18	1.04
350.73	4.25	1.10
350.74	4.33	1.17
350.75	4.40	1.24
350.76	4.47	1.31
350.77	4.53	1.38
350.78	4.60	1.45
350.79	4.67	1.53
350.80	4.73	1.60
350.81	4.79	1.68
350.82	4.86	1.76
350.83	4.92	1.84
350.84	4.98	1.92
350.85	5.03	2.00
350.86	5.09	2.09
350.87	5.15	2.17
350.88	5.20	2.26
350.89	5.26	2.35
350.90	5.31	2.43
350.91	5.36	2.52
350.92	5.41	2.61
350.93	5.46	2.71
350.94	5.51	2.80
350.95	5.56	2.89
350.96	5.61	2.98
350.97	5.65	3.08
350.98	5.70	3.17
350.99	5.74	3.27
351.00	5.78	3.37
351.01	5.82	3.46
351.02	5.86	3.56
351.03	5.90	3.66
351.04	5.94	3.76
351.05	5.98	3.86
351.06	6.02	3.96
351.07	6.06	4.06
351.08	6.09	4.16
351.09	6.12	4.26
351.10	6.16	4.35
351.11	6.19	4.45
351.12	6.22	4.55
351.13	6.25	4.65
351.14	6.28	4.75
351.15	6.31	4.85
351.16	6.34	4.95
351.17	6.37	5.05
351.18	6.39	5.15
351.19	6.42	5.25
351.20	6.44	5.34
351.21	6.46	5.44
351.22	6.49	5.53
351.23	6.51	5.63
351.24	6.53	5.72
351.25	6.55	5.82
351.26	6.56	5.91
351.27	6.58	6.00
351.28	6.60	6.09
351.29	6.61	6.18
351.30	6.63	6.27
351.31	6.64	6.36
351.32	6.65	6.44
351.33	6.66	6.52
351.34	6.67	6.61
351.35	6.68	6.69
351.36	6.69	6.76
351.37	6.70	6.84
351.38	6.70	6.92
351.39	6.70	6.99
351.40	6.71	7.06
351.41	6.71	7.13
351.42	**6.71**	7.19
351.43	6.71	7.26
351.44	6.71	7.32
351.45	6.70	7.37
351.46	6.70	7.43
351.47	6.69	7.48
351.48	6.68	7.53
351.49	6.67	7.57
351.50	6.66	7.61
351.51	6.64	7.65
351.52	6.63	7.68
351.53	6.61	7.71
351.54	6.59	7.73
351.55	6.56	7.75
351.56	6.54	7.76
351.57	6.51	**7.77**
351.58	6.47	7.77
351.59	6.43	7.76
351.60	6.39	7.74
351.61	6.34	7.71
351.62	6.28	7.66
351.63	6.21	7.59
351.64	6.09	7.46
351.65	5.89	7.22

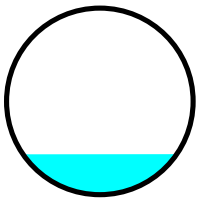
Summary for Reach DMHd3: TO DMH#2

Inflow Area = 6,527 sf, 84.22% Impervious, Inflow Depth = 5.19" for 100-Year event
Inflow = 0.84 cfs @ 12.08 hrs, Volume= 2,822 cf
Outflow = 0.83 cfs @ 12.09 hrs, Volume= 2,822 cf, Atten= 0%, Lag= 0.1 min

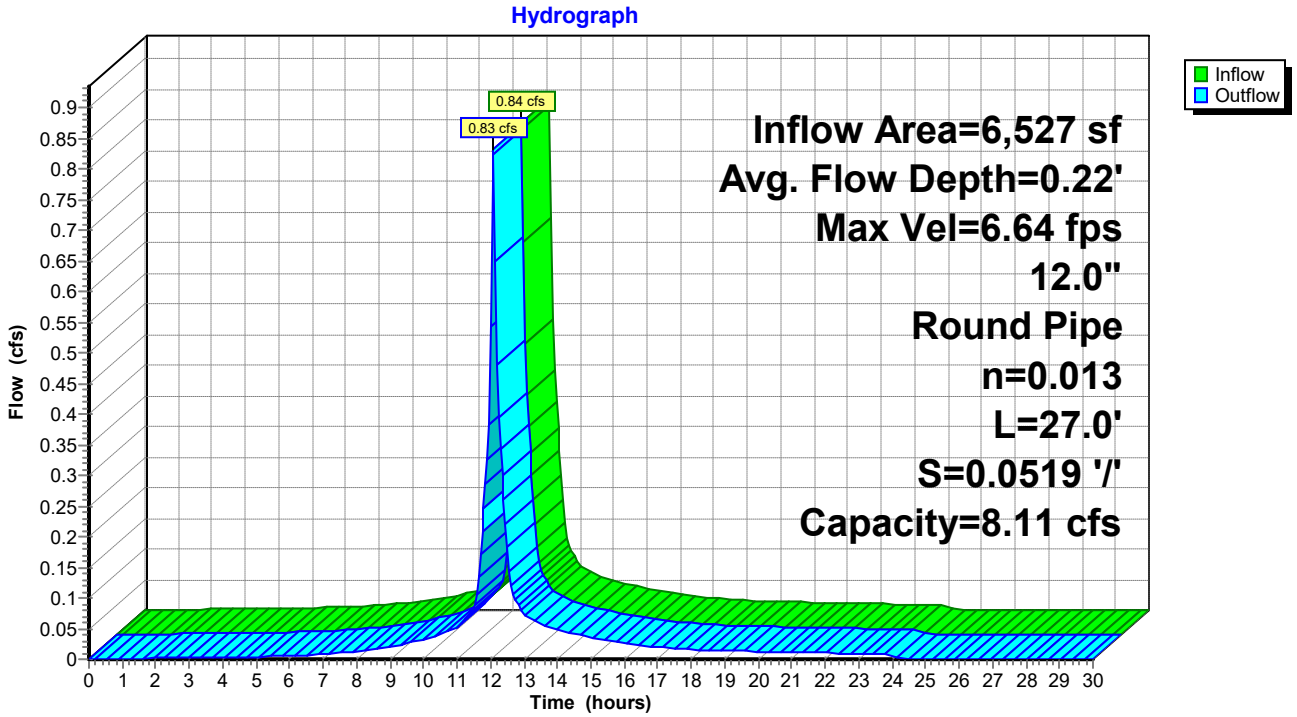
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.64 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.08 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.22'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.11 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 27.0' Slope= 0.0519 '/'
Inlet Invert= 352.40', Outlet Invert= 351.00'



Reach DMHd3: TO DMH#2



Stage-Discharge for Reach DMHd3: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.40	0.00	0.00
352.41	0.92	0.00
352.42	1.45	0.01
352.43	1.90	0.01
352.44	2.29	0.02
352.45	2.65	0.04
352.46	2.99	0.06
352.47	3.30	0.08
352.48	3.59	0.11
352.49	3.88	0.14
352.50	4.14	0.17
352.51	4.40	0.21
352.52	4.65	0.25
352.53	4.89	0.29
352.54	5.12	0.34
352.55	5.34	0.39
352.56	5.55	0.45
352.57	5.76	0.51
352.58	5.96	0.57
352.59	6.16	0.64
352.60	6.35	0.71
352.61	6.54	0.78
352.62	6.72	0.86
352.63	6.90	0.94
352.64	7.07	1.02
352.65	7.24	1.11
352.66	7.40	1.20
352.67	7.56	1.29
352.68	7.72	1.39
352.69	7.87	1.49
352.70	8.02	1.59
352.71	8.16	1.69
352.72	8.30	1.80
352.73	8.44	1.91
352.74	8.58	2.02
352.75	8.71	2.13
352.76	8.84	2.25
352.77	8.96	2.37
352.78	9.08	2.49
352.79	9.20	2.61
352.80	9.32	2.73
352.81	9.43	2.86
352.82	9.54	2.99
352.83	9.65	3.12
352.84	9.76	3.25
352.85	9.86	3.38
352.86	9.96	3.51
352.87	10.05	3.65
352.88	10.15	3.78
352.89	10.24	3.92
352.90	10.33	4.06
352.91	10.42	4.19
352.92	10.50	4.33
352.93	10.58	4.47
352.94	10.66	4.61
352.95	10.74	4.75
352.96	10.81	4.89
352.97	10.88	5.03
352.98	10.95	5.17
352.99	11.01	5.31
353.00	11.08	5.45
353.01	11.14	5.59
353.02	11.20	5.73
353.03	11.25	5.86
353.04	11.31	6.00
353.05	11.36	6.14
353.06	11.40	6.27
353.07	11.45	6.40
353.08	11.49	6.53
353.09	11.53	6.66
353.10	11.57	6.79
353.11	11.60	6.92
353.12	11.63	7.04
353.13	11.66	7.16
353.14	11.69	7.28
353.15	11.71	7.40
353.16	11.73	7.51
353.17	11.74	7.62
353.18	11.76	7.73
353.19	11.77	7.83
353.20	11.77	7.93
353.21	**11.78**	8.03
353.22	11.78	8.12
353.23	11.77	8.20
353.24	11.76	8.28
353.25	11.75	8.36
353.26	11.73	8.43
353.27	11.71	8.49
353.28	11.68	8.55
353.29	11.65	8.60
353.30	11.61	8.65
353.31	11.57	8.68
353.32	11.52	8.71
353.33	11.46	8.72
353.34	11.39	**8.73**
353.35	11.31	8.72
353.36	11.22	8.69
353.37	11.11	8.65
353.38	10.97	8.57
353.39	10.78	8.45
353.40	10.33	8.11

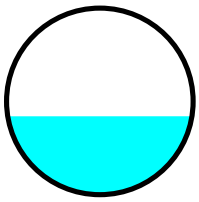
Summary for Reach DMHD4: TO DMH#2

Inflow Area = 9,322 sf, 78.29% Impervious, Inflow Depth = 4.80" for 100-Year event
Inflow = 1.14 cfs @ 12.08 hrs, Volume= 3,725 cf
Outflow = 1.12 cfs @ 12.10 hrs, Volume= 3,725 cf, Atten= 2%, Lag= 1.2 min

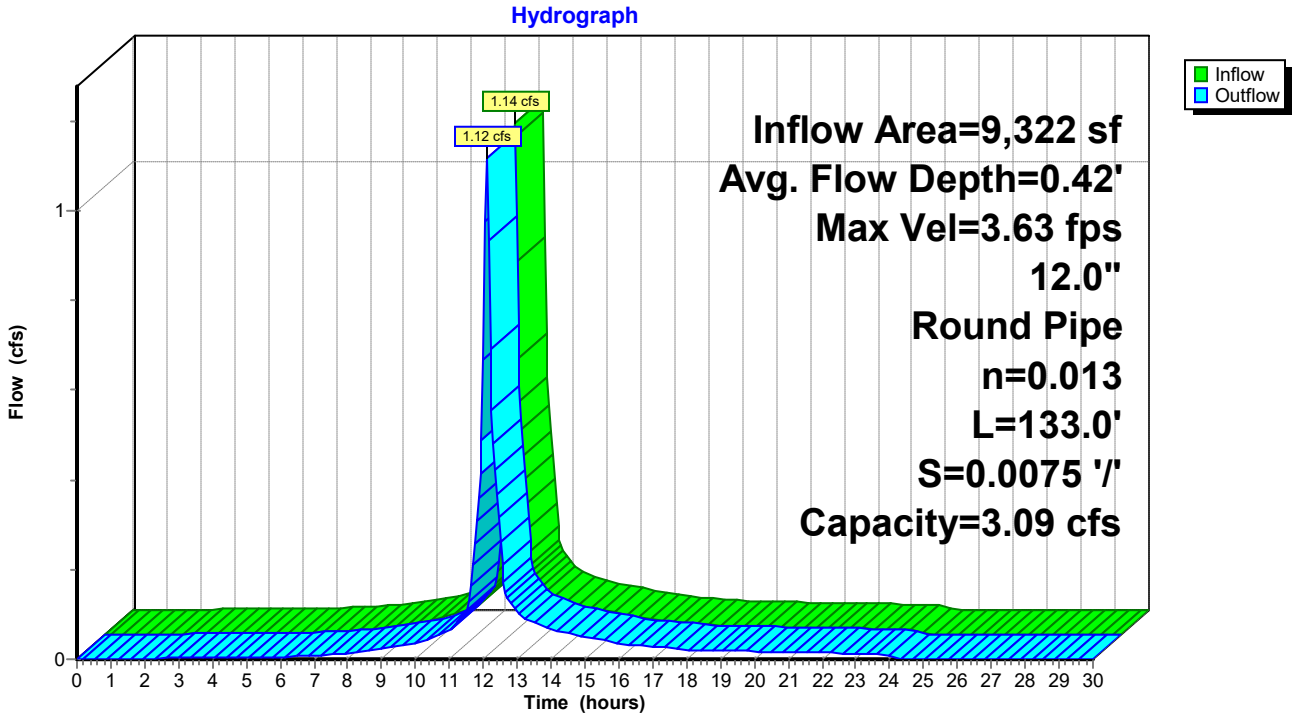
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.63 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.12 fps, Avg. Travel Time= 2.0 min

Peak Storage= 42 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.42'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.09 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 133.0' Slope= 0.0075 '/'
Inlet Invert= 351.50', Outlet Invert= 350.50'



Reach DMHD4: TO DMH#2



Stage-Discharge for Reach DMHD4: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.50	0.00	0.00
351.51	0.35	0.00
351.52	0.55	0.00
351.53	0.72	0.00
351.54	0.87	0.01
351.55	1.01	0.01
351.56	1.14	0.02
351.57	1.26	0.03
351.58	1.37	0.04
351.59	1.48	0.05
351.60	1.58	0.06
351.61	1.68	0.08
351.62	1.77	0.09
351.63	1.86	0.11
351.64	1.95	0.13
351.65	2.03	0.15
351.66	2.11	0.17
351.67	2.19	0.19
351.68	2.27	0.22
351.69	2.35	0.24
351.70	2.42	0.27
351.71	2.49	0.30
351.72	2.56	0.33
351.73	2.63	0.36
351.74	2.69	0.39
351.75	2.76	0.42
351.76	2.82	0.46
351.77	2.88	0.49
351.78	2.94	0.53
351.79	3.00	0.57
351.80	3.05	0.60
351.81	3.11	0.64
351.82	3.16	0.69
351.83	3.21	0.73
351.84	3.27	0.77
351.85	3.32	0.81
351.86	3.36	0.86
351.87	3.41	0.90
351.88	3.46	0.95
351.89	3.50	0.99
351.90	3.55	1.04
351.91	3.59	1.09
351.92	3.63	1.14
351.93	3.68	1.19
351.94	3.72	1.24
351.95	3.75	1.29
351.96	3.79	1.34
351.97	3.83	1.39
351.98	3.86	1.44
351.99	3.90	1.49
352.00	3.93	1.54
352.01	3.97	1.60
352.02	4.00	1.65
352.03	4.03	1.70
352.04	4.06	1.76
352.05	4.09	1.81
352.06	4.12	1.86
352.07	4.14	1.92
352.08	4.17	1.97
352.09	4.19	2.02
352.10	4.22	2.08
352.11	4.24	2.13
352.12	4.26	2.18
352.13	4.28	2.23
352.14	4.30	2.29
352.15	4.32	2.34
352.16	4.34	2.39
352.17	4.36	2.44
352.18	4.38	2.49
352.19	4.39	2.54
352.20	4.40	2.59
352.21	4.42	2.63
352.22	4.43	2.68
352.23	4.44	2.73
352.24	4.45	2.77
352.25	4.46	2.82
352.26	4.47	2.86
352.27	4.47	2.90
352.28	4.48	2.94
352.29	4.48	2.98
352.30	4.48	3.02
352.31	**4.48**	3.06
352.32	4.48	3.09
352.33	4.48	3.12
352.34	4.48	3.15
352.35	4.47	3.18
352.36	4.47	3.21
352.37	4.46	3.23
352.38	4.45	3.26
352.39	4.44	3.28
352.40	4.42	3.29
352.41	4.41	3.31
352.42	4.39	3.32
352.43	4.36	3.32
352.44	4.34	**3.32**
352.45	4.31	3.32
352.46	4.27	3.31
352.47	4.23	3.29
352.48	4.18	3.26
352.49	4.11	3.22
352.50	3.93	3.09

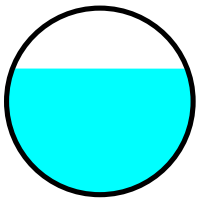
Summary for Reach DMHD5: TO DMH#2

Inflow Area = 19,181 sf, 81.45% Impervious, Inflow Depth = 4.99" for 100-Year event
Inflow = 2.40 cfs @ 12.09 hrs, Volume= 7,979 cf
Outflow = 2.38 cfs @ 12.09 hrs, Volume= 7,979 cf, Atten= 1%, Lag= 0.5 min

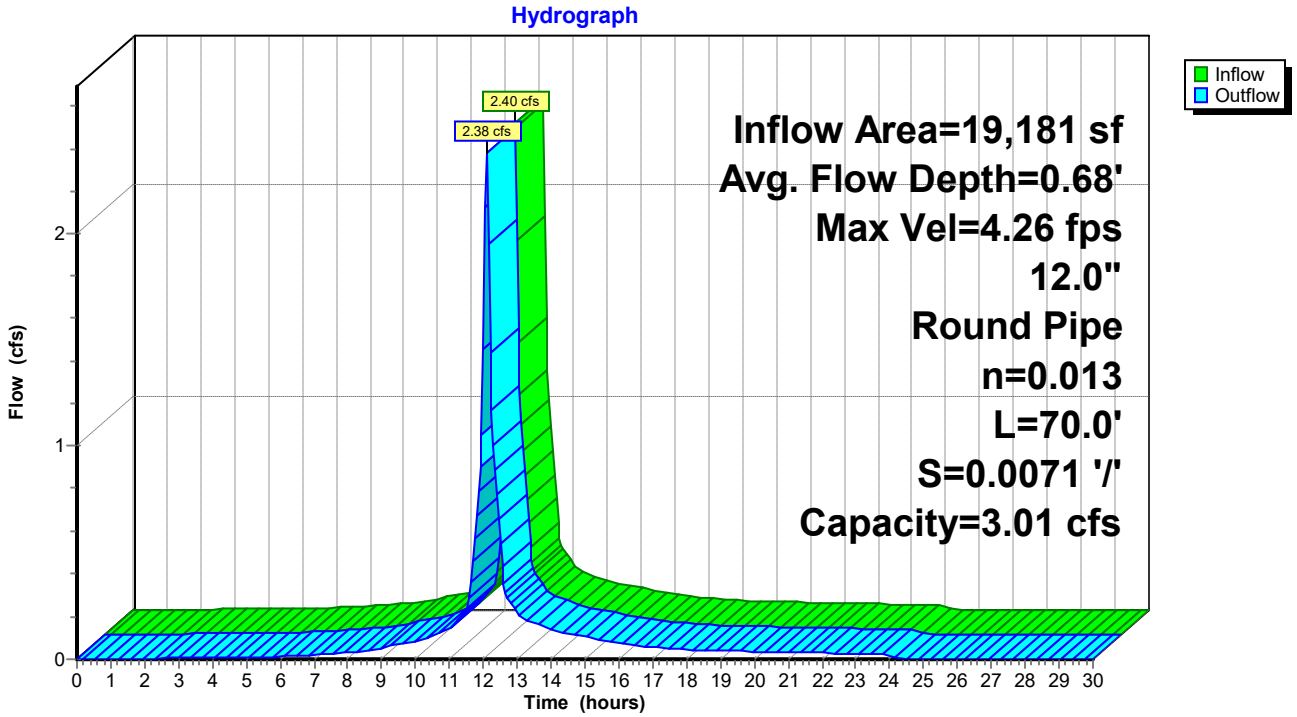
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.26 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.38 fps, Avg. Travel Time= 0.8 min

Peak Storage= 40 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.68'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.01 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 70.0' Slope= 0.0071 '/'
Inlet Invert= 350.90', Outlet Invert= 350.40'



Reach DMHD5: TO DMH#2



Stage-Discharge for Reach DMHD5: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.90	0.00	0.00
350.91	0.34	0.00
350.92	0.54	0.00
350.93	0.71	0.00
350.94	0.85	0.01
350.95	0.98	0.01
350.96	1.11	0.02
350.97	1.22	0.03
350.98	1.33	0.04
350.99	1.44	0.05
351.00	1.54	0.06
351.01	1.63	0.08
351.02	1.73	0.09
351.03	1.81	0.11
351.04	1.90	0.13
351.05	1.98	0.15
351.06	2.06	0.17
351.07	2.14	0.19
351.08	2.21	0.21
351.09	2.29	0.24
351.10	2.36	0.26
351.11	2.43	0.29
351.12	2.49	0.32
351.13	2.56	0.35
351.14	2.62	0.38
351.15	2.69	0.41
351.16	2.75	0.45
351.17	2.81	0.48
351.18	2.86	0.52
351.19	2.92	0.55
351.20	2.98	0.59
351.21	3.03	0.63
351.22	3.08	0.67
351.23	3.13	0.71
351.24	3.18	0.75
351.25	3.23	0.79
351.26	3.28	0.83
351.27	3.33	0.88
351.28	3.37	0.92
351.29	3.42	0.97
351.30	3.46	1.01
351.31	3.50	1.06
351.32	3.54	1.11
351.33	3.58	1.16
351.34	3.62	1.21
351.35	3.66	1.25
351.36	3.70	1.30
351.37	3.73	1.35
351.38	3.77	1.40
351.39	3.80	1.45
351.40	3.83	1.51
351.41	3.87	1.56
351.42	3.90	1.61
351.43	3.93	1.66
351.44	3.96	1.71
351.45	3.98	1.76
351.46	4.01	1.82
351.47	4.04	1.87
351.48	4.06	1.92
351.49	4.09	1.97
351.50	4.11	2.02
351.51	4.13	2.07
351.52	4.16	2.13
351.53	4.18	2.18
351.54	4.20	2.23
351.55	4.21	2.28
351.56	4.23	2.33
351.57	4.25	2.38
351.58	4.26	2.43
351.59	4.28	2.47
351.60	4.29	2.52
351.61	4.31	2.57
351.62	4.32	2.61
351.63	4.33	2.66
351.64	4.34	2.70
351.65	4.35	2.75
351.66	4.35	2.79
351.67	4.36	2.83
351.68	4.36	2.87
351.69	4.37	2.91
351.70	4.37	2.94
351.71	**4.37**	2.98
351.72	4.37	3.01
351.73	4.37	3.04
351.74	4.37	3.07
351.75	4.36	3.10
351.76	4.35	3.13
351.77	4.35	3.15
351.78	4.34	3.17
351.79	4.32	3.19
351.80	4.31	3.21
351.81	4.29	3.22
351.82	4.28	3.23
351.83	4.25	3.24
351.84	4.23	**3.24**
351.85	4.20	3.24
351.86	4.16	3.23
351.87	4.12	3.21
351.88	4.07	3.18
351.89	4.00	3.14
351.90	3.83	3.01

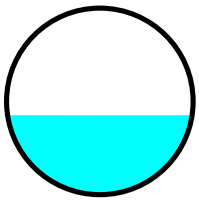
Summary for Reach DMHD6: TO DMH#5

Inflow Area = 8,503 sf, 83.97% Impervious, Inflow Depth = 5.16" for 100-Year event
Inflow = 1.10 cfs @ 12.08 hrs, Volume= 3,655 cf
Outflow = 1.09 cfs @ 12.09 hrs, Volume= 3,655 cf, Atten= 1%, Lag= 0.6 min

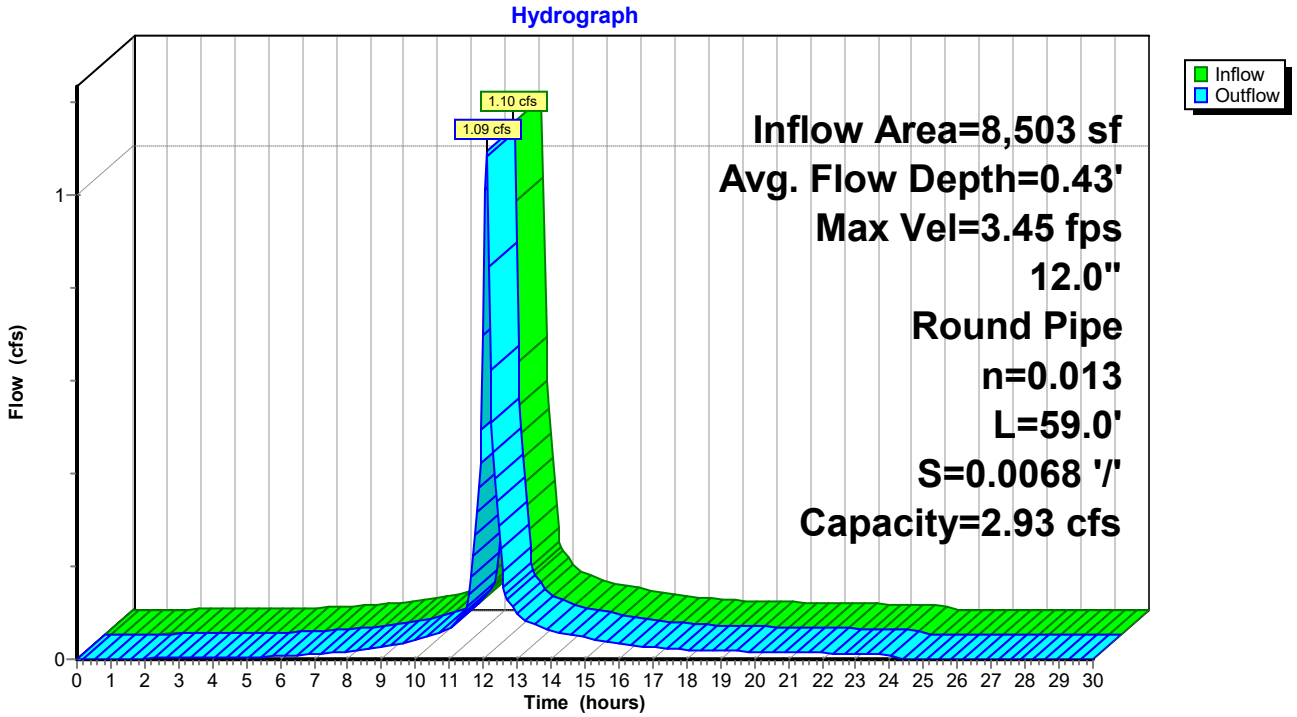
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.45 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.09 fps, Avg. Travel Time= 0.9 min

Peak Storage= 19 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.43'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.93 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 59.0' Slope= 0.0068 '/'
Inlet Invert= 351.40', Outlet Invert= 351.00'



Reach DMHD6: TO DMH#5



Stage-Discharge for Reach DMHD6: TO DMH#5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.40	0.00	0.00
351.41	0.33	0.00
351.42	0.53	0.00
351.43	0.69	0.00
351.44	0.83	0.01
351.45	0.96	0.01
351.46	1.08	0.02
351.47	1.19	0.03
351.48	1.30	0.04
351.49	1.40	0.05
351.50	1.50	0.06
351.51	1.59	0.07
351.52	1.68	0.09
351.53	1.77	0.11
351.54	1.85	0.12
351.55	1.93	0.14
351.56	2.01	0.16
351.57	2.08	0.18
351.58	2.16	0.21
351.59	2.23	0.23
351.60	2.30	0.26
351.61	2.36	0.28
351.62	2.43	0.31
351.63	2.49	0.34
351.64	2.56	0.37
351.65	2.62	0.40
351.66	2.68	0.43
351.67	2.73	0.47
351.68	2.79	0.50
351.69	2.85	0.54
351.70	2.90	0.57
351.71	2.95	0.61
351.72	3.00	0.65
351.73	3.05	0.69
351.74	3.10	0.73
351.75	3.15	0.77
351.76	3.20	0.81
351.77	3.24	0.86
351.78	3.28	0.90
351.79	3.33	0.94
351.80	3.37	0.99
351.81	3.41	1.03
351.82	3.45	1.08
351.83	3.49	1.13
351.84	3.53	1.17
351.85	3.56	1.22
351.86	3.60	1.27
351.87	3.64	1.32
351.88	3.67	1.37
351.89	3.70	1.42
351.90	3.74	1.47
351.91	3.77	1.52
351.92	3.80	1.57
351.93	3.83	1.62
351.94	3.85	1.67
351.95	3.88	1.72
351.96	3.91	1.77
351.97	3.93	1.82
351.98	3.96	1.87
351.99	3.98	1.92
352.00	4.01	1.97
352.01	4.03	2.02
352.02	4.05	2.07
352.03	4.07	2.12
352.04	4.09	2.17
352.05	4.11	2.22
352.06	4.12	2.27
352.07	4.14	2.32
352.08	4.15	2.36
352.09	4.17	2.41
352.10	4.18	2.46
352.11	4.19	2.50
352.12	4.21	2.55
352.13	4.22	2.59
352.14	4.23	2.63
352.15	4.23	2.68
352.16	4.24	2.72
352.17	4.25	2.76
352.18	4.25	2.79
352.19	4.25	2.83
352.20	4.26	2.87
352.21	**4.26**	2.90
352.22	4.26	2.93
352.23	4.26	2.97
352.24	4.25	3.00
352.25	4.25	3.02
352.26	4.24	3.05
352.27	4.23	3.07
352.28	4.22	3.09
352.29	4.21	3.11
352.30	4.20	3.13
352.31	4.18	3.14
352.32	4.16	3.15
352.33	4.14	3.15
352.34	4.12	**3.16**
352.35	4.09	3.15
352.36	4.06	3.14
352.37	4.02	3.13
352.38	3.97	3.10
352.39	3.90	3.06
352.40	3.74	2.93

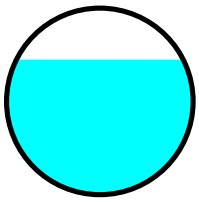
Summary for Reach DMHD7: TO UGS#1

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 4.44" for 100-Year event
Inflow = 6.32 cfs @ 12.09 hrs, Volume= 20,935 cf
Outflow = 6.31 cfs @ 12.09 hrs, Volume= 20,935 cf, Atten= 0%, Lag= 0.1 min

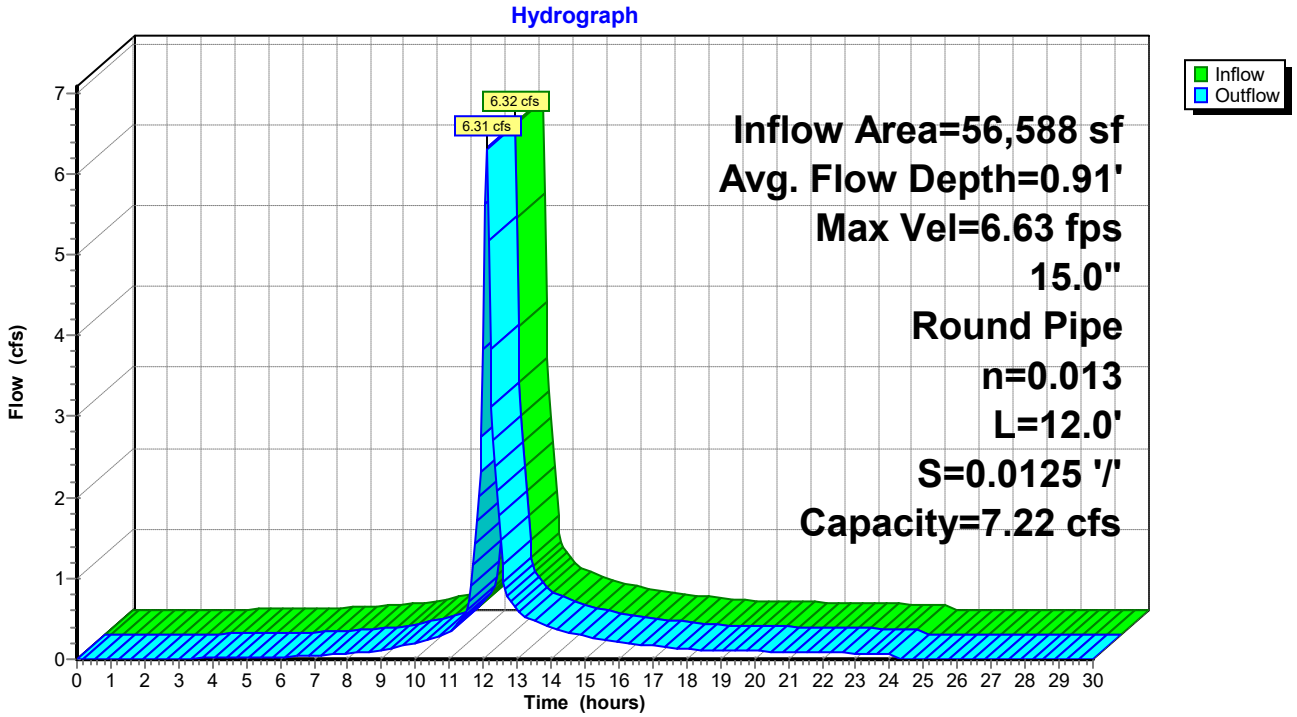
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.63 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.14 fps, Avg. Travel Time= 0.1 min

Peak Storage= 11 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.91'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.22 cfs

15.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 12.0' Slope= 0.0125 '/'
Inlet Invert= 350.15', Outlet Invert= 350.00'



Reach DMHD7: TO UGS#1



Stage-Discharge for Reach DMHD7: TO UGS#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.15	0.00	0.00
350.16	0.42	0.00
350.17	0.71	0.00
350.18	0.93	0.01
350.19	1.13	0.01
350.20	1.31	0.02
350.21	1.47	0.03
350.22	1.63	0.04
350.23	1.77	0.06
350.24	1.91	0.08
350.25	2.05	0.09
350.26	2.18	0.12
350.27	2.30	0.14
350.28	2.42	0.16
350.29	2.54	0.19
350.30	2.65	0.22
350.31	2.76	0.25
350.32	2.86	0.29
350.33	2.97	0.32
350.34	3.07	0.36
350.35	3.16	0.40
350.36	3.26	0.44
350.37	3.35	0.49
350.38	3.44	0.53
350.39	3.53	0.58
350.40	3.62	0.63
350.41	3.70	0.68
350.42	3.79	0.74
350.43	3.87	0.80
350.44	3.95	0.85
350.45	4.03	0.91
350.46	4.10	0.97
350.47	4.18	1.04
350.48	4.25	1.10
350.49	4.33	1.17
350.50	4.40	1.24
350.51	4.47	1.31
350.52	4.53	1.38
350.53	4.60	1.45
350.54	4.67	1.53
350.55	4.73	1.60
350.56	4.79	1.68
350.57	4.86	1.76
350.58	4.92	1.84
350.59	4.98	1.92
350.60	5.03	2.00
350.61	5.09	2.09
350.62	5.15	2.17
350.63	5.20	2.26
350.64	5.26	2.35
350.65	5.31	2.43
350.66	5.36	2.52
350.67	5.41	2.61
350.68	5.46	2.71
350.69	5.51	2.80
350.70	5.56	2.89
350.71	5.61	2.98
350.72	5.65	3.08
350.73	5.70	3.17
350.74	5.74	3.27
350.75	5.78	3.37
350.76	5.82	3.46
350.77	5.86	3.56
350.78	5.90	3.66
350.79	5.94	3.76
350.80	5.98	3.86
350.81	6.02	3.96
350.82	6.06	4.06
350.83	6.09	4.16
350.84	6.12	4.26
350.85	6.16	4.35
350.86	6.19	4.45
350.87	6.22	4.55
350.88	6.25	4.65
350.89	6.28	4.75
350.90	6.31	4.85
350.91	6.34	4.95
350.92	6.37	5.05
350.93	6.39	5.15
350.94	6.42	5.25
350.95	6.44	5.34
350.96	6.46	5.44
350.97	6.49	5.53
350.98	6.51	5.63
350.99	6.53	5.72
351.00	6.55	5.82
351.01	6.56	5.91
351.02	6.58	6.00
351.03	6.60	6.09
351.04	6.61	6.18
351.05	6.63	6.27
351.06	6.64	6.36
351.07	6.65	6.44
351.08	6.66	6.52
351.09	6.67	6.61
351.10	6.68	6.69
351.11	6.69	6.76
351.12	6.70	6.84
351.13	6.70	6.92
351.14	6.70	6.99
351.15	6.71	7.06
351.16	6.71	7.13
351.17	**6.71**	7.19
351.18	6.71	7.26
351.19	6.71	7.32
351.20	6.70	7.37
351.21	6.70	7.43
351.22	6.69	7.48
351.23	6.68	7.53
351.24	6.67	7.57
351.25	6.66	7.61
351.26	6.64	7.65
351.27	6.63	7.68
351.28	6.61	7.71
351.29	6.59	7.73
351.30	6.56	7.75
351.31	6.54	7.76
351.32	6.51	**7.77**
351.33	6.47	7.77
351.34	6.43	7.76
351.35	6.39	7.74
351.36	6.34	7.71
351.37	6.28	7.66
351.38	6.21	7.59
351.39	6.09	7.46
351.40	5.89	7.22

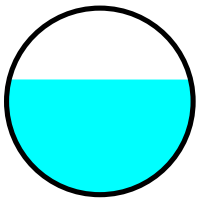
Summary for Reach DMHD8: TO DMH#2

Inflow Area = 28,085 sf, 64.50% Impervious, Inflow Depth = 3.94" for 100-Year event
Inflow = 2.84 cfs @ 12.09 hrs, Volume= 9,230 cf
Outflow = 2.83 cfs @ 12.09 hrs, Volume= 9,230 cf, Atten= 0%, Lag= 0.2 min

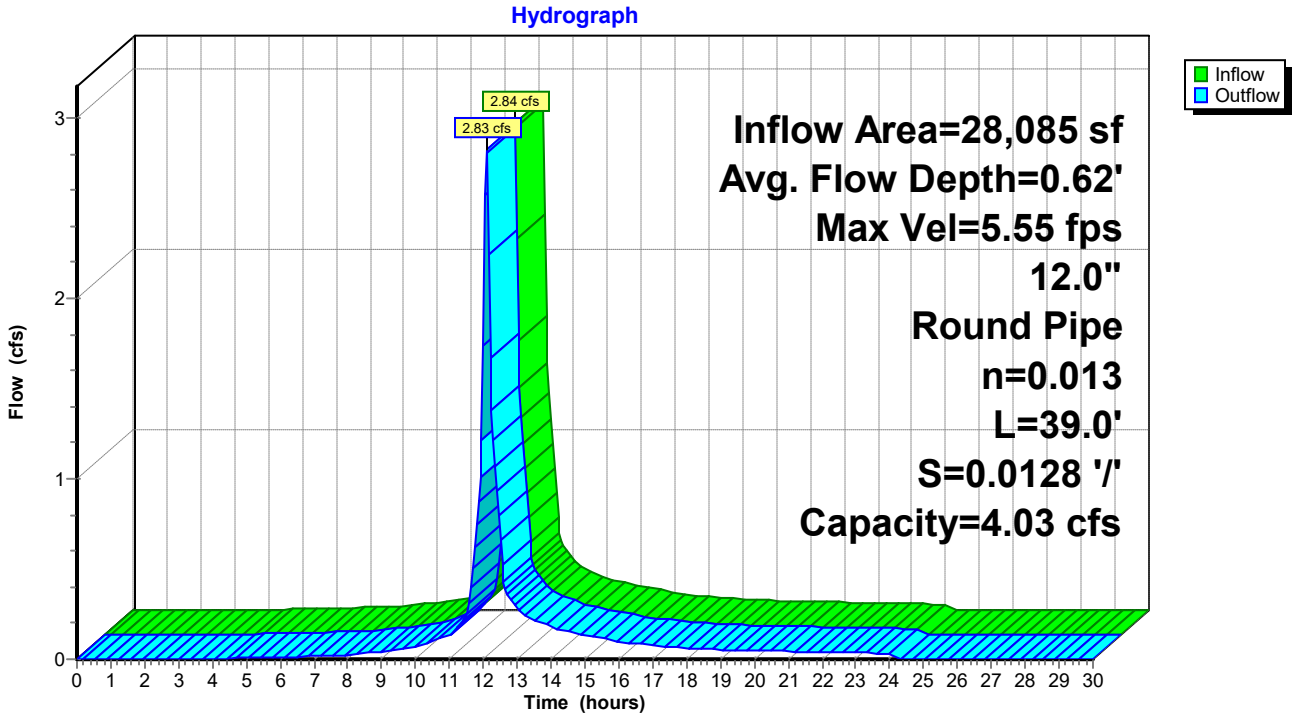
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.55 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.85 fps, Avg. Travel Time= 0.4 min

Peak Storage= 20 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.62'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.03 cfs

12.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 39.0' Slope= 0.0128 '/'
Inlet Invert= 351.00', Outlet Invert= 350.50'



Reach DMHD8: TO DMH#2



Stage-Discharge for Reach DMHD8: TO DMH#2

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.00	0.00	0.00
351.01	0.46	0.00
351.02	0.72	0.00
351.03	0.94	0.01
351.04	1.14	0.01
351.05	1.32	0.02
351.06	1.49	0.03
351.07	1.64	0.04
351.08	1.79	0.05
351.09	1.93	0.07
351.10	2.06	0.08
351.11	2.19	0.10
351.12	2.31	0.12
351.13	2.43	0.15
351.14	2.54	0.17
351.15	2.65	0.20
351.16	2.76	0.22
351.17	2.87	0.25
351.18	2.97	0.29
351.19	3.06	0.32
351.20	3.16	0.35
351.21	3.25	0.39
351.22	3.34	0.43
351.23	3.43	0.47
351.24	3.52	0.51
351.25	3.60	0.55
351.26	3.68	0.60
351.27	3.76	0.64
351.28	3.84	0.69
351.29	3.91	0.74
351.30	3.99	0.79
351.31	4.06	0.84
351.32	4.13	0.89
351.33	4.20	0.95
351.34	4.26	1.00
351.35	4.33	1.06
351.36	4.39	1.12
351.37	4.46	1.18
351.38	4.52	1.24
351.39	4.58	1.30
351.40	4.63	1.36
351.41	4.69	1.42
351.42	4.75	1.49
351.43	4.80	1.55
351.44	4.85	1.61
351.45	4.90	1.68
351.46	4.95	1.75
351.47	5.00	1.81
351.48	5.05	1.88
351.49	5.09	1.95
351.50	5.14	2.02
351.51	5.18	2.09
351.52	5.22	2.15
351.53	5.26	2.22
351.54	5.30	2.29
351.55	5.34	2.36
351.56	5.37	2.43
351.57	5.41	2.50
351.58	5.44	2.57
351.59	5.48	2.64
351.60	5.51	2.71
351.61	5.54	2.78
351.62	5.57	2.85
351.63	5.60	2.92
351.64	5.62	2.98
351.65	5.65	3.05
351.66	5.67	3.12
351.67	5.69	3.18
351.68	5.71	3.25
351.69	5.73	3.31
351.70	5.75	3.38
351.71	5.77	3.44
351.72	5.78	3.50
351.73	5.80	3.56
351.74	5.81	3.62
351.75	5.82	3.68
351.76	5.83	3.73
351.77	5.84	3.79
351.78	5.85	3.84
351.79	5.85	3.89
351.80	5.85	3.94
351.81	**5.86**	3.99
351.82	5.86	4.04
351.83	5.85	4.08
351.84	5.85	4.12
351.85	5.84	4.16
351.86	5.83	4.19
351.87	5.82	4.22
351.88	5.81	4.25
351.89	5.79	4.28
351.90	5.77	4.30
351.91	5.75	4.32
351.92	5.73	4.33
351.93	5.70	4.34
351.94	5.66	**4.34**
351.95	5.62	4.33
351.96	5.58	4.32
351.97	5.52	4.30
351.98	5.45	4.26
351.99	5.36	4.20
352.00	5.14	4.03

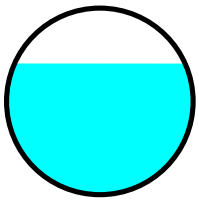
Summary for Reach DMHR100: TO DMH-R101

Inflow Area = 27,171 sf, 83.67% Impervious, Inflow Depth = 5.17" for 100-Year event
Inflow = 3.56 cfs @ 12.08 hrs, Volume= 11,705 cf
Outflow = 3.50 cfs @ 12.10 hrs, Volume= 11,705 cf, Atten= 2%, Lag= 1.0 min

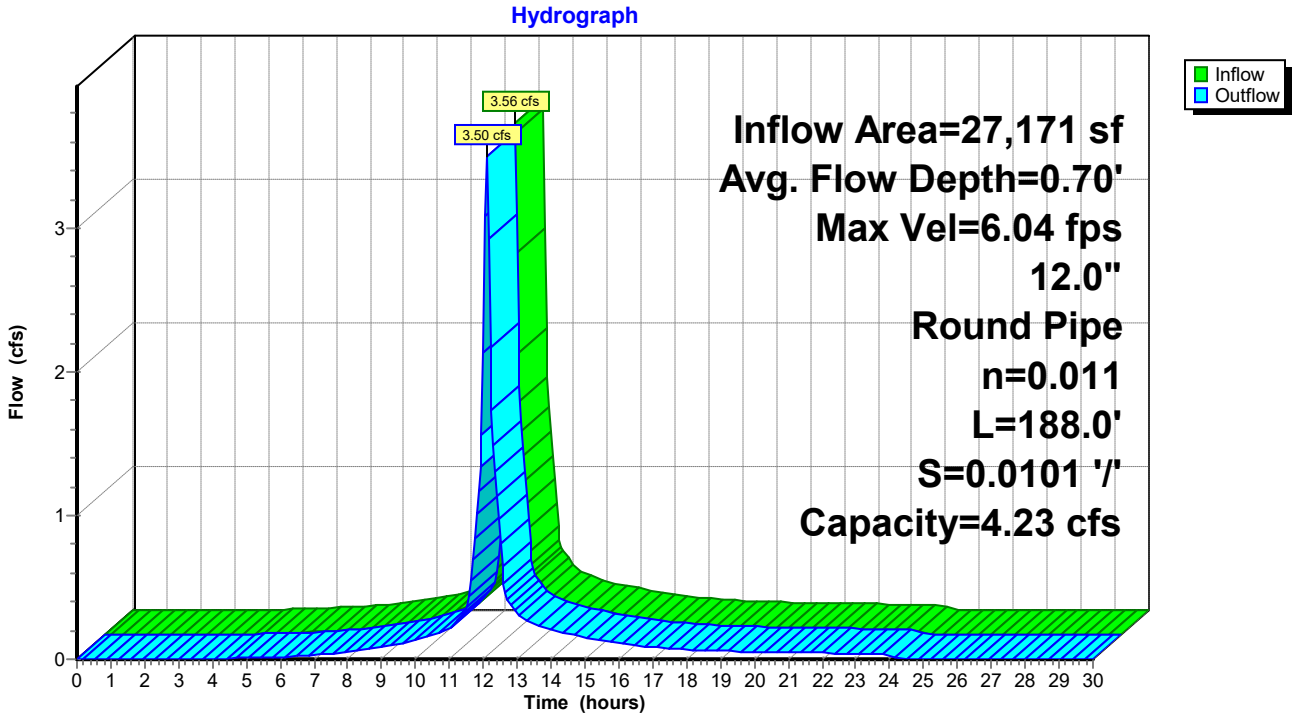
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.04 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.03 fps, Avg. Travel Time= 1.5 min

Peak Storage= 111 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.70'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.23 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 188.0' Slope= 0.0101 '/'
Inlet Invert= 353.00', Outlet Invert= 351.10'



Reach DMHR100: TO DMH-R101



Stage-Discharge for Reach DMHR100: TO DMH-R101

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
353.00	0.00	0.00
353.01	0.48	0.00
353.02	0.76	0.00
353.03	0.99	0.01
353.04	1.20	0.01
353.05	1.38	0.02
353.06	1.56	0.03
353.07	1.72	0.04
353.08	1.88	0.06
353.09	2.02	0.07
353.10	2.16	0.09
353.11	2.30	0.11
353.12	2.43	0.13
353.13	2.55	0.15
353.14	2.67	0.18
353.15	2.79	0.21
353.16	2.90	0.24
353.17	3.01	0.27
353.18	3.11	0.30
353.19	3.21	0.33
353.20	3.31	0.37
353.21	3.41	0.41
353.22	3.51	0.45
353.23	3.60	0.49
353.24	3.69	0.53
353.25	3.78	0.58
353.26	3.86	0.63
353.27	3.94	0.67
353.28	4.03	0.72
353.29	4.11	0.78
353.30	4.18	0.83
353.31	4.26	0.88
353.32	4.33	0.94
353.33	4.40	1.00
353.34	4.47	1.05
353.35	4.54	1.11
353.36	4.61	1.17
353.37	4.68	1.24
353.38	4.74	1.30
353.39	4.80	1.36
353.40	4.86	1.43
353.41	4.92	1.49
353.42	4.98	1.56
353.43	5.04	1.63
353.44	5.09	1.69
353.45	5.14	1.76
353.46	5.20	1.83
353.47	5.25	1.90
353.48	5.30	1.97
353.49	5.34	2.04
353.50	5.39	2.12
353.51	5.43	2.19
353.52	5.48	2.26
353.53	5.52	2.33
353.54	5.56	2.41
353.55	5.60	2.48
353.56	5.64	2.55
353.57	5.68	2.63
353.58	5.71	2.70
353.59	5.75	2.77
353.60	5.78	2.84
353.61	5.81	2.92
353.62	5.84	2.99
353.63	5.87	3.06
353.64	5.90	3.13
353.65	5.92	3.20
353.66	5.95	3.27
353.67	5.97	3.34
353.68	6.00	3.41
353.69	6.02	3.48
353.70	6.04	3.54
353.71	6.05	3.61
353.72	6.07	3.67
353.73	6.08	3.74
353.74	6.10	3.80
353.75	6.11	3.86
353.76	6.12	3.92
353.77	6.13	3.98
353.78	6.13	4.03
353.79	6.14	4.09
353.80	6.14	4.14
353.81	**6.14**	4.19
353.82	6.14	4.23
353.83	6.14	4.28
353.84	6.14	4.32
353.85	6.13	4.36
353.86	6.12	4.40
353.87	6.11	4.43
353.88	6.10	4.46
353.89	6.08	4.49
353.90	6.06	4.51
353.91	6.04	4.53
353.92	6.01	4.54
353.93	5.98	4.55
353.94	5.94	**4.55**
353.95	5.90	4.55
353.96	5.85	4.54
353.97	5.79	4.51
353.98	5.72	4.47
353.99	5.63	4.41
354.00	5.39	4.23

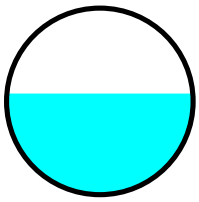
Summary for Reach DMHS10: TO DMH-S11

Inflow Area = 110,937 sf, 66.95% Impervious, Inflow Depth = 5.38" for 100-Year event
Inflow = 14.00 cfs @ 12.09 hrs, Volume= 49,772 cf
Outflow = 13.77 cfs @ 12.11 hrs, Volume= 49,772 cf, Atten= 2%, Lag= 0.8 min

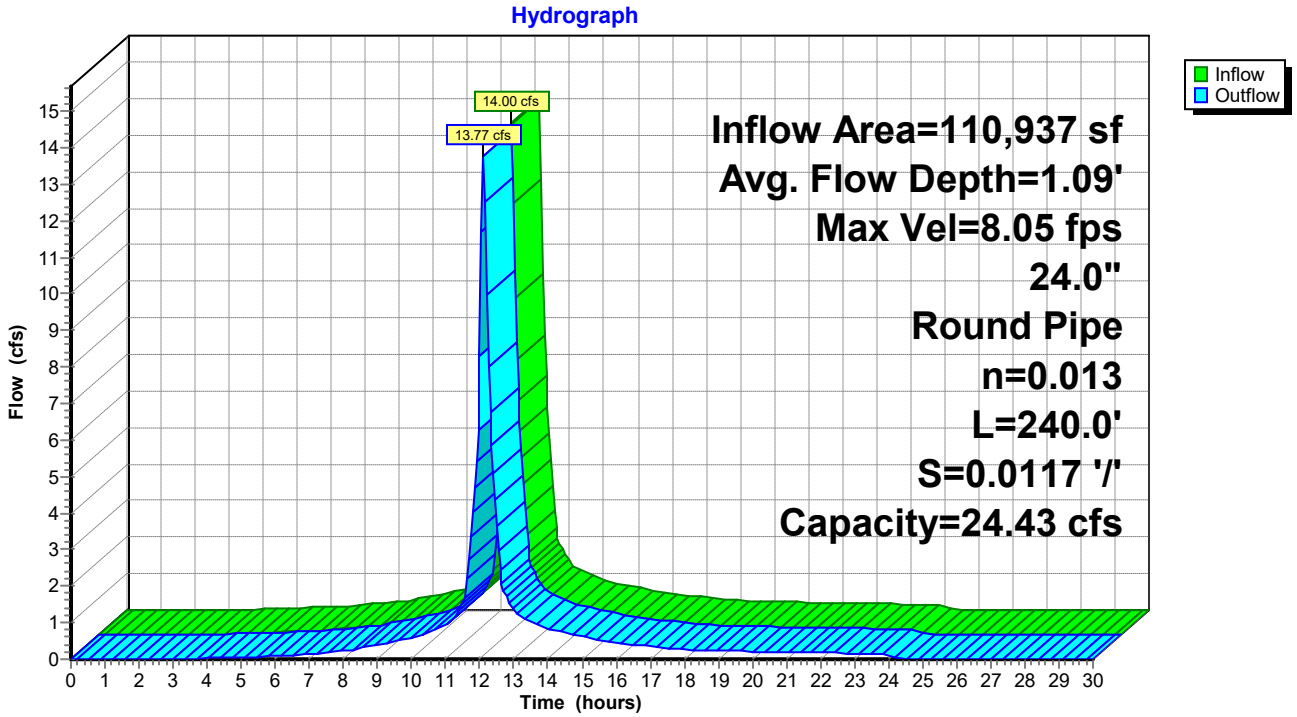
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.05 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 2.62 fps, Avg. Travel Time= 1.5 min

Peak Storage= 418 cf @ 12.10 hrs
Average Depth at Peak Storage= 1.09'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 24.43 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 240.0' Slope= 0.0117 '/'
Inlet Invert= 343.30', Outlet Invert= 340.50'



