PARAGON ASSOCIATES
Environmental Design & Consulting

April 18, 2025

City of La Crosse Engineering Dept.
400 La Crosse St.
La Crosse, WI 54601

RE: Gerrard Haven-On-Main Development – FINAL Stormwater modeling

We have finalized our modeling of the stormwater management structures for the Haven-On-Main development at 915-927 Main St., and are providing the following supplemental information for compliance reviewer's consideration.

The project will occur on 6 parcels, 5 of which are vacant, and a partially-vacated city alley. Utility connections and alley and driveway additions/abandonments will necessitate disturbance of some City-owned rights-of-way as well. All 6 parcels are owned by Gerrard Development LLC. The project includes demolition of an existing 24-unit apartment building at 915 Main St. and construction of a new 4-story, 74-unit combination assisted living facility and regular apartment units with interior parking and a commercial office space. A summary of the existing project site is as follows:

Parcel	Address	Acres	Current Use	Notes
17-20204-010	928 State St .	0.11	vacant	
17-20204-020	119 N. 10th St.	0.07	vacant	
17-20204-030	922 State St.	0.30	vacant	
17-20204-100	915 Main St.	0.43	24-unit apts	
17-20204-110	117 N. 10th St.	0.18	vacant	
17-20204-120	927 Main St.	0.18	vacant	
vacated alley	NA	0.09	concrete	excludes part in 10th R/W
		1.36		

The proposed project site (after alley vacation & new alley) will consist of 1.25 acres of Gerrard Corp. property (which includes the vacated alley) along with 0.38 acres of street and alley rights-of-way (which includes the new alley), listed as follows, for a total project site disturbed area of 1.63 acres. Gerrard Corp. will dedicate 0.07 acres for a new concrete alley connecting the existing remaining alley to State St. which will contain a new storm sewer to be dedicated to the City.

Remaining alley	0.04 ac	disturbed portion
New dedicated alley	0.07	20' concrete in 20' ROW
State/10th R/W	0.09	storm sewer connection
Main R/W	0.11	sewer & water connections, new driveways
10th R/W	0.06	alley & driveway apron removals
	0.38 ac	

The project will result in some added pervious areas and some lost pervious areas, with an overall net loss in the pervious area on both the public and private property.

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This site is considered redevelopment so 40% TSS removal from only parking and driveway areas is required. However, an ADS underground chamber system is proposed that will accept runoff from not only all Gerrard-owned parking and driveway areas, but also all of their roof runoff except the canopy at the front main entrance to the building. The proposed new alley storm sewer will accept all runoff from the remaining disturbed and newly dedicated alleys as well as run-on from the remaining undisturbed alley and an adjacent (4-unit?) apartment building.

Our WinSLAMM model shows a TSS removal rate of 51.64% even with the roof contributing areas included.

HydroCAD modeling was done to determine peak flow runoff impacts of the redevelopment. Two post-construction HydroCAD models were done for 1) only the HOM-owned part of the project site; and 2) for the full project site with stormwater run-on volumes included. The HOM-only model shows decreased peak hour flow rates leaving the site for all storm events modeled. The full site model shows equal or decreased peak flow rates for all storm events except the 100-year event, where a very slight increase occurs. However, the owners of the HOM site are not responsible for managing the stormwater runoff generated by City-owned alleys and the full-site model is included in this submittal only to show that the proposed storm sewer pipes are adequately sized.

A stormwater management plan that contains the following items is being submitted for compliance review along with this cover letter:

Existing site aerial map
WinSLAMM proposed site model diagram, model input data & model output
NOTE: Existing site WinSLAMM model previously submitted is still valid so not included
HCAD existing & 2 proposed site models
Operations & Maintenance Plan
Long Term Maintenance Agreement

Also included in this submittal is:

Plan sheets with Existing Site C001, Proposed Site C100, Grading C200 & Erosion Control C300
Proposed site map mark-up with drainage areas, land uses & flow arrows

A stormwater permit application was submitted with our preliminary modeling results. Please feel free to contact our office should you need any additional information or clarification regarding this matter.

Sincerely,

Robert A. Haines
WI PE #30878 MN PE #63889

STORM WATER MANAGEMENT PLAN
Haven On Main Project
915-927 Main Street
La Crosse, WI 54601

Gerrard Development LLC
W5947 Woodland Drive
La Crosse, WI 54601

Updated April 18, 2025

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TABLE OF CONTENTS

APPENDICES

***Existing Site Description**:*

This project is proposed to occur on 6 adjacent parcels, all owned by Gerrard Development LLC, and on part of a city-owned alley that is proposed to be partially vacated and ownership transferred to Gerrard Development LLC. 5 of the parcels are currently vacant but have been landscaped and are believed to have contained residential homes in the past. The 6th parcel contains a 24-unit apartment building. The project site is bounded by Main St., State St., 10th St. and is east of 9th St. with a concrete alley running east-west approximately through the middle of the site. The vacation of the eastern part of the alley is expected to occur in spring of 2025 followed shortly thereafter by a certified survey map that combines all of the project parcels. Several utility easements between the developers and the City will also be part of that CSM. All of the areas within the limits of construction are developed and therefore the Project is considered to be redevelopment.

***Project Description**:*

The project proposes to demolish the existing 24-unit apartment building and part of the concrete alley, and construct a new 4-story, 74-unit combined assisted living facility and regular apartments with interior parking. The project's general development plan has received conceptual approval from the City of La Crosse Common Council in January 2024. The 6 Gerrard Development LLC parcels have a combined area of 1.266 acres while the vacated alley area is 0.102 acres. Some additional public street right-of-way areas will also be disturbed for new driveways and utility connections. An aerial photo has been included in **Appendix A** showing the site and surrounding areas.

Grading, installation of permanent BMP's, utility installation, new building construction, and landscaping will constitute most of the new exterior construction. Topsoil stripping, back filling, grading, subbase preparation, paving, and landscaping will constitute a majority of the ground disturbing activities.

Estimate of construction site area: The total area of ground disturbing activity, including city rights-of-way, is as follows:

Pre-construction HOM property = 1.38 ac (includes vacated alley)

Pre-construction City ROW in project area = 0.25 ac

Total project disturbed area = 1.63 ac

Post-construction HOM property = 1.25 ac (after adding vacated alley & subtracting new alley)

Summary of Controls: Total suspended solids removal requirements are met through the application of an underground chamber storage system (isolator row system) for TSS removal. A single 2-chamber underground storage system is proposed to treat runoff for TSS and peak discharge from a portion of the site. Other parts of the site will either surface drain to adjacent city streets or will drain to a new storm sewer system installed in a newly dedicated alley that will directly connect to a city storm sewer main without any type of treatment. The proposed underground chamber storage system is an ADS Stormtech SC310 system.

Performance Standards

Total Suspended Solids: A single 2-chamber underground storage system will be utilized to achieve TSS removal and control runoff volume. Because this project is considered redevelopment under City regulations, a TSS reduction of 40% is required from parking and drives per City Municipal Code Section 105-61.

WinSLAMM V10.5.0 was used to model the site and determine the amount of TSS carried in runoff from the site. The modeled TSS removal incorporates all areas that drain to the underground chamber system, including those areas where TSS reduction is not required. The results are as follows:

Baseline Model (Developed site without controls)

Total TSS without controls = 371 lbs.

Modeled TSS Removal

TSS Removed with Controls = 192 lbs. (371 lbs. – 179 lbs.)

The TSS removal is 51.64%, above the redevelopment requirement of 40%. Model input and output file information are included in **Appendix B**.

Peak Storm Water Discharge: Municipal Code Section 105-61 requires no increase in the developed site runoff as compared to the existing site for the 2 and 10-year storms. This requirement will be met by the 2-chamber underground storage system. HydroCAD V10.00-26 models of the existing and proposed site were developed. The results are summarized in the table below:

Return Period, Years	Existing Site, cfs	Proposed Site, cfs
2	0.84	0.40
10	1.55	0.81

100	3.43	2.59

The proposed BMP adequately controls the runoff from the 2- and 10-year events, and the 100-year runoff does not overflow from the underground storage chambers, although it is slightly increased from the pre-development runoff. Because the 100-year runoff volume is contained within the underground storage chamber and is slowly released to the City's storm sewer system, it is considered to be a safe outlet for that slightly increased runoff volume. Model input and output file information is included in **Appendix B**.

Infiltration: As a moderately-impervious multi-family residential site, post-construction infiltration is required per Municipal Code Section 105-61 to be at least 75% of pre-development infiltration volume. However, no more than 2% of the disturbed site is required to be dedicated as an effective infiltration area. The underground chamber storage system will be underlain by an impervious liner so no infiltration will occur within that system. Infiltration will occur primarily via the landscaped (non-turf) areas and lawn areas, which comprise 7906sf of the proposed site and therefore greatly exceeds the 2% maximum area cap.

BMP Maintenance: An O & M Plan has been included in **Appendix C**.

Post Construction Maintenance Agreement: A draft Long Term Maintenance Agreement has been included in **Appendix D,** with a final agreement pending final design.

Haven On Main Project

Storm Water Management Plan

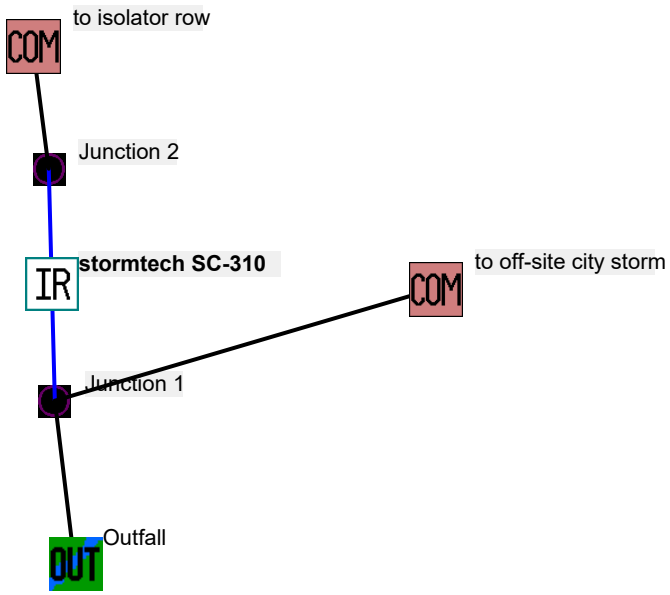
APPENDIX A – Aerial Photo of Project Site


Haven On Main Project Site
STATE ST
MAIN ST
9TH ST N
10TH ST N
20202-121
901
20166-140
827-29
20166-50
111
20166-70
908
914
128
20204-60
20204-50
20204-70
20204-40
20204-30
20204-10
20204-20
108-16
20204-90
102-04
20204-80
901-05
20204-100
907
915
919
20204-110
20204-120
20192-100
1009
20192-110
1013
20192-120
1002
1006-08
1012-14
1018
128-30
20192-70
20192-40
20192-30
20192-20
124-26
120-22
20192-50
20192-60
112-14
20191-70
102
20191-80
1005
20191-90
1011
20191-100
City of La Crosse, La Crosse County, City of La Crosse, La Crosse County

Haven On Main Project

Storm Water Management Plan

APPENDIX B – Stormwater Modeling Results



HOM Development
Proposed Site WinSLAMM
Model Diagram

Data file name: F:\Engineering\Engineering Dwg\2023\23-109 Gerrard HOM\Storm\models\SLAMM\proposed site + SC310 isolator REVISED APR 25.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 04-18-2025 Time: 07:53:53
Site information:

LU# 1 - Commercial: to isolator row Total area (ac): 1.095
1 - Roofs 1: 0.644 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
2 - Roofs 2: 0.009 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 0.047 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
14 - Paved Parking 2: 0.051 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
15 - Paved Parking 3: 0.032 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
16 - Paved Parking 4: 0.025 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
17 - Paved Parking 5: 0.025 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
18 - Paved Parking 6: 0.034 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.017 ac. Disconnected Normal Sandy PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
32 - Sidewalks 2: 0.064 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
51 - Small Landscaped Areas 1: 0.031 ac. Normal Sandy PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
52 - Small Landscaped Areas 2: 0.030 ac. Normal Sandy PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
53 - Small Landscaped Areas 3: 0.043 ac. Moderately Compacted Sandy PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM F
63 - Paved Playground 1: 0.022 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
71 - Other Pervious Areas 1: 0.021 ac. Normal Sandy PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Commercial: to off-site city storm Total area (ac): 0.165
1 - Roofs 1: 0.069 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
31 - Sidewalks 1: 0.010 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
32 - Sidewalks 2: 0.008 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
51 - Small Landscaped Areas 1: 0.051 ac. Normal Sandy PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
52 - Small Landscaped Areas 2: 0.027 ac. Moderately Compacted Sandy PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM F

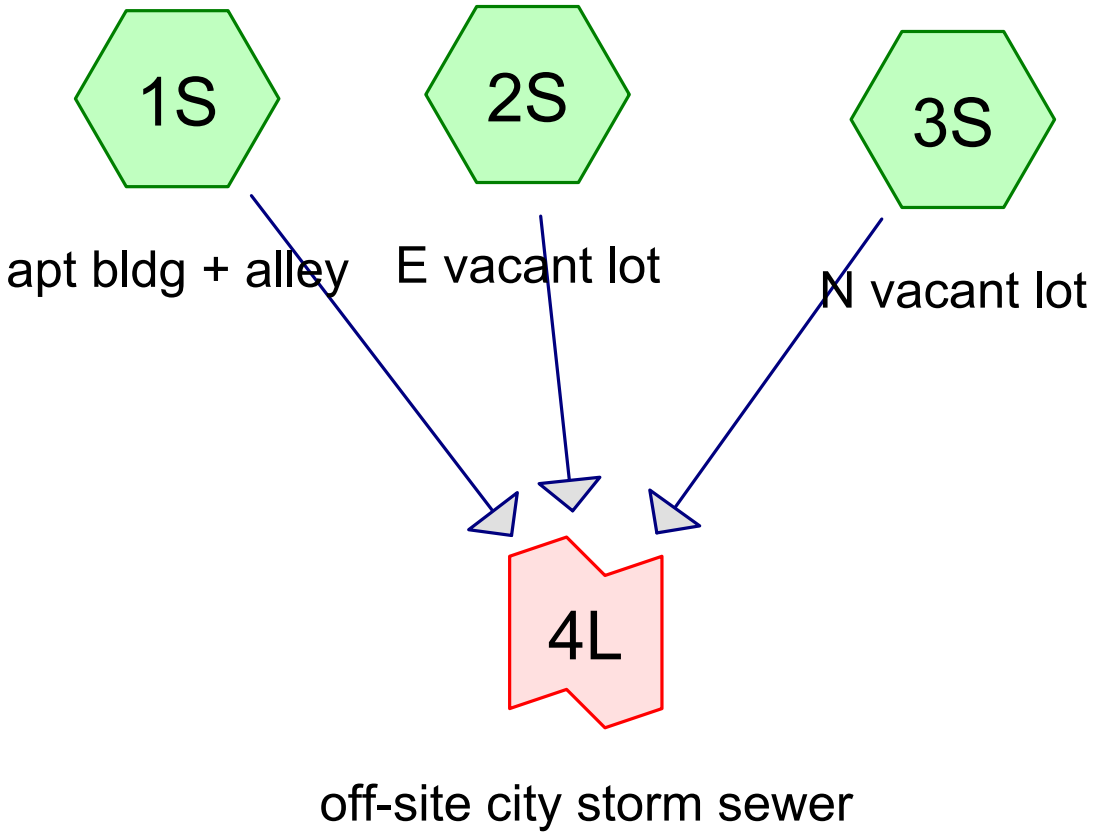
Control Practice 1: Isolator Row CP# 1 (DS) - stormtech SC-310
Total available system length (ft) = 120
Total available system width (ft) = 30
Available height from chamber base to surface (ft) = 3.83
Number of isolator rows = 1
Native soil infiltration rate (in/hr) = 0.00
Assumed stone porosity () = 0.33
Sizing option: Number of rows and row length
Number of rows = 2
Row length (ft) = 115
Selected Chamber Information
Chamber type: SC-310
Chamber height (in): 16.00
Chamber width (in): 34.00
Chamber segment length (in): 85.40
Final storage volume (cf): 1272
Number of rows: 2
Row length (ft): 115.0
Total system length (ft): 230.0
Total system width (ft): 5.7
Number of chambers: 32
Overflow weir invert elevation (ft) = 2.10
Orifice 1 invert elevation (ft) = 0.50
Orifice 1 diameter (ft) = 0.17

Drain Tile Present

SLAMM for Windows Version 10.5.0

Data file name: F:\Engineering\Engineering Dwg\2023\23-109 Gerrard HOM\Storm\models\SLAMM\proposed site + SC310 isolator REVISED APR 25.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Model Run Start Date: 01/01/81 Model Run End Date: 12/31/81
Date of run: 04-18-2025 Time of run: 07:53:02
Total Area Modeled (acres): 1.260
Years in Model Run: 1.00

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	96060	-	61.86	371.0	-
Outfall Total with Controls:	96086	-0.03%	29.91	179.4	51.64%
Annualized Total After Outfall Controls:	96350			179.9	



Subcat Reach Pond Link

Routing Diagram for existing
Prepared by Paragon Associates, Printed 4/18/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.020	61	>75% Grass cover, Good, HSG B (1S)
0.354	98	apt bldg roof (1S)
0.001	98	conc apron + shed (3S)
0.042	98	conc patios + slab (1S)
0.831	61	vacant lot, landscaped, HSG B (2S, 3S)
1.248	**73**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.851	HSG B	1S, 2S, 3S
0.000	HSG C	
0.000	HSG D	
0.397	Other	1S, 3S
1.248		**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
0.000	0.020	0.000	0.000	0.000	0.020	>75% Grass cover, Good	1S
0.000	0.000	0.000	0.000	0.354	0.354	apt bldg roof	1S
0.000	0.000	0.000	0.000	0.001	0.001	conc apron + shed	3S
0.000	0.000	0.000	0.000	0.042	0.042	conc patios + slab	1S
0.000	0.831	0.000	0.000	0.000	0.831	vacant lot, landscaped	2S, 3S
0.000	**0.851**	**0.000**	**0.000**	**0.397**	**1.248**	**TOTAL AREA**	

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: apt bldg + alley Runoff Area=0.416 ac 95.19% Impervious Runoff Depth>2.07"
Tc=32.0 min CN=96 Runoff=0.66 cfs 0.072 af

Subcatchment2S: E vacant lot Runoff Area=0.358 ac 0.00% Impervious Runoff Depth>0.20"
Tc=45.0 min CN=61 Runoff=0.03 cfs 0.006 af

Subcatchment3S: N vacant lot Runoff Area=0.474 ac 0.21% Impervious Runoff Depth>0.20"
Tc=45.0 min CN=61 Runoff=0.04 cfs 0.008 af

Link 4L: off-site city storm sewer Inflow=0.69 cfs 0.085 af
Primary=0.69 cfs 0.085 af

Total Runoff Area = 1.248 ac Runoff Volume = 0.085 af Average Runoff Depth = 0.82"
68.19% Pervious = 0.851 ac 31.81% Impervious = 0.397 ac

Summary for Subcatchment 1S: apt bldg + alley

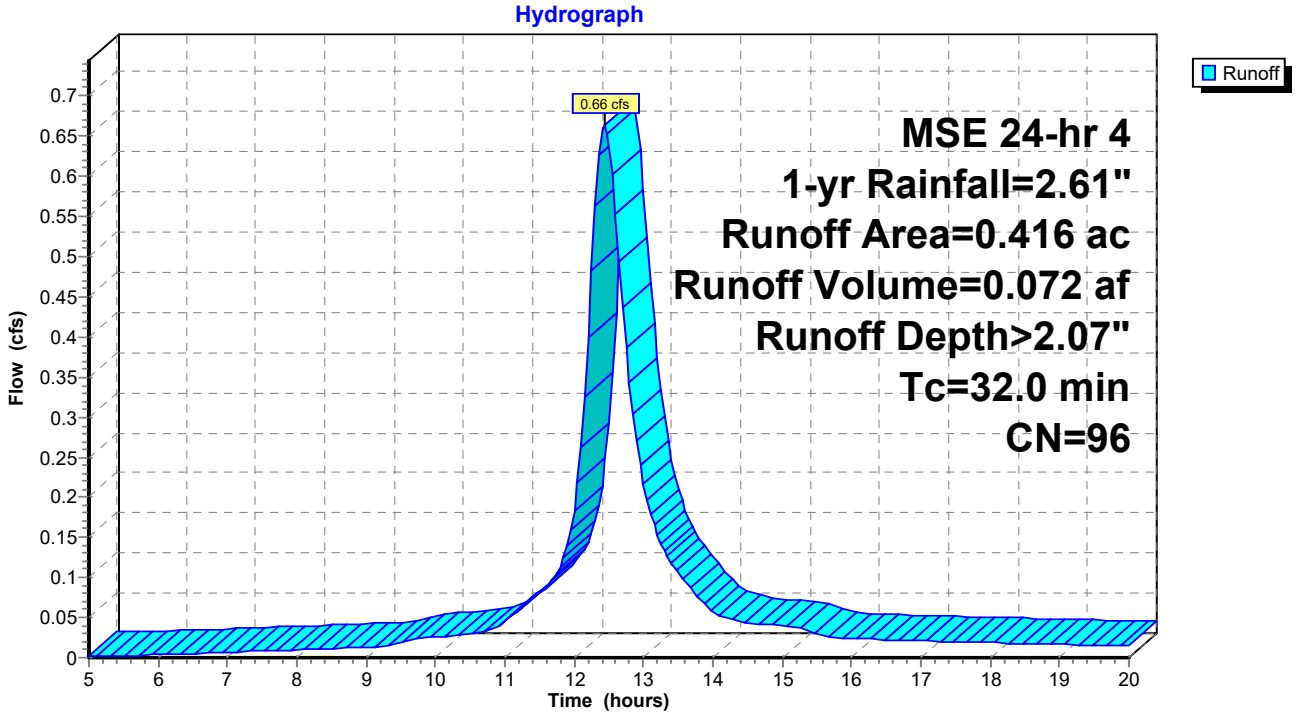
Runoff = 0.66 cfs @ 12.43 hrs, Volume= 0.072 af, Depth> 2.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.354	98	apt bldg roof
*	0.042	98	conc patios + slab
*	0.020	61	>75% Grass cover, Good, HSG B
	0.416	96	Weighted Average
	0.020		4.81% Pervious Area
	0.396		95.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, apt bldg roof**
5.0					**Direct Entry, patios + slab**
15.0					**Direct Entry, landscaping**
7.0					**Direct Entry, alley**
32.0	0	Total			

Subcatchment 1S: apt bldg + alley



Hydrograph for Subcatchment 1S: apt bldg + alley

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.25	0.13	0.00	0.00
5.50	0.14	0.01	0.00
5.75	0.15	0.01	0.00
6.00	0.16	0.01	0.00
6.25	0.17	0.02	0.00
6.50	0.18	0.02	0.01
6.75	0.19	0.02	0.01
7.00	0.21	0.03	0.01
7.25	0.22	0.03	0.01
7.50	0.23	0.04	0.01
7.75	0.25	0.05	0.01
8.00	0.26	0.05	0.01
8.25	0.27	0.06	0.01
8.50	0.29	0.07	0.01
8.75	0.30	0.07	0.01
9.00	0.32	0.08	0.01
9.25	0.34	0.10	0.01
9.50	0.36	0.11	0.02
9.75	0.39	0.13	0.02
10.00	0.41	0.15	0.03
10.25	0.44	0.16	0.03
10.50	0.47	0.18	0.03
10.75	0.51	0.22	0.03
11.00	0.56	0.26	0.05
11.25	0.63	0.31	0.06
11.50	0.71	0.38	0.08
11.75	0.86	0.50	0.10
12.00	1.22	0.83	0.18
12.25	1.75	1.34	**0.48**
12.50	1.90	1.48	**0.64**
12.75	1.98	1.55	0.39
13.00	2.05	1.62	0.22
13.25	2.10	1.67	0.14
13.50	2.14	1.71	0.11
13.75	2.17	1.74	0.08
14.00	2.20	1.77	0.06
14.25	2.22	1.79	0.05
14.50	2.25	1.81	0.04
14.75	2.27	1.84	0.04
15.00	2.29	1.86	0.04
15.25	2.31	1.87	0.04
15.50	2.32	1.89	0.03
15.75	2.34	1.90	0.03
16.00	2.35	1.92	0.02
16.25	2.36	1.93	0.02
16.50	2.38	1.94	0.02
16.75	2.39	1.95	0.02
17.00	2.40	1.97	0.02
17.25	2.42	1.98	0.02
17.50	2.43	1.99	0.02
17.75	2.44	2.00	0.02
18.00	2.45	2.01	0.02
18.25	2.46	2.02	0.02
18.50	2.47	2.03	0.02
18.75	2.48	2.04	0.02
19.00	2.49	2.05	0.02
19.25	2.50	2.06	0.02
19.50	2.51	2.07	0.02
19.75	2.52	2.08	0.01
20.00	**2.53**	**2.09**	0.01

Summary for Subcatchment 2S: E vacant lot

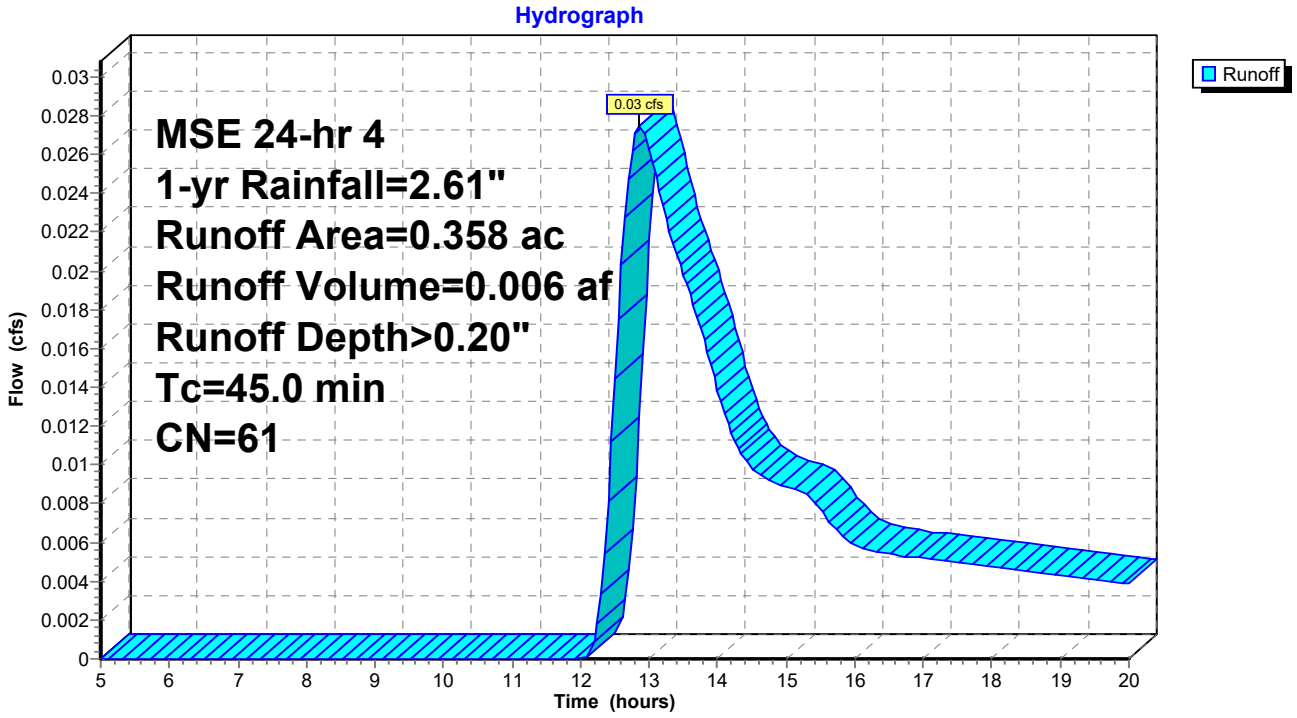
Runoff = 0.03 cfs @ 12.86 hrs, Volume= 0.006 af, Depth> 0.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.358	61	vacant lot, landscaped, HSG B
	0.358		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.0					**Direct Entry, vacant lot, grass, flat**

Subcatchment 2S: E vacant lot



Hydrograph for Subcatchment 2S: E vacant lot

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.25	0.13	0.00	0.00
5.50	0.14	0.00	0.00
5.75	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.25	0.17	0.00	0.00
6.50	0.18	0.00	0.00
6.75	0.19	0.00	0.00
7.00	0.21	0.00	0.00
7.25	0.22	0.00	0.00
7.50	0.23	0.00	0.00
7.75	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.25	0.27	0.00	0.00
8.50	0.29	0.00	0.00
8.75	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.25	0.34	0.00	0.00
9.50	0.36	0.00	0.00
9.75	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.25	0.44	0.00	0.00
10.50	0.47	0.00	0.00
10.75	0.51	0.00	0.00
11.00	0.56	0.00	0.00
11.25	0.63	0.00	0.00
11.50	0.71	0.00	0.00
11.75	0.86	0.00	0.00
12.00	1.22	0.00	0.00
12.25	1.75	0.03	0.00
12.50	1.90	0.06	0.01
12.75	1.98	0.07	**0.03**
13.00	2.05	0.08	**0.03**
13.25	2.10	0.09	0.02
13.50	2.14	0.10	0.02
13.75	2.17	0.11	0.02
14.00	2.20	0.12	0.01
14.25	2.22	0.12	0.01
14.50	2.25	0.13	0.01
14.75	2.27	0.13	0.01
15.00	2.29	0.14	0.01
15.25	2.31	0.14	0.01
15.50	2.32	0.15	0.01
15.75	2.34	0.15	0.01
16.00	2.35	0.15	0.01
16.25	2.36	0.16	0.01
16.50	2.38	0.16	0.01
16.75	2.39	0.16	0.01
17.00	2.40	0.17	0.01
17.25	2.42	0.17	0.01
17.50	2.43	0.17	0.00
17.75	2.44	0.18	0.00
18.00	2.45	0.18	0.00
18.25	2.46	0.18	0.00
18.50	2.47	0.19	0.00
18.75	2.48	0.19	0.00
19.00	2.49	0.19	0.00
19.25	2.50	0.20	0.00
19.50	2.51	0.20	0.00
19.75	2.52	0.20	0.00
20.00	**2.53**	**0.20**	0.00

Summary for Subcatchment 3S: N vacant lot

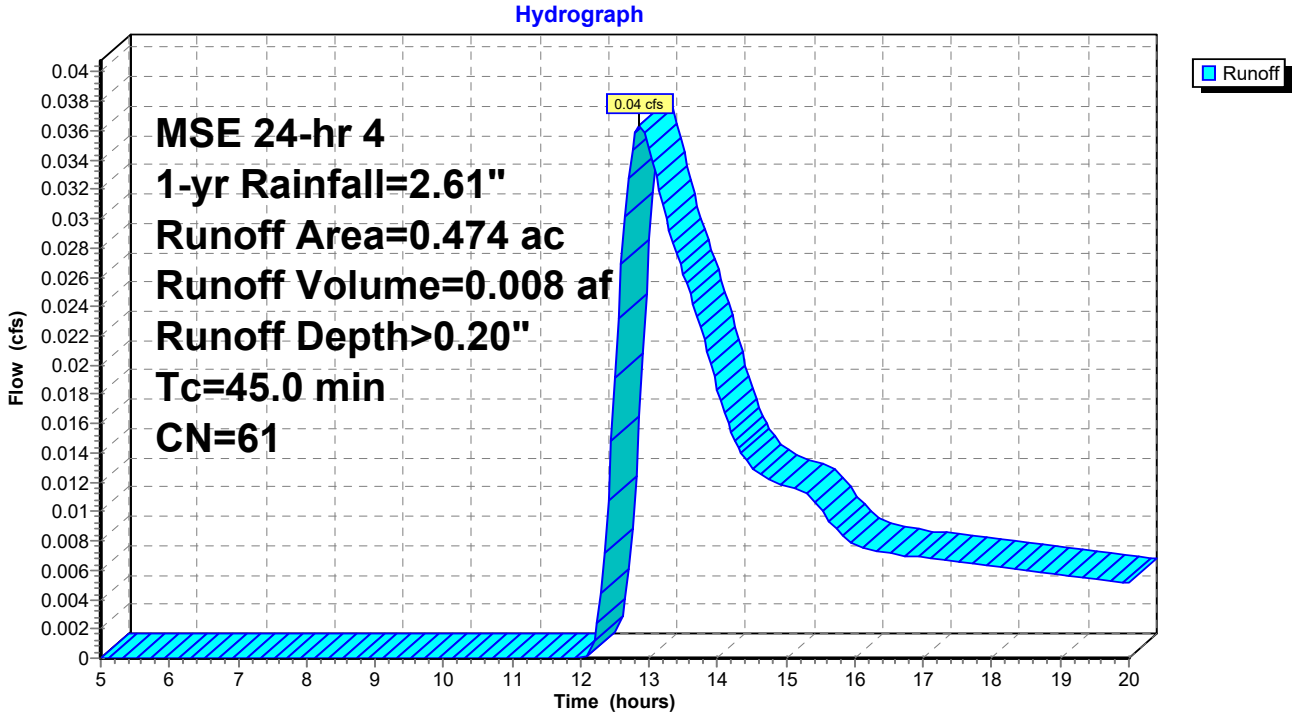
Runoff = 0.04 cfs @ 12.86 hrs, Volume= 0.008 af, Depth> 0.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.001	98	conc apron + shed
*	0.473	61	vacant lot, landscaped, HSG B
	0.474	61	Weighted Average
	0.473		99.79% Pervious Area
	0.001		0.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.0					**Direct Entry, vacant lot, grass, flat**

Subcatchment 3S: N vacant lot



Hydrograph for Subcatchment 3S: N vacant lot

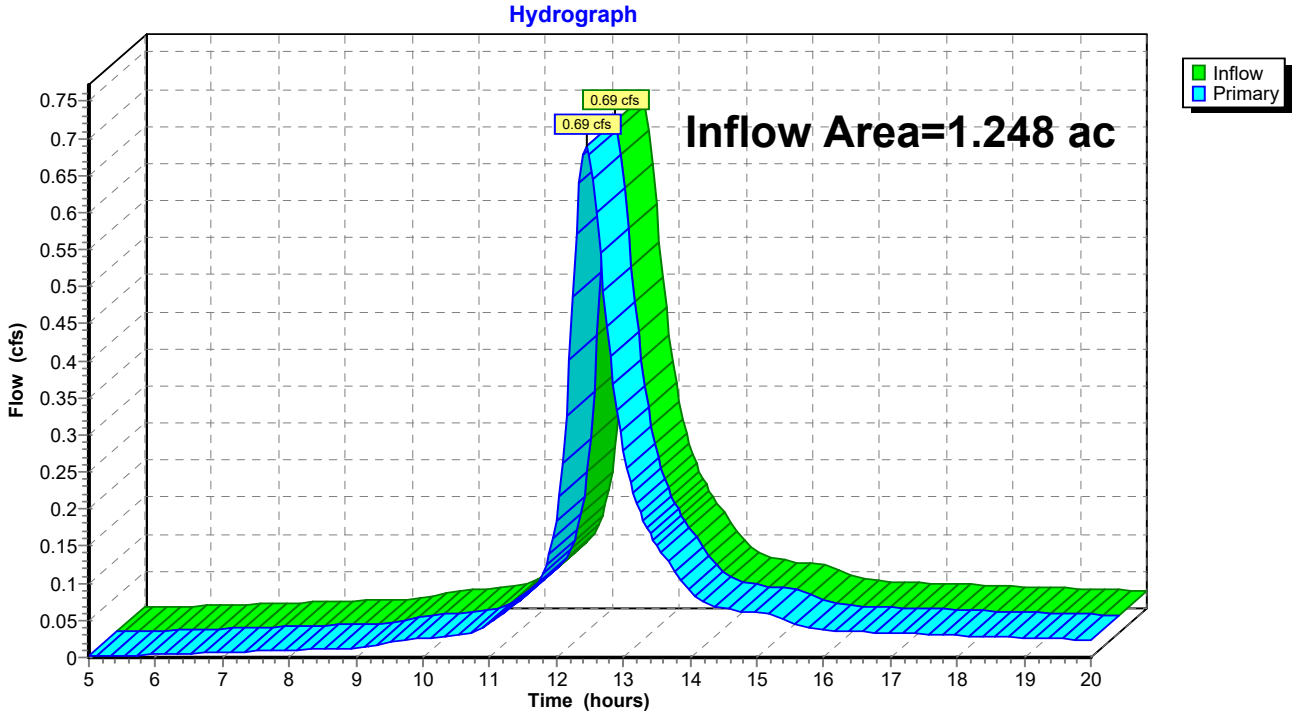
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.25	0.13	0.00	0.00
5.50	0.14	0.00	0.00
5.75	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.25	0.17	0.00	0.00
6.50	0.18	0.00	0.00
6.75	0.19	0.00	0.00
7.00	0.21	0.00	0.00
7.25	0.22	0.00	0.00
7.50	0.23	0.00	0.00
7.75	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.25	0.27	0.00	0.00
8.50	0.29	0.00	0.00
8.75	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.25	0.34	0.00	0.00
9.50	0.36	0.00	0.00
9.75	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.25	0.44	0.00	0.00
10.50	0.47	0.00	0.00
10.75	0.51	0.00	0.00
11.00	0.56	0.00	0.00
11.25	0.63	0.00	0.00
11.50	0.71	0.00	0.00
11.75	0.86	0.00	0.00
12.00	1.22	0.00	0.00
12.25	1.75	0.03	0.00
12.50	1.90	0.06	0.02
12.75	1.98	0.07	**0.03**
13.00	2.05	0.08	**0.03**
13.25	2.10	0.09	0.03
13.50	2.14	0.10	0.03
13.75	2.17	0.11	0.02
14.00	2.20	0.12	0.02
14.25	2.22	0.12	0.01
14.50	2.25	0.13	0.01
14.75	2.27	0.13	0.01
15.00	2.29	0.14	0.01
15.25	2.31	0.14	0.01
15.50	2.32	0.15	0.01
15.75	2.34	0.15	0.01
16.00	2.35	0.15	0.01
16.25	2.36	0.16	0.01
16.50	2.38	0.16	0.01
16.75	2.39	0.16	0.01
17.00	2.40	0.17	0.01
17.25	2.42	0.17	0.01
17.50	2.43	0.17	0.01
17.75	2.44	0.18	0.01
18.00	2.45	0.18	0.01
18.25	2.46	0.18	0.01
18.50	2.47	0.19	0.01
18.75	2.48	0.19	0.01
19.00	2.49	0.19	0.01
19.25	2.50	0.20	0.01
19.50	2.51	0.20	0.01
19.75	2.52	0.20	0.01
20.00	**2.53**	**0.20**	0.01

Summary for Link 4L: off-site city storm sewer

Inflow Area = 1.248 ac, 31.81% Impervious, Inflow Depth > 0.82" for 1-yr event
Inflow = 0.69 cfs @ 12.45 hrs, Volume= 0.085 af
Primary = 0.69 cfs @ 12.45 hrs, Volume= 0.085 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: off-site city storm sewer



Hydrograph for Link 4L: off-site city storm sewer

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.25	0.00	0.00	0.00
5.50	0.00	0.00	0.00
5.75	0.00	0.00	0.00
6.00	0.00	0.00	0.00
6.25	0.00	0.00	0.00
6.50	0.01	0.00	0.01
6.75	0.01	0.00	0.01
7.00	0.01	0.00	0.01
7.25	0.01	0.00	0.01
7.50	0.01	0.00	0.01
7.75	0.01	0.00	0.01
8.00	0.01	0.00	0.01
8.25	0.01	0.00	0.01
8.50	0.01	0.00	0.01
8.75	0.01	0.00	0.01
9.00	0.01	0.00	0.01
9.25	0.01	0.00	0.01
9.50	0.02	0.00	0.02
9.75	0.02	0.00	0.02
10.00	0.03	0.00	0.03
10.25	0.03	0.00	0.03
10.50	0.03	0.00	0.03
10.75	0.03	0.00	0.03
11.00	0.05	0.00	0.05
11.25	0.06	0.00	0.06
11.50	0.08	0.00	0.08
11.75	0.10	0.00	0.10
12.00	0.18	0.00	0.18
12.25	**0.49**	0.00	**0.49**
12.50	**0.68**	0.00	**0.68**
12.75	0.45	0.00	0.45
13.00	0.28	0.00	0.28
13.25	0.20	0.00	0.20
13.50	0.15	0.00	0.15
13.75	0.12	0.00	0.12
14.00	0.09	0.00	0.09
14.25	0.07	0.00	0.07
14.50	0.07	0.00	0.07
14.75	0.06	0.00	0.06
15.00	0.06	0.00	0.06
15.25	0.06	0.00	0.06
15.50	0.05	0.00	0.05
15.75	0.04	0.00	0.04
16.00	0.04	0.00	0.04
16.25	0.04	0.00	0.04
16.50	0.03	0.00	0.03
16.75	0.03	0.00	0.03
17.00	0.03	0.00	0.03
17.25	0.03	0.00	0.03
17.50	0.03	0.00	0.03
17.75	0.03	0.00	0.03
18.00	0.03	0.00	0.03
18.25	0.03	0.00	0.03
18.50	0.03	0.00	0.03
18.75	0.03	0.00	0.03
19.00	0.03	0.00	0.03
19.25	0.03	0.00	0.03
19.50	0.03	0.00	0.03
19.75	0.02	0.00	0.02
20.00	0.02	0.00	0.02

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: apt bldg + alley Runoff Area=0.416 ac 95.19% Impervious Runoff Depth>2.45"
Tc=32.0 min CN=96 Runoff=0.78 cfs 0.085 af

Subcatchment2S: E vacant lot Runoff Area=0.358 ac 0.00% Impervious Runoff Depth>0.32"
Tc=45.0 min CN=61 Runoff=0.05 cfs 0.010 af

Subcatchment3S: N vacant lot Runoff Area=0.474 ac 0.21% Impervious Runoff Depth>0.32"
Tc=45.0 min CN=61 Runoff=0.07 cfs 0.013 af

Link 4L: off-site city storm sewer Inflow=0.84 cfs 0.107 af
Primary=0.84 cfs 0.107 af

Total Runoff Area = 1.248 ac Runoff Volume = 0.107 af Average Runoff Depth = 1.03"
68.19% Pervious = 0.851 ac 31.81% Impervious = 0.397 ac

Summary for Subcatchment 1S: apt bldg + alley

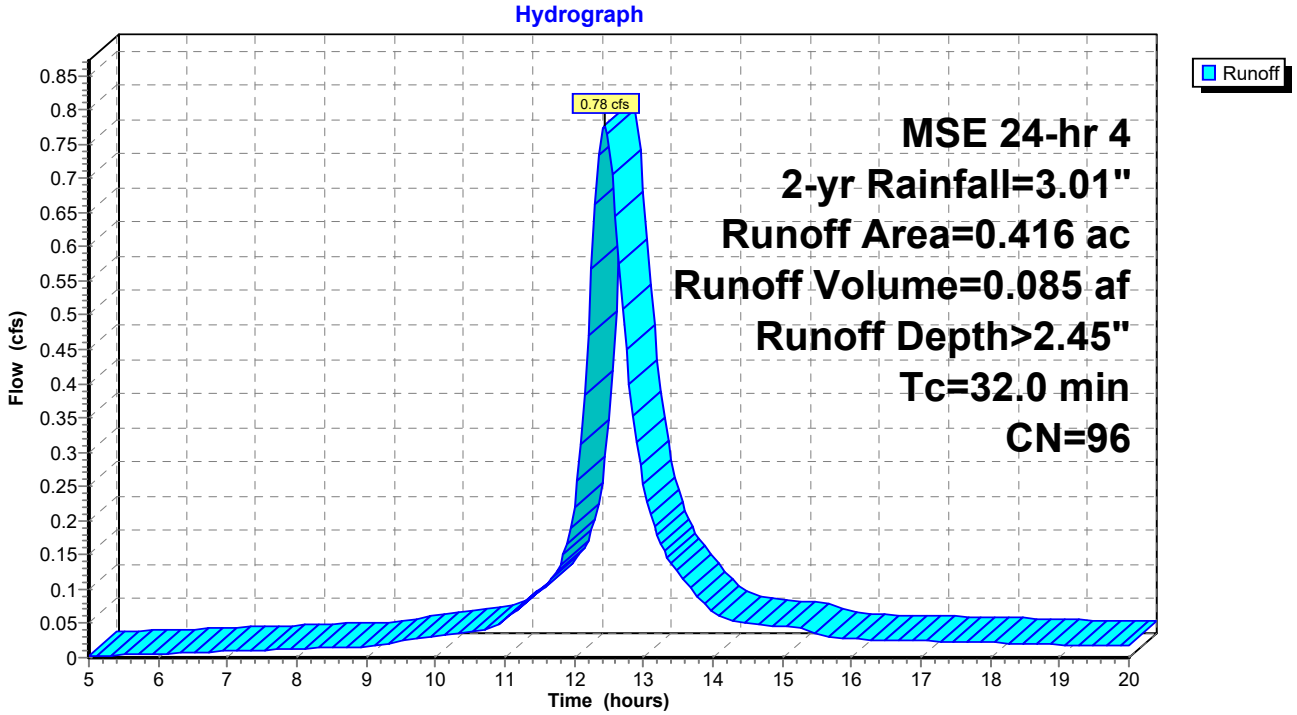
Runoff = 0.78 cfs @ 12.43 hrs, Volume= 0.085 af, Depth> 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.354	98	apt bldg roof
*	0.042	98	conc patios + slab
*	0.020	61	>75% Grass cover, Good, HSG B
	0.416	96	Weighted Average
	0.020		4.81% Pervious Area
	0.396		95.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, apt bldg roof**
5.0					**Direct Entry, patios + slab**
15.0					**Direct Entry, landscaping**
7.0					**Direct Entry, alley**
32.0	0	Total			

Subcatchment 1S: apt bldg + alley



Hydrograph for Subcatchment 1S: apt bldg + alley

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.01	0.00
5.25	0.15	0.01	0.00
5.50	0.16	0.01	0.00
5.75	0.17	0.02	0.00
6.00	0.19	0.02	0.01
6.25	0.20	0.02	0.01
6.50	0.21	0.03	0.01
6.75	0.22	0.04	0.01
7.00	0.24	0.04	0.01
7.25	0.25	0.05	0.01
7.50	0.27	0.06	0.01
7.75	0.28	0.06	0.01
8.00	0.30	0.07	0.01
8.25	0.31	0.08	0.01
8.50	0.33	0.09	0.01
8.75	0.35	0.10	0.02
9.00	0.36	0.11	0.02
9.25	0.39	0.13	0.02
9.50	0.42	0.15	0.02
9.75	0.45	0.17	0.03
10.00	0.48	0.19	0.03
10.25	0.51	0.21	0.03
10.50	0.54	0.24	0.04
10.75	0.59	0.28	0.04
11.00	0.65	0.33	0.06
11.25	0.73	0.39	0.08
11.50	0.82	0.47	0.10
11.75	0.99	0.62	0.13
12.00	1.41	1.01	0.22
12.25	2.02	1.60	**0.57**
12.50	2.19	1.76	**0.75**
12.75	2.28	1.85	0.45
13.00	2.36	1.92	0.25
13.25	2.42	1.98	0.17
13.50	2.47	2.03	0.12
13.75	2.50	2.06	0.09
14.00	2.53	2.09	0.07
14.25	2.56	2.12	0.06
14.50	2.59	2.15	0.05
14.75	2.62	2.18	0.05
15.00	2.65	2.20	0.05
15.25	2.66	2.22	0.04
15.50	2.68	2.24	0.03
15.75	2.70	2.25	0.03
16.00	2.71	2.27	0.03
16.25	2.73	2.28	0.03
16.50	2.74	2.30	0.03
16.75	2.76	2.31	0.03
17.00	2.77	2.33	0.02
17.25	2.79	2.34	0.02
17.50	2.80	2.35	0.02
17.75	2.81	2.37	0.02
18.00	2.82	2.38	0.02
18.25	2.84	2.39	0.02
18.50	2.85	2.40	0.02
18.75	2.86	2.42	0.02
19.00	2.87	2.43	0.02
19.25	2.88	2.44	0.02
19.50	2.89	2.45	0.02
19.75	2.90	2.46	0.02
20.00	**2.91**	**2.47**	0.02

Summary for Subcatchment 2S: E vacant lot

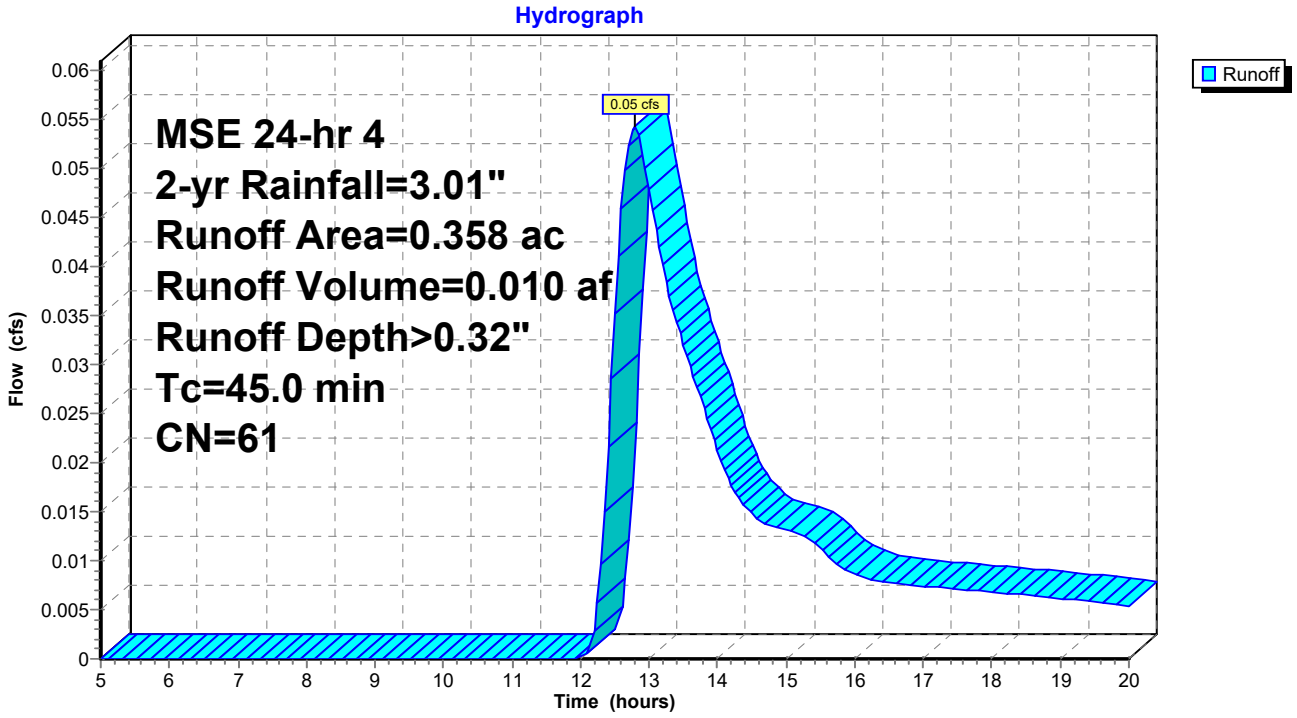
Runoff = 0.05 cfs @ 12.79 hrs, Volume= 0.010 af, Depth> 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.358	61	vacant lot, landscaped, HSG B
	0.358		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.0					**Direct Entry, vacant lot, grass, flat**

Subcatchment 2S: E vacant lot



Hydrograph for Subcatchment 2S: E vacant lot

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.25	0.15	0.00	0.00
5.50	0.16	0.00	0.00
5.75	0.17	0.00	0.00
6.00	0.19	0.00	0.00
6.25	0.20	0.00	0.00
6.50	0.21	0.00	0.00
6.75	0.22	0.00	0.00
7.00	0.24	0.00	0.00
7.25	0.25	0.00	0.00
7.50	0.27	0.00	0.00
7.75	0.28	0.00	0.00
8.00	0.30	0.00	0.00
8.25	0.31	0.00	0.00
8.50	0.33	0.00	0.00
8.75	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.25	0.39	0.00	0.00
9.50	0.42	0.00	0.00
9.75	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.25	0.51	0.00	0.00
10.50	0.54	0.00	0.00
10.75	0.59	0.00	0.00
11.00	0.65	0.00	0.00
11.25	0.73	0.00	0.00
11.50	0.82	0.00	0.00
11.75	0.99	0.00	0.00
12.00	1.41	0.00	0.00
12.25	2.02	0.08	0.01
12.50	2.19	0.11	0.04
12.75	2.28	0.14	**0.05**
13.00	2.36	0.16	**0.05**
13.25	2.42	0.17	0.04
13.50	2.47	0.19	0.03
13.75	2.50	0.20	0.03
14.00	2.53	0.21	0.02
14.25	2.56	0.21	0.02
14.50	2.59	0.22	0.01
14.75	2.62	0.23	0.01
15.00	2.65	0.24	0.01
15.25	2.66	0.25	0.01
15.50	2.68	0.25	0.01
15.75	2.70	0.26	0.01
16.00	2.71	0.26	0.01
16.25	2.73	0.27	0.01
16.50	2.74	0.27	0.01
16.75	2.76	0.28	0.01
17.00	2.77	0.28	0.01
17.25	2.79	0.29	0.01
17.50	2.80	0.29	0.01
17.75	2.81	0.30	0.01
18.00	2.82	0.30	0.01
18.25	2.84	0.31	0.01
18.50	2.85	0.31	0.01
18.75	2.86	0.31	0.01
19.00	2.87	0.32	0.01
19.25	2.88	0.32	0.01
19.50	2.89	0.33	0.01
19.75	2.90	0.33	0.01
20.00	**2.91**	**0.33**	0.01

Summary for Subcatchment 3S: N vacant lot

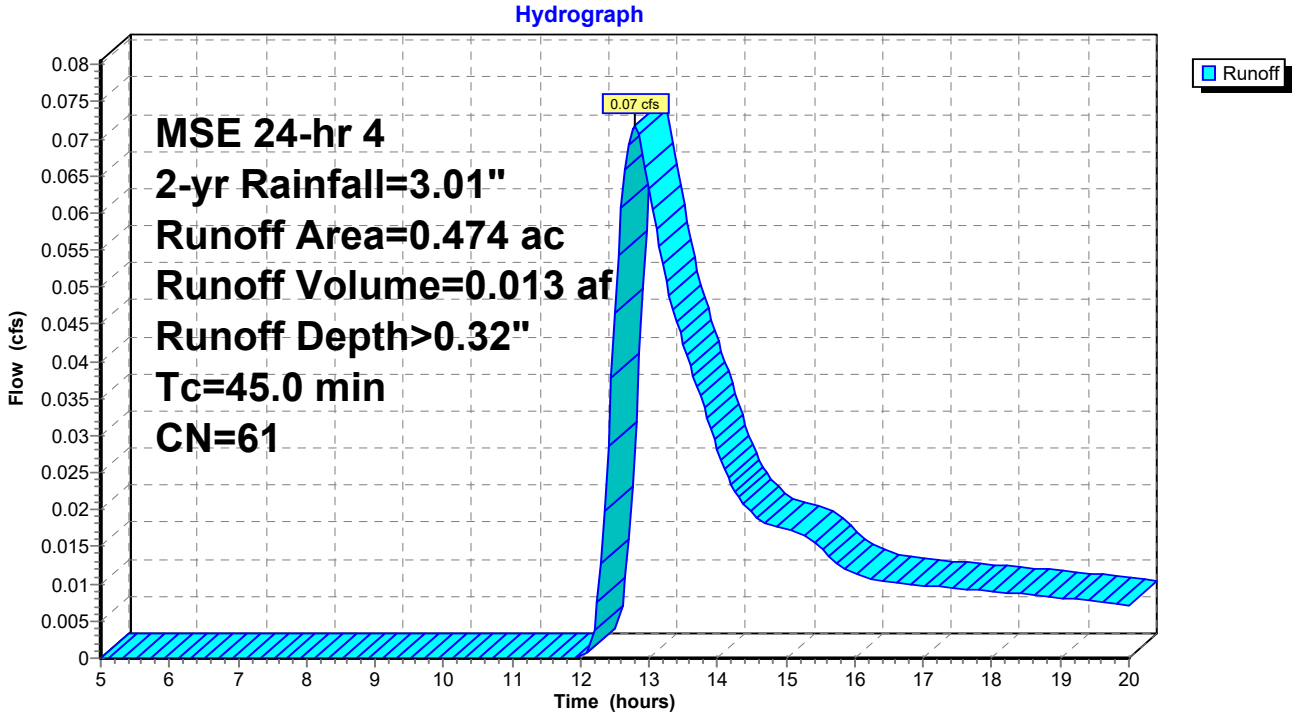
Runoff = 0.07 cfs @ 12.79 hrs, Volume= 0.013 af, Depth> 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.001	98	conc apron + shed
*	0.473	61	vacant lot, landscaped, HSG B
	0.474	61	Weighted Average
	0.473		99.79% Pervious Area
	0.001		0.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.0					**Direct Entry, vacant lot, grass, flat**

Subcatchment 3S: N vacant lot



Hydrograph for Subcatchment 3S: N vacant lot

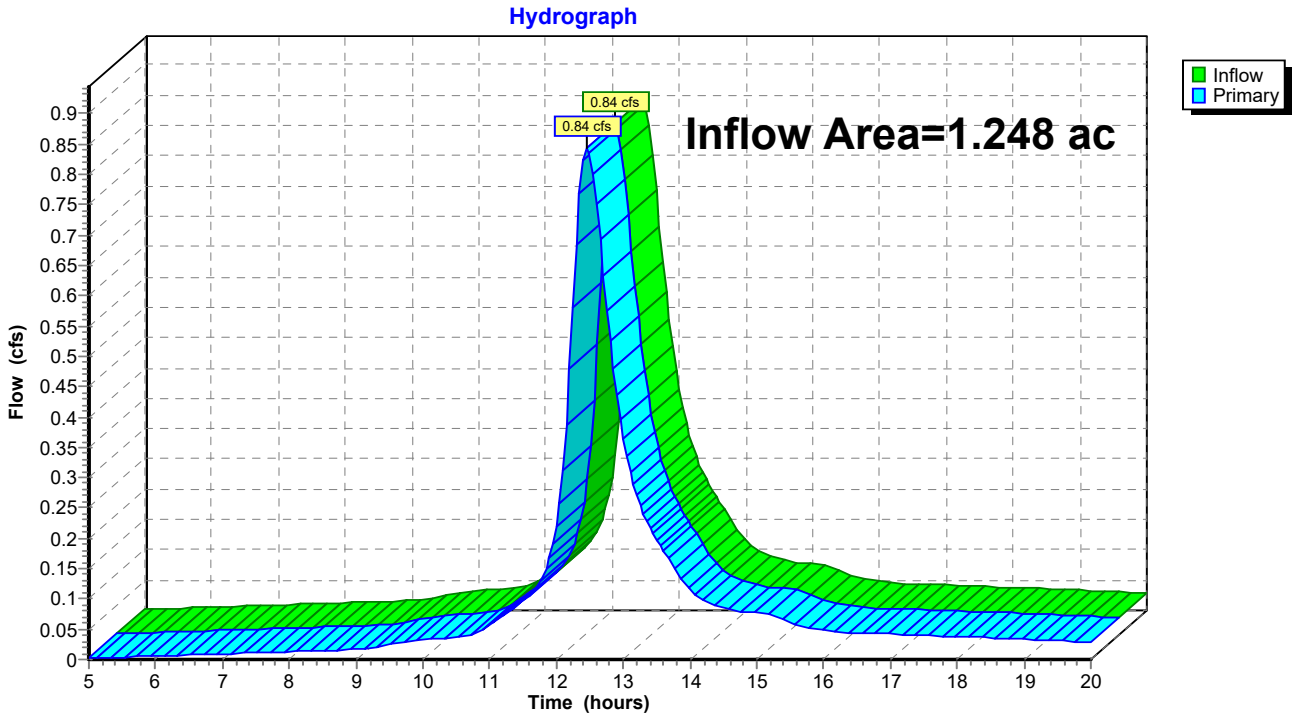
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.25	0.15	0.00	0.00
5.50	0.16	0.00	0.00
5.75	0.17	0.00	0.00
6.00	0.19	0.00	0.00
6.25	0.20	0.00	0.00
6.50	0.21	0.00	0.00
6.75	0.22	0.00	0.00
7.00	0.24	0.00	0.00
7.25	0.25	0.00	0.00
7.50	0.27	0.00	0.00
7.75	0.28	0.00	0.00
8.00	0.30	0.00	0.00
8.25	0.31	0.00	0.00
8.50	0.33	0.00	0.00
8.75	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.25	0.39	0.00	0.00
9.50	0.42	0.00	0.00
9.75	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.25	0.51	0.00	0.00
10.50	0.54	0.00	0.00
10.75	0.59	0.00	0.00
11.00	0.65	0.00	0.00
11.25	0.73	0.00	0.00
11.50	0.82	0.00	0.00
11.75	0.99	0.00	0.00
12.00	1.41	0.00	0.00
12.25	2.02	0.08	0.01
12.50	2.19	0.11	0.05
12.75	2.28	0.14	**0.07**
13.00	2.36	0.16	**0.06**
13.25	2.42	0.17	0.05
13.50	2.47	0.19	0.04
13.75	2.50	0.20	0.04
14.00	2.53	0.21	0.03
14.25	2.56	0.21	0.02
14.50	2.59	0.22	0.02
14.75	2.62	0.23	0.02
15.00	2.65	0.24	0.02
15.25	2.66	0.25	0.02
15.50	2.68	0.25	0.01
15.75	2.70	0.26	0.01
16.00	2.71	0.26	0.01
16.25	2.73	0.27	0.01
16.50	2.74	0.27	0.01
16.75	2.76	0.28	0.01
17.00	2.77	0.28	0.01
17.25	2.79	0.29	0.01
17.50	2.80	0.29	0.01
17.75	2.81	0.30	0.01
18.00	2.82	0.30	0.01
18.25	2.84	0.31	0.01
18.50	2.85	0.31	0.01
18.75	2.86	0.31	0.01
19.00	2.87	0.32	0.01
19.25	2.88	0.32	0.01
19.50	2.89	0.33	0.01
19.75	2.90	0.33	0.01
20.00	**2.91**	**0.33**	0.01

Summary for Link 4L: off-site city storm sewer

Inflow Area = 1.248 ac, 31.81% Impervious, Inflow Depth > 1.03" for 2-yr event
Inflow = 0.84 cfs @ 12.46 hrs, Volume= 0.107 af
Primary = 0.84 cfs @ 12.46 hrs, Volume= 0.107 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: off-site city storm sewer



Hydrograph for Link 4L: off-site city storm sewer

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.25	0.00	0.00	0.00
5.50	0.00	0.00	0.00
5.75	0.00	0.00	0.00
6.00	0.01	0.00	0.01
6.25	0.01	0.00	0.01
6.50	0.01	0.00	0.01
6.75	0.01	0.00	0.01
7.00	0.01	0.00	0.01
7.25	0.01	0.00	0.01
7.50	0.01	0.00	0.01
7.75	0.01	0.00	0.01
8.00	0.01	0.00	0.01
8.25	0.01	0.00	0.01
8.50	0.01	0.00	0.01
8.75	0.02	0.00	0.02
9.00	0.02	0.00	0.02
9.25	0.02	0.00	0.02
9.50	0.02	0.00	0.02
9.75	0.03	0.00	0.03
10.00	0.03	0.00	0.03
10.25	0.03	0.00	0.03
10.50	0.04	0.00	0.04
10.75	0.04	0.00	0.04
11.00	0.06	0.00	0.06
11.25	0.08	0.00	0.08
11.50	0.10	0.00	0.10
11.75	0.13	0.00	0.13
12.00	0.22	0.00	0.22
12.25	**0.58**	0.00	**0.58**
12.50	**0.83**	0.00	**0.83**
12.75	0.58	0.00	0.58
13.00	0.36	0.00	0.36
13.25	0.26	0.00	0.26
13.50	0.20	0.00	0.20
13.75	0.16	0.00	0.16
14.00	0.12	0.00	0.12
14.25	0.09	0.00	0.09
14.50	0.08	0.00	0.08
14.75	0.08	0.00	0.08
15.00	0.08	0.00	0.08
15.25	0.07	0.00	0.07
15.50	0.06	0.00	0.06
15.75	0.05	0.00	0.05
16.00	0.05	0.00	0.05
16.25	0.05	0.00	0.05
16.50	0.04	0.00	0.04
16.75	0.04	0.00	0.04
17.00	0.04	0.00	0.04
17.25	0.04	0.00	0.04
17.50	0.04	0.00	0.04
17.75	0.04	0.00	0.04
18.00	0.04	0.00	0.04
18.25	0.04	0.00	0.04
18.50	0.04	0.00	0.04
18.75	0.03	0.00	0.03
19.00	0.03	0.00	0.03
19.25	0.03	0.00	0.03
19.50	0.03	0.00	0.03
19.75	0.03	0.00	0.03
20.00	0.03	0.00	0.03

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: apt bldg + alley Runoff Area=0.416 ac 95.19% Impervious Runoff Depth>3.81"
Tc=32.0 min CN=96 Runoff=1.19 cfs 0.132 af

Subcatchment2S: E vacant lot Runoff Area=0.358 ac 0.00% Impervious Runoff Depth>0.96"
Tc=45.0 min CN=61 Runoff=0.21 cfs 0.029 af

Subcatchment3S: N vacant lot Runoff Area=0.474 ac 0.21% Impervious Runoff Depth>0.96"
Tc=45.0 min CN=61 Runoff=0.28 cfs 0.038 af

Link 4L: off-site city storm sewer Inflow=1.55 cfs 0.198 af
Primary=1.55 cfs 0.198 af

Total Runoff Area = 1.248 ac Runoff Volume = 0.198 af Average Runoff Depth = 1.91"
68.19% Pervious = 0.851 ac 31.81% Impervious = 0.397 ac

Summary for Subcatchment 1S: apt bldg + alley

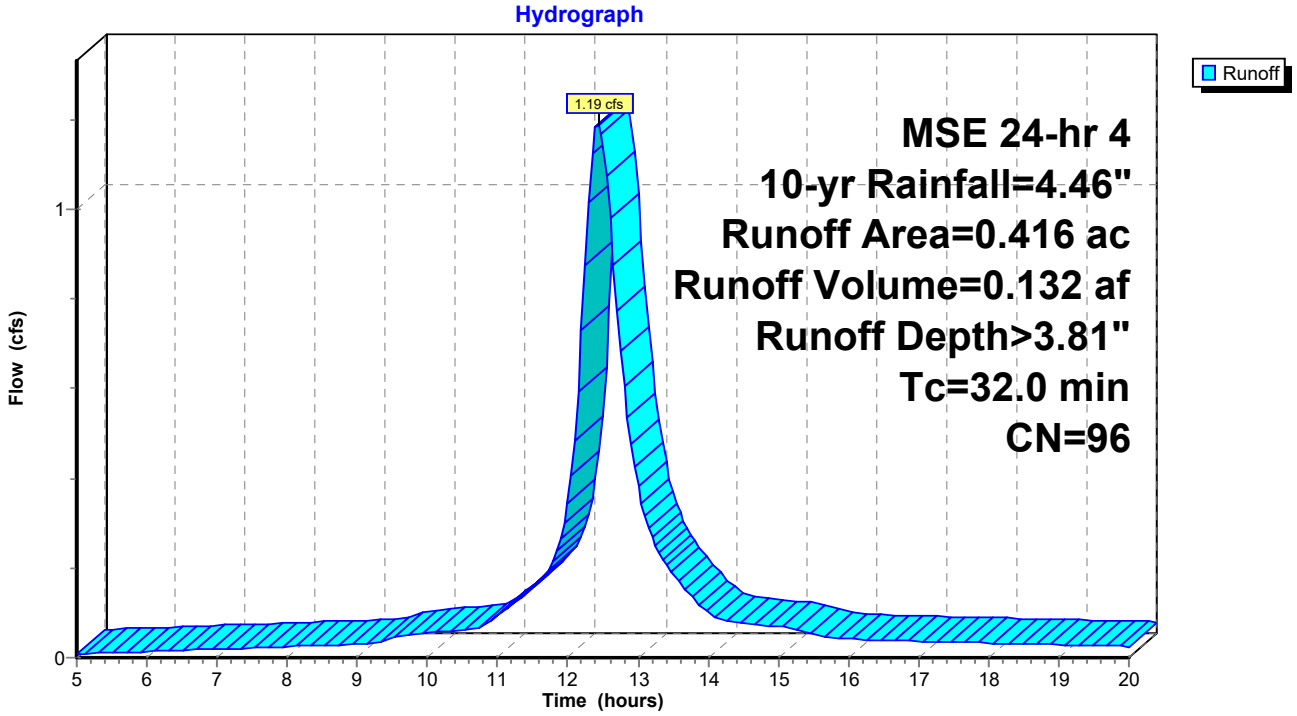
Runoff = 1.19 cfs @ 12.43 hrs, Volume= 0.132 af, Depth> 3.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.354	98	apt bldg roof
*	0.042	98	conc patios + slab
*	0.020	61	>75% Grass cover, Good, HSG B
	0.416	96	Weighted Average
	0.020		4.81% Pervious Area
	0.396		95.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, apt bldg roof**
5.0					**Direct Entry, patios + slab**
15.0					**Direct Entry, landscaping**
7.0					**Direct Entry, alley**
32.0	0	Total			

Subcatchment 1S: apt bldg + alley



Hydrograph for Subcatchment 1S: apt bldg + alley

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.03	0.01
5.25	0.22	0.03	0.01
5.50	0.24	0.04	0.01
5.75	0.26	0.05	0.01
6.00	0.27	0.06	0.01
6.25	0.29	0.07	0.02
6.50	0.31	0.08	0.02
6.75	0.33	0.09	0.02
7.00	0.35	0.11	0.02
7.25	0.37	0.12	0.02
7.50	0.40	0.13	0.02
7.75	0.42	0.15	0.02
8.00	0.44	0.17	0.03
8.25	0.47	0.18	0.03
8.50	0.49	0.20	0.03
8.75	0.51	0.22	0.03
9.00	0.54	0.24	0.03
9.25	0.58	0.27	0.03
9.50	0.62	0.30	0.04
9.75	0.66	0.34	0.05
10.00	0.71	0.37	0.06
10.25	0.75	0.41	0.06
10.50	0.80	0.45	0.06
10.75	0.87	0.52	0.07
11.00	0.96	0.60	0.09
11.25	1.08	0.70	0.12
11.50	1.21	0.82	0.16
11.75	1.46	1.06	0.20
12.00	2.09	1.66	0.34
12.25	3.00	2.55	**0.87**
12.50	3.25	2.80	**1.15**
12.75	3.38	2.93	0.68
13.00	3.50	3.04	0.38
13.25	3.59	3.13	0.25
13.50	3.66	3.21	0.19
13.75	3.71	3.25	0.14
14.00	3.75	3.30	0.10
14.25	3.80	3.34	0.08
14.50	3.84	3.38	0.08
14.75	3.88	3.42	0.07
15.00	3.92	3.46	0.07
15.25	3.95	3.49	0.06
15.50	3.97	3.51	0.05
15.75	3.99	3.53	0.04
16.00	4.02	3.56	0.04
16.25	4.04	3.58	0.04
16.50	4.06	3.60	0.04
16.75	4.09	3.62	0.04
17.00	4.11	3.65	0.04
17.25	4.13	3.67	0.04
17.50	4.15	3.69	0.03
17.75	4.17	3.71	0.03
18.00	4.19	3.72	0.03
18.25	4.20	3.74	0.03
18.50	4.22	3.76	0.03
18.75	4.24	3.78	0.03
19.00	4.26	3.79	0.03
19.25	4.27	3.81	0.03
19.50	4.29	3.82	0.03
19.75	4.30	3.84	0.03
20.00	**4.32**	**3.85**	0.02

Summary for Subcatchment 2S: E vacant lot

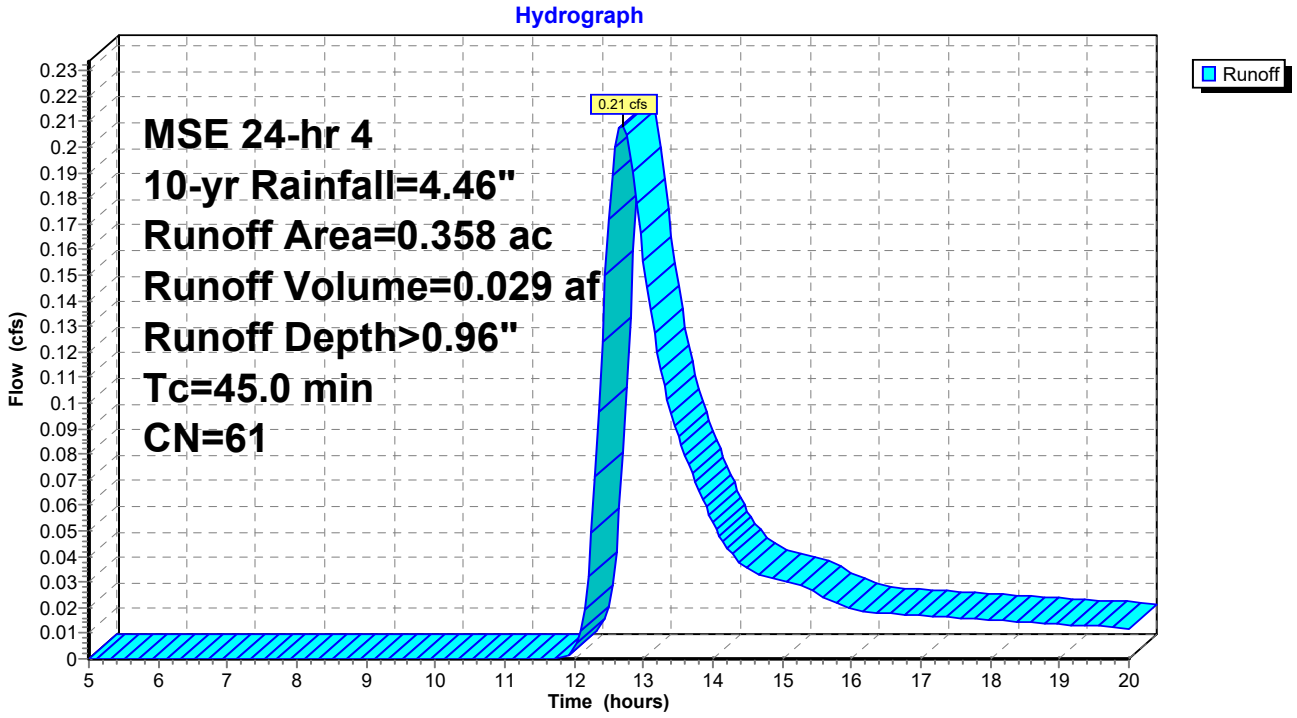
Runoff = 0.21 cfs @ 12.69 hrs, Volume= 0.029 af, Depth> 0.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.358	61	vacant lot, landscaped, HSG B
	0.358		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.0					**Direct Entry, vacant lot, grass, flat**

Subcatchment 2S: E vacant lot



Hydrograph for Subcatchment 2S: E vacant lot

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.24	0.00	0.00
5.75	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.25	0.29	0.00	0.00
6.50	0.31	0.00	0.00
6.75	0.33	0.00	0.00
7.00	0.35	0.00	0.00
7.25	0.37	0.00	0.00
7.50	0.40	0.00	0.00
7.75	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.25	0.47	0.00	0.00
8.50	0.49	0.00	0.00
8.75	0.51	0.00	0.00
9.00	0.54	0.00	0.00
9.25	0.58	0.00	0.00
9.50	0.62	0.00	0.00
9.75	0.66	0.00	0.00
10.00	0.71	0.00	0.00
10.25	0.75	0.00	0.00
10.50	0.80	0.00	0.00
10.75	0.87	0.00	0.00
11.00	0.96	0.00	0.00
11.25	1.08	0.00	0.00
11.50	1.21	0.00	0.00
11.75	1.46	0.01	0.00
12.00	2.09	0.09	0.00
12.25	3.00	0.36	0.05
12.50	3.25	0.46	**0.17**
12.75	3.38	0.52	**0.21**
13.00	3.50	0.57	0.16
13.25	3.59	0.61	0.11
13.50	3.66	0.65	0.09
13.75	3.71	0.67	0.07
14.00	3.75	0.69	0.05
14.25	3.80	0.71	0.04
14.50	3.84	0.73	0.04
14.75	3.88	0.75	0.03
15.00	3.92	0.77	0.03
15.25	3.95	0.79	0.03
15.50	3.97	0.80	0.03
15.75	3.99	0.81	0.02
16.00	4.02	0.82	0.02
16.25	4.04	0.83	0.02
16.50	4.06	0.85	0.02
16.75	4.09	0.86	0.02
17.00	4.11	0.87	0.02
17.25	4.13	0.88	0.02
17.50	4.15	0.89	0.02
17.75	4.17	0.90	0.02
18.00	4.19	0.91	0.02
18.25	4.20	0.92	0.01
18.50	4.22	0.93	0.01
18.75	4.24	0.94	0.01
19.00	4.26	0.95	0.01
19.25	4.27	0.95	0.01
19.50	4.29	0.96	0.01
19.75	4.30	0.97	0.01
20.00	**4.32**	**0.98**	0.01

Summary for Subcatchment 3S: N vacant lot

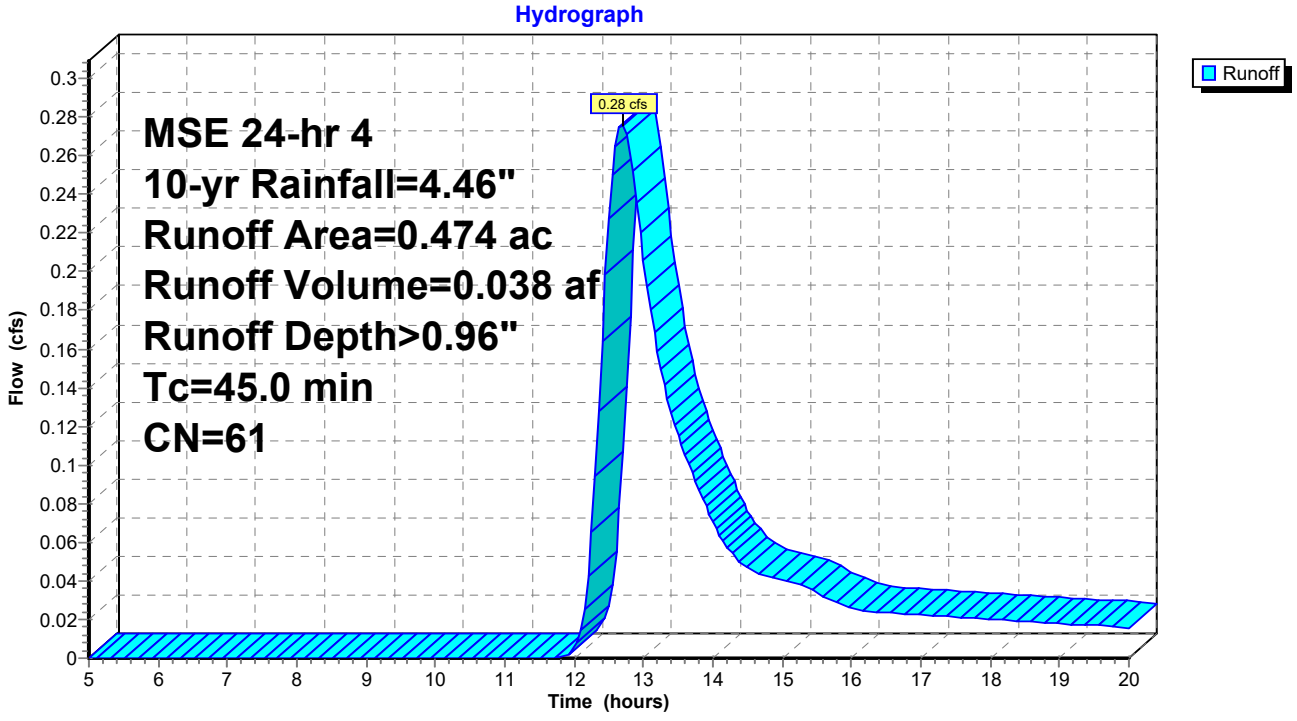
Runoff = 0.28 cfs @ 12.69 hrs, Volume= 0.038 af, Depth> 0.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.001	98	conc apron + shed
*	0.473	61	vacant lot, landscaped, HSG B
	0.474	61	Weighted Average
	0.473		99.79% Pervious Area
	0.001		0.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.0					**Direct Entry, vacant lot, grass, flat**

Subcatchment 3S: N vacant lot



Hydrograph for Subcatchment 3S: N vacant lot

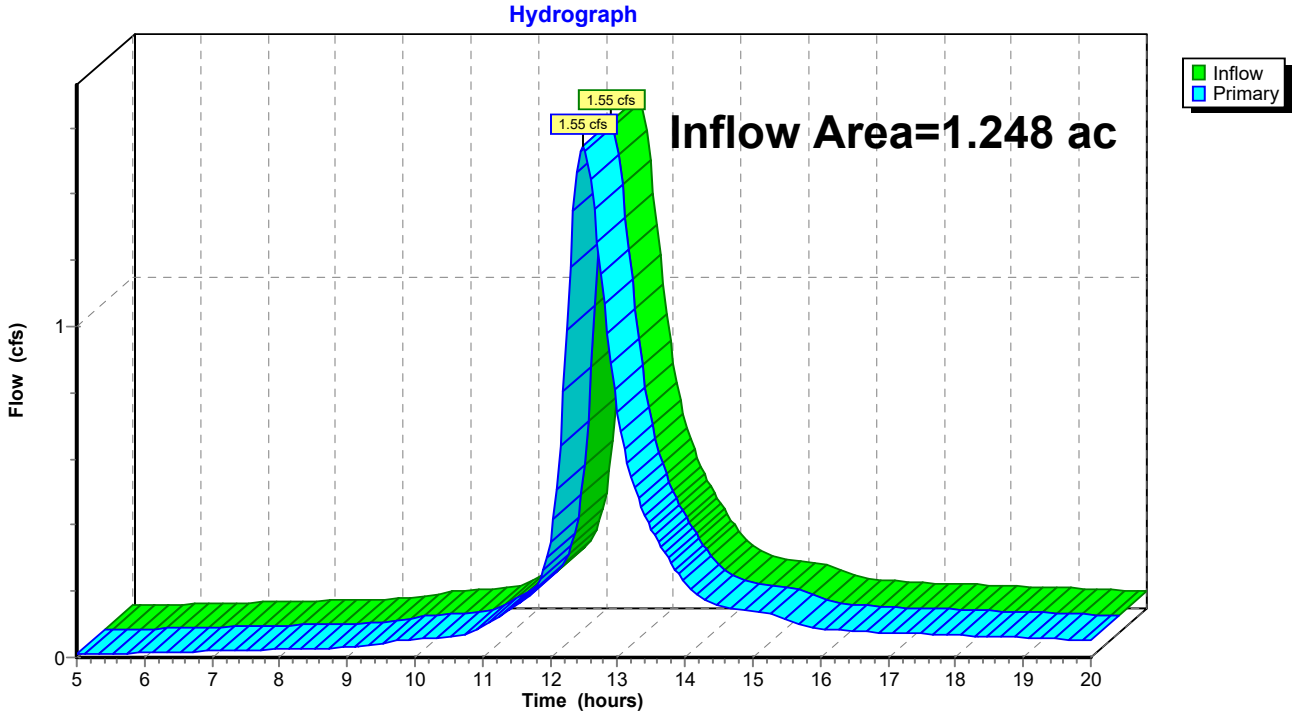
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.24	0.00	0.00
5.75	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.25	0.29	0.00	0.00
6.50	0.31	0.00	0.00
6.75	0.33	0.00	0.00
7.00	0.35	0.00	0.00
7.25	0.37	0.00	0.00
7.50	0.40	0.00	0.00
7.75	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.25	0.47	0.00	0.00
8.50	0.49	0.00	0.00
8.75	0.51	0.00	0.00
9.00	0.54	0.00	0.00
9.25	0.58	0.00	0.00
9.50	0.62	0.00	0.00
9.75	0.66	0.00	0.00
10.00	0.71	0.00	0.00
10.25	0.75	0.00	0.00
10.50	0.80	0.00	0.00
10.75	0.87	0.00	0.00
11.00	0.96	0.00	0.00
11.25	1.08	0.00	0.00
11.50	1.21	0.00	0.00
11.75	1.46	0.01	0.00
12.00	2.09	0.09	0.00
12.25	3.00	0.36	0.07
12.50	3.25	0.46	**0.23**
12.75	3.38	0.52	**0.27**
13.00	3.50	0.57	0.21
13.25	3.59	0.61	0.15
13.50	3.66	0.65	0.12
13.75	3.71	0.67	0.09
14.00	3.75	0.69	0.07
14.25	3.80	0.71	0.06
14.50	3.84	0.73	0.05
14.75	3.88	0.75	0.04
15.00	3.92	0.77	0.04
15.25	3.95	0.79	0.04
15.50	3.97	0.80	0.03
15.75	3.99	0.81	0.03
16.00	4.02	0.82	0.03
16.25	4.04	0.83	0.02
16.50	4.06	0.85	0.02
16.75	4.09	0.86	0.02
17.00	4.11	0.87	0.02
17.25	4.13	0.88	0.02
17.50	4.15	0.89	0.02
17.75	4.17	0.90	0.02
18.00	4.19	0.91	0.02
18.25	4.20	0.92	0.02
18.50	4.22	0.93	0.02
18.75	4.24	0.94	0.02
19.00	4.26	0.95	0.02
19.25	4.27	0.95	0.02
19.50	4.29	0.96	0.02
19.75	4.30	0.97	0.02
20.00	**4.32**	**0.98**	0.02

Summary for Link 4L: off-site city storm sewer

Inflow Area = 1.248 ac, 31.81% Impervious, Inflow Depth > 1.91" for 10-yr event
Inflow = 1.55 cfs @ 12.49 hrs, Volume= 0.198 af
Primary = 1.55 cfs @ 12.49 hrs, Volume= 0.198 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: off-site city storm sewer



Hydrograph for Link 4L: off-site city storm sewer

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.01	**0.00**	0.01
5.25	0.01	0.00	0.01
5.50	0.01	0.00	0.01
5.75	0.01	0.00	0.01
6.00	0.01	0.00	0.01
6.25	0.02	0.00	0.02
6.50	0.02	0.00	0.02
6.75	0.02	0.00	0.02
7.00	0.02	0.00	0.02
7.25	0.02	0.00	0.02
7.50	0.02	0.00	0.02
7.75	0.02	0.00	0.02
8.00	0.03	0.00	0.03
8.25	0.03	0.00	0.03
8.50	0.03	0.00	0.03
8.75	0.03	0.00	0.03
9.00	0.03	0.00	0.03
9.25	0.03	0.00	0.03
9.50	0.04	0.00	0.04
9.75	0.05	0.00	0.05
10.00	0.06	0.00	0.06
10.25	0.06	0.00	0.06
10.50	0.06	0.00	0.06
10.75	0.07	0.00	0.07
11.00	0.09	0.00	0.09
11.25	0.12	0.00	0.12
11.50	0.16	0.00	0.16
11.75	0.20	0.00	0.20
12.00	0.35	0.00	0.35
12.25	0.99	0.00	0.99
12.50	**1.54**	0.00	**1.54**
12.75	1.16	0.00	1.16
13.00	0.74	0.00	0.74
13.25	0.51	0.00	0.51
13.50	0.39	0.00	0.39
13.75	0.30	0.00	0.30
14.00	0.22	0.00	0.22
14.25	0.18	0.00	0.18
14.50	0.16	0.00	0.16
14.75	0.15	0.00	0.15
15.00	0.14	0.00	0.14
15.25	0.13	0.00	0.13
15.50	0.11	0.00	0.11
15.75	0.10	0.00	0.10
16.00	0.09	0.00	0.09
16.25	0.08	0.00	0.08
16.50	0.08	0.00	0.08
16.75	0.08	0.00	0.08
17.00	0.08	0.00	0.08
17.25	0.07	0.00	0.07
17.50	0.07	0.00	0.07
17.75	0.07	0.00	0.07
18.00	0.07	0.00	0.07
18.25	0.07	0.00	0.07
18.50	0.06	0.00	0.06
18.75	0.06	0.00	0.06
19.00	0.06	0.00	0.06
19.25	0.06	0.00	0.06
19.50	0.06	0.00	0.06
19.75	0.05	0.00	0.05
20.00	0.05	0.00	0.05

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: apt bldg + alley Runoff Area=0.416 ac 95.19% Impervious Runoff Depth>4.84"
Tc=32.0 min CN=96 Runoff=1.49 cfs 0.168 af

Subcatchment2S: E vacant lot Runoff Area=0.358 ac 0.00% Impervious Runoff Depth>1.57"
Tc=45.0 min CN=61 Runoff=0.37 cfs 0.047 af

Subcatchment3S: N vacant lot Runoff Area=0.474 ac 0.21% Impervious Runoff Depth>1.57"
Tc=45.0 min CN=61 Runoff=0.48 cfs 0.062 af

Link 4L: off-site city storm sewer Inflow=2.18 cfs 0.277 af
Primary=2.18 cfs 0.277 af

Total Runoff Area = 1.248 ac Runoff Volume = 0.277 af Average Runoff Depth = 2.66"
68.19% Pervious = 0.851 ac 31.81% Impervious = 0.397 ac

Summary for Subcatchment 1S: apt bldg + alley

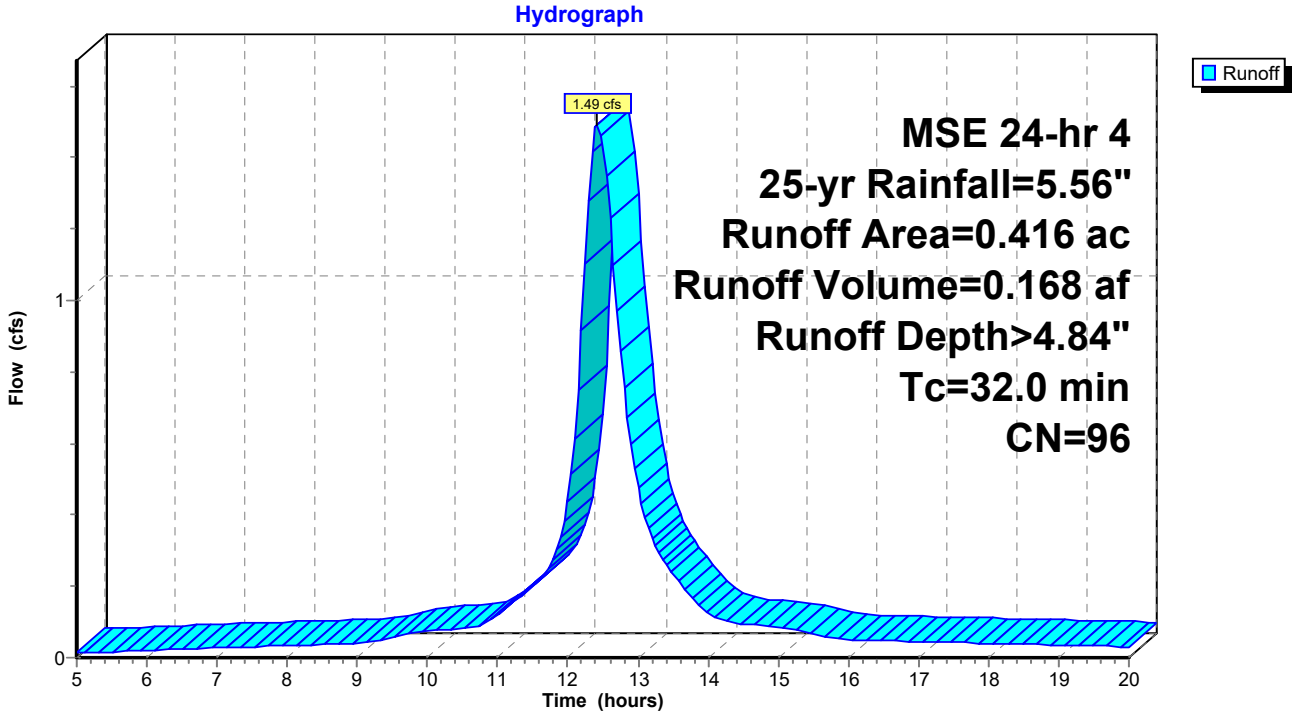
Runoff = 1.49 cfs @ 12.43 hrs, Volume= 0.168 af, Depth> 4.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.354	98	apt bldg roof
*	0.042	98	conc patios + slab
*	0.020	61	>75% Grass cover, Good, HSG B
	0.416	96	Weighted Average
	0.020		4.81% Pervious Area
	0.396		95.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, apt bldg roof**
5.0					**Direct Entry, patios + slab**
15.0					**Direct Entry, landscaping**
7.0					**Direct Entry, alley**
32.0	0	Total			

Subcatchment 1S: apt bldg + alley



Hydrograph for Subcatchment 1S: apt bldg + alley

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.05	0.01
5.25	0.28	0.06	0.02
5.50	0.30	0.07	0.02
5.75	0.32	0.09	0.02
6.00	0.34	0.10	0.02
6.25	0.37	0.11	0.02
6.50	0.39	0.13	0.02
6.75	0.41	0.15	0.03
7.00	0.44	0.16	0.03
7.25	0.47	0.18	0.03
7.50	0.49	0.20	0.03
7.75	0.52	0.22	0.03
8.00	0.55	0.25	0.03
8.25	0.58	0.27	0.04
8.50	0.61	0.29	0.04
8.75	0.64	0.32	0.04
9.00	0.67	0.35	0.04
9.25	0.72	0.39	0.05
9.50	0.77	0.43	0.06
9.75	0.83	0.48	0.07
10.00	0.88	0.52	0.07
10.25	0.94	0.57	0.08
10.50	0.99	0.63	0.08
10.75	1.09	0.71	0.09
11.00	1.20	0.82	0.12
11.25	1.34	0.95	0.16
11.50	1.51	1.10	0.20
11.75	1.82	1.40	0.26
12.00	2.61	2.16	0.44
12.25	3.74	3.28	**1.10**
12.50	4.05	3.59	**1.44**
12.75	4.22	3.75	0.86
13.00	4.36	3.89	0.48
13.25	4.47	4.01	0.31
13.50	4.57	4.10	0.23
13.75	4.62	4.16	0.17
14.00	4.68	4.21	0.13
14.25	4.73	4.27	0.10
14.50	4.79	4.32	0.09
14.75	4.84	4.37	0.09
15.00	4.89	4.42	0.09
15.25	4.92	4.45	0.08
15.50	4.95	4.48	0.07
15.75	4.98	4.51	0.06
16.00	5.01	4.54	0.05
16.25	5.04	4.57	0.05
16.50	5.07	4.60	0.05
16.75	5.09	4.63	0.05
17.00	5.12	4.65	0.05
17.25	5.15	4.68	0.04
17.50	5.17	4.70	0.04
17.75	5.19	4.73	0.04
18.00	5.22	4.75	0.04
18.25	5.24	4.77	0.04
18.50	5.26	4.79	0.04
18.75	5.28	4.82	0.04
19.00	5.30	4.84	0.04
19.25	5.32	4.86	0.03
19.50	5.34	4.87	0.03
19.75	5.36	4.89	0.03
20.00	**5.38**	**4.91**	0.03

Summary for Subcatchment 2S: E vacant lot

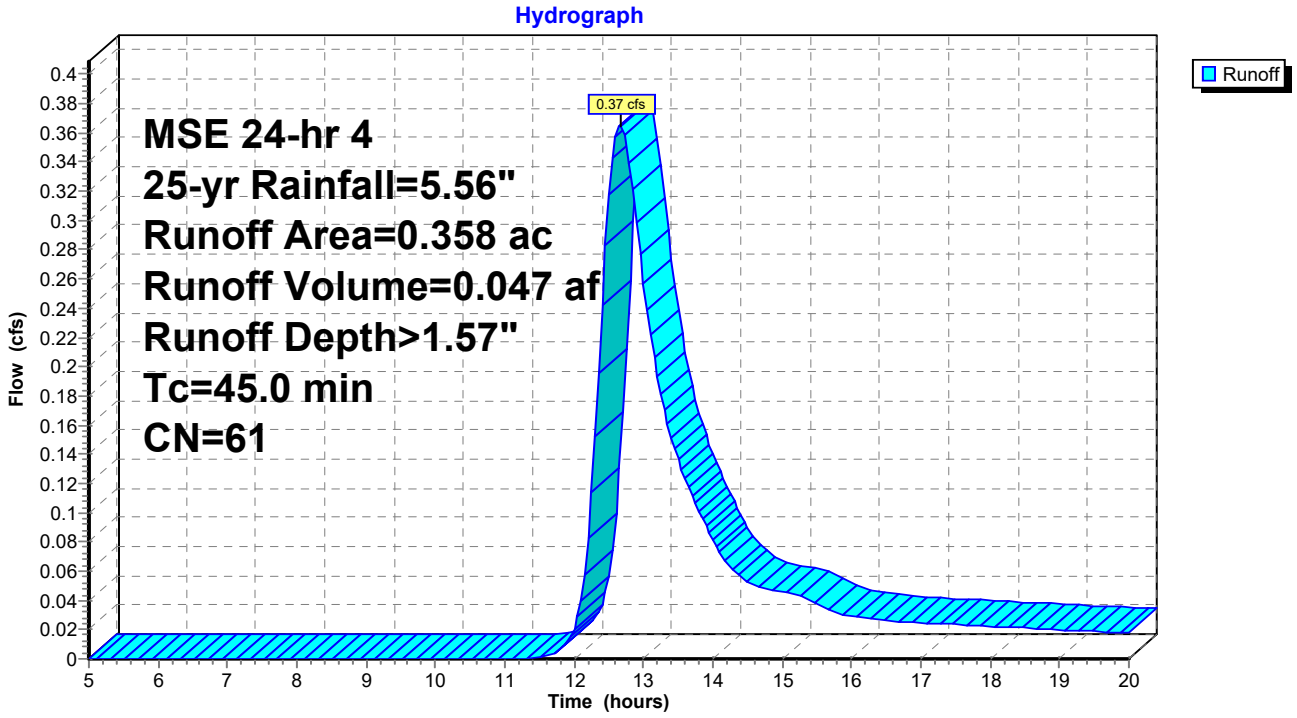
Runoff = 0.37 cfs @ 12.66 hrs, Volume= 0.047 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.358	61	vacant lot, landscaped, HSG B
	0.358		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.0					**Direct Entry, vacant lot, grass, flat**

Subcatchment 2S: E vacant lot



Hydrograph for Subcatchment 2S: E vacant lot

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.37	0.00	0.00
6.50	0.39	0.00	0.00
6.75	0.41	0.00	0.00
7.00	0.44	0.00	0.00
7.25	0.47	0.00	0.00
7.50	0.49	0.00	0.00
7.75	0.52	0.00	0.00
8.00	0.55	0.00	0.00
8.25	0.58	0.00	0.00
8.50	0.61	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.67	0.00	0.00
9.25	0.72	0.00	0.00
9.50	0.77	0.00	0.00
9.75	0.83	0.00	0.00
10.00	0.88	0.00	0.00
10.25	0.94	0.00	0.00
10.50	0.99	0.00	0.00
10.75	1.09	0.00	0.00
11.00	1.20	0.00	0.00
11.25	1.34	0.00	0.00
11.50	1.51	0.01	0.00
11.75	1.82	0.04	0.00
12.00	2.61	0.23	0.02
12.25	3.74	0.68	0.11
12.50	4.05	0.84	**0.32**
12.75	4.22	0.92	**0.35**
13.00	4.36	1.00	0.26
13.25	4.47	1.06	0.18
13.50	4.57	1.12	0.14
13.75	4.62	1.15	0.11
14.00	4.68	1.18	0.08
14.25	4.73	1.21	0.06
14.50	4.79	1.24	0.05
14.75	4.84	1.27	0.05
15.00	4.89	1.30	0.05
15.25	4.92	1.32	0.04
15.50	4.95	1.34	0.04
15.75	4.98	1.36	0.03
16.00	5.01	1.37	0.03
16.25	5.04	1.39	0.03
16.50	5.07	1.41	0.03
16.75	5.09	1.43	0.03
17.00	5.12	1.44	0.02
17.25	5.15	1.46	0.02
17.50	5.17	1.47	0.02
17.75	5.19	1.49	0.02
18.00	5.22	1.50	0.02
18.25	5.24	1.52	0.02
18.50	5.26	1.53	0.02
18.75	5.28	1.54	0.02
19.00	5.30	1.56	0.02
19.25	5.32	1.57	0.02
19.50	5.34	1.58	0.02
19.75	5.36	1.59	0.02
20.00	**5.38**	**1.60**	0.02

Summary for Subcatchment 3S: N vacant lot

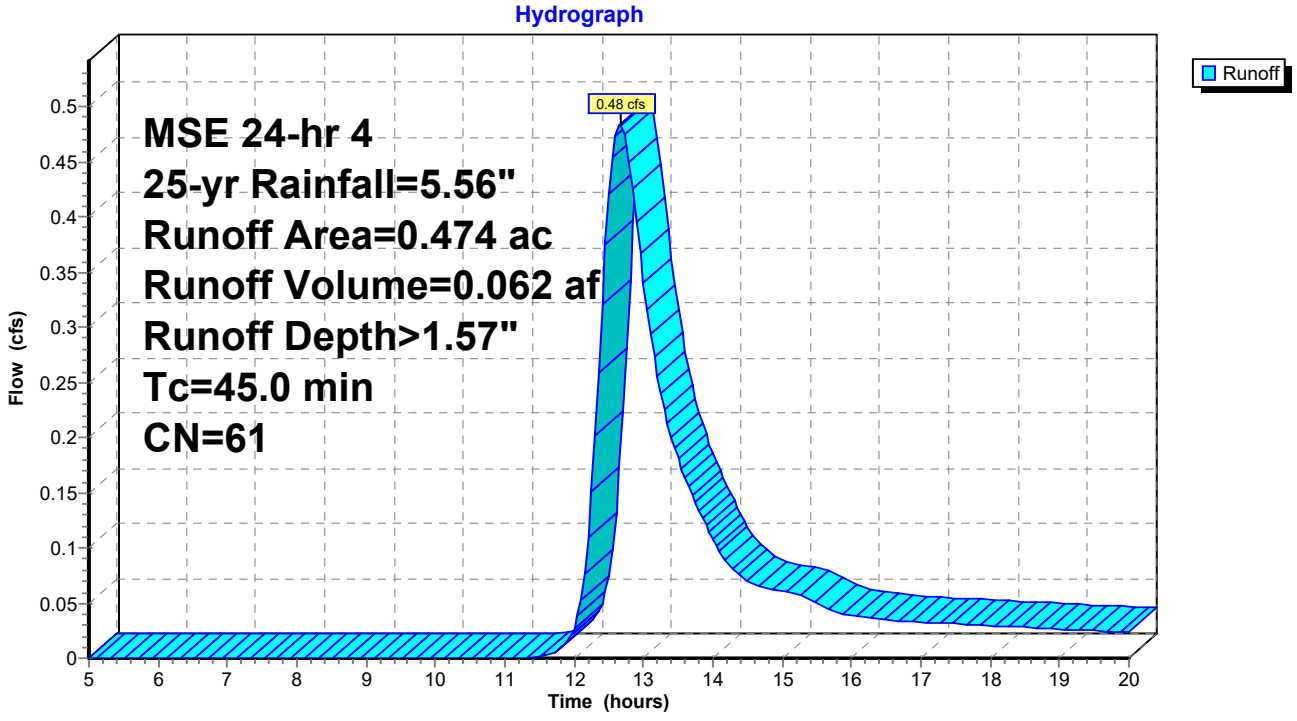
Runoff = 0.48 cfs @ 12.66 hrs, Volume= 0.062 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.001	98	conc apron + shed
*	0.473	61	vacant lot, landscaped, HSG B
	0.474	61	Weighted Average
	0.473		99.79% Pervious Area
	0.001		0.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.0					**Direct Entry, vacant lot, grass, flat**

Subcatchment 3S: N vacant lot



Hydrograph for Subcatchment 3S: N vacant lot

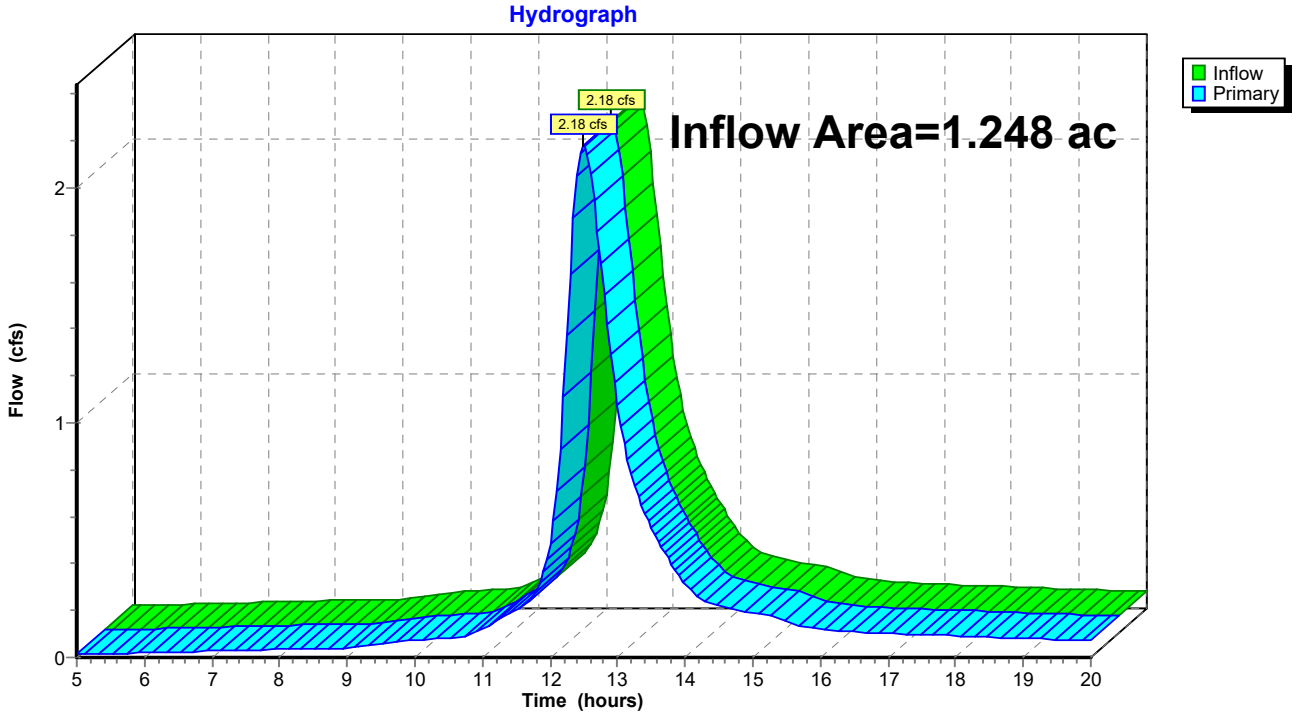
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.37	0.00	0.00
6.50	0.39	0.00	0.00
6.75	0.41	0.00	0.00
7.00	0.44	0.00	0.00
7.25	0.47	0.00	0.00
7.50	0.49	0.00	0.00
7.75	0.52	0.00	0.00
8.00	0.55	0.00	0.00
8.25	0.58	0.00	0.00
8.50	0.61	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.67	0.00	0.00
9.25	0.72	0.00	0.00
9.50	0.77	0.00	0.00
9.75	0.83	0.00	0.00
10.00	0.88	0.00	0.00
10.25	0.94	0.00	0.00
10.50	0.99	0.00	0.00
10.75	1.09	0.00	0.00
11.00	1.20	0.00	0.00
11.25	1.34	0.00	0.00
11.50	1.51	0.01	0.00
11.75	1.82	0.04	0.01
12.00	2.61	0.23	0.03
12.25	3.74	0.68	0.15
12.50	4.05	0.84	**0.42**
12.75	4.22	0.92	**0.47**
13.00	4.36	1.00	0.34
13.25	4.47	1.06	0.24
13.50	4.57	1.12	0.18
13.75	4.62	1.15	0.14
14.00	4.68	1.18	0.11
14.25	4.73	1.21	0.08
14.50	4.79	1.24	0.07
14.75	4.84	1.27	0.06
15.00	4.89	1.30	0.06
15.25	4.92	1.32	0.06
15.50	4.95	1.34	0.05
15.75	4.98	1.36	0.04
16.00	5.01	1.37	0.04
16.25	5.04	1.39	0.04
16.50	5.07	1.41	0.03
16.75	5.09	1.43	0.03
17.00	5.12	1.44	0.03
17.25	5.15	1.46	0.03
17.50	5.17	1.47	0.03
17.75	5.19	1.49	0.03
18.00	5.22	1.50	0.03
18.25	5.24	1.52	0.03
18.50	5.26	1.53	0.03
18.75	5.28	1.54	0.03
19.00	5.30	1.56	0.03
19.25	5.32	1.57	0.03
19.50	5.34	1.58	0.02
19.75	5.36	1.59	0.02
20.00	**5.38**	**1.60**	0.02

Summary for Link 4L: off-site city storm sewer

Inflow Area = 1.248 ac, 31.81% Impervious, Inflow Depth > 2.66" for 25-yr event
Inflow = 2.18 cfs @ 12.50 hrs, Volume= 0.277 af
Primary = 2.18 cfs @ 12.50 hrs, Volume= 0.277 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: off-site city storm sewer



Hydrograph for Link 4L: off-site city storm sewer

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.01	**0.00**	0.01
5.25	0.02	0.00	0.02
5.50	0.02	0.00	0.02
5.75	0.02	0.00	0.02
6.00	0.02	0.00	0.02
6.25	0.02	0.00	0.02
6.50	0.02	0.00	0.02
6.75	0.03	0.00	0.03
7.00	0.03	0.00	0.03
7.25	0.03	0.00	0.03
7.50	0.03	0.00	0.03
7.75	0.03	0.00	0.03
8.00	0.03	0.00	0.03
8.25	0.04	0.00	0.04
8.50	0.04	0.00	0.04
8.75	0.04	0.00	0.04
9.00	0.04	0.00	0.04
9.25	0.05	0.00	0.05
9.50	0.06	0.00	0.06
9.75	0.07	0.00	0.07
10.00	0.07	0.00	0.07
10.25	0.08	0.00	0.08
10.50	0.08	0.00	0.08
10.75	0.09	0.00	0.09
11.00	0.12	0.00	0.12
11.25	0.16	0.00	0.16
11.50	0.20	0.00	0.20
11.75	0.27	0.00	0.27
12.00	0.49	0.00	0.49
12.25	1.37	0.00	1.37
12.50	**2.18**	0.00	**2.18**
12.75	1.68	0.00	1.68
13.00	1.07	0.00	1.07
13.25	0.73	0.00	0.73
13.50	0.55	0.00	0.55
13.75	0.42	0.00	0.42
14.00	0.31	0.00	0.31
14.25	0.25	0.00	0.25
14.50	0.22	0.00	0.22
14.75	0.20	0.00	0.20
15.00	0.19	0.00	0.19
15.25	0.18	0.00	0.18
15.50	0.15	0.00	0.15
15.75	0.13	0.00	0.13
16.00	0.12	0.00	0.12
16.25	0.11	0.00	0.11
16.50	0.11	0.00	0.11
16.75	0.11	0.00	0.11
17.00	0.10	0.00	0.10
17.25	0.10	0.00	0.10
17.50	0.10	0.00	0.10
17.75	0.10	0.00	0.10
18.00	0.09	0.00	0.09
18.25	0.09	0.00	0.09
18.50	0.09	0.00	0.09
18.75	0.09	0.00	0.09
19.00	0.08	0.00	0.08
19.25	0.08	0.00	0.08
19.50	0.08	0.00	0.08
19.75	0.07	0.00	0.07
20.00	0.07	0.00	0.07

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: apt bldg + alley Runoff Area=0.416 ac 95.19% Impervious Runoff Depth>6.71"
Tc=32.0 min CN=96 Runoff=2.05 cfs 0.233 af

Subcatchment2S: E vacant lot Runoff Area=0.358 ac 0.00% Impervious Runoff Depth>2.87"
Tc=45.0 min CN=61 Runoff=0.69 cfs 0.086 af

Subcatchment3S: N vacant lot Runoff Area=0.474 ac 0.21% Impervious Runoff Depth>2.87"
Tc=45.0 min CN=61 Runoff=0.92 cfs 0.114 af

Link 4L: off-site city storm sewer Inflow=3.43 cfs 0.432 af
Primary=3.43 cfs 0.432 af

Total Runoff Area = 1.248 ac Runoff Volume = 0.432 af Average Runoff Depth = 4.15"
68.19% Pervious = 0.851 ac 31.81% Impervious = 0.397 ac

Summary for Subcatchment 1S: apt bldg + alley

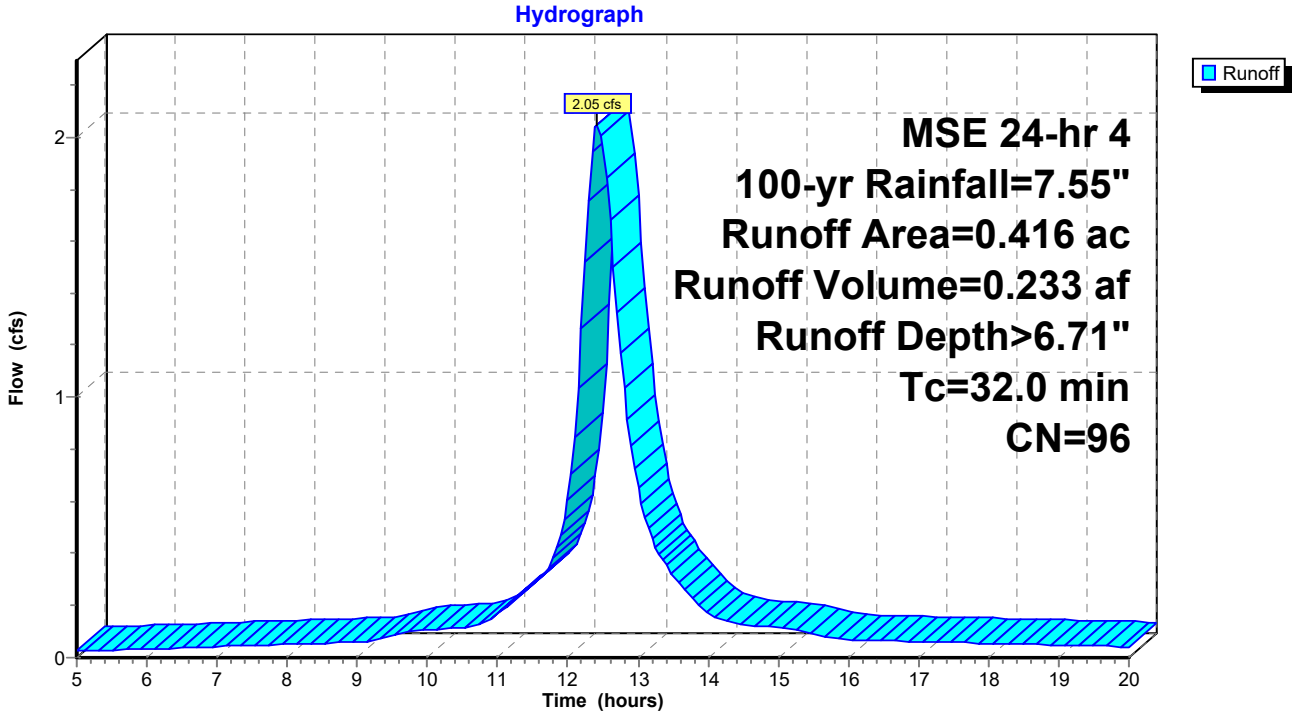
Runoff = 2.05 cfs @ 12.43 hrs, Volume= 0.233 af, Depth> 6.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.354	98	apt bldg roof
*	0.042	98	conc patios + slab
*	0.020	61	>75% Grass cover, Good, HSG B
	0.416	96	Weighted Average
	0.020		4.81% Pervious Area
	0.396		95.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, apt bldg roof**
5.0					**Direct Entry, patios + slab**
15.0					**Direct Entry, landscaping**
7.0					**Direct Entry, alley**
32.0	0	Total			

Subcatchment 1S: apt bldg + alley



Hydrograph for Subcatchment 1S: apt bldg + alley

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.10	0.02
5.25	0.37	0.12	0.03
5.50	0.40	0.14	0.03
5.75	0.43	0.16	0.03
6.00	0.46	0.18	0.03
6.25	0.50	0.21	0.04
6.50	0.53	0.23	0.04
6.75	0.56	0.26	0.04
7.00	0.60	0.28	0.04
7.25	0.63	0.31	0.05
7.50	0.67	0.34	0.05
7.75	0.71	0.38	0.05
8.00	0.75	0.41	0.05
8.25	0.79	0.44	0.05
8.50	0.83	0.48	0.06
8.75	0.87	0.51	0.06
9.00	0.91	0.55	0.06
9.25	0.98	0.61	0.07
9.50	1.05	0.68	0.09
9.75	1.12	0.74	0.10
10.00	1.20	0.81	0.11
10.25	1.27	0.88	0.11
10.50	1.35	0.95	0.12
10.75	1.48	1.07	0.13
11.00	1.63	1.22	0.17
11.25	1.83	1.41	0.23
11.50	2.05	1.62	0.28
11.75	2.47	2.04	0.36
12.00	3.54	3.08	0.61
12.25	5.08	4.61	**1.52**
12.50	5.50	5.03	**1.97**
12.75	5.72	5.25	1.17
13.00	5.92	5.44	0.65
13.25	6.07	5.60	0.43
13.50	6.20	5.73	0.32
13.75	6.28	5.80	0.24
14.00	6.35	5.88	0.17
14.25	6.43	5.95	0.14
14.50	6.50	6.03	0.13
14.75	6.57	6.09	0.12
15.00	6.64	6.16	0.12
15.25	6.68	6.20	0.11
15.50	6.72	6.25	0.09
15.75	6.76	6.29	0.08
16.00	6.80	6.33	0.07
16.25	6.84	6.37	0.07
16.50	6.88	6.40	0.07
16.75	6.92	6.44	0.06
17.00	6.95	6.48	0.06
17.25	6.99	6.51	0.06
17.50	7.02	6.54	0.06
17.75	7.05	6.58	0.06
18.00	7.09	6.61	0.06
18.25	7.12	6.64	0.05
18.50	7.15	6.67	0.05
18.75	7.18	6.70	0.05
19.00	7.20	6.73	0.05
19.25	7.23	6.75	0.05
19.50	7.26	6.78	0.05
19.75	7.28	6.80	0.04
20.00	**7.31**	**6.83**	0.04

Summary for Subcatchment 2S: E vacant lot

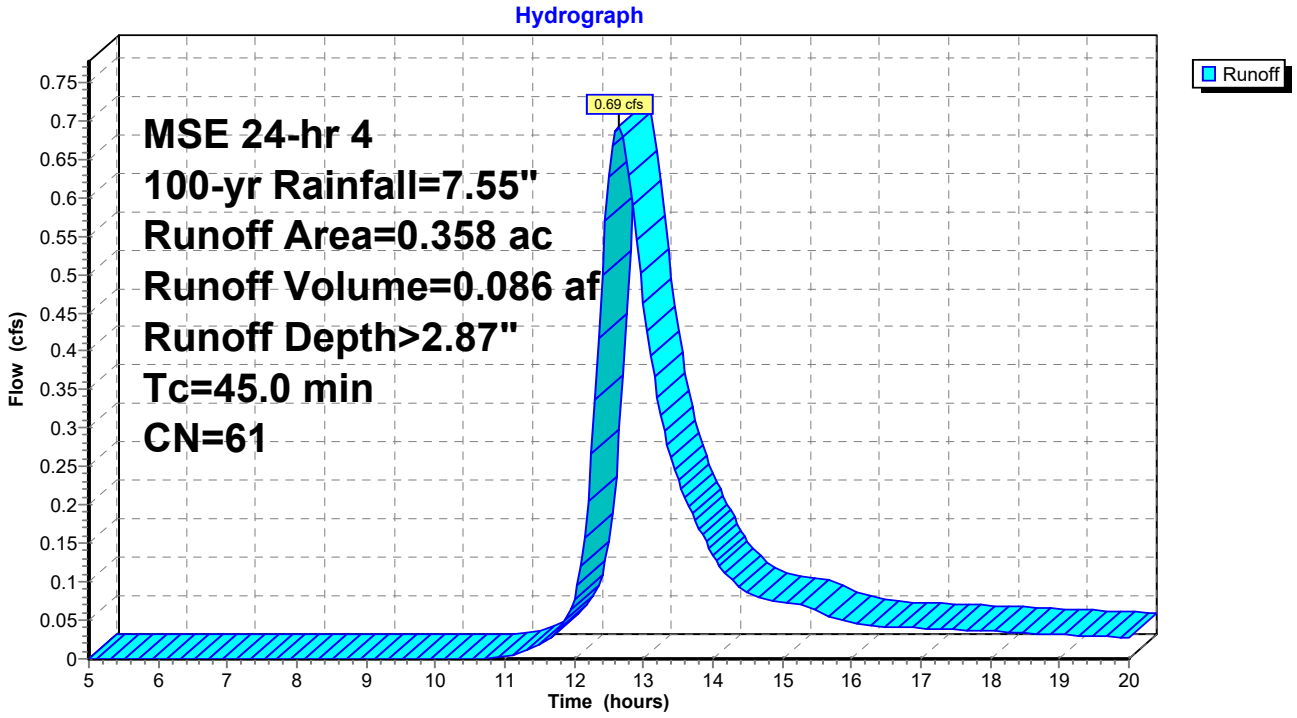
Runoff = 0.69 cfs @ 12.64 hrs, Volume= 0.086 af, Depth> 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.358	61	vacant lot, landscaped, HSG B
	0.358		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.0					**Direct Entry, vacant lot, grass, flat**

Subcatchment 2S: E vacant lot



Hydrograph for Subcatchment 2S: E vacant lot

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.25	0.37	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.46	0.00	0.00
6.25	0.50	0.00	0.00
6.50	0.53	0.00	0.00
6.75	0.56	0.00	0.00
7.00	0.60	0.00	0.00
7.25	0.63	0.00	0.00
7.50	0.67	0.00	0.00
7.75	0.71	0.00	0.00
8.00	0.75	0.00	0.00
8.25	0.79	0.00	0.00
8.50	0.83	0.00	0.00
8.75	0.87	0.00	0.00
9.00	0.91	0.00	0.00
9.25	0.98	0.00	0.00
9.50	1.05	0.00	0.00
9.75	1.12	0.00	0.00
10.00	1.20	0.00	0.00
10.25	1.27	0.00	0.00
10.50	1.35	0.00	0.00
10.75	1.48	0.01	0.00
11.00	1.63	0.02	0.00
11.25	1.83	0.04	0.01
11.50	2.05	0.08	0.02
11.75	2.47	0.19	0.04
12.00	3.54	0.59	0.08
12.25	5.08	1.41	0.27
12.50	5.50	1.68	**0.63**
12.75	5.72	1.82	**0.66**
13.00	5.92	1.95	0.46
13.25	6.07	2.06	0.32
13.50	6.20	2.14	0.23
13.75	6.28	2.19	0.18
14.00	6.35	2.25	0.13
14.25	6.43	2.30	0.10
14.50	6.50	2.35	0.09
14.75	6.57	2.40	0.08
15.00	6.64	2.44	0.07
15.25	6.68	2.47	0.07
15.50	6.72	2.50	0.06
15.75	6.76	2.53	0.05
16.00	6.80	2.56	0.05
16.25	6.84	2.59	0.04
16.50	6.88	2.62	0.04
16.75	6.92	2.64	0.04
17.00	6.95	2.67	0.04
17.25	6.99	2.69	0.04
17.50	7.02	2.72	0.04
17.75	7.05	2.74	0.04
18.00	7.09	2.76	0.04
18.25	7.12	2.79	0.03
18.50	7.15	2.81	0.03
18.75	7.18	2.83	0.03
19.00	7.20	2.85	0.03
19.25	7.23	2.87	0.03
19.50	7.26	2.89	0.03
19.75	7.28	2.91	0.03
20.00	**7.31**	**2.92**	0.03