Reach DMHS10: TO DMH-S11



Stage-Discharge for Reach DMHS10: TO DMH-S11

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
343.30	0.00	0.00
343.32	0.69	0.00
343.34	1.10	0.02
343.36	1.43	0.04
343.38	1.73	0.07
343.40	2.00	0.12
343.42	2.25	0.17
343.44	2.48	0.24
343.46	2.71	0.32
343.48	2.92	0.41
343.50	3.12	0.51
343.52	3.31	0.62
343.54	3.50	0.75
343.56	3.68	0.88
343.58	3.85	1.03
343.60	4.02	1.19
343.62	4.18	1.36
343.64	4.34	1.54
343.66	4.49	1.73
343.68	4.64	1.93
343.70	4.78	2.14
343.72	4.92	2.36
343.74	5.06	2.59
343.76	5.19	2.84
343.78	5.32	3.09
343.80	5.45	3.35
343.82	5.57	3.62
343.84	5.69	3.90
343.86	5.81	4.18
343.88	5.92	4.48
343.90	6.04	4.79
343.92	6.15	5.10
343.94	6.25	5.42
343.96	6.36	5.75
343.98	6.46	6.08
344.00	6.56	6.42
344.02	6.65	6.77
344.04	6.75	7.13
344.06	6.84	7.49
344.08	6.93	7.86
344.10	7.02	8.23
344.12	7.10	8.61
344.14	7.19	9.00
344.16	7.27	9.39
344.18	7.35	9.78
344.20	7.42	10.18
344.22	7.50	10.58
344.24	7.57	10.98
344.26	7.64	11.39
344.28	7.71	11.80
344.30	7.78	12.22
344.32	7.84	12.63
344.34	7.91	13.05
344.36	7.97	13.47
344.38	8.03	13.89
344.40	8.08	14.31
344.42	8.14	14.73
344.44	8.19	15.16
344.46	8.24	15.58
344.48	8.29	16.00
344.50	8.34	16.42
344.52	8.39	16.83
344.54	8.43	17.25
344.56	8.47	17.66
344.58	8.51	18.08
344.60	8.55	18.48
344.62	8.59	18.89
344.64	8.62	19.29
344.66	8.65	19.68
344.68	8.68	20.07
344.70	8.71	20.46
344.72	8.74	20.84
344.74	8.76	21.21
344.76	8.78	21.57
344.78	8.80	21.93
344.80	8.82	22.28
344.82	8.83	22.62
344.84	8.84	22.95
344.86	8.85	23.27
344.88	8.86	23.59
344.90	8.86	23.88
344.92	**8.87**	24.17
344.94	8.87	24.44
344.96	8.86	24.70
344.98	8.86	24.95
345.00	8.85	25.18
345.02	8.83	25.39
345.04	8.82	25.58
345.06	8.80	25.76
345.08	8.77	25.91
345.10	8.74	26.04
345.12	8.71	26.15
345.14	8.67	26.23
345.16	8.63	26.27
345.18	8.58	**26.28**
345.20	8.52	26.26
345.22	8.45	26.18
345.24	8.36	26.04
345.26	8.26	25.82
345.28	8.12	25.46
345.30	7.78	24.43

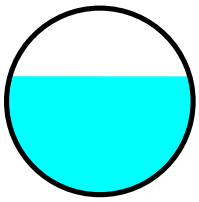
Summary for Reach DMHS11: TO DMH-D14

Inflow Area = 110,937 sf, 66.95% Impervious, Inflow Depth = 5.38" for 100-Year event
Inflow = 13.77 cfs @ 12.11 hrs, Volume= 49,772 cf
Outflow = 13.56 cfs @ 12.12 hrs, Volume= 49,772 cf, Atten= 1%, Lag= 0.6 min

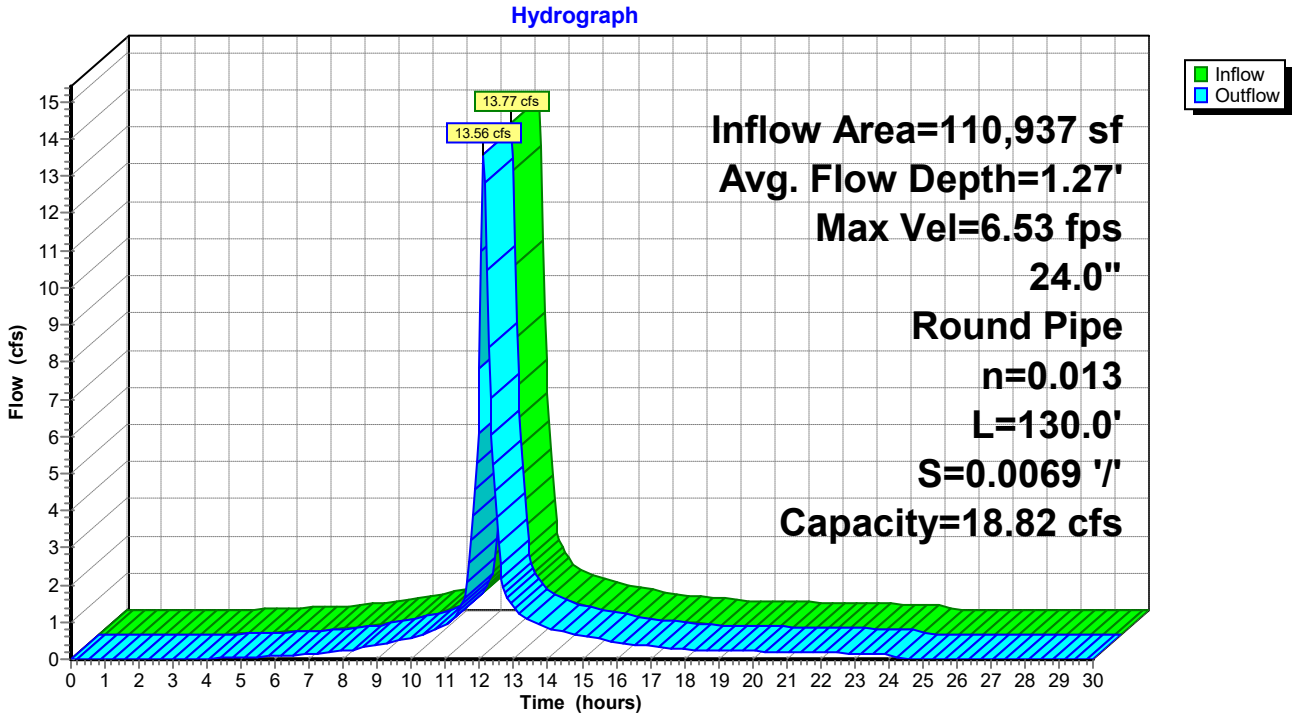
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.53 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.17 fps, Avg. Travel Time= 1.0 min

Peak Storage= 273 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.27'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 18.82 cfs

24.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 130.0' Slope= 0.0069 '/'
Inlet Invert= 339.20', Outlet Invert= 338.30'



Reach DMHS11: TO DMH-D14



Stage-Discharge for Reach DMHS11: TO DMH-D14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
339.20	0.00	0.00
339.22	0.53	0.00
339.24	0.84	0.01
339.26	1.10	0.03
339.28	1.33	0.06
339.30	1.54	0.09
339.32	1.73	0.13
339.34	1.91	0.19
339.36	2.09	0.25
339.38	2.25	0.31
339.40	2.40	0.39
339.42	2.55	0.48
339.44	2.70	0.58
339.46	2.83	0.68
339.48	2.97	0.79
339.50	3.10	0.91
339.52	3.22	1.05
339.54	3.34	1.18
339.56	3.46	1.33
339.58	3.57	1.49
339.60	3.69	1.65
339.62	3.79	1.82
339.64	3.90	2.00
339.66	4.00	2.18
339.68	4.10	2.38
339.70	4.20	2.58
339.72	4.29	2.79
339.74	4.39	3.00
339.76	4.48	3.22
339.78	4.56	3.45
339.80	4.65	3.69
339.82	4.73	3.93
339.84	4.82	4.17
339.86	4.90	4.43
339.88	4.97	4.69
339.90	5.05	4.95
339.92	5.13	5.22
339.94	5.20	5.49
339.96	5.27	5.77
339.98	5.34	6.06
340.00	5.41	6.34
340.02	5.47	6.64
340.04	5.54	6.93
340.06	5.60	7.23
340.08	5.66	7.53
340.10	5.72	7.84
340.12	5.78	8.15
340.14	5.83	8.46
340.16	5.89	8.78
340.18	5.94	9.09
340.20	5.99	9.41
340.22	6.04	9.73
340.24	6.09	10.05
340.26	6.14	10.38
340.28	6.18	10.70
340.30	6.23	11.02
340.32	6.27	11.35
340.34	6.31	11.67
340.36	6.35	12.00
340.38	6.39	12.32
340.40	6.43	12.65
340.42	6.46	12.97
340.44	6.49	13.29
340.46	6.53	13.61
340.48	6.56	13.92
340.50	6.59	14.24
340.52	6.61	14.55
340.54	6.64	14.86
340.56	6.66	15.16
340.58	6.69	15.46
340.60	6.71	15.76
340.62	6.73	16.05
340.64	6.75	16.34
340.66	6.76	16.62
340.68	6.78	16.90
340.70	6.79	17.16
340.72	6.80	17.43
340.74	6.81	17.68
340.76	6.82	17.93
340.78	6.83	18.17
340.80	6.83	18.40
340.82	**6.83**	18.62
340.84	6.83	18.83
340.86	6.83	19.03
340.88	6.82	19.22
340.90	6.81	19.40
340.92	6.81	19.56
340.94	6.79	19.71
340.96	6.78	19.84
340.98	6.76	19.96
341.00	6.74	20.06
341.02	6.71	20.14
341.04	6.68	20.20
341.06	6.65	20.24
341.08	6.61	**20.25**
341.10	6.56	20.23
341.12	6.51	20.17
341.14	6.44	20.06
341.16	6.36	19.89
341.18	6.25	19.61
341.20	5.99	18.82

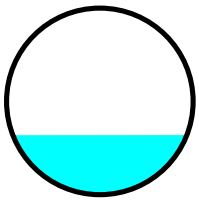
Summary for Reach DMHS4: TO DMH-S5

Inflow Area = 9,006 sf, 33.47% Impervious, Inflow Depth = 5.65" for 100-Year event
Inflow = 1.15 cfs @ 12.10 hrs, Volume= 4,240 cf
Outflow = 1.13 cfs @ 12.11 hrs, Volume= 4,240 cf, Atten= 2%, Lag= 0.6 min

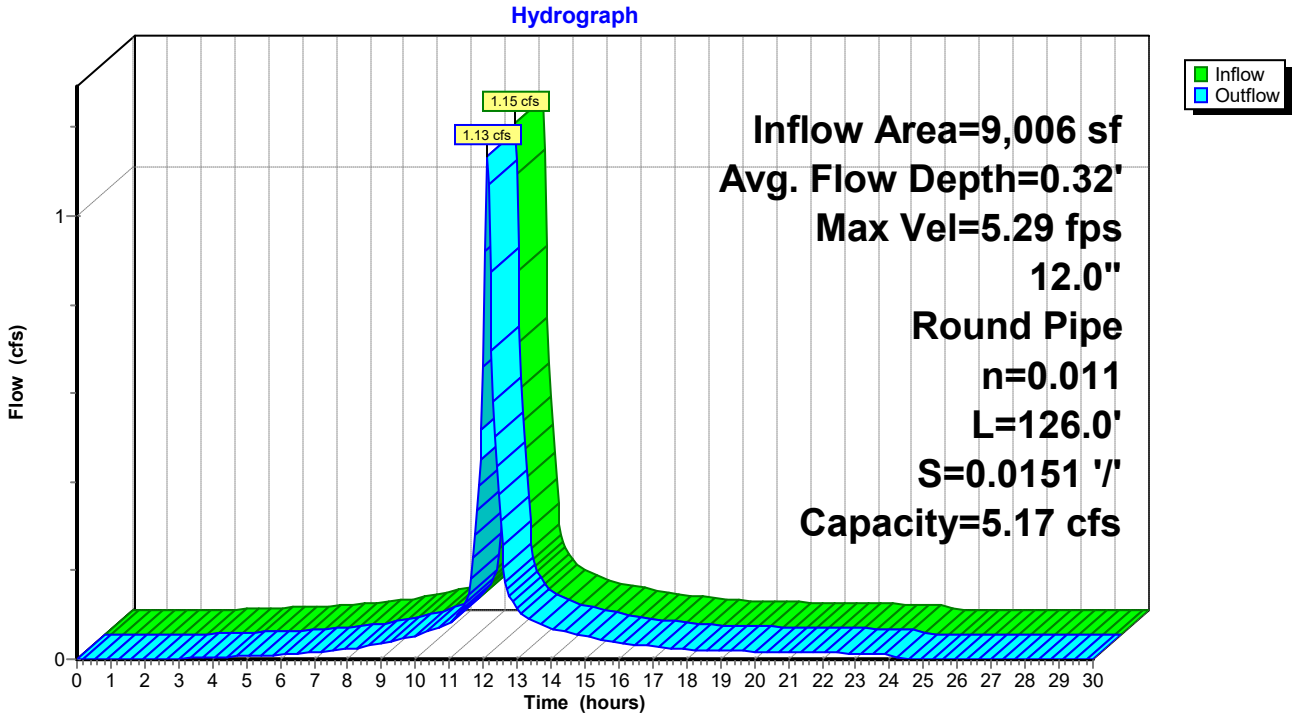
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.29 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.74 fps, Avg. Travel Time= 1.2 min

Peak Storage= 27 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.17 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 126.0' Slope= 0.0151 '/'
Inlet Invert= 352.00', Outlet Invert= 350.10'



Reach DMHS4: TO DMH-S5



Stage-Discharge for Reach DMHS4: TO DMH-S5

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.00	0.00	0.00
352.01	0.59	0.00
352.02	0.93	0.00
352.03	1.21	0.01
352.04	1.46	0.02
352.05	1.69	0.02
352.06	1.90	0.04
352.07	2.10	0.05
352.08	2.29	0.07
352.09	2.47	0.09
352.10	2.64	0.11
352.11	2.80	0.13
352.12	2.96	0.16
352.13	3.11	0.19
352.14	3.26	0.22
352.15	3.40	0.25
352.16	3.54	0.29
352.17	3.67	0.33
352.18	3.80	0.37
352.19	3.93	0.41
352.20	4.05	0.45
352.21	4.17	0.50
352.22	4.28	0.55
352.23	4.40	0.60
352.24	4.51	0.65
352.25	4.61	0.71
352.26	4.72	0.77
352.27	4.82	0.82
352.28	4.92	0.89
352.29	5.01	0.95
352.30	5.11	1.01
352.31	5.20	1.08
352.32	5.29	1.15
352.33	5.38	1.22
352.34	5.47	1.29
352.35	5.55	1.36
352.36	5.63	1.43
352.37	5.71	1.51
352.38	5.79	1.59
352.39	5.87	1.66
352.40	5.94	1.74
352.41	6.01	1.82
352.42	6.08	1.90
352.43	6.15	1.99
352.44	6.22	2.07
352.45	6.28	2.15
352.46	6.35	2.24
352.47	6.41	2.32
352.48	6.47	2.41
352.49	6.53	2.50
352.50	6.58	2.59
352.51	6.64	2.67
352.52	6.69	2.76
352.53	6.74	2.85
352.54	6.79	2.94
352.55	6.84	3.03
352.56	6.89	3.12
352.57	6.93	3.21
352.58	6.98	3.30
352.59	7.02	3.39
352.60	7.06	3.47
352.61	7.10	3.56
352.62	7.14	3.65
352.63	7.17	3.74
352.64	7.20	3.82
352.65	7.24	3.91
352.66	7.27	4.00
352.67	7.30	4.08
352.68	7.32	4.16
352.69	7.35	4.25
352.70	7.37	4.33
352.71	7.39	4.41
352.72	7.41	4.49
352.73	7.43	4.57
352.74	7.45	4.64
352.75	7.46	4.71
352.76	7.47	4.79
352.77	7.48	4.86
352.78	7.49	4.93
352.79	7.50	4.99
352.80	7.50	5.05
352.81	**7.51**	5.11
352.82	7.50	5.17
352.83	7.50	5.23
352.84	7.50	5.28
352.85	7.49	5.33
352.86	7.48	5.37
352.87	7.46	5.41
352.88	7.45	5.45
352.89	7.43	5.48
352.90	7.40	5.51
352.91	7.37	5.53
352.92	7.34	5.55
352.93	7.30	5.56
352.94	7.26	**5.56**
352.95	7.21	5.56
352.96	7.15	5.54
352.97	7.08	5.51
352.98	6.99	5.46
352.99	6.87	5.39
353.00	6.58	5.17

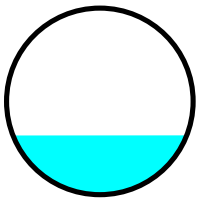
Summary for Reach DMHS5: TO DMH-S6

Inflow Area = 9,006 sf, 33.47% Impervious, Inflow Depth = 5.65" for 100-Year event
Inflow = 1.13 cfs @ 12.11 hrs, Volume= 4,240 cf
Outflow = 1.11 cfs @ 12.13 hrs, Volume= 4,240 cf, Atten= 2%, Lag= 0.8 min

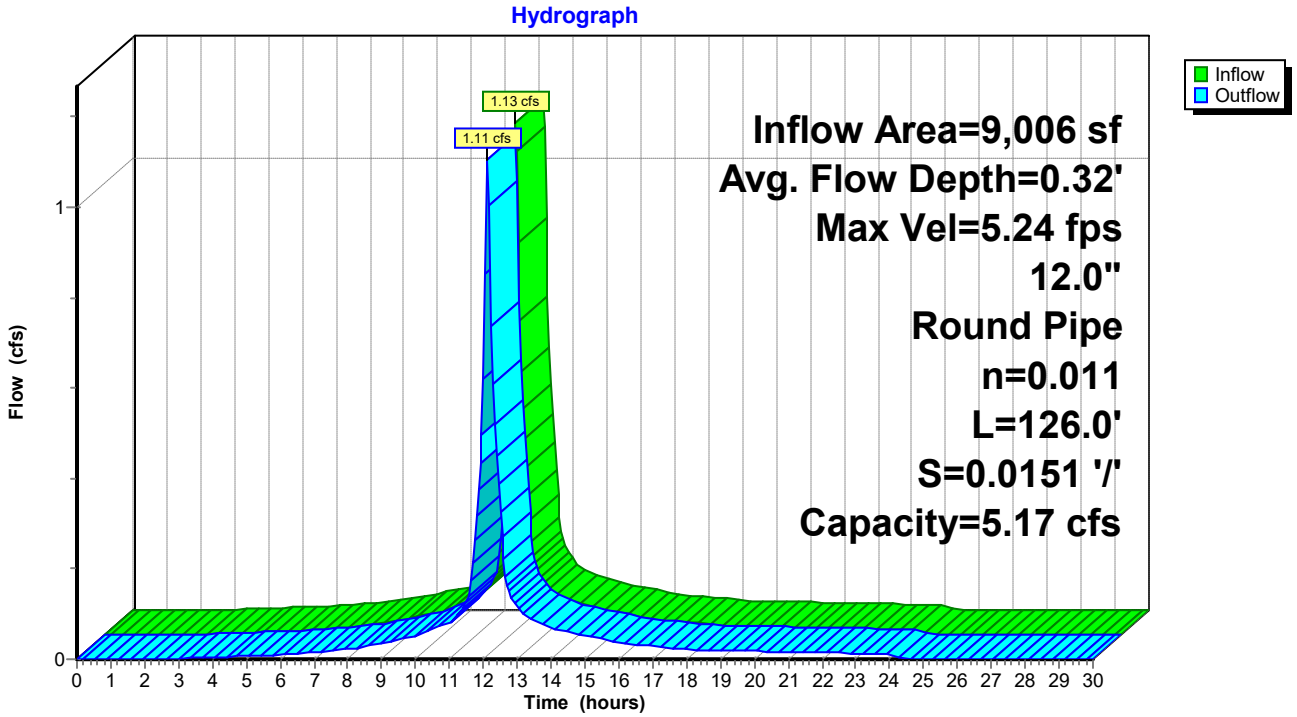
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.24 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.73 fps, Avg. Travel Time= 1.2 min

Peak Storage= 27 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.17 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 126.0' Slope= 0.0151 '/'
Inlet Invert= 350.00', Outlet Invert= 348.10'



Reach DMHS5: TO DMH-S6



Stage-Discharge for Reach DMHS5: TO DMH-S6

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.00	0.00	0.00
350.01	0.59	0.00
350.02	0.93	0.00
350.03	1.21	0.01
350.04	1.46	0.02
350.05	1.69	0.02
350.06	1.90	0.04
350.07	2.10	0.05
350.08	2.29	0.07
350.09	2.47	0.09
350.10	2.64	0.11
350.11	2.80	0.13
350.12	2.96	0.16
350.13	3.11	0.19
350.14	3.26	0.22
350.15	3.40	0.25
350.16	3.54	0.29
350.17	3.67	0.33
350.18	3.80	0.37
350.19	3.93	0.41
350.20	4.05	0.45
350.21	4.17	0.50
350.22	4.28	0.55
350.23	4.40	0.60
350.24	4.51	0.65
350.25	4.61	0.71
350.26	4.72	0.77
350.27	4.82	0.82
350.28	4.92	0.89
350.29	5.01	0.95
350.30	5.11	1.01
350.31	5.20	1.08
350.32	5.29	1.15
350.33	5.38	1.22
350.34	5.47	1.29
350.35	5.55	1.36
350.36	5.63	1.43
350.37	5.71	1.51
350.38	5.79	1.59
350.39	5.87	1.66
350.40	5.94	1.74
350.41	6.01	1.82
350.42	6.08	1.90
350.43	6.15	1.99
350.44	6.22	2.07
350.45	6.28	2.15
350.46	6.35	2.24
350.47	6.41	2.32
350.48	6.47	2.41
350.49	6.53	2.50
350.50	6.58	2.59
350.51	6.64	2.67
350.52	6.69	2.76
350.53	6.74	2.85
350.54	6.79	2.94
350.55	6.84	3.03
350.56	6.89	3.12
350.57	6.93	3.21
350.58	6.98	3.30
350.59	7.02	3.39
350.60	7.06	3.47
350.61	7.10	3.56
350.62	7.14	3.65
350.63	7.17	3.74
350.64	7.20	3.82
350.65	7.24	3.91
350.66	7.27	4.00
350.67	7.30	4.08
350.68	7.32	4.16
350.69	7.35	4.25
350.70	7.37	4.33
350.71	7.39	4.41
350.72	7.41	4.49
350.73	7.43	4.57
350.74	7.45	4.64
350.75	7.46	4.71
350.76	7.47	4.79
350.77	7.48	4.86
350.78	7.49	4.93
350.79	7.50	4.99
350.80	7.50	5.05
350.81	**7.51**	5.11
350.82	7.50	5.17
350.83	7.50	5.23
350.84	7.50	5.28
350.85	7.49	5.33
350.86	7.48	5.37
350.87	7.46	5.41
350.88	7.45	5.45
350.89	7.43	5.48
350.90	7.40	5.51
350.91	7.37	5.53
350.92	7.34	5.55
350.93	7.30	5.56
350.94	7.26	**5.56**
350.95	7.21	5.56
350.96	7.15	5.54
350.97	7.08	5.51
350.98	6.99	5.46
350.99	6.87	5.39
351.00	6.58	5.17

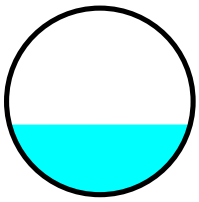
Summary for Reach DMHS6: TO DMH-S7

Inflow Area = 30,209 sf, 42.48% Impervious, Inflow Depth = 5.50" for 100-Year event
Inflow = 3.64 cfs @ 12.11 hrs, Volume= 13,851 cf
Outflow = 3.64 cfs @ 12.12 hrs, Volume= 13,851 cf, Atten= 0%, Lag= 0.1 min

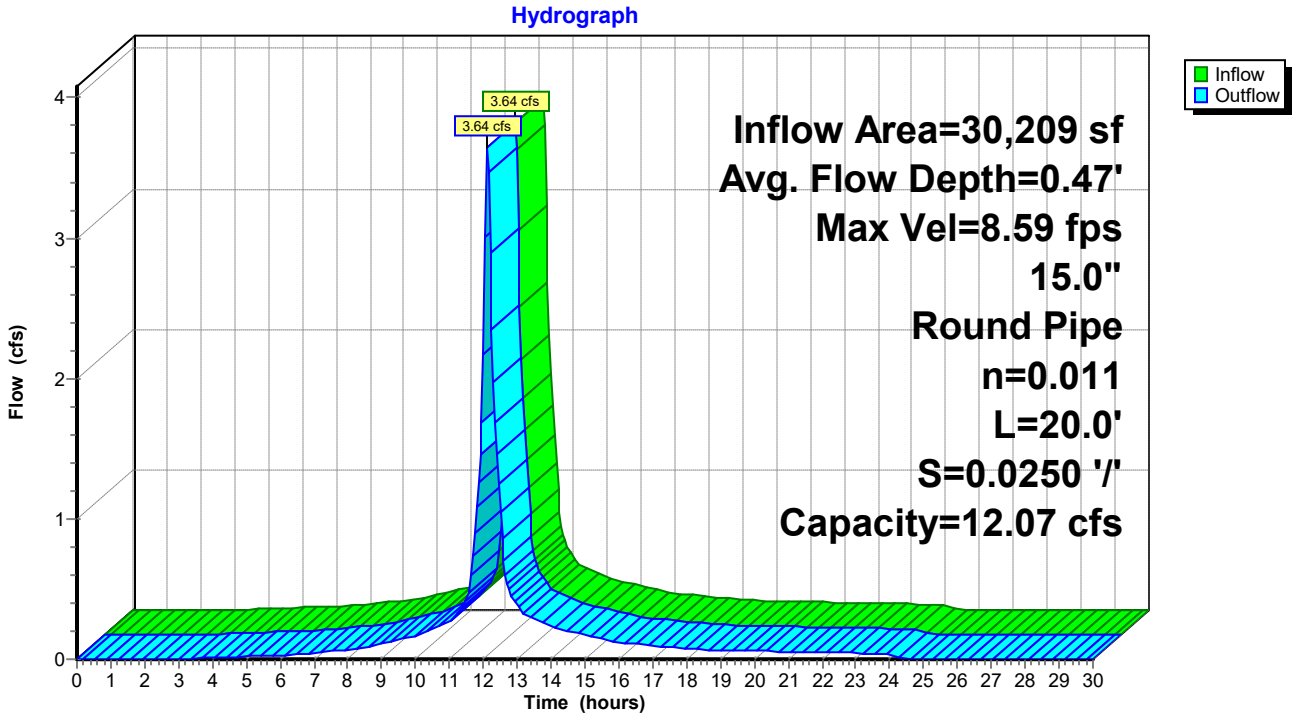
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.59 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.84 fps, Avg. Travel Time= 0.1 min

Peak Storage= 8 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.47'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 12.07 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0250 '/'
Inlet Invert= 348.00', Outlet Invert= 347.50'



Reach DMHS6: TO DMH-S7



Stage-Discharge for Reach DMHS6: TO DMH-S7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
348.00	0.00	0.00
348.01	0.70	0.00
348.02	1.18	0.01
348.03	1.55	0.01
348.04	1.88	0.02
348.05	2.18	0.04
348.06	2.46	0.05
348.07	2.72	0.07
348.08	2.96	0.10
348.09	3.20	0.13
348.10	3.42	0.16
348.11	3.64	0.19
348.12	3.84	0.23
348.13	4.04	0.27
348.14	4.24	0.32
348.15	4.43	0.37
348.16	4.61	0.42
348.17	4.78	0.48
348.18	4.96	0.54
348.19	5.12	0.60
348.20	5.29	0.67
348.21	5.45	0.74
348.22	5.60	0.82
348.23	5.76	0.89
348.24	5.90	0.97
348.25	6.05	1.06
348.26	6.19	1.14
348.27	6.33	1.24
348.28	6.47	1.33
348.29	6.60	1.43
348.30	6.73	1.52
348.31	6.86	1.63
348.32	6.99	1.73
348.33	7.11	1.84
348.34	7.23	1.95
348.35	7.35	2.07
348.36	7.46	2.18
348.37	7.58	2.30
348.38	7.69	2.43
348.39	7.80	2.55
348.40	7.91	2.68
348.41	8.01	2.81
348.42	8.12	2.94
348.43	8.22	3.07
348.44	8.32	3.21
348.45	8.41	3.35
348.46	8.51	3.49
348.47	8.60	3.63
348.48	8.70	3.77
348.49	8.79	3.92
348.50	8.87	4.07
348.51	8.96	4.22
348.52	9.05	4.37
348.53	9.13	4.52
348.54	9.21	4.68
348.55	9.29	4.83
348.56	9.37	4.99
348.57	9.44	5.15
348.58	9.52	5.31
348.59	9.59	5.47
348.60	9.66	5.63
348.61	9.73	5.79
348.62	9.80	5.95
348.63	9.87	6.12
348.64	9.93	6.28
348.65	10.00	6.45
348.66	10.06	6.61
348.67	10.12	6.78
348.68	10.18	6.95
348.69	10.24	7.11
348.70	10.29	7.28
348.71	10.35	7.44
348.72	10.40	7.61
348.73	10.45	7.78
348.74	10.50	7.94
348.75	10.55	8.11
348.76	10.59	8.27
348.77	10.64	8.44
348.78	10.68	8.60
348.79	10.72	8.77
348.80	10.77	8.93
348.81	10.80	9.09
348.82	10.84	9.25
348.83	10.88	9.41
348.84	10.91	9.57
348.85	10.94	9.72
348.86	10.97	9.88
348.87	11.00	10.03
348.88	11.03	10.18
348.89	11.05	10.33
348.90	11.08	10.48
348.91	11.10	10.62
348.92	11.12	10.76
348.93	11.14	10.90
348.94	11.15	11.04
348.95	11.17	11.18
348.96	11.18	11.31
348.97	11.19	11.43
348.98	11.20	11.56
348.99	11.21	11.68
349.00	11.21	11.80
349.01	11.21	11.91
349.02	**11.21**	12.02
349.03	11.21	12.13
349.04	11.21	12.23
349.05	11.20	12.33
349.06	11.19	12.42
349.07	11.18	12.50
349.08	11.16	12.58
349.09	11.15	12.66
349.10	11.13	12.73
349.11	11.10	12.79
349.12	11.07	12.84
349.13	11.04	12.89
349.14	11.01	12.92
349.15	10.97	12.96
349.16	10.92	12.97
349.17	10.87	**12.98**
349.18	10.82	12.98
349.19	10.75	12.96
349.20	10.68	12.93
349.21	10.60	12.88
349.22	10.50	12.80
349.23	10.37	12.68
349.24	10.18	12.48
349.25	9.84	12.07

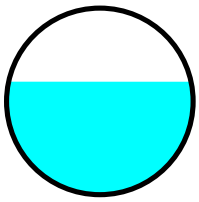
Summary for Reach DMHS7: TO DMH-S9

Inflow Area = 57,987 sf, 60.49% Impervious, Inflow Depth = 5.53" for 100-Year event
Inflow = 7.37 cfs @ 12.10 hrs, Volume= 26,735 cf
Outflow = 7.36 cfs @ 12.10 hrs, Volume= 26,735 cf, Atten= 0%, Lag= 0.1 min

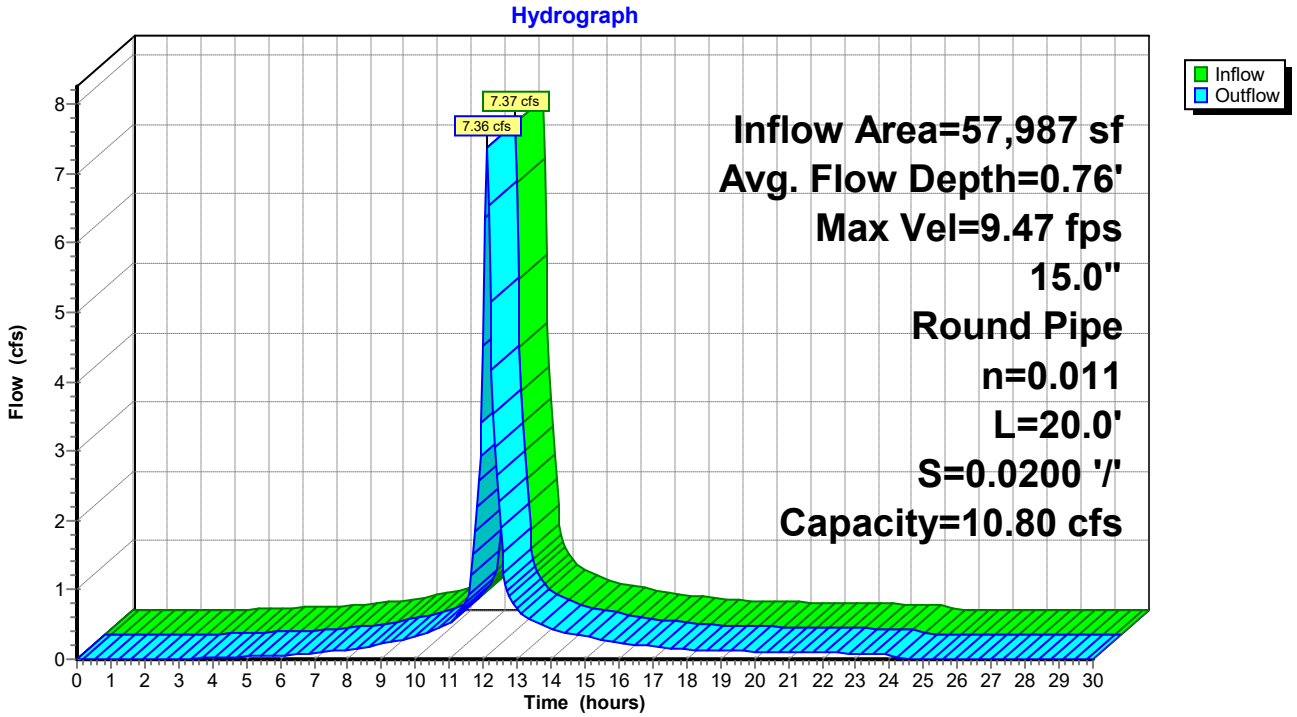
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 9.47 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.19 fps, Avg. Travel Time= 0.1 min

Peak Storage= 16 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.76'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.80 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0200 '/'
Inlet Invert= 344.90', Outlet Invert= 344.50'



Reach DMHS7: TO DMH-S9



Stage-Discharge for Reach DMHS7: TO DMH-S9

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
344.90	0.00	0.00
344.91	0.63	0.00
344.92	1.06	0.01
344.93	1.39	0.01
344.94	1.69	0.02
344.95	1.95	0.03
344.96	2.20	0.05
344.97	2.43	0.07
344.98	2.65	0.09
344.99	2.86	0.11
345.00	3.06	0.14
345.01	3.25	0.17
345.02	3.44	0.21
345.03	3.62	0.25
345.04	3.79	0.29
345.05	3.96	0.33
345.06	4.12	0.38
345.07	4.28	0.43
345.08	4.43	0.48
345.09	4.58	0.54
345.10	4.73	0.60
345.11	4.87	0.66
345.12	5.01	0.73
345.13	5.15	0.80
345.14	5.28	0.87
345.15	5.41	0.95
345.16	5.54	1.02
345.17	5.66	1.10
345.18	5.78	1.19
345.19	5.90	1.27
345.20	6.02	1.36
345.21	6.14	1.46
345.22	6.25	1.55
345.23	6.36	1.65
345.24	6.47	1.75
345.25	6.57	1.85
345.26	6.68	1.95
345.27	6.78	2.06
345.28	6.88	2.17
345.29	6.98	2.28
345.30	7.07	2.39
345.31	7.17	2.51
345.32	7.26	2.63
345.33	7.35	2.75
345.34	7.44	2.87
345.35	7.53	2.99
345.36	7.61	3.12
345.37	7.69	3.25
345.38	7.78	3.38
345.39	7.86	3.51
345.40	7.94	3.64
345.41	8.01	3.77
345.42	8.09	3.91
345.43	8.16	4.04
345.44	8.24	4.18
345.45	8.31	4.32
345.46	8.38	4.46
345.47	8.45	4.60
345.48	8.51	4.75
345.49	8.58	4.89
345.50	8.64	5.03
345.51	8.71	5.18
345.52	8.77	5.33
345.53	8.83	5.47
345.54	8.89	5.62
345.55	8.94	5.77
345.56	9.00	5.91
345.57	9.05	6.06
345.58	9.10	6.21
345.59	9.16	6.36
345.60	9.21	6.51
345.61	9.25	6.66
345.62	9.30	6.81
345.63	9.35	6.96
345.64	9.39	7.11
345.65	9.43	7.25
345.66	9.48	7.40
345.67	9.52	7.55
345.68	9.56	7.70
345.69	9.59	7.84
345.70	9.63	7.99
345.71	9.66	8.13
345.72	9.70	8.27
345.73	9.73	8.42
345.74	9.76	8.56
345.75	9.79	8.70
345.76	9.81	8.83
345.77	9.84	8.97
345.78	9.86	9.11
345.79	9.89	9.24
345.80	9.91	9.37
345.81	9.93	9.50
345.82	9.94	9.63
345.83	9.96	9.75
345.84	9.98	9.88
345.85	9.99	10.00
345.86	10.00	10.11
345.87	10.01	10.23
345.88	10.02	10.34
345.89	10.02	10.45
345.90	10.03	10.55
345.91	10.03	10.65
345.92	**10.03**	10.75
345.93	10.03	10.85
345.94	10.02	10.94
345.95	10.02	11.02
345.96	10.01	11.10
345.97	10.00	11.18
345.98	9.98	11.25
345.99	9.97	11.32
346.00	9.95	11.38
346.01	9.93	11.44
346.02	9.90	11.48
346.03	9.88	11.53
346.04	9.85	11.56
346.05	9.81	11.59
346.06	9.77	11.60
346.07	9.72	**11.61**
346.08	9.67	11.61
346.09	9.62	11.59
346.10	9.55	11.57
346.11	9.48	11.52
346.12	9.39	11.45
346.13	9.28	11.35
346.14	9.11	11.16
346.15	8.80	10.80

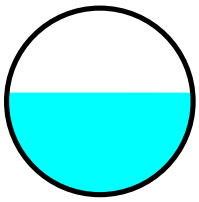
Summary for Reach DMHS8: TO DMH-S7

Inflow Area = 27,778 sf, 80.08% Impervious, Inflow Depth = 5.57" for 100-Year event
Inflow = 3.88 cfs @ 12.07 hrs, Volume= 12,883 cf
Outflow = 3.79 cfs @ 12.09 hrs, Volume= 12,883 cf, Atten= 2%, Lag= 1.1 min

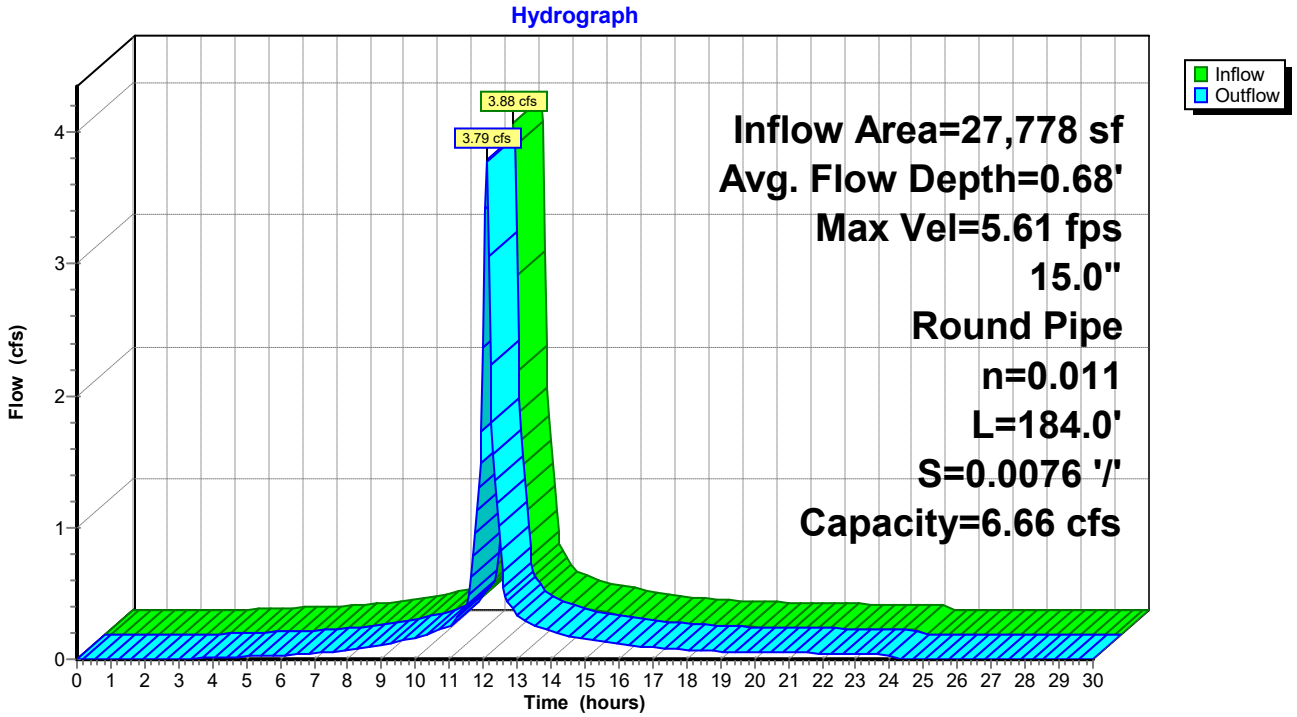
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.61 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.85 fps, Avg. Travel Time= 1.7 min

Peak Storage= 126 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.68'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 6.66 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 184.0' Slope= 0.0076 '/'
Inlet Invert= 346.40', Outlet Invert= 345.00'



Reach DMHS8: TO DMH-S7



Stage-Discharge for Reach DMHS8: TO DMH-S7

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
346.40	0.00	0.00
346.41	0.39	0.00
346.42	0.65	0.00
346.43	0.86	0.01
346.44	1.04	0.01
346.45	1.21	0.02
346.46	1.36	0.03
346.47	1.50	0.04
346.48	1.63	0.05
346.49	1.76	0.07
346.50	1.89	0.09
346.51	2.01	0.11
346.52	2.12	0.13
346.53	2.23	0.15
346.54	2.34	0.18
346.55	2.44	0.20
346.56	2.54	0.23
346.57	2.64	0.26
346.58	2.73	0.30
346.59	2.83	0.33
346.60	2.92	0.37
346.61	3.01	0.41
346.62	3.09	0.45
346.63	3.17	0.49
346.64	3.26	0.54
346.65	3.34	0.58
346.66	3.42	0.63
346.67	3.49	0.68
346.68	3.57	0.73
346.69	3.64	0.79
346.70	3.71	0.84
346.71	3.78	0.90
346.72	3.85	0.96
346.73	3.92	1.02
346.74	3.99	1.08
346.75	4.05	1.14
346.76	4.12	1.20
346.77	4.18	1.27
346.78	4.24	1.34
346.79	4.30	1.41
346.80	4.36	1.48
346.81	4.42	1.55
346.82	4.48	1.62
346.83	4.53	1.69
346.84	4.59	1.77
346.85	4.64	1.85
346.86	4.69	1.92
346.87	4.75	2.00
346.88	4.80	2.08
346.89	4.85	2.16
346.90	4.90	2.24
346.91	4.94	2.33
346.92	4.99	2.41
346.93	5.04	2.49
346.94	5.08	2.58
346.95	5.13	2.67
346.96	5.17	2.75
346.97	5.21	2.84
346.98	5.25	2.93
346.99	5.29	3.02
347.00	5.33	3.10
347.01	5.37	3.19
347.02	5.41	3.28
347.03	5.44	3.37
347.04	5.48	3.47
347.05	5.52	3.56
347.06	5.55	3.65
347.07	5.58	3.74
347.08	5.62	3.83
347.09	5.65	3.92
347.10	5.68	4.02
347.11	5.71	4.11
347.12	5.74	4.20
347.13	5.77	4.29
347.14	5.79	4.38
347.15	5.82	4.47
347.16	5.84	4.57
347.17	5.87	4.66
347.18	5.89	4.75
347.19	5.92	4.84
347.20	5.94	4.93
347.21	5.96	5.01
347.22	5.98	5.10
347.23	6.00	5.19
347.24	6.02	5.28
347.25	6.04	5.36
347.26	6.05	5.45
347.27	6.07	5.53
347.28	6.08	5.62
347.29	6.10	5.70
347.30	6.11	5.78
347.31	6.12	5.86
347.32	6.13	5.94
347.33	6.14	6.02
347.34	6.15	6.09
347.35	6.16	6.17
347.36	6.17	6.24
347.37	6.17	6.31
347.38	6.18	6.38
347.39	6.18	6.44
347.40	6.18	6.51
347.41	6.19	6.57
347.42	**6.19**	6.63
347.43	6.18	6.69
347.44	6.18	6.75
347.45	6.18	6.80
347.46	6.17	6.85
347.47	6.17	6.90
347.48	6.16	6.94
347.49	6.15	6.98
347.50	6.14	7.02
347.51	6.12	7.05
347.52	6.11	7.08
347.53	6.09	7.11
347.54	6.07	7.13
347.55	6.05	7.15
347.56	6.03	7.16
347.57	6.00	**7.16**
347.58	5.97	7.16
347.59	5.93	7.15
347.60	5.89	7.13
347.61	5.85	7.10
347.62	5.79	7.06
347.63	5.72	7.00
347.64	5.62	6.88
347.65	5.43	6.66

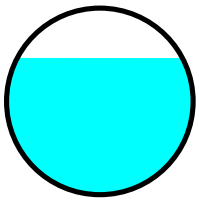
Summary for Reach DMHS9: TO DMH-S10

Inflow Area = 57,987 sf, 60.49% Impervious, Inflow Depth = 5.53" for 100-Year event
Inflow = 7.36 cfs @ 12.10 hrs, Volume= 26,735 cf
Outflow = 7.22 cfs @ 12.11 hrs, Volume= 26,735 cf, Atten= 2%, Lag= 0.7 min

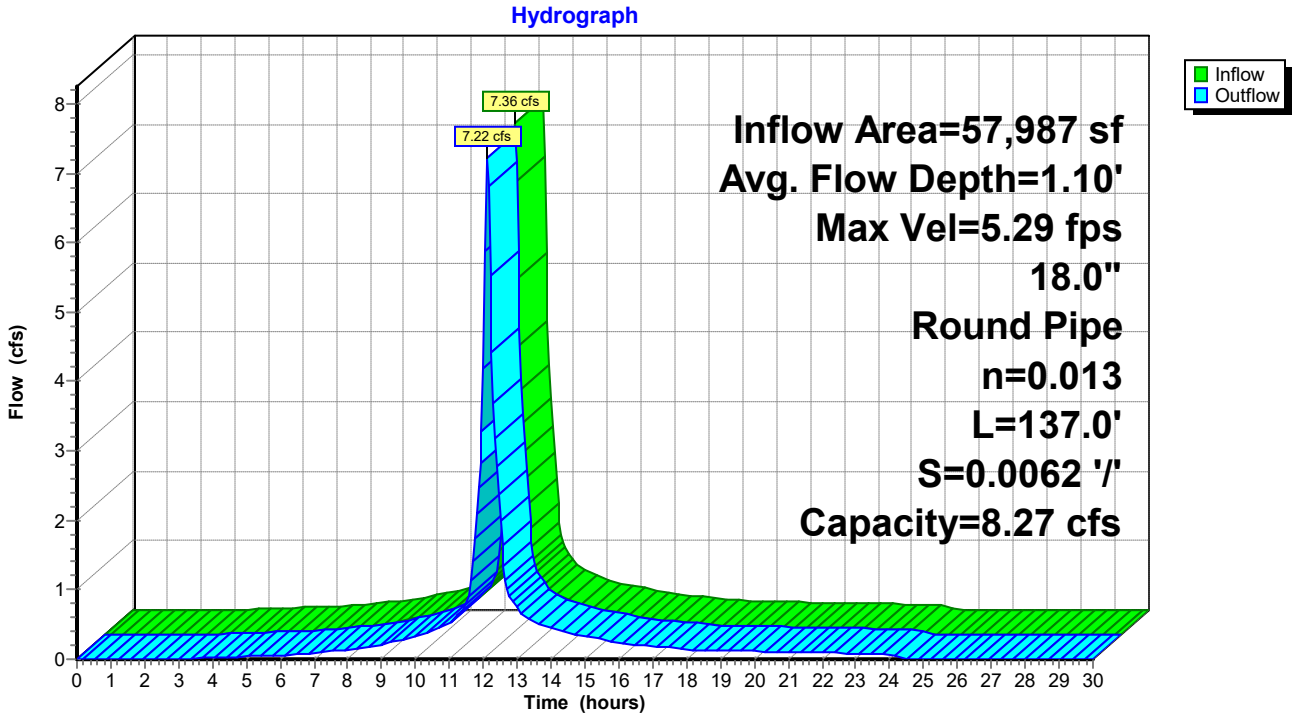
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.29 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.82 fps, Avg. Travel Time= 1.3 min

Peak Storage= 190 cf @ 12.11 hrs
Average Depth at Peak Storage= 1.10'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.27 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 137.0' Slope= 0.0062 '/'
Inlet Invert= 344.25', Outlet Invert= 343.40'



Reach DMHS9: TO DMH-S10



Stage-Discharge for Reach DMHS9: TO DMH-S10

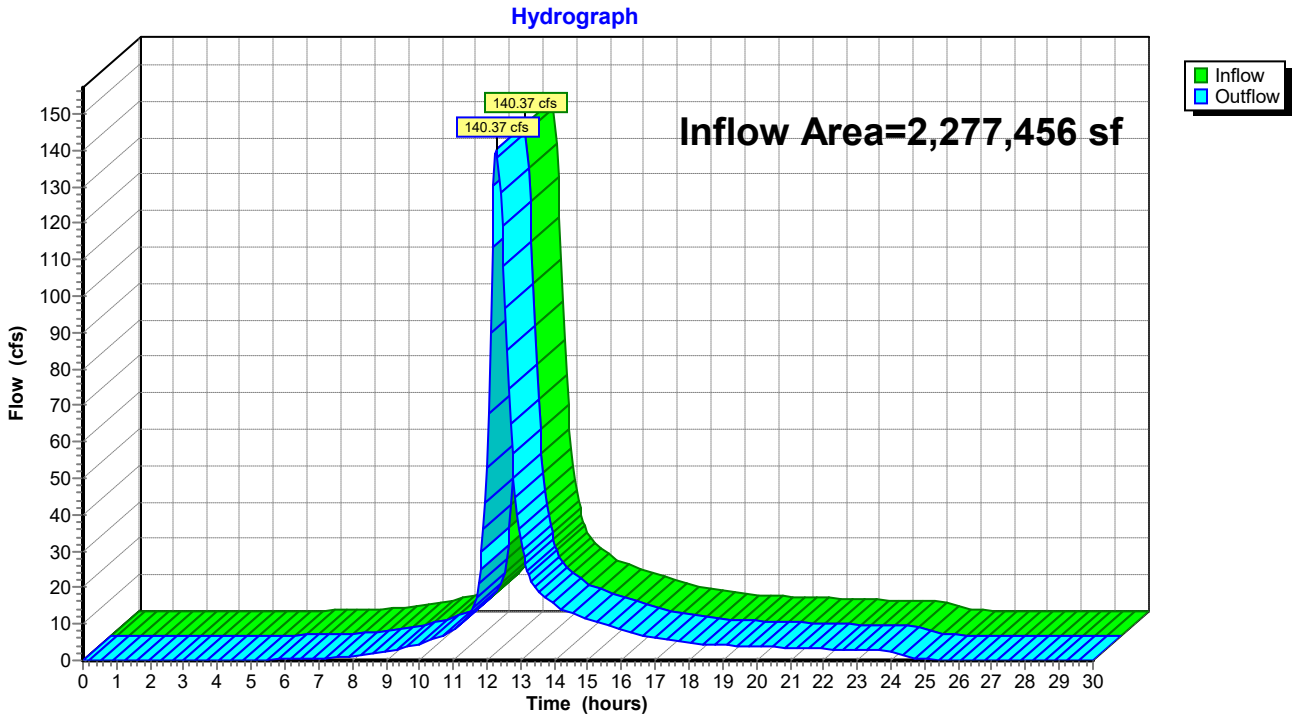
Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
344.25	0.00	0.00
344.26	0.28	0.00
344.27	0.50	0.00
344.28	0.66	0.01
344.29	0.79	0.01
344.30	0.92	0.02
344.31	1.04	0.02
344.32	1.15	0.03
344.33	1.25	0.05
344.34	1.35	0.06
344.35	1.45	0.07
344.36	1.54	0.09
344.37	1.63	0.11
344.38	1.71	0.13
344.39	1.80	0.15
344.40	1.88	0.17
344.41	1.96	0.20
344.42	2.03	0.23
344.43	2.11	0.25
344.44	2.18	0.28
344.45	2.25	0.32
344.46	2.32	0.35
344.47	2.39	0.38
344.48	2.45	0.42
344.49	2.52	0.46
344.50	2.58	0.50
344.51	2.64	0.54
344.52	2.70	0.58
344.53	2.76	0.63
344.54	2.82	0.68
344.55	2.88	0.72
344.56	2.94	0.77
344.57	2.99	0.83
344.58	3.05	0.88
344.59	3.10	0.93
344.60	3.15	0.99
344.61	3.20	1.05
344.62	3.26	1.10
344.63	3.31	1.16
344.64	3.35	1.22
344.65	3.40	1.29
344.66	3.45	1.35
344.67	3.50	1.42
344.68	3.54	1.48
344.69	3.59	1.55
344.70	3.63	1.62
344.71	3.68	1.69
344.72	3.72	1.76
344.73	3.76	1.83
344.74	3.81	1.91
344.75	3.85	1.98
344.76	3.89	2.06
344.77	3.93	2.14
344.78	3.97	2.22
344.79	4.01	2.29
344.80	4.04	2.37
344.81	4.08	2.46
344.82	4.12	2.54
344.83	4.15	2.62
344.84	4.19	2.70
344.85	4.22	2.79
344.86	4.26	2.87
344.87	4.29	2.96
344.88	4.33	3.05
344.89	4.36	3.13
344.90	4.39	3.22
344.91	4.42	3.31
344.92	4.45	3.40
344.93	4.48	3.49
344.94	4.51	3.58
344.95	4.54	3.67
344.96	4.57	3.77
344.97	4.60	3.86
344.98	4.63	3.95
344.99	4.66	4.04
345.00	4.68	4.14
345.01	4.71	4.23
345.02	4.73	4.32
345.03	4.76	4.42
345.04	4.78	4.51
345.05	4.81	4.61
345.06	4.83	4.70
345.07	4.85	4.80
345.08	4.88	4.89
345.09	4.90	4.99
345.10	4.92	5.08
345.11	4.94	5.18
345.12	4.96	5.27
345.13	4.98	5.37
345.14	5.00	5.46
345.15	5.02	5.56
345.16	5.04	5.65
345.17	5.06	5.75
345.18	5.08	5.84
345.19	5.09	5.93
345.20	5.11	6.03
345.21	5.12	6.12
345.22	5.14	6.21
345.23	5.15	6.30
345.24	5.17	6.40
345.25	5.18	6.49
345.26	5.20	6.58
345.27	5.21	6.66
345.28	5.22	6.75
345.29	5.23	6.84
345.30	5.24	6.93
345.31	5.25	7.01
345.32	5.26	7.10
345.33	5.27	7.18
345.34	5.28	7.26
345.35	5.29	7.35
345.36	5.30	7.43
345.37	5.30	7.51
345.38	5.31	7.58
345.39	5.32	7.66
345.40	5.32	7.74
345.41	5.33	7.81
345.42	5.33	7.88
345.43	5.33	7.95
345.44	5.33	8.02
345.45	5.34	8.09
345.46	5.34	8.15
345.47	**5.34**	8.22
345.48	5.34	8.28
345.49	5.34	8.34
345.50	5.33	8.39
345.51	5.33	8.45
345.52	5.33	8.50
345.53	5.32	8.55
345.54	5.32	8.60
345.55	5.31	8.64
345.56	5.30	8.68
345.57	5.30	8.72
345.58	5.29	8.76
345.59	5.28	8.79
345.60	5.26	8.82
345.61	5.25	8.84
345.62	5.24	8.86
345.63	5.22	8.88
345.64	5.20	8.89
345.65	5.18	8.90
345.66	5.16	**8.90**
345.67	5.14	8.89
345.68	5.11	8.88
345.69	5.08	8.86
345.70	5.05	8.83
345.71	5.01	8.79
345.72	4.97	8.74
345.73	4.92	8.66
345.74	4.82	8.51
345.75	4.68	8.27