Summary for Subcatchment 3S: N vacant lot

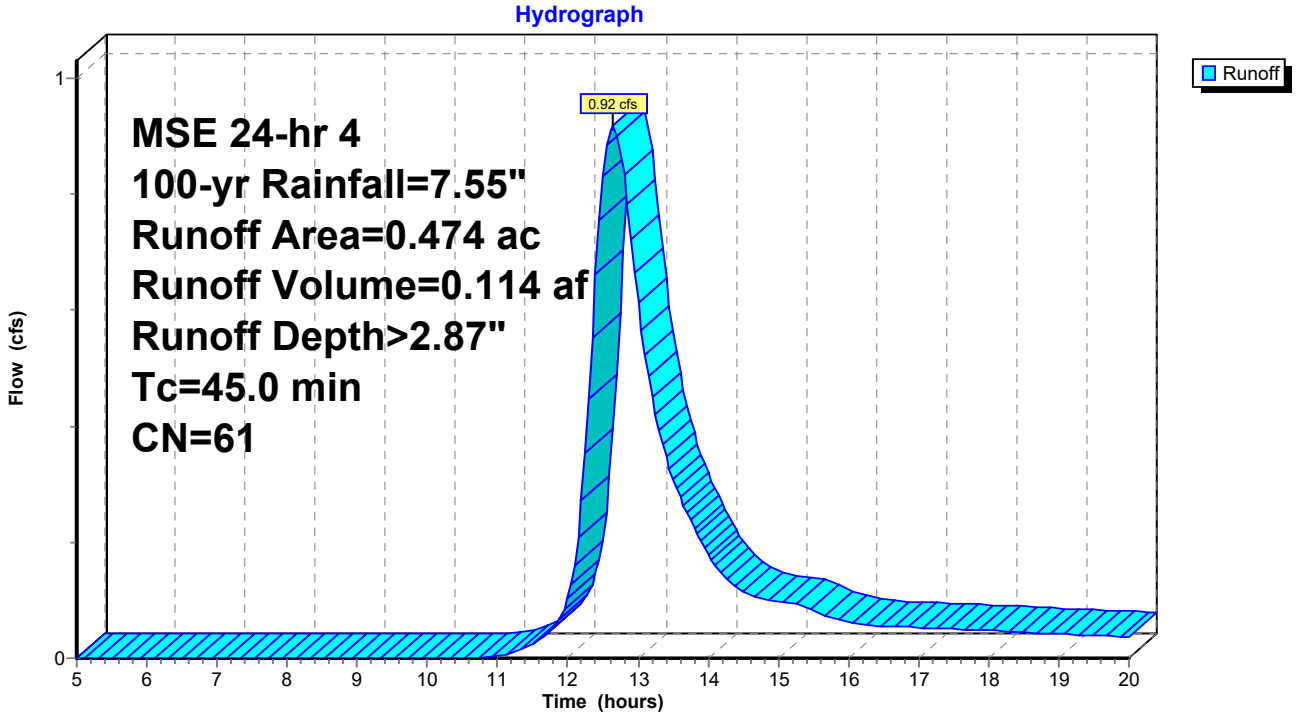
Runoff = 0.92 cfs @ 12.64 hrs, Volume= 0.114 af, Depth> 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.001	98	conc apron + shed
*	0.473	61	vacant lot, landscaped, HSG B
	0.474	61	Weighted Average
	0.473		99.79% Pervious Area
	0.001		0.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.0					**Direct Entry, vacant lot, grass, flat**

Subcatchment 3S: N vacant lot



Hydrograph for Subcatchment 3S: N vacant lot

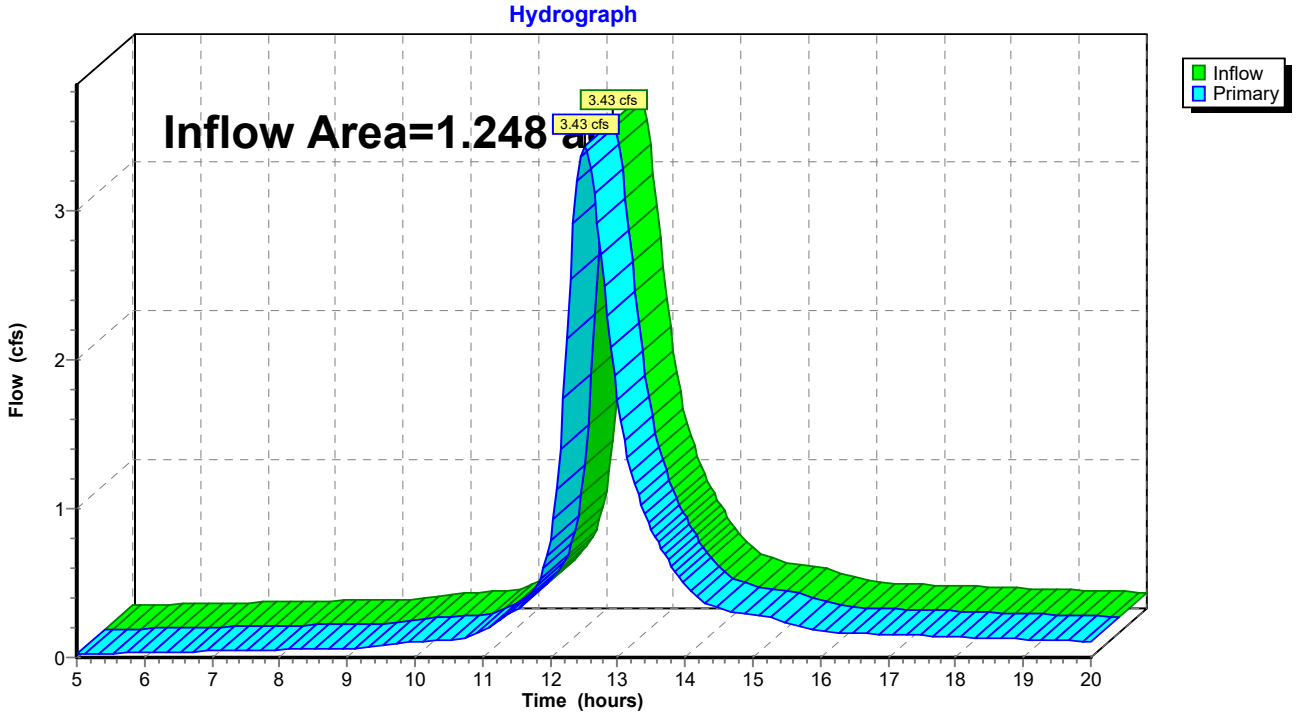
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.25	0.37	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.46	0.00	0.00
6.25	0.50	0.00	0.00
6.50	0.53	0.00	0.00
6.75	0.56	0.00	0.00
7.00	0.60	0.00	0.00
7.25	0.63	0.00	0.00
7.50	0.67	0.00	0.00
7.75	0.71	0.00	0.00
8.00	0.75	0.00	0.00
8.25	0.79	0.00	0.00
8.50	0.83	0.00	0.00
8.75	0.87	0.00	0.00
9.00	0.91	0.00	0.00
9.25	0.98	0.00	0.00
9.50	1.05	0.00	0.00
9.75	1.12	0.00	0.00
10.00	1.20	0.00	0.00
10.25	1.27	0.00	0.00
10.50	1.35	0.00	0.00
10.75	1.48	0.01	0.00
11.00	1.63	0.02	0.00
11.25	1.83	0.04	0.01
11.50	2.05	0.08	0.03
11.75	2.47	0.19	0.05
12.00	3.54	0.59	0.10
12.25	5.08	1.41	0.35
12.50	5.50	1.68	**0.83**
12.75	5.72	1.82	**0.87**
13.00	5.92	1.95	0.61
13.25	6.07	2.06	0.42
13.50	6.20	2.14	0.31
13.75	6.28	2.19	0.24
14.00	6.35	2.25	0.18
14.25	6.43	2.30	0.14
14.50	6.50	2.35	0.11
14.75	6.57	2.40	0.10
15.00	6.64	2.44	0.10
15.25	6.68	2.47	0.09
15.50	6.72	2.50	0.08
15.75	6.76	2.53	0.07
16.00	6.80	2.56	0.06
16.25	6.84	2.59	0.06
16.50	6.88	2.62	0.06
16.75	6.92	2.64	0.05
17.00	6.95	2.67	0.05
17.25	6.99	2.69	0.05
17.50	7.02	2.72	0.05
17.75	7.05	2.74	0.05
18.00	7.09	2.76	0.05
18.25	7.12	2.79	0.05
18.50	7.15	2.81	0.04
18.75	7.18	2.83	0.04
19.00	7.20	2.85	0.04
19.25	7.23	2.87	0.04
19.50	7.26	2.89	0.04
19.75	7.28	2.91	0.04
20.00	**7.31**	**2.92**	0.04

Summary for Link 4L: off-site city storm sewer

Inflow Area = 1.248 ac, 31.81% Impervious, Inflow Depth > 4.15" for 100-yr event
Inflow = 3.43 cfs @ 12.51 hrs, Volume= 0.432 af
Primary = 3.43 cfs @ 12.51 hrs, Volume= 0.432 af, Atten= 0%, Lag= 0.0 min

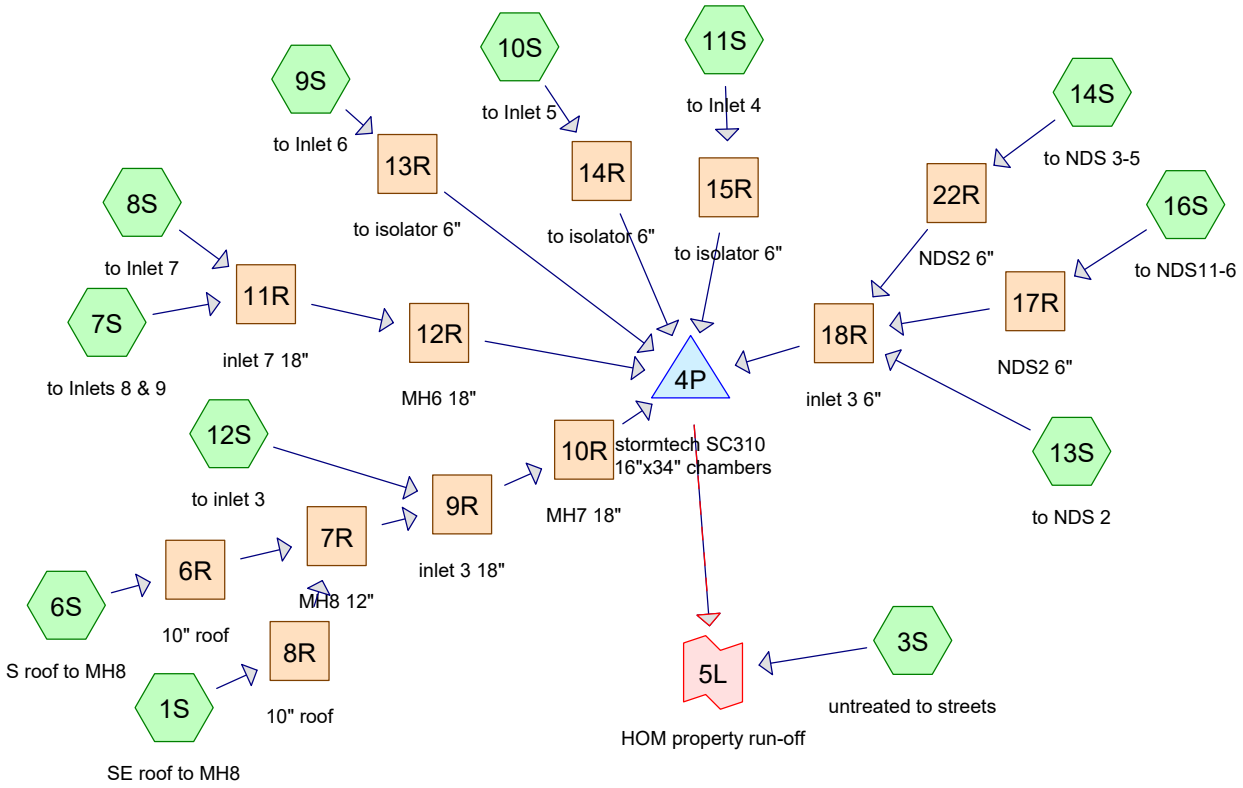
Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: off-site city storm sewer



Hydrograph for Link 4L: off-site city storm sewer

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.02	**0.00**	0.02
5.25	0.03	0.00	0.03
5.50	0.03	0.00	0.03
5.75	0.03	0.00	0.03
6.00	0.03	0.00	0.03
6.25	0.04	0.00	0.04
6.50	0.04	0.00	0.04
6.75	0.04	0.00	0.04
7.00	0.04	0.00	0.04
7.25	0.05	0.00	0.05
7.50	0.05	0.00	0.05
7.75	0.05	0.00	0.05
8.00	0.05	0.00	0.05
8.25	0.05	0.00	0.05
8.50	0.06	0.00	0.06
8.75	0.06	0.00	0.06
9.00	0.06	0.00	0.06
9.25	0.07	0.00	0.07
9.50	0.09	0.00	0.09
9.75	0.10	0.00	0.10
10.00	0.11	0.00	0.11
10.25	0.11	0.00	0.11
10.50	0.12	0.00	0.12
10.75	0.13	0.00	0.13
11.00	0.18	0.00	0.18
11.25	0.25	0.00	0.25
11.50	0.33	0.00	0.33
11.75	0.44	0.00	0.44
12.00	0.79	0.00	0.79
12.25	2.13	0.00	2.13
12.50	**3.43**	0.00	**3.43**
12.75	2.71	0.00	2.71
13.00	1.73	0.00	1.73
13.25	1.16	0.00	1.16
13.50	0.86	0.00	0.86
13.75	0.65	0.00	0.65
14.00	0.49	0.00	0.49
14.25	0.38	0.00	0.38
14.50	0.33	0.00	0.33
14.75	0.31	0.00	0.31
15.00	0.29	0.00	0.29
15.25	0.27	0.00	0.27
15.50	0.23	0.00	0.23
15.75	0.20	0.00	0.20
16.00	0.18	0.00	0.18
16.25	0.17	0.00	0.17
16.50	0.16	0.00	0.16
16.75	0.16	0.00	0.16
17.00	0.15	0.00	0.15
17.25	0.15	0.00	0.15
17.50	0.15	0.00	0.15
17.75	0.14	0.00	0.14
18.00	0.14	0.00	0.14
18.25	0.13	0.00	0.13
18.50	0.13	0.00	0.13
18.75	0.13	0.00	0.13
19.00	0.12	0.00	0.12
19.25	0.12	0.00	0.12
19.50	0.11	0.00	0.11
19.75	0.11	0.00	0.11
20.00	0.11	0.00	0.11



Subcat Reach Pond Link

Routing Diagram for SC310 system HOM only
Prepared by Paragon Associates, Printed 4/18/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.117	39	LS (3S, 9S, 10S, 11S, 14S, 16S)
0.022	98	PIP play surface (12S)
0.099	98	SW (3S, 7S, 11S, 12S, 14S, 16S)
0.069	98	canopy (3S)
0.305	98	fronting 10th (6S)
0.339	98	fronting Main St (1S)
0.070	61	lawn, HSG B (3S, 13S, 14S)
0.009	98	open shelter (12S)
0.034	98	parking AC pavement (12S)
0.179	98	pavement (7S, 8S, 9S, 10S, 11S)
1.243	**90**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.070	HSG B	3S, 13S, 14S
0.000	HSG C	
0.000	HSG D	
1.173	Other	1S, 3S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 14S, 16S
1.243		**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
0.000	0.000	0.000	0.000	0.117	0.117	LS	3S, 9S, 10S, 11S, 14S, 16S
0.000	0.000	0.000	0.000	0.022	0.022	PIP play surface	12S
0.000	0.000	0.000	0.000	0.099	0.099	SW	3S, 7S, 11S, 12S, 14S, 16S
0.000	0.000	0.000	0.000	0.069	0.069	canopy	3S
0.000	0.000	0.000	0.000	0.305	0.305	fronting 10th	6S
0.000	0.000	0.000	0.000	0.339	0.339	fronting Main St	1S
0.000	0.070	0.000	0.000	0.000	0.070	lawn	3S, 13S, 14S
0.000	0.000	0.000	0.000	0.009	0.009	open shelter	12S
0.000	0.000	0.000	0.000	0.034	0.034	parking AC pavement	12S
0.000	0.000	0.000	0.000	0.179	0.179	pavement	7S, 8S, 9S, 10S, 11S
0.000	**0.070**	**0.000**	**0.000**	**1.173**	**1.243**	**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	6R	665.72	665.58	27.0	0.0052	0.010	10.0	0.0	7.0
2	7R	665.48	665.40	19.0	0.0042	0.010	12.0	0.0	9.0
3	8R	665.80	665.58	42.0	0.0052	0.010	10.0	0.0	7.0
4	9R	665.30	665.02	35.0	0.0080	0.010	18.0	0.0	14.0
5	10R	665.02	665.00	4.0	0.0050	0.010	18.0	0.0	14.0
6	11R	665.36	665.04	62.0	0.0052	0.010	18.0	0.0	14.0
7	12R	665.04	665.00	8.0	0.0050	0.010	18.0	0.0	14.0
8	13R	668.00	666.00	10.0	0.2000	0.010	6.0	0.0	4.0
9	14R	668.00	666.00	10.0	0.2000	0.010	6.0	0.0	4.0
10	15R	668.00	666.00	10.0	0.2000	0.010	6.0	0.0	4.0
11	17R	668.84	668.18	129.0	0.0051	0.010	6.0	0.0	4.0
12	18R	668.18	667.88	62.0	0.0048	0.010	6.0	0.0	4.0
13	22R	668.86	668.18	129.0	0.0053	0.010	6.0	0.0	4.0

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SE roof to MH8 Runoff Area=0.339 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=130' Tc=10.0 min CN=98 Runoff=0.98 cfs 0.064 af

Subcatchment3S: untreated to streets Runoff Area=0.177 ac 49.15% Impervious Runoff Depth>0.50"
Flow Length=110' Tc=30.0 min CN=71 Runoff=0.07 cfs 0.007 af

Subcatchment6S: S roof to MH8 Runoff Area=0.305 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=170' Tc=12.0 min CN=98 Runoff=0.82 cfs 0.058 af

Subcatchment7S: to Inlets 8 & 9 Runoff Area=0.048 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=150' Tc=28.0 min CN=98 Runoff=0.09 cfs 0.009 af

Subcatchment8S: to Inlet 7 Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=90' Tc=21.0 min CN=98 Runoff=0.11 cfs 0.010 af

Subcatchment9S: to Inlet 6 Runoff Area=0.041 ac 78.05% Impervious Runoff Depth>1.19"
Flow Length=110' Tc=26.0 min CN=85 Runoff=0.04 cfs 0.004 af

Subcatchment10S: to Inlet 5 Runoff Area=0.030 ac 83.33% Impervious Runoff Depth>1.40"
Flow Length=60' Tc=18.0 min CN=88 Runoff=0.05 cfs 0.003 af

Subcatchment11S: to Inlet 4 Runoff Area=0.038 ac 73.68% Impervious Runoff Depth>1.01"
Flow Length=120' Tc=26.0 min CN=82 Runoff=0.04 cfs 0.003 af

Subcatchment12S: to inlet 3 Runoff Area=0.124 ac 100.00% Impervious Runoff Depth>2.27"
Tc=0.0 min CN=98 Runoff=0.46 cfs 0.024 af

Subcatchment13S: to NDS 2 Runoff Area=0.021 ac 0.00% Impervious Runoff Depth>0.20"
Flow Length=20' Tc=15.0 min CN=61 Runoff=0.00 cfs 0.000 af

Subcatchment14S: to NDS 3-5 Runoff Area=0.031 ac 3.23% Impervious Runoff Depth>0.11"
Flow Length=105' Tc=55.0 min CN=57 Runoff=0.00 cfs 0.000 af

Subcatchment16S: to NDS11-6 Runoff Area=0.038 ac 42.11% Impervious Runoff Depth>0.27"
Flow Length=80' Tc=30.0 min CN=64 Runoff=0.01 cfs 0.001 af

Reach 6R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.22 fps Inflow=0.82 cfs 0.058 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=27.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.28 cfs 0.058 af

Reach 7R: MH8 12" Avg. Flow Depth=0.25' Max Vel=2.01 fps Inflow=0.55 cfs 0.122 af
12.0" Round Pipe w/ 9.0" inside fill n=0.010 L=19.0' S=0.0042 '/' Capacity=0.28 cfs Outflow=0.28 cfs 0.122 af

Reach 8R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.23 fps Inflow=0.98 cfs 0.064 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=42.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.064 af

Reach 9R: inlet 3 18" Avg. Flow Depth=0.21' Max Vel=3.27 fps Inflow=0.74 cfs 0.145 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=35.0' S=0.0080 '/' Capacity=0.88 cfs Outflow=0.74 cfs 0.145 af

Reach 10R: MH7 18" Avg. Flow Depth=0.30' Max Vel=2.65 fps Inflow=0.74 cfs 0.145 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=4.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.74 cfs 0.145 af

Reach 11R: inlet 7 18" Avg. Flow Depth=0.09' Max Vel=1.83 fps Inflow=0.19 cfs 0.019 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=62.0' S=0.0052 '/' Capacity=0.71 cfs Outflow=0.19 cfs 0.019 af

Reach 12R: MH6 18" Avg. Flow Depth=0.09' Max Vel=1.81 fps Inflow=0.19 cfs 0.019 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=8.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.19 cfs 0.019 af

Reach 13R: to isolator 6" Avg. Flow Depth=0.02' Max Vel=4.68 fps Inflow=0.04 cfs 0.004 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.04 cfs 0.004 af

Reach 14R: to isolator 6" Avg. Flow Depth=0.02' Max Vel=4.73 fps Inflow=0.05 cfs 0.003 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.05 cfs 0.003 af

Reach 15R: to isolator 6" Avg. Flow Depth=0.02' Max Vel=4.26 fps Inflow=0.04 cfs 0.003 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.04 cfs 0.003 af

Reach 17R: NDS2 6" Avg. Flow Depth=0.02' Max Vel=0.70 fps Inflow=0.01 cfs 0.001 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0051 '/' Capacity=0.09 cfs Outflow=0.01 cfs 0.001 af

Reach 18R: inlet 3 6" Avg. Flow Depth=0.02' Max Vel=0.75 fps Inflow=0.01 cfs 0.002 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=62.0' S=0.0048 '/' Capacity=0.08 cfs Outflow=0.01 cfs 0.001 af

Reach 22R: NDS2 6" Avg. Flow Depth=0.01' Max Vel=0.36 fps Inflow=0.00 cfs 0.000 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0053 '/' Capacity=0.09 cfs Outflow=0.00 cfs 0.000 af

Pond 4P: stormtech SC310 16"x34" Peak Elev=665.73' Storage=0.051 af Inflow=0.87 cfs 0.176 af
Primary=0.06 cfs 0.013 af Secondary=0.26 cfs 0.159 af Outflow=0.32 cfs 0.172 af

Link 5L: HOM property run-off Inflow=0.34 cfs 0.179 af
Primary=0.34 cfs 0.179 af

Total Runoff Area = 1.243 ac Runoff Volume = 0.184 af Average Runoff Depth = 1.77"
15.04% Pervious = 0.187 ac 84.96% Impervious = 1.056 ac

Summary for Subcatchment 1S: SE roof to MH8

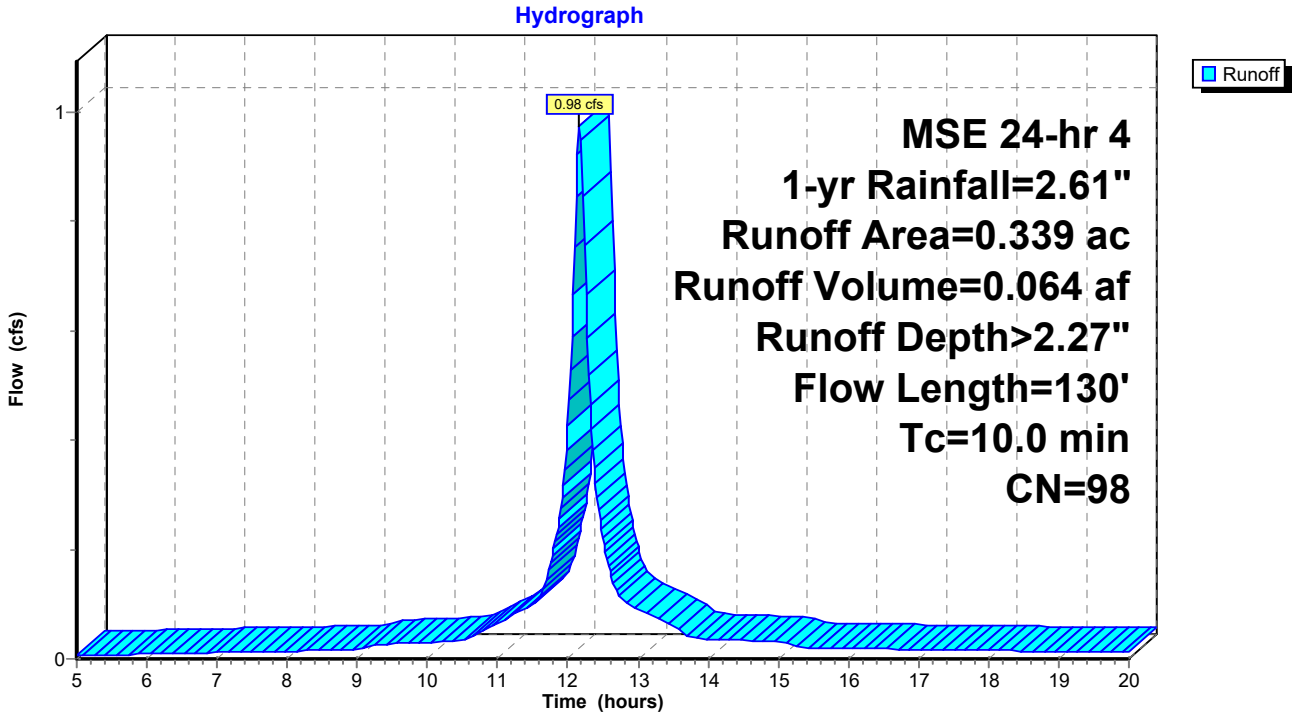
Runoff = 0.98 cfs @ 12.17 hrs, Volume= 0.064 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.339	98	fronting Main St
	0.339		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	130		0.22		**Direct Entry, S Bldg roof**

Subcatchment 1S: SE roof to MH8



Hydrograph for Subcatchment 1S: SE roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.01
5.20	0.13	0.03	0.01
5.40	0.14	0.03	0.01
5.60	0.14	0.03	0.01
5.80	0.15	0.04	0.01
6.00	0.16	0.04	0.01
6.20	0.17	0.05	0.01
6.40	0.18	0.06	0.01
6.60	0.19	0.06	0.01
6.80	0.20	0.07	0.01
7.00	0.21	0.07	0.01
7.20	0.22	0.08	0.01
7.40	0.23	0.09	0.01
7.60	0.24	0.10	0.01
7.80	0.25	0.10	0.01
8.00	0.26	0.11	0.01
8.20	0.27	0.12	0.01
8.40	0.28	0.13	0.01
8.60	0.29	0.14	0.02
8.80	0.30	0.15	0.02
9.00	0.32	0.16	0.02
9.20	0.33	0.17	0.02
9.40	0.35	0.19	0.03
9.60	0.37	0.21	0.03
9.80	0.39	0.22	0.03
10.00	0.41	0.24	0.03
10.20	0.43	0.26	0.03
10.40	0.46	0.28	0.03
10.60	0.48	0.30	0.04
10.80	0.52	0.34	0.05
11.00	0.56	0.38	0.07
11.20	0.62	0.43	0.08
11.40	0.68	0.48	0.09
11.60	0.75	0.55	0.11
11.80	0.90	0.69	0.20
12.00	1.22	1.01	**0.43**
12.20	1.71	1.49	**0.93**
12.40	1.86	1.63	0.32
12.60	1.93	1.71	0.16
12.80	1.99	1.77	0.11
13.00	2.05	1.82	0.09
13.20	2.09	1.86	0.08
13.40	2.13	1.90	0.07
13.60	2.15	1.93	0.05
13.80	2.18	1.95	0.04
14.00	2.20	1.97	0.04
14.20	2.22	1.99	0.04
14.40	2.24	2.01	0.03
14.60	2.26	2.03	0.03
14.80	2.28	2.05	0.03
15.00	2.29	2.07	0.03
15.20	2.31	2.08	0.02
15.40	2.32	2.09	0.02
15.60	2.33	2.10	0.02
15.80	2.34	2.11	0.02
16.00	2.35	2.12	0.02
16.20	2.36	2.13	0.02
16.40	2.37	2.14	0.02
16.60	2.38	2.15	0.02
16.80	2.39	2.16	0.02
17.00	2.40	2.17	0.02
17.20	2.41	2.18	0.02
17.40	2.42	2.19	0.02
17.60	2.43	2.20	0.02
17.80	2.44	2.21	0.02
18.00	2.45	2.22	0.02
18.20	2.46	2.23	0.01
18.40	2.47	2.24	0.01
18.60	2.47	2.25	0.01
18.80	2.48	2.25	0.01
19.00	2.49	2.26	0.01
19.20	2.50	2.27	0.01
19.40	2.50	2.28	0.01
19.60	2.51	2.28	0.01
19.80	2.52	2.29	0.01
20.00	**2.53**	**2.30**	0.01

Summary for Subcatchment 3S: untreated to streets

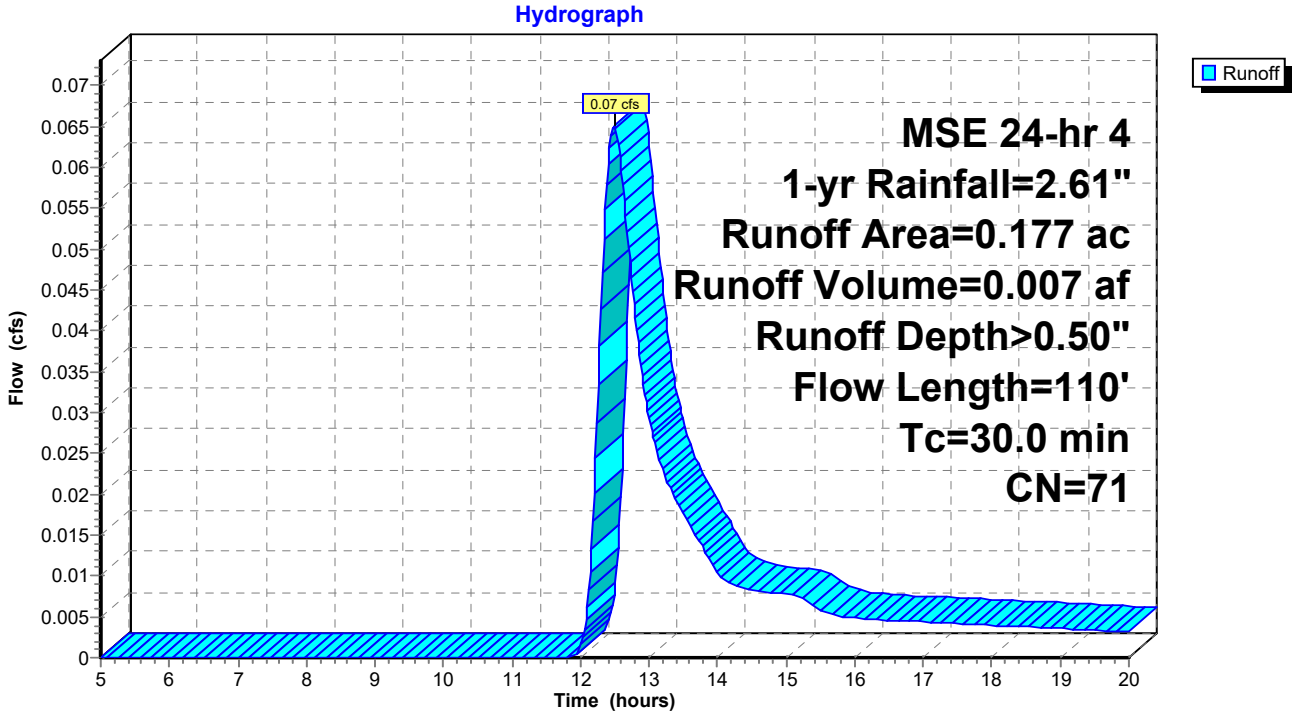
Runoff = 0.07 cfs @ 12.49 hrs, Volume= 0.007 af, Depth> 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.069	98	canopy
*	0.063	39	LS
*	0.027	61	lawn, HSG B
*	0.018	98	SW
	0.177	71	Weighted Average
	0.090		50.85% Pervious Area
	0.087		49.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	70		0.19		**Direct Entry, canopy**
12.0	20		0.03		**Direct Entry, LS**
12.0	20		0.03		**Direct Entry, lawn**
30.0	110	Total			

Subcatchment 3S: untreated to streets



Hydrograph for Subcatchment 3S: untreated to streets

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.00	0.00
10.60	0.48	0.00	0.00
10.80	0.52	0.00	0.00
11.00	0.56	0.00	0.00
11.20	0.62	0.00	0.00
11.40	0.68	0.00	0.00
11.60	0.75	0.00	0.00
11.80	0.90	0.00	0.00
12.00	1.22	0.04	0.00
12.20	1.71	0.16	0.02
12.40	1.86	0.21	**0.06**
12.60	1.93	0.24	**0.06**
12.80	1.99	0.26	0.04
13.00	2.05	0.28	0.03
13.20	2.09	0.30	0.02
13.40	2.13	0.32	0.02
13.60	2.15	0.33	0.02
13.80	2.18	0.34	0.01
14.00	2.20	0.35	0.01
14.20	2.22	0.36	0.01
14.40	2.24	0.37	0.01
14.60	2.26	0.38	0.01
14.80	2.28	0.38	0.01
15.00	2.29	0.39	0.01
15.20	2.31	0.40	0.01
15.40	2.32	0.40	0.01
15.60	2.33	0.41	0.01
15.80	2.34	0.41	0.01
16.00	2.35	0.42	0.00
16.20	2.36	0.42	0.00
16.40	2.37	0.43	0.00
16.60	2.38	0.43	0.00
16.80	2.39	0.44	0.00
17.00	2.40	0.44	0.00
17.20	2.41	0.45	0.00
17.40	2.42	0.45	0.00
17.60	2.43	0.46	0.00
17.80	2.44	0.46	0.00
18.00	2.45	0.47	0.00
18.20	2.46	0.47	0.00
18.40	2.47	0.47	0.00
18.60	2.47	0.48	0.00
18.80	2.48	0.48	0.00
19.00	2.49	0.49	0.00
19.20	2.50	0.49	0.00
19.40	2.50	0.49	0.00
19.60	2.51	0.50	0.00
19.80	2.52	0.50	0.00
20.00	**2.53**	**0.50**	0.00

Summary for Subcatchment 6S: S roof to MH8

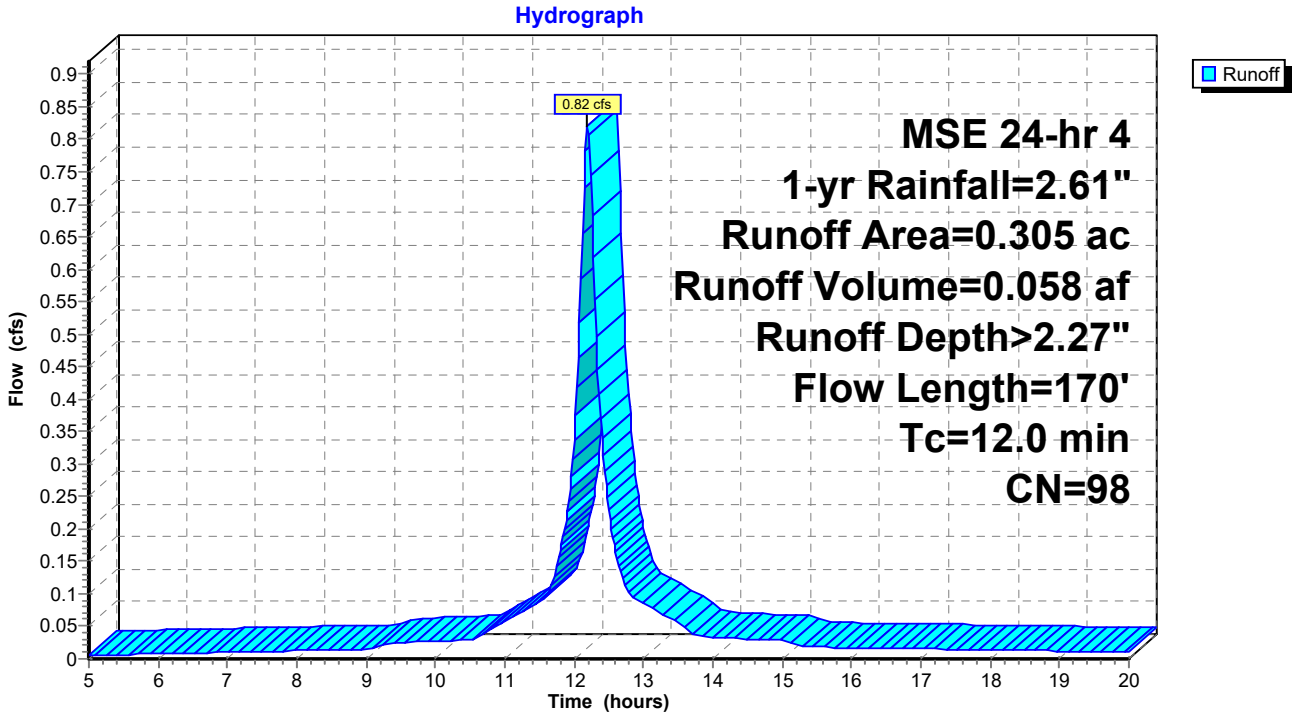
Runoff = 0.82 cfs @ 12.19 hrs, Volume= 0.058 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.305	98	fronting 10th
	0.305		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	170		0.24		**Direct Entry, NE Bldg Roof**

Subcatchment 6S: S roof to MH8



Hydrograph for Subcatchment 6S: S roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.01
5.20	0.13	0.03	0.01
5.40	0.14	0.03	0.01
5.60	0.14	0.03	0.01
5.80	0.15	0.04	0.01
6.00	0.16	0.04	0.01
6.20	0.17	0.05	0.01
6.40	0.18	0.06	0.01
6.60	0.19	0.06	0.01
6.80	0.20	0.07	0.01
7.00	0.21	0.07	0.01
7.20	0.22	0.08	0.01
7.40	0.23	0.09	0.01
7.60	0.24	0.10	0.01
7.80	0.25	0.10	0.01
8.00	0.26	0.11	0.01
8.20	0.27	0.12	0.01
8.40	0.28	0.13	0.01
8.60	0.29	0.14	0.01
8.80	0.30	0.15	0.01
9.00	0.32	0.16	0.01
9.20	0.33	0.17	0.02
9.40	0.35	0.19	0.02
9.60	0.37	0.21	0.03
9.80	0.39	0.22	0.03
10.00	0.41	0.24	0.03
10.20	0.43	0.26	0.03
10.40	0.46	0.28	0.03
10.60	0.48	0.30	0.03
10.80	0.52	0.34	0.05
11.00	0.56	0.38	0.06
11.20	0.62	0.43	0.07
11.40	0.68	0.48	0.08
11.60	0.75	0.55	0.10
11.80	0.90	0.69	0.17
12.00	1.22	1.01	0.34
12.20	1.71	1.49	**0.82**
12.40	1.86	1.63	0.34
12.60	1.93	1.71	0.16
12.80	1.99	1.77	0.10
13.00	2.05	1.82	0.08
13.20	2.09	1.86	0.07
13.40	2.13	1.90	0.06
13.60	2.15	1.93	0.05
13.80	2.18	1.95	0.03
14.00	2.20	1.97	0.03
14.20	2.22	1.99	0.03
14.40	2.24	2.01	0.03
14.60	2.26	2.03	0.03
14.80	2.28	2.05	0.03
15.00	2.29	2.07	0.03
15.20	2.31	2.08	0.02
15.40	2.32	2.09	0.02
15.60	2.33	2.10	0.02
15.80	2.34	2.11	0.02
16.00	2.35	2.12	0.02
16.20	2.36	2.13	0.02
16.40	2.37	2.14	0.02
16.60	2.38	2.15	0.02
16.80	2.39	2.16	0.02
17.00	2.40	2.17	0.02
17.20	2.41	2.18	0.01
17.40	2.42	2.19	0.01
17.60	2.43	2.20	0.01
17.80	2.44	2.21	0.01
18.00	2.45	2.22	0.01
18.20	2.46	2.23	0.01
18.40	2.47	2.24	0.01
18.60	2.47	2.25	0.01
18.80	2.48	2.25	0.01
19.00	2.49	2.26	0.01
19.20	2.50	2.27	0.01
19.40	2.50	2.28	0.01
19.60	2.51	2.28	0.01
19.80	2.52	2.29	0.01
20.00	**2.53**	**2.30**	0.01

Summary for Subcatchment 7S: to Inlets 8 & 9

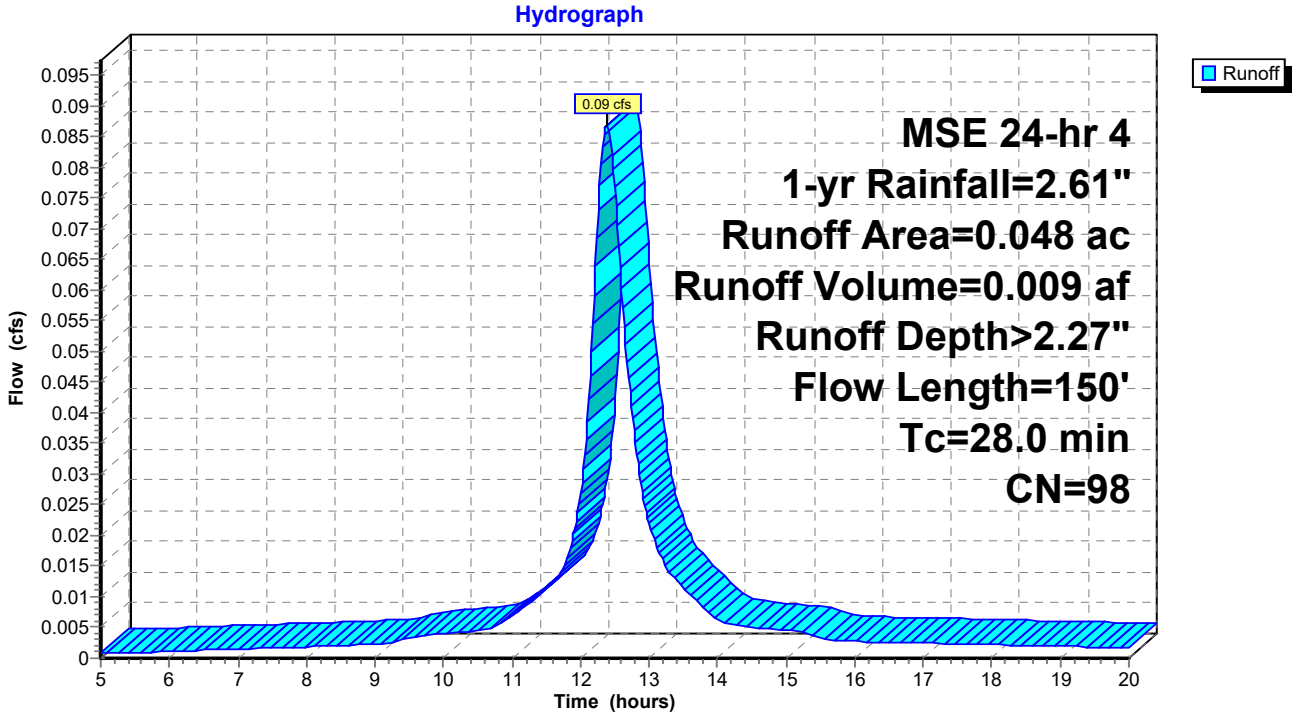
Runoff = 0.09 cfs @ 12.38 hrs, Volume= 0.009 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.046	98	pavement
*	0.002	98	SW
	0.048	98	Weighted Average
	0.048		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	55		0.13		**Direct Entry, pavement**
6.0	50		0.14		**Direct Entry, SW**
15.0	45		0.05		**Direct Entry, LS**
28.0	150	Total			

Subcatchment 7S: to Inlets 8 & 9



Hydrograph for Subcatchment 7S: to Inlets 8 & 9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.00
5.20	0.13	0.03	0.00
5.40	0.14	0.03	0.00
5.60	0.14	0.03	0.00
5.80	0.15	0.04	0.00
6.00	0.16	0.04	0.00
6.20	0.17	0.05	0.00
6.40	0.18	0.06	0.00
6.60	0.19	0.06	0.00
6.80	0.20	0.07	0.00
7.00	0.21	0.07	0.00
7.20	0.22	0.08	0.00
7.40	0.23	0.09	0.00
7.60	0.24	0.10	0.00
7.80	0.25	0.10	0.00
8.00	0.26	0.11	0.00
8.20	0.27	0.12	0.00
8.40	0.28	0.13	0.00
8.60	0.29	0.14	0.00
8.80	0.30	0.15	0.00
9.00	0.32	0.16	0.00
9.20	0.33	0.17	0.00
9.40	0.35	0.19	0.00
9.60	0.37	0.21	0.00
9.80	0.39	0.22	0.00
10.00	0.41	0.24	0.00
10.20	0.43	0.26	0.00
10.40	0.46	0.28	0.00
10.60	0.48	0.30	0.00
10.80	0.52	0.34	0.01
11.00	0.56	0.38	0.01
11.20	0.62	0.43	0.01
11.40	0.68	0.48	0.01
11.60	0.75	0.55	0.01
11.80	0.90	0.69	0.02
12.00	1.22	1.01	0.03
12.20	1.71	1.49	**0.06**
12.40	1.86	1.63	**0.09**
12.60	1.93	1.71	0.06
12.80	1.99	1.77	0.04
13.00	2.05	1.82	0.02
13.20	2.09	1.86	0.02
13.40	2.13	1.90	0.01
13.60	2.15	1.93	0.01
13.80	2.18	1.95	0.01
14.00	2.20	1.97	0.01
14.20	2.22	1.99	0.01
14.40	2.24	2.01	0.01
14.60	2.26	2.03	0.00
14.80	2.28	2.05	0.00
15.00	2.29	2.07	0.00
15.20	2.31	2.08	0.00
15.40	2.32	2.09	0.00
15.60	2.33	2.10	0.00
15.80	2.34	2.11	0.00
16.00	2.35	2.12	0.00
16.20	2.36	2.13	0.00
16.40	2.37	2.14	0.00
16.60	2.38	2.15	0.00
16.80	2.39	2.16	0.00
17.00	2.40	2.17	0.00
17.20	2.41	2.18	0.00
17.40	2.42	2.19	0.00
17.60	2.43	2.20	0.00
17.80	2.44	2.21	0.00
18.00	2.45	2.22	0.00
18.20	2.46	2.23	0.00
18.40	2.47	2.24	0.00
18.60	2.47	2.25	0.00
18.80	2.48	2.25	0.00
19.00	2.49	2.26	0.00
19.20	2.50	2.27	0.00
19.40	2.50	2.28	0.00
19.60	2.51	2.28	0.00
19.80	2.52	2.29	0.00
20.00	**2.53**	**2.30**	0.00

Summary for Subcatchment 8S: to Inlet 7

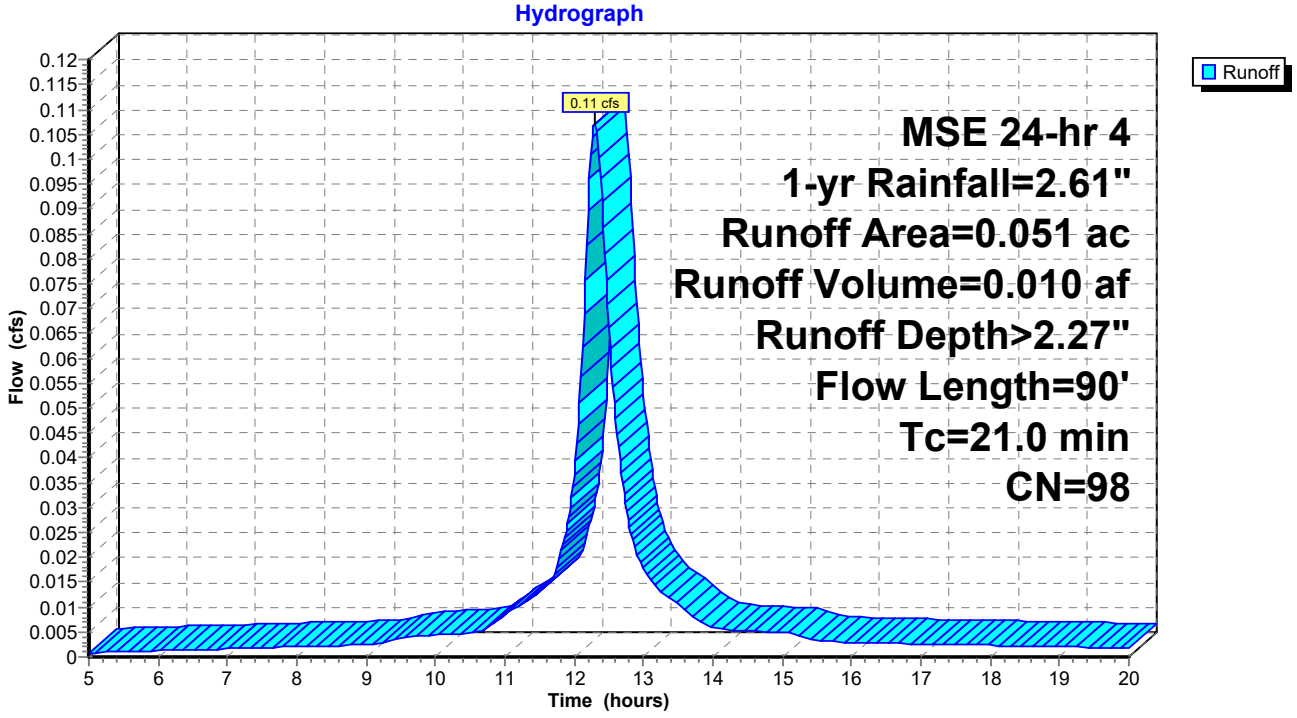
Runoff = 0.11 cfs @ 12.30 hrs, Volume= 0.010 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.051	98	pavement
	0.051		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50		0.14		**Direct Entry, pavement**
15.0	40		0.04		**Direct Entry, LS**
21.0	90	Total			

Subcatchment 8S: to Inlet 7



Hydrograph for Subcatchment 8S: to Inlet 7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.00
5.20	0.13	0.03	0.00
5.40	0.14	0.03	0.00
5.60	0.14	0.03	0.00
5.80	0.15	0.04	0.00
6.00	0.16	0.04	0.00
6.20	0.17	0.05	0.00
6.40	0.18	0.06	0.00
6.60	0.19	0.06	0.00
6.80	0.20	0.07	0.00
7.00	0.21	0.07	0.00
7.20	0.22	0.08	0.00
7.40	0.23	0.09	0.00
7.60	0.24	0.10	0.00
7.80	0.25	0.10	0.00
8.00	0.26	0.11	0.00
8.20	0.27	0.12	0.00
8.40	0.28	0.13	0.00
8.60	0.29	0.14	0.00
8.80	0.30	0.15	0.00
9.00	0.32	0.16	0.00
9.20	0.33	0.17	0.00
9.40	0.35	0.19	0.00
9.60	0.37	0.21	0.00
9.80	0.39	0.22	0.00
10.00	0.41	0.24	0.00
10.20	0.43	0.26	0.00
10.40	0.46	0.28	0.00
10.60	0.48	0.30	0.00
10.80	0.52	0.34	0.01
11.00	0.56	0.38	0.01
11.20	0.62	0.43	0.01
11.40	0.68	0.48	0.01
11.60	0.75	0.55	0.01
11.80	0.90	0.69	0.02
12.00	1.22	1.01	0.04
12.20	1.71	1.49	**0.09**
12.40	1.86	1.63	**0.09**
12.60	1.93	1.71	0.05
12.80	1.99	1.77	0.03
13.00	2.05	1.82	0.02
13.20	2.09	1.86	0.01
13.40	2.13	1.90	0.01
13.60	2.15	1.93	0.01
13.80	2.18	1.95	0.01
14.00	2.20	1.97	0.01
14.20	2.22	1.99	0.01
14.40	2.24	2.01	0.01
14.60	2.26	2.03	0.01
14.80	2.28	2.05	0.00
15.00	2.29	2.07	0.00
15.20	2.31	2.08	0.00
15.40	2.32	2.09	0.00
15.60	2.33	2.10	0.00
15.80	2.34	2.11	0.00
16.00	2.35	2.12	0.00
16.20	2.36	2.13	0.00
16.40	2.37	2.14	0.00
16.60	2.38	2.15	0.00
16.80	2.39	2.16	0.00
17.00	2.40	2.17	0.00
17.20	2.41	2.18	0.00
17.40	2.42	2.19	0.00
17.60	2.43	2.20	0.00
17.80	2.44	2.21	0.00
18.00	2.45	2.22	0.00
18.20	2.46	2.23	0.00
18.40	2.47	2.24	0.00
18.60	2.47	2.25	0.00
18.80	2.48	2.25	0.00
19.00	2.49	2.26	0.00
19.20	2.50	2.27	0.00
19.40	2.50	2.28	0.00
19.60	2.51	2.28	0.00
19.80	2.52	2.29	0.00
20.00	**2.53**	**2.30**	0.00

Summary for Subcatchment 9S: to Inlet 6

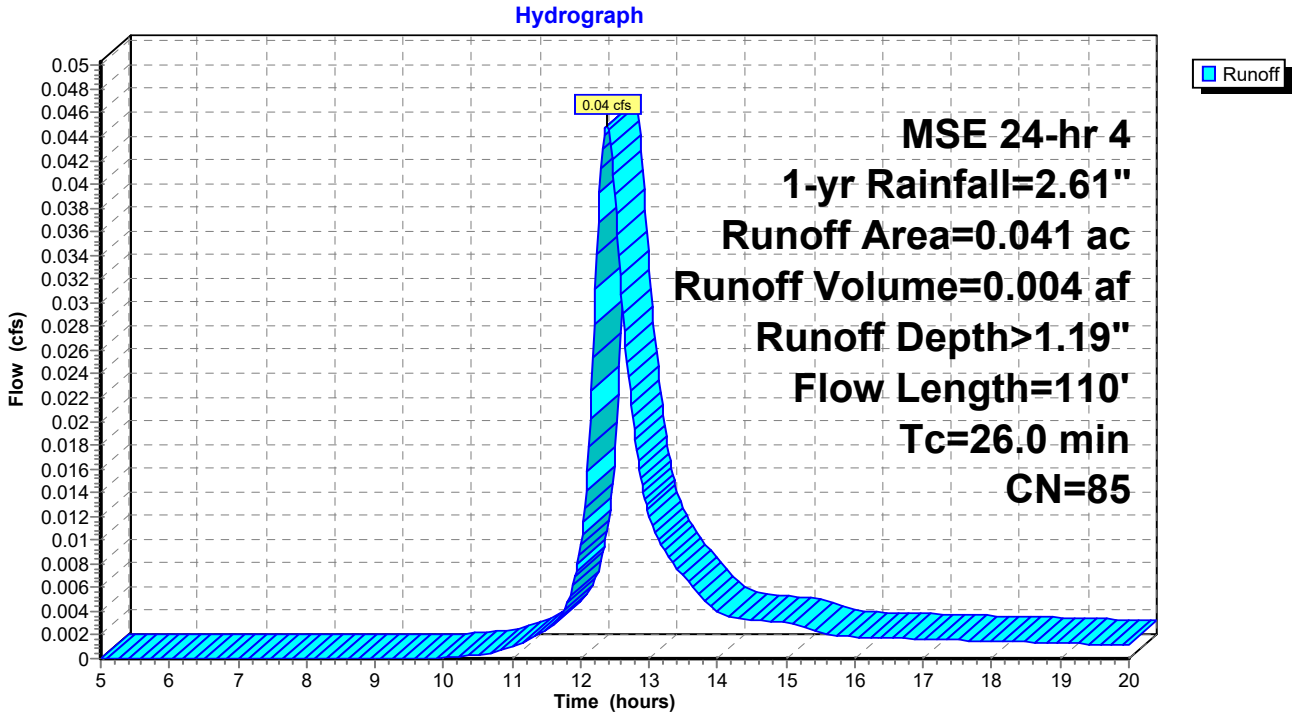
Runoff = 0.04 cfs @ 12.38 hrs, Volume= 0.004 af, Depth> 1.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.032	98	pavement
*	0.009	39	LS
	0.041	85	Weighted Average
	0.009		21.95% Pervious Area
	0.032		78.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	45		0.11		**Direct Entry, pavement**
7.0	45		0.11		**Direct Entry, SW**
12.0	20		0.03		**Direct Entry, LS**
26.0	110	Total			

Subcatchment 9S: to Inlet 6



Hydrograph for Subcatchment 9S: to Inlet 6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.01	0.00
10.60	0.48	0.01	0.00
10.80	0.52	0.01	0.00
11.00	0.56	0.02	0.00
11.20	0.62	0.03	0.00
11.40	0.68	0.05	0.00
11.60	0.75	0.07	0.00
11.80	0.90	0.13	0.00
12.00	1.22	0.29	0.01
12.20	1.71	0.59	**0.03**
12.40	1.86	0.69	**0.04**
12.60	1.93	0.75	0.03
12.80	1.99	0.79	0.02
13.00	2.05	0.83	0.01
13.20	2.09	0.86	0.01
13.40	2.13	0.89	0.01
13.60	2.15	0.91	0.01
13.80	2.18	0.93	0.00
14.00	2.20	0.94	0.00
14.20	2.22	0.96	0.00
14.40	2.24	0.97	0.00
14.60	2.26	0.99	0.00
14.80	2.28	1.00	0.00
15.00	2.29	1.02	0.00
15.20	2.31	1.03	0.00
15.40	2.32	1.04	0.00
15.60	2.33	1.04	0.00
15.80	2.34	1.05	0.00
16.00	2.35	1.06	0.00
16.20	2.36	1.07	0.00
16.40	2.37	1.08	0.00
16.60	2.38	1.09	0.00
16.80	2.39	1.09	0.00
17.00	2.40	1.10	0.00
17.20	2.41	1.11	0.00
17.40	2.42	1.12	0.00
17.60	2.43	1.12	0.00
17.80	2.44	1.13	0.00
18.00	2.45	1.14	0.00
18.20	2.46	1.15	0.00
18.40	2.47	1.15	0.00
18.60	2.47	1.16	0.00
18.80	2.48	1.16	0.00
19.00	2.49	1.17	0.00
19.20	2.50	1.18	0.00
19.40	2.50	1.18	0.00
19.60	2.51	1.19	0.00
19.80	2.52	1.19	0.00
20.00	**2.53**	**1.20**	0.00

Summary for Subcatchment 10S: to Inlet 5

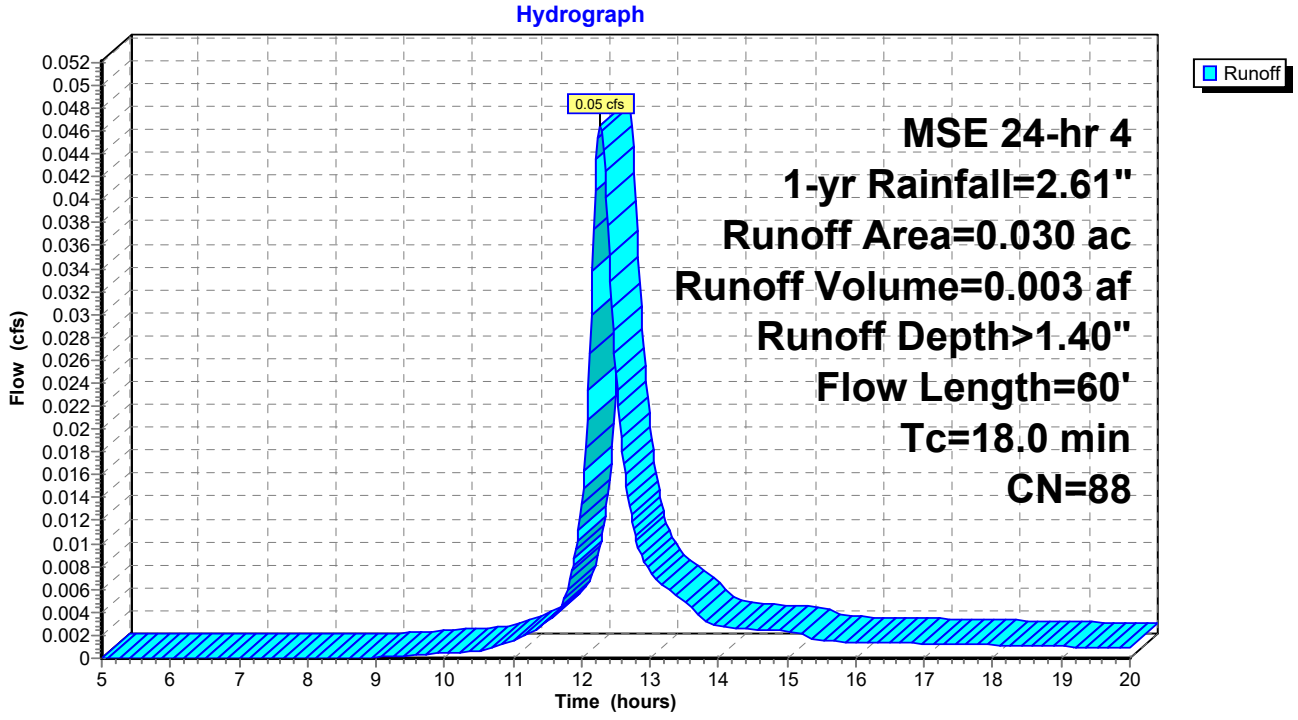
Runoff = 0.05 cfs @ 12.27 hrs, Volume= 0.003 af, Depth> 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.005	39	LS
	0.030	88	Weighted Average
	0.005		16.67% Pervious Area
	0.025		83.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40		0.11		**Direct Entry, pavement**
12.0	20		0.03		**Direct Entry, LS**
18.0	60	Total			

Subcatchment 10S: to Inlet 5



Hydrograph for Subcatchment 10S: to Inlet 5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.01	0.00
9.80	0.39	0.01	0.00
10.00	0.41	0.01	0.00
10.20	0.43	0.02	0.00
10.40	0.46	0.02	0.00
10.60	0.48	0.03	0.00
10.80	0.52	0.04	0.00
11.00	0.56	0.05	0.00
11.20	0.62	0.07	0.00
11.40	0.68	0.09	0.00
11.60	0.75	0.13	0.00
11.80	0.90	0.20	0.01
12.00	1.22	0.39	0.01
12.20	1.71	0.74	**0.04**
12.40	1.86	0.85	**0.04**
12.60	1.93	0.91	0.02
12.80	1.99	0.96	0.01
13.00	2.05	1.00	0.01
13.20	2.09	1.04	0.01
13.40	2.13	1.07	0.01
13.60	2.15	1.09	0.00
13.80	2.18	1.11	0.00
14.00	2.20	1.13	0.00
14.20	2.22	1.14	0.00
14.40	2.24	1.16	0.00
14.60	2.26	1.18	0.00
14.80	2.28	1.19	0.00
15.00	2.29	1.21	0.00
15.20	2.31	1.22	0.00
15.40	2.32	1.23	0.00
15.60	2.33	1.24	0.00
15.80	2.34	1.25	0.00
16.00	2.35	1.26	0.00
16.20	2.36	1.26	0.00
16.40	2.37	1.27	0.00
16.60	2.38	1.28	0.00
16.80	2.39	1.29	0.00
17.00	2.40	1.30	0.00
17.20	2.41	1.31	0.00
17.40	2.42	1.32	0.00
17.60	2.43	1.32	0.00
17.80	2.44	1.33	0.00
18.00	2.45	1.34	0.00
18.20	2.46	1.35	0.00
18.40	2.47	1.35	0.00
18.60	2.47	1.36	0.00
18.80	2.48	1.37	0.00
19.00	2.49	1.37	0.00
19.20	2.50	1.38	0.00
19.40	2.50	1.39	0.00
19.60	2.51	1.39	0.00
19.80	2.52	1.40	0.00
20.00	**2.53**	**1.40**	0.00

Summary for Subcatchment 11S: to Inlet 4

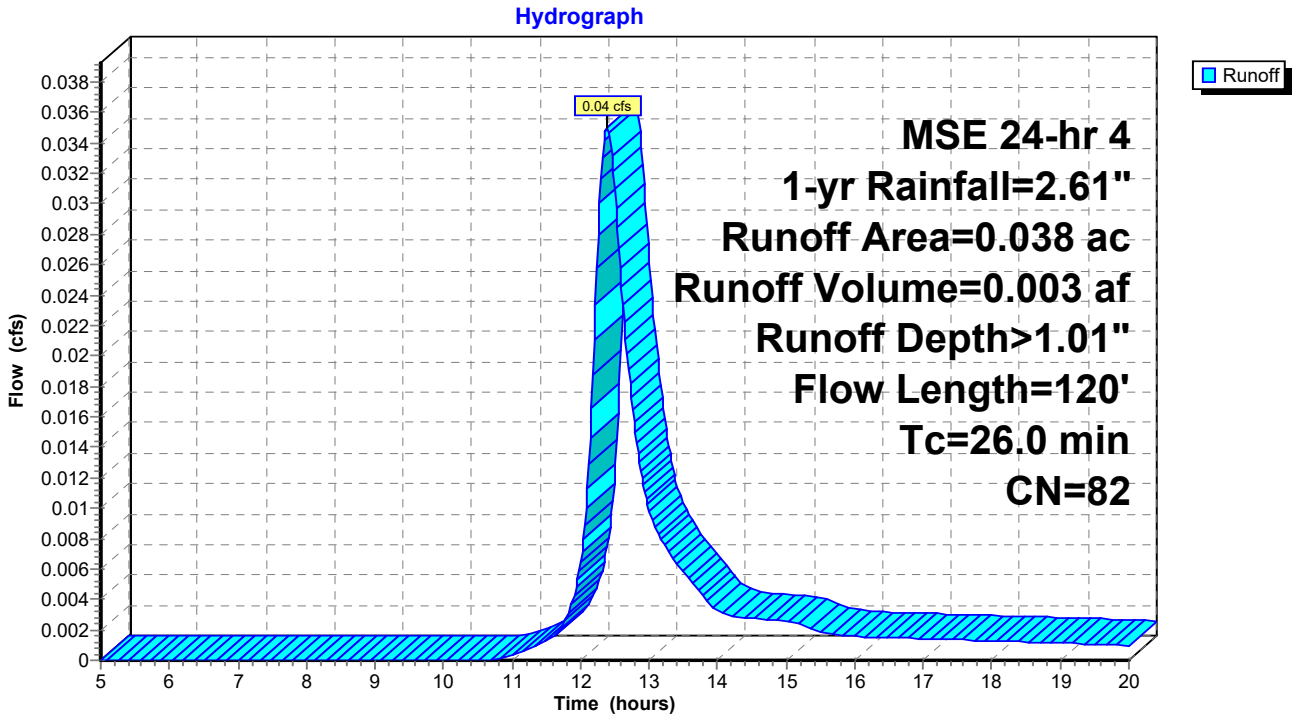
Runoff = 0.04 cfs @ 12.39 hrs, Volume= 0.003 af, Depth> 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.003	98	SW
*	0.010	39	LS
	0.038	82	Weighted Average
	0.010		26.32% Pervious Area
	0.028		73.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	40		0.10		**Direct Entry, pavement**
7.0	40		0.10		**Direct Entry, SW**
12.0	40		0.06		**Direct Entry, LS**
26.0	120	Total			

Subcatchment 11S: to Inlet 4



Hydrograph for Subcatchment 11S: to Inlet 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.00	0.00
10.60	0.48	0.00	0.00
10.80	0.52	0.00	0.00
11.00	0.56	0.01	0.00
11.20	0.62	0.01	0.00
11.40	0.68	0.02	0.00
11.60	0.75	0.04	0.00
11.80	0.90	0.08	0.00
12.00	1.22	0.21	0.01
12.20	1.71	0.47	**0.02**
12.40	1.86	0.56	**0.04**
12.60	1.93	0.61	0.02
12.80	1.99	0.64	0.01
13.00	2.05	0.68	0.01
13.20	2.09	0.71	0.01
13.40	2.13	0.73	0.01
13.60	2.15	0.75	0.01
13.80	2.18	0.77	0.00
14.00	2.20	0.78	0.00
14.20	2.22	0.80	0.00
14.40	2.24	0.81	0.00
14.60	2.26	0.82	0.00
14.80	2.28	0.84	0.00
15.00	2.29	0.85	0.00
15.20	2.31	0.86	0.00
15.40	2.32	0.87	0.00
15.60	2.33	0.87	0.00
15.80	2.34	0.88	0.00
16.00	2.35	0.89	0.00
16.20	2.36	0.90	0.00
16.40	2.37	0.91	0.00
16.60	2.38	0.91	0.00
16.80	2.39	0.92	0.00
17.00	2.40	0.93	0.00
17.20	2.41	0.93	0.00
17.40	2.42	0.94	0.00
17.60	2.43	0.95	0.00
17.80	2.44	0.95	0.00
18.00	2.45	0.96	0.00
18.20	2.46	0.97	0.00
18.40	2.47	0.97	0.00
18.60	2.47	0.98	0.00
18.80	2.48	0.99	0.00
19.00	2.49	0.99	0.00
19.20	2.50	1.00	0.00
19.40	2.50	1.00	0.00
19.60	2.51	1.01	0.00
19.80	2.52	1.01	0.00
20.00	**2.53**	**1.02**	0.00

Summary for Subcatchment 12S: to inlet 3

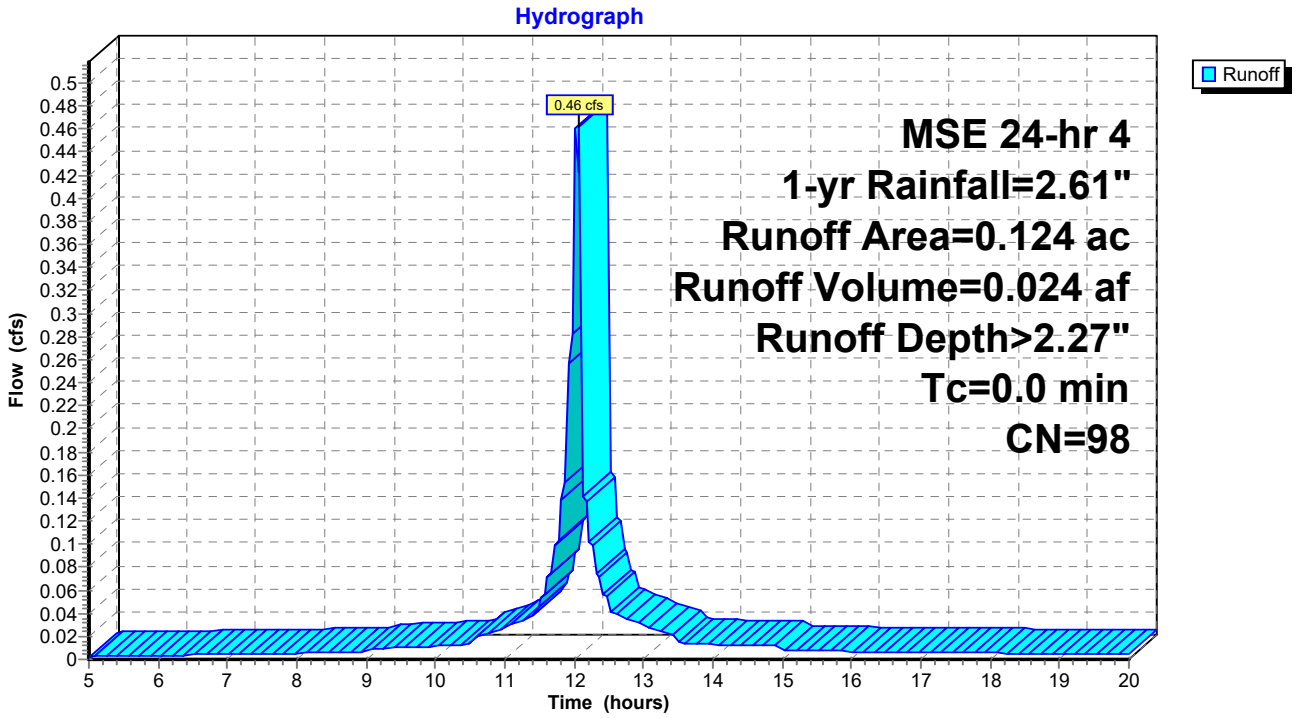
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.46 cfs @ 12.08 hrs, Volume= 0.024 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.009	98	open shelter
*	0.059	98	SW
*	0.034	98	parking AC pavement
*	0.022	98	PIP play surface
	0.124	98	Weighted Average
	0.124		100.00% Impervious Area

Subcatchment 12S: to inlet 3



Hydrograph for Subcatchment 12S: to inlet 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.00
5.20	0.13	0.03	0.00
5.40	0.14	0.03	0.00
5.60	0.14	0.03	0.00
5.80	0.15	0.04	0.00
6.00	0.16	0.04	0.00
6.20	0.17	0.05	0.00
6.40	0.18	0.06	0.00
6.60	0.19	0.06	0.00
6.80	0.20	0.07	0.00
7.00	0.21	0.07	0.00
7.20	0.22	0.08	0.00
7.40	0.23	0.09	0.00
7.60	0.24	0.10	0.00
7.80	0.25	0.10	0.01
8.00	0.26	0.11	0.01
8.20	0.27	0.12	0.01
8.40	0.28	0.13	0.01
8.60	0.29	0.14	0.01
8.80	0.30	0.15	0.01
9.00	0.32	0.16	0.01
9.20	0.33	0.17	0.01
9.40	0.35	0.19	0.01
9.60	0.37	0.21	0.01
9.80	0.39	0.22	0.01
10.00	0.41	0.24	0.01
10.20	0.43	0.26	0.01
10.40	0.46	0.28	0.01
10.60	0.48	0.30	0.02
10.80	0.52	0.34	0.02
11.00	0.56	0.38	0.03
11.20	0.62	0.43	0.03
11.40	0.68	0.48	0.04
11.60	0.75	0.55	0.06
11.80	0.90	0.69	0.12
12.00	1.22	1.01	**0.36**
12.20	1.71	1.49	**0.12**
12.40	1.86	1.63	0.07
12.60	1.93	1.71	0.04
12.80	1.99	1.77	0.03
13.00	2.05	1.82	0.03
13.20	2.09	1.86	0.03
13.40	2.13	1.90	0.02
13.60	2.15	1.93	0.01
13.80	2.18	1.95	0.01
14.00	2.20	1.97	0.01
14.20	2.22	1.99	0.01
14.40	2.24	2.01	0.01
14.60	2.26	2.03	0.01
14.80	2.28	2.05	0.01
15.00	2.29	2.07	0.01
15.20	2.31	2.08	0.01
15.40	2.32	2.09	0.01
15.60	2.33	2.10	0.01
15.80	2.34	2.11	0.01
16.00	2.35	2.12	0.01
16.20	2.36	2.13	0.01
16.40	2.37	2.14	0.01
16.60	2.38	2.15	0.01
16.80	2.39	2.16	0.01
17.00	2.40	2.17	0.01
17.20	2.41	2.18	0.01
17.40	2.42	2.19	0.01
17.60	2.43	2.20	0.01
17.80	2.44	2.21	0.01
18.00	2.45	2.22	0.01
18.20	2.46	2.23	0.01
18.40	2.47	2.24	0.01
18.60	2.47	2.25	0.00
18.80	2.48	2.25	0.00
19.00	2.49	2.26	0.00
19.20	2.50	2.27	0.00
19.40	2.50	2.28	0.00
19.60	2.51	2.28	0.00
19.80	2.52	2.29	0.00
20.00	**2.53**	**2.30**	0.00

Summary for Subcatchment 13S: to NDS 2

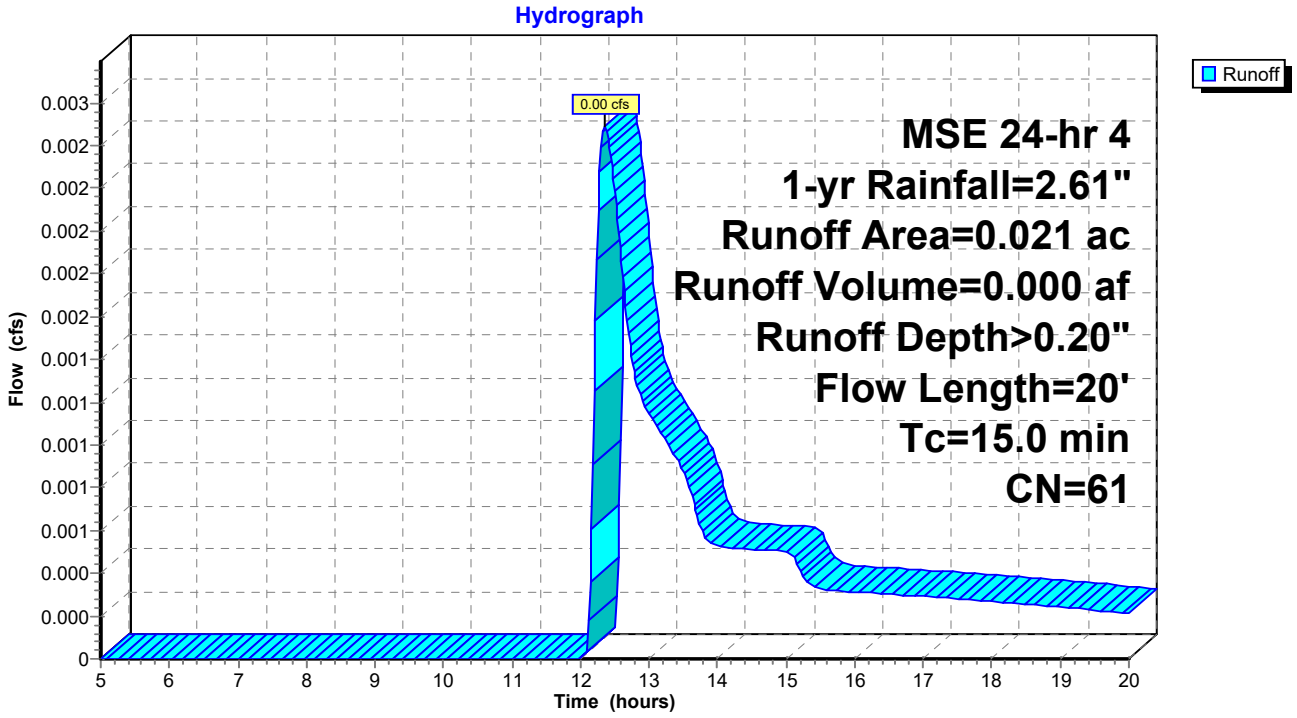
Runoff = 0.00 cfs @ 12.34 hrs, Volume= 0.000 af, Depth> 0.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.021	61	lawn, HSG B
	0.021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	20		0.02		**Direct Entry, lawn**

Subcatchment 13S: to NDS 2



Hydrograph for Subcatchment 13S: to NDS 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.00	0.00
10.60	0.48	0.00	0.00
10.80	0.52	0.00	0.00
11.00	0.56	0.00	0.00
11.20	0.62	0.00	0.00
11.40	0.68	0.00	0.00
11.60	0.75	0.00	0.00
11.80	0.90	0.00	0.00
12.00	1.22	0.00	0.00
12.20	1.71	0.03	**0.00**
12.40	1.86	0.05	**0.00**
12.60	1.93	0.06	0.00
12.80	1.99	0.07	0.00
13.00	2.05	0.08	0.00
13.20	2.09	0.09	0.00
13.40	2.13	0.10	0.00
13.60	2.15	0.11	0.00
13.80	2.18	0.11	0.00
14.00	2.20	0.12	0.00
14.20	2.22	0.12	0.00
14.40	2.24	0.12	0.00
14.60	2.26	0.13	0.00
14.80	2.28	0.13	0.00
15.00	2.29	0.14	0.00
15.20	2.31	0.14	0.00
15.40	2.32	0.15	0.00
15.60	2.33	0.15	0.00
15.80	2.34	0.15	0.00
16.00	2.35	0.15	0.00
16.20	2.36	0.16	0.00
16.40	2.37	0.16	0.00
16.60	2.38	0.16	0.00
16.80	2.39	0.17	0.00
17.00	2.40	0.17	0.00
17.20	2.41	0.17	0.00
17.40	2.42	0.17	0.00
17.60	2.43	0.18	0.00
17.80	2.44	0.18	0.00
18.00	2.45	0.18	0.00
18.20	2.46	0.18	0.00
18.40	2.47	0.19	0.00
18.60	2.47	0.19	0.00
18.80	2.48	0.19	0.00
19.00	2.49	0.19	0.00
19.20	2.50	0.20	0.00
19.40	2.50	0.20	0.00
19.60	2.51	0.20	0.00
19.80	2.52	0.20	0.00
20.00	**2.53**	**0.20**	0.00

Summary for Subcatchment 14S: to NDS 3-5

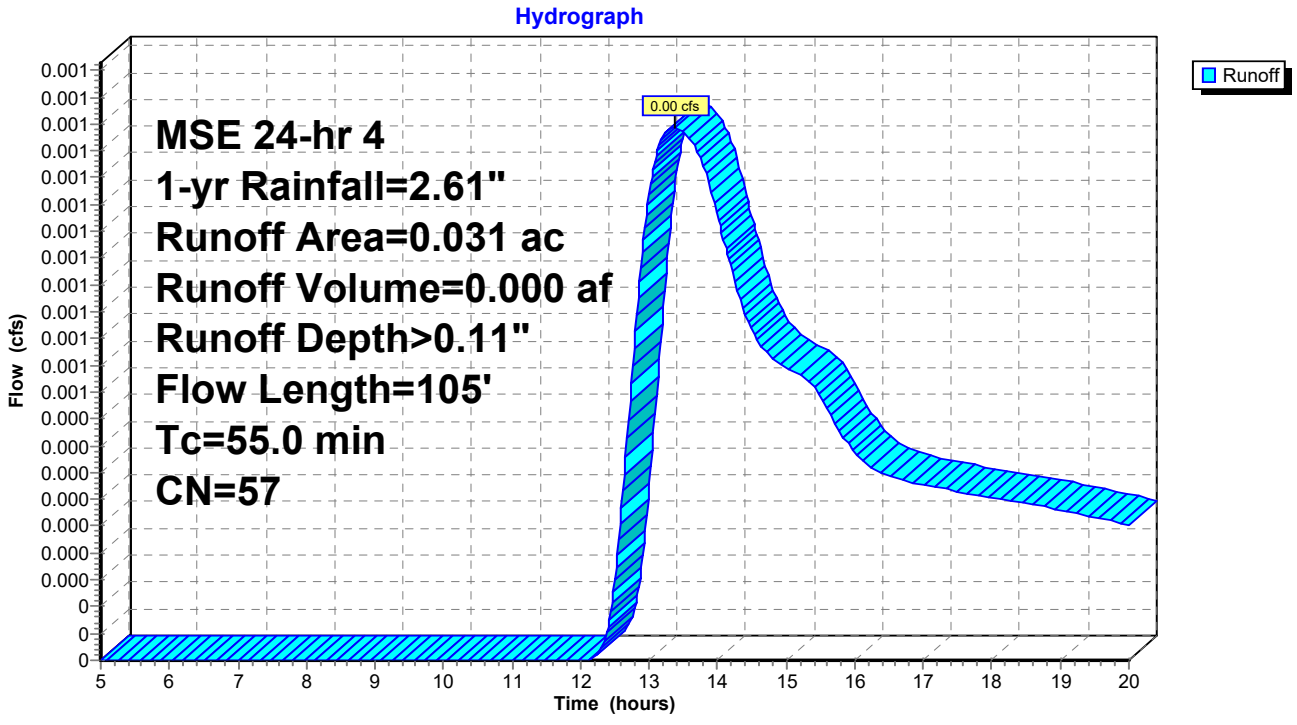
Runoff = 0.00 cfs @ 13.37 hrs, Volume= 0.000 af, Depth> 0.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.022	61	lawn, HSG B
*	0.008	39	LS
*	0.001	98	SW
	0.031	57	Weighted Average
	0.030		96.77% Pervious Area
	0.001		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	20		0.02		**Direct Entry, lawn**
20.0	75		0.06		**Direct Entry, LS**
20.0	10		0.01		**Direct Entry, SW via LS**
55.0	105	Total			

Subcatchment 14S: to NDS 3-5



Hydrograph for Subcatchment 14S: to NDS 3-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.00	0.00
10.60	0.48	0.00	0.00
10.80	0.52	0.00	0.00
11.00	0.56	0.00	0.00
11.20	0.62	0.00	0.00
11.40	0.68	0.00	0.00
11.60	0.75	0.00	0.00
11.80	0.90	0.00	0.00
12.00	1.22	0.00	0.00
12.20	1.71	0.01	0.00
12.40	1.86	0.02	0.00
12.60	1.93	0.02	0.00
12.80	1.99	0.03	0.00
13.00	2.05	0.04	0.00
13.20	2.09	0.04	**0.00**
13.40	2.13	0.05	**0.00**
13.60	2.15	0.05	0.00
13.80	2.18	0.05	0.00
14.00	2.20	0.06	0.00
14.20	2.22	0.06	0.00
14.40	2.24	0.06	0.00
14.60	2.26	0.07	0.00
14.80	2.28	0.07	0.00
15.00	2.29	0.07	0.00
15.20	2.31	0.08	0.00
15.40	2.32	0.08	0.00
15.60	2.33	0.08	0.00
15.80	2.34	0.08	0.00
16.00	2.35	0.08	0.00
16.20	2.36	0.09	0.00
16.40	2.37	0.09	0.00
16.60	2.38	0.09	0.00
16.80	2.39	0.09	0.00
17.00	2.40	0.09	0.00
17.20	2.41	0.10	0.00
17.40	2.42	0.10	0.00
17.60	2.43	0.10	0.00
17.80	2.44	0.10	0.00
18.00	2.45	0.10	0.00
18.20	2.46	0.11	0.00
18.40	2.47	0.11	0.00
18.60	2.47	0.11	0.00
18.80	2.48	0.11	0.00
19.00	2.49	0.11	0.00
19.20	2.50	0.11	0.00
19.40	2.50	0.12	0.00
19.60	2.51	0.12	0.00
19.80	2.52	0.12	0.00
20.00	**2.53**	**0.12**	0.00

Summary for Subcatchment 16S: to NDS11-6

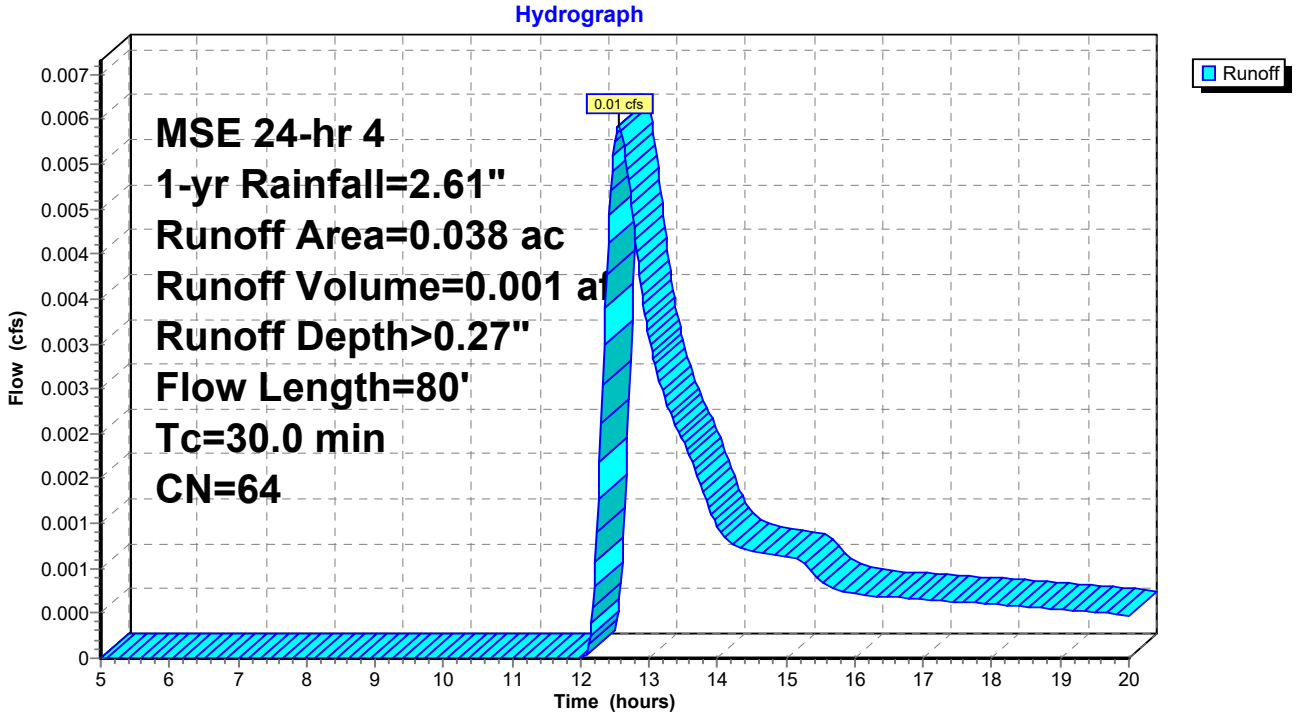
Runoff = 0.01 cfs @ 12.56 hrs, Volume= 0.001 af, Depth> 0.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.022	39	LS
*	0.016	98	SW
	0.038	64	Weighted Average
	0.022		57.89% Pervious Area
	0.016		42.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	40		0.04		**Direct Entry, LS**
15.0	40		0.04		**Direct Entry, SW via LS**
30.0	80	Total			

Subcatchment 16S: to NDS11-6



Hydrograph for Subcatchment 16S: to NDS11-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.00	0.00
10.60	0.48	0.00	0.00
10.80	0.52	0.00	0.00
11.00	0.56	0.00	0.00
11.20	0.62	0.00	0.00
11.40	0.68	0.00	0.00
11.60	0.75	0.00	0.00
11.80	0.90	0.00	0.00
12.00	1.22	0.00	0.00
12.20	1.71	0.06	0.00
12.40	1.86	0.08	**0.00**
12.60	1.93	0.10	**0.01**
12.80	1.99	0.12	0.00
13.00	2.05	0.13	0.00
13.20	2.09	0.14	0.00
13.40	2.13	0.15	0.00
13.60	2.15	0.16	0.00
13.80	2.18	0.17	0.00
14.00	2.20	0.17	0.00
14.20	2.22	0.18	0.00
14.40	2.24	0.18	0.00
14.60	2.26	0.19	0.00
14.80	2.28	0.20	0.00
15.00	2.29	0.20	0.00
15.20	2.31	0.20	0.00
15.40	2.32	0.21	0.00
15.60	2.33	0.21	0.00
15.80	2.34	0.22	0.00
16.00	2.35	0.22	0.00
16.20	2.36	0.22	0.00
16.40	2.37	0.23	0.00
16.60	2.38	0.23	0.00
16.80	2.39	0.23	0.00
17.00	2.40	0.24	0.00
17.20	2.41	0.24	0.00
17.40	2.42	0.24	0.00
17.60	2.43	0.25	0.00
17.80	2.44	0.25	0.00
18.00	2.45	0.25	0.00
18.20	2.46	0.26	0.00
18.40	2.47	0.26	0.00
18.60	2.47	0.26	0.00
18.80	2.48	0.26	0.00
19.00	2.49	0.27	0.00
19.20	2.50	0.27	0.00
19.40	2.50	0.27	0.00
19.60	2.51	0.27	0.00
19.80	2.52	0.28	0.00
20.00	**2.53**	**0.28**	0.00

Summary for Reach 6R: 10" roof

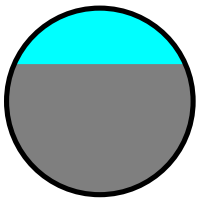
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 302% of Manning's capacity
[76] Warning: Detained 0.010 af (Pond w/culvert advised)

Inflow Area = 0.305 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.82 cfs @ 12.19 hrs, Volume= 0.058 af
Outflow = 0.28 cfs @ 11.97 hrs, Volume= 0.058 af, Atten= 66%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.03 fps, Avg. Travel Time= 0.4 min

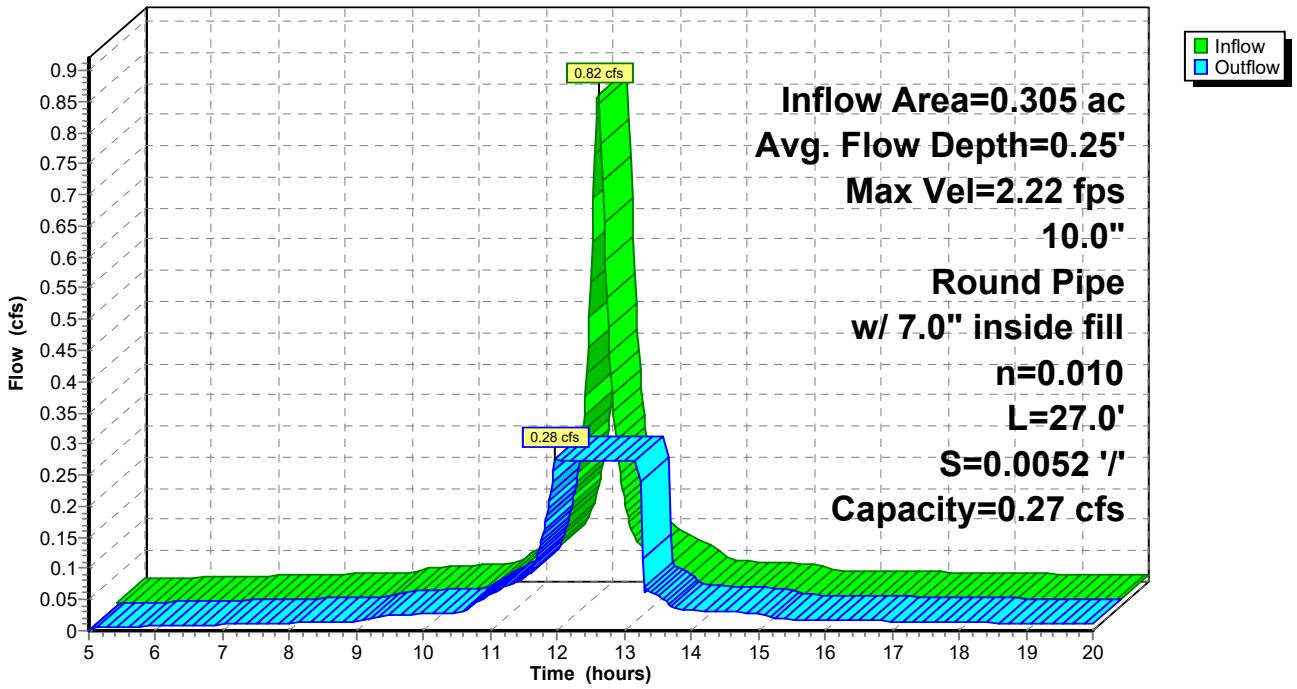
Peak Storage= 4 cf @ 11.98 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 27.0' Slope= 0.0052 '/'
Inlet Invert= 665.72', Outlet Invert= 665.58'



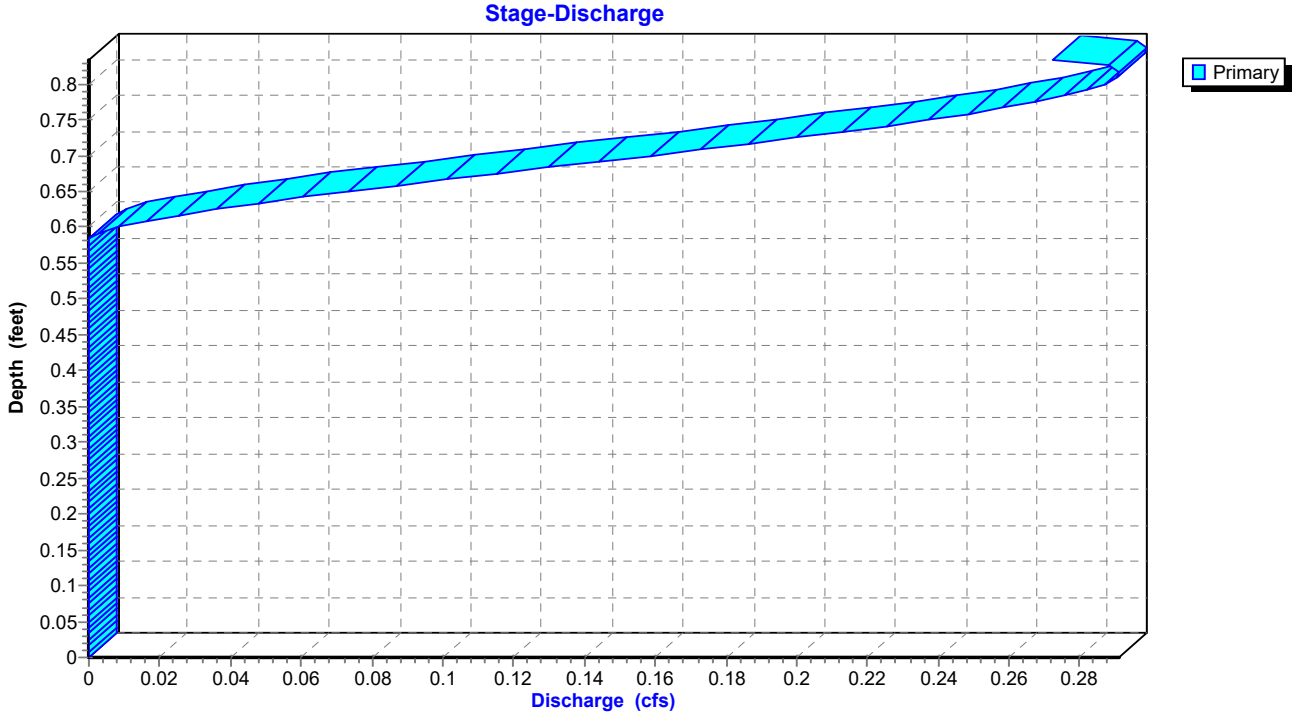
Reach 6R: 10" roof

Hydrograph

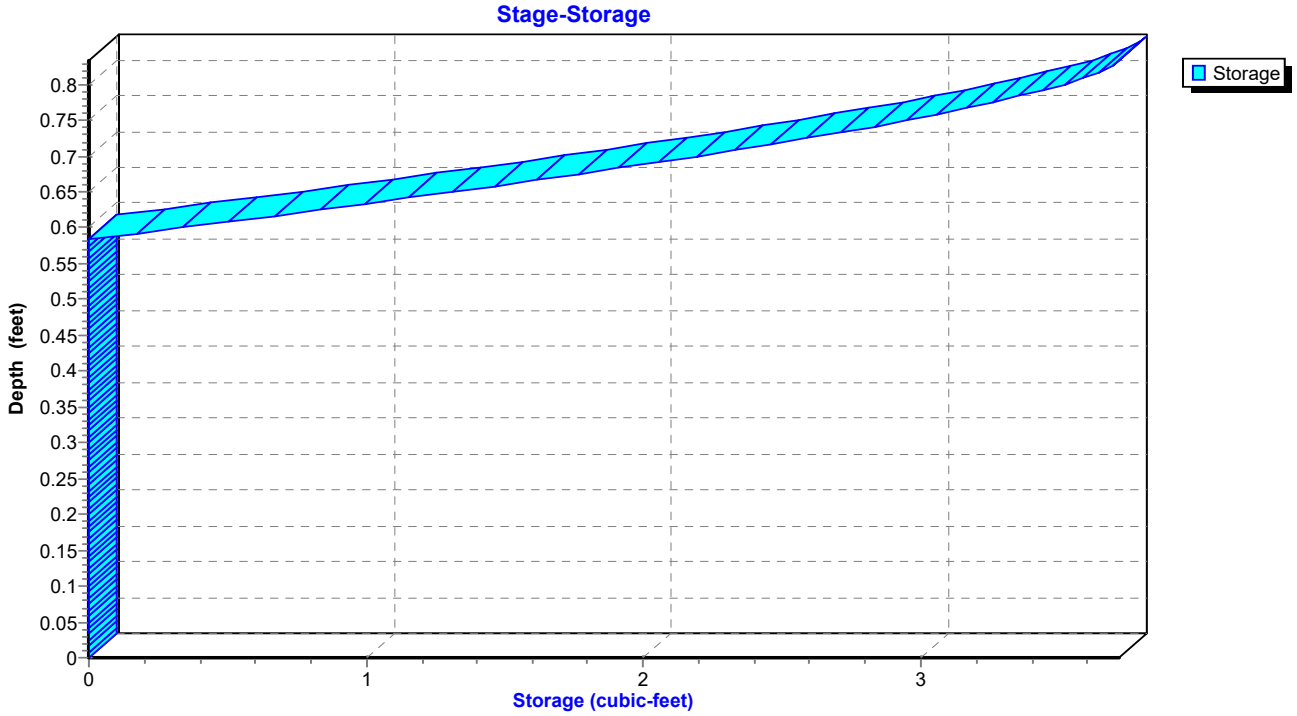


Reach 6R: 10" roof

Stage-Discharge



Reach 6R: 10" roof



Hydrograph for Reach 6R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.30	0.00
5.40	0.01	0	666.32	0.01
5.80	0.01	0	666.32	0.01
6.20	0.01	0	666.32	0.01
6.60	0.01	0	666.32	0.01
7.00	0.01	0	666.32	0.01
7.40	0.01	0	666.32	0.01
7.80	0.01	0	666.32	0.01
8.20	0.01	0	666.32	0.01
8.60	0.01	0	666.33	0.01
9.00	0.01	0	666.33	0.01
9.40	0.02	1	666.34	0.02
9.80	0.03	1	666.34	0.03
10.20	0.03	1	666.34	0.03
10.60	0.03	1	666.34	0.03
11.00	0.06	1	666.36	0.06
11.40	0.08	1	666.37	0.08
11.80	0.17	**2**	**666.42**	**0.16**
12.20	**0.82**	**4**	**666.55**	**0.27**
12.60	0.16	4	666.55	0.27
13.00	0.08	4	666.55	0.27
13.40	0.06	1	666.36	0.06
13.80	0.03	1	666.34	0.04
14.20	0.03	1	666.34	0.03
14.60	0.03	1	666.34	0.03
15.00	0.03	1	666.34	0.03
15.40	0.02	1	666.33	0.02
15.80	0.02	1	666.33	0.02
16.20	0.02	1	666.33	0.02
16.60	0.02	1	666.33	0.02
17.00	0.02	0	666.33	0.02
17.40	0.01	0	666.33	0.01
17.80	0.01	0	666.33	0.01
18.20	0.01	0	666.33	0.01
18.60	0.01	0	666.32	0.01
19.00	0.01	0	666.32	0.01
19.40	0.01	0	666.32	0.01
19.80	0.01	0	666.32	0.01

Stage-Discharge for Reach 6R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.35	0.00
666.32	0.67	0.01
666.33	0.90	0.02
666.34	1.08	0.03
666.35	1.25	0.04
666.36	1.39	0.06
666.37	1.51	0.07
666.38	1.62	0.09
666.39	1.72	0.11
666.40	1.81	0.12
666.41	1.88	0.14
666.42	1.95	0.16
666.43	2.01	0.18
666.44	2.06	0.19
666.45	2.11	0.21
666.46	2.14	0.22
666.47	2.17	0.24
666.48	2.19	0.25
666.49	2.21	0.26
666.50	**2.22**	0.27
666.51	2.21	0.28
666.52	2.20	0.29
666.53	2.18	**0.29**
666.54	2.14	0.29
666.55	2.03	0.28

Stage-Area-Storage for Reach 6R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.72	0.0	0
665.73	0.0	0
665.74	0.0	0
665.75	0.0	0
665.76	0.0	0
665.77	0.0	0
665.78	0.0	0
665.79	0.0	0
665.80	0.0	0
665.81	0.0	0
665.82	0.0	0
665.83	0.0	0
665.84	0.0	0
665.85	0.0	0
665.86	0.0	0
665.87	0.0	0
665.88	0.0	0
665.89	0.0	0
665.90	0.0	0
665.91	0.0	0
665.92	0.0	0
665.93	0.0	0
665.94	0.0	0
665.95	0.0	0
665.96	0.0	0
665.97	0.0	0
665.98	0.0	0
665.99	0.0	0
666.00	0.0	0
666.01	0.0	0
666.02	0.0	0
666.03	0.0	0
666.04	0.0	0
666.05	0.0	0
666.06	0.0	0
666.07	0.0	0
666.08	0.0	0
666.09	0.0	0
666.10	0.0	0
666.11	0.0	0
666.12	0.0	0
666.13	0.0	0
666.14	0.0	0
666.15	0.0	0
666.16	0.0	0
666.17	0.0	0
666.18	0.0	0
666.19	0.0	0
666.20	0.0	0
666.21	0.0	0
666.22	0.0	0
666.23	0.0	0
666.24	0.0	0
666.25	0.0	0
666.26	0.0	0
666.27	0.0	0
666.28	0.0	0
666.29	0.0	0
666.30	0.0	0
666.31	0.0	0
666.32	0.0	0
666.33	0.0	1
666.34	0.0	1
666.35	0.0	1
666.36	0.0	1
666.37	0.0	1
666.38	0.1	1
666.39	0.1	2
666.40	0.1	2
666.41	0.1	2
666.42	0.1	2
666.43	0.1	2
666.44	0.1	3
666.45	0.1	3
666.46	0.1	3
666.47	0.1	3
666.48	0.1	3
666.49	0.1	3
666.50	0.1	3
666.51	0.1	3
666.52	0.1	4
666.53	0.1	4
666.54	0.1	4
666.55	**0.1**	**4**

Summary for Reach 7R: MH8 12"

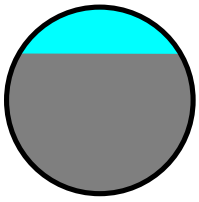
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 200% of Manning's capacity
[76] Warning: Detained 0.033 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 6R INLET depth by 0.15' @ 15.34 hrs
[63] Warning: Exceeded Reach 8R INLET depth by 0.07' @ 15.34 hrs

Inflow Area = 0.644 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.55 cfs @ 11.97 hrs, Volume= 0.122 af
Outflow = 0.28 cfs @ 11.73 hrs, Volume= 0.122 af, Atten= 49%, Lag= 0.0 min

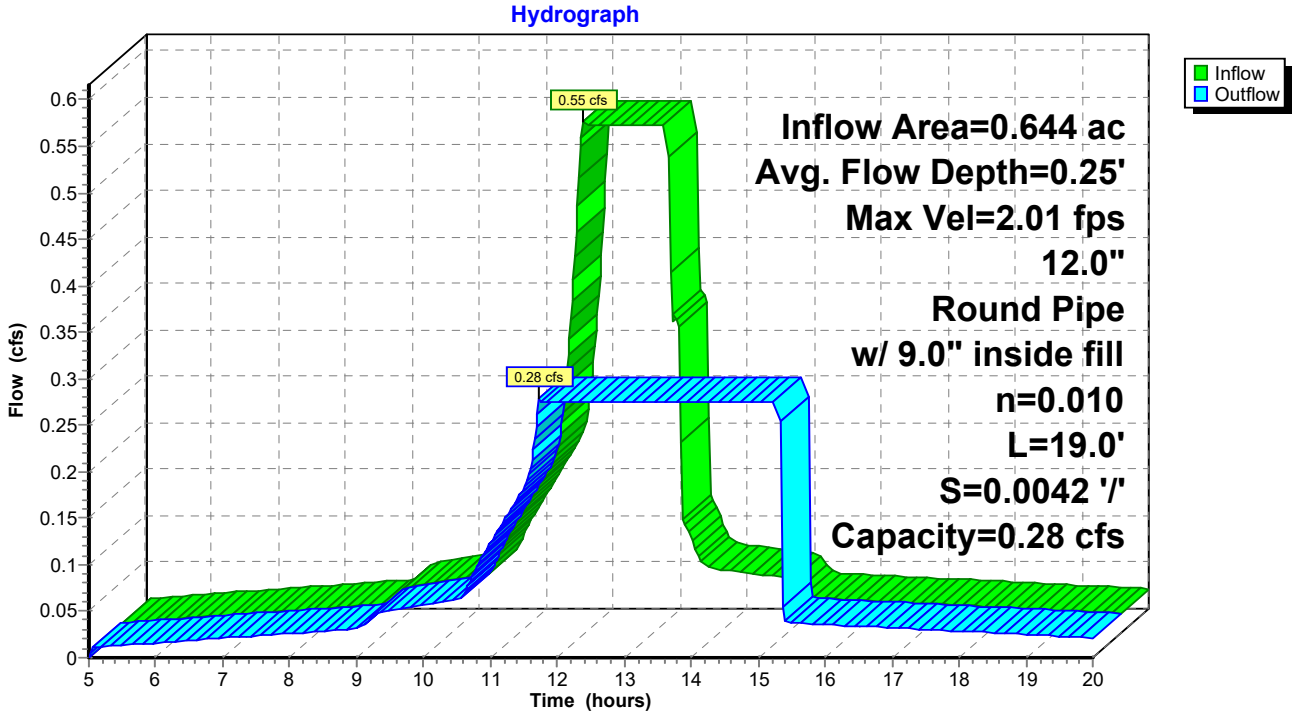
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.22 fps, Avg. Travel Time= 0.3 min

Peak Storage= 3 cf @ 11.74 hrs
Average Depth at Peak Storage= 1.00' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.28 cfs

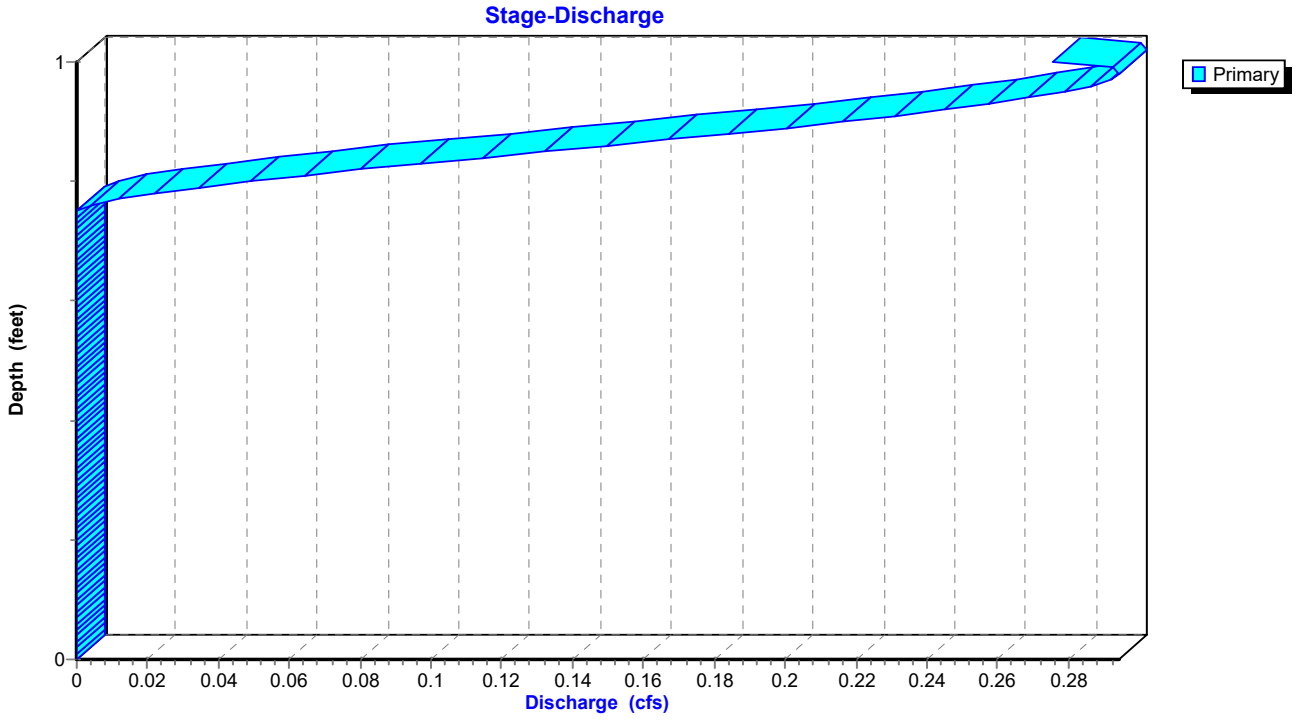
12.0" Round Pipe w/ 9.0" inside fill
n= 0.010
Length= 19.0' Slope= 0.0042 '/'
Inlet Invert= 665.48', Outlet Invert= 665.40'



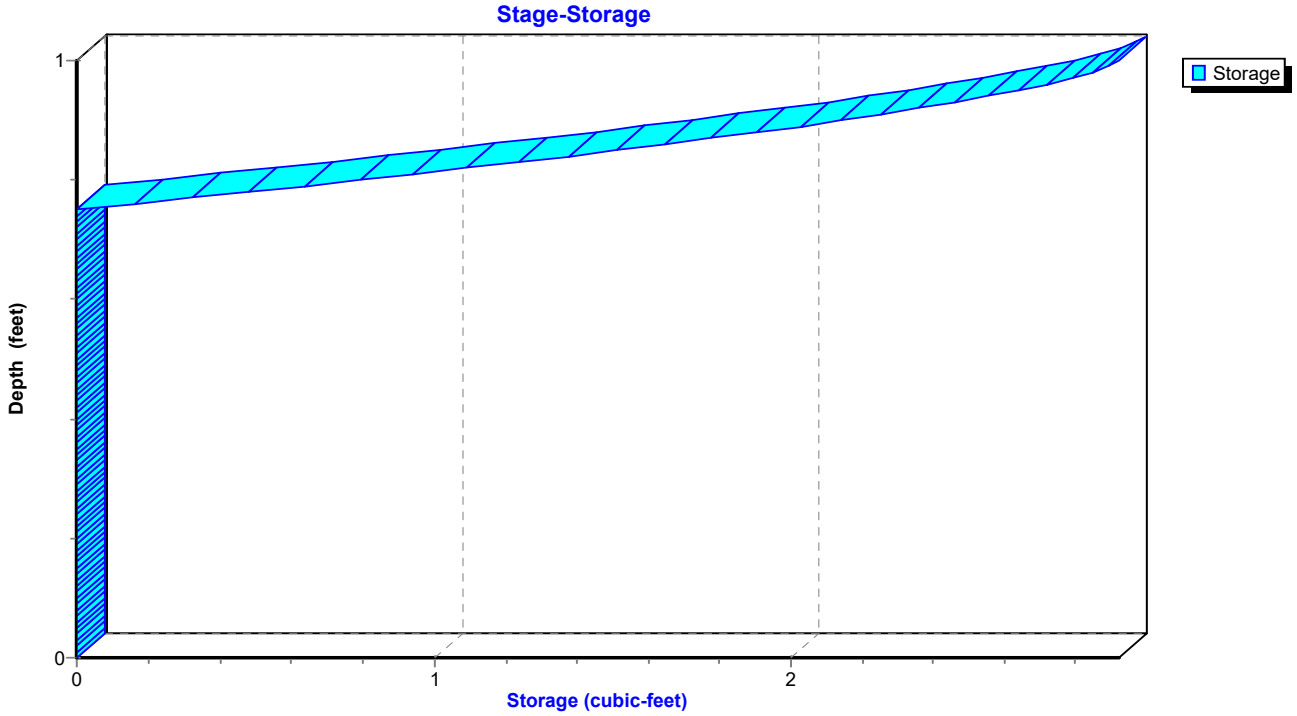
Reach 7R: MH8 12"



Reach 7R: MH8 12"



Reach 7R: MH8 12"



Hydrograph for Reach 7R: MH8 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.23	0.00
5.40	0.01	0	666.25	0.01
5.80	0.02	0	666.25	0.01
6.20	0.02	0	666.26	0.02
6.60	0.02	0	666.26	0.02
7.00	0.02	0	666.26	0.02
7.40	0.02	0	666.26	0.02
7.80	0.03	1	666.26	0.03
8.20	0.03	1	666.26	0.03
8.60	0.03	1	666.27	0.03
9.00	0.03	1	666.27	0.03
9.40	0.05	1	666.28	0.05
9.80	0.06	1	666.28	0.06
10.20	0.06	1	666.29	0.06
10.60	0.07	1	666.29	0.07
11.00	0.12	1	666.33	0.12
11.40	0.17	**2**	**666.35**	**0.17**
11.80	**0.36**	**3**	**666.48**	**0.28**
12.20	**0.55**	3	666.48	0.28
12.60	0.55	3	666.48	0.28
13.00	0.55	3	666.48	0.28
13.40	0.34	3	666.48	0.28
13.80	0.07	3	666.48	0.28
14.20	0.07	3	666.48	0.28
14.60	0.06	3	666.48	0.28
15.00	0.06	3	666.48	0.28
15.40	0.04	1	666.27	0.04
15.80	0.04	1	666.27	0.04
16.20	0.04	1	666.27	0.04
16.60	0.03	1	666.27	0.03
17.00	0.03	1	666.27	0.03
17.40	0.03	1	666.27	0.03
17.80	0.03	1	666.27	0.03
18.20	0.03	1	666.26	0.03
18.60	0.03	1	666.26	0.03
19.00	0.03	1	666.26	0.03
19.40	0.02	1	666.26	0.02
19.80	0.02	0	666.26	0.02

Stage-Discharge for Reach 7R: MH8 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.44	0.00
666.25	0.68	0.01
666.26	0.87	0.02
666.27	1.03	0.03
666.28	1.17	0.05
666.29	1.29	0.06
666.30	1.40	0.08
666.31	1.50	0.10
666.32	1.58	0.11
666.33	1.66	0.13
666.34	1.72	0.15
666.35	1.78	0.17
666.36	1.84	0.18
666.37	1.88	0.20
666.38	1.92	0.22
666.39	1.95	0.23
666.40	1.97	0.25
666.41	1.99	0.26
666.42	2.00	0.27
666.43	**2.01**	0.28
666.44	2.00	0.29
666.45	1.99	0.29
666.46	1.96	**0.29**
666.47	1.92	0.29
666.48	1.79	0.28

Stage-Area-Storage for Reach 7R: MH8 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.48	0.0	0	665.99	0.0	0
665.49	0.0	0	666.00	0.0	0
665.50	0.0	0	666.01	0.0	0
665.51	0.0	0	666.02	0.0	0
665.52	0.0	0	666.03	0.0	0
665.53	0.0	0	666.04	0.0	0
665.54	0.0	0	666.05	0.0	0
665.55	0.0	0	666.06	0.0	0
665.56	0.0	0	666.07	0.0	0
665.57	0.0	0	666.08	0.0	0
665.58	0.0	0	666.09	0.0	0
665.59	0.0	0	666.10	0.0	0
665.60	0.0	0	666.11	0.0	0
665.61	0.0	0	666.12	0.0	0
665.62	0.0	0	666.13	0.0	0
665.63	0.0	0	666.14	0.0	0
665.64	0.0	0	666.15	0.0	0
665.65	0.0	0	666.16	0.0	0
665.66	0.0	0	666.17	0.0	0
665.67	0.0	0	666.18	0.0	0
665.68	0.0	0	666.19	0.0	0
665.69	0.0	0	666.20	0.0	0
665.70	0.0	0	666.21	0.0	0
665.71	0.0	0	666.22	0.0	0
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	1
665.77	0.0	0	666.28	0.0	1
665.78	0.0	0	666.29	0.0	1
665.79	0.0	0	666.30	0.1	1
665.80	0.0	0	666.31	0.1	1
665.81	0.0	0	666.32	0.1	1
665.82	0.0	0	666.33	0.1	2
665.83	0.0	0	666.34	0.1	2
665.84	0.0	0	666.35	0.1	2
665.85	0.0	0	666.36	0.1	2
665.86	0.0	0	666.37	0.1	2
665.87	0.0	0	666.38	0.1	2
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	3
665.92	0.0	0	666.43	0.1	3
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.2	3
665.97	0.0	0	666.48	**0.2**	**3**
665.98	0.0	0			

Summary for Reach 8R: 10" roof

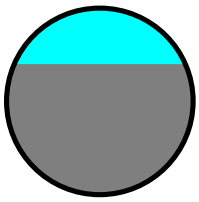
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 357% of Manning's capacity
[76] Warning: Detained 0.013 af (Pond w/culvert advised)

Inflow Area = 0.339 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.98 cfs @ 12.17 hrs, Volume= 0.064 af
Outflow = 0.29 cfs @ 11.92 hrs, Volume= 0.064 af, Atten= 71%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.07 fps, Avg. Travel Time= 0.7 min

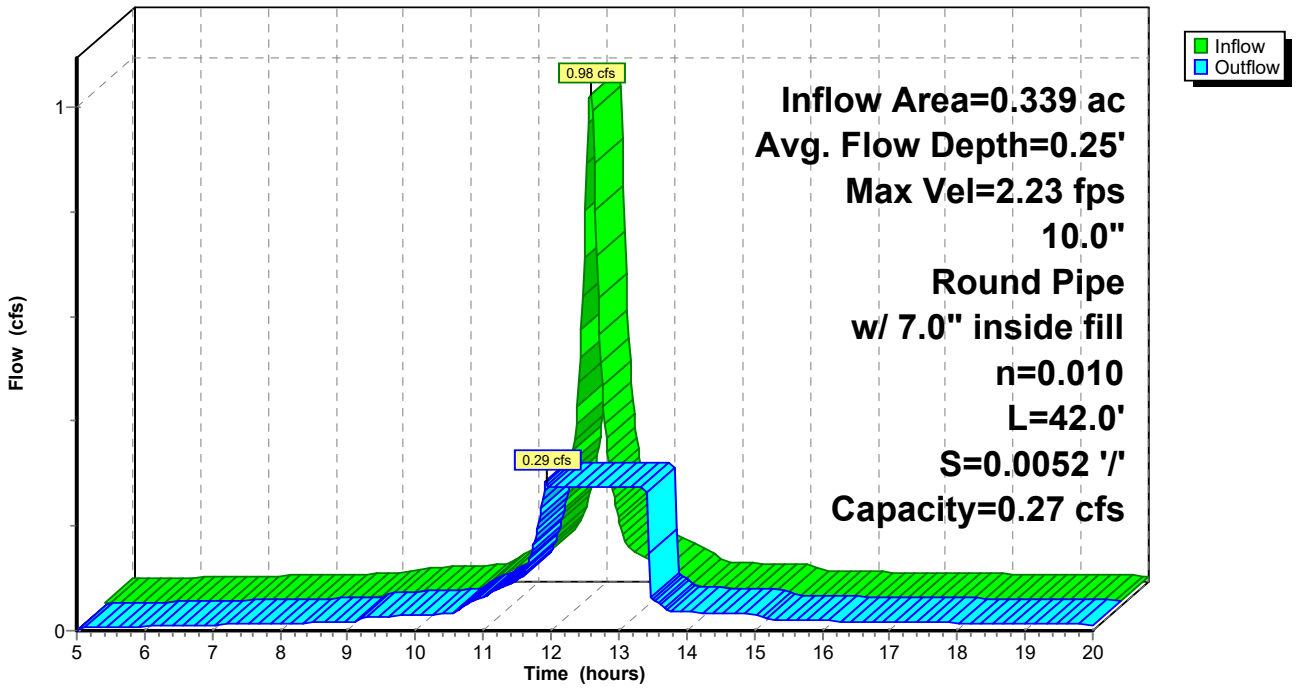
Peak Storage= 6 cf @ 11.94 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 42.0' Slope= 0.0052 '/'
Inlet Invert= 665.80', Outlet Invert= 665.58'