Summary for Reach DP#1: DP#1

Inflow Area = 2,277,456 sf, 14.76% Impervious, Inflow Depth = 3.75" for 100-Year event
Inflow = 140.37 cfs @ 12.29 hrs, Volume= 712,522 cf
Outflow = 140.37 cfs @ 12.29 hrs, Volume= 712,522 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#1: DP#1

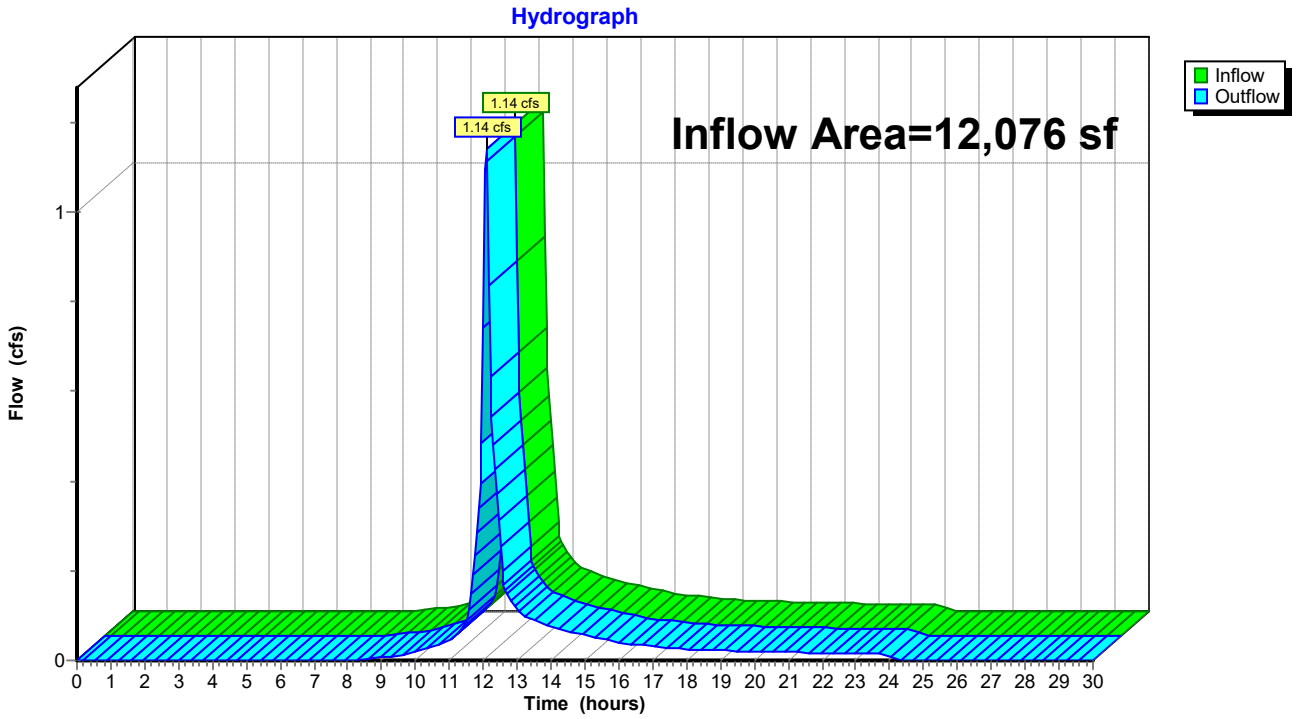


Summary for Reach DP#5: DITCH

Inflow Area = 12,076 sf, 57.69% Impervious, Inflow Depth = 3.51" for 100-Year event
Inflow = 1.14 cfs @ 12.08 hrs, Volume= 3,530 cf
Outflow = 1.14 cfs @ 12.08 hrs, Volume= 3,530 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DP#5: DITCH

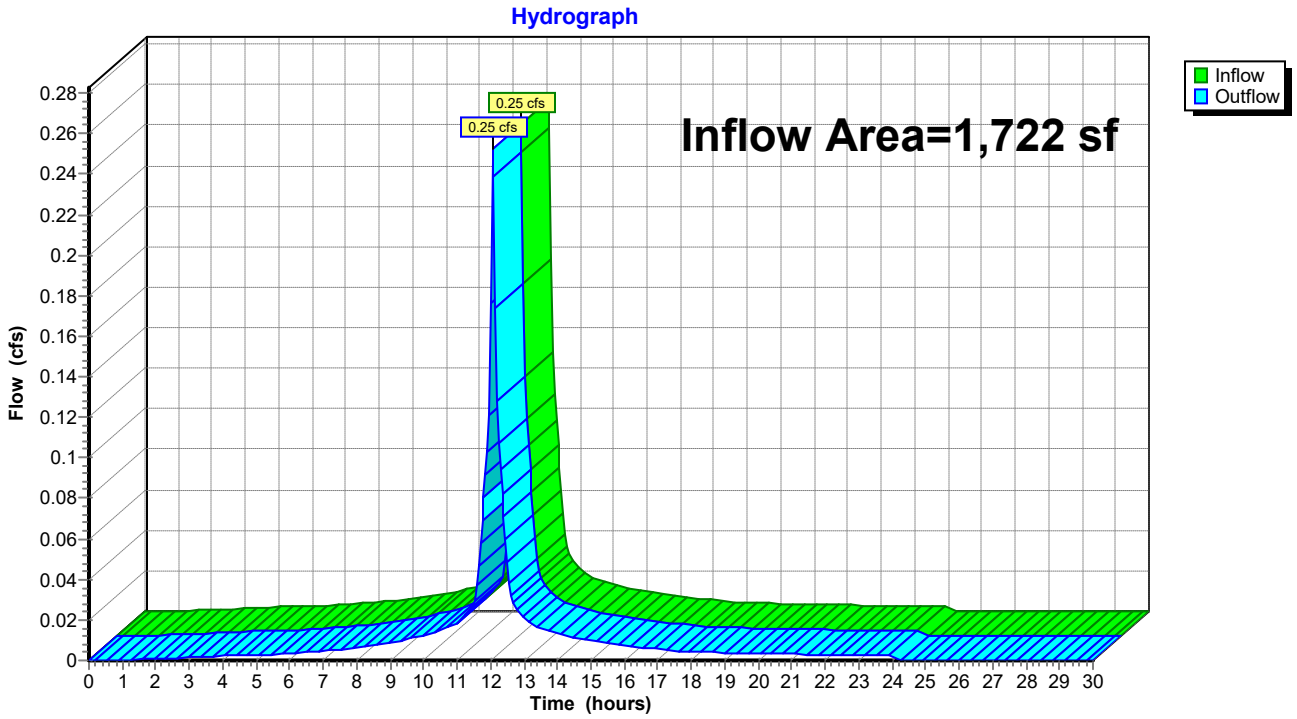


Summary for Reach DRIP: TO YD#1

Inflow Area = 1,722 sf, 96.81% Impervious, Inflow Depth = 6.14" for 100-Year event
Inflow = 0.25 cfs @ 12.07 hrs, Volume= 882 cf
Outflow = 0.25 cfs @ 12.07 hrs, Volume= 882 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach DRIP: TO YD#1

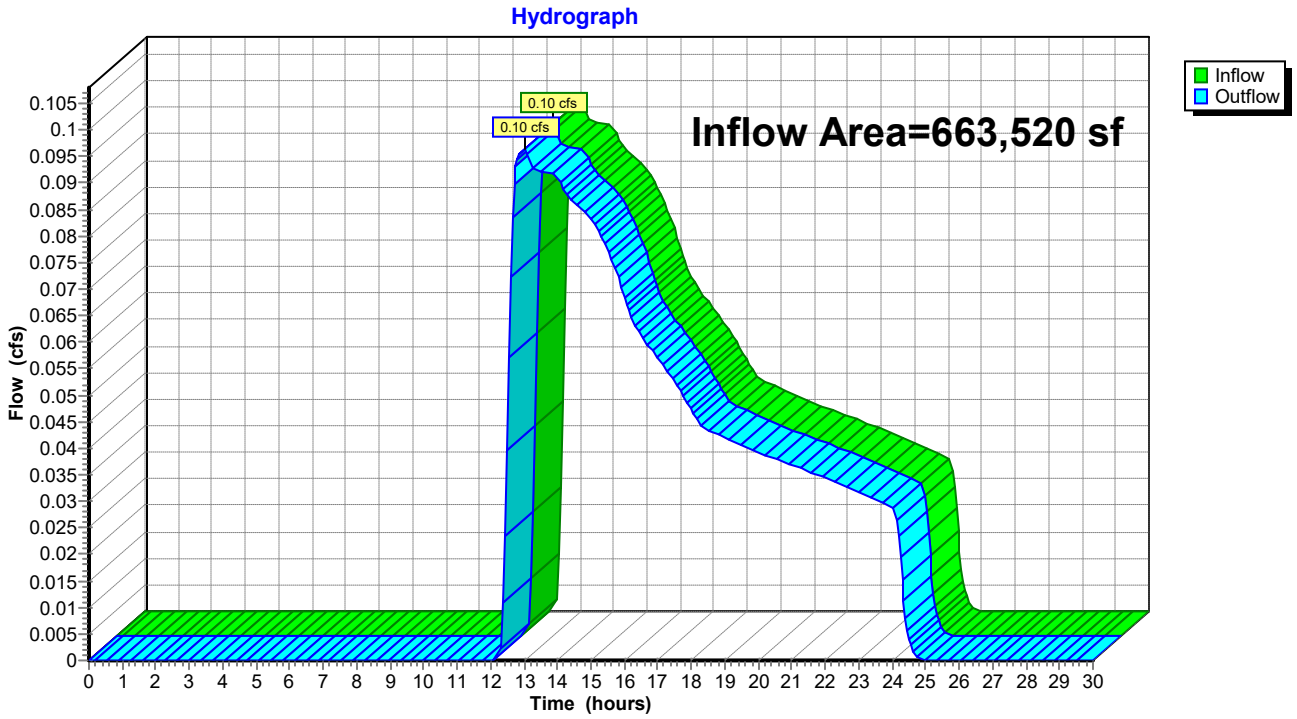


Summary for Reach R200: DP#2

Inflow Area = 663,520 sf, 33.87% Impervious, Inflow Depth = 0.04" for 100-Year event
Inflow = 0.10 cfs @ 13.01 hrs, Volume= 2,330 cf
Outflow = 0.10 cfs @ 13.01 hrs, Volume= 2,330 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R200: DP#2

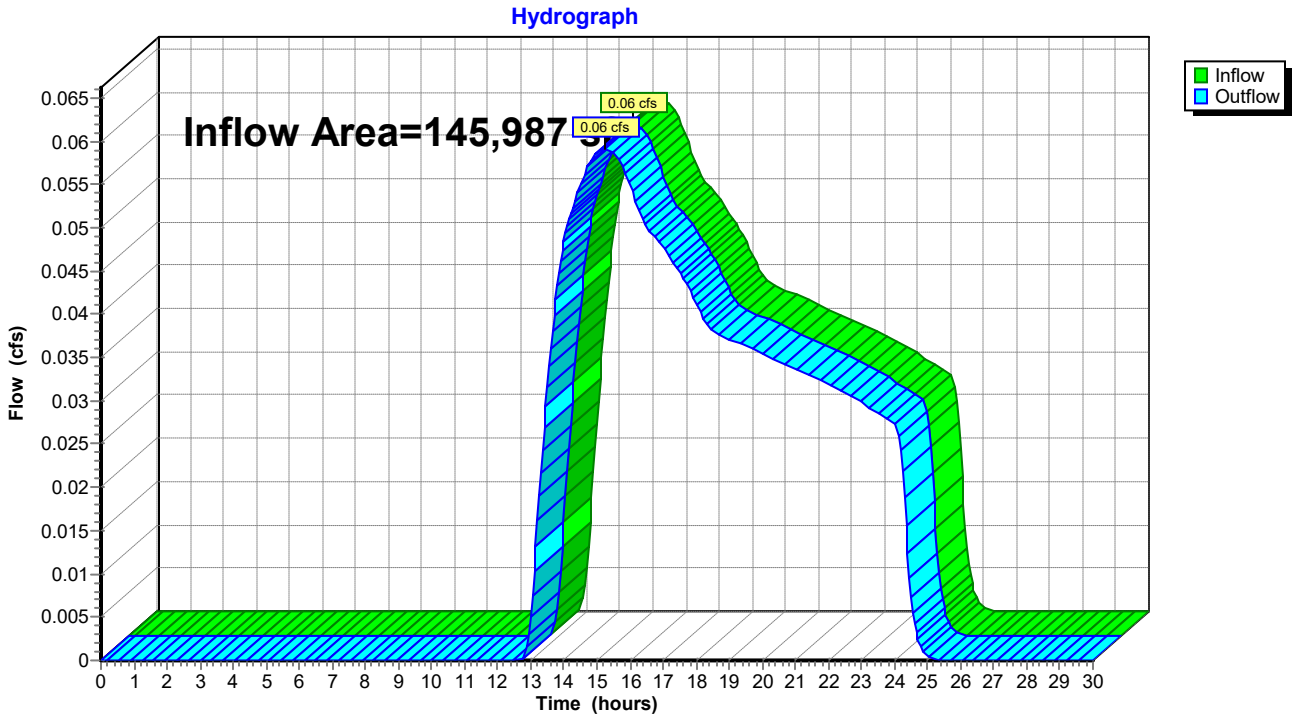


Summary for Reach R300: DP#3

Inflow Area = 145,987 sf, 0.00% Impervious, Inflow Depth = 0.13" for 100-Year event
Inflow = 0.06 cfs @ 15.23 hrs, Volume= 1,625 cf
Outflow = 0.06 cfs @ 15.23 hrs, Volume= 1,625 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R300: DP#3

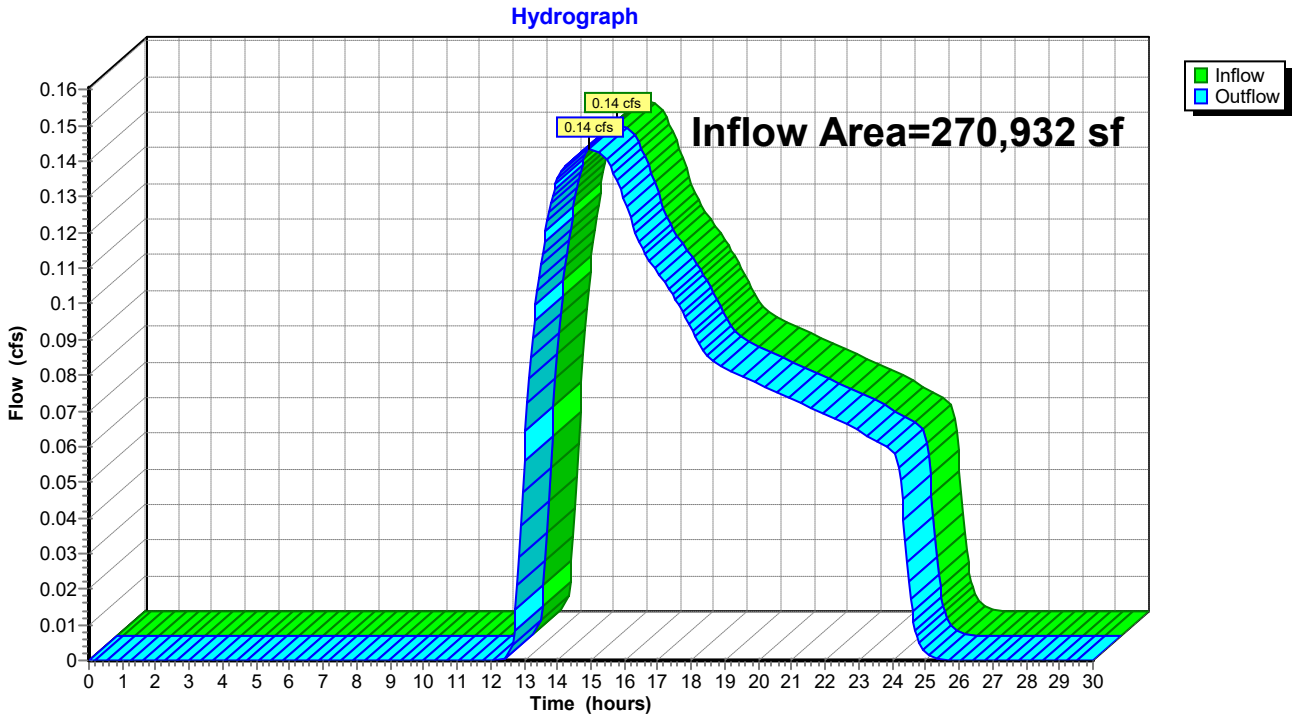


Summary for Reach R400: DP#4

Inflow Area = 270,932 sf, 0.59% Impervious, Inflow Depth = 0.17" for 100-Year event
Inflow = 0.14 cfs @ 14.96 hrs, Volume= 3,897 cf
Outflow = 0.14 cfs @ 14.96 hrs, Volume= 3,897 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach R400: DP#4



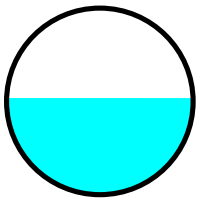
Summary for Reach RF-1: TO DMH#3

Inflow Area = 2,135 sf,100.00% Impervious, Inflow Depth = 6.26" for 100-Year event
Inflow = 0.30 cfs @ 12.09 hrs, Volume= 1,114 cf
Outflow = 0.30 cfs @ 12.10 hrs, Volume= 1,114 cf, Atten= 1%, Lag= 0.4 min

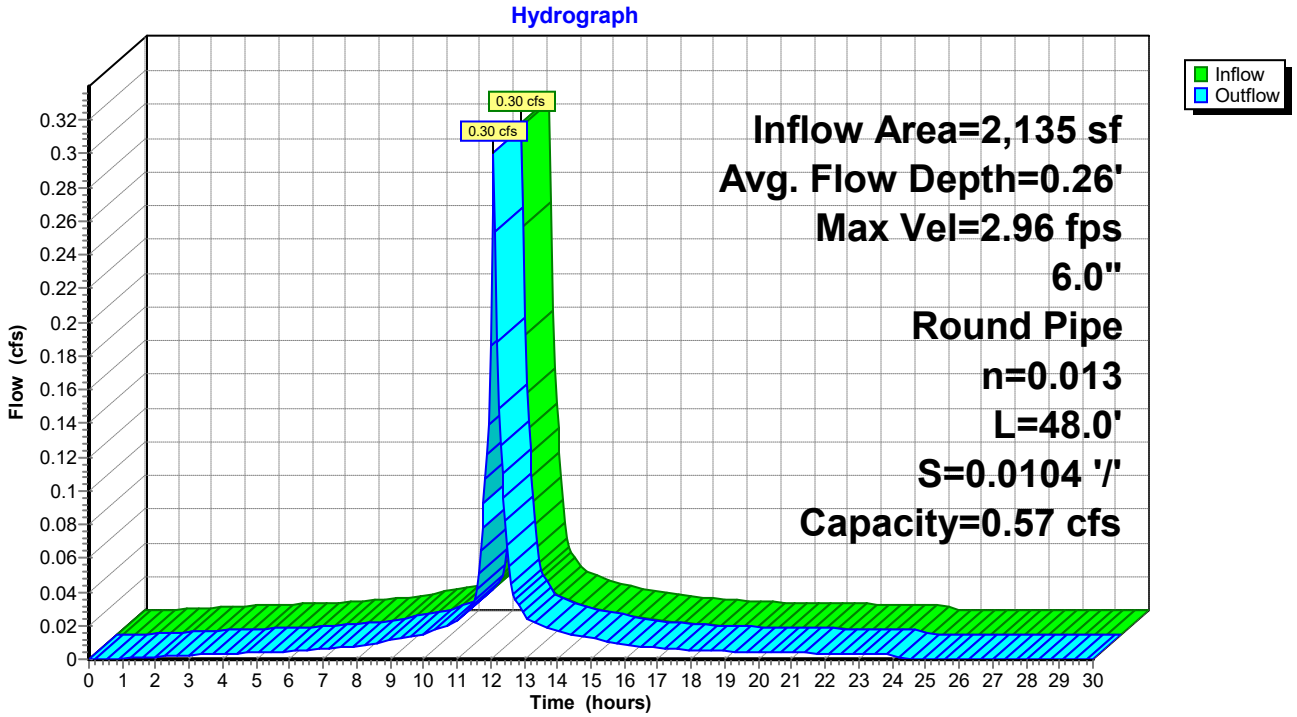
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.96 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.01 fps, Avg. Travel Time= 0.8 min

Peak Storage= 5 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.26'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.57 cfs

6.0" Round Pipe
n= 0.013 Cast iron, coated
Length= 48.0' Slope= 0.0104 '/'
Inlet Invert= 351.70', Outlet Invert= 351.20'



Reach RF-1: TO DMH#3



Stage-Discharge for Reach RF-1: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.70	0.00	0.00
351.71	0.41	0.00
351.72	0.65	0.00
351.73	0.84	0.00
351.74	1.02	0.01
351.75	1.17	0.01
351.76	1.31	0.02
351.77	1.44	0.02
351.78	1.57	0.03
351.79	1.68	0.04
351.80	1.79	0.05
351.81	1.90	0.06
351.82	2.00	0.07
351.83	2.09	0.08
351.84	2.18	0.10
351.85	2.26	0.11
351.86	2.34	0.13
351.87	2.42	0.14
351.88	2.49	0.16
351.89	2.56	0.18
351.90	2.63	0.19
351.91	2.69	0.21
351.92	2.75	0.23
351.93	2.81	0.25
351.94	2.87	0.27
351.95	2.92	0.29
351.96	2.96	0.31
351.97	3.01	0.33
351.98	3.05	0.35
351.99	3.09	0.37
352.00	3.13	0.38
352.01	3.16	0.40
352.02	3.19	0.42
352.03	3.22	0.44
352.04	3.24	0.46
352.05	3.27	0.48
352.06	3.28	0.50
352.07	3.30	0.51
352.08	3.31	0.53
352.09	3.32	0.55
352.10	3.32	0.56
352.11	**3.32**	0.57
352.12	3.32	0.58
352.13	3.31	0.60
352.14	3.30	0.60
352.15	3.28	0.61
352.16	3.25	0.61
352.17	3.22	**0.62**
352.18	3.17	0.61
352.19	3.10	0.61
352.20	2.92	0.57

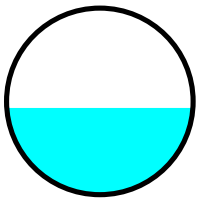
Summary for Reach RF-2: TO DMH#3

Inflow Area = 1,853 sf,100.00% Impervious, Inflow Depth = 6.26" for 100-Year event
Inflow = 0.27 cfs @ 12.08 hrs, Volume= 967 cf
Outflow = 0.26 cfs @ 12.09 hrs, Volume= 967 cf, Atten= 1%, Lag= 0.6 min

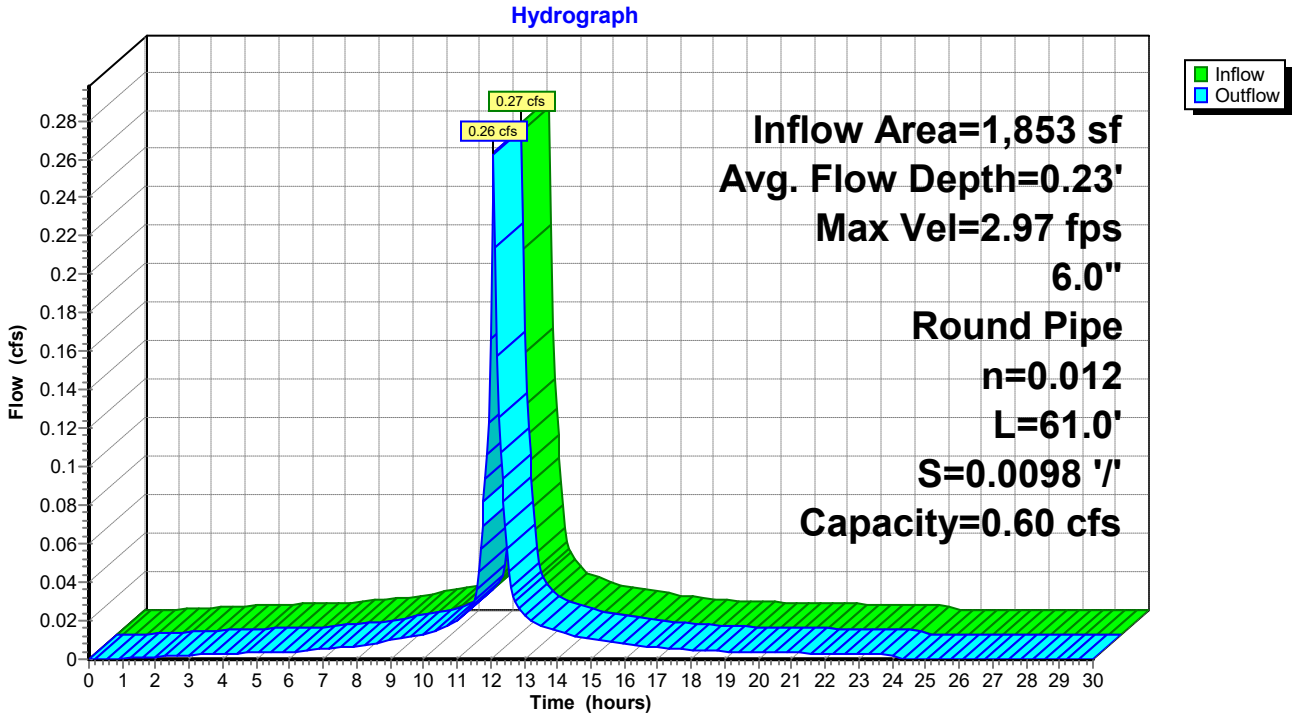
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.97 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.01 fps, Avg. Travel Time= 1.0 min

Peak Storage= 5 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.60 cfs

6.0" Round Pipe
n= 0.012 Steel, smooth
Length= 61.0' Slope= 0.0098 '/'
Inlet Invert= 351.80', Outlet Invert= 351.20'



Reach RF-2: TO DMH#3



Stage-Discharge for Reach RF-2: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
351.80	0.00	0.00
351.81	0.43	0.00
351.82	0.68	0.00
351.83	0.89	0.00
351.84	1.07	0.01
351.85	1.23	0.01
351.86	1.38	0.02
351.87	1.52	0.03
351.88	1.65	0.03
351.89	1.77	0.04
351.90	1.89	0.05
351.91	2.00	0.06
351.92	2.10	0.08
351.93	2.20	0.09
351.94	2.29	0.10
351.95	2.38	0.12
351.96	2.47	0.13
351.97	2.55	0.15
351.98	2.63	0.17
351.99	2.70	0.18
352.00	2.77	0.20
352.01	2.84	0.22
352.02	2.90	0.24
352.03	2.96	0.26
352.04	3.02	0.28
352.05	3.07	0.30
352.06	3.12	0.32
352.07	3.17	0.34
352.08	3.21	0.36
352.09	3.25	0.38
352.10	3.29	0.41
352.11	3.33	0.43
352.12	3.36	0.45
352.13	3.39	0.47
352.14	3.42	0.49
352.15	3.44	0.50
352.16	3.46	0.52
352.17	3.47	0.54
352.18	3.49	0.56
352.19	3.49	0.57
352.20	3.50	0.59
352.21	**3.50**	0.60
352.22	3.50	0.62
352.23	3.49	0.63
352.24	3.47	0.64
352.25	3.45	0.64
352.26	3.42	0.65
352.27	3.39	**0.65**
352.28	3.33	0.65
352.29	3.26	0.64
352.30	3.07	0.60

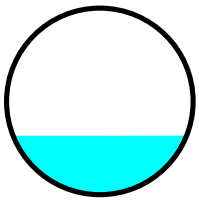
Summary for Reach RF3: TO DMH#3

Inflow Area = 933 sf,100.00% Impervious, Inflow Depth = 6.26" for 100-Year event
Inflow = 0.14 cfs @ 12.07 hrs, Volume= 487 cf
Outflow = 0.13 cfs @ 12.09 hrs, Volume= 487 cf, Atten= 3%, Lag= 1.3 min

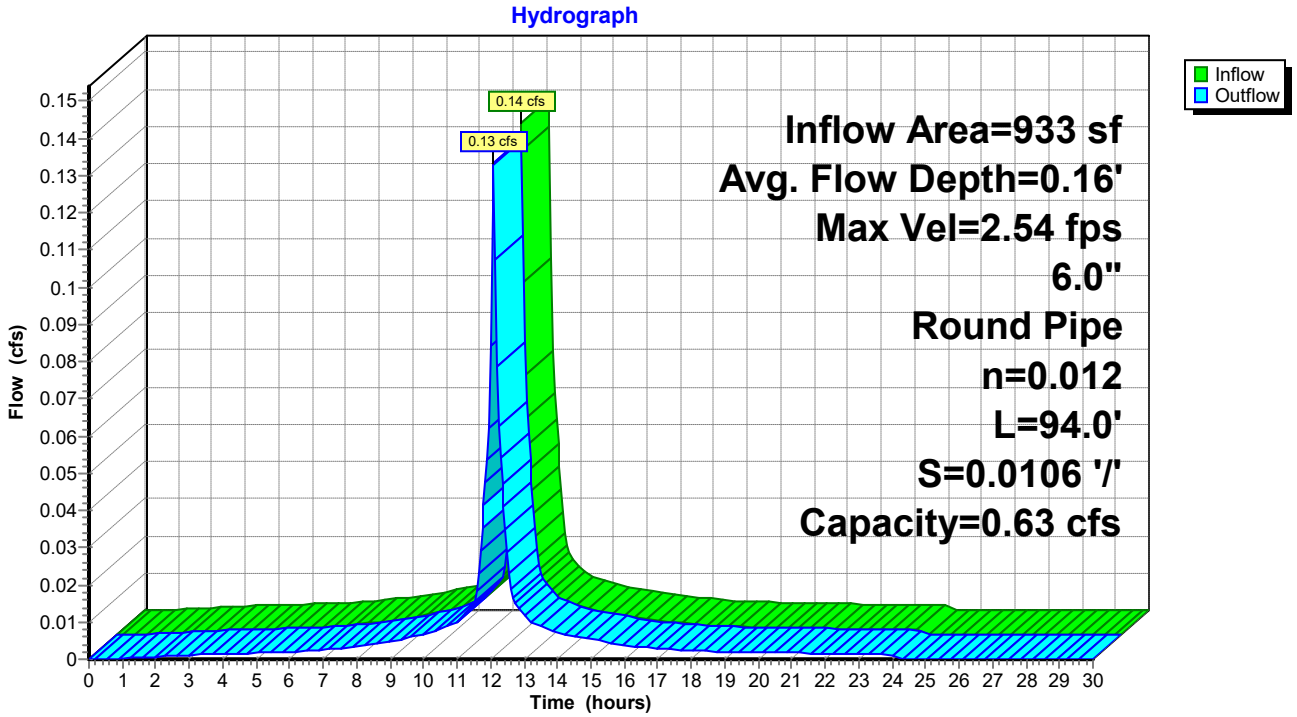
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.54 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 0.85 fps, Avg. Travel Time= 1.8 min

Peak Storage= 5 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.16'
Bank-Full Depth= 0.50' Flow Area= 0.2 sf, Capacity= 0.63 cfs

6.0" Round Pipe
n= 0.012 Steel, smooth
Length= 94.0' Slope= 0.0106 '/'
Inlet Invert= 352.10', Outlet Invert= 351.10'



Reach RF3: TO DMH#3



Stage-Discharge for Reach RF3: TO DMH#3

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
352.10	0.00	0.00
352.11	0.45	0.00
352.12	0.71	0.00
352.13	0.92	0.00
352.14	1.11	0.01
352.15	1.28	0.01
352.16	1.44	0.02
352.17	1.58	0.03
352.18	1.72	0.03
352.19	1.84	0.04
352.20	1.96	0.05
352.21	2.08	0.07
352.22	2.19	0.08
352.23	2.29	0.09
352.24	2.39	0.11
352.25	2.48	0.12
352.26	2.57	0.14
352.27	2.65	0.16
352.28	2.73	0.17
352.29	2.81	0.19
352.30	2.88	0.21
352.31	2.95	0.23
352.32	3.02	0.25
352.33	3.08	0.27
352.34	3.14	0.29
352.35	3.19	0.31
352.36	3.25	0.33
352.37	3.30	0.36
352.38	3.34	0.38
352.39	3.38	0.40
352.40	3.42	0.42
352.41	3.46	0.44
352.42	3.49	0.46
352.43	3.52	0.48
352.44	3.55	0.51
352.45	3.58	0.52
352.46	3.60	0.54
352.47	3.61	0.56
352.48	3.63	0.58
352.49	3.63	0.60
352.50	3.64	0.61
352.51	**3.64**	0.63
352.52	3.64	0.64
352.53	3.63	0.65
352.54	3.61	0.66
352.55	3.59	0.67
352.56	3.56	0.67
352.57	3.52	**0.67**
352.58	3.47	0.67
352.59	3.39	0.66
352.60	3.19	0.63

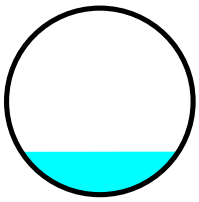
Summary for Reach YD1: TO CO#1

Inflow Area = 5,181 sf, 36.69% Impervious, Inflow Depth = 3.80" for 100-Year event
Inflow = 0.49 cfs @ 12.08 hrs, Volume= 1,639 cf
Outflow = 0.49 cfs @ 12.08 hrs, Volume= 1,639 cf, Atten= 0%, Lag= 0.1 min

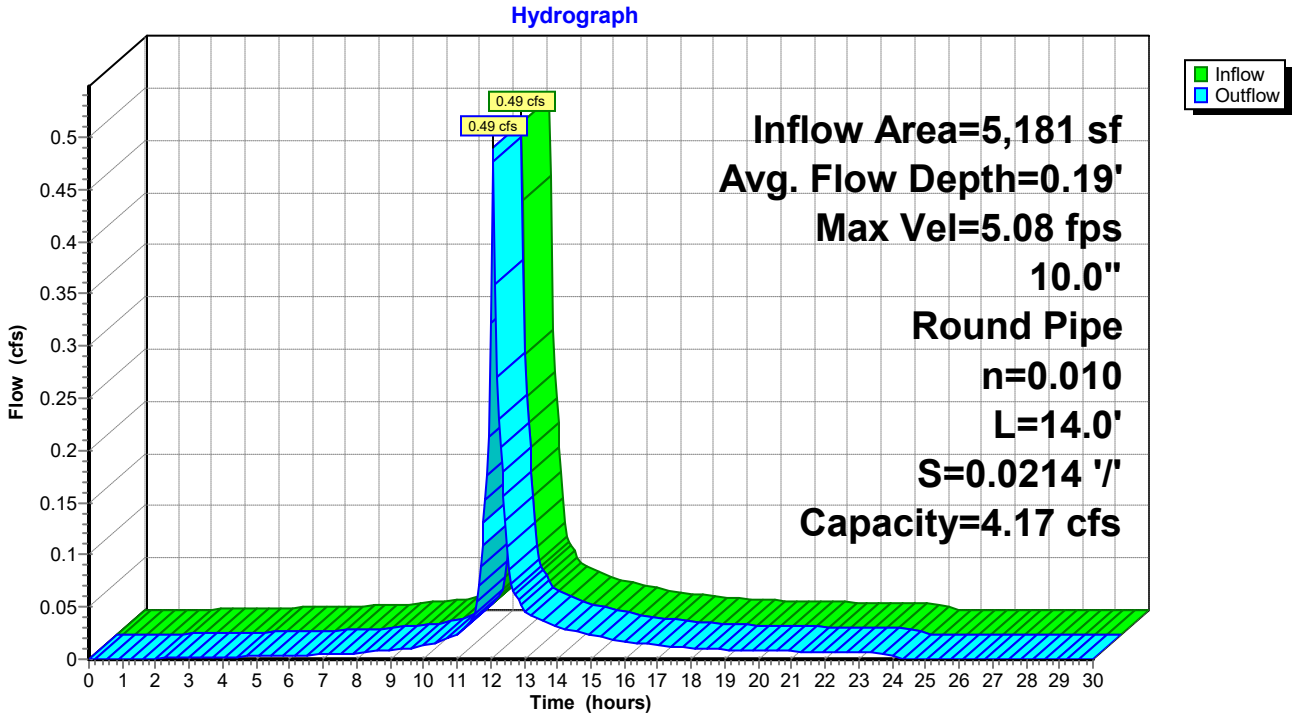
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.08 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.62 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 4.17 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 14.0' Slope= 0.0214 '/'
Inlet Invert= 350.80', Outlet Invert= 350.50'



Reach YD1: TO CO#1



Stage-Discharge for Reach YD1: TO CO#1

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
350.80	0.00	0.00
350.81	0.76	0.00
350.82	1.21	0.00
350.83	1.58	0.01
350.84	1.91	0.02
350.85	2.21	0.03
350.86	2.49	0.04
350.87	2.74	0.06
350.88	2.99	0.08
350.89	3.22	0.10
350.90	3.44	0.13
350.91	3.65	0.16
350.92	3.85	0.19
350.93	4.05	0.22
350.94	4.23	0.26
350.95	4.41	0.29
350.96	4.59	0.34
350.97	4.76	0.38
350.98	4.92	0.43
350.99	5.08	0.48
351.00	5.23	0.53
351.01	5.38	0.58
351.02	5.52	0.64
351.03	5.66	0.69
351.04	5.80	0.75
351.05	5.93	0.82
351.06	6.06	0.88
351.07	6.19	0.95
351.08	6.31	1.01
351.09	6.42	1.08
351.10	6.54	1.16
351.11	6.65	1.23
351.12	6.76	1.30
351.13	6.86	1.38
351.14	6.96	1.46
351.15	7.06	1.54
351.16	7.16	1.62
351.17	7.25	1.70
351.18	7.34	1.78
351.19	7.43	1.86
351.20	7.51	1.94
351.21	7.59	2.03
351.22	7.67	2.11
351.23	7.75	2.20
351.24	7.82	2.28
351.25	7.89	2.37
351.26	7.96	2.46
351.27	8.02	2.54
351.28	8.08	2.63
351.29	8.14	2.72
351.30	8.20	2.80
351.31	8.25	2.89
351.32	8.30	2.97
351.33	8.35	3.06
351.34	8.40	3.14
351.35	8.44	3.22
351.36	8.48	3.30
351.37	8.52	3.39
351.38	8.55	3.46
351.39	8.58	3.54
351.40	8.61	3.62
351.41	8.63	3.69
351.42	8.65	3.77
351.43	8.67	3.84
351.44	8.69	3.91
351.45	8.70	3.97
351.46	8.71	4.03
351.47	8.71	4.10
351.48	**8.71**	4.15
351.49	8.71	4.21
351.50	8.70	4.26
351.51	8.69	4.30
351.52	8.68	4.35
351.53	8.65	4.38
351.54	8.63	4.42
351.55	8.59	4.44
351.56	8.55	4.46
351.57	8.51	4.48
351.58	8.45	**4.48**
351.59	8.38	4.48
351.60	8.30	4.47
351.61	8.20	4.44
351.62	8.06	4.38
351.63	7.78	4.24

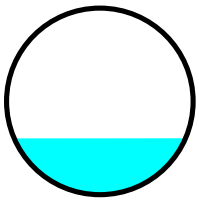
Summary for Reach YD2: TO D14

Inflow Area = 10,793 sf, 49.52% Impervious, Inflow Depth = 4.13" for 100-Year event
Inflow = 1.19 cfs @ 12.08 hrs, Volume= 3,714 cf
Outflow = 1.19 cfs @ 12.08 hrs, Volume= 3,714 cf, Atten= 0%, Lag= 0.0 min

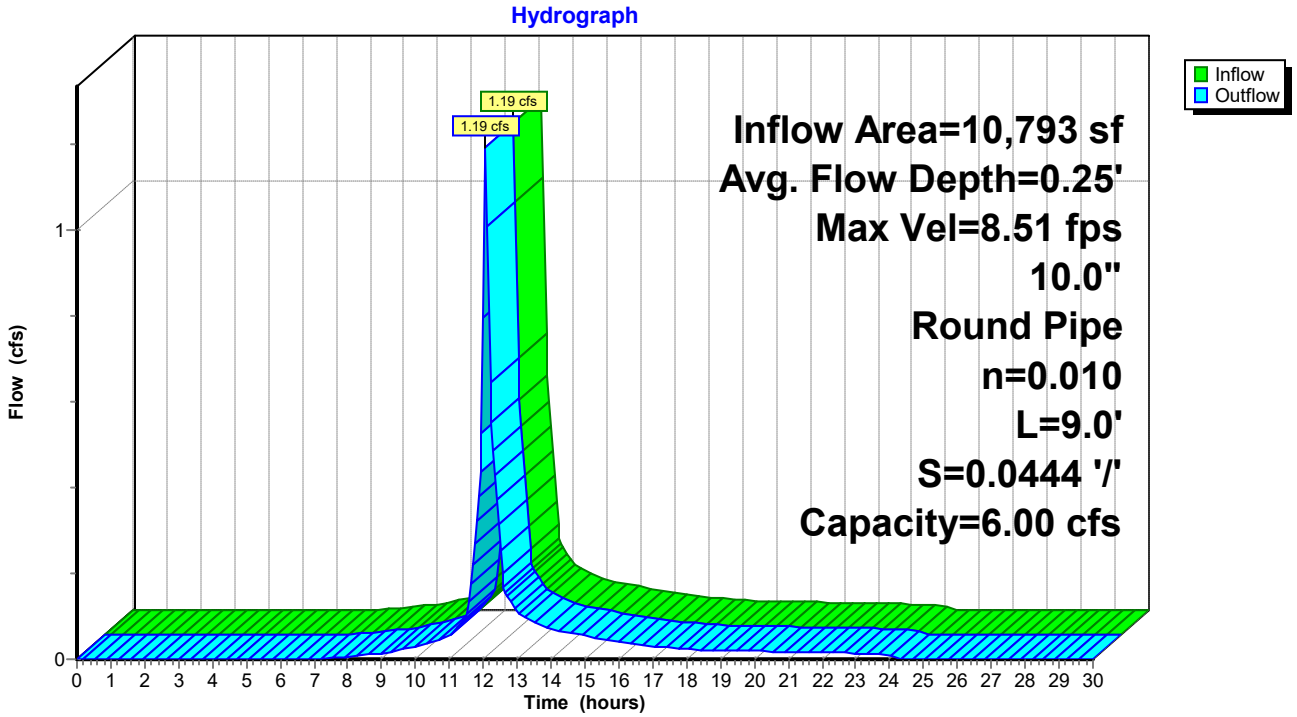
Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.51 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.94 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.25'
Bank-Full Depth= 0.83' Flow Area= 0.5 sf, Capacity= 6.00 cfs

10.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 9.0' Slope= 0.0444 '/'
Inlet Invert= 347.80', Outlet Invert= 347.40'



Reach YD2: TO D14



Stage-Discharge for Reach YD2: TO D14

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
347.80	0.00	0.00
347.81	1.09	0.00
347.82	1.74	0.01
347.83	2.28	0.01
347.84	2.75	0.03
347.85	3.18	0.04
347.86	3.58	0.06
347.87	3.95	0.09
347.88	4.30	0.12
347.89	4.64	0.15
347.90	4.95	0.18
347.91	5.26	0.22
347.92	5.55	0.27
347.93	5.83	0.32
347.94	6.10	0.37
347.95	6.36	0.42
347.96	6.61	0.48
347.97	6.85	0.55
347.98	7.09	0.61
347.99	7.31	0.68
348.00	7.54	0.76
348.01	7.75	0.84
348.02	7.96	0.92
348.03	8.16	1.00
348.04	8.35	1.09
348.05	8.54	1.18
348.06	8.73	1.27
348.07	8.91	1.36
348.08	9.08	1.46
348.09	9.25	1.56
348.10	9.42	1.66
348.11	9.58	1.77
348.12	9.73	1.88
348.13	9.88	1.99
348.14	10.03	2.10
348.15	10.17	2.21
348.16	10.31	2.33
348.17	10.44	2.44
348.18	10.57	2.56
348.19	10.70	2.68
348.20	10.82	2.80
348.21	10.93	2.92
348.22	11.05	3.04
348.23	11.16	3.17
348.24	11.26	3.29
348.25	11.36	3.41
348.26	11.46	3.54
348.27	11.55	3.66
348.28	11.64	3.79
348.29	11.73	3.91
348.30	11.81	4.03
348.31	11.88	4.16
348.32	11.96	4.28
348.33	12.03	4.40
348.34	12.09	4.52
348.35	12.15	4.64
348.36	12.21	4.76
348.37	12.26	4.88
348.38	12.31	4.99
348.39	12.36	5.10
348.40	12.40	5.21
348.41	12.43	5.32
348.42	12.46	5.42
348.43	12.49	5.53
348.44	12.51	5.62
348.45	12.53	5.72
348.46	12.54	5.81
348.47	12.55	5.90
348.48	**12.55**	5.98
348.49	12.55	6.06
348.50	12.54	6.13
348.51	12.52	6.20
348.52	12.49	6.26
348.53	12.46	6.31
348.54	12.43	6.36
348.55	12.38	6.40
348.56	12.32	6.43
348.57	12.25	6.45
348.58	12.17	**6.46**
348.59	12.07	6.45
348.60	11.96	6.43
348.61	11.81	6.39
348.62	11.61	6.31
348.63	11.20	6.11

Summary for Pond P1: BASIN#1

Inflow Area =	556,651 sf,	40.37% Impervious,	Inflow Depth =	3.37"	for 100-Year event
Inflow =	37.29 cfs @	12.16 hrs,	Volume=	156,351 cf	
Outflow =	5.76 cfs @	12.94 hrs,	Volume=	156,351 cf,	Atten= 85%, Lag= 46.9 min
Discarded =	5.76 cfs @	12.94 hrs,	Volume=	156,351 cf	
Primary =	0.00 cfs @	0.00 hrs,	Volume=	0 cf	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0 cf	

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 337.51' @ 12.94 hrs Surf.Area= 24,167 sf Storage= 53,937 cf

Plug-Flow detention time= 80.8 min calculated for 156,091 cf (100% of inflow)
Center-of-Mass det. time= 80.6 min (897.3 - 816.6)

Volume	Invert	Avail.Storage	Storage Description
#1	335.00'	119,716 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
335.00	17,284	0	0
336.00	21,521	19,403	19,403
338.00	25,021	46,542	65,945
340.00	28,750	53,771	119,716

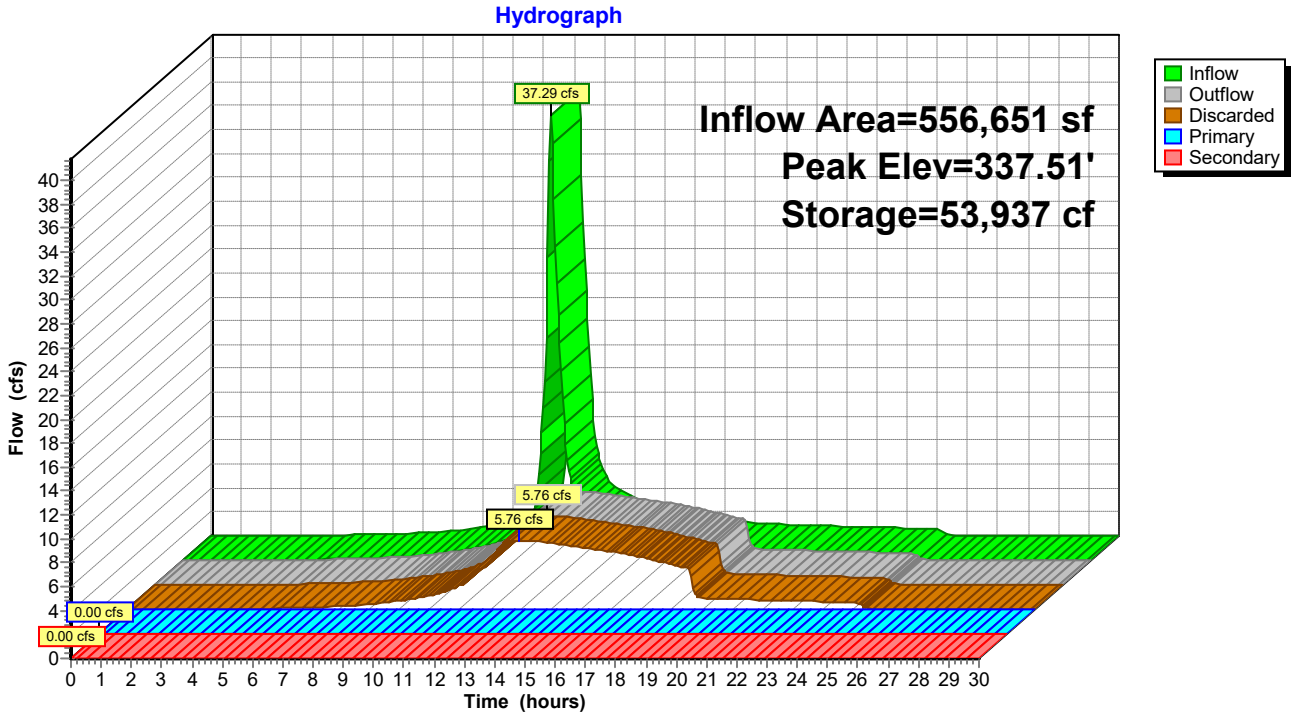
Device	Routing	Invert	Outlet Devices
#1	Primary	332.60'	**12.0" Round Culvert** L= 223.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 332.60' / 331.50' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	335.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 326.00'
#3	Device 1	338.00'	**6.0" Vert. Orifice/Grate X 3.00** C= 0.600
#4	Secondary	339.00'	**14.0' 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

Discarded OutFlow Max=5.75 cfs @ 12.94 hrs HW=337.51' (Free Discharge)
└─**2=Exfiltration** (Controls 5.75 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 3.34 cfs potential flow)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond P1: BASIN#1



Stage-Discharge for Pond P1: BASIN#1

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
335.00	0.00	0.00	0.00	0.00
335.10	3.43	3.43	0.00	0.00
335.20	3.55	3.55	0.00	0.00
335.30	3.67	3.67	0.00	0.00
335.40	3.79	3.79	0.00	0.00
335.50	3.91	3.91	0.00	0.00
335.60	4.03	4.03	0.00	0.00
335.70	4.15	4.15	0.00	0.00
335.80	4.28	4.28	0.00	0.00
335.90	4.40	4.40	0.00	0.00
336.00	4.53	4.53	0.00	0.00
336.10	4.61	4.61	0.00	0.00
336.20	4.69	4.69	0.00	0.00
336.30	4.77	4.77	0.00	0.00
336.40	4.85	4.85	0.00	0.00
336.50	4.93	4.93	0.00	0.00
336.60	5.01	5.01	0.00	0.00
336.70	5.09	5.09	0.00	0.00
336.80	5.17	5.17	0.00	0.00
336.90	5.25	5.25	0.00	0.00
337.00	5.33	5.33	0.00	0.00
337.10	5.41	5.41	0.00	0.00
337.20	5.50	5.50	0.00	0.00
337.30	5.58	5.58	0.00	0.00
337.40	5.66	5.66	0.00	0.00
337.50	5.75	5.75	0.00	0.00
337.60	5.83	5.83	0.00	0.00
337.70	5.91	5.91	0.00	0.00
337.80	6.00	6.00	0.00	0.00
337.90	6.08	6.08	0.00	0.00
338.00	6.17	6.17	0.00	0.00
338.10	6.34	6.25	0.09	0.00
338.20	6.68	6.34	0.34	0.00
338.30	7.12	6.43	0.69	0.00
338.40	7.60	6.52	1.09	0.00
338.50	8.02	6.60	1.42	0.00
338.60	8.37	6.69	1.68	0.00
338.70	8.68	6.78	1.90	0.00
338.80	8.97	6.87	2.10	0.00
338.90	9.25	6.96	2.29	0.00
339.00	9.51	7.05	2.46	0.00
339.10	10.86	7.14	2.61	1.10
339.20	13.11	7.23	2.76	3.12
339.30	16.04	7.32	2.91	5.81
339.40	19.52	7.41	3.04	9.07
339.50	23.69	7.50	3.17	13.02
339.60	28.46	7.59	3.30	17.57
339.70	33.20	7.69	3.42	22.10
339.80	38.26	7.78	3.53	26.95
339.90	43.61	7.87	3.64	32.09
340.00	**49.23**	**7.96**	**3.75**	**37.52**

Summary for Pond P2: SETTLING POND

Inflow Area = 59,763 sf, 5.17% Impervious, Inflow Depth = 0.80" for 100-Year event
Inflow = 0.55 cfs @ 12.37 hrs, Volume= 3,966 cf
Outflow = 0.28 cfs @ 12.76 hrs, Volume= 3,966 cf, Atten= 48%, Lag= 23.4 min
Discarded = 0.28 cfs @ 12.76 hrs, Volume= 3,966 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 343.45' @ 12.76 hrs Surf.Area= 1,398 sf Storage= 477 cf

Plug-Flow detention time= 10.4 min calculated for 3,959 cf (100% of inflow)
Center-of-Mass det. time= 10.4 min (943.2 - 932.8)

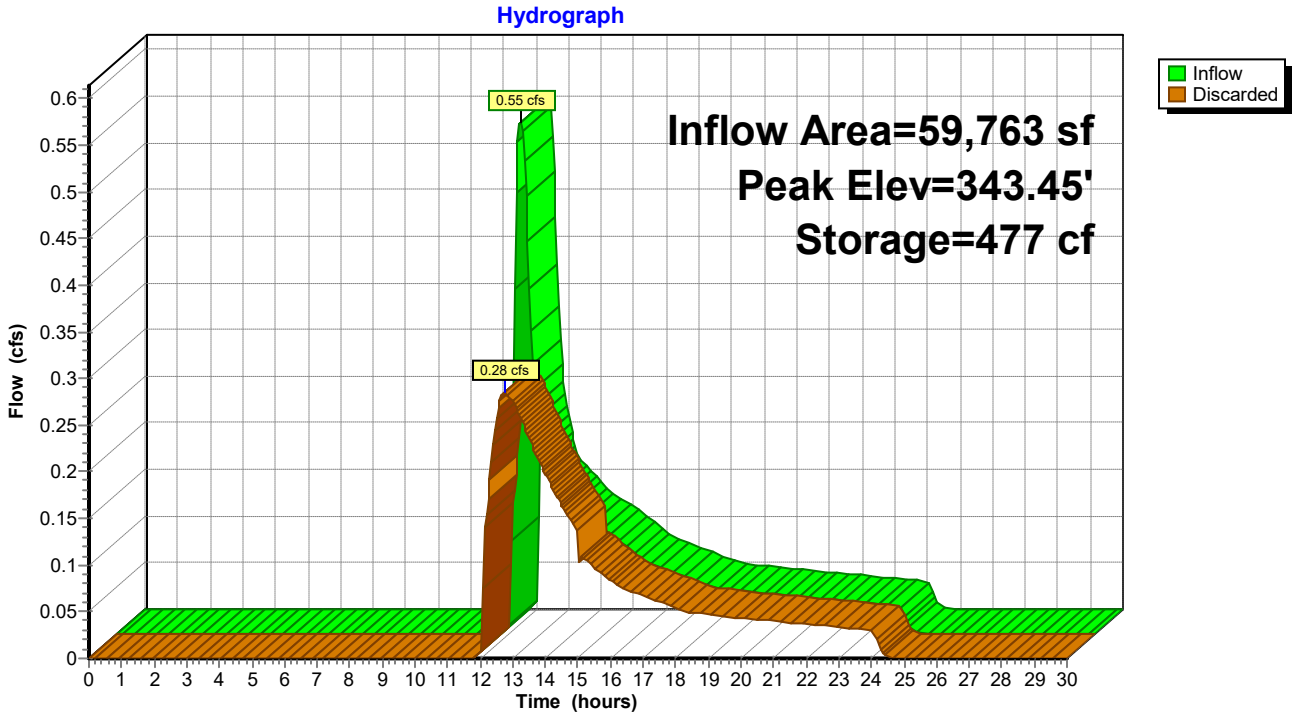
Volume	Invert	Avail.Storage	Storage Description
#1	343.00'	1,470 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
343.00	707	0	0
344.00	2,233	1,470	1,470

Device	Routing	Invert	Outlet Devices
#1	Discarded	343.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 337.80'

Discarded OutFlow Max=0.28 cfs @ 12.76 hrs HW=343.45' (Free Discharge)
└**1=Exfiltration** (Controls 0.28 cfs)

Pond P2: SETTLING POND



Stage-Discharge for Pond P2: SETTLING POND

Elevation (feet)	Discarded (cfs)	Elevation (feet)	Discarded (cfs)
343.00	0.00	343.52	0.31
343.01	0.14	343.53	0.31
343.02	0.14	343.54	0.31
343.03	0.14	343.55	0.32
343.04	0.15	343.56	0.32
343.05	0.15	343.57	0.33
343.06	0.15	343.58	0.33
343.07	0.16	343.59	0.33
343.08	0.16	343.60	0.34
343.09	0.16	343.61	0.34
343.10	0.17	343.62	0.34
343.11	0.17	343.63	0.35
343.12	0.17	343.64	0.35
343.13	0.18	343.65	0.35
343.14	0.18	343.66	0.36
343.15	0.18	343.67	0.36
343.16	0.19	343.68	0.36
343.17	0.19	343.69	0.37
343.18	0.19	343.70	0.37
343.19	0.20	343.71	0.37
343.20	0.20	343.72	0.38
343.21	0.20	343.73	0.38
343.22	0.21	343.74	0.39
343.23	0.21	343.75	0.39
343.24	0.21	343.76	0.39
343.25	0.22	343.77	0.40
343.26	0.22	343.78	0.40
343.27	0.22	343.79	0.40
343.28	0.23	343.80	0.41
343.29	0.23	343.81	0.41
343.30	0.23	343.82	0.41
343.31	0.24	343.83	0.42
343.32	0.24	343.84	0.42
343.33	0.24	343.85	0.42
343.34	0.25	343.86	0.43
343.35	0.25	343.87	0.43
343.36	0.25	343.88	0.44
343.37	0.26	343.89	0.44
343.38	0.26	343.90	0.44
343.39	0.26	343.91	0.45
343.40	0.27	343.92	0.45
343.41	0.27	343.93	0.45
343.42	0.27	343.94	0.46
343.43	0.28	343.95	0.46
343.44	0.28	343.96	0.46
343.45	0.28	343.97	0.47
343.46	0.29	343.98	0.47
343.47	0.29	343.99	0.48
343.48	0.29	344.00	**0.48**
343.49	0.30		
343.50	0.30		
343.51	0.30		

Summary for Pond UGS-B: TO DMH#8

Inflow Area =	67,684 sf, 89.07% Impervious, Inflow Depth = 5.52" for 100-Year event				
Inflow =	9.12 cfs @	12.09 hrs,	Volume=	31,151 cf	
Outflow =	4.64 cfs @	12.24 hrs,	Volume=	31,151 cf,	Atten= 49%, Lag= 9.2 min
Discarded =	1.26 cfs @	12.24 hrs,	Volume=	24,764 cf	
Primary =	3.39 cfs @	12.24 hrs,	Volume=	6,387 cf	

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 352.49' @ 12.24 hrs Surf.Area= 0.074 ac Storage= 0.160 af

Plug-Flow detention time= 26.9 min calculated for 31,100 cf (100% of inflow)
Center-of-Mass det. time= 26.8 min (803.2 - 776.3)

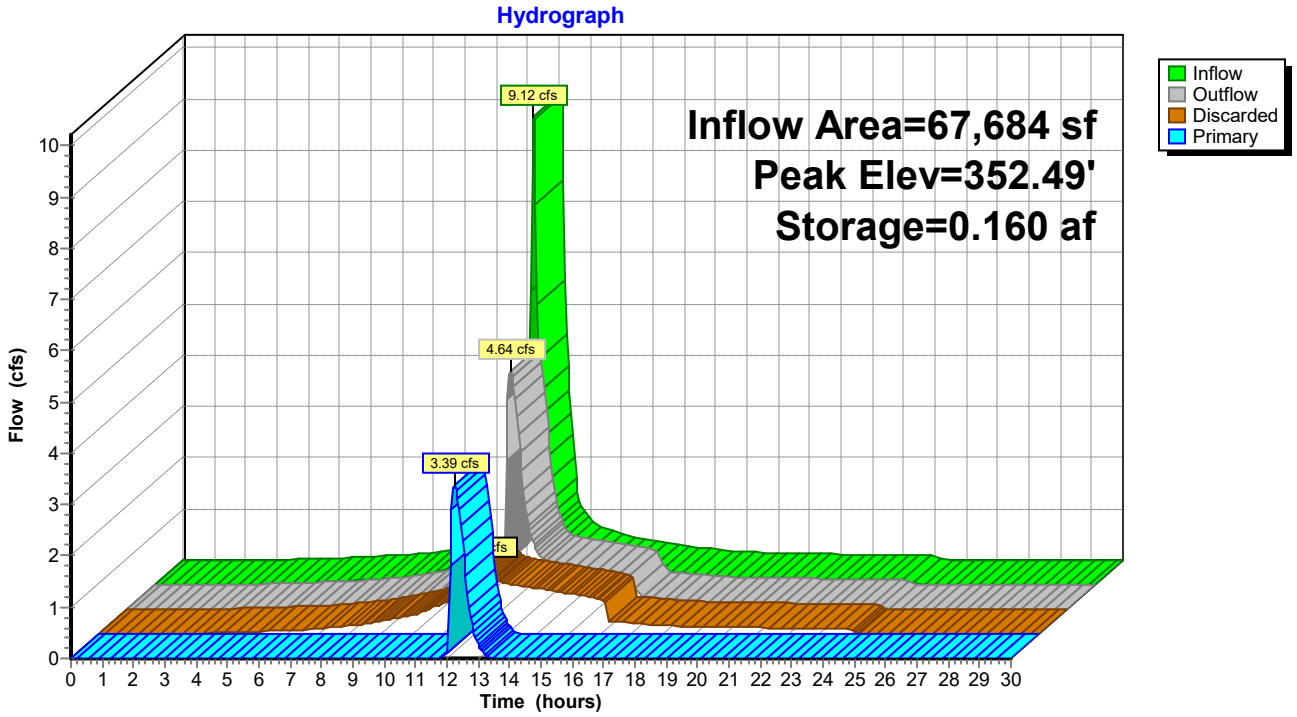
Volume	Invert	Avail.Storage	Storage Description
#1	349.00'	0.082 af	**54.00'W x 60.00'L x 4.00'H Prismatoid** 0.298 af Overall - 0.094 af Embedded = 0.204 af x 40.0% Voids
#2	349.50'	0.094 af	**ADS_StormTech SC-740** x 88 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 11 rows
		0.175 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Device 2	350.80'	**12.0" Round Culvert X 11.00** L= 3.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.80' / 350.80' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Primary	350.70'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.70' / 350.00' S= 0.0175 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Discarded	349.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 345.60'

Discarded OutFlow Max=1.26 cfs @ 12.24 hrs HW=352.48' (Free Discharge)
└─**3=Exfiltration** (Controls 1.26 cfs)

Primary OutFlow Max=3.38 cfs @ 12.24 hrs HW=352.48' (Free Discharge)
└─**2=Culvert** (Inlet Controls 3.38 cfs @ 4.30 fps)
  └─**1=Culvert** (Passes 3.38 cfs of 35.70 cfs potential flow)

Pond UGS-B: TO DMH#8



Stage-Discharge for Pond UGS-B: TO DMH#8

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
349.00	0.00	0.00	0.00
349.05	0.63	0.63	0.00
349.10	0.64	0.64	0.00
349.15	0.65	0.65	0.00
349.20	0.66	0.66	0.00
349.25	0.67	0.67	0.00
349.30	0.67	0.67	0.00
349.35	0.68	0.68	0.00
349.40	0.69	0.69	0.00
349.45	0.70	0.70	0.00
349.50	0.71	0.71	0.00
349.55	0.72	0.72	0.00
349.60	0.73	0.73	0.00
349.65	0.74	0.74	0.00
349.70	0.75	0.75	0.00
349.75	0.76	0.76	0.00
349.80	0.77	0.77	0.00
349.85	0.78	0.78	0.00
349.90	0.78	0.78	0.00
349.95	0.79	0.79	0.00
350.00	0.80	0.80	0.00
350.05	0.81	0.81	0.00
350.10	0.82	0.82	0.00
350.15	0.83	0.83	0.00
350.20	0.84	0.84	0.00
350.25	0.85	0.85	0.00
350.30	0.86	0.86	0.00
350.35	0.87	0.87	0.00
350.40	0.88	0.88	0.00
350.45	0.88	0.88	0.00
350.50	0.89	0.89	0.00
350.55	0.90	0.90	0.00
350.60	0.91	0.91	0.00
350.65	0.92	0.92	0.00
350.70	0.93	0.93	0.00
350.75	0.94	0.94	0.00
350.80	0.95	0.95	0.00
350.85	1.00	0.96	0.05
350.90	1.10	0.97	0.13
350.95	1.18	0.98	0.21
351.00	1.28	0.99	0.29
351.05	1.38	0.99	0.39
351.10	1.50	1.00	0.50
351.15	1.63	1.01	0.62
351.20	1.77	1.02	0.75
351.25	1.91	1.03	0.88
351.30	2.06	1.04	1.02
351.35	2.22	1.05	1.17
351.40	2.38	1.06	1.32
351.45	2.54	1.07	1.47
351.50	2.70	1.08	1.62
351.55	2.85	1.09	1.76
351.60	2.99	1.09	1.90
351.65	3.12	1.10	2.02
351.70	3.22	1.11	2.11
351.75	3.34	1.12	2.21
351.80	3.44	1.13	2.31
351.85	3.55	1.14	2.41
351.90	3.65	1.15	2.50
351.95	3.74	1.16	2.59
352.00	3.84	1.17	2.67
352.05	3.93	1.18	2.75
352.10	4.02	1.19	2.83
352.15	4.10	1.19	2.91
352.20	4.19	1.20	2.99
352.25	4.27	1.21	3.06
352.30	4.35	1.22	3.13
352.35	4.43	1.23	3.20
352.40	4.51	1.24	3.27
352.45	4.59	1.25	3.34
352.50	4.66	1.26	3.40
352.55	4.74	1.27	3.47
352.60	4.81	1.28	3.53
352.65	4.88	1.29	3.60
352.70	4.95	1.30	3.66
352.75	5.02	1.30	3.72
352.80	5.09	1.31	3.78
352.85	5.16	1.32	3.83
352.90	5.22	1.33	3.89
352.95	5.29	1.34	3.95
353.00	**5.36**	**1.35**	**4.01**

Summary for Pond USGD1: TO TEMP SETTLING BASIN

Inflow Area = 56,588 sf, 72.52% Impervious, Inflow Depth = 4.44" for 100-Year event
Inflow = 6.31 cfs @ 12.09 hrs, Volume= 20,935 cf
Outflow = 2.83 cfs @ 12.29 hrs, Volume= 15,024 cf, Atten= 55%, Lag= 11.6 min
Primary = 2.83 cfs @ 12.29 hrs, Volume= 15,024 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 351.40' @ 12.29 hrs Surf.Area= 0.110 ac Storage= 0.198 af

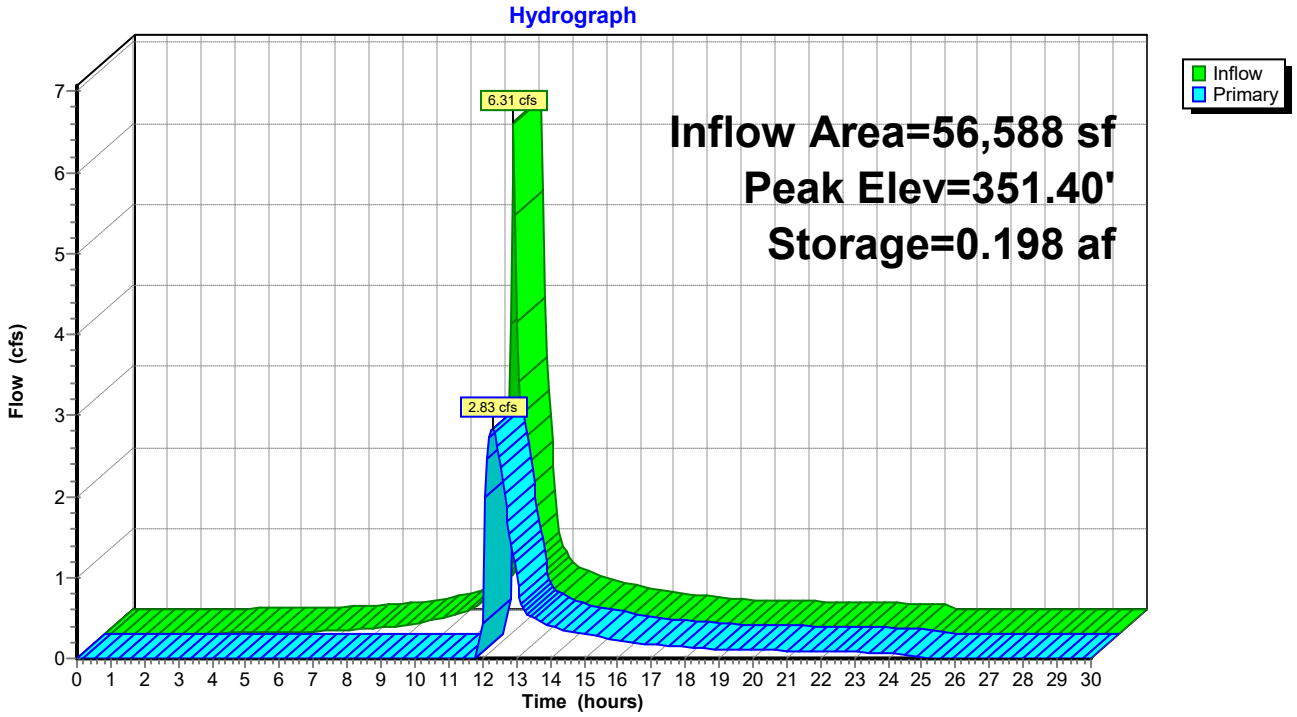
Plug-Flow detention time= 173.1 min calculated for 14,999 cf (72% of inflow)
Center-of-Mass det. time= 81.6 min (877.3 - 795.8)

Volume	Invert	Avail.Storage	Storage Description
#1	348.50'	0.107 af	**60.00'W x 80.00'L x 3.50'H Prismatoid** 0.386 af Overall - 0.118 af Embedded = 0.268 af x 40.0% Voids
#2	349.00'	0.118 af	**ADS_StormTech SC-740** x 111 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 11 rows
		0.225 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Device 2	350.40'	**10.0" Round Culvert X 11.00** L= 3.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.40' / 350.40' S= 0.0000 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf
#2	Primary	350.00'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 350.00' / 349.00' S= 0.0250 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.83 cfs @ 12.29 hrs HW=351.40' (Free Discharge)
└─**2=Culvert** (Inlet Controls 2.83 cfs @ 3.60 fps)
  └─**1=Culvert** (Passes 2.83 cfs of 16.06 cfs potential flow)

Pond USGD1: TO TEMP SETTLING BASIN



Stage-Discharge for Pond USGD1: TO TEMP SETTLING BASIN

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
348.50	0.00	349.54	0.00	350.58	0.70	351.62	3.16
348.52	0.00	349.56	0.00	350.60	0.87	351.64	3.19
348.54	0.00	349.58	0.00	350.62	1.05	351.66	3.22
348.56	0.00	349.60	0.00	350.64	1.14	351.68	3.24
348.58	0.00	349.62	0.00	350.66	1.20	351.70	3.27
348.60	0.00	349.64	0.00	350.68	1.26	351.72	3.30
348.62	0.00	349.66	0.00	350.70	1.32	351.74	3.32
348.64	0.00	349.68	0.00	350.72	1.38	351.76	3.35
348.66	0.00	349.70	0.00	350.74	1.44	351.78	3.38
348.68	0.00	349.72	0.00	350.76	1.50	351.80	3.40
348.70	0.00	349.74	0.00	350.78	1.56	351.82	3.43
348.72	0.00	349.76	0.00	350.80	1.62	351.84	3.46
348.74	0.00	349.78	0.00	350.82	1.68	351.86	3.48
348.76	0.00	349.80	0.00	350.84	1.74	351.88	3.51
348.78	0.00	349.82	0.00	350.86	1.79	351.90	3.53
348.80	0.00	349.84	0.00	350.88	1.85	351.92	3.56
348.82	0.00	349.86	0.00	350.90	1.90	351.94	3.58
348.84	0.00	349.88	0.00	350.92	1.95	351.96	3.61
348.86	0.00	349.90	0.00	350.94	2.00	351.98	3.63
348.88	0.00	349.92	0.00	350.96	2.04	352.00	**3.66**
348.90	0.00	349.94	0.00	350.98	2.08		
348.92	0.00	349.96	0.00	351.00	2.11		
348.94	0.00	349.98	0.00	351.02	2.15		
348.96	0.00	350.00	0.00	351.04	2.19		
348.98	0.00	350.02	0.00	351.06	2.23		
349.00	0.00	350.04	0.00	351.08	2.27		
349.02	0.00	350.06	0.00	351.10	2.31		
349.04	0.00	350.08	0.00	351.12	2.35		
349.06	0.00	350.10	0.00	351.14	2.39		
349.08	0.00	350.12	0.00	351.16	2.43		
349.10	0.00	350.14	0.00	351.18	2.46		
349.12	0.00	350.16	0.00	351.20	2.50		
349.14	0.00	350.18	0.00	351.22	2.53		
349.16	0.00	350.20	0.00	351.24	2.57		
349.18	0.00	350.22	0.00	351.26	2.60		
349.20	0.00	350.24	0.00	351.28	2.64		
349.22	0.00	350.26	0.00	351.30	2.67		
349.24	0.00	350.28	0.00	351.32	2.70		
349.26	0.00	350.30	0.00	351.34	2.74		
349.28	0.00	350.32	0.00	351.36	2.77		
349.30	0.00	350.34	0.00	351.38	2.80		
349.32	0.00	350.36	0.00	351.40	2.83		
349.34	0.00	350.38	0.00	351.42	2.86		
349.36	0.00	350.40	0.00	351.44	2.89		
349.38	0.00	350.42	0.00	351.46	2.93		
349.40	0.00	350.44	0.02	351.48	2.96		
349.42	0.00	350.46	0.06	351.50	2.99		
349.44	0.00	350.48	0.12	351.52	3.02		
349.46	0.00	350.50	0.20	351.54	3.04		
349.48	0.00	350.52	0.30	351.56	3.07		
349.50	0.00	350.54	0.41	351.58	3.10		
349.52	0.00	350.56	0.55	351.60	3.13		

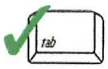
3.0
STORMWATER MANAGEMENT FORMS

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature

COMMONWEALTH OF MASSACHUSETTS
WILLIAM D. HANNIGAN
CIVIL
No. 36439
REGISTERED PROFESSIONAL ENGINEER

Signature and Date 3-26-21

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☒ New development

☐ Redevelopment

☐ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☒ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☒ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
  - ☐ Credit 1
  - ☐ Credit 2
  - ☐ Credit 3
- ☐ Use of "country drainage" versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☒ Other (describe): Deep Sump Catchbasins, Hydroworks Proprietary Unit, Infiltration Basin

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☒ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☒ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☒ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms.** If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do no exceed pre-development rates for the 100-year 24-hour storm. ****With the exception of the DP#4 During all Stormevents, the increases have been determined to be De miminus due to small increase in the rates.***

Standard 3: Recharge

☒ Soil Analysis provided.

☒ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☒ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☒ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☒ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☒ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☒ A Long-Term Pollution Prevention Plan is attached to Stormwater.

☒ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☒ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☒ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist (continued)

Standard 4: Water Quality (continued)

☒ The BMP is sized (and calculations provided) based on:

- ☒ The ½" or 1" Water Quality Volume or
- ☒ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☒ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☒ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas *(Not Applicable)*

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☐ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable- N/A

☐ *Portions of the project are* subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☐ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions. (Reduction in impervious area provided).

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☐ The project is ***not*** covered by a NPDES Construction General Permit

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☒ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☐ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☐ An Illicit Discharge Compliance Statement is attached;

☒ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

Stormwater Compliance Documentation

McGovern Place – Phase II
March 26, 2021

Standard 1: No Untreated Discharges or Erosion to Wetlands

The drainage from the site currently flows to one of fiver Design Point, Design Point (DP#1), which is a southerly point along McGovern Brook, Design Point #2, #3, #4 being low points within the terrain along the southerly limits of the project and Design Point #5 being a drainage ditch to that flows north along Lunenburg Road. These Points have been determined during the course of the previous permitting and design reviews and have been consolidated into single hydrology review for a comprehensive design review.

Flows from the individual building pad site will be designed to accommodate the individual stormwater flows from the sites. The purpose of this review is to analyze the stormwater impacts from the McGovern Boulevard roadway and associated infrastructure. Flows from the roadway have been divided into two areas the, the easterly and westerly portions of the roadway. The westerly portion of the roadway is directed towards a previously constructed detention basin on land of Benter's LLC which was approved and constructed as part of the initial FC Stars Massachusetts Soccer Club. The easterly portion will captured and treated prior to discharge to a rip-rap drainage swale towards Design Point #2.

Provided are the computations showing the calculations per the Connecticut DOT Drainage Manual, Section 11.13 that the proposed rip-rap aprons will provide adequate protection from scouring.

Equation-11.31
L=1.80(Q-5)/Sp^(1.5) + 10

Equation-11.33
W2=3Sp +0.7La

For 18-inch RCP pipe (FE#S1) to Drainage Swale

Qmax=12.15 cfs (100-Year) Sp=18/12 → 1.5ft
L=1.8(12.15-5)/(1.5^1.5) + 10 → 7.0 + 10 = 17.0 → 18 feet
W2=3(1.5) +0.7(18) → 4.5 + 12.6=17.1 → 18 feet

Flows discharged to 100+ft drainage swale with a terminus width of 20-feet

For 30-inch HDPE pipe (EX) to D.BASIN#1

Qmax=30.90 cfs (100-Year) Sp=30/12 → 2.5ft
L=1.8(30.9-5)/(2.5^1.5) + 10 → 11.8 + 10 = 21.8 → 22 feet
W2=3(2.5) +0.7(22) → 7.5 + 15.4 → 23.9 feet

Flows discharged to existing sediment forebay with 35-foot radius

See the narrative within the Drainage Analysis and Report for further information.

Standard 2: Peak Rate Attenuation

As outline above, the post-development peak rates of runoff show a decrease for all design points with the exception of *DP#4*. With respect to peak rates, there are slight increases in the peak rate of runoff at Design Point #4. These increases are primarily attributed to the soil conditions within these subcatchment areas as being well drained soils in the Hydrological Soil Group A. As such, the predevelopment runoff characteristics produce little or no runoff. With an overall post development watershed area of approximately 6.2 acres, these increases would likely be absorbed into the downstream swale bottom and never reach the Nashua River. The flow depths attributed to the runoff to these design points in the 100-year storm event are actually less than 0.17 inches. In the event that these flows do travel through the entire length of the swale system to the Nashua River, they would not generate enough velocity to cause downstream erosion and do not have enough volume to cause an increase in downstream flooding. As such, these increases in peak rate of runoff are considered *de minimis*.

Standard 3: Stormwater Recharge

Impervious Area Proposed: (This area includes all proposed buildings, driveways, etc.) The soils within the developed area are classified as HSG A,B,C,D. DEP Stormwater Management requires the restoration of recharge using infiltration measures.

The soils within the development ***(Roadway Project)*** classified as HSG A:
Existing Impervious HSG-A: 0.00 s.f.
Proposed Impervious HSG-A: 38,457 s.f.
Net New Impervious HSG-A: +38,457 s.f.

The soils within the development ***(Roadway Project)*** classified as HSG B:
Existing Impervious HSG-B: 0.00 s.f.
Proposed Impervious HSG-B: 21,460 s.f.
Net New Impervious HSG-B: +21,460 s.f.

The soils within the development ***(Roadway Project)*** classified as HSG C:
Existing Impervious HSG-C: 0.00 s.f.
Proposed Impervious HSG-C: 8,478 s.f.
Net New Impervious HSG-C: +8,478 s.f.

The soils within the development ***(Roadway Project)*** classified as HSG D:
Existing Impervious HSG-D: 0.00 s.f.
Proposed Impervious HSG-D: 19,059 s.f.
Net New Impervious HSG-D: +19,059 s.f.

Total Impervious for Roadway Project = 87,454 s.f.

Required Recharge Volume:

TOTAL FOR ROADWAY

Net New Impervious HSG A = 38,457 sf
HSG A: 38,457 sf x (0.60 in/12) = 1,923 c.f.
Required Recharge Volume = 1,923 c.f.

Net New Impervious HSG B = 21,460 sf
HSG B: 21,460 sf x (0.35 in/12) = 626 c.f.
Required Recharge Volume = 626 c.f.

Net New Impervious HSG C = 8,478 sf
HSG C: 8,478 sf x (0.25 in/12) = 177 c.f.
Required Recharge Volume = 177 c.f.

Net New Impervious HSG D = 19,059 sf
HSG D: 19,059 sf x (0.10 in/12) = 159 c.f.
Required Recharge Volume = 159 c.f.

Total Recharge (All Soils) = 2,884 c.f.
Total Recharge Required (HSG A & B) = 2,549 c.f.

Capture Rate Calculation

Total Impervious Area 87,454 sf

Impervious to Ex-Basin #1 35,077 sf

Capture Rate-Overall: 35,077 / 87,454 = 40% - *Less than 65% volume requires adjustment*

Volume Adjustment
Roadway Project – Required Recharge Volume

Rv = (1/.40) x 2,549 cf = 6,355 c.f

Adjusted Recharge Volume = 6,355 c.f.

Storage Volume Provided:

Volume below lowest orifice invert within detention facility.
Note: existing basin to be enlarged to accommodate additional flow

D-Basin #1: 65,978 c.f. of storage volume provided
(lowest invert is at an elevation of 338.0 ft)

Infiltration Provided:

Recharge Volume Required: = 5,936 cubic feet.

D-Basin #1: 33,606 c.f. of discarded volume provided (exfiltrated) during 1-year event

Recharge Required:

FC Stars (2016) project	6,739 cubic feet
McGovern Place – Phase II	6,355 cubic feet
Total Required	13,094 cubic feet

Compliance is provided.

Drawdown Time: (72 Hours Max.)

Time = Storage Volume / (K x Bottom Area)
Where K = Saturated Hydraulic Conductivity (inches/hour) (From table 2.3.3 1982 Rawls Rates – Mass Stormwater Handbook)

EX-Basin #1: 65,978 c.f. of storage volume provided.
Time = 65,978 c.f. / (8.27 in/hr x (1 ft/ 12 in) x 17,284 s.f.) = **5.54 hrs**

Compliance is provided.

Groundwater Mounding:

D-Basin #1	Bottom Elevation:	335.0
	Estimated Groundwater Elevation	326.0 (*Observed 8-9-13*)
	Offset to Groundwater Provided:	9.0 feet

The proposed Stormwater Management system utilizes exfiltration as a means of peak rate mitigation. As all BMPs using exfiltration as a means of peak rate mitigation are above the four foot offset to ground water, mounding analysis is not required as part of Stormwater Management Regulations.

Standard 4: Water Quality

Water Quality Volume (WQV) = Water Quality Depth x Impervious Area

Water Quality Depth = 1-inch

WQV = [(1-inch) / 12 inches/foot]x(87,454 s.f.) = 7,288 cf

The flows from this area of the project have been designed to be directed towards one of two Hydroworks Hydroguard unit within DMH#S3 and DMH#S9. The unit has been sized to provide in excess of 80% TSS removal. Due to the unknown traffic that will be generated by the roadway these units have designed to accommodate a LUHPPL which requires a Water Quality volume of 1-inch. The volume of water being treated in this unit during the 1-year storm event at DMH#S3 and DMH#S9 is 11,838 c.f. and 8,103 c.f., respectively for a total of 19,941 cf.

TSS Removal Calculations:
TSS Removal forms are attached for each unit.

Standard 5: Land Uses with Higher Potential Pollutant Loads

This project is for a commercial/industrial subdivision roadway. Due to the unknown future uses, it is anticipated that the overall development will experience in excess of 1,000 trips per day. As such the Water Quality Volume is increased to 1-inch and the pretreatment requirement is 44% prior to discharge.

The proprietary Water Quality Units are able to treat runoff from a LUHPPL as it is considered an oil-grit separator. Prior to discharge the combination of BMPs removes a minimum 80% of TSS, in excess of 44%. Additionally, prior to discharge both a deep sump catch basin and oil grit separator has been incorporated to satisfy Standard 5.

See Operation and Maintenance for Source Control and Pollution Prevention Plan.

Standard 6: Critical Areas

Not Applicable

Standard 7: Redevelopment

Not Applicable

Standard 8: Construction Period Controls

Proper erosion controls have been incorporated into the submitted plans and details to ensure compliance with the standard.

Standard 9: Operation and Maintenance Plan

Operation and Maintenance plans for the project have been incorporated into the submitted plans and details to ensure compliance with the standard.

Standard 10: Illicit Discharges to Drainage System

No Illicit discharges to the drainage system will occur as a result of this proposed project. A No Illicit discharge statement shall be provided prior to construction.

Summary for Pond P1: BASIN#1

[63] Warning: Exceeded Reach D16 INLET depth by 3.83' @ 13.20 hrs
[62] Hint: Exceeded Reach DCB30 OUTLET depth by 1.69' @ 13.25 hrs

Inflow Area =	550,418 sf,	40.76% Impervious,	Inflow Depth =	3.97"	for Custom event
Inflow =	41.81 cfs @	12.16 hrs, Volume=	182,173 cf		
Outflow =	6.17 cfs @	13.01 hrs, Volume=	182,173 cf,	Atten= 85%,	Lag= 50.8 min
Discarded =	6.17 cfs @	13.01 hrs, Volume=	182,173 cf		
Primary =	0.00 cfs @	13.00 hrs, Volume=	0 cf		
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0 cf		

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 338.00' @ 13.01 hrs Surf.Area= 25,023 sf Storage= 65,978 cf <=Storage Volume

Plug-Flow detention time= 95.9 min calculated for 181,870 cf (100% of inflow)
Center-of-Mass det. time= 95.8 min (909.8 - 814.0)

Volume	Invert	Avail.Storage	Storage Description
#1	335.00'	119,716 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
335.00	17,284	0	0
336.00	21,521	19,403	19,403
338.00	25,021	46,542	65,945
340.00	28,750	53,771	119,716

Device	Routing	Invert	Outlet Devices
#1	Primary	332.60'	**12.0" Round Culvert** L= 223.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 332.60' / 331.50' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	335.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 326.00'
#3	Device 1	338.00'	**6.0" Vert. Orifice/Grate X 3.00** C= 0.600
#4	Secondary	339.00'	**14.0' 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

Discarded OutFlow Max=6.17 cfs @ 13.01 hrs HW=338.00' (Free Discharge)
└─**2=Exfiltration** (Controls 6.17 cfs)

Primary OutFlow Max=0.00 cfs @ 13.00 hrs HW=338.00' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 4.95 cfs potential flow)
└─**3=Orifice/Grate** (Orifice Controls 0.00 cfs @ 0.12 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond P1: BASIN#1

[63] Warning: Exceeded Reach D16 INLET depth by 1.35' @ 0.00 hrs

Inflow Area =	556,613 sf,	40.37% Impervious,	Inflow Depth =	0.72"	for 1-Year event
Inflow =	8.27 cfs @	12.17 hrs, Volume=	33,606 cf		
Outflow =	3.63 cfs @	12.48 hrs, Volume=	33,606 cf,	Atten= 56%, Lag= 18.8 min	
Discarded =	3.63 cfs @	12.48 hrs, Volume=	33,606 cf	<=Recharge Volume	
Primary =	0.00 cfs @	0.00 hrs, Volume=	0 cf		
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0 cf		

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 335.27' @ 12.48 hrs Surf.Area= 18,426 sf Storage= 4,811 cf

Plug-Flow detention time= 8.9 min calculated for 33,550 cf (100% of inflow)
Center-of-Mass det. time= 8.9 min (851.4 - 842.5)

Volume	Invert	Avail.Storage	Storage Description
#1	335.00'	119,716 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
335.00	17,284	0	0
336.00	21,521	19,403	19,403
338.00	25,021	46,542	65,945
340.00	28,750	53,771	119,716

Device	Routing	Invert	Outlet Devices
#1	Primary	332.60'	**12.0" Round Culvert** L= 223.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 332.60' / 331.50' S= 0.0049 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Discarded	335.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 326.00'
#3	Device 1	338.00'	**6.0" Vert. Orifice/Grate X 3.00** C= 0.600
#4	Secondary	339.00'	**14.0' 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

Discarded OutFlow Max=3.63 cfs @ 12.48 hrs HW=335.27' (Free Discharge)
└─**2=Exfiltration** (Controls 3.63 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 3.34 cfs potential flow)
└─**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=335.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

MASS DEP "Standard Method to Convert Required Water Quality Volume to a Discharge Rate for Sizing Flow Based Manufactured Proprietary Stormwater Treatment Practices"

DMH#S3-Water Quality Unit

For First 1-Inch Runoff WQV

Step 1: Area of Impervious Surface to Structure

2.35 acres @ 80.50% Impervious = 1.89 Acres Impervious
1.89 Acres x .0015625 sq mi = ***2.95(-3) square miles.***

Step 2: Tc of Train

P-S108 to DCB#R100:	5.0 min
DCB#R100 to DMH#R100	2.6 min
DMH#R100 to DMH#R101	2.1 min
DMH#R101 to DMH#S1	3.1 min
DMH#S1 to DMH#S2:	3.3 min
DMH#S2 to DMH#S3:	0.3 min
Total Tc to DMH#S3	***16.4 min or 0.27 hours***

Step 3: Determine qu

From Figure 4:

Tc @ 0.25, qu=628 csm/in

Step 4: Determine Q1

Q1=(qu)x(A)x(WQV)

Q1=(628csm/in)x(2.95e-3)x(1 in)

Q1=1.86 CFS

Determination

Determination of Water Quality Flow rates for units by New Jersey Corporation for Advanced Technology (NJCAT) Program

From Technology Verification
HG 6 Treatment Flow rate
2.6 cf.s > 1.86 c.f.s. *"Pass"*

HydroGuard HG6 to be utilized in Design.

Summary for Reach DMH-S3: TO FE-S1

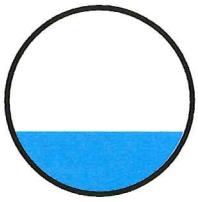
[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach DMH-S2 outlet invert by 0.30' @ 12.10 hrs

Inflow Area = 102,372 sf, 80.49% Impervious, Inflow Depth = 1.39" for 1-Year event
Inflow = 3.30 cfs @ 12.11 hrs, Volume= 11,838 cf <=Water Quality Volume
Outflow = 3.29 cfs @ 12.11 hrs, Volume= 11,838 cf, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.33 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.10 fps, Avg. Travel Time= 0.2 min

Peak Storage= 13 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.50'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.60 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 25.0' Slope= 0.0120 '/'
Inlet Invert= 346.00', Outlet Invert= 345.70'



Summary for Subcatchment P-S108: TO DCB-R100

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.38 cfs @ 12.07 hrs, Volume= 1,172 cf, Depth= 1.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.50"

Area (sf)	CN	Description
847	39	>75% Grass cover, Good, HSG A
7,457	98	Paved parking, HSG A
8,304	92	Weighted Average
847		10.20% Pervious Area
7,457		89.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	50	0.0050	0.67		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
3.1	265	0.0050	1.44		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.4	315	Total, Increased to minimum Tc = 5.0 min <=Tc			

Summary for Reach DCBR100: TO DMH R100

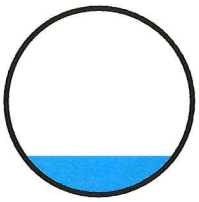
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 8,304 sf, 89.80% Impervious, Inflow Depth = 1.69" for 1-Year event
Inflow = 0.38 cfs @ 12.07 hrs, Volume= 1,172 cf
Outflow = 0.36 cfs @ 12.10 hrs, Volume= 1,172 cf, Atten= 4%, Lag= 1.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.14 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 1.05 fps, Avg. Travel Time= 2.6 min <=Tc

Peak Storage= 19 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.21'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.91 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 162.0' Slope= 0.0086 '/'
Inlet Invert= 354.50', Outlet Invert= 353.10'



Summary for Reach DMHR100: TO DMH-R101

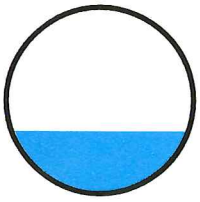
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach DCBR100 OUTLET depth by 0.03' @ 12.10 hrs

Inflow Area =	27,171 sf,	83.67% Impervious,	Inflow Depth =	1.43"	for 1-Year event
Inflow =	1.02 cfs @	12.09 hrs, Volume=	3,233 cf		
Outflow =	0.99 cfs @	12.11 hrs, Volume=	3,233 cf,	Atten= 3%,	Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.44 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.47 fps, Avg. Travel Time= 2.1 min <=Tc

Peak Storage= 43 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.23 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 188.0' Slope= 0.0101 '/'
Inlet Invert= 353.00', Outlet Invert= 351.10'



Summary for Reach DMH-R101: TO DMH-S1

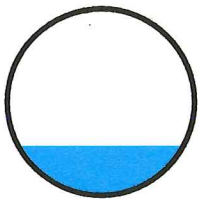
[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach DMHR100 outlet invert by 0.23' @ 12.10 hrs

Inflow Area = 40,822 sf, 73.55% Impervious, Inflow Depth = 1.11" for 1-Year event
Inflow = 1.14 cfs @ 12.11 hrs, Volume= 3,792 cf
Outflow = 1.08 cfs @ 12.14 hrs, Volume= 3,792 cf, Atten= 5%, Lag= 2.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.26 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.44 fps, Avg. Travel Time= 3.1 min<=Tc

Peak Storage= 69 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 7.27 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 265.0' Slope= 0.0091 '/'
Inlet Invert= 351.00', Outlet Invert= 348.60'



Summary for Reach DMH-S1: TO DMH-S2

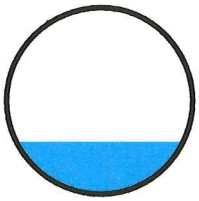
[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach DMH-R101 outlet invert by 0.32' @ 12.15 hrs

Inflow Area = 59,366 sf, 76.73% Impervious, Inflow Depth = 1.21" for 1-Year event
Inflow = 1.70 cfs @ 12.11 hrs, Volume= 5,965 cf
Outflow = 1.64 cfs @ 12.15 hrs, Volume= 5,965 cf, Atten= 4%, Lag= 2.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.09 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 1.39 fps, Avg. Travel Time= 3.3 min <=Tc

Peak Storage= 114 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.42'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 9.69 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 279.0' Slope= 0.0061 '/'
Inlet Invert= 348.50', Outlet Invert= 346.80'



Summary for Reach DMH-S2: TO DMH-S3

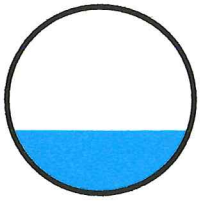
[52] Hint: Inlet/Outlet conditions not evaluated
[63] Warning: Exceeded Reach DCB-S3 INLET depth by 0.02' @ 12.15 hrs
[63] Warning: Exceeded Reach DCB-S4 INLET depth by 0.06' @ 12.15 hrs
[61] Hint: Exceeded Reach DMH-S1 outlet invert by 0.40' @ 12.10 hrs

Inflow Area = 102,372 sf, 80.49% Impervious, Inflow Depth = 1.39" for 1-Year event
Inflow = 3.31 cfs @ 12.11 hrs, Volume= 11,838 cf
Outflow = 3.30 cfs @ 12.11 hrs, Volume= 11,838 cf, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.32 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.10 fps, Avg. Travel Time= 0.3 min <=Tc

Peak Storage= 22 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.51'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 13.55 cfs

18.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 42.0' Slope= 0.0119 '/'
Inlet Invert= 346.70', Outlet Invert= 346.20'



INSTRUCTIONS:

Non-automated: Mar. 4, 2008

1. Sheet is nonautomated. Print sheet and complete using hand calculations. Column A and B: See MassDEP Structural BMP Table
2. The calculations must be completed using the Column Headings specified in Chart and Not the Excel Column Headings
3. To complete Chart Column D, multiple Column B value within Row x Column C value within Row
4. To complete Chart Column E value, subtract Column D value within Row from Column C within Row
5. Total TSS Removal = Sum All Values in Column D

Location: DMH#S3

TSS Removal Calculation Worksheet

A BMP[1]	B TSS Removal Rate[1]	C Starting TSS Load*	D Amount Removed (B*C)	E Remaining Load (C-D)
Hooded and Deep sump catchbasin	0.25	1.00	0.25	0.75
Hydroworks HG6	0.75	0.75	0.56	0.19

Total TSS Removal = 81%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: McGovern Place - Phase II

Prepared By: Hannigan Engineering, Inc.

Date: 3/29/2021

*Equals remaining load from previous BMP (E) which enters the BMP

```
**************************************************
*      Storm Water Management Sizing Model       *
*               Hydroworks, LLC                  *
*                Version 4.4                     *
*                                                *
*        Continuous Simulation Program           *
*              Based on SWMM 4.4H                *
*              Hydroworks, LLC                   *
*               Graham Bryant                    *
*                2003 - 2013                     *
**************************************************

                 Developed by

**************************************************
*               Hydroworks, LLC                  *
*             Metcalf & Eddy, Inc.               *
*            University of Florida               *
*       Water Resources Engineers, Inc.          *
*      (Now Camp Dresser & McKee, Inc.)          *
*              Modified SWMM 4.4                 *
**************************************************

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*              www.hydroworks.com                *
*                                                *
**************************************************

**************************************************
*     If any problems occur executing this       *
*     model, contact Mr. Graham Bryant at        *
*     Hydroworks, LLC by phone at 908-272-4411   *
*     or by e-mail: support@hydroworks.com       *
**************************************************

**************************************************
*     This model is based on EPA SWMM 4.4        *
*  "Nature is full of infinite causes which      *
*   have never occurred in experience" da Vinci  *
**************************************************


**************************************************
* Entry made to the Rain Block                   *
* Created by the University of Florida - 1988    *
* Updated by Oregon State University, March 2000 *
**************************************************
```

McGovern Boulevard, Lancaster, MA
DMH#S3

```
#########################################
#  Precipitation Block Input Commands  #
#########################################

Station Name........................  Worcester Wso Ap

Station Location....................  Massachusetts

Station, ISTA.......................    9923

Beginning date, IYBEG (Yr/Mo/Dy......  1957/ 1/ 1

Ending date, IYEND (Yr/Mo/Dy)........  2001/12/31

Minimum interevent time, MIT.........     1

Number of ranked storms, NPTS........    10

NWS format, IFORM (See text).........     1

Print storm summary, ISUM (O-No 1-Yes)    0

Print all rainfall, IYEAR (O-No 1-Yes)    0

Save storm event data on NSCRAT(1)....    0
(IFILE =0 -Do not save, =1 -Save data)

IDECID 0 - Create interface file
       1 - Create file and analyze
       2 - Synoptic analysis.........     2

Plotting position parameter, A........  0.40

Storm event statistics, NOSTAT........  1100


KODEA (from optional group B0)........     2
 = 0, Do not include NCDC cumulative values.
 = 1, Average NCDC cumulative values.
 = 2, Use NCDC cumulative value as inst. rain.

KODEPR (from optional group B0).......     0
 Print NCDC special codes in event summary:
 = 0, only on days with events.
 = 1, on all days with codes present.
 Codes: A = accumulated value, I = incomplete value,
        M = missing value,     O = other code present
```

```
*****************************************************
*  Precipitation output created using the Rain block   *
*  Number of precipitation stations...        1        *
*****************************************************

Location Station Number
-------- --------------
       1.     9923


STATION ID ON PRECIP. DATA INPUT FILE = 2302
REQUESTED STATION ID =     9923  CHECK TO BE SURE THEY MATCH.



$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
Note, 15-min. data are being processed, but hourly
print-out, summaries, and statistics are based on
hourly totals only.  Data placed on interface file
are at correct 15-min. intervals.
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

##################################################
# Entry made to the Runoff Block, last updated by #
# Oregon State University, and Camp, Dresser and  #
# McKee, Inc., March 2002.                        #
##################################################
# "And wherever water goes, amoebae go along for  #
#  the ride"                      Tom Robbins     #
##################################################


                    McGovern Boulevard, Lancaster, MA

                    DMH#S3


Snowmelt parameter - ISNOW......................          0

Number of rain gages - NRGAG....................          1

Horton infiltration equation used - INFILM.......          2
Maximum infiltration volume is limited to RMAXINF input on  subcatchment lines.
Infiltration volume regenerates during  non rainfall periods.

Quality is simulated - KWALTY...................          1

IVAP is negative.  Evaporation will be set to zero
    during time steps with rainfall.

Read evaporation data on line(s) F1 (F2) - IVAP..          1
```

```
Hour of day at start of storm - NHR.............          1

Minute of hour at start of storm - NMN..........          1

Time TZERO at start of storm (hours)............      1.017

Use U.S. Customary units for most I/O - METRIC...          0

Runoff input print control...                              0

Runoff graph plot control....                              1

Runoff output print control..                              0

Print headers every 50 lines - NOHEAD (0=yes, 1=no)        0

Print land use load percentages -LANDUPR (0=no, 1=yes)     0

Limit number of groundwater convergence messages to 10000 (if simulated)

Month, day, year of start of storm is:              1/ 1/1957

Wet time step length (seconds).......                   300.

Dry time step length (seconds).......                   900.

Wet/Dry time step length (seconds)...                   450.

Simulation length is......                       20011231.0 Yr/Mo/Dy

Percent of impervious area with zero detention depth    25.0

Horton infiltration model being used
Rate for regeneration of infiltration = REGEN * DECAY
DECAY is read in for each subcatchment
REGEN = ........................................   0.01000
```

```
*******************************************************
*   Processed Precipitation will be read from file     *
*******************************************************

  ############################
  #        Data Group F1      #
  # Evaporation Rate (in/day) #
  ############################
```

JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
0.00	0.00	0.00	0.10	0.10	0.15	0.15	0.15	0.10	0.10	0.00	0.00

```
*********************************************************
*        C H A N N E L   A N D   P I P E   D A T A      *
*********************************************************
```

Input equen umber	NAMEG: Channel ID #	Drains to NGTO:	Channel Type	Width (ft)	Length (ft)	Invert Slope (ft/ft)	L Side Slope (ft/ft)	R Side Slope (ft/ft)	Intial Depth (ft)	Max Depth (ft)	Mann- ings "N"	Full Flow (cfs)
1	201	200	Dummy	0.0	0.0	0.0000	0.0000	0.0000	0.0	0.0	0.0000	0.00E+00

```
**************************************************
*          S U B C A T C H M E N T   D A T A      *
**************************************************
```

NOTE. SEE LATER TABLE FOR OPTIONAL SUBCATCHMENT PARAMETERS

SUBCATCH- MENT NO.	CHANNEL OR INLET	WIDTH (FT)	AREA (AC)	PERCENT IMPERV.	SLOPE (FT/FT)	RESISTANCE IMPERV.	FACTOR PERV.	DEPRES. IMPERV.	STORAGE(IN) PERV.	INFILTRATION RATE(IN/HR) MAXIMUM	MINIMUM	DECAY RATE (1/SEC)	GAGE NO.	MAXIMUM VOLUME (INCHES)
1	300	200	319.95	2.35	80.50	0.0200	0.015	0.250	0.020	0.200	2.50	0.40	0.00055	1	4.00000

```
TOTAL NUMBER OF SUBCATCHMENTS...          1
TOTAL TRIBUTARY AREA (ACRES)....       2.35
IMPERVIOUS AREA (ACRES).........       1.89
PERVIOUS AREA (ACRES)...........       0.46
TOTAL WIDTH (FEET)..............     319.95
PERCENT IMPERVIOUSNESS..........      80.50
```

```
*******************************************************
*     G R O U N D W A T E R   I N P U T   D A T A     *
*******************************************************
```

SUB-CATCH NUMBER	CHANNEL OR INLET	ELEVATIONS GROUND (FT)	BOTTOM (FT)	STAGE (FT)	BC (FT)	TW (FT)	FLOW CONSTANTS A1 (IN/HR-FT^B1)	B1	A2 (IN/HR-FT^B2)	B2	A3 (IN/HR-FT^2)
0	602	10.00	0.00	0.00	2.00	2.00	4.500E-05	2.600	0.000E+00	1.000	0.00E+00

```
*******************************************************
* G R O U N D W A T E R   I N P U T   D A T A (CONTINUED) *
*******************************************************
```

S O I L   P R O P E R T I E S

SUBCAT. NO.	POROSITY	SATURATED HYDRAULIC CONDUCTIVITY (in/hr)	WILTING POINT	FIELD CAPACITY	INITIAL MOISTURE	MAX. DEEP PERCOLATION (in/hr)	PERCOLATION PARAMETERS HCO	PCO	ET PARAMETERS DEPTH OF ET (ft)	FRACTION OF ET TO UPPER ZONE
0	.4000	5.000	.1500	.3000	.3000	2.000E-03	10.00	15.00	14.00	0.350

```
*******************************************************
*    Arrangement of Subcatchments and Channel/Pipes     *
*******************************************************
* See second subcatchment output table for connectivity *
* of subcatchment to subcatchment flows.                *
*******************************************************

   Channel
   or Pipe
       201     No Tributary Channel/Pipes
               No Tributary Subareas.....


    INLET
       200     Tributary Channel/Pipes...        201
               Tributary Subareas........        300


*********************************************************
* Hydrographs will be stored for the following   1 INLETS *
*********************************************************
          200

↑
##################################################
#              Quality Simulation                #
##################################################
#      General Quality Control Data Groups       #
##################################################

 Description                          Variable       Value
 -----------                          --------       -----

 Number of quality constituents.....   NQS.......        1

 Number of land uses................  JLAND.......        1

 Standard catchbasin volume.........  CBVOL.......     4.00 cubic feet

 Erosion is not simulated.........    IROS........        0

 DRY DAYS PRIOR TO START OF STORM... DRYDAY.......     3.00 DAYS

 DRY DAYS REQUIRED TO RECHARGE
 CATCHBASIN CONCENTRATION TO
 INITIAL VALUES..................... DRYBSN.......     5.00 DAYS

 DUST AND DIRT
 STREET SWEEPING EFFICIENCY......... REFFDD.......    0.000

 DAY OF YEAR ON WHICH STREET
 SWEEPING BEGINS.................... KLNBGN.......      120

 DAY OF YEAR ON WHICH STREET
 SWEEPING ENDS...................... KLNEND.......      270
```

```
##########################################
#     Land use data on data group J2     #
##########################################
```

AND USE LNAME)	BUILDUP EQUATION TYPE (METHOD)	FUNCTIONAL DEPENDENCE OF BUILDUP PARAMETER(JACGUT)	LIMITING BUILDUP QUANTITY (DDLIM)	BUILDUP POWER (DDPOW)	BUILDUP COEFF. (DDFACT)	CLEANING INTERVAL IN DAYS (CLFREQ)	AVAIL. FACTOR FRACTION (AVSWP)	DAYS SINCE LAST SWEEPING (DSLCL)
Urban De	EXPONENTIAL(1)	AREA(1)	2.500E+01	0.500	60.000	30.000	0.300	30.000

```
##############################################
#     Constituent data on data group J3      #
##############################################
```

	Total Su
Constituent units.....	mg/l
Type of units.....	0
KALC.....	2
Type of buildup calc.....	EXPONENTIAL(2)
KWASH.....	0
Type of washoff calc.....	POWER EXPONEN.(0)
KACGUT.....	1
Dependence of buildup....	AREA(1)
LINKUP.....	0
Linkage to snowmelt.....	NO SNOW LINKAGE
Buildup param 1 (QFACT1).	25.000
Buildup param 2 (QFACT2).	0.500
Buildup param 3 (QFACT3).	60.000
Buildup param 4 (QFACT4).	0.000
Buildup param 5 (QFACT5).	0.000
Washoff power (WASHPO)...	1.100
Washoff coef. (RCOEF)....	3.000
Init catchb conc (CBFACT)	100.000
Precip. conc. (CONCRN)...	0.000
Street sweep effic (REFF)	0.000
Remove fraction (REMOVE).	0.000
1st order QDECAY, 1/day..	0.000
Land use number.....	1

```
************************************************
* Constant Groundwater Quality Concentration(s) *
************************************************
```

Total Susp has a concentration of.. 0.0000 mg/l

```
**********************************************
* REMOVAL FRACTIONS FOR SELECTED CHANNEL/PIPES *
* FROM J7 LINES                                *
**********************************************

  CHANNEL/   CONSTITUENT
     PIPE Total Susp
---------- --------
       201    0.000


*****************************************************
*     Subcatchment surface quality on data group L1 *
*****************************************************
```

	No.	Land Usage	Land Use No.	Total Gutter Length 10**2ft	Number of Catch-Basins	Input Loading load/ac Total Su
1	300	Urban De	1	6.40	1.00	0.0E+00
Totals (Loads in lb or other)				6.40	1.00	0.0E+00

```
    ***********************
    *    DATA GROUP M1    *
    ***********************


TOTAL NUMBER OF PRINTED GUTTERS/INLETS...NPRNT..        1
NUMBER OF TIME STEPS BETWEEN PRINTINGS..INTERV..        0
STARTING AND STOPPING PRINTOUT DATES............        0        0


    ***********************
    *    DATA GROUP M3    *
    ***********************

CHANNEL/INLET PRINT DATA GROUPS......       -200


          *****************************************
          * Rainfall from Nat. Weather Serv. file  *
          * in units of hundredths of an inch      *
          *****************************************

         McGovern Boulevard, Lancaster, MA
         DMH#S3
```