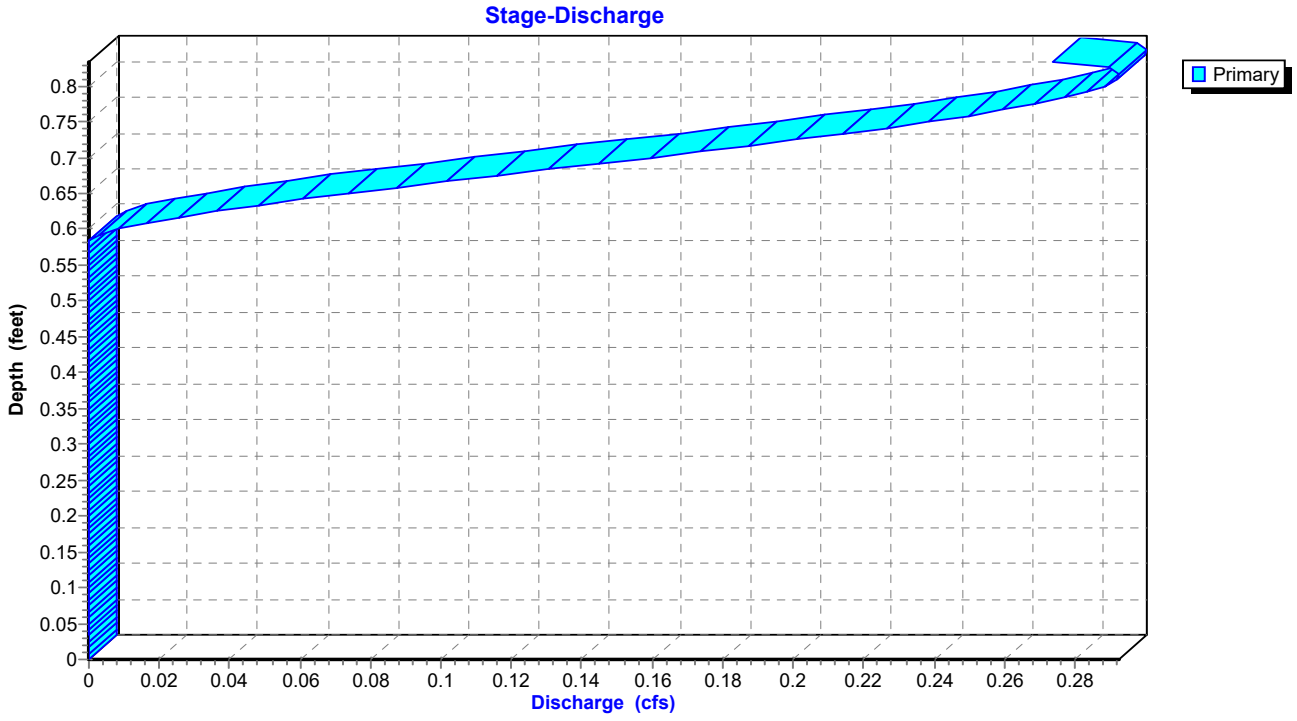
Reach 8R: 10" roof

Hydrograph

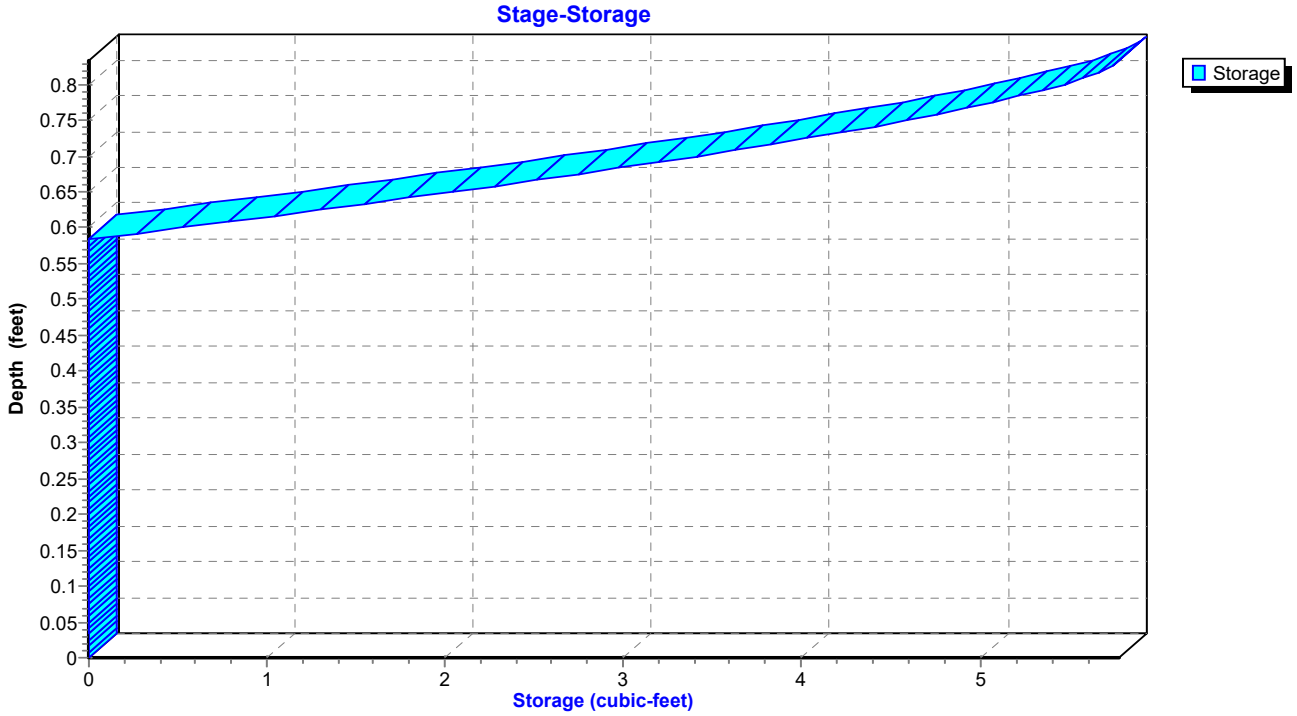


Reach 8R: 10" roof

Stage-Discharge



Reach 8R: 10" roof



Hydrograph for Reach 8R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.38	0.00
5.40	0.01	0	666.40	0.01
5.80	0.01	1	666.40	0.01
6.20	0.01	1	666.40	0.01
6.60	0.01	1	666.40	0.01
7.00	0.01	1	666.40	0.01
7.40	0.01	1	666.40	0.01
7.80	0.01	1	666.41	0.01
8.20	0.01	1	666.41	0.01
8.60	0.02	1	666.41	0.02
9.00	0.02	1	666.41	0.02
9.40	0.03	1	666.42	0.03
9.80	0.03	1	666.42	0.03
10.20	0.03	1	666.42	0.03
10.60	0.04	1	666.42	0.04
11.00	0.07	2	666.45	0.07
11.40	0.09	2	666.46	0.09
11.80	**0.20**	**4**	**666.52**	**0.19**
12.20	**0.93**	**6**	**666.63**	**0.27**
12.60	0.16	6	666.63	0.27
13.00	0.09	6	666.63	0.27
13.40	0.07	6	666.63	0.27
13.80	0.04	1	666.43	0.04
14.20	0.04	1	666.42	0.04
14.60	0.03	1	666.42	0.03
15.00	0.03	1	666.42	0.03
15.40	0.02	1	666.41	0.02
15.80	0.02	1	666.41	0.02
16.20	0.02	1	666.41	0.02
16.60	0.02	1	666.41	0.02
17.00	0.02	1	666.41	0.02
17.40	0.02	1	666.41	0.02
17.80	0.02	1	666.41	0.02
18.20	0.01	1	666.41	0.01
18.60	0.01	1	666.41	0.01
19.00	0.01	1	666.40	0.01
19.40	0.01	1	666.40	0.01
19.80	0.01	1	666.40	0.01

Stage-Discharge for Reach 8R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.35	0.00
666.40	0.68	0.01
666.41	0.90	0.02
666.42	1.09	0.03
666.43	1.25	0.04
666.44	1.39	0.06
666.45	1.52	0.07
666.46	1.63	0.09
666.47	1.73	0.11
666.48	1.81	0.12
666.49	1.89	0.14
666.50	1.96	0.16
666.51	2.02	0.18
666.52	2.07	0.19
666.53	2.12	0.21
666.54	2.15	0.22
666.55	2.18	0.24
666.56	2.21	0.25
666.57	2.22	0.26
666.58	**2.23**	0.27
666.59	2.23	0.28
666.60	2.21	0.29
666.61	2.19	**0.29**
666.62	2.15	0.29
666.63	2.04	0.28

Stage-Area-Storage for Reach 8R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.80	0.0	0
665.81	0.0	0
665.82	0.0	0
665.83	0.0	0
665.84	0.0	0
665.85	0.0	0
665.86	0.0	0
665.87	0.0	0
665.88	0.0	0
665.89	0.0	0
665.90	0.0	0
665.91	0.0	0
665.92	0.0	0
665.93	0.0	0
665.94	0.0	0
665.95	0.0	0
665.96	0.0	0
665.97	0.0	0
665.98	0.0	0
665.99	0.0	0
666.00	0.0	0
666.01	0.0	0
666.02	0.0	0
666.03	0.0	0
666.04	0.0	0
666.05	0.0	0
666.06	0.0	0
666.07	0.0	0
666.08	0.0	0
666.09	0.0	0
666.10	0.0	0
666.11	0.0	0
666.12	0.0	0
666.13	0.0	0
666.14	0.0	0
666.15	0.0	0
666.16	0.0	0
666.17	0.0	0
666.18	0.0	0
666.19	0.0	0
666.20	0.0	0
666.21	0.0	0
666.22	0.0	0
666.23	0.0	0
666.24	0.0	0
666.25	0.0	0
666.26	0.0	0
666.27	0.0	0
666.28	0.0	0
666.29	0.0	0
666.30	0.0	0
666.31	0.0	0
666.32	0.0	0
666.33	0.0	0
666.34	0.0	0
666.35	0.0	0
666.36	0.0	0
666.37	0.0	0
666.38	0.0	0
666.39	0.0	0
666.40	0.0	1
666.41	0.0	1
666.42	0.0	1
666.43	0.0	1
666.44	0.0	2
666.45	0.0	2
666.46	0.1	2
666.47	0.1	3
666.48	0.1	3
666.49	0.1	3
666.50	0.1	3
666.51	0.1	4
666.52	0.1	4
666.53	0.1	4
666.54	0.1	4
666.55	0.1	5
666.56	0.1	5
666.57	0.1	5
666.58	0.1	5
666.59	0.1	5
666.60	0.1	5
666.61	0.1	6
666.62	0.1	6
666.63	**0.1**	**6**

Summary for Reach 9R: inlet 3 18"

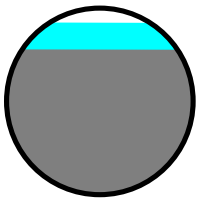
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[63] Warning: Exceeded Reach 7R INLET depth by 0.24' @ 15.38 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.74 cfs @ 12.08 hrs, Volume= 0.145 af
Outflow = 0.74 cfs @ 12.04 hrs, Volume= 0.145 af, Atten= 0%, Lag= 0.0 min

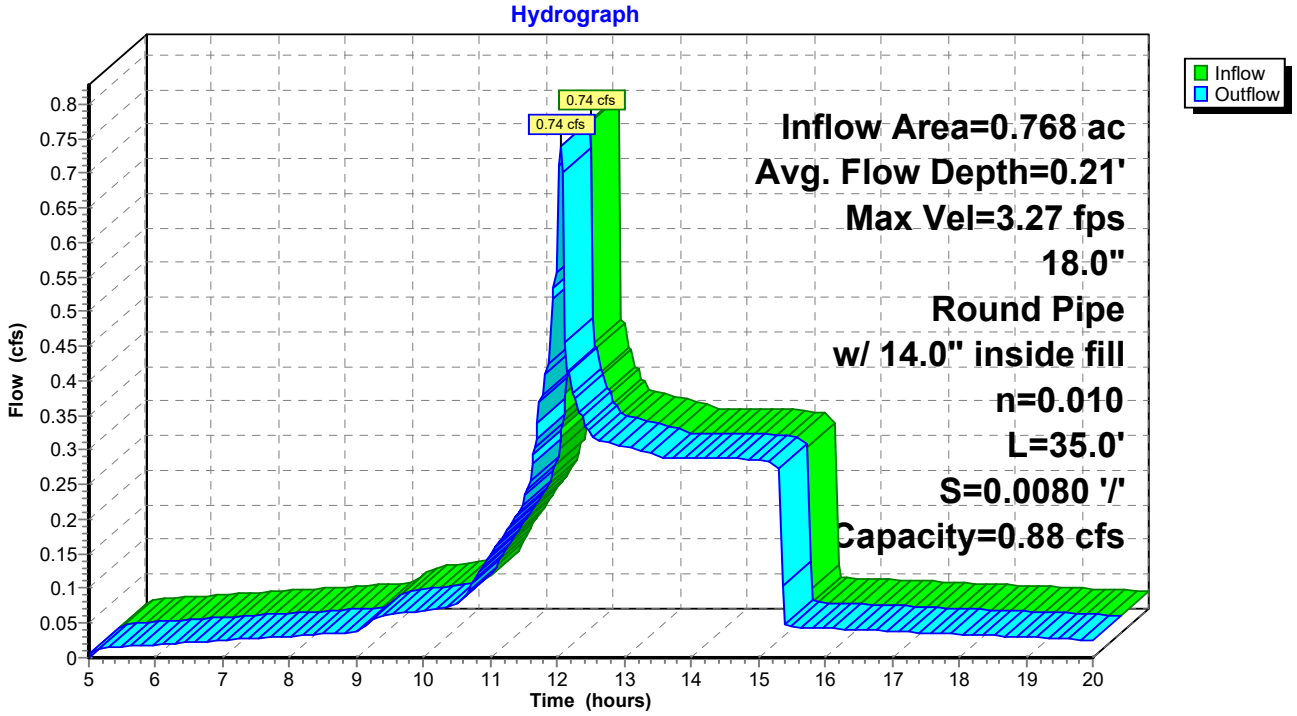
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.27 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.53 fps, Avg. Travel Time= 0.4 min

Peak Storage= 8 cf @ 12.04 hrs
Average Depth at Peak Storage= 1.38' above invert (0.21' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.88 cfs

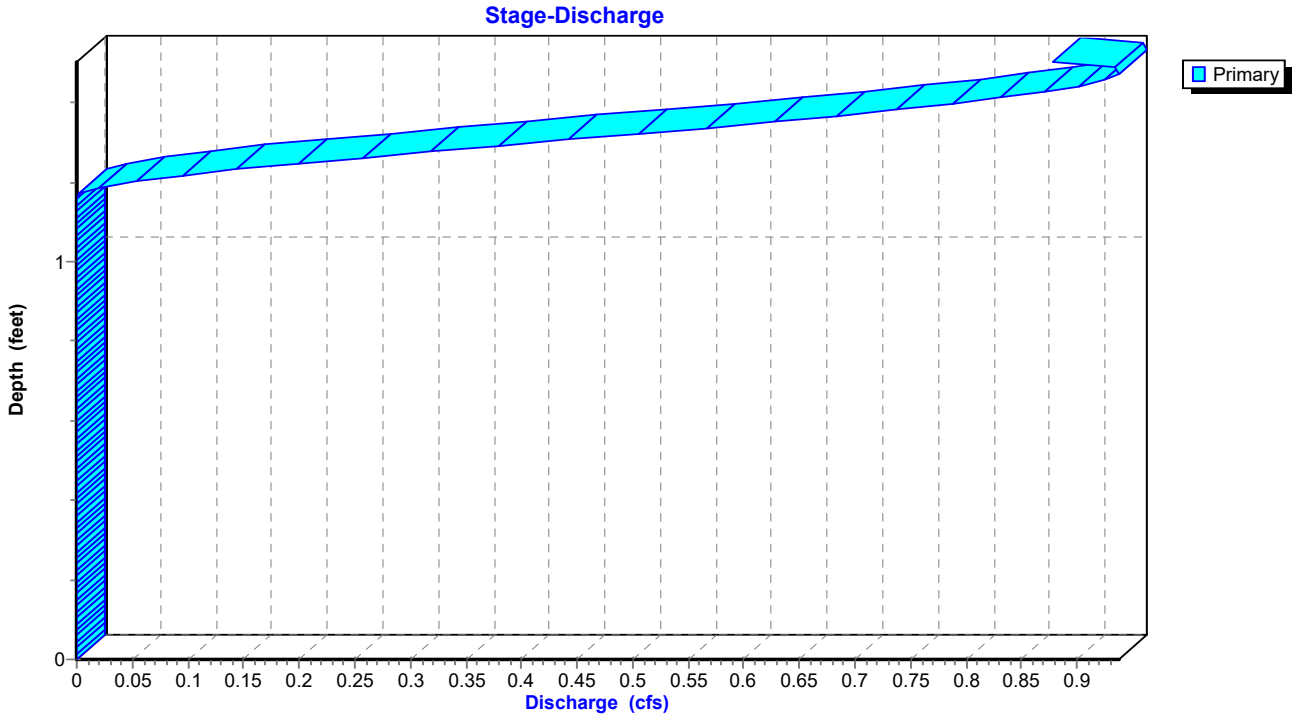
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 35.0' Slope= 0.0080 '/'
Inlet Invert= 665.30', Outlet Invert= 665.02'



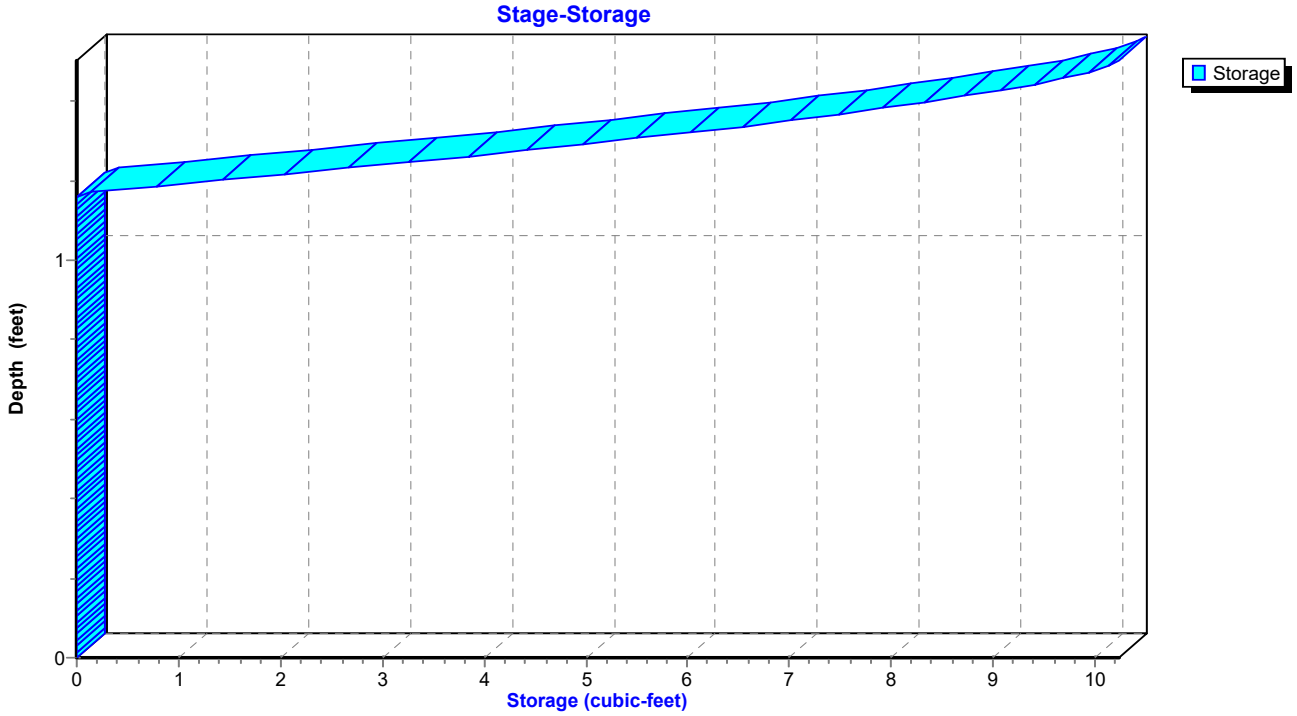
Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Hydrograph for Reach 9R: inlet 3 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.47	0.00
5.40	0.02	1	666.48	0.02
5.80	0.02	1	666.48	0.02
6.20	0.02	1	666.49	0.02
6.60	0.02	1	666.49	0.02
7.00	0.03	1	666.49	0.03
7.40	0.03	1	666.49	0.03
7.80	0.03	1	666.49	0.03
8.20	0.03	1	666.49	0.03
8.60	0.03	1	666.49	0.03
9.00	0.04	1	666.49	0.04
9.40	0.06	2	666.50	0.06
9.80	0.07	2	666.50	0.07
10.20	0.07	2	666.51	0.07
10.60	0.09	2	666.51	0.08
11.00	0.15	3	666.53	0.15
11.40	0.21	3	666.55	0.21
11.80	**0.39**	**5**	**666.59**	**0.39**
12.20	**0.40**	**5**	**666.60**	**0.40**
12.60	0.31	4	666.57	0.32
13.00	0.31	4	666.57	0.31
13.40	0.30	4	666.57	0.30
13.80	0.29	4	666.57	0.29
14.20	0.29	4	666.57	0.29
14.60	0.29	4	666.57	0.29
15.00	0.28	4	666.57	0.29
15.40	0.05	1	666.49	0.05
15.80	0.04	1	666.50	0.04
16.20	0.04	1	666.49	0.04
16.60	0.04	1	666.49	0.04
17.00	0.04	1	666.49	0.04
17.40	0.04	1	666.49	0.04
17.80	0.03	1	666.49	0.04
18.20	0.03	1	666.49	0.03
18.60	0.03	1	666.49	0.03
19.00	0.03	1	666.49	0.03
19.40	0.03	1	666.49	0.03
19.80	0.03	1	666.49	0.03

Stage-Discharge for Reach 9R: inlet 3 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.10	0.00
666.47	0.29	0.00
666.48	0.70	0.01
666.49	1.03	0.03
666.50	1.30	0.05
666.51	1.52	0.08
666.52	1.72	0.11
666.53	1.90	0.14
666.54	2.06	0.18
666.55	2.21	0.22
666.56	2.34	0.26
666.57	2.46	0.30
666.58	2.57	0.34
666.59	2.68	0.38
666.60	2.77	0.42
666.61	2.86	0.46
666.62	2.94	0.51
666.63	3.01	0.55
666.64	3.07	0.59
666.65	3.13	0.63
666.66	3.18	0.67
666.67	3.22	0.70
666.68	3.26	0.74
666.69	3.29	0.77
666.70	3.32	0.80
666.71	3.34	0.83
666.72	3.35	0.86
666.73	3.36	0.88
666.74	**3.36**	0.90
666.75	3.35	0.92
666.76	3.33	0.93
666.77	3.30	**0.94**
666.78	3.25	0.94
666.79	3.15	0.92
666.80	3.01	0.88

Stage-Area-Storage for Reach 9R: inlet 3 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	1
666.50	0.0	1
666.52	0.1	2
666.54	0.1	3
666.56	0.1	4
666.58	0.1	5
666.60	0.2	5
666.62	0.2	6
666.64	0.2	7
666.66	0.2	7
666.68	0.2	8
666.70	0.2	8
666.72	0.3	9
666.74	0.3	9
666.76	0.3	10
666.78	0.3	10
666.80	**0.3**	**10**

Summary for Reach 10R: MH7 18"

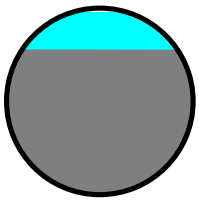
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 106% of Manning's capacity
[62] Hint: Exceeded Reach 9R OUTLET depth by 0.09' @ 12.04 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.74 cfs @ 12.04 hrs, Volume= 0.145 af
Outflow = 0.74 cfs @ 12.08 hrs, Volume= 0.145 af, Atten= 0%, Lag= 2.4 min

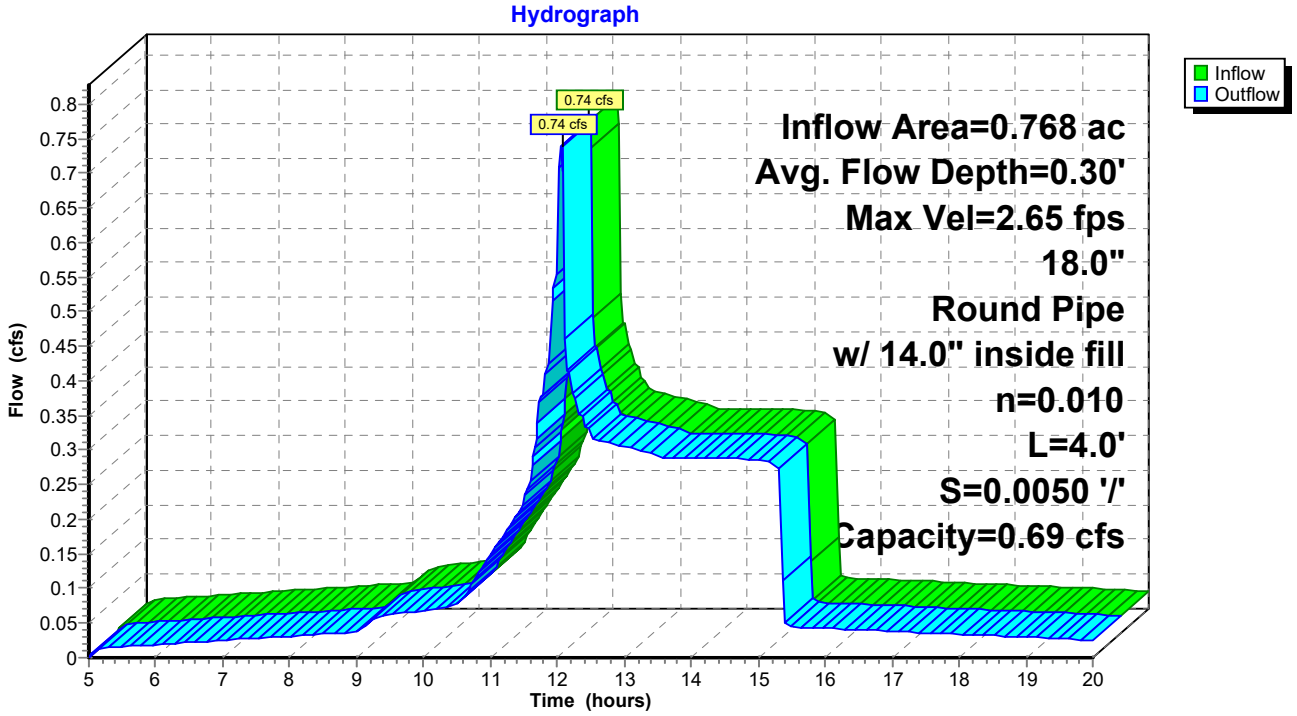
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.65 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.31 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.04 hrs
Average Depth at Peak Storage= 1.47' above invert (0.30' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 4.0' Slope= 0.0050 '/'
Inlet Invert= 665.02', Outlet Invert= 665.00'



Reach 10R: MH7 18"



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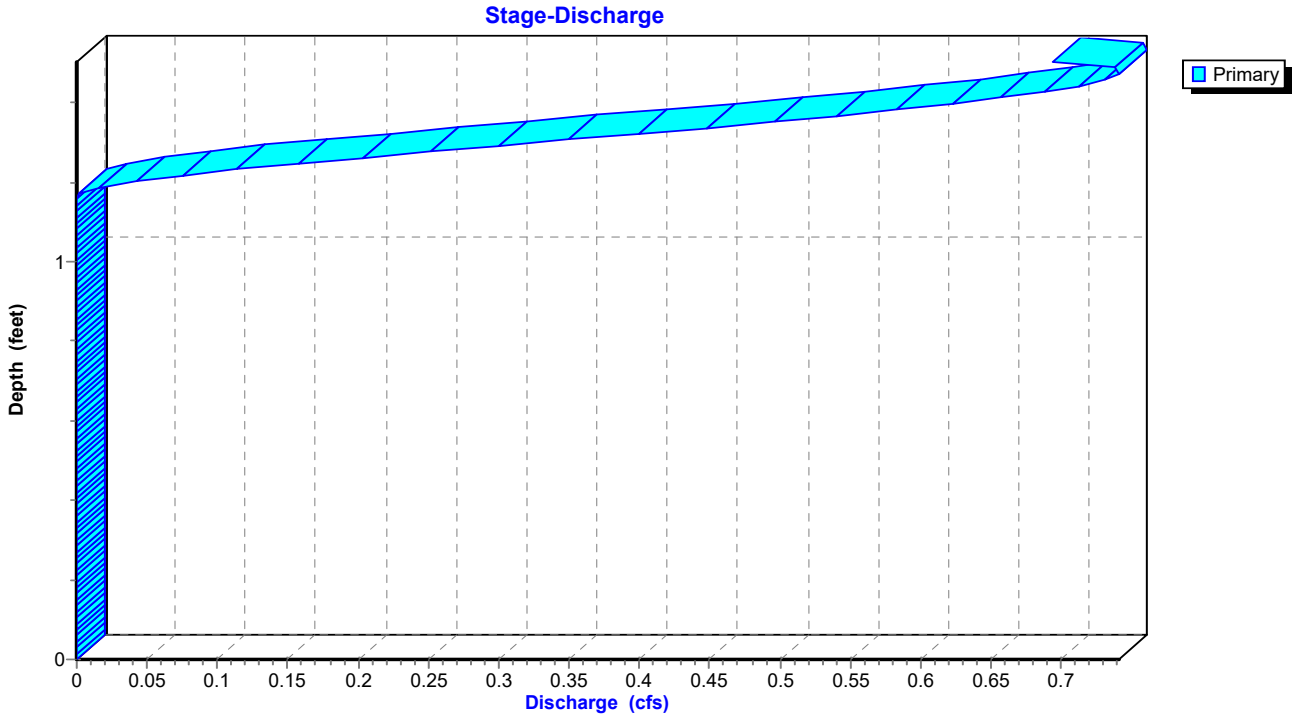
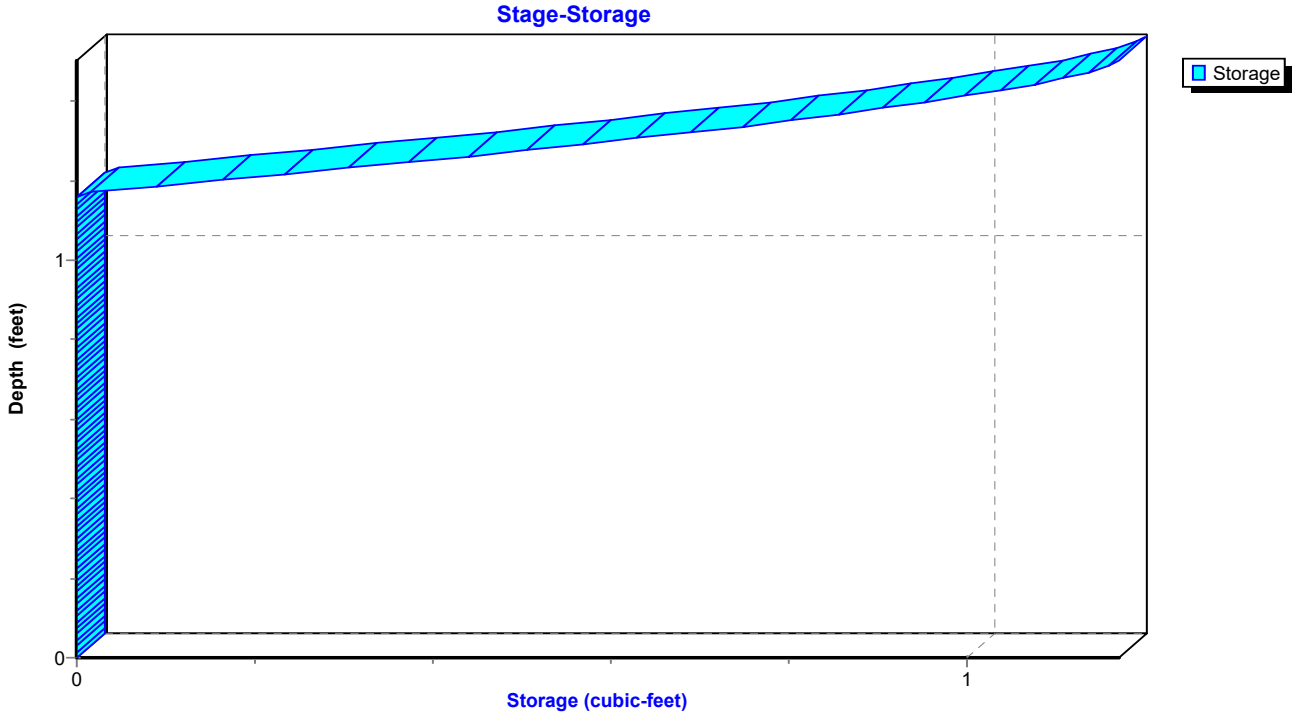


Reach 10R: MH7 18"



Hydrograph for Reach 10R: MH7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.19	0.00
5.40	0.02	0	666.20	0.02
5.80	0.02	0	666.21	0.02
6.20	0.02	0	666.21	0.02
6.60	0.02	0	666.21	0.02
7.00	0.03	0	666.21	0.03
7.40	0.03	0	666.21	0.03
7.80	0.03	0	666.21	0.03
8.20	0.03	0	666.21	0.03
8.60	0.03	0	666.22	0.03
9.00	0.04	0	666.22	0.04
9.40	0.06	0	666.23	0.06
9.80	0.07	0	666.23	0.07
10.20	0.07	0	666.23	0.07
10.60	0.08	0	666.24	0.08
11.00	0.15	0	666.26	0.15
11.40	0.21	0	666.28	0.21
11.80	**0.39**	**1**	**666.34**	**0.39**
12.20	**0.40**	**1**	**666.34**	**0.40**
12.60	0.32	1	666.31	0.31
13.00	0.31	1	666.31	0.31
13.40	0.30	1	666.31	0.30
13.80	0.29	1	666.31	0.29
14.20	0.29	1	666.31	0.29
14.60	0.29	1	666.31	0.29
15.00	0.29	1	666.31	0.29
15.40	0.05	0	666.22	0.05
15.80	0.04	0	666.22	0.04
16.20	0.04	0	666.22	0.04
16.60	0.04	0	666.22	0.04
17.00	0.04	0	666.22	0.04
17.40	0.04	0	666.22	0.04
17.80	0.04	0	666.22	0.04
18.20	0.03	0	666.21	0.03
18.60	0.03	0	666.21	0.03
19.00	0.03	0	666.21	0.03
19.40	0.03	0	666.21	0.03
19.80	0.03	0	666.21	0.03

Stage-Discharge for Reach 10R: MH7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.02	0.00	0.00	665.53	0.00	0.00	666.04	0.00	0.00
665.03	0.00	0.00	665.54	0.00	0.00	666.05	0.00	0.00
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.08	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.23	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.55	0.01
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.82	0.02
665.20	0.00	0.00	665.71	0.00	0.00	666.22	1.03	0.04
665.21	0.00	0.00	665.72	0.00	0.00	666.23	1.20	0.06
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.36	0.09
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.50	0.11
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.63	0.14
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.74	0.17
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.85	0.20
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.95	0.24
665.28	0.00	0.00	665.79	0.00	0.00	666.30	2.04	0.27
665.29	0.00	0.00	665.80	0.00	0.00	666.31	2.12	0.30
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.19	0.33
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.26	0.37
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.32	0.40
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.38	0.43
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.43	0.46
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.47	0.50
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.51	0.53
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.55	0.56
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.58	0.58
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.60	0.61
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.62	0.63
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.64	0.66
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.65	0.68
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.65	0.70
665.44	0.00	0.00	665.95	0.00	0.00	666.46	**2.65**	0.71
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.73
665.46	0.00	0.00	665.97	0.00	0.00	666.48	2.63	0.73
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.61	**0.74**
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.57	0.74
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.49	0.72
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.38	0.69
665.51	0.00	0.00	666.02	0.00	0.00			
665.52	0.00	0.00	666.03	0.00	0.00			

Stage-Area-Storage for Reach 10R: MH7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.02	0.0	0
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.1	0
666.26	0.1	0
666.28	0.1	0
666.30	0.1	1
666.32	0.2	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	1
666.40	0.2	1
666.42	0.2	1
666.44	0.3	1
666.46	0.3	1
666.48	0.3	1
666.50	0.3	1
666.52	**0.3**	**1**

Summary for Reach 11R: inlet 7 18"

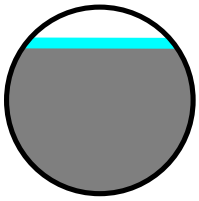
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.19 cfs @ 12.33 hrs, Volume= 0.019 af
Outflow = 0.19 cfs @ 12.34 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.9 min

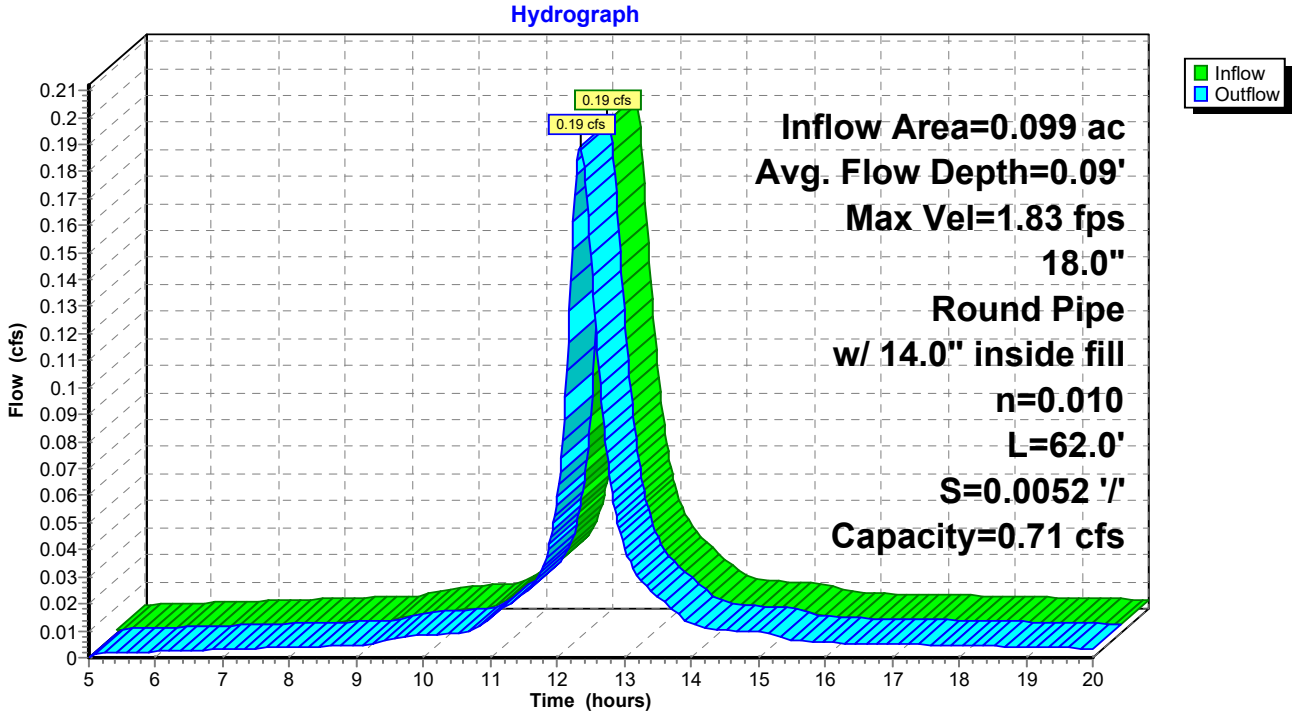
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.83 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 0.64 fps, Avg. Travel Time= 1.6 min

Peak Storage= 6 cf @ 12.33 hrs
Average Depth at Peak Storage= 1.25' above invert (0.09' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.71 cfs

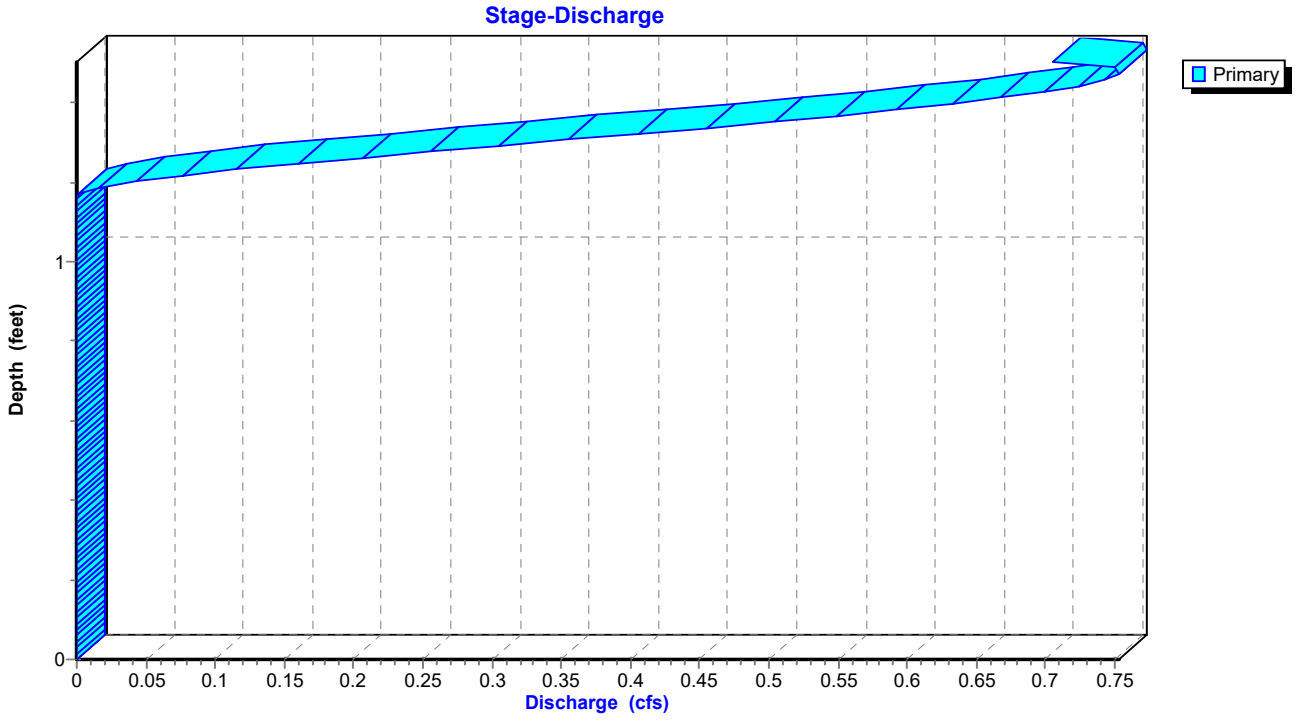
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0052 '/'
Inlet Invert= 665.36', Outlet Invert= 665.04'



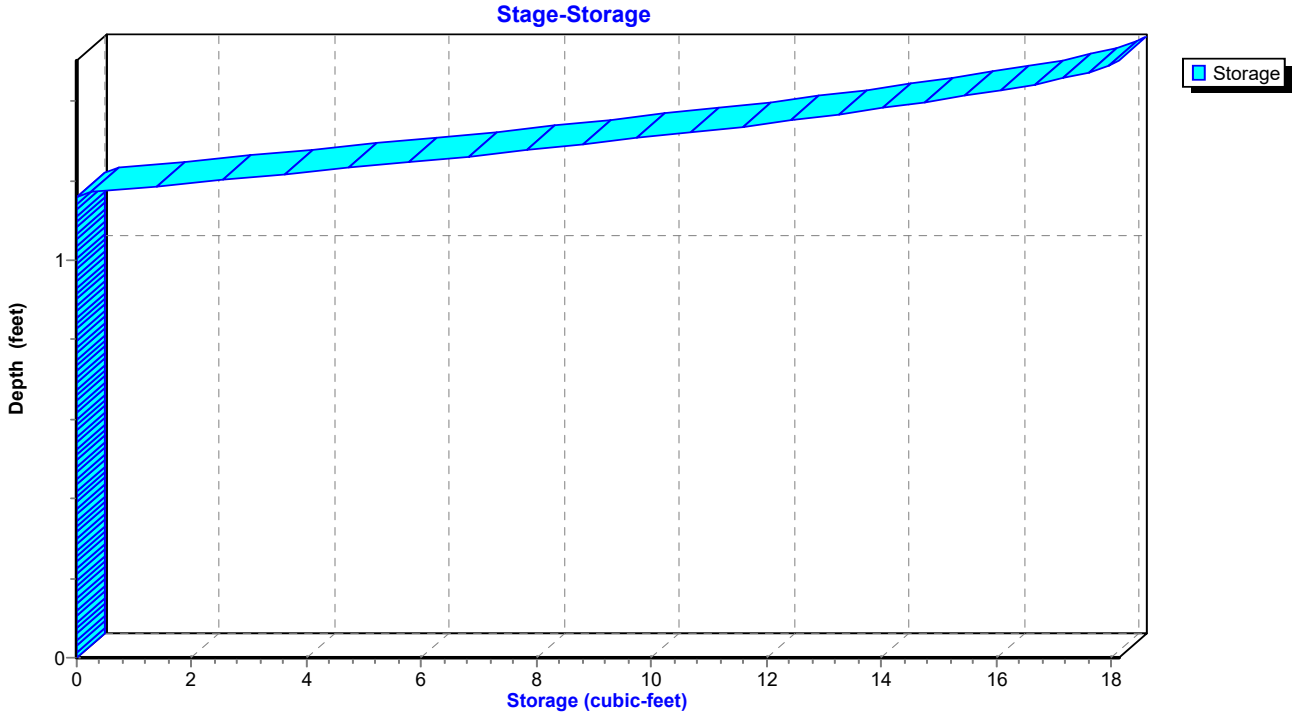
Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Hydrograph for Reach 11R: inlet 7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.53	0.00
5.40	0.00	0	666.53	0.00
5.80	0.00	0	666.53	0.00
6.20	0.00	0	666.53	0.00
6.60	0.00	0	666.53	0.00
7.00	0.00	0	666.53	0.00
7.40	0.00	0	666.53	0.00
7.80	0.00	0	666.53	0.00
8.20	0.00	0	666.53	0.00
8.60	0.00	1	666.53	0.00
9.00	0.00	1	666.53	0.00
9.40	0.01	1	666.54	0.01
9.80	0.01	1	666.54	0.01
10.20	0.01	1	666.54	0.01
10.60	0.01	1	666.54	0.01
11.00	0.02	1	666.54	0.01
11.40	0.02	2	666.55	0.02
11.80	0.04	2	666.56	0.03
12.20	**0.15**	**5**	**666.60**	**0.14**
12.60	**0.11**	**5**	**666.59**	**0.11**
13.00	0.04	2	666.56	0.04
13.40	0.02	2	666.55	0.02
13.80	0.02	1	666.54	0.02
14.20	0.01	1	666.54	0.01
14.60	0.01	1	666.54	0.01
15.00	0.01	1	666.54	0.01
15.40	0.01	1	666.54	0.01
15.80	0.01	1	666.53	0.01
16.20	0.01	1	666.53	0.01
16.60	0.01	1	666.53	0.01
17.00	0.01	1	666.53	0.01
17.40	0.00	1	666.53	0.00
17.80	0.00	1	666.53	0.00
18.20	0.00	1	666.53	0.00
18.60	0.00	0	666.53	0.00
19.00	0.00	0	666.53	0.00
19.40	0.00	0	666.53	0.00
19.80	0.00	0	666.53	0.00

Stage-Discharge for Reach 11R: inlet 7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.36	0.00	0.00	665.87	0.00	0.00	666.38	0.00	0.00
665.37	0.00	0.00	665.88	0.00	0.00	666.39	0.00	0.00
665.38	0.00	0.00	665.89	0.00	0.00	666.40	0.00	0.00
665.39	0.00	0.00	665.90	0.00	0.00	666.41	0.00	0.00
665.40	0.00	0.00	665.91	0.00	0.00	666.42	0.00	0.00
665.41	0.00	0.00	665.92	0.00	0.00	666.43	0.00	0.00
665.42	0.00	0.00	665.93	0.00	0.00	666.44	0.00	0.00
665.43	0.00	0.00	665.94	0.00	0.00	666.45	0.00	0.00
665.44	0.00	0.00	665.95	0.00	0.00	666.46	0.00	0.00
665.45	0.00	0.00	665.96	0.00	0.00	666.47	0.00	0.00
665.46	0.00	0.00	665.97	0.00	0.00	666.48	0.00	0.00
665.47	0.00	0.00	665.98	0.00	0.00	666.49	0.00	0.00
665.48	0.00	0.00	665.99	0.00	0.00	666.50	0.00	0.00
665.49	0.00	0.00	666.00	0.00	0.00	666.51	0.00	0.00
665.50	0.00	0.00	666.01	0.00	0.00	666.52	0.08	0.00
665.51	0.00	0.00	666.02	0.00	0.00	666.53	0.24	0.00
665.52	0.00	0.00	666.03	0.00	0.00	666.54	0.56	0.01
665.53	0.00	0.00	666.04	0.00	0.00	666.55	0.83	0.03
665.54	0.00	0.00	666.05	0.00	0.00	666.56	1.05	0.04
665.55	0.00	0.00	666.06	0.00	0.00	666.57	1.22	0.07
665.56	0.00	0.00	666.07	0.00	0.00	666.58	1.38	0.09
665.57	0.00	0.00	666.08	0.00	0.00	666.59	1.53	0.12
665.58	0.00	0.00	666.09	0.00	0.00	666.60	1.65	0.15
665.59	0.00	0.00	666.10	0.00	0.00	666.61	1.77	0.18
665.60	0.00	0.00	666.11	0.00	0.00	666.62	1.88	0.21
665.61	0.00	0.00	666.12	0.00	0.00	666.63	1.98	0.24
665.62	0.00	0.00	666.13	0.00	0.00	666.64	2.07	0.27
665.63	0.00	0.00	666.14	0.00	0.00	666.65	2.15	0.31
665.64	0.00	0.00	666.15	0.00	0.00	666.66	2.23	0.34
665.65	0.00	0.00	666.16	0.00	0.00	666.67	2.29	0.37
665.66	0.00	0.00	666.17	0.00	0.00	666.68	2.36	0.41
665.67	0.00	0.00	666.18	0.00	0.00	666.69	2.41	0.44
665.68	0.00	0.00	666.19	0.00	0.00	666.70	2.47	0.47
665.69	0.00	0.00	666.20	0.00	0.00	666.71	2.51	0.50
665.70	0.00	0.00	666.21	0.00	0.00	666.72	2.55	0.53
665.71	0.00	0.00	666.22	0.00	0.00	666.73	2.59	0.56
665.72	0.00	0.00	666.23	0.00	0.00	666.74	2.62	0.59
665.73	0.00	0.00	666.24	0.00	0.00	666.75	2.65	0.62
665.74	0.00	0.00	666.25	0.00	0.00	666.76	2.67	0.64
665.75	0.00	0.00	666.26	0.00	0.00	666.77	2.68	0.67
665.76	0.00	0.00	666.27	0.00	0.00	666.78	2.69	0.69
665.77	0.00	0.00	666.28	0.00	0.00	666.79	2.70	0.71
665.78	0.00	0.00	666.29	0.00	0.00	666.80	**2.70**	0.72
665.79	0.00	0.00	666.30	0.00	0.00	666.81	2.69	0.74
665.80	0.00	0.00	666.31	0.00	0.00	666.82	2.67	0.75
665.81	0.00	0.00	666.32	0.00	0.00	666.83	2.65	**0.75**
665.82	0.00	0.00	666.33	0.00	0.00	666.84	2.61	0.75
665.83	0.00	0.00	666.34	0.00	0.00	666.85	2.53	0.74
665.84	0.00	0.00	666.35	0.00	0.00	666.86	2.41	0.71
665.85	0.00	0.00	666.36	0.00	0.00			
665.86	0.00	0.00	666.37	0.00	0.00			

Stage-Area-Storage for Reach 11R: inlet 7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	0
666.50	0.0	0
666.52	0.0	0
666.54	0.0	1
666.56	0.0	3
666.58	0.1	4
666.60	0.1	5
666.62	0.1	7
666.64	0.1	8
666.66	0.2	9
666.68	0.2	11
666.70	0.2	12
666.72	0.2	13
666.74	0.2	14
666.76	0.2	15
666.78	0.3	16
666.80	0.3	17
666.82	0.3	17
666.84	0.3	18
666.86	**0.3**	**18**

Summary for Reach 12R: MH6 18"

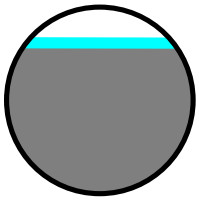
[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach 11R outlet invert by 1.26' @ 12.34 hrs

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.19 cfs @ 12.34 hrs, Volume= 0.019 af
Outflow = 0.19 cfs @ 12.34 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.1 min

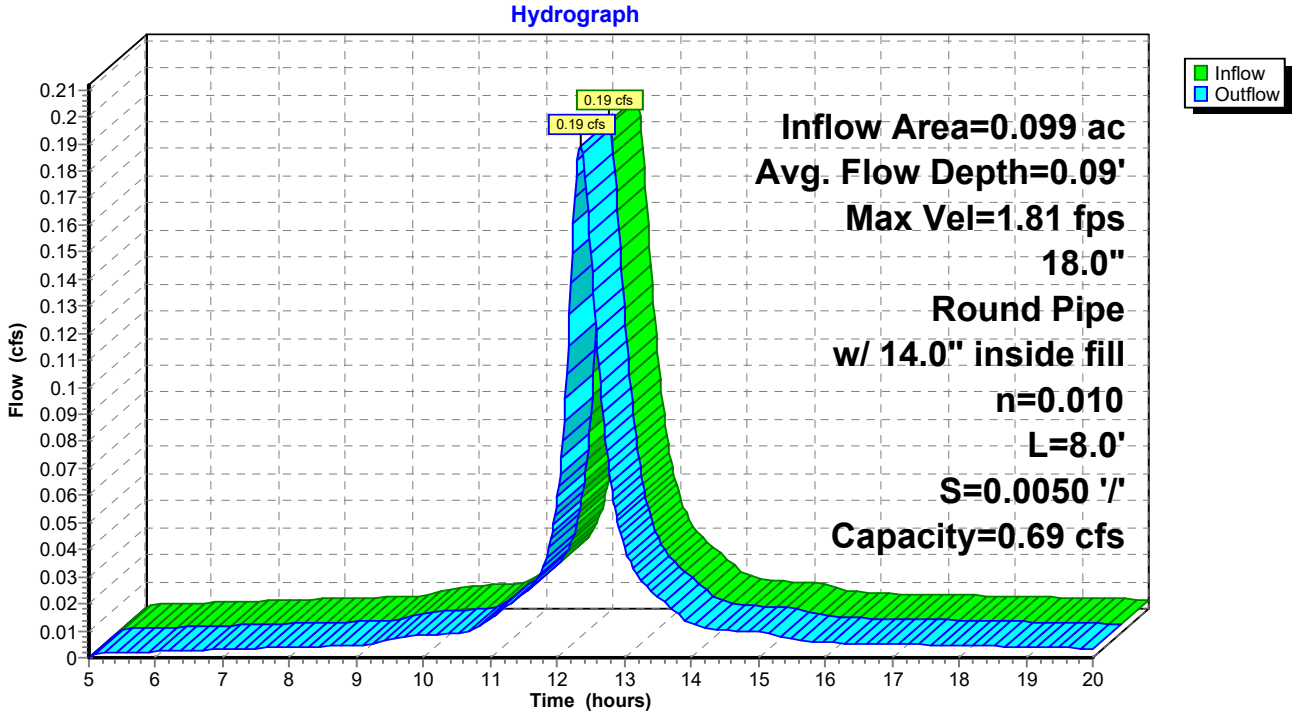
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.81 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.64 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.34 hrs
Average Depth at Peak Storage= 1.26' above invert (0.09' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

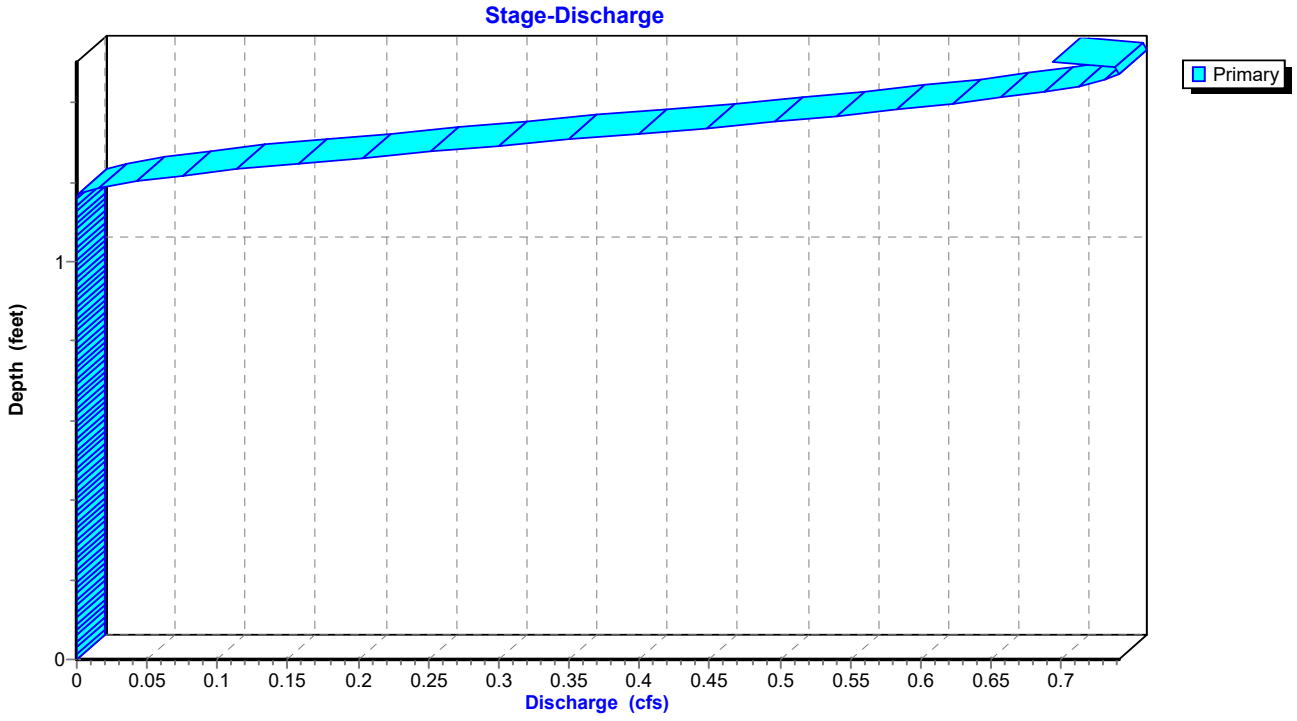
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 8.0' Slope= 0.0050 '/'
Inlet Invert= 665.04', Outlet Invert= 665.00'



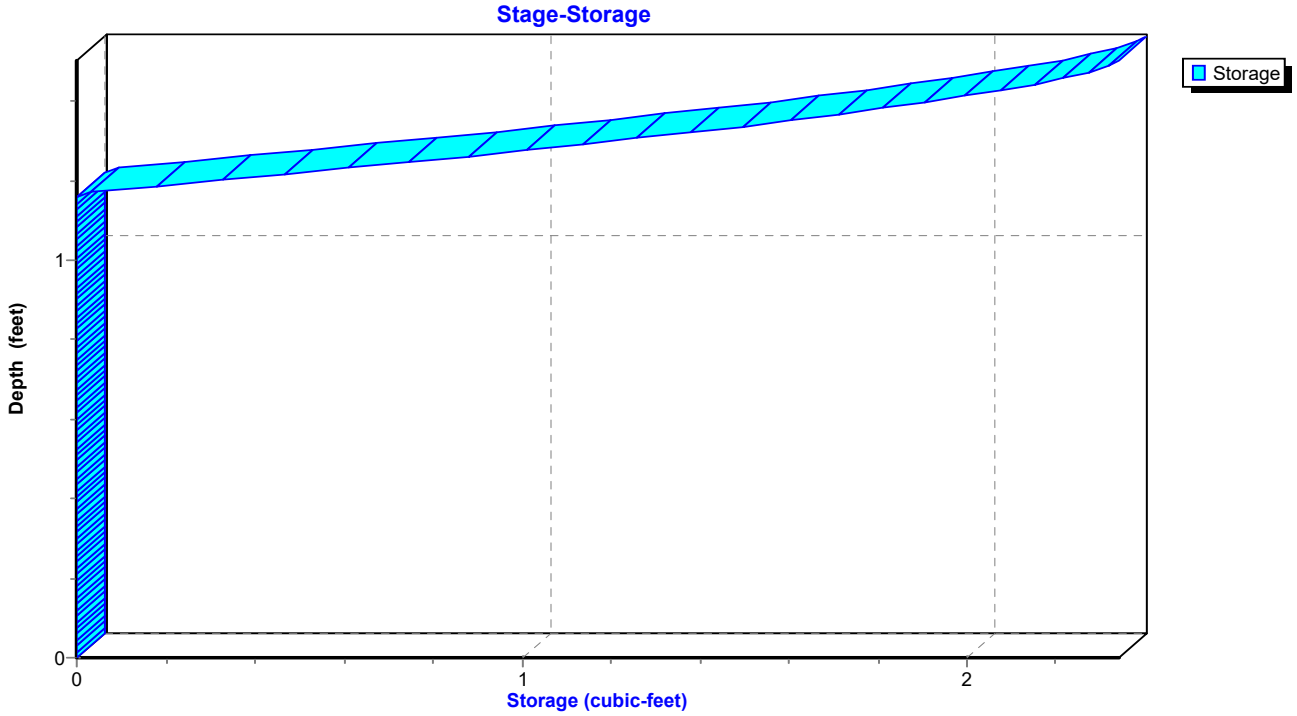
Reach 12R: MH6 18"



Reach 12R: MH6 18"



Reach 12R: MH6 18"



Hydrograph for Reach 12R: MH6 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.21	0.00
5.40	0.00	0	666.21	0.00
5.80	0.00	0	666.21	0.00
6.20	0.00	0	666.21	0.00
6.60	0.00	0	666.21	0.00
7.00	0.00	0	666.21	0.00
7.40	0.00	0	666.21	0.00
7.80	0.00	0	666.21	0.00
8.20	0.00	0	666.21	0.00
8.60	0.00	0	666.21	0.00
9.00	0.00	0	666.21	0.00
9.40	0.01	0	666.22	0.01
9.80	0.01	0	666.22	0.01
10.20	0.01	0	666.22	0.01
10.60	0.01	0	666.22	0.01
11.00	0.01	0	666.22	0.01
11.40	0.02	0	666.23	0.02
11.80	0.03	0	666.24	0.03
12.20	**0.14**	**1**	**666.28**	**0.14**
12.60	**0.11**	**1**	**666.27**	**0.11**
13.00	0.04	0	666.24	0.04
13.40	0.02	0	666.23	0.02
13.80	0.02	0	666.22	0.02
14.20	0.01	0	666.22	0.01
14.60	0.01	0	666.22	0.01
15.00	0.01	0	666.22	0.01
15.40	0.01	0	666.22	0.01
15.80	0.01	0	666.21	0.01
16.20	0.01	0	666.21	0.01
16.60	0.01	0	666.21	0.01
17.00	0.01	0	666.21	0.01
17.40	0.00	0	666.21	0.00
17.80	0.00	0	666.21	0.00
18.20	0.00	0	666.21	0.00
18.60	0.00	0	666.21	0.00
19.00	0.00	0	666.21	0.00
19.40	0.00	0	666.21	0.00
19.80	0.00	0	666.21	0.00

Stage-Discharge for Reach 12R: MH6 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.00	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.00	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.08	0.00
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.23	0.00
665.20	0.00	0.00	665.71	0.00	0.00	666.22	0.55	0.01
665.21	0.00	0.00	665.72	0.00	0.00	666.23	0.82	0.02
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.03	0.04
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.20	0.06
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.36	0.09
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.50	0.11
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.63	0.14
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.74	0.17
665.28	0.00	0.00	665.79	0.00	0.00	666.30	1.85	0.20
665.29	0.00	0.00	665.80	0.00	0.00	666.31	1.95	0.24
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.04	0.27
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.12	0.30
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.19	0.33
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.26	0.37
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.32	0.40
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.38	0.43
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.43	0.46
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.47	0.50
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.51	0.53
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.55	0.56
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.58	0.58
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.60	0.61
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.62	0.63
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.64	0.66
665.44	0.00	0.00	665.95	0.00	0.00	666.46	2.65	0.68
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.70
665.46	0.00	0.00	665.97	0.00	0.00	666.48	**2.65**	0.71
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.65	0.73
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.63	0.73
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.61	**0.74**
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.57	0.74
665.51	0.00	0.00	666.02	0.00	0.00	666.53	2.49	0.72
665.52	0.00	0.00	666.03	0.00	0.00	666.54	2.38	0.69
665.53	0.00	0.00	666.04	0.00	0.00			
665.54	0.00	0.00	666.05	0.00	0.00			

Stage-Area-Storage for Reach 12R: MH6 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.1	1
666.28	0.1	1
666.30	0.1	1
666.32	0.1	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	2
666.40	0.2	2
666.42	0.2	2
666.44	0.2	2
666.46	0.3	2
666.48	0.3	2
666.50	0.3	2
666.52	0.3	2
666.54	**0.3**	**2**

Summary for Reach 13R: to isolator 6"

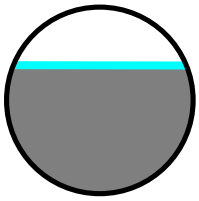
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.041 ac, 78.05% Impervious, Inflow Depth > 1.19" for 1-yr event
Inflow = 0.04 cfs @ 12.38 hrs, Volume= 0.004 af
Outflow = 0.04 cfs @ 12.38 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.1 min

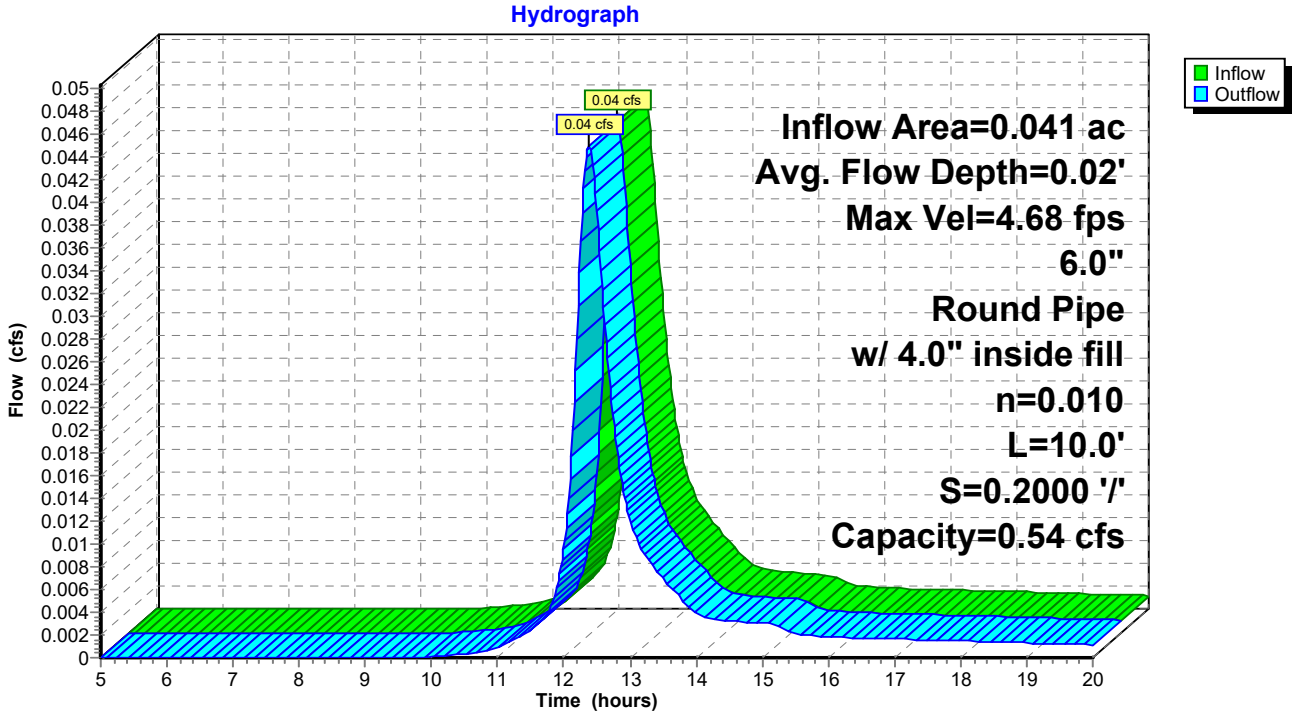
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.68 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.80 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.38 hrs
Average Depth at Peak Storage= 0.35' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

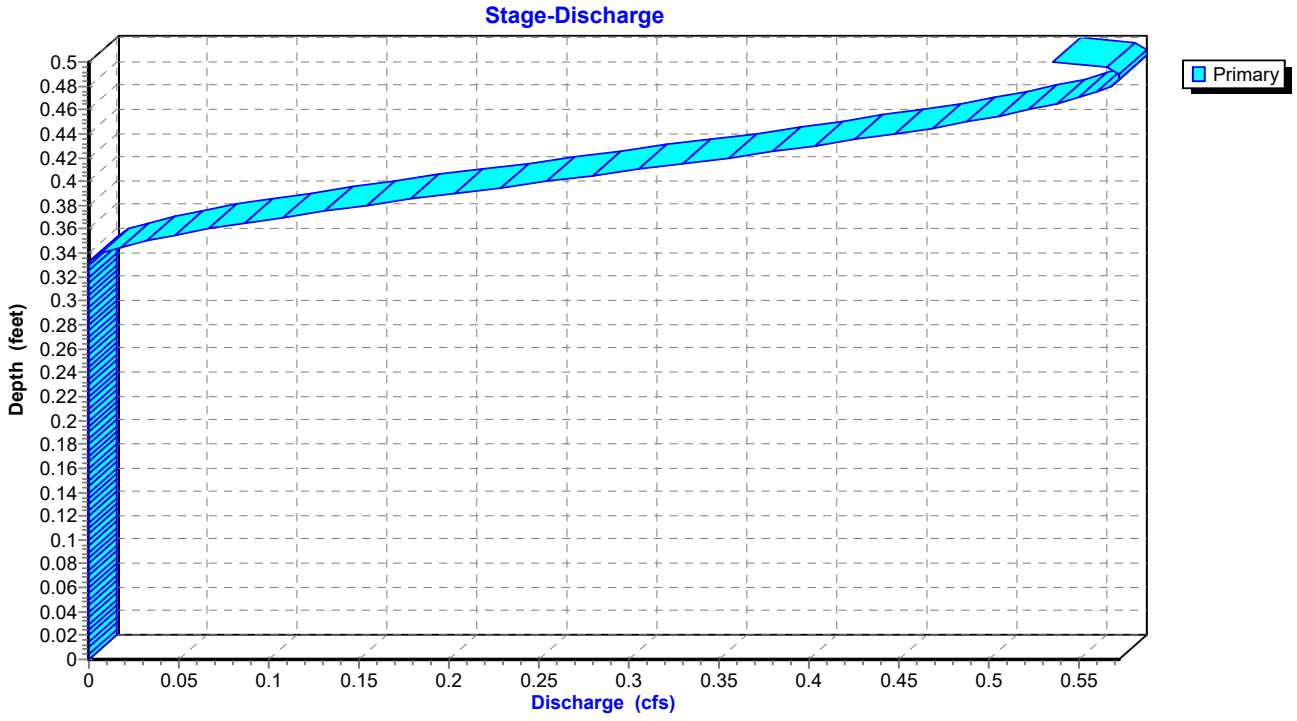
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



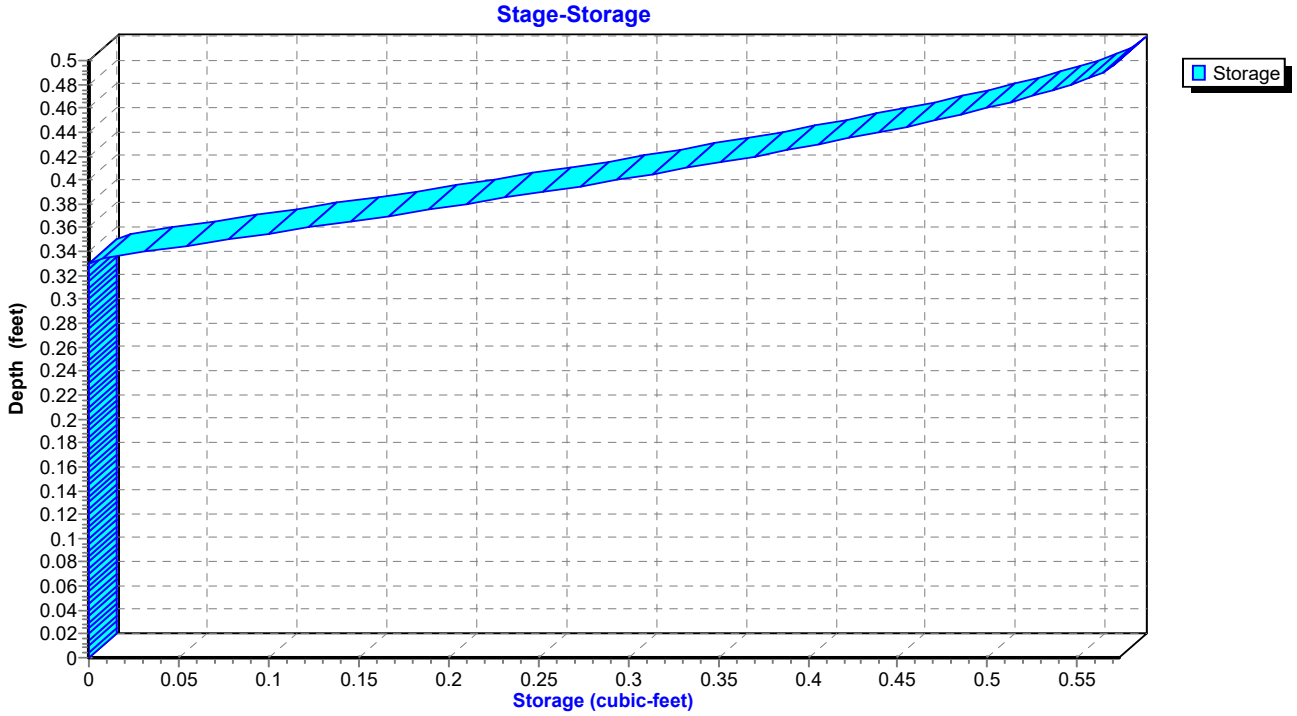
Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Hydrograph for Reach 13R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.33	0.00
10.20	0.00	0	668.33	0.00
10.60	0.00	0	668.33	0.00
11.00	0.00	0	668.34	0.00
11.40	0.00	0	668.34	0.00
11.80	0.00	0	668.34	0.00
12.20	**0.03**	**0**	**668.35**	**0.03**
12.60	**0.03**	**0**	**668.35**	**0.03**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.00	0	668.34	0.00
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 13R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 13R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 14R: to isolator 6"

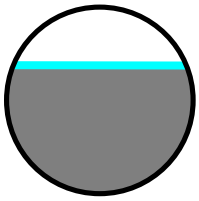
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.030 ac, 83.33% Impervious, Inflow Depth > 1.40" for 1-yr event
Inflow = 0.05 cfs @ 12.27 hrs, Volume= 0.003 af
Outflow = 0.05 cfs @ 12.27 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.1 min

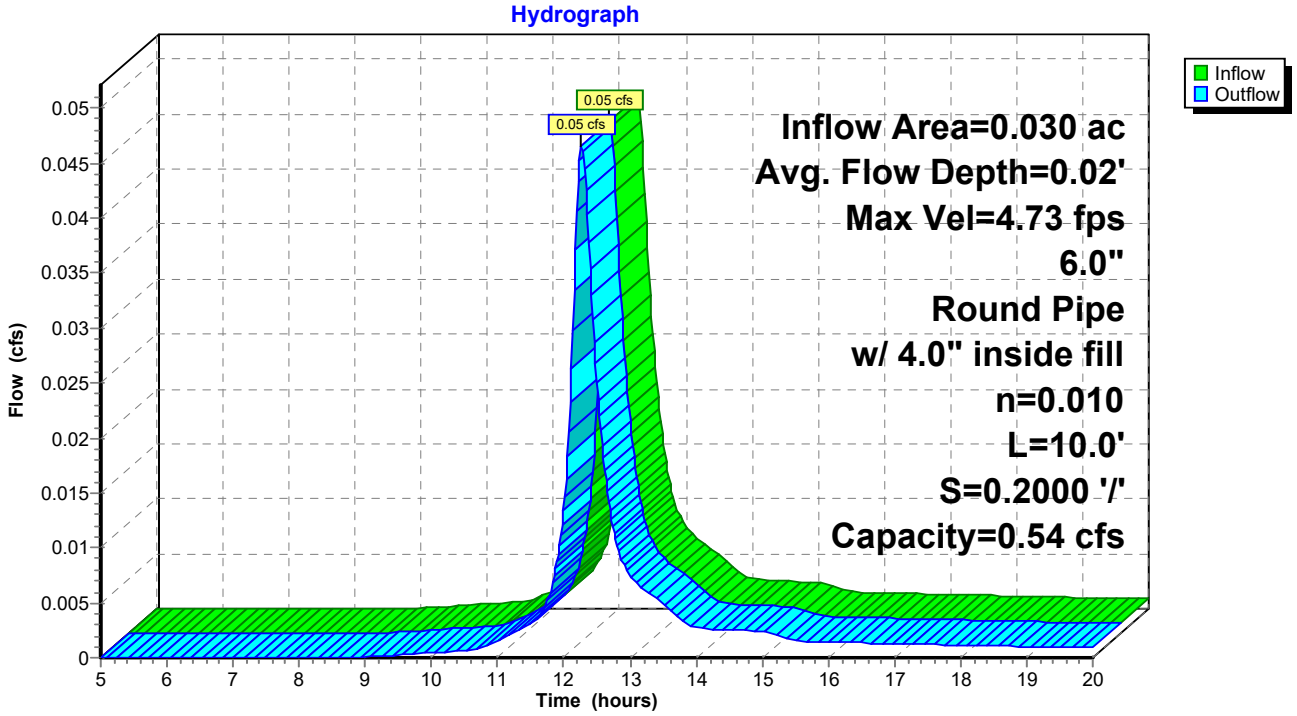
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.73 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.62 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.35' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

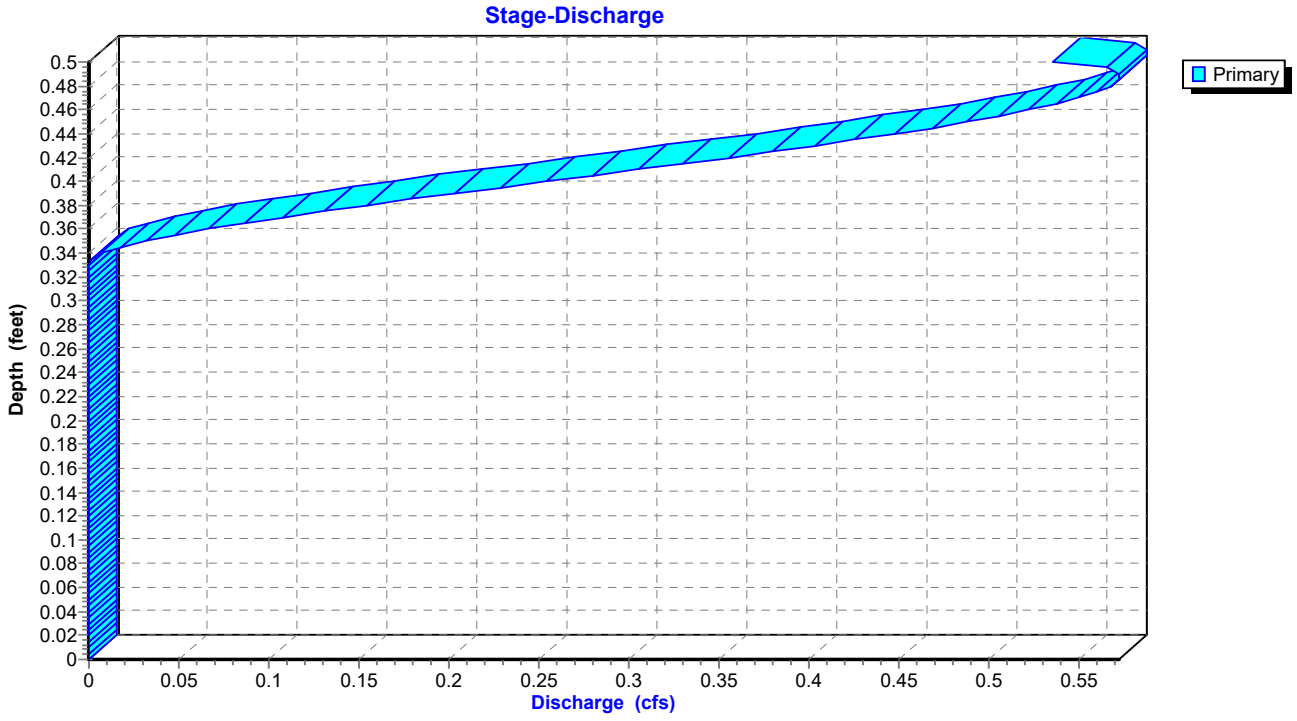
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



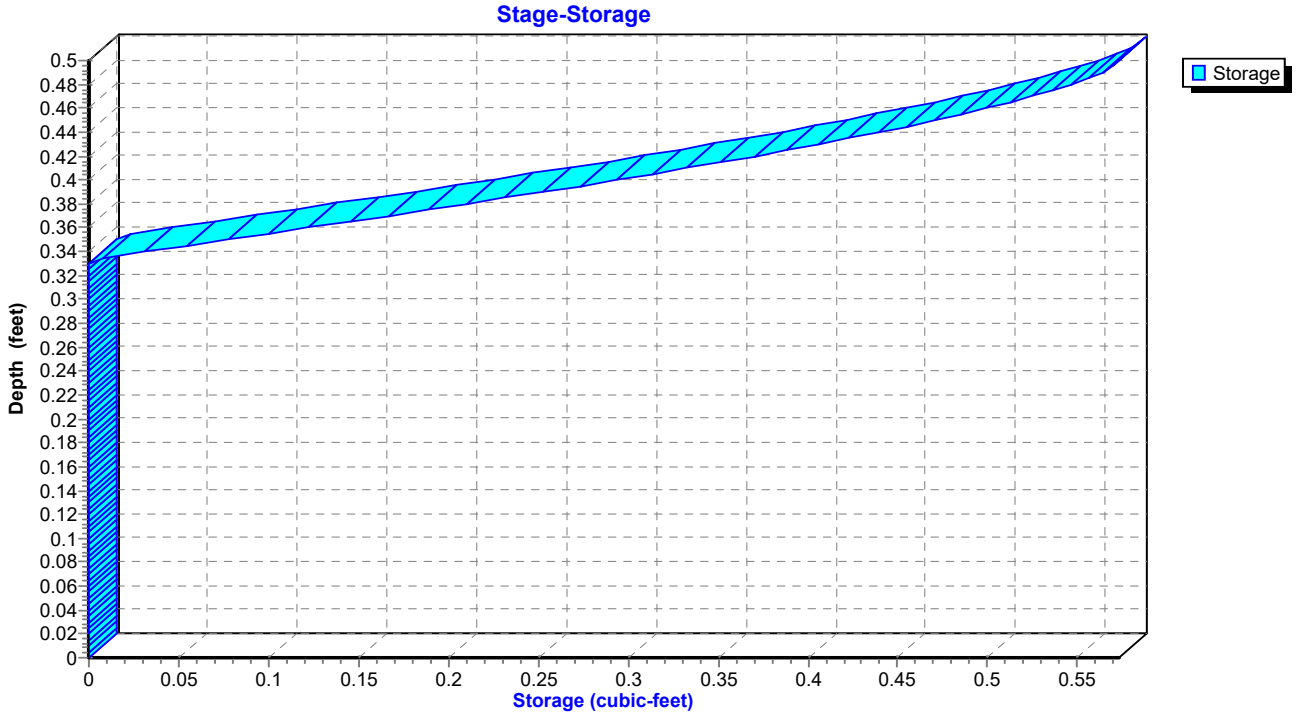
Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Hydrograph for Reach 14R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.33	0.00
10.20	0.00	0	668.33	0.00
10.60	0.00	0	668.33	0.00
11.00	0.00	0	668.34	0.00
11.40	0.00	0	668.34	0.00
11.80	0.01	0	668.34	0.01
12.20	**0.04**	**0**	**668.35**	**0.04**
12.60	**0.02**	**0**	**668.35**	**0.02**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.00	0	668.34	0.00
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 14R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 14R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 15R: to isolator 6"

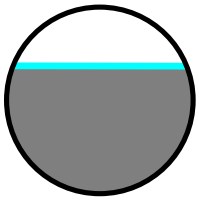
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 73.68% Impervious, Inflow Depth > 1.01" for 1-yr event
Inflow = 0.04 cfs @ 12.39 hrs, Volume= 0.003 af
Outflow = 0.04 cfs @ 12.39 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.1 min

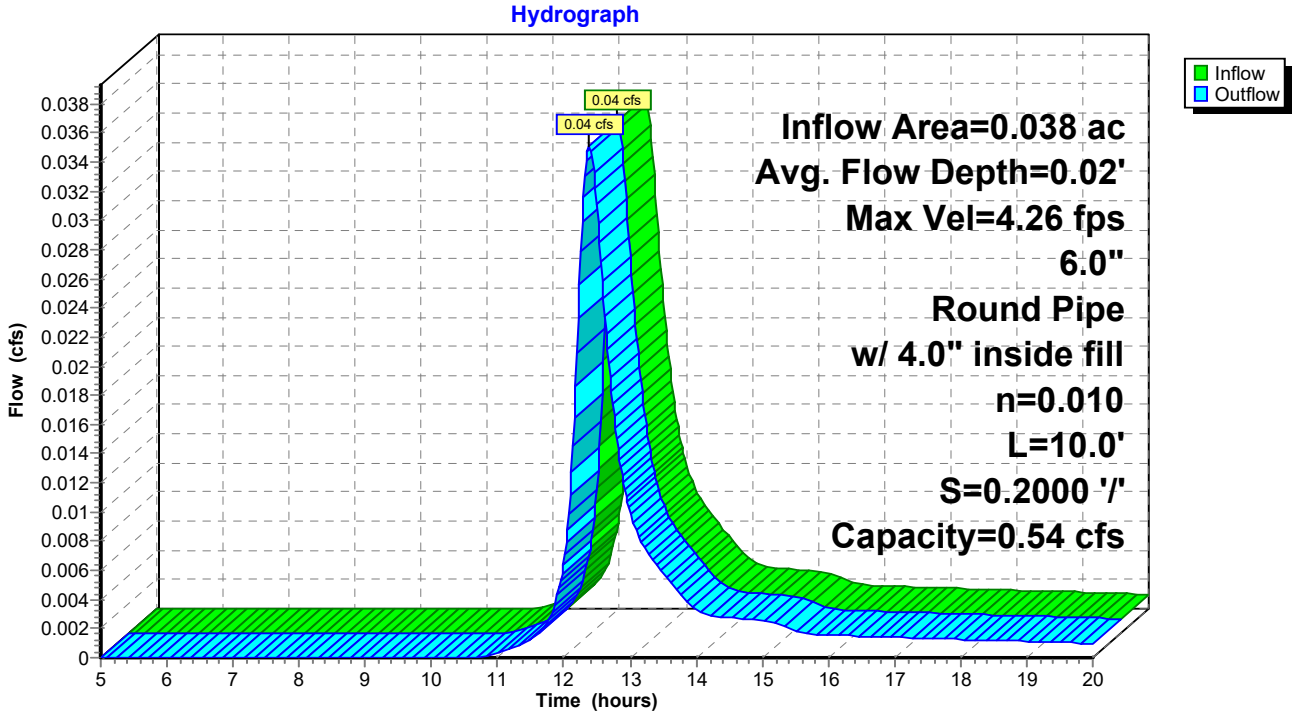
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.26 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.71 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.39 hrs
Average Depth at Peak Storage= 0.35' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

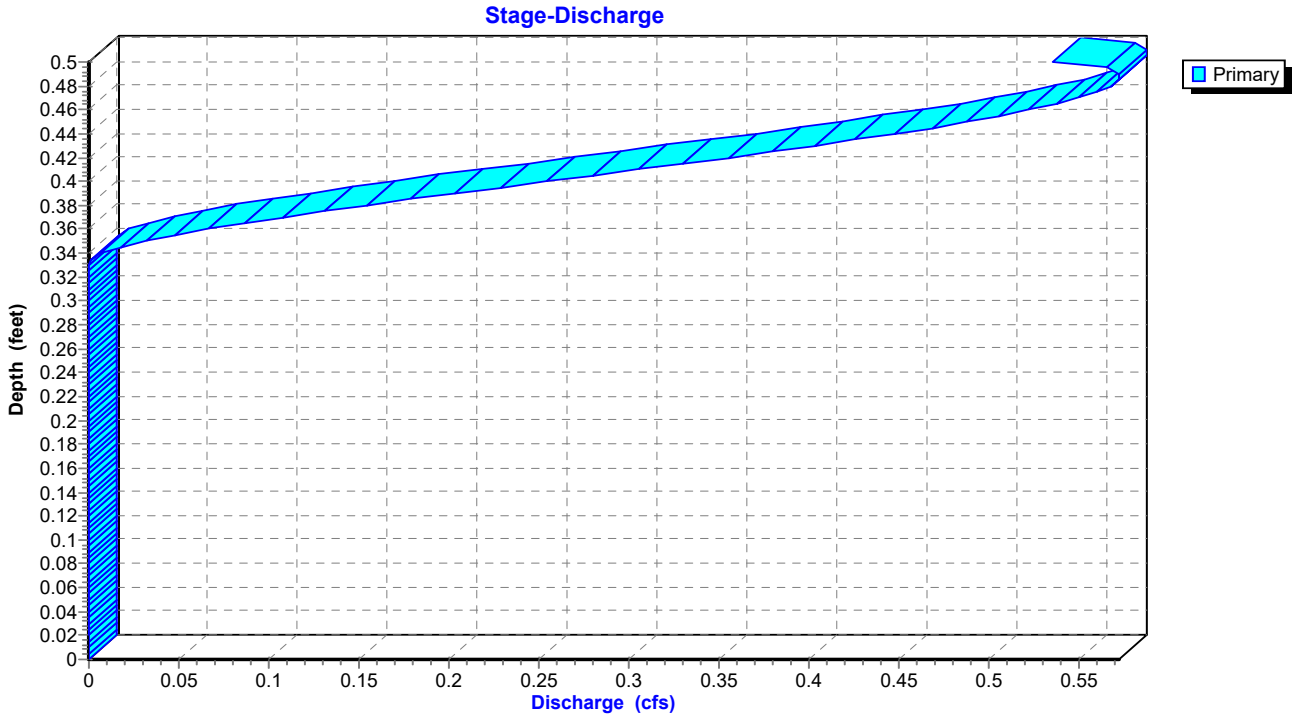
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



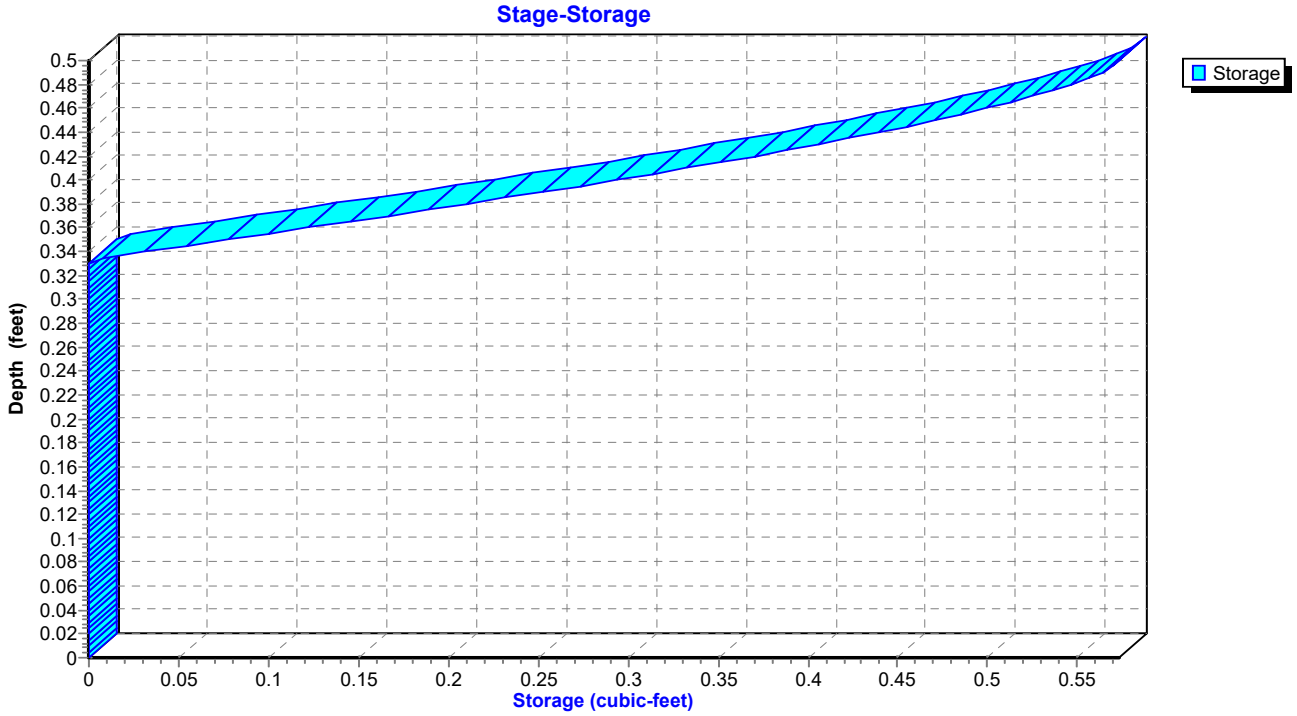
Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Hydrograph for Reach 15R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.33	0.00
10.20	0.00	0	668.33	0.00
10.60	0.00	0	668.33	0.00
11.00	0.00	0	668.33	0.00
11.40	0.00	0	668.34	0.00
11.80	0.00	0	668.34	0.00
12.20	**0.02**	**0**	**668.35**	**0.02**
12.60	**0.02**	**0**	**668.35**	**0.02**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.00	0	668.34	0.00
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 15R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 15R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 17R: NDS2 6"

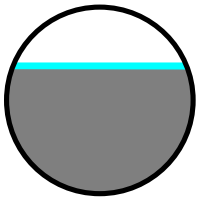
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 42.11% Impervious, Inflow Depth > 0.27" for 1-yr event
Inflow = 0.01 cfs @ 12.56 hrs, Volume= 0.001 af
Outflow = 0.01 cfs @ 12.65 hrs, Volume= 0.001 af, Atten= 1%, Lag= 5.1 min

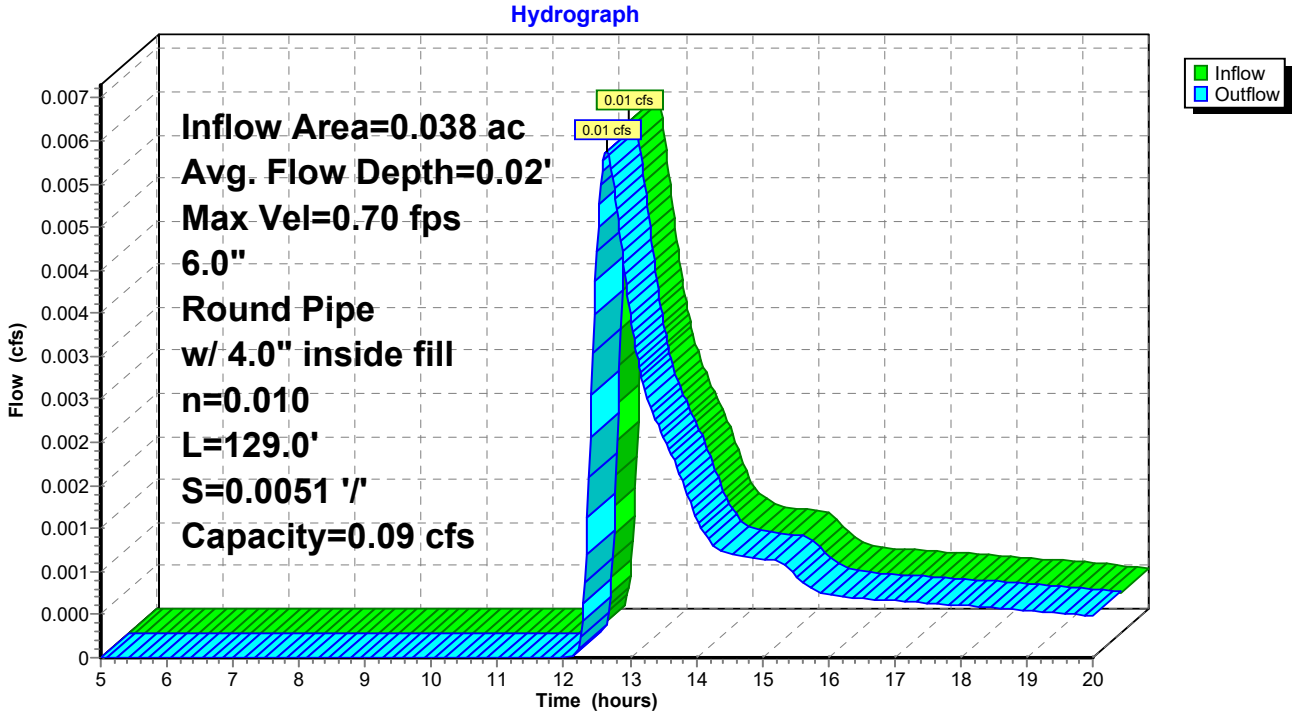
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.70 fps, Min. Travel Time= 3.1 min
Avg. Velocity = 0.38 fps, Avg. Travel Time= 5.7 min

Peak Storage= 1 cf @ 12.59 hrs
Average Depth at Peak Storage= 0.35' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

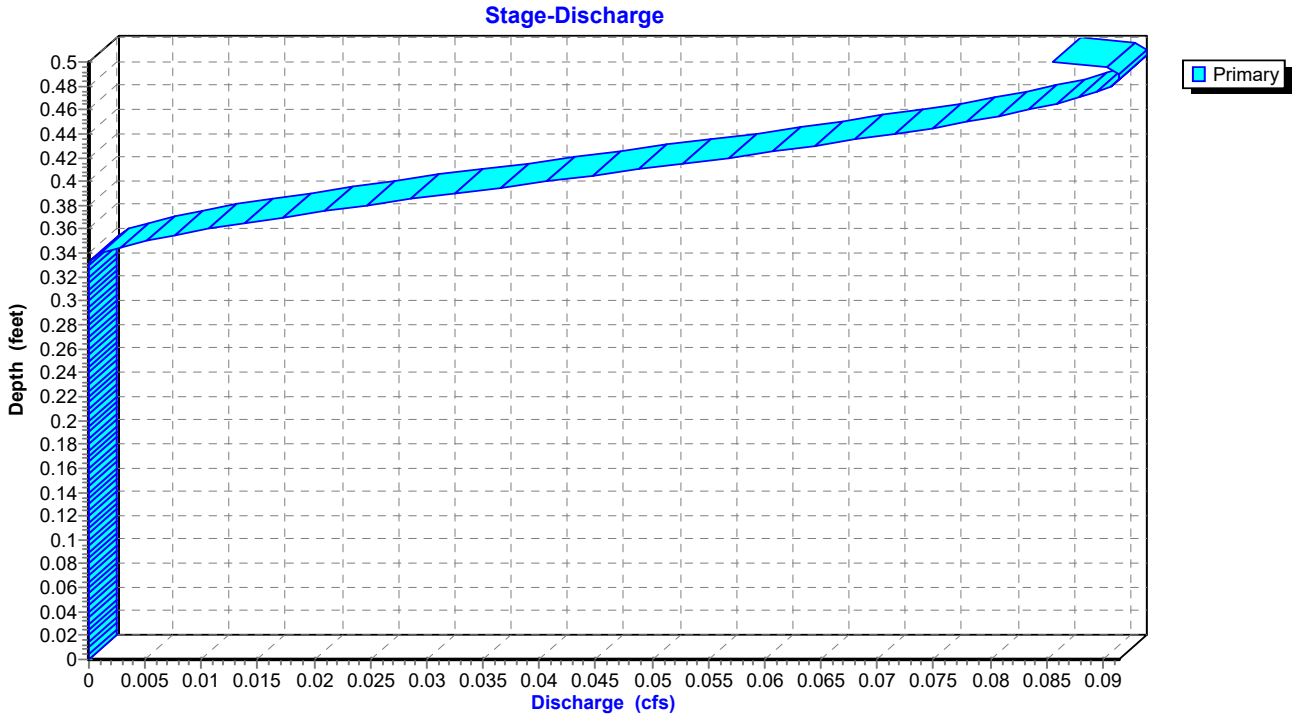
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0051 '/'
Inlet Invert= 668.84', Outlet Invert= 668.18'



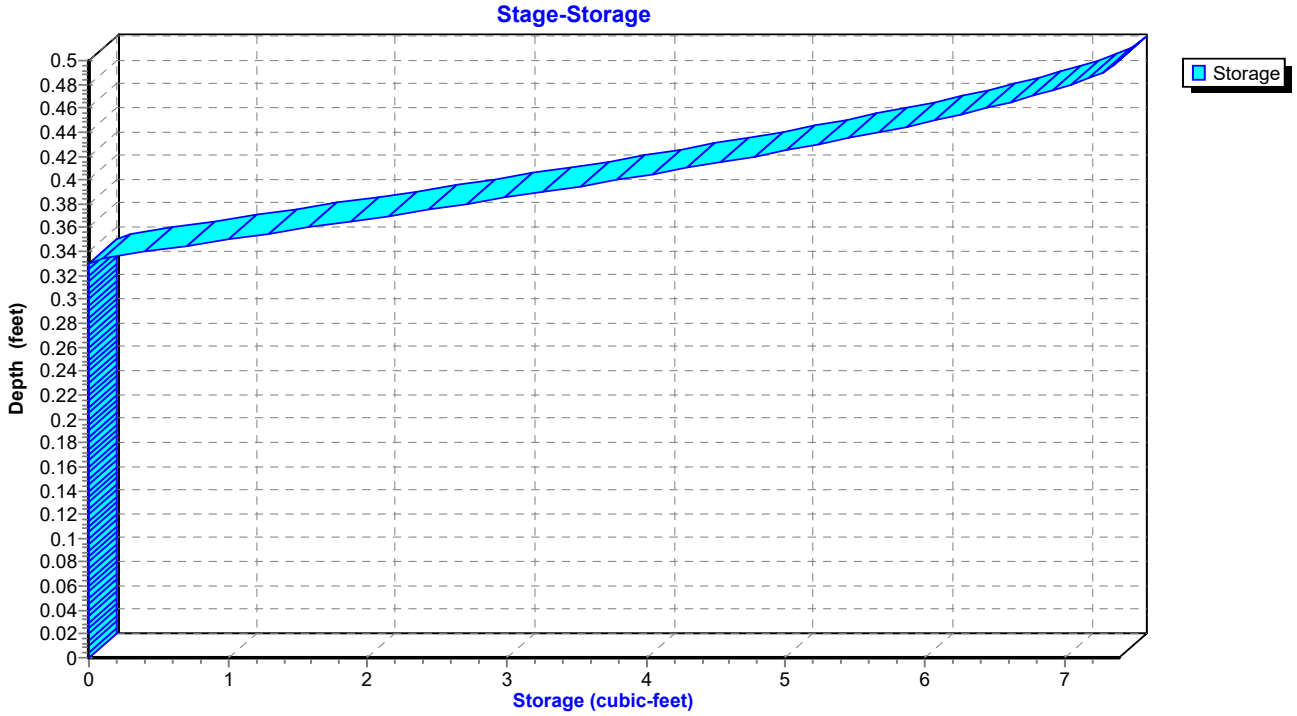
Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Hydrograph for Reach 17R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.17	0.00
5.40	0.00	0	669.17	0.00
5.80	0.00	0	669.17	0.00
6.20	0.00	0	669.17	0.00
6.60	0.00	0	669.17	0.00
7.00	0.00	0	669.17	0.00
7.40	0.00	0	669.17	0.00
7.80	0.00	0	669.17	0.00
8.20	0.00	0	669.17	0.00
8.60	0.00	0	669.17	0.00
9.00	0.00	0	669.17	0.00
9.40	0.00	0	669.17	0.00
9.80	0.00	0	669.17	0.00
10.20	0.00	0	669.17	0.00
10.60	0.00	0	669.17	0.00
11.00	0.00	0	669.17	0.00
11.40	0.00	0	669.17	0.00
11.80	0.00	0	669.17	0.00
12.20	**0.00**	0	669.18	0.00
12.60	**0.01**	**1**	**669.19**	**0.01**
13.00	0.00	1	669.19	**0.00**
13.40	0.00	1	669.18	0.00
13.80	0.00	1	669.18	0.00
14.20	0.00	0	669.18	0.00
14.60	0.00	0	669.18	0.00
15.00	0.00	0	669.18	0.00
15.40	0.00	0	669.18	0.00
15.80	0.00	0	669.18	0.00
16.20	0.00	0	669.18	0.00
16.60	0.00	0	669.18	0.00
17.00	0.00	0	669.18	0.00
17.40	0.00	0	669.18	0.00
17.80	0.00	0	669.18	0.00
18.20	0.00	0	669.18	0.00
18.60	0.00	0	669.18	0.00
19.00	0.00	0	669.18	0.00
19.40	0.00	0	669.18	0.00
19.80	0.00	0	669.18	0.00

Stage-Discharge for Reach 17R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.84	0.00	0.00
668.85	0.00	0.00
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.37	0.00
669.19	0.65	0.01
669.20	0.87	0.01
669.21	1.03	0.02
669.22	1.17	0.02
669.23	1.29	0.03
669.24	1.39	0.04
669.25	1.47	0.05
669.26	1.53	0.06
669.27	1.59	0.06
669.28	1.63	0.07
669.29	1.66	0.08
669.30	1.67	0.08
669.31	**1.67**	0.09
669.32	1.66	0.09
669.33	1.62	**0.09**
669.34	1.49	0.09

Stage-Area-Storage for Reach 17R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.84	0.0	0
668.85	0.0	0
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	1
669.20	0.0	2
669.21	0.0	2
669.22	0.0	3
669.23	0.0	3
669.24	0.0	4
669.25	0.0	4
669.26	0.0	5
669.27	0.0	5
669.28	0.0	6
669.29	0.0	6
669.30	0.0	6
669.31	0.1	7
669.32	0.1	7
669.33	0.1	7
669.34	**0.1**	**7**

Summary for Reach 18R: inlet 3 6"

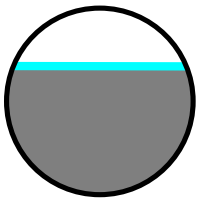
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 17R OUTLET depth by 0.01' @ 13.42 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.02' @ 12.56 hrs

Inflow Area = 0.090 ac, 18.89% Impervious, Inflow Depth > 0.20" for 1-yr event
Inflow = 0.01 cfs @ 12.62 hrs, Volume= 0.002 af
Outflow = 0.01 cfs @ 12.65 hrs, Volume= 0.001 af, Atten= 0%, Lag= 2.2 min

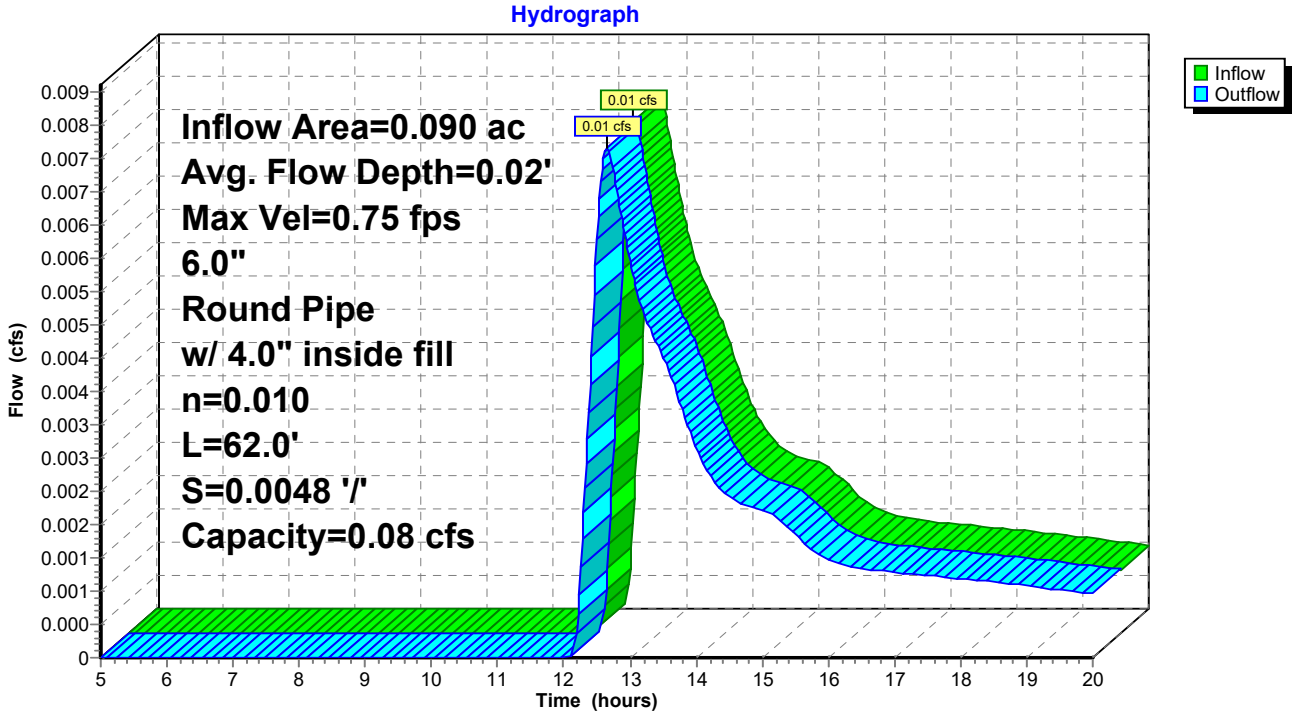
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.75 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 0.45 fps, Avg. Travel Time= 2.3 min

Peak Storage= 1 cf @ 12.63 hrs
Average Depth at Peak Storage= 0.36' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.08 cfs

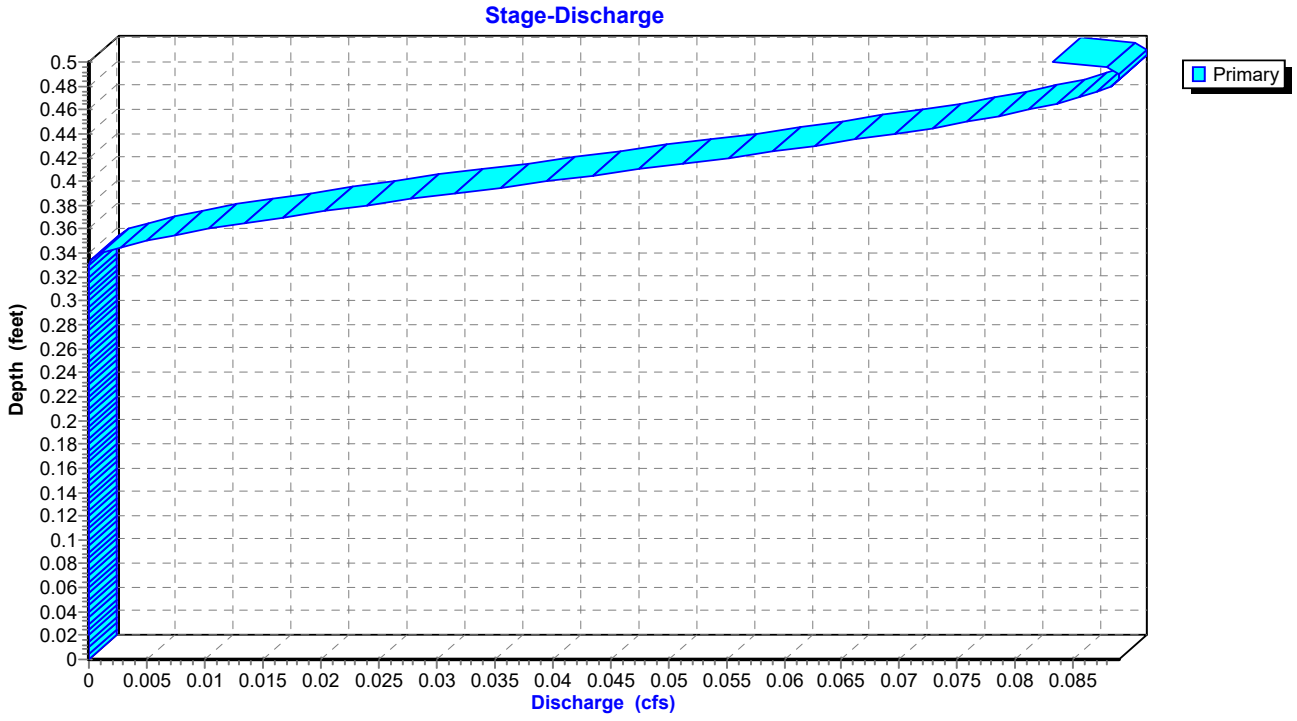
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0048 '/'
Inlet Invert= 668.18', Outlet Invert= 667.88'



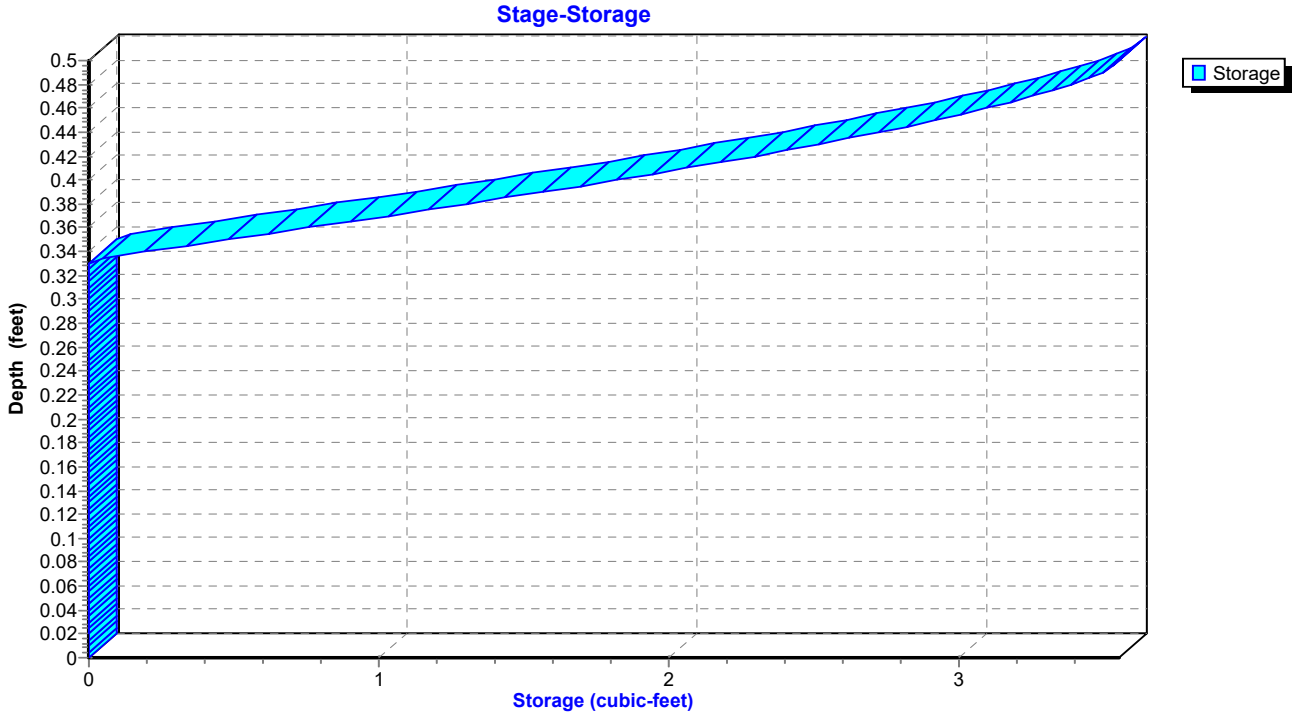
Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Hydrograph for Reach 18R: inlet 3 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.51	0.00
5.40	0.00	0	668.51	0.00
5.80	0.00	0	668.51	0.00
6.20	0.00	0	668.51	0.00
6.60	0.00	0	668.51	0.00
7.00	0.00	0	668.51	0.00
7.40	0.00	0	668.51	0.00
7.80	0.00	0	668.51	0.00
8.20	0.00	0	668.51	0.00
8.60	0.00	0	668.51	0.00
9.00	0.00	0	668.51	0.00
9.40	0.00	0	668.51	0.00
9.80	0.00	0	668.51	0.00
10.20	0.00	0	668.51	0.00
10.60	0.00	0	668.51	0.00
11.00	0.00	0	668.51	0.00
11.40	0.00	0	668.51	0.00
11.80	0.00	0	668.51	0.00
12.20	0.00	0	668.52	0.00
12.60	**0.01**	**1**	**668.54**	**0.01**
13.00	**0.01**	**1**	**668.53**	**0.01**
13.40	0.00	0	668.53	0.00
13.80	0.00	0	668.53	0.00
14.20	0.00	0	668.52	0.00
14.60	0.00	0	668.52	0.00
15.00	0.00	0	668.52	0.00
15.40	0.00	0	668.52	0.00
15.80	0.00	0	668.52	0.00
16.20	0.00	0	668.52	0.00
16.60	0.00	0	668.52	0.00
17.00	0.00	0	668.52	0.00
17.40	0.00	0	668.52	0.00
17.80	0.00	0	668.52	0.00
18.20	0.00	0	668.52	0.00
18.60	0.00	0	668.52	0.00
19.00	0.00	0	668.52	0.00
19.40	0.00	0	668.52	0.00
19.80	0.00	0	668.52	0.00

Stage-Discharge for Reach 18R: inlet 3 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	0.00	0.00
668.35	0.00	0.00
668.36	0.00	0.00
668.37	0.00	0.00
668.38	0.00	0.00
668.39	0.00	0.00
668.40	0.00	0.00
668.41	0.00	0.00
668.42	0.00	0.00
668.43	0.00	0.00
668.44	0.00	0.00
668.45	0.00	0.00
668.46	0.00	0.00
668.47	0.00	0.00
668.48	0.00	0.00
668.49	0.00	0.00
668.50	0.00	0.00
668.51	0.00	0.00
668.52	0.36	0.00
668.53	0.64	0.00
668.54	0.84	0.01
668.55	1.00	0.02
668.56	1.14	0.02
668.57	1.25	0.03
668.58	1.35	0.04
668.59	1.43	0.05
668.60	1.49	0.06
668.61	1.54	0.06
668.62	1.58	0.07
668.63	1.61	0.08
668.64	1.63	0.08
668.65	**1.63**	0.09
668.66	1.61	0.09
668.67	1.58	**0.09**
668.68	1.45	0.08

Stage-Area-Storage for Reach 18R: inlet 3 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.0	0
668.48	0.0	0
668.49	0.0	0
668.50	0.0	0
668.51	0.0	0
668.52	0.0	0
668.53	0.0	0
668.54	0.0	1
668.55	0.0	1
668.56	0.0	1
668.57	0.0	2
668.58	0.0	2
668.59	0.0	2
668.60	0.0	2
668.61	0.0	3
668.62	0.0	3
668.63	0.0	3
668.64	0.0	3
668.65	0.1	3
668.66	0.1	3
668.67	0.1	3
668.68	**0.1**	**4**

Summary for Reach 22R: NDS2 6"

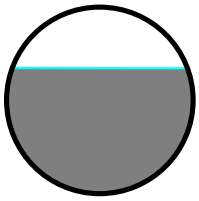
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.031 ac, 3.23% Impervious, Inflow Depth > 0.11" for 1-yr event
Inflow = 0.00 cfs @ 13.37 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 13.55 hrs, Volume= 0.000 af, Atten= 0%, Lag= 10.4 min

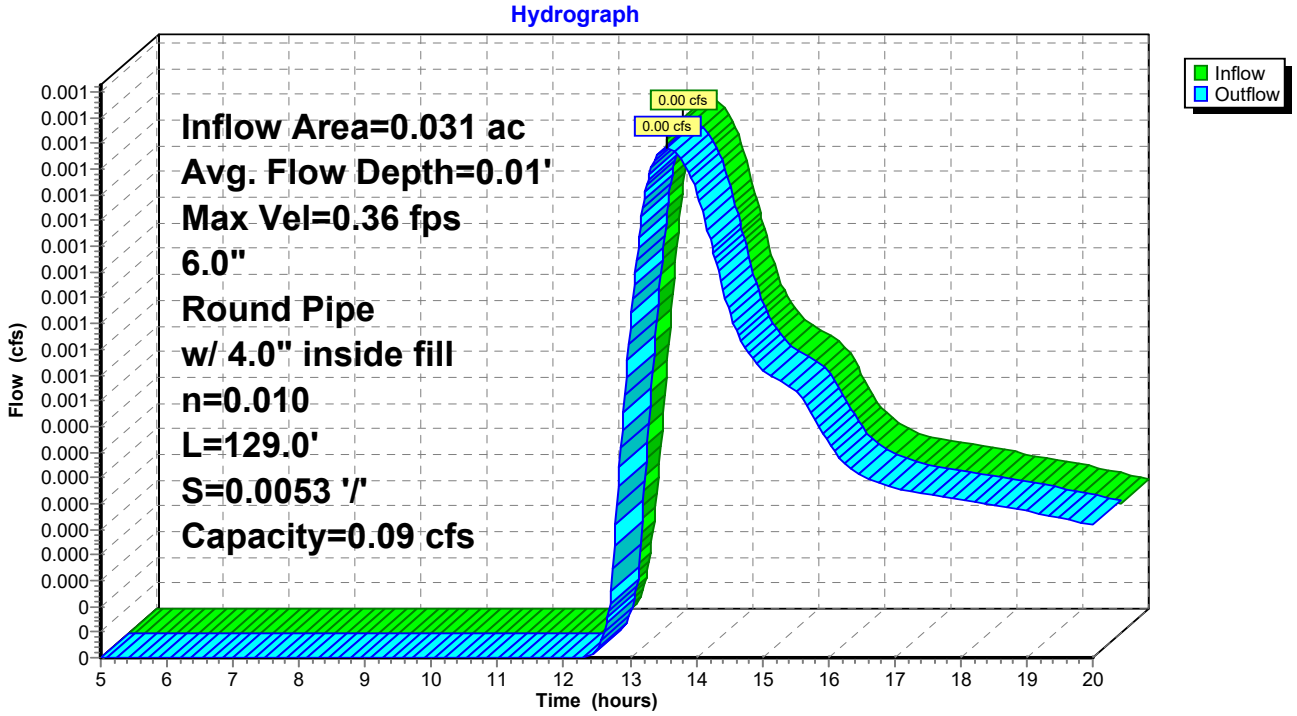
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.36 fps, Min. Travel Time= 5.9 min
Avg. Velocity = 0.28 fps, Avg. Travel Time= 7.6 min

Peak Storage= 0 cf @ 13.45 hrs
Average Depth at Peak Storage= 0.34' above invert (0.01' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

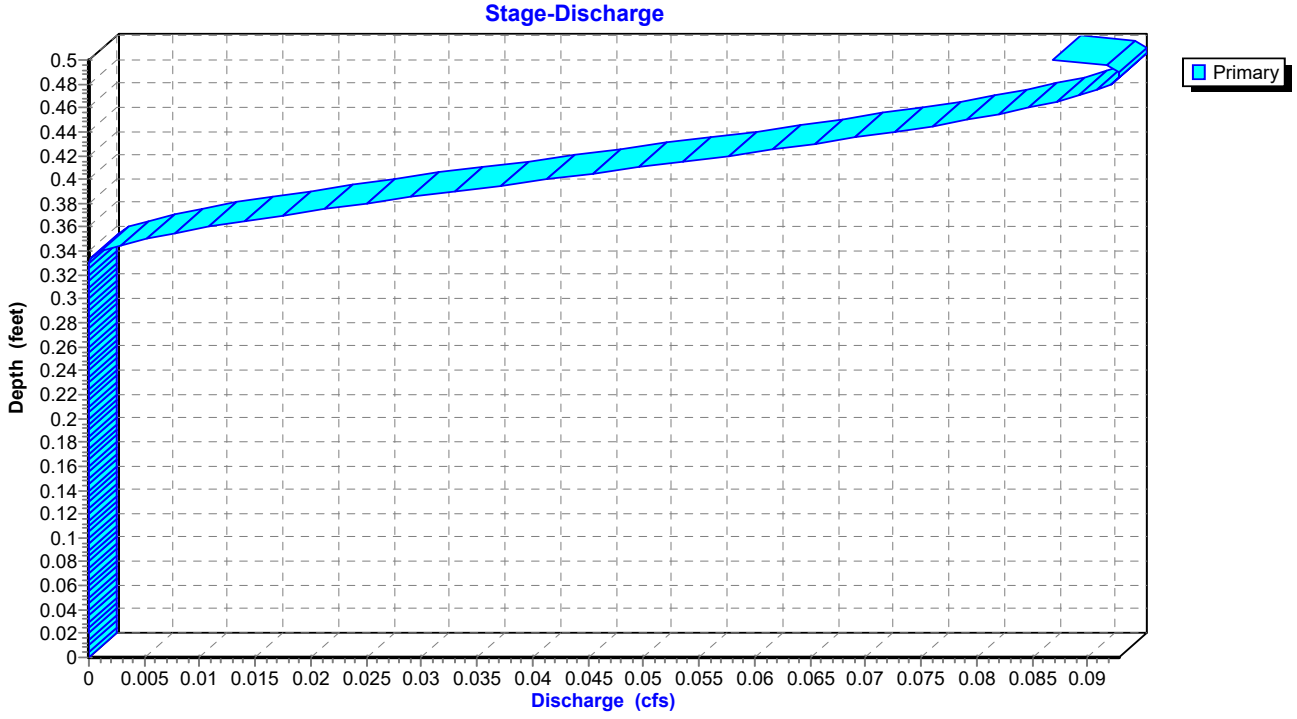
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0053 '/'
Inlet Invert= 668.86', Outlet Invert= 668.18'