Rainfall Station Worcester Wso Ap
State/Province Massachusetts

Rainfall Depth Summary (in)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1957.	0.4	1.4	2.8	3.6	3.4	3.0	1.1	2.8	1.1	3.8	5.7	7.3	36.5
1958.	9.0	2.9	4.9	7.2	4.3	2.8	6.1	4.4	8.1	2.8	5.0	3.2	60.8
1959.	5.1	2.8	8.2	4.2	2.4	4.7	8.4	4.5	3.1	8.3	6.1	5.1	62.9
1960.	2.4	6.3	4.2	5.4	5.9	3.1	7.2	3.9	7.0	3.0	4.0	5.0	57.4
1961.	3.7	2.5	5.8	5.2	4.2	2.5	4.3	5.3	6.1	3.5	3.3	5.1	51.5
1962.	2.4	5.4	2.6	3.9	4.4	3.5	2.1	4.6	5.7	9.2	4.9	5.8	54.4
1963.	4.2	3.4	4.7	1.9	3.6	2.6	2.0	3.0	4.9	1.7	8.8	3.3	44.0
1964.	5.9	3.6	4.2	4.5	1.5	1.8	3.6	2.9	2.1	2.5	3.5	6.2	42.4
1965.	3.1	4.9	2.7	3.9	3.1	2.0	2.0	3.2	3.8	2.3	3.2	2.9	37.1
1966.	4.4	4.4	3.2	1.7	3.8	2.6	3.5	2.0	7.5	3.5	4.9	4.2	45.6
1967.	2.8	3.7	4.9	5.2	7.4	3.9	6.5	3.5	5.2	2.4	5.1	5.0	55.7
1968.	3.7	1.4	7.9	2.3	7.1	8.4	1.9	0.7	2.2	2.4	6.2	6.5	50.7
1969.	1.8	4.2	2.7	5.6	3.4	1.7	4.3	4.7	5.4	1.8	7.1	8.5	51.1
1970.	2.2	5.5	4.1	3.9	6.1	2.9	0.9	5.8	3.6	3.0	4.0	3.9	45.7
1971.	3.2	5.9	1.9	2.0	5.6	2.6	4.9	8.0	1.6	3.6	5.5	3.7	48.3
1972.	3.1	8.2	6.1	4.8	8.4	9.7	6.6	5.1	3.3	6.0	10.2	6.4	77.7
1973.	4.4	4.1	4.9	5.7	4.8	7.3	4.1	4.4	4.1	4.8	3.9	8.8	61.1
1974.	4.2	3.4	5.6	3.6	6.3	3.8	3.4	3.7	13.4	3.6	5.7	4.1	61.0
1975.	6.9	3.3	5.9	1.3	2.0	3.8	4.3	5.1	7.6	6.6	6.0	5.2	57.9
1976.	6.9	2.9	4.5	2.5	3.2	2.8	3.6	6.6	2.3	5.3	1.0	3.4	45.0
1977.	2.4	3.2	6.4	4.2	2.7	4.2	4.8	2.4	8.2	5.6	4.2	6.8	55.0
1978.	11.9	1.8	3.4	2.5	3.8	1.8	3.8	5.4	1.3	4.1	2.5	4.3	46.5
1979.	12.2	3.1	4.0	5.5	4.7	0.6	6.1	7.7	4.1	4.9	4.1	1.8	58.8
1980.	0.8	1.2	7.4	5.2	2.4	4.8	3.9	2.1	3.3	5.4	4.8	2.2	43.4
1981.	1.9	9.4	1.4	4.9	4.1	2.7	8.2	1.2	5.5	5.7	3.9	6.1	55.0
1982.	4.4	4.0	4.2	4.8	3.4	13.1	6.0	2.0	2.1	3.2	4.6	3.9	55.7
1983.	5.3	5.3	9.0	8.4	7.3	2.7	0.9	6.4	1.5	6.3	9.3	7.1	69.5
1984.	3.3	6.7	6.3	5.1	10.3	3.3	6.4	1.2	2.8	3.3	3.0	3.4	55.1
1985.	1.9	3.6	3.5	3.0	5.1	5.2	6.6	4.1	4.7	3.0	7.3	2.7	50.7
1986.	5.5	3.5	3.6	1.9	3.4	9.6	3.5	3.6	0.9	3.0	6.7	7.8	52.9
1987.	6.2	1.9	5.8	9.9	1.5	5.0	1.0	5.4	6.7	4.5	3.1	2.6	53.6
1988.	3.7	3.5	3.3	3.8	5.1	1.4	6.7	4.5	1.2	5.9	5.9	1.8	46.8
1989.	1.6	3.4	3.0	4.8	6.6	7.3	4.6	5.9	5.1	0.0	0.0	0.0	42.3
1991.	0.0	0.0	0.0	0.0	0.0	0.0	3.2	8.1	6.9	3.8	6.0	3.5	31.5
1992.	3.1	3.3	4.7	3.2	2.7	5.0	5.7	7.2	2.3	2.4	6.3	5.1	50.9
1993.	3.2	2.9	7.1	4.0	1.9	2.9	3.4	2.1	9.4	4.0	5.2	5.8	51.8
1994.	6.0	2.9	6.6	2.9	6.8	2.5	3.2	8.0	5.3	1.3	6.0	4.2	55.7
1995.	5.9	2.3	2.2	2.5	0.0	0.0	4.7	2.1	3.7	8.8	5.2	1.4	38.8
1996.	7.1	3.3	2.5	7.3	4.1	3.1	6.3	4.5	4.9	4.9	3.0	5.0	55.8
1997.	3.3	1.7	4.6	3.4	2.6	1.6	3.2	2.8	1.6	1.8	5.5	2.3	34.4
1998.	3.9	2.8	6.3	2.8	5.7	9.7	1.8	2.3	1.2	5.0	2.4	1.4	45.4
1999.	7.0	2.4	4.6	1.1	3.3	1.8	2.4	2.4	8.6	4.6	3.1	4.3	45.7
2000.	3.5	3.3	4.2	7.6	4.2	5.4	4.5	2.5	3.4	2.4	4.0	4.2	49.3
2001.	2.2	3.2	7.4	1.0	3.9	5.0	3.7	1.1	3.5	0.9	1.7	3.2	36.7

Total Rainfall Depth for Simulation Period 2227.9 (in)

Rainfall Intensity Analysis (in/hr)

(in/hr)	(#)	(%)	(in)	(%)
0.10	55294	69.5	679.	30.5
0.20	15423	19.4	571.	25.6
0.30	3295	4.1	211.	9.5
0.40	2538	3.2	224.	10.1
0.50	868	1.1	100.	4.5
0.60	597	0.8	80.	3.6
0.70	577	0.7	92.	4.1
0.80	337	0.4	64.	2.9
0.90	120	0.2	26.	1.2
1.00	123	0.2	29.	1.3
1.10	70	0.1	18.	0.8
1.20	64	0.1	18.	0.8
1.30	56	0.1	17.	0.8
1.40	38	0.0	13.	0.6
1.50	18	0.0	7.	0.3
1.60	38	0.0	15.	0.7
1.70	16	0.0	7.	0.3
1.80	28	0.0	12.	0.6
1.90	14	0.0	7.	0.3
2.00	16	0.0	8.	0.4
> 2.00	48	0.1	30.	1.3

Total # of Intensities 79578

Daily Rainfall Depth Analysis (in)

(in)	(#)	(%)	(in)	(%)
0.10	1790	31.7	85.	3.8
0.20	996	17.7	143.	6.4
0.30	575	10.2	138.	6.2
0.40	489	8.7	166.	7.4
0.50	302	5.4	134.	6.0
0.60	279	4.9	152.	6.8
0.70	209	3.7	134.	6.0
0.80	152	2.7	113.	5.1
0.90	128	2.3	108.	4.8
1.00	126	2.2	119.	5.3
1.10	89	1.6	93.	4.2
1.20	79	1.4	90.	4.1
1.30	69	1.2	86.	3.9
1.40	49	0.9	66.	3.0
1.50	56	1.0	81.	3.6
1.60	44	0.8	68.	3.0
1.70	39	0.7	64.	2.9
1.80	28	0.5	49.	2.2
1.90	20	0.4	37.	1.6

```
  2.00     16       0.3       31.       1.4
> 2.00    104       1.8      270.      12.1

Total # Days with Rain   5639

***********************************************
*      End of time step DO-loop in Runoff     *
***********************************************

Final Date (Mo/Day/Year)   =                  1/ 1/2002
Total number of time steps =                    3056105
Final Julian Date  =                            2002001
Final time of day  =                                 2. seconds.
Final time of day  =                              0.00   hours.
Final running time =                        394464.0000   hours.
Final running time =                         16436.0000    days.

**************************************************
*     Extrapolation Summary for Watersheds       *
* # Steps ==> Total Number of Extrapolated Steps *
* # Calls ==> Total Number of OVERLND Calls      *
**************************************************

 Subcatch   # Steps   # Calls  Subcatch   # Steps   # Calls  Subcatch   # Steps   # Calls
 --------   -------   -------  --------   -------   -------  --------   -------   -------
      300  13617517   3411943

**************************************************
*     Extrapolation Summary for Channel/Pipes    *
* # Steps ==> Total Number of Extrapolated Steps *
* # Calls ==> Total Number of GUTNR Calls        *
**************************************************

Chan/Pipe   # Steps   # Calls Chan/Pipe   # Steps   # Calls Chan/Pipe   # Steps   # Calls
 --------   -------   -------  --------   -------   -------  --------   -------   -------
      201         0         0
↑
*********************************************
*       Continuity Check for Surface Water  *
*********************************************
                                                                  Inches over
                                                     cubic feet   Total Basin
Total Precipitation (Rain plus Snow)                  18976267.      2225.
Total Infiltration                                     3655892.       429.
Total Evaporation                                       774448.        91.
Surface Runoff from Watersheds                        14631473.      1715.
Total Water remaining in Surface Storage                    103.         0.
Infiltration over the Pervious Area...                 3655892.      2198.
                        --------
Infiltration + Evaporation +
Surface Runoff + Snow removal +
Water remaining in Surface Storage +
Water remaining in Snow Cover.........                19061916.      2235.
Total Precipitation + Initial Storage.                18976266.      2225.
```

```
The error in continuity is calculated as
*************************************
* Precipitation + Initial Snow Cover  *
*      - Infiltration -               *
*Evaporation - Snow removal -         *
*Surface Runoff from Watersheds -     *
*Water in Surface Storage -           *
*Water remaining in Snow Cover        *
*-----------------------------------*
* Precipitation + Initial Snow Cover  *
*************************************
Error.................................       -0.451 Percent


*********************************************
*       Continuity Check for Channel/Pipes   *
*********************************************
```

	cubic feet	Inches over Total Basin
Initial Channel/Pipe Storage.....	0.	0.
Final Channel/Pipe Storage.....	0.	0.
Surface Runoff from Watersheds.....	14631473.	1715.
Baseflow.....	0.	
Groundwater Subsurface Inflow.....	0.	0.
Evaporation Loss from Channels.....	0.	0.
Channel/Pipe/Inlet Outflow.....	14631473.	1715.
Initial Storage + Inflow.....	14631473.	1715.
Final Storage + Outflow.....	14631473.	1715.

```
*****************************************
* Final Storage + Outflow + Evaporation  - *
* Watershed Runoff - Groundwater Inflow  - *
*     Initial Channel/Pipe Storage         *
*     ---------------------------------   *
*  Final Storage + Outflow  + Evaporation  *
*****************************************
Error.......................................      0.000 Percent

↑
**************************************************
*     Continuity Check for Subsurface Water       *
**************************************************
```

	cubic feet	Inches over Subsurface Basin
Total Infiltration	0.	0.
Total Upper Zone ET	0.	0.
Total Lower Zone ET	0.	0.
Total Groundwater flow	0.	0.
Total Deep percolation	0.	0.
Initial Subsurface Storage	307098.	36.
Final Subsurface Storage	307098.	36.
Upper Zone ET over Pervious Area	0.	0.
Lower Zone ET over Pervious Area	0.	0.

```
****************************************
* Infiltration + Initial Storage - Final *
* Storage - Upper and Lower Zone ET -    *
* Groundwater Flow - Deep Percolation    *
* ------------------------------------- *
*     Infiltration + Initial Storage     *
****************************************
Error ....................................     0.000 Percent
```

SUMMARY STATISTICS FOR SUBCATCHMENTS

SUBCATCH-MENT NO.	GUTTER OR INLET NO.	AREA (AC)	PERCENT IMPER.	TOTAL SIMULATED RAINFALL (IN)	PERVIOUS AREA TOTAL RUNOFF DEPTH (IN)	PERVIOUS AREA TOTAL LOSSES (IN)	PERVIOUS AREA PEAK RUNOFF RATE (CFS)	IMPERVIOUS AREA RUNOFF DEPTH (IN)	IMPERVIOUS AREA PEAK RUNOFF RATE (CFS)	TOTAL SUBCATCHMENT AREA RUNOFF DEPTH (IN)	TOTAL SUBCATCHMENT AREA PEAK RUNOFF RATE (CFS)	TOTAL SUBCATCHMENT AREA PEAK UNIT RUNOFF (IN/HR)
300	200	2.35	80.5	2224.52	24.236	2200.715	1.083	2122.658	6.867	1713.465	7.950	3.383

*** NOTE *** IMPERVIOUS AREA STATISTICS AGGREGATE IMPERVIOUS AREAS WITH AND WITHOUT DEPRESSION STORAGE

SUMMARY STATISTICS FOR CHANNEL/PIPES

CHANNEL NUMBER	FULL FLOW (CFS)	FULL VELOCITY (FPS)	FULL DEPTH (FT)	MAXIMUM COMPUTED INFLOW (CFS)	MAXIMUM COMPUTED OUTFLOW (CFS)	MAXIMUM COMPUTED DEPTH (FT)	MAXIMUM COMPUTED VELOCITY (FPS)	TIME OF OCCURRENCE DAY	TIME OF OCCURRENCE HR.	LENGTH OF SURCHARGE (HOUR)	MAXIMUM SURCHARGE VOLUME (AC-FT)	RATIO OF MAX. TO FULL FLOW	RATIO OF MAX. DEPTH TO FULL DEPTH
201				0.00				1/ 0/1900	0.00				
200				7.79				7/19/1972	17.50				

TOTAL NUMBER OF CHANNELS/PIPES = 2

*** NOTE *** THE MAXIMUM FLOWS AND DEPTHS ARE CALCULATED AT THE END OF THE TIME INTERVAL

```
##################################################
#              Runoff Quality Summary Page       #
# If NDIM = 0 Units for:   loads    mass rates   #
#             METRIC = 1    lb        lb/sec     #
#             METRIC = 2    kg        kg/sec     #
# If NDIM = 1 Loads are in units of quantity     #
#             and mass rates are quantity/sec    #
# If NDIM = 2 loads are in units of concentration #
#             times volume and mass rates have units#
```

```
#              of concentration times volume/second  #
##################################################

Total Su NDIM =  0
METRIC =  1
```

	Total Su
Inputs	
1. INITIAL SURFACE LOAD.....	46.
2. TOTAL SURFACE BUILDUP.....	83570.
3. INITIAL CATCHBASIN LOAD.....	0.
4. TOTAL CATCHBASIN LOAD.....	0.
5. TOTAL CATCHBASIN AND SURFACE BUILDUP (2+4).....	83570.
Remaining Loads	
6. LOAD REMAINING ON SURFACE...	14.
7. REMAINING IN CATCHBASINS....	0.
8. REMAINING IN CHANNEL/PIPES..	0.
Removals	
9. STREET SWEEPING REMOVAL.....	0.
10. NET SURFACE BUILDUP (2-9)...	83570.
11. SURFACE WASHOFF.....	83492.
12. CATCHBASIN WASHOFF.....	0.
13. TOTAL WASHOFF (11+12).....	83492.
14. LOAD FROM OTHER CONSTITUENTS	0.
15. PRECIPITATION LOAD.....	0.
15a.SUM SURFACE LOAD (13+14+15).	83492.
16. TOTAL GROUNDWATER LOAD.....	0.
16a.TOTAL I/I LOAD.....	0.
17. NET SUBCATCHMENT LOAD (15a-15b-15c-15d+16+16a)....	83492.
>>Removal in channel/pipes (17a, 17b):	
17a.REMOVE BY BMP FRACTION.....	0.
17b.REMOVE BY 1st ORDER DECAY...	0.
18. TOTAL LOAD TO INLETS.....	83486.
19. FLOW WT'D AVE.CONCENTRATION mg/l (INLET LOAD/TOTAL FLOW).....	91.
Percentages	
20. STREET SWEEPING (9/2).....	0.
21. SURFACE WASHOFF (11/2).....	100.
22. NET SURFACE WASHOFF(11/10)..	100.
23. WASHOFF/SUBCAT LOAD(11/17)..	100.
24. SURFACE WASHOFF/INLET LOAD (11/18).....	100.
25. CATCHBASIN WASHOFF/	

```
    SUBCATCHMENT LOAD (12/17)...        0.
26. CATCHBASIN WASHOFF/
    INLET LOAD (12/18)..........        0.
27. OTHER CONSTITUENT LOAD/
    SUBCATCHMENT LOAD (14/17)...        0.
28. INSOLUBLE FRACTION/
    INLET LOAD (14/18)..........        0.
29. PRECIPITATION/
    SUBCATCHMENT LOAD (15/17)...        0.
30. PRECIPITATION/
    INLET LOAD (15/18)..........        0.
31. GROUNDWATER LOAD/
    SUBCATCHMENT LOAD (16/17)...        0.
32. GROUNDWATER LOAD/
    INLET LOAD (16/18)..........        0.
32a.INFILTRATION/INFLOW LOAD/
    SUBCATCHMENT LOAD (16a/17)..        0.
32b.INFILTRATION/INFLOW LOAD/
    INLET LOAD (16a/18).........        0.
32c.CH/PIPE BMP FRACTION REMOVAL/
    SUBCATCHMENT LOAD (17a/17)..        0.
32d.CH/PIPE 1st ORDER DECAY REMOVAL/
    SUBCATCHMENT LOAD (17b/17)..        0.
33. INLET LOAD SUMMATION ERROR
    (18+8+6a+17a+17b-17)/17.....        0.

CAUTION. Due to method of quality routing (Users Manual, Appendix IX)
quality routing through channel/pipes is sensitive to the time step.
Large "Inlet Load Summation Errors" may result.
These can be reduced by adjusting the time step(s).
Note: surface accumulation during dry time steps at end of simulation is
not included in totals.  Buildup is only performed at beginning of
wet steps or for street cleaning.
```

****
* TSS Particle Size Distribution *
****

Diameter (um)	%	Specific Gravity	Settling Velocity (ft/s)	Critical Peclet Number
2.	5.0	2.65	0.000009	0.032973
5.	5.0	2.65	0.000055	0.056296
8.	10.0	2.65	0.000141	0.074071
20.	15.0	2.65	0.000875	0.126463
50.	10.0	2.65	0.005346	0.215914
75.	5.0	2.65	0.011640	0.273579
100.	10.0	2.65	0.019828	0.323611
150.	15.0	2.65	0.040138	0.410039
250.	15.0	2.65	0.087320	0.552510
500.	5.0	2.65	0.198831	0.828097
1000.	5.0	2.65	0.365264	1.241146

```
****************************************************
*                                                  *
*              Summary of TSS Removal              *
*                                                  *
****************************************************
```

TSS Removal based on NJCAT Lab Performance Curve

Model #	Low Q Treated (cfs)	High Q Treated (cfs)	Runoff Treated (%)	TSS Removed (%)
HS 4	0.975	11.017	94.0	59.8
HS 5	1.919	11.017	98.1	69.0
HS 6	3.034	11.017	99.4	75.4
HS 7	4.056	11.017	99.8	79.4
HS 8	5.158	11.017	99.9	82.5
HS 9	6.392	11.017	100.0	85.8
HS 10	7.758	11.017	100.0	88.5
HS 12	10.628	11.017	100.0	92.8

```
****************************************************
*                                                  *
*  Summary of Annual Flow Treatmnet & TSS Removal  *
*                                                  *
****************************************************
```

HS 4

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2478945.8	1537.0	909.4	627.7	94.9	59.2
1958.	4359612.0	4078400.2	2110.6	1166.1	944.5	93.5	55.3
1959.	4556554.0	4145863.0	2099.0	1227.8	871.4	91.0	58.5
1960.	4170938.2	3842332.8	2054.1	1247.9	806.2	92.1	60.8
1961.	3700208.8	3475190.2	2020.7	1233.7	787.1	93.9	61.1
1962.	3947819.0	3779873.0	1916.8	1154.4	762.5	95.7	60.2
1963.	3166754.5	3123073.8	1870.7	1163.9	706.9	98.6	62.2
1964.	3040154.2	2924744.8	1787.4	1111.7	675.9	96.2	62.2
1965.	2646353.8	2579147.2	1734.6	1077.5	657.2	97.5	62.1
1966.	3299085.5	3172186.2	1894.2	1144.7	749.6	96.2	60.4
1967.	4018117.2	3828963.2	2136.9	1249.5	887.6	95.3	58.5
1968.	3701816.0	3535414.2	1797.0	1100.2	697.0	95.5	61.2
1969.	3692137.0	3580995.0	1837.9	1120.7	717.4	97.0	61.0
1970.	3315532.2	3077360.0	1775.5	1084.1	691.6	92.8	61.1
1971.	3526334.5	3266220.5	1978.6	1109.9	868.9	92.6	56.1
1972.	5715895.5	5046827.5	2561.6	1326.3	1235.5	88.3	51.8
1973.	4455813.0	4111249.2	2177.6	1169.5	1008.2	92.3	53.7
1974.	4476171.5	3899317.8	2108.9	1159.5	949.4	87.1	55.0
1975.	4175382.5	4108520.5	1918.7	1206.6	712.3	98.4	62.9
1976.	3217118.5	2994551.2	1917.2	1151.6	765.7	93.1	60.1
1977.	3951751.8	3778048.5	2093.7	1286.2	807.6	95.6	61.4
1978.	3327134.0	3210201.8	1702.6	1076.1	626.6	96.5	63.2
1979.	4275595.5	3882904.0	1987.2	1147.5	839.8	90.8	57.7

1980.	3095499.2	2875615.0	1801.5	1023.7	777.9	92.9	56.8
1981.	3960161.8	3675220.0	2016.7	1152.9	864.0	92.8	57.2
1982.	4022977.8	3705881.0	1983.6	1138.9	844.8	92.1	57.4
1983.	5091839.0	4827806.5	2318.5	1360.1	958.5	94.8	58.7
1984.	3996083.5	3901384.0	1959.2	1185.5	773.8	97.6	60.5
1985.	3637566.2	3273168.5	1958.4	1225.5	733.0	90.0	62.6
1986.	3790836.8	3674100.5	1824.9	1121.9	703.1	96.9	61.5
1987.	3904000.8	3789722.8	1834.2	1157.6	676.8	97.1	63.1
1988.	3348070.5	3157552.5	1822.8	1111.0	711.9	94.3	60.9
1989.	2994106.5	2836913.0	1598.5	966.3	632.3	94.7	60.4
1991.	2317475.0	1996464.8	948.5	604.5	344.0	86.1	63.7
1992.	3643764.5	3542784.5	2026.3	1287.8	738.5	97.2	63.6
1993.	3745788.5	3390449.2	2025.1	1219.6	805.6	90.5	60.2
1994.	4010700.5	3783996.2	2093.2	1237.0	856.2	94.3	59.1
1995.	2822966.0	2661203.0	1491.3	907.4	584.1	94.3	60.8
1996.	4032014.2	3802669.8	2154.2	1273.8	880.4	94.3	59.1
1997.	2466561.2	2421693.5	1630.4	1033.2	597.3	98.2	63.4
1998.	3282861.8	3081285.5	1779.4	1034.3	745.2	93.9	58.1
1999.	3295877.8	3095281.5	1772.7	1088.2	684.6	93.9	61.4
2000.	3485602.5	3344113.2	1934.7	1185.7	749.2	95.9	61.3
2001.	2605558.5	2450713.2	1596.8	987.5	609.5	94.1	61.8

HS 5

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2589393.2	1537.0	1044.5	492.6	99.1	68.0
1958.	4359612.0	4307708.0	2110.6	1387.8	722.8	98.8	65.8
1959.	4556554.0	4352988.0	2099.0	1424.3	674.8	95.5	67.9
1960.	4170938.2	4052420.2	2054.1	1435.1	619.0	97.2	69.9
1961.	3700208.8	3605070.5	2020.7	1420.2	600.5	97.4	70.3
1962.	3947819.0	3909885.5	1916.8	1333.6	583.2	99.0	69.6
1963.	3166754.5	3166247.5	1870.7	1329.0	541.7	100.0	71.0
1964.	3040154.2	3009830.0	1787.4	1269.7	517.8	99.0	71.0
1965.	2646353.8	2641821.2	1734.6	1234.0	500.6	99.8	71.1
1966.	3299085.5	3265931.0	1894.2	1319.3	575.0	99.0	69.6
1967.	4018117.2	3967950.5	2136.9	1466.1	670.9	98.8	68.6
1968.	3701816.0	3639118.0	1797.0	1257.9	539.2	98.3	70.0
1969.	3692137.0	3648073.0	1837.9	1286.6	551.6	98.8	70.0
1970.	3315532.2	3234594.2	1775.5	1242.6	533.0	97.6	70.0
1971.	3526334.5	3469764.2	1978.6	1312.7	666.0	98.4	66.3
1972.	5715895.5	5406620.0	2561.6	1591.7	970.1	94.6	62.1
1973.	4455813.0	4373851.0	2177.6	1404.5	773.1	98.2	64.5
1974.	4476171.5	4203782.5	2108.9	1359.0	749.8	93.9	64.4
1975.	4175382.5	4175382.5	1918.7	1372.2	546.6	100.0	71.5
1976.	3217118.5	3133551.2	1917.2	1340.0	577.2	97.4	69.9
1977.	3951751.8	3884629.8	2093.7	1472.5	621.3	98.3	70.3
1978.	3327134.0	3318782.0	1702.6	1232.5	470.2	99.7	72.4
1979.	4275595.5	4066117.0	1987.2	1322.9	664.4	95.1	66.6
1980.	3095499.2	3043188.5	1801.5	1201.8	599.8	98.3	66.7
1981.	3960161.8	3861208.2	2016.7	1337.0	679.8	97.5	66.3
1982.	4022977.8	3956584.5	1983.6	1335.4	648.2	98.3	67.3

1983.	5091839.0	5039957.0	2318.5	1579.3	739.3	99.0	68.1
1984.	3996083.5	3970174.5	1959.2	1373.0	586.3	99.4	70.1
1985.	3637566.2	3479021.8	1958.4	1389.8	568.7	95.6	71.0
1986.	3790836.8	3774833.8	1824.9	1285.7	539.3	99.6	70.5
1987.	3904000.8	3902055.0	1834.2	1320.3	513.9	100.0	72.0
1988.	3348070.5	3295062.0	1822.8	1267.6	555.3	98.4	69.5
1989.	2994106.5	2958451.0	1598.5	1116.1	482.4	98.8	69.8
1991.	2317475.0	2197729.2	948.5	671.2	277.3	94.8	70.8
1992.	3643764.5	3626791.8	2026.3	1455.5	570.8	99.5	71.8
1993.	3745788.5	3628630.0	2025.1	1404.9	620.2	96.9	69.4
1994.	4010700.5	3968073.5	2093.2	1433.7	659.5	98.9	68.5
1995.	2822966.0	2777922.2	1491.3	1033.6	457.9	98.4	69.3
1996.	4032014.2	3962913.2	2154.2	1461.6	692.6	98.3	67.8
1997.	2466561.2	2458925.5	1630.4	1165.3	465.1	99.7	71.5
1998.	3282861.8	3247781.2	1779.4	1187.5	592.0	98.9	66.7
1999.	3295877.8	3251071.2	1772.7	1237.7	535.1	98.6	69.8
2000.	3485602.5	3464330.8	1934.7	1353.4	581.4	99.4	70.0
2001.	2605558.5	2511361.0	1596.8	1122.9	474.0	96.4	70.3

HS 6

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2608899.5	1537.0	1140.0	397.1	99.8	74.2
1958.	4359612.0	4354786.5	2110.6	1536.4	574.2	99.9	72.8
1959.	4556554.0	4444544.5	2099.0	1561.5	537.6	97.5	74.4
1960.	4170938.2	4122604.8	2054.1	1568.8	485.3	98.8	76.4
1961.	3700208.8	3669946.8	2020.7	1557.1	463.6	99.2	77.1
1962.	3947819.0	3942723.0	1916.8	1460.2	456.6	99.9	76.2
1963.	3166754.5	3166754.5	1870.7	1444.8	425.9	100.0	77.2
1964.	3040154.2	3040154.5	1787.4	1387.7	399.7	100.0	77.6
1965.	2646353.8	2646352.2	1734.6	1344.4	390.2	100.0	77.5
1966.	3299085.5	3291950.5	1894.2	1445.2	449.1	99.8	76.3
1967.	4018117.2	4014166.0	2136.9	1608.5	528.4	99.9	75.3
1968.	3701816.0	3665621.5	1797.0	1376.7	420.3	99.0	76.6
1969.	3692137.0	3676874.2	1837.9	1402.2	435.9	99.6	76.3
1970.	3315532.2	3301881.0	1775.5	1358.5	417.1	99.6	76.5
1971.	3526334.5	3509335.8	1978.6	1448.4	530.2	99.5	73.2
1972.	5715895.5	5524364.5	2561.6	1778.1	783.7	96.6	69.4
1973.	4455813.0	4443559.0	2177.6	1558.3	619.3	99.7	71.6
1974.	4476171.5	4376799.5	2108.9	1504.9	603.9	97.8	71.4
1975.	4175382.5	4175382.5	1918.7	1484.5	434.4	100.0	77.4
1976.	3217118.5	3197439.8	1917.2	1465.1	452.1	99.4	76.4
1977.	3951751.8	3923375.8	2093.7	1608.3	485.4	99.3	76.8
1978.	3327134.0	3327134.0	1702.6	1338.9	363.8	100.0	78.6
1979.	4275595.5	4177380.0	1987.2	1464.8	522.4	97.7	73.7
1980.	3095499.2	3090357.5	1801.5	1322.7	478.8	99.8	73.4
1981.	3960161.8	3937624.8	2016.7	1477.2	539.6	99.4	73.2
1982.	4022977.8	4022977.8	1983.6	1474.9	508.7	100.0	74.4
1983.	5091839.0	5075058.5	2318.5	1722.9	595.7	99.7	74.3
1984.	3996083.5	3995989.2	1959.2	1497.3	461.9	100.0	76.4
1985.	3637566.2	3571042.2	1958.4	1508.6	449.8	98.2	77.0

1986.	3790836.8	3790836.8	1824.9	1396.3	428.7	100.0	76.5
1987.	3904000.8	3904000.8	1834.2	1431.4	402.9	100.0	78.0
1988.	3348070.5	3324529.2	1822.8	1378.0	444.8	99.3	75.6
1989.	2994106.5	2989085.5	1598.5	1218.9	379.7	99.8	76.2
1991.	2317475.0	2284684.2	948.5	725.9	222.6	98.6	76.5
1992.	3643764.5	3643488.5	2026.3	1570.5	455.8	100.0	77.5
1993.	3745788.5	3707810.0	2025.1	1531.9	493.3	99.0	75.6
1994.	4010700.5	4010700.5	2093.2	1568.2	524.9	100.0	74.9
1995.	2822966.0	2805688.0	1491.3	1120.1	371.5	99.4	75.1
1996.	4032014.2	4013629.0	2154.2	1593.9	560.3	99.5	74.0
1997.	2466561.2	2466561.2	1630.4	1265.6	364.8	100.0	77.6
1998.	3282861.8	3278036.5	1779.4	1293.0	486.4	99.9	72.7
1999.	3295877.8	3289088.2	1772.7	1335.3	437.4	99.8	75.3
2000.	3485602.5	3485602.5	1934.7	1467.3	467.4	100.0	75.8
2001.	2605558.5	2567083.8	1596.8	1220.8	376.1	98.5	76.5

HS 7

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2612824.5	1537.0	1193.9	343.2	100.0	77.7
1958.	4359612.0	4359612.0	2110.6	1624.6	486.0	100.0	77.0
1959.	4556554.0	4486879.5	2099.0	1646.7	452.4	98.5	78.5
1960.	4170938.2	4154149.2	2054.1	1645.9	408.2	99.6	80.1
1961.	3700208.8	3694527.5	2020.7	1636.1	384.6	99.8	81.0
1962.	3947819.0	3947819.8	1916.8	1536.4	380.3	100.0	80.2
1963.	3166754.5	3166754.5	1870.7	1508.5	362.2	100.0	80.6
1964.	3040154.2	3040154.5	1787.4	1452.2	335.3	100.0	81.2
1965.	2646353.8	2646352.2	1734.6	1402.4	332.1	100.0	80.9
1966.	3299085.5	3299085.5	1894.2	1518.3	376.0	100.0	80.2
1967.	4018117.2	4018117.2	2136.9	1688.5	448.4	100.0	79.0
1968.	3701816.0	3683087.2	1797.0	1447.5	349.5	99.5	80.5
1969.	3692137.0	3692137.8	1837.9	1475.1	363.0	100.0	80.3
1970.	3315532.2	3315532.2	1775.5	1431.8	343.7	100.0	80.6
1971.	3526334.5	3524058.0	1978.6	1528.2	450.5	99.9	77.2
1972.	5715895.5	5598123.5	2561.6	1879.1	682.7	97.9	73.4
1973.	4455813.0	4455813.0	2177.6	1655.3	522.4	100.0	76.0
1974.	4476171.5	4452759.0	2108.9	1588.3	520.5	99.5	75.3
1975.	4175382.5	4175382.5	1918.7	1558.1	360.8	100.0	81.2
1976.	3217118.5	3217118.5	1917.2	1545.6	371.6	100.0	80.6
1977.	3951751.8	3949952.0	2093.7	1692.3	401.4	100.0	80.8
1978.	3327134.0	3327134.0	1702.6	1406.5	296.1	100.0	82.6
1979.	4275595.5	4230474.0	1987.2	1542.8	444.4	98.9	77.6
1980.	3095499.2	3095499.2	1801.5	1396.7	404.8	100.0	77.5
1981.	3960161.8	3960161.8	2016.7	1561.7	455.1	100.0	77.4
1982.	4022977.8	4022977.8	1983.6	1557.0	426.5	100.0	78.5
1983.	5091839.0	5089601.5	2318.5	1814.5	504.2	100.0	78.3
1984.	3996083.5	3996083.2	1959.2	1578.1	381.1	100.0	80.5
1985.	3637566.2	3608695.8	1958.4	1590.0	368.4	99.2	81.2
1986.	3790836.8	3790836.8	1824.9	1467.6	357.3	100.0	80.4
1987.	3904000.8	3904000.8	1834.2	1500.9	333.4	100.0	81.8
1988.	3348070.5	3341392.5	1822.8	1448.2	374.6	99.8	79.5

1989.	2994106.5	2994108.0	1598.5	1281.0	317.6	100.0	80.1
1991.	2317475.0	2317377.0	948.5	759.3	189.2	100.0	80.1
1992.	3643764.5	3643764.5	2026.3	1652.2	374.0	100.0	81.5
1993.	3745788.5	3737330.2	2025.1	1615.2	409.9	99.8	79.8
1994.	4010700.5	4010700.5	2093.2	1654.0	439.1	100.0	79.0
1995.	2822966.0	2820764.2	1491.3	1179.2	312.4	99.9	79.1
1996.	4032014.2	4029686.5	2154.2	1678.7	475.5	99.9	77.9
1997.	2466561.2	2466561.2	1630.4	1332.1	298.3	100.0	81.7
1998.	3282861.8	3282861.8	1779.4	1365.9	413.6	100.0	76.8
1999.	3295877.8	3295877.2	1772.7	1408.3	364.4	100.0	79.4
2000.	3485602.5	3485602.5	1934.7	1541.2	393.6	100.0	79.7
2001.	2605558.5	2591054.0	1596.8	1283.1	313.7	99.4	80.4

HS 8

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2612824.5	1537.0	1237.1	299.9	100.0	80.5
1958.	4359612.0	4359612.0	2110.6	1691.8	418.8	100.0	80.2
1959.	4556554.0	4523788.0	2099.0	1714.8	384.2	99.3	81.7
1960.	4170938.2	4170899.0	2054.1	1713.0	341.1	100.0	83.4
1961.	3700208.8	3700208.8	2020.7	1703.4	317.3	100.0	84.3
1962.	3947819.0	3947819.8	1916.8	1598.6	318.1	100.0	83.4
1963.	3166754.5	3166754.5	1870.7	1563.6	307.0	100.0	83.6
1964.	3040154.2	3040154.5	1787.4	1509.0	278.5	100.0	84.4
1965.	2646353.8	2646352.2	1734.6	1455.4	279.2	100.0	83.9
1966.	3299085.5	3299085.5	1894.2	1578.2	316.0	100.0	83.3
1967.	4018117.2	4018117.2	2136.9	1756.9	380.0	100.0	82.2
1968.	3701816.0	3699082.8	1797.0	1502.4	294.5	99.9	83.6
1969.	3692137.0	3692137.8	1837.9	1536.4	301.8	100.0	83.6
1970.	3315532.2	3315532.2	1775.5	1484.2	291.4	100.0	83.6
1971.	3526334.5	3526334.2	1978.6	1586.4	392.2	100.0	80.2
1972.	5715895.5	5654295.0	2561.6	1976.4	585.3	98.9	77.2
1973.	4455813.0	4455813.0	2177.6	1731.1	446.6	100.0	79.5
1974.	4476171.5	4476089.5	2108.9	1661.9	446.8	100.0	78.8
1975.	4175382.5	4175382.5	1918.7	1621.7	297.2	100.0	84.5
1976.	3217118.5	3217118.5	1917.2	1605.3	311.9	100.0	83.7
1977.	3951751.8	3951751.8	2093.7	1755.5	338.2	100.0	83.8
1978.	3327134.0	3327134.0	1702.6	1452.5	250.1	100.0	85.3
1979.	4275595.5	4255796.0	1987.2	1611.8	375.3	99.5	81.1
1980.	3095499.2	3095499.2	1801.5	1448.3	353.2	100.0	80.4
1981.	3960161.8	3960161.8	2016.7	1618.6	398.2	100.0	80.3
1982.	4022977.8	4022977.8	1983.6	1617.1	366.3	100.0	81.5
1983.	5091839.0	5091838.5	2318.5	1890.2	428.5	100.0	81.5
1984.	3996083.5	3996083.2	1959.2	1638.3	320.9	100.0	83.6
1985.	3637566.2	3629948.8	1958.4	1643.9	314.5	99.8	83.9
1986.	3790836.8	3790836.8	1824.9	1520.6	304.3	100.0	83.3
1987.	3904000.8	3904000.8	1834.2	1554.7	279.5	100.0	84.8
1988.	3348070.5	3348070.5	1822.8	1504.1	318.7	100.0	82.5
1989.	2994106.5	2994108.0	1598.5	1331.1	267.4	100.0	83.3
1991.	2317475.0	2317475.0	948.5	786.8	161.7	100.0	83.0
1992.	3643764.5	3643764.5	2026.3	1710.3	316.0	100.0	84.4

1993.	3745788.5	3745788.5	2025.1	1672.8	352.3	100.0	82.6
1994.	4010700.5	4010700.5	2093.2	1716.0	377.0	100.0	82.0
1995.	2822966.0	2822966.0	1491.3	1219.9	271.7	100.0	81.8
1996.	4032014.2	4032014.2	2154.2	1742.2	412.0	100.0	80.9
1997.	2466561.2	2466561.2	1630.4	1383.0	247.4	100.0	84.8
1998.	3282861.8	3282861.8	1779.4	1427.4	352.1	100.0	80.2
1999.	3295877.8	3295877.2	1772.7	1460.7	312.0	100.0	82.4
2000.	3485602.5	3485602.5	1934.7	1597.5	337.2	100.0	82.6
2001.	2605558.5	2605332.2	1596.8	1325.8	271.0	100.0	83.0

HS 9

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2612824.5	1537.0	1288.6	248.4	100.0	83.8
1958.	4359612.0	4359612.0	2110.6	1759.4	351.2	100.0	83.4
1959.	4556554.0	4553443.5	2099.0	1788.0	311.1	99.9	85.2
1960.	4170938.2	4170938.2	2054.1	1780.0	274.1	100.0	86.7
1961.	3700208.8	3700208.8	2020.7	1766.3	254.4	100.0	87.4
1962.	3947819.0	3947819.8	1916.8	1659.1	257.5	100.0	86.6
1963.	3166754.5	3166754.5	1870.7	1627.2	243.4	100.0	87.0
1964.	3040154.2	3040154.5	1787.4	1565.2	222.4	100.0	87.6
1965.	2646353.8	2646352.2	1734.6	1510.9	223.7	100.0	87.1
1966.	3299085.5	3299085.5	1894.2	1641.2	253.1	100.0	86.6
1967.	4018117.2	4018117.2	2136.9	1829.8	307.0	100.0	85.6
1968.	3701816.0	3701816.0	1797.0	1560.9	236.1	100.0	86.9
1969.	3692137.0	3692137.8	1837.9	1597.8	240.3	100.0	86.9
1970.	3315532.2	3315532.2	1775.5	1540.5	235.0	100.0	86.8
1971.	3526334.5	3526334.2	1978.6	1650.1	328.5	100.0	83.4
1972.	5715895.5	5701002.0	2561.6	2071.7	490.1	99.7	80.9
1973.	4455813.0	4455813.0	2177.6	1808.1	369.6	100.0	83.0
1974.	4476171.5	4476171.5	2108.9	1737.8	370.8	100.0	82.4
1975.	4175382.5	4175382.5	1918.7	1684.8	234.1	100.0	87.8
1976.	3217118.5	3217118.5	1917.2	1664.9	252.3	100.0	86.8
1977.	3951751.8	3951751.8	2093.7	1825.3	268.4	100.0	87.2
1978.	3327134.0	3327134.0	1702.6	1505.2	197.4	100.0	88.4
1979.	4275595.5	4273198.0	1987.2	1674.0	313.2	99.9	84.2
1980.	3095499.2	3095499.2	1801.5	1511.0	290.5	100.0	83.9
1981.	3960161.8	3960161.8	2016.7	1689.7	327.1	100.0	83.8
1982.	4022977.8	4022977.8	1983.6	1680.5	302.9	100.0	84.7
1983.	5091839.0	5091838.5	2318.5	1972.1	346.6	100.0	85.1
1984.	3996083.5	3996083.2	1959.2	1703.6	255.7	100.0	87.0
1985.	3637566.2	3637566.2	1958.4	1703.0	255.4	100.0	87.0
1986.	3790836.8	3790836.8	1824.9	1576.9	248.0	100.0	86.4
1987.	3904000.8	3904000.8	1834.2	1611.4	222.8	100.0	87.9
1988.	3348070.5	3348070.5	1822.8	1562.3	260.5	100.0	85.7
1989.	2994106.5	2994108.0	1598.5	1384.4	214.1	100.0	86.6
1991.	2317475.0	2317475.0	948.5	817.6	130.9	100.0	86.2
1992.	3643764.5	3643764.5	2026.3	1772.9	253.4	100.0	87.5
1993.	3745788.5	3745788.5	2025.1	1738.2	286.9	100.0	85.8
1994.	4010700.5	4010700.5	2093.2	1782.2	310.8	100.0	85.1
1995.	2822966.0	2822966.0	1491.3	1270.6	221.0	100.0	85.2

1996.	4032014.2	4032014.2	2154.2	1817.2	337.0	100.0	84.4
1997.	2466561.2	2466561.2	1630.4	1440.5	189.8	100.0	88.4
1998.	3282861.8	3282861.8	1779.4	1497.9	281.6	100.0	84.2
1999.	3295877.8	3295877.2	1772.7	1514.2	258.5	100.0	85.4
2000.	3485602.5	3485602.5	1934.7	1662.3	272.5	100.0	85.9
2001.	2605558.5	2605558.5	1596.8	1380.0	216.8	100.0	86.4

HS 10

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2612824.5	1537.0	1334.5	202.5	100.0	86.8
1958.	4359612.0	4359612.0	2110.6	1819.8	290.8	100.0	86.2
1959.	4556554.0	4556554.0	2099.0	1841.2	257.9	100.0	87.7
1960.	4170938.2	4170938.2	2054.1	1835.1	219.0	100.0	89.3
1961.	3700208.8	3700208.8	2020.7	1818.3	202.4	100.0	90.0
1962.	3947819.0	3947819.8	1916.8	1710.9	205.7	100.0	89.3
1963.	3166754.5	3166754.5	1870.7	1679.0	191.6	100.0	89.8
1964.	3040154.2	3040154.5	1787.4	1606.2	181.4	100.0	89.9
1965.	2646353.8	2646352.2	1734.6	1558.3	176.2	100.0	89.8
1966.	3299085.5	3299085.5	1894.2	1686.9	207.3	100.0	89.1
1967.	4018117.2	4018117.2	2136.9	1886.2	250.6	100.0	88.3
1968.	3701816.0	3701816.0	1797.0	1607.8	189.1	100.0	89.5
1969.	3692137.0	3692137.8	1837.9	1643.9	194.3	100.0	89.4
1970.	3315532.2	3315532.2	1775.5	1585.3	190.2	100.0	89.3
1971.	3526334.5	3526334.2	1978.6	1706.6	272.0	100.0	86.3
1972.	5715895.5	5715801.0	2561.6	2155.8	406.0	100.0	84.2
1973.	4455813.0	4455813.0	2177.6	1873.0	304.7	100.0	86.0
1974.	4476171.5	4476171.5	2108.9	1802.4	306.2	100.0	85.5
1975.	4175382.5	4175382.5	1918.7	1735.9	183.1	100.0	90.5
1976.	3217118.5	3217118.5	1917.2	1712.9	204.3	100.0	89.3
1977.	3951751.8	3951751.8	2093.7	1878.7	215.0	100.0	89.7
1978.	3327134.0	3327134.0	1702.6	1547.6	155.0	100.0	90.9
1979.	4275595.5	4275595.5	1987.2	1726.3	260.9	100.0	86.9
1980.	3095499.2	3095499.2	1801.5	1556.4	245.1	100.0	86.4
1981.	3960161.8	3960161.8	2016.7	1739.5	277.3	100.0	86.3
1982.	4022977.8	4022977.8	1983.6	1732.1	251.3	100.0	87.3
1983.	5091839.0	5091838.5	2318.5	2037.6	281.2	100.0	87.9
1984.	3996083.5	3996083.2	1959.2	1753.3	205.9	100.0	89.5
1985.	3637566.2	3637566.2	1958.4	1754.0	204.4	100.0	89.6
1986.	3790836.8	3790836.8	1824.9	1626.3	198.6	100.0	89.1
1987.	3904000.8	3904000.8	1834.2	1653.8	180.5	100.0	90.2
1988.	3348070.5	3348070.5	1822.8	1609.0	213.8	100.0	88.3
1989.	2994106.5	2994108.0	1598.5	1425.5	173.0	100.0	89.2
1991.	2317475.0	2317475.0	948.5	842.3	106.2	100.0	88.8
1992.	3643764.5	3643764.5	2026.3	1822.2	204.0	100.0	89.9
1993.	3745788.5	3745788.5	2025.1	1791.1	234.0	100.0	88.4
1994.	4010700.5	4010700.5	2093.2	1835.3	257.7	100.0	87.7
1995.	2822966.0	2822966.0	1491.3	1311.2	180.4	100.0	87.9
1996.	4032014.2	4032014.2	2154.2	1876.0	278.2	100.0	87.1
1997.	2466561.2	2466561.2	1630.4	1480.2	150.1	100.0	90.8
1998.	3282861.8	3282861.8	1779.4	1549.0	230.5	100.0	87.0

1999.	3295877.8	3295877.2	1772.7	1563.6	209.1	100.0	88.2
2000.	3485602.5	3485602.5	1934.7	1714.2	220.6	100.0	88.6
2001.	2605558.5	2605558.5	1596.8	1422.9	173.9	100.0	89.1

HS 12

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2612824.5	1537.0	1403.7	133.3	100.0	91.3
1958.	4359612.0	4359612.0	2110.6	1913.0	197.6	100.0	90.6
1959.	4556554.0	4556554.0	2099.0	1934.0	165.0	100.0	92.1
1960.	4170938.2	4170938.2	2054.1	1922.9	131.1	100.0	93.6
1961.	3700208.8	3700208.8	2020.7	1897.4	123.3	100.0	93.9
1962.	3947819.0	3947819.8	1916.8	1790.5	126.2	100.0	93.4
1963.	3166754.5	3166754.5	1870.7	1761.3	109.3	100.0	94.2
1964.	3040154.2	3040154.5	1787.4	1676.1	111.2	100.0	93.8
1965.	2646353.8	2646352.2	1734.6	1630.9	103.7	100.0	94.0
1966.	3299085.5	3299085.5	1894.2	1765.0	129.2	100.0	93.2
1967.	4018117.2	4018117.2	2136.9	1982.2	154.8	100.0	92.8
1968.	3701816.0	3701816.0	1797.0	1683.1	113.6	100.0	93.7
1969.	3692137.0	3692137.8	1837.9	1722.3	116.0	100.0	93.7
1970.	3315532.2	3315532.2	1775.5	1656.3	119.2	100.0	93.3
1971.	3526334.5	3526334.2	1978.6	1806.0	172.7	100.0	91.3
1972.	5715895.5	5715895.5	2561.6	2282.8	278.9	100.0	89.1
1973.	4455813.0	4455813.0	2177.6	1981.3	196.3	100.0	91.0
1974.	4476171.5	4476171.5	2108.9	1901.3	207.5	100.0	90.2
1975.	4175382.5	4175382.5	1918.7	1811.0	107.7	100.0	94.4
1976.	3217118.5	3217118.5	1917.2	1787.6	129.6	100.0	93.2
1977.	3951751.8	3951751.8	2093.7	1960.3	133.4	100.0	93.6
1978.	3327134.0	3327134.0	1702.6	1612.3	90.3	100.0	94.7
1979.	4275595.5	4275595.5	1987.2	1815.2	172.0	100.0	91.3
1980.	3095499.2	3095499.2	1801.5	1639.8	161.7	100.0	91.0
1981.	3960161.8	3960161.8	2016.7	1831.9	184.8	100.0	90.8
1982.	4022977.8	4022977.8	1983.6	1820.8	162.8	100.0	91.8
1983.	5091839.0	5091838.5	2318.5	2146.4	172.2	100.0	92.6
1984.	3996083.5	3996083.2	1959.2	1840.1	119.1	100.0	93.9
1985.	3637566.2	3637566.2	1958.4	1833.2	125.2	100.0	93.6
1986.	3790836.8	3790836.8	1824.9	1705.4	119.6	100.0	93.4
1987.	3904000.8	3904000.8	1834.2	1729.7	104.5	100.0	94.3
1988.	3348070.5	3348070.5	1822.8	1687.2	135.5	100.0	92.6
1989.	2994106.5	2994108.0	1598.5	1492.8	105.7	100.0	93.4
1991.	2317475.0	2317475.0	948.5	882.7	65.8	100.0	93.1
1992.	3643764.5	3643764.5	2026.3	1910.5	115.8	100.0	94.3
1993.	3745788.5	3745788.5	2025.1	1874.7	150.4	100.0	92.6
1994.	4010700.5	4010700.5	2093.2	1931.5	161.7	100.0	92.3
1995.	2822966.0	2822966.0	1491.3	1378.2	113.1	100.0	92.4
1996.	4032014.2	4032014.2	2154.2	1976.1	178.1	100.0	91.7
1997.	2466561.2	2466561.2	1630.4	1549.9	80.4	100.0	95.1
1998.	3282861.8	3282861.8	1779.4	1631.5	147.9	100.0	91.7
1999.	3295877.8	3295877.2	1772.7	1639.2	133.6	100.0	92.5
2000.	3485602.5	3485602.5	1934.7	1796.7	138.0	100.0	92.9
2001.	2605558.5	2605558.5	1596.8	1487.9	108.9	100.0	93.2

```
**************************************************
*  Summary of Quantity and Quality Results at     *
*  Location        200  INFlow in cfs.            *
*  Values are instantaneous at indicated time step *
**************************************************

  McGovern Boulevard, Lancaster, MA
  DMH#S3

     Date      Time        Flow   Total Su
 Mo/Da/Year  Hr:Min        cfs    mg/l
 ----------  -------    -------  --------
Flow wtd means.....        0.023       92.
Flow wtd std devs..        0.110       68.
Maximum value......        7.787      292.
Minimum value......        0.000        0.
Total loads........    14617869.    83535.
                        Cub-Ft     POUNDS

===> Runoff simulation ended normally.

===> SWMM 4.4    simulation ended normally.
     Always check output file for possible warning messages.

*****************************************************
*       SWMM 4.4    Simulation Date and Time Summary  *
*****************************************************
* Starting Date... March      29, 2021               *
*          Time...         16: 9:42.517              *
*   Ending Date... March      29, 2021               *
*          Time...         16: 9:50.521              *
*  Elapsed Time...               0.133 minutes.      *
*  Elapsed Time...               8.004 seconds.      *
*****************************************************
```

```
**************************************************
*      Storm Water Management Sizing Model       *
*               Hydroworks, LLC                  *
*                Version 4.4                     *
*                                                *
*        Continuous Simulation Program           *
*              Based on SWMM 4.4H                *
*              Hydroworks, LLC                   *
*               Graham Bryant                    *
*                2003 - 2013                     *
**************************************************

                 Developed by

**************************************************
*               Hydroworks, LLC                  *
*             Metcalf & Eddy, Inc.               *
*            University of Florida               *
*       Water Resources Engineers, Inc.          *
*      (Now Camp Dresser & McKee, Inc.)          *
*              Modified SWMM 4.4                 *
**************************************************

         Distributed and Maintained by

**************************************************
*                                                *
*                Hydroworks, LLC                 *
*                 888-290-7900                   *
*              www.hydroworks.com                *
*                                                *
**************************************************

**************************************************
*     If any problems occur executing this       *
*     model, contact Mr. Graham Bryant at        *
*     Hydroworks, LLC by phone at 908-272-4411   *
*     or by e-mail: support@hydroworks.com       *
**************************************************

**************************************************
*     This model is based on EPA SWMM 4.4        *
*  "Nature is full of infinite causes which      *
*   have never occurred in experience" da Vinci *
**************************************************


**************************************************
* Entry made to the Rain Block                   *
* Created by the University of Florida - 1988    *
* Updated by Oregon State University, March 2000 *
**************************************************
```

McGovern Boulevard, Lancaster, MA
DMH#S3

```
#######################################
#  Precipitation Block Input Commands  #
#######################################

Station Name..........................  Worcester Wso Ap

Station Location......................  Massachusetts

Station, ISTA.........................    9923

Beginning date, IYBEG (Yr/Mo/Dy)......  1957/ 1/ 1

Ending date, IYEND (Yr/Mo/Dy).........  2001/12/31

Minimum interevent time, MIT..........     1

Number of ranked storms, NPTS.........    10

NWS format, IFORM (See text)..........     1

Print storm summary, ISUM (O-No 1-Yes)     0

Print all rainfall, IYEAR (O-No 1-Yes)     0

Save storm event data on NSCRAT(1)....     0
(IFILE =0 -Do not save, =1 -Save data)

IDECID 0 - Create interface file
       1 - Create file and analyze
       2 - Synoptic analysis..........     2

Plotting position parameter, A........  0.40

Storm event statistics, NOSTAT........  1100


KODEA (from optional group B0)........     2
 = 0, Do not include NCDC cumulative values.
 = 1, Average NCDC cumulative values.
 = 2, Use NCDC cumulative value as inst. rain.

KODEPR (from optional group B0).......     0
 Print NCDC special codes in event summary:
 = 0, only on days with events.
 = 1, on all days with codes present.
 Codes: A = accumulated value, I = incomplete value,
        M = missing value,     O = other code present
```

```
*****************************************************
*  Precipitation output created using the Rain block   *
*  Number of precipitation stations...        1        *
*****************************************************

Location Station Number
-------- --------------
       1.     9923


STATION ID ON PRECIP. DATA INPUT FILE = 2302
REQUESTED STATION ID =     9923  CHECK TO BE SURE THEY MATCH.



$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
Note, 15-min. data are being processed, but hourly
print-out, summaries, and statistics are based on
hourly totals only.  Data placed on interface file
are at correct 15-min. intervals.
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

##################################################
# Entry made to the Runoff Block, last updated by #
# Oregon State University, and Camp, Dresser and  #
# McKee, Inc., March 2002.                        #
##################################################
# "And wherever water goes, amoebae go along for  #
#  the ride"                      Tom Robbins     #
##################################################


                  McGovern Boulevard, Lancaster, MA

                  DMH#S3


Snowmelt parameter - ISNOW.......................          0

Number of rain gages - NRGAG.....................          1

Horton infiltration equation used - INFILM.......          2
Maximum infiltration volume is limited to RMAXINF input on  subcatchment lines.
Infiltration volume regenerates during  non rainfall periods.

Quality is simulated - KWALTY....................          1

IVAP is negative.  Evaporation will be set to zero
    during time steps with rainfall.

Read evaporation data on line(s) F1 (F2) - IVAP..          1
```

```
Hour of day at start of storm - NHR.............          1

Minute of hour at start of storm - NMN..........          1

Time TZERO at start of storm (hours)............      1.017

Use U.S. Customary units for most I/O - METRIC...          0

Runoff input print control...                              0

Runoff graph plot control....                              1

Runoff output print control..                              0

Print headers every 50 lines - NOHEAD (0=yes, 1=no)        0

Print land use load percentages -LANDUPR (0=no, 1=yes)     0

Limit number of groundwater convergence messages to 10000 (if simulated)

Month, day, year of start of storm is:              1/ 1/1957

Wet time step length (seconds).......                   300.

Dry time step length (seconds).......                   900.

Wet/Dry time step length (seconds)...                   450.

Simulation length is......                        20011231.0 Yr/Mo/Dy

Percent of impervious area with zero detention depth    25.0

Horton infiltration model being used
Rate for regeneration of infiltration = REGEN * DECAY
DECAY is read in for each subcatchment
REGEN = ........................................   0.01000
```

```
*******************************************************
*   Processed Precipitation will be read from file     *
*******************************************************

  ##############################
  #        Data Group F1       #
  # Evaporation Rate (in/day) #
  ##############################
```

JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
0.00	0.00	0.00	0.10	0.10	0.15	0.15	0.15	0.10	0.10	0.00	0.00

```
*********************************************************
*        C H A N N E L   A N D   P I P E   D A T A      *
*********************************************************
```

Input equen umber	NAMEG: Channel ID #	Drains to NGTO:	Channel Type	Width (ft)	Length (ft)	Invert Slope (ft/ft)	L Side Slope (ft/ft)	R Side Slope (ft/ft)	Intial Depth (ft)	Max Depth (ft)	Mann- ings "N"	Full Flow (cfs)
1	201	200	Dummy	0.0	0.0	0.0000	0.0000	0.0000	0.0	0.0	0.0000	0.00E+00

```
*****************************************************
*         S U B C A T C H M E N T   D A T A         *
*****************************************************
```

NOTE. SEE LATER TABLE FOR OPTIONAL SUBCATCHMENT PARAMETERS

	SUBCATCH- MENT NO.	CHANNEL OR INLET	WIDTH (FT)	AREA (AC)	PERCENT IMPERV.	SLOPE (FT/FT)	RESISTANCE IMPERV.	FACTOR PERV.	DEPRES. IMPERV.	STORAGE(IN) PERV.	INFILTRATION RATE(IN/HR) MAXIMUM	MINIMUM	DECAY RATE (1/SEC)	GAGE NO.	MAXIMUM VOLUME (INCHES)
1	300	200	319.95	2.35	80.50	0.0200	0.015	0.250	0.020	0.200	2.50	0.40	0.00055	1	4.00000

```
TOTAL NUMBER OF SUBCATCHMENTS...              1
TOTAL TRIBUTARY AREA (ACRES)....           2.35
IMPERVIOUS AREA (ACRES).........           1.89
PERVIOUS AREA (ACRES)...........           0.46
TOTAL WIDTH (FEET)..............         319.95
PERCENT IMPERVIOUSNESS..........          80.50
```

```
*********************************************************
*     G R O U N D W A T E R   I N P U T   D A T A       *
*********************************************************
```

SUB-CATCH NUMBER	CHANNEL OR INLET	ELEVATIONS GROUND (FT)	BOTTOM (FT)	STAGE (FT)	BC (FT)	TW (FT)	FLOW CONSTANTS A1 (IN/HR-FT^B1)	B1	A2 (IN/HR-FT^B2)	B2	A3 (IN/HR-FT^2)
0	602	10.00	0.00	0.00	2.00	2.00	4.500E-05	2.600	0.000E+00	1.000	0.00E+00

```
*********************************************************
* G R O U N D W A T E R   I N P U T   D A T A (CONTINUED) *
*********************************************************
```

S O I L P R O P E R T I E S

SUBCAT. NO.	POROSITY	SATURATED HYDRAULIC CONDUCTIVITY (in/hr)	WILTING POINT	FIELD CAPACITY	INITIAL MOISTURE	MAX. DEEP PERCOLATION (in/hr)	PERCOLATION PARAMETERS HCO	PCO	ET PARAMETERS DEPTH OF ET (ft)	FRACTION OF ET TO UPPER ZONE
0	.4000	5.000	.1500	.3000	.3000	2.000E-03	10.00	15.00	14.00	0.350

```
*******************************************************
*    Arrangement of Subcatchments and Channel/Pipes     *
*******************************************************
* See second subcatchment output table for connectivity *
* of subcatchment to subcatchment flows.                *
*******************************************************

   Channel
   or Pipe
       201     No Tributary Channel/Pipes
               No Tributary Subareas.....


    INLET
       200     Tributary Channel/Pipes...        201
               Tributary Subareas........        300


*********************************************************
* Hydrographs will be stored for the following   1 INLETS *
*********************************************************
          200

↑
##################################################
#               Quality Simulation               #
##################################################
#      General Quality Control Data Groups       #
##################################################

 Description                            Variable       Value
 -----------                            --------       -----

 Number of quality constituents.....    NQS.......        1

 Number of land uses................  JLAND.......        1

 Standard catchbasin volume.........  CBVOL.......     4.00 cubic feet

 Erosion is not simulated.........    IROS........        0

 DRY DAYS PRIOR TO START OF STORM... DRYDAY.......     3.00 DAYS

 DRY DAYS REQUIRED TO RECHARGE
 CATCHBASIN CONCENTRATION TO
 INITIAL VALUES..................... DRYBSN.......     5.00 DAYS

 DUST AND DIRT
 STREET SWEEPING EFFICIENCY......... REFFDD.......    0.000

 DAY OF YEAR ON WHICH STREET
 SWEEPING BEGINS.................... KLNBGN.......      120

 DAY OF YEAR ON WHICH STREET
 SWEEPING ENDS...................... KLNEND.......      270
```

```
##########################################
#     Land use data on data group J2     #
##########################################
```

AND USE LNAME)	BUILDUP EQUATION TYPE (METHOD)	FUNCTIONAL DEPENDENCE OF BUILDUP PARAMETER(JACGUT)	LIMITING BUILDUP QUANTITY (DDLIM)	BUILDUP POWER (DDPOW)	BUILDUP COEFF. (DDFACT)	CLEANING INTERVAL IN DAYS (CLFREQ)	AVAIL. FACTOR FRACTION (AVSWP)	DAYS SINCE LAST SWEEPING (DSLCL)
Urban De	EXPONENTIAL(1)	AREA(1)	2.500E+01	0.500	60.000	30.000	0.300	30.000

```
##############################################
#     Constituent data on data group J3      #
##############################################
```

	Total Su
Constituent units.....	mg/l
Type of units.....	0
KALC.....	2
Type of buildup calc.....	EXPONENTIAL(2)
KWASH.....	0
Type of washoff calc.....	POWER EXPONEN.(0)
KACGUT.....	1
Dependence of buildup....	AREA(1)
LINKUP.....	0
Linkage to snowmelt.....	NO SNOW LINKAGE
Buildup param 1 (QFACT1).	25.000
Buildup param 2 (QFACT2).	0.500
Buildup param 3 (QFACT3).	60.000
Buildup param 4 (QFACT4).	0.000
Buildup param 5 (QFACT5).	0.000
Washoff power (WASHPO)...	1.100
Washoff coef. (RCOEF)....	3.000
Init catchb conc (CBFACT)	100.000
Precip. conc. (CONCRN)...	0.000
Street sweep effic (REFF)	0.000
Remove fraction (REMOVE).	0.000
1st order QDECAY, 1/day..	0.000
Land use number.....	1

```
***********************************************
* Constant Groundwater Quality Concentration(s) *
***********************************************
```

Total Susp has a concentration of.. 0.0000 mg/l

```
**********************************************
* REMOVAL FRACTIONS FOR SELECTED CHANNEL/PIPES *
* FROM J7 LINES                                *
**********************************************

  CHANNEL/   CONSTITUENT
     PIPE Total Susp
---------- --------
       201    0.000


*****************************************************
*     Subcatchment surface quality on data group L1 *
*****************************************************


                                Total   Number   Input
                     Land       Gutter    of     Loading
            Land     Use       Length   Catch-  load/ac
      No.   Usage    No.      10**2ft   Basins  Total Su
    ------ -------- ----      -------- -------  -------
  1        300 Urban De  1       6.40     1.00  0.0E+00
  Totals (Loads in lb or other)  6.40     1.00  0.0E+00

   ***********************
   *    DATA GROUP M1    *
   ***********************


TOTAL NUMBER OF PRINTED GUTTERS/INLETS...NPRNT..        1
NUMBER OF TIME STEPS BETWEEN PRINTINGS..INTERV..        0
STARTING AND STOPPING PRINTOUT DATES............        0        0


   ***********************
   *    DATA GROUP M3    *
   ***********************

CHANNEL/INLET PRINT DATA GROUPS......       -200


          ****************************************
          * Rainfall from Nat. Weather Serv. file *
          * in units of hundredths of an inch     *
          ****************************************

        McGovern Boulevard, Lancaster, MA
        DMH#S3
```

Rainfall Station Worcester Wso Ap
State/Province Massachusetts

Rainfall Depth Summary (in)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1957.	0.4	1.4	2.8	3.6	3.4	3.0	1.1	2.8	1.1	3.8	5.7	7.3	36.5
1958.	9.0	2.9	4.9	7.2	4.3	2.8	6.1	4.4	8.1	2.8	5.0	3.2	60.8
1959.	5.1	2.8	8.2	4.2	2.4	4.7	8.4	4.5	3.1	8.3	6.1	5.1	62.9
1960.	2.4	6.3	4.2	5.4	5.9	3.1	7.2	3.9	7.0	3.0	4.0	5.0	57.4
1961.	3.7	2.5	5.8	5.2	4.2	2.5	4.3	5.3	6.1	3.5	3.3	5.1	51.5
1962.	2.4	5.4	2.6	3.9	4.4	3.5	2.1	4.6	5.7	9.2	4.9	5.8	54.4
1963.	4.2	3.4	4.7	1.9	3.6	2.6	2.0	3.0	4.9	1.7	8.8	3.3	44.0
1964.	5.9	3.6	4.2	4.5	1.5	1.8	3.6	2.9	2.1	2.5	3.5	6.2	42.4
1965.	3.1	4.9	2.7	3.9	3.1	2.0	2.0	3.2	3.8	2.3	3.2	2.9	37.1
1966.	4.4	4.4	3.2	1.7	3.8	2.6	3.5	2.0	7.5	3.5	4.9	4.2	45.6
1967.	2.8	3.7	4.9	5.2	7.4	3.9	6.5	3.5	5.2	2.4	5.1	5.0	55.7
1968.	3.7	1.4	7.9	2.3	7.1	8.4	1.9	0.7	2.2	2.4	6.2	6.5	50.7
1969.	1.8	4.2	2.7	5.6	3.4	1.7	4.3	4.7	5.4	1.8	7.1	8.5	51.1
1970.	2.2	5.5	4.1	3.9	6.1	2.9	0.9	5.8	3.6	3.0	4.0	3.9	45.7
1971.	3.2	5.9	1.9	2.0	5.6	2.6	4.9	8.0	1.6	3.6	5.5	3.7	48.3
1972.	3.1	8.2	6.1	4.8	8.4	9.7	6.6	5.1	3.3	6.0	10.2	6.4	77.7
1973.	4.4	4.1	4.9	5.7	4.8	7.3	4.1	4.4	4.1	4.8	3.9	8.8	61.1
1974.	4.2	3.4	5.6	3.6	6.3	3.8	3.4	3.7	13.4	3.6	5.7	4.1	61.0
1975.	6.9	3.3	5.9	1.3	2.0	3.8	4.3	5.1	7.6	6.6	6.0	5.2	57.9
1976.	6.9	2.9	4.5	2.5	3.2	2.8	3.6	6.6	2.3	5.3	1.0	3.4	45.0
1977.	2.4	3.2	6.4	4.2	2.7	4.2	4.8	2.4	8.2	5.6	4.2	6.8	55.0
1978.	11.9	1.8	3.4	2.5	3.8	1.8	3.8	5.4	1.3	4.1	2.5	4.3	46.5
1979.	12.2	3.1	4.0	5.5	4.7	0.6	6.1	7.7	4.1	4.9	4.1	1.8	58.8
1980.	0.8	1.2	7.4	5.2	2.4	4.8	3.9	2.1	3.3	5.4	4.8	2.2	43.4
1981.	1.9	9.4	1.4	4.9	4.1	2.7	8.2	1.2	5.5	5.7	3.9	6.1	55.0
1982.	4.4	4.0	4.2	4.8	3.4	13.1	6.0	2.0	2.1	3.2	4.6	3.9	55.7
1983.	5.3	5.3	9.0	8.4	7.3	2.7	0.9	6.4	1.5	6.3	9.3	7.1	69.5
1984.	3.3	6.7	6.3	5.1	10.3	3.3	6.4	1.2	2.8	3.3	3.0	3.4	55.1
1985.	1.9	3.6	3.5	3.0	5.1	5.2	6.6	4.1	4.7	3.0	7.3	2.7	50.7
1986.	5.5	3.5	3.6	1.9	3.4	9.6	3.5	3.6	0.9	3.0	6.7	7.8	52.9
1987.	6.2	1.9	5.8	9.9	1.5	5.0	1.0	5.4	6.7	4.5	3.1	2.6	53.6
1988.	3.7	3.5	3.3	3.8	5.1	1.4	6.7	4.5	1.2	5.9	5.9	1.8	46.8
1989.	1.6	3.4	3.0	4.8	6.6	7.3	4.6	5.9	5.1	0.0	0.0	0.0	42.3
1991.	0.0	0.0	0.0	0.0	0.0	0.0	3.2	8.1	6.9	3.8	6.0	3.5	31.5
1992.	3.1	3.3	4.7	3.2	2.7	5.0	5.7	7.2	2.3	2.4	6.3	5.1	50.9
1993.	3.2	2.9	7.1	4.0	1.9	2.9	3.4	2.1	9.4	4.0	5.2	5.8	51.8
1994.	6.0	2.9	6.6	2.9	6.8	2.5	3.2	8.0	5.3	1.3	6.0	4.2	55.7
1995.	5.9	2.3	2.2	2.5	0.0	0.0	4.7	2.1	3.7	8.8	5.2	1.4	38.8
1996.	7.1	3.3	2.5	7.3	4.1	3.1	6.3	4.5	4.9	4.9	3.0	5.0	55.8
1997.	3.3	1.7	4.6	3.4	2.6	1.6	3.2	2.8	1.6	1.8	5.5	2.3	34.4
1998.	3.9	2.8	6.3	2.8	5.7	9.7	1.8	2.3	1.2	5.0	2.4	1.4	45.4
1999.	7.0	2.4	4.6	1.1	3.3	1.8	2.4	2.4	8.6	4.6	3.1	4.3	45.7
2000.	3.5	3.3	4.2	7.6	4.2	5.4	4.5	2.5	3.4	2.4	4.0	4.2	49.3
2001.	2.2	3.2	7.4	1.0	3.9	5.0	3.7	1.1	3.5	0.9	1.7	3.2	36.7

Total Rainfall Depth for Simulation Period 2227.9 (in)

Rainfall Intensity Analysis (in/hr)

(in/hr)	(#)	(%)	(in)	(%)
0.10	55294	69.5	679.	30.5
0.20	15423	19.4	571.	25.6
0.30	3295	4.1	211.	9.5
0.40	2538	3.2	224.	10.1
0.50	868	1.1	100.	4.5
0.60	597	0.8	80.	3.6
0.70	577	0.7	92.	4.1
0.80	337	0.4	64.	2.9
0.90	120	0.2	26.	1.2
1.00	123	0.2	29.	1.3
1.10	70	0.1	18.	0.8
1.20	64	0.1	18.	0.8
1.30	56	0.1	17.	0.8
1.40	38	0.0	13.	0.6
1.50	18	0.0	7.	0.3
1.60	38	0.0	15.	0.7
1.70	16	0.0	7.	0.3
1.80	28	0.0	12.	0.6
1.90	14	0.0	7.	0.3
2.00	16	0.0	8.	0.4
> 2.00	48	0.1	30.	1.3

Total # of Intensities 79578

Daily Rainfall Depth Analysis (in)

(in)	(#)	(%)	(in)	(%)
0.10	1790	31.7	85.	3.8
0.20	996	17.7	143.	6.4
0.30	575	10.2	138.	6.2
0.40	489	8.7	166.	7.4
0.50	302	5.4	134.	6.0
0.60	279	4.9	152.	6.8
0.70	209	3.7	134.	6.0
0.80	152	2.7	113.	5.1
0.90	128	2.3	108.	4.8
1.00	126	2.2	119.	5.3
1.10	89	1.6	93.	4.2
1.20	79	1.4	90.	4.1
1.30	69	1.2	86.	3.9
1.40	49	0.9	66.	3.0
1.50	56	1.0	81.	3.6
1.60	44	0.8	68.	3.0
1.70	39	0.7	64.	2.9
1.80	28	0.5	49.	2.2
1.90	20	0.4	37.	1.6

```
  2.00     16       0.3       31.       1.4
> 2.00    104       1.8      270.      12.1

Total # Days with Rain   5639

************************************************
*      End of time step DO-loop in Runoff      *
************************************************

Final Date (Mo/Day/Year)   =                  1/ 1/2002
Total number of time steps =                    3056105
Final Julian Date  =                            2002001
Final time of day  =                                 2. seconds.
Final time of day  =                              0.00   hours.
Final running time =                        394464.0000   hours.
Final running time =                         16436.0000    days.

**************************************************
*     Extrapolation Summary for Watersheds       *
* # Steps ==> Total Number of Extrapolated Steps *
* # Calls ==> Total Number of OVERLND Calls      *
**************************************************

 Subcatch   # Steps   # Calls  Subcatch   # Steps   # Calls  Subcatch   # Steps   # Calls
 --------   -------   -------  --------   -------   -------  --------   -------   -------
      300  13617517   3411943

**************************************************
*     Extrapolation Summary for Channel/Pipes    *
* # Steps ==> Total Number of Extrapolated Steps *
* # Calls ==> Total Number of GUTNR Calls        *
**************************************************

Chan/Pipe   # Steps   # Calls Chan/Pipe   # Steps   # Calls Chan/Pipe   # Steps   # Calls
 --------   -------   -------  --------   -------   -------  --------   -------   -------
      201         0         0
↑
*********************************************
*       Continuity Check for Surface Water  *
*********************************************
                                                                  Inches over
                                                   cubic feet     Total Basin
Total Precipitation (Rain plus Snow)                18976267.       2225.
Total Infiltration                                   3655892.        429.
Total Evaporation                                     774448.         91.
Surface Runoff from Watersheds                      14631473.       1715.
Total Water remaining in Surface Storage                  103.          0.
Infiltration over the Pervious Area...               3655892.       2198.
                       --------
Infiltration + Evaporation +
Surface Runoff + Snow removal +
Water remaining in Surface Storage +
Water remaining in Snow Cover.........              19061916.       2235.
Total Precipitation + Initial Storage.              18976266.       2225.
```

```
The error in continuity is calculated as
*************************************
* Precipitation + Initial Snow Cover  *
*      - Infiltration -               *
*Evaporation - Snow removal -         *
*Surface Runoff from Watersheds -     *
*Water in Surface Storage -           *
*Water remaining in Snow Cover        *
*-----------------------------------*
* Precipitation + Initial Snow Cover  *
*************************************
Error.................................       -0.451 Percent


*********************************************
*       Continuity Check for Channel/Pipes   *
*********************************************
                                                          Inches over
                                                cubic feet  Total Basin
Initial Channel/Pipe Storage................          0.         0.
Final Channel/Pipe Storage..................          0.         0.
Surface Runoff from Watersheds..............   14631473.      1715.
Baseflow....................................          0.
Groundwater Subsurface Inflow...............          0.         0.
Evaporation Loss from Channels..............          0.         0.
Channel/Pipe/Inlet Outflow..................   14631473.      1715.
Initial Storage + Inflow....................   14631473.      1715.
Final Storage + Outflow.....................   14631473.      1715.
*******************************************
* Final Storage + Outflow + Evaporation  - *
* Watershed Runoff - Groundwater Inflow  - *
*     Initial Channel/Pipe Storage         *
*     ---------------------------------    *
*  Final Storage + Outflow  + Evaporation  *
*******************************************
Error.......................................      0.000 Percent

↑
**************************************************
*     Continuity Check for Subsurface Water       *
**************************************************

                                                          Inches over
                                                cubic feet  Subsurface Basin

Total Infiltration                                   0.         0.
Total Upper Zone ET                                  0.         0.
Total Lower Zone ET                                  0.         0.
Total Groundwater flow                               0.         0.
Total Deep percolation                               0.         0.
Initial Subsurface Storage                      307098.        36.
Final Subsurface Storage                        307098.        36.
Upper Zone ET over Pervious Area                     0.         0.
Lower Zone ET over Pervious Area                     0.         0.
```

```
****************************************
* Infiltration + Initial Storage - Final *
* Storage - Upper and Lower Zone ET -    *
* Groundwater Flow - Deep Percolation    *
* ------------------------------------- *
*     Infiltration + Initial Storage     *
****************************************
Error ....................................     0.000 Percent
```

SUMMARY STATISTICS FOR SUBCATCHMENTS

SUBCATCH-MENT NO.	GUTTER OR INLET NO.	AREA (AC)	PERCENT IMPER.	TOTAL SIMULATED RAINFALL (IN)	PERVIOUS AREA TOTAL RUNOFF DEPTH (IN)	PERVIOUS AREA TOTAL LOSSES (IN)	PERVIOUS AREA PEAK RUNOFF RATE (CFS)	IMPERVIOUS AREA RUNOFF DEPTH (IN)	IMPERVIOUS AREA PEAK RUNOFF RATE (CFS)	TOTAL SUBCATCHMENT AREA RUNOFF DEPTH (IN)	TOTAL SUBCATCHMENT AREA PEAK RUNOFF RATE (CFS)	TOTAL SUBCATCHMENT AREA PEAK UNIT RUNOFF (IN/HR)
300	200	2.35	80.5	2224.52	24.2362	200.715	1.083	2122.658	6.867	1713.465	7.950	3.383

*** NOTE *** IMPERVIOUS AREA STATISTICS AGGREGATE IMPERVIOUS AREAS WITH AND WITHOUT DEPRESSION STORAGE

SUMMARY STATISTICS FOR CHANNEL/PIPES

CHANNEL NUMBER	FULL FLOW (CFS)	FULL VELOCITY (FPS)	FULL DEPTH (FT)	MAXIMUM COMPUTED INFLOW (CFS)	MAXIMUM COMPUTED OUTFLOW (CFS)	MAXIMUM COMPUTED DEPTH (FT)	MAXIMUM COMPUTED VELOCITY (FPS)	TIME OF OCCURRENCE DAY	TIME OF OCCURRENCE HR.	LENGTH OF SURCHARGE (HOUR)	MAXIMUM SURCHARGE VOLUME (AC-FT)	RATIO OF MAX. TO FULL FLOW	RATIO OF MAX. DEPTH TO FULL DEPTH
201				0.00				1/ 0/1900	0.00				
200				7.79				7/19/1972	17.50				

TOTAL NUMBER OF CHANNELS/PIPES = 2

*** NOTE *** THE MAXIMUM FLOWS AND DEPTHS ARE CALCULATED AT THE END OF THE TIME INTERVAL

```
##################################################
#             Runoff Quality Summary Page        #
# If NDIM = 0 Units for:   loads    mass rates   #
#             METRIC = 1    lb        lb/sec     #
#             METRIC = 2    kg        kg/sec     #
# If NDIM = 1 Loads are in units of quantity     #
#             and mass rates are quantity/sec    #
# If NDIM = 2 loads are in units of concentration #
#             times volume and mass rates have units#
```

```
#             of concentration times volume/second  #
##################################################

Total Su NDIM =  0
METRIC =  1

                                    Total Su
                                    --------
Inputs
------
 1. INITIAL SURFACE LOAD........        46.
 2. TOTAL SURFACE BUILDUP.......     83570.
 3. INITIAL CATCHBASIN LOAD.....         0.
 4. TOTAL CATCHBASIN LOAD.......         0.
 5. TOTAL CATCHBASIN AND
    SURFACE BUILDUP (2+4).......     83570.

Remaining Loads
---------------
 6. LOAD REMAINING ON SURFACE...        14.
 7. REMAINING IN CATCHBASINS....         0.
 8. REMAINING IN CHANNEL/PIPES..         0.

Removals
--------
 9. STREET SWEEPING REMOVAL.....         0.
10. NET SURFACE BUILDUP (2-9)...     83570.
11. SURFACE WASHOFF.............     83492.
12. CATCHBASIN WASHOFF..........         0.
13. TOTAL WASHOFF (11+12).......     83492.
14. LOAD FROM OTHER CONSTITUENTS         0.
15. PRECIPITATION LOAD..........         0.
15a.SUM SURFACE LOAD (13+14+15).     83492.
16. TOTAL GROUNDWATER LOAD......         0.
16a.TOTAL I/I LOAD..............         0.
17. NET SUBCATCHMENT LOAD
    (15a-15b-15c-15d+16+16a)....     83492.
>>Removal in channel/pipes (17a, 17b):
17a.REMOVE BY BMP FRACTION......         0.
17b.REMOVE BY 1st ORDER DECAY...         0.
18. TOTAL LOAD TO INLETS........     83486.
19. FLOW WT'D AVE.CONCENTRATION  mg/l
    (INLET LOAD/TOTAL FLOW).....        91.

Percentages
-----------
20. STREET SWEEPING (9/2).......         0.
21. SURFACE WASHOFF (11/2)......       100.
22. NET SURFACE WASHOFF(11/10)..       100.
23. WASHOFF/SUBCAT LOAD(11/17)..       100.
24. SURFACE WASHOFF/INLET LOAD
    (11/18).....................       100.
25. CATCHBASIN WASHOFF/
```

```
    SUBCATCHMENT LOAD (12/17)...        0.
26. CATCHBASIN WASHOFF/
    INLET LOAD (12/18)..........        0.
27. OTHER CONSTITUENT LOAD/
    SUBCATCHMENT LOAD (14/17)...        0.
28. INSOLUBLE FRACTION/
    INLET LOAD (14/18)..........        0.
29. PRECIPITATION/
    SUBCATCHMENT LOAD (15/17)...        0.
30. PRECIPITATION/
    INLET LOAD (15/18)..........        0.
31. GROUNDWATER LOAD/
    SUBCATCHMENT LOAD (16/17)...        0.
32. GROUNDWATER LOAD/
    INLET LOAD (16/18)..........        0.
32a.INFILTRATION/INFLOW LOAD/
    SUBCATCHMENT LOAD (16a/17)..        0.
32b.INFILTRATION/INFLOW LOAD/
    INLET LOAD (16a/18).........        0.
32c.CH/PIPE BMP FRACTION REMOVAL/
    SUBCATCHMENT LOAD (17a/17)..        0.
32d.CH/PIPE 1st ORDER DECAY REMOVAL/
    SUBCATCHMENT LOAD (17b/17)..        0.
33. INLET LOAD SUMMATION ERROR
    (18+8+6a+17a+17b-17)/17.....        0.

CAUTION. Due to method of quality routing (Users Manual, Appendix IX)
quality routing through channel/pipes is sensitive to the time step.
Large "Inlet Load Summation Errors" may result.
These can be reduced by adjusting the time step(s).
Note: surface accumulation during dry time steps at end of simulation is
not included in totals.  Buildup is only performed at beginning of
wet steps or for street cleaning.
```

****
* TSS Particle Size Distribution *
****

Diameter (um)	%	Specific Gravity	Settling Velocity (ft/s)	Critical Peclet Number
2.	5.0	2.65	0.000009	0.032973
5.	5.0	2.65	0.000055	0.056296
8.	10.0	2.65	0.000141	0.074071
20.	15.0	2.65	0.000875	0.126463
50.	10.0	2.65	0.005346	0.215914
75.	5.0	2.65	0.011640	0.273579
100.	10.0	2.65	0.019828	0.323611
150.	15.0	2.65	0.040138	0.410039
250.	15.0	2.65	0.087320	0.552510
500.	5.0	2.65	0.198831	0.828097
1000.	5.0	2.65	0.365264	1.241146

```
*****************************************************
*                                                   *
*              Summary of TSS Removal               *
*                                                   *
*****************************************************
```

TSS Removal based on NJCAT Lab Performance Curve

Model #	Low Q Treated (cfs)	High Q Treated (cfs)	Runoff Treated (%)	TSS Removed (%)
HS 4	0.975	11.017	94.0	59.8
HS 5	1.919	11.017	98.1	69.0
HS 6	3.034	11.017	99.4	75.4
HS 7	4.056	11.017	99.8	79.4
HS 8	5.158	11.017	99.9	82.5
HS 9	6.392	11.017	100.0	85.8
HS 10	7.758	11.017	100.0	88.5
HS 12	10.628	11.017	100.0	92.8

← TSS REMOVAL

```
*****************************************************
*                                                   *
*  Summary of Annual Flow Treatmnet & TSS Removal   *
*                                                   *
*****************************************************
```

HS 4

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2478945.8	1537.0	909.4	627.7	94.9	59.2
1958.	4359612.0	4078400.2	2110.6	1166.1	944.5	93.5	55.3
1959.	4556554.0	4145863.0	2099.0	1227.8	871.4	91.0	58.5
1960.	4170938.2	3842332.8	2054.1	1247.9	806.2	92.1	60.8
1961.	3700208.8	3475190.2	2020.7	1233.7	787.1	93.9	61.1
1962.	3947819.0	3779873.0	1916.8	1154.4	762.5	95.7	60.2
1963.	3166754.5	3123073.8	1870.7	1163.9	706.9	98.6	62.2
1964.	3040154.2	2924744.8	1787.4	1111.7	675.9	96.2	62.2
1965.	2646353.8	2579147.2	1734.6	1077.5	657.2	97.5	62.1
1966.	3299085.5	3172186.2	1894.2	1144.7	749.6	96.2	60.4
1967.	4018117.2	3828963.2	2136.9	1249.5	887.6	95.3	58.5
1968.	3701816.0	3535414.2	1797.0	1100.2	697.0	95.5	61.2
1969.	3692137.0	3580995.0	1837.9	1120.7	717.4	97.0	61.0
1970.	3315532.2	3077360.0	1775.5	1084.1	691.6	92.8	61.1
1971.	3526334.5	3266220.5	1978.6	1109.9	868.9	92.6	56.1
1972.	5715895.5	5046827.5	2561.6	1326.3	1235.5	88.3	51.8
1973.	4455813.0	4111249.2	2177.6	1169.5	1008.2	92.3	53.7
1974.	4476171.5	3899317.8	2108.9	1159.5	949.4	87.1	55.0
1975.	4175382.5	4108520.5	1918.7	1206.6	712.3	98.4	62.9
1976.	3217118.5	2994551.2	1917.2	1151.6	765.7	93.1	60.1
1977.	3951751.8	3778048.5	2093.7	1286.2	807.6	95.6	61.4
1978.	3327134.0	3210201.8	1702.6	1076.1	626.6	96.5	63.2
1979.	4275595.5	3882904.0	1987.2	1147.5	839.8	90.8	57.7

1980.	3095499.2	2875615.0	1801.5	1023.7	777.9	92.9	56.8
1981.	3960161.8	3675220.0	2016.7	1152.9	864.0	92.8	57.2
1982.	4022977.8	3705881.0	1983.6	1138.9	844.8	92.1	57.4
1983.	5091839.0	4827806.5	2318.5	1360.1	958.5	94.8	58.7
1984.	3996083.5	3901384.0	1959.2	1185.5	773.8	97.6	60.5
1985.	3637566.2	3273168.5	1958.4	1225.5	733.0	90.0	62.6
1986.	3790836.8	3674100.5	1824.9	1121.9	703.1	96.9	61.5
1987.	3904000.8	3789722.8	1834.2	1157.6	676.8	97.1	63.1
1988.	3348070.5	3157552.5	1822.8	1111.0	711.9	94.3	60.9
1989.	2994106.5	2836913.0	1598.5	966.3	632.3	94.7	60.4
1991.	2317475.0	1996464.8	948.5	604.5	344.0	86.1	63.7
1992.	3643764.5	3542784.5	2026.3	1287.8	738.5	97.2	63.6
1993.	3745788.5	3390449.2	2025.1	1219.6	805.6	90.5	60.2
1994.	4010700.5	3783996.2	2093.2	1237.0	856.2	94.3	59.1
1995.	2822966.0	2661203.0	1491.3	907.4	584.1	94.3	60.8
1996.	4032014.2	3802669.8	2154.2	1273.8	880.4	94.3	59.1
1997.	2466561.2	2421693.5	1630.4	1033.2	597.3	98.2	63.4
1998.	3282861.8	3081285.5	1779.4	1034.3	745.2	93.9	58.1
1999.	3295877.8	3095281.5	1772.7	1088.2	684.6	93.9	61.4
2000.	3485602.5	3344113.2	1934.7	1185.7	749.2	95.9	61.3
2001.	2605558.5	2450713.2	1596.8	987.5	609.5	94.1	61.8

HS 5

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2589393.2	1537.0	1044.5	492.6	99.1	68.0
1958.	4359612.0	4307708.0	2110.6	1387.8	722.8	98.8	65.8
1959.	4556554.0	4352988.0	2099.0	1424.3	674.8	95.5	67.9
1960.	4170938.2	4052420.2	2054.1	1435.1	619.0	97.2	69.9
1961.	3700208.8	3605070.5	2020.7	1420.2	600.5	97.4	70.3
1962.	3947819.0	3909885.5	1916.8	1333.6	583.2	99.0	69.6
1963.	3166754.5	3166247.5	1870.7	1329.0	541.7	100.0	71.0
1964.	3040154.2	3009830.0	1787.4	1269.7	517.8	99.0	71.0
1965.	2646353.8	2641821.2	1734.6	1234.0	500.6	99.8	71.1
1966.	3299085.5	3265931.0	1894.2	1319.3	575.0	99.0	69.6
1967.	4018117.2	3967950.5	2136.9	1466.1	670.9	98.8	68.6
1968.	3701816.0	3639118.0	1797.0	1257.9	539.2	98.3	70.0
1969.	3692137.0	3648073.0	1837.9	1286.6	551.6	98.8	70.0
1970.	3315532.2	3234594.2	1775.5	1242.6	533.0	97.6	70.0
1971.	3526334.5	3469764.2	1978.6	1312.7	666.0	98.4	66.3
1972.	5715895.5	5406620.0	2561.6	1591.7	970.1	94.6	62.1
1973.	4455813.0	4373851.0	2177.6	1404.5	773.1	98.2	64.5
1974.	4476171.5	4203782.5	2108.9	1359.0	749.8	93.9	64.4
1975.	4175382.5	4175382.5	1918.7	1372.2	546.6	100.0	71.5
1976.	3217118.5	3133551.2	1917.2	1340.0	577.2	97.4	69.9
1977.	3951751.8	3884629.8	2093.7	1472.5	621.3	98.3	70.3
1978.	3327134.0	3318782.0	1702.6	1232.5	470.2	99.7	72.4
1979.	4275595.5	4066117.0	1987.2	1322.9	664.4	95.1	66.6
1980.	3095499.2	3043188.5	1801.5	1201.8	599.8	98.3	66.7
1981.	3960161.8	3861208.2	2016.7	1337.0	679.8	97.5	66.3
1982.	4022977.8	3956584.5	1983.6	1335.4	648.2	98.3	67.3

1983.	5091839.0	5039957.0	2318.5	1579.3	739.3	99.0	68.1
1984.	3996083.5	3970174.5	1959.2	1373.0	586.3	99.4	70.1
1985.	3637566.2	3479021.8	1958.4	1389.8	568.7	95.6	71.0
1986.	3790836.8	3774833.8	1824.9	1285.7	539.3	99.6	70.5
1987.	3904000.8	3902055.0	1834.2	1320.3	513.9	100.0	72.0
1988.	3348070.5	3295062.0	1822.8	1267.6	555.3	98.4	69.5
1989.	2994106.5	2958451.0	1598.5	1116.1	482.4	98.8	69.8
1991.	2317475.0	2197729.2	948.5	671.2	277.3	94.8	70.8
1992.	3643764.5	3626791.8	2026.3	1455.5	570.8	99.5	71.8
1993.	3745788.5	3628630.0	2025.1	1404.9	620.2	96.9	69.4
1994.	4010700.5	3968073.5	2093.2	1433.7	659.5	98.9	68.5
1995.	2822966.0	2777922.2	1491.3	1033.6	457.9	98.4	69.3
1996.	4032014.2	3962913.2	2154.2	1461.6	692.6	98.3	67.8
1997.	2466561.2	2458925.5	1630.4	1165.3	465.1	99.7	71.5
1998.	3282861.8	3247781.2	1779.4	1187.5	592.0	98.9	66.7
1999.	3295877.8	3251071.2	1772.7	1237.7	535.1	98.6	69.8
2000.	3485602.5	3464330.8	1934.7	1353.4	581.4	99.4	70.0
2001.	2605558.5	2511361.0	1596.8	1122.9	474.0	96.4	70.3

HS 6

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2608899.5	1537.0	1140.0	397.1	99.8	74.2
1958.	4359612.0	4354786.5	2110.6	1536.4	574.2	99.9	72.8
1959.	4556554.0	4444544.5	2099.0	1561.5	537.6	97.5	74.4
1960.	4170938.2	4122604.8	2054.1	1568.8	485.3	98.8	76.4
1961.	3700208.8	3669946.8	2020.7	1557.1	463.6	99.2	77.1
1962.	3947819.0	3942723.0	1916.8	1460.2	456.6	99.9	76.2
1963.	3166754.5	3166754.5	1870.7	1444.8	425.9	100.0	77.2
1964.	3040154.2	3040154.5	1787.4	1387.7	399.7	100.0	77.6
1965.	2646353.8	2646352.2	1734.6	1344.4	390.2	100.0	77.5
1966.	3299085.5	3291950.5	1894.2	1445.2	449.1	99.8	76.3
1967.	4018117.2	4014166.0	2136.9	1608.5	528.4	99.9	75.3
1968.	3701816.0	3665621.5	1797.0	1376.7	420.3	99.0	76.6
1969.	3692137.0	3676874.2	1837.9	1402.2	435.9	99.6	76.3
1970.	3315532.2	3301881.0	1775.5	1358.5	417.1	99.6	76.5
1971.	3526334.5	3509335.8	1978.6	1448.4	530.2	99.5	73.2
1972.	5715895.5	5524364.5	2561.6	1778.1	783.7	96.6	69.4
1973.	4455813.0	4443559.0	2177.6	1558.3	619.3	99.7	71.6
1974.	4476171.5	4376799.5	2108.9	1504.9	603.9	97.8	71.4
1975.	4175382.5	4175382.5	1918.7	1484.5	434.4	100.0	77.4
1976.	3217118.5	3197439.8	1917.2	1465.1	452.1	99.4	76.4
1977.	3951751.8	3923375.8	2093.7	1608.3	485.4	99.3	76.8
1978.	3327134.0	3327134.0	1702.6	1338.9	363.8	100.0	78.6
1979.	4275595.5	4177380.0	1987.2	1464.8	522.4	97.7	73.7
1980.	3095499.2	3090357.5	1801.5	1322.7	478.8	99.8	73.4
1981.	3960161.8	3937624.8	2016.7	1477.2	539.6	99.4	73.2
1982.	4022977.8	4022977.8	1983.6	1474.9	508.7	100.0	74.4
1983.	5091839.0	5075058.5	2318.5	1722.9	595.7	99.7	74.3
1984.	3996083.5	3995989.2	1959.2	1497.3	461.9	100.0	76.4
1985.	3637566.2	3571042.2	1958.4	1508.6	449.8	98.2	77.0

1986.	3790836.8	3790836.8	1824.9	1396.3	428.7	100.0	76.5
1987.	3904000.8	3904000.8	1834.2	1431.4	402.9	100.0	78.0
1988.	3348070.5	3324529.2	1822.8	1378.0	444.8	99.3	75.6
1989.	2994106.5	2989085.5	1598.5	1218.9	379.7	99.8	76.2
1991.	2317475.0	2284684.2	948.5	725.9	222.6	98.6	76.5
1992.	3643764.5	3643488.5	2026.3	1570.5	455.8	100.0	77.5
1993.	3745788.5	3707810.0	2025.1	1531.9	493.3	99.0	75.6
1994.	4010700.5	4010700.5	2093.2	1568.2	524.9	100.0	74.9
1995.	2822966.0	2805688.0	1491.3	1120.1	371.5	99.4	75.1
1996.	4032014.2	4013629.0	2154.2	1593.9	560.3	99.5	74.0
1997.	2466561.2	2466561.2	1630.4	1265.6	364.8	100.0	77.6
1998.	3282861.8	3278036.5	1779.4	1293.0	486.4	99.9	72.7
1999.	3295877.8	3289088.2	1772.7	1335.3	437.4	99.8	75.3
2000.	3485602.5	3485602.5	1934.7	1467.3	467.4	100.0	75.8
2001.	2605558.5	2567083.8	1596.8	1220.8	376.1	98.5	76.5

HS 7

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2612824.5	1537.0	1193.9	343.2	100.0	77.7
1958.	4359612.0	4359612.0	2110.6	1624.6	486.0	100.0	77.0
1959.	4556554.0	4486879.5	2099.0	1646.7	452.4	98.5	78.5
1960.	4170938.2	4154149.2	2054.1	1645.9	408.2	99.6	80.1
1961.	3700208.8	3694527.5	2020.7	1636.1	384.6	99.8	81.0
1962.	3947819.0	3947819.8	1916.8	1536.4	380.3	100.0	80.2
1963.	3166754.5	3166754.5	1870.7	1508.5	362.2	100.0	80.6
1964.	3040154.2	3040154.5	1787.4	1452.2	335.3	100.0	81.2
1965.	2646353.8	2646352.2	1734.6	1402.4	332.1	100.0	80.9
1966.	3299085.5	3299085.5	1894.2	1518.3	376.0	100.0	80.2
1967.	4018117.2	4018117.2	2136.9	1688.5	448.4	100.0	79.0
1968.	3701816.0	3683087.2	1797.0	1447.5	349.5	99.5	80.5
1969.	3692137.0	3692137.8	1837.9	1475.1	363.0	100.0	80.3
1970.	3315532.2	3315532.2	1775.5	1431.8	343.7	100.0	80.6
1971.	3526334.5	3524058.0	1978.6	1528.2	450.5	99.9	77.2
1972.	5715895.5	5598123.5	2561.6	1879.1	682.7	97.9	73.4
1973.	4455813.0	4455813.0	2177.6	1655.3	522.4	100.0	76.0
1974.	4476171.5	4452759.0	2108.9	1588.3	520.5	99.5	75.3
1975.	4175382.5	4175382.5	1918.7	1558.1	360.8	100.0	81.2
1976.	3217118.5	3217118.5	1917.2	1545.6	371.6	100.0	80.6
1977.	3951751.8	3949952.0	2093.7	1692.3	401.4	100.0	80.8
1978.	3327134.0	3327134.0	1702.6	1406.5	296.1	100.0	82.6
1979.	4275595.5	4230474.0	1987.2	1542.8	444.4	98.9	77.6
1980.	3095499.2	3095499.2	1801.5	1396.7	404.8	100.0	77.5
1981.	3960161.8	3960161.8	2016.7	1561.7	455.1	100.0	77.4
1982.	4022977.8	4022977.8	1983.6	1557.0	426.5	100.0	78.5
1983.	5091839.0	5089601.5	2318.5	1814.5	504.2	100.0	78.3
1984.	3996083.5	3996083.2	1959.2	1578.1	381.1	100.0	80.5
1985.	3637566.2	3608695.8	1958.4	1590.0	368.4	99.2	81.2
1986.	3790836.8	3790836.8	1824.9	1467.6	357.3	100.0	80.4
1987.	3904000.8	3904000.8	1834.2	1500.9	333.4	100.0	81.8
1988.	3348070.5	3341392.5	1822.8	1448.2	374.6	99.8	79.5

1989.	2994106.5	2994108.0	1598.5	1281.0	317.6	100.0	80.1
1991.	2317475.0	2317377.0	948.5	759.3	189.2	100.0	80.1
1992.	3643764.5	3643764.5	2026.3	1652.2	374.0	100.0	81.5
1993.	3745788.5	3737330.2	2025.1	1615.2	409.9	99.8	79.8
1994.	4010700.5	4010700.5	2093.2	1654.0	439.1	100.0	79.0
1995.	2822966.0	2820764.2	1491.3	1179.2	312.4	99.9	79.1
1996.	4032014.2	4029686.5	2154.2	1678.7	475.5	99.9	77.9
1997.	2466561.2	2466561.2	1630.4	1332.1	298.3	100.0	81.7
1998.	3282861.8	3282861.8	1779.4	1365.9	413.6	100.0	76.8
1999.	3295877.8	3295877.2	1772.7	1408.3	364.4	100.0	79.4
2000.	3485602.5	3485602.5	1934.7	1541.2	393.6	100.0	79.7
2001.	2605558.5	2591054.0	1596.8	1283.1	313.7	99.4	80.4

HS 8

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2612824.5	1537.0	1237.1	299.9	100.0	80.5
1958.	4359612.0	4359612.0	2110.6	1691.8	418.8	100.0	80.2
1959.	4556554.0	4523788.0	2099.0	1714.8	384.2	99.3	81.7
1960.	4170938.2	4170899.0	2054.1	1713.0	341.1	100.0	83.4
1961.	3700208.8	3700208.8	2020.7	1703.4	317.3	100.0	84.3
1962.	3947819.0	3947819.8	1916.8	1598.6	318.1	100.0	83.4
1963.	3166754.5	3166754.5	1870.7	1563.6	307.0	100.0	83.6
1964.	3040154.2	3040154.5	1787.4	1509.0	278.5	100.0	84.4
1965.	2646353.8	2646352.2	1734.6	1455.4	279.2	100.0	83.9
1966.	3299085.5	3299085.5	1894.2	1578.2	316.0	100.0	83.3
1967.	4018117.2	4018117.2	2136.9	1756.9	380.0	100.0	82.2
1968.	3701816.0	3699082.8	1797.0	1502.4	294.5	99.9	83.6
1969.	3692137.0	3692137.8	1837.9	1536.4	301.8	100.0	83.6
1970.	3315532.2	3315532.2	1775.5	1484.2	291.4	100.0	83.6
1971.	3526334.5	3526334.2	1978.6	1586.4	392.2	100.0	80.2
1972.	5715895.5	5654295.0	2561.6	1976.4	585.3	98.9	77.2
1973.	4455813.0	4455813.0	2177.6	1731.1	446.6	100.0	79.5
1974.	4476171.5	4476089.5	2108.9	1661.9	446.8	100.0	78.8
1975.	4175382.5	4175382.5	1918.7	1621.7	297.2	100.0	84.5
1976.	3217118.5	3217118.5	1917.2	1605.3	311.9	100.0	83.7
1977.	3951751.8	3951751.8	2093.7	1755.5	338.2	100.0	83.8
1978.	3327134.0	3327134.0	1702.6	1452.5	250.1	100.0	85.3
1979.	4275595.5	4255796.0	1987.2	1611.8	375.3	99.5	81.1
1980.	3095499.2	3095499.2	1801.5	1448.3	353.2	100.0	80.4
1981.	3960161.8	3960161.8	2016.7	1618.6	398.2	100.0	80.3
1982.	4022977.8	4022977.8	1983.6	1617.1	366.3	100.0	81.5
1983.	5091839.0	5091838.5	2318.5	1890.2	428.5	100.0	81.5
1984.	3996083.5	3996083.2	1959.2	1638.3	320.9	100.0	83.6
1985.	3637566.2	3629948.8	1958.4	1643.9	314.5	99.8	83.9
1986.	3790836.8	3790836.8	1824.9	1520.6	304.3	100.0	83.3
1987.	3904000.8	3904000.8	1834.2	1554.7	279.5	100.0	84.8
1988.	3348070.5	3348070.5	1822.8	1504.1	318.7	100.0	82.5
1989.	2994106.5	2994108.0	1598.5	1331.1	267.4	100.0	83.3
1991.	2317475.0	2317475.0	948.5	786.8	161.7	100.0	83.0
1992.	3643764.5	3643764.5	2026.3	1710.3	316.0	100.0	84.4

1993.	3745788.5	3745788.5	2025.1	1672.8	352.3	100.0	82.6
1994.	4010700.5	4010700.5	2093.2	1716.0	377.0	100.0	82.0
1995.	2822966.0	2822966.0	1491.3	1219.9	271.7	100.0	81.8
1996.	4032014.2	4032014.2	2154.2	1742.2	412.0	100.0	80.9
1997.	2466561.2	2466561.2	1630.4	1383.0	247.4	100.0	84.8
1998.	3282861.8	3282861.8	1779.4	1427.4	352.1	100.0	80.2
1999.	3295877.8	3295877.2	1772.7	1460.7	312.0	100.0	82.4
2000.	3485602.5	3485602.5	1934.7	1597.5	337.2	100.0	82.6
2001.	2605558.5	2605332.2	1596.8	1325.8	271.0	100.0	83.0

HS 9

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2612824.5	1537.0	1288.6	248.4	100.0	83.8
1958.	4359612.0	4359612.0	2110.6	1759.4	351.2	100.0	83.4
1959.	4556554.0	4553443.5	2099.0	1788.0	311.1	99.9	85.2
1960.	4170938.2	4170938.2	2054.1	1780.0	274.1	100.0	86.7
1961.	3700208.8	3700208.8	2020.7	1766.3	254.4	100.0	87.4
1962.	3947819.0	3947819.8	1916.8	1659.1	257.5	100.0	86.6
1963.	3166754.5	3166754.5	1870.7	1627.2	243.4	100.0	87.0
1964.	3040154.2	3040154.5	1787.4	1565.2	222.4	100.0	87.6
1965.	2646353.8	2646352.2	1734.6	1510.9	223.7	100.0	87.1
1966.	3299085.5	3299085.5	1894.2	1641.2	253.1	100.0	86.6
1967.	4018117.2	4018117.2	2136.9	1829.8	307.0	100.0	85.6
1968.	3701816.0	3701816.0	1797.0	1560.9	236.1	100.0	86.9
1969.	3692137.0	3692137.8	1837.9	1597.8	240.3	100.0	86.9
1970.	3315532.2	3315532.2	1775.5	1540.5	235.0	100.0	86.8
1971.	3526334.5	3526334.2	1978.6	1650.1	328.5	100.0	83.4
1972.	5715895.5	5701002.0	2561.6	2071.7	490.1	99.7	80.9
1973.	4455813.0	4455813.0	2177.6	1808.1	369.6	100.0	83.0
1974.	4476171.5	4476171.5	2108.9	1737.8	370.8	100.0	82.4
1975.	4175382.5	4175382.5	1918.7	1684.8	234.1	100.0	87.8
1976.	3217118.5	3217118.5	1917.2	1664.9	252.3	100.0	86.8
1977.	3951751.8	3951751.8	2093.7	1825.3	268.4	100.0	87.2
1978.	3327134.0	3327134.0	1702.6	1505.2	197.4	100.0	88.4
1979.	4275595.5	4273198.0	1987.2	1674.0	313.2	99.9	84.2
1980.	3095499.2	3095499.2	1801.5	1511.0	290.5	100.0	83.9
1981.	3960161.8	3960161.8	2016.7	1689.7	327.1	100.0	83.8
1982.	4022977.8	4022977.8	1983.6	1680.5	302.9	100.0	84.7
1983.	5091839.0	5091838.5	2318.5	1972.1	346.6	100.0	85.1
1984.	3996083.5	3996083.2	1959.2	1703.6	255.7	100.0	87.0
1985.	3637566.2	3637566.2	1958.4	1703.0	255.4	100.0	87.0
1986.	3790836.8	3790836.8	1824.9	1576.9	248.0	100.0	86.4
1987.	3904000.8	3904000.8	1834.2	1611.4	222.8	100.0	87.9
1988.	3348070.5	3348070.5	1822.8	1562.3	260.5	100.0	85.7
1989.	2994106.5	2994108.0	1598.5	1384.4	214.1	100.0	86.6
1991.	2317475.0	2317475.0	948.5	817.6	130.9	100.0	86.2
1992.	3643764.5	3643764.5	2026.3	1772.9	253.4	100.0	87.5
1993.	3745788.5	3745788.5	2025.1	1738.2	286.9	100.0	85.8
1994.	4010700.5	4010700.5	2093.2	1782.2	310.8	100.0	85.1
1995.	2822966.0	2822966.0	1491.3	1270.6	221.0	100.0	85.2

1996.	4032014.2	4032014.2	2154.2	1817.2	337.0	100.0	84.4
1997.	2466561.2	2466561.2	1630.4	1440.5	189.8	100.0	88.4
1998.	3282861.8	3282861.8	1779.4	1497.9	281.6	100.0	84.2
1999.	3295877.8	3295877.2	1772.7	1514.2	258.5	100.0	85.4
2000.	3485602.5	3485602.5	1934.7	1662.3	272.5	100.0	85.9
2001.	2605558.5	2605558.5	1596.8	1380.0	216.8	100.0	86.4

HS 10

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2612824.5	1537.0	1334.5	202.5	100.0	86.8
1958.	4359612.0	4359612.0	2110.6	1819.8	290.8	100.0	86.2
1959.	4556554.0	4556554.0	2099.0	1841.2	257.9	100.0	87.7
1960.	4170938.2	4170938.2	2054.1	1835.1	219.0	100.0	89.3
1961.	3700208.8	3700208.8	2020.7	1818.3	202.4	100.0	90.0
1962.	3947819.0	3947819.8	1916.8	1710.9	205.7	100.0	89.3
1963.	3166754.5	3166754.5	1870.7	1679.0	191.6	100.0	89.8
1964.	3040154.2	3040154.5	1787.4	1606.2	181.4	100.0	89.9
1965.	2646353.8	2646352.2	1734.6	1558.3	176.2	100.0	89.8
1966.	3299085.5	3299085.5	1894.2	1686.9	207.3	100.0	89.1
1967.	4018117.2	4018117.2	2136.9	1886.2	250.6	100.0	88.3
1968.	3701816.0	3701816.0	1797.0	1607.8	189.1	100.0	89.5
1969.	3692137.0	3692137.8	1837.9	1643.9	194.3	100.0	89.4
1970.	3315532.2	3315532.2	1775.5	1585.3	190.2	100.0	89.3
1971.	3526334.5	3526334.2	1978.6	1706.6	272.0	100.0	86.3
1972.	5715895.5	5715801.0	2561.6	2155.8	406.0	100.0	84.2
1973.	4455813.0	4455813.0	2177.6	1873.0	304.7	100.0	86.0
1974.	4476171.5	4476171.5	2108.9	1802.4	306.2	100.0	85.5
1975.	4175382.5	4175382.5	1918.7	1735.9	183.1	100.0	90.5
1976.	3217118.5	3217118.5	1917.2	1712.9	204.3	100.0	89.3
1977.	3951751.8	3951751.8	2093.7	1878.7	215.0	100.0	89.7
1978.	3327134.0	3327134.0	1702.6	1547.6	155.0	100.0	90.9
1979.	4275595.5	4275595.5	1987.2	1726.3	260.9	100.0	86.9
1980.	3095499.2	3095499.2	1801.5	1556.4	245.1	100.0	86.4
1981.	3960161.8	3960161.8	2016.7	1739.5	277.3	100.0	86.3
1982.	4022977.8	4022977.8	1983.6	1732.1	251.3	100.0	87.3
1983.	5091839.0	5091838.5	2318.5	2037.6	281.2	100.0	87.9
1984.	3996083.5	3996083.2	1959.2	1753.3	205.9	100.0	89.5
1985.	3637566.2	3637566.2	1958.4	1754.0	204.4	100.0	89.6
1986.	3790836.8	3790836.8	1824.9	1626.3	198.6	100.0	89.1
1987.	3904000.8	3904000.8	1834.2	1653.8	180.5	100.0	90.2
1988.	3348070.5	3348070.5	1822.8	1609.0	213.8	100.0	88.3
1989.	2994106.5	2994108.0	1598.5	1425.5	173.0	100.0	89.2
1991.	2317475.0	2317475.0	948.5	842.3	106.2	100.0	88.8
1992.	3643764.5	3643764.5	2026.3	1822.2	204.0	100.0	89.9
1993.	3745788.5	3745788.5	2025.1	1791.1	234.0	100.0	88.4
1994.	4010700.5	4010700.5	2093.2	1835.3	257.7	100.0	87.7
1995.	2822966.0	2822966.0	1491.3	1311.2	180.4	100.0	87.9
1996.	4032014.2	4032014.2	2154.2	1876.0	278.2	100.0	87.1
1997.	2466561.2	2466561.2	1630.4	1480.2	150.1	100.0	90.8
1998.	3282861.8	3282861.8	1779.4	1549.0	230.5	100.0	87.0

1999.	3295877.8	3295877.2	1772.7	1563.6	209.1	100.0	88.2
2000.	3485602.5	3485602.5	1934.7	1714.2	220.6	100.0	88.6
2001.	2605558.5	2605558.5	1596.8	1422.9	173.9	100.0	89.1

HS 12

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	2612824.5	2612824.5	1537.0	1403.7	133.3	100.0	91.3
1958.	4359612.0	4359612.0	2110.6	1913.0	197.6	100.0	90.6
1959.	4556554.0	4556554.0	2099.0	1934.0	165.0	100.0	92.1
1960.	4170938.2	4170938.2	2054.1	1922.9	131.1	100.0	93.6
1961.	3700208.8	3700208.8	2020.7	1897.4	123.3	100.0	93.9
1962.	3947819.0	3947819.8	1916.8	1790.5	126.2	100.0	93.4
1963.	3166754.5	3166754.5	1870.7	1761.3	109.3	100.0	94.2
1964.	3040154.2	3040154.5	1787.4	1676.1	111.2	100.0	93.8
1965.	2646353.8	2646352.2	1734.6	1630.9	103.7	100.0	94.0
1966.	3299085.5	3299085.5	1894.2	1765.0	129.2	100.0	93.2
1967.	4018117.2	4018117.2	2136.9	1982.2	154.8	100.0	92.8
1968.	3701816.0	3701816.0	1797.0	1683.1	113.6	100.0	93.7
1969.	3692137.0	3692137.8	1837.9	1722.3	116.0	100.0	93.7
1970.	3315532.2	3315532.2	1775.5	1656.3	119.2	100.0	93.3
1971.	3526334.5	3526334.2	1978.6	1806.0	172.7	100.0	91.3
1972.	5715895.5	5715895.5	2561.6	2282.8	278.9	100.0	89.1
1973.	4455813.0	4455813.0	2177.6	1981.3	196.3	100.0	91.0
1974.	4476171.5	4476171.5	2108.9	1901.3	207.5	100.0	90.2
1975.	4175382.5	4175382.5	1918.7	1811.0	107.7	100.0	94.4
1976.	3217118.5	3217118.5	1917.2	1787.6	129.6	100.0	93.2
1977.	3951751.8	3951751.8	2093.7	1960.3	133.4	100.0	93.6
1978.	3327134.0	3327134.0	1702.6	1612.3	90.3	100.0	94.7
1979.	4275595.5	4275595.5	1987.2	1815.2	172.0	100.0	91.3
1980.	3095499.2	3095499.2	1801.5	1639.8	161.7	100.0	91.0
1981.	3960161.8	3960161.8	2016.7	1831.9	184.8	100.0	90.8
1982.	4022977.8	4022977.8	1983.6	1820.8	162.8	100.0	91.8
1983.	5091839.0	5091838.5	2318.5	2146.4	172.2	100.0	92.6
1984.	3996083.5	3996083.2	1959.2	1840.1	119.1	100.0	93.9
1985.	3637566.2	3637566.2	1958.4	1833.2	125.2	100.0	93.6
1986.	3790836.8	3790836.8	1824.9	1705.4	119.6	100.0	93.4
1987.	3904000.8	3904000.8	1834.2	1729.7	104.5	100.0	94.3
1988.	3348070.5	3348070.5	1822.8	1687.2	135.5	100.0	92.6
1989.	2994106.5	2994108.0	1598.5	1492.8	105.7	100.0	93.4
1991.	2317475.0	2317475.0	948.5	882.7	65.8	100.0	93.1
1992.	3643764.5	3643764.5	2026.3	1910.5	115.8	100.0	94.3
1993.	3745788.5	3745788.5	2025.1	1874.7	150.4	100.0	92.6
1994.	4010700.5	4010700.5	2093.2	1931.5	161.7	100.0	92.3
1995.	2822966.0	2822966.0	1491.3	1378.2	113.1	100.0	92.4
1996.	4032014.2	4032014.2	2154.2	1976.1	178.1	100.0	91.7
1997.	2466561.2	2466561.2	1630.4	1549.9	80.4	100.0	95.1
1998.	3282861.8	3282861.8	1779.4	1631.5	147.9	100.0	91.7
1999.	3295877.8	3295877.2	1772.7	1639.2	133.6	100.0	92.5
2000.	3485602.5	3485602.5	1934.7	1796.7	138.0	100.0	92.9
2001.	2605558.5	2605558.5	1596.8	1487.9	108.9	100.0	93.2

```
**************************************************
*  Summary of Quantity and Quality Results at      *
*  Location        200  INFlow in cfs.             *
*  Values are instantaneous at indicated time step *
**************************************************

  McGovern Boulevard, Lancaster, MA
  DMH#S3

     Date      Time        Flow   Total Su
 Mo/Da/Year  Hr:Min        cfs    mg/l
 ----------  -------    -------  --------
Flow wtd means.....        0.023       92.
Flow wtd std devs..        0.110       68.
Maximum value......        7.787      292.
Minimum value......        0.000        0.
Total loads........    14617869.    83535.
                        Cub-Ft     POUNDS

===> Runoff simulation ended normally.

===> SWMM 4.4    simulation ended normally.
     Always check output file for possible warning messages.

*****************************************************
*       SWMM 4.4    Simulation Date and Time Summary  *
*****************************************************
* Starting Date... March      29, 2021               *
*          Time...         16: 9:42.517              *
*   Ending Date... March      29, 2021               *
*          Time...         16: 9:50.521              *
*  Elapsed Time...               0.133 minutes.      *
*  Elapsed Time...               8.004 seconds.      *
*****************************************************
```

MASS DEP "Standard Method to Convert Required Water Quality Volume to a Discharge Rate for Sizing Flow Based Manufactured Proprietary Stormwater Treatment Practices"

DMH#S3-Water Quality Unit

For First 1-Inch Runoff WQV

Step 1: Area of Impervious Surface to Structure

2.35 acres @ 80.50% Impervious = 1.89 Acres Impervious

1.89 Acres x .0015625 sq mi = ***2.95(-3) square miles.***

Step 2: Tc of Train

P-S108 to DCB#R100:	5.0 min
DCB#R100 to DMH#R100	2.6 min
DMH#R100 to DMH#R101	2.1 min
DMH#R101 to DMH#S1	3.1 min
DMH#S1 to DMH#S2:	3.3 min
DMH#S2 to DMH#S3:	0.3 min
Total Tc to DMH#S3	***16.4 min or 0.27 hours***

Step 3: Determine qu

From Figure 4:

Tc @ 0.25, qu=628 csm/in

Step 4: Determine Q1

Q1=(qu)x(A)x(WQV)

Q1=(628csm/in)x(2.95e-3)x(1 in)

Q1=1.86 CFS

Determination

Determination of Water Quality Flow rates for units by New Jersey Corporation for Advanced Technology (NJCAT) Program

From Technology Verification
HG 6 Treatment Flow rate

2.6 cf.s > 1.86 c.f.s. *"Pass"*

HydroGuard HG6 to be utilized in Design.