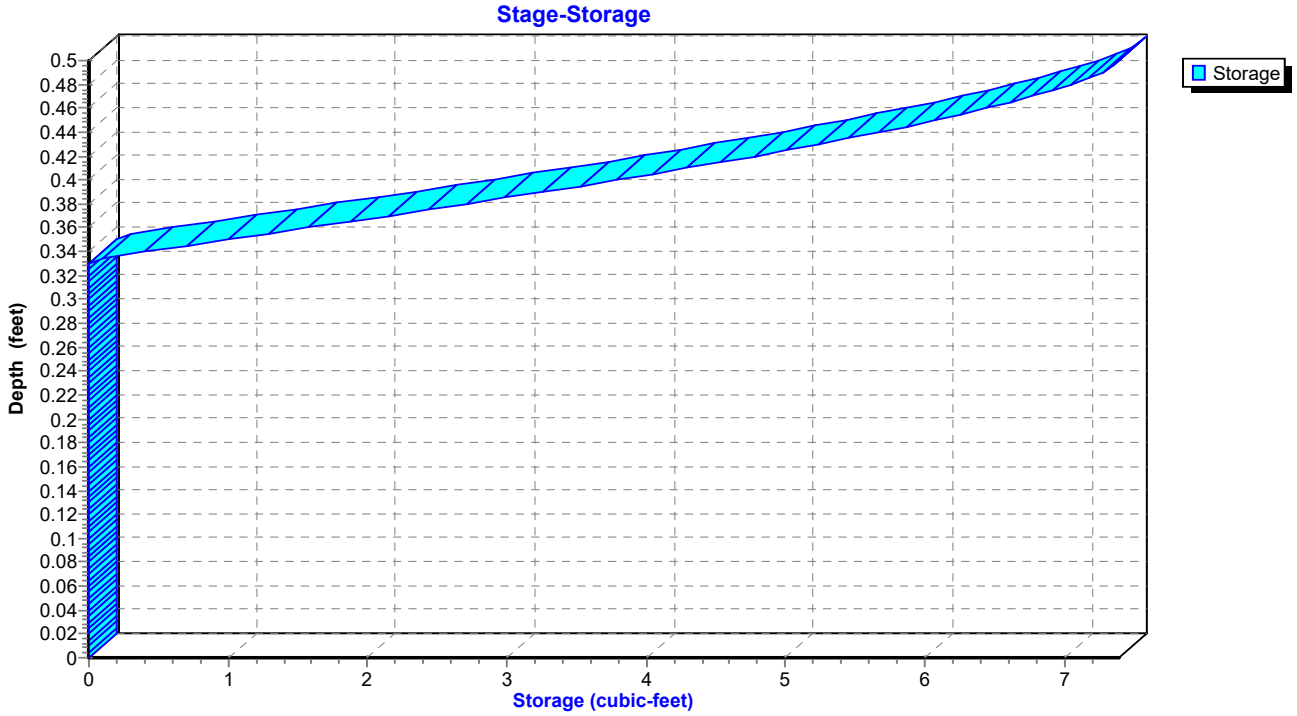
Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Hydrograph for Reach 22R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.19	0.00
5.40	0.00	0	669.19	0.00
5.80	0.00	0	669.19	0.00
6.20	0.00	0	669.19	0.00
6.60	0.00	0	669.19	0.00
7.00	0.00	0	669.19	0.00
7.40	0.00	0	669.19	0.00
7.80	0.00	0	669.19	0.00
8.20	0.00	0	669.19	0.00
8.60	0.00	0	669.19	0.00
9.00	0.00	0	669.19	0.00
9.40	0.00	0	669.19	0.00
9.80	0.00	0	669.19	0.00
10.20	0.00	0	669.19	0.00
10.60	0.00	0	669.19	0.00
11.00	0.00	0	669.19	0.00
11.40	0.00	0	669.19	0.00
11.80	0.00	0	669.19	0.00
12.20	0.00	0	669.19	0.00
12.60	0.00	0	669.19	0.00
13.00	**0.00**	0	669.20	0.00
13.40	**0.00**	**0**	**669.20**	**0.00**
13.80	0.00	**0**	**669.20**	**0.00**
14.20	0.00	0	669.20	0.00
14.60	0.00	0	669.20	0.00
15.00	0.00	0	669.20	0.00
15.40	0.00	0	669.20	0.00
15.80	0.00	0	669.20	0.00
16.20	0.00	0	669.20	0.00
16.60	0.00	0	669.20	0.00
17.00	0.00	0	669.20	0.00
17.40	0.00	0	669.20	0.00
17.80	0.00	0	669.20	0.00
18.20	0.00	0	669.20	0.00
18.60	0.00	0	669.20	0.00
19.00	0.00	0	669.20	0.00
19.40	0.00	0	669.20	0.00
19.80	0.00	0	669.20	0.00

Stage-Discharge for Reach 22R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.00	0.00
669.19	0.00	0.00
669.20	0.37	0.00
669.21	0.66	0.01
669.22	0.88	0.01
669.23	1.05	0.02
669.24	1.19	0.03
669.25	1.31	0.03
669.26	1.41	0.04
669.27	1.49	0.05
669.28	1.56	0.06
669.29	1.61	0.07
669.30	1.65	0.07
669.31	1.68	0.08
669.32	1.70	0.08
669.33	**1.70**	0.09
669.34	1.69	0.09
669.35	1.65	**0.09**
669.36	1.52	0.09

Stage-Area-Storage for Reach 22R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	0
669.20	0.0	0
669.21	0.0	1
669.22	0.0	2
669.23	0.0	2
669.24	0.0	3
669.25	0.0	3
669.26	0.0	4
669.27	0.0	4
669.28	0.0	5
669.29	0.0	5
669.30	0.0	6
669.31	0.0	6
669.32	0.0	6
669.33	0.1	7
669.34	0.1	7
669.35	0.1	7
669.36	**0.1**	**7**

Summary for Pond 4P: stormtech SC310 16"x34" chambers

[44] Hint: Outlet device #2 is below defined storage
[61] Hint: Exceeded Reach 10R outlet invert by 0.73' @ 13.82 hrs
[61] Hint: Exceeded Reach 12R outlet invert by 0.73' @ 13.82 hrs

Inflow Area = 1.066 ac, 90.90% Impervious, Inflow Depth > 1.98" for 1-yr event
Inflow = 0.87 cfs @ 12.07 hrs, Volume= 0.176 af
Outflow = 0.32 cfs @ 13.82 hrs, Volume= 0.172 af, Atten= 63%, Lag= 104.9 min
Primary = 0.06 cfs @ 13.82 hrs, Volume= 0.013 af
Secondary = 0.26 cfs @ 13.82 hrs, Volume= 0.159 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 665.73' @ 13.82 hrs Surf.Area= 0.104 ac Storage= 0.051 af

Plug-Flow detention time= 97.2 min calculated for 0.171 af (97% of inflow)
Center-of-Mass det. time= 87.0 min (865.6 - 778.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	664.40'	0.076 af	**36.00'W x 120.45'L x 2.33'H Field A Z=0.5** 0.242 af Overall - 0.011 af Embedded = 0.231 af x 33.0% Voids
#2A	664.90'	0.011 af	**ADS_StormTech RC-310 +Cap** x 32 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 2 Rows
#3	665.00'	0.001 af	**8.0" Round Pipe Storage** L= 87.0' S= 0.5200 '/'
#4	664.90'	0.001 af	**12.0" Round Pipe Storage** L= 45.0' S= 0.7300 '/'
#5	665.40'	0.000 af	**12.0" Round Pipe Storage** L= 23.0' S= 0.5200 '/'
#6	665.58'	0.001 af	**10.0" Round Pipe Storage** L= 69.0' S= 0.5200 '/'
		0.090 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	665.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.75 0.75 2.10 2.10 3.00 Width (feet) 0.00 0.17 0.17 4.00 4.00
#2	Secondary	664.00'	**Tube/Siphon/Float Valve** 4.000" Diameter, C= 0.600 136.0' Long Tube, Hazen-Williams C= 130 Inlet / Outlet Elev. = 664.00' / 664.00'

Primary OutFlow Max=0.06 cfs @ 13.82 hrs HW=665.73' (Free Discharge)
↑└**1=Custom Weir/Orifice** (Weir Controls 0.06 cfs @ 1.57 fps)

Secondary OutFlow Max=0.26 cfs @ 13.82 hrs HW=665.73' (Free Discharge)
↑└**2=Tube/Siphon/Float Valve** (Tube Controls 0.26 cfs @ 2.97 fps)

Pond 4P: stormtech SC310 16"x34" chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-310 +Cap (ADS StormTech®RC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 48.0" Spacing = 82.0" C-C Row Spacing

16 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 115.12' Row Length +32.0" End Stone x 2 = 120.45' Base Length
2 Rows x 34.0" Wide + 48.0" Spacing x 1 + 158.0" Side Stone x 2 = 36.00' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

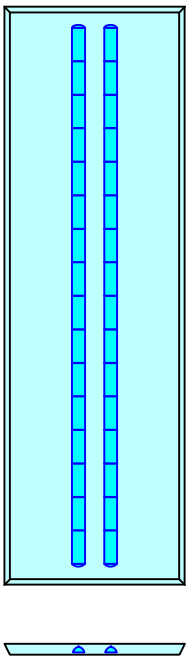
0.5 '/' Side-Z x Height = 14.0" Flare/Side
Base Length + Flare x 2 = 122.79' Top Length
Base Width + Flare x 2 = 38.33' Top Width

32 Chambers x 14.7 cf = 471.7 cf Chamber Storage

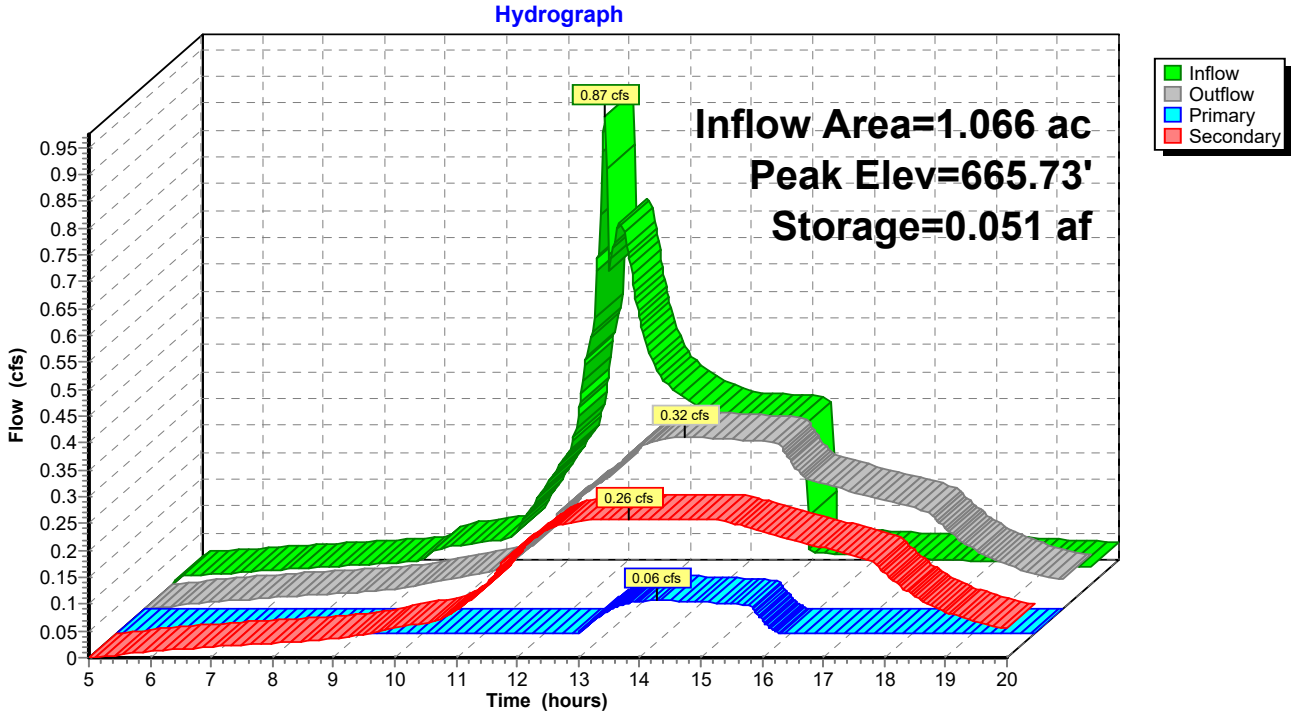
10,548.2 cf Field - 471.7 cf Chambers = 10,076.5 cf Stone x 33.0% Voids = 3,325.2 cf Stone Storage

Chamber Storage + Stone Storage = 3,797.0 cf = 0.087 af
Overall Storage Efficiency = 36.0%
Overall System Size = 120.45' x 36.00' x 2.33'

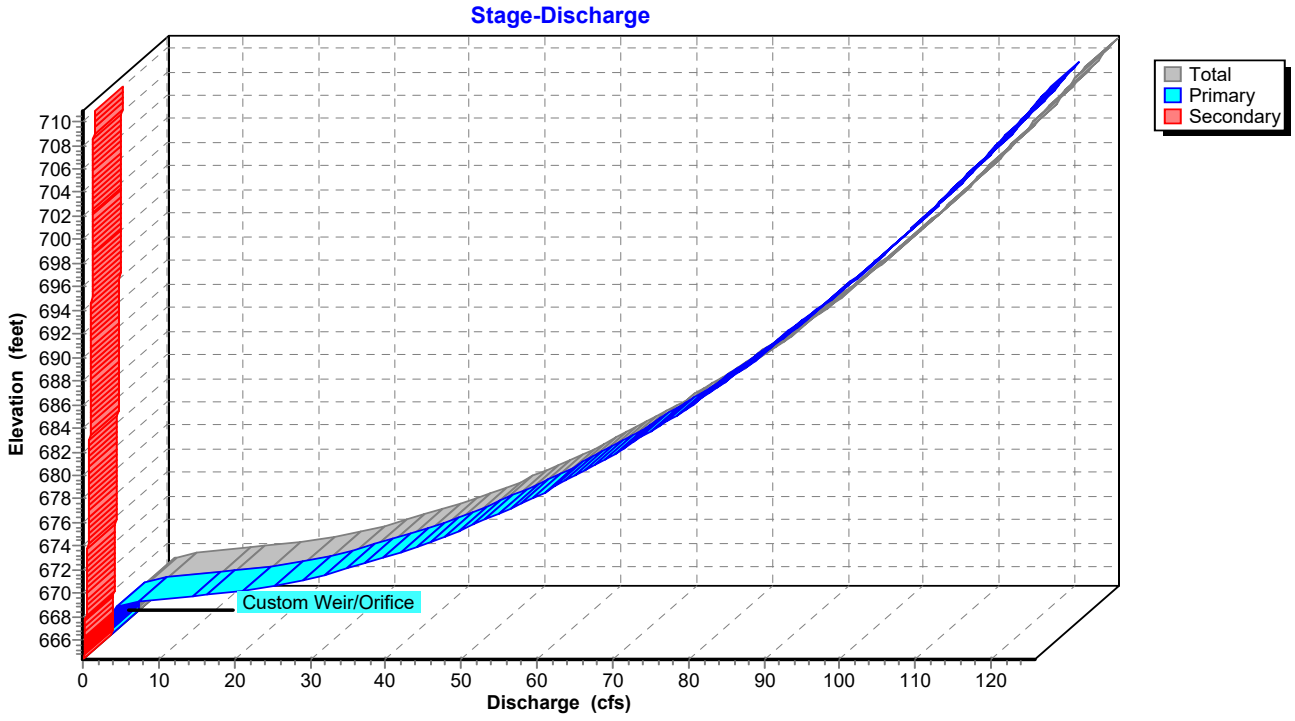
32 Chambers
390.7 cy Field
373.2 cy Stone



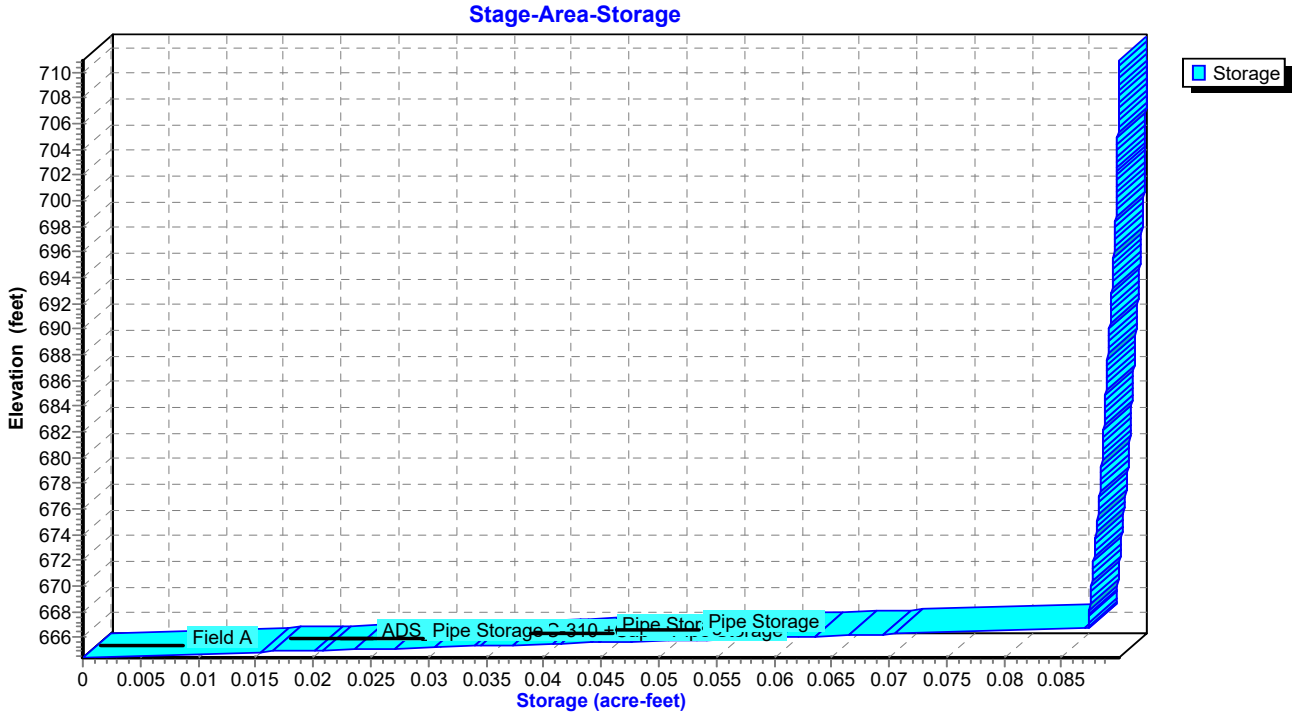
Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Hydrograph for Pond 4P: stormtech SC310 16"x34" chambers

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0.000	664.40	0.00	0.00	0.00
5.40	0.02	0.000	664.41	0.00	0.00	0.00
5.80	0.02	0.001	664.42	0.01	0.00	0.01
6.20	0.02	0.001	664.43	0.01	0.00	0.01
6.60	0.03	0.001	664.44	0.02	0.00	0.02
7.00	0.03	0.002	664.45	0.02	0.00	0.02
7.40	0.03	0.002	664.46	0.02	0.00	0.02
7.80	0.03	0.002	664.47	0.03	0.00	0.03
8.20	0.04	0.003	664.48	0.03	0.00	0.03
8.60	0.04	0.003	664.48	0.03	0.00	0.03
9.00	0.04	0.003	664.49	0.03	0.00	0.03
9.40	0.07	0.004	664.51	0.04	0.00	0.04
9.80	0.07	0.004	664.53	0.05	0.00	0.05
10.20	0.08	0.005	664.55	0.06	0.00	0.06
10.60	0.09	0.006	664.58	0.07	0.00	0.07
11.00	0.17	0.008	664.63	0.09	0.00	0.09
11.40	0.23	0.011	664.73	0.13	0.00	0.13
11.80	**0.44**	0.016	664.89	0.18	0.00	0.18
12.20	**0.63**	0.031	665.23	0.22	0.00	0.22
12.60	0.51	0.043	665.54	0.25	0.01	0.24
13.00	0.38	0.048	665.67	0.29	0.04	0.25
13.40	0.35	0.050	665.72	0.32	0.06	0.26
13.80	0.32	**0.051**	**665.73**	**0.32**	**0.06**	**0.26**
14.20	0.31	**0.051**	**665.72**	**0.32**	**0.06**	**0.26**
14.60	0.31	0.050	665.72	0.32	0.06	0.26
15.00	0.31	0.050	665.71	0.31	0.06	0.26
15.40	0.07	0.049	665.69	0.30	0.05	0.26
15.80	0.06	0.042	665.52	0.24	0.00	0.24
16.20	0.05	0.036	665.37	0.23	0.00	0.23
16.60	0.05	0.031	665.24	0.22	0.00	0.22
17.00	0.05	0.025	665.11	0.20	0.00	0.20
17.40	0.05	0.020	664.99	0.19	0.00	0.19
17.80	0.04	0.016	664.87	0.18	0.00	0.18
18.20	0.04	0.012	664.76	0.14	0.00	0.14
18.60	0.04	0.009	664.68	0.11	0.00	0.11
19.00	0.04	0.007	664.62	0.09	0.00	0.09
19.40	0.04	0.006	664.58	0.07	0.00	0.07
19.80	0.03	0.005	664.55	0.06	0.00	0.06

Stage-Discharge for Pond 4P: stormtech SC310 16"x34" chambers

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
664.40	0.00	0.00	0.00
664.90	0.18	0.00	0.18
665.40	0.23	0.00	0.23
665.90	0.41	0.14	0.27
666.40	0.78	0.48	0.31
666.90	1.40	1.06	0.34
667.40	6.94	6.57	0.37
667.90	15.20	14.80	0.40
668.40	20.51	20.09	0.42
668.90	24.60	24.15	0.45
669.40	28.07	27.60	0.47
669.90	31.15	30.65	0.50
670.40	33.94	33.43	0.52
670.90	36.52	35.98	0.54
671.40	38.93	38.37	0.56
671.90	41.19	40.61	0.58
672.40	43.34	42.74	0.60
672.90	45.38	44.76	0.62
673.40	47.33	46.70	0.64
673.90	49.21	48.56	0.65
674.40	51.02	50.35	0.67
674.90	52.76	52.08	0.69
675.40	54.45	53.75	0.70
675.90	56.09	55.37	0.72
676.40	57.68	56.95	0.74
676.90	59.23	58.48	0.75
677.40	60.74	59.98	0.77
677.90	62.22	61.43	0.78
678.40	63.65	62.86	0.80
678.90	65.06	64.25	0.81
679.40	66.44	65.61	0.82
679.90	67.79	66.95	0.84
680.40	69.11	68.26	0.85
680.90	70.41	69.54	0.87
681.40	71.68	70.80	0.88
681.90	72.94	72.04	0.89
682.40	74.17	73.26	0.91
682.90	75.38	74.46	0.92
683.40	76.57	75.64	0.93
683.90	77.74	76.80	0.94
684.40	78.90	77.94	0.96
684.90	80.04	79.07	0.97
685.40	81.16	80.18	0.98
685.90	82.27	81.28	0.99
686.40	83.36	82.36	1.01
686.90	84.44	83.43	1.02
687.40	85.51	84.48	1.03
687.90	86.56	85.52	1.04
688.40	87.60	86.55	1.05
688.90	88.63	87.57	1.06
689.40	89.65	88.57	1.08
689.90	90.65	89.56	1.09
690.40	91.64	90.55	1.10
690.90	92.63	91.52	1.11
691.40	93.60	92.48	1.12
691.90	94.56	93.43	1.13
692.40	95.51	94.37	1.14
692.90	96.46	95.31	1.15
693.40	97.39	96.23	1.16
693.90	98.32	97.15	1.17
694.40	99.23	98.05	1.18
694.90	100.14	98.95	1.19
695.40	101.04	99.84	1.20
695.90	101.94	100.72	1.21
696.40	102.82	101.60	1.22
696.90	103.70	102.47	1.23
697.40	104.57	103.32	1.24
697.90	105.43	104.18	1.25
698.40	106.29	105.02	1.26
698.90	107.13	105.86	1.27
699.40	107.98	106.70	1.28
699.90	108.81	107.52	1.29
700.40	109.64	108.34	1.30
700.90	110.46	109.15	1.31
701.40	111.28	109.96	1.32
701.90	112.09	110.76	1.33
702.40	112.90	111.56	1.34
702.90	113.70	112.35	1.35
703.40	114.49	113.14	1.36
703.90	115.28	113.91	1.37
704.40	116.06	114.69	1.37
704.90	116.84	115.46	1.38
705.40	117.61	116.22	1.39
705.90	118.38	116.98	1.40
706.40	119.14	117.73	1.41
706.90	119.90	118.48	1.42
707.40	120.65	119.23	1.43
707.90	121.40	119.97	1.44
708.40	122.15	120.70	1.44
708.90	122.89	121.43	1.45
709.40	123.62	122.16	1.46
709.90	124.35	122.88	1.47
710.40	125.08	123.60	1.48
710.90	**125.80**	**124.31**	**1.49**

Stage-Area-Storage for Pond 4P: stormtech SC310 16"x34" chambers

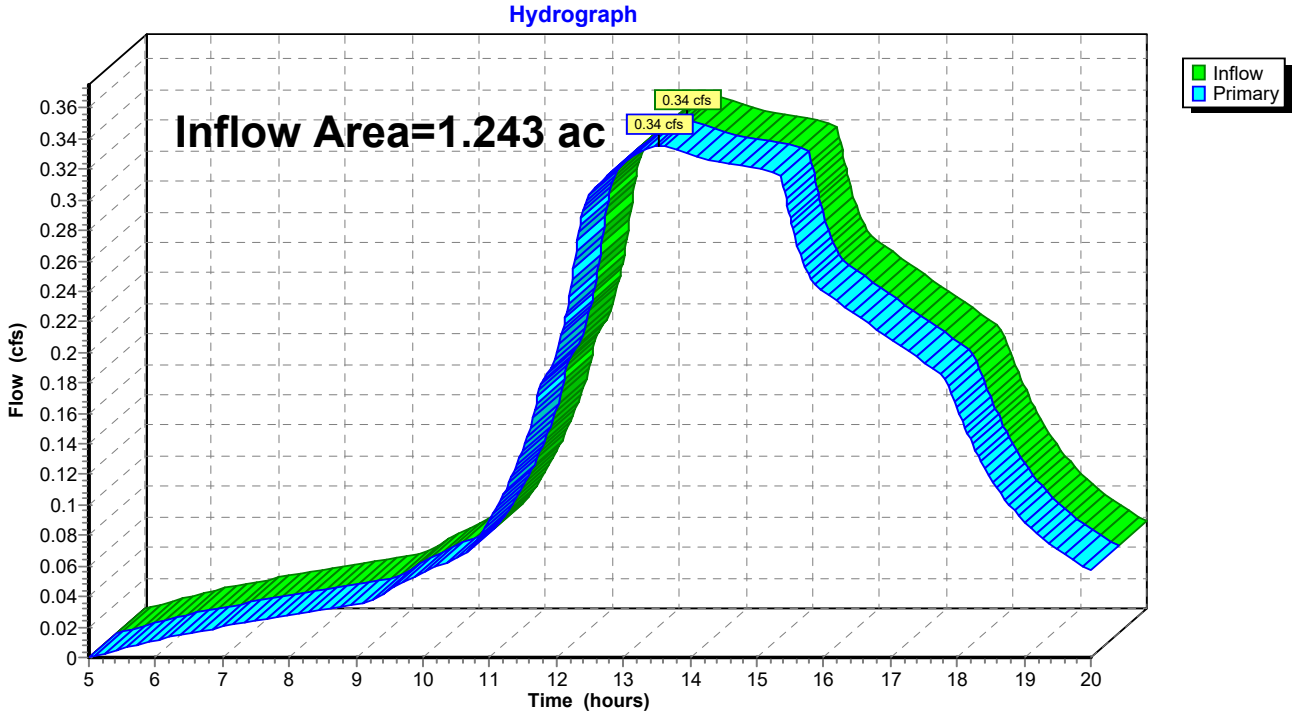
Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
664.40	0.000	689.90	0.089
664.90	0.017	690.40	0.089
665.40	0.037	690.90	0.089
665.90	0.057	691.40	0.089
666.40	0.075	691.90	0.089
666.90	0.087	692.40	0.089
667.40	0.087	692.90	0.089
667.90	0.087	693.40	0.089
668.40	0.087	693.90	0.089
668.90	0.087	694.40	0.089
669.40	0.088	694.90	0.089
669.90	0.088	695.40	0.089
670.40	0.088	695.90	0.090
670.90	0.088	696.40	0.090
671.40	0.088	696.90	0.090
671.90	0.088	697.40	0.090
672.40	0.088	697.90	0.090
672.90	0.088	698.40	0.090
673.40	0.088	698.90	0.090
673.90	0.088	699.40	0.090
674.40	0.088	699.90	0.090
674.90	0.088	700.40	0.090
675.40	0.088	700.90	0.090
675.90	0.088	701.40	0.090
676.40	0.088	701.90	0.090
676.90	0.088	702.40	0.090
677.40	0.088	702.90	0.090
677.90	0.088	703.40	0.090
678.40	0.088	703.90	0.090
678.90	0.088	704.40	0.090
679.40	0.088	704.90	0.090
679.90	0.088	705.40	0.090
680.40	0.089	705.90	0.090
680.90	0.089	706.40	0.090
681.40	0.089	706.90	0.090
681.90	0.089	707.40	0.090
682.40	0.089	707.90	0.090
682.90	0.089	708.40	0.090
683.40	0.089	708.90	0.090
683.90	0.089	709.40	0.090
684.40	0.089	709.90	0.090
684.90	0.089	710.40	0.090
685.40	0.089	710.90	**0.090**
685.90	0.089		
686.40	0.089		
686.90	0.089		
687.40	0.089		
687.90	0.089		
688.40	0.089		
688.90	0.089		
689.40	0.089		

Summary for Link 5L: HOM property run-off

Inflow Area = 1.243 ac, 84.96% Impervious, Inflow Depth > 1.73" for 1-yr event
Inflow = 0.34 cfs @ 13.53 hrs, Volume= 0.179 af
Primary = 0.34 cfs @ 13.53 hrs, Volume= 0.179 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Link 5L: HOM property run-off



Hydrograph for Link 5L: HOM property run-off

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.20	0.00	0.00	0.00
5.40	0.00	0.00	0.00
5.60	0.01	0.00	0.01
5.80	0.01	0.00	0.01
6.00	0.01	0.00	0.01
6.20	0.01	0.00	0.01
6.40	0.01	0.00	0.01
6.60	0.02	0.00	0.02
6.80	0.02	0.00	0.02
7.00	0.02	0.00	0.02
7.20	0.02	0.00	0.02
7.40	0.02	0.00	0.02
7.60	0.02	0.00	0.02
7.80	0.03	0.00	0.03
8.00	0.03	0.00	0.03
8.20	0.03	0.00	0.03
8.40	0.03	0.00	0.03
8.60	0.03	0.00	0.03
8.80	0.03	0.00	0.03
9.00	0.03	0.00	0.03
9.20	0.04	0.00	0.04
9.40	0.04	0.00	0.04
9.60	0.05	0.00	0.05
9.80	0.05	0.00	0.05
10.00	0.06	0.00	0.06
10.20	0.06	0.00	0.06
10.40	0.06	0.00	0.06
10.60	0.07	0.00	0.07
10.80	0.08	0.00	0.08
11.00	0.09	0.00	0.09
11.20	0.11	0.00	0.11
11.40	0.13	0.00	0.13
11.60	0.15	0.00	0.15
11.80	0.18	0.00	0.18
12.00	0.20	0.00	0.20
12.20	0.24	0.00	0.24
12.40	0.29	0.00	0.29
12.60	0.31	0.00	0.31
12.80	0.32	0.00	0.32
13.00	0.32	0.00	0.32
13.20	0.33	0.00	0.33
13.40	**0.33**	0.00	**0.33**
13.60	**0.34**	0.00	**0.34**
13.80	0.33	0.00	0.33
14.00	0.33	0.00	0.33
14.20	0.33	0.00	0.33
14.40	0.33	0.00	0.33
14.60	0.32	0.00	0.32
14.80	0.32	0.00	0.32
15.00	0.32	0.00	0.32
15.20	0.32	0.00	0.32
15.40	0.31	0.00	0.31
15.60	0.27	0.00	0.27
15.80	0.25	0.00	0.25
16.00	0.24	0.00	0.24
16.20	0.23	0.00	0.23
16.40	0.23	0.00	0.23
16.60	0.22	0.00	0.22
16.80	0.21	0.00	0.21
17.00	0.21	0.00	0.21
17.20	0.20	0.00	0.20
17.40	0.20	0.00	0.20
17.60	0.19	0.00	0.19
17.80	0.18	0.00	0.18
18.00	0.16	0.00	0.16
18.20	0.14	0.00	0.14
18.40	0.13	0.00	0.13
18.60	0.11	0.00	0.11
18.80	0.10	0.00	0.10
19.00	0.09	0.00	0.09
19.20	0.08	0.00	0.08
19.40	0.07	0.00	0.07
19.60	0.07	0.00	0.07
19.80	0.06	0.00	0.06
20.00	0.06	0.00	0.06

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SE roof to MH8 Runoff Area=0.339 ac 100.00% Impervious Runoff Depth>2.65"
Flow Length=130' Tc=10.0 min CN=98 Runoff=1.13 cfs 0.075 af

Subcatchment3S: untreated to streets Runoff Area=0.177 ac 49.15% Impervious Runoff Depth>0.70"
Flow Length=110' Tc=30.0 min CN=71 Runoff=0.10 cfs 0.010 af

Subcatchment6S: S roof to MH8 Runoff Area=0.305 ac 100.00% Impervious Runoff Depth>2.65"
Flow Length=170' Tc=12.0 min CN=98 Runoff=0.95 cfs 0.067 af

Subcatchment7S: to Inlets 8 & 9 Runoff Area=0.048 ac 100.00% Impervious Runoff Depth>2.64"
Flow Length=150' Tc=28.0 min CN=98 Runoff=0.10 cfs 0.011 af

Subcatchment8S: to Inlet 7 Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>2.64"
Flow Length=90' Tc=21.0 min CN=98 Runoff=0.12 cfs 0.011 af

Subcatchment9S: to Inlet 6 Runoff Area=0.041 ac 78.05% Impervious Runoff Depth>1.50"
Flow Length=110' Tc=26.0 min CN=85 Runoff=0.06 cfs 0.005 af

Subcatchment10S: to Inlet 5 Runoff Area=0.030 ac 83.33% Impervious Runoff Depth>1.73"
Flow Length=60' Tc=18.0 min CN=88 Runoff=0.06 cfs 0.004 af

Subcatchment11S: to Inlet 4 Runoff Area=0.038 ac 73.68% Impervious Runoff Depth>1.30"
Flow Length=120' Tc=26.0 min CN=82 Runoff=0.05 cfs 0.004 af

Subcatchment12S: to inlet 3 Runoff Area=0.124 ac 100.00% Impervious Runoff Depth>2.65"
Tc=0.0 min CN=98 Runoff=0.54 cfs 0.027 af

Subcatchment13S: to NDS 2 Runoff Area=0.021 ac 0.00% Impervious Runoff Depth>0.33"
Flow Length=20' Tc=15.0 min CN=61 Runoff=0.01 cfs 0.001 af

Subcatchment14S: to NDS 3-5 Runoff Area=0.031 ac 3.23% Impervious Runoff Depth>0.21"
Flow Length=105' Tc=55.0 min CN=57 Runoff=0.00 cfs 0.001 af

Subcatchment16S: to NDS11-6 Runoff Area=0.038 ac 42.11% Impervious Runoff Depth>0.42"
Flow Length=80' Tc=30.0 min CN=64 Runoff=0.01 cfs 0.001 af

Reach 6R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.22 fps Inflow=0.95 cfs 0.067 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=27.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.28 cfs 0.067 af

Reach 7R: MH8 12" Avg. Flow Depth=0.25' Max Vel=2.01 fps Inflow=0.55 cfs 0.142 af
12.0" Round Pipe w/ 9.0" inside fill n=0.010 L=19.0' S=0.0042 '/' Capacity=0.28 cfs Outflow=0.29 cfs 0.142 af

Reach 8R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.23 fps Inflow=1.13 cfs 0.075 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=42.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.075 af

Reach 9R: inlet 3 18" Avg. Flow Depth=0.24' Max Vel=3.33 fps Inflow=0.81 cfs 0.169 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=35.0' S=0.0080 '/' Capacity=0.88 cfs Outflow=0.81 cfs 0.169 af

Reach 10R: MH7 18" Avg. Flow Depth=0.33' Max Vel=2.64 fps Inflow=0.81 cfs 0.169 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=4.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.69 cfs 0.169 af

Reach 11R: inlet 7 18" Avg. Flow Depth=0.10' Max Vel=1.92 fps Inflow=0.22 cfs 0.022 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=62.0' S=0.0052 '/' Capacity=0.71 cfs Outflow=0.22 cfs 0.022 af

Reach 12R: MH6 18" Avg. Flow Depth=0.10' Max Vel=1.90 fps Inflow=0.22 cfs 0.022 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=8.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.22 cfs 0.022 af

Reach 13R: to isolator 6" Avg. Flow Depth=0.02' Max Vel=5.12 fps Inflow=0.06 cfs 0.005 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.06 cfs 0.005 af

Reach 14R: to isolator 6" Avg. Flow Depth=0.02' Max Vel=5.13 fps Inflow=0.06 cfs 0.004 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.06 cfs 0.004 af

Reach 15R: to isolator 6" Avg. Flow Depth=0.02' Max Vel=4.70 fps Inflow=0.05 cfs 0.004 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.05 cfs 0.004 af

Reach 17R: NDS2 6" Avg. Flow Depth=0.03' Max Vel=0.86 fps Inflow=0.01 cfs 0.001 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0051 '/' Capacity=0.09 cfs Outflow=0.01 cfs 0.001 af

Reach 18R: inlet 3 6" Avg. Flow Depth=0.03' Max Vel=0.95 fps Inflow=0.01 cfs 0.002 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=62.0' S=0.0048 '/' Capacity=0.08 cfs Outflow=0.01 cfs 0.002 af

Reach 22R: NDS2 6" Avg. Flow Depth=0.01' Max Vel=0.49 fps Inflow=0.00 cfs 0.001 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0053 '/' Capacity=0.09 cfs Outflow=0.00 cfs 0.001 af

Pond 4P: stormtech SC310 16"x34" Peak Elev=665.82' Storage=0.054 af Inflow=0.88 cfs 0.207 af
Primary=0.10 cfs 0.023 af Secondary=0.27 cfs 0.178 af Outflow=0.36 cfs 0.201 af

Link 5L: HOM property run-off Inflow=0.40 cfs 0.211 af
Primary=0.40 cfs 0.211 af

Total Runoff Area = 1.243 ac Runoff Volume = 0.218 af Average Runoff Depth = 2.10"
15.04% Pervious = 0.187 ac 84.96% Impervious = 1.056 ac

Summary for Subcatchment 1S: SE roof to MH8

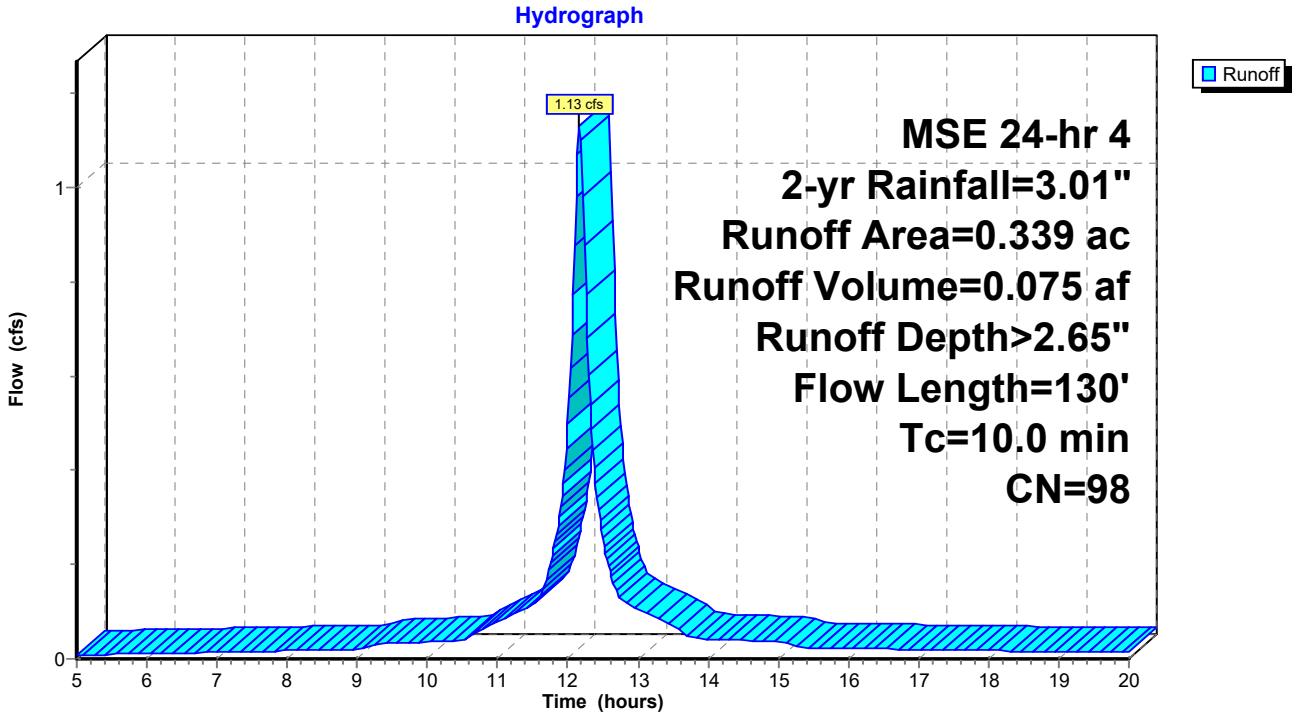
Runoff = 1.13 cfs @ 12.17 hrs, Volume= 0.075 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.339	98	fronting Main St
	0.339		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	130		0.22		**Direct Entry, S Bldg roof**

Subcatchment 1S: SE roof to MH8



Hydrograph for Subcatchment 1S: SE roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.01
5.20	0.15	0.04	0.01
5.40	0.16	0.04	0.01
5.60	0.17	0.05	0.01
5.80	0.18	0.05	0.01
6.00	0.19	0.06	0.01
6.20	0.20	0.07	0.01
6.40	0.21	0.07	0.01
6.60	0.22	0.08	0.01
6.80	0.23	0.09	0.01
7.00	0.24	0.10	0.01
7.20	0.25	0.11	0.01
7.40	0.26	0.11	0.02
7.60	0.27	0.12	0.02
7.80	0.29	0.13	0.02
8.00	0.30	0.14	0.02
8.20	0.31	0.15	0.02
8.40	0.32	0.16	0.02
8.60	0.34	0.18	0.02
8.80	0.35	0.19	0.02
9.00	0.36	0.20	0.02
9.20	0.39	0.22	0.03
9.40	0.41	0.24	0.03
9.60	0.43	0.26	0.03
9.80	0.45	0.28	0.03
10.00	0.48	0.30	0.04
10.20	0.50	0.32	0.04
10.40	0.53	0.34	0.04
10.60	0.56	0.37	0.04
10.80	0.60	0.41	0.06
11.00	0.65	0.46	0.08
11.20	0.71	0.51	0.09
11.40	0.78	0.58	0.11
11.60	0.87	0.66	0.13
11.80	1.03	0.82	0.23
12.00	1.41	1.19	**0.50**
12.20	1.98	1.75	**1.07**
12.40	2.14	1.91	0.37
12.60	2.23	2.00	0.18
12.80	2.30	2.07	0.12
13.00	2.36	2.13	0.11
13.20	2.41	2.18	0.09
13.40	2.45	2.22	0.08
13.60	2.48	2.26	0.06
13.80	2.51	2.28	0.04
14.00	2.53	2.30	0.04
14.20	2.56	2.33	0.04
14.40	2.58	2.35	0.04
14.60	2.60	2.37	0.04
14.80	2.62	2.39	0.04
15.00	2.65	2.42	0.04
15.20	2.66	2.43	0.03
15.40	2.67	2.44	0.02
15.60	2.69	2.46	0.02
15.80	2.70	2.47	0.02
16.00	2.71	2.48	0.02
16.20	2.72	2.49	0.02
16.40	2.74	2.51	0.02
16.60	2.75	2.52	0.02
16.80	2.76	2.53	0.02
17.00	2.77	2.54	0.02
17.20	2.78	2.55	0.02
17.40	2.79	2.56	0.02
17.60	2.80	2.57	0.02
17.80	2.81	2.58	0.02
18.00	2.82	2.59	0.02
18.20	2.83	2.60	0.02
18.40	2.84	2.61	0.02
18.60	2.85	2.62	0.02
18.80	2.86	2.63	0.02
19.00	2.87	2.64	0.02
19.20	2.88	2.65	0.01
19.40	2.89	2.66	0.01
19.60	2.90	2.67	0.01
19.80	2.90	2.67	0.01
20.00	**2.91**	**2.68**	0.01

Summary for Subcatchment 3S: untreated to streets

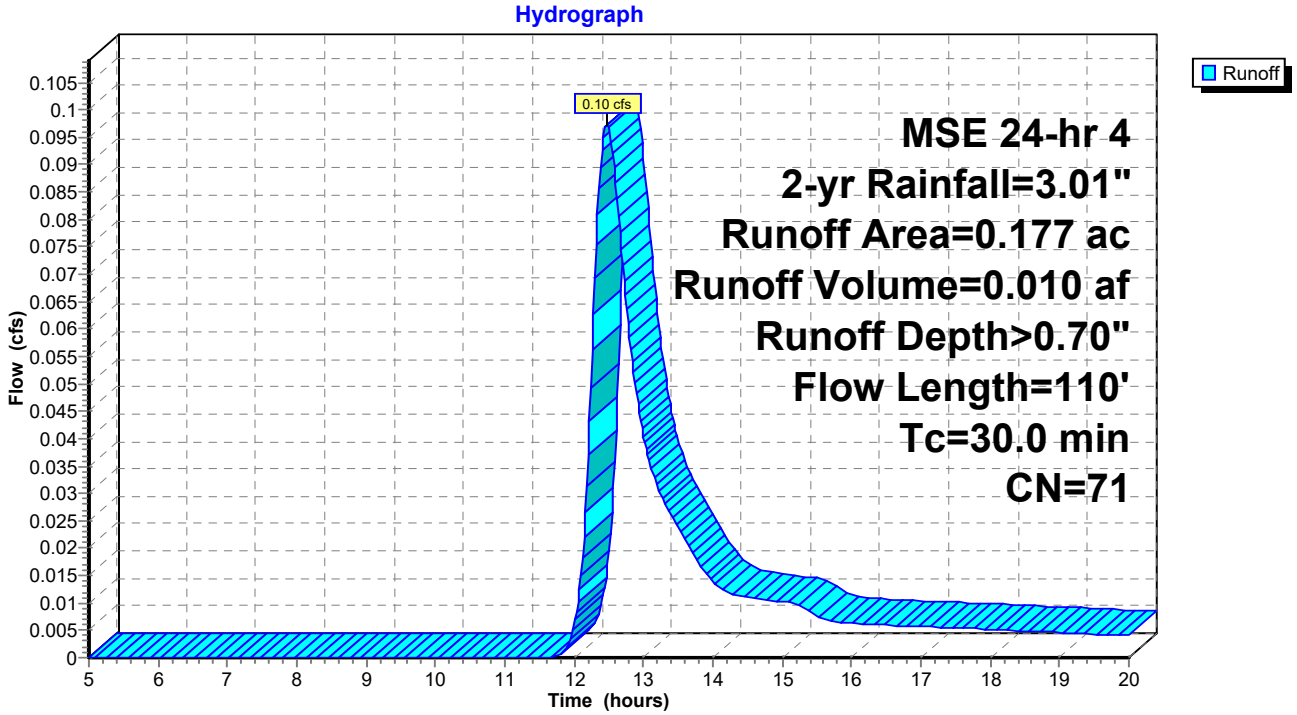
Runoff = 0.10 cfs @ 12.47 hrs, Volume= 0.010 af, Depth> 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.069	98	canopy
*	0.063	39	LS
*	0.027	61	lawn, HSG B
*	0.018	98	SW
	0.177	71	Weighted Average
	0.090		50.85% Pervious Area
	0.087		49.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	70		0.19		**Direct Entry, canopy**
12.0	20		0.03		**Direct Entry, LS**
12.0	20		0.03		**Direct Entry, lawn**
30.0	110	Total			

Subcatchment 3S: untreated to streets



Hydrograph for Subcatchment 3S: untreated to streets

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.20	0.50	0.00	0.00
10.40	0.53	0.00	0.00
10.60	0.56	0.00	0.00
10.80	0.60	0.00	0.00
11.00	0.65	0.00	0.00
11.20	0.71	0.00	0.00
11.40	0.78	0.00	0.00
11.60	0.87	0.00	0.00
11.80	1.03	0.01	0.00
12.00	1.41	0.08	0.01
12.20	1.98	0.26	0.04
12.40	2.14	0.32	**0.09**
12.60	2.23	0.36	**0.09**
12.80	2.30	0.39	0.06
13.00	2.36	0.42	0.04
13.20	2.41	0.45	0.03
13.40	2.45	0.47	0.03
13.60	2.48	0.48	0.02
13.80	2.51	0.50	0.02
14.00	2.53	0.51	0.01
14.20	2.56	0.52	0.01
14.40	2.58	0.53	0.01
14.60	2.60	0.54	0.01
14.80	2.62	0.55	0.01
15.00	2.65	0.57	0.01
15.20	2.66	0.57	0.01
15.40	2.67	0.58	0.01
15.60	2.69	0.59	0.01
15.80	2.70	0.59	0.01
16.00	2.71	0.60	0.01
16.20	2.72	0.61	0.01
16.40	2.74	0.61	0.01
16.60	2.75	0.62	0.01
16.80	2.76	0.63	0.01
17.00	2.77	0.63	0.01
17.20	2.78	0.64	0.01
17.40	2.79	0.64	0.01
17.60	2.80	0.65	0.01
17.80	2.81	0.66	0.01
18.00	2.82	0.66	0.01
18.20	2.83	0.67	0.01
18.40	2.84	0.67	0.00
18.60	2.85	0.68	0.00
18.80	2.86	0.68	0.00
19.00	2.87	0.69	0.00
19.20	2.88	0.69	0.00
19.40	2.89	0.70	0.00
19.60	2.90	0.70	0.00
19.80	2.90	0.71	0.00
20.00	**2.91**	**0.71**	0.00

Summary for Subcatchment 6S: S roof to MH8

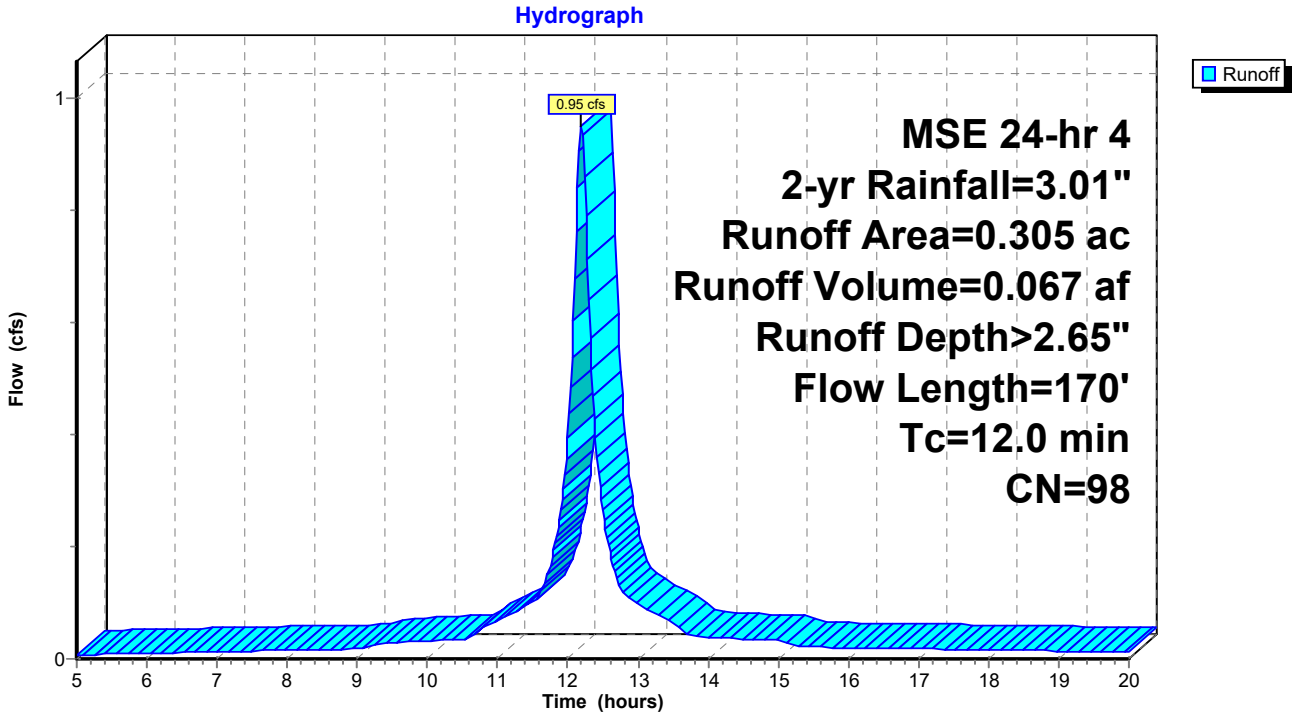
Runoff = 0.95 cfs @ 12.19 hrs, Volume= 0.067 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.305	98	fronting 10th
	0.305		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	170		0.24		**Direct Entry, NE Bldg Roof**

Subcatchment 6S: S roof to MH8



Hydrograph for Subcatchment 6S: S roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.01
5.20	0.15	0.04	0.01
5.40	0.16	0.04	0.01
5.60	0.17	0.05	0.01
5.80	0.18	0.05	0.01
6.00	0.19	0.06	0.01
6.20	0.20	0.07	0.01
6.40	0.21	0.07	0.01
6.60	0.22	0.08	0.01
6.80	0.23	0.09	0.01
7.00	0.24	0.10	0.01
7.20	0.25	0.11	0.01
7.40	0.26	0.11	0.01
7.60	0.27	0.12	0.01
7.80	0.29	0.13	0.01
8.00	0.30	0.14	0.02
8.20	0.31	0.15	0.02
8.40	0.32	0.16	0.02
8.60	0.34	0.18	0.02
8.80	0.35	0.19	0.02
9.00	0.36	0.20	0.02
9.20	0.39	0.22	0.02
9.40	0.41	0.24	0.03
9.60	0.43	0.26	0.03
9.80	0.45	0.28	0.03
10.00	0.48	0.30	0.03
10.20	0.50	0.32	0.03
10.40	0.53	0.34	0.03
10.60	0.56	0.37	0.04
10.80	0.60	0.41	0.05
11.00	0.65	0.46	0.07
11.20	0.71	0.51	0.08
11.40	0.78	0.58	0.09
11.60	0.87	0.66	0.11
11.80	1.03	0.82	0.19
12.00	1.41	1.19	0.39
12.20	1.98	1.75	**0.95**
12.40	2.14	1.91	0.39
12.60	2.23	2.00	0.19
12.80	2.30	2.07	0.12
13.00	2.36	2.13	0.10
13.20	2.41	2.18	0.08
13.40	2.45	2.22	0.07
13.60	2.48	2.26	0.06
13.80	2.51	2.28	0.04
14.00	2.53	2.30	0.04
14.20	2.56	2.33	0.04
14.40	2.58	2.35	0.04
14.60	2.60	2.37	0.03
14.80	2.62	2.39	0.03
15.00	2.65	2.42	0.03
15.20	2.66	2.43	0.03
15.40	2.67	2.44	0.02
15.60	2.69	2.46	0.02
15.80	2.70	2.47	0.02
16.00	2.71	2.48	0.02
16.20	2.72	2.49	0.02
16.40	2.74	2.51	0.02
16.60	2.75	2.52	0.02
16.80	2.76	2.53	0.02
17.00	2.77	2.54	0.02
17.20	2.78	2.55	0.02
17.40	2.79	2.56	0.02
17.60	2.80	2.57	0.02
17.80	2.81	2.58	0.02
18.00	2.82	2.59	0.02
18.20	2.83	2.60	0.02
18.40	2.84	2.61	0.01
18.60	2.85	2.62	0.01
18.80	2.86	2.63	0.01
19.00	2.87	2.64	0.01
19.20	2.88	2.65	0.01
19.40	2.89	2.66	0.01
19.60	2.90	2.67	0.01
19.80	2.90	2.67	0.01
20.00	**2.91**	**2.68**	0.01

Summary for Subcatchment 7S: to Inlets 8 & 9

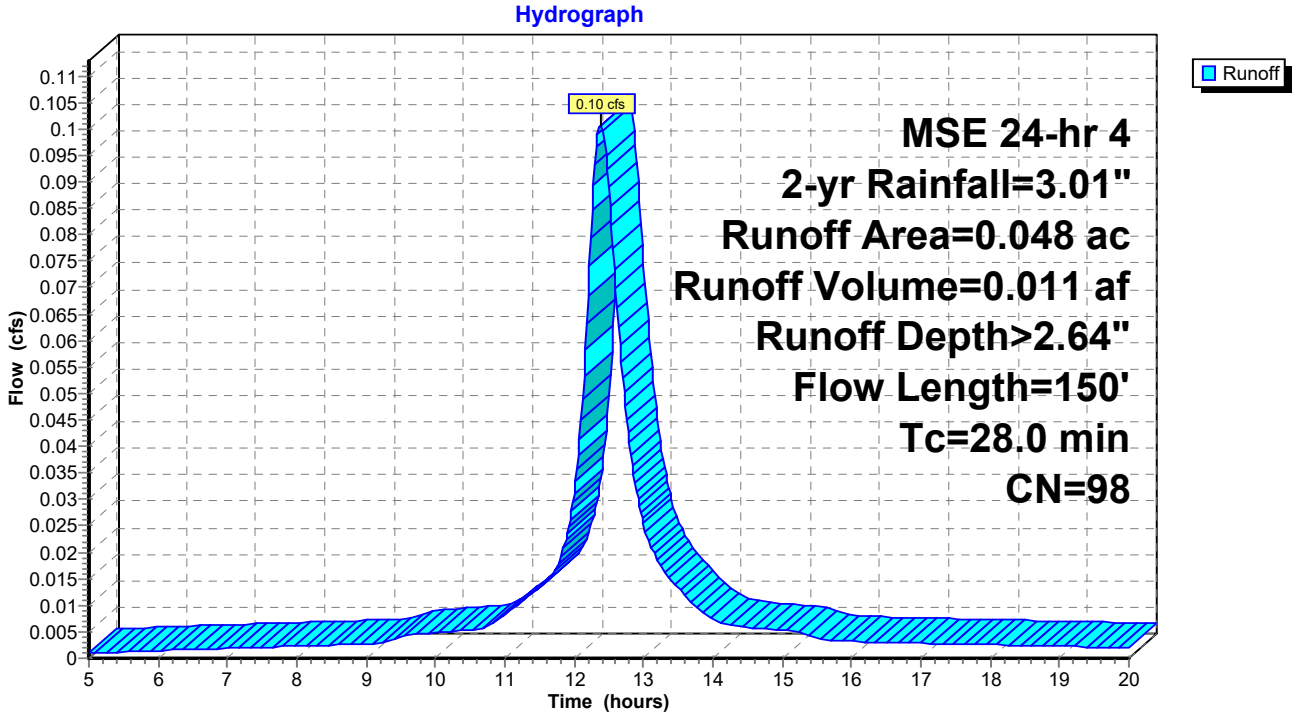
Runoff = 0.10 cfs @ 12.38 hrs, Volume= 0.011 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.046	98	pavement
*	0.002	98	SW
	0.048	98	Weighted Average
	0.048		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	55		0.13		**Direct Entry, pavement**
6.0	50		0.14		**Direct Entry, SW**
15.0	45		0.05		**Direct Entry, LS**
28.0	150	Total			

Subcatchment 7S: to Inlets 8 & 9



Hydrograph for Subcatchment 7S: to Inlets 8 & 9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.00
5.20	0.15	0.04	0.00
5.40	0.16	0.04	0.00
5.60	0.17	0.05	0.00
5.80	0.18	0.05	0.00
6.00	0.19	0.06	0.00
6.20	0.20	0.07	0.00
6.40	0.21	0.07	0.00
6.60	0.22	0.08	0.00
6.80	0.23	0.09	0.00
7.00	0.24	0.10	0.00
7.20	0.25	0.11	0.00
7.40	0.26	0.11	0.00
7.60	0.27	0.12	0.00
7.80	0.29	0.13	0.00
8.00	0.30	0.14	0.00
8.20	0.31	0.15	0.00
8.40	0.32	0.16	0.00
8.60	0.34	0.18	0.00
8.80	0.35	0.19	0.00
9.00	0.36	0.20	0.00
9.20	0.39	0.22	0.00
9.40	0.41	0.24	0.00
9.60	0.43	0.26	0.00
9.80	0.45	0.28	0.00
10.00	0.48	0.30	0.00
10.20	0.50	0.32	0.00
10.40	0.53	0.34	0.01
10.60	0.56	0.37	0.01
10.80	0.60	0.41	0.01
11.00	0.65	0.46	0.01
11.20	0.71	0.51	0.01
11.40	0.78	0.58	0.01
11.60	0.87	0.66	0.01
11.80	1.03	0.82	0.02
12.00	1.41	1.19	0.03
12.20	1.98	1.75	**0.07**
12.40	2.14	1.91	**0.10**
12.60	2.23	2.00	0.07
12.80	2.30	2.07	0.04
13.00	2.36	2.13	0.03
13.20	2.41	2.18	0.02
13.40	2.45	2.22	0.01
13.60	2.48	2.26	0.01
13.80	2.51	2.28	0.01
14.00	2.53	2.30	0.01
14.20	2.56	2.33	0.01
14.40	2.58	2.35	0.01
14.60	2.60	2.37	0.01
14.80	2.62	2.39	0.01
15.00	2.65	2.42	0.01
15.20	2.66	2.43	0.01
15.40	2.67	2.44	0.00
15.60	2.69	2.46	0.00
15.80	2.70	2.47	0.00
16.00	2.71	2.48	0.00
16.20	2.72	2.49	0.00
16.40	2.74	2.51	0.00
16.60	2.75	2.52	0.00
16.80	2.76	2.53	0.00
17.00	2.77	2.54	0.00
17.20	2.78	2.55	0.00
17.40	2.79	2.56	0.00
17.60	2.80	2.57	0.00
17.80	2.81	2.58	0.00
18.00	2.82	2.59	0.00
18.20	2.83	2.60	0.00
18.40	2.84	2.61	0.00
18.60	2.85	2.62	0.00
18.80	2.86	2.63	0.00
19.00	2.87	2.64	0.00
19.20	2.88	2.65	0.00
19.40	2.89	2.66	0.00
19.60	2.90	2.67	0.00
19.80	2.90	2.67	0.00
20.00	**2.91**	**2.68**	0.00

Summary for Subcatchment 8S: to Inlet 7

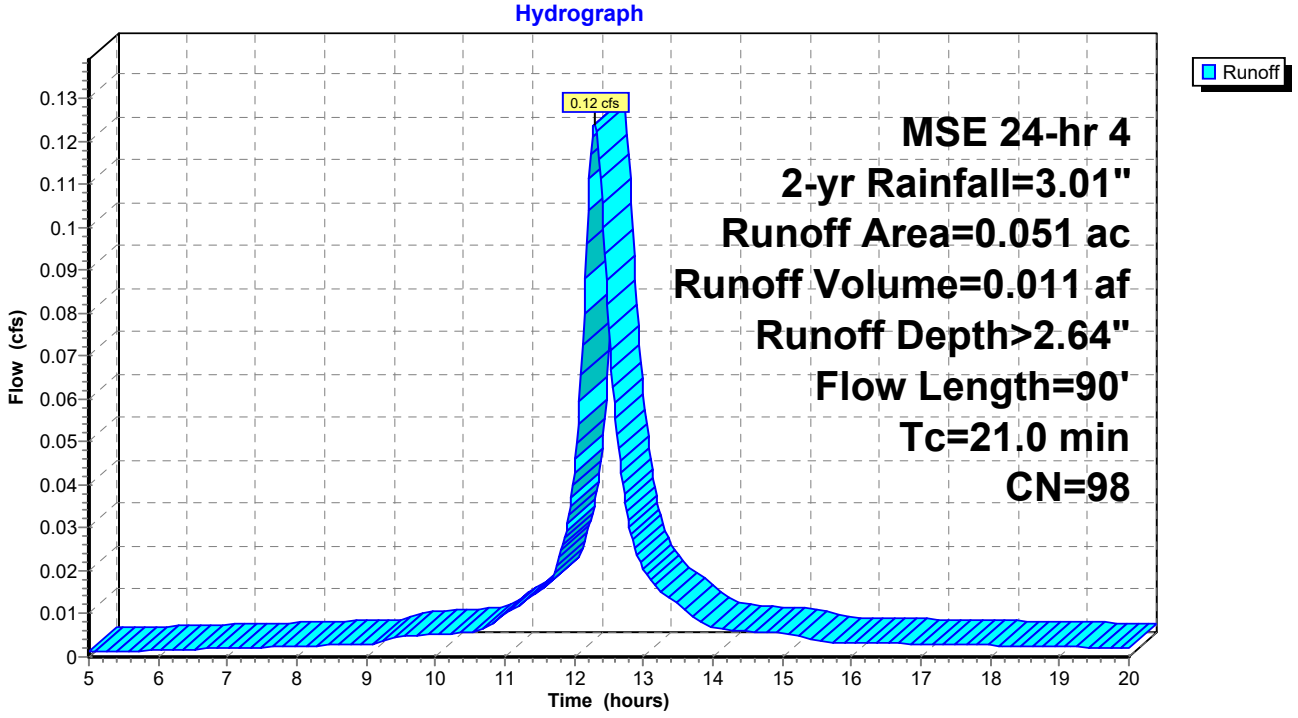
Runoff = 0.12 cfs @ 12.30 hrs, Volume= 0.011 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.051	98	pavement
	0.051		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50		0.14		**Direct Entry, pavement**
15.0	40		0.04		**Direct Entry, LS**
21.0	90	Total			

Subcatchment 8S: to Inlet 7



Hydrograph for Subcatchment 8S: to Inlet 7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.00
5.20	0.15	0.04	0.00
5.40	0.16	0.04	0.00
5.60	0.17	0.05	0.00
5.80	0.18	0.05	0.00
6.00	0.19	0.06	0.00
6.20	0.20	0.07	0.00
6.40	0.21	0.07	0.00
6.60	0.22	0.08	0.00
6.80	0.23	0.09	0.00
7.00	0.24	0.10	0.00
7.20	0.25	0.11	0.00
7.40	0.26	0.11	0.00
7.60	0.27	0.12	0.00
7.80	0.29	0.13	0.00
8.00	0.30	0.14	0.00
8.20	0.31	0.15	0.00
8.40	0.32	0.16	0.00
8.60	0.34	0.18	0.00
8.80	0.35	0.19	0.00
9.00	0.36	0.20	0.00
9.20	0.39	0.22	0.00
9.40	0.41	0.24	0.00
9.60	0.43	0.26	0.00
9.80	0.45	0.28	0.01
10.00	0.48	0.30	0.01
10.20	0.50	0.32	0.01
10.40	0.53	0.34	0.01
10.60	0.56	0.37	0.01
10.80	0.60	0.41	0.01
11.00	0.65	0.46	0.01
11.20	0.71	0.51	0.01
11.40	0.78	0.58	0.01
11.60	0.87	0.66	0.02
11.80	1.03	0.82	0.02
12.00	1.41	1.19	0.04
12.20	1.98	1.75	**0.10**
12.40	2.14	1.91	**0.11**
12.60	2.23	2.00	0.06
12.80	2.30	2.07	0.03
13.00	2.36	2.13	0.02
13.20	2.41	2.18	0.02
13.40	2.45	2.22	0.01
13.60	2.48	2.26	0.01
13.80	2.51	2.28	0.01
14.00	2.53	2.30	0.01
14.20	2.56	2.33	0.01
14.40	2.58	2.35	0.01
14.60	2.60	2.37	0.01
14.80	2.62	2.39	0.01
15.00	2.65	2.42	0.01
15.20	2.66	2.43	0.01
15.40	2.67	2.44	0.00
15.60	2.69	2.46	0.00
15.80	2.70	2.47	0.00
16.00	2.71	2.48	0.00
16.20	2.72	2.49	0.00
16.40	2.74	2.51	0.00
16.60	2.75	2.52	0.00
16.80	2.76	2.53	0.00
17.00	2.77	2.54	0.00
17.20	2.78	2.55	0.00
17.40	2.79	2.56	0.00
17.60	2.80	2.57	0.00
17.80	2.81	2.58	0.00
18.00	2.82	2.59	0.00
18.20	2.83	2.60	0.00
18.40	2.84	2.61	0.00
18.60	2.85	2.62	0.00
18.80	2.86	2.63	0.00
19.00	2.87	2.64	0.00
19.20	2.88	2.65	0.00
19.40	2.89	2.66	0.00
19.60	2.90	2.67	0.00
19.80	2.90	2.67	0.00
20.00	**2.91**	**2.68**	0.00

Summary for Subcatchment 9S: to Inlet 6

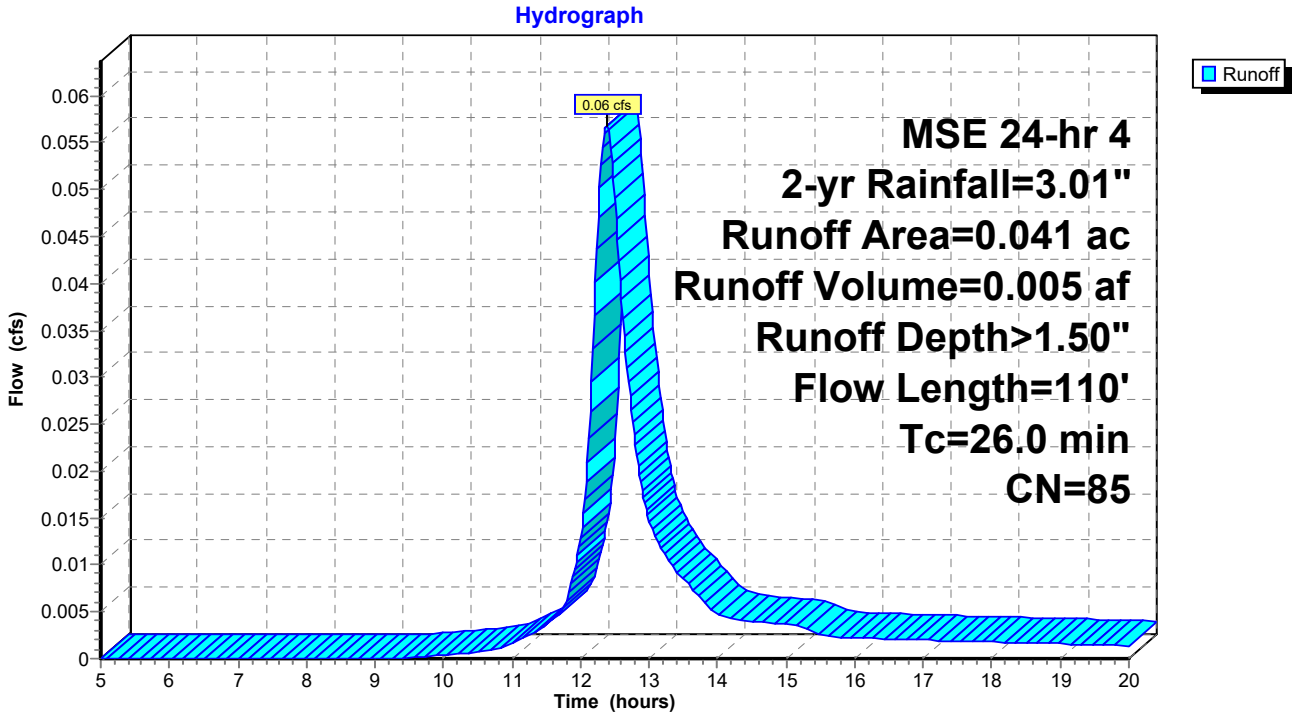
Runoff = 0.06 cfs @ 12.38 hrs, Volume= 0.005 af, Depth> 1.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.032	98	pavement
*	0.009	39	LS
	0.041	85	Weighted Average
	0.009		21.95% Pervious Area
	0.032		78.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	45		0.11		**Direct Entry, pavement**
7.0	45		0.11		**Direct Entry, SW**
12.0	20		0.03		**Direct Entry, LS**
26.0	110	Total			

Subcatchment 9S: to Inlet 6



Hydrograph for Subcatchment 9S: to Inlet 6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.01	0.00
10.00	0.48	0.01	0.00
10.20	0.50	0.01	0.00
10.40	0.53	0.02	0.00
10.60	0.56	0.02	0.00
10.80	0.60	0.03	0.00
11.00	0.65	0.04	0.00
11.20	0.71	0.06	0.00
11.40	0.78	0.08	0.00
11.60	0.87	0.12	0.00
11.80	1.03	0.19	0.01
12.00	1.41	0.40	0.01
12.20	1.98	0.78	**0.04**
12.40	2.14	0.90	**0.06**
12.60	2.23	0.97	0.04
12.80	2.30	1.02	0.02
13.00	2.36	1.07	0.01
13.20	2.41	1.11	0.01
13.40	2.45	1.14	0.01
13.60	2.48	1.17	0.01
13.80	2.51	1.19	0.01
14.00	2.53	1.20	0.00
14.20	2.56	1.22	0.00
14.40	2.58	1.24	0.00
14.60	2.60	1.26	0.00
14.80	2.62	1.28	0.00
15.00	2.65	1.30	0.00
15.20	2.66	1.31	0.00
15.40	2.67	1.32	0.00
15.60	2.69	1.33	0.00
15.80	2.70	1.34	0.00
16.00	2.71	1.35	0.00
16.20	2.72	1.36	0.00
16.40	2.74	1.37	0.00
16.60	2.75	1.38	0.00
16.80	2.76	1.39	0.00
17.00	2.77	1.40	0.00
17.20	2.78	1.41	0.00
17.40	2.79	1.42	0.00
17.60	2.80	1.43	0.00
17.80	2.81	1.43	0.00
18.00	2.82	1.44	0.00
18.20	2.83	1.45	0.00
18.40	2.84	1.46	0.00
18.60	2.85	1.47	0.00
18.80	2.86	1.47	0.00
19.00	2.87	1.48	0.00
19.20	2.88	1.49	0.00
19.40	2.89	1.50	0.00
19.60	2.90	1.50	0.00
19.80	2.90	1.51	0.00
20.00	**2.91**	**1.51**	0.00

Summary for Subcatchment 10S: to Inlet 5

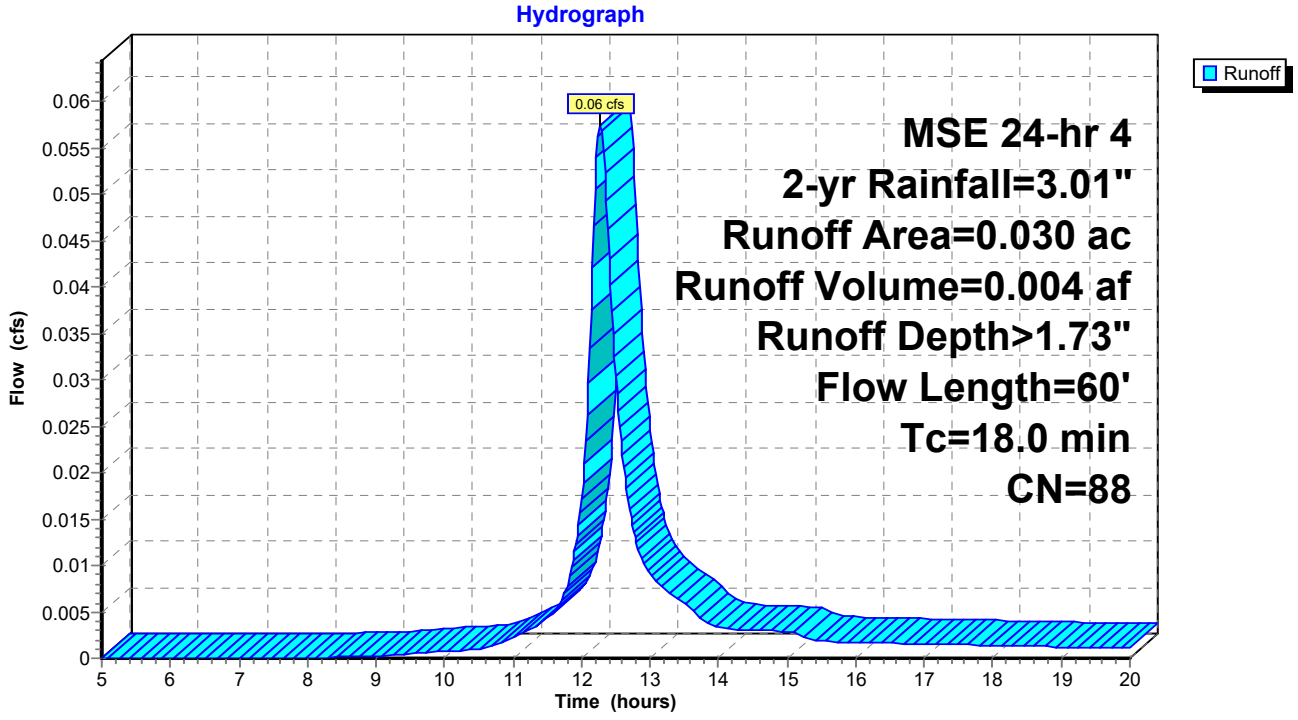
Runoff = 0.06 cfs @ 12.27 hrs, Volume= 0.004 af, Depth> 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.005	39	LS
	0.030	88	Weighted Average
	0.005		16.67% Pervious Area
	0.025		83.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40		0.11		**Direct Entry, pavement**
12.0	20		0.03		**Direct Entry, LS**
18.0	60	Total			

Subcatchment 10S: to Inlet 5



Hydrograph for Subcatchment 10S: to Inlet 5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.01	0.00
9.20	0.39	0.01	0.00
9.40	0.41	0.01	0.00
9.60	0.43	0.02	0.00
9.80	0.45	0.02	0.00
10.00	0.48	0.03	0.00
10.20	0.50	0.03	0.00
10.40	0.53	0.04	0.00
10.60	0.56	0.05	0.00
10.80	0.60	0.06	0.00
11.00	0.65	0.08	0.00
11.20	0.71	0.11	0.00
11.40	0.78	0.14	0.00
11.60	0.87	0.18	0.00
11.80	1.03	0.27	0.01
12.00	1.41	0.52	0.02
12.20	1.98	0.95	**0.05**
12.40	2.14	1.08	**0.04**
12.60	2.23	1.15	0.02
12.80	2.30	1.21	0.01
13.00	2.36	1.26	0.01
13.20	2.41	1.31	0.01
13.40	2.45	1.34	0.01
13.60	2.48	1.37	0.01
13.80	2.51	1.39	0.00
14.00	2.53	1.41	0.00
14.20	2.56	1.43	0.00
14.40	2.58	1.45	0.00
14.60	2.60	1.47	0.00
14.80	2.62	1.49	0.00
15.00	2.65	1.51	0.00
15.20	2.66	1.52	0.00
15.40	2.67	1.53	0.00
15.60	2.69	1.54	0.00
15.80	2.70	1.55	0.00
16.00	2.71	1.56	0.00
16.20	2.72	1.58	0.00
16.40	2.74	1.59	0.00
16.60	2.75	1.60	0.00
16.80	2.76	1.61	0.00
17.00	2.77	1.62	0.00
17.20	2.78	1.63	0.00
17.40	2.79	1.64	0.00
17.60	2.80	1.65	0.00
17.80	2.81	1.65	0.00
18.00	2.82	1.66	0.00
18.20	2.83	1.67	0.00
18.40	2.84	1.68	0.00
18.60	2.85	1.69	0.00
18.80	2.86	1.70	0.00
19.00	2.87	1.70	0.00
19.20	2.88	1.71	0.00
19.40	2.89	1.72	0.00
19.60	2.90	1.73	0.00
19.80	2.90	1.73	0.00
20.00	**2.91**	**1.74**	0.00

Summary for Subcatchment 11S: to Inlet 4

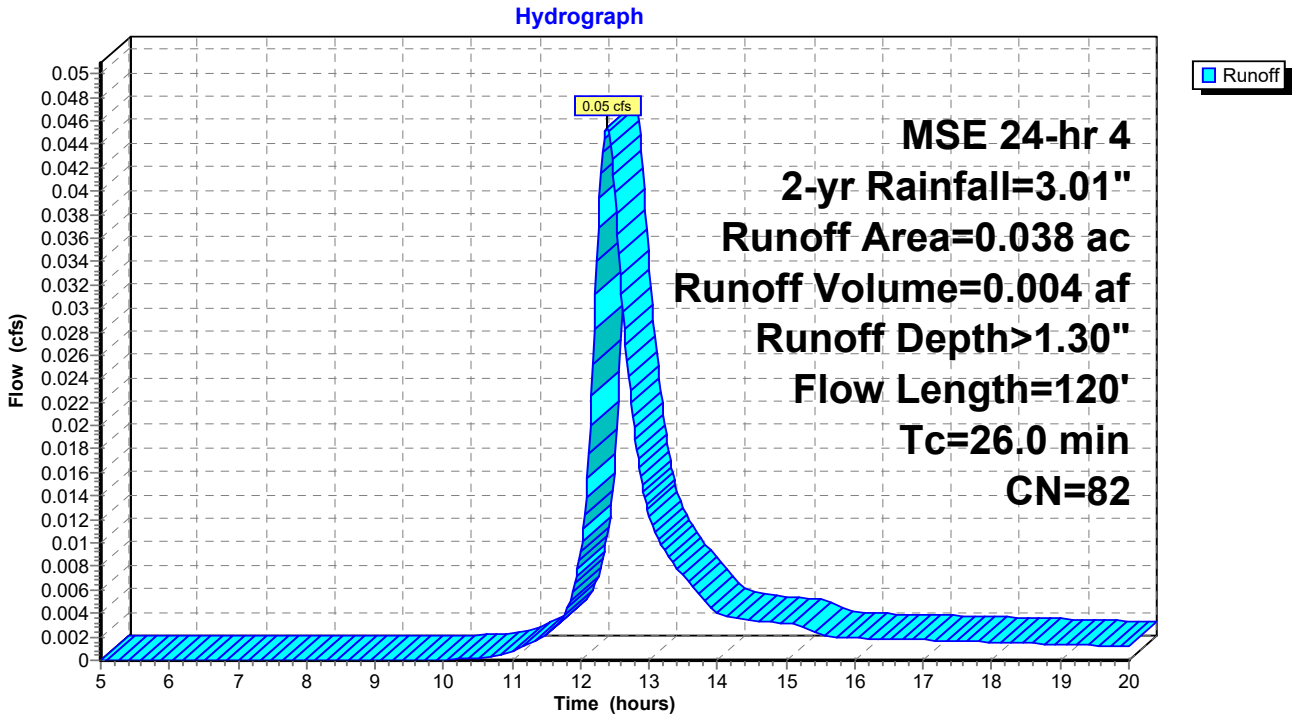
Runoff = 0.05 cfs @ 12.38 hrs, Volume= 0.004 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.003	98	SW
*	0.010	39	LS
	0.038	82	Weighted Average
	0.010		26.32% Pervious Area
	0.028		73.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	40		0.10		**Direct Entry, pavement**
7.0	40		0.10		**Direct Entry, SW**
12.0	40		0.06		**Direct Entry, LS**
26.0	120	Total			

Subcatchment 11S: to Inlet 4



Hydrograph for Subcatchment 11S: to Inlet 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.20	0.50	0.00	0.00
10.40	0.53	0.00	0.00
10.60	0.56	0.01	0.00
10.80	0.60	0.01	0.00
11.00	0.65	0.02	0.00
11.20	0.71	0.03	0.00
11.40	0.78	0.05	0.00
11.60	0.87	0.07	0.00
11.80	1.03	0.13	0.00
12.00	1.41	0.30	0.01
12.20	1.98	0.63	**0.03**
12.40	2.14	0.74	**0.05**
12.60	2.23	0.80	0.03
12.80	2.30	0.85	0.02
13.00	2.36	0.90	0.01
13.20	2.41	0.93	0.01
13.40	2.45	0.96	0.01
13.60	2.48	0.99	0.01
13.80	2.51	1.00	0.01
14.00	2.53	1.02	0.00
14.20	2.56	1.04	0.00
14.40	2.58	1.06	0.00
14.60	2.60	1.07	0.00
14.80	2.62	1.09	0.00
15.00	2.65	1.11	0.00
15.20	2.66	1.12	0.00
15.40	2.67	1.13	0.00
15.60	2.69	1.14	0.00
15.80	2.70	1.15	0.00
16.00	2.71	1.16	0.00
16.20	2.72	1.17	0.00
16.40	2.74	1.17	0.00
16.60	2.75	1.18	0.00
16.80	2.76	1.19	0.00
17.00	2.77	1.20	0.00
17.20	2.78	1.21	0.00
17.40	2.79	1.22	0.00
17.60	2.80	1.23	0.00
17.80	2.81	1.23	0.00
18.00	2.82	1.24	0.00
18.20	2.83	1.25	0.00
18.40	2.84	1.26	0.00
18.60	2.85	1.26	0.00
18.80	2.86	1.27	0.00
19.00	2.87	1.28	0.00
19.20	2.88	1.29	0.00
19.40	2.89	1.29	0.00
19.60	2.90	1.30	0.00
19.80	2.90	1.30	0.00
20.00	**2.91**	**1.31**	0.00

Summary for Subcatchment 12S: to inlet 3

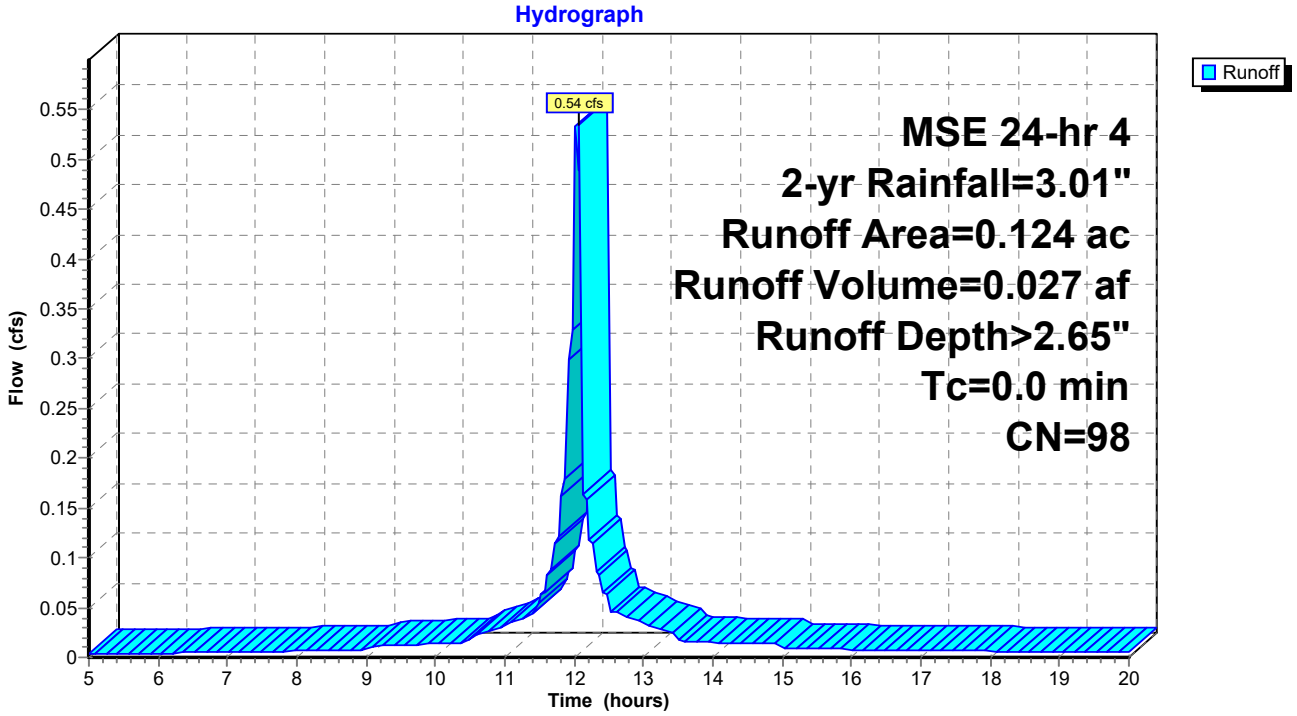
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.54 cfs @ 12.08 hrs, Volume= 0.027 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.009	98	open shelter
*	0.059	98	SW
*	0.034	98	parking AC pavement
*	0.022	98	PIP play surface
	0.124	98	Weighted Average
	0.124		100.00% Impervious Area

Subcatchment 12S: to inlet 3



Hydrograph for Subcatchment 12S: to inlet 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.00
5.20	0.15	0.04	0.00
5.40	0.16	0.04	0.00
5.60	0.17	0.05	0.00
5.80	0.18	0.05	0.00
6.00	0.19	0.06	0.00
6.20	0.20	0.07	0.00
6.40	0.21	0.07	0.00
6.60	0.22	0.08	0.00
6.80	0.23	0.09	0.01
7.00	0.24	0.10	0.01
7.20	0.25	0.11	0.01
7.40	0.26	0.11	0.01
7.60	0.27	0.12	0.01
7.80	0.29	0.13	0.01
8.00	0.30	0.14	0.01
8.20	0.31	0.15	0.01
8.40	0.32	0.16	0.01
8.60	0.34	0.18	0.01
8.80	0.35	0.19	0.01
9.00	0.36	0.20	0.01
9.20	0.39	0.22	0.01
9.40	0.41	0.24	0.01
9.60	0.43	0.26	0.01
9.80	0.45	0.28	0.01
10.00	0.48	0.30	0.01
10.20	0.50	0.32	0.01
10.40	0.53	0.34	0.01
10.60	0.56	0.37	0.02
10.80	0.60	0.41	0.03
11.00	0.65	0.46	0.03
11.20	0.71	0.51	0.04
11.40	0.78	0.58	0.04
11.60	0.87	0.66	0.07
11.80	1.03	0.82	0.14
12.00	1.41	1.19	**0.42**
12.20	1.98	1.75	**0.14**
12.40	2.14	1.91	0.08
12.60	2.23	2.00	0.05
12.80	2.30	2.07	0.04
13.00	2.36	2.13	0.03
13.20	2.41	2.18	0.03
13.40	2.45	2.22	0.02
13.60	2.48	2.26	0.02
13.80	2.51	2.28	0.02
14.00	2.53	2.30	0.01
14.20	2.56	2.33	0.01
14.40	2.58	2.35	0.01
14.60	2.60	2.37	0.01
14.80	2.62	2.39	0.01
15.00	2.65	2.42	0.01
15.20	2.66	2.43	0.01
15.40	2.67	2.44	0.01
15.60	2.69	2.46	0.01
15.80	2.70	2.47	0.01
16.00	2.71	2.48	0.01
16.20	2.72	2.49	0.01
16.40	2.74	2.51	0.01
16.60	2.75	2.52	0.01
16.80	2.76	2.53	0.01
17.00	2.77	2.54	0.01
17.20	2.78	2.55	0.01
17.40	2.79	2.56	0.01
17.60	2.80	2.57	0.01
17.80	2.81	2.58	0.01
18.00	2.82	2.59	0.01
18.20	2.83	2.60	0.01
18.40	2.84	2.61	0.01
18.60	2.85	2.62	0.01
18.80	2.86	2.63	0.01
19.00	2.87	2.64	0.01
19.20	2.88	2.65	0.01
19.40	2.89	2.66	0.01
19.60	2.90	2.67	0.00
19.80	2.90	2.67	0.00
20.00	**2.91**	**2.68**	0.00

Summary for Subcatchment 13S: to NDS 2

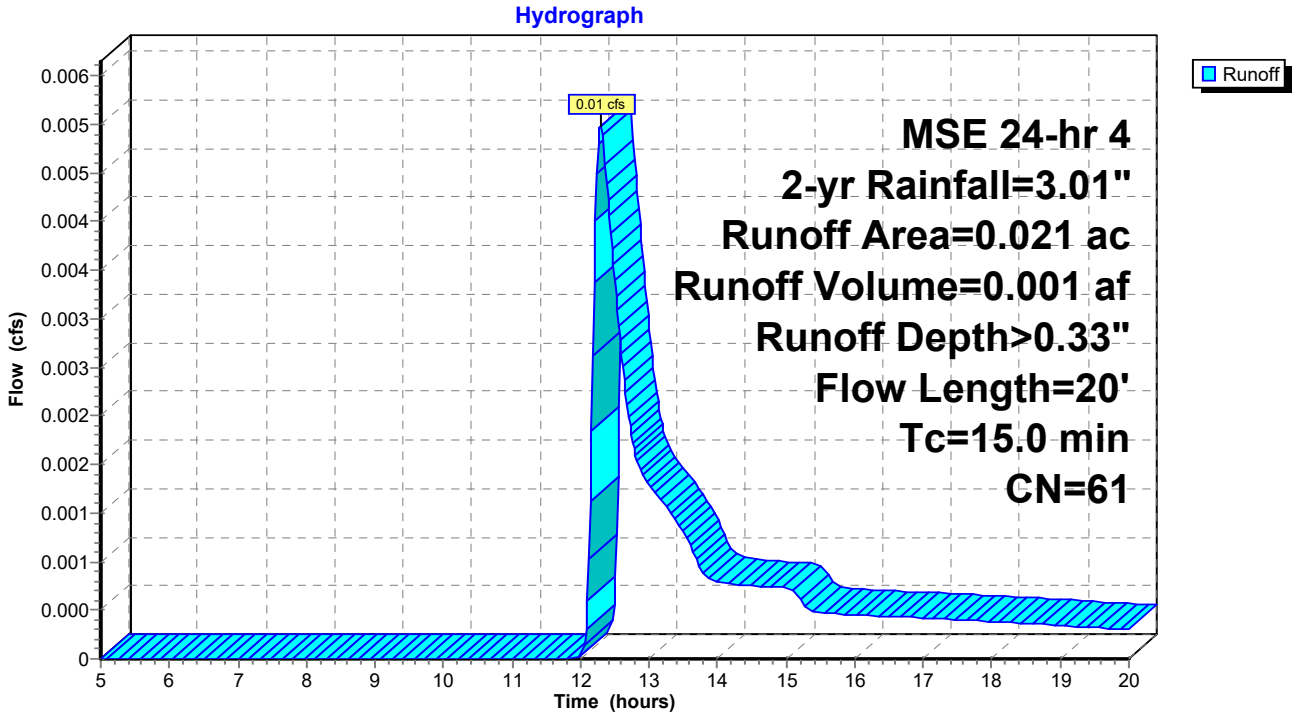
Runoff = 0.01 cfs @ 12.30 hrs, Volume= 0.001 af, Depth> 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.021	61	lawn, HSG B
	0.021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	20		0.02		**Direct Entry, lawn**

Subcatchment 13S: to NDS 2



Hydrograph for Subcatchment 13S: to NDS 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.20	0.50	0.00	0.00
10.40	0.53	0.00	0.00
10.60	0.56	0.00	0.00
10.80	0.60	0.00	0.00
11.00	0.65	0.00	0.00
11.20	0.71	0.00	0.00
11.40	0.78	0.00	0.00
11.60	0.87	0.00	0.00
11.80	1.03	0.00	0.00
12.00	1.41	0.00	0.00
12.20	1.98	0.07	**0.00**
12.40	2.14	0.10	**0.00**
12.60	2.23	0.12	0.00
12.80	2.30	0.14	0.00
13.00	2.36	0.16	0.00
13.20	2.41	0.17	0.00
13.40	2.45	0.18	0.00
13.60	2.48	0.19	0.00
13.80	2.51	0.20	0.00
14.00	2.53	0.21	0.00
14.20	2.56	0.21	0.00
14.40	2.58	0.22	0.00
14.60	2.60	0.23	0.00
14.80	2.62	0.23	0.00
15.00	2.65	0.24	0.00
15.20	2.66	0.25	0.00
15.40	2.67	0.25	0.00
15.60	2.69	0.25	0.00
15.80	2.70	0.26	0.00
16.00	2.71	0.26	0.00
16.20	2.72	0.27	0.00
16.40	2.74	0.27	0.00
16.60	2.75	0.27	0.00
16.80	2.76	0.28	0.00
17.00	2.77	0.28	0.00
17.20	2.78	0.29	0.00
17.40	2.79	0.29	0.00
17.60	2.80	0.29	0.00
17.80	2.81	0.30	0.00
18.00	2.82	0.30	0.00
18.20	2.83	0.30	0.00
18.40	2.84	0.31	0.00
18.60	2.85	0.31	0.00
18.80	2.86	0.31	0.00
19.00	2.87	0.32	0.00
19.20	2.88	0.32	0.00
19.40	2.89	0.32	0.00
19.60	2.90	0.33	0.00
19.80	2.90	0.33	0.00
20.00	**2.91**	**0.33**	0.00

Summary for Subcatchment 14S: to NDS 3-5

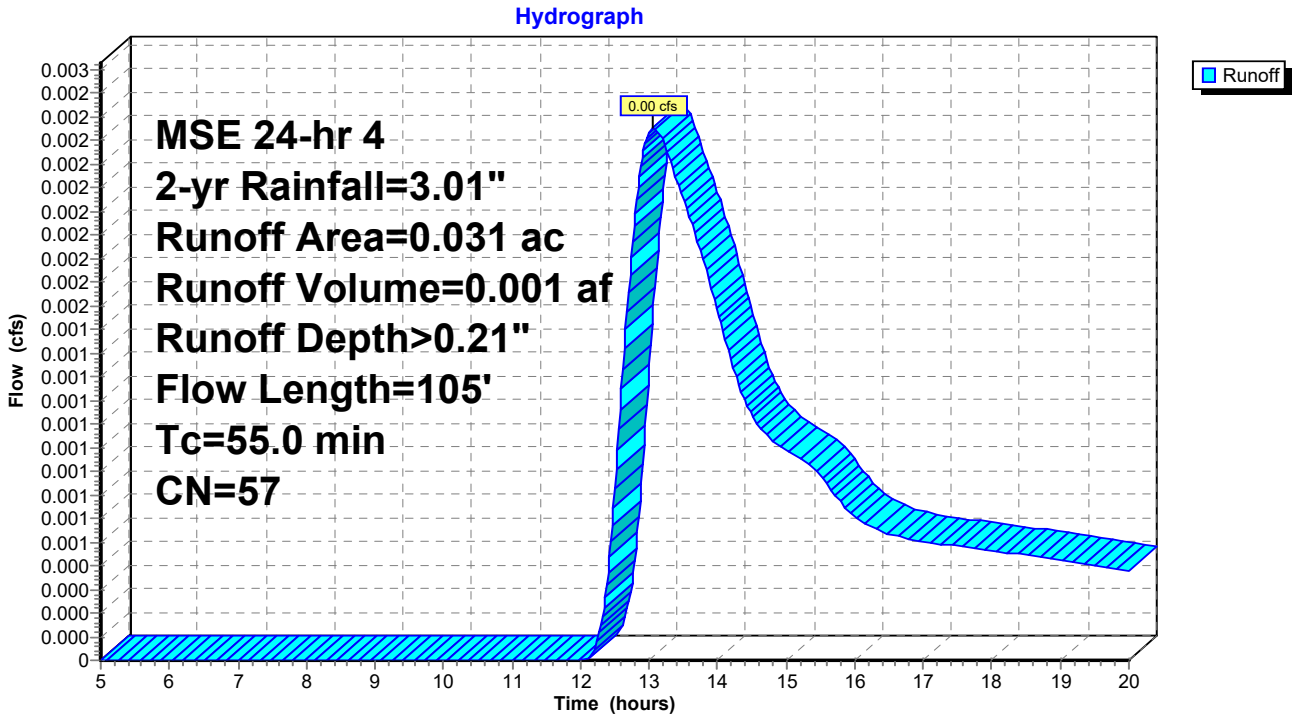
Runoff = 0.00 cfs @ 13.05 hrs, Volume= 0.001 af, Depth> 0.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.022	61	lawn, HSG B
*	0.008	39	LS
*	0.001	98	SW
	0.031	57	Weighted Average
	0.030		96.77% Pervious Area
	0.001		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	20		0.02		**Direct Entry, lawn**
20.0	75		0.06		**Direct Entry, LS**
20.0	10		0.01		**Direct Entry, SW via LS**
55.0	105	Total			

Subcatchment 14S: to NDS 3-5



Hydrograph for Subcatchment 14S: to NDS 3-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.20	0.50	0.00	0.00
10.40	0.53	0.00	0.00
10.60	0.56	0.00	0.00
10.80	0.60	0.00	0.00
11.00	0.65	0.00	0.00
11.20	0.71	0.00	0.00
11.40	0.78	0.00	0.00
11.60	0.87	0.00	0.00
11.80	1.03	0.00	0.00
12.00	1.41	0.00	0.00
12.20	1.98	0.03	0.00
12.40	2.14	0.05	0.00
12.60	2.23	0.06	0.00
12.80	2.30	0.07	0.00
13.00	2.36	0.09	**0.00**
13.20	2.41	0.10	**0.00**
13.40	2.45	0.11	0.00
13.60	2.48	0.11	0.00
13.80	2.51	0.12	0.00
14.00	2.53	0.12	0.00
14.20	2.56	0.13	0.00
14.40	2.58	0.13	0.00
14.60	2.60	0.14	0.00
14.80	2.62	0.14	0.00
15.00	2.65	0.15	0.00
15.20	2.66	0.15	0.00
15.40	2.67	0.16	0.00
15.60	2.69	0.16	0.00
15.80	2.70	0.16	0.00
16.00	2.71	0.17	0.00
16.20	2.72	0.17	0.00
16.40	2.74	0.17	0.00
16.60	2.75	0.17	0.00
16.80	2.76	0.18	0.00
17.00	2.77	0.18	0.00
17.20	2.78	0.18	0.00
17.40	2.79	0.19	0.00
17.60	2.80	0.19	0.00
17.80	2.81	0.19	0.00
18.00	2.82	0.20	0.00
18.20	2.83	0.20	0.00
18.40	2.84	0.20	0.00
18.60	2.85	0.20	0.00
18.80	2.86	0.21	0.00
19.00	2.87	0.21	0.00
19.20	2.88	0.21	0.00
19.40	2.89	0.21	0.00
19.60	2.90	0.22	0.00
19.80	2.90	0.22	0.00
20.00	**2.91**	**0.22**	0.00

Summary for Subcatchment 16S: to NDS11-6

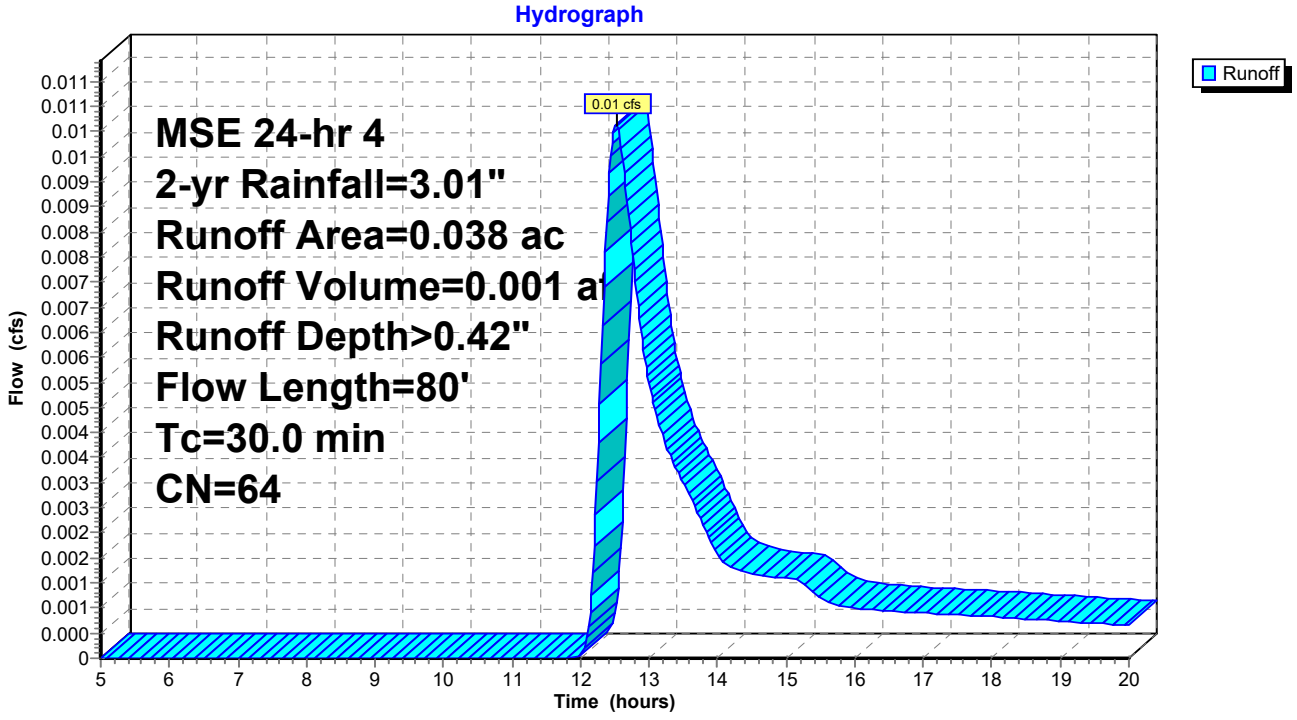
Runoff = 0.01 cfs @ 12.52 hrs, Volume= 0.001 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.022	39	LS
*	0.016	98	SW
	0.038	64	Weighted Average
	0.022		57.89% Pervious Area
	0.016		42.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	40		0.04		**Direct Entry, LS**
15.0	40		0.04		**Direct Entry, SW via LS**
30.0	80	Total			

Subcatchment 16S: to NDS11-6



Hydrograph for Subcatchment 16S: to NDS11-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.20	0.50	0.00	0.00
10.40	0.53	0.00	0.00
10.60	0.56	0.00	0.00
10.80	0.60	0.00	0.00
11.00	0.65	0.00	0.00
11.20	0.71	0.00	0.00
11.40	0.78	0.00	0.00
11.60	0.87	0.00	0.00
11.80	1.03	0.00	0.00
12.00	1.41	0.01	0.00
12.20	1.98	0.11	0.00
12.40	2.14	0.16	**0.01**
12.60	2.23	0.18	**0.01**
12.80	2.30	0.20	0.01
13.00	2.36	0.22	0.01
13.20	2.41	0.24	0.00
13.40	2.45	0.25	0.00
13.60	2.48	0.26	0.00
13.80	2.51	0.27	0.00
14.00	2.53	0.28	0.00
14.20	2.56	0.29	0.00
14.40	2.58	0.30	0.00
14.60	2.60	0.31	0.00
14.80	2.62	0.32	0.00
15.00	2.65	0.32	0.00
15.20	2.66	0.33	0.00
15.40	2.67	0.33	0.00
15.60	2.69	0.34	0.00
15.80	2.70	0.34	0.00
16.00	2.71	0.35	0.00
16.20	2.72	0.35	0.00
16.40	2.74	0.36	0.00
16.60	2.75	0.36	0.00
16.80	2.76	0.37	0.00
17.00	2.77	0.37	0.00
17.20	2.78	0.38	0.00
17.40	2.79	0.38	0.00
17.60	2.80	0.39	0.00
17.80	2.81	0.39	0.00
18.00	2.82	0.39	0.00
18.20	2.83	0.40	0.00
18.40	2.84	0.40	0.00
18.60	2.85	0.41	0.00
18.80	2.86	0.41	0.00
19.00	2.87	0.41	0.00
19.20	2.88	0.42	0.00
19.40	2.89	0.42	0.00
19.60	2.90	0.42	0.00
19.80	2.90	0.43	0.00
20.00	**2.91**	**0.43**	0.00

Summary for Reach 6R: 10" roof

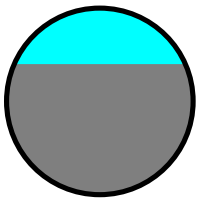
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 349% of Manning's capacity
[76] Warning: Detained 0.014 af (Pond w/culvert advised)

Inflow Area = 0.305 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.95 cfs @ 12.19 hrs, Volume= 0.067 af
Outflow = 0.28 cfs @ 11.93 hrs, Volume= 0.067 af, Atten= 71%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.09 fps, Avg. Travel Time= 0.4 min

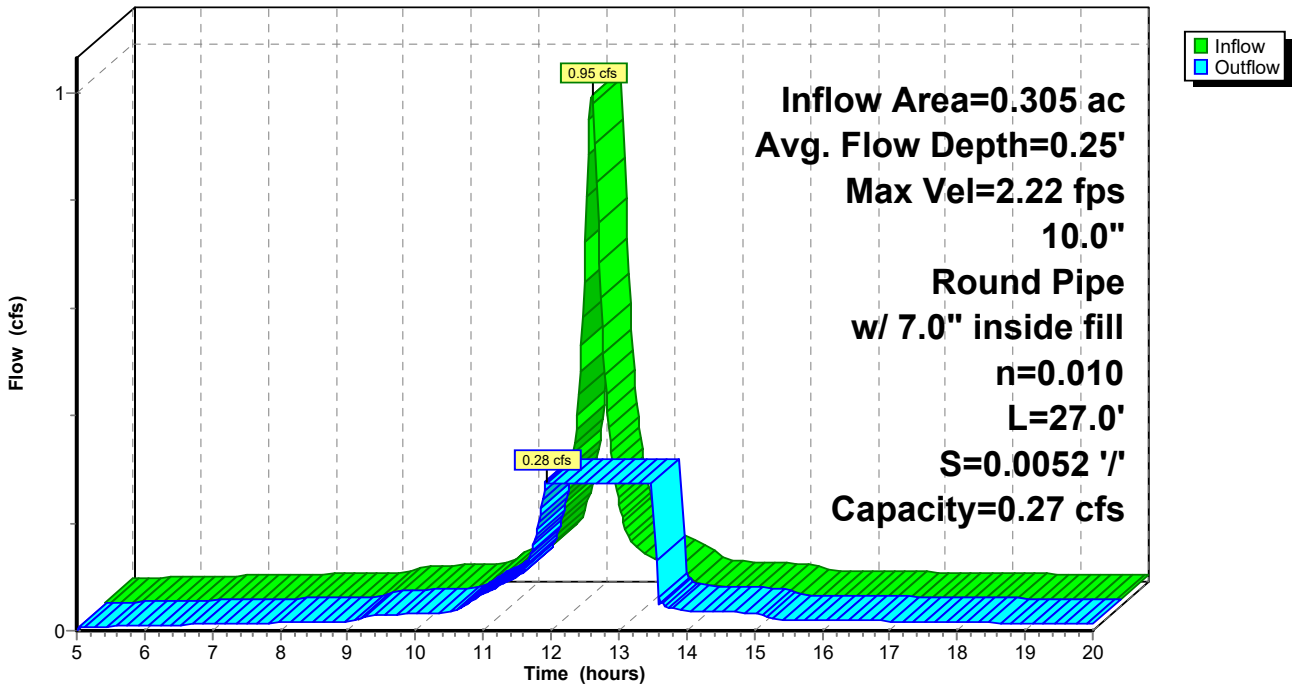
Peak Storage= 4 cf @ 11.94 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 27.0' Slope= 0.0052 '/'
Inlet Invert= 665.72', Outlet Invert= 665.58'



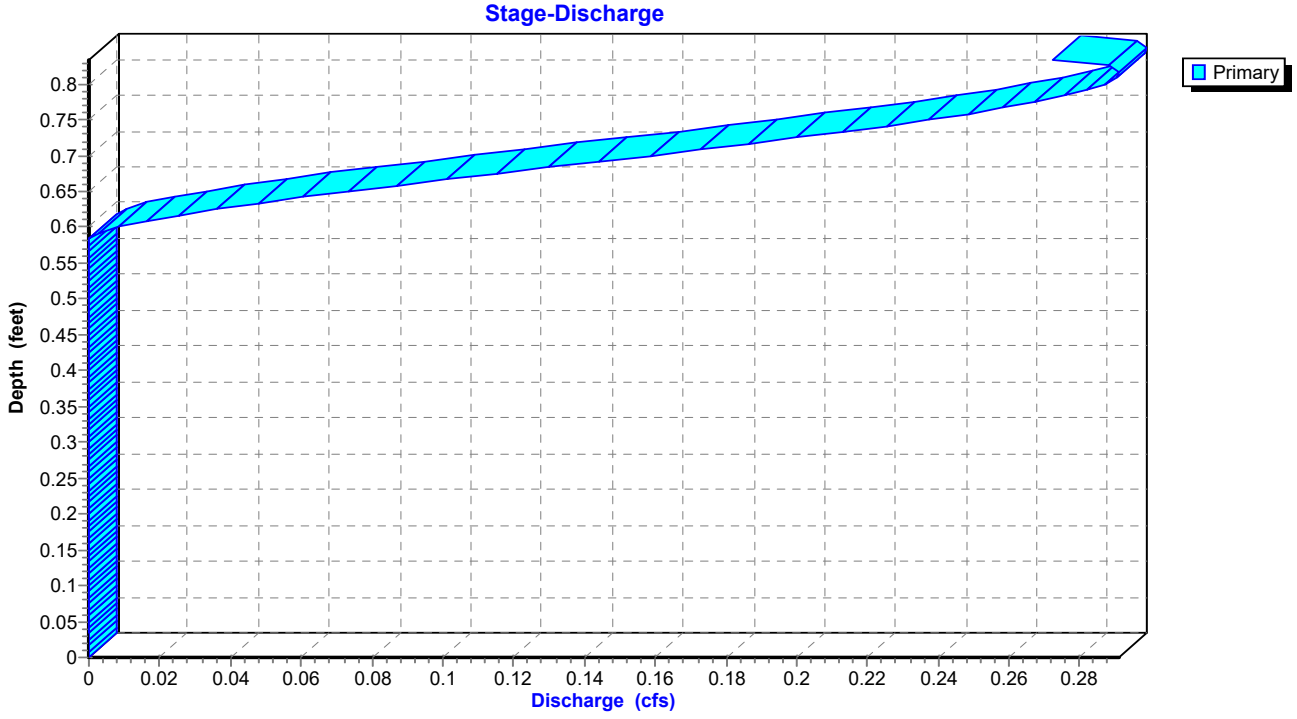
Reach 6R: 10" roof

Hydrograph

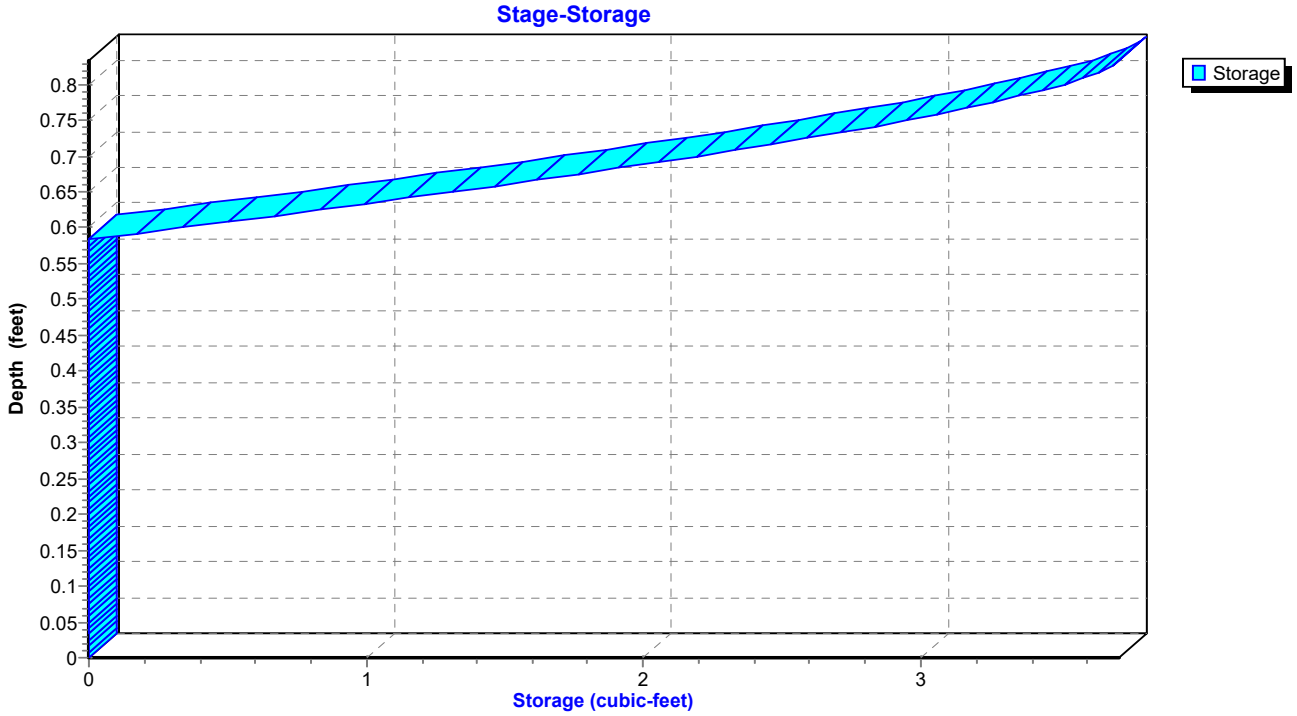


Reach 6R: 10" roof

Stage-Discharge



Reach 6R: 10" roof



Hydrograph for Reach 6R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.30	0.00
5.40	0.01	0	666.32	0.01
5.80	0.01	0	666.32	0.01
6.20	0.01	0	666.32	0.01
6.60	0.01	0	666.32	0.01
7.00	0.01	0	666.32	0.01
7.40	0.01	0	666.33	0.01
7.80	0.01	0	666.33	0.01
8.20	0.02	0	666.33	0.02
8.60	0.02	1	666.33	0.02
9.00	0.02	1	666.33	0.02
9.40	0.03	1	666.34	0.03
9.80	0.03	1	666.34	0.03
10.20	0.03	1	666.34	0.03
10.60	0.04	1	666.35	0.04
11.00	0.07	1	666.37	0.07
11.40	0.09	2	666.38	0.09
11.80	0.19	**3**	**666.44**	**0.19**
12.20	**0.95**	**4**	**666.55**	**0.27**
12.60	0.19	4	666.55	0.27
13.00	0.10	4	666.55	0.27
13.40	0.07	4	666.55	0.27
13.80	0.04	1	666.35	0.04
14.20	0.04	1	666.35	0.04
14.60	0.03	1	666.34	0.03
15.00	0.03	1	666.34	0.03
15.40	0.02	1	666.33	0.02
15.80	0.02	1	666.33	0.02
16.20	0.02	1	666.33	0.02
16.60	0.02	1	666.33	0.02
17.00	0.02	1	666.33	0.02
17.40	0.02	1	666.33	0.02
17.80	0.02	1	666.33	0.02
18.20	0.02	0	666.33	0.02
18.60	0.01	0	666.33	0.01
19.00	0.01	0	666.33	0.01
19.40	0.01	0	666.32	0.01
19.80	0.01	0	666.32	0.01

Stage-Discharge for Reach 6R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.35	0.00
666.32	0.67	0.01
666.33	0.90	0.02
666.34	1.08	0.03
666.35	1.25	0.04
666.36	1.39	0.06
666.37	1.51	0.07
666.38	1.62	0.09
666.39	1.72	0.11
666.40	1.81	0.12
666.41	1.88	0.14
666.42	1.95	0.16
666.43	2.01	0.18
666.44	2.06	0.19
666.45	2.11	0.21
666.46	2.14	0.22
666.47	2.17	0.24
666.48	2.19	0.25
666.49	2.21	0.26
666.50	**2.22**	0.27
666.51	2.21	0.28
666.52	2.20	0.29
666.53	2.18	**0.29**
666.54	2.14	0.29
666.55	2.03	0.28

Stage-Area-Storage for Reach 6R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.72	0.0	0
665.73	0.0	0
665.74	0.0	0
665.75	0.0	0
665.76	0.0	0
665.77	0.0	0
665.78	0.0	0
665.79	0.0	0
665.80	0.0	0
665.81	0.0	0
665.82	0.0	0
665.83	0.0	0
665.84	0.0	0
665.85	0.0	0
665.86	0.0	0
665.87	0.0	0
665.88	0.0	0
665.89	0.0	0
665.90	0.0	0
665.91	0.0	0
665.92	0.0	0
665.93	0.0	0
665.94	0.0	0
665.95	0.0	0
665.96	0.0	0
665.97	0.0	0
665.98	0.0	0
665.99	0.0	0
666.00	0.0	0
666.01	0.0	0
666.02	0.0	0
666.03	0.0	0
666.04	0.0	0
666.05	0.0	0
666.06	0.0	0
666.07	0.0	0
666.08	0.0	0
666.09	0.0	0
666.10	0.0	0
666.11	0.0	0
666.12	0.0	0
666.13	0.0	0
666.14	0.0	0
666.15	0.0	0
666.16	0.0	0
666.17	0.0	0
666.18	0.0	0
666.19	0.0	0
666.20	0.0	0
666.21	0.0	0
666.22	0.0	0
666.23	0.0	0
666.24	0.0	0
666.25	0.0	0
666.26	0.0	0
666.27	0.0	0
666.28	0.0	0
666.29	0.0	0
666.30	0.0	0
666.31	0.0	0
666.32	0.0	0
666.33	0.0	1
666.34	0.0	1
666.35	0.0	1
666.36	0.0	1
666.37	0.0	1
666.38	0.1	1
666.39	0.1	2
666.40	0.1	2
666.41	0.1	2
666.42	0.1	2
666.43	0.1	2
666.44	0.1	3
666.45	0.1	3
666.46	0.1	3
666.47	0.1	3
666.48	0.1	3
666.49	0.1	3
666.50	0.1	3
666.51	0.1	3
666.52	0.1	4
666.53	0.1	4
666.54	0.1	4
666.55	**0.1**	**4**

Summary for Reach 7R: MH8 12"

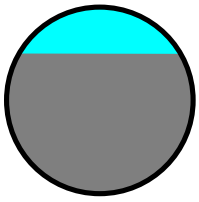
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 200% of Manning's capacity
[76] Warning: Detained 0.040 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 6R INLET depth by 0.15' @ 16.02 hrs
[63] Warning: Exceeded Reach 8R INLET depth by 0.07' @ 16.02 hrs

Inflow Area = 0.644 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.55 cfs @ 11.93 hrs, Volume= 0.142 af
Outflow = 0.29 cfs @ 11.68 hrs, Volume= 0.142 af, Atten= 48%, Lag= 0.0 min

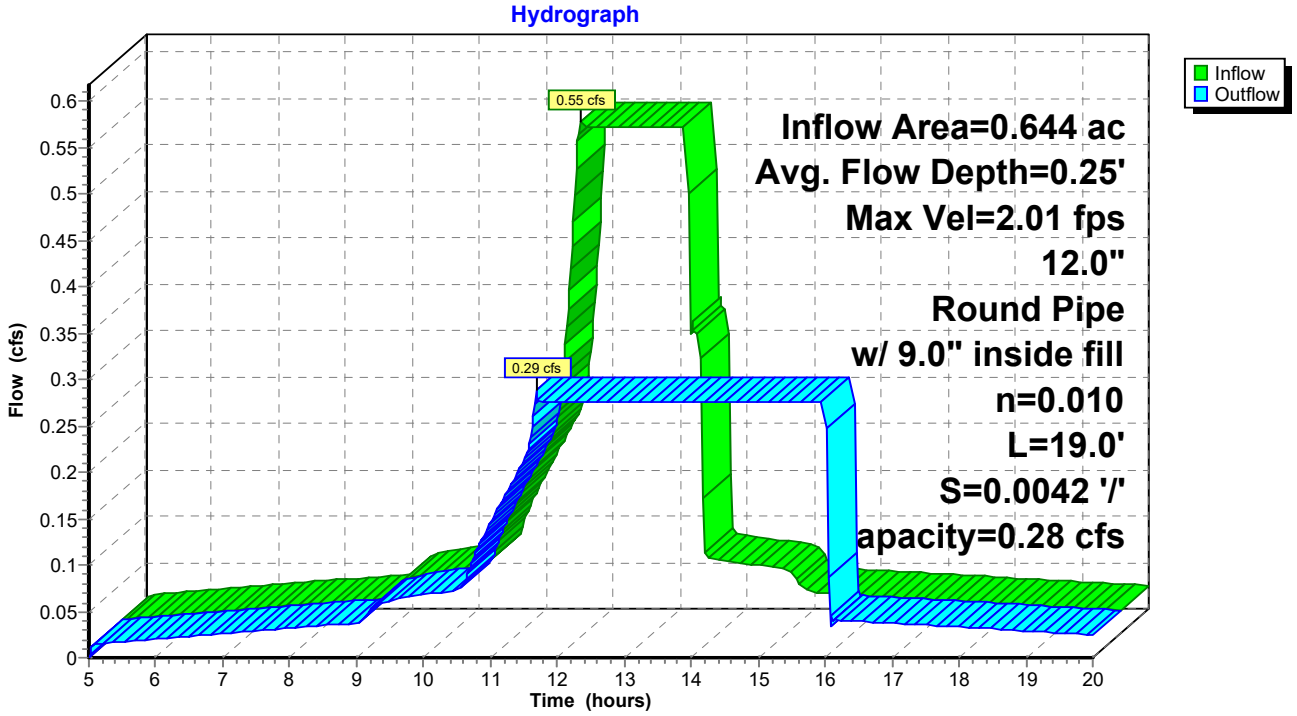
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.30 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 11.70 hrs
Average Depth at Peak Storage= 1.00' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.28 cfs