MASS DEP "Standard Method to Convert Required Water Quality Volume to a Discharge Rate for Sizing Flow Based Manufactured Proprietary Stormwater Treatment Practices"

DMH#S9 Water Quality Unit

For First 1/2-Inch Runoff WQV

Step 1: Area of Impervious Surface to Structure

1.33 acres @ 60.50% Impervious = 0.805 Acres Impervious

0.805 Acres x .0015625 sq mi = ***1.26e(-3) square miles.***

Step 2: Tc of Train

P-SUB9 to DCB#S9:	8.5 min
DCB#S9 To DMH#S4:	0.2 min
DMH#S4 to DMH#S5:	1.6 min
DMH#S5 to DMH#S6:	1.6 min
DMH#S6 to DMH#S7:	0.2 min
DMH#S7 to DMH#S9:	0.1 min
Total Tc to DMH#S3	***12.2 min or 0.203 hours***

Step 3: Determine qu

From Figure 4:

Tc @ 0.200, qu=669 csm/in

Step 4: Determine Q1

Q1=(qu)x(A)x(WQV)

Q1=(669csm/in)x(1.26e-3)x(1 in)

Q1=0.84 CFS

Determination

Determination of Water Quality Flow rates for units by New Jersey Corporation for Advanced Technology (NJCAT) Program

From Technology Verification
HG 5 Treatment Flow rate

1.7 cf.s > 0.84 c.f.s. *"Pass"*

HydroGuard HG5 to be utilized in Design.

INSTRUCTIONS:

Non-automated: Mar. 4, 2008

1. Sheet is nonautomated. Print sheet and complete using hand calculations. Column A and B: See MassDEP Structural BMP Table
2. The calculations must be completed using the Column Headings specified in Chart and Not the Excel Column Headings
3. To complete Chart Column D, multiple Column B value within Row x Column C value within Row
4. To complete Chart Column E value, subtract Column D value within Row from Column C within Row
5. Total TSS Removal = Sum All Values in Column D

Location: DMH#S9

TSS Removal Calculation Worksheet

A BMP[1]	B TSS Removal Rate[1]	C Starting TSS Load*	D Amount Removed (B*C)	E Remaining Load (C-D)
Hooded and Deep sump catchbasin	0.25	1.00	0.25	0.75
Hydroworks HG5	0.80	0.75	0.60	0.15

Total TSS Removal = 85%

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: McGovern Place - Phase II

Prepared By: Hannigan Engineering, Inc.

Date: 2/25/2021

*Equals remaining load from previous BMP (E) which enters the BMP

Summary for Reach DMHS9: TO DMH-S10

[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach DMHS7 outlet invert by 0.29' @ 12.10 hrs

Inflow Area = 57,987 sf, 60.49% Impervious, Inflow Depth = 1.68" for 1-Year event
Inflow = 2.34 cfs @ 12.11 hrs, Volume= 8,103 cf<=WQV
Outflow = 2.27 cfs @ 12.13 hrs, Volume= 8,103 cf, Atten= 3%, Lag= 1.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.01 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.31 fps, Avg. Travel Time= 1.7 min

Peak Storage= 79 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.55'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 8.27 cfs

18.0" Round Pipe
n= 0.013 Corrugated PE, smooth interior
Length= 137.0' Slope= 0.0062 '/'
Inlet Invert= 344.25', Outlet Invert= 343.40'

Summary for Subcatchment P-SUB9: TO DCB-S9

Runoff = 0.28 cfs @ 12.12 hrs, Volume= 951 cf, Depth= 1.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.50"

Area (sf)	CN	Description
615	61	>75% Grass cover, Good, HSG B
851	96	Gravel surface, HSG B
717	98	Paved parking, HSG B
435	74	>75% Grass cover, Good, HSG C
3,901	96	Gravel surface, HSG C
218	98	Paved parking, HSG C
6,737	92	Weighted Average
5,802		86.12% Pervious Area
935		13.88% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	75	0.0200	0.16		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	55	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	29	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
8.5	159	Total <=Tc			

Summary for Reach DCBS9: TO DMH-S4

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 6,737 sf, 13.88% Impervious, Inflow Depth = 1.69" for 1-Year event
Inflow = 0.28 cfs @ 12.12 hrs, Volume= 951 cf
Outflow = 0.27 cfs @ 12.12 hrs, Volume= 951 cf, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.31 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.51 fps, Avg. Travel Time= 0.2 min<Tc

Peak Storage= 1 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.14'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.02 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 18.0' Slope= 0.0278 '/'
Inlet Invert= 356.50', Outlet Invert= 356.00'

Summary for Reach DMHS4: TO DMH-S5

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 9,006 sf, 33.47% Impervious, Inflow Depth = 1.76" for 1-Year event
Inflow = 0.38 cfs @ 12.11 hrs, Volume= 1,322 cf
Outflow = 0.37 cfs @ 12.12 hrs, Volume= 1,322 cf, Atten= 2%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.84 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.27 fps, Avg. Travel Time= 1.6 min <=Tc

Peak Storage= 12 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.17 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 126.0' Slope= 0.0151 '/'
Inlet Invert= 352.00', Outlet Invert= 350.10'

Summary for Reach DMHS5: TO DMH-S6

[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach DMHS4 outlet invert by 0.08' @ 12.15 hrs

Inflow Area = 9,006 sf, 33.47% Impervious, Inflow Depth = 1.76" for 1-Year event
Inflow = 0.37 cfs @ 12.12 hrs, Volume= 1,322 cf
Outflow = 0.36 cfs @ 12.14 hrs, Volume= 1,322 cf, Atten= 2%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.80 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 1.27 fps, Avg. Travel Time= 1.6 min <=Tc

Peak Storage= 12 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.18'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 5.17 cfs

12.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 126.0' Slope= 0.0151 '/'
Inlet Invert= 350.00', Outlet Invert= 348.10'

Summary for Reach DMHS6: TO DMH-S7

[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach DMHS5 outlet invert by 0.16' @ 12.10 hrs

Inflow Area = 30,209 sf, 42.48% Impervious, Inflow Depth = 1.65" for 1-Year event
Inflow = 1.14 cfs @ 12.12 hrs, Volume= 4,163 cf
Outflow = 1.14 cfs @ 12.12 hrs, Volume= 4,163 cf, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.16 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.06 fps, Avg. Travel Time= 0.2 min <= Tc

Peak Storage= 4 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.26'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 12.07 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0250 '/'
Inlet Invert= 348.00', Outlet Invert= 347.50'

Summary for Reach DMHS7: TO DMH-S9

[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach DMHS8 outlet invert by 0.29' @ 12.10 hrs

Inflow Area = 57,987 sf, 60.49% Impervious, Inflow Depth = 1.68" for 1-Year event
Inflow = 2.34 cfs @ 12.11 hrs, Volume= 8,103 cf
Outflow = 2.34 cfs @ 12.11 hrs, Volume= 8,103 cf, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.02 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.31 fps, Avg. Travel Time= 0.1 min<=Tc

Peak Storage= 7 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.40'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 10.80 cfs

15.0" Round Pipe
n= 0.011 Concrete pipe, straight & clean
Length= 20.0' Slope= 0.0200 '/'
Inlet Invert= 344.90', Outlet Invert= 344.50'

```
  ************************************************
*      Storm Water Management Sizing Model      *
*               Hydroworks, LLC                 *
*                Version 4.4                    *
*                                               *
*        Continuous Simulation Program          *
*              Based on SWMM 4.4H               *
*              Hydroworks, LLC                  *
*               Graham Bryant                   *
*                2003 - 2013                    *
************************************************

                 Developed by

************************************************
*               Hydroworks, LLC                 *
*             Metcalf & Eddy, Inc.              *
*            University of Florida              *
*       Water Resources Engineers, Inc.         *
*      (Now Camp Dresser & McKee, Inc.)         *
*              Modified SWMM 4.4                *
************************************************

         Distributed and Maintained by

************************************************
*                                              *
*                Hydroworks, LLC               *
*                 888-290-7900                 *
*              www.hydroworks.com              *
*                                              *
************************************************

************************************************
*     If any problems occur executing this     *
*     model, contact Mr. Graham Bryant at      *
*     Hydroworks, LLC by phone at 908-272-4411 *
*     or by e-mail: support@hydroworks.com     *
************************************************

************************************************
*     This model is based on EPA SWMM 4.4      *
*  "Nature is full of infinite causes which    *
*   have never occurred in experience" da Vinci *
************************************************


************************************************
* Entry made to the Rain Block                 *
* Created by the University of Florida - 1988  *
* Updated by Oregon State University, March 2000 *
************************************************
```

North Lancaster, LLC, McGovern Boulevard
DMH#S9

```
#######################################
#  Precipitation Block Input Commands  #
#######################################

Station Name........................  Worcester Wso Ap

Station Location....................  Massachusetts

Station, ISTA.......................    9923

Beginning date, IYBEG (Yr/Mo/Dy......  1957/ 1/ 1

Ending date, IYEND (Yr/Mo/Dy)........  2001/12/31

Minimum interevent time, MIT.........     1

Number of ranked storms, NPTS........    10

NWS format, IFORM (See text).........     1

Print storm summary, ISUM (O-No 1-Yes)    0

Print all rainfall, IYEAR (O-No 1-Yes)    0

Save storm event data on NSCRAT(1)....    0
(IFILE =0 -Do not save, =1 -Save data)

IDECID 0 - Create interface file
       1 - Create file and analyze
       2 - Synoptic analysis.........     2

Plotting position parameter, A........  0.40

Storm event statistics, NOSTAT........  1100


KODEA (from optional group B0)........     2
 = 0, Do not include NCDC cumulative values.
 = 1, Average NCDC cumulative values.
 = 2, Use NCDC cumulative value as inst. rain.

KODEPR (from optional group B0).......     0
 Print NCDC special codes in event summary:
 = 0, only on days with events.
 = 1, on all days with codes present.
 Codes: A = accumulated value, I = incomplete value,
        M = missing value,     O = other code present
```

```
*******************************************************
*  Precipitation output created using the Rain block   *
*  Number of precipitation stations...        1        *
*******************************************************

Location Station Number
-------- --------------
       1.     9923


STATION ID ON PRECIP. DATA INPUT FILE = 2302
REQUESTED STATION ID =     9923  CHECK TO BE SURE THEY MATCH.



$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$
Note, 15-min. data are being processed, but hourly
print-out, summaries, and statistics are based on
hourly totals only.  Data placed on interface file
are at correct 15-min. intervals.
$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

##################################################
# Entry made to the Runoff Block, last updated by #
# Oregon State University, and Camp, Dresser and  #
# McKee, Inc., March 2002.                        #
##################################################
# "And wherever water goes, amoebae go along for  #
#  the ride"                        Tom Robbins    #
##################################################


                    North Lancaster, LLC, McGovern Boulevard

                    DMH#S9


Snowmelt parameter - ISNOW.......................          0

Number of rain gages - NRGAG.....................          1

Horton infiltration equation used - INFILM.......          2
Maximum infiltration volume is limited to RMAXINF input on  subcatchment lines.
Infiltration volume regenerates during  non rainfall periods.

Quality is simulated - KWALTY....................          1

IVAP is negative.  Evaporation will be set to zero
    during time steps with rainfall.

Read evaporation data on line(s) F1 (F2) - IVAP..          1
```

```
Hour of day at start of storm - NHR.............          1

Minute of hour at start of storm - NMN...........          1

Time TZERO at start of storm (hours).............      1.017

Use U.S. Customary units for most I/O - METRIC...          0

Runoff input print control...                              0

Runoff graph plot control....                              1

Runoff output print control..                              0

Print headers every 50 lines - NOHEAD (0=yes, 1=no)        0

Print land use load percentages -LANDUPR (0=no, 1=yes)     0

Limit number of groundwater convergence messages to 10000 (if simulated)

Month, day, year of start of storm is:              1/ 1/1957

Wet time step length (seconds).......                   300.

Dry time step length (seconds).......                   900.

Wet/Dry time step length (seconds)...                   450.

Simulation length is......                       20011231.0 Yr/Mo/Dy

Percent of impervious area with zero detention depth    25.0

Horton infiltration model being used
Rate for regeneration of infiltration = REGEN * DECAY
DECAY is read in for each subcatchment
REGEN = ........................................   0.01000
```

```
*******************************************************
*   Processed Precipitation will be read from file     *
*******************************************************

  ############################
  #        Data Group F1     #
  # Evaporation Rate (in/day) #
  ############################
```

JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
0.00	0.00	0.00	0.10	0.10	0.15	0.15	0.15	0.10	0.10	0.00	0.00

```
*********************************************************
*        C H A N N E L   A N D   P I P E   D A T A      *
*********************************************************
```

Input equen umber	NAMEG: Channel ID #	Drains to NGTO:	Channel Type	Width (ft)	Length (ft)	Invert Slope (ft/ft)	L Side Slope (ft/ft)	R Side Slope (ft/ft)	Intial Depth (ft)	Max Depth (ft)	Mann- ings "N"	Full Flow (cfs)
1	201	200	Dummy	0.0	0.0	0.0000	0.0000	0.0000	0.0	0.0	0.0000	0.00E+00

```
*****************************************************
*          S U B C A T C H M E N T   D A T A        *
*****************************************************
```

NOTE. SEE LATER TABLE FOR OPTIONAL SUBCATCHMENT PARAMETERS

	SUBCATCH- MENT NO.	CHANNEL OR INLET	WIDTH (FT)	AREA (AC)	PERCENT IMPERV.	SLOPE (FT/FT)	RESISTANCE IMPERV.	FACTOR PERV.	DEPRES. IMPERV.	STORAGE(IN) PERV.	INFILTRATION RATE(IN/HR) MAXIMUM	MINIMUM	DECAY RATE (1/SEC)	GAGE NO.	MAXIMUM VOLUME (INCHES)
1	300	200	240.70	1.33	60.50	0.0200	0.015	0.250	0.020	0.200	2.50	0.40	0.00055	1	4.00000

```
TOTAL NUMBER OF SUBCATCHMENTS...              1
TOTAL TRIBUTARY AREA (ACRES)....           1.33
IMPERVIOUS AREA (ACRES).........           0.80
PERVIOUS AREA (ACRES)...........           0.53
TOTAL WIDTH (FEET)..............         240.70
PERCENT IMPERVIOUSNESS..........          60.50
```

```
*******************************************************
*     G R O U N D W A T E R   I N P U T   D A T A     *
*******************************************************
```

SUB- CATCH NUMBER	CHANNEL OR INLET	ELEVATIONS GROUND (FT)	BOTTOM (FT)	STAGE (FT)	BC (FT)	TW (FT)	FLOW CONSTANTS A1 (IN/HR-FT^B1)	B1	A2 (IN/HR-FT^B2)	B2	A3 (IN/HR-FT^2)
0	602	10.00	0.00	0.00	2.00	2.00	4.500E-05	2.600	0.000E+00	1.000	0.00E+00

```
*********************************************************
* G R O U N D W A T E R   I N P U T   D A T A (CONTINUED) *
*********************************************************
```

S O I L P R O P E R T I E S

SUBCAT. NO.	POROSITY	SATURATED HYDRAULIC CONDUCTIVITY (in/hr)	WILTING POINT	FIELD CAPACITY	INITIAL MOISTURE	MAX. DEEP PERCOLATION (in/hr)	PERCOLATION PARAMETERS HCO	PCO	ET PARAMETERS DEPTH OF ET (ft)	FRACTION OF ET TO UPPER ZONE
0	.4000	5.000	.1500	.3000	.3000	2.000E-03	10.00	15.00	14.00	0.350

```
*******************************************************
*    Arrangement of Subcatchments and Channel/Pipes     *
*******************************************************
* See second subcatchment output table for connectivity *
* of subcatchment to subcatchment flows.                *
*******************************************************

   Channel
   or Pipe
       201      No Tributary Channel/Pipes
                No Tributary Subareas.....


    INLET
       200      Tributary Channel/Pipes...        201
                Tributary Subareas........        300


*********************************************************
* Hydrographs will be stored for the following   1 INLETS *
*********************************************************
           200

↑
##################################################
#              Quality Simulation                #
##################################################
#      General Quality Control Data Groups       #
##################################################

 Description                          Variable       Value
 -----------                          --------       -----

 Number of quality constituents.....   NQS.......        1

 Number of land uses...............  JLAND.......        1

 Standard catchbasin volume.........  CBVOL.......     4.00 cubic feet

 Erosion is not simulated.........    IROS........        0

 DRY DAYS PRIOR TO START OF STORM... DRYDAY.......     3.00 DAYS

 DRY DAYS REQUIRED TO RECHARGE
 CATCHBASIN CONCENTRATION TO
 INITIAL VALUES..................... DRYBSN.......     5.00 DAYS

 DUST AND DIRT
 STREET SWEEPING EFFICIENCY......... REFFDD.......    0.000

 DAY OF YEAR ON WHICH STREET
 SWEEPING BEGINS.................... KLNBGN.......      120

 DAY OF YEAR ON WHICH STREET
 SWEEPING ENDS...................... KLNEND.......      270
```

```
##########################################
#     Land use data on data group J2     #
##########################################
```

AND USE LNAME)	BUILDUP EQUATION TYPE (METHOD)	FUNCTIONAL DEPENDENCE OF BUILDUP PARAMETER(JACGUT)	LIMITING BUILDUP QUANTITY (DDLIM)	BUILDUP POWER (DDPOW)	BUILDUP COEFF. (DDFACT)	CLEANING INTERVAL IN DAYS (CLFREQ)	AVAIL. FACTOR FRACTION (AVSWP)	DAYS SINCE LAST SWEEPING (DSLCL)
Urban De	EXPONENTIAL(1)	AREA(1)	2.500E+01	0.500	60.000	30.000	0.300	30.000

```
##############################################
#     Constituent data on data group J3      #
##############################################
```

	Total Su
Constituent units.....	mg/l
Type of units.....	0
KALC.....	2
Type of buildup calc.....	EXPONENTIAL(2)
KWASH.....	0
Type of washoff calc.....	POWER EXPONEN.(0)
KACGUT.....	1
Dependence of buildup....	AREA(1)
LINKUP.....	0
Linkage to snowmelt.....	NO SNOW LINKAGE
Buildup param 1 (QFACT1).	25.000
Buildup param 2 (QFACT2).	0.500
Buildup param 3 (QFACT3).	60.000
Buildup param 4 (QFACT4).	0.000
Buildup param 5 (QFACT5).	0.000
Washoff power (WASHPO)...	1.100
Washoff coef. (RCOEF)....	3.000
Init catchb conc (CBFACT)	100.000
Precip. conc. (CONCRN)...	0.000
Street sweep effic (REFF)	0.000
Remove fraction (REMOVE).	0.000
1st order QDECAY, 1/day..	0.000
Land use number.....	1

```
************************************************
* Constant Groundwater Quality Concentration(s) *
************************************************
```

Total Susp has a concentration of.. 0.0000 mg/l

```
***********************************************
* REMOVAL FRACTIONS FOR SELECTED CHANNEL/PIPES *
* FROM J7 LINES                                *
***********************************************

  CHANNEL/   CONSTITUENT
     PIPE Total Susp
---------- --------
       201     0.000


****************************************************
*     Subcatchment surface quality on data group L1 *
****************************************************



                                Total   Number   Input
                     Land      Gutter     of    Loading
              Land    Use     Length   Catch-  load/ac
          No. Usage   No.    10**2ft   Basins  Total Su
        ------ -------- ----  -------- -------- -------
   1        300 Urban De  1        4.80     2.00  0.0E+00
   Totals (Loads in lb or other)    4.80     2.00  0.0E+00

    **********************
    *    DATA GROUP M1    *
    **********************


TOTAL NUMBER OF PRINTED GUTTERS/INLETS...NPRNT..        1
NUMBER OF TIME STEPS BETWEEN PRINTINGS..INTERV..        0
STARTING AND STOPPING PRINTOUT DATES............        0        0


    **********************
    *    DATA GROUP M3    *
    **********************

CHANNEL/INLET PRINT DATA GROUPS......       -200



          ****************************************
          * Rainfall from Nat. Weather Serv. file  *
          * in units of hundredths of an inch      *
          ****************************************

         North Lancaster, LLC, McGovern Boulevard
         DMH#S9
```

Rainfall Station Worcester Wso Ap
State/Province Massachusetts

Rainfall Depth Summary (in)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1957.	0.4	1.4	2.8	3.6	3.4	3.0	1.1	2.8	1.1	3.8	5.7	7.3	36.5
1958.	9.0	2.9	4.9	7.2	4.3	2.8	6.1	4.4	8.1	2.8	5.0	3.2	60.8
1959.	5.1	2.8	8.2	4.2	2.4	4.7	8.4	4.5	3.1	8.3	6.1	5.1	62.9
1960.	2.4	6.3	4.2	5.4	5.9	3.1	7.2	3.9	7.0	3.0	4.0	5.0	57.4
1961.	3.7	2.5	5.8	5.2	4.2	2.5	4.3	5.3	6.1	3.5	3.3	5.1	51.5
1962.	2.4	5.4	2.6	3.9	4.4	3.5	2.1	4.6	5.7	9.2	4.9	5.8	54.4
1963.	4.2	3.4	4.7	1.9	3.6	2.6	2.0	3.0	4.9	1.7	8.8	3.3	44.0
1964.	5.9	3.6	4.2	4.5	1.5	1.8	3.6	2.9	2.1	2.5	3.5	6.2	42.4
1965.	3.1	4.9	2.7	3.9	3.1	2.0	2.0	3.2	3.8	2.3	3.2	2.9	37.1
1966.	4.4	4.4	3.2	1.7	3.8	2.6	3.5	2.0	7.5	3.5	4.9	4.2	45.6
1967.	2.8	3.7	4.9	5.2	7.4	3.9	6.5	3.5	5.2	2.4	5.1	5.0	55.7
1968.	3.7	1.4	7.9	2.3	7.1	8.4	1.9	0.7	2.2	2.4	6.2	6.5	50.7
1969.	1.8	4.2	2.7	5.6	3.4	1.7	4.3	4.7	5.4	1.8	7.1	8.5	51.1
1970.	2.2	5.5	4.1	3.9	6.1	2.9	0.9	5.8	3.6	3.0	4.0	3.9	45.7
1971.	3.2	5.9	1.9	2.0	5.6	2.6	4.9	8.0	1.6	3.6	5.5	3.7	48.3
1972.	3.1	8.2	6.1	4.8	8.4	9.7	6.6	5.1	3.3	6.0	10.2	6.4	77.7
1973.	4.4	4.1	4.9	5.7	4.8	7.3	4.1	4.4	4.1	4.8	3.9	8.8	61.1
1974.	4.2	3.4	5.6	3.6	6.3	3.8	3.4	3.7	13.4	3.6	5.7	4.1	61.0
1975.	6.9	3.3	5.9	1.3	2.0	3.8	4.3	5.1	7.6	6.6	6.0	5.2	57.9
1976.	6.9	2.9	4.5	2.5	3.2	2.8	3.6	6.6	2.3	5.3	1.0	3.4	45.0
1977.	2.4	3.2	6.4	4.2	2.7	4.2	4.8	2.4	8.2	5.6	4.2	6.8	55.0
1978.	11.9	1.8	3.4	2.5	3.8	1.8	3.8	5.4	1.3	4.1	2.5	4.3	46.5
1979.	12.2	3.1	4.0	5.5	4.7	0.6	6.1	7.7	4.1	4.9	4.1	1.8	58.8
1980.	0.8	1.2	7.4	5.2	2.4	4.8	3.9	2.1	3.3	5.4	4.8	2.2	43.4
1981.	1.9	9.4	1.4	4.9	4.1	2.7	8.2	1.2	5.5	5.7	3.9	6.1	55.0
1982.	4.4	4.0	4.2	4.8	3.4	13.1	6.0	2.0	2.1	3.2	4.6	3.9	55.7
1983.	5.3	5.3	9.0	8.4	7.3	2.7	0.9	6.4	1.5	6.3	9.3	7.1	69.5
1984.	3.3	6.7	6.3	5.1	10.3	3.3	6.4	1.2	2.8	3.3	3.0	3.4	55.1
1985.	1.9	3.6	3.5	3.0	5.1	5.2	6.6	4.1	4.7	3.0	7.3	2.7	50.7
1986.	5.5	3.5	3.6	1.9	3.4	9.6	3.5	3.6	0.9	3.0	6.7	7.8	52.9
1987.	6.2	1.9	5.8	9.9	1.5	5.0	1.0	5.4	6.7	4.5	3.1	2.6	53.6
1988.	3.7	3.5	3.3	3.8	5.1	1.4	6.7	4.5	1.2	5.9	5.9	1.8	46.8
1989.	1.6	3.4	3.0	4.8	6.6	7.3	4.6	5.9	5.1	0.0	0.0	0.0	42.3
1991.	0.0	0.0	0.0	0.0	0.0	0.0	3.2	8.1	6.9	3.8	6.0	3.5	31.5
1992.	3.1	3.3	4.7	3.2	2.7	5.0	5.7	7.2	2.3	2.4	6.3	5.1	50.9
1993.	3.2	2.9	7.1	4.0	1.9	2.9	3.4	2.1	9.4	4.0	5.2	5.8	51.8
1994.	6.0	2.9	6.6	2.9	6.8	2.5	3.2	8.0	5.3	1.3	6.0	4.2	55.7
1995.	5.9	2.3	2.2	2.5	0.0	0.0	4.7	2.1	3.7	8.8	5.2	1.4	38.8
1996.	7.1	3.3	2.5	7.3	4.1	3.1	6.3	4.5	4.9	4.9	3.0	5.0	55.8
1997.	3.3	1.7	4.6	3.4	2.6	1.6	3.2	2.8	1.6	1.8	5.5	2.3	34.4
1998.	3.9	2.8	6.3	2.8	5.7	9.7	1.8	2.3	1.2	5.0	2.4	1.4	45.4
1999.	7.0	2.4	4.6	1.1	3.3	1.8	2.4	2.4	8.6	4.6	3.1	4.3	45.7
2000.	3.5	3.3	4.2	7.6	4.2	5.4	4.5	2.5	3.4	2.4	4.0	4.2	49.3
2001.	2.2	3.2	7.4	1.0	3.9	5.0	3.7	1.1	3.5	0.9	1.7	3.2	36.7

Total Rainfall Depth for Simulation Period 2227.9 (in)

Rainfall Intensity Analysis (in/hr)

(in/hr)	(#)	(%)	(in)	(%)
0.10	55294	69.5	679.	30.5
0.20	15423	19.4	571.	25.6
0.30	3295	4.1	211.	9.5
0.40	2538	3.2	224.	10.1
0.50	868	1.1	100.	4.5
0.60	597	0.8	80.	3.6
0.70	577	0.7	92.	4.1
0.80	337	0.4	64.	2.9
0.90	120	0.2	26.	1.2
1.00	123	0.2	29.	1.3
1.10	70	0.1	18.	0.8
1.20	64	0.1	18.	0.8
1.30	56	0.1	17.	0.8
1.40	38	0.0	13.	0.6
1.50	18	0.0	7.	0.3
1.60	38	0.0	15.	0.7
1.70	16	0.0	7.	0.3
1.80	28	0.0	12.	0.6
1.90	14	0.0	7.	0.3
2.00	16	0.0	8.	0.4
> 2.00	48	0.1	30.	1.3

Total # of Intensities 79578

Daily Rainfall Depth Analysis (in)

(in)	(#)	(%)	(in)	(%)
0.10	1790	31.7	85.	3.8
0.20	996	17.7	143.	6.4
0.30	575	10.2	138.	6.2
0.40	489	8.7	166.	7.4
0.50	302	5.4	134.	6.0
0.60	279	4.9	152.	6.8
0.70	209	3.7	134.	6.0
0.80	152	2.7	113.	5.1
0.90	128	2.3	108.	4.8
1.00	126	2.2	119.	5.3
1.10	89	1.6	93.	4.2
1.20	79	1.4	90.	4.1
1.30	69	1.2	86.	3.9
1.40	49	0.9	66.	3.0
1.50	56	1.0	81.	3.6
1.60	44	0.8	68.	3.0
1.70	39	0.7	64.	2.9
1.80	28	0.5	49.	2.2
1.90	20	0.4	37.	1.6

```
  2.00     16       0.3       31.       1.4
> 2.00    104       1.8      270.      12.1

Total # Days with Rain   5639

************************************************
*      End of time step DO-loop in Runoff      *
************************************************

Final Date (Mo/Day/Year)    =                  12/31/2001
Total number of time steps =                      3055996
Final Julian Date  =                              2001365
Final time of day  =                               86399. seconds.
Final time of day  =                                24.00   hours.
Final running time =                           394464.0000   hours.
Final running time =                            16436.0000    days.

**************************************************
*     Extrapolation Summary for Watersheds       *
* # Steps ==> Total Number of Extrapolated Steps *
* # Calls ==> Total Number of OVERLND Calls      *
**************************************************

 Subcatch   # Steps   # Calls  Subcatch   # Steps   # Calls  Subcatch   # Steps   # Calls
 --------   -------   -------  --------   -------   -------  --------   -------   -------
      300  13543158   3370982

**************************************************
*     Extrapolation Summary for Channel/Pipes    *
* # Steps ==> Total Number of Extrapolated Steps *
* # Calls ==> Total Number of GUTNR Calls        *
**************************************************

Chan/Pipe   # Steps   # Calls Chan/Pipe   # Steps   # Calls Chan/Pipe   # Steps   # Calls
 --------   -------   -------  --------   -------   -------  --------   -------   -------
      201         0         0
↑
**********************************************
*       Continuity Check for Surface Water   *
**********************************************
                                                                 Inches over
                                                   cubic feet    Total Basin
Total Precipitation (Rain plus Snow)                10739760.      2225.
Total Infiltration                                   4193525.       869.
Total Evaporation                                     316369.        66.
Surface Runoff from Watersheds                       6282550.      1301.
Total Water remaining in Surface Storage                   44.         0.
Infiltration over the Pervious Area...               4193525.      2199.
                        --------
Infiltration + Evaporation +
Surface Runoff + Snow removal +
Water remaining in Surface Storage +
Water remaining in Snow Cover.........              10792487.      2235.
Total Precipitation + Initial Storage.              10739760.      2225.
```

```
The error in continuity is calculated as
****************************************
* Precipitation + Initial Snow Cover  *
*      - Infiltration -               *
*Evaporation - Snow removal -         *
*Surface Runoff from Watersheds -     *
*Water in Surface Storage -           *
*Water remaining in Snow Cover        *
*-------------------------------------*
* Precipitation + Initial Snow Cover  *
****************************************
Error.................................       -0.491 Percent


*********************************************
*       Continuity Check for Channel/Pipes  *
*********************************************
```

	cubic feet	Inches over Total Basin
Initial Channel/Pipe Storage.....	0.	0.
Final Channel/Pipe Storage.....	0.	0.
Surface Runoff from Watersheds.....	6282550.	1301.
Baseflow.....	0.	
Groundwater Subsurface Inflow.....	0.	0.
Evaporation Loss from Channels.....	0.	0.
Channel/Pipe/Inlet Outflow.....	6282550.	1301.
Initial Storage + Inflow.....	6282550.	1301.
Final Storage + Outflow.....	6282550.	1301.

```
*****************************************
* Final Storage + Outflow + Evaporation  - *
* Watershed Runoff - Groundwater Inflow  - *
*     Initial Channel/Pipe Storage         *
*     ---------------------------------    *
*  Final Storage + Outflow  + Evaporation  *
*****************************************
Error.....................................      0.000 Percent

↑
**************************************************
*     Continuity Check for Subsurface Water      *
**************************************************
```

	cubic feet	Inches over Subsurface Basin
Total Infiltration	0.	0.
Total Upper Zone ET	0.	0.
Total Lower Zone ET	0.	0.
Total Groundwater flow	0.	0.
Total Deep percolation	0.	0.
Initial Subsurface Storage	173804.	36.
Final Subsurface Storage	173804.	36.
Upper Zone ET over Pervious Area	0.	0.
Lower Zone ET over Pervious Area	0.	0.

```
****************************************
* Infiltration + Initial Storage - Final *
* Storage - Upper and Lower Zone ET -    *
* Groundwater Flow - Deep Percolation    *
* ------------------------------------- *
*     Infiltration + Initial Storage     *
****************************************
Error ....................................     0.000 Percent
```

SUMMARY STATISTICS FOR SUBCATCHMENTS

SUBCATCH-MENT NO.	GUTTER OR INLET NO.	AREA (AC)	PERCENT IMPER.	TOTAL SIMULATED RAINFALL (IN)	PERVIOUS AREA TOTAL RUNOFF DEPTH (IN)	PERVIOUS AREA TOTAL LOSSES (IN)	PERVIOUS AREA PEAK RUNOFF RATE (CFS)	IMPERVIOUS AREA RUNOFF DEPTH (IN)	IMPERVIOUS AREA PEAK RUNOFF RATE (CFS)	TOTAL SUBCATCHMENT AREA RUNOFF DEPTH (IN)	TOTAL SUBCATCHMENT AREA PEAK RUNOFF RATE (CFS)	TOTAL SUBCATCHMENT AREA PEAK UNIT RUNOFF (IN/HR)
300	200	1.33	60.5	2224.52	22.8572	201.970	1.161	2134.522	2.921	1300.414	4.082	3.069

*** NOTE *** IMPERVIOUS AREA STATISTICS AGGREGATE IMPERVIOUS AREAS WITH AND WITHOUT DEPRESSION STORAGE

SUMMARY STATISTICS FOR CHANNEL/PIPES

CHANNEL NUMBER	FULL FLOW (CFS)	FULL VELOCITY (FPS)	FULL DEPTH (FT)	MAXIMUM COMPUTED INFLOW (CFS)	MAXIMUM COMPUTED OUTFLOW (CFS)	MAXIMUM COMPUTED DEPTH (FT)	MAXIMUM COMPUTED VELOCITY (FPS)	TIME OF OCCURRENCE DAY	TIME OF OCCURRENCE HR.	LENGTH OF SURCHARGE (HOUR)	MAXIMUM SURCHARGE VOLUME (AC-FT)	RATIO OF MAX. TO FULL FLOW	RATIO OF MAX. DEPTH TO FULL DEPTH
201				0.00				1/ 0/1900	0.00				
200				3.84				7/19/1972	17.50				

TOTAL NUMBER OF CHANNELS/PIPES = 2

*** NOTE *** THE MAXIMUM FLOWS AND DEPTHS ARE CALCULATED AT THE END OF THE TIME INTERVAL

```
##################################################
#            Runoff Quality Summary Page         #
# If NDIM = 0 Units for:   loads    mass rates   #
#             METRIC = 1    lb        lb/sec     #
#             METRIC = 2    kg        kg/sec     #
# If NDIM = 1 Loads are in units of quantity     #
#             and mass rates are quantity/sec    #
# If NDIM = 2 loads are in units of concentration #
#             times volume and mass rates have units#
```

```
#             of concentration times volume/second  #
##################################################

Total Su NDIM =  0
METRIC =  1
```

	Total Su
Inputs	
1. INITIAL SURFACE LOAD.....	26.
2. TOTAL SURFACE BUILDUP.....	43003.
3. INITIAL CATCHBASIN LOAD.....	0.
4. TOTAL CATCHBASIN LOAD.....	0.
5. TOTAL CATCHBASIN AND SURFACE BUILDUP (2+4).....	43003.
Remaining Loads	
6. LOAD REMAINING ON SURFACE...	11.
7. REMAINING IN CATCHBASINS....	0.
8. REMAINING IN CHANNEL/PIPES..	0.
Removals	
9. STREET SWEEPING REMOVAL.....	0.
10. NET SURFACE BUILDUP (2-9)...	43003.
11. SURFACE WASHOFF.....	42965.
12. CATCHBASIN WASHOFF.....	0.
13. TOTAL WASHOFF (11+12).....	42965.
14. LOAD FROM OTHER CONSTITUENTS	0.
15. PRECIPITATION LOAD.....	0.
15a.SUM SURFACE LOAD (13+14+15).	42965.
16. TOTAL GROUNDWATER LOAD.....	0.
16a.TOTAL I/I LOAD.....	0.
17. NET SUBCATCHMENT LOAD (15a-15b-15c-15d+16+16a)....	42965.
>>Removal in channel/pipes (17a, 17b):	
17a.REMOVE BY BMP FRACTION.....	0.
17b.REMOVE BY 1st ORDER DECAY...	0.
18. TOTAL LOAD TO INLETS.....	42965.
19. FLOW WT'D AVE.CONCENTRATION mg/l (INLET LOAD/TOTAL FLOW).....	110.
Percentages	
20. STREET SWEEPING (9/2).....	0.
21. SURFACE WASHOFF (11/2).....	100.
22. NET SURFACE WASHOFF(11/10)..	100.
23. WASHOFF/SUBCAT LOAD(11/17)..	100.
24. SURFACE WASHOFF/INLET LOAD (11/18).....	100.
25. CATCHBASIN WASHOFF/	

```
    SUBCATCHMENT LOAD (12/17)...        0.
26. CATCHBASIN WASHOFF/
    INLET LOAD (12/18)..........        0.
27. OTHER CONSTITUENT LOAD/
    SUBCATCHMENT LOAD (14/17)...        0.
28. INSOLUBLE FRACTION/
    INLET LOAD (14/18)..........        0.
29. PRECIPITATION/
    SUBCATCHMENT LOAD (15/17)...        0.
30. PRECIPITATION/
    INLET LOAD (15/18)..........        0.
31. GROUNDWATER LOAD/
    SUBCATCHMENT LOAD (16/17)...        0.
32. GROUNDWATER LOAD/
    INLET LOAD (16/18)..........        0.
32a.INFILTRATION/INFLOW LOAD/
    SUBCATCHMENT LOAD (16a/17)..        0.
32b.INFILTRATION/INFLOW LOAD/
    INLET LOAD (16a/18).........        0.
32c.CH/PIPE BMP FRACTION REMOVAL/
    SUBCATCHMENT LOAD (17a/17)..        0.
32d.CH/PIPE 1st ORDER DECAY REMOVAL/
    SUBCATCHMENT LOAD (17b/17)..        0.
33. INLET LOAD SUMMATION ERROR
    (18+8+6a+17a+17b-17)/17.....        0.

CAUTION. Due to method of quality routing (Users Manual, Appendix IX)
quality routing through channel/pipes is sensitive to the time step.
Large "Inlet Load Summation Errors" may result.
These can be reduced by adjusting the time step(s).
Note: surface accumulation during dry time steps at end of simulation is
not included in totals.  Buildup is only performed at beginning of
wet steps or for street cleaning.
```

****
* TSS Particle Size Distribution *
****

Diameter (um)	%	Specific Gravity	Settling Velocity (ft/s)	Critical Peclet Number
2.	5.0	2.65	0.000009	0.032973
5.	5.0	2.65	0.000055	0.056296
8.	10.0	2.65	0.000141	0.074071
20.	15.0	2.65	0.000875	0.126463
50.	10.0	2.65	0.005346	0.215914
75.	5.0	2.65	0.011640	0.273579
100.	10.0	2.65	0.019828	0.323611
150.	15.0	2.65	0.040138	0.410039
250.	15.0	2.65	0.087320	0.552510
500.	5.0	2.65	0.198831	0.828097
1000.	5.0	2.65	0.365264	1.241146

```
*****************************************************
*                                                   *
*              Summary of TSS Removal               *
*                                                   *
*****************************************************
```