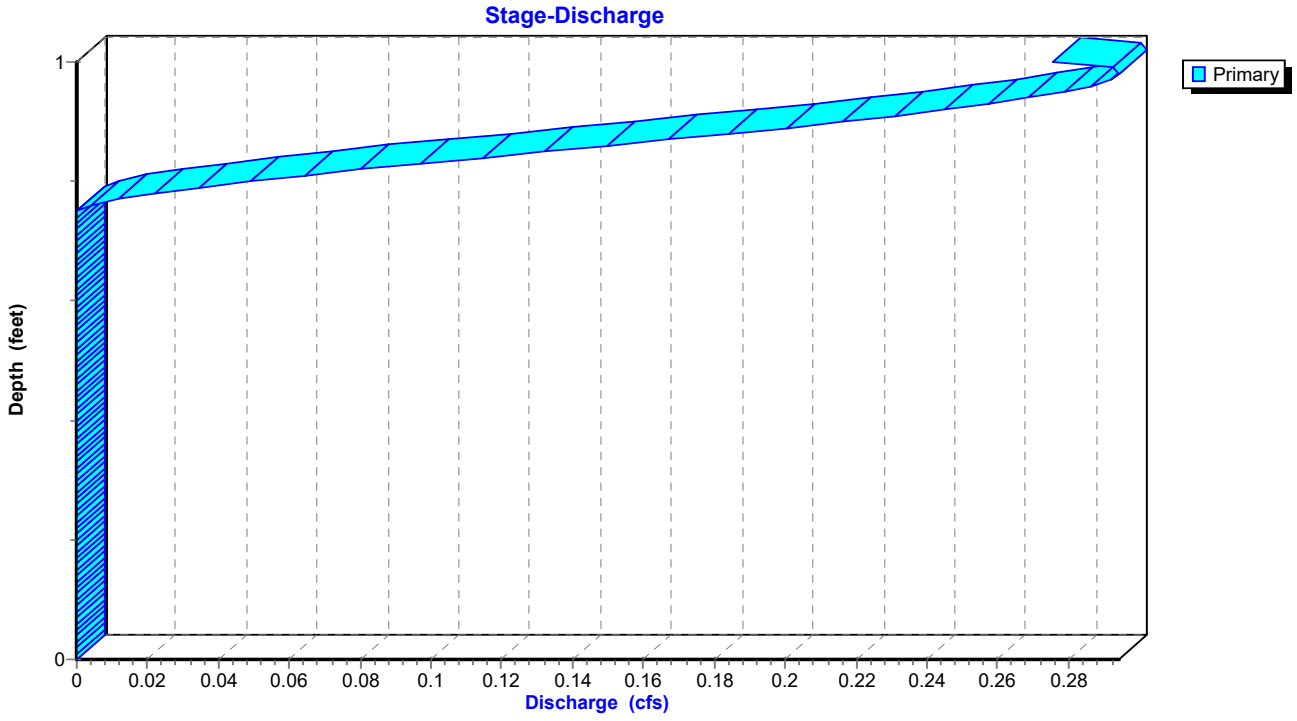
12.0" Round Pipe w/ 9.0" inside fill
n= 0.010
Length= 19.0' Slope= 0.0042 '/'
Inlet Invert= 665.48', Outlet Invert= 665.40'



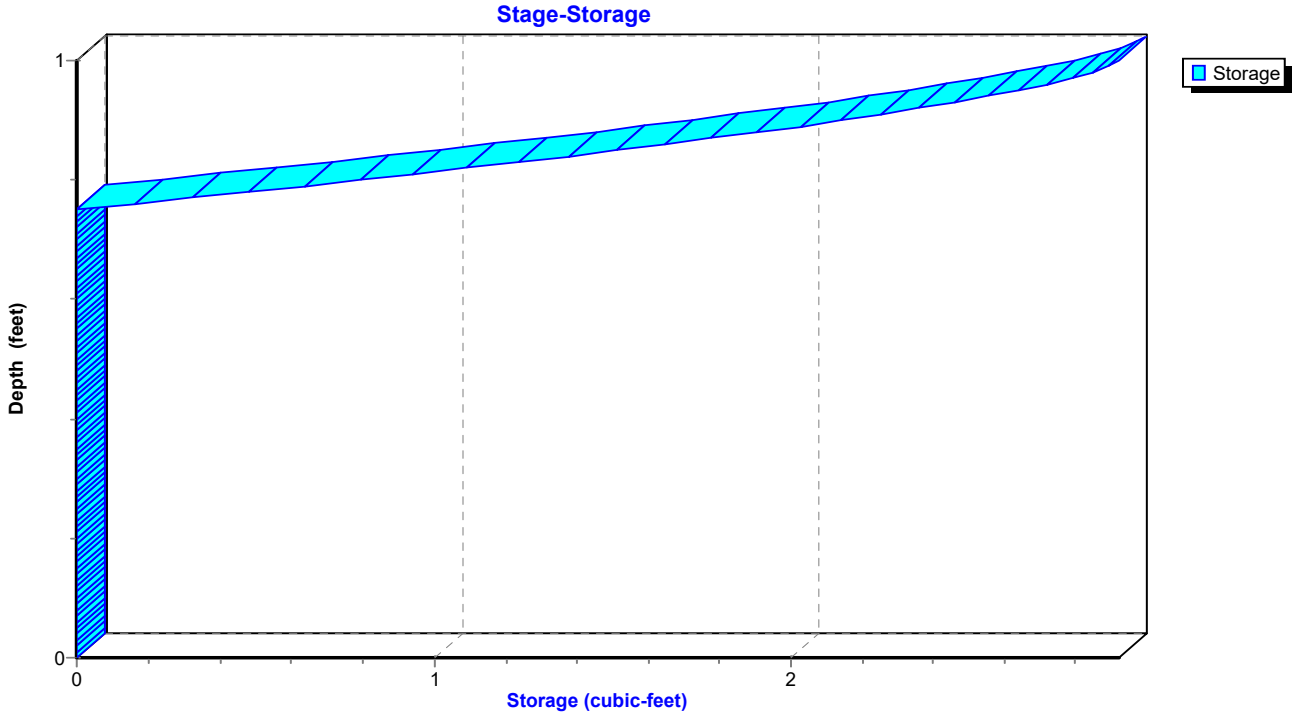
Reach 7R: MH8 12"



Reach 7R: MH8 12"



Reach 7R: MH8 12"



Hydrograph for Reach 7R: MH8 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.23	0.00
5.40	0.02	0	666.25	0.02
5.80	0.02	0	666.26	0.02
6.20	0.02	0	666.26	0.02
6.60	0.02	1	666.26	0.02
7.00	0.03	1	666.26	0.03
7.40	0.03	1	666.27	0.03
7.80	0.03	1	666.27	0.03
8.20	0.03	1	666.27	0.03
8.60	0.04	1	666.27	0.04
9.00	0.04	1	666.27	0.04
9.40	0.06	1	666.29	0.06
9.80	0.07	1	666.29	0.07
10.20	0.07	1	666.29	0.07
10.60	0.08	1	666.30	0.08
11.00	0.15	2	666.34	0.14
11.40	0.20	**2**	**666.37**	**0.20**
11.80	**0.42**	**3**	**666.48**	**0.28**
12.20	**0.55**	3	666.48	0.28
12.60	0.55	3	666.48	0.28
13.00	0.55	3	666.48	0.28
13.40	0.55	3	666.48	0.28
13.80	0.08	3	666.48	0.28
14.20	0.08	3	666.48	0.28
14.60	0.07	3	666.48	0.28
15.00	0.07	3	666.48	0.28
15.40	0.04	3	666.48	0.28
15.80	0.04	3	666.48	0.28
16.20	0.04	1	666.27	0.04
16.60	0.04	1	666.27	0.04
17.00	0.04	1	666.27	0.04
17.40	0.04	1	666.27	0.04
17.80	0.03	1	666.27	0.03
18.20	0.03	1	666.27	0.03
18.60	0.03	1	666.27	0.03
19.00	0.03	1	666.27	0.03
19.40	0.03	1	666.26	0.03
19.80	0.03	1	666.26	0.03

Stage-Discharge for Reach 7R: MH8 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.44	0.00
666.25	0.68	0.01
666.26	0.87	0.02
666.27	1.03	0.03
666.28	1.17	0.05
666.29	1.29	0.06
666.30	1.40	0.08
666.31	1.50	0.10
666.32	1.58	0.11
666.33	1.66	0.13
666.34	1.72	0.15
666.35	1.78	0.17
666.36	1.84	0.18
666.37	1.88	0.20
666.38	1.92	0.22
666.39	1.95	0.23
666.40	1.97	0.25
666.41	1.99	0.26
666.42	2.00	0.27
666.43	**2.01**	0.28
666.44	2.00	0.29
666.45	1.99	0.29
666.46	1.96	**0.29**
666.47	1.92	0.29
666.48	1.79	0.28

Stage-Area-Storage for Reach 7R: MH8 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.48	0.0	0	665.99	0.0	0
665.49	0.0	0	666.00	0.0	0
665.50	0.0	0	666.01	0.0	0
665.51	0.0	0	666.02	0.0	0
665.52	0.0	0	666.03	0.0	0
665.53	0.0	0	666.04	0.0	0
665.54	0.0	0	666.05	0.0	0
665.55	0.0	0	666.06	0.0	0
665.56	0.0	0	666.07	0.0	0
665.57	0.0	0	666.08	0.0	0
665.58	0.0	0	666.09	0.0	0
665.59	0.0	0	666.10	0.0	0
665.60	0.0	0	666.11	0.0	0
665.61	0.0	0	666.12	0.0	0
665.62	0.0	0	666.13	0.0	0
665.63	0.0	0	666.14	0.0	0
665.64	0.0	0	666.15	0.0	0
665.65	0.0	0	666.16	0.0	0
665.66	0.0	0	666.17	0.0	0
665.67	0.0	0	666.18	0.0	0
665.68	0.0	0	666.19	0.0	0
665.69	0.0	0	666.20	0.0	0
665.70	0.0	0	666.21	0.0	0
665.71	0.0	0	666.22	0.0	0
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	1
665.77	0.0	0	666.28	0.0	1
665.78	0.0	0	666.29	0.0	1
665.79	0.0	0	666.30	0.1	1
665.80	0.0	0	666.31	0.1	1
665.81	0.0	0	666.32	0.1	1
665.82	0.0	0	666.33	0.1	2
665.83	0.0	0	666.34	0.1	2
665.84	0.0	0	666.35	0.1	2
665.85	0.0	0	666.36	0.1	2
665.86	0.0	0	666.37	0.1	2
665.87	0.0	0	666.38	0.1	2
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	3
665.92	0.0	0	666.43	0.1	3
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.2	3
665.97	0.0	0	666.48	**0.2**	**3**
665.98	0.0	0			

Summary for Reach 8R: 10" roof

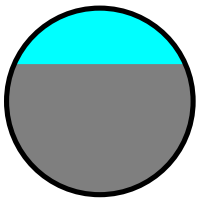
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 413% of Manning's capacity
[76] Warning: Detained 0.017 af (Pond w/culvert advised)

Inflow Area = 0.339 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 1.13 cfs @ 12.17 hrs, Volume= 0.075 af
Outflow = 0.29 cfs @ 11.88 hrs, Volume= 0.075 af, Atten= 75%, Lag= 0.0 min

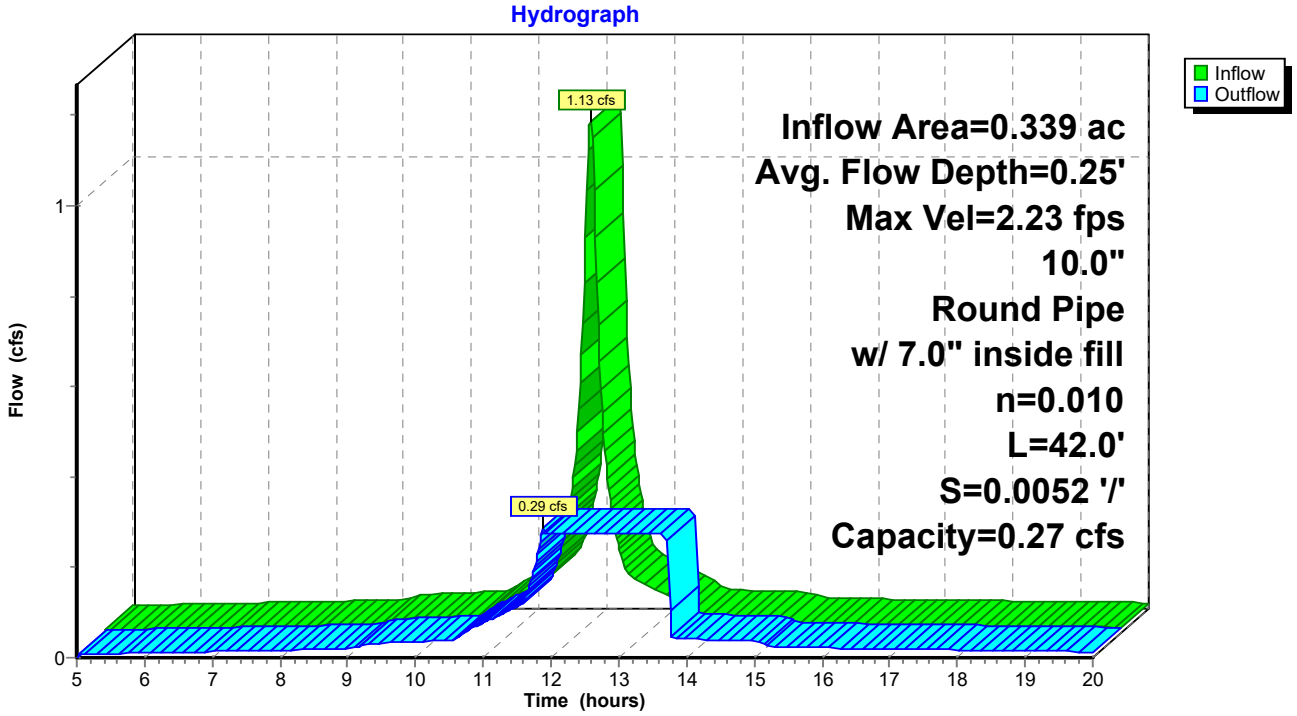
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.14 fps, Avg. Travel Time= 0.6 min

Peak Storage= 6 cf @ 11.90 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

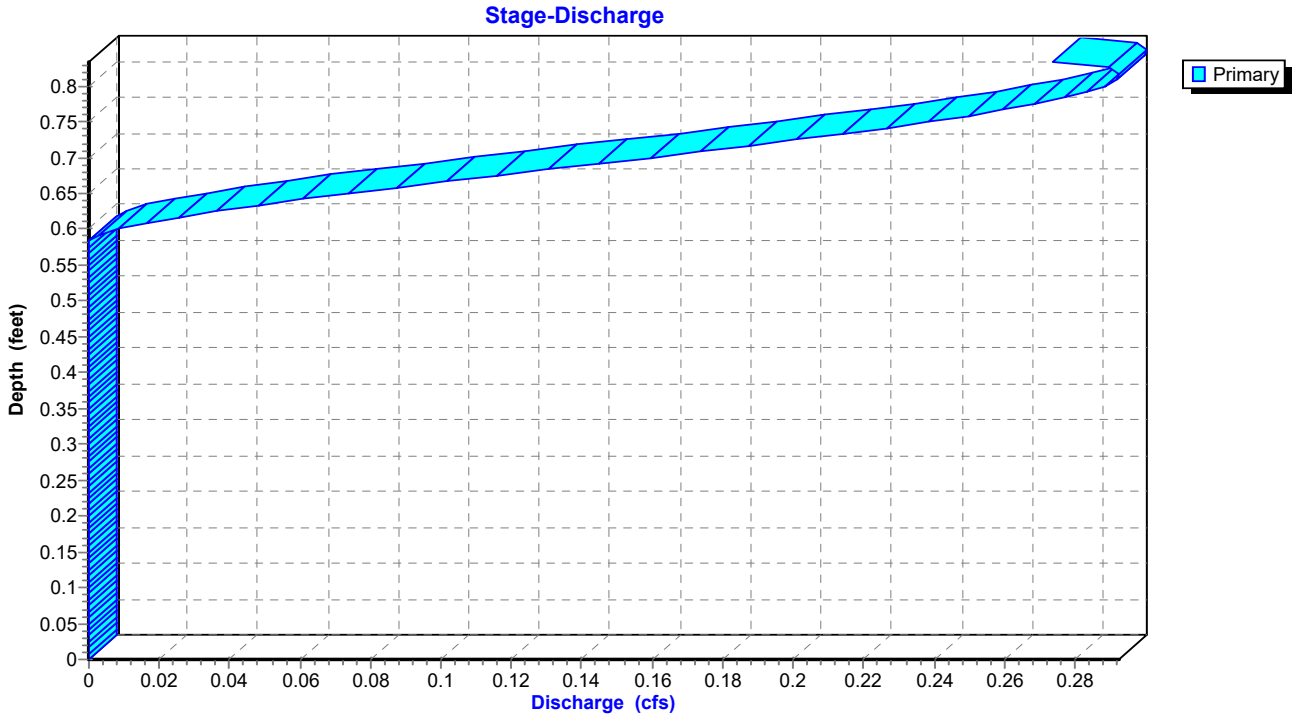
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 42.0' Slope= 0.0052 '/'
Inlet Invert= 665.80', Outlet Invert= 665.58'



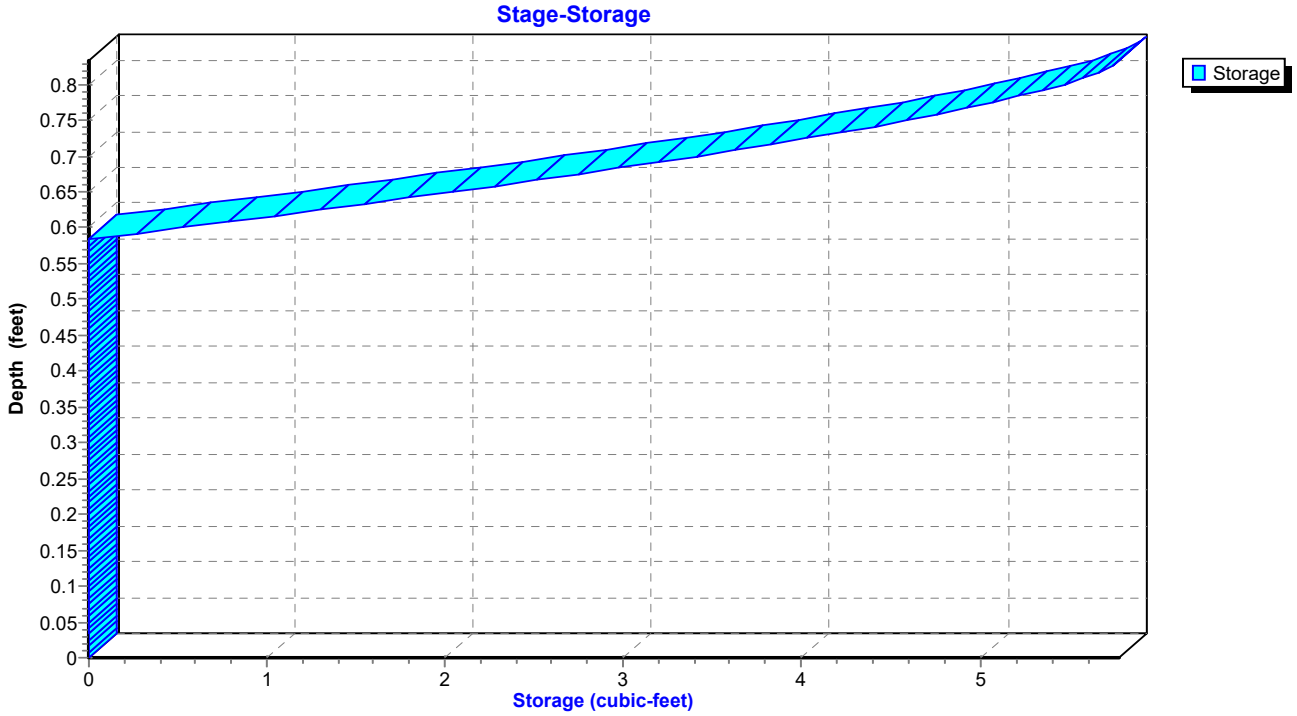
Reach 8R: 10" roof



Reach 8R: 10" roof



Reach 8R: 10" roof



Hydrograph for Reach 8R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.38	0.00
5.40	0.01	1	666.40	0.01
5.80	0.01	1	666.40	0.01
6.20	0.01	1	666.40	0.01
6.60	0.01	1	666.40	0.01
7.00	0.01	1	666.41	0.01
7.40	0.02	1	666.41	0.02
7.80	0.02	1	666.41	0.02
8.20	0.02	1	666.41	0.02
8.60	0.02	1	666.41	0.02
9.00	0.02	1	666.41	0.02
9.40	0.03	1	666.42	0.03
9.80	0.03	1	666.42	0.03
10.20	0.04	1	666.43	0.04
10.60	0.04	1	666.43	0.04
11.00	0.08	2	666.45	0.08
11.40	0.11	3	666.47	0.11
11.80	**0.23**	**4**	**666.54**	**0.23**
12.20	**1.07**	**6**	**666.63**	**0.27**
12.60	0.18	6	666.63	0.27
13.00	0.11	6	666.63	0.27
13.40	0.08	6	666.63	0.27
13.80	0.04	1	666.43	0.04
14.20	0.04	1	666.43	0.04
14.60	0.04	1	666.43	0.04
15.00	0.04	1	666.43	0.04
15.40	0.02	1	666.41	0.02
15.80	0.02	1	666.41	0.02
16.20	0.02	1	666.41	0.02
16.60	0.02	1	666.41	0.02
17.00	0.02	1	666.41	0.02
17.40	0.02	1	666.41	0.02
17.80	0.02	1	666.41	0.02
18.20	0.02	1	666.41	0.02
18.60	0.02	1	666.41	0.02
19.00	0.02	1	666.41	0.02
19.40	0.01	1	666.41	0.01
19.80	0.01	1	666.41	0.01

Stage-Discharge for Reach 8R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.35	0.00
666.40	0.68	0.01
666.41	0.90	0.02
666.42	1.09	0.03
666.43	1.25	0.04
666.44	1.39	0.06
666.45	1.52	0.07
666.46	1.63	0.09
666.47	1.73	0.11
666.48	1.81	0.12
666.49	1.89	0.14
666.50	1.96	0.16
666.51	2.02	0.18
666.52	2.07	0.19
666.53	2.12	0.21
666.54	2.15	0.22
666.55	2.18	0.24
666.56	2.21	0.25
666.57	2.22	0.26
666.58	**2.23**	0.27
666.59	2.23	0.28
666.60	2.21	0.29
666.61	2.19	**0.29**
666.62	2.15	0.29
666.63	2.04	0.28

Stage-Area-Storage for Reach 8R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	0
665.83	0.0	0	666.34	0.0	0
665.84	0.0	0	666.35	0.0	0
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	1
665.90	0.0	0	666.41	0.0	1
665.91	0.0	0	666.42	0.0	1
665.92	0.0	0	666.43	0.0	1
665.93	0.0	0	666.44	0.0	2
665.94	0.0	0	666.45	0.0	2
665.95	0.0	0	666.46	0.1	2
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	4
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	0.1	5
666.05	0.0	0	666.56	0.1	5
666.06	0.0	0	666.57	0.1	5
666.07	0.0	0	666.58	0.1	5
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	5
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	6
666.12	0.0	0	666.63	**0.1**	**6**
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			
666.23	0.0	0			
666.24	0.0	0			
666.25	0.0	0			
666.26	0.0	0			
666.27	0.0	0			
666.28	0.0	0			
666.29	0.0	0			
666.30	0.0	0			

Summary for Reach 9R: inlet 3 18"

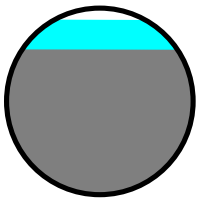
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[63] Warning: Exceeded Reach 7R INLET depth by 0.24' @ 5.00 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.81 cfs @ 12.08 hrs, Volume= 0.169 af
Outflow = 0.81 cfs @ 12.04 hrs, Volume= 0.169 af, Atten= 0%, Lag= 0.0 min

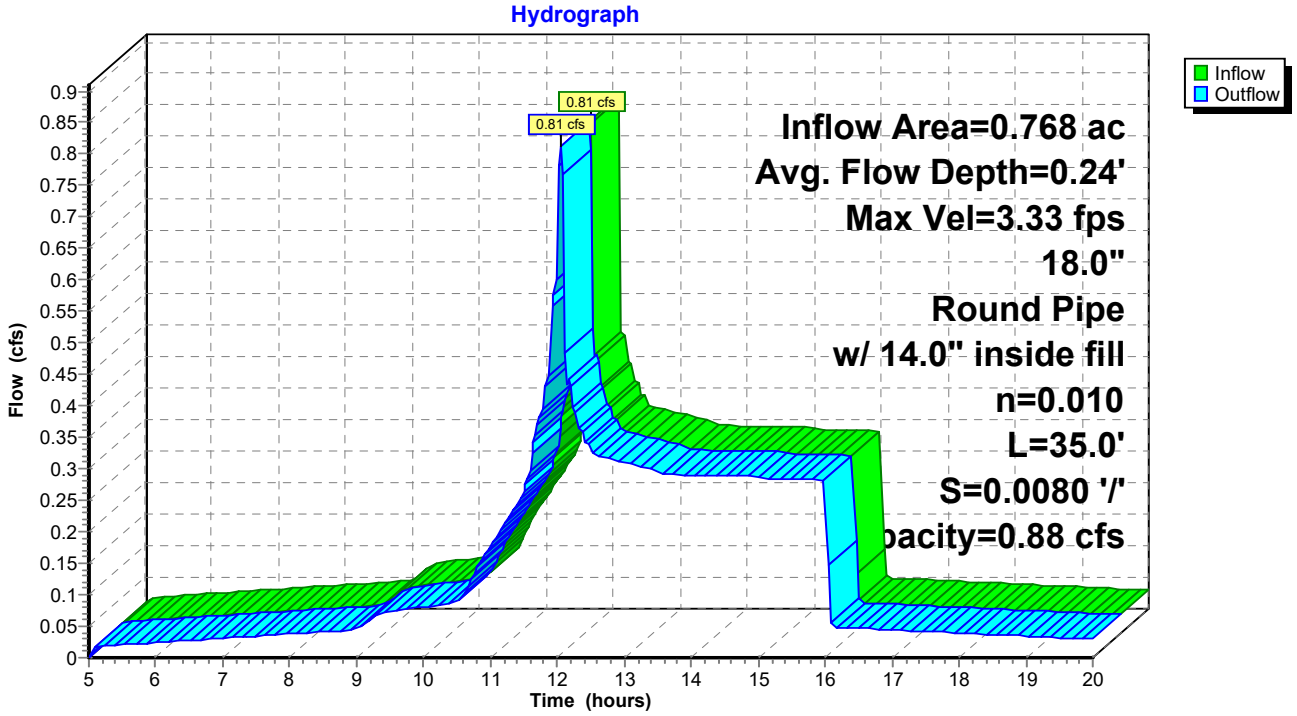
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.33 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.65 fps, Avg. Travel Time= 0.4 min

Peak Storage= 9 cf @ 12.04 hrs
Average Depth at Peak Storage= 1.40' above invert (0.24' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.88 cfs

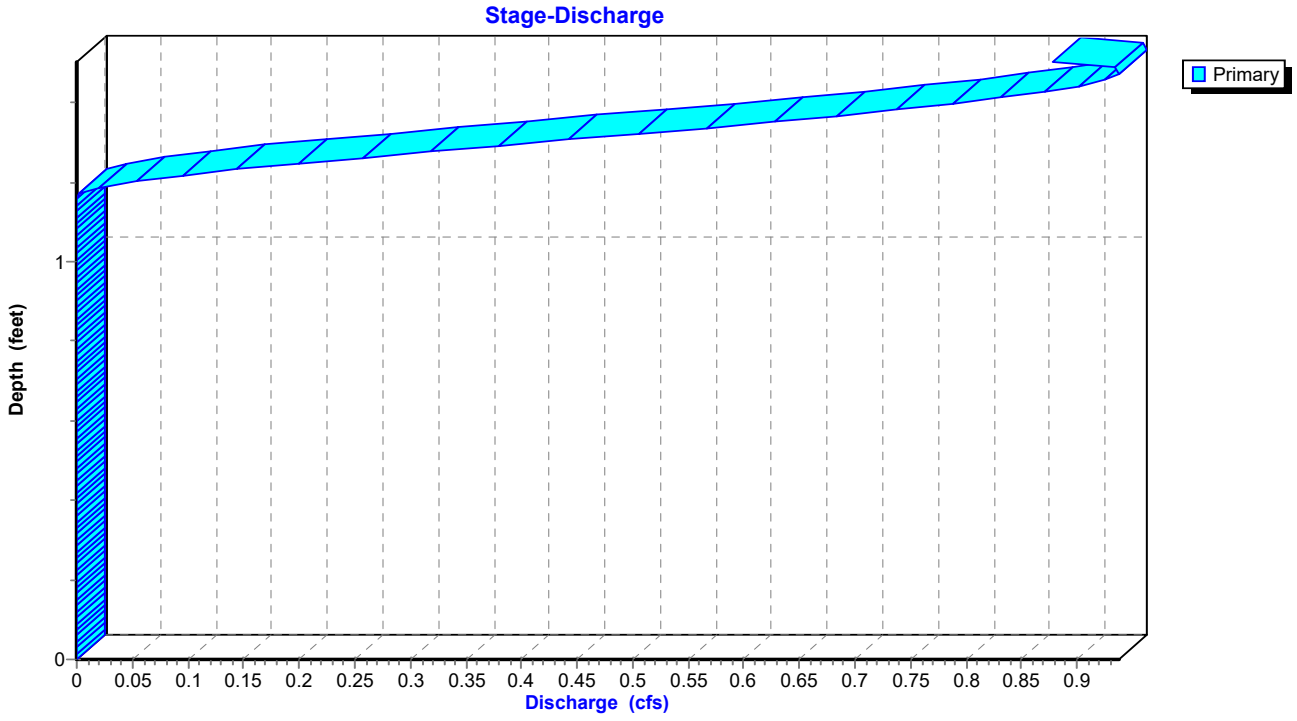
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 35.0' Slope= 0.0080 '/'
Inlet Invert= 665.30', Outlet Invert= 665.02'



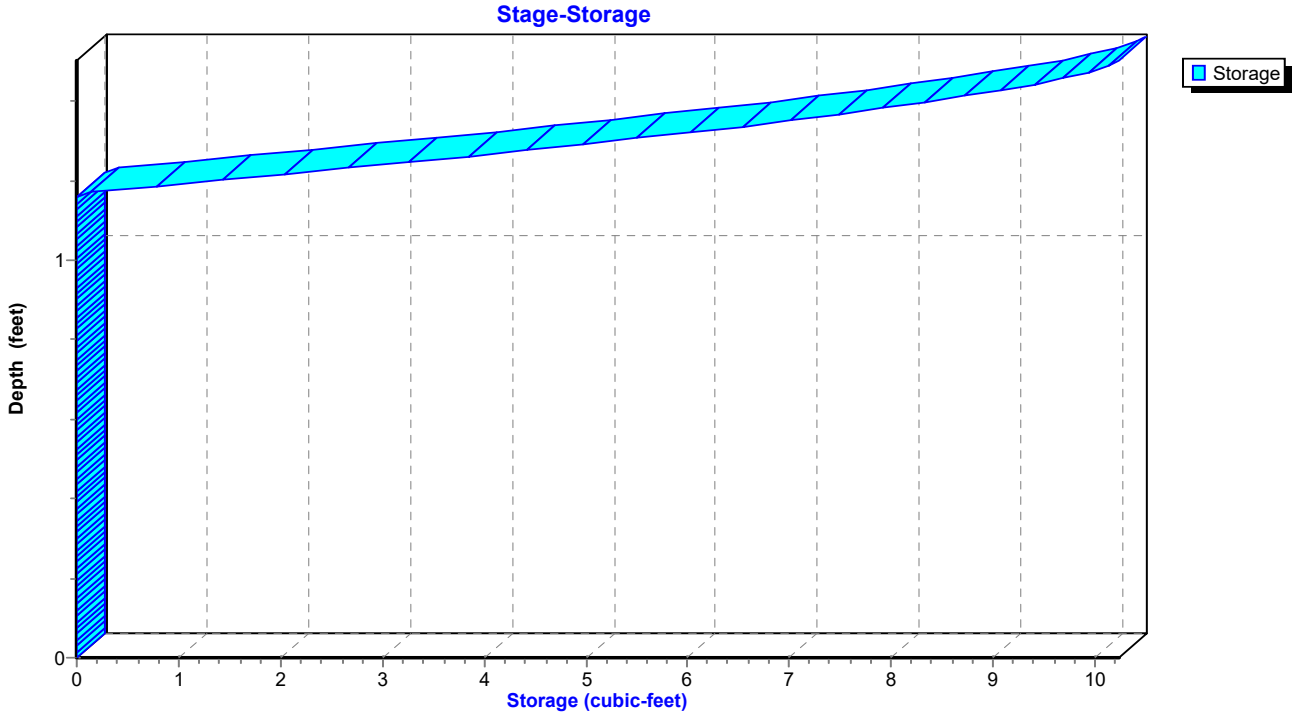
Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Hydrograph for Reach 9R: inlet 3 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.47	0.00
5.40	0.02	1	666.48	0.02
5.80	0.02	1	666.49	0.02
6.20	0.03	1	666.49	0.03
6.60	0.03	1	666.49	0.03
7.00	0.03	1	666.49	0.03
7.40	0.03	1	666.49	0.03
7.80	0.04	1	666.49	0.04
8.20	0.04	1	666.49	0.04
8.60	0.04	1	666.49	0.04
9.00	0.05	1	666.50	0.05
9.40	0.07	2	666.51	0.07
9.80	0.08	2	666.51	0.08
10.20	0.08	2	666.51	0.08
10.60	0.10	2	666.52	0.10
11.00	0.18	3	666.54	0.18
11.40	0.24	4	666.56	0.24
11.80	**0.41**	**5**	**666.60**	**0.41**
12.20	**0.42**	**5**	**666.60**	**0.42**
12.60	0.32	4	666.58	0.32
13.00	0.31	4	666.57	0.31
13.40	0.30	4	666.57	0.30
13.80	0.29	4	666.57	0.29
14.20	0.29	4	666.57	0.29
14.60	0.29	4	666.57	0.29
15.00	0.29	4	666.57	0.29
15.40	0.28	4	666.57	0.28
15.80	0.28	4	666.57	0.28
16.20	0.05	1	666.50	0.05
16.60	0.05	1	666.50	0.05
17.00	0.04	1	666.50	0.04
17.40	0.04	1	666.50	0.04
17.80	0.04	1	666.49	0.04
18.20	0.04	1	666.49	0.04
18.60	0.04	1	666.49	0.04
19.00	0.03	1	666.49	0.03
19.40	0.03	1	666.49	0.03
19.80	0.03	1	666.49	0.03

Stage-Discharge for Reach 9R: inlet 3 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.10	0.00
666.47	0.29	0.00
666.48	0.70	0.01
666.49	1.03	0.03
666.50	1.30	0.05
666.51	1.52	0.08
666.52	1.72	0.11
666.53	1.90	0.14
666.54	2.06	0.18
666.55	2.21	0.22
666.56	2.34	0.26
666.57	2.46	0.30
666.58	2.57	0.34
666.59	2.68	0.38
666.60	2.77	0.42
666.61	2.86	0.46
666.62	2.94	0.51
666.63	3.01	0.55
666.64	3.07	0.59
666.65	3.13	0.63
666.66	3.18	0.67
666.67	3.22	0.70
666.68	3.26	0.74
666.69	3.29	0.77
666.70	3.32	0.80
666.71	3.34	0.83
666.72	3.35	0.86
666.73	3.36	0.88
666.74	**3.36**	0.90
666.75	3.35	0.92
666.76	3.33	0.93
666.77	3.30	**0.94**
666.78	3.25	0.94
666.79	3.15	0.92
666.80	3.01	0.88

Stage-Area-Storage for Reach 9R: inlet 3 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	1
666.50	0.0	1
666.52	0.1	2
666.54	0.1	3
666.56	0.1	4
666.58	0.1	5
666.60	0.2	5
666.62	0.2	6
666.64	0.2	7
666.66	0.2	7
666.68	0.2	8
666.70	0.2	8
666.72	0.3	9
666.74	0.3	9
666.76	0.3	10
666.78	0.3	10
666.80	**0.3**	**10**

Summary for Reach 10R: MH7 18"

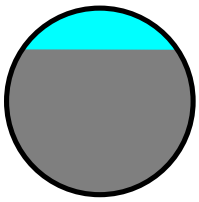
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 117% of Manning's capacity
[76] Warning: Detained 0.001 af (Pond w/culvert advised)
[62] Hint: Exceeded Reach 9R OUTLET depth by 0.19' @ 12.12 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.81 cfs @ 12.04 hrs, Volume= 0.169 af
Outflow = 0.69 cfs @ 12.04 hrs, Volume= 0.169 af, Atten= 14%, Lag= 0.0 min

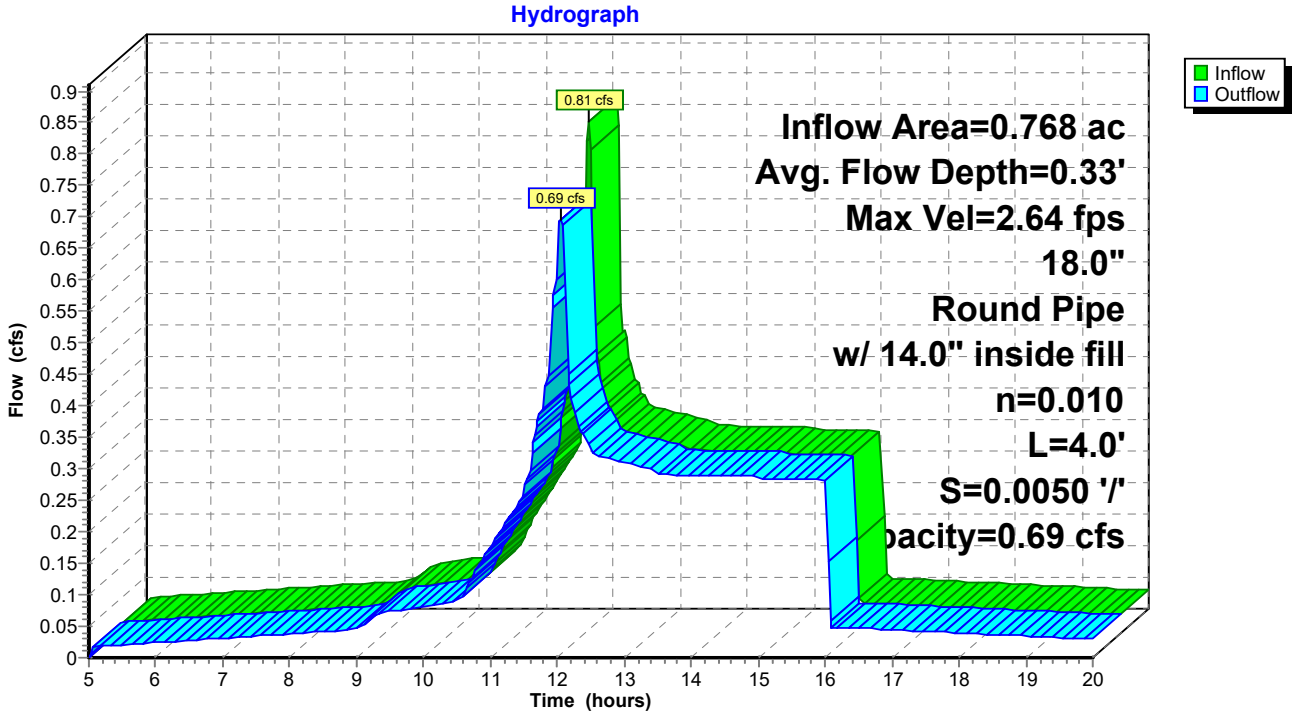
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.64 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.41 fps, Avg. Travel Time= 0.0 min

Peak Storage= 1 cf @ 12.02 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

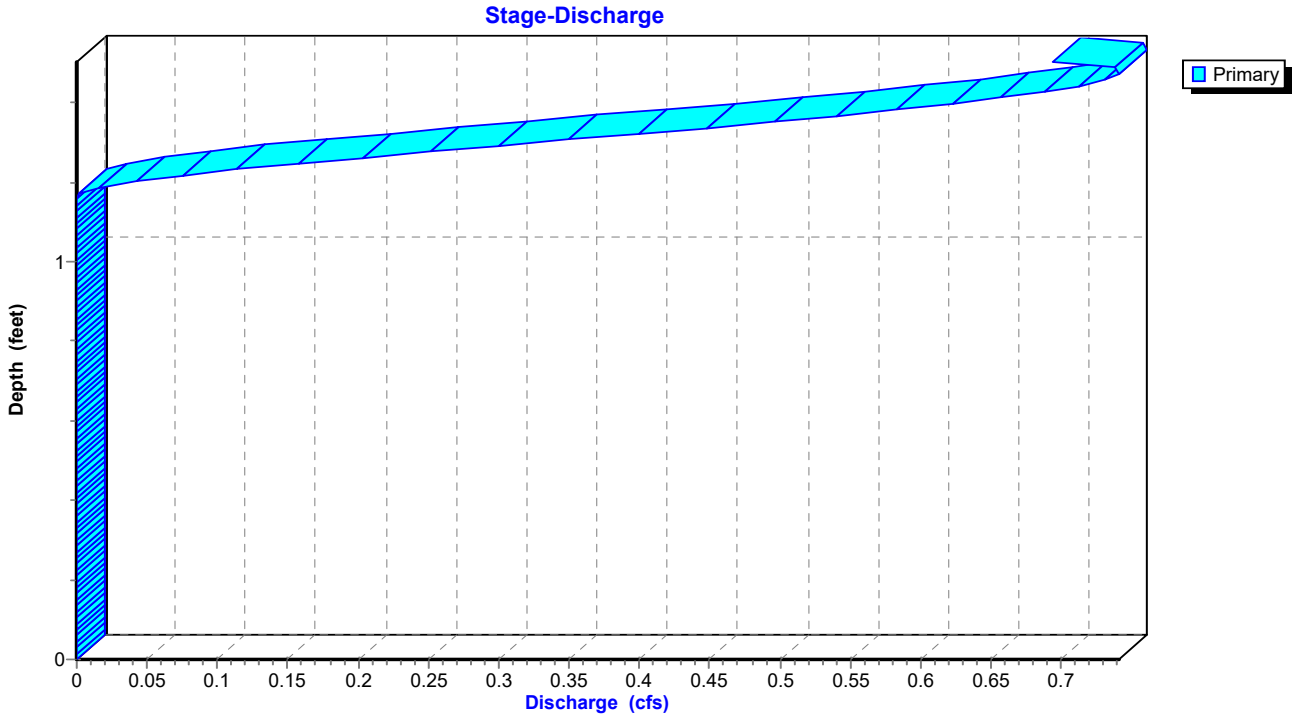
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 4.0' Slope= 0.0050 '/'
Inlet Invert= 665.02', Outlet Invert= 665.00'



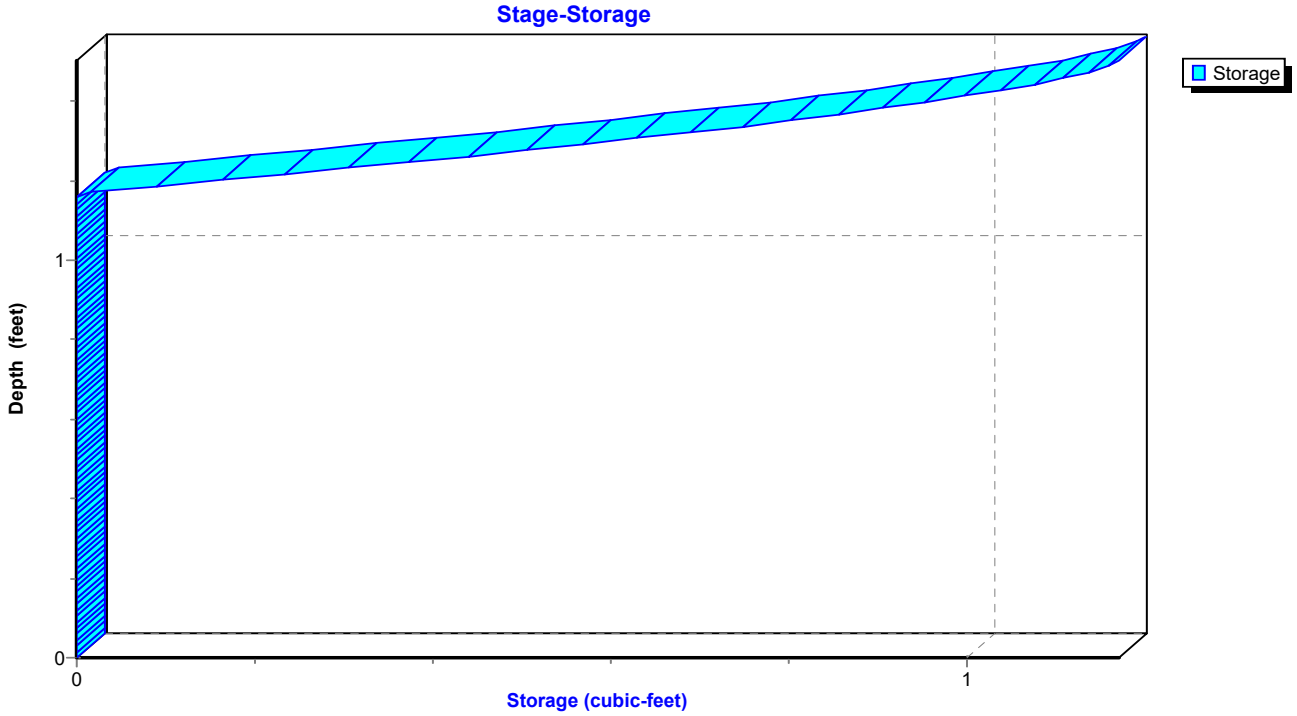
Reach 10R: MH7 18"



Reach 10R: MH7 18"



Reach 10R: MH7 18"



Hydrograph for Reach 10R: MH7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.19	0.00
5.40	0.02	0	666.21	0.02
5.80	0.02	0	666.21	0.02
6.20	0.03	0	666.21	0.03
6.60	0.03	0	666.21	0.03
7.00	0.03	0	666.21	0.03
7.40	0.03	0	666.22	0.03
7.80	0.04	0	666.22	0.04
8.20	0.04	0	666.22	0.04
8.60	0.04	0	666.22	0.04
9.00	0.05	0	666.22	0.05
9.40	0.07	0	666.23	0.07
9.80	0.08	0	666.24	0.08
10.20	0.08	0	666.24	0.08
10.60	0.10	0	666.24	0.10
11.00	0.18	0	666.27	0.18
11.40	0.24	0	666.29	0.24
11.80	**0.41**	**1**	**666.34**	**0.41**
12.20	**0.42**	**1**	**666.35**	**0.43**
12.60	0.32	1	666.32	0.32
13.00	0.31	1	666.31	0.31
13.40	0.30	1	666.31	0.30
13.80	0.29	1	666.31	0.29
14.20	0.29	1	666.31	0.29
14.60	0.29	1	666.31	0.29
15.00	0.29	1	666.31	0.29
15.40	0.28	1	666.30	0.28
15.80	0.28	1	666.30	0.28
16.20	0.05	0	666.22	0.05
16.60	0.05	0	666.22	0.05
17.00	0.04	0	666.22	0.04
17.40	0.04	0	666.22	0.04
17.80	0.04	0	666.22	0.04
18.20	0.04	0	666.22	0.04
18.60	0.04	0	666.22	0.04
19.00	0.03	0	666.22	0.03
19.40	0.03	0	666.21	0.03
19.80	0.03	0	666.21	0.03

Stage-Discharge for Reach 10R: MH7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.02	0.00	0.00	665.53	0.00	0.00	666.04	0.00	0.00
665.03	0.00	0.00	665.54	0.00	0.00	666.05	0.00	0.00
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.08	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.23	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.55	0.01
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.82	0.02
665.20	0.00	0.00	665.71	0.00	0.00	666.22	1.03	0.04
665.21	0.00	0.00	665.72	0.00	0.00	666.23	1.20	0.06
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.36	0.09
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.50	0.11
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.63	0.14
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.74	0.17
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.85	0.20
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.95	0.24
665.28	0.00	0.00	665.79	0.00	0.00	666.30	2.04	0.27
665.29	0.00	0.00	665.80	0.00	0.00	666.31	2.12	0.30
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.19	0.33
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.26	0.37
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.32	0.40
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.38	0.43
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.43	0.46
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.47	0.50
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.51	0.53
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.55	0.56
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.58	0.58
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.60	0.61
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.62	0.63
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.64	0.66
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.65	0.68
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.65	0.70
665.44	0.00	0.00	665.95	0.00	0.00	666.46	**2.65**	0.71
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.73
665.46	0.00	0.00	665.97	0.00	0.00	666.48	2.63	0.73
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.61	**0.74**
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.57	0.74
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.49	0.72
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.38	0.69
665.51	0.00	0.00	666.02	0.00	0.00			
665.52	0.00	0.00	666.03	0.00	0.00			

Stage-Area-Storage for Reach 10R: MH7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.02	0.0	0
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.1	0
666.26	0.1	0
666.28	0.1	0
666.30	0.1	1
666.32	0.2	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	1
666.40	0.2	1
666.42	0.2	1
666.44	0.3	1
666.46	0.3	1
666.48	0.3	1
666.50	0.3	1
666.52	**0.3**	**1**

Summary for Reach 11R: inlet 7 18"

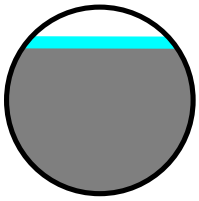
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 2.64" for 2-yr event
Inflow = 0.22 cfs @ 12.33 hrs, Volume= 0.022 af
Outflow = 0.22 cfs @ 12.34 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.8 min

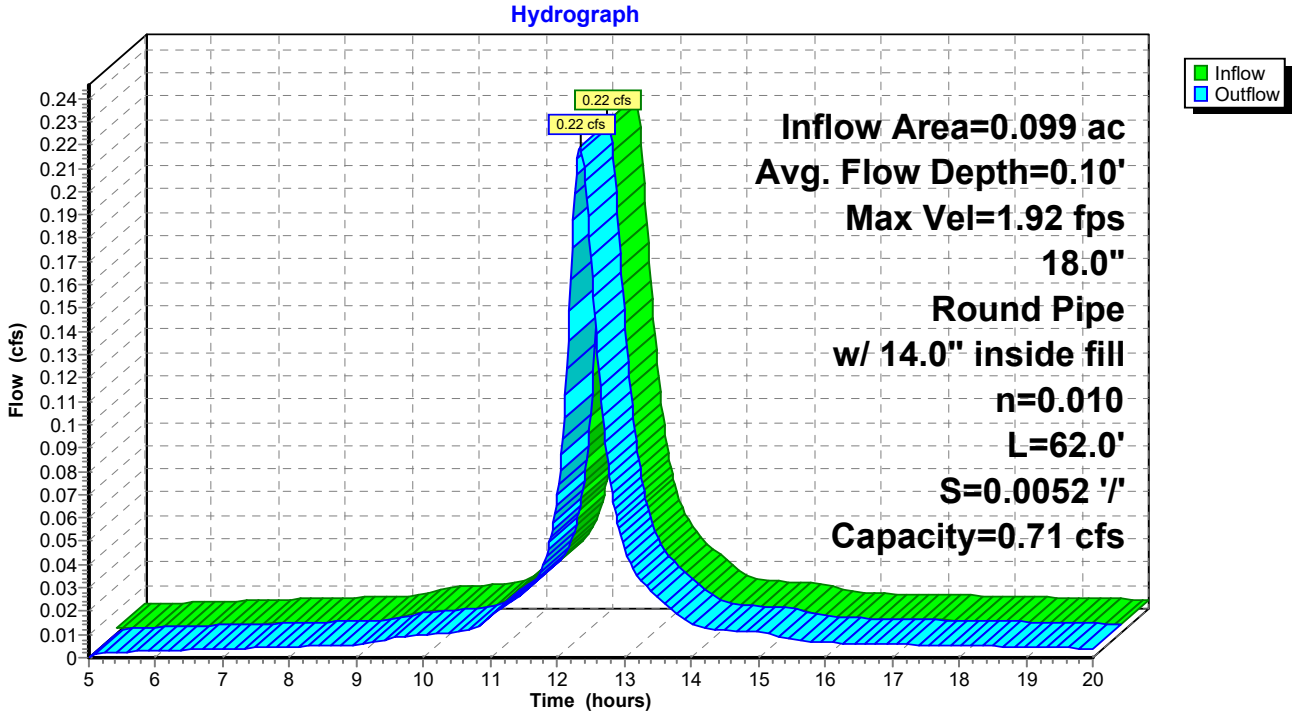
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.92 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.68 fps, Avg. Travel Time= 1.5 min

Peak Storage= 7 cf @ 12.33 hrs
Average Depth at Peak Storage= 1.26' above invert (0.10' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.71 cfs

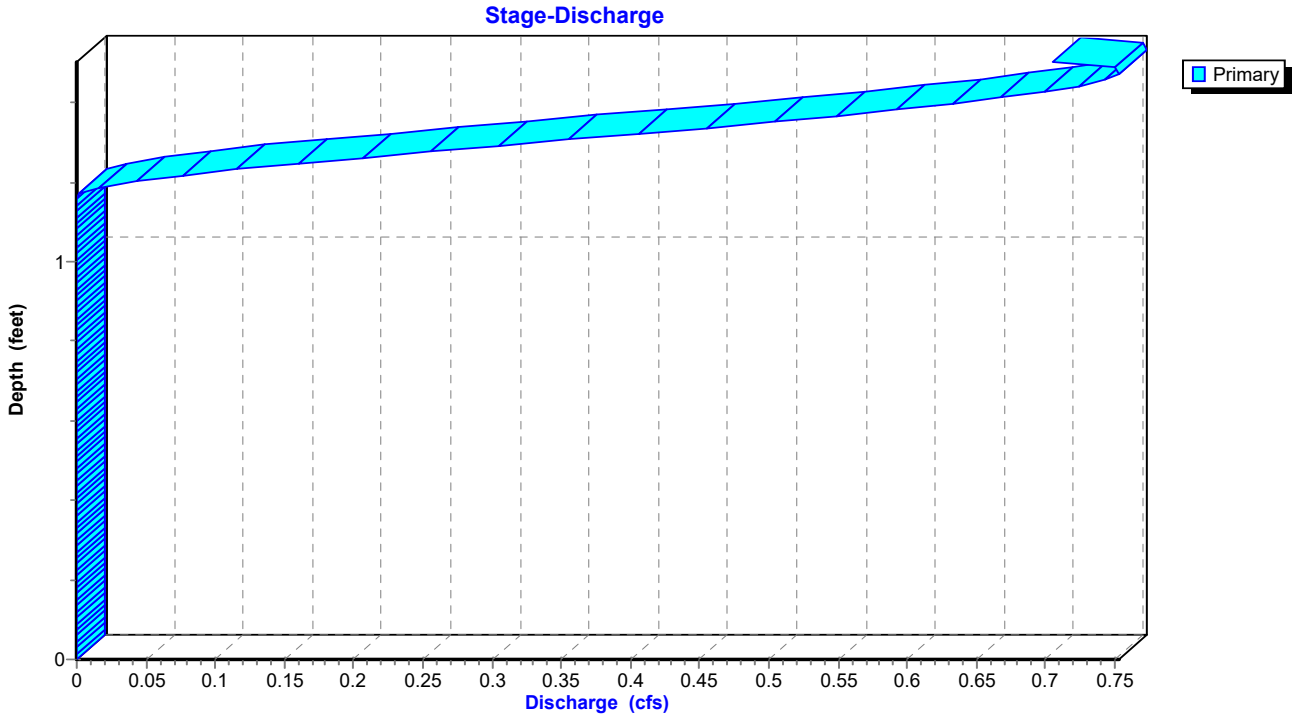
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0052 '/'
Inlet Invert= 665.36', Outlet Invert= 665.04'



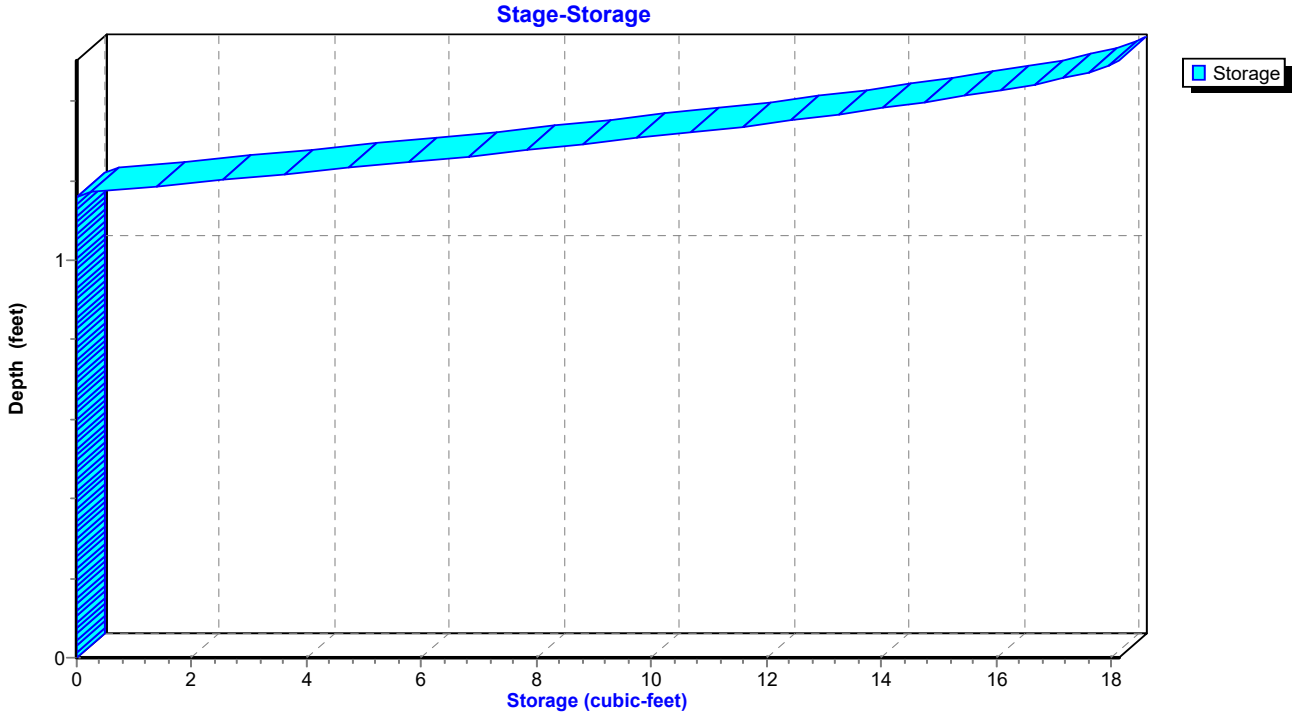
Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Hydrograph for Reach 11R: inlet 7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.53	0.00
5.40	0.00	0	666.53	0.00
5.80	0.00	0	666.53	0.00
6.20	0.00	0	666.53	0.00
6.60	0.00	0	666.53	0.00
7.00	0.00	0	666.53	0.00
7.40	0.00	0	666.53	0.00
7.80	0.00	1	666.53	0.00
8.20	0.00	1	666.53	0.00
8.60	0.01	1	666.53	0.01
9.00	0.01	1	666.53	0.01
9.40	0.01	1	666.54	0.01
9.80	0.01	1	666.54	0.01
10.20	0.01	1	666.54	0.01
10.60	0.01	1	666.54	0.01
11.00	0.02	1	666.55	0.02
11.40	0.03	2	666.55	0.03
11.80	0.04	2	666.56	0.04
12.20	**0.17**	**6**	**666.61**	**0.16**
12.60	**0.13**	**5**	**666.59**	**0.13**
13.00	0.05	3	666.56	0.05
13.40	0.03	2	666.55	0.03
13.80	0.02	1	666.55	0.02
14.20	0.01	1	666.54	0.01
14.60	0.01	1	666.54	0.01
15.00	0.01	1	666.54	0.01
15.40	0.01	1	666.54	0.01
15.80	0.01	1	666.54	0.01
16.20	0.01	1	666.54	0.01
16.60	0.01	1	666.54	0.01
17.00	0.01	1	666.53	0.01
17.40	0.01	1	666.53	0.01
17.80	0.01	1	666.53	0.01
18.20	0.01	1	666.53	0.01
18.60	0.00	1	666.53	0.00
19.00	0.00	1	666.53	0.00
19.40	0.00	1	666.53	0.00
19.80	0.00	0	666.53	0.00

Stage-Discharge for Reach 11R: inlet 7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.08	0.00
666.53	0.24	0.00
666.54	0.56	0.01
666.55	0.83	0.03
666.56	1.05	0.04
666.57	1.22	0.07
666.58	1.38	0.09
666.59	1.53	0.12
666.60	1.65	0.15
666.61	1.77	0.18
666.62	1.88	0.21
666.63	1.98	0.24
666.64	2.07	0.27
666.65	2.15	0.31
666.66	2.23	0.34
666.67	2.29	0.37
666.68	2.36	0.41
666.69	2.41	0.44
666.70	2.47	0.47
666.71	2.51	0.50
666.72	2.55	0.53
666.73	2.59	0.56
666.74	2.62	0.59
666.75	2.65	0.62
666.76	2.67	0.64
666.77	2.68	0.67
666.78	2.69	0.69
666.79	2.70	0.71
666.80	**2.70**	0.72
666.81	2.69	0.74
666.82	2.67	0.75
666.83	2.65	**0.75**
666.84	2.61	0.75
666.85	2.53	0.74
666.86	2.41	0.71

Stage-Area-Storage for Reach 11R: inlet 7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	0
666.50	0.0	0
666.52	0.0	0
666.54	0.0	1
666.56	0.0	3
666.58	0.1	4
666.60	0.1	5
666.62	0.1	7
666.64	0.1	8
666.66	0.2	9
666.68	0.2	11
666.70	0.2	12
666.72	0.2	13
666.74	0.2	14
666.76	0.2	15
666.78	0.3	16
666.80	0.3	17
666.82	0.3	17
666.84	0.3	18
666.86	**0.3**	**18**

Summary for Reach 12R: MH6 18"

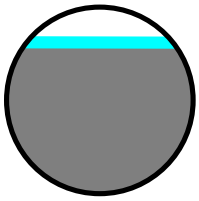
[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach 11R outlet invert by 1.26' @ 12.34 hrs

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 2.64" for 2-yr event
Inflow = 0.22 cfs @ 12.34 hrs, Volume= 0.022 af
Outflow = 0.22 cfs @ 12.34 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.1 min

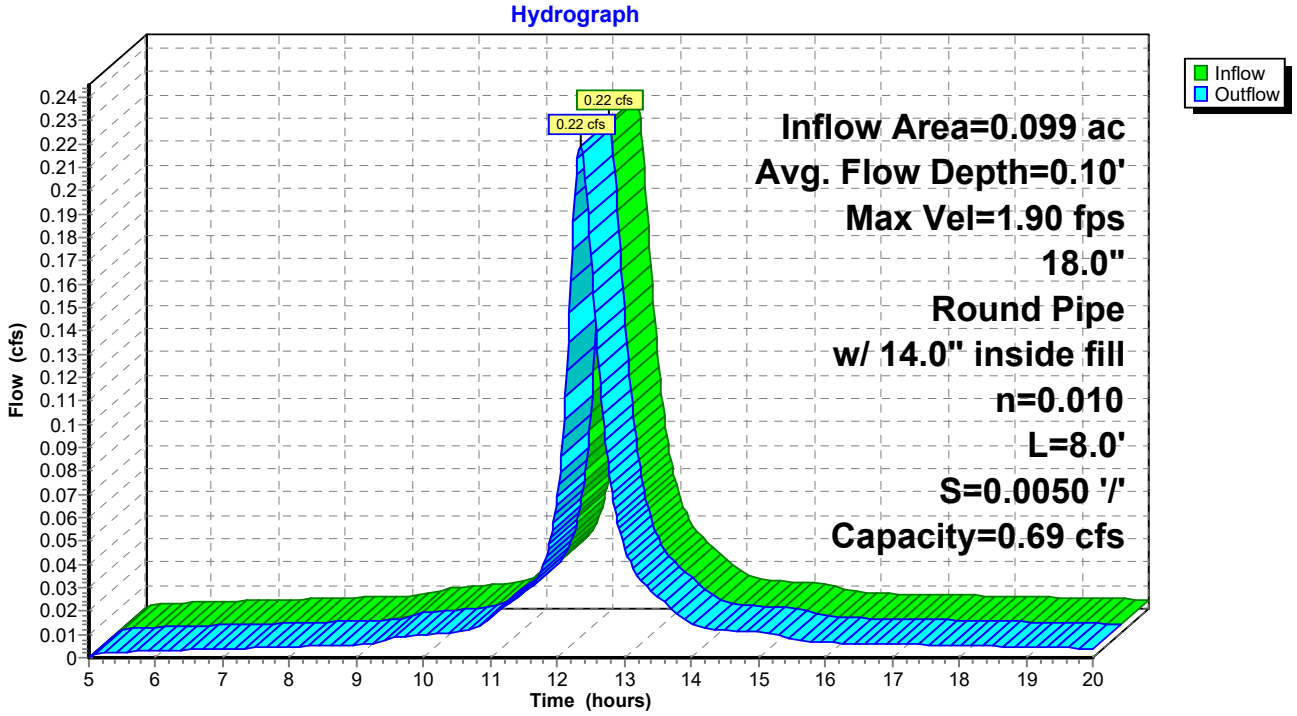
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.90 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.67 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.34 hrs
Average Depth at Peak Storage= 1.26' above invert (0.10' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

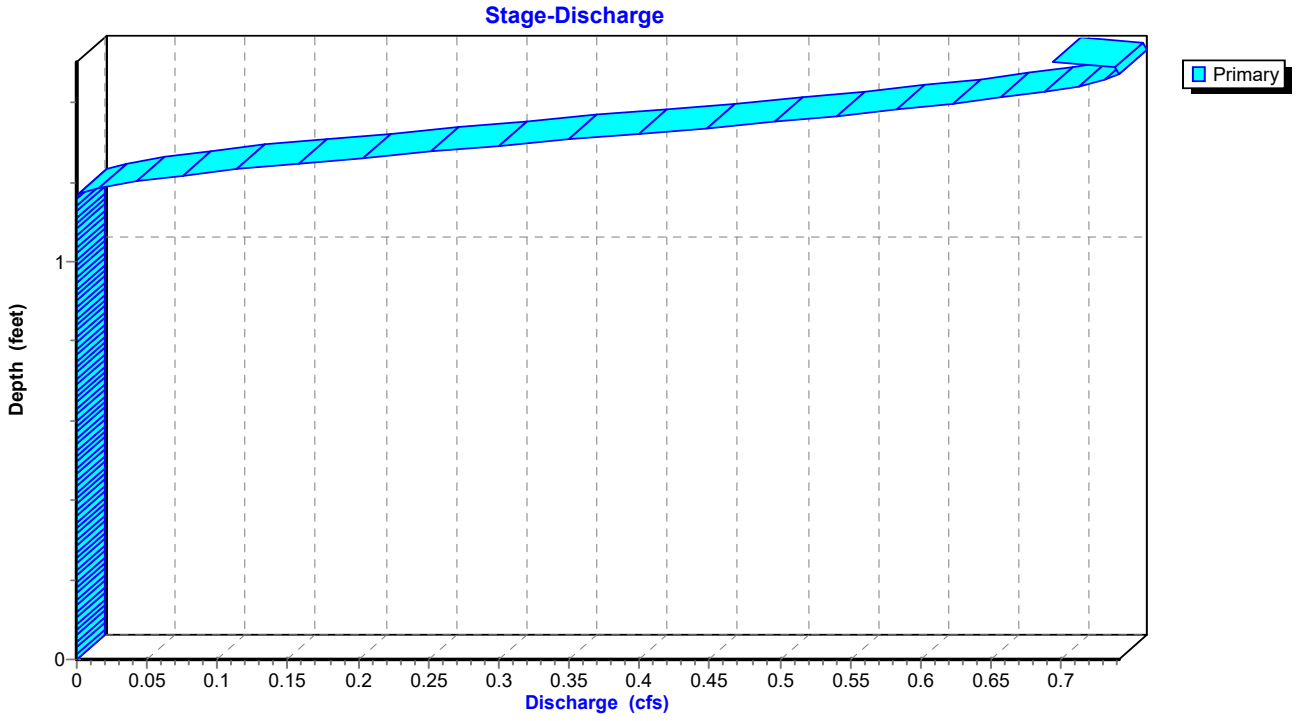
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 8.0' Slope= 0.0050 '/'
Inlet Invert= 665.04', Outlet Invert= 665.00'



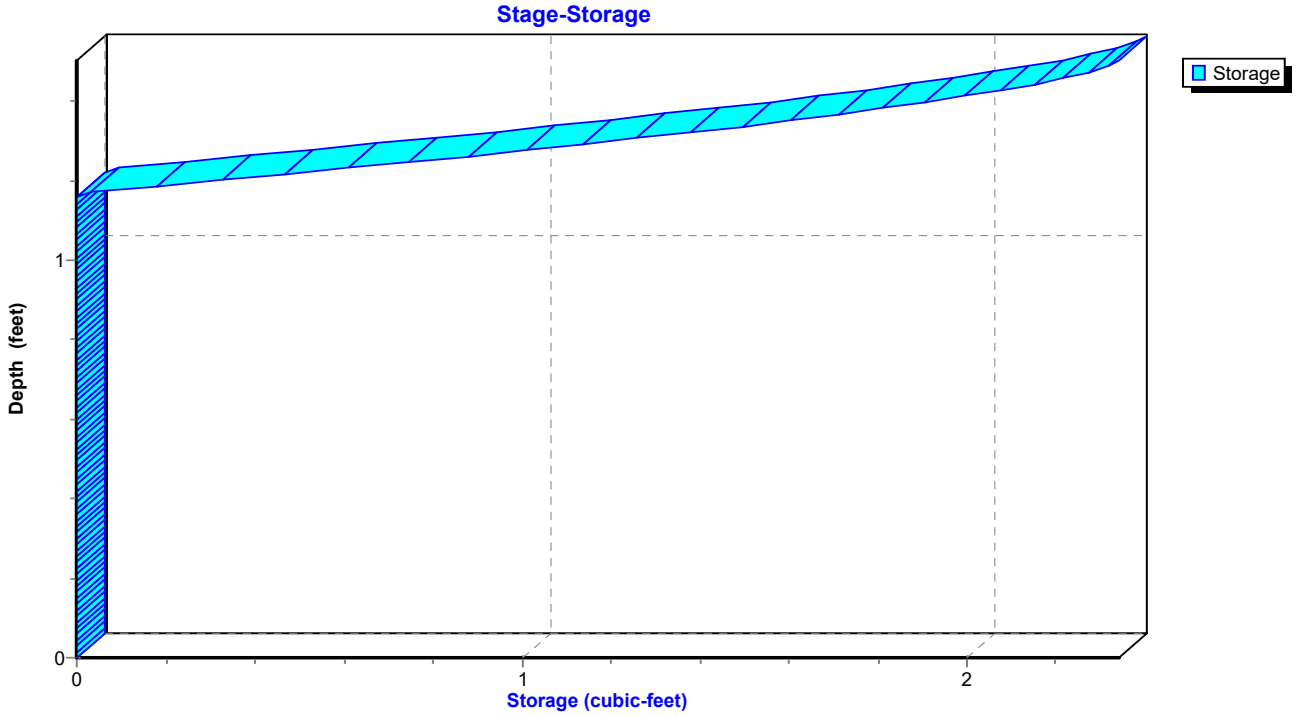
Reach 12R: MH6 18"



Reach 12R: MH6 18"



Reach 12R: MH6 18"



Hydrograph for Reach 12R: MH6 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.21	0.00
5.40	0.00	0	666.21	0.00
5.80	0.00	0	666.21	0.00
6.20	0.00	0	666.21	0.00
6.60	0.00	0	666.21	0.00
7.00	0.00	0	666.21	0.00
7.40	0.00	0	666.21	0.00
7.80	0.00	0	666.21	0.00
8.20	0.00	0	666.21	0.00
8.60	0.01	0	666.21	0.01
9.00	0.01	0	666.21	0.01
9.40	0.01	0	666.22	0.01
9.80	0.01	0	666.22	0.01
10.20	0.01	0	666.22	0.01
10.60	0.01	0	666.22	0.01
11.00	0.02	0	666.23	0.02
11.40	0.03	0	666.23	0.03
11.80	0.04	0	666.24	0.04
12.20	**0.16**	**1**	**666.29**	**0.16**
12.60	**0.13**	**1**	**666.28**	**0.13**
13.00	0.05	0	666.24	0.05
13.40	0.03	0	666.23	0.03
13.80	0.02	0	666.23	0.02
14.20	0.01	0	666.22	0.01
14.60	0.01	0	666.22	0.01
15.00	0.01	0	666.22	0.01
15.40	0.01	0	666.22	0.01
15.80	0.01	0	666.22	0.01
16.20	0.01	0	666.22	0.01
16.60	0.01	0	666.22	0.01
17.00	0.01	0	666.21	0.01
17.40	0.01	0	666.21	0.01
17.80	0.01	0	666.21	0.01
18.20	0.01	0	666.21	0.01
18.60	0.00	0	666.21	0.00
19.00	0.00	0	666.21	0.00
19.40	0.00	0	666.21	0.00
19.80	0.00	0	666.21	0.00

Stage-Discharge for Reach 12R: MH6 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.04	0.00	0.00
665.05	0.00	0.00
665.06	0.00	0.00
665.07	0.00	0.00
665.08	0.00	0.00
665.09	0.00	0.00
665.10	0.00	0.00
665.11	0.00	0.00
665.12	0.00	0.00
665.13	0.00	0.00
665.14	0.00	0.00
665.15	0.00	0.00
665.16	0.00	0.00
665.17	0.00	0.00
665.18	0.00	0.00
665.19	0.00	0.00
665.20	0.00	0.00
665.21	0.00	0.00
665.22	0.00	0.00
665.23	0.00	0.00
665.24	0.00	0.00
665.25	0.00	0.00
665.26	0.00	0.00
665.27	0.00	0.00
665.28	0.00	0.00
665.29	0.00	0.00
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.08	0.00
666.21	0.23	0.00
666.22	0.55	0.01
666.23	0.82	0.02
666.24	1.03	0.04
666.25	1.20	0.06
666.26	1.36	0.09
666.27	1.50	0.11
666.28	1.63	0.14
666.29	1.74	0.17
666.30	1.85	0.20
666.31	1.95	0.24
666.32	2.04	0.27
666.33	2.12	0.30
666.34	2.19	0.33
666.35	2.26	0.37
666.36	2.32	0.40
666.37	2.38	0.43
666.38	2.43	0.46
666.39	2.47	0.50
666.40	2.51	0.53
666.41	2.55	0.56
666.42	2.58	0.58
666.43	2.60	0.61
666.44	2.62	0.63
666.45	2.64	0.66
666.46	2.65	0.68
666.47	2.65	0.70
666.48	**2.65**	0.71
666.49	2.65	0.73
666.50	2.63	0.73
666.51	2.61	**0.74**
666.52	2.57	0.74
666.53	2.49	0.72
666.54	2.38	0.69

Stage-Area-Storage for Reach 12R: MH6 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.1	1
666.28	0.1	1
666.30	0.1	1
666.32	0.1	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	2
666.40	0.2	2
666.42	0.2	2
666.44	0.2	2
666.46	0.3	2
666.48	0.3	2
666.50	0.3	2
666.52	0.3	2
666.54	**0.3**	**2**

Summary for Reach 13R: to isolator 6"

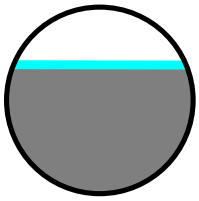
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.041 ac, 78.05% Impervious, Inflow Depth > 1.50" for 2-yr event
Inflow = 0.06 cfs @ 12.38 hrs, Volume= 0.005 af
Outflow = 0.06 cfs @ 12.38 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

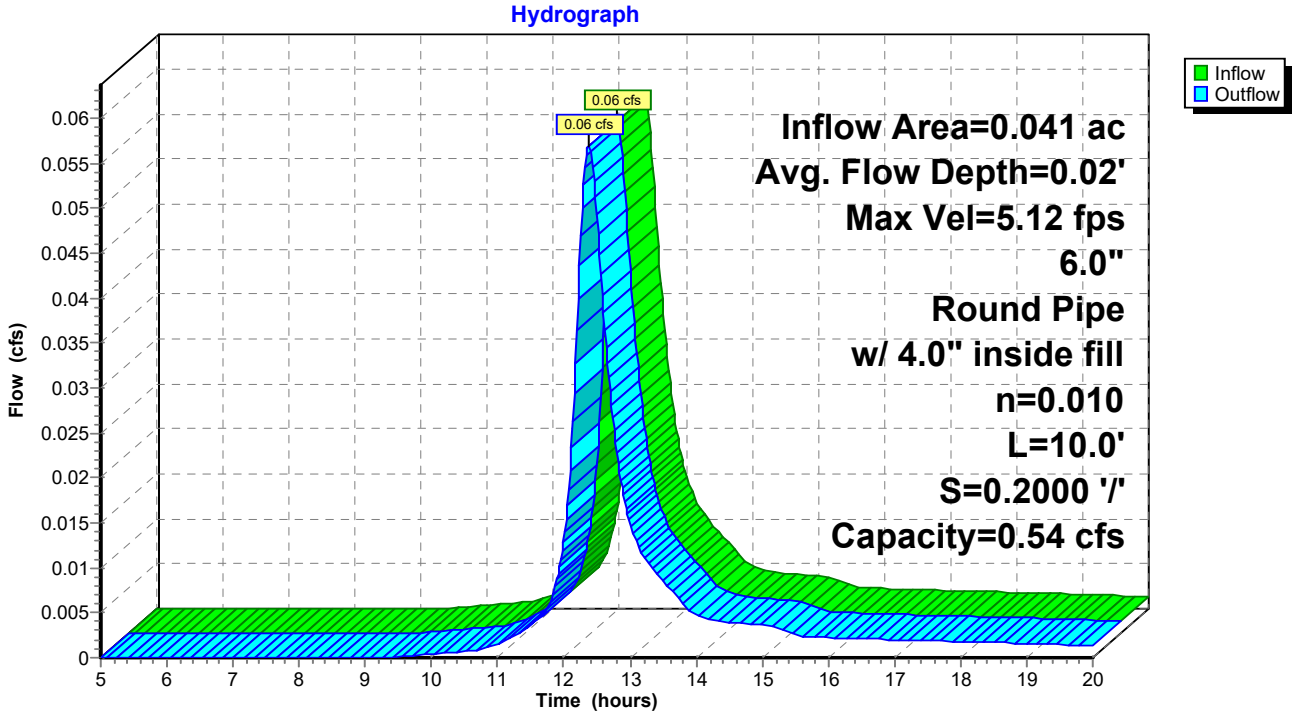
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 5.12 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.91 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.38 hrs
Average Depth at Peak Storage= 0.36' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

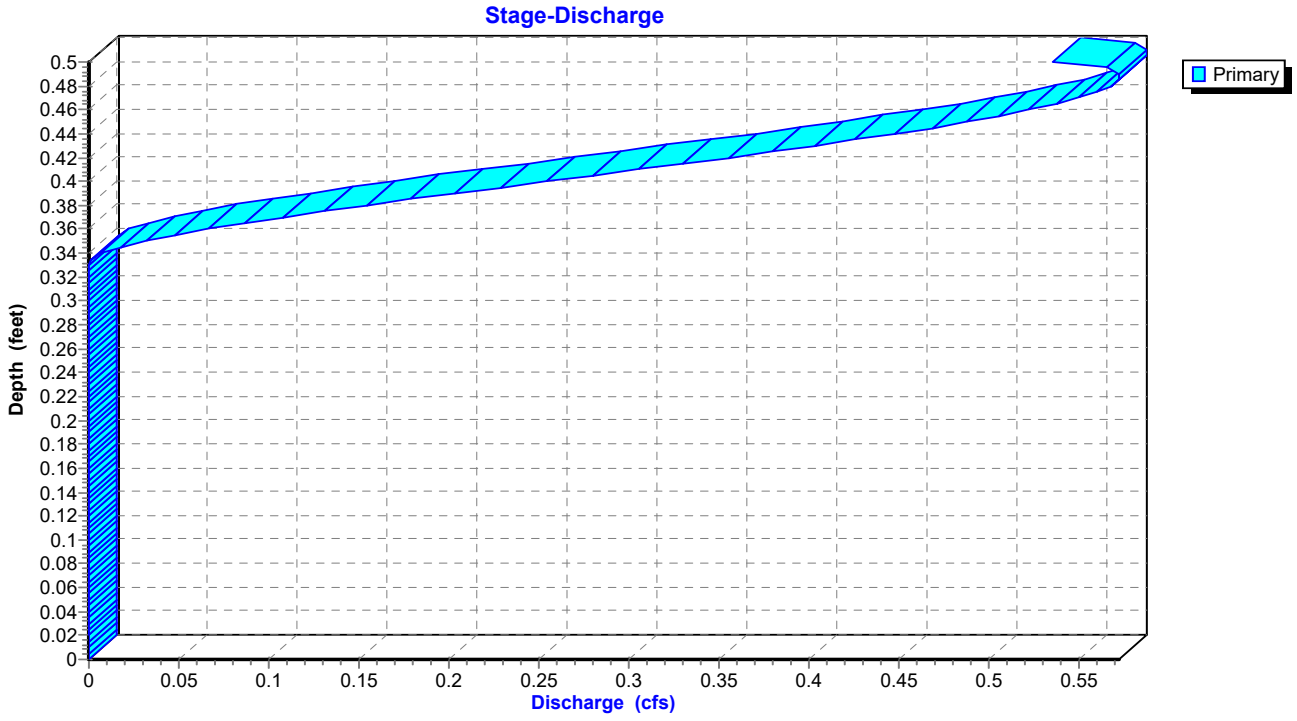
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



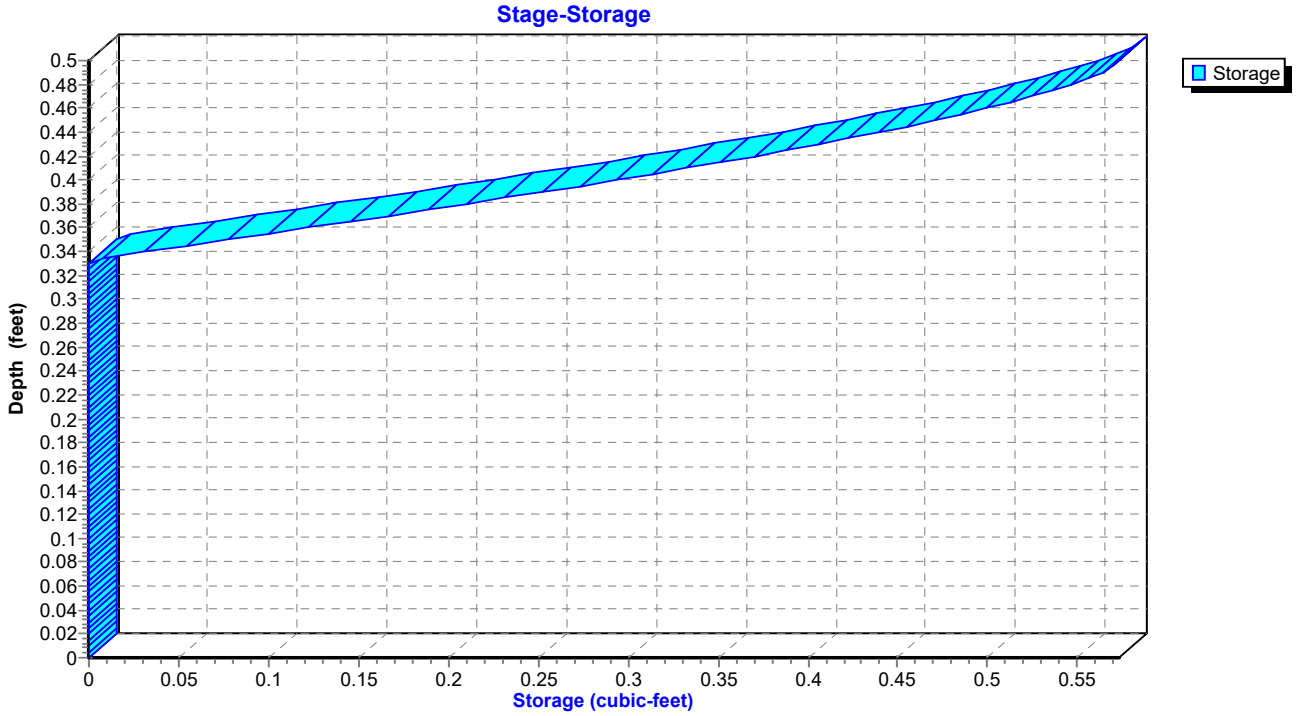
Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Hydrograph for Reach 13R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.33	0.00
10.20	0.00	0	668.33	0.00
10.60	0.00	0	668.34	0.00
11.00	0.00	0	668.34	0.00
11.40	0.00	0	668.34	0.00
11.80	0.01	0	668.34	0.01
12.20	**0.04**	**0**	**668.35**	**0.04**
12.60	**0.04**	**0**	**668.35**	**0.04**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 13R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 13R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 14R: to isolator 6"

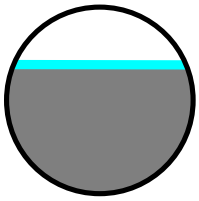
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.030 ac, 83.33% Impervious, Inflow Depth > 1.73" for 2-yr event
Inflow = 0.06 cfs @ 12.27 hrs, Volume= 0.004 af
Outflow = 0.06 cfs @ 12.27 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.1 min

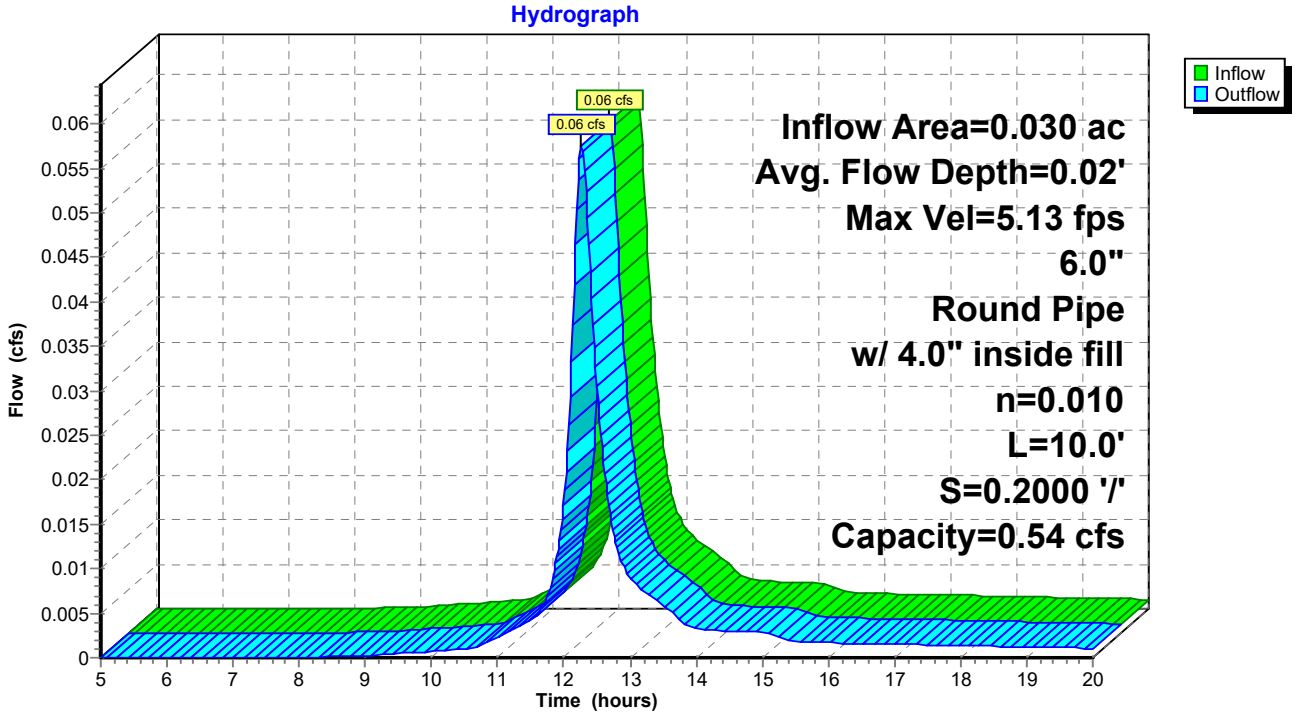
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 5.13 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.70 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.36' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

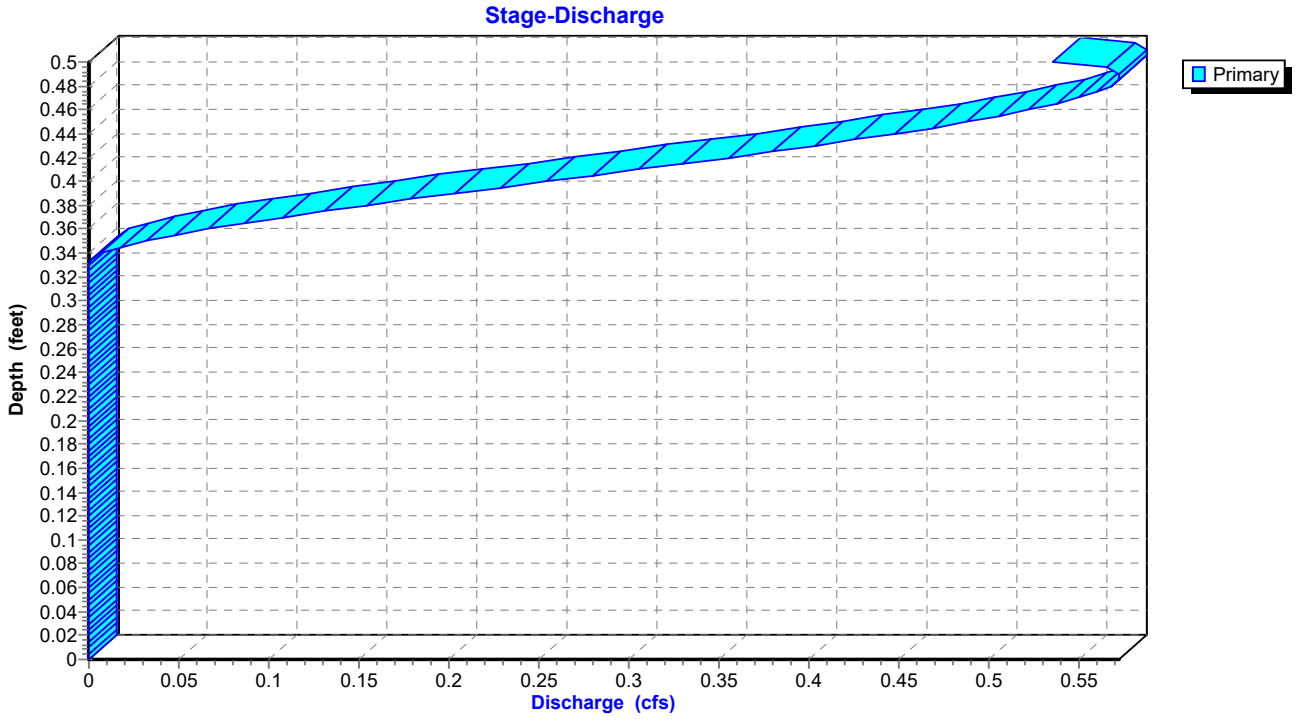
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



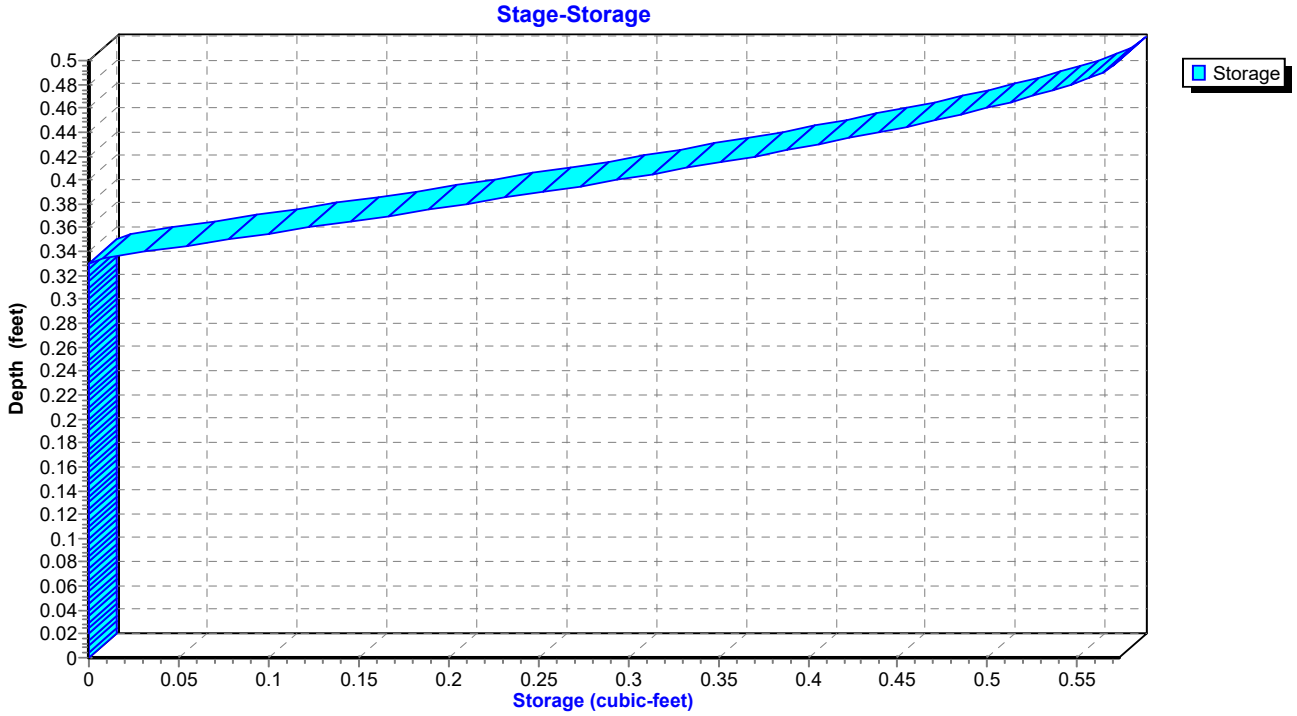
Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Hydrograph for Reach 14R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.33	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.00	0	668.34	0.00
11.40	0.00	0	668.34	0.00
11.80	0.01	0	668.34	0.01
12.20	**0.05**	**0**	**668.36**	**0.05**
12.60	**0.02**	**0**	**668.35**	**0.02**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.00	0	668.34	0.00
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 14R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 14R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 15R: to isolator 6"

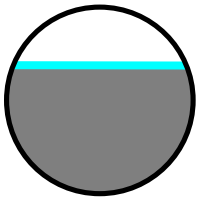
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 73.68% Impervious, Inflow Depth > 1.30" for 2-yr event
Inflow = 0.05 cfs @ 12.38 hrs, Volume= 0.004 af
Outflow = 0.05 cfs @ 12.39 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.1 min

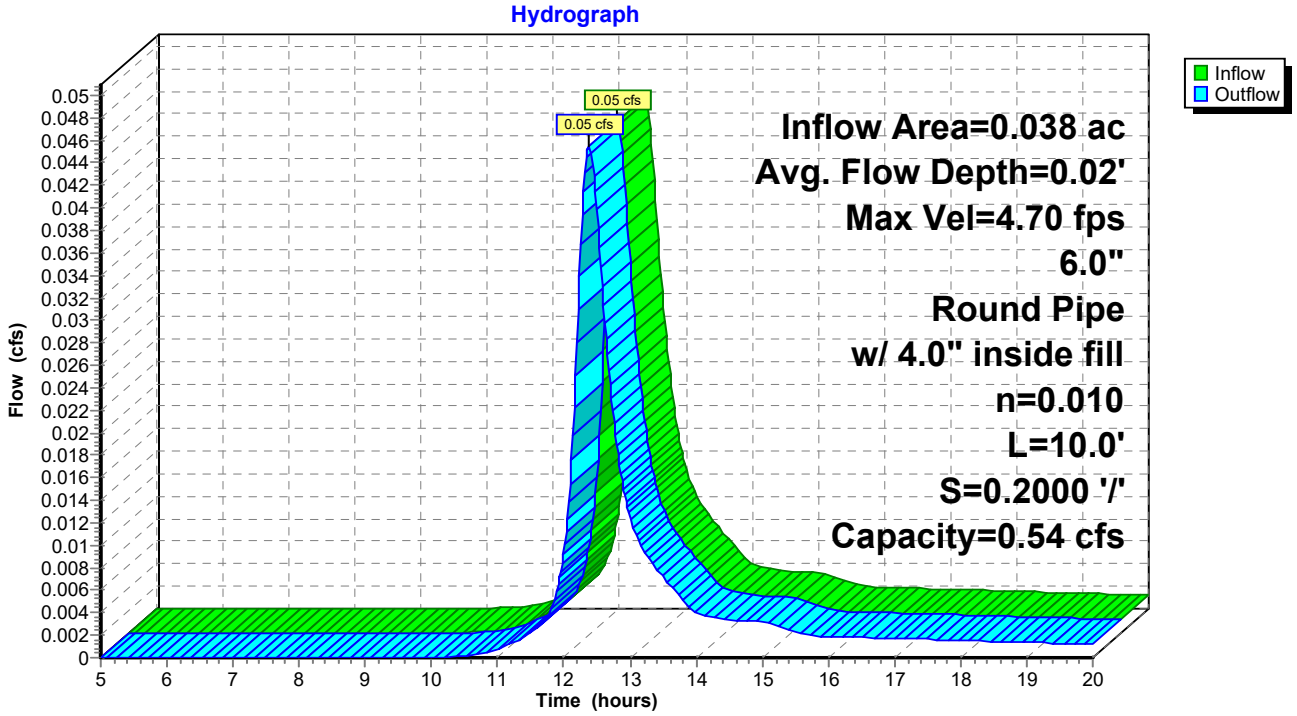
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.70 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.84 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.38 hrs
Average Depth at Peak Storage= 0.35' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

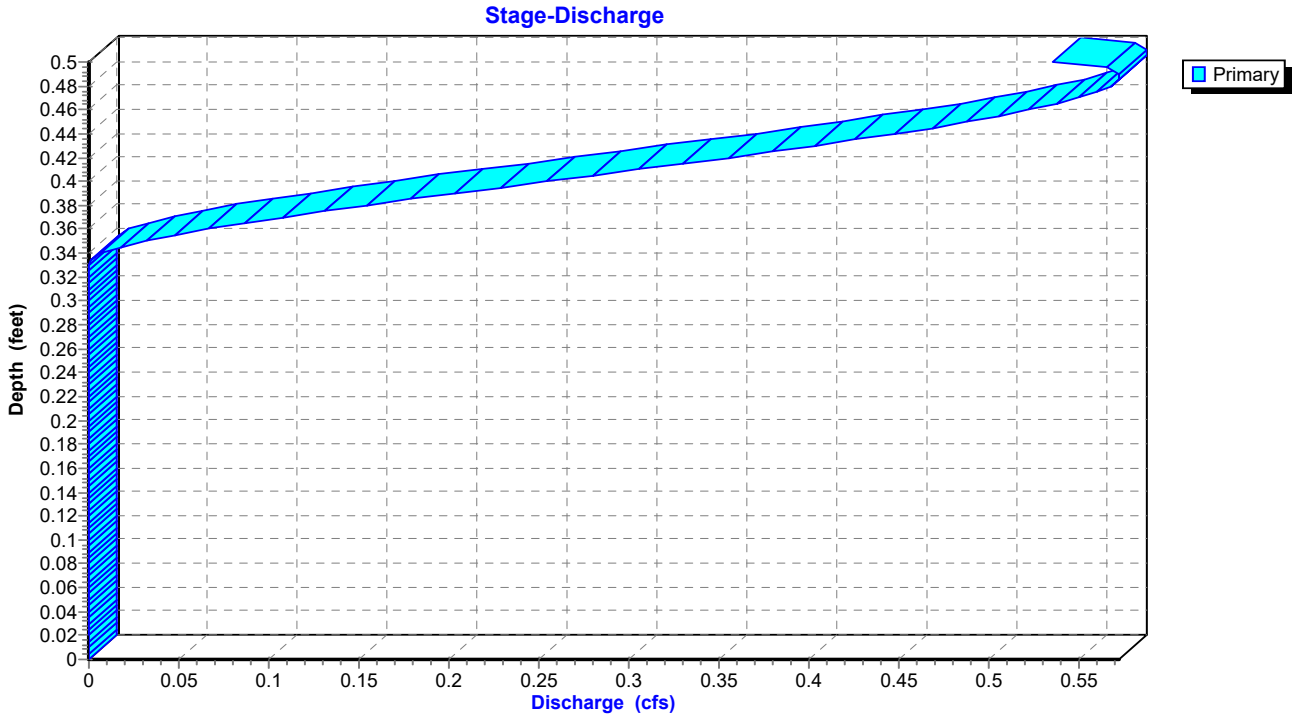
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



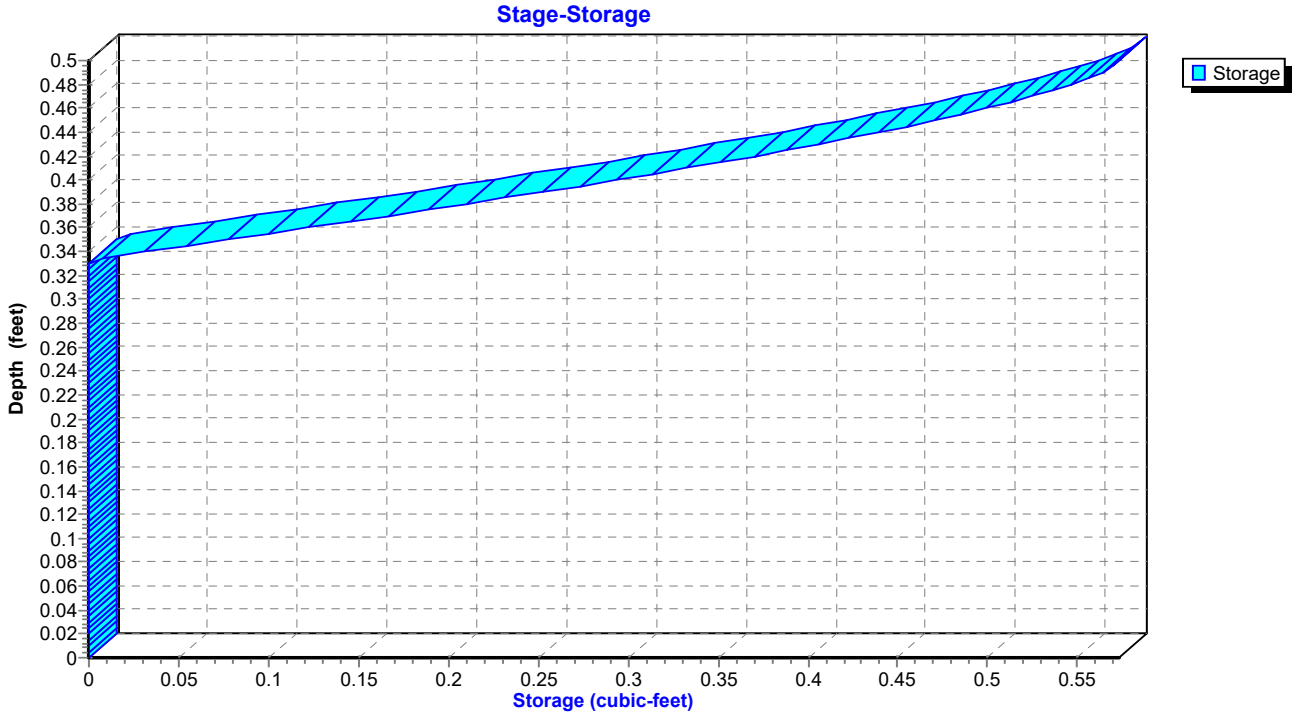
Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Hydrograph for Reach 15R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.33	0.00
10.20	0.00	0	668.33	0.00
10.60	0.00	0	668.33	0.00
11.00	0.00	0	668.34	0.00
11.40	0.00	0	668.34	0.00
11.80	0.00	0	668.34	0.00
12.20	**0.03**	**0**	**668.35**	**0.03**
12.60	**0.03**	**0**	**668.35**	**0.03**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 15R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 15R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 17R: NDS2 6"

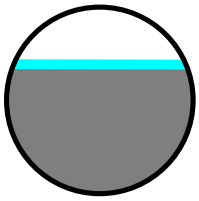
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 42.11% Impervious, Inflow Depth > 0.42" for 2-yr event
Inflow = 0.01 cfs @ 12.52 hrs, Volume= 0.001 af
Outflow = 0.01 cfs @ 12.59 hrs, Volume= 0.001 af, Atten= 1%, Lag= 4.4 min

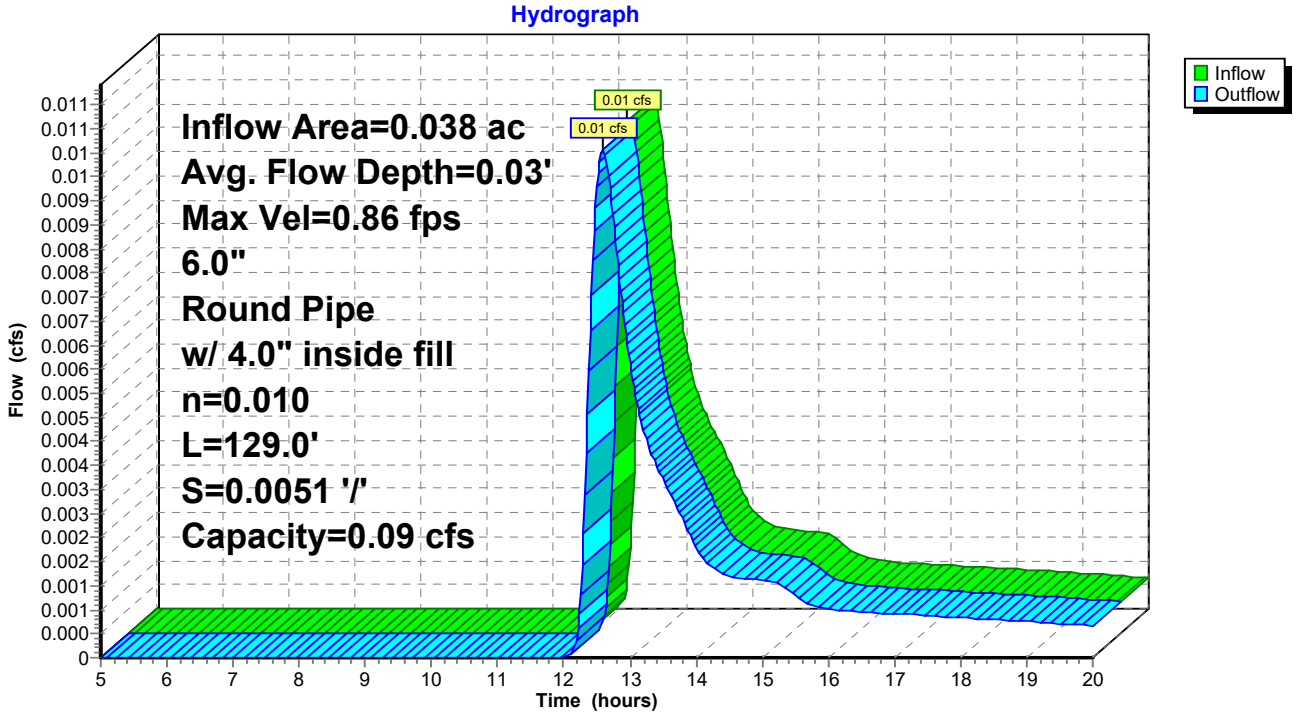
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.86 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 0.43 fps, Avg. Travel Time= 5.0 min

Peak Storage= 2 cf @ 12.55 hrs
Average Depth at Peak Storage= 0.36' above invert (0.03' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

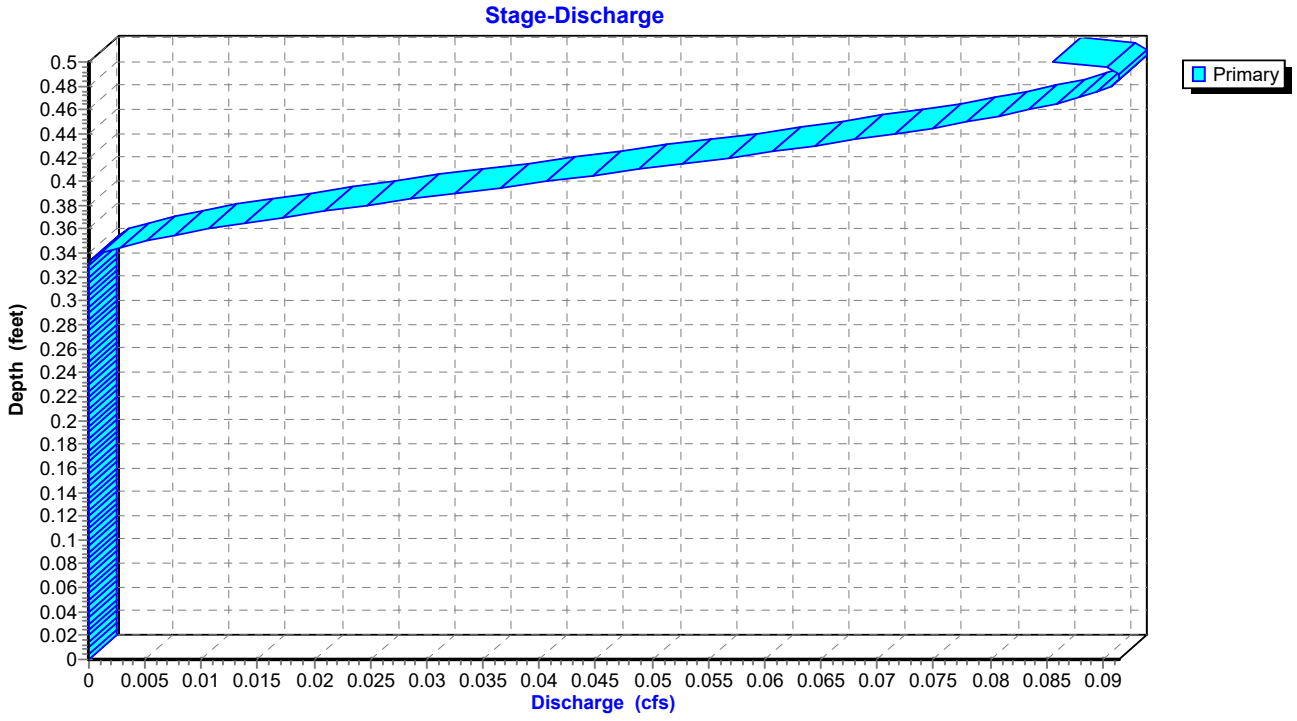
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0051 '/'
Inlet Invert= 668.84', Outlet Invert= 668.18'



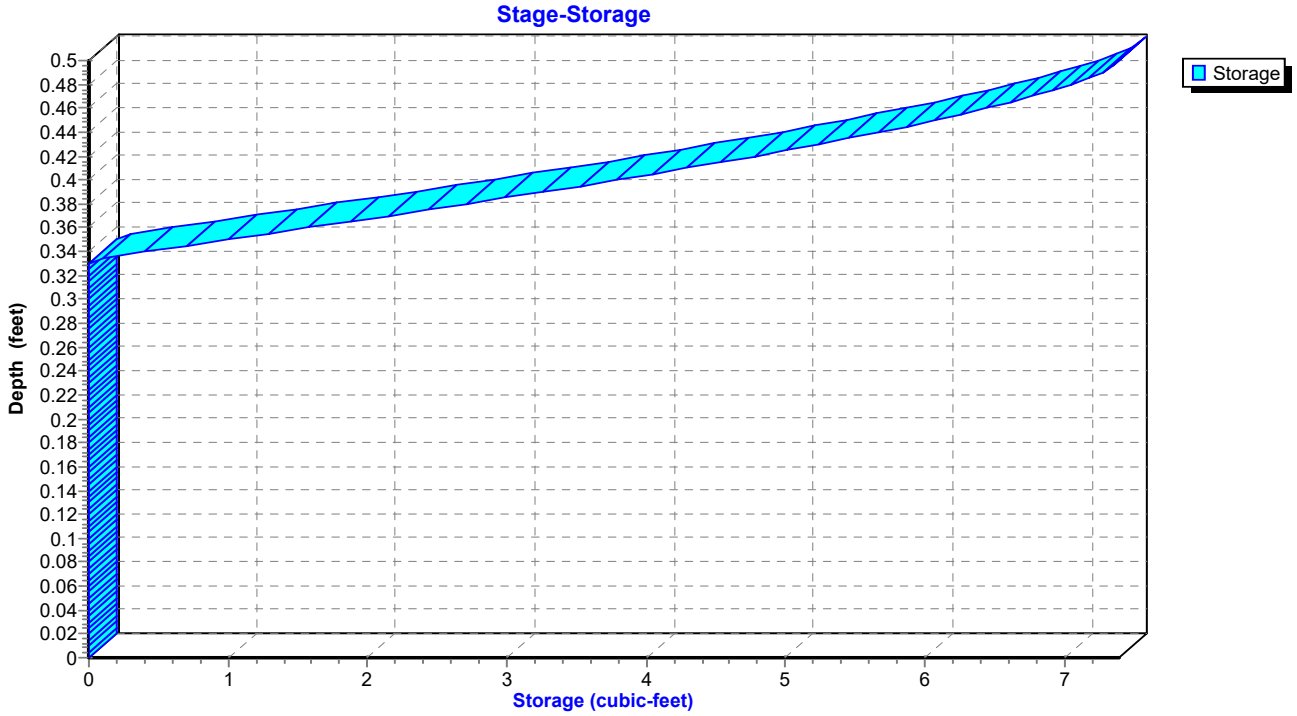
Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Hydrograph for Reach 17R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.17	0.00
5.40	0.00	0	669.17	0.00
5.80	0.00	0	669.17	0.00
6.20	0.00	0	669.17	0.00
6.60	0.00	0	669.17	0.00
7.00	0.00	0	669.17	0.00
7.40	0.00	0	669.17	0.00
7.80	0.00	0	669.17	0.00
8.20	0.00	0	669.17	0.00
8.60	0.00	0	669.17	0.00
9.00	0.00	0	669.17	0.00
9.40	0.00	0	669.17	0.00
9.80	0.00	0	669.17	0.00
10.20	0.00	0	669.17	0.00
10.60	0.00	0	669.17	0.00
11.00	0.00	0	669.17	0.00
11.40	0.00	0	669.17	0.00
11.80	0.00	0	669.17	0.00
12.20	**0.00**	**0**	**669.18**	0.00
12.60	**0.01**	**2**	**669.20**	**0.01**
13.00	0.01	1	669.19	0.01
13.40	0.00	1	669.19	0.00
13.80	0.00	1	669.18	0.00
14.20	0.00	1	669.18	0.00
14.60	0.00	0	669.18	0.00
15.00	0.00	0	669.18	0.00
15.40	0.00	0	669.18	0.00
15.80	0.00	0	669.18	0.00
16.20	0.00	0	669.18	0.00
16.60	0.00	0	669.18	0.00
17.00	0.00	0	669.18	0.00
17.40	0.00	0	669.18	0.00
17.80	0.00	0	669.18	0.00
18.20	0.00	0	669.18	0.00
18.60	0.00	0	669.18	0.00
19.00	0.00	0	669.18	0.00
19.40	0.00	0	669.18	0.00
19.80	0.00	0	669.18	0.00

Stage-Discharge for Reach 17R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.84	0.00	0.00
668.85	0.00	0.00
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.37	0.00
669.19	0.65	0.01
669.20	0.87	0.01
669.21	1.03	0.02
669.22	1.17	0.02
669.23	1.29	0.03
669.24	1.39	0.04
669.25	1.47	0.05
669.26	1.53	0.06
669.27	1.59	0.06
669.28	1.63	0.07
669.29	1.66	0.08
669.30	1.67	0.08
669.31	**1.67**	0.09
669.32	1.66	0.09
669.33	1.62	**0.09**
669.34	1.49	0.09

Stage-Area-Storage for Reach 17R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.84	0.0	0
668.85	0.0	0
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	1
669.20	0.0	2
669.21	0.0	2
669.22	0.0	3
669.23	0.0	3
669.24	0.0	4
669.25	0.0	4
669.26	0.0	5
669.27	0.0	5
669.28	0.0	6
669.29	0.0	6
669.30	0.0	6
669.31	0.1	7
669.32	0.1	7
669.33	0.1	7
669.34	**0.1**	**7**

Summary for Reach 18R: inlet 3 6"

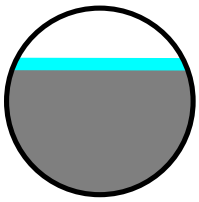
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 17R OUTLET depth by 0.01' @ 13.02 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.03' @ 12.52 hrs

Inflow Area = 0.090 ac, 18.89% Impervious, Inflow Depth > 0.33" for 2-yr event
Inflow = 0.01 cfs @ 12.57 hrs, Volume= 0.002 af
Outflow = 0.01 cfs @ 12.60 hrs, Volume= 0.002 af, Atten= 0%, Lag= 1.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.95 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 0.54 fps, Avg. Travel Time= 1.9 min

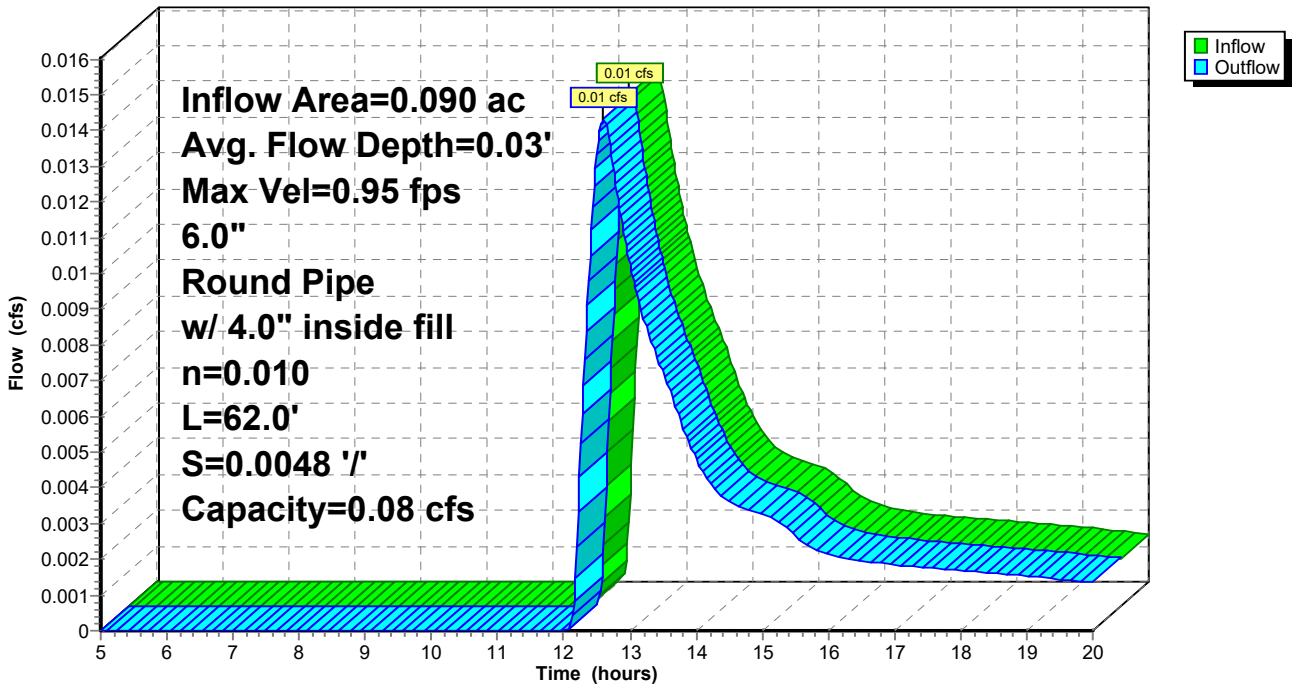
Peak Storage= 1 cf @ 12.58 hrs
Average Depth at Peak Storage= 0.37' above invert (0.03' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.08 cfs

6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0048 '/'
Inlet Invert= 668.18', Outlet Invert= 667.88'



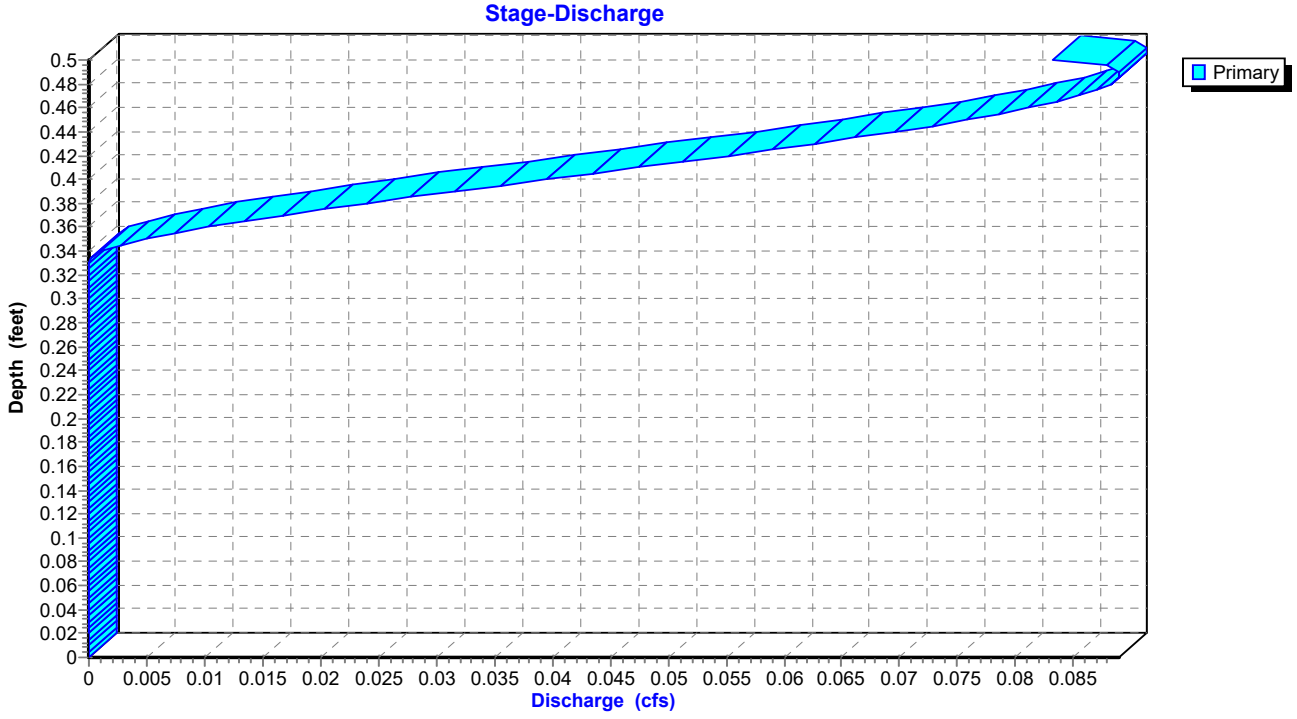
Reach 18R: inlet 3 6"

Hydrograph

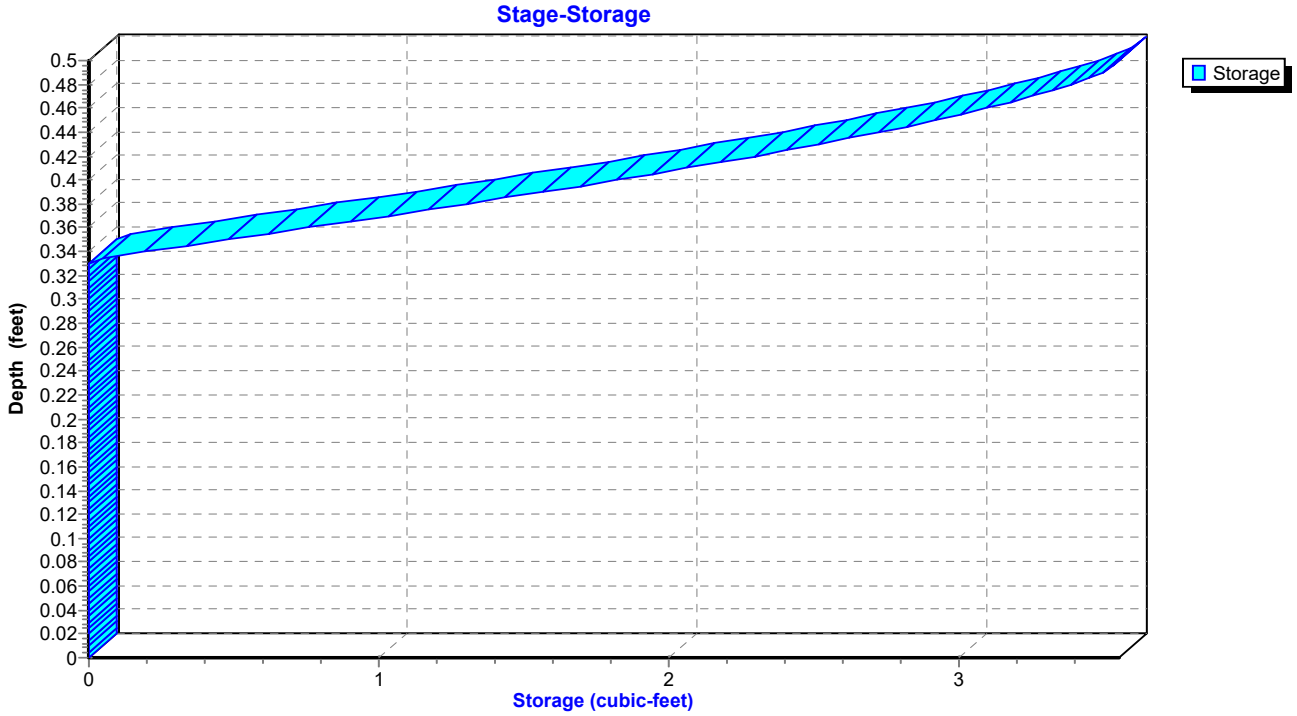


Reach 18R: inlet 3 6"

Stage-Discharge



Reach 18R: inlet 3 6"



Hydrograph for Reach 18R: inlet 3 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.51	0.00
5.40	0.00	0	668.51	0.00
5.80	0.00	0	668.51	0.00
6.20	0.00	0	668.51	0.00
6.60	0.00	0	668.51	0.00
7.00	0.00	0	668.51	0.00
7.40	0.00	0	668.51	0.00
7.80	0.00	0	668.51	0.00
8.20	0.00	0	668.51	0.00
8.60	0.00	0	668.51	0.00
9.00	0.00	0	668.51	0.00
9.40	0.00	0	668.51	0.00
9.80	0.00	0	668.51	0.00
10.20	0.00	0	668.51	0.00
10.60	0.00	0	668.51	0.00
11.00	0.00	0	668.51	0.00
11.40	0.00	0	668.51	0.00
11.80	0.00	0	668.51	0.00
12.20	**0.00**	**0**	**668.53**	0.00
12.60	**0.01**	**1**	**668.55**	**0.01**
13.00	0.01	1	668.54	0.01
13.40	0.01	1	668.54	0.01
13.80	0.01	1	668.53	0.01
14.20	0.00	0	668.53	0.00
14.60	0.00	0	668.53	0.00
15.00	0.00	0	668.53	0.00
15.40	0.00	0	668.53	0.00
15.80	0.00	0	668.52	0.00
16.20	0.00	0	668.52	0.00
16.60	0.00	0	668.52	0.00
17.00	0.00	0	668.52	0.00
17.40	0.00	0	668.52	0.00
17.80	0.00	0	668.52	0.00
18.20	0.00	0	668.52	0.00
18.60	0.00	0	668.52	0.00
19.00	0.00	0	668.52	0.00
19.40	0.00	0	668.52	0.00
19.80	0.00	0	668.52	0.00

Stage-Discharge for Reach 18R: inlet 3 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	0.00	0.00
668.35	0.00	0.00
668.36	0.00	0.00
668.37	0.00	0.00
668.38	0.00	0.00
668.39	0.00	0.00
668.40	0.00	0.00
668.41	0.00	0.00
668.42	0.00	0.00
668.43	0.00	0.00
668.44	0.00	0.00
668.45	0.00	0.00
668.46	0.00	0.00
668.47	0.00	0.00
668.48	0.00	0.00
668.49	0.00	0.00
668.50	0.00	0.00
668.51	0.00	0.00
668.52	0.36	0.00
668.53	0.64	0.00
668.54	0.84	0.01
668.55	1.00	0.02
668.56	1.14	0.02
668.57	1.25	0.03
668.58	1.35	0.04
668.59	1.43	0.05
668.60	1.49	0.06
668.61	1.54	0.06
668.62	1.58	0.07
668.63	1.61	0.08
668.64	1.63	0.08
668.65	**1.63**	0.09
668.66	1.61	0.09
668.67	1.58	**0.09**
668.68	1.45	0.08

Stage-Area-Storage for Reach 18R: inlet 3 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.0	0
668.48	0.0	0
668.49	0.0	0
668.50	0.0	0
668.51	0.0	0
668.52	0.0	0
668.53	0.0	0
668.54	0.0	1
668.55	0.0	1
668.56	0.0	1
668.57	0.0	2
668.58	0.0	2
668.59	0.0	2
668.60	0.0	2
668.61	0.0	3
668.62	0.0	3
668.63	0.0	3
668.64	0.0	3
668.65	0.1	3
668.66	0.1	3
668.67	0.1	3
668.68	**0.1**	**4**

Summary for Reach 22R: NDS2 6"

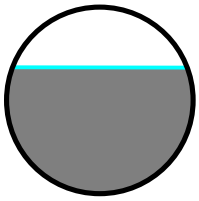
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.031 ac, 3.23% Impervious, Inflow Depth > 0.21" for 2-yr event
Inflow = 0.00 cfs @ 13.05 hrs, Volume= 0.001 af
Outflow = 0.00 cfs @ 13.19 hrs, Volume= 0.001 af, Atten= 0%, Lag= 8.6 min

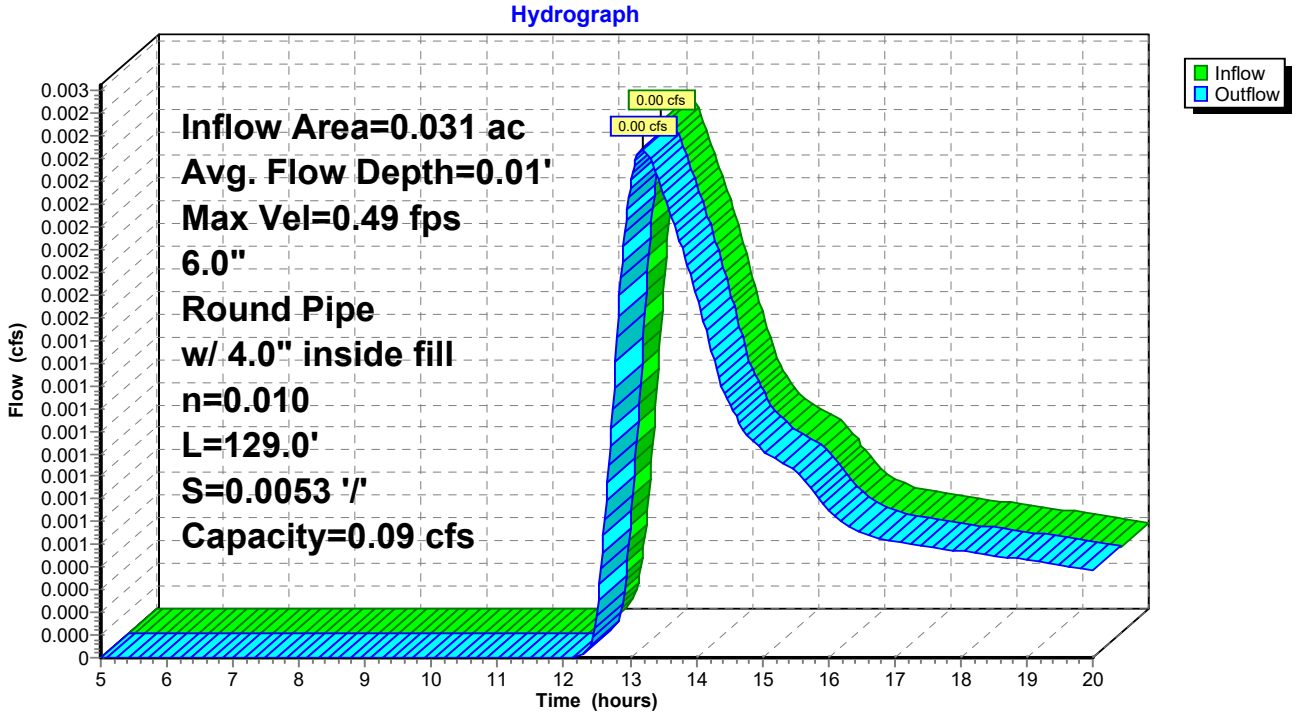
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.49 fps, Min. Travel Time= 4.4 min
Avg. Velocity = 0.34 fps, Avg. Travel Time= 6.3 min

Peak Storage= 1 cf @ 13.12 hrs
Average Depth at Peak Storage= 0.34' above invert (0.01' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

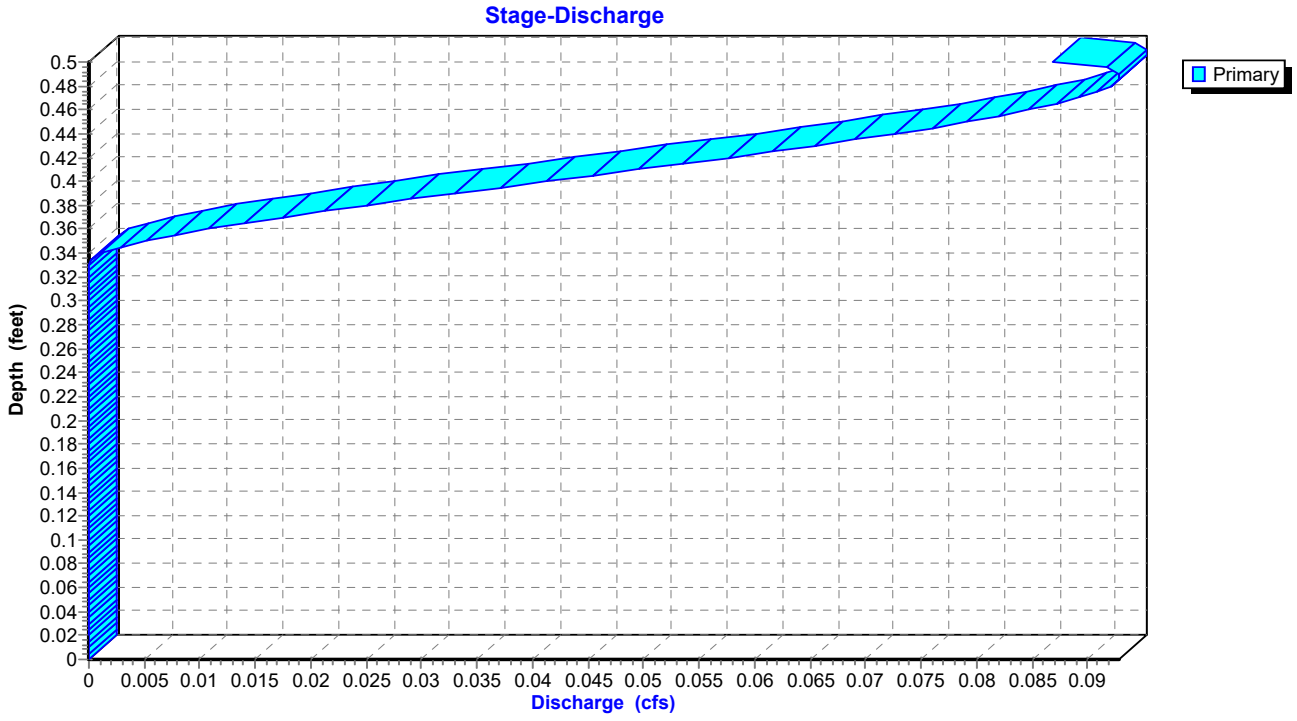
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0053 '/'
Inlet Invert= 668.86', Outlet Invert= 668.18'



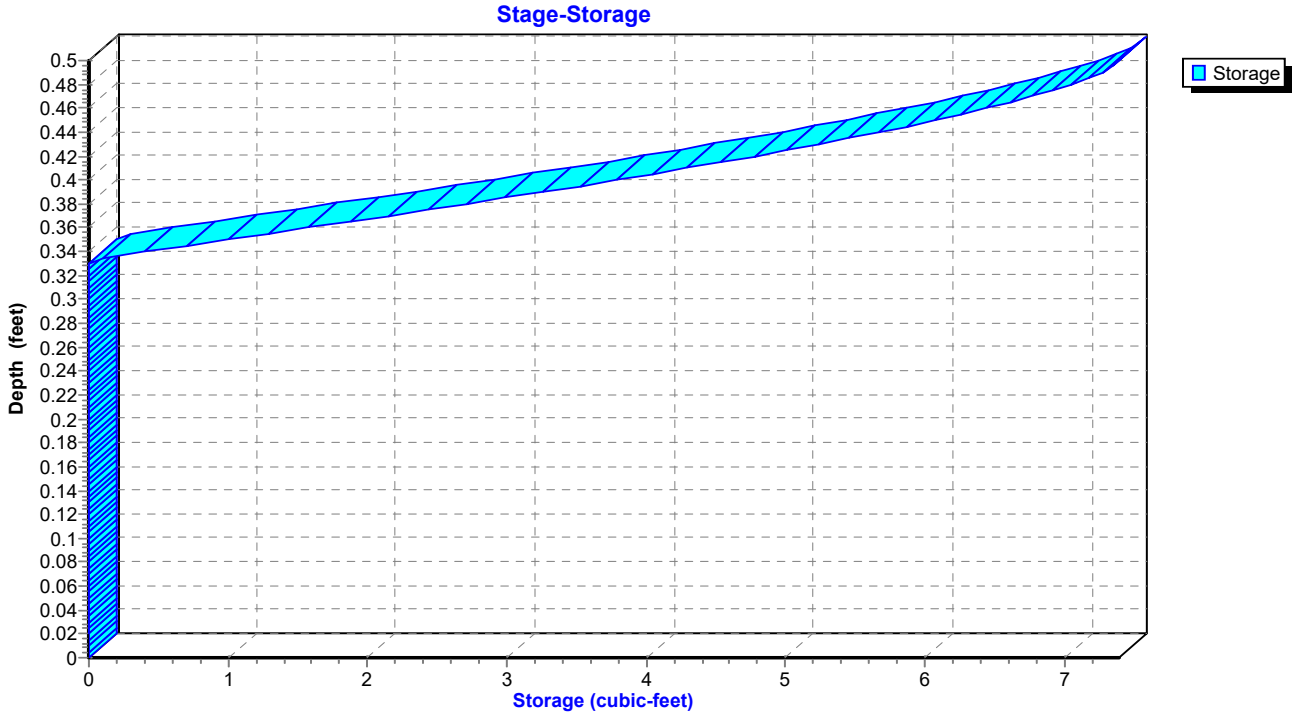
Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Hydrograph for Reach 22R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.19	0.00
5.40	0.00	0	669.19	0.00
5.80	0.00	0	669.19	0.00
6.20	0.00	0	669.19	0.00
6.60	0.00	0	669.19	0.00
7.00	0.00	0	669.19	0.00
7.40	0.00	0	669.19	0.00
7.80	0.00	0	669.19	0.00
8.20	0.00	0	669.19	0.00
8.60	0.00	0	669.19	0.00
9.00	0.00	0	669.19	0.00
9.40	0.00	0	669.19	0.00
9.80	0.00	0	669.19	0.00
10.20	0.00	0	669.19	0.00
10.60	0.00	0	669.19	0.00
11.00	0.00	0	669.19	0.00
11.40	0.00	0	669.19	0.00
11.80	0.00	0	669.19	0.00
12.20	0.00	0	669.19	0.00
12.60	0.00	0	669.20	0.00
13.00	**0.00**	**1**	**669.20**	**0.00**
13.40	**0.00**	**1**	**669.20**	**0.00**
13.80	0.00	1	669.20	0.00
14.20	0.00	0	669.20	0.00
14.60	0.00	0	669.20	0.00
15.00	0.00	0	669.20	0.00
15.40	0.00	0	669.20	0.00
15.80	0.00	0	669.20	0.00
16.20	0.00	0	669.20	0.00
16.60	0.00	0	669.20	0.00
17.00	0.00	0	669.20	0.00
17.40	0.00	0	669.20	0.00
17.80	0.00	0	669.20	0.00
18.20	0.00	0	669.20	0.00
18.60	0.00	0	669.20	0.00
19.00	0.00	0	669.20	0.00
19.40	0.00	0	669.20	0.00
19.80	0.00	0	669.20	0.00

Stage-Discharge for Reach 22R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.00	0.00
669.19	0.00	0.00
669.20	0.37	0.00
669.21	0.66	0.01
669.22	0.88	0.01
669.23	1.05	0.02
669.24	1.19	0.03
669.25	1.31	0.03
669.26	1.41	0.04
669.27	1.49	0.05
669.28	1.56	0.06
669.29	1.61	0.07
669.30	1.65	0.07
669.31	1.68	0.08
669.32	1.70	0.08
669.33	**1.70**	0.09
669.34	1.69	0.09
669.35	1.65	**0.09**
669.36	1.52	0.09

Stage-Area-Storage for Reach 22R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	0
669.20	0.0	0
669.21	0.0	1
669.22	0.0	2
669.23	0.0	2
669.24	0.0	3
669.25	0.0	3
669.26	0.0	4
669.27	0.0	4
669.28	0.0	5
669.29	0.0	5
669.30	0.0	6
669.31	0.0	6
669.32	0.0	6
669.33	0.1	7
669.34	0.1	7
669.35	0.1	7
669.36	**0.1**	**7**

Summary for Pond 4P: stormtech SC310 16"x34" chambers

[44] Hint: Outlet device #2 is below defined storage
[61] Hint: Exceeded Reach 10R outlet invert by 0.82' @ 13.34 hrs
[61] Hint: Exceeded Reach 12R outlet invert by 0.82' @ 13.34 hrs

Inflow Area = 1.066 ac, 90.90% Impervious, Inflow Depth > 2.33" for 2-yr event
Inflow = 0.88 cfs @ 12.12 hrs, Volume= 0.207 af
Outflow = 0.36 cfs @ 13.34 hrs, Volume= 0.201 af, Atten= 59%, Lag= 73.6 min
Primary = 0.10 cfs @ 13.34 hrs, Volume= 0.023 af
Secondary = 0.27 cfs @ 13.34 hrs, Volume= 0.178 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 665.82' @ 13.34 hrs Surf.Area= 0.105 ac Storage= 0.054 af

Plug-Flow detention time= 97.2 min calculated for 0.201 af (97% of inflow)
Center-of-Mass det. time= 85.4 min (870.7 - 785.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	664.40'	0.076 af	**36.00'W x 120.45'L x 2.33'H Field A Z=0.5** 0.242 af Overall - 0.011 af Embedded = 0.231 af x 33.0% Voids
#2A	664.90'	0.011 af	**ADS_StormTech RC-310 +Cap** x 32 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 2 Rows
#3	665.00'	0.001 af	**8.0" Round Pipe Storage** L= 87.0' S= 0.5200 '/'
#4	664.90'	0.001 af	**12.0" Round Pipe Storage** L= 45.0' S= 0.7300 '/'
#5	665.40'	0.000 af	**12.0" Round Pipe Storage** L= 23.0' S= 0.5200 '/'
#6	665.58'	0.001 af	**10.0" Round Pipe Storage** L= 69.0' S= 0.5200 '/'
		0.090 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	665.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.75 0.75 2.10 2.10 3.00 Width (feet) 0.00 0.17 0.17 4.00 4.00
#2	Secondary	664.00'	**Tube/Siphon/Float Valve** 4.000" Diameter, C= 0.600 136.0' Long Tube, Hazen-Williams C= 130 Inlet / Outlet Elev. = 664.00' / 664.00'

Primary OutFlow Max=0.10 cfs @ 13.34 hrs HW=665.82' (Free Discharge)
↑—**1=Custom Weir/Orifice** (Weir Controls 0.10 cfs @ 1.84 fps)

Secondary OutFlow Max=0.27 cfs @ 13.34 hrs HW=665.82' (Free Discharge)
↑—**2=Tube/Siphon/Float Valve** (Tube Controls 0.27 cfs @ 3.04 fps)

Pond 4P: stormtech SC310 16"x34" chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-310 +Cap (ADS StormTech®RC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 48.0" Spacing = 82.0" C-C Row Spacing

16 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 115.12' Row Length +32.0" End Stone x 2 = 120.45' Base Length
2 Rows x 34.0" Wide + 48.0" Spacing x 1 + 158.0" Side Stone x 2 = 36.00' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

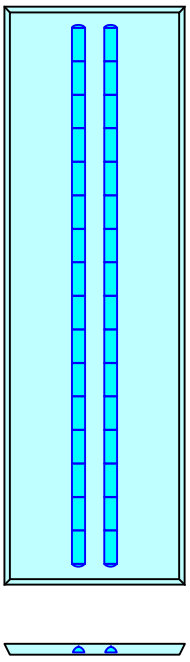
0.5 '/' Side-Z x Height = 14.0" Flare/Side
Base Length + Flare x 2 = 122.79' Top Length
Base Width + Flare x 2 = 38.33' Top Width

32 Chambers x 14.7 cf = 471.7 cf Chamber Storage

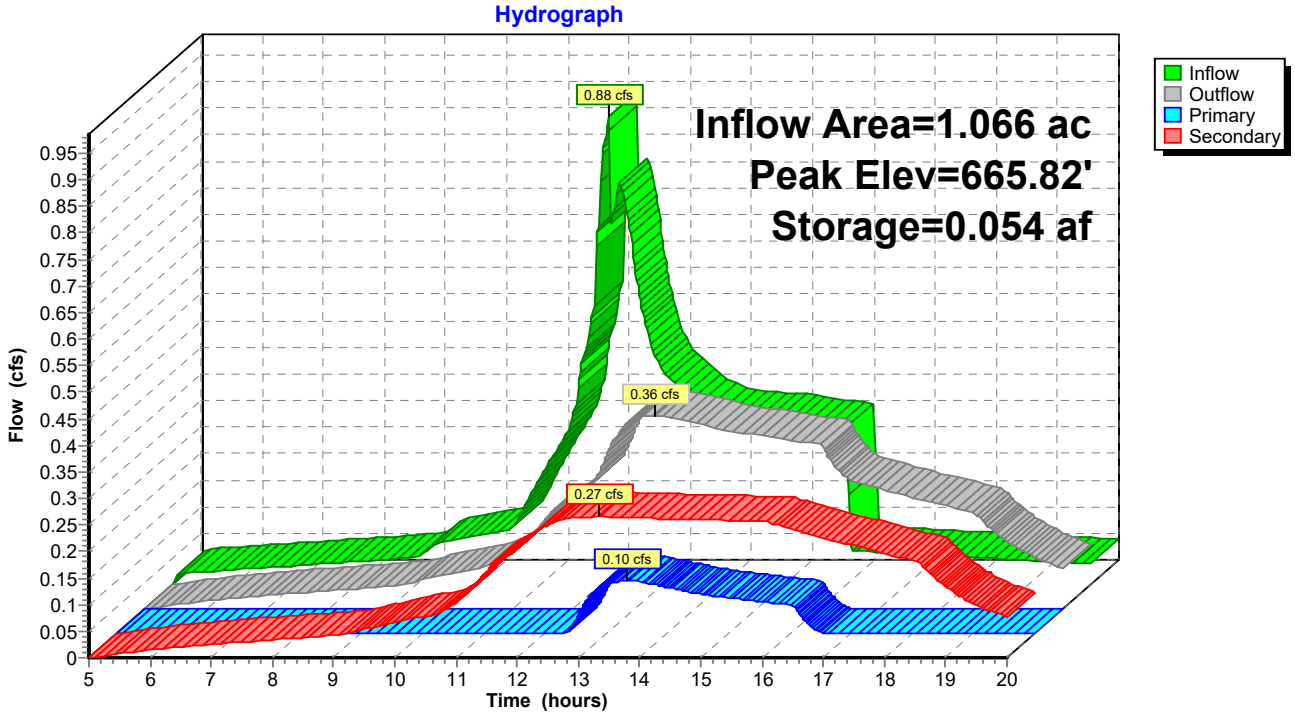
10,548.2 cf Field - 471.7 cf Chambers = 10,076.5 cf Stone x 33.0% Voids = 3,325.2 cf Stone Storage

Chamber Storage + Stone Storage = 3,797.0 cf = 0.087 af
Overall Storage Efficiency = 36.0%
Overall System Size = 120.45' x 36.00' x 2.33'

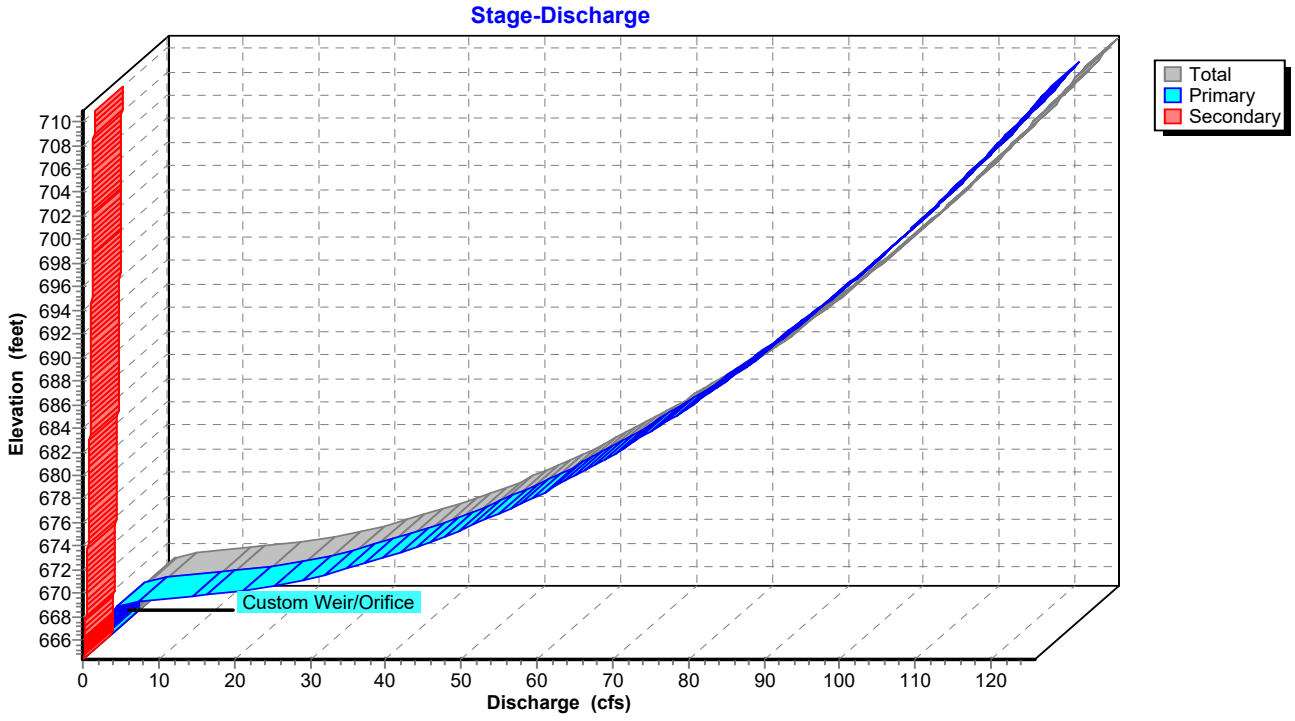
32 Chambers
390.7 cy Field
373.2 cy Stone



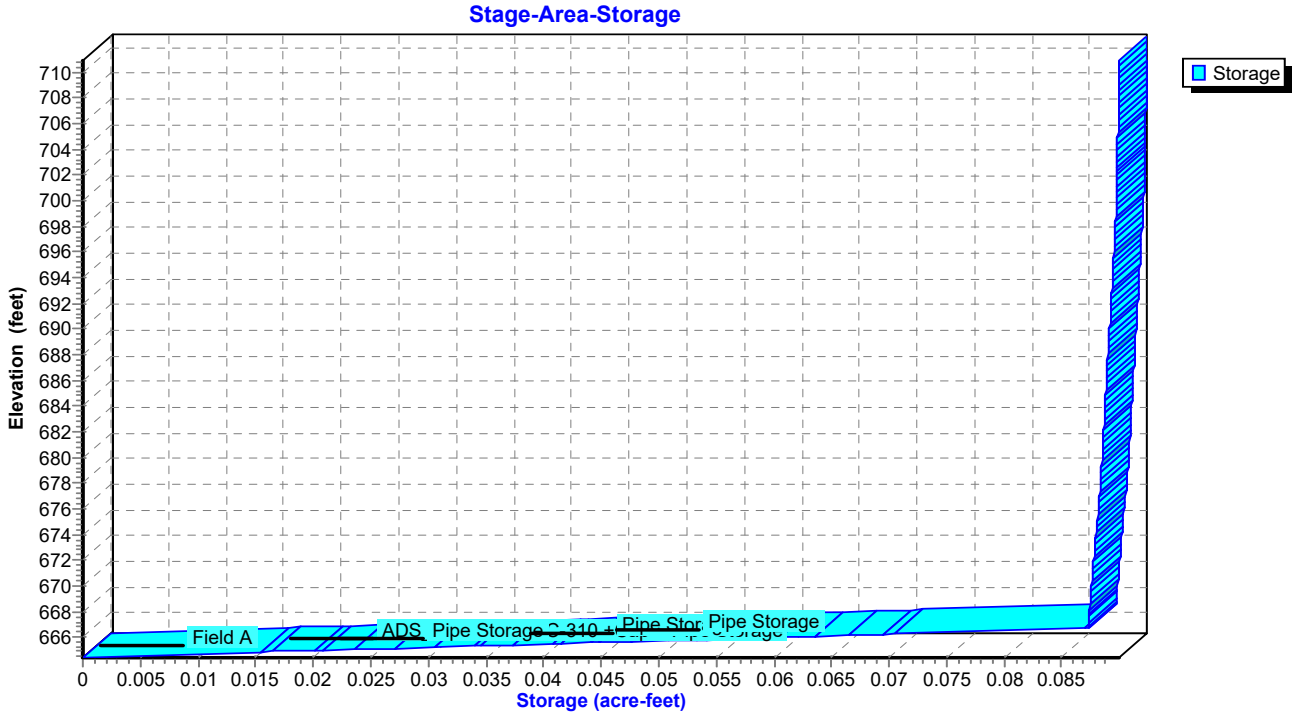
Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Hydrograph for Pond 4P: stormtech SC310 16"x34" chambers

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0.000	664.40	0.00	0.00	0.00
5.40	0.02	0.001	664.42	0.01	0.00	0.01
5.80	0.03	0.001	664.43	0.01	0.00	0.01
6.20	0.03	0.001	664.44	0.02	0.00	0.02
6.60	0.03	0.002	664.45	0.02	0.00	0.02
7.00	0.04	0.002	664.47	0.03	0.00	0.03
7.40	0.04	0.002	664.47	0.03	0.00	0.03
7.80	0.04	0.003	664.48	0.03	0.00	0.03
8.20	0.04	0.003	664.49	0.04	0.00	0.04
8.60	0.05	0.003	664.50	0.04	0.00	0.04
9.00	0.05	0.004	664.51	0.04	0.00	0.04
9.40	0.08	0.004	664.53	0.05	0.00	0.05
9.80	0.09	0.005	664.56	0.06	0.00	0.06
10.20	0.10	0.006	664.59	0.07	0.00	0.07
10.60	0.11	0.007	664.61	0.08	0.00	0.08
11.00	0.20	0.009	664.68	0.11	0.00	0.11
11.40	0.28	0.013	664.79	0.15	0.00	0.15
11.80	**0.46**	0.019	664.96	0.19	0.00	0.19
12.20	**0.71**	0.035	665.34	0.23	0.00	0.23
12.60	0.56	0.049	665.69	0.30	0.05	0.26
13.00	0.40	**0.054**	**665.80**	**0.36**	**0.09**	**0.26**
13.40	0.36	**0.054**	**665.82**	**0.36**	**0.10**	**0.27**
13.80	0.33	0.054	665.80	0.36	0.09	0.26
14.20	0.32	0.053	665.78	0.34	0.08	0.26
14.60	0.31	0.052	665.76	0.33	0.07	0.26
15.00	0.31	0.051	665.74	0.33	0.07	0.26
15.40	0.30	0.051	665.73	0.32	0.06	0.26
15.80	0.30	0.050	665.72	0.31	0.06	0.26
16.20	0.06	0.047	665.64	0.28	0.03	0.25
16.60	0.06	0.041	665.48	0.24	0.00	0.24
17.00	0.06	0.035	665.34	0.23	0.00	0.23
17.40	0.05	0.030	665.21	0.21	0.00	0.21
17.80	0.05	0.024	665.09	0.20	0.00	0.20
18.20	0.05	0.020	664.97	0.19	0.00	0.19
18.60	0.05	0.015	664.86	0.18	0.00	0.18
19.00	0.04	0.012	664.75	0.13	0.00	0.13
19.40	0.04	0.009	664.67	0.11	0.00	0.11
19.80	0.04	0.007	664.62	0.08	0.00	0.08

Stage-Discharge for Pond 4P: stormtech SC310 16"x34" chambers

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
664.40	0.00	0.00	0.00
664.90	0.18	0.00	0.18
665.40	0.23	0.00	0.23
665.90	0.41	0.14	0.27
666.40	0.78	0.48	0.31
666.90	1.40	1.06	0.34
667.40	6.94	6.57	0.37
667.90	15.20	14.80	0.40
668.40	20.51	20.09	0.42
668.90	24.60	24.15	0.45
669.40	28.07	27.60	0.47
669.90	31.15	30.65	0.50
670.40	33.94	33.43	0.52
670.90	36.52	35.98	0.54
671.40	38.93	38.37	0.56
671.90	41.19	40.61	0.58
672.40	43.34	42.74	0.60
672.90	45.38	44.76	0.62
673.40	47.33	46.70	0.64
673.90	49.21	48.56	0.65
674.40	51.02	50.35	0.67
674.90	52.76	52.08	0.69
675.40	54.45	53.75	0.70
675.90	56.09	55.37	0.72
676.40	57.68	56.95	0.74
676.90	59.23	58.48	0.75
677.40	60.74	59.98	0.77
677.90	62.22	61.43	0.78
678.40	63.65	62.86	0.80
678.90	65.06	64.25	0.81
679.40	66.44	65.61	0.82
679.90	67.79	66.95	0.84
680.40	69.11	68.26	0.85
680.90	70.41	69.54	0.87
681.40	71.68	70.80	0.88
681.90	72.94	72.04	0.89
682.40	74.17	73.26	0.91
682.90	75.38	74.46	0.92
683.40	76.57	75.64	0.93
683.90	77.74	76.80	0.94
684.40	78.90	77.94	0.96
684.90	80.04	79.07	0.97
685.40	81.16	80.18	0.98
685.90	82.27	81.28	0.99
686.40	83.36	82.36	1.01
686.90	84.44	83.43	1.02
687.40	85.51	84.48	1.03
687.90	86.56	85.52	1.04
688.40	87.60	86.55	1.05
688.90	88.63	87.57	1.06
689.40	89.65	88.57	1.08
689.90	90.65	89.56	1.09
690.40	91.64	90.55	1.10
690.90	92.63	91.52	1.11
691.40	93.60	92.48	1.12
691.90	94.56	93.43	1.13
692.40	95.51	94.37	1.14
692.90	96.46	95.31	1.15
693.40	97.39	96.23	1.16
693.90	98.32	97.15	1.17
694.40	99.23	98.05	1.18
694.90	100.14	98.95	1.19
695.40	101.04	99.84	1.20
695.90	101.94	100.72	1.21
696.40	102.82	101.60	1.22
696.90	103.70	102.47	1.23
697.40	104.57	103.32	1.24
697.90	105.43	104.18	1.25
698.40	106.29	105.02	1.26
698.90	107.13	105.86	1.27
699.40	107.98	106.70	1.28
699.90	108.81	107.52	1.29
700.40	109.64	108.34	1.30
700.90	110.46	109.15	1.31
701.40	111.28	109.96	1.32
701.90	112.09	110.76	1.33
702.40	112.90	111.56	1.34
702.90	113.70	112.35	1.35
703.40	114.49	113.14	1.36
703.90	115.28	113.91	1.37
704.40	116.06	114.69	1.37
704.90	116.84	115.46	1.38
705.40	117.61	116.22	1.39
705.90	118.38	116.98	1.40
706.40	119.14	117.73	1.41
706.90	119.90	118.48	1.42
707.40	120.65	119.23	1.43
707.90	121.40	119.97	1.44
708.40	122.15	120.70	1.44
708.90	122.89	121.43	1.45
709.40	123.62	122.16	1.46
709.90	124.35	122.88	1.47
710.40	125.08	123.60	1.48
710.90	**125.80**	**124.31**	**1.49**

Stage-Area-Storage for Pond 4P: stormtech SC310 16"x34" chambers

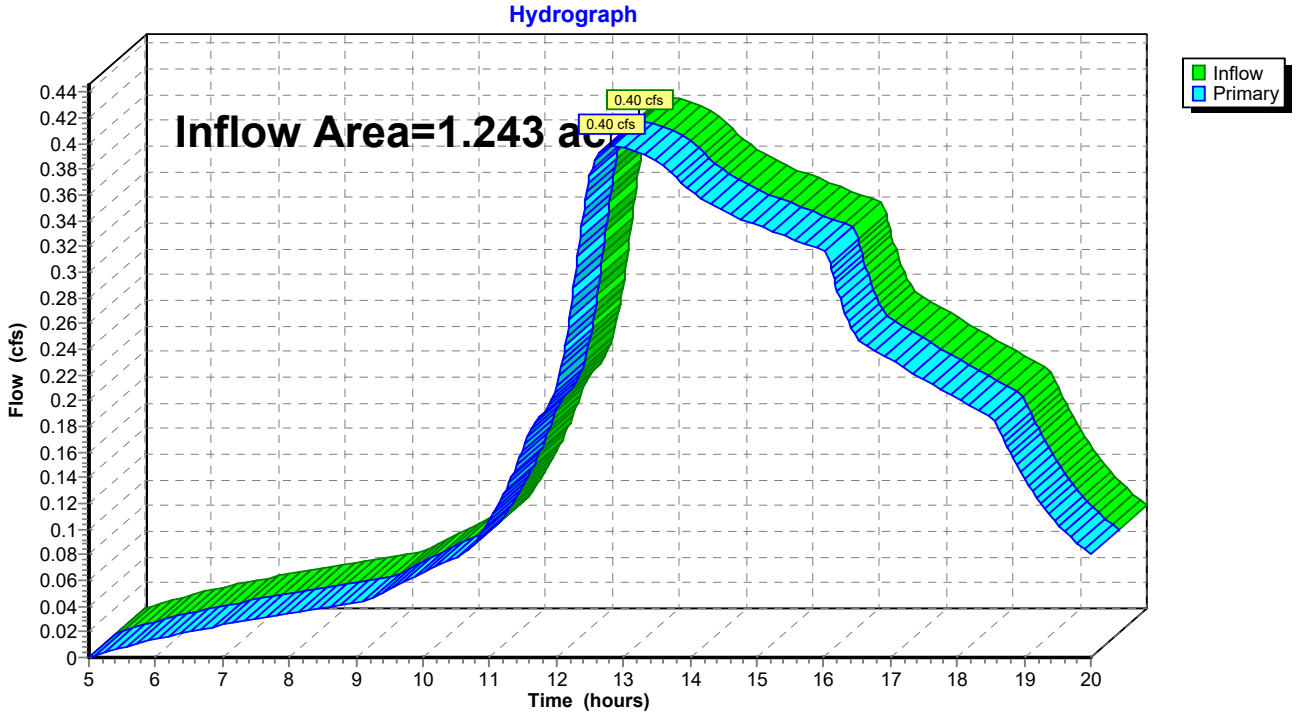
Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
664.40	0.000	689.90	0.089
664.90	0.017	690.40	0.089
665.40	0.037	690.90	0.089
665.90	0.057	691.40	0.089
666.40	0.075	691.90	0.089
666.90	0.087	692.40	0.089
667.40	0.087	692.90	0.089
667.90	0.087	693.40	0.089
668.40	0.087	693.90	0.089
668.90	0.087	694.40	0.089
669.40	0.088	694.90	0.089
669.90	0.088	695.40	0.089
670.40	0.088	695.90	0.090
670.90	0.088	696.40	0.090
671.40	0.088	696.90	0.090
671.90	0.088	697.40	0.090
672.40	0.088	697.90	0.090
672.90	0.088	698.40	0.090
673.40	0.088	698.90	0.090
673.90	0.088	699.40	0.090
674.40	0.088	699.90	0.090
674.90	0.088	700.40	0.090
675.40	0.088	700.90	0.090
675.90	0.088	701.40	0.090
676.40	0.088	701.90	0.090
676.90	0.088	702.40	0.090
677.40	0.088	702.90	0.090
677.90	0.088	703.40	0.090
678.40	0.088	703.90	0.090
678.90	0.088	704.40	0.090
679.40	0.088	704.90	0.090
679.90	0.088	705.40	0.090
680.40	0.089	705.90	0.090
680.90	0.089	706.40	0.090
681.40	0.089	706.90	0.090
681.90	0.089	707.40	0.090
682.40	0.089	707.90	0.090
682.90	0.089	708.40	0.090
683.40	0.089	708.90	0.090
683.90	0.089	709.40	0.090
684.40	0.089	709.90	0.090
684.90	0.089	710.40	0.090
685.40	0.089	710.90	**0.090**
685.90	0.089		
686.40	0.089		
686.90	0.089		
687.40	0.089		
687.90	0.089		
688.40	0.089		
688.90	0.089		
689.40	0.089		

Summary for Link 5L: HOM property run-off

Inflow Area = 1.243 ac, 84.96% Impervious, Inflow Depth > 2.04" for 2-yr event
Inflow = 0.40 cfs @ 12.83 hrs, Volume= 0.211 af
Primary = 0.40 cfs @ 12.83 hrs, Volume= 0.211 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Link 5L: HOM property run-off



Hydrograph for Link 5L: HOM property run-off

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.20	0.00	0.00	0.00
5.40	0.01	0.00	0.01
5.60	0.01	0.00	0.01
5.80	0.01	0.00	0.01
6.00	0.01	0.00	0.01
6.20	0.02	0.00	0.02
6.40	0.02	0.00	0.02
6.60	0.02	0.00	0.02
6.80	0.02	0.00	0.02
7.00	0.03	0.00	0.03
7.20	0.03	0.00	0.03
7.40	0.03	0.00	0.03
7.60	0.03	0.00	0.03
7.80	0.03	0.00	0.03
8.00	0.03	0.00	0.03
8.20	0.04	0.00	0.04
8.40	0.04	0.00	0.04
8.60	0.04	0.00	0.04
8.80	0.04	0.00	0.04
9.00	0.04	0.00	0.04
9.20	0.05	0.00	0.05
9.40	0.05	0.00	0.05
9.60	0.06	0.00	0.06
9.80	0.06	0.00	0.06
10.00	0.07	0.00	0.07
10.20	0.07	0.00	0.07
10.40	0.08	0.00	0.08
10.60	0.08	0.00	0.08
10.80	0.09	0.00	0.09
11.00	0.11	0.00	0.11
11.20	0.13	0.00	0.13
11.40	0.15	0.00	0.15
11.60	0.18	0.00	0.18
11.80	0.19	0.00	0.19
12.00	0.21	0.00	0.21
12.20	0.26	0.00	0.26
12.40	0.34	0.00	0.34
12.60	0.39	0.00	0.39
12.80	**0.40**	0.00	**0.40**
13.00	**0.40**	0.00	**0.40**
13.20	0.39	0.00	0.39
13.40	0.39	0.00	0.39
13.60	0.38	0.00	0.38
13.80	0.37	0.00	0.37
14.00	0.36	0.00	0.36
14.20	0.36	0.00	0.36
14.40	0.35	0.00	0.35
14.60	0.35	0.00	0.35
14.80	0.34	0.00	0.34
15.00	0.34	0.00	0.34
15.20	0.33	0.00	0.33
15.40	0.33	0.00	0.33
15.60	0.32	0.00	0.32
15.80	0.32	0.00	0.32
16.00	0.32	0.00	0.32
16.20	0.29	0.00	0.29
16.40	0.26	0.00	0.26
16.60	0.24	0.00	0.24
16.80	0.24	0.00	0.24
17.00	0.23	0.00	0.23
17.20	0.23	0.00	0.23
17.40	0.22	0.00	0.22
17.60	0.21	0.00	0.21
17.80	0.21	0.00	0.21
18.00	0.20	0.00	0.20
18.20	0.20	0.00	0.20
18.40	0.19	0.00	0.19
18.60	0.18	0.00	0.18
18.80	0.16	0.00	0.16
19.00	0.14	0.00	0.14
19.20	0.12	0.00	0.12
19.40	0.11	0.00	0.11
19.60	0.10	0.00	0.10
19.80	0.09	0.00	0.09
20.00	0.08	0.00	0.08

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SE roof to MH8 Runoff Area=0.339 ac 100.00% Impervious Runoff Depth>4.01"
Flow Length=130' Tc=10.0 min CN=98 Runoff=1.69 cfs 0.113 af

Subcatchment3S: untreated to streets Runoff Area=0.177 ac 49.15% Impervious Runoff Depth>1.60"
Flow Length=110' Tc=30.0 min CN=71 Runoff=0.24 cfs 0.024 af

Subcatchment6S: S roof to MH8 Runoff Area=0.305 ac 100.00% Impervious Runoff Depth>4.01"
Flow Length=170' Tc=12.0 min CN=98 Runoff=1.42 cfs 0.102 af

Subcatchment7S: to Inlets 8 & 9 Runoff Area=0.048 ac 100.00% Impervious Runoff Depth>4.00"
Flow Length=150' Tc=28.0 min CN=98 Runoff=0.15 cfs 0.016 af

Subcatchment8S: to Inlet 7 Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>4.00"
Flow Length=90' Tc=21.0 min CN=98 Runoff=0.19 cfs 0.017 af

Subcatchment9S: to Inlet 6 Runoff Area=0.041 ac 78.05% Impervious Runoff Depth>2.72"
Flow Length=110' Tc=26.0 min CN=85 Runoff=0.10 cfs 0.009 af

Subcatchment10S: to Inlet 5 Runoff Area=0.030 ac 83.33% Impervious Runoff Depth>3.01"
Flow Length=60' Tc=18.0 min CN=88 Runoff=0.10 cfs 0.008 af

Subcatchment11S: to Inlet 4 Runoff Area=0.038 ac 73.68% Impervious Runoff Depth>2.46"
Flow Length=120' Tc=26.0 min CN=82 Runoff=0.09 cfs 0.008 af

Subcatchment12S: to inlet 3 Runoff Area=0.124 ac 100.00% Impervious Runoff Depth>4.01"
Tc=0.0 min CN=98 Runoff=0.80 cfs 0.041 af

Subcatchment13S: to NDS 2 Runoff Area=0.021 ac 0.00% Impervious Runoff Depth>0.97"
Flow Length=20' Tc=15.0 min CN=61 Runoff=0.02 cfs 0.002 af

Subcatchment14S: to NDS 3-5 Runoff Area=0.031 ac 3.23% Impervious Runoff Depth>0.74"
Flow Length=105' Tc=55.0 min CN=57 Runoff=0.01 cfs 0.002 af

Subcatchment16S: to NDS11-6 Runoff Area=0.038 ac 42.11% Impervious Runoff Depth>1.14"
Flow Length=80' Tc=30.0 min CN=64 Runoff=0.03 cfs 0.004 af

Reach 6R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.22 fps Inflow=1.42 cfs 0.102 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=27.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.102 af

Reach 7R: MH8 12" Avg. Flow Depth=0.25' Max Vel=2.01 fps Inflow=0.56 cfs 0.215 af
12.0" Round Pipe w/ 9.0" inside fill n=0.010 L=19.0' S=0.0042 '/' Capacity=0.28 cfs Outflow=0.29 cfs 0.215 af

Reach 8R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.23 fps Inflow=1.69 cfs 0.113 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=42.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.30 cfs 0.113 af

Reach 9R: inlet 3 18" Avg. Flow Depth=0.33' Max Vel=3.36 fps Inflow=1.07 cfs 0.256 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=35.0' S=0.0080 '/' Capacity=0.88 cfs Outflow=0.88 cfs 0.256 af

Reach 10R: MH7 18" Avg. Flow Depth=0.33' Max Vel=2.65 fps Inflow=0.88 cfs 0.256 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=4.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.72 cfs 0.256 af

Reach 11R: inlet 7 18" Avg. Flow Depth=0.13' Max Vel=2.20 fps Inflow=0.33 cfs 0.033 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=62.0' S=0.0052 '/' Capacity=0.71 cfs Outflow=0.33 cfs 0.033 af

Reach 12R: MH6 18" Avg. Flow Depth=0.13' Max Vel=2.18 fps Inflow=0.33 cfs 0.033 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=8.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.33 cfs 0.033 af

Reach 13R: to isolator 6" Avg. Flow Depth=0.04' Max Vel=6.33 fps Inflow=0.10 cfs 0.009 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.10 cfs 0.009 af

Reach 14R: to isolator 6" Avg. Flow Depth=0.03' Max Vel=6.24 fps Inflow=0.10 cfs 0.008 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.10 cfs 0.008 af

Reach 15R: to isolator 6" Avg. Flow Depth=0.03' Max Vel=5.94 fps Inflow=0.09 cfs 0.008 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.09 cfs 0.008 af

Reach 17R: NDS2 6" Avg. Flow Depth=0.06' Max Vel=1.32 fps Inflow=0.03 cfs 0.004 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0051 '/' Capacity=0.09 cfs Outflow=0.03 cfs 0.004 af

Reach 18R: inlet 3 6" Avg. Flow Depth=0.08' Max Vel=1.46 fps Inflow=0.05 cfs 0.007 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=62.0' S=0.0048 '/' Capacity=0.08 cfs Outflow=0.05 cfs 0.007 af

Reach 22R: NDS2 6" Avg. Flow Depth=0.03' Max Vel=0.90 fps Inflow=0.01 cfs 0.002 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0053 '/' Capacity=0.09 cfs Outflow=0.01 cfs 0.002 af

Pond 4P: stormtech SC310 16"x34" Peak Elev=666.20' Storage=0.068 af Inflow=1.33 cfs 0.321 af
Primary=0.33 cfs 0.067 af Secondary=0.29 cfs 0.222 af Outflow=0.62 cfs 0.289 af

Link 5L: HOM property run-off Inflow=0.81 cfs 0.313 af
Primary=0.81 cfs 0.313 af

Total Runoff Area = 1.243 ac Runoff Volume = 0.345 af Average Runoff Depth = 3.33"
15.04% Pervious = 0.187 ac 84.96% Impervious = 1.056 ac

Summary for Subcatchment 1S: SE roof to MH8

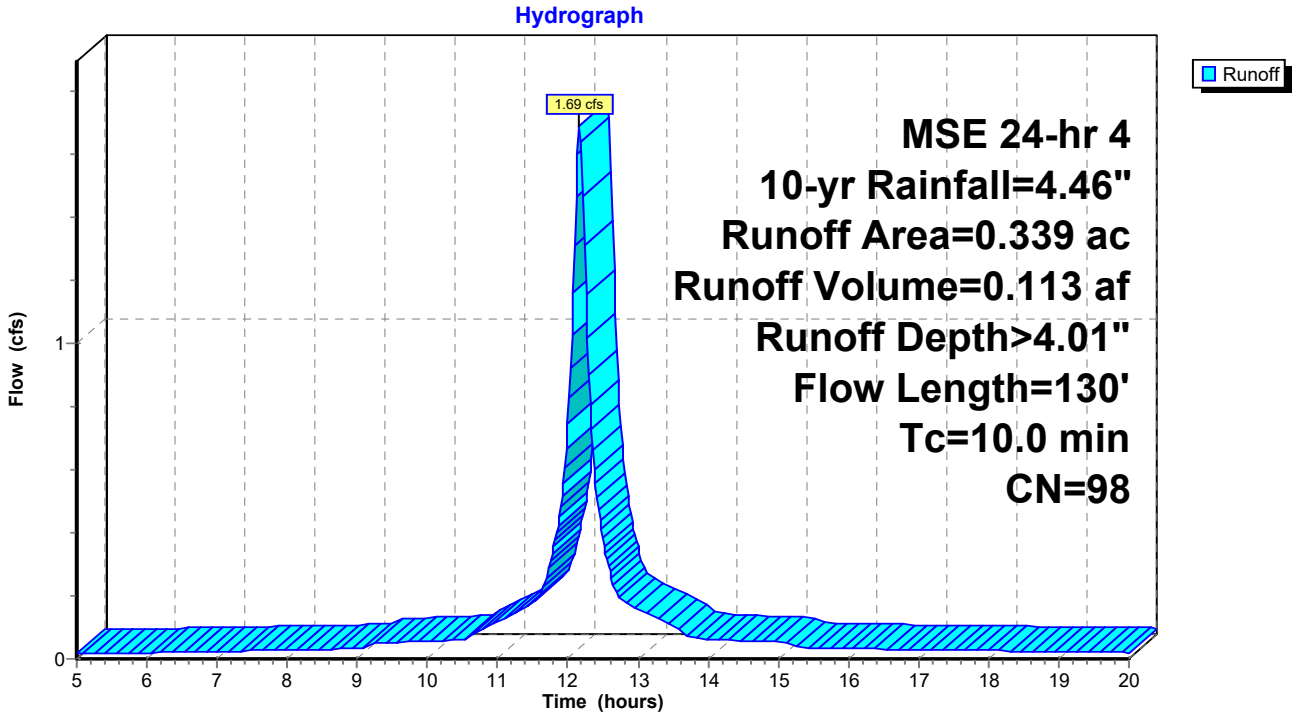
Runoff = 1.69 cfs @ 12.17 hrs, Volume= 0.113 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.339	98	fronting Main St
	0.339		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	130		0.22		**Direct Entry, S Bldg roof**

Subcatchment 1S: SE roof to MH8



Hydrograph for Subcatchment 1S: SE roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.01
5.20	0.22	0.08	0.02
5.40	0.23	0.09	0.02
5.60	0.25	0.10	0.02
5.80	0.26	0.11	0.02
6.00	0.27	0.12	0.02
6.20	0.29	0.14	0.02
6.40	0.30	0.15	0.02
6.60	0.32	0.16	0.02
6.80	0.34	0.18	0.02
7.00	0.35	0.19	0.02
7.20	0.37	0.20	0.02
7.40	0.39	0.22	0.03
7.60	0.41	0.23	0.03
7.80	0.42	0.25	0.03
8.00	0.44	0.27	0.03
8.20	0.46	0.28	0.03
8.40	0.48	0.30	0.03
8.60	0.50	0.32	0.03
8.80	0.52	0.34	0.03
9.00	0.54	0.35	0.03
9.20	0.57	0.38	0.05
9.40	0.60	0.41	0.05
9.60	0.64	0.44	0.05
9.80	0.67	0.48	0.05
10.00	0.71	0.51	0.06
10.20	0.74	0.54	0.06
10.40	0.78	0.58	0.06
10.60	0.82	0.62	0.07
10.80	0.89	0.68	0.10
11.00	0.96	0.76	0.12
11.20	1.05	0.84	0.14
11.40	1.16	0.94	0.16
11.60	1.29	1.07	0.20
11.80	1.53	1.31	0.35
12.00	2.09	1.86	**0.75**
12.20	2.93	2.70	**1.60**
12.40	3.17	2.94	0.55
12.60	3.30	3.07	0.28
12.80	3.41	3.17	0.18
13.00	3.50	3.26	0.16
13.20	3.57	3.34	0.14
13.40	3.64	3.40	0.11
13.60	3.68	3.45	0.09
13.80	3.72	3.48	0.06
14.00	3.75	3.52	0.06
14.20	3.79	3.55	0.06
14.40	3.82	3.59	0.06
14.60	3.86	3.62	0.06
14.80	3.89	3.65	0.06
15.00	3.92	3.69	0.05
15.20	3.94	3.71	0.04
15.40	3.96	3.73	0.03
15.60	3.98	3.75	0.03
15.80	4.00	3.76	0.03
16.00	4.02	3.78	0.03
16.20	4.04	3.80	0.03
16.40	4.05	3.82	0.03
16.60	4.07	3.84	0.03
16.80	4.09	3.85	0.03
17.00	4.11	3.87	0.03
17.20	4.12	3.89	0.03
17.40	4.14	3.90	0.03
17.60	4.16	3.92	0.03
17.80	4.17	3.94	0.03
18.00	4.19	3.95	0.03
18.20	4.20	3.97	0.03
18.40	4.21	3.98	0.02
18.60	4.23	3.99	0.02
18.80	4.24	4.01	0.02
19.00	4.26	4.02	0.02
19.20	4.27	4.03	0.02
19.40	4.28	4.04	0.02
19.60	4.29	4.06	0.02
19.80	4.30	4.07	0.02
20.00	**4.32**	**4.08**	0.02

Summary for Subcatchment 3S: untreated to streets

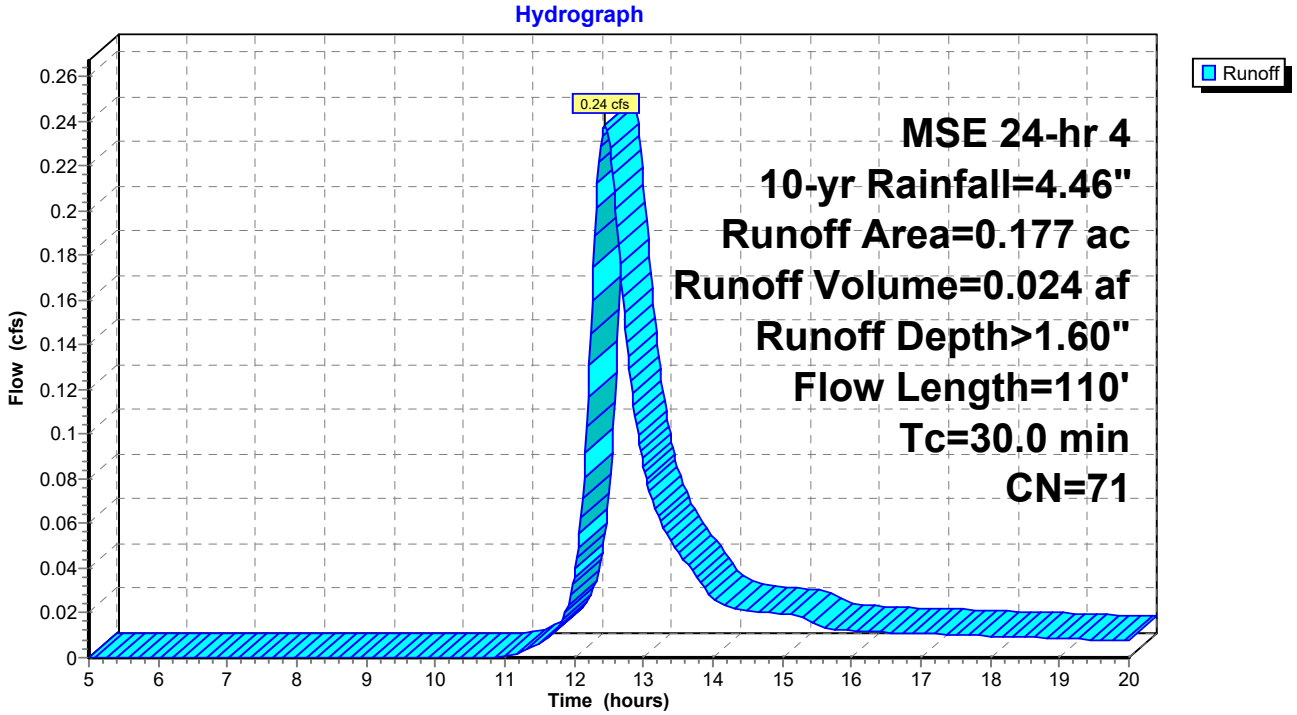
Runoff = 0.24 cfs @ 12.44 hrs, Volume= 0.024 af, Depth> 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.069	98	canopy
*	0.063	39	LS
*	0.027	61	lawn, HSG B
*	0.018	98	SW
	0.177	71	Weighted Average
	0.090		50.85% Pervious Area
	0.087		49.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	70		0.19		**Direct Entry, canopy**
12.0	20		0.03		**Direct Entry, LS**
12.0	20		0.03		**Direct Entry, lawn**
30.0	110	Total			

Subcatchment 3S: untreated to streets



Hydrograph for Subcatchment 3S: untreated to streets

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.00	0.00
8.40	0.48	0.00	0.00
8.60	0.50	0.00	0.00
8.80	0.52	0.00	0.00
9.00	0.54	0.00	0.00
9.20	0.57	0.00	0.00
9.40	0.60	0.00	0.00
9.60	0.64	0.00	0.00
9.80	0.67	0.00	0.00
10.00	0.71	0.00	0.00
10.20	0.74	0.00	0.00
10.40	0.78	0.00	0.00
10.60	0.82	0.00	0.00
10.80	0.89	0.00	0.00
11.00	0.96	0.01	0.00
11.20	1.05	0.01	0.00
11.40	1.16	0.03	0.00
11.60	1.29	0.05	0.01
11.80	1.53	0.11	0.02
12.00	2.09	0.30	0.04
12.20	2.93	0.72	0.12
12.40	3.17	0.86	**0.23**
12.60	3.30	0.94	**0.20**
12.80	3.41	1.00	0.13
13.00	3.50	1.06	0.09
13.20	3.57	1.11	0.06
13.40	3.64	1.15	0.05
13.60	3.68	1.18	0.04
13.80	3.72	1.20	0.03
14.00	3.75	1.23	0.03
14.20	3.79	1.25	0.02
14.40	3.82	1.27	0.02
14.60	3.86	1.30	0.02
14.80	3.89	1.32	0.02
15.00	3.92	1.34	0.02
15.20	3.94	1.35	0.02
15.40	3.96	1.37	0.02
15.60	3.98	1.38	0.01
15.80	4.00	1.39	0.01
16.00	4.02	1.41	0.01
16.20	4.04	1.42	0.01
16.40	4.05	1.43	0.01
16.60	4.07	1.44	0.01
16.80	4.09	1.46	0.01
17.00	4.11	1.47	0.01
17.20	4.12	1.48	0.01
17.40	4.14	1.49	0.01
17.60	4.16	1.50	0.01
17.80	4.17	1.51	0.01
18.00	4.19	1.52	0.01
18.20	4.20	1.53	0.01
18.40	4.21	1.54	0.01
18.60	4.23	1.55	0.01
18.80	4.24	1.56	0.01
19.00	4.26	1.57	0.01
19.20	4.27	1.58	0.01
19.40	4.28	1.59	0.01
19.60	4.29	1.60	0.01
19.80	4.30	1.61	0.01
20.00	**4.32**	**1.61**	0.01

Summary for Subcatchment 6S: S roof to MH8

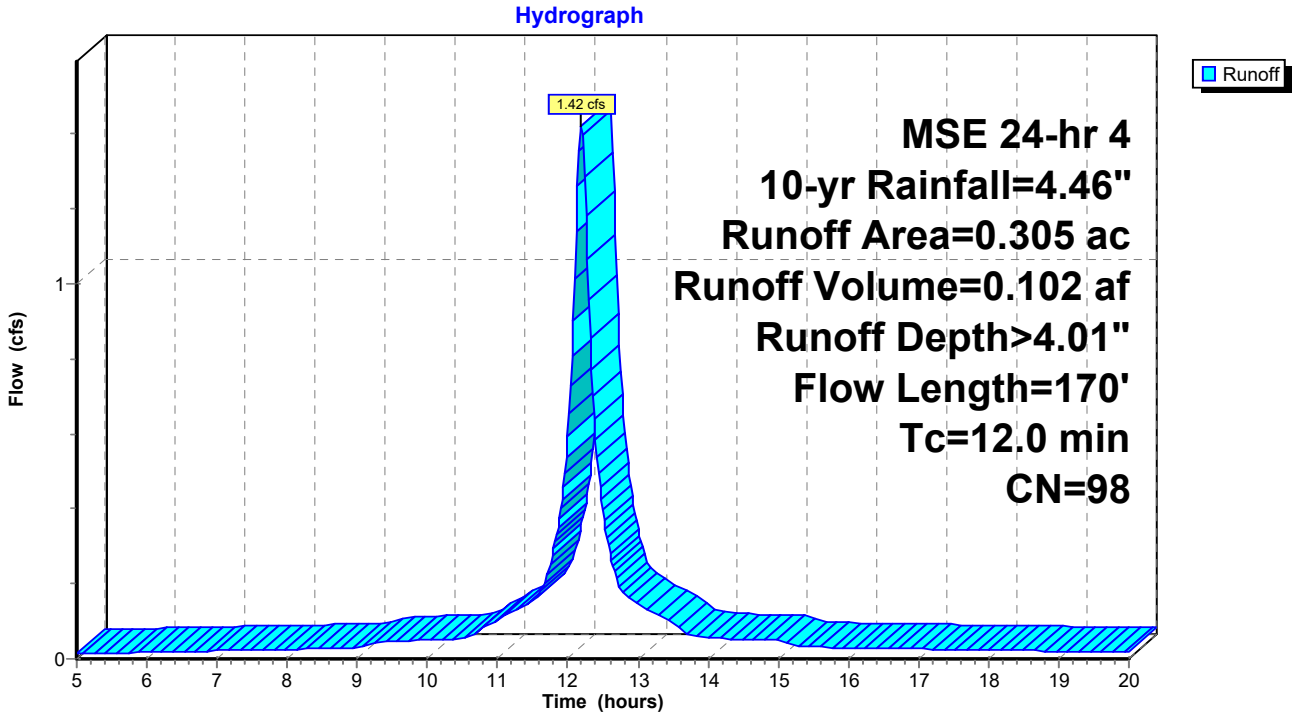
Runoff = 1.42 cfs @ 12.19 hrs, Volume= 0.102 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.305	98	fronting 10th
	0.305		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	170		0.24		**Direct Entry, NE Bldg Roof**

Subcatchment 6S: S roof to MH8



Hydrograph for Subcatchment 6S: S roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.01
5.20	0.22	0.08	0.01
5.40	0.23	0.09	0.01
5.60	0.25	0.10	0.02
5.80	0.26	0.11	0.02
6.00	0.27	0.12	0.02
6.20	0.29	0.14	0.02
6.40	0.30	0.15	0.02
6.60	0.32	0.16	0.02
6.80	0.34	0.18	0.02
7.00	0.35	0.19	0.02
7.20	0.37	0.20	0.02
7.40	0.39	0.22	0.02
7.60	0.41	0.23	0.02
7.80	0.42	0.25	0.02
8.00	0.44	0.27	0.02
8.20	0.46	0.28	0.03
8.40	0.48	0.30	0.03
8.60	0.50	0.32	0.03
8.80	0.52	0.34	0.03
9.00	0.54	0.35	0.03
9.20	0.57	0.38	0.04
9.40	0.60	0.41	0.05
9.60	0.64	0.44	0.05
9.80	0.67	0.48	0.05
10.00	0.71	0.51	0.05
10.20	0.74	0.54	0.05
10.40	0.78	0.58	0.05
10.60	0.82	0.62	0.06
10.80	0.89	0.68	0.08
11.00	0.96	0.76	0.10
11.20	1.05	0.84	0.12
11.40	1.16	0.94	0.14
11.60	1.29	1.07	0.17
11.80	1.53	1.31	0.29
12.00	2.09	1.86	0.59
12.20	2.93	2.70	**1.42**
12.40	3.17	2.94	0.59
12.60	3.30	3.07	0.28
12.80	3.41	3.17	0.17
13.00	3.50	3.26	0.15
13.20	3.57	3.34	0.13
13.40	3.64	3.40	0.11
13.60	3.68	3.45	0.08
13.80	3.72	3.48	0.06
14.00	3.75	3.52	0.06
14.20	3.79	3.55	0.05
14.40	3.82	3.59	0.05
14.60	3.86	3.62	0.05
14.80	3.89	3.65	0.05
15.00	3.92	3.69	0.05
15.20	3.94	3.71	0.04
15.40	3.96	3.73	0.03
15.60	3.98	3.75	0.03
15.80	4.00	3.76	0.03
16.00	4.02	3.78	0.03
16.20	4.04	3.80	0.03
16.40	4.05	3.82	0.03
16.60	4.07	3.84	0.03
16.80	4.09	3.85	0.03
17.00	4.11	3.87	0.03
17.20	4.12	3.89	0.03
17.40	4.14	3.90	0.03
17.60	4.16	3.92	0.02
17.80	4.17	3.94	0.02
18.00	4.19	3.95	0.02
18.20	4.20	3.97	0.02
18.40	4.21	3.98	0.02
18.60	4.23	3.99	0.02
18.80	4.24	4.01	0.02
19.00	4.26	4.02	0.02
19.20	4.27	4.03	0.02
19.40	4.28	4.04	0.02
19.60	4.29	4.06	0.02
19.80	4.30	4.07	0.02
20.00	**4.32**	**4.08**	0.02

Summary for Subcatchment 7S: to Inlets 8 & 9

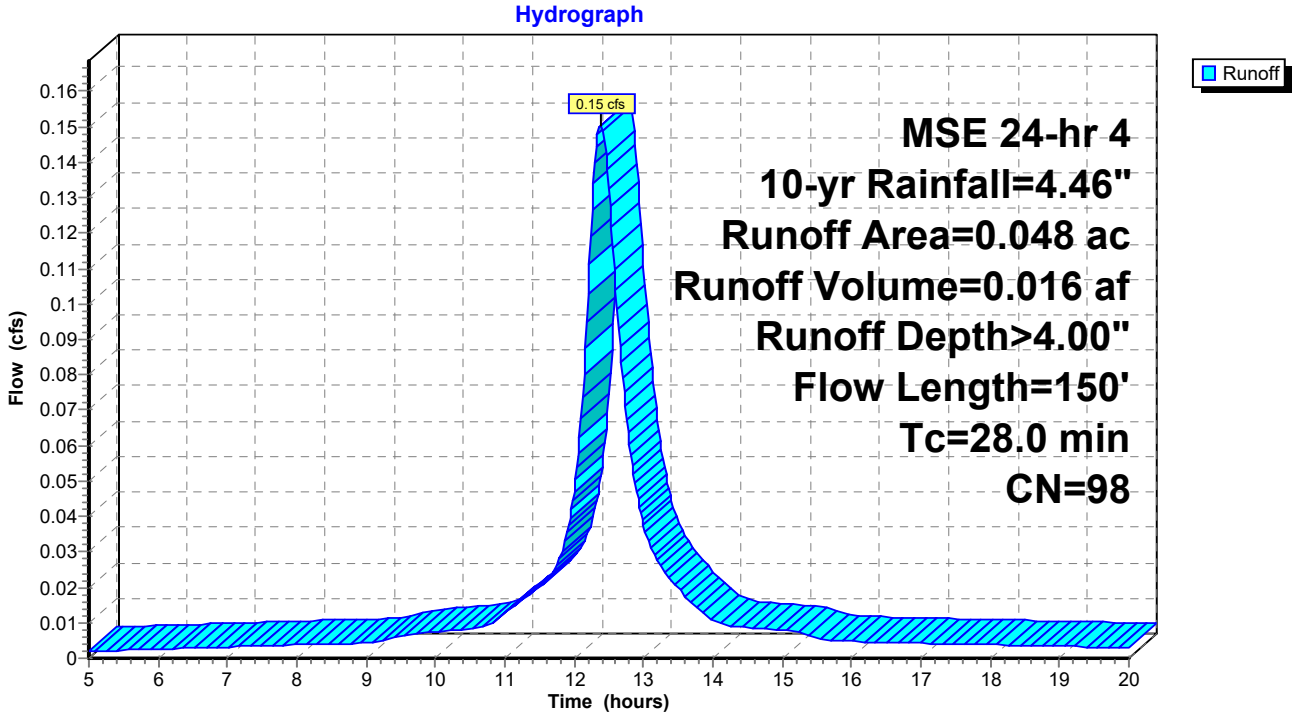
Runoff = 0.15 cfs @ 12.38 hrs, Volume= 0.016 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.046	98	pavement
*	0.002	98	SW
	0.048	98	Weighted Average
	0.048		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	55		0.13		**Direct Entry, pavement**
6.0	50		0.14		**Direct Entry, SW**
15.0	45		0.05		**Direct Entry, LS**
28.0	150	Total			

Subcatchment 7S: to Inlets 8 & 9



Hydrograph for Subcatchment 7S: to Inlets 8 & 9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.00
5.20	0.22	0.08	0.00
5.40	0.23	0.09	0.00
5.60	0.25	0.10	0.00
5.80	0.26	0.11	0.00
6.00	0.27	0.12	0.00
6.20	0.29	0.14	0.00
6.40	0.30	0.15	0.00
6.60	0.32	0.16	0.00
6.80	0.34	0.18	0.00
7.00	0.35	0.19	0.00
7.20	0.37	0.20	0.00
7.40	0.39	0.22	0.00
7.60	0.41	0.23	0.00
7.80	0.42	0.25	0.00
8.00	0.44	0.27	0.00
8.20	0.46	0.28	0.00
8.40	0.48	0.30	0.00
8.60	0.50	0.32	0.00
8.80	0.52	0.34	0.00
9.00	0.54	0.35	0.00
9.20	0.57	0.38	0.00
9.40	0.60	0.41	0.01
9.60	0.64	0.44	0.01
9.80	0.67	0.48	0.01
10.00	0.71	0.51	0.01
10.20	0.74	0.54	0.01
10.40	0.78	0.58	0.01
10.60	0.82	0.62	0.01
10.80	0.89	0.68	0.01
11.00	0.96	0.76	0.01
11.20	1.05	0.84	0.02
11.40	1.16	0.94	0.02
11.60	1.29	1.07	0.02
11.80	1.53	1.31	0.03
12.00	2.09	1.86	0.05
12.20	2.93	2.70	**0.10**
12.40	3.17	2.94	**0.15**
12.60	3.30	3.07	0.10
12.80	3.41	3.17	0.06
13.00	3.50	3.26	0.04
13.20	3.57	3.34	0.03
13.40	3.64	3.40	0.02
13.60	3.68	3.45	0.02
13.80	3.72	3.48	0.01
14.00	3.75	3.52	0.01
14.20	3.79	3.55	0.01
14.40	3.82	3.59	0.01
14.60	3.86	3.62	0.01
14.80	3.89	3.65	0.01
15.00	3.92	3.69	0.01
15.20	3.94	3.71	0.01
15.40	3.96	3.73	0.01
15.60	3.98	3.75	0.01
15.80	4.00	3.76	0.00
16.00	4.02	3.78	0.00
16.20	4.04	3.80	0.00
16.40	4.05	3.82	0.00
16.60	4.07	3.84	0.00
16.80	4.09	3.85	0.00
17.00	4.11	3.87	0.00
17.20	4.12	3.89	0.00
17.40	4.14	3.90	0.00
17.60	4.16	3.92	0.00
17.80	4.17	3.94	0.00
18.00	4.19	3.95	0.00
18.20	4.20	3.97	0.00
18.40	4.21	3.98	0.00
18.60	4.23	3.99	0.00
18.80	4.24	4.01	0.00
19.00	4.26	4.02	0.00
19.20	4.27	4.03	0.00
19.40	4.28	4.04	0.00
19.60	4.29	4.06	0.00
19.80	4.30	4.07	0.00
20.00	**4.32**	**4.08**	0.00

Summary for Subcatchment 8S: to Inlet 7

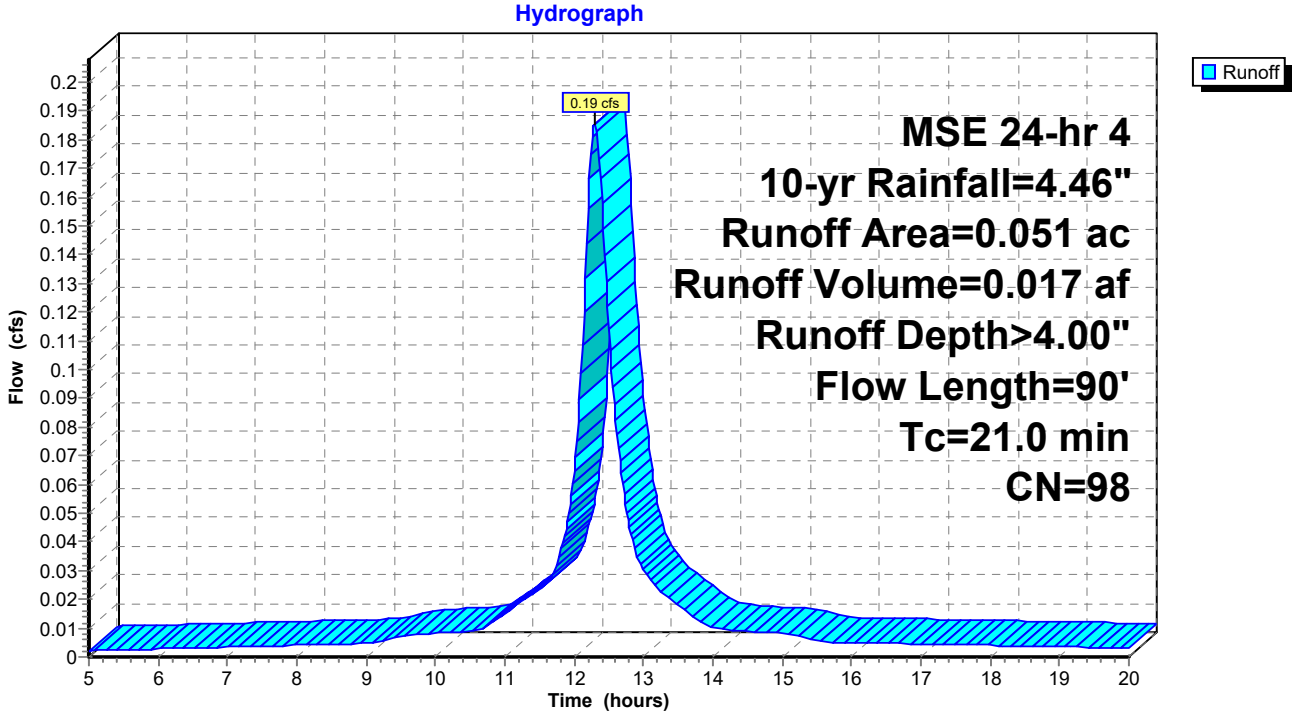
Runoff = 0.19 cfs @ 12.29 hrs, Volume= 0.017 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.051	98	pavement
	0.051		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50		0.14		**Direct Entry, pavement**
15.0	40		0.04		**Direct Entry, LS**
21.0	90	Total			

Subcatchment 8S: to Inlet 7



Hydrograph for Subcatchment 8S: to Inlet 7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.00
5.20	0.22	0.08	0.00
5.40	0.23	0.09	0.00
5.60	0.25	0.10	0.00
5.80	0.26	0.11	0.00
6.00	0.27	0.12	0.00
6.20	0.29	0.14	0.00
6.40	0.30	0.15	0.00
6.60	0.32	0.16	0.00
6.80	0.34	0.18	0.00
7.00	0.35	0.19	0.00
7.20	0.37	0.20	0.00
7.40	0.39	0.22	0.00
7.60	0.41	0.23	0.00
7.80	0.42	0.25	0.00
8.00	0.44	0.27	0.00
8.20	0.46	0.28	0.00
8.40	0.48	0.30	0.00
8.60	0.50	0.32	0.00
8.80	0.52	0.34	0.00
9.00	0.54	0.35	0.00
9.20	0.57	0.38	0.01
9.40	0.60	0.41	0.01
9.60	0.64	0.44	0.01
9.80	0.67	0.48	0.01
10.00	0.71	0.51	0.01
10.20	0.74	0.54	0.01
10.40	0.78	0.58	0.01
10.60	0.82	0.62	0.01
10.80	0.89	0.68	0.01
11.00	0.96	0.76	0.02
11.20	1.05	0.84	0.02
11.40	1.16	0.94	0.02
11.60	1.29	1.07	0.03
11.80	1.53	1.31	0.04
12.00	2.09	1.86	0.06
12.20	2.93	2.70	**0.16**
12.40	3.17	2.94	**0.16**
12.60	3.30	3.07	0.08
12.80	3.41	3.17	0.04
13.00	3.50	3.26	0.03
13.20	3.57	3.34	0.02
13.40	3.64	3.40	0.02
13.60	3.68	3.45	0.02
13.80	3.72	3.48	0.01
14.00	3.75	3.52	0.01
14.20	3.79	3.55	0.01
14.40	3.82	3.59	0.01
14.60	3.86	3.62	0.01
14.80	3.89	3.65	0.01
15.00	3.92	3.69	0.01
15.20	3.94	3.71	0.01
15.40	3.96	3.73	0.01
15.60	3.98	3.75	0.01
15.80	4.00	3.76	0.01
16.00	4.02	3.78	0.00
16.20	4.04	3.80	0.00
16.40	4.05	3.82	0.00
16.60	4.07	3.84	0.00
16.80	4.09	3.85	0.00
17.00	4.11	3.87	0.00
17.20	4.12	3.89	0.00
17.40	4.14	3.90	0.00
17.60	4.16	3.92	0.00
17.80	4.17	3.94	0.00
18.00	4.19	3.95	0.00
18.20	4.20	3.97	0.00
18.40	4.21	3.98	0.00
18.60	4.23	3.99	0.00
18.80	4.24	4.01	0.00
19.00	4.26	4.02	0.00
19.20	4.27	4.03	0.00
19.40	4.28	4.04	0.00
19.60	4.29	4.06	0.00
19.80	4.30	4.07	0.00
20.00	**4.32**	**4.08**	0.00

Summary for Subcatchment 9S: to Inlet 6

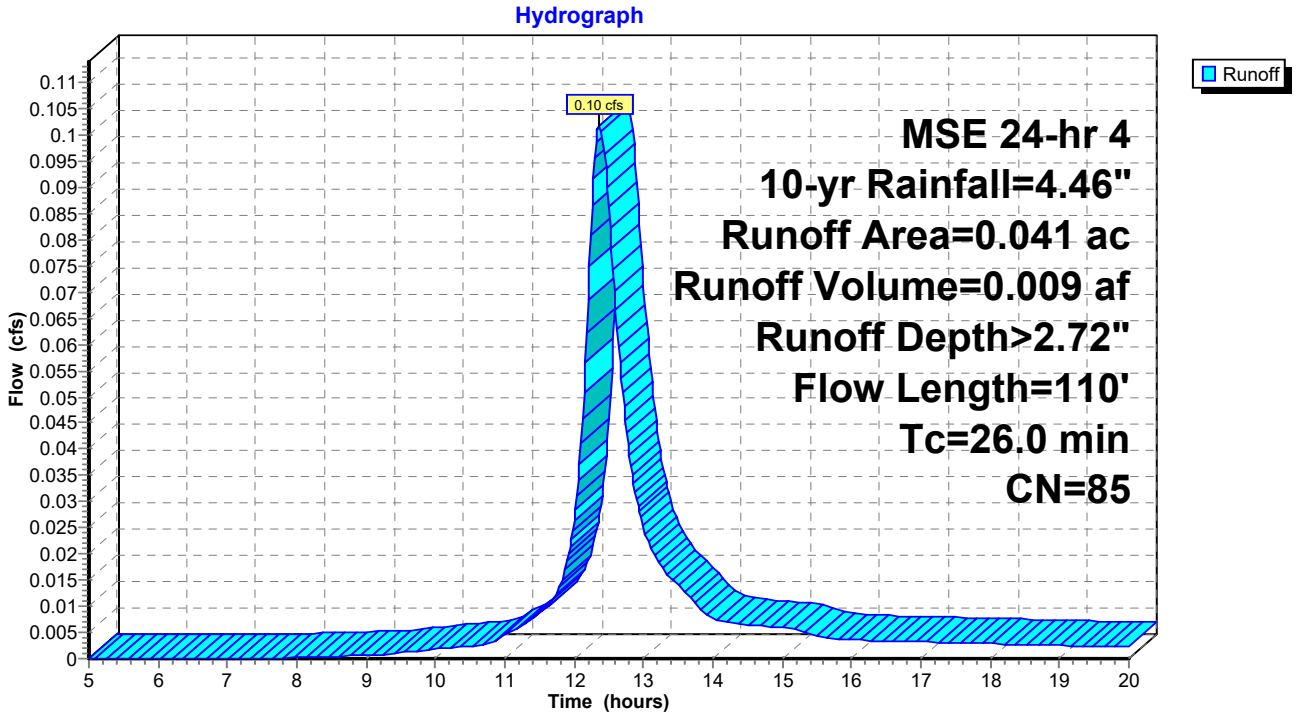
Runoff = 0.10 cfs @ 12.37 hrs, Volume= 0.009 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.032	98	pavement
*	0.009	39	LS
	0.041	85	Weighted Average
	0.009		21.95% Pervious Area
	0.032		78.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	45		0.11		**Direct Entry, pavement**
7.0	45		0.11		**Direct Entry, SW**
12.0	20		0.03		**Direct Entry, LS**
26.0	110	Total			

Subcatchment 9S: to Inlet 6



Hydrograph for Subcatchment 9S: to Inlet 6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.01	0.00
8.40	0.48	0.01	0.00
8.60	0.50	0.01	0.00
8.80	0.52	0.01	0.00
9.00	0.54	0.02	0.00
9.20	0.57	0.02	0.00
9.40	0.60	0.03	0.00
9.60	0.64	0.04	0.00
9.80	0.67	0.05	0.00
10.00	0.71	0.06	0.00
10.20	0.74	0.07	0.00
10.40	0.78	0.08	0.00
10.60	0.82	0.10	0.00
10.80	0.89	0.12	0.00
11.00	0.96	0.16	0.00
11.20	1.05	0.20	0.01
11.40	1.16	0.25	0.01
11.60	1.29	0.32	0.01
11.80	1.53	0.47	0.01
12.00	2.09	0.86	0.03
12.20	2.93	1.53	**0.07**
12.40	3.17	1.73	**0.10**
12.60	3.30	1.85	0.07
12.80	3.41	1.94	0.04
13.00	3.50	2.01	0.03
13.20	3.57	2.08	0.02
13.40	3.64	2.13	0.02
13.60	3.68	2.17	0.01
13.80	3.72	2.21	0.01
14.00	3.75	2.24	0.01
14.20	3.79	2.27	0.01
14.40	3.82	2.30	0.01
14.60	3.86	2.33	0.01
14.80	3.89	2.36	0.01
15.00	3.92	2.39	0.01
15.20	3.94	2.40	0.01
15.40	3.96	2.42	0.00
15.60	3.98	2.44	0.00
15.80	4.00	2.46	0.00
16.00	4.02	2.47	0.00
16.20	4.04	2.49	0.00
16.40	4.05	2.51	0.00
16.60	4.07	2.52	0.00
16.80	4.09	2.54	0.00
17.00	4.11	2.55	0.00
17.20	4.12	2.57	0.00
17.40	4.14	2.58	0.00
17.60	4.16	2.60	0.00
17.80	4.17	2.61	0.00
18.00	4.19	2.62	0.00
18.20	4.20	2.64	0.00
18.40	4.21	2.65	0.00
18.60	4.23	2.66	0.00
18.80	4.24	2.68	0.00
19.00	4.26	2.69	0.00
19.20	4.27	2.70	0.00
19.40	4.28	2.71	0.00
19.60	4.29	2.72	0.00
19.80	4.30	2.73	0.00
20.00	**4.32**	**2.74**	0.00

Summary for Subcatchment 10S: to Inlet 5

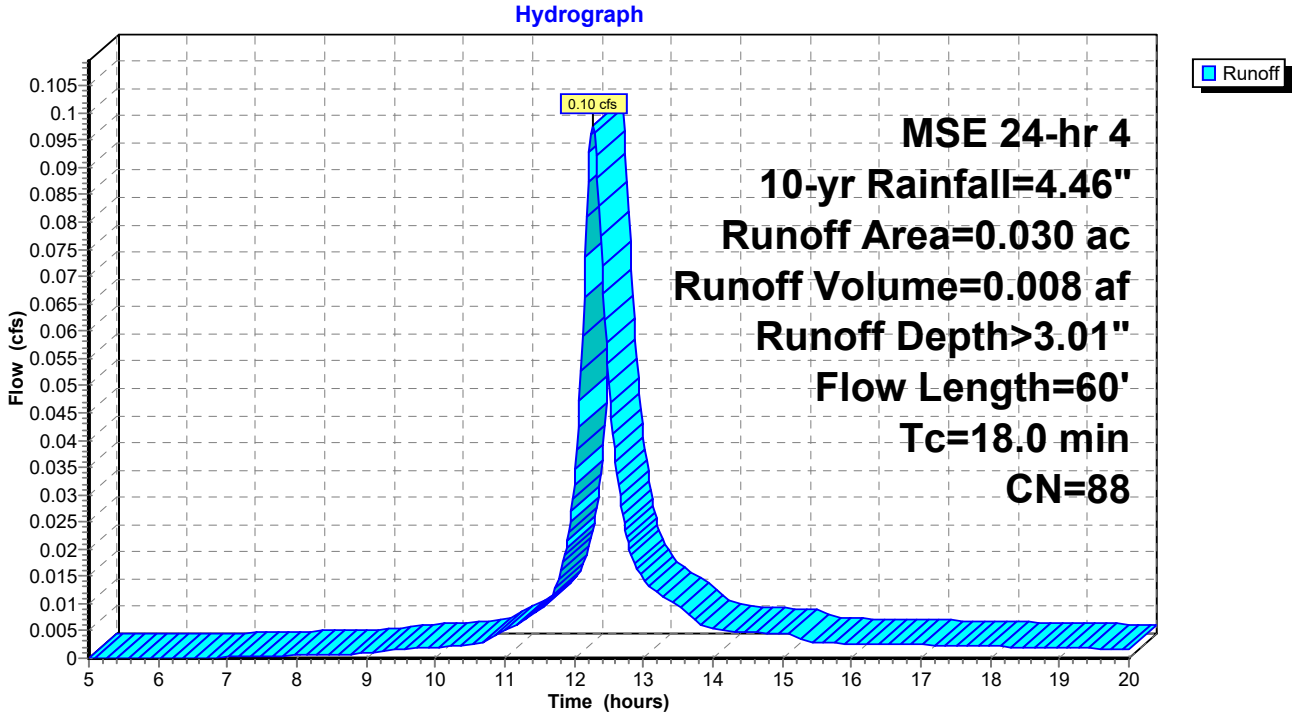
Runoff = 0.10 cfs @ 12.26 hrs, Volume= 0.008 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.005	39	LS
	0.030	88	Weighted Average
	0.005		16.67% Pervious Area
	0.025		83.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40		0.11		**Direct Entry, pavement**
12.0	20		0.03		**Direct Entry, LS**
18.0	60	Total			

Subcatchment 10S: to Inlet 5



Hydrograph for Subcatchment 10S: to Inlet 5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.01	0.00
7.40	0.39	0.01	0.00
7.60	0.41	0.01	0.00
7.80	0.42	0.01	0.00
8.00	0.44	0.02	0.00
8.20	0.46	0.02	0.00
8.40	0.48	0.03	0.00
8.60	0.50	0.03	0.00
8.80	0.52	0.04	0.00
9.00	0.54	0.04	0.00
9.20	0.57	0.05	0.00
9.40	0.60	0.06	0.00
9.60	0.64	0.08	0.00
9.80	0.67	0.09	0.00
10.00	0.71	0.10	0.00
10.20	0.74	0.12	0.00
10.40	0.78	0.14	0.00
10.60	0.82	0.16	0.00
10.80	0.89	0.19	0.00
11.00	0.96	0.23	0.01
11.20	1.05	0.28	0.01
11.40	1.16	0.35	0.01
11.60	1.29	0.43	0.01
11.80	1.53	0.60	0.02
12.00	2.09	1.04	0.03
12.20	2.93	1.75	**0.09**
12.40	3.17	1.97	**0.07**
12.60	3.30	2.09	0.04
12.80	3.41	2.18	0.02
13.00	3.50	2.26	0.01
13.20	3.57	2.33	0.01
13.40	3.64	2.39	0.01
13.60	3.68	2.43	0.01
13.80	3.72	2.47	0.01
14.00	3.75	2.50	0.01
14.20	3.79	2.53	0.01
14.40	3.82	2.56	0.00
14.60	3.86	2.60	0.00
14.80	3.89	2.63	0.00
15.00	3.92	2.65	0.00
15.20	3.94	2.67	0.00
15.40	3.96	2.69	0.00
15.60	3.98	2.71	0.00
15.80	4.00	2.73	0.00
16.00	4.02	2.75	0.00
16.20	4.04	2.76	0.00
16.40	4.05	2.78	0.00
16.60	4.07	2.80	0.00
16.80	4.09	2.81	0.00
17.00	4.11	2.83	0.00
17.20	4.12	2.84	0.00
17.40	4.14	2.86	0.00
17.60	4.16	2.87	0.00
17.80	4.17	2.89	0.00
18.00	4.19	2.90	0.00
18.20	4.20	2.92	0.00
18.40	4.21	2.93	0.00
18.60	4.23	2.94	0.00
18.80	4.24	2.95	0.00
19.00	4.26	2.97	0.00
19.20	4.27	2.98	0.00
19.40	4.28	2.99	0.00
19.60	4.29	3.00	0.00
19.80	4.30	3.01	0.00
20.00	**4.32**	**3.02**	0.00

Summary for Subcatchment 11S: to Inlet 4

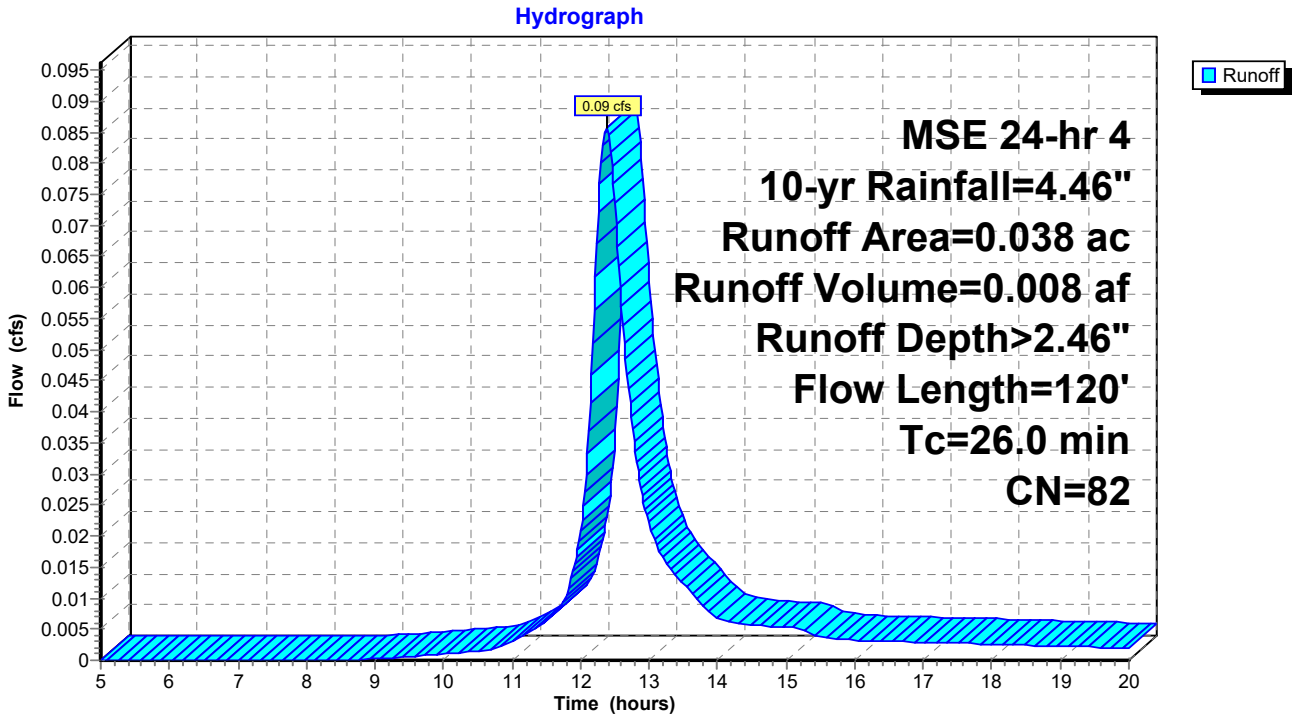
Runoff = 0.09 cfs @ 12.37 hrs, Volume= 0.008 af, Depth> 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.003	98	SW
*	0.010	39	LS
	0.038	82	Weighted Average
	0.010		26.32% Pervious Area
	0.028		73.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	40		0.10		**Direct Entry, pavement**
7.0	40		0.10		**Direct Entry, SW**
12.0	40		0.06		**Direct Entry, LS**
26.0	120	Total			

Subcatchment 11S: to Inlet 4



Hydrograph for Subcatchment 11S: to Inlet 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.00	0.00
8.40	0.48	0.00	0.00
8.60	0.50	0.00	0.00
8.80	0.52	0.00	0.00
9.00	0.54	0.00	0.00
9.20	0.57	0.01	0.00
9.40	0.60	0.01	0.00
9.60	0.64	0.02	0.00
9.80	0.67	0.02	0.00
10.00	0.71	0.03	0.00
10.20	0.74	0.04	0.00
10.40	0.78	0.05	0.00
10.60	0.82	0.06	0.00
10.80	0.89	0.08	0.00
11.00	0.96	0.10	0.00
11.20	1.05	0.13	0.00
11.40	1.16	0.18	0.01
11.60	1.29	0.24	0.01
11.80	1.53	0.36	0.01
12.00	2.09	0.71	0.02
12.20	2.93	1.32	**0.06**
12.40	3.17	1.52	**0.09**
12.60	3.30	1.62	0.06
12.80	3.41	1.71	0.03
13.00	3.50	1.78	0.02
13.20	3.57	1.84	0.02
13.40	3.64	1.89	0.01
13.60	3.68	1.93	0.01
13.80	3.72	1.96	0.01
14.00	3.75	1.99	0.01
14.20	3.79	2.02	0.01
14.40	3.82	2.05	0.01
14.60	3.86	2.08	0.01
14.80	3.89	2.11	0.01
15.00	3.92	2.13	0.01
15.20	3.94	2.15	0.01
15.40	3.96	2.17	0.00
15.60	3.98	2.19	0.00
15.80	4.00	2.20	0.00
16.00	4.02	2.22	0.00
16.20	4.04	2.23	0.00
16.40	4.05	2.25	0.00
16.60	4.07	2.27	0.00
16.80	4.09	2.28	0.00
17.00	4.11	2.29	0.00
17.20	4.12	2.31	0.00
17.40	4.14	2.32	0.00
17.60	4.16	2.34	0.00
17.80	4.17	2.35	0.00
18.00	4.19	2.36	0.00
18.20	4.20	2.38	0.00
18.40	4.21	2.39	0.00
18.60	4.23	2.40	0.00
18.80	4.24	2.41	0.00
19.00	4.26	2.42	0.00
19.20	4.27	2.43	0.00
19.40	4.28	2.44	0.00
19.60	4.29	2.45	0.00
19.80	4.30	2.47	0.00
20.00	**4.32**	**2.47**	0.00

Summary for Subcatchment 12S: to inlet 3

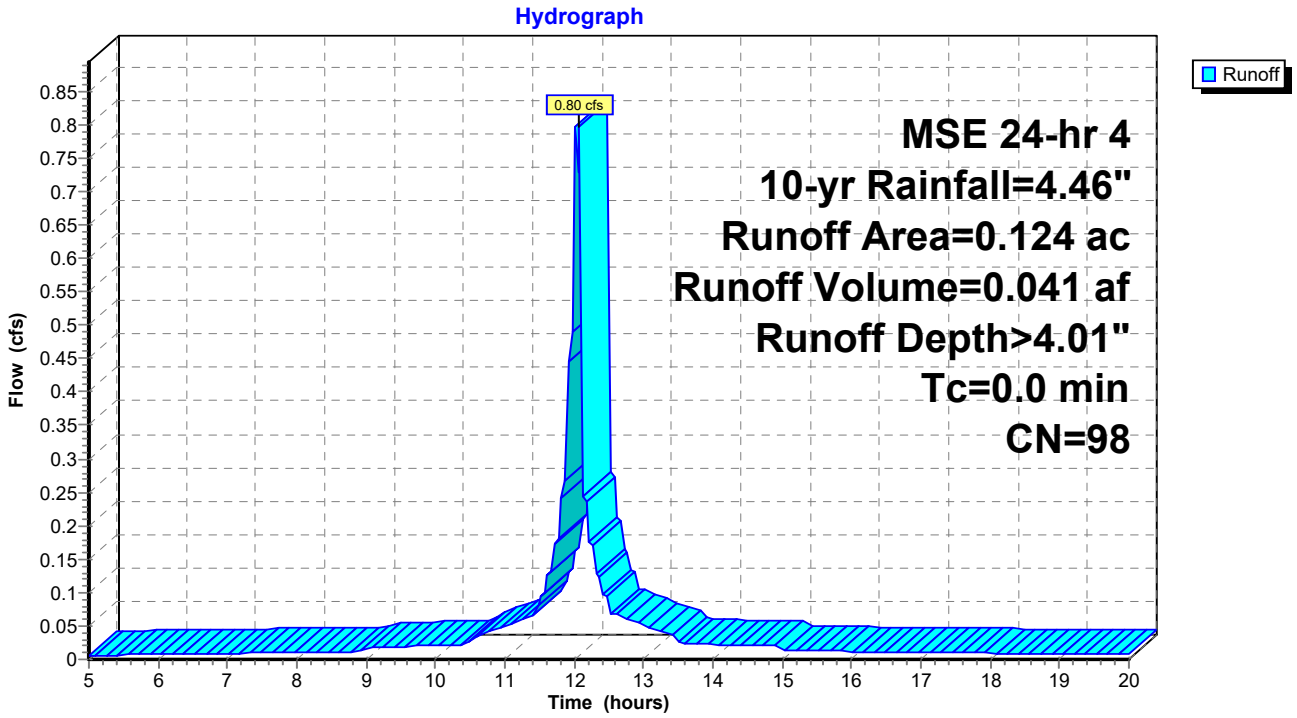
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.80 cfs @ 12.08 hrs, Volume= 0.041 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.009	98	open shelter
*	0.059	98	SW
*	0.034	98	parking AC pavement
*	0.022	98	PIP play surface
	0.124	98	Weighted Average
	0.124		100.00% Impervious Area

Subcatchment 12S: to inlet 3



Hydrograph for Subcatchment 12S: to inlet 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.01
5.20	0.22	0.08	0.01
5.40	0.23	0.09	0.01
5.60	0.25	0.10	0.01
5.80	0.26	0.11	0.01
6.00	0.27	0.12	0.01
6.20	0.29	0.14	0.01
6.40	0.30	0.15	0.01
6.60	0.32	0.16	0.01
6.80	0.34	0.18	0.01
7.00	0.35	0.19	0.01
7.20	0.37	0.20	0.01
7.40	0.39	0.22	0.01
7.60	0.41	0.23	0.01
7.80	0.42	0.25	0.01
8.00	0.44	0.27	0.01
8.20	0.46	0.28	0.01
8.40	0.48	0.30	0.01
8.60	0.50	0.32	0.01
8.80	0.52	0.34	0.01
9.00	0.54	0.35	0.01
9.20	0.57	0.38	0.02
9.40	0.60	0.41	0.02
9.60	0.64	0.44	0.02
9.80	0.67	0.48	0.02
10.00	0.71	0.51	0.02
10.20	0.74	0.54	0.02
10.40	0.78	0.58	0.02
10.60	0.82	0.62	0.03
10.80	0.89	0.68	0.04
11.00	0.96	0.76	0.05
11.20	1.05	0.84	0.06
11.40	1.16	0.94	0.07
11.60	1.29	1.07	0.11
11.80	1.53	1.31	0.21
12.00	2.09	1.86	**0.62**
12.20	2.93	2.70	**0.21**
12.40	3.17	2.94	0.11
12.60	3.30	3.07	0.07
12.80	3.41	3.17	0.06
13.00	3.50	3.26	0.05
13.20	3.57	3.34	0.04
13.40	3.64	3.40	0.04
13.60	3.68	3.45	0.02
13.80	3.72	3.48	0.02
14.00	3.75	3.52	0.02
14.20	3.79	3.55	0.02
14.40	3.82	3.59	0.02
14.60	3.86	3.62	0.02
14.80	3.89	3.65	0.02
15.00	3.92	3.69	0.02
15.20	3.94	3.71	0.01
15.40	3.96	3.73	0.01
15.60	3.98	3.75	0.01
15.80	4.00	3.76	0.01
16.00	4.02	3.78	0.01
16.20	4.04	3.80	0.01
16.40	4.05	3.82	0.01
16.60	4.07	3.84	0.01
16.80	4.09	3.85	0.01
17.00	4.11	3.87	0.01
17.20	4.12	3.89	0.01
17.40	4.14	3.90	0.01
17.60	4.16	3.92	0.01
17.80	4.17	3.94	0.01
18.00	4.19	3.95	0.01
18.20	4.20	3.97	0.01
18.40	4.21	3.98	0.01
18.60	4.23	3.99	0.01
18.80	4.24	4.01	0.01
19.00	4.26	4.02	0.01
19.20	4.27	4.03	0.01
19.40	4.28	4.04	0.01
19.60	4.29	4.06	0.01
19.80	4.30	4.07	0.01
20.00	**4.32**	**4.08**	0.01

Summary for Subcatchment 13S: to NDS 2

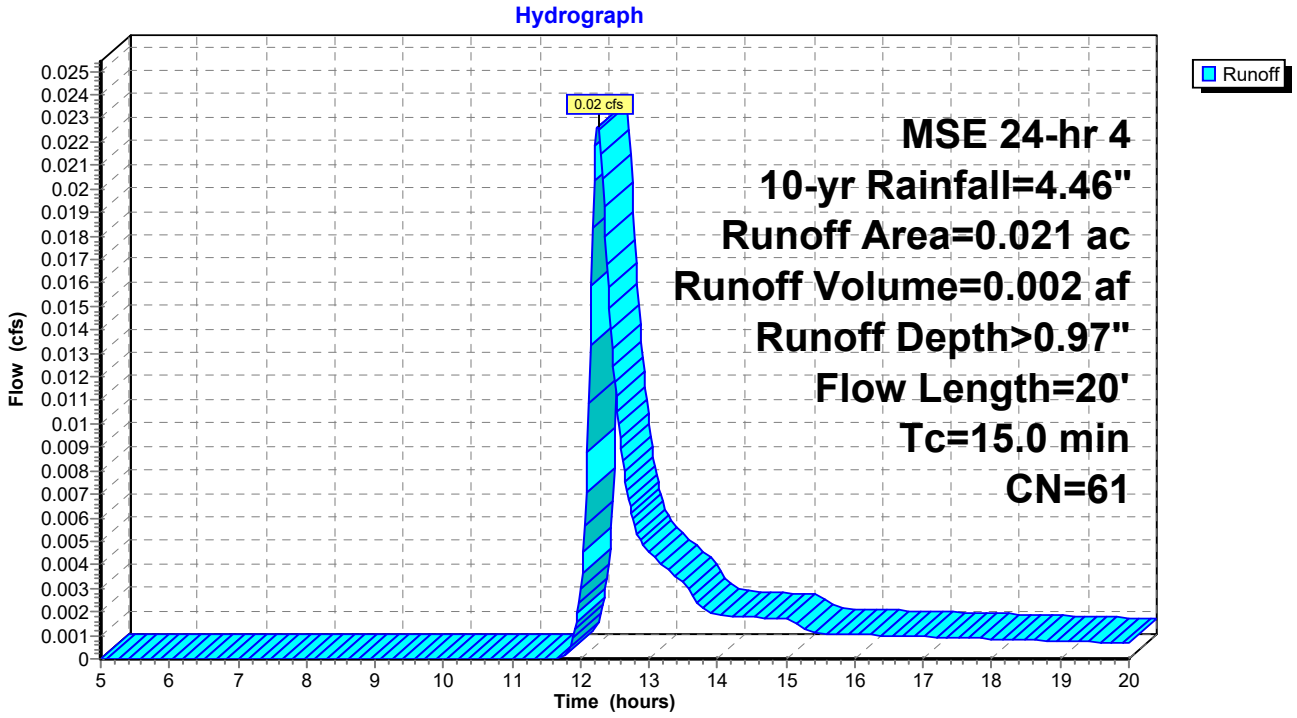
Runoff = 0.02 cfs @ 12.25 hrs, Volume= 0.002 af, Depth> 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.021	61	lawn, HSG B
	0.021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	20		0.02		**Direct Entry, lawn**

Subcatchment 13S: to NDS 2



Hydrograph for Subcatchment 13S: to NDS 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.00	0.00
8.40	0.48	0.00	0.00
8.60	0.50	0.00	0.00
8.80	0.52	0.00	0.00
9.00	0.54	0.00	0.00
9.20	0.57	0.00	0.00
9.40	0.60	0.00	0.00
9.60	0.64	0.00	0.00
9.80	0.67	0.00	0.00
10.00	0.71	0.00	0.00
10.20	0.74	0.00	0.00
10.40	0.78	0.00	0.00
10.60	0.82	0.00	0.00
10.80	0.89	0.00	0.00
11.00	0.96	0.00	0.00
11.20	1.05	0.00	0.00
11.40	1.16	0.00	0.00
11.60	1.29	0.00	0.00
11.80	1.53	0.01	0.00
12.00	2.09	0.09	0.00
12.20	2.93	0.34	**0.02**
12.40	3.17	0.43	**0.02**
12.60	3.30	0.49	0.01
12.80	3.41	0.53	0.01
13.00	3.50	0.57	0.00
13.20	3.57	0.61	0.00
13.40	3.64	0.63	0.00
13.60	3.68	0.66	0.00
13.80	3.72	0.67	0.00
14.00	3.75	0.69	0.00
14.20	3.79	0.71	0.00
14.40	3.82	0.72	0.00
14.60	3.86	0.74	0.00
14.80	3.89	0.76	0.00
15.00	3.92	0.77	0.00
15.20	3.94	0.78	0.00
15.40	3.96	0.79	0.00
15.60	3.98	0.80	0.00
15.80	4.00	0.81	0.00
16.00	4.02	0.82	0.00
16.20	4.04	0.83	0.00
16.40	4.05	0.84	0.00
16.60	4.07	0.85	0.00
16.80	4.09	0.86	0.00
17.00	4.11	0.87	0.00
17.20	4.12	0.88	0.00
17.40	4.14	0.88	0.00
17.60	4.16	0.89	0.00
17.80	4.17	0.90	0.00
18.00	4.19	0.91	0.00
18.20	4.20	0.92	0.00
18.40	4.21	0.92	0.00
18.60	4.23	0.93	0.00
18.80	4.24	0.94	0.00
19.00	4.26	0.95	0.00
19.20	4.27	0.95	0.00
19.40	4.28	0.96	0.00
19.60	4.29	0.97	0.00
19.80	4.30	0.97	0.00
20.00	**4.32**	**0.98**	0.00

Summary for Subcatchment 14S: to NDS 3-5

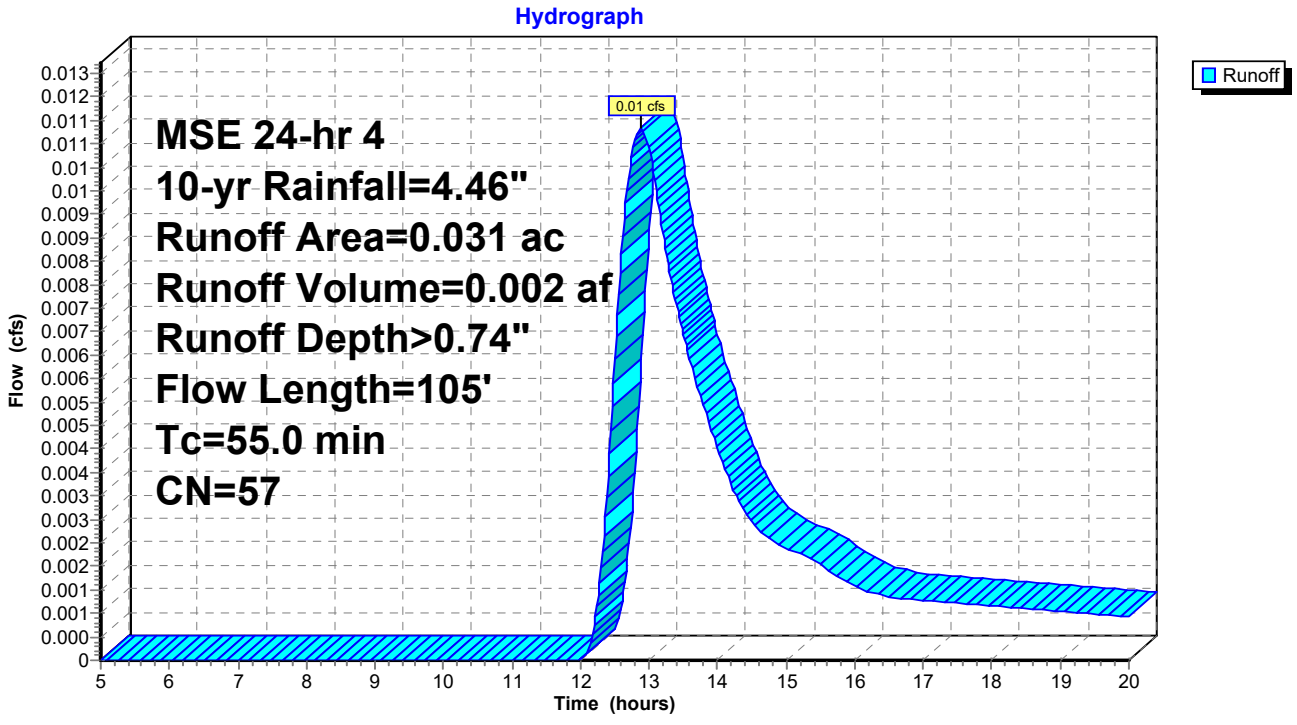
Runoff = 0.01 cfs @ 12.89 hrs, Volume= 0.002 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.022	61	lawn, HSG B
*	0.008	39	LS
*	0.001	98	SW
	0.031	57	Weighted Average
	0.030		96.77% Pervious Area
	0.001		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	20		0.02		**Direct Entry, lawn**
20.0	75		0.06		**Direct Entry, LS**
20.0	10		0.01		**Direct Entry, SW via LS**
55.0	105	Total			

Subcatchment 14S: to NDS 3-5



Hydrograph for Subcatchment 14S: to NDS 3-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.00	0.00
8.40	0.48	0.00	0.00
8.60	0.50	0.00	0.00
8.80	0.52	0.00	0.00
9.00	0.54	0.00	0.00
9.20	0.57	0.00	0.00
9.40	0.60	0.00	0.00
9.60	0.64	0.00	0.00
9.80	0.67	0.00	0.00
10.00	0.71	0.00	0.00
10.20	0.74	0.00	0.00
10.40	0.78	0.00	0.00
10.60	0.82	0.00	0.00
10.80	0.89	0.00	0.00
11.00	0.96	0.00	0.00
11.20	1.05	0.00	0.00
11.40	1.16	0.00	0.00
11.60	1.29	0.00	0.00
11.80	1.53	0.00	0.00
12.00	2.09	0.04	0.00
12.20	2.93	0.22	0.00
12.40	3.17	0.30	0.00
12.60	3.30	0.35	0.01
12.80	3.41	0.38	**0.01**
13.00	3.50	0.41	**0.01**
13.20	3.57	0.44	0.01
13.40	3.64	0.47	0.01
13.60	3.68	0.49	0.01
13.80	3.72	0.50	0.01
14.00	3.75	0.51	0.00
14.20	3.79	0.53	0.00
14.40	3.82	0.54	0.00
14.60	3.86	0.56	0.00
14.80	3.89	0.57	0.00
15.00	3.92	0.58	0.00
15.20	3.94	0.59	0.00
15.40	3.96	0.60	0.00
15.60	3.98	0.61	0.00
15.80	4.00	0.62	0.00
16.00	4.02	0.63	0.00
16.20	4.04	0.63	0.00
16.40	4.05	0.64	0.00
16.60	4.07	0.65	0.00
16.80	4.09	0.66	0.00
17.00	4.11	0.67	0.00
17.20	4.12	0.67	0.00
17.40	4.14	0.68	0.00
17.60	4.16	0.69	0.00
17.80	4.17	0.69	0.00
18.00	4.19	0.70	0.00
18.20	4.20	0.71	0.00
18.40	4.21	0.71	0.00
18.60	4.23	0.72	0.00
18.80	4.24	0.73	0.00
19.00	4.26	0.73	0.00
19.20	4.27	0.74	0.00
19.40	4.28	0.74	0.00
19.60	4.29	0.75	0.00
19.80	4.30	0.76	0.00
20.00	**4.32**	**0.76**	0.00

Summary for Subcatchment 16S: to NDS11-6

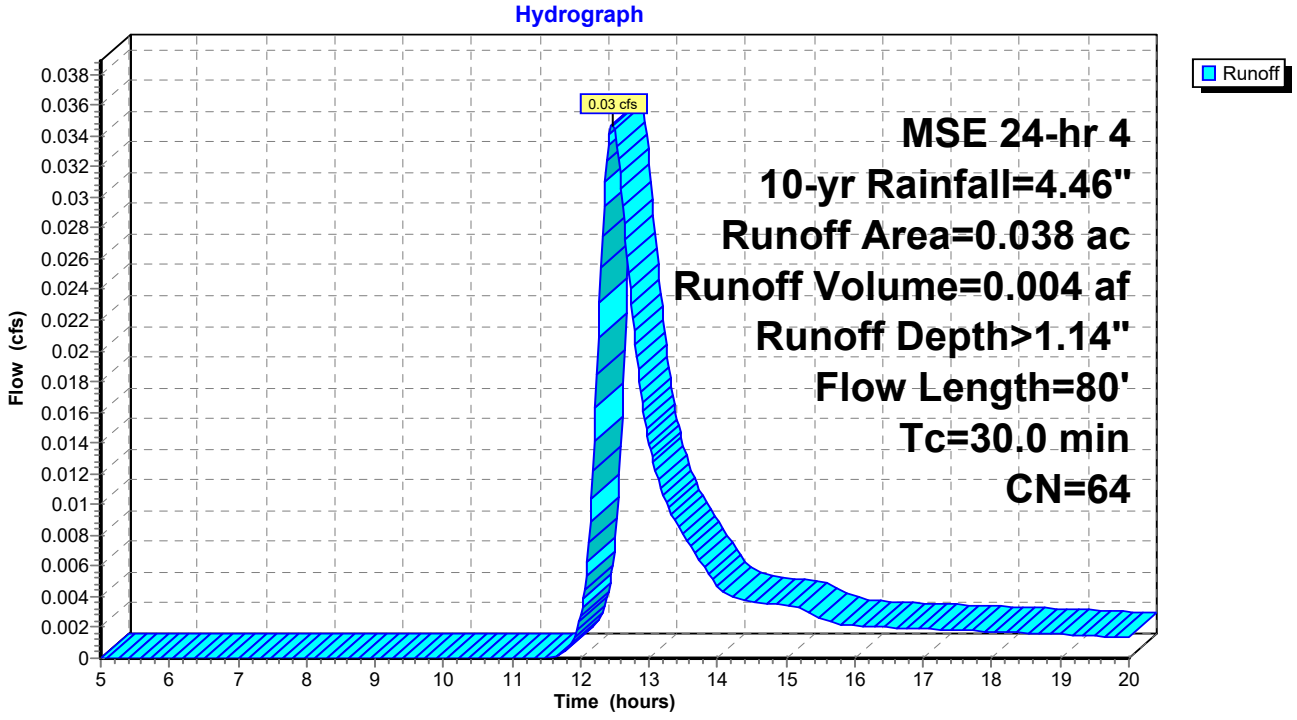
Runoff = 0.03 cfs @ 12.46 hrs, Volume= 0.004 af, Depth> 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.022	39	LS
*	0.016	98	SW
	0.038	64	Weighted Average
	0.022		57.89% Pervious Area
	0.016		42.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	40		0.04		**Direct Entry, LS**
15.0	40		0.04		**Direct Entry, SW via LS**
30.0	80	Total			

Subcatchment 16S: to NDS11-6



Hydrograph for Subcatchment 16S: to NDS11-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.00	0.00
8.40	0.48	0.00	0.00
8.60	0.50	0.00	0.00
8.80	0.52	0.00	0.00
9.00	0.54	0.00	0.00
9.20	0.57	0.00	0.00
9.40	0.60	0.00	0.00
9.60	0.64	0.00	0.00
9.80	0.67	0.00	0.00
10.00	0.71	0.00	0.00
10.20	0.74	0.00	0.00
10.40	0.78	0.00	0.00
10.60	0.82	0.00	0.00
10.80	0.89	0.00	0.00
11.00	0.96	0.00	0.00
11.20	1.05	0.00	0.00
11.40	1.16	0.00	0.00
11.60	1.29	0.00	0.00
11.80	1.53	0.03	0.00
12.00	2.09	0.14	0.00
12.20	2.93	0.44	0.01
12.40	3.17	0.55	**0.03**
12.60	3.30	0.61	**0.03**
12.80	3.41	0.66	0.02
13.00	3.50	0.70	0.01
13.20	3.57	0.74	0.01
13.40	3.64	0.77	0.01
13.60	3.68	0.80	0.01
13.80	3.72	0.82	0.01
14.00	3.75	0.84	0.00
14.20	3.79	0.86	0.00
14.40	3.82	0.87	0.00
14.60	3.86	0.89	0.00
14.80	3.89	0.91	0.00
15.00	3.92	0.93	0.00
15.20	3.94	0.94	0.00
15.40	3.96	0.95	0.00
15.60	3.98	0.96	0.00
15.80	4.00	0.97	0.00
16.00	4.02	0.98	0.00
16.20	4.04	0.99	0.00
16.40	4.05	1.00	0.00
16.60	4.07	1.01	0.00
16.80	4.09	1.02	0.00
17.00	4.11	1.03	0.00
17.20	4.12	1.04	0.00
17.40	4.14	1.05	0.00
17.60	4.16	1.06	0.00
17.80	4.17	1.07	0.00
18.00	4.19	1.08	0.00
18.20	4.20	1.09	0.00
18.40	4.21	1.10	0.00
18.60	4.23	1.10	0.00
18.80	4.24	1.11	0.00
19.00	4.26	1.12	0.00
19.20	4.27	1.13	0.00
19.40	4.28	1.13	0.00
19.60	4.29	1.14	0.00
19.80	4.30	1.15	0.00
20.00	**4.32**	**1.15**	0.00

Summary for Reach 6R: 10" roof

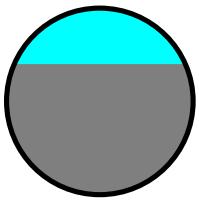
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 522% of Manning's capacity
[76] Warning: Detained 0.029 af (Pond w/culvert advised)

Inflow Area = 0.305 ac,100.00% Impervious, Inflow Depth > 4.01" for 10-yr event
Inflow = 1.42 cfs @ 12.19 hrs, Volume= 0.102 af
Outflow = 0.29 cfs @ 11.80 hrs, Volume= 0.102 af, Atten= 80%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.28 fps, Avg. Travel Time= 0.4 min

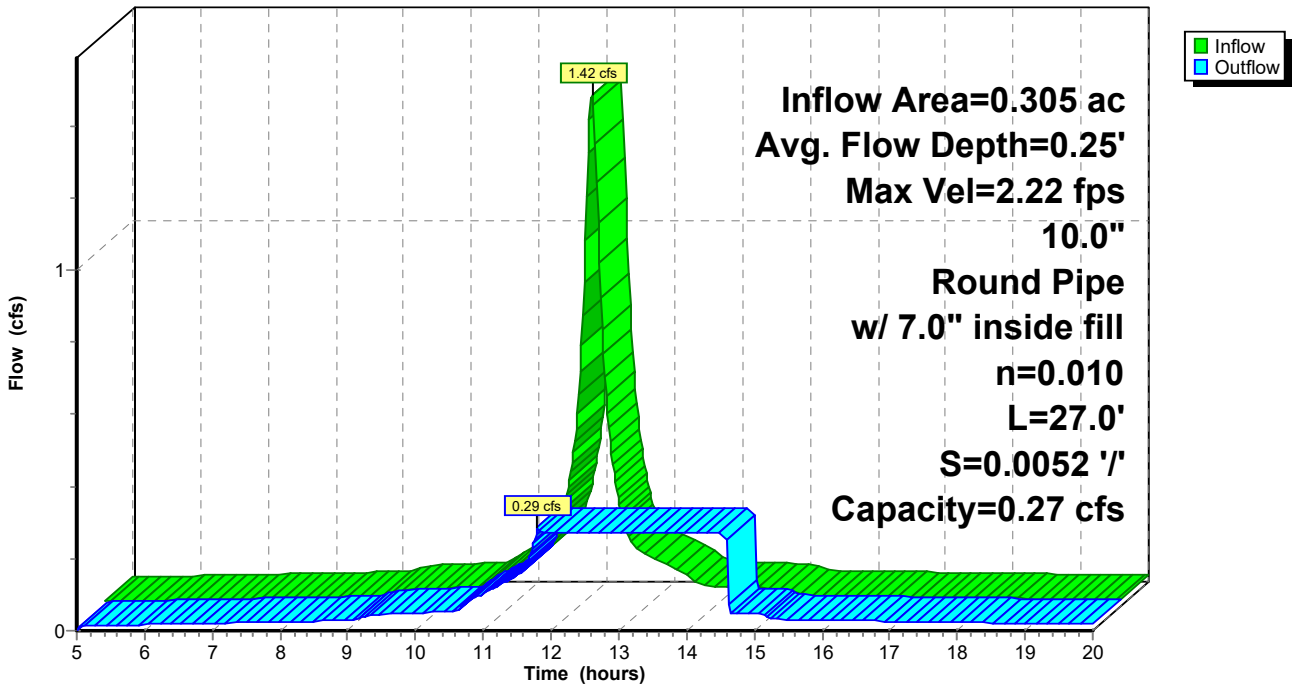
Peak Storage= 4 cf @ 11.82 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 27.0' Slope= 0.0052 '/'
Inlet Invert= 665.72', Outlet Invert= 665.58'