TSS Removal based on NJCAT Lab Performance Curve

Model #	Low Q Treated (cfs)	High Q Treated (cfs)	Runoff Treated (%)	TSS Removed (%)
HS 4	0.866	10.214	98.0	72.3
HS 5	1.306	10.214	99.2	79.7<=TSS REMOVAL RATE
HS 6	1.824	10.214	99.7	84.9
HS 7	2.412	10.214	99.9	88.2
HS 8	3.100	10.214	100.0	90.6
HS 9	3.845	10.214	100.0	93.1
HS 10	4.678	10.214	100.0	94.9
HS 12	6.604	10.214	100.0	97.1

```
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*                                                   *
*  Summary of Annual Flow Treatmnet & TSS Removal   *
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HS 4

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	1117867.6	1108032.6	777.1	554.4	222.8	99.1	71.3
1958.	1864781.5	1845589.8	1099.5	763.2	336.4	99.0	69.4
1959.	1963606.1	1865606.0	1094.2	775.8	318.5	95.0	70.9
1960.	1803313.4	1741061.2	1058.8	775.6	283.2	96.5	73.3
1961.	1584504.0	1542396.2	1037.2	762.5	274.8	97.3	73.5
1962.	1706855.2	1691320.9	986.1	721.4	264.7	99.1	73.2
1963.	1354137.1	1354137.1	947.7	708.0	239.8	100.0	74.7
1964.	1299718.6	1287780.6	906.3	673.6	232.7	99.1	74.3
1965.	1132368.2	1130812.1	870.3	649.0	221.3	99.9	74.6
1966.	1410512.4	1396392.1	964.6	707.8	256.8	99.0	73.4
1967.	1718861.6	1698788.5	1098.0	793.5	304.4	98.8	72.3
1968.	1605812.5	1576420.9	929.9	682.6	247.3	98.2	73.4
1969.	1578540.2	1560007.8	952.6	697.3	255.4	98.8	73.2
1970.	1424638.2	1387267.4	907.5	665.4	242.1	97.4	73.3
1971.	1510389.8	1486434.5	1014.1	710.2	303.9	98.4	70.0
1972.	2458905.0	2314863.5	1362.7	892.7	470.1	94.1	65.5
1973.	1909616.9	1873911.6	1133.3	769.9	363.5	98.1	67.9
1974.	1926988.5	1800997.4	1096.8	737.9	358.9	93.5	67.3
1975.	1784477.5	1784477.5	1003.5	747.0	256.6	100.0	74.4
1976.	1377411.5	1341251.4	973.1	708.8	264.4	97.4	72.8
1977.	1693936.5	1662467.2	1083.3	799.3	284.1	98.1	73.8
1978.	1422540.2	1419359.0	873.5	656.6	216.8	99.8	75.2
1979.	1839837.1	1741159.0	1037.5	727.0	310.5	94.6	70.1

1980.	1324983.0	1303056.4	911.9	639.7	272.3	98.3	70.1
1981.	1693239.2	1651358.8	1041.0	731.2	309.8	97.5	70.2
1982.	1728833.1	1701269.8	1026.0	727.1	298.9	98.4	70.9
1983.	2180316.8	2156033.2	1225.7	874.4	351.3	98.9	71.3
1984.	1728573.8	1718043.6	1010.0	739.0	271.0	99.4	73.2
1985.	1573591.4	1493808.1	1002.3	737.8	264.5	94.9	73.6
1986.	1628759.5	1623094.0	942.1	691.4	250.7	99.7	73.4
1987.	1712818.5	1712275.1	937.9	701.4	236.5	100.0	74.8
1988.	1433099.8	1410725.9	927.4	670.8	256.7	98.4	72.3
1989.	1281639.6	1266493.6	815.3	593.4	221.9	98.8	72.8
1991.	1010841.6	947691.7	492.2	362.7	129.5	93.8	73.7
1992.	1558405.4	1551319.4	1041.9	777.4	264.5	99.5	74.6
1993.	1611814.2	1556671.8	1047.3	761.0	286.3	96.6	72.7
1994.	1715173.0	1699145.1	1089.8	785.2	304.6	99.1	72.0
1995.	1208886.9	1188738.5	778.2	563.3	215.0	98.3	72.4
1996.	1725323.8	1695685.6	1101.9	783.1	318.8	98.3	71.1
1997.	1055196.2	1052147.0	814.1	608.0	206.2	99.7	74.7
1998.	1406233.5	1391976.1	898.1	628.3	269.9	99.0	70.0
1999.	1416255.8	1395756.1	908.7	660.6	248.1	98.6	72.7
2000.	1491521.1	1483568.2	983.4	720.0	263.5	99.5	73.2
2001.	1115433.2	1074060.2	807.8	596.4	211.5	96.3	73.8

HS 5

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	1117867.6	1116026.2	777.1	606.5	170.7	99.8	78.0
1958.	1864781.5	1862489.5	1099.5	849.5	250.0	99.9	77.3
1959.	1963606.1	1903261.2	1094.2	859.9	234.4	96.9	78.6
1960.	1803313.4	1771711.1	1058.8	849.0	209.8	98.2	80.2
1961.	1584504.0	1569212.0	1037.2	841.2	196.1	99.0	81.1
1962.	1706855.2	1704428.2	986.1	794.4	191.7	99.9	80.6
1963.	1354137.1	1354137.1	947.7	768.9	178.8	100.0	81.1
1964.	1299718.6	1299718.6	906.3	739.8	166.5	100.0	81.6
1965.	1132368.2	1132368.2	870.3	707.1	163.2	100.0	81.3
1966.	1410512.4	1407140.2	964.6	775.6	189.0	99.8	80.4
1967.	1718861.6	1716779.1	1098.0	872.8	225.1	99.9	79.5
1968.	1605812.5	1586674.0	929.9	752.4	177.5	98.8	80.9
1969.	1578540.2	1571722.4	952.6	765.3	187.4	99.6	80.3
1970.	1424638.2	1414209.4	907.5	733.3	174.2	99.3	80.8
1971.	1510389.8	1500905.5	1014.1	786.0	228.1	99.4	77.5
1972.	2458905.0	2361520.8	1362.7	1006.1	356.6	96.0	73.8
1973.	1909616.9	1902381.0	1133.3	863.3	270.1	99.6	76.2
1974.	1926988.5	1873608.4	1096.8	828.1	268.7	97.2	75.5
1975.	1784477.5	1784477.5	1003.5	819.8	183.8	100.0	81.7
1976.	1377411.5	1367839.0	973.1	787.1	186.0	99.3	80.9
1977.	1693936.5	1679078.8	1083.3	879.1	204.3	99.1	81.1
1978.	1422540.2	1422540.2	873.5	722.9	150.5	100.0	82.8
1979.	1839837.1	1787356.1	1037.5	814.0	223.5	97.1	78.5
1980.	1324983.0	1322609.0	911.9	705.3	206.6	99.8	77.3
1981.	1693239.2	1682848.6	1041.0	806.9	234.1	99.4	77.5
1982.	1728833.1	1728707.2	1026.0	808.0	218.0	100.0	78.8

1983.	2180316.8	2170383.8	1225.7	965.1	260.6	99.5	78.7
1984.	1728573.8	1728573.9	1010.0	817.9	192.2	100.0	81.0
1985.	1573591.4	1532793.9	1002.3	812.1	190.2	97.4	81.0
1986.	1628759.5	1628759.5	942.1	757.8	184.3	100.0	80.4
1987.	1712818.5	1712818.5	937.9	769.2	168.8	100.0	82.0
1988.	1433099.8	1422157.8	927.4	739.5	187.9	99.2	79.7
1989.	1281639.6	1279267.2	815.3	657.1	158.2	99.8	80.6
1991.	1010841.6	984477.1	492.2	393.8	98.4	97.4	80.0
1992.	1558405.4	1558136.5	1041.9	852.6	189.3	100.0	81.8
1993.	1611814.2	1588440.9	1047.3	838.0	209.3	98.5	80.0
1994.	1715173.0	1715173.0	1089.8	866.9	222.8	100.0	79.5
1995.	1208886.9	1199853.4	778.2	617.1	161.2	99.3	79.3
1996.	1725323.8	1716391.2	1101.9	861.0	240.9	99.5	78.1
1997.	1055196.2	1055196.2	814.1	667.5	146.6	100.0	82.0
1998.	1406233.5	1403940.6	898.1	692.8	205.4	99.8	77.1
1999.	1416255.8	1411547.8	908.7	727.1	181.6	99.7	80.0
2000.	1491521.1	1491521.1	983.4	785.8	197.7	100.0	79.9
2001.	1115433.2	1097110.1	807.8	651.8	156.0	98.4	80.7

HS 6

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	1117867.6	1117867.6	777.1	645.9	131.3	100.0	83.1
1958.	1864781.5	1864781.5	1099.5	906.2	193.4	100.0	82.4
1959.	1963606.1	1926028.4	1094.2	920.9	173.3	98.1	84.2
1960.	1803313.4	1789202.6	1058.8	904.1	154.7	99.2	85.4
1961.	1584504.0	1581913.1	1037.2	898.8	138.5	99.8	86.6
1962.	1706855.2	1706855.2	986.1	846.3	139.8	100.0	85.8
1963.	1354137.1	1354137.1	947.7	817.2	130.5	100.0	86.2
1964.	1299718.6	1299718.6	906.3	787.9	118.5	100.0	86.9
1965.	1132368.2	1132368.2	870.3	750.9	119.5	100.0	86.3
1966.	1410512.4	1410512.0	964.6	828.0	136.6	100.0	85.8
1967.	1718861.6	1718861.6	1098.0	932.1	165.9	100.0	84.9
1968.	1605812.5	1596573.9	929.9	801.5	128.4	99.4	86.2
1969.	1578540.2	1578540.2	952.6	819.4	133.3	100.0	86.0
1970.	1424638.2	1424379.9	907.5	780.3	127.2	100.0	86.0
1971.	1510389.8	1508462.0	1014.1	835.7	178.4	99.9	82.4
1972.	2458905.0	2398984.8	1362.7	1088.5	274.3	97.6	79.9
1973.	1909616.9	1909226.2	1133.3	929.7	203.6	100.0	82.0
1974.	1926988.5	1913527.2	1096.8	890.4	206.3	99.3	81.2
1975.	1784477.5	1784477.5	1003.5	871.5	132.1	100.0	86.8
1976.	1377411.5	1377411.5	973.1	833.3	139.8	100.0	85.6
1977.	1693936.5	1692037.6	1083.3	936.9	146.5	99.9	86.5
1978.	1422540.2	1422540.2	873.5	765.8	107.6	100.0	87.7
1979.	1839837.1	1813640.8	1037.5	865.7	171.8	98.6	83.4
1980.	1324983.0	1324983.0	911.9	751.8	160.1	100.0	82.4
1981.	1693239.2	1693239.2	1041.0	862.2	178.8	100.0	82.8
1982.	1728833.1	1728833.1	1026.0	857.8	168.2	100.0	83.6
1983.	2180316.8	2177951.2	1225.7	1032.7	193.1	99.9	84.3
1984.	1728573.8	1728573.9	1010.0	869.8	140.2	100.0	86.1
1985.	1573591.4	1556268.2	1002.3	862.3	140.0	98.9	86.0

1986.	1628759.5	1628759.5	942.1	803.4	138.7	100.0	85.3
1987.	1712818.5	1712818.5	937.9	813.8	124.1	100.0	86.8
1988.	1433099.8	1430905.1	927.4	784.9	142.6	99.8	84.6
1989.	1281639.6	1281639.6	815.3	699.4	115.8	100.0	85.8
1991.	1010841.6	1007872.7	492.2	416.9	75.3	99.7	84.7
1992.	1558405.4	1558405.8	1041.9	901.3	140.6	100.0	86.5
1993.	1611814.2	1605359.5	1047.3	891.8	155.5	99.6	85.2
1994.	1715173.0	1715173.0	1089.8	921.3	168.4	100.0	84.5
1995.	1208886.9	1207468.0	778.2	655.7	122.7	99.9	84.3
1996.	1725323.8	1724456.6	1101.9	918.2	183.7	99.9	83.3
1997.	1055196.2	1055196.2	814.1	714.4	99.7	100.0	87.8
1998.	1406233.5	1406233.5	898.1	747.3	150.9	100.0	83.2
1999.	1416255.8	1416255.8	908.7	769.3	139.4	100.0	84.7
2000.	1491521.1	1491521.1	983.4	834.6	148.9	100.0	84.9
2001.	1115433.2	1109856.6	807.8	691.4	116.4	99.5	85.6

HS 7

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	1117867.6	1117867.6	777.1	670.0	107.2	100.0	86.2
1958.	1864781.5	1864781.5	1099.5	946.1	153.4	100.0	86.0
1959.	1963606.1	1946591.9	1094.2	953.8	140.5	99.1	87.2
1960.	1803313.4	1800864.2	1058.8	944.6	114.2	99.9	89.2
1961.	1584504.0	1584504.0	1037.2	931.9	105.3	100.0	89.8
1962.	1706855.2	1706855.2	986.1	878.3	107.8	100.0	89.1
1963.	1354137.1	1354137.1	947.7	849.7	98.0	100.0	89.7
1964.	1299718.6	1299718.6	906.3	815.7	90.6	100.0	90.0
1965.	1132368.2	1132368.2	870.3	781.9	88.4	100.0	89.8
1966.	1410512.4	1410512.0	964.6	859.5	105.1	100.0	89.1
1967.	1718861.6	1718861.6	1098.0	968.3	129.7	100.0	88.2
1968.	1605812.5	1604342.0	929.9	832.4	97.4	99.9	89.5
1969.	1578540.2	1578540.2	952.6	854.0	98.7	100.0	89.6
1970.	1424638.2	1424638.2	907.5	809.4	98.1	100.0	89.2
1971.	1510389.8	1510389.8	1014.1	872.4	141.7	100.0	86.0
1972.	2458905.0	2430680.5	1362.7	1142.1	220.7	98.9	83.8
1973.	1909616.9	1909616.2	1133.3	969.1	164.2	100.0	85.5
1974.	1926988.5	1926261.8	1096.8	932.5	164.3	100.0	85.0
1975.	1784477.5	1784477.5	1003.5	905.4	98.2	100.0	90.2
1976.	1377411.5	1377411.5	973.1	863.6	109.6	100.0	88.7
1977.	1693936.5	1693936.5	1083.3	971.6	111.7	100.0	89.7
1978.	1422540.2	1422540.2	873.5	792.2	81.3	100.0	90.7
1979.	1839837.1	1827043.5	1037.5	899.5	138.1	99.3	86.7
1980.	1324983.0	1324983.0	911.9	782.2	129.7	100.0	85.8
1981.	1693239.2	1693239.2	1041.0	897.8	143.1	100.0	86.2
1982.	1728833.1	1728833.1	1026.0	893.0	133.0	100.0	87.0
1983.	2180316.8	2180316.8	1225.7	1074.1	151.6	100.0	87.6
1984.	1728573.8	1728573.9	1010.0	903.1	106.9	100.0	89.4
1985.	1573591.4	1569890.4	1002.3	893.8	108.5	99.8	89.2
1986.	1628759.5	1628759.5	942.1	836.4	105.7	100.0	88.8
1987.	1712818.5	1712818.5	937.9	842.6	95.3	100.0	89.8
1988.	1433099.8	1433099.8	927.4	814.5	112.9	100.0	87.8

1989.	1281639.6	1281639.6	815.3	724.7	90.6	100.0	88.9
1991.	1010841.6	1010841.6	492.2	433.5	58.7	100.0	88.1
1992.	1558405.4	1558405.8	1041.9	935.1	106.9	100.0	89.7
1993.	1611814.2	1611814.2	1047.3	925.5	121.8	100.0	88.4
1994.	1715173.0	1715173.0	1089.8	955.1	134.6	100.0	87.6
1995.	1208886.9	1208886.9	778.2	683.4	94.8	100.0	87.8
1996.	1725323.8	1725323.8	1101.9	954.8	147.0	100.0	86.7
1997.	1055196.2	1055196.2	814.1	740.2	73.9	100.0	90.9
1998.	1406233.5	1406233.5	898.1	779.4	118.7	100.0	86.8
1999.	1416255.8	1416255.8	908.7	796.8	111.9	100.0	87.7
2000.	1491521.1	1491521.1	983.4	868.7	114.7	100.0	88.3
2001.	1115433.2	1115433.2	807.8	719.0	88.8	100.0	89.0

HS 8

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	1117867.6	1117867.6	777.1	691.4	85.7	100.0	89.0
1958.	1864781.5	1864781.5	1099.5	971.1	128.5	100.0	88.3
1959.	1963606.1	1961742.9	1094.2	983.9	110.3	99.9	89.9
1960.	1803313.4	1803313.4	1058.8	968.5	90.3	100.0	91.5
1961.	1584504.0	1584504.0	1037.2	953.8	83.4	100.0	92.0
1962.	1706855.2	1706855.2	986.1	900.5	85.7	100.0	91.3
1963.	1354137.1	1354137.1	947.7	874.6	73.1	100.0	92.3
1964.	1299718.6	1299718.6	906.3	835.0	71.3	100.0	92.1
1965.	1132368.2	1132368.2	870.3	801.1	69.2	100.0	92.0
1966.	1410512.4	1410512.0	964.6	880.7	83.9	100.0	91.3
1967.	1718861.6	1718861.6	1098.0	997.8	100.2	100.0	90.9
1968.	1605812.5	1605812.5	929.9	853.8	75.9	100.0	91.8
1969.	1578540.2	1578540.2	952.6	874.8	77.9	100.0	91.8
1970.	1424638.2	1424638.2	907.5	827.7	79.8	100.0	91.2
1971.	1510389.8	1510389.8	1014.1	900.3	113.8	100.0	88.8
1972.	2458905.0	2453410.5	1362.7	1181.7	181.1	99.8	86.7
1973.	1909616.9	1909616.2	1133.3	1000.3	133.0	100.0	88.3
1974.	1926988.5	1926988.5	1096.8	961.0	135.8	100.0	87.6
1975.	1784477.5	1784477.5	1003.5	928.5	75.0	100.0	92.5
1976.	1377411.5	1377411.5	973.1	886.3	86.8	100.0	91.1
1977.	1693936.5	1693936.5	1083.3	994.6	88.7	100.0	91.8
1978.	1422540.2	1422540.2	873.5	810.2	63.3	100.0	92.8
1979.	1839837.1	1836621.2	1037.5	925.4	112.1	99.8	89.2
1980.	1324983.0	1324983.0	911.9	807.4	104.5	100.0	88.5
1981.	1693239.2	1693239.2	1041.0	923.5	117.5	100.0	88.7
1982.	1728833.1	1728833.1	1026.0	917.7	108.3	100.0	89.4
1983.	2180316.8	2180316.8	1225.7	1104.8	120.9	100.0	90.1
1984.	1728573.8	1728573.9	1010.0	928.9	81.1	100.0	92.0
1985.	1573591.4	1573591.4	1002.3	915.6	86.7	100.0	91.3
1986.	1628759.5	1628759.5	942.1	859.3	82.8	100.0	91.2
1987.	1712818.5	1712818.5	937.9	863.9	74.0	100.0	92.1
1988.	1433099.8	1433099.8	927.4	837.0	90.4	100.0	90.2
1989.	1281639.6	1281639.6	815.3	743.9	71.4	100.0	91.2
1991.	1010841.6	1010841.6	492.2	446.3	45.9	100.0	90.7
1992.	1558405.4	1558405.8	1041.9	960.1	81.8	100.0	92.1

1993.	1611814.2	1611814.2	1047.3	947.5	99.8	100.0	90.5
1994.	1715173.0	1715173.0	1089.8	982.2	107.6	100.0	90.1
1995.	1208886.9	1208886.9	778.2	702.5	75.8	100.0	90.3
1996.	1725323.8	1725323.8	1101.9	985.8	116.1	100.0	89.5
1997.	1055196.2	1055196.2	814.1	759.1	55.0	100.0	93.2
1998.	1406233.5	1406233.5	898.1	801.4	96.7	100.0	89.2
1999.	1416255.8	1416255.8	908.7	818.5	90.2	100.0	90.1
2000.	1491521.1	1491521.1	983.4	893.3	90.1	100.0	90.8
2001.	1115433.2	1115433.2	807.8	737.8	70.0	100.0	91.3

HS 9

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	1117867.6	1117867.6	777.1	713.3	63.8	100.0	91.8
1958.	1864781.5	1864781.5	1099.5	1002.4	97.1	100.0	91.2
1959.	1963606.1	1963606.1	1094.2	1011.8	82.4	100.0	92.5
1960.	1803313.4	1803313.4	1058.8	992.5	66.3	100.0	93.7
1961.	1584504.0	1584504.0	1037.2	977.0	60.2	100.0	94.2
1962.	1706855.2	1706855.2	986.1	925.0	61.1	100.0	93.8
1963.	1354137.1	1354137.1	947.7	897.5	50.3	100.0	94.7
1964.	1299718.6	1299718.6	906.3	851.8	54.5	100.0	94.0
1965.	1132368.2	1132368.2	870.3	821.1	49.3	100.0	94.3
1966.	1410512.4	1410512.0	964.6	904.2	60.3	100.0	93.7
1967.	1718861.6	1718861.6	1098.0	1022.7	75.3	100.0	93.1
1968.	1605812.5	1605812.5	929.9	875.3	54.3	100.0	94.1
1969.	1578540.2	1578540.2	952.6	897.3	55.5	100.0	94.2
1970.	1424638.2	1424638.2	907.5	848.3	59.2	100.0	93.5
1971.	1510389.8	1510389.8	1014.1	930.0	84.1	100.0	91.7
1972.	2458905.0	2458905.0	1362.7	1220.2	142.5	100.0	89.5
1973.	1909616.9	1909616.2	1133.3	1033.4	100.0	100.0	91.2
1974.	1926988.5	1926988.5	1096.8	991.8	105.0	100.0	90.4
1975.	1784477.5	1784477.5	1003.5	952.4	51.1	100.0	94.9
1976.	1377411.5	1377411.5	973.1	911.0	62.2	100.0	93.6
1977.	1693936.5	1693936.5	1083.3	1019.8	63.5	100.0	94.1
1978.	1422540.2	1422540.2	873.5	829.9	43.6	100.0	95.0
1979.	1839837.1	1839837.1	1037.5	951.3	86.3	100.0	91.7
1980.	1324983.0	1324983.0	911.9	832.4	79.5	100.0	91.3
1981.	1693239.2	1693239.2	1041.0	951.6	89.3	100.0	91.4
1982.	1728833.1	1728833.1	1026.0	943.6	82.4	100.0	92.0
1983.	2180316.8	2180316.8	1225.7	1139.5	86.2	100.0	93.0
1984.	1728573.8	1728573.9	1010.0	952.9	57.1	100.0	94.3
1985.	1573591.4	1573591.4	1002.3	937.9	64.4	100.0	93.6
1986.	1628759.5	1628759.5	942.1	882.0	60.1	100.0	93.6
1987.	1712818.5	1712818.5	937.9	885.7	52.3	100.0	94.4
1988.	1433099.8	1433099.8	927.4	862.3	65.1	100.0	93.0
1989.	1281639.6	1281639.6	815.3	764.0	51.3	100.0	93.7
1991.	1010841.6	1010841.6	492.2	458.0	34.2	100.0	93.0
1992.	1558405.4	1558405.8	1041.9	987.6	54.3	100.0	94.8
1993.	1611814.2	1611814.2	1047.3	970.6	76.7	100.0	92.7
1994.	1715173.0	1715173.0	1089.8	1009.0	80.7	100.0	92.6
1995.	1208886.9	1208886.9	778.2	722.6	55.7	100.0	92.8

1996.	1725323.8	1725323.8	1101.9	1014.9	87.0	100.0	92.1
1997.	1055196.2	1055196.2	814.1	776.4	37.7	100.0	95.4
1998.	1406233.5	1406233.5	898.1	827.1	71.1	100.0	92.1
1999.	1416255.8	1416255.8	908.7	843.8	64.9	100.0	92.9
2000.	1491521.1	1491521.1	983.4	917.2	66.2	100.0	93.3
2001.	1115433.2	1115433.2	807.8	755.7	52.1	100.0	93.5

HS 10

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	1117867.6	1117867.6	777.1	729.1	48.0	100.0	93.8
1958.	1864781.5	1864781.5	1099.5	1026.7	72.8	100.0	93.4
1959.	1963606.1	1963606.1	1094.2	1032.6	61.7	100.0	94.4
1960.	1803313.4	1803313.4	1058.8	1010.5	48.3	100.0	95.4
1961.	1584504.0	1584504.0	1037.2	992.7	44.5	100.0	95.7
1962.	1706855.2	1706855.2	986.1	941.0	45.1	100.0	95.4
1963.	1354137.1	1354137.1	947.7	913.7	34.0	100.0	96.4
1964.	1299718.6	1299718.6	906.3	865.1	41.2	100.0	95.5
1965.	1132368.2	1132368.2	870.3	837.6	32.7	100.0	96.2
1966.	1410512.4	1410512.0	964.6	921.5	43.1	100.0	95.5
1967.	1718861.6	1718861.6	1098.0	1045.0	53.0	100.0	95.2
1968.	1605812.5	1605812.5	929.9	891.2	38.7	100.0	95.8
1969.	1578540.2	1578540.2	952.6	912.3	40.3	100.0	95.8
1970.	1424638.2	1424638.2	907.5	862.5	45.0	100.0	95.0
1971.	1510389.8	1510389.8	1014.1	949.4	64.7	100.0	93.6
1972.	2458905.0	2458905.0	1362.7	1250.5	112.3	100.0	91.8
1973.	1909616.9	1909616.2	1133.3	1057.7	75.7	100.0	93.3
1974.	1926988.5	1926988.5	1096.8	1015.7	81.1	100.0	92.6
1975.	1784477.5	1784477.5	1003.5	971.1	32.4	100.0	96.8
1976.	1377411.5	1377411.5	973.1	927.1	46.1	100.0	95.3
1977.	1693936.5	1693936.5	1083.3	1036.5	46.9	100.0	95.7
1978.	1422540.2	1422540.2	873.5	842.2	31.3	100.0	96.4
1979.	1839837.1	1839837.1	1037.5	970.4	67.2	100.0	93.5
1980.	1324983.0	1324983.0	911.9	852.0	59.9	100.0	93.4
1981.	1693239.2	1693239.2	1041.0	971.1	69.8	100.0	93.3
1982.	1728833.1	1728833.1	1026.0	965.4	60.6	100.0	94.1
1983.	2180316.8	2180316.8	1225.7	1165.6	60.1	100.0	95.1
1984.	1728573.8	1728573.9	1010.0	968.5	41.6	100.0	95.9
1985.	1573591.4	1573591.4	1002.3	954.2	48.1	100.0	95.2
1986.	1628759.5	1628759.5	942.1	901.2	40.9	100.0	95.7
1987.	1712818.5	1712818.5	937.9	903.7	34.3	100.0	96.3
1988.	1433099.8	1433099.8	927.4	880.8	46.6	100.0	95.0
1989.	1281639.6	1281639.6	815.3	777.7	37.6	100.0	95.4
1991.	1010841.6	1010841.6	492.2	468.1	24.1	100.0	95.1
1992.	1558405.4	1558405.8	1041.9	1004.4	37.5	100.0	96.4
1993.	1611814.2	1611814.2	1047.3	990.7	56.6	100.0	94.6
1994.	1715173.0	1715173.0	1089.8	1031.3	58.5	100.0	94.6
1995.	1208886.9	1208886.9	778.2	738.4	39.8	100.0	94.9
1996.	1725323.8	1725323.8	1101.9	1036.5	65.4	100.0	94.1
1997.	1055196.2	1055196.2	814.1	788.2	25.9	100.0	96.8
1998.	1406233.5	1406233.5	898.1	846.7	51.4	100.0	94.3

1999.	1416255.8	1416255.8	908.7	863.0	45.7	100.0	95.0
2000.	1491521.1	1491521.1	983.4	935.3	48.2	100.0	95.1
2001.	1115433.2	1115433.2	807.8	767.1	40.7	100.0	95.0

HS 12

Year	Flow Vol (ft3)	Flow Treated (ft3)	TSS IN (lb)	TSS Rem (lb)	TSS Out (lb)	Flow Treated (%)	TSS Removal (%)
1957.	1117867.6	1117867.6	777.1	751.1	26.0	100.0	96.7
1958.	1864781.5	1864781.5	1099.5	1058.2	41.4	100.0	96.2
1959.	1963606.1	1963606.1	1094.2	1057.1	37.1	100.0	96.6
1960.	1803313.4	1803313.4	1058.8	1034.5	24.3	100.0	97.7
1961.	1584504.0	1584504.0	1037.2	1010.8	26.4	100.0	97.5
1962.	1706855.2	1706855.2	986.1	960.8	25.3	100.0	97.4
1963.	1354137.1	1354137.1	947.7	931.3	16.4	100.0	98.3
1964.	1299718.6	1299718.6	906.3	884.2	22.1	100.0	97.6
1965.	1132368.2	1132368.2	870.3	854.0	16.3	100.0	98.1
1966.	1410512.4	1410512.0	964.6	939.2	25.3	100.0	97.4
1967.	1718861.6	1718861.6	1098.0	1068.4	29.6	100.0	97.3
1968.	1605812.5	1605812.5	929.9	908.6	21.2	100.0	97.7
1969.	1578540.2	1578540.2	952.6	928.5	24.1	100.0	97.5
1970.	1424638.2	1424638.2	907.5	883.2	24.2	100.0	97.3
1971.	1510389.8	1510389.8	1014.1	979.4	34.7	100.0	96.6
1972.	2458905.0	2458905.0	1362.7	1293.4	69.3	100.0	94.9
1973.	1909616.9	1909616.2	1133.3	1093.4	40.0	100.0	96.5
1974.	1926988.5	1926988.5	1096.8	1043.8	53.0	100.0	95.2
1975.	1784477.5	1784477.5	1003.5	987.4	16.1	100.0	98.4
1976.	1377411.5	1377411.5	973.1	944.4	28.7	100.0	97.1
1977.	1693936.5	1693936.5	1083.3	1057.4	25.9	100.0	97.6
1978.	1422540.2	1422540.2	873.5	858.5	15.0	100.0	98.3
1979.	1839837.1	1839837.1	1037.5	994.6	43.0	100.0	95.9
1980.	1324983.0	1324983.0	911.9	876.9	35.0	100.0	96.2
1981.	1693239.2	1693239.2	1041.0	997.7	43.2	100.0	95.8
1982.	1728833.1	1728833.1	1026.0	992.3	33.7	100.0	96.7
1983.	2180316.8	2180316.8	1225.7	1195.1	30.5	100.0	97.5
1984.	1728573.8	1728573.9	1010.0	986.7	23.3	100.0	97.7
1985.	1573591.4	1573591.4	1002.3	976.2	26.1	100.0	97.4
1986.	1628759.5	1628759.5	942.1	920.7	21.4	100.0	97.7
1987.	1712818.5	1712818.5	937.9	920.6	17.3	100.0	98.2
1988.	1433099.8	1433099.8	927.4	900.1	27.4	100.0	97.1
1989.	1281639.6	1281639.6	815.3	793.2	22.0	100.0	97.3
1991.	1010841.6	1010841.6	492.2	479.4	12.8	100.0	97.4
1992.	1558405.4	1558405.8	1041.9	1022.4	19.5	100.0	98.1
1993.	1611814.2	1611814.2	1047.3	1016.7	30.6	100.0	97.1
1994.	1715173.0	1715173.0	1089.8	1058.3	31.5	100.0	97.1
1995.	1208886.9	1208886.9	778.2	756.5	21.8	100.0	97.2
1996.	1725323.8	1725323.8	1101.9	1063.6	38.2	100.0	96.5
1997.	1055196.2	1055196.2	814.1	801.4	12.8	100.0	98.4
1998.	1406233.5	1406233.5	898.1	868.9	29.2	100.0	96.7
1999.	1416255.8	1416255.8	908.7	884.6	24.0	100.0	97.4
2000.	1491521.1	1491521.1	983.4	957.8	25.6	100.0	97.4
2001.	1115433.2	1115433.2	807.8	780.2	27.6	100.0	96.6

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*****************************************************
*  Summary of Quantity and Quality Results at      *
*  Location        200  INFlow in cfs.              *
*  Values are instantaneous at indicated time step *
*****************************************************

  North Lancaster, LLC, McGovern Boulevard
  DMH#S9

     Date      Time        Flow   Total Su
 Mo/Da/Year  Hr:Min        cfs    mg/l
 ----------  -------    -------  --------
Flow wtd means.....        0.010      110.
Flow wtd std devs..        0.050       67.
Maximum value......        3.838      292.
Minimum value......        0.000        0.
Total loads........     6277337.    42990.
                        Cub-Ft     POUNDS

===> Runoff simulation ended normally.

===> SWMM 4.4    simulation ended normally.
     Always check output file for possible warning messages.

*******************************************************
*       SWMM 4.4    Simulation Date and Time Summary  *
*******************************************************
* Starting Date... February   22, 2021                *
*          Time...         15:10:39.724               *
*   Ending Date... February   22, 2021                *
*          Time...         15:10:47.676               *
*  Elapsed Time...               0.133 minutes.       *
*  Elapsed Time...               7.952 seconds.       *
*******************************************************
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3.1
OPERATION AND MAINTENANCE

STORMWATER OPERATION, MAINTENANCE AND POLLUTION PREVENTION PLAN

McGovern Boulevard
Lancaster, Massachusetts

RESPONSIBLE PARTY DURING CONSTRUCTION:
TBD

RESPONSIBLE PARTY POST CONSTRUCTION:
TBD

BEST MANAGEMENT PRACTICES

To prevent the migration of soils, Best Management Practices (BMP's) shall be employed. During construction, hay bales and silt fence will be installed as shown on the plans and also at additional locations on an as needed basis to provide sufficient erosion controls on the site. These components shall be installed to catch and trap the migrating soil materials and pollutants.

All applicable BMP's listed below and in the Department of Environmental Protection's Stormwater Management Handbooks (Volume1: Overview of Massachusetts Stormwater Management Standards and Volume 2: Technical Guide for Compliance with Massachusetts Stormwater Management Standards) dated January 2008 (as amended), shall be incorporated in this project. Reference to this Operation and Maintenance Plan will be made within and recorded within the deed of the Land. This Plan shall be followed by subsequent landowners as required and amended by the Massachusetts Department of Environmental Protection's Stormwater Management Regulations.

INSPECTION AND MAINTENANCE (DURING CONSTRUCTION)

1. At all times, hay bales, siltation fabric fencing and wooden stakes sufficient to construct sedimentation control barrier a minimum of 50 feet long will be stockpiled on the site in order to repair established barriers which may have been damaged or breached.

2. Necessary erosion controls shall be in place prior to any clearing or construction on the site. Construction sequence shall be phased in such a manner that the on-site detention basin is stabilized and functioning prior to the establishment of any new impervious areas on the site. The Contractor shall provide temporary stilling or settling basins as needed to catch and trap any migrating soil materials and pollutants from the construction areas.

3. An inspection of all erosion control and stormwater management systems shall be conducted at least once every fourteen (14) calendar days and following significant storm events. Where sites have been finally or temporarily stabilized, or runoff is unlikely due to winter conditions, such inspections shall be conducted at least once every month. (A SWPPP is required for this project)

In case of any noted breach or failure, the General Contractor shall immediately make appropriate repairs to any erosion control system and notify the engineer of any problems involving storm water management systems.

A significant storm event shall be defined as all or one of the following thresholds.

a. Any storm in which rain is predicted to last for twelve consecutive hours or more.
b. Any storm for which a flash flood watch or warning is issued.
c. Any single storm predicted to have a cumulative rainfall of greater than one inch.
d. Any storm not meeting the previous three thresholds, but which would mark a third consecutive day of measurable rainfall.

4. If site inspections identify BMPs not operating effectively, maintenance must be performed as soon as possible and before the next storm event.

5. If BMPs need modification or additional BMPs need to be added, implementation must be completed before the next storm if practicable. If implementation before the next storm event is impracticable, the situation must be documented in the construction log and alternative BMPs must be implemented as soon as possible

6. The General Contractor shall also inspect the erosion control and stormwater management systems at times of significant increase in surface water runoff due to rapid thawing when the risk of failure of erosion control measures is significant.

7. In such instances as remedial action is necessary, the General Contractor shall repair any and all significant deficiencies in erosion control systems within two days.

8. The Department of Public Works and/or Conservation Commission shall be notified of any significant failure of storm water management systems and erosion and sediment control measures and shall be notified of any release of pollutants to a water body (stream, brook, pond, etc.).

9. The General Contractor shall remove the sediment from behind the fence of the sedimentation control barrier when the accumulated sediment has reached one-half of the original installed height of the barrier.

INSPECTION AND MAINTENANCE (POST-CONSTRUCTION)

It is the agreement of the responsible parties to finance, inspect, and perform (respectfully) the long-term maintenance of the erosion control devices and the stormwater management systems within the limits stated below.

1. A visual inspection of all erosion control and stormwater management systems shall be conducted by the above identified person(s) a minimum of once per month and after every major storm during the first six months of operation (a portion of that time must be in the growing season). Thorough investigations shall be conducted twice a year. Monthly maintenance requirements may be adjusted based upon the results obtained from the first year of operation.

2. Roads and parking lots shall be swept at least twice per year and on a more frequent basis depending on sanding operations. All resulting sweepings shall be collected and properly disposed of off-site in accordance with MADEP and other applicable requirements.

3. Accumulated sediment shall be removed a minimum of one time per year by means of a clamshell bucket or equivalent from the bottom of the deep sump catch basins and manholes. Disposal of accumulated sediment and pollutants must be in accordance with local, state, and federal guidelines and requirements.

4. Hydroworks Units shall be inspected and maintained per the manufactures recommendations or as needed.

5. All resulting sweepings or sediment removed from catch basins, and manhole connections shall be collected and properly disposed of off-site in accordance with MADEP and other applicable requirements.

6. Reference to this Operation and Maintenance Plan will be made within the chain of title by reference or recorded within the initial deed transfer if this is to occur prior to construction. This Plan shall be followed by subsequent landowners as required and amended by the Massachusetts Department of Environmental Protection's Stormwater Management Regulations.

7. It shall be the responsibility of the ***Landowner*** to ensure that the Operation and Maintenance of all stormwater structures is performed as outlined in the provided Maintenance Schedule and to provide full funding of the required tasks.

Table A: Maintenance Schedule

Structure Type	**Inspection** *(Responsible Party)*	**Maintenance** *(Responsible Party)*	**Task**	**Cost Estimate**
Rip/Rap Aprons	Every 2 years *(Owner)*	Every 10 Years *(3rd Party Contractor)*	Remove Debris & Add Stone	$1,000* *($100/Year)*
Deep-Sump Catchbasins	Quarterly and at the end of the foliage and snow removal seasons. *(Owner)*	Quarterly or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe *(3rd Party Contractor)*	Remove Sediment and Debris	$3,000** *($3,000/Year)*
Hydroworks Unit	Annually in the spring *(Owner)*	Annually in the Spring or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe *(3rd Party Contractor)*	Remove Sediment and debris	$2,000** *($2,000/Year)*
Infiltration Basins	Monthly (May-Oct)	Monthly (May-Oct)	Mow Grass Areas & Remove Debris Remove Sediment if present	$500* *($500/Year)*
Forebay	Twice a Year	Every 10 Years	Remove Debris/Sediment & Add Stone	$1,000* *($100/Year)*
		Total Annual Cost estimate		$5,700/Year

NOTES:
**Cost estimate per RS Means: Site work & Landscape Cost Data, Includes Mobilization, Material and Installation costs for work*
***Cost estimate per contractor*

LONG TERM POLLUTION PREVENTION PLAN

1. Access drives to the site shall be swept on an annual basis with a commercial cleaning unit. Any sediment removed shall be disposed of in accordance with applicable local and state requirements.

2. Trash and other debris shall be removed from the drives periodically as needed. Full inspection of the site shall be made on a semi-annual basis to ensure clean and neat appearance to the site. This measure will help in the overall performance of the onsite systems.

3. Trash and other debris shall be removed from landscaped and planted areas periodically as needed. Full inspection of the site shall be made on a semi-annual basis to ensure clean and neat appearance to the site. This measure will help in the overall performance of the onsite systems.

4. Reseed any bare areas as soon as they occur. Erosion control measures shall be installed in these areas to prevent deposits of sediment from entering the drainage system

5. Grass shall be maintained at a minimum blade height of two to three inches and only 1/3 of the plant height shall be removed at a time.

6. Plants shall be pruned as necessary. The use of fertilizers will be kept at a level consistent with typical residential use. Fertilizer will be applied a maximum of once to twice per year during the initial planting and stabilization of landscaped areas. Once plants are established and growing well fertilizer will be applied judiciously.

7. The use of pesticides will be kept at a level consistent with typical residential use. Where possible mechanical methods (i.e. pest traps) or biological methods (i.e. beneficial insects) of pest control shall be implemented. If pesticides (insecticide, herbicide, and fungicide) are required to be used a pesticide which poses the lowest risk to public health and the environment shall be used.

8. Pet waste shall be disposed of in accordance with local regulations. Pet waste shall not be disposed of in a storm drain or catch basin.

Inspection Log

McGovern Boulevard
March 19, 2021

DATE	ACTION	RESULT	PERFORMED BY

Maintenance Log

McGovern Boulevard
March 19, 2021

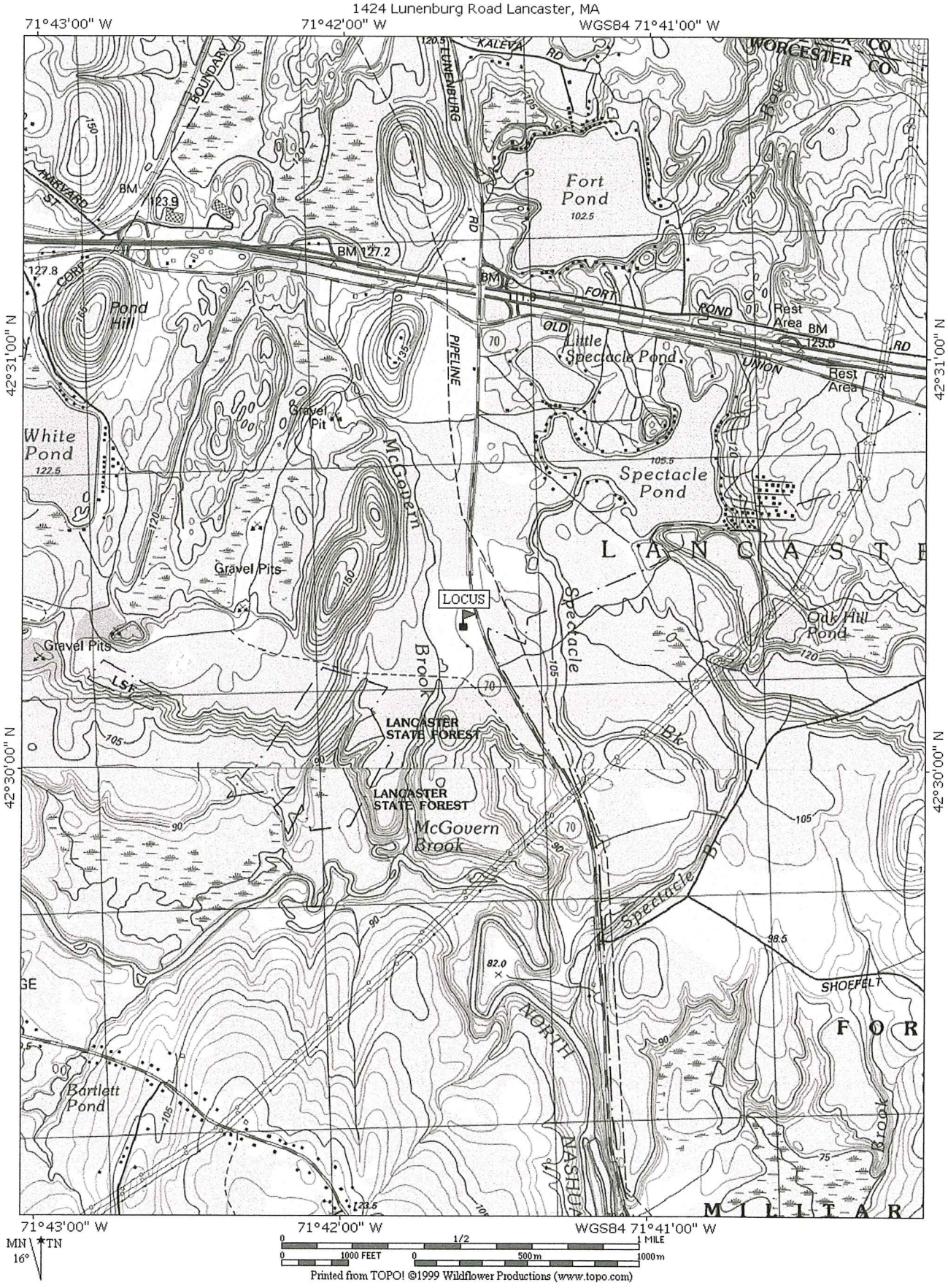
DATE	ACTION	PERFORMED BY

SOURCE CONTROL AND POLLUTIN PREVENTION PLAN

Potential sources of pollution associated with this project include but are not limited to the high intensity roadway systems. Within the roadway the potential stormwater contaminants that are recognized as automotive chemicals from automobile and truck traffic, along with deicing chemicals and abrasive additives for safety during the winter months. To prevent contamination of stormwater several methods of prevention and containment are proposed. The roadway has been designed such that all areas are directed towards the treatment systems including the catchbasins and ultimately the Stormwater treatment system. The catchbasins will be constructed with a deep sump and a hooded inlet, this configuration will provide TSS removal and capture larger materials prior to entering the treatment system. The stormwater will be directed to a Hydroworks Hydroguard Water Quality Unit, to provide further treatment and provide compliance with Stormwater Management Regulations. This system will provide in excess of 80% TSS removal prior to discharge.

FIGURE 1
LOCUS MAP AND SOILS MAP

1424 Lunenburg Road Lancaster, MA



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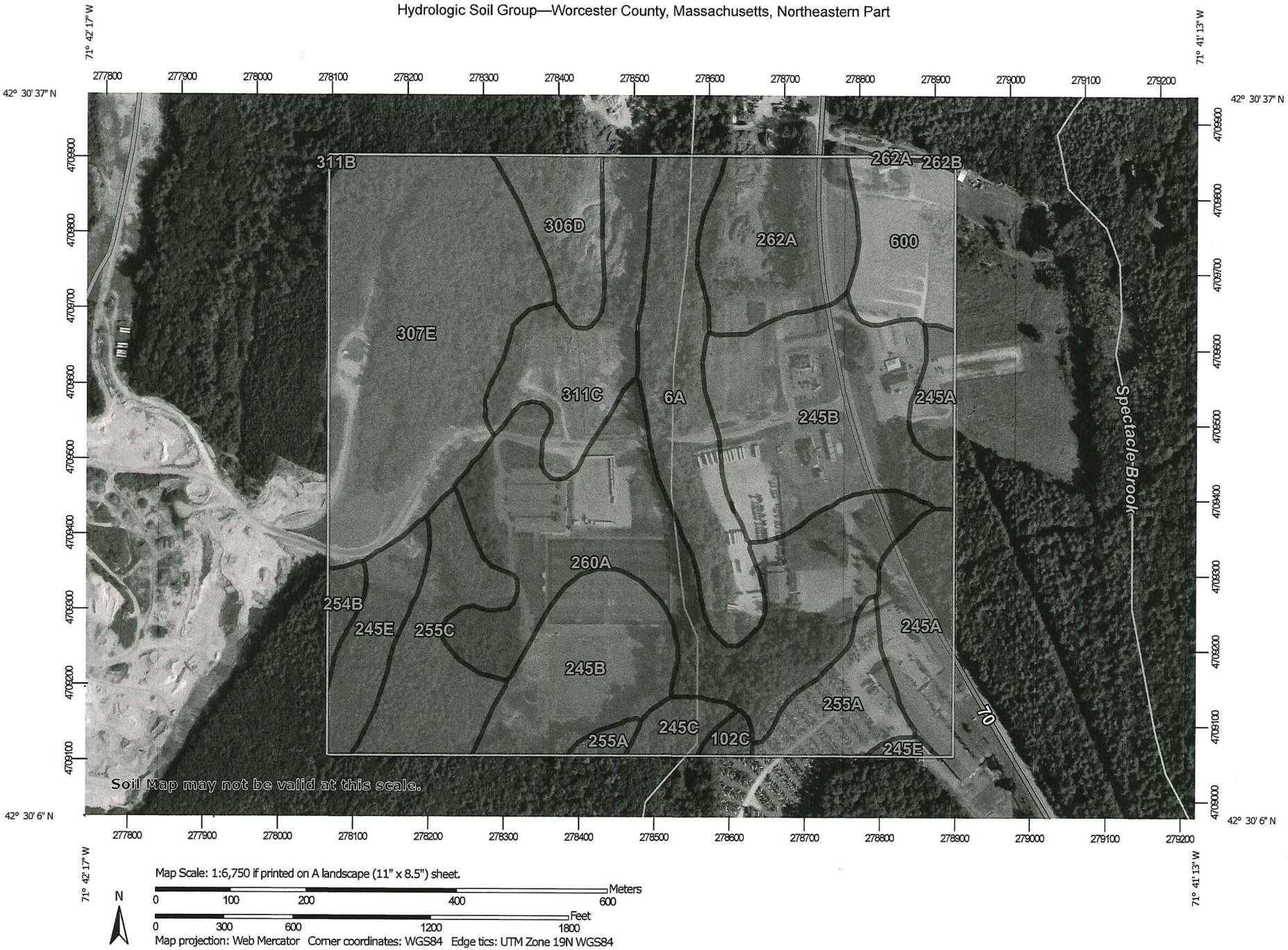
Hydrologic Soil Group—Worcester County, Massachusetts, Northeastern Part



Map Scale: 1:6,750 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N 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 1:20,000.

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: Worcester County, Massachusetts, Northeastern Part
Survey Area Data: Version 15, Jun 10, 2020

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

Date(s) aerial images were photographed: Aug 12, 2019—Sep 29, 2019

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
6A	Scarboro mucky fine sandy loam, 0 to 3 percent slopes	A/D	13.2	8.0%
102C	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	B	0.7	0.4%
245A	Hinckley loamy sand, 0 to 3 percent slopes	A	8.5	5.2%
245B	Hinckley loamy sand, 3 to 8 percent slopes	A	28.6	17.4%
245C	Hinckley loamy sand, 8 to 15 percent slopes	A	1.9	1.2%
245E	Hinckley loamy sand, 25 to 35 percent slopes	A	5.3	3.2%
254B	Merrimac fine sandy loam, 3 to 8 percent slopes	A	1.1	0.7%
255A	Windsor loamy sand, 0 to 3 percent slopes	A	5.9	3.6%
255C	Windsor loamy sand, 8 to 15 percent slopes	A	8.9	5.4%
260A	Sudbury fine sandy loam, 0 to 3 percent slopes	B	28.3	17.2%
262A	Quonset loamy sand, 0 to 3 percent slopes	A	10.4	6.4%
262B	Quonset loamy sand, 3 to 8 percent slopes	A	0.1	0.1%
306D	Paxton fine sandy loam, 15 to 25 percent slopes, very stony	C	5.1	3.1%
307E	Paxton fine sandy loam, 25 to 35 percent slopes, extremely stony	C	28.9	17.6%
311B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	C/D	0.1	0.1%
311C	Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony	C/D	10.1	6.1%
600	Pits, gravel		7.2	4.4%
Totals for Area of Interest			**164.4**	**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.

Rating Options

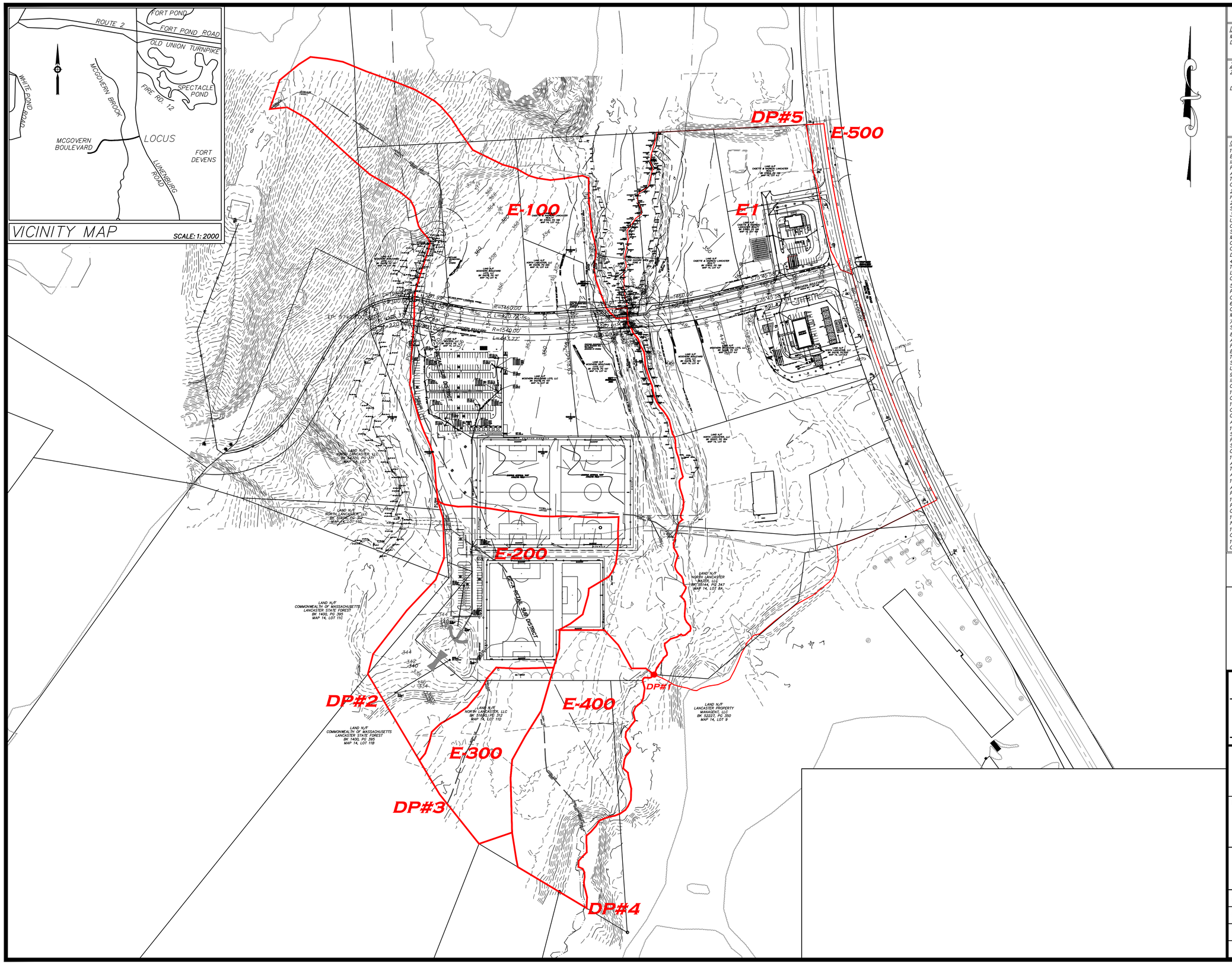
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

FIGURE 2
PRE-DEVELOMPENT WATERSHED MAP

VICINITY MAP SCALE: 1:2000



PROJECT INFORMATION

LAND INFORMATION

MAP/PARCEL: 14/4.D
DEED BOOK/PAGE: 52227/354

ZONING INFORMATION

ZONING DISTRICT: ENTERPRISE DISTRICT *
*IPOD OVERLAY DISTRICT
*EZ-A RETAIL SUB DISTRICT

DIMENSIONAL REQUIREMENTS:
MINIMUM AREA: 64,000 SF
MINIMUM FRONTAGE: 225 FEET
MINIMUM SETBACKS;
FRONT YARD: 40 FT**
SIDE YARD: 30 FT
REAR YARD: 30 FT
**100FT WHEN ABUTTING A RESIDENTIAL DISTRICT

GENERAL NOTES:

1. PROPERTY LINE INFORMATION BASED ON AN ON-THE-GROUND SURVEY BY HANNIGAN ENGINEERING, INC. IN JULY OF 2013. TOPOGRAPHIC INFORMATION IS THE RESULT OF AN AERIAL TOPOGRAPHIC SURVEY PERFROMED BY MINUTEMAN MAPPING IN OCTOBER OF 2009 NAVD88 DATUM. ADDITIONAL FIELD SURVEY HAS BEEN PERFORMED TO VERIFY AND ADJUST TOPOGRAPHIC FEATURES AS NEEDED BY THIS OFFICE THROUGH NOVEMBER OF 2020.
2. AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT HAVE BEEN DELINEATED BY GODDARD CONSULTING, LLC IN OCTOBER OF 2020. THESE AREAS ARE DEPICTED ON THE PLANS BASED ON FIELD SURVEY LOCATION DURING THE TOPOGRAPHIC SURVEY.
3. LOCATION OF ALL UTILITIES ARE APPROXIMATE AS SHOWN AND BASED UPON VISIBLE STRUCTURES AT THE TIME OF THE FIELD SURVEY. LOCATION OF EXISTING UTILITIES AND SUBSURFACE STRUCTURES, WHETHER OR NOT SHOWN ON THESE PLANS, SHALL BE DETERMINED BY THE CONTRACTOR, MARKED IN THE FIELD, AND REVIEWED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE OF THE OBLIGATION TO ALL UTILITY COMPANIES AND AGENCY AS WELL AS DIG-SAFE PRIOR TO EXCAVATION. (SEE NOTE)
4. NOTIFICATION REQUIREMENTS SHOWN ON THIS PLAN SHALL NOT RELIEVE THE CONTRACTOR OF ANY OTHER REQUIREMENTS WHICH MAY EXIST UNDER LOCAL, STATE, OR FEDERAL JURISDICTION TO WHICH THE CONTRACTOR IS OBLIGATED.
5. RELOCATION OF AND/OR CONNECTION TO EXISTING UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
6. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE TOWN OF LANCASTER AND THE MASS DOT SPECIFICATIONS OF HIGHWAYS AND BRIDGES.
7. ALL SLOPES UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION.
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12. STOCKPILING OF MATERIAL SHALL NOT BE PERMITTED WITHIN ANY AREAS SUBJECT TO PROTECTION UNDER THE WETLANDS PROTECTION ACT WITHOUT PRIOR APPROVAL BY THE LOCAL CONSERVATION COMMISSION. STOCKPILES SHALL BE PLACED IN A SUITABLE LOCATION AND SURROUNDED BY A ROW OF STAKED HAY BALES FOR EROSION CONTROL.
13. AREAS OF FILL TO BE COMPACTED TO A MINIMUM 95% DRY DENSITY IN AREAS WITHIN ROADWAYS AND UTILITY EASEMENTS. OTHER AREAS OF FILL TO BE COMPACTED TO A MINIMUM 90% DRY DENSITY. ALL FILL MATERIALS ARE TO BE CLEAN FILL, FREE OF DELETERIOUS MATERIALS AND DEBRIS.
14. ALL SIDEWALKS AND RAMPS TO CONFORM TO REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AS REQUIRED. SEE ARCHITECTURAL PLANS FOR CONFORMANCE REQUIREMENTS FOR PROPOSED BUILDINGS.
15. THE AREA PROPOSED FOR DEVELOPMENT IS WITHIN A 100 YEAR FLOOD PLAIN PER F.E.M.A. FIRM PANEL #25027-C0289E, DATED: JULY 4, 2011. COMPLIANCE WITH APPLICABLE REGULATIONS IS REQUIRED.
16. ALL REINFORCED CONCRETE PIPE TO BE CLASS III UNLESS OTHERWISE NOTED.
17. PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
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HANNIGAN ENGINEERING, INC.
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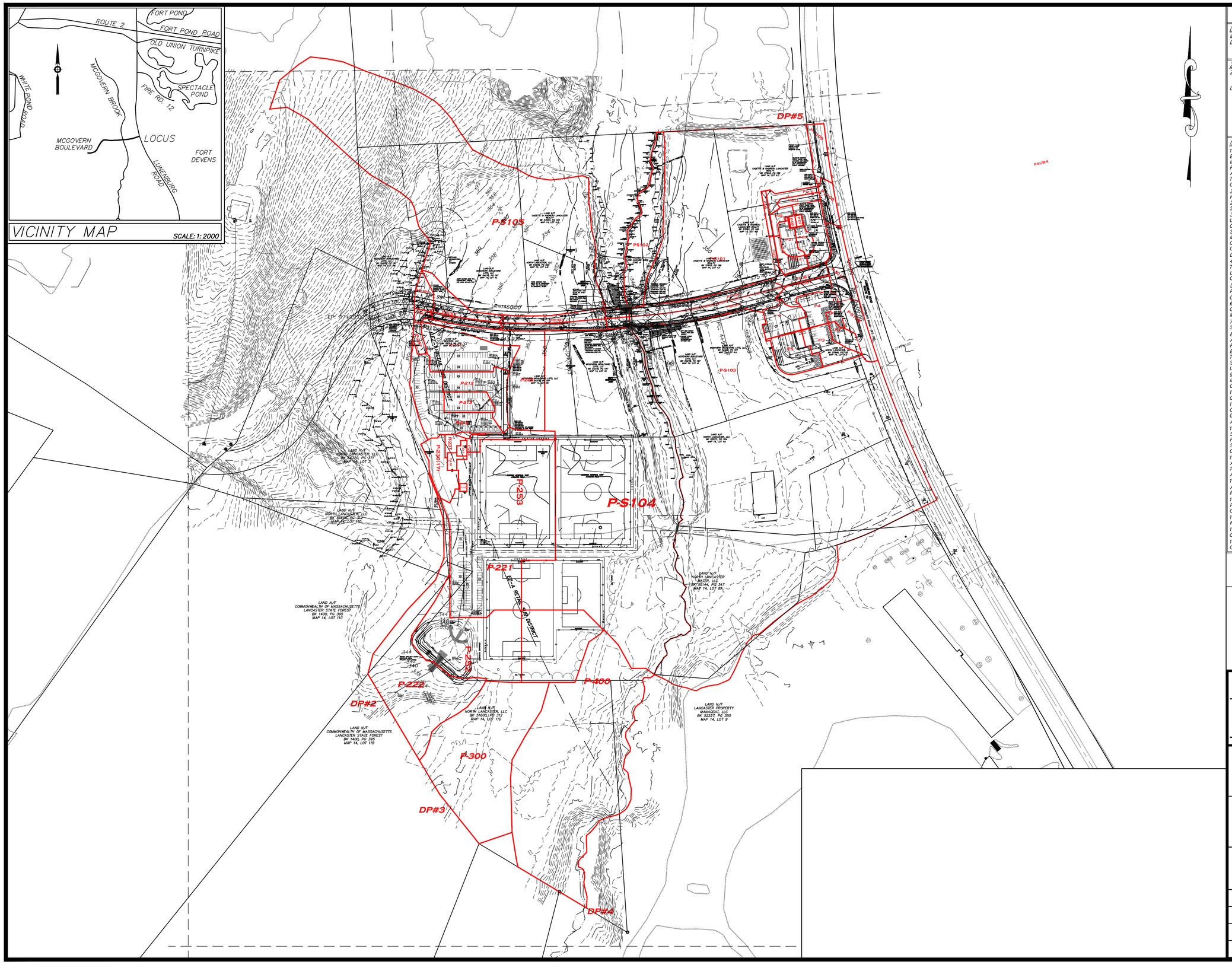
EXISTING WATERSHED IN LANCASTER, MASSACHUSETTS

PREPARED FOR:
NORTH LANCASTER, LLC
STEVE BOUCHER
435 LANCASTER STREET
LEOMINSTER, MASSACHUSETTS 01453
TEL: 978-534-0816

CALC: CMA/WDH	DRWN: CMA/WDH	SCALE: 1"=150'
CHKD: WDH	APPD: WDH	DATE: NOV 24, 2020
SRV: JEF	FB: FILES	JOB NO: 2226
TAB: WS	SHEET 1 OF 2	PLAN NO: C-11-1

FIGURE 3
POST-DEVELOMPENT WATERSHED MAP

VICINITY MAP SCALE: 1:2000



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*IPOD OVERLAY DISTRICT
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