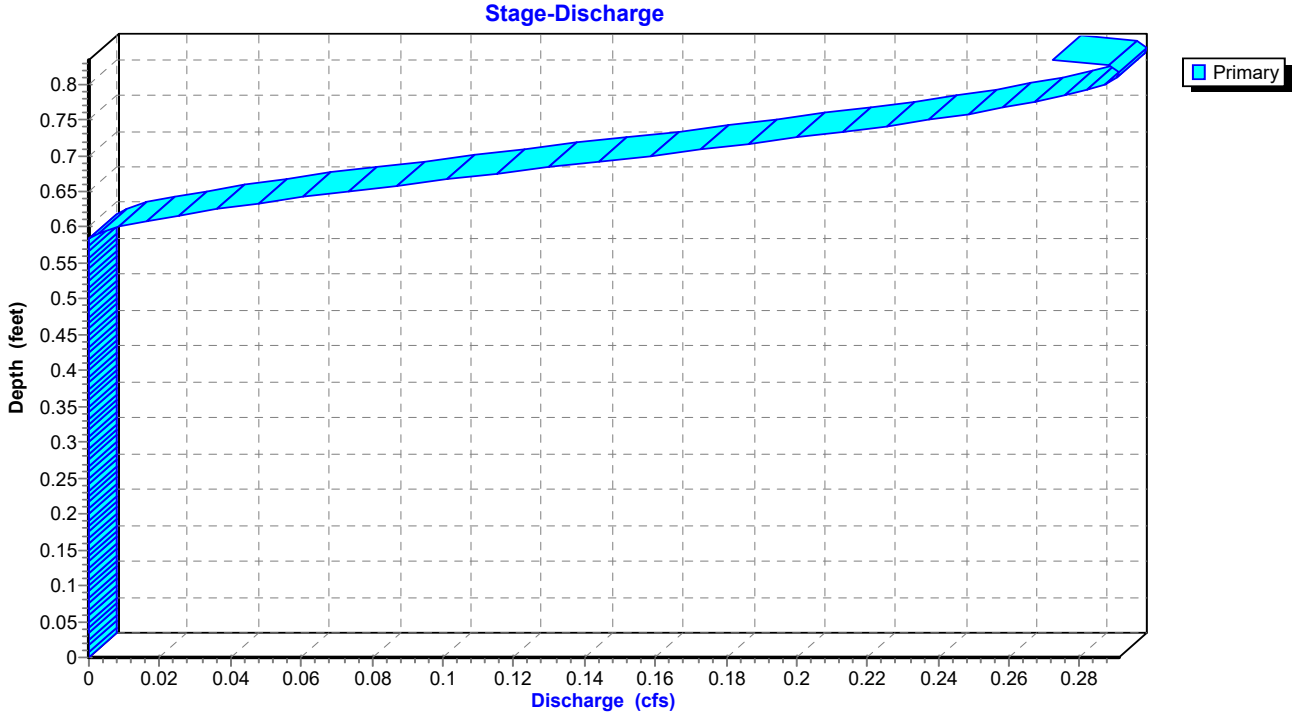
Reach 6R: 10" roof

Hydrograph

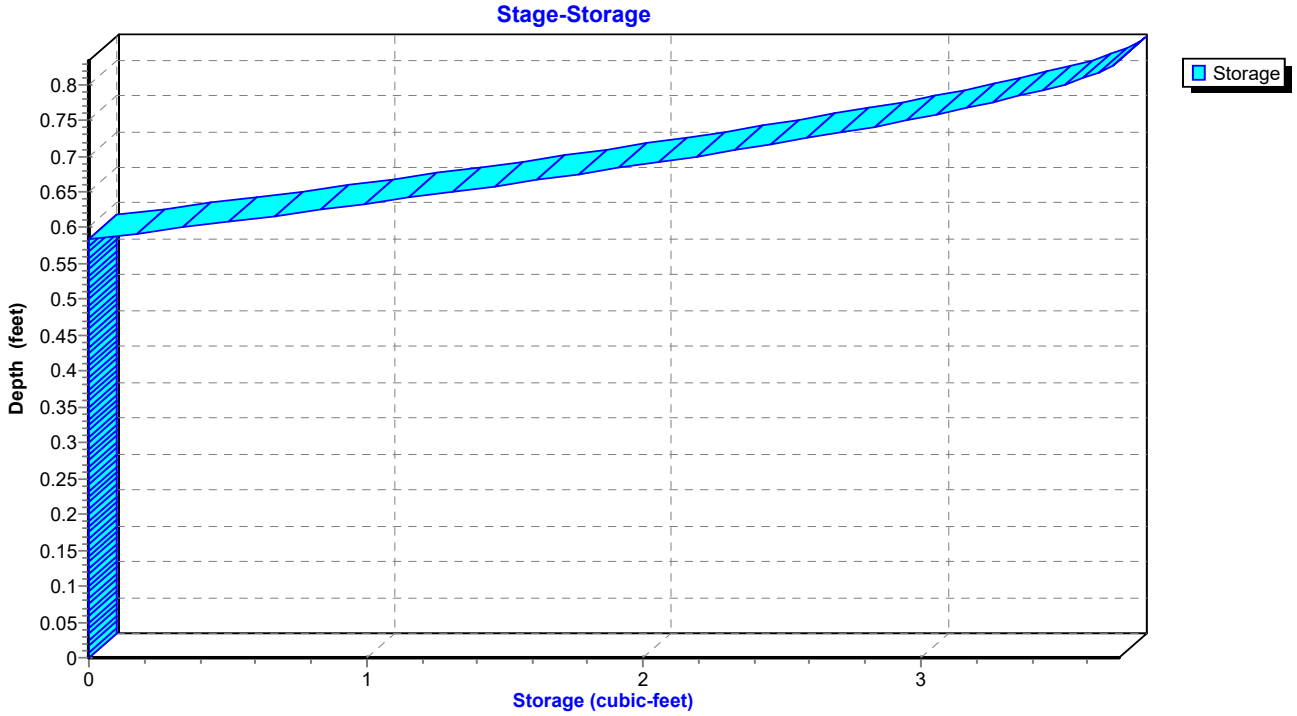


Reach 6R: 10" roof

Stage-Discharge



Reach 6R: 10" roof



Hydrograph for Reach 6R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.30	0.00
5.40	0.01	0	666.33	0.01
5.80	0.02	1	666.33	0.02
6.20	0.02	1	666.33	0.02
6.60	0.02	1	666.33	0.02
7.00	0.02	1	666.33	0.02
7.40	0.02	1	666.33	0.02
7.80	0.02	1	666.34	0.02
8.20	0.03	1	666.34	0.03
8.60	0.03	1	666.34	0.03
9.00	0.03	1	666.34	0.03
9.40	0.05	1	666.35	0.05
9.80	0.05	1	666.35	0.05
10.20	0.05	1	666.36	0.05
10.60	0.06	1	666.36	0.06
11.00	0.10	2	666.39	0.10
11.40	0.14	2	666.41	0.14
11.80	0.29	**4**	**666.52**	**0.29**
12.20	**1.42**	**4**	**666.55**	0.27
12.60	0.28	4	666.55	0.27
13.00	0.15	4	666.55	0.27
13.40	0.11	4	666.55	0.27
13.80	0.06	4	666.55	0.27
14.20	0.05	4	666.55	0.27
14.60	0.05	4	666.55	0.27
15.00	0.05	1	666.35	0.05
15.40	0.03	1	666.34	0.03
15.80	0.03	1	666.34	0.03
16.20	0.03	1	666.34	0.03
16.60	0.03	1	666.34	0.03
17.00	0.03	1	666.34	0.03
17.40	0.03	1	666.34	0.03
17.80	0.02	1	666.34	0.02
18.20	0.02	1	666.33	0.02
18.60	0.02	1	666.33	0.02
19.00	0.02	1	666.33	0.02
19.40	0.02	1	666.33	0.02
19.80	0.02	1	666.33	0.02

Stage-Discharge for Reach 6R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.35	0.00
666.32	0.67	0.01
666.33	0.90	0.02
666.34	1.08	0.03
666.35	1.25	0.04
666.36	1.39	0.06
666.37	1.51	0.07
666.38	1.62	0.09
666.39	1.72	0.11
666.40	1.81	0.12
666.41	1.88	0.14
666.42	1.95	0.16
666.43	2.01	0.18
666.44	2.06	0.19
666.45	2.11	0.21
666.46	2.14	0.22
666.47	2.17	0.24
666.48	2.19	0.25
666.49	2.21	0.26
666.50	**2.22**	0.27
666.51	2.21	0.28
666.52	2.20	0.29
666.53	2.18	**0.29**
666.54	2.14	0.29
666.55	2.03	0.28

Stage-Area-Storage for Reach 6R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	0
665.77	0.0	0	666.28	0.0	0
665.78	0.0	0	666.29	0.0	0
665.79	0.0	0	666.30	0.0	0
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	1
665.83	0.0	0	666.34	0.0	1
665.84	0.0	0	666.35	0.0	1
665.85	0.0	0	666.36	0.0	1
665.86	0.0	0	666.37	0.0	1
665.87	0.0	0	666.38	0.1	1
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	2
665.92	0.0	0	666.43	0.1	2
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	3
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	**0.1**	**4**
666.05	0.0	0			
666.06	0.0	0			
666.07	0.0	0			
666.08	0.0	0			
666.09	0.0	0			
666.10	0.0	0			
666.11	0.0	0			
666.12	0.0	0			
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			

Summary for Reach 7R: MH8 12"

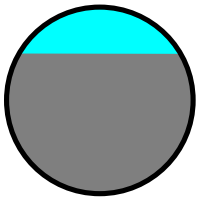
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 203% of Manning's capacity
[76] Warning: Detained 0.069 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 6R INLET depth by 0.15' @ 18.78 hrs
[63] Warning: Exceeded Reach 8R INLET depth by 0.07' @ 18.78 hrs

Inflow Area = 0.644 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.56 cfs @ 11.80 hrs, Volume= 0.215 af
Outflow = 0.29 cfs @ 11.33 hrs, Volume= 0.215 af, Atten= 48%, Lag= 0.0 min

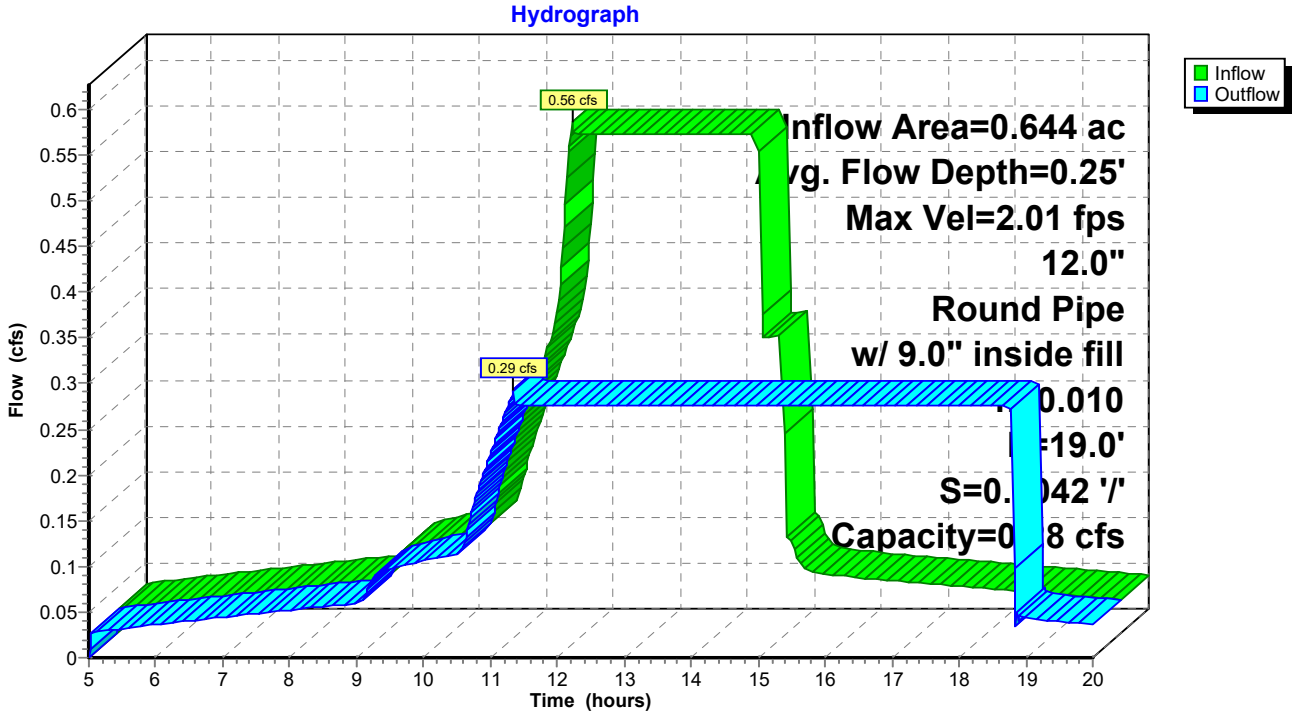
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.53 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 11.36 hrs
Average Depth at Peak Storage= 1.00' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.28 cfs

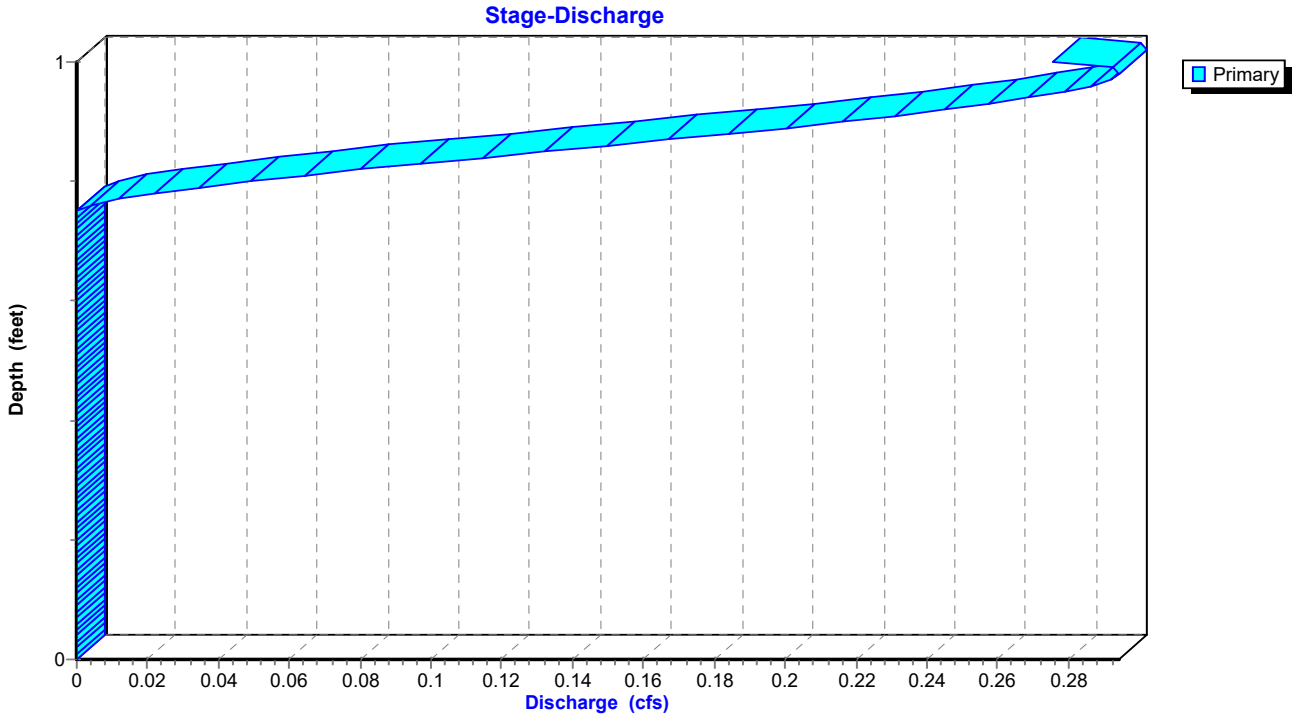
12.0" Round Pipe w/ 9.0" inside fill
n= 0.010
Length= 19.0' Slope= 0.0042 '/'
Inlet Invert= 665.48', Outlet Invert= 665.40'



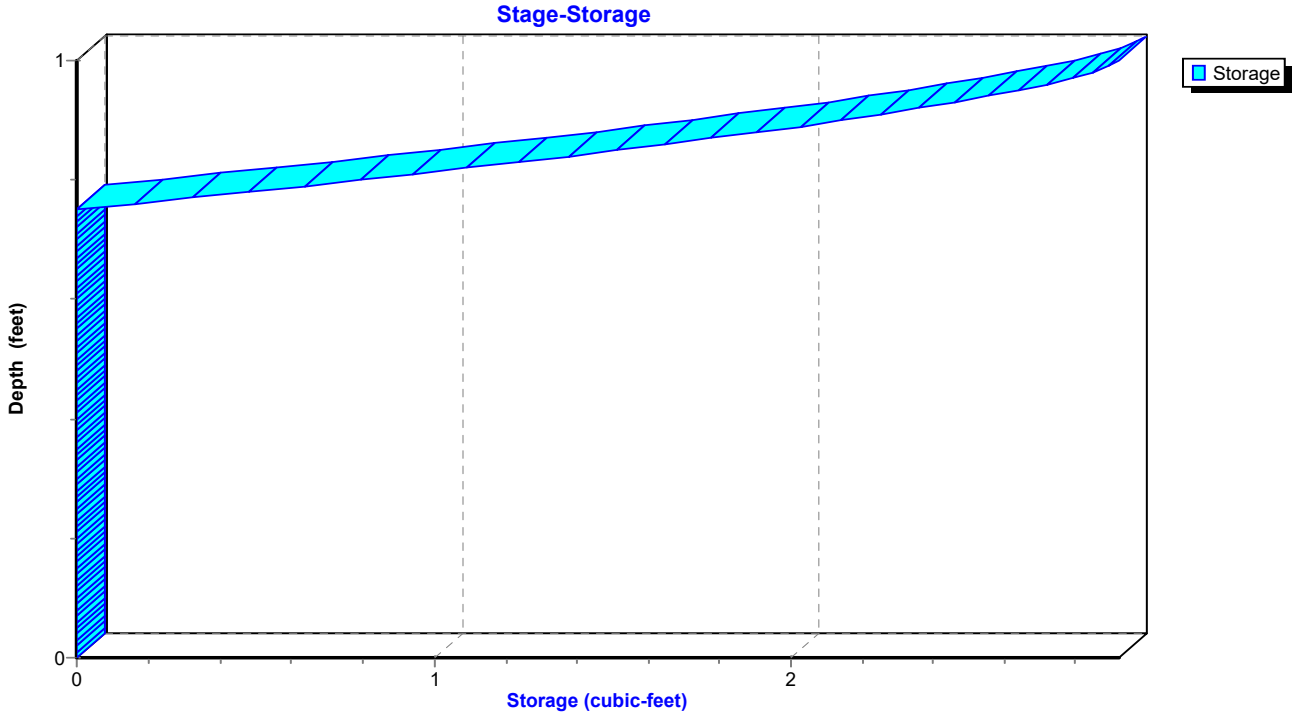
Reach 7R: MH8 12"



Reach 7R: MH8 12"



Reach 7R: MH8 12"



Hydrograph for Reach 7R: MH8 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.23	0.00
5.40	0.03	1	666.27	0.03
5.80	0.03	1	666.27	0.03
6.20	0.04	1	666.27	0.04
6.60	0.04	1	666.27	0.04
7.00	0.04	1	666.28	0.04
7.40	0.05	1	666.28	0.05
7.80	0.05	1	666.28	0.05
8.20	0.05	1	666.28	0.05
8.60	0.06	1	666.29	0.06
9.00	0.06	1	666.29	0.06
9.40	0.10	1	666.31	0.10
9.80	0.10	1	666.31	0.10
10.20	0.11	1	666.32	0.11
10.60	0.12	1	666.32	0.12
11.00	0.22	**2**	**666.38**	**0.22**
11.40	0.31	**3**	**666.48**	**0.28**
11.80	**0.56**	3	666.48	0.28
12.20	0.55	3	666.48	0.28
12.60	0.55	3	666.48	0.28
13.00	0.55	3	666.48	0.28
13.40	0.55	3	666.48	0.28
13.80	0.55	3	666.48	0.28
14.20	0.55	3	666.48	0.28
14.60	0.55	3	666.48	0.28
15.00	0.10	3	666.48	0.28
15.40	0.07	3	666.48	0.28
15.80	0.06	3	666.48	0.28
16.20	0.06	3	666.48	0.28
16.60	0.06	3	666.48	0.28
17.00	0.06	3	666.48	0.28
17.40	0.05	3	666.48	0.28
17.80	0.05	3	666.48	0.28
18.20	0.05	3	666.48	0.28
18.60	0.05	3	666.48	0.28
19.00	0.04	1	666.28	0.04
19.40	0.04	1	666.27	0.04
19.80	0.04	1	666.27	0.04

Stage-Discharge for Reach 7R: MH8 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.44	0.00
666.25	0.68	0.01
666.26	0.87	0.02
666.27	1.03	0.03
666.28	1.17	0.05
666.29	1.29	0.06
666.30	1.40	0.08
666.31	1.50	0.10
666.32	1.58	0.11
666.33	1.66	0.13
666.34	1.72	0.15
666.35	1.78	0.17
666.36	1.84	0.18
666.37	1.88	0.20
666.38	1.92	0.22
666.39	1.95	0.23
666.40	1.97	0.25
666.41	1.99	0.26
666.42	2.00	0.27
666.43	**2.01**	0.28
666.44	2.00	0.29
666.45	1.99	0.29
666.46	1.96	**0.29**
666.47	1.92	0.29
666.48	1.79	0.28

Stage-Area-Storage for Reach 7R: MH8 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.48	0.0	0	665.99	0.0	0
665.49	0.0	0	666.00	0.0	0
665.50	0.0	0	666.01	0.0	0
665.51	0.0	0	666.02	0.0	0
665.52	0.0	0	666.03	0.0	0
665.53	0.0	0	666.04	0.0	0
665.54	0.0	0	666.05	0.0	0
665.55	0.0	0	666.06	0.0	0
665.56	0.0	0	666.07	0.0	0
665.57	0.0	0	666.08	0.0	0
665.58	0.0	0	666.09	0.0	0
665.59	0.0	0	666.10	0.0	0
665.60	0.0	0	666.11	0.0	0
665.61	0.0	0	666.12	0.0	0
665.62	0.0	0	666.13	0.0	0
665.63	0.0	0	666.14	0.0	0
665.64	0.0	0	666.15	0.0	0
665.65	0.0	0	666.16	0.0	0
665.66	0.0	0	666.17	0.0	0
665.67	0.0	0	666.18	0.0	0
665.68	0.0	0	666.19	0.0	0
665.69	0.0	0	666.20	0.0	0
665.70	0.0	0	666.21	0.0	0
665.71	0.0	0	666.22	0.0	0
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	1
665.77	0.0	0	666.28	0.0	1
665.78	0.0	0	666.29	0.0	1
665.79	0.0	0	666.30	0.1	1
665.80	0.0	0	666.31	0.1	1
665.81	0.0	0	666.32	0.1	1
665.82	0.0	0	666.33	0.1	2
665.83	0.0	0	666.34	0.1	2
665.84	0.0	0	666.35	0.1	2
665.85	0.0	0	666.36	0.1	2
665.86	0.0	0	666.37	0.1	2
665.87	0.0	0	666.38	0.1	2
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	3
665.92	0.0	0	666.43	0.1	3
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.2	3
665.97	0.0	0	666.48	**0.2**	**3**
665.98	0.0	0			

Summary for Reach 8R: 10" roof

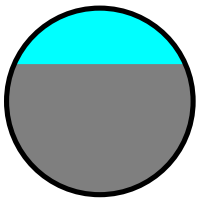
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 617% of Manning's capacity
[76] Warning: Detained 0.034 af (Pond w/culvert advised)

Inflow Area = 0.339 ac,100.00% Impervious, Inflow Depth > 4.01" for 10-yr event
Inflow = 1.69 cfs @ 12.17 hrs, Volume= 0.113 af
Outflow = 0.30 cfs @ 14.95 hrs, Volume= 0.113 af, Atten= 82%, Lag= 166.9 min

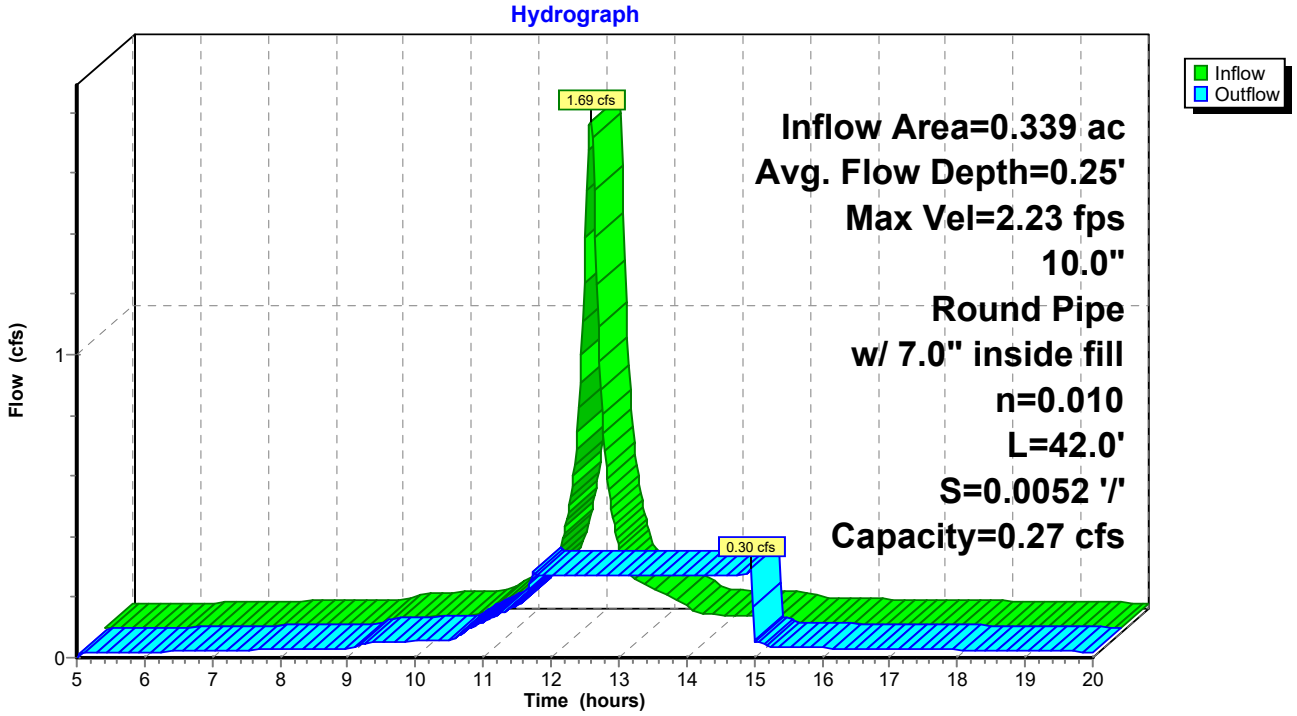
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.34 fps, Avg. Travel Time= 0.5 min

Peak Storage= 6 cf @ 11.76 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

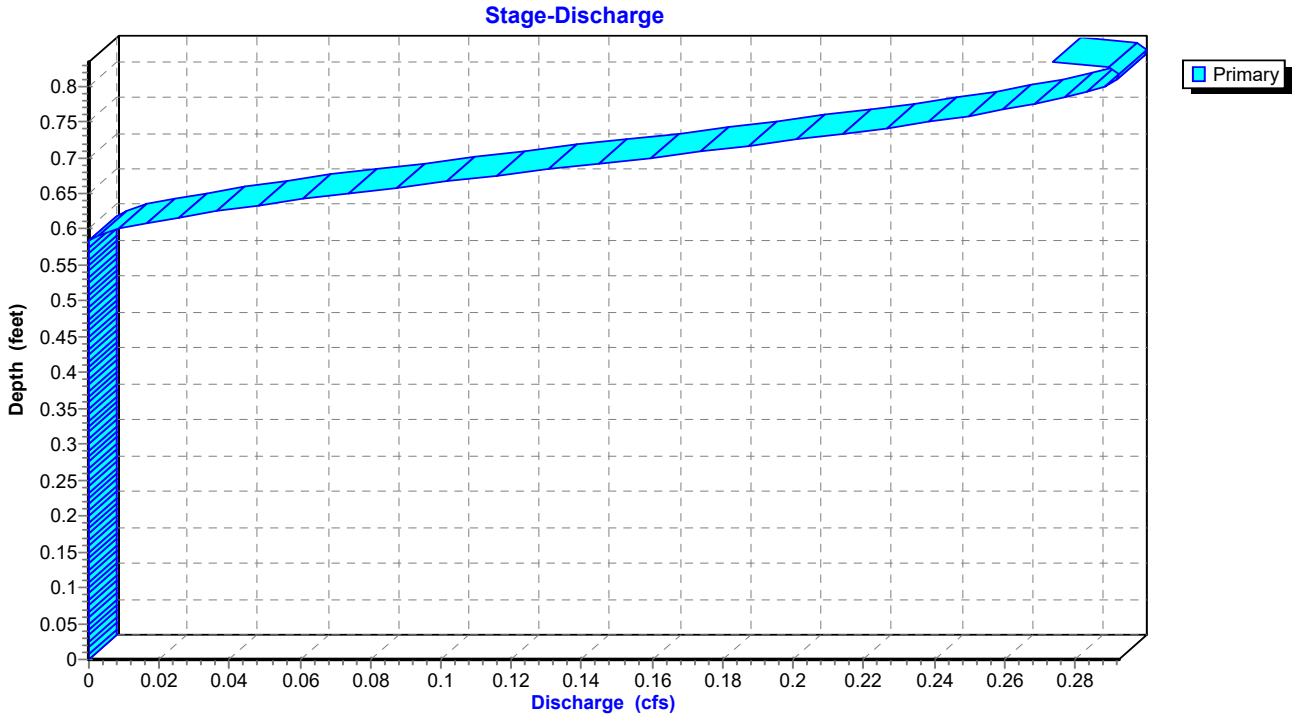
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 42.0' Slope= 0.0052 '/'
Inlet Invert= 665.80', Outlet Invert= 665.58'



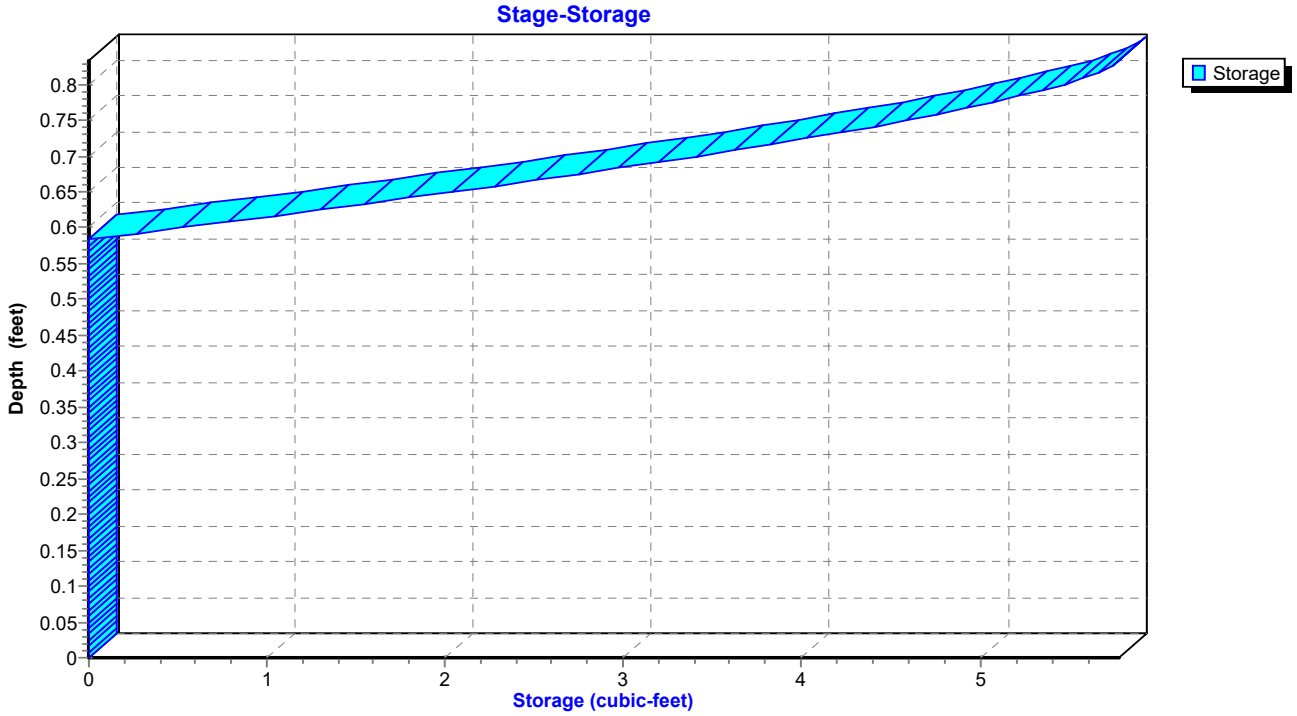
Reach 8R: 10" roof



Reach 8R: 10" roof



Reach 8R: 10" roof



Hydrograph for Reach 8R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.38	0.00
5.40	0.02	1	666.41	0.02
5.80	0.02	1	666.41	0.02
6.20	0.02	1	666.41	0.02
6.60	0.02	1	666.41	0.02
7.00	0.02	1	666.41	0.02
7.40	0.03	1	666.42	0.03
7.80	0.03	1	666.42	0.03
8.20	0.03	1	666.42	0.03
8.60	0.03	1	666.42	0.03
9.00	0.03	1	666.42	0.03
9.40	0.05	2	666.44	0.05
9.80	0.05	2	666.44	0.05
10.20	0.06	2	666.44	0.06
10.60	0.07	2	666.45	0.07
11.00	0.12	3	666.48	0.12
11.40	0.16	**3**	**666.50**	0.16
11.80	**0.35**	**6**	**666.63**	0.27
12.20	**1.60**	6	666.63	0.27
12.60	0.28	6	666.63	0.27
13.00	0.16	6	666.63	0.27
13.40	0.11	6	666.63	0.27
13.80	0.06	6	666.63	0.27
14.20	0.06	6	666.63	0.27
14.60	0.06	6	666.63	**0.27**
15.00	0.05	1	666.42	**0.06**
15.40	0.03	1	666.42	0.03
15.80	0.03	1	666.42	0.03
16.20	0.03	1	666.42	0.03
16.60	0.03	1	666.42	0.03
17.00	0.03	1	666.42	0.03
17.40	0.03	1	666.42	0.03
17.80	0.03	1	666.42	0.03
18.20	0.03	1	666.42	0.03
18.60	0.02	1	666.42	0.02
19.00	0.02	1	666.41	0.02
19.40	0.02	1	666.41	0.02
19.80	0.02	1	666.41	0.02

Stage-Discharge for Reach 8R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.35	0.00
666.40	0.68	0.01
666.41	0.90	0.02
666.42	1.09	0.03
666.43	1.25	0.04
666.44	1.39	0.06
666.45	1.52	0.07
666.46	1.63	0.09
666.47	1.73	0.11
666.48	1.81	0.12
666.49	1.89	0.14
666.50	1.96	0.16
666.51	2.02	0.18
666.52	2.07	0.19
666.53	2.12	0.21
666.54	2.15	0.22
666.55	2.18	0.24
666.56	2.21	0.25
666.57	2.22	0.26
666.58	**2.23**	0.27
666.59	2.23	0.28
666.60	2.21	0.29
666.61	2.19	**0.29**
666.62	2.15	0.29
666.63	2.04	0.28

Stage-Area-Storage for Reach 8R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	0
665.83	0.0	0	666.34	0.0	0
665.84	0.0	0	666.35	0.0	0
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	1
665.90	0.0	0	666.41	0.0	1
665.91	0.0	0	666.42	0.0	1
665.92	0.0	0	666.43	0.0	1
665.93	0.0	0	666.44	0.0	2
665.94	0.0	0	666.45	0.0	2
665.95	0.0	0	666.46	0.1	2
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	4
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	0.1	5
666.05	0.0	0	666.56	0.1	5
666.06	0.0	0	666.57	0.1	5
666.07	0.0	0	666.58	0.1	5
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	5
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	6
666.12	0.0	0	666.63	**0.1**	**6**
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			
666.23	0.0	0			
666.24	0.0	0			
666.25	0.0	0			
666.26	0.0	0			
666.27	0.0	0			
666.28	0.0	0			
666.29	0.0	0			
666.30	0.0	0			

Summary for Reach 9R: inlet 3 18"

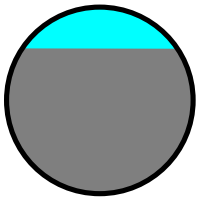
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 122% of Manning's capacity
[76] Warning: Detained 0.001 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 7R INLET depth by 0.32' @ 12.02 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 1.07 cfs @ 12.08 hrs, Volume= 0.256 af
Outflow = 0.88 cfs @ 12.14 hrs, Volume= 0.256 af, Atten= 18%, Lag= 3.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.36 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.01 fps, Avg. Travel Time= 0.3 min

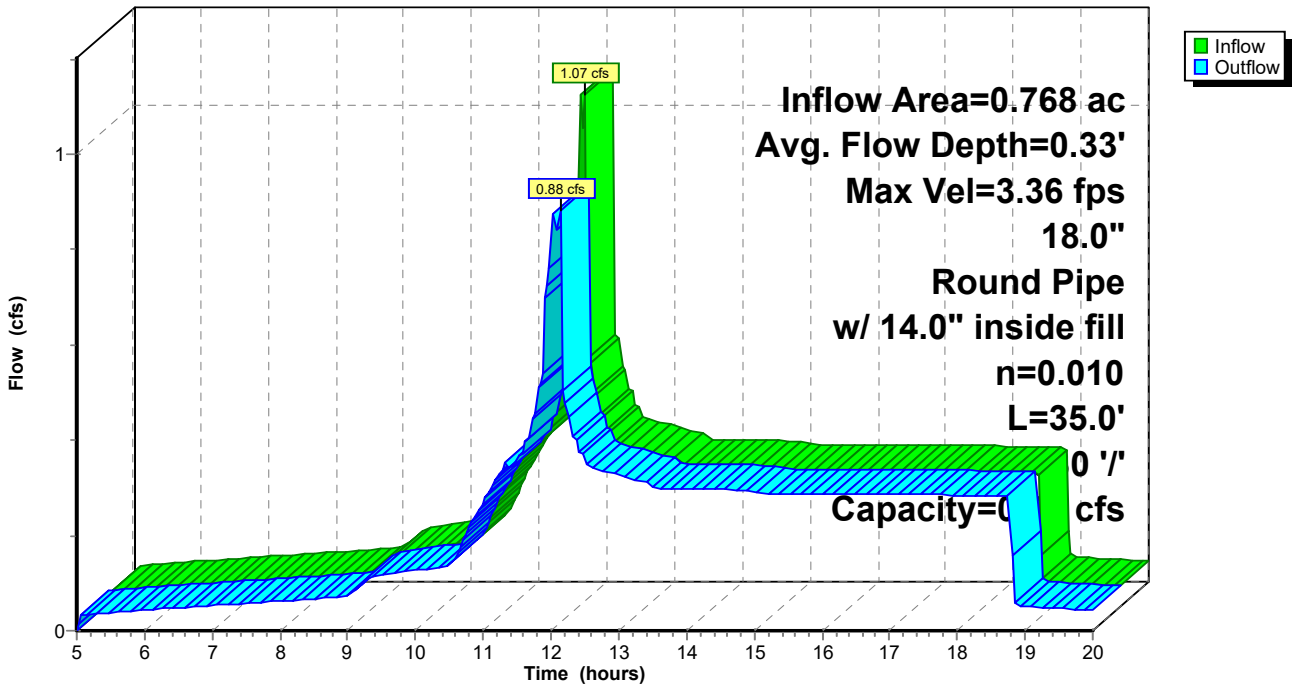
Peak Storage= 10 cf @ 12.02 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.88 cfs

18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 35.0' Slope= 0.0080 '/'
Inlet Invert= 665.30', Outlet Invert= 665.02'



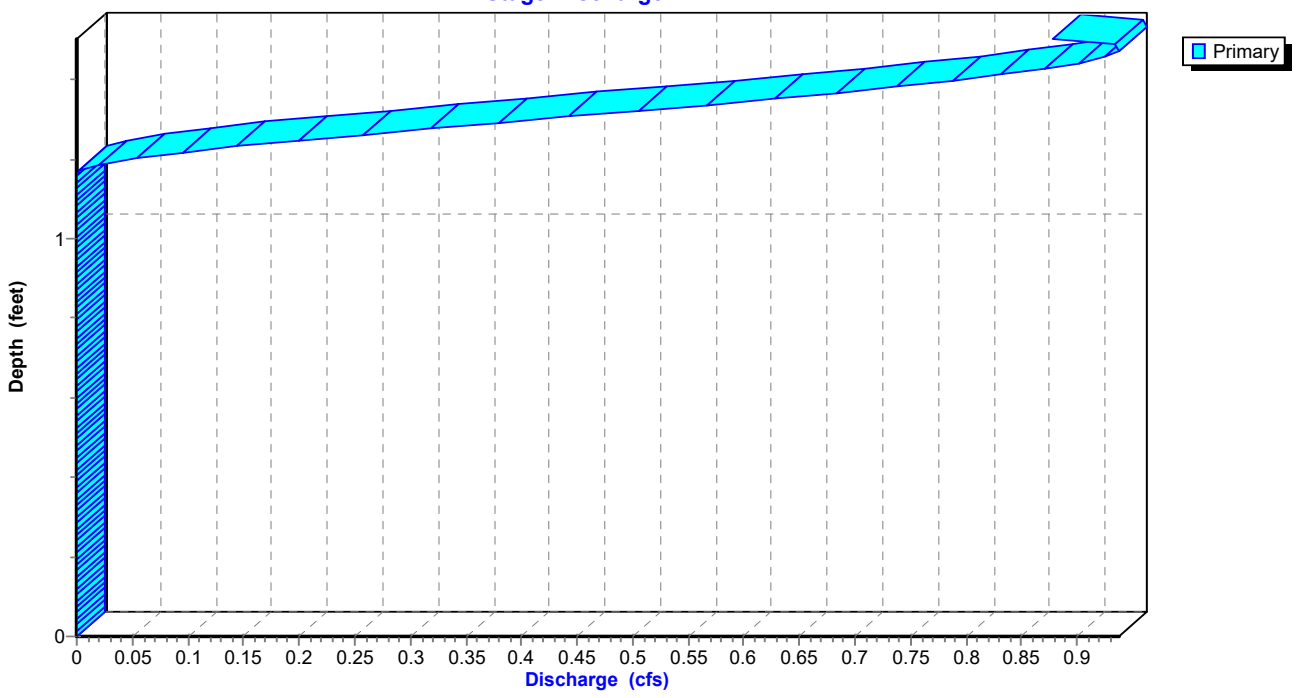
Reach 9R: inlet 3 18"

Hydrograph

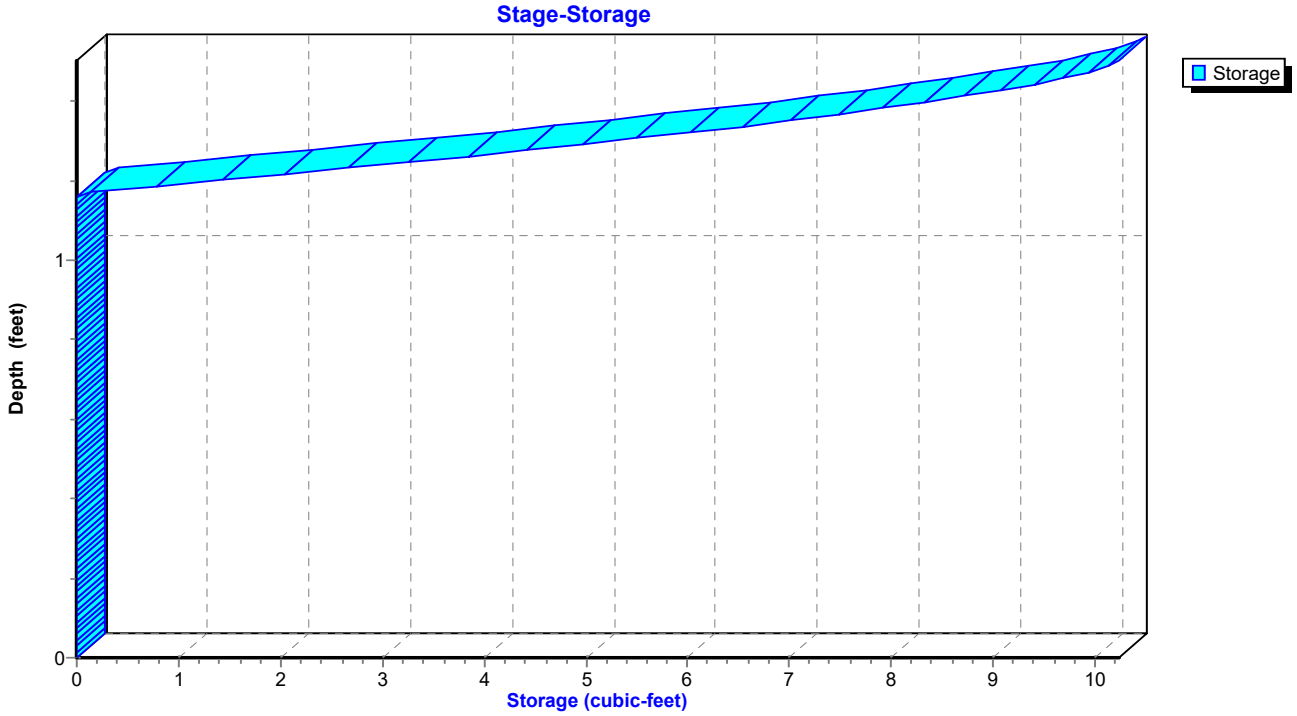


Reach 9R: inlet 3 18"

Stage-Discharge



Reach 9R: inlet 3 18"



Hydrograph for Reach 9R: inlet 3 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.47	0.00
5.40	0.04	1	666.49	0.04
5.80	0.04	1	666.49	0.04
6.20	0.05	1	666.50	0.05
6.60	0.05	1	666.50	0.05
7.00	0.05	1	666.50	0.05
7.40	0.06	1	666.50	0.06
7.80	0.06	2	666.50	0.06
8.20	0.06	2	666.50	0.06
8.60	0.07	2	666.51	0.07
9.00	0.07	2	666.51	0.07
9.40	0.11	2	666.52	0.11
9.80	0.12	2	666.52	0.12
10.20	0.13	2	666.53	0.13
10.60	0.16	3	666.53	0.15
11.00	0.27	4	666.56	0.27
11.40	0.34	5	666.58	0.34
11.80	**0.48**	**6**	**666.61**	**0.47**
12.20	**0.49**	**6**	**666.62**	**0.51**
12.60	0.34	5	666.58	0.34
13.00	0.33	4	666.58	0.33
13.40	0.31	4	666.57	0.31
13.80	0.30	4	666.57	0.30
14.20	0.30	4	666.57	0.30
14.60	0.30	4	666.57	0.30
15.00	0.29	4	666.57	0.29
15.40	0.29	4	666.57	0.29
15.80	0.29	4	666.57	0.29
16.20	0.29	4	666.57	0.29
16.60	0.29	4	666.57	0.29
17.00	0.29	4	666.57	0.29
17.40	0.29	4	666.57	0.29
17.80	0.28	4	666.57	0.28
18.20	0.28	4	666.57	0.28
18.60	0.28	4	666.57	0.28
19.00	0.05	1	666.50	0.05
19.40	0.05	1	666.50	0.05
19.80	0.05	1	666.50	0.05

Stage-Discharge for Reach 9R: inlet 3 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.10	0.00
666.47	0.29	0.00
666.48	0.70	0.01
666.49	1.03	0.03
666.50	1.30	0.05
666.51	1.52	0.08
666.52	1.72	0.11
666.53	1.90	0.14
666.54	2.06	0.18
666.55	2.21	0.22
666.56	2.34	0.26
666.57	2.46	0.30
666.58	2.57	0.34
666.59	2.68	0.38
666.60	2.77	0.42
666.61	2.86	0.46
666.62	2.94	0.51
666.63	3.01	0.55
666.64	3.07	0.59
666.65	3.13	0.63
666.66	3.18	0.67
666.67	3.22	0.70
666.68	3.26	0.74
666.69	3.29	0.77
666.70	3.32	0.80
666.71	3.34	0.83
666.72	3.35	0.86
666.73	3.36	0.88
666.74	**3.36**	0.90
666.75	3.35	0.92
666.76	3.33	0.93
666.77	3.30	**0.94**
666.78	3.25	0.94
666.79	3.15	0.92
666.80	3.01	0.88

Stage-Area-Storage for Reach 9R: inlet 3 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	1
666.50	0.0	1
666.52	0.1	2
666.54	0.1	3
666.56	0.1	4
666.58	0.1	5
666.60	0.2	5
666.62	0.2	6
666.64	0.2	7
666.66	0.2	7
666.68	0.2	8
666.70	0.2	8
666.72	0.3	9
666.74	0.3	9
666.76	0.3	10
666.78	0.3	10
666.80	**0.3**	**10**

Summary for Reach 10R: MH7 18"

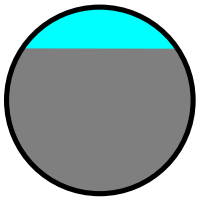
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 127% of Manning's capacity
[76] Warning: Detained 0.002 af (Pond w/culvert advised)
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=3)
[62] Hint: Exceeded Reach 9R OUTLET depth by 0.20' @ 12.22 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.88 cfs @ 12.14 hrs, Volume= 0.256 af
Outflow = 0.72 cfs @ 11.94 hrs, Volume= 0.256 af, Atten= 18%, Lag= 0.0 min

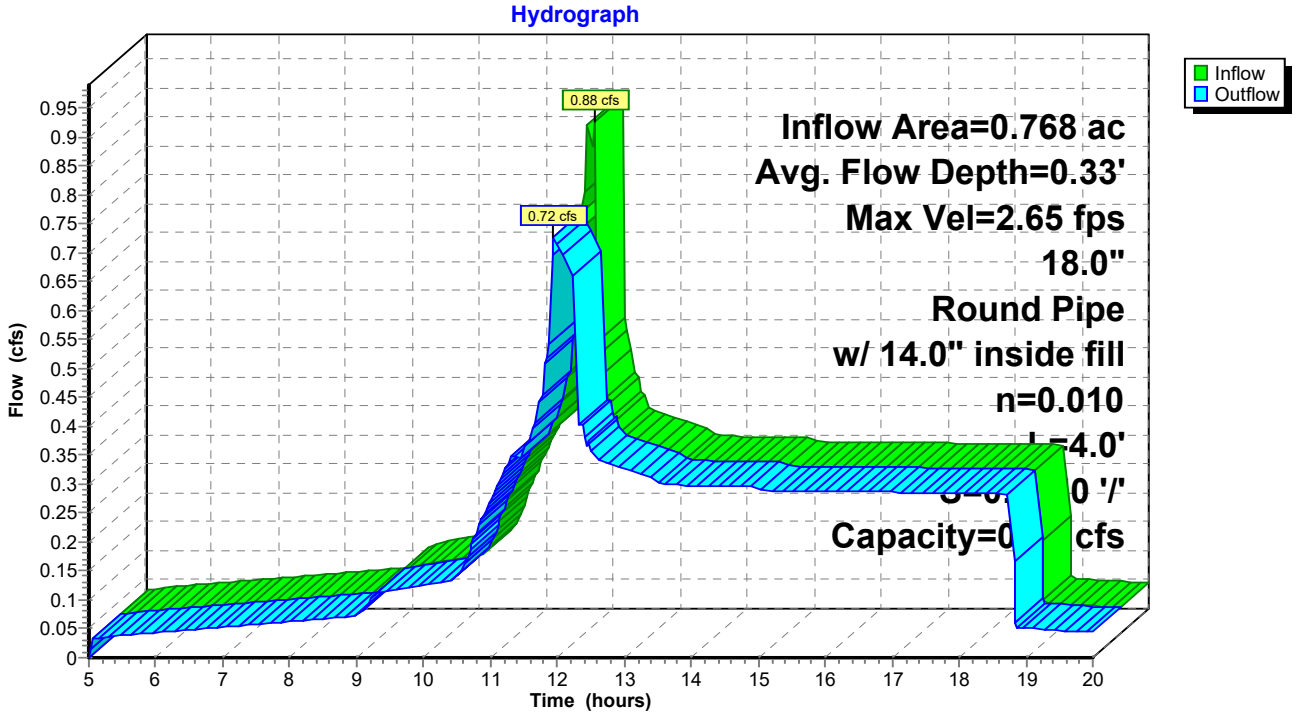
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.65 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.72 fps, Avg. Travel Time= 0.0 min

Peak Storage= 1 cf @ 12.00 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

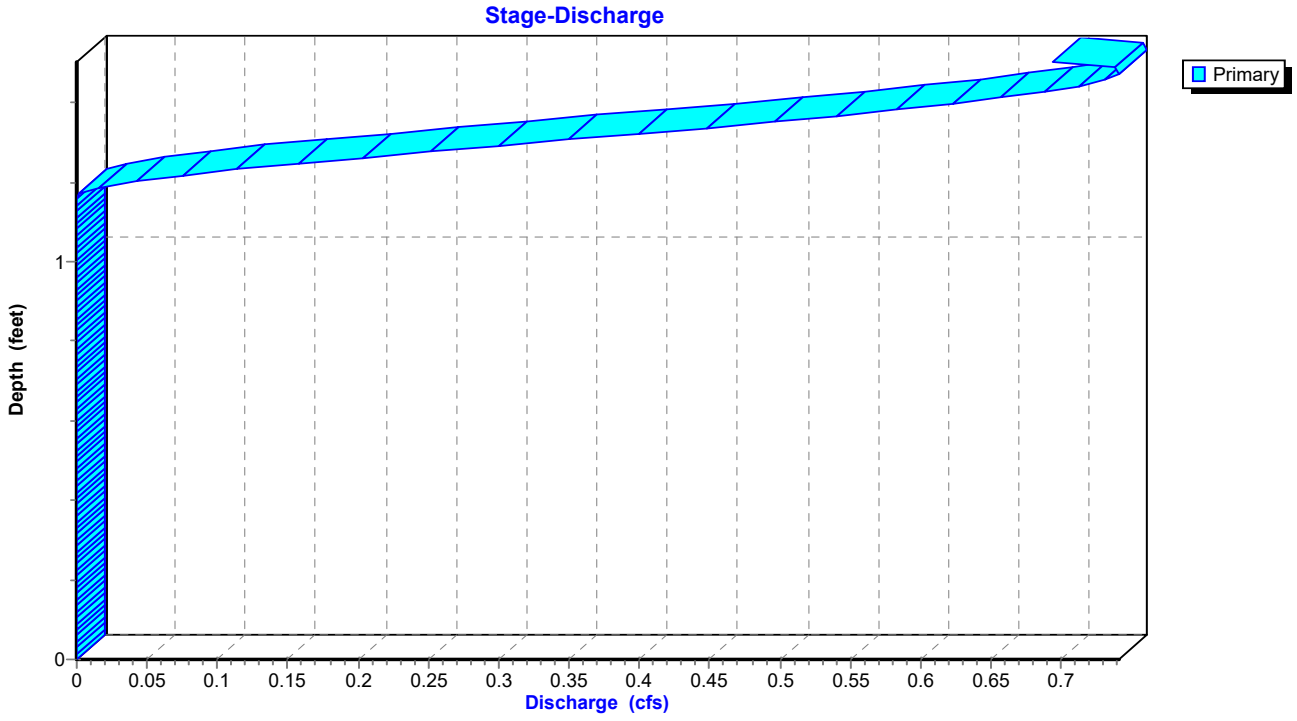
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 4.0' Slope= 0.0050 '/'
Inlet Invert= 665.02', Outlet Invert= 665.00'



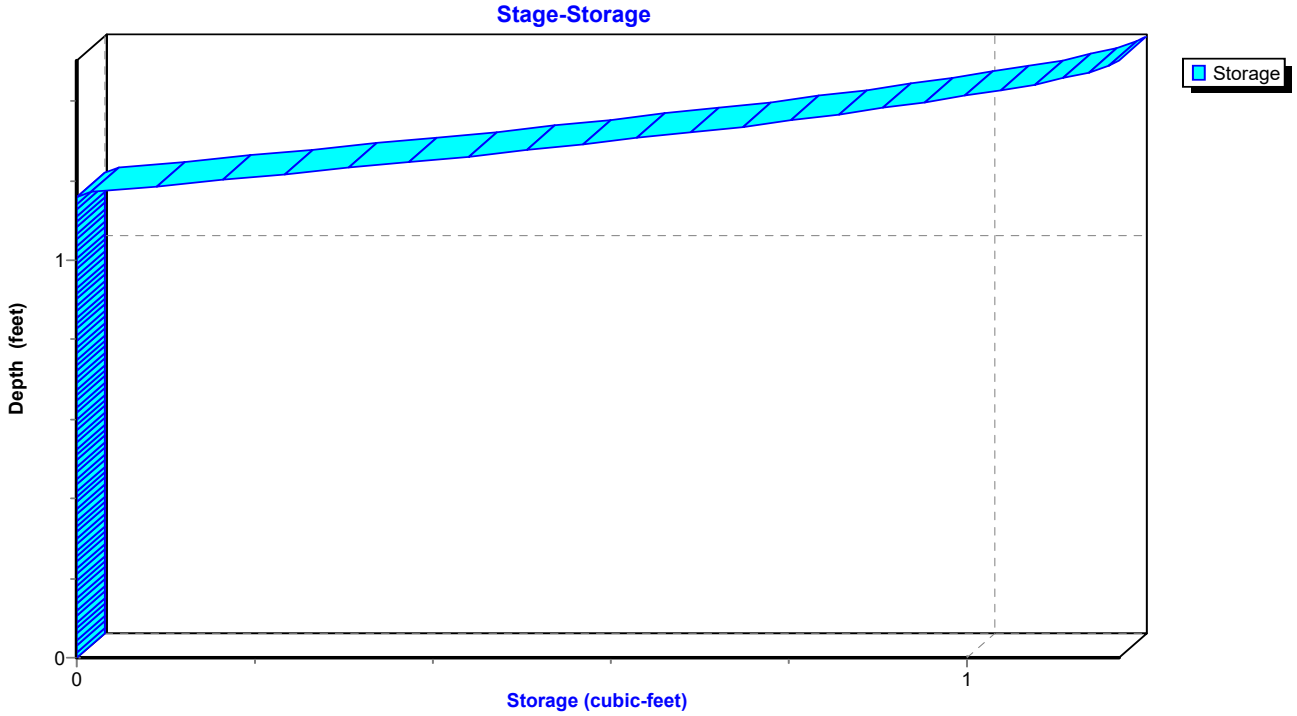
Reach 10R: MH7 18"



Reach 10R: MH7 18"



Reach 10R: MH7 18"



Hydrograph for Reach 10R: MH7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.19	0.00
5.40	0.04	0	666.22	0.04
5.80	0.04	0	666.22	0.04
6.20	0.05	0	666.22	0.05
6.60	0.05	0	666.22	0.05
7.00	0.05	0	666.22	0.05
7.40	0.06	0	666.23	0.06
7.80	0.06	0	666.23	0.06
8.20	0.06	0	666.23	0.06
8.60	0.07	0	666.23	0.07
9.00	0.07	0	666.23	0.07
9.40	0.11	0	666.25	0.11
9.80	0.12	0	666.25	0.12
10.20	0.13	0	666.26	0.13
10.60	0.15	0	666.26	0.15
11.00	0.27	1	666.30	0.27
11.40	0.34	1	666.32	0.34
11.80	**0.47**	**1**	**666.36**	**0.47**
12.20	**0.51**	**1**	**666.52**	**0.69**
12.60	0.34	1	666.32	0.34
13.00	0.33	1	666.32	0.33
13.40	0.31	1	666.31	0.31
13.80	0.30	1	666.31	0.30
14.20	0.30	1	666.31	0.30
14.60	0.30	1	666.31	0.30
15.00	0.29	1	666.31	0.29
15.40	0.29	1	666.31	0.29
15.80	0.29	1	666.31	0.29
16.20	0.29	1	666.31	0.29
16.60	0.29	1	666.31	0.29
17.00	0.29	1	666.31	0.29
17.40	0.29	1	666.31	0.29
17.80	0.28	1	666.31	0.28
18.20	0.28	1	666.31	0.28
18.60	0.28	1	666.30	0.28
19.00	0.05	0	666.22	0.05
19.40	0.05	0	666.22	0.05
19.80	0.05	0	666.22	0.05

Stage-Discharge for Reach 10R: MH7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.02	0.00	0.00	665.53	0.00	0.00	666.04	0.00	0.00
665.03	0.00	0.00	665.54	0.00	0.00	666.05	0.00	0.00
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.08	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.23	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.55	0.01
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.82	0.02
665.20	0.00	0.00	665.71	0.00	0.00	666.22	1.03	0.04
665.21	0.00	0.00	665.72	0.00	0.00	666.23	1.20	0.06
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.36	0.09
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.50	0.11
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.63	0.14
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.74	0.17
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.85	0.20
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.95	0.24
665.28	0.00	0.00	665.79	0.00	0.00	666.30	2.04	0.27
665.29	0.00	0.00	665.80	0.00	0.00	666.31	2.12	0.30
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.19	0.33
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.26	0.37
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.32	0.40
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.38	0.43
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.43	0.46
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.47	0.50
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.51	0.53
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.55	0.56
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.58	0.58
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.60	0.61
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.62	0.63
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.64	0.66
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.65	0.68
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.65	0.70
665.44	0.00	0.00	665.95	0.00	0.00	666.46	**2.65**	0.71
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.73
665.46	0.00	0.00	665.97	0.00	0.00	666.48	2.63	0.73
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.61	**0.74**
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.57	0.74
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.49	0.72
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.38	0.69
665.51	0.00	0.00	666.02	0.00	0.00			
665.52	0.00	0.00	666.03	0.00	0.00			

Stage-Area-Storage for Reach 10R: MH7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.02	0.0	0
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.1	0
666.26	0.1	0
666.28	0.1	0
666.30	0.1	1
666.32	0.2	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	1
666.40	0.2	1
666.42	0.2	1
666.44	0.3	1
666.46	0.3	1
666.48	0.3	1
666.50	0.3	1
666.52	**0.3**	**1**

Summary for Reach 11R: inlet 7 18"

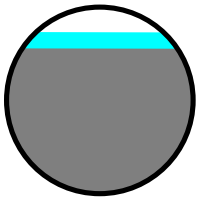
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.33 cfs @ 12.33 hrs, Volume= 0.033 af
Outflow = 0.33 cfs @ 12.34 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.7 min

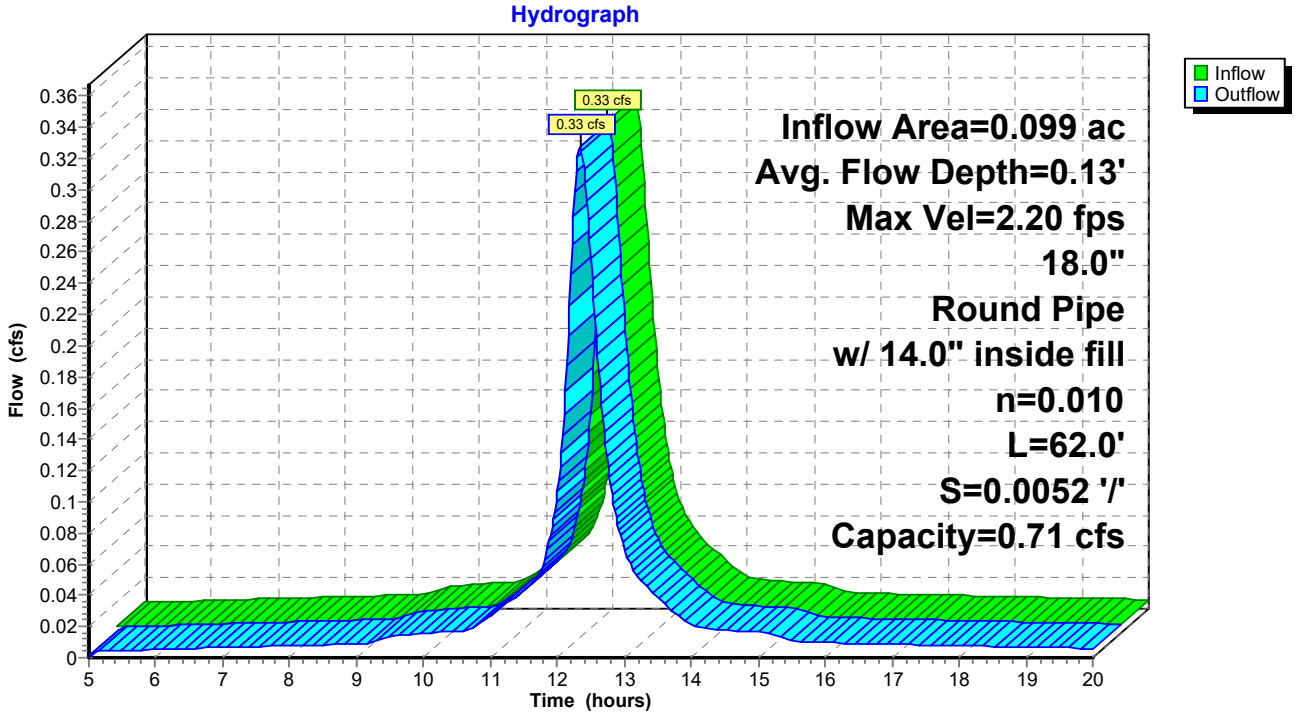
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.20 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.78 fps, Avg. Travel Time= 1.3 min

Peak Storage= 9 cf @ 12.33 hrs
Average Depth at Peak Storage= 1.30' above invert (0.13' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.71 cfs

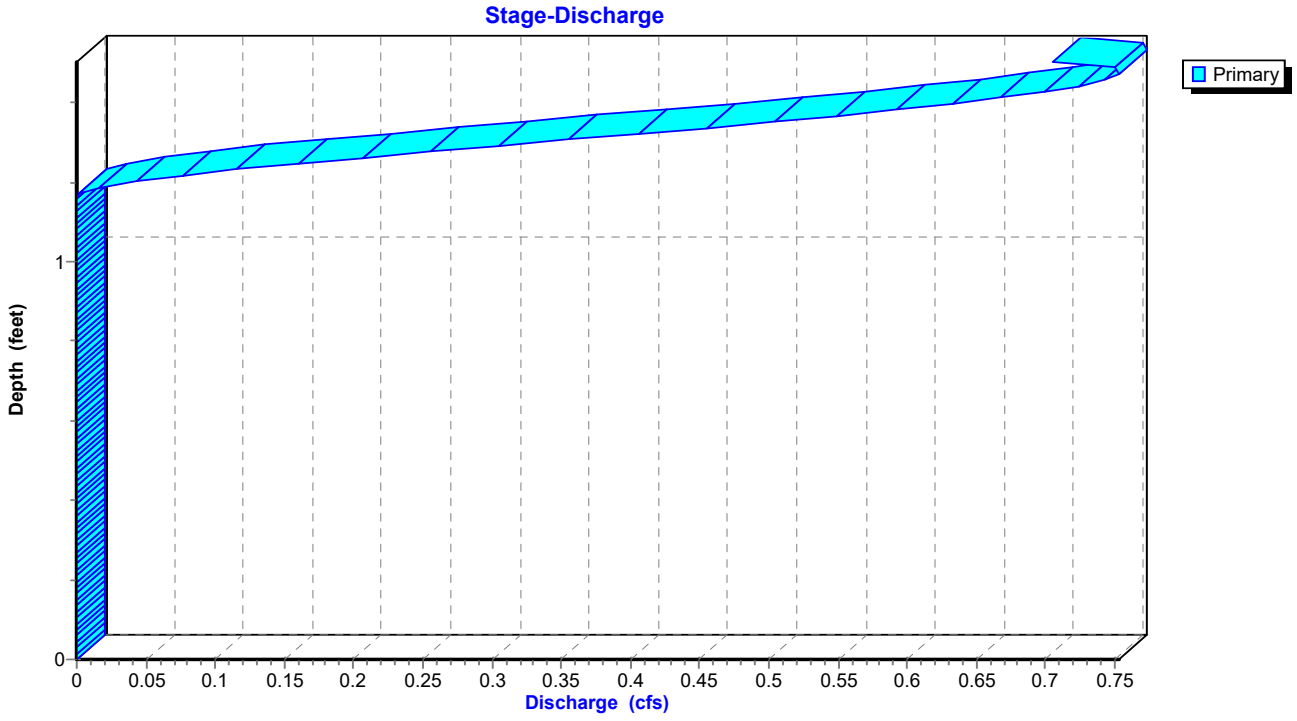
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0052 '/'
Inlet Invert= 665.36', Outlet Invert= 665.04'



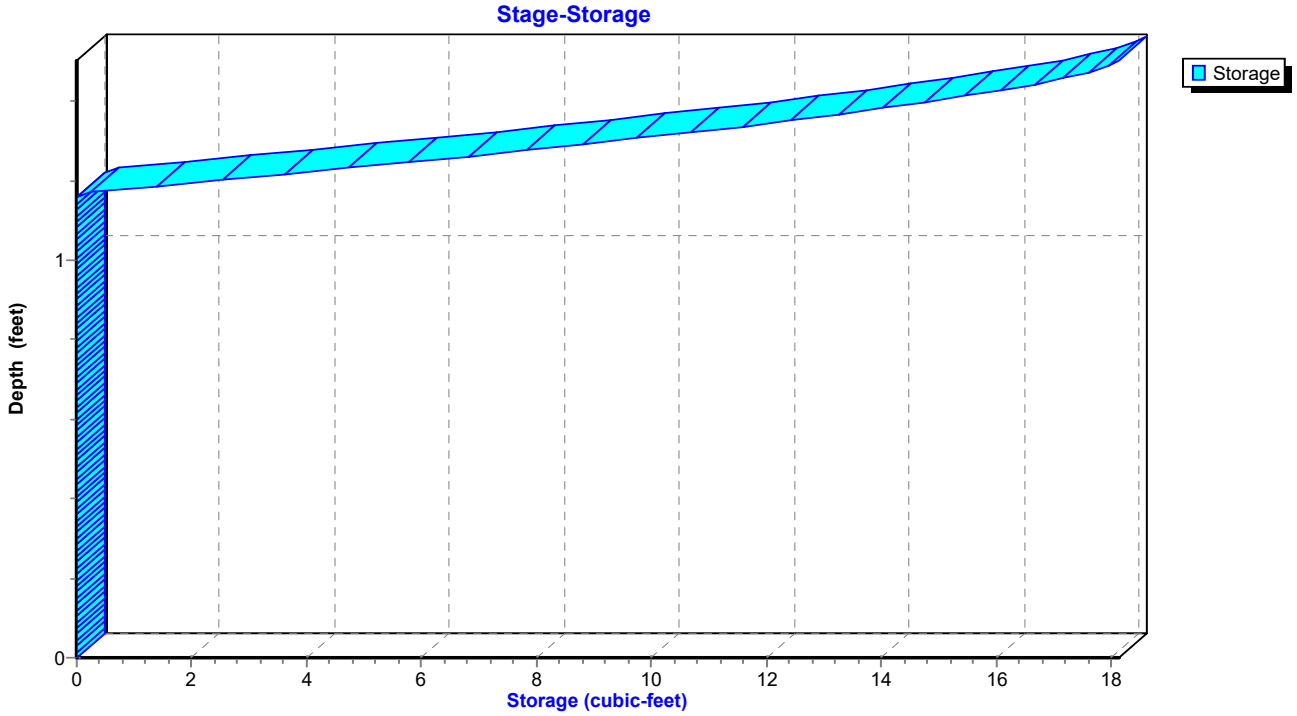
Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Hydrograph for Reach 11R: inlet 7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.53	0.00
5.40	0.00	1	666.53	0.00
5.80	0.01	1	666.53	0.00
6.20	0.01	1	666.53	0.01
6.60	0.01	1	666.53	0.01
7.00	0.01	1	666.54	0.01
7.40	0.01	1	666.54	0.01
7.80	0.01	1	666.54	0.01
8.20	0.01	1	666.54	0.01
8.60	0.01	1	666.54	0.01
9.00	0.01	1	666.54	0.01
9.40	0.01	1	666.54	0.01
9.80	0.02	1	666.54	0.02
10.20	0.02	1	666.54	0.02
10.60	0.02	1	666.55	0.02
11.00	0.03	2	666.55	0.03
11.40	0.04	2	666.56	0.04
11.80	0.06	3	666.57	0.06
12.20	**0.26**	**8**	**666.63**	**0.25**
12.60	**0.19**	**6**	**666.61**	**0.19**
13.00	0.07	3	666.57	0.07
13.40	0.04	3	666.56	0.04
13.80	0.03	2	666.55	0.03
14.20	0.02	2	666.55	0.02
14.60	0.02	1	666.55	0.02
15.00	0.02	1	666.55	0.02
15.40	0.01	1	666.54	0.01
15.80	0.01	1	666.54	0.01
16.20	0.01	1	666.54	0.01
16.60	0.01	1	666.54	0.01
17.00	0.01	1	666.54	0.01
17.40	0.01	1	666.54	0.01
17.80	0.01	1	666.54	0.01
18.20	0.01	1	666.54	0.01
18.60	0.01	1	666.54	0.01
19.00	0.01	1	666.54	0.01
19.40	0.01	1	666.54	0.01
19.80	0.01	1	666.53	0.01

Stage-Discharge for Reach 11R: inlet 7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.36	0.00	0.00	665.87	0.00	0.00	666.38	0.00	0.00
665.37	0.00	0.00	665.88	0.00	0.00	666.39	0.00	0.00
665.38	0.00	0.00	665.89	0.00	0.00	666.40	0.00	0.00
665.39	0.00	0.00	665.90	0.00	0.00	666.41	0.00	0.00
665.40	0.00	0.00	665.91	0.00	0.00	666.42	0.00	0.00
665.41	0.00	0.00	665.92	0.00	0.00	666.43	0.00	0.00
665.42	0.00	0.00	665.93	0.00	0.00	666.44	0.00	0.00
665.43	0.00	0.00	665.94	0.00	0.00	666.45	0.00	0.00
665.44	0.00	0.00	665.95	0.00	0.00	666.46	0.00	0.00
665.45	0.00	0.00	665.96	0.00	0.00	666.47	0.00	0.00
665.46	0.00	0.00	665.97	0.00	0.00	666.48	0.00	0.00
665.47	0.00	0.00	665.98	0.00	0.00	666.49	0.00	0.00
665.48	0.00	0.00	665.99	0.00	0.00	666.50	0.00	0.00
665.49	0.00	0.00	666.00	0.00	0.00	666.51	0.00	0.00
665.50	0.00	0.00	666.01	0.00	0.00	666.52	0.08	0.00
665.51	0.00	0.00	666.02	0.00	0.00	666.53	0.24	0.00
665.52	0.00	0.00	666.03	0.00	0.00	666.54	0.56	0.01
665.53	0.00	0.00	666.04	0.00	0.00	666.55	0.83	0.03
665.54	0.00	0.00	666.05	0.00	0.00	666.56	1.05	0.04
665.55	0.00	0.00	666.06	0.00	0.00	666.57	1.22	0.07
665.56	0.00	0.00	666.07	0.00	0.00	666.58	1.38	0.09
665.57	0.00	0.00	666.08	0.00	0.00	666.59	1.53	0.12
665.58	0.00	0.00	666.09	0.00	0.00	666.60	1.65	0.15
665.59	0.00	0.00	666.10	0.00	0.00	666.61	1.77	0.18
665.60	0.00	0.00	666.11	0.00	0.00	666.62	1.88	0.21
665.61	0.00	0.00	666.12	0.00	0.00	666.63	1.98	0.24
665.62	0.00	0.00	666.13	0.00	0.00	666.64	2.07	0.27
665.63	0.00	0.00	666.14	0.00	0.00	666.65	2.15	0.31
665.64	0.00	0.00	666.15	0.00	0.00	666.66	2.23	0.34
665.65	0.00	0.00	666.16	0.00	0.00	666.67	2.29	0.37
665.66	0.00	0.00	666.17	0.00	0.00	666.68	2.36	0.41
665.67	0.00	0.00	666.18	0.00	0.00	666.69	2.41	0.44
665.68	0.00	0.00	666.19	0.00	0.00	666.70	2.47	0.47
665.69	0.00	0.00	666.20	0.00	0.00	666.71	2.51	0.50
665.70	0.00	0.00	666.21	0.00	0.00	666.72	2.55	0.53
665.71	0.00	0.00	666.22	0.00	0.00	666.73	2.59	0.56
665.72	0.00	0.00	666.23	0.00	0.00	666.74	2.62	0.59
665.73	0.00	0.00	666.24	0.00	0.00	666.75	2.65	0.62
665.74	0.00	0.00	666.25	0.00	0.00	666.76	2.67	0.64
665.75	0.00	0.00	666.26	0.00	0.00	666.77	2.68	0.67
665.76	0.00	0.00	666.27	0.00	0.00	666.78	2.69	0.69
665.77	0.00	0.00	666.28	0.00	0.00	666.79	2.70	0.71
665.78	0.00	0.00	666.29	0.00	0.00	666.80	**2.70**	0.72
665.79	0.00	0.00	666.30	0.00	0.00	666.81	2.69	0.74
665.80	0.00	0.00	666.31	0.00	0.00	666.82	2.67	0.75
665.81	0.00	0.00	666.32	0.00	0.00	666.83	2.65	**0.75**
665.82	0.00	0.00	666.33	0.00	0.00	666.84	2.61	0.75
665.83	0.00	0.00	666.34	0.00	0.00	666.85	2.53	0.74
665.84	0.00	0.00	666.35	0.00	0.00	666.86	2.41	0.71
665.85	0.00	0.00	666.36	0.00	0.00			
665.86	0.00	0.00	666.37	0.00	0.00			

Stage-Area-Storage for Reach 11R: inlet 7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	0
666.50	0.0	0
666.52	0.0	0
666.54	0.0	1
666.56	0.0	3
666.58	0.1	4
666.60	0.1	5
666.62	0.1	7
666.64	0.1	8
666.66	0.2	9
666.68	0.2	11
666.70	0.2	12
666.72	0.2	13
666.74	0.2	14
666.76	0.2	15
666.78	0.3	16
666.80	0.3	17
666.82	0.3	17
666.84	0.3	18
666.86	**0.3**	**18**

Summary for Reach 12R: MH6 18"

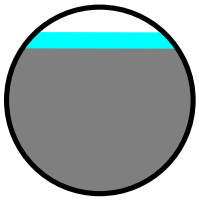
[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach 11R outlet invert by 1.30' @ 12.34 hrs

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.33 cfs @ 12.34 hrs, Volume= 0.033 af
Outflow = 0.33 cfs @ 12.34 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.1 min

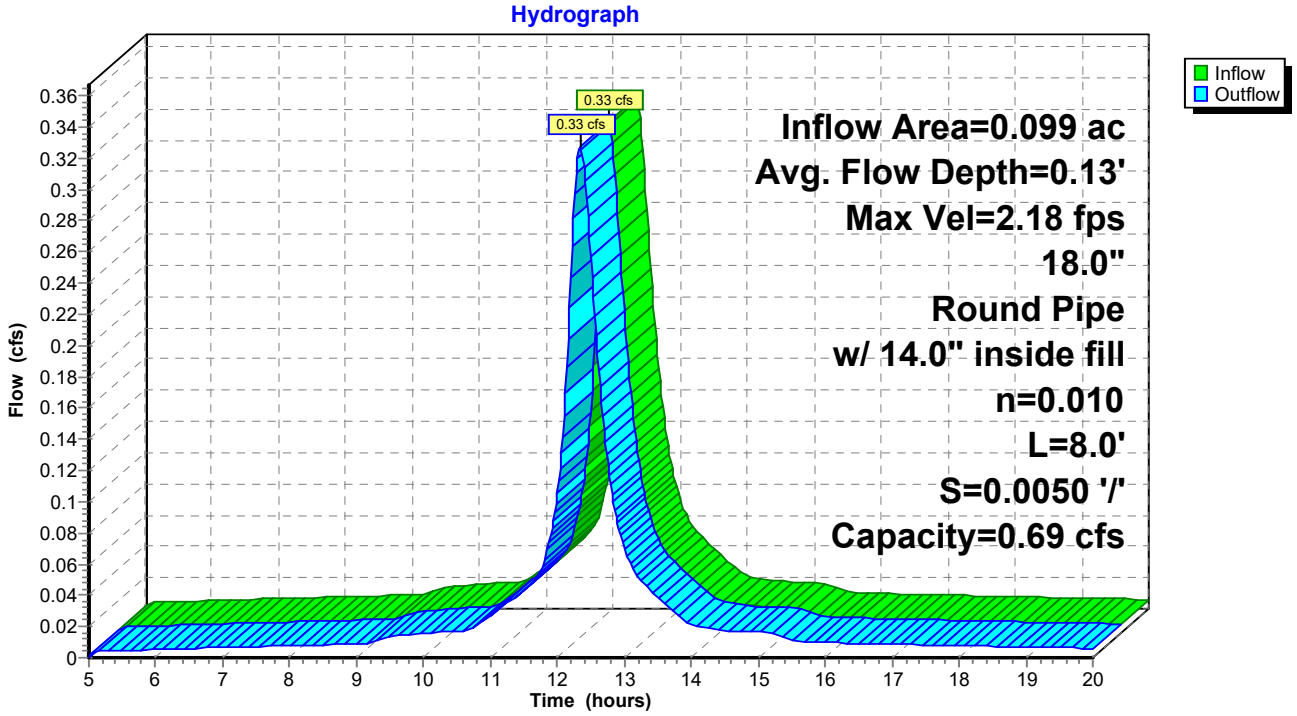
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.18 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.77 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.34 hrs
Average Depth at Peak Storage= 1.30' above invert (0.13' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

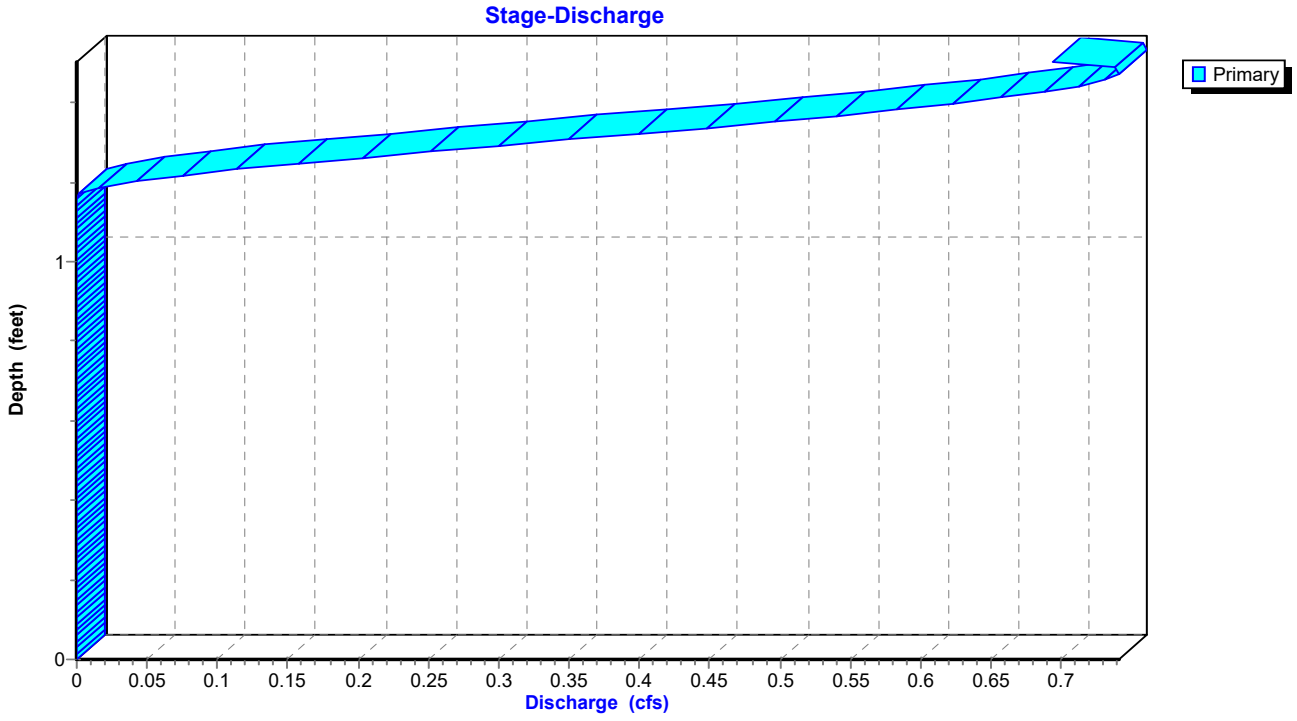
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 8.0' Slope= 0.0050 '/'
Inlet Invert= 665.04', Outlet Invert= 665.00'



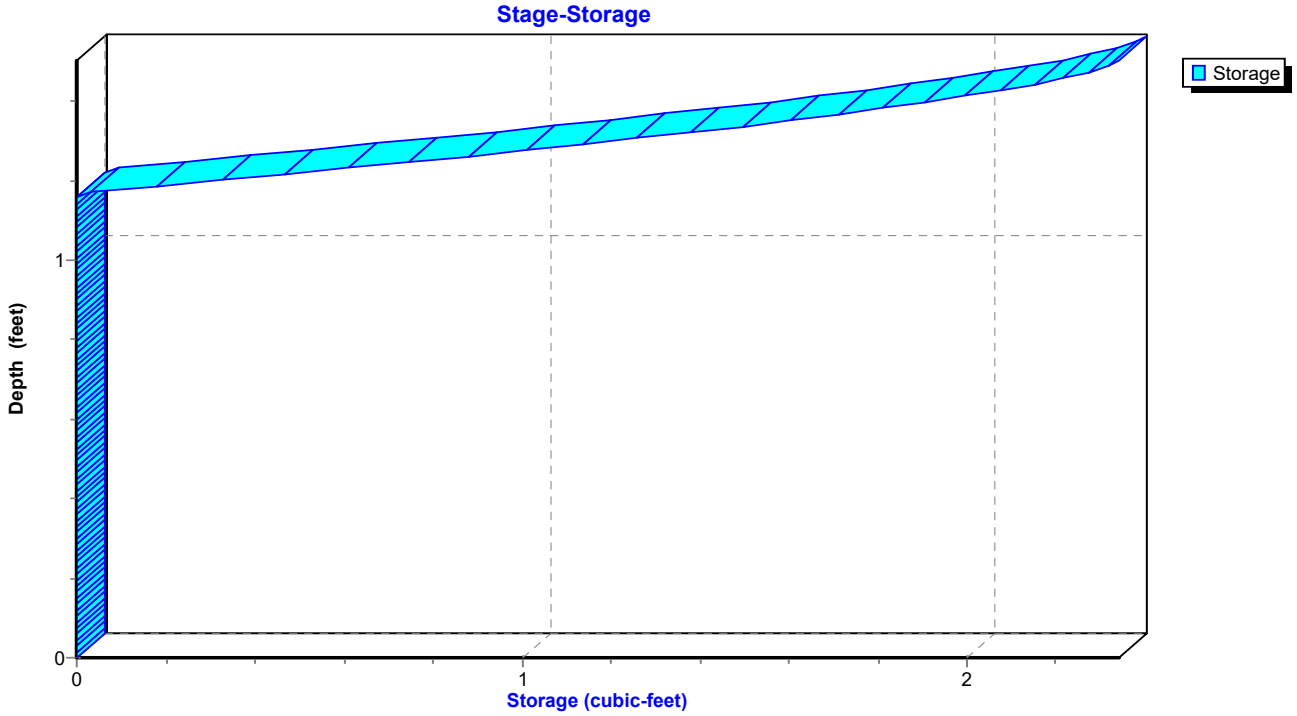
Reach 12R: MH6 18"



Reach 12R: MH6 18"



Reach 12R: MH6 18"



Hydrograph for Reach 12R: MH6 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.21	0.00
5.40	0.00	0	666.21	0.00
5.80	0.00	0	666.21	0.00
6.20	0.01	0	666.21	0.01
6.60	0.01	0	666.22	0.01
7.00	0.01	0	666.22	0.01
7.40	0.01	0	666.22	0.01
7.80	0.01	0	666.22	0.01
8.20	0.01	0	666.22	0.01
8.60	0.01	0	666.22	0.01
9.00	0.01	0	666.22	0.01
9.40	0.01	0	666.22	0.01
9.80	0.02	0	666.22	0.02
10.20	0.02	0	666.23	0.02
10.60	0.02	0	666.23	0.02
11.00	0.03	0	666.23	0.03
11.40	0.04	0	666.24	0.04
11.80	0.06	0	666.25	0.06
12.20	**0.25**	**1**	**666.31**	**0.24**
12.60	**0.19**	**1**	**666.30**	**0.20**
13.00	0.07	0	666.25	0.07
13.40	0.04	0	666.24	0.04
13.80	0.03	0	666.23	0.03
14.20	0.02	0	666.23	0.02
14.60	0.02	0	666.23	0.02
15.00	0.02	0	666.23	0.02
15.40	0.01	0	666.22	0.01
15.80	0.01	0	666.22	0.01
16.20	0.01	0	666.22	0.01
16.60	0.01	0	666.22	0.01
17.00	0.01	0	666.22	0.01
17.40	0.01	0	666.22	0.01
17.80	0.01	0	666.22	0.01
18.20	0.01	0	666.22	0.01
18.60	0.01	0	666.22	0.01
19.00	0.01	0	666.22	0.01
19.40	0.01	0	666.22	0.01
19.80	0.01	0	666.22	0.01

Stage-Discharge for Reach 12R: MH6 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.00	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.00	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.08	0.00
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.23	0.00
665.20	0.00	0.00	665.71	0.00	0.00	666.22	0.55	0.01
665.21	0.00	0.00	665.72	0.00	0.00	666.23	0.82	0.02
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.03	0.04
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.20	0.06
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.36	0.09
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.50	0.11
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.63	0.14
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.74	0.17
665.28	0.00	0.00	665.79	0.00	0.00	666.30	1.85	0.20
665.29	0.00	0.00	665.80	0.00	0.00	666.31	1.95	0.24
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.04	0.27
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.12	0.30
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.19	0.33
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.26	0.37
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.32	0.40
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.38	0.43
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.43	0.46
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.47	0.50
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.51	0.53
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.55	0.56
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.58	0.58
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.60	0.61
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.62	0.63
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.64	0.66
665.44	0.00	0.00	665.95	0.00	0.00	666.46	2.65	0.68
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.70
665.46	0.00	0.00	665.97	0.00	0.00	666.48	**2.65**	0.71
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.65	0.73
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.63	0.73
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.61	**0.74**
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.57	0.74
665.51	0.00	0.00	666.02	0.00	0.00	666.53	2.49	0.72
665.52	0.00	0.00	666.03	0.00	0.00	666.54	2.38	0.69
665.53	0.00	0.00	666.04	0.00	0.00			
665.54	0.00	0.00	666.05	0.00	0.00			

Stage-Area-Storage for Reach 12R: MH6 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.1	1
666.28	0.1	1
666.30	0.1	1
666.32	0.1	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	2
666.40	0.2	2
666.42	0.2	2
666.44	0.2	2
666.46	0.3	2
666.48	0.3	2
666.50	0.3	2
666.52	0.3	2
666.54	**0.3**	**2**

Summary for Reach 13R: to isolator 6"

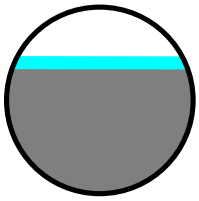
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.041 ac, 78.05% Impervious, Inflow Depth > 2.72" for 10-yr event
Inflow = 0.10 cfs @ 12.37 hrs, Volume= 0.009 af
Outflow = 0.10 cfs @ 12.37 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

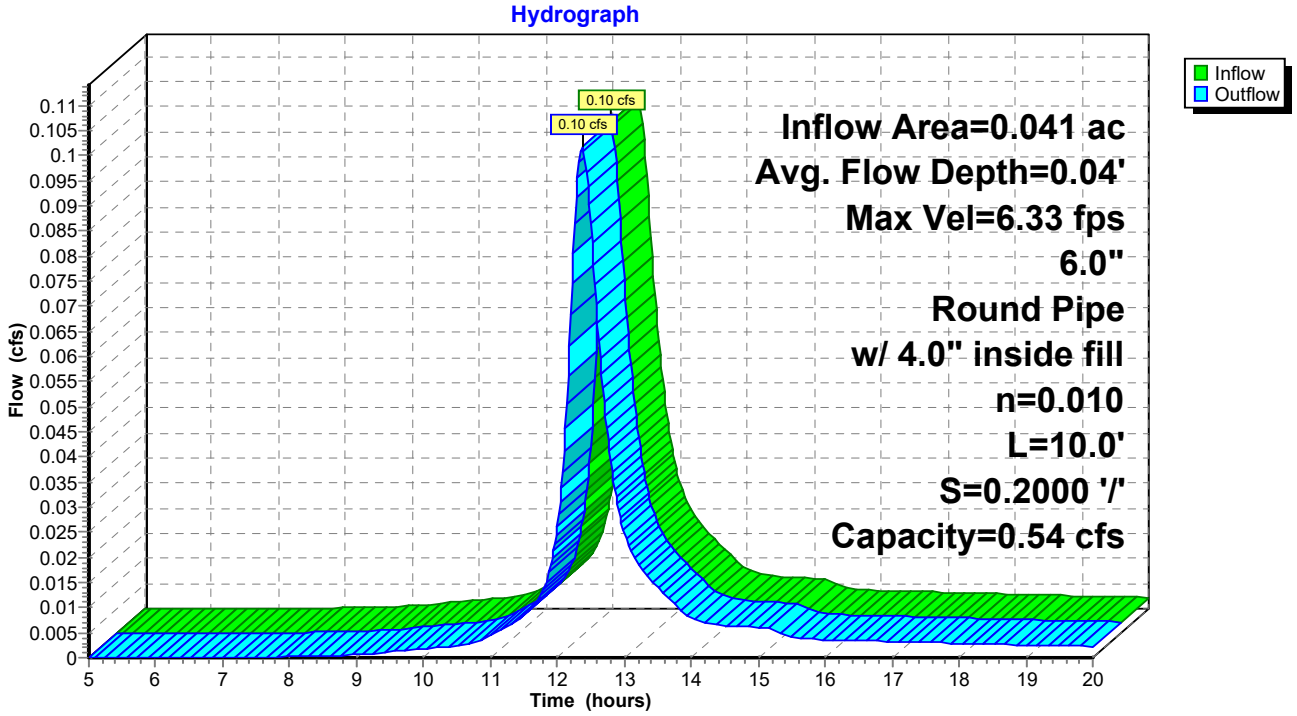
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 6.33 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.16 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.37 hrs
Average Depth at Peak Storage= 0.37' above invert (0.04' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

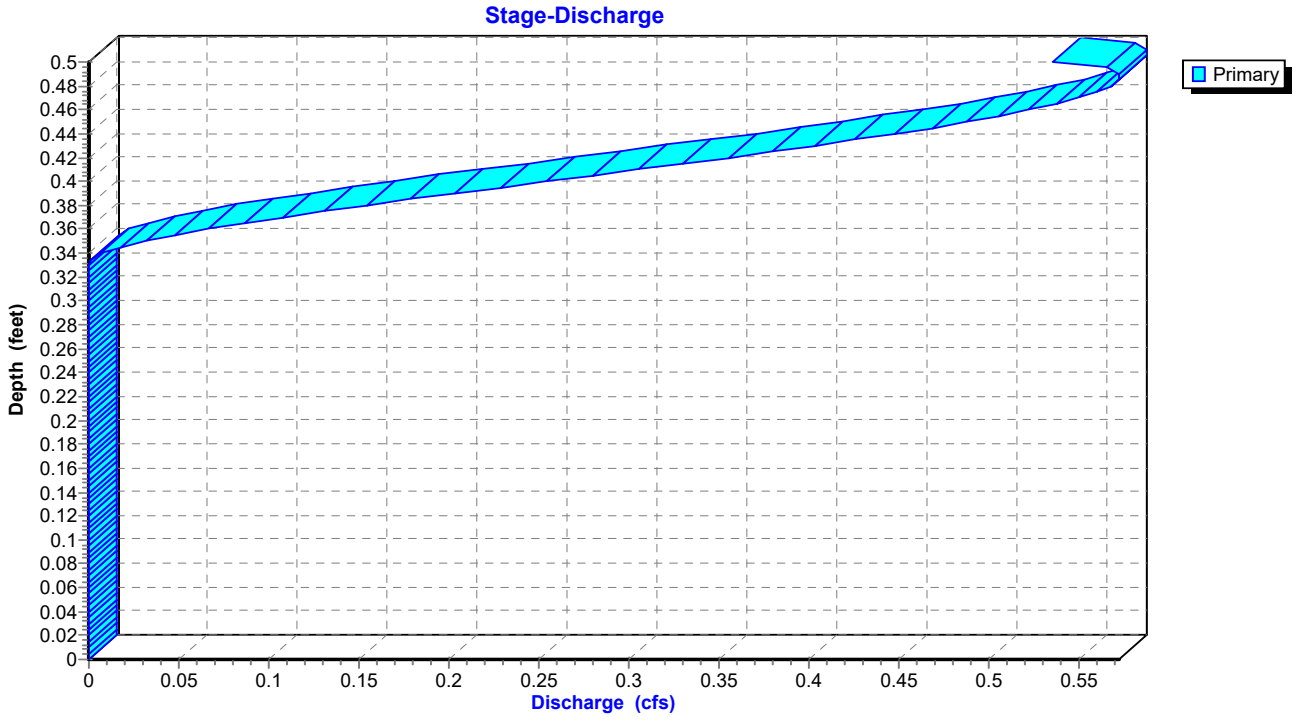
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



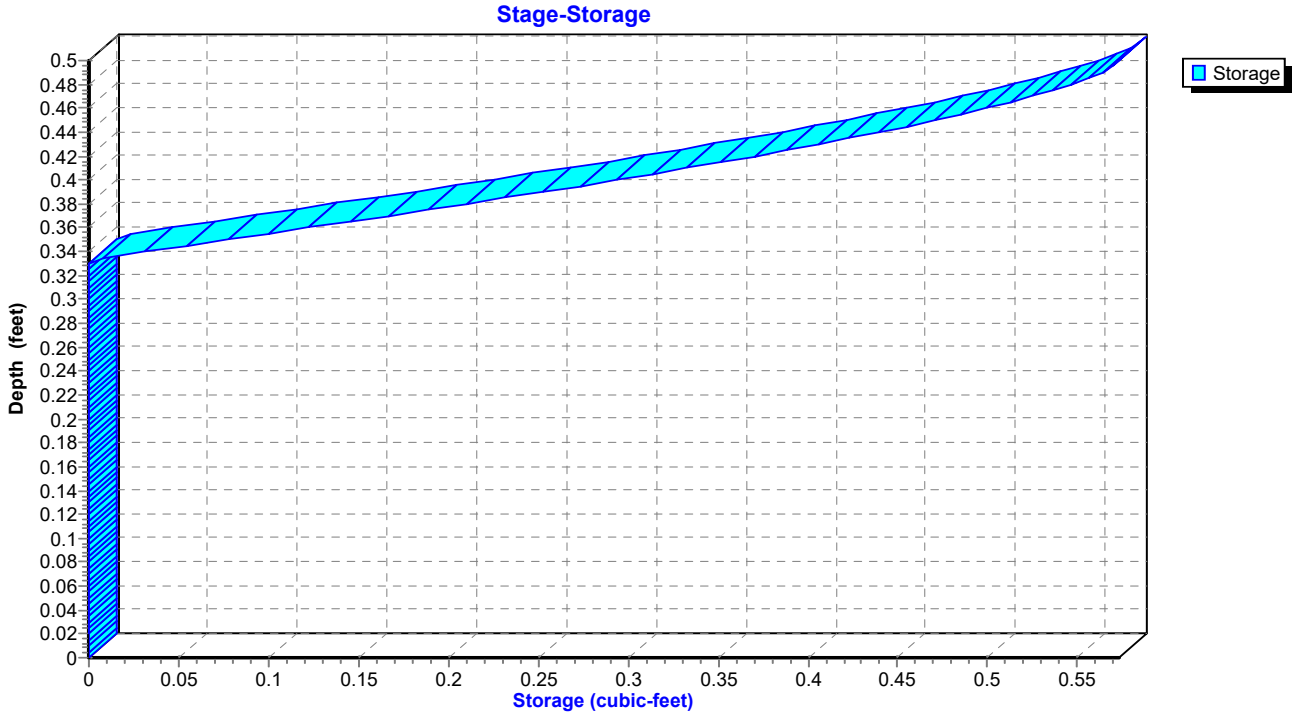
Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Hydrograph for Reach 13R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.00	0	668.34	0.00
11.40	0.01	0	668.34	0.01
11.80	0.01	0	668.34	0.01
12.20	**0.07**	**0**	**668.36**	**0.07**
12.60	**0.07**	**0**	**668.36**	**0.07**
13.00	0.03	0	668.35	0.03
13.40	0.02	0	668.34	0.02
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 13R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 13R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 14R: to isolator 6"

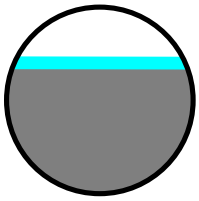
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.030 ac, 83.33% Impervious, Inflow Depth > 3.01" for 10-yr event
Inflow = 0.10 cfs @ 12.26 hrs, Volume= 0.008 af
Outflow = 0.10 cfs @ 12.27 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min

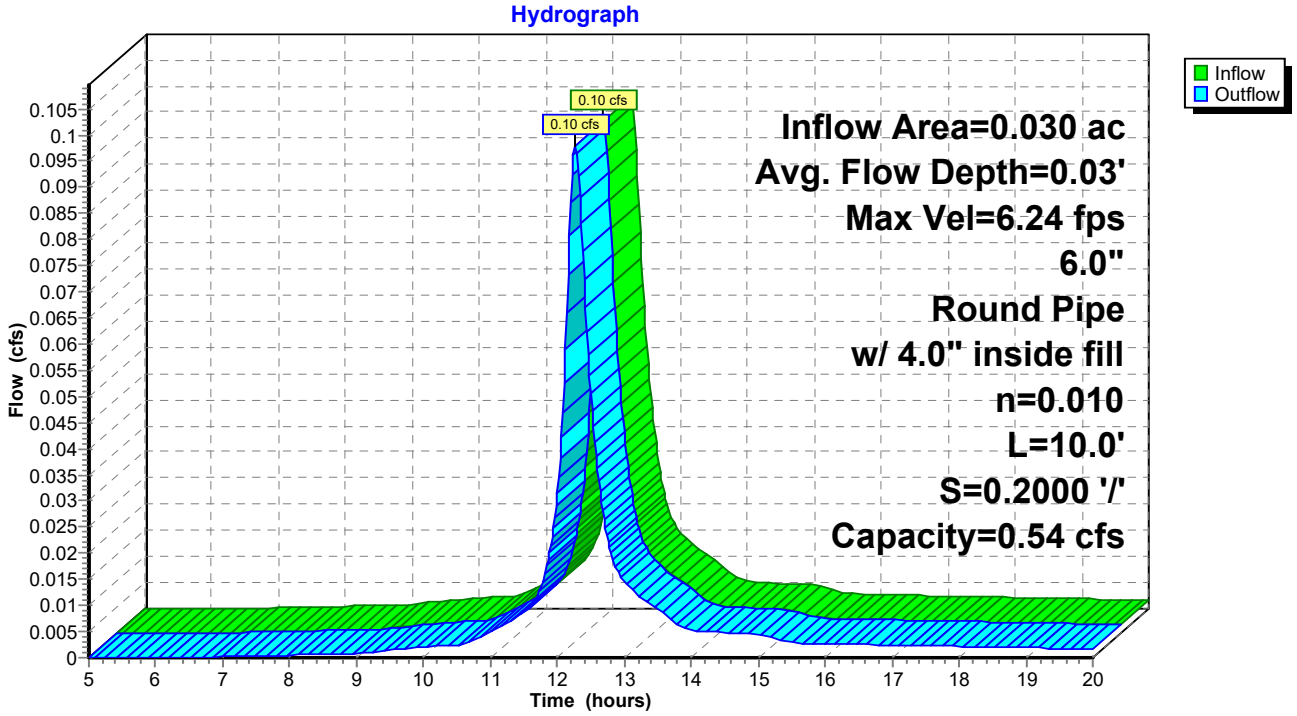
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 6.24 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.37' above invert (0.03' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

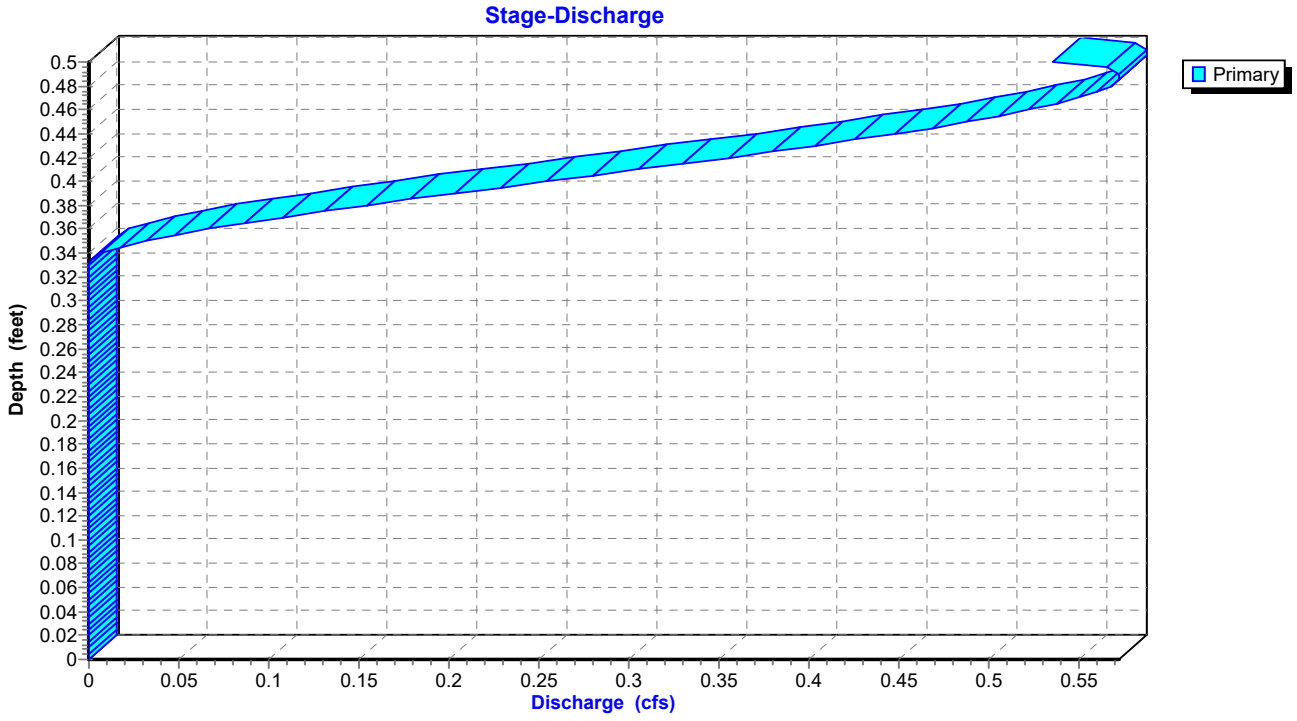
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



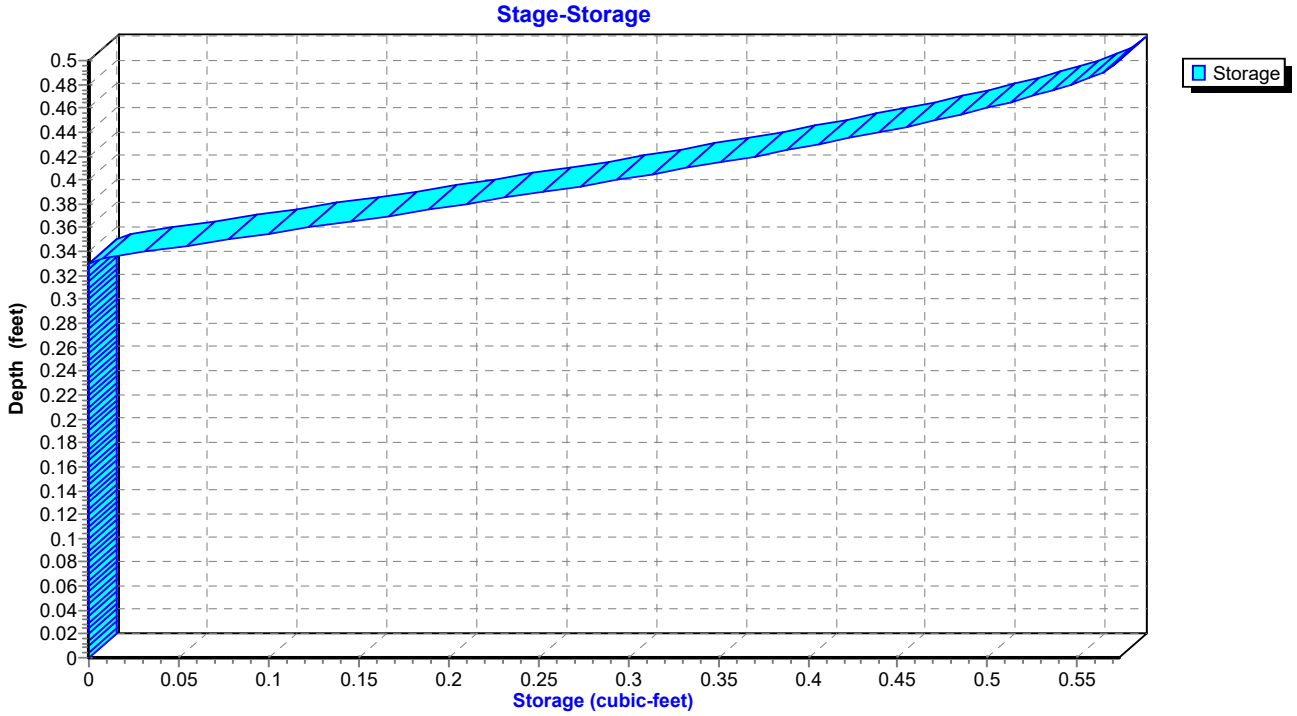
Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Hydrograph for Reach 14R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.01	0	668.34	0.01
11.40	0.01	0	668.34	0.01
11.80	0.02	0	668.34	0.02
12.20	**0.09**	**0**	**668.37**	**0.09**
12.60	**0.04**	**0**	**668.35**	**0.04**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 14R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 14R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 15R: to isolator 6"

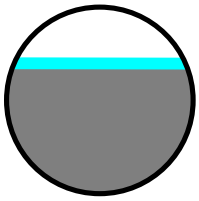
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 73.68% Impervious, Inflow Depth > 2.46" for 10-yr event
Inflow = 0.09 cfs @ 12.37 hrs, Volume= 0.008 af
Outflow = 0.09 cfs @ 12.38 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min

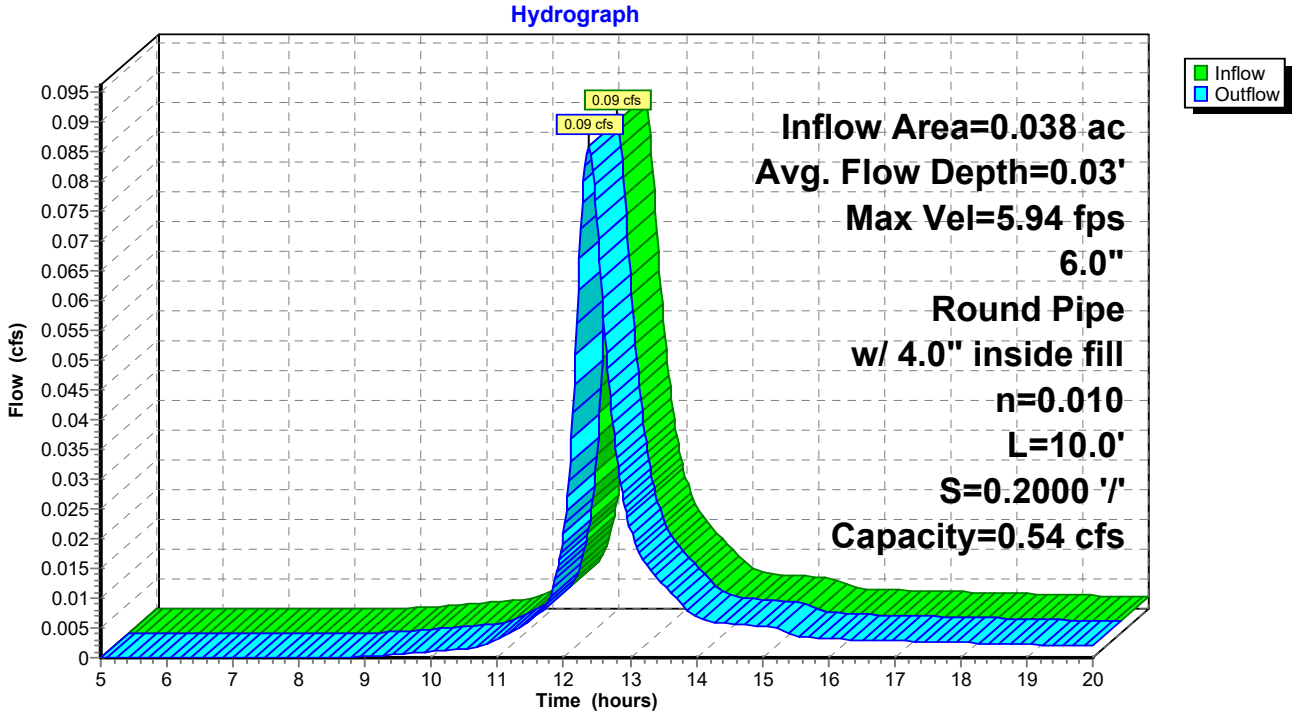
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 5.94 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.12 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.37 hrs
Average Depth at Peak Storage= 0.36' above invert (0.03' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

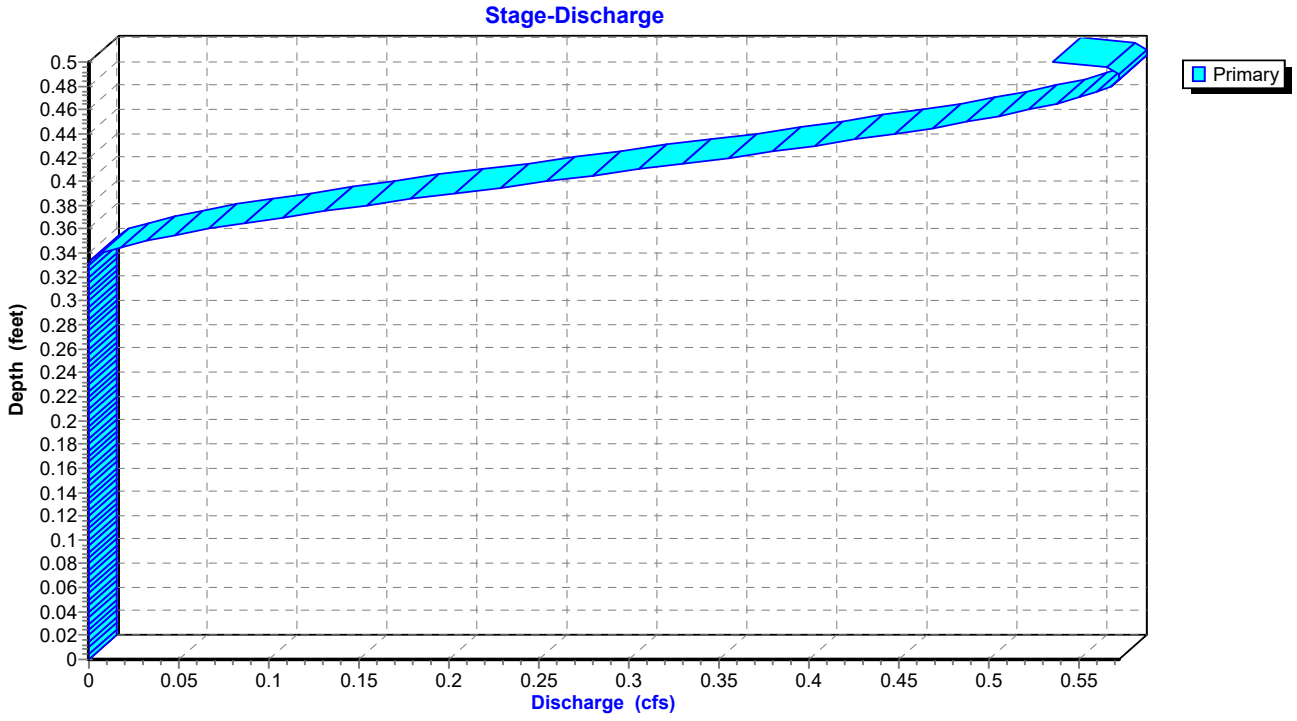
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



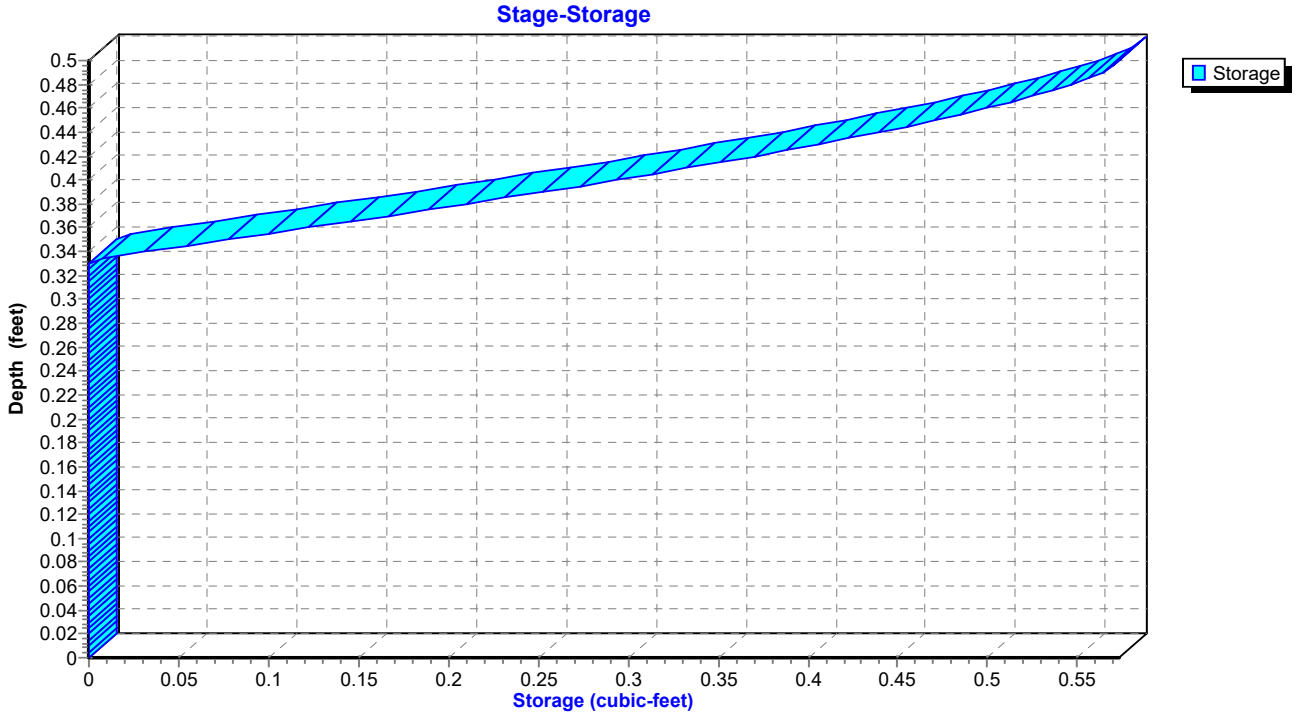
Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Hydrograph for Reach 15R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.00	0	668.34	0.00
11.40	0.01	0	668.34	0.01
11.80	0.01	0	668.34	0.01
12.20	**0.06**	**0**	**668.36**	**0.06**
12.60	**0.06**	**0**	**668.36**	**0.06**
13.00	0.02	0	668.35	0.02
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 15R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 15R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 17R: NDS2 6"

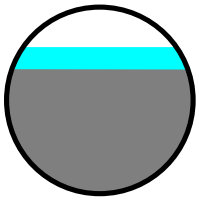
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 42.11% Impervious, Inflow Depth > 1.14" for 10-yr event
Inflow = 0.03 cfs @ 12.46 hrs, Volume= 0.004 af
Outflow = 0.03 cfs @ 12.51 hrs, Volume= 0.004 af, Atten= 0%, Lag= 2.9 min

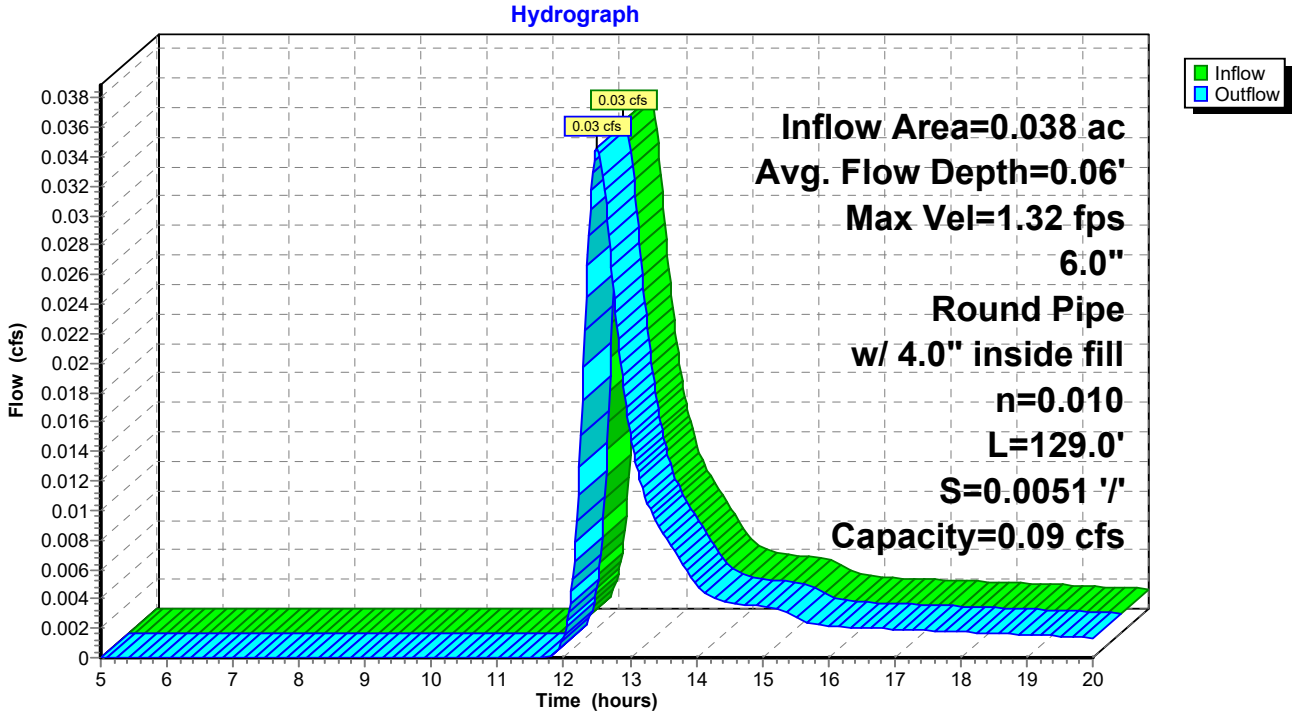
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.32 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 0.58 fps, Avg. Travel Time= 3.7 min

Peak Storage= 3 cf @ 12.48 hrs
Average Depth at Peak Storage= 0.39' above invert (0.06' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

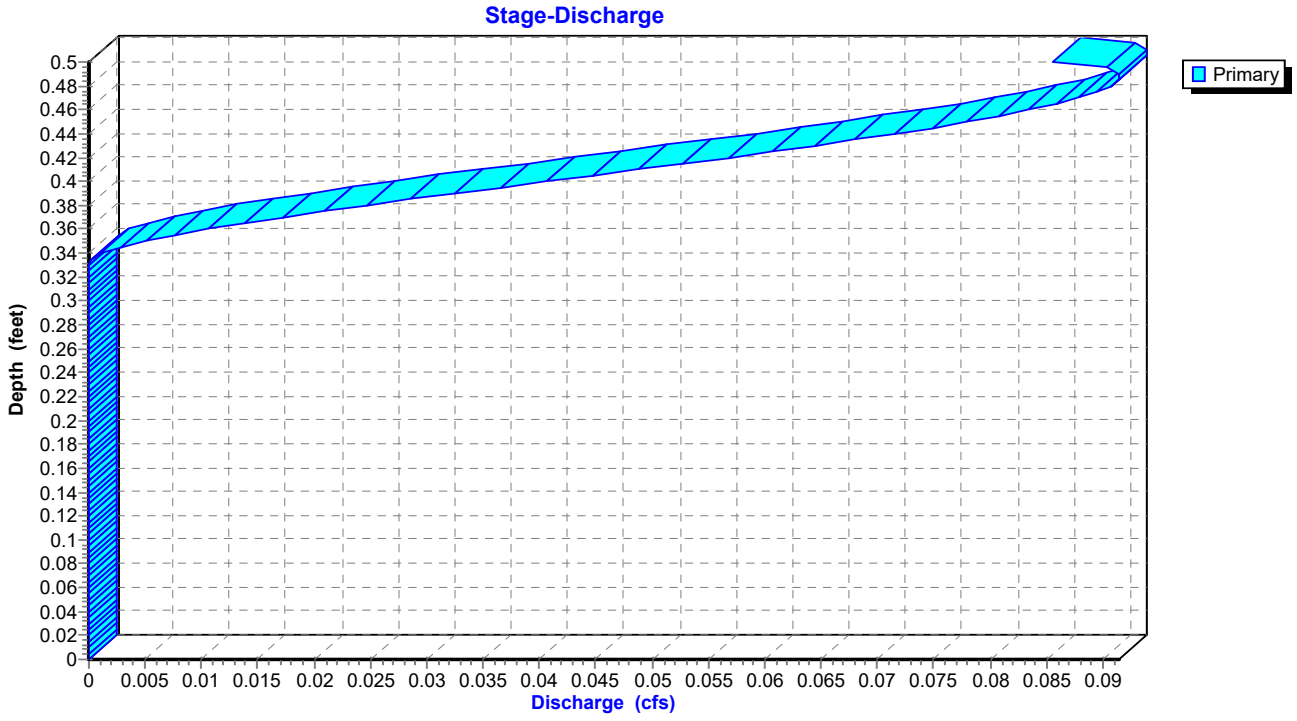
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0051 '/'
Inlet Invert= 668.84', Outlet Invert= 668.18'



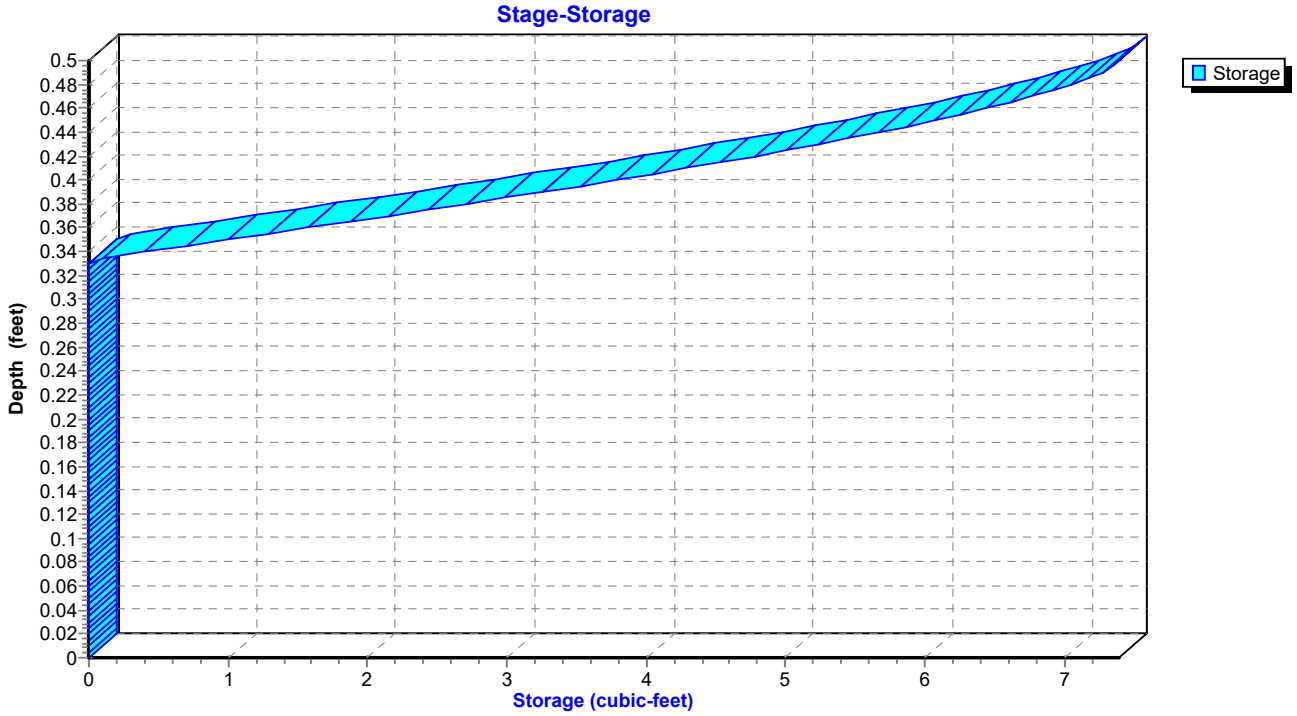
Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Hydrograph for Reach 17R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.17	0.00
5.40	0.00	0	669.17	0.00
5.80	0.00	0	669.17	0.00
6.20	0.00	0	669.17	0.00
6.60	0.00	0	669.17	0.00
7.00	0.00	0	669.17	0.00
7.40	0.00	0	669.17	0.00
7.80	0.00	0	669.17	0.00
8.20	0.00	0	669.17	0.00
8.60	0.00	0	669.17	0.00
9.00	0.00	0	669.17	0.00
9.40	0.00	0	669.17	0.00
9.80	0.00	0	669.17	0.00
10.20	0.00	0	669.17	0.00
10.60	0.00	0	669.17	0.00
11.00	0.00	0	669.17	0.00
11.40	0.00	0	669.17	0.00
11.80	0.00	0	669.18	0.00
12.20	**0.01**	**2**	**669.20**	**0.01**
12.60	**0.03**	**3**	**669.23**	**0.03**
13.00	0.01	2	669.21	0.02
13.40	0.01	1	669.20	0.01
13.80	0.01	1	669.19	0.01
14.20	0.00	1	669.19	0.00
14.60	0.00	1	669.19	0.00
15.00	0.00	1	669.19	0.00
15.40	0.00	1	669.19	0.00
15.80	0.00	1	669.18	0.00
16.20	0.00	1	669.18	0.00
16.60	0.00	1	669.18	0.00
17.00	0.00	1	669.18	0.00
17.40	0.00	1	669.18	0.00
17.80	0.00	1	669.18	0.00
18.20	0.00	1	669.18	0.00
18.60	0.00	0	669.18	0.00
19.00	0.00	0	669.18	0.00
19.40	0.00	0	669.18	0.00
19.80	0.00	0	669.18	0.00

Stage-Discharge for Reach 17R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.84	0.00	0.00
668.85	0.00	0.00
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.37	0.00
669.19	0.65	0.01
669.20	0.87	0.01
669.21	1.03	0.02
669.22	1.17	0.02
669.23	1.29	0.03
669.24	1.39	0.04
669.25	1.47	0.05
669.26	1.53	0.06
669.27	1.59	0.06
669.28	1.63	0.07
669.29	1.66	0.08
669.30	1.67	0.08
669.31	**1.67**	0.09
669.32	1.66	0.09
669.33	1.62	**0.09**
669.34	1.49	0.09

Stage-Area-Storage for Reach 17R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.84	0.0	0
668.85	0.0	0
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	1
669.20	0.0	2
669.21	0.0	2
669.22	0.0	3
669.23	0.0	3
669.24	0.0	4
669.25	0.0	4
669.26	0.0	5
669.27	0.0	5
669.28	0.0	6
669.29	0.0	6
669.30	0.0	6
669.31	0.1	7
669.32	0.1	7
669.33	0.1	7
669.34	**0.1**	**7**

Summary for Reach 18R: inlet 3 6"

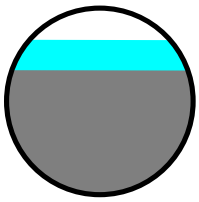
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 17R OUTLET depth by 0.03' @ 12.24 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.07' @ 12.42 hrs

Inflow Area = 0.090 ac, 18.89% Impervious, Inflow Depth > 0.96" for 10-yr event
Inflow = 0.05 cfs @ 12.50 hrs, Volume= 0.007 af
Outflow = 0.05 cfs @ 12.52 hrs, Volume= 0.007 af, Atten= 0%, Lag= 1.3 min

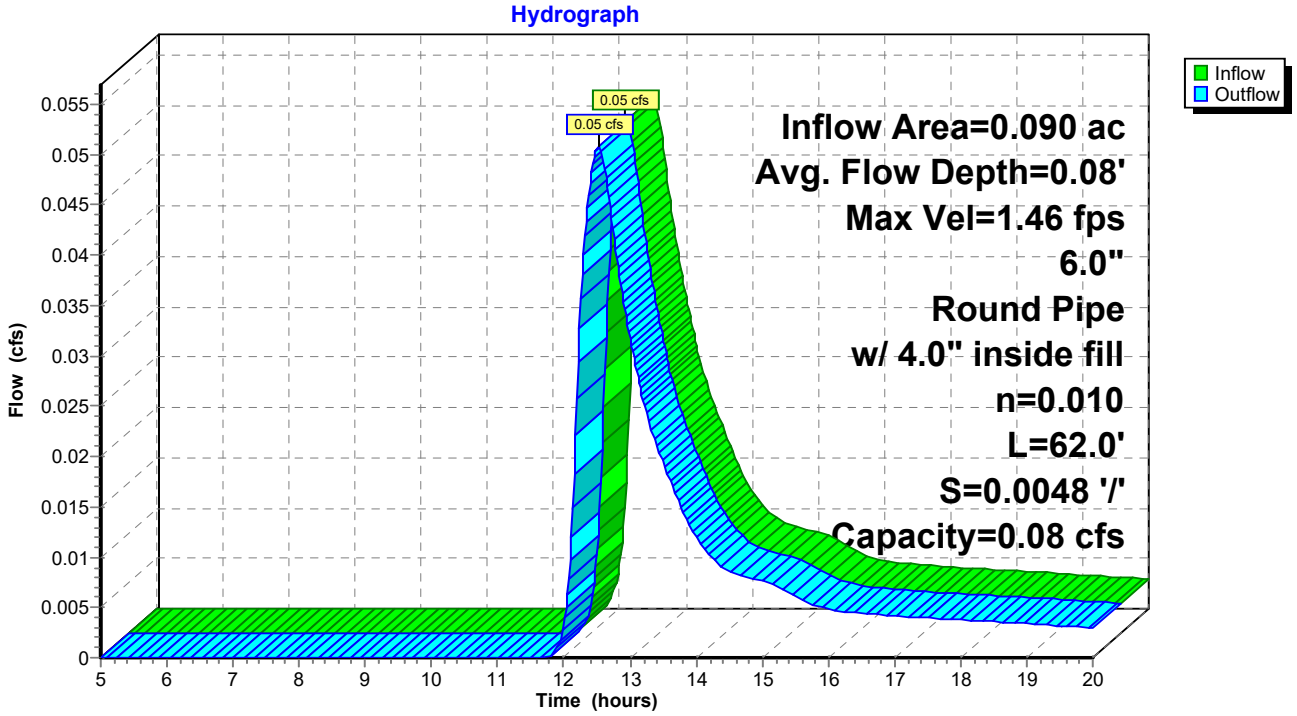
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.46 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 0.75 fps, Avg. Travel Time= 1.4 min

Peak Storage= 2 cf @ 12.51 hrs
Average Depth at Peak Storage= 0.41' above invert (0.08' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.08 cfs

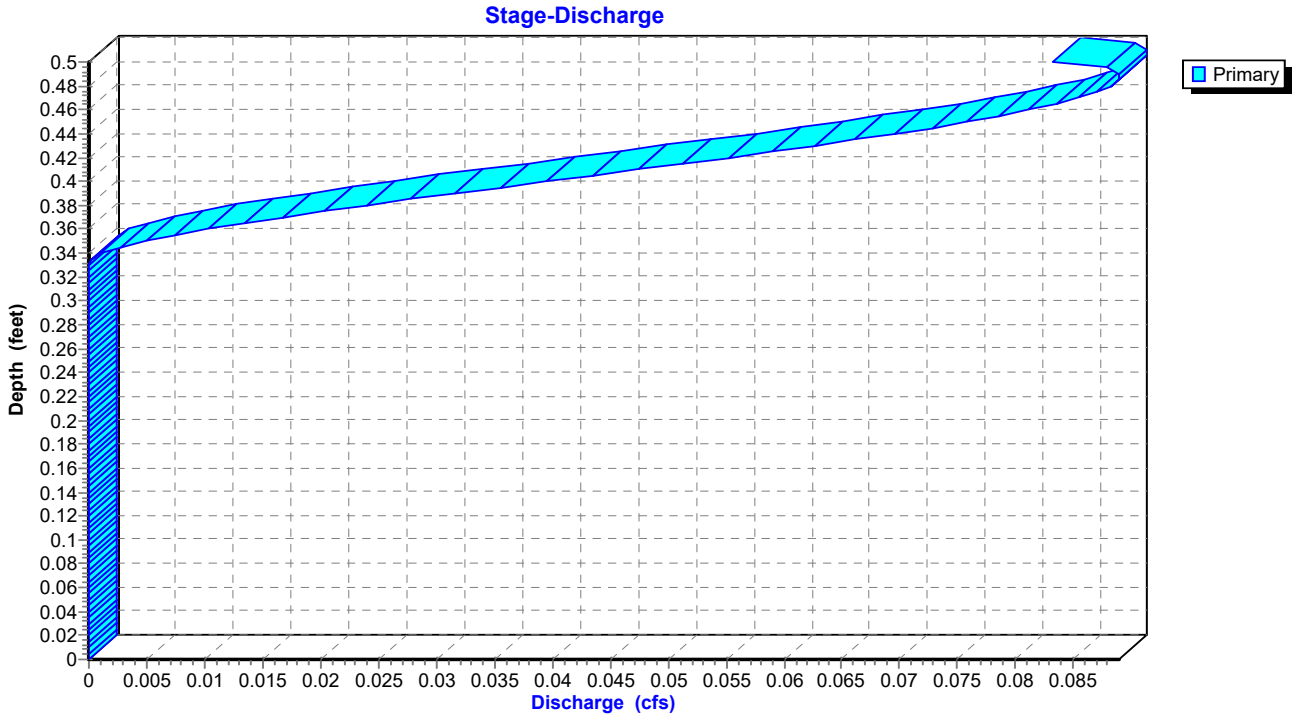
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0048 '/'
Inlet Invert= 668.18', Outlet Invert= 667.88'



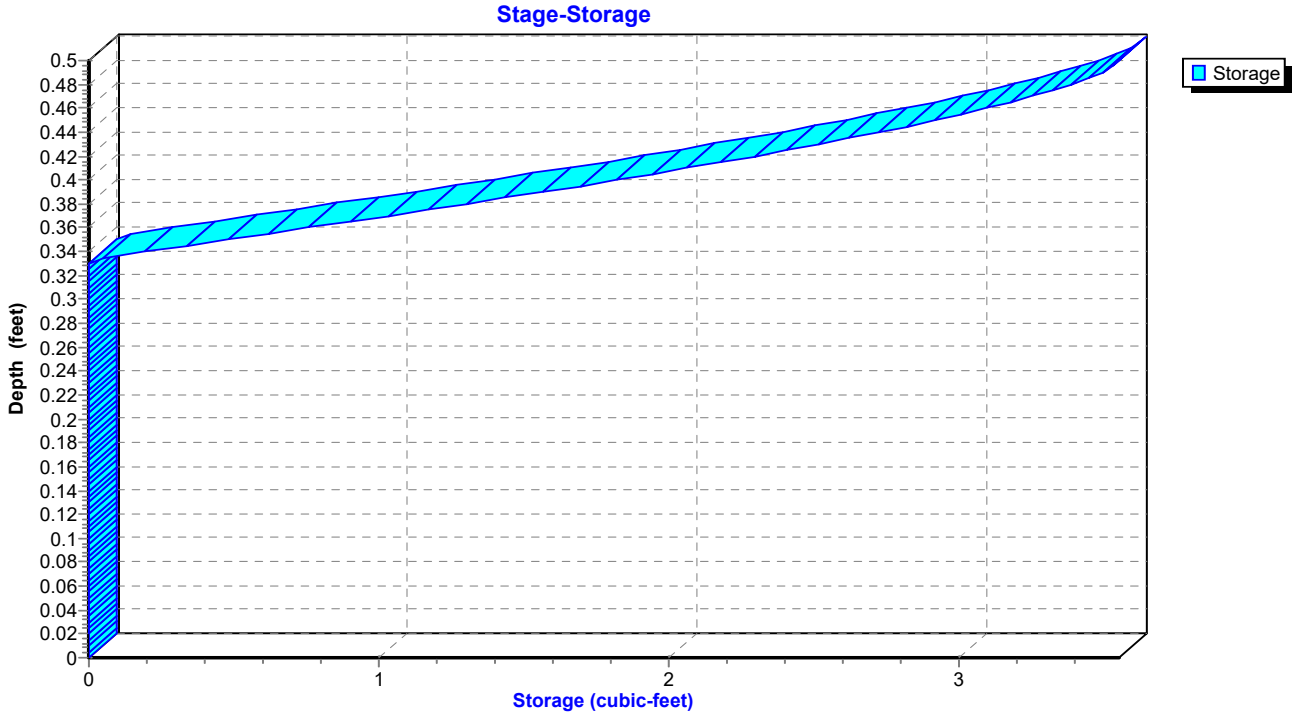
Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Hydrograph for Reach 18R: inlet 3 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.51	0.00
5.40	0.00	0	668.51	0.00
5.80	0.00	0	668.51	0.00
6.20	0.00	0	668.51	0.00
6.60	0.00	0	668.51	0.00
7.00	0.00	0	668.51	0.00
7.40	0.00	0	668.51	0.00
7.80	0.00	0	668.51	0.00
8.20	0.00	0	668.51	0.00
8.60	0.00	0	668.51	0.00
9.00	0.00	0	668.51	0.00
9.40	0.00	0	668.51	0.00
9.80	0.00	0	668.51	0.00
10.20	0.00	0	668.51	0.00
10.60	0.00	0	668.51	0.00
11.00	0.00	0	668.51	0.00
11.40	0.00	0	668.51	0.00
11.80	0.00	0	668.51	0.00
12.20	**0.03**	**1**	**668.57**	**0.03**
12.60	**0.05**	**2**	**668.59**	**0.05**
13.00	0.03	2	668.57	0.03
13.40	0.02	1	668.56	0.02
13.80	0.01	1	668.55	0.01
14.20	0.01	1	668.54	0.01
14.60	0.01	1	668.54	0.01
15.00	0.01	1	668.54	0.01
15.40	0.01	1	668.53	0.01
15.80	0.01	0	668.53	0.01
16.20	0.00	0	668.53	0.00
16.60	0.00	0	668.53	0.00
17.00	0.00	0	668.53	0.00
17.40	0.00	0	668.53	0.00
17.80	0.00	0	668.53	0.00
18.20	0.00	0	668.53	0.00
18.60	0.00	0	668.53	0.00
19.00	0.00	0	668.53	0.00
19.40	0.00	0	668.53	0.00
19.80	0.00	0	668.53	0.00

Stage-Discharge for Reach 18R: inlet 3 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	0.00	0.00
668.35	0.00	0.00
668.36	0.00	0.00
668.37	0.00	0.00
668.38	0.00	0.00
668.39	0.00	0.00
668.40	0.00	0.00
668.41	0.00	0.00
668.42	0.00	0.00
668.43	0.00	0.00
668.44	0.00	0.00
668.45	0.00	0.00
668.46	0.00	0.00
668.47	0.00	0.00
668.48	0.00	0.00
668.49	0.00	0.00
668.50	0.00	0.00
668.51	0.00	0.00
668.52	0.36	0.00
668.53	0.64	0.00
668.54	0.84	0.01
668.55	1.00	0.02
668.56	1.14	0.02
668.57	1.25	0.03
668.58	1.35	0.04
668.59	1.43	0.05
668.60	1.49	0.06
668.61	1.54	0.06
668.62	1.58	0.07
668.63	1.61	0.08
668.64	1.63	0.08
668.65	**1.63**	0.09
668.66	1.61	0.09
668.67	1.58	**0.09**
668.68	1.45	0.08

Stage-Area-Storage for Reach 18R: inlet 3 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.0	0
668.48	0.0	0
668.49	0.0	0
668.50	0.0	0
668.51	0.0	0
668.52	0.0	0
668.53	0.0	0
668.54	0.0	1
668.55	0.0	1
668.56	0.0	1
668.57	0.0	2
668.58	0.0	2
668.59	0.0	2
668.60	0.0	2
668.61	0.0	3
668.62	0.0	3
668.63	0.0	3
668.64	0.0	3
668.65	0.1	3
668.66	0.1	3
668.67	0.1	3
668.68	**0.1**	**4**

Summary for Reach 22R: NDS2 6"

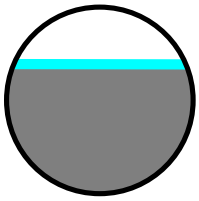
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.031 ac, 3.23% Impervious, Inflow Depth > 0.74" for 10-yr event
Inflow = 0.01 cfs @ 12.89 hrs, Volume= 0.002 af
Outflow = 0.01 cfs @ 12.94 hrs, Volume= 0.002 af, Atten= 0%, Lag= 3.4 min

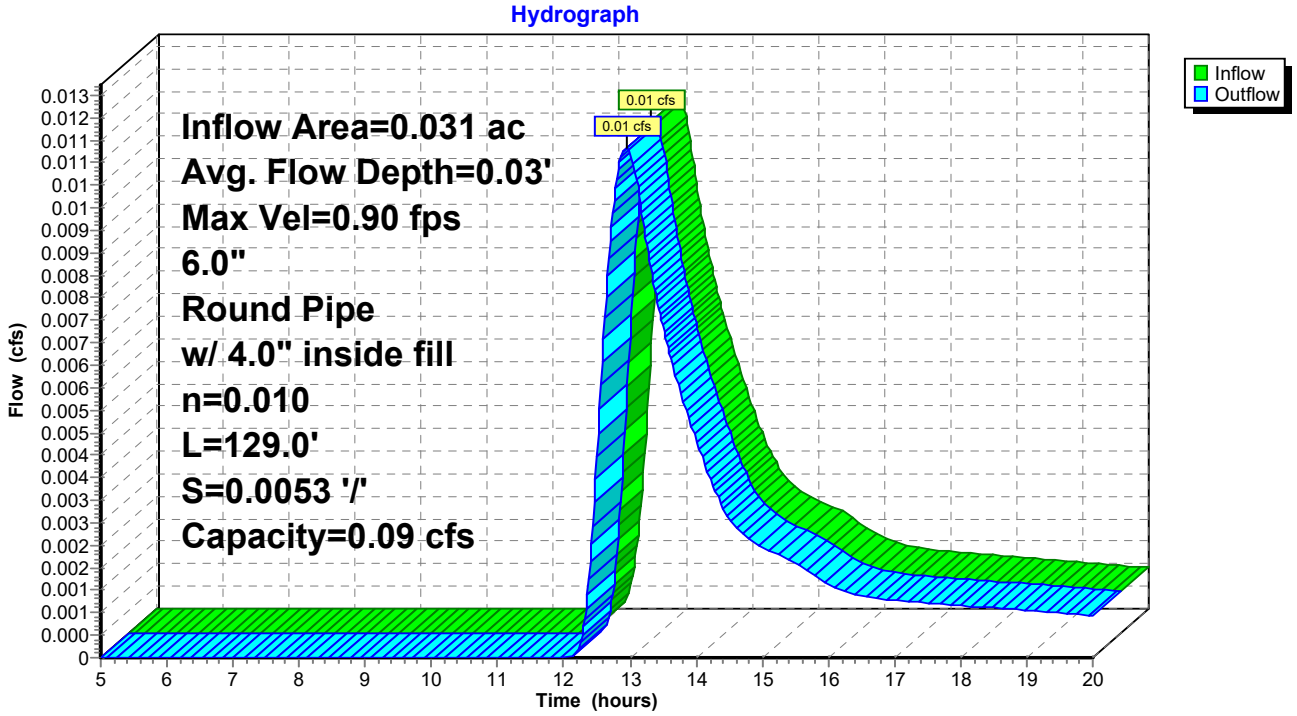
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.90 fps, Min. Travel Time= 2.4 min
Avg. Velocity = 0.49 fps, Avg. Travel Time= 4.4 min

Peak Storage= 2 cf @ 12.90 hrs
Average Depth at Peak Storage= 0.36' above invert (0.03' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

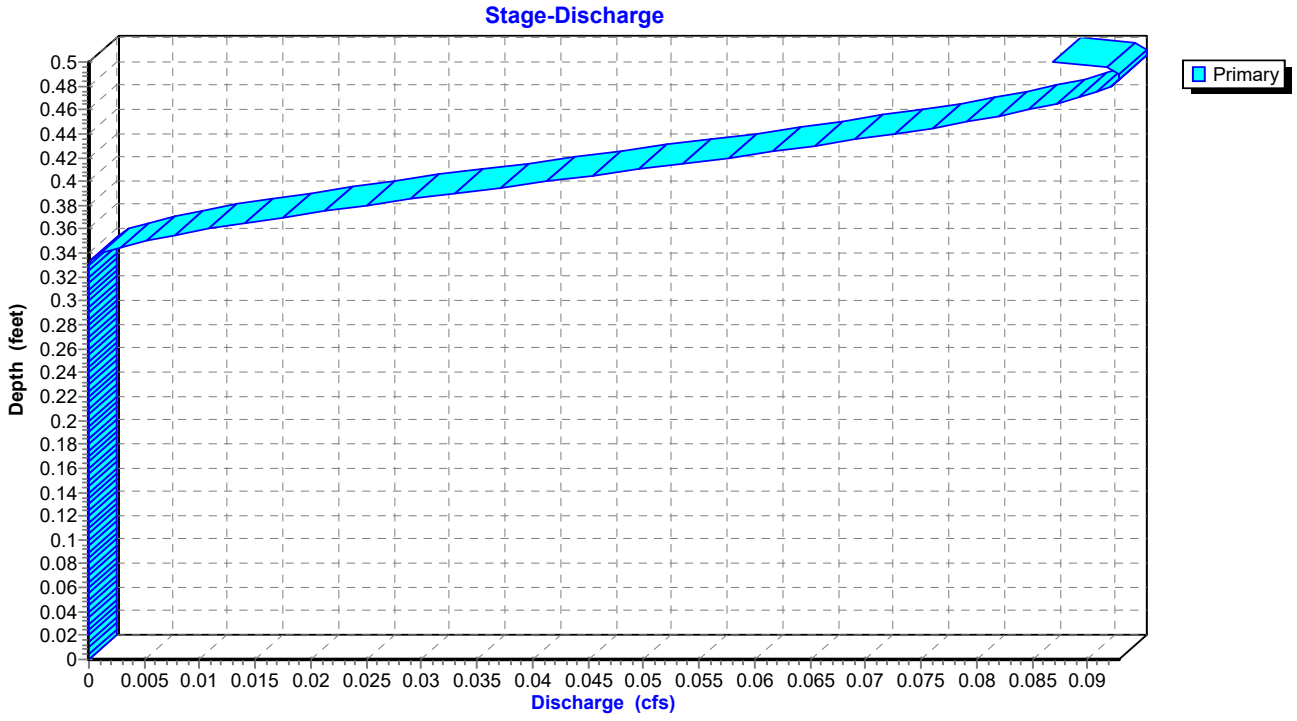
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0053 '/'
Inlet Invert= 668.86', Outlet Invert= 668.18'



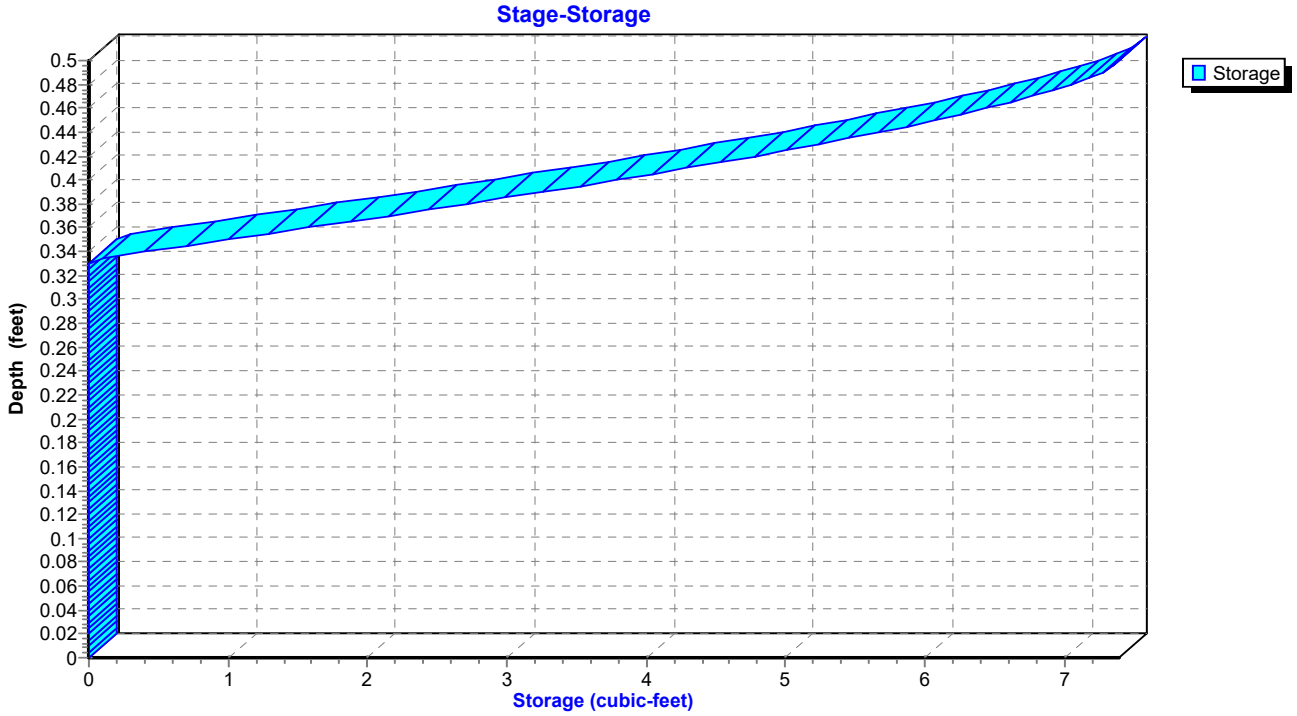
Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Hydrograph for Reach 22R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.19	0.00
5.40	0.00	0	669.19	0.00
5.80	0.00	0	669.19	0.00
6.20	0.00	0	669.19	0.00
6.60	0.00	0	669.19	0.00
7.00	0.00	0	669.19	0.00
7.40	0.00	0	669.19	0.00
7.80	0.00	0	669.19	0.00
8.20	0.00	0	669.19	0.00
8.60	0.00	0	669.19	0.00
9.00	0.00	0	669.19	0.00
9.40	0.00	0	669.19	0.00
9.80	0.00	0	669.19	0.00
10.20	0.00	0	669.19	0.00
10.60	0.00	0	669.19	0.00
11.00	0.00	0	669.19	0.00
11.40	0.00	0	669.19	0.00
11.80	0.00	0	669.19	0.00
12.20	0.00	0	669.20	0.00
12.60	**0.01**	**1**	**669.22**	**0.01**
13.00	**0.01**	**2**	**669.22**	**0.01**
13.40	0.01	1	669.21	0.01
13.80	0.01	1	669.21	0.01
14.20	0.00	1	669.21	0.00
14.60	0.00	1	669.20	0.00
15.00	0.00	1	669.20	0.00
15.40	0.00	1	669.20	0.00
15.80	0.00	1	669.20	0.00
16.20	0.00	0	669.20	0.00
16.60	0.00	0	669.20	0.00
17.00	0.00	0	669.20	0.00
17.40	0.00	0	669.20	0.00
17.80	0.00	0	669.20	0.00
18.20	0.00	0	669.20	0.00
18.60	0.00	0	669.20	0.00
19.00	0.00	0	669.20	0.00
19.40	0.00	0	669.20	0.00
19.80	0.00	0	669.20	0.00

Stage-Discharge for Reach 22R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.00	0.00
669.19	0.00	0.00
669.20	0.37	0.00
669.21	0.66	0.01
669.22	0.88	0.01
669.23	1.05	0.02
669.24	1.19	0.03
669.25	1.31	0.03
669.26	1.41	0.04
669.27	1.49	0.05
669.28	1.56	0.06
669.29	1.61	0.07
669.30	1.65	0.07
669.31	1.68	0.08
669.32	1.70	0.08
669.33	**1.70**	0.09
669.34	1.69	0.09
669.35	1.65	**0.09**
669.36	1.52	0.09

Stage-Area-Storage for Reach 22R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	0
669.20	0.0	0
669.21	0.0	1
669.22	0.0	2
669.23	0.0	2
669.24	0.0	3
669.25	0.0	3
669.26	0.0	4
669.27	0.0	4
669.28	0.0	5
669.29	0.0	5
669.30	0.0	6
669.31	0.0	6
669.32	0.0	6
669.33	0.1	7
669.34	0.1	7
669.35	0.1	7
669.36	**0.1**	**7**

Summary for Pond 4P: stormtech SC310 16"x34" chambers

[44] Hint: Outlet device #2 is below defined storage
[61] Hint: Exceeded Reach 10R outlet invert by 1.20' @ 12.74 hrs
[61] Hint: Exceeded Reach 12R outlet invert by 1.20' @ 12.74 hrs
[61] Hint: Exceeded Reach 13R outlet invert by 0.20' @ 12.74 hrs
[61] Hint: Exceeded Reach 14R outlet invert by 0.20' @ 12.74 hrs
[61] Hint: Exceeded Reach 15R outlet invert by 0.20' @ 12.74 hrs

Inflow Area =	1.066 ac,	90.90% Impervious,	Inflow Depth >	3.61" for 10-yr event
Inflow =	1.33 cfs @	12.27 hrs,	Volume=	0.321 af
Outflow =	0.62 cfs @	12.74 hrs,	Volume=	0.289 af, Atten= 54%, Lag= 28.0 min
Primary =	0.33 cfs @	12.74 hrs,	Volume=	0.067 af
Secondary =	0.29 cfs @	12.74 hrs,	Volume=	0.222 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 666.20' @ 12.74 hrs Surf.Area= 0.106 ac Storage= 0.068 af

Plug-Flow detention time= 89.3 min calculated for 0.289 af (90% of inflow)
Center-of-Mass det. time= 57.0 min (873.2 - 816.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	664.40'	0.076 af	**36.00'W x 120.45'L x 2.33'H Field A Z=0.5** 0.242 af Overall - 0.011 af Embedded = 0.231 af x 33.0% Voids
#2A	664.90'	0.011 af	**ADS_StormTech RC-310 +Cap** x 32 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 2 Rows
#3	665.00'	0.001 af	**8.0" Round Pipe Storage** L= 87.0' S= 0.5200 '/'
#4	664.90'	0.001 af	**12.0" Round Pipe Storage** L= 45.0' S= 0.7300 '/'
#5	665.40'	0.000 af	**12.0" Round Pipe Storage** L= 23.0' S= 0.5200 '/'
#6	665.58'	0.001 af	**10.0" Round Pipe Storage** L= 69.0' S= 0.5200 '/'
		0.090 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	665.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.75 0.75 2.10 2.10 3.00 Width (feet) 0.00 0.17 0.17 4.00 4.00
#2	Secondary	664.00'	**Tube/Siphon/Float Valve** 4.000" Diameter, C= 0.600 136.0' Long Tube, Hazen-Williams C= 130 Inlet / Outlet Elev. = 664.00' / 664.00'

Primary OutFlow Max=0.32 cfs @ 12.74 hrs HW=666.20' (Free Discharge)
↑—**1=Custom Weir/Orifice** (Weir Controls 0.32 cfs @ 2.74 fps)

Secondary OutFlow Max=0.29 cfs @ 12.74 hrs HW=666.20' (Free Discharge)
↑—**2=Tube/Siphon/Float Valve** (Tube Controls 0.29 cfs @ 3.37 fps)

Pond 4P: stormtech SC310 16"x34" chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-310 +Cap (ADS StormTech®RC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 48.0" Spacing = 82.0" C-C Row Spacing

16 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 115.12' Row Length +32.0" End Stone x 2 = 120.45' Base Length
2 Rows x 34.0" Wide + 48.0" Spacing x 1 + 158.0" Side Stone x 2 = 36.00' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

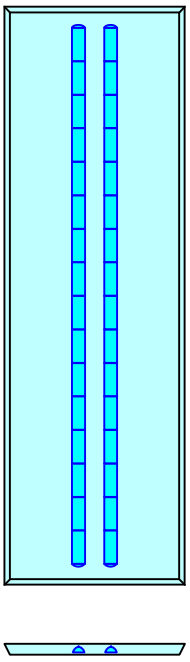
0.5 '/' Side-Z x Height = 14.0" Flare/Side
Base Length + Flare x 2 = 122.79' Top Length
Base Width + Flare x 2 = 38.33' Top Width

32 Chambers x 14.7 cf = 471.7 cf Chamber Storage

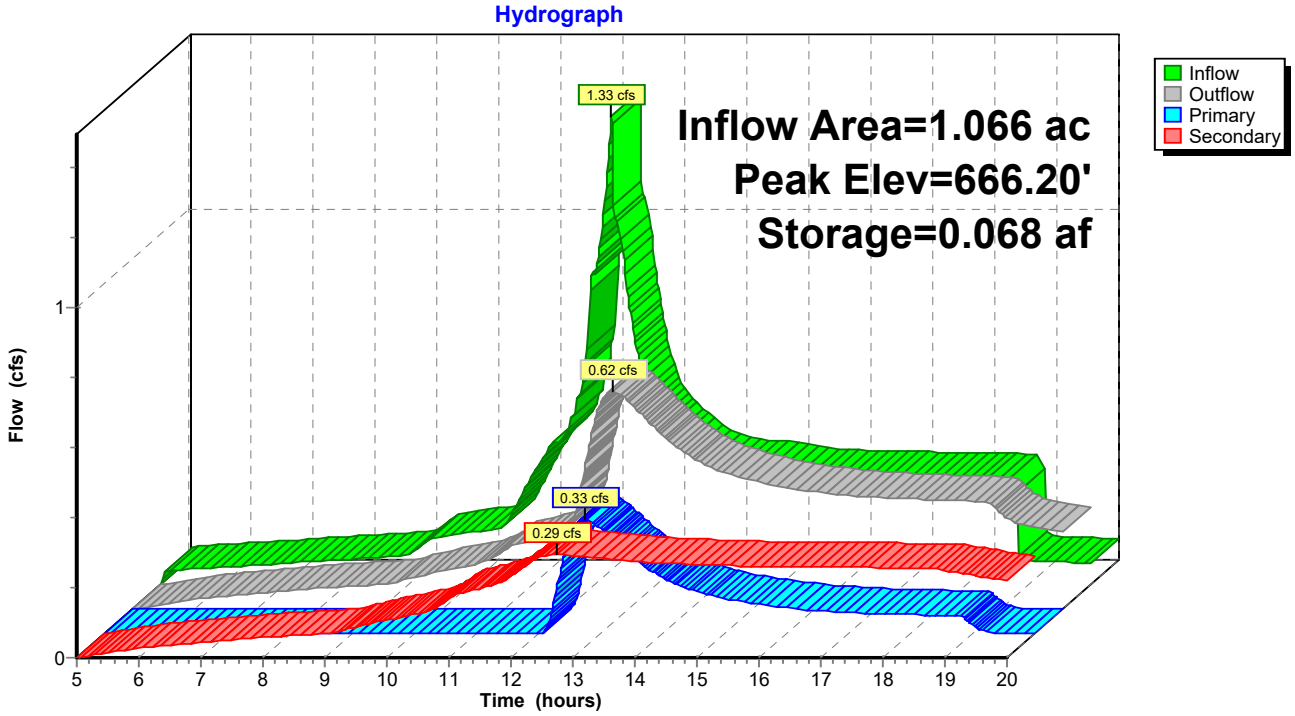
10,548.2 cf Field - 471.7 cf Chambers = 10,076.5 cf Stone x 33.0% Voids = 3,325.2 cf Stone Storage

Chamber Storage + Stone Storage = 3,797.0 cf = 0.087 af
Overall Storage Efficiency = 36.0%
Overall System Size = 120.45' x 36.00' x 2.33'

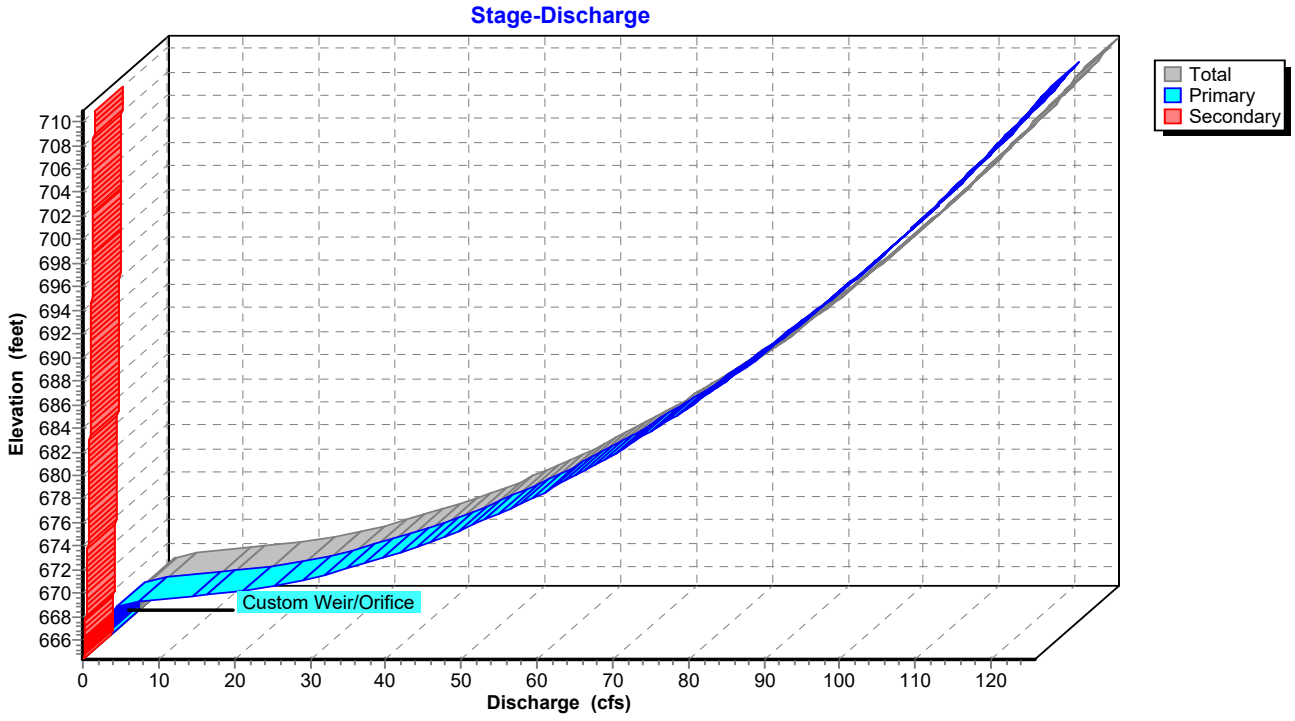
32 Chambers
390.7 cy Field
373.2 cy Stone



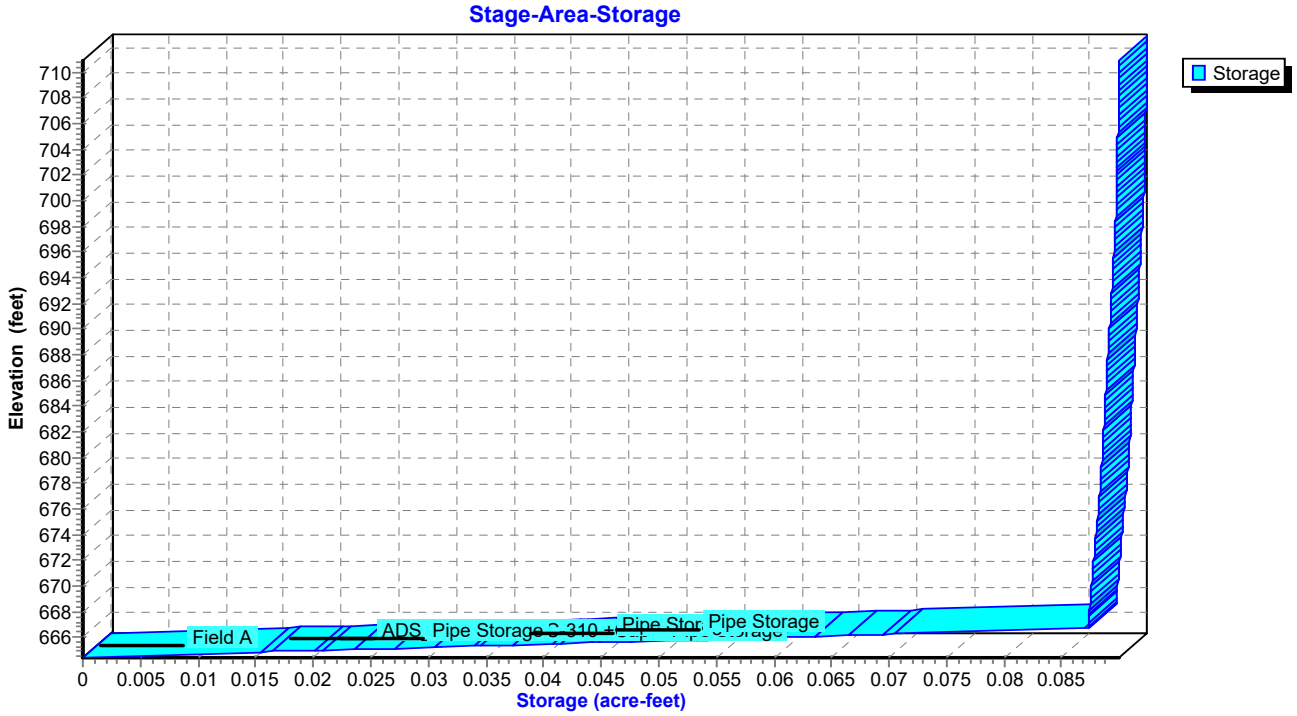
Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Hydrograph for Pond 4P: stormtech SC310 16"x34" chambers

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0.000	664.40	0.00	0.00	0.00
5.40	0.04	0.001	664.43	0.01	0.00	0.01
5.80	0.05	0.002	664.46	0.02	0.00	0.02
6.20	0.05	0.003	664.48	0.03	0.00	0.03
6.60	0.06	0.003	664.50	0.04	0.00	0.04
7.00	0.06	0.004	664.51	0.04	0.00	0.04
7.40	0.06	0.004	664.53	0.05	0.00	0.05
7.80	0.07	0.005	664.54	0.06	0.00	0.06
8.20	0.07	0.005	664.56	0.06	0.00	0.06
8.60	0.08	0.006	664.57	0.07	0.00	0.07
9.00	0.08	0.006	664.58	0.07	0.00	0.07
9.40	0.13	0.007	664.62	0.08	0.00	0.08
9.80	0.14	0.009	664.66	0.10	0.00	0.10
10.20	0.15	0.010	664.70	0.12	0.00	0.12
10.60	0.18	0.011	664.74	0.13	0.00	0.13
11.00	0.31	0.014	664.84	0.17	0.00	0.17
11.40	0.40	0.021	664.99	0.19	0.00	0.19
11.80	0.57	0.029	665.20	0.21	0.00	0.21
12.20	**1.18**	0.050	665.72	0.31	0.06	0.26
12.60	**0.75**	**0.068**	**666.18**	**0.60**	**0.31**	**0.29**
13.00	0.49	**0.067**	**666.16**	**0.59**	**0.30**	**0.29**
13.40	0.41	0.063	666.06	0.52	0.23	0.28
13.80	0.36	0.060	665.97	0.46	0.18	0.28
14.20	0.34	0.057	665.90	0.41	0.14	0.27
14.60	0.34	0.055	665.85	0.38	0.12	0.27
15.00	0.33	0.054	665.82	0.37	0.10	0.27
15.40	0.32	0.053	665.79	0.35	0.09	0.26
15.80	0.31	0.052	665.77	0.34	0.08	0.26
16.20	0.31	0.051	665.75	0.33	0.07	0.26
16.60	0.31	0.051	665.73	0.32	0.06	0.26
17.00	0.31	0.051	665.72	0.32	0.06	0.26
17.40	0.31	0.050	665.72	0.31	0.06	0.26
17.80	0.30	0.050	665.71	0.31	0.05	0.26
18.20	0.30	0.050	665.70	0.31	0.05	0.26
18.60	0.30	0.050	665.70	0.31	0.05	0.26
19.00	0.07	0.046	665.62	0.27	0.02	0.25
19.40	0.06	0.040	665.47	0.24	0.00	0.24
19.80	0.06	0.035	665.33	0.23	0.00	0.23

Stage-Discharge for Pond 4P: stormtech SC310 16"x34" chambers

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
664.40	0.00	0.00	0.00
664.90	0.18	0.00	0.18
665.40	0.23	0.00	0.23
665.90	0.41	0.14	0.27
666.40	0.78	0.48	0.31
666.90	1.40	1.06	0.34
667.40	6.94	6.57	0.37
667.90	15.20	14.80	0.40
668.40	20.51	20.09	0.42
668.90	24.60	24.15	0.45
669.40	28.07	27.60	0.47
669.90	31.15	30.65	0.50
670.40	33.94	33.43	0.52
670.90	36.52	35.98	0.54
671.40	38.93	38.37	0.56
671.90	41.19	40.61	0.58
672.40	43.34	42.74	0.60
672.90	45.38	44.76	0.62
673.40	47.33	46.70	0.64
673.90	49.21	48.56	0.65
674.40	51.02	50.35	0.67
674.90	52.76	52.08	0.69
675.40	54.45	53.75	0.70
675.90	56.09	55.37	0.72
676.40	57.68	56.95	0.74
676.90	59.23	58.48	0.75
677.40	60.74	59.98	0.77
677.90	62.22	61.43	0.78
678.40	63.65	62.86	0.80
678.90	65.06	64.25	0.81
679.40	66.44	65.61	0.82
679.90	67.79	66.95	0.84
680.40	69.11	68.26	0.85
680.90	70.41	69.54	0.87
681.40	71.68	70.80	0.88
681.90	72.94	72.04	0.89
682.40	74.17	73.26	0.91
682.90	75.38	74.46	0.92
683.40	76.57	75.64	0.93
683.90	77.74	76.80	0.94
684.40	78.90	77.94	0.96
684.90	80.04	79.07	0.97
685.40	81.16	80.18	0.98
685.90	82.27	81.28	0.99
686.40	83.36	82.36	1.01
686.90	84.44	83.43	1.02
687.40	85.51	84.48	1.03
687.90	86.56	85.52	1.04
688.40	87.60	86.55	1.05
688.90	88.63	87.57	1.06
689.40	89.65	88.57	1.08
689.90	90.65	89.56	1.09
690.40	91.64	90.55	1.10
690.90	92.63	91.52	1.11
691.40	93.60	92.48	1.12
691.90	94.56	93.43	1.13
692.40	95.51	94.37	1.14
692.90	96.46	95.31	1.15
693.40	97.39	96.23	1.16
693.90	98.32	97.15	1.17
694.40	99.23	98.05	1.18
694.90	100.14	98.95	1.19
695.40	101.04	99.84	1.20
695.90	101.94	100.72	1.21
696.40	102.82	101.60	1.22
696.90	103.70	102.47	1.23
697.40	104.57	103.32	1.24
697.90	105.43	104.18	1.25
698.40	106.29	105.02	1.26
698.90	107.13	105.86	1.27
699.40	107.98	106.70	1.28
699.90	108.81	107.52	1.29
700.40	109.64	108.34	1.30
700.90	110.46	109.15	1.31
701.40	111.28	109.96	1.32
701.90	112.09	110.76	1.33
702.40	112.90	111.56	1.34
702.90	113.70	112.35	1.35
703.40	114.49	113.14	1.36
703.90	115.28	113.91	1.37
704.40	116.06	114.69	1.37
704.90	116.84	115.46	1.38
705.40	117.61	116.22	1.39
705.90	118.38	116.98	1.40
706.40	119.14	117.73	1.41
706.90	119.90	118.48	1.42
707.40	120.65	119.23	1.43
707.90	121.40	119.97	1.44
708.40	122.15	120.70	1.44
708.90	122.89	121.43	1.45
709.40	123.62	122.16	1.46
709.90	124.35	122.88	1.47
710.40	125.08	123.60	1.48
710.90	**125.80**	**124.31**	**1.49**

Stage-Area-Storage for Pond 4P: stormtech SC310 16"x34" chambers

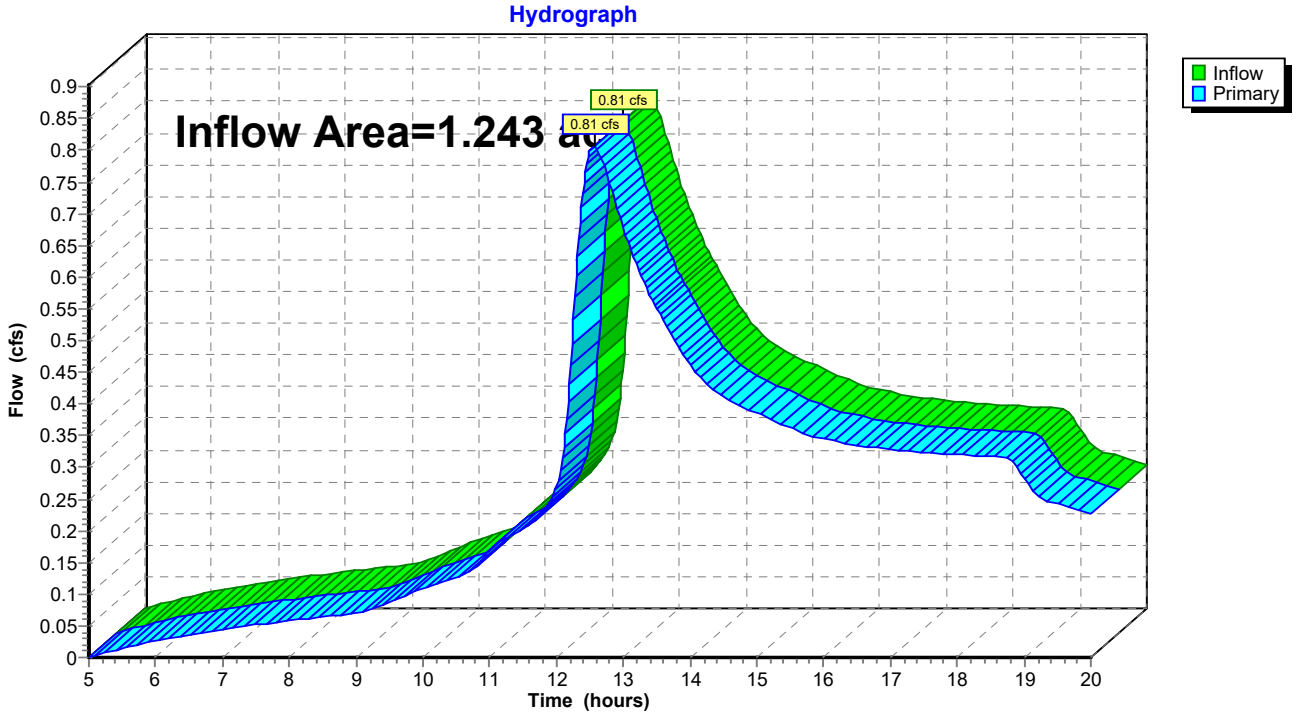
Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
664.40	0.000	689.90	0.089
664.90	0.017	690.40	0.089
665.40	0.037	690.90	0.089
665.90	0.057	691.40	0.089
666.40	0.075	691.90	0.089
666.90	0.087	692.40	0.089
667.40	0.087	692.90	0.089
667.90	0.087	693.40	0.089
668.40	0.087	693.90	0.089
668.90	0.087	694.40	0.089
669.40	0.088	694.90	0.089
669.90	0.088	695.40	0.089
670.40	0.088	695.90	0.090
670.90	0.088	696.40	0.090
671.40	0.088	696.90	0.090
671.90	0.088	697.40	0.090
672.40	0.088	697.90	0.090
672.90	0.088	698.40	0.090
673.40	0.088	698.90	0.090
673.90	0.088	699.40	0.090
674.40	0.088	699.90	0.090
674.90	0.088	700.40	0.090
675.40	0.088	700.90	0.090
675.90	0.088	701.40	0.090
676.40	0.088	701.90	0.090
676.90	0.088	702.40	0.090
677.40	0.088	702.90	0.090
677.90	0.088	703.40	0.090
678.40	0.088	703.90	0.090
678.90	0.088	704.40	0.090
679.40	0.088	704.90	0.090
679.90	0.088	705.40	0.090
680.40	0.089	705.90	0.090
680.90	0.089	706.40	0.090
681.40	0.089	706.90	0.090
681.90	0.089	707.40	0.090
682.40	0.089	707.90	0.090
682.90	0.089	708.40	0.090
683.40	0.089	708.90	0.090
683.90	0.089	709.40	0.090
684.40	0.089	709.90	0.090
684.90	0.089	710.40	0.090
685.40	0.089	710.90	**0.090**
685.90	0.089		
686.40	0.089		
686.90	0.089		
687.40	0.089		
687.90	0.089		
688.40	0.089		
688.90	0.089		
689.40	0.089		

Summary for Link 5L: HOM property run-off

Inflow Area = 1.243 ac, 84.96% Impervious, Inflow Depth > 3.02" for 10-yr event
Inflow = 0.81 cfs @ 12.56 hrs, Volume= 0.313 af
Primary = 0.81 cfs @ 12.56 hrs, Volume= 0.313 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Link 5L: HOM property run-off



Hydrograph for Link 5L: HOM property run-off

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.20	0.01	0.00	0.01
5.40	0.01	0.00	0.01
5.60	0.02	0.00	0.02
5.80	0.02	0.00	0.02
6.00	0.03	0.00	0.03
6.20	0.03	0.00	0.03
6.40	0.03	0.00	0.03
6.60	0.04	0.00	0.04
6.80	0.04	0.00	0.04
7.00	0.04	0.00	0.04
7.20	0.05	0.00	0.05
7.40	0.05	0.00	0.05
7.60	0.05	0.00	0.05
7.80	0.06	0.00	0.06
8.00	0.06	0.00	0.06
8.20	0.06	0.00	0.06
8.40	0.06	0.00	0.06
8.60	0.07	0.00	0.07
8.80	0.07	0.00	0.07
9.00	0.07	0.00	0.07
9.20	0.07	0.00	0.07
9.40	0.08	0.00	0.08
9.60	0.09	0.00	0.09
9.80	0.10	0.00	0.10
10.00	0.11	0.00	0.11
10.20	0.12	0.00	0.12
10.40	0.12	0.00	0.12
10.60	0.13	0.00	0.13
10.80	0.14	0.00	0.14
11.00	0.17	0.00	0.17
11.20	0.19	0.00	0.19
11.40	0.20	0.00	0.20
11.60	0.21	0.00	0.21
11.80	0.23	0.00	0.23
12.00	0.27	0.00	0.27
12.20	0.43	0.00	0.43
12.40	**0.73**	0.00	**0.73**
12.60	**0.80**	0.00	**0.80**
12.80	0.75	0.00	0.75
13.00	0.68	0.00	0.68
13.20	0.62	0.00	0.62
13.40	0.57	0.00	0.57
13.60	0.53	0.00	0.53
13.80	0.49	0.00	0.49
14.00	0.46	0.00	0.46
14.20	0.44	0.00	0.44
14.40	0.42	0.00	0.42
14.60	0.41	0.00	0.41
14.80	0.39	0.00	0.39
15.00	0.39	0.00	0.39
15.20	0.38	0.00	0.38
15.40	0.37	0.00	0.37
15.60	0.36	0.00	0.36
15.80	0.35	0.00	0.35
16.00	0.35	0.00	0.35
16.20	0.34	0.00	0.34
16.40	0.34	0.00	0.34
16.60	0.33	0.00	0.33
16.80	0.33	0.00	0.33
17.00	0.33	0.00	0.33
17.20	0.33	0.00	0.33
17.40	0.32	0.00	0.32
17.60	0.32	0.00	0.32
17.80	0.32	0.00	0.32
18.00	0.32	0.00	0.32
18.20	0.32	0.00	0.32
18.40	0.32	0.00	0.32
18.60	0.32	0.00	0.32
18.80	0.32	0.00	0.32
19.00	0.28	0.00	0.28
19.20	0.26	0.00	0.26
19.40	0.25	0.00	0.25
19.60	0.24	0.00	0.24
19.80	0.23	0.00	0.23
20.00	0.23	0.00	0.23

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SE roof to MH8 Runoff Area=0.339 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=130' Tc=10.0 min CN=98 Runoff=2.11 cfs 0.142 af

Subcatchment3S: untreated to streets Runoff Area=0.177 ac 49.15% Impervious Runoff Depth>2.38"
Flow Length=110' Tc=30.0 min CN=71 Runoff=0.36 cfs 0.035 af

Subcatchment6S: S roof to MH8 Runoff Area=0.305 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=170' Tc=12.0 min CN=98 Runoff=1.78 cfs 0.128 af

Subcatchment7S: to Inlets 8 & 9 Runoff Area=0.048 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=150' Tc=28.0 min CN=98 Runoff=0.19 cfs 0.020 af

Subcatchment8S: to Inlet 7 Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=90' Tc=21.0 min CN=98 Runoff=0.23 cfs 0.021 af

Subcatchment9S: to Inlet 6 Runoff Area=0.041 ac 78.05% Impervious Runoff Depth>3.69"
Flow Length=110' Tc=26.0 min CN=85 Runoff=0.14 cfs 0.013 af

Subcatchment10S: to Inlet 5 Runoff Area=0.030 ac 83.33% Impervious Runoff Depth>4.01"
Flow Length=60' Tc=18.0 min CN=88 Runoff=0.13 cfs 0.010 af

Subcatchment11S: to Inlet 4 Runoff Area=0.038 ac 73.68% Impervious Runoff Depth>3.40"
Flow Length=120' Tc=26.0 min CN=82 Runoff=0.12 cfs 0.011 af

Subcatchment12S: to inlet 3 Runoff Area=0.124 ac 100.00% Impervious Runoff Depth>5.03"
Tc=0.0 min CN=98 Runoff=1.00 cfs 0.052 af

Subcatchment13S: to NDS 2 Runoff Area=0.021 ac 0.00% Impervious Runoff Depth>1.59"
Flow Length=20' Tc=15.0 min CN=61 Runoff=0.04 cfs 0.003 af

Subcatchment14S: to NDS 3-5 Runoff Area=0.031 ac 3.23% Impervious Runoff Depth>1.28"
Flow Length=105' Tc=55.0 min CN=57 Runoff=0.02 cfs 0.003 af

Subcatchment16S: to NDS11-6 Runoff Area=0.038 ac 42.11% Impervious Runoff Depth>1.81"
Flow Length=80' Tc=30.0 min CN=64 Runoff=0.06 cfs 0.006 af

Reach 6R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.22 fps Inflow=1.78 cfs 0.128 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=27.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.128 af

Reach 7R: MH8 12" Avg. Flow Depth=0.25' Max Vel=2.01 fps Inflow=0.56 cfs 0.270 af
12.0" Round Pipe w/ 9.0" inside fill n=0.010 L=19.0' S=0.0042 '/' Capacity=0.28 cfs Outflow=0.29 cfs 0.248 af

Reach 8R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.23 fps Inflow=2.11 cfs 0.142 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=42.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.28 cfs 0.142 af

Reach 9R: inlet 3 18" Avg. Flow Depth=0.33' Max Vel=3.34 fps Inflow=1.27 cfs 0.300 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=35.0' S=0.0080 '/' Capacity=0.88 cfs Outflow=0.88 cfs 0.300 af

Reach 10R: MH7 18" Avg. Flow Depth=0.33' Max Vel=2.65 fps Inflow=0.88 cfs 0.300 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=4.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.69 cfs 0.300 af

Reach 11R: inlet 7 18" Avg. Flow Depth=0.15' Max Vel=2.36 fps Inflow=0.41 cfs 0.041 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=62.0' S=0.0052 '/' Capacity=0.71 cfs Outflow=0.41 cfs 0.041 af

Reach 12R: MH6 18" Avg. Flow Depth=0.16' Max Vel=2.34 fps Inflow=0.41 cfs 0.041 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=8.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.41 cfs 0.041 af

Reach 13R: to isolator 6" Avg. Flow Depth=0.04' Max Vel=7.03 fps Inflow=0.14 cfs 0.013 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.14 cfs 0.013 af

Reach 14R: to isolator 6" Avg. Flow Depth=0.04' Max Vel=6.87 fps Inflow=0.13 cfs 0.010 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.13 cfs 0.010 af

Reach 15R: to isolator 6" Avg. Flow Depth=0.04' Max Vel=6.67 fps Inflow=0.12 cfs 0.011 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.12 cfs 0.011 af

Reach 17R: NDS2 6" Avg. Flow Depth=0.09' Max Vel=1.54 fps Inflow=0.06 cfs 0.006 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0051 '/' Capacity=0.09 cfs Outflow=0.06 cfs 0.006 af

Reach 18R: inlet 3 6" Avg. Flow Depth=0.14' Max Vel=1.63 fps Inflow=0.09 cfs 0.012 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=62.0' S=0.0048 '/' Capacity=0.08 cfs Outflow=0.09 cfs 0.012 af

Reach 22R: NDS2 6" Avg. Flow Depth=0.04' Max Vel=1.13 fps Inflow=0.02 cfs 0.003 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0053 '/' Capacity=0.09 cfs Outflow=0.02 cfs 0.003 af

Pond 4P: stormtech SC310 16"x34" Peak Elev=666.49' Storage=0.079 af Inflow=1.55 cfs 0.387 af
Primary=0.56 cfs 0.099 af Secondary=0.31 cfs 0.238 af Outflow=0.87 cfs 0.337 af

Link 5L: HOM property run-off Inflow=1.20 cfs 0.372 af
Primary=1.20 cfs 0.372 af

Total Runoff Area = 1.243 ac Runoff Volume = 0.444 af Average Runoff Depth = 4.29"
15.04% Pervious = 0.187 ac 84.96% Impervious = 1.056 ac

Summary for Subcatchment 1S: SE roof to MH8

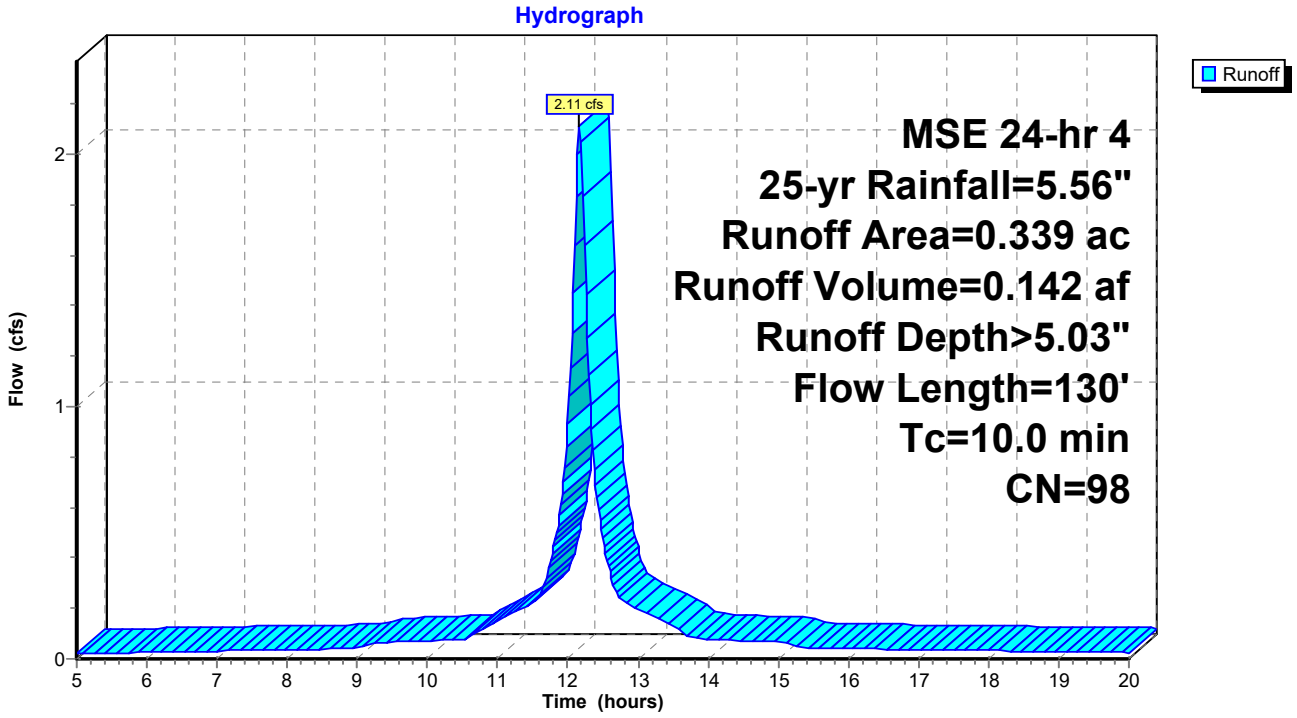
Runoff = 2.11 cfs @ 12.17 hrs, Volume= 0.142 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.339	98	fronting Main St
	0.339		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	130		0.22		**Direct Entry, S Bldg roof**

Subcatchment 1S: SE roof to MH8



Hydrograph for Subcatchment 1S: SE roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.02
5.20	0.27	0.12	0.02
5.40	0.29	0.14	0.02
5.60	0.31	0.15	0.02
5.80	0.32	0.16	0.02
6.00	0.34	0.18	0.03
6.20	0.36	0.20	0.03
6.40	0.38	0.21	0.03
6.60	0.40	0.23	0.03
6.80	0.42	0.25	0.03
7.00	0.44	0.26	0.03
7.20	0.46	0.28	0.03
7.40	0.48	0.30	0.03
7.60	0.51	0.32	0.03
7.80	0.53	0.34	0.03
8.00	0.55	0.36	0.04
8.20	0.57	0.39	0.04
8.40	0.60	0.41	0.04
8.60	0.62	0.43	0.04
8.80	0.65	0.45	0.04
9.00	0.67	0.48	0.04
9.20	0.71	0.52	0.06
9.40	0.75	0.55	0.06
9.60	0.79	0.59	0.07
9.80	0.84	0.63	0.07
10.00	0.88	0.68	0.07
10.20	0.93	0.72	0.07
10.40	0.97	0.76	0.08
10.60	1.03	0.82	0.08
10.80	1.11	0.90	0.12
11.00	1.20	0.99	0.15
11.20	1.31	1.10	0.18
11.40	1.44	1.22	0.21
11.60	1.61	1.38	0.25
11.80	1.91	1.69	0.44
12.00	2.61	2.38	**0.93**
12.20	3.65	3.42	**2.00**
12.40	3.95	3.72	0.69
12.60	4.12	3.88	0.34
12.80	4.25	4.01	0.23
13.00	4.36	4.12	0.20
13.20	4.45	4.22	0.17
13.40	4.53	4.30	0.14
13.60	4.59	4.35	0.11
13.80	4.63	4.40	0.08
14.00	4.68	4.44	0.08
14.20	4.72	4.49	0.08
14.40	4.77	4.53	0.07
14.60	4.81	4.57	0.07
14.80	4.85	4.61	0.07
15.00	4.89	4.65	0.07
15.20	4.91	4.68	0.05
15.40	4.94	4.70	0.04
15.60	4.96	4.73	0.04
15.80	4.99	4.75	0.04
16.00	5.01	4.77	0.04
16.20	5.03	4.80	0.04
16.40	5.05	4.82	0.04
16.60	5.08	4.84	0.04
16.80	5.10	4.86	0.04
17.00	5.12	4.88	0.04
17.20	5.14	4.90	0.04
17.40	5.16	4.92	0.03
17.60	5.18	4.94	0.03
17.80	5.20	4.96	0.03
18.00	5.22	4.98	0.03
18.20	5.24	5.00	0.03
18.40	5.25	5.02	0.03
18.60	5.27	5.03	0.03
18.80	5.29	5.05	0.03
19.00	5.30	5.07	0.03
19.20	5.32	5.08	0.03
19.40	5.34	5.10	0.03
19.60	5.35	5.11	0.03
19.80	5.37	5.13	0.02
20.00	**5.38**	**5.14**	0.02

Summary for Subcatchment 3S: untreated to streets

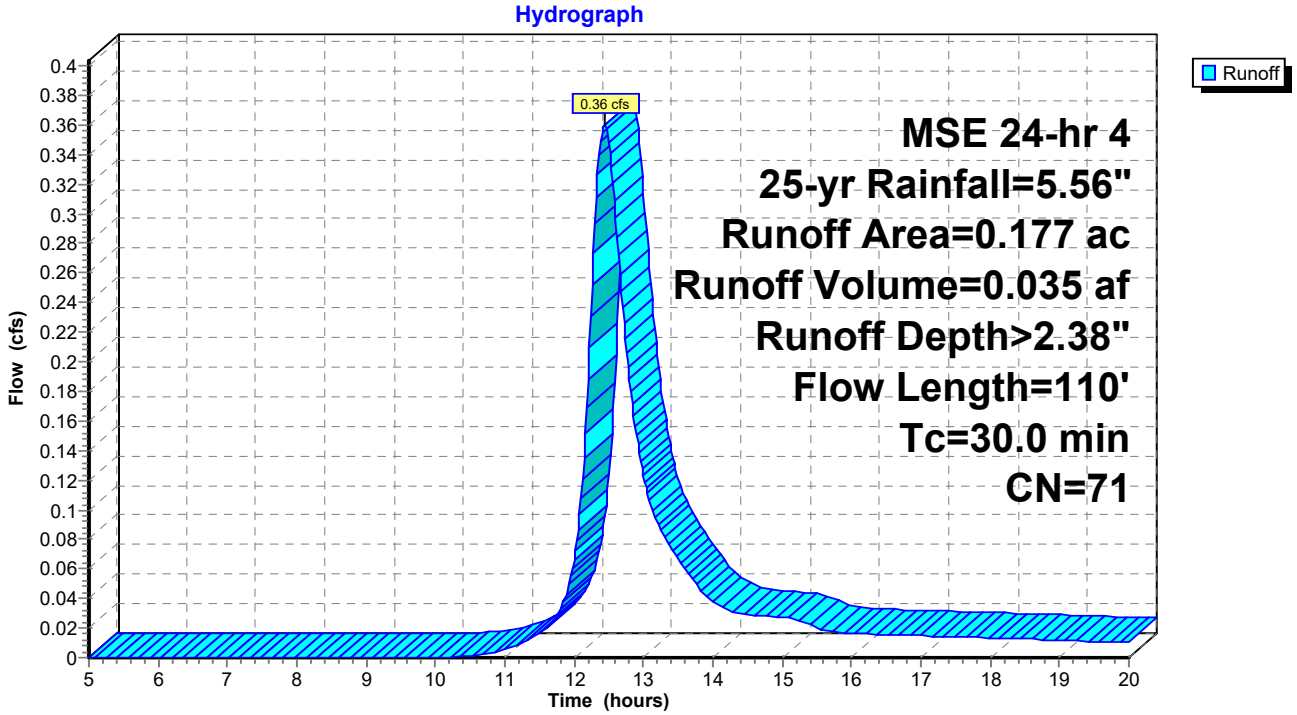
Runoff = 0.36 cfs @ 12.44 hrs, Volume= 0.035 af, Depth> 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.069	98	canopy
*	0.063	39	LS
*	0.027	61	lawn, HSG B
*	0.018	98	SW
	0.177	71	Weighted Average
	0.090		50.85% Pervious Area
	0.087		49.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	70		0.19		**Direct Entry, canopy**
12.0	20		0.03		**Direct Entry, LS**
12.0	20		0.03		**Direct Entry, lawn**
30.0	110	Total			

Subcatchment 3S: untreated to streets



Hydrograph for Subcatchment 3S: untreated to streets

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.00	0.00
7.40	0.48	0.00	0.00
7.60	0.51	0.00	0.00
7.80	0.53	0.00	0.00
8.00	0.55	0.00	0.00
8.20	0.57	0.00	0.00
8.40	0.60	0.00	0.00
8.60	0.62	0.00	0.00
8.80	0.65	0.00	0.00
9.00	0.67	0.00	0.00
9.20	0.71	0.00	0.00
9.40	0.75	0.00	0.00
9.60	0.79	0.00	0.00
9.80	0.84	0.00	0.00
10.00	0.88	0.00	0.00
10.20	0.93	0.00	0.00
10.40	0.97	0.01	0.00
10.60	1.03	0.01	0.00
10.80	1.11	0.02	0.00
11.00	1.20	0.03	0.01
11.20	1.31	0.05	0.01
11.40	1.44	0.08	0.01
11.60	1.61	0.13	0.02
11.80	1.91	0.23	0.03
12.00	2.61	0.54	0.07
12.20	3.65	1.16	0.19
12.40	3.95	1.36	**0.36**
12.60	4.12	1.48	**0.30**
12.80	4.25	1.57	0.19
13.00	4.36	1.64	0.12
13.20	4.45	1.71	0.09
13.40	4.53	1.77	0.07
13.60	4.59	1.81	0.06
13.80	4.63	1.84	0.05
14.00	4.68	1.88	0.04
14.20	4.72	1.91	0.03
14.40	4.77	1.94	0.03
14.60	4.81	1.97	0.03
14.80	4.85	2.00	0.03
15.00	4.89	2.03	0.03
15.20	4.91	2.05	0.03
15.40	4.94	2.07	0.02
15.60	4.96	2.09	0.02
15.80	4.99	2.11	0.02
16.00	5.01	2.12	0.02
16.20	5.03	2.14	0.02
16.40	5.05	2.16	0.02
16.60	5.08	2.17	0.02
16.80	5.10	2.19	0.02
17.00	5.12	2.21	0.01
17.20	5.14	2.22	0.01
17.40	5.16	2.24	0.01
17.60	5.18	2.25	0.01
17.80	5.20	2.27	0.01
18.00	5.22	2.28	0.01
18.20	5.24	2.30	0.01
18.40	5.25	2.31	0.01
18.60	5.27	2.32	0.01
18.80	5.29	2.34	0.01
19.00	5.30	2.35	0.01
19.20	5.32	2.36	0.01
19.40	5.34	2.37	0.01
19.60	5.35	2.39	0.01
19.80	5.37	2.40	0.01
20.00	**5.38**	**2.41**	0.01

Summary for Subcatchment 6S: S roof to MH8

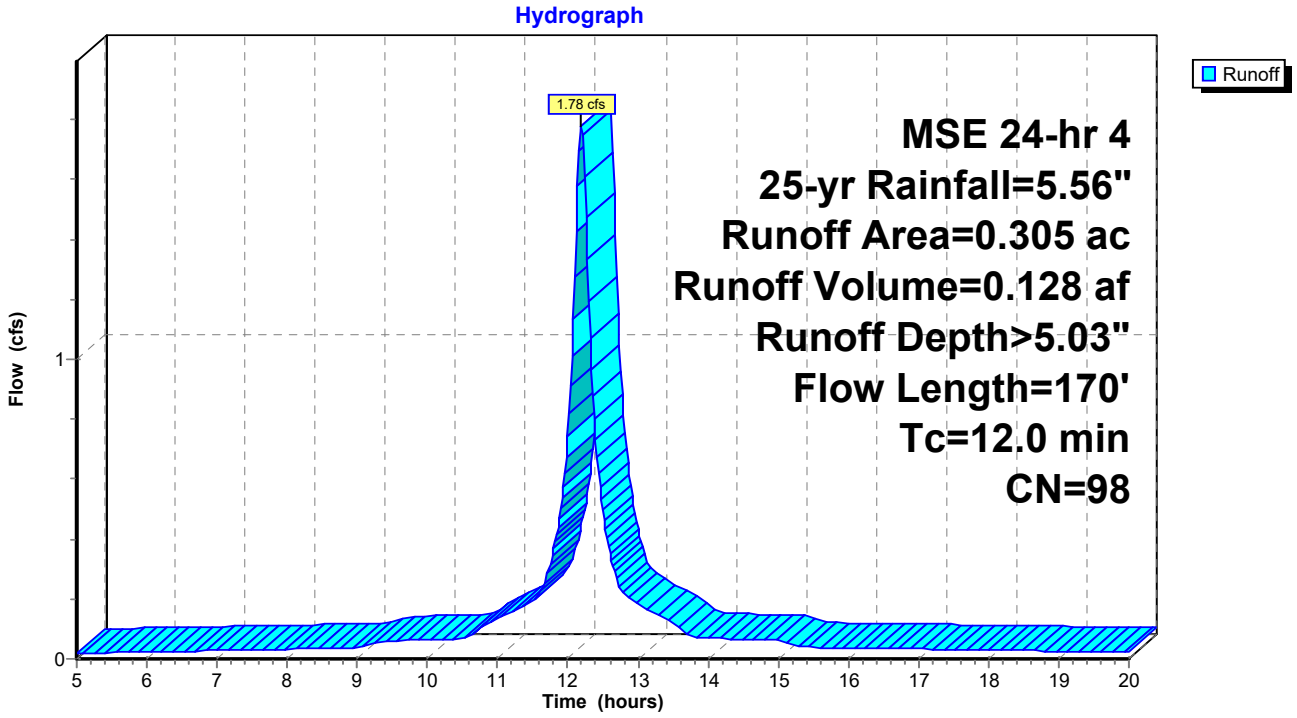
Runoff = 1.78 cfs @ 12.19 hrs, Volume= 0.128 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.305	98	fronting 10th
	0.305		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	170		0.24		**Direct Entry, NE Bldg Roof**

Subcatchment 6S: S roof to MH8



Hydrograph for Subcatchment 6S: S roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.02
5.20	0.27	0.12	0.02
5.40	0.29	0.14	0.02
5.60	0.31	0.15	0.02
5.80	0.32	0.16	0.02
6.00	0.34	0.18	0.02
6.20	0.36	0.20	0.02
6.40	0.38	0.21	0.02
6.60	0.40	0.23	0.03
6.80	0.42	0.25	0.03
7.00	0.44	0.26	0.03
7.20	0.46	0.28	0.03
7.40	0.48	0.30	0.03
7.60	0.51	0.32	0.03
7.80	0.53	0.34	0.03
8.00	0.55	0.36	0.03
8.20	0.57	0.39	0.03
8.40	0.60	0.41	0.03
8.60	0.62	0.43	0.03
8.80	0.65	0.45	0.04
9.00	0.67	0.48	0.04
9.20	0.71	0.52	0.05
9.40	0.75	0.55	0.06
9.60	0.79	0.59	0.06
9.80	0.84	0.63	0.06
10.00	0.88	0.68	0.06
10.20	0.93	0.72	0.07
10.40	0.97	0.76	0.07
10.60	1.03	0.82	0.07
10.80	1.11	0.90	0.11
11.00	1.20	0.99	0.13
11.20	1.31	1.10	0.16
11.40	1.44	1.22	0.18
11.60	1.61	1.38	0.22
11.80	1.91	1.69	0.37
12.00	2.61	2.38	0.74
12.20	3.65	3.42	**1.77**
12.40	3.95	3.72	0.73
12.60	4.12	3.88	0.35
12.80	4.25	4.01	0.22
13.00	4.36	4.12	0.18
13.20	4.45	4.22	0.16
13.40	4.53	4.30	0.13
13.60	4.59	4.35	0.11
13.80	4.63	4.40	0.07
14.00	4.68	4.44	0.07
14.20	4.72	4.49	0.07
14.40	4.77	4.53	0.07
14.60	4.81	4.57	0.06
14.80	4.85	4.61	0.06
15.00	4.89	4.65	0.06
15.20	4.91	4.68	0.05
15.40	4.94	4.70	0.04
15.60	4.96	4.73	0.04
15.80	4.99	4.75	0.04
16.00	5.01	4.77	0.04
16.20	5.03	4.80	0.04
16.40	5.05	4.82	0.03
16.60	5.08	4.84	0.03
16.80	5.10	4.86	0.03
17.00	5.12	4.88	0.03
17.20	5.14	4.90	0.03
17.40	5.16	4.92	0.03
17.60	5.18	4.94	0.03
17.80	5.20	4.96	0.03
18.00	5.22	4.98	0.03
18.20	5.24	5.00	0.03
18.40	5.25	5.02	0.03
18.60	5.27	5.03	0.03
18.80	5.29	5.05	0.03
19.00	5.30	5.07	0.03
19.20	5.32	5.08	0.02
19.40	5.34	5.10	0.02
19.60	5.35	5.11	0.02
19.80	5.37	5.13	0.02
20.00	**5.38**	**5.14**	0.02

Summary for Subcatchment 7S: to Inlets 8 & 9

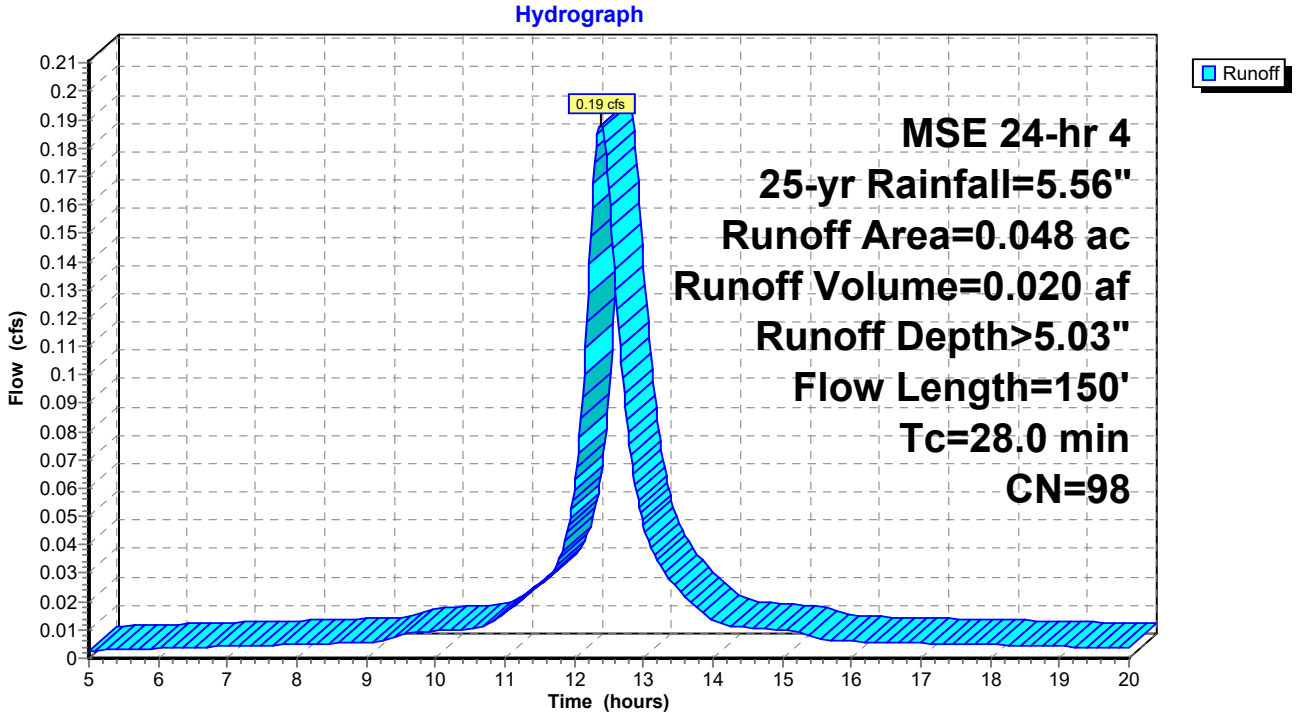
Runoff = 0.19 cfs @ 12.38 hrs, Volume= 0.020 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.046	98	pavement
*	0.002	98	SW
	0.048	98	Weighted Average
	0.048		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	55		0.13		**Direct Entry, pavement**
6.0	50		0.14		**Direct Entry, SW**
15.0	45		0.05		**Direct Entry, LS**
28.0	150	Total			

Subcatchment 7S: to Inlets 8 & 9



Hydrograph for Subcatchment 7S: to Inlets 8 & 9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.00
5.20	0.27	0.12	0.00
5.40	0.29	0.14	0.00
5.60	0.31	0.15	0.00
5.80	0.32	0.16	0.00
6.00	0.34	0.18	0.00
6.20	0.36	0.20	0.00
6.40	0.38	0.21	0.00
6.60	0.40	0.23	0.00
6.80	0.42	0.25	0.00
7.00	0.44	0.26	0.00
7.20	0.46	0.28	0.00
7.40	0.48	0.30	0.00
7.60	0.51	0.32	0.00
7.80	0.53	0.34	0.00
8.00	0.55	0.36	0.00
8.20	0.57	0.39	0.01
8.40	0.60	0.41	0.01
8.60	0.62	0.43	0.01
8.80	0.65	0.45	0.01
9.00	0.67	0.48	0.01
9.20	0.71	0.52	0.01
9.40	0.75	0.55	0.01
9.60	0.79	0.59	0.01
9.80	0.84	0.63	0.01
10.00	0.88	0.68	0.01
10.20	0.93	0.72	0.01
10.40	0.97	0.76	0.01
10.60	1.03	0.82	0.01
10.80	1.11	0.90	0.01
11.00	1.20	0.99	0.02
11.20	1.31	1.10	0.02
11.40	1.44	1.22	0.02
11.60	1.61	1.38	0.03
11.80	1.91	1.69	0.04
12.00	2.61	2.38	0.06
12.20	3.65	3.42	**0.13**
12.40	3.95	3.72	**0.19**
12.60	4.12	3.88	0.13
12.80	4.25	4.01	0.08
13.00	4.36	4.12	0.05
13.20	4.45	4.22	0.03
13.40	4.53	4.30	0.03
13.60	4.59	4.35	0.02
13.80	4.63	4.40	0.02
14.00	4.68	4.44	0.01
14.20	4.72	4.49	0.01
14.40	4.77	4.53	0.01
14.60	4.81	4.57	0.01
14.80	4.85	4.61	0.01
15.00	4.89	4.65	0.01
15.20	4.91	4.68	0.01
15.40	4.94	4.70	0.01
15.60	4.96	4.73	0.01
15.80	4.99	4.75	0.01
16.00	5.01	4.77	0.01
16.20	5.03	4.80	0.01
16.40	5.05	4.82	0.01
16.60	5.08	4.84	0.01
16.80	5.10	4.86	0.01
17.00	5.12	4.88	0.01
17.20	5.14	4.90	0.01
17.40	5.16	4.92	0.01
17.60	5.18	4.94	0.00
17.80	5.20	4.96	0.00
18.00	5.22	4.98	0.00
18.20	5.24	5.00	0.00
18.40	5.25	5.02	0.00
18.60	5.27	5.03	0.00
18.80	5.29	5.05	0.00
19.00	5.30	5.07	0.00
19.20	5.32	5.08	0.00
19.40	5.34	5.10	0.00
19.60	5.35	5.11	0.00
19.80	5.37	5.13	0.00
20.00	**5.38**	**5.14**	0.00

Summary for Subcatchment 8S: to Inlet 7

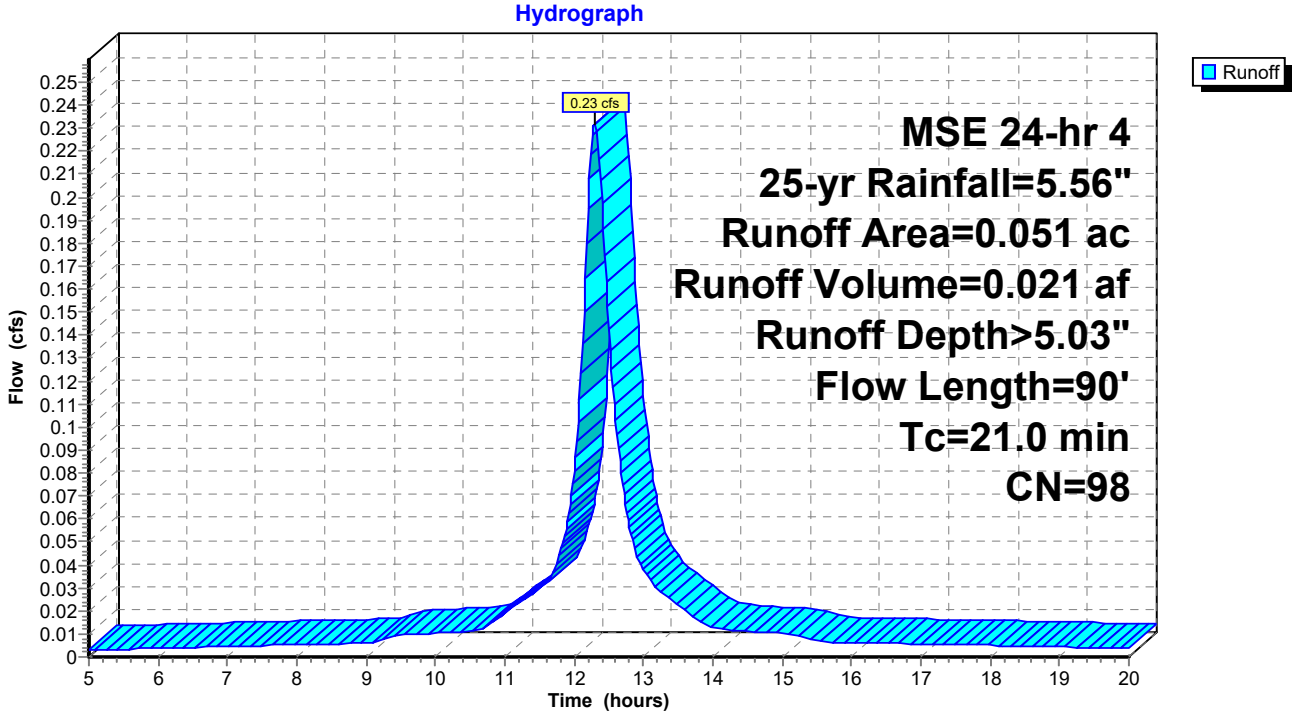
Runoff = 0.23 cfs @ 12.29 hrs, Volume= 0.021 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.051	98	pavement
	0.051		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50		0.14		**Direct Entry, pavement**
15.0	40		0.04		**Direct Entry, LS**
21.0	90	Total			

Subcatchment 8S: to Inlet 7



Hydrograph for Subcatchment 8S: to Inlet 7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.00
5.20	0.27	0.12	0.00
5.40	0.29	0.14	0.00
5.60	0.31	0.15	0.00
5.80	0.32	0.16	0.00
6.00	0.34	0.18	0.00
6.20	0.36	0.20	0.00
6.40	0.38	0.21	0.00
6.60	0.40	0.23	0.00
6.80	0.42	0.25	0.00
7.00	0.44	0.26	0.00
7.20	0.46	0.28	0.00
7.40	0.48	0.30	0.00
7.60	0.51	0.32	0.00
7.80	0.53	0.34	0.01
8.00	0.55	0.36	0.01
8.20	0.57	0.39	0.01
8.40	0.60	0.41	0.01
8.60	0.62	0.43	0.01
8.80	0.65	0.45	0.01
9.00	0.67	0.48	0.01
9.20	0.71	0.52	0.01
9.40	0.75	0.55	0.01
9.60	0.79	0.59	0.01
9.80	0.84	0.63	0.01
10.00	0.88	0.68	0.01
10.20	0.93	0.72	0.01
10.40	0.97	0.76	0.01
10.60	1.03	0.82	0.01
10.80	1.11	0.90	0.01
11.00	1.20	0.99	0.02
11.20	1.31	1.10	0.02
11.40	1.44	1.22	0.03
11.60	1.61	1.38	0.03
11.80	1.91	1.69	0.04
12.00	2.61	2.38	0.08
12.20	3.65	3.42	**0.20**
12.40	3.95	3.72	**0.20**
12.60	4.12	3.88	0.10
12.80	4.25	4.01	0.06
13.00	4.36	4.12	0.04
13.20	4.45	4.22	0.03
13.40	4.53	4.30	0.03
13.60	4.59	4.35	0.02
13.80	4.63	4.40	0.02
14.00	4.68	4.44	0.01
14.20	4.72	4.49	0.01
14.40	4.77	4.53	0.01
14.60	4.81	4.57	0.01
14.80	4.85	4.61	0.01
15.00	4.89	4.65	0.01
15.20	4.91	4.68	0.01
15.40	4.94	4.70	0.01
15.60	4.96	4.73	0.01
15.80	4.99	4.75	0.01
16.00	5.01	4.77	0.01
16.20	5.03	4.80	0.01
16.40	5.05	4.82	0.01
16.60	5.08	4.84	0.01
16.80	5.10	4.86	0.01
17.00	5.12	4.88	0.01
17.20	5.14	4.90	0.01
17.40	5.16	4.92	0.01
17.60	5.18	4.94	0.01
17.80	5.20	4.96	0.01
18.00	5.22	4.98	0.00
18.20	5.24	5.00	0.00
18.40	5.25	5.02	0.00
18.60	5.27	5.03	0.00
18.80	5.29	5.05	0.00
19.00	5.30	5.07	0.00
19.20	5.32	5.08	0.00
19.40	5.34	5.10	0.00
19.60	5.35	5.11	0.00
19.80	5.37	5.13	0.00
20.00	**5.38**	**5.14**	0.00

Summary for Subcatchment 9S: to Inlet 6

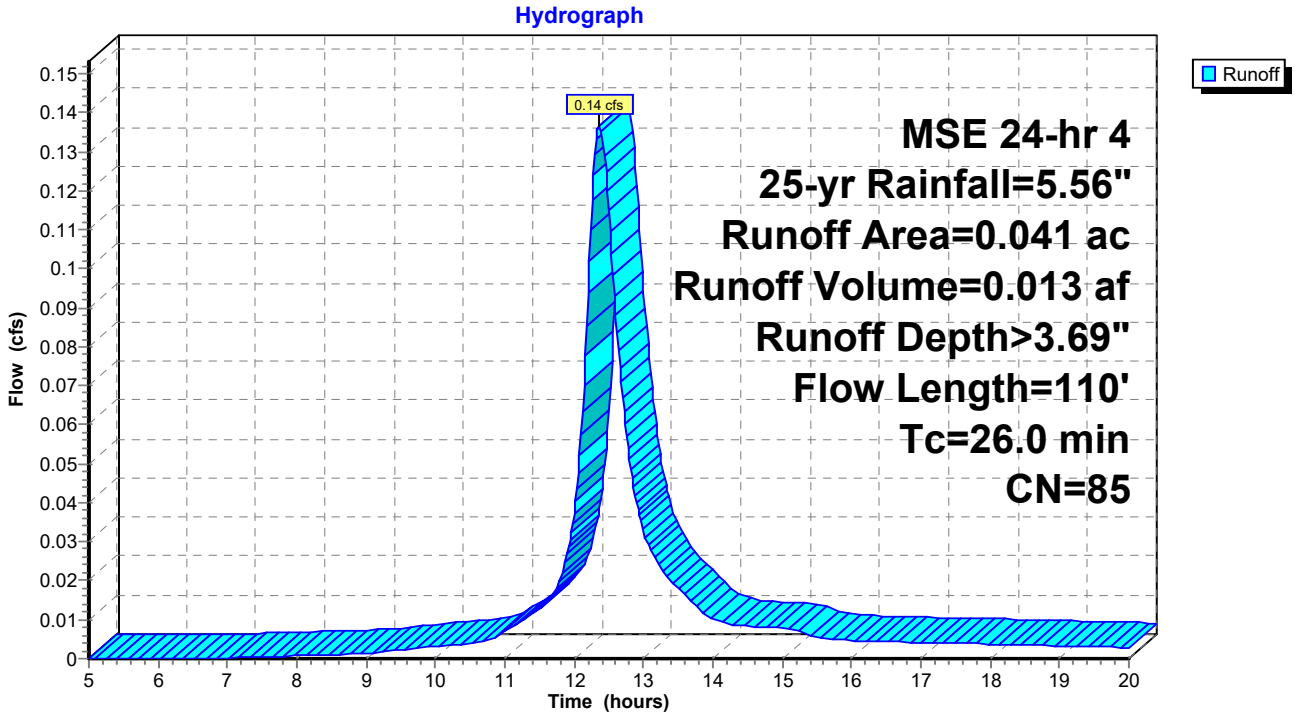
Runoff = 0.14 cfs @ 12.37 hrs, Volume= 0.013 af, Depth> 3.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.032	98	pavement
*	0.009	39	LS
	0.041	85	Weighted Average
	0.009		21.95% Pervious Area
	0.032		78.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	45		0.11		**Direct Entry, pavement**
7.0	45		0.11		**Direct Entry, SW**
12.0	20		0.03		**Direct Entry, LS**
26.0	110	Total			

Subcatchment 9S: to Inlet 6



Hydrograph for Subcatchment 9S: to Inlet 6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.01	0.00
7.40	0.48	0.01	0.00
7.60	0.51	0.01	0.00
7.80	0.53	0.02	0.00
8.00	0.55	0.02	0.00
8.20	0.57	0.02	0.00
8.40	0.60	0.03	0.00
8.60	0.62	0.04	0.00
8.80	0.65	0.04	0.00
9.00	0.67	0.05	0.00
9.20	0.71	0.06	0.00
9.40	0.75	0.07	0.00
9.60	0.79	0.09	0.00
9.80	0.84	0.10	0.00
10.00	0.88	0.12	0.00
10.20	0.93	0.14	0.00
10.40	0.97	0.16	0.00
10.60	1.03	0.19	0.00
10.80	1.11	0.23	0.01
11.00	1.20	0.28	0.01
11.20	1.31	0.34	0.01
11.40	1.44	0.41	0.01
11.60	1.61	0.52	0.01
11.80	1.91	0.73	0.02
12.00	2.61	1.26	0.04
12.20	3.65	2.15	**0.09**
12.40	3.95	2.42	**0.14**
12.60	4.12	2.57	0.09
12.80	4.25	2.68	0.05
13.00	4.36	2.78	0.03
13.20	4.45	2.87	0.02
13.40	4.53	2.94	0.02
13.60	4.59	2.99	0.02
13.80	4.63	3.03	0.01
14.00	4.68	3.07	0.01
14.20	4.72	3.11	0.01
14.40	4.77	3.15	0.01
14.60	4.81	3.19	0.01
14.80	4.85	3.23	0.01
15.00	4.89	3.26	0.01
15.20	4.91	3.29	0.01
15.40	4.94	3.31	0.01
15.60	4.96	3.33	0.01
15.80	4.99	3.35	0.00
16.00	5.01	3.38	0.00
16.20	5.03	3.40	0.00
16.40	5.05	3.42	0.00
16.60	5.08	3.44	0.00
16.80	5.10	3.46	0.00
17.00	5.12	3.48	0.00
17.20	5.14	3.50	0.00
17.40	5.16	3.52	0.00
17.60	5.18	3.53	0.00
17.80	5.20	3.55	0.00
18.00	5.22	3.57	0.00
18.20	5.24	3.59	0.00
18.40	5.25	3.60	0.00
18.60	5.27	3.62	0.00
18.80	5.29	3.64	0.00
19.00	5.30	3.65	0.00
19.20	5.32	3.67	0.00
19.40	5.34	3.68	0.00
19.60	5.35	3.69	0.00
19.80	5.37	3.71	0.00
20.00	**5.38**	**3.72**	0.00

Summary for Subcatchment 10S: to Inlet 5

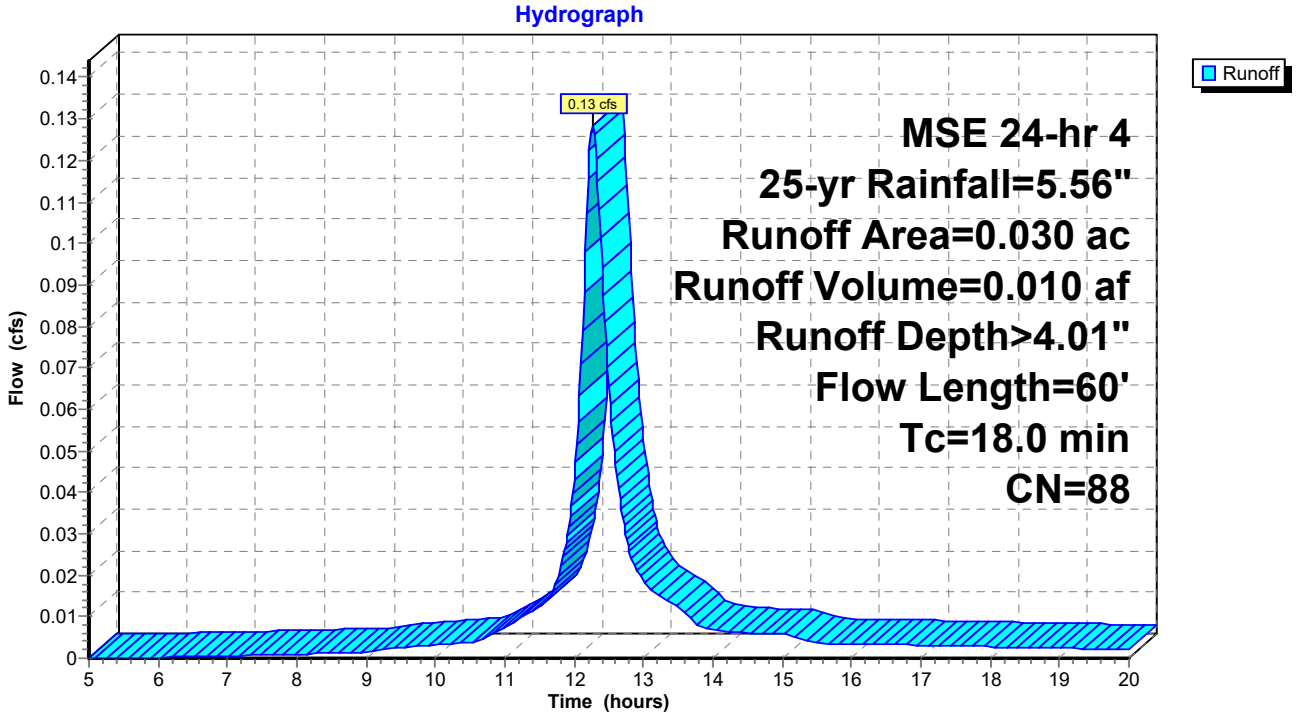
Runoff = 0.13 cfs @ 12.26 hrs, Volume= 0.010 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.005	39	LS
	0.030	88	Weighted Average
	0.005		16.67% Pervious Area
	0.025		83.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40		0.11		**Direct Entry, pavement**
12.0	20		0.03		**Direct Entry, LS**
18.0	60	Total			

Subcatchment 10S: to Inlet 5



Hydrograph for Subcatchment 10S: to Inlet 5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.01	0.00
6.40	0.38	0.01	0.00
6.60	0.40	0.01	0.00
6.80	0.42	0.01	0.00
7.00	0.44	0.02	0.00
7.20	0.46	0.02	0.00
7.40	0.48	0.03	0.00
7.60	0.51	0.03	0.00
7.80	0.53	0.04	0.00
8.00	0.55	0.05	0.00
8.20	0.57	0.05	0.00
8.40	0.60	0.06	0.00
8.60	0.62	0.07	0.00
8.80	0.65	0.08	0.00
9.00	0.67	0.09	0.00
9.20	0.71	0.11	0.00
9.40	0.75	0.13	0.00
9.60	0.79	0.14	0.00
9.80	0.84	0.17	0.00
10.00	0.88	0.19	0.00
10.20	0.93	0.21	0.00
10.40	0.97	0.24	0.00
10.60	1.03	0.27	0.00
10.80	1.11	0.32	0.01
11.00	1.20	0.38	0.01
11.20	1.31	0.45	0.01
11.40	1.44	0.54	0.01
11.60	1.61	0.66	0.01
11.80	1.91	0.89	0.02
12.00	2.61	1.47	0.04
12.20	3.65	2.41	**0.12**
12.40	3.95	2.69	**0.09**
12.60	4.12	2.84	0.05
12.80	4.25	2.96	0.03
13.00	4.36	3.06	0.02
13.20	4.45	3.15	0.02
13.40	4.53	3.23	0.01
13.60	4.59	3.28	0.01
13.80	4.63	3.32	0.01
14.00	4.68	3.37	0.01
14.20	4.72	3.41	0.01
14.40	4.77	3.45	0.01
14.60	4.81	3.49	0.01
14.80	4.85	3.52	0.01
15.00	4.89	3.56	0.01
15.20	4.91	3.59	0.01
15.40	4.94	3.61	0.00
15.60	4.96	3.63	0.00
15.80	4.99	3.66	0.00
16.00	5.01	3.68	0.00
16.20	5.03	3.70	0.00
16.40	5.05	3.72	0.00
16.60	5.08	3.74	0.00
16.80	5.10	3.76	0.00
17.00	5.12	3.78	0.00
17.20	5.14	3.80	0.00
17.40	5.16	3.82	0.00
17.60	5.18	3.84	0.00
17.80	5.20	3.86	0.00
18.00	5.22	3.88	0.00
18.20	5.24	3.89	0.00
18.40	5.25	3.91	0.00
18.60	5.27	3.93	0.00
18.80	5.29	3.94	0.00
19.00	5.30	3.96	0.00
19.20	5.32	3.97	0.00
19.40	5.34	3.99	0.00
19.60	5.35	4.00	0.00
19.80	5.37	4.02	0.00
20.00	**5.38**	**4.03**	0.00

Summary for Subcatchment 11S: to Inlet 4

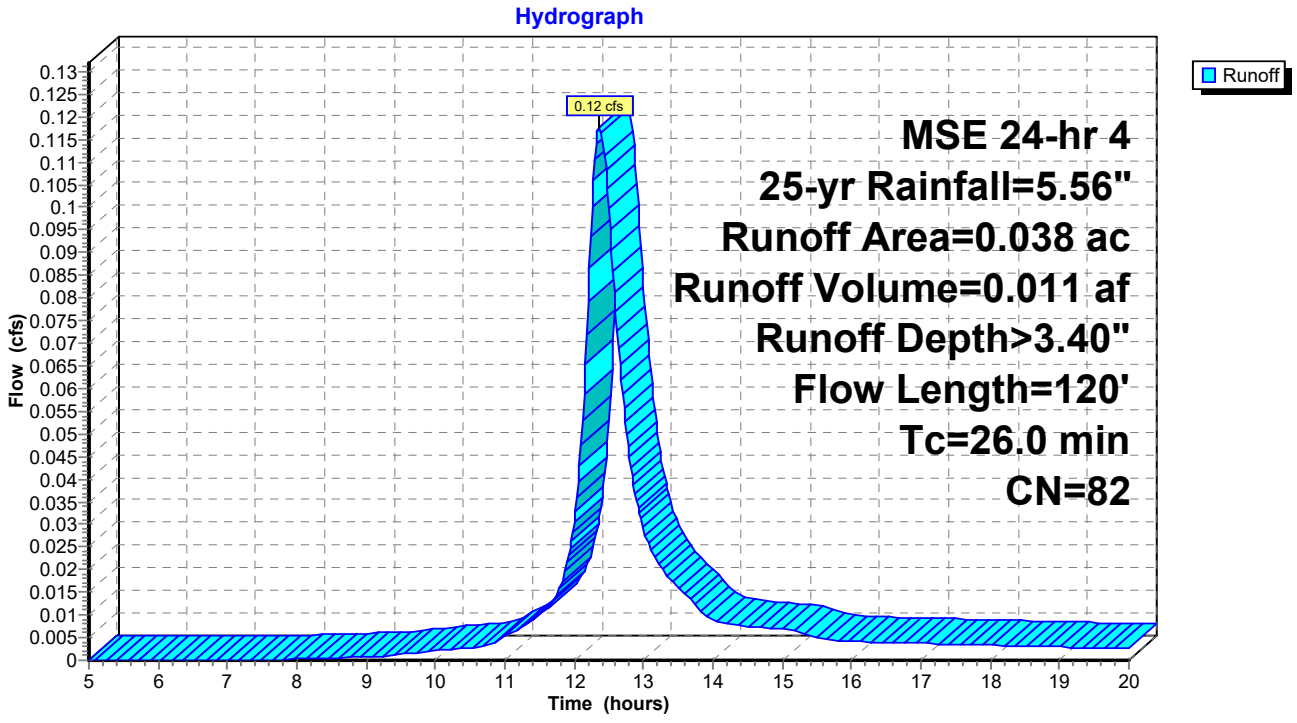
Runoff = 0.12 cfs @ 12.37 hrs, Volume= 0.011 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.003	98	SW
*	0.010	39	LS
	0.038	82	Weighted Average
	0.010		26.32% Pervious Area
	0.028		73.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	40		0.10		**Direct Entry, pavement**
7.0	40		0.10		**Direct Entry, SW**
12.0	40		0.06		**Direct Entry, LS**
26.0	120	Total			

Subcatchment 11S: to Inlet 4



Hydrograph for Subcatchment 11S: to Inlet 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.00	0.00
7.40	0.48	0.00	0.00
7.60	0.51	0.00	0.00
7.80	0.53	0.00	0.00
8.00	0.55	0.01	0.00
8.20	0.57	0.01	0.00
8.40	0.60	0.01	0.00
8.60	0.62	0.01	0.00
8.80	0.65	0.02	0.00
9.00	0.67	0.02	0.00
9.20	0.71	0.03	0.00
9.40	0.75	0.04	0.00
9.60	0.79	0.05	0.00
9.80	0.84	0.06	0.00
10.00	0.88	0.07	0.00
10.20	0.93	0.09	0.00
10.40	0.97	0.10	0.00
10.60	1.03	0.12	0.00
10.80	1.11	0.16	0.00
11.00	1.20	0.20	0.01
11.20	1.31	0.25	0.01
11.40	1.44	0.31	0.01
11.60	1.61	0.41	0.01
11.80	1.91	0.59	0.02
12.00	2.61	1.08	0.03
12.20	3.65	1.91	**0.08**
12.40	3.95	2.16	**0.12**
12.60	4.12	2.31	0.08
12.80	4.25	2.42	0.04
13.00	4.36	2.51	0.03
13.20	4.45	2.59	0.02
13.40	4.53	2.66	0.02
13.60	4.59	2.71	0.01
13.80	4.63	2.75	0.01
14.00	4.68	2.79	0.01
14.20	4.72	2.83	0.01
14.40	4.77	2.87	0.01
14.60	4.81	2.91	0.01
14.80	4.85	2.94	0.01
15.00	4.89	2.98	0.01
15.20	4.91	3.00	0.01
15.40	4.94	3.02	0.01
15.60	4.96	3.04	0.00
15.80	4.99	3.07	0.00
16.00	5.01	3.09	0.00
16.20	5.03	3.11	0.00
16.40	5.05	3.13	0.00
16.60	5.08	3.15	0.00
16.80	5.10	3.17	0.00
17.00	5.12	3.19	0.00
17.20	5.14	3.20	0.00
17.40	5.16	3.22	0.00
17.60	5.18	3.24	0.00
17.80	5.20	3.26	0.00
18.00	5.22	3.27	0.00
18.20	5.24	3.29	0.00
18.40	5.25	3.31	0.00
18.60	5.27	3.32	0.00
18.80	5.29	3.34	0.00
19.00	5.30	3.35	0.00
19.20	5.32	3.37	0.00
19.40	5.34	3.38	0.00
19.60	5.35	3.39	0.00
19.80	5.37	3.41	0.00
20.00	**5.38**	**3.42**	0.00

Summary for Subcatchment 12S: to inlet 3

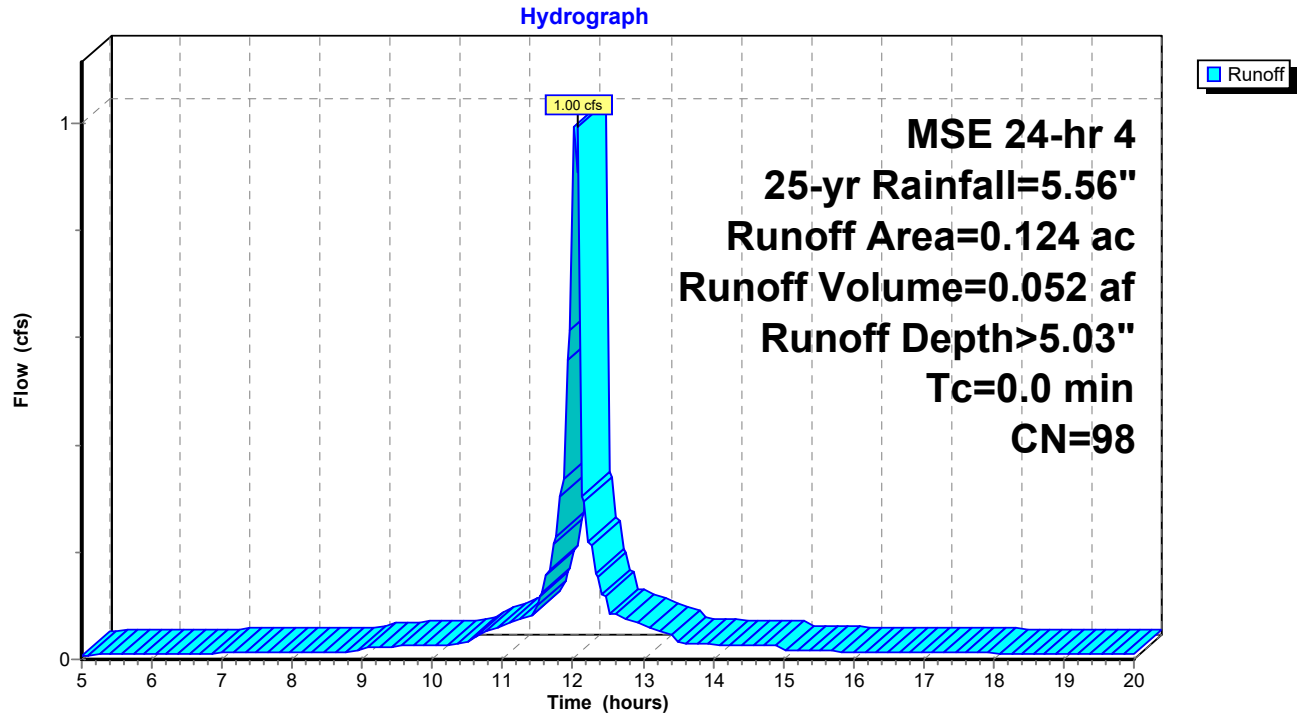
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 1.00 cfs @ 12.08 hrs, Volume= 0.052 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.009	98	open shelter
*	0.059	98	SW
*	0.034	98	parking AC pavement
*	0.022	98	PIP play surface
	0.124	98	Weighted Average
	0.124		100.00% Impervious Area

Subcatchment 12S: to inlet 3



Hydrograph for Subcatchment 12S: to inlet 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.01
5.20	0.27	0.12	0.01
5.40	0.29	0.14	0.01
5.60	0.31	0.15	0.01
5.80	0.32	0.16	0.01
6.00	0.34	0.18	0.01
6.20	0.36	0.20	0.01
6.40	0.38	0.21	0.01
6.60	0.40	0.23	0.01
6.80	0.42	0.25	0.01
7.00	0.44	0.26	0.01
7.20	0.46	0.28	0.01
7.40	0.48	0.30	0.01
7.60	0.51	0.32	0.01
7.80	0.53	0.34	0.01
8.00	0.55	0.36	0.01
8.20	0.57	0.39	0.01
8.40	0.60	0.41	0.01
8.60	0.62	0.43	0.01
8.80	0.65	0.45	0.01
9.00	0.67	0.48	0.02
9.20	0.71	0.52	0.02
9.40	0.75	0.55	0.02
9.60	0.79	0.59	0.03
9.80	0.84	0.63	0.03
10.00	0.88	0.68	0.03
10.20	0.93	0.72	0.03
10.40	0.97	0.76	0.03
10.60	1.03	0.82	0.04
10.80	1.11	0.90	0.05
11.00	1.20	0.99	0.06
11.20	1.31	1.10	0.07
11.40	1.44	1.22	0.08
11.60	1.61	1.38	0.14
11.80	1.91	1.69	0.26
12.00	2.61	2.38	**0.78**
12.20	3.65	3.42	**0.26**
12.40	3.95	3.72	0.14
12.60	4.12	3.88	0.08
12.80	4.25	4.01	0.07
13.00	4.36	4.12	0.06
13.20	4.45	4.22	0.05
13.40	4.53	4.30	0.04
13.60	4.59	4.35	0.03
13.80	4.63	4.40	0.03
14.00	4.68	4.44	0.03
14.20	4.72	4.49	0.03
14.40	4.77	4.53	0.03
14.60	4.81	4.57	0.03
14.80	4.85	4.61	0.02
15.00	4.89	4.65	0.02
15.20	4.91	4.68	0.02
15.40	4.94	4.70	0.02
15.60	4.96	4.73	0.02
15.80	4.99	4.75	0.01
16.00	5.01	4.77	0.01
16.20	5.03	4.80	0.01
16.40	5.05	4.82	0.01
16.60	5.08	4.84	0.01
16.80	5.10	4.86	0.01
17.00	5.12	4.88	0.01
17.20	5.14	4.90	0.01
17.40	5.16	4.92	0.01
17.60	5.18	4.94	0.01
17.80	5.20	4.96	0.01
18.00	5.22	4.98	0.01
18.20	5.24	5.00	0.01
18.40	5.25	5.02	0.01
18.60	5.27	5.03	0.01
18.80	5.29	5.05	0.01
19.00	5.30	5.07	0.01
19.20	5.32	5.08	0.01
19.40	5.34	5.10	0.01
19.60	5.35	5.11	0.01
19.80	5.37	5.13	0.01
20.00	**5.38**	**5.14**	0.01

Summary for Subcatchment 13S: to NDS 2

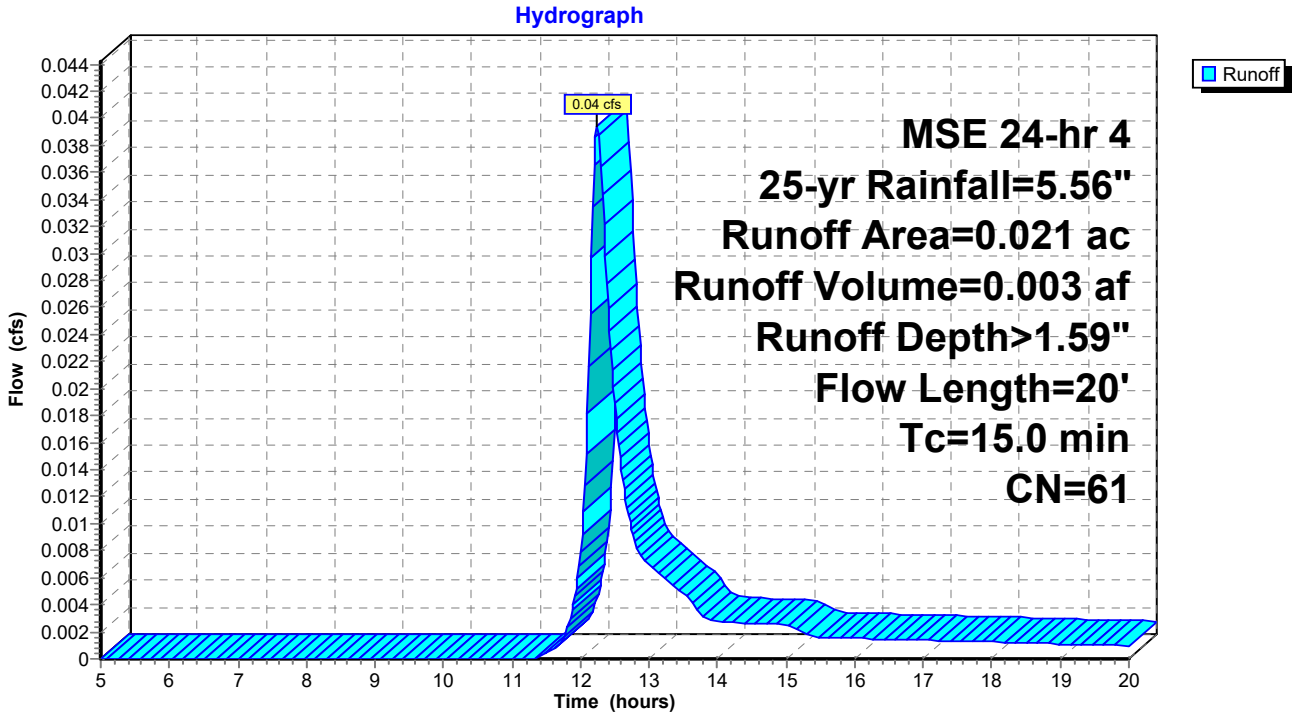
Runoff = 0.04 cfs @ 12.25 hrs, Volume= 0.003 af, Depth> 1.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.021	61	lawn, HSG B
	0.021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	20		0.02		**Direct Entry, lawn**

Subcatchment 13S: to NDS 2



Hydrograph for Subcatchment 13S: to NDS 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.00	0.00
7.40	0.48	0.00	0.00
7.60	0.51	0.00	0.00
7.80	0.53	0.00	0.00
8.00	0.55	0.00	0.00
8.20	0.57	0.00	0.00
8.40	0.60	0.00	0.00
8.60	0.62	0.00	0.00
8.80	0.65	0.00	0.00
9.00	0.67	0.00	0.00
9.20	0.71	0.00	0.00
9.40	0.75	0.00	0.00
9.60	0.79	0.00	0.00
9.80	0.84	0.00	0.00
10.00	0.88	0.00	0.00
10.20	0.93	0.00	0.00
10.40	0.97	0.00	0.00
10.60	1.03	0.00	0.00
10.80	1.11	0.00	0.00
11.00	1.20	0.00	0.00
11.20	1.31	0.00	0.00
11.40	1.44	0.00	0.00
11.60	1.61	0.02	0.00
11.80	1.91	0.06	0.00
12.00	2.61	0.23	0.01
12.20	3.65	0.64	**0.04**
12.40	3.95	0.79	**0.03**
12.60	4.12	0.87	0.01
12.80	4.25	0.94	0.01
13.00	4.36	1.00	0.01
13.20	4.45	1.05	0.01
13.40	4.53	1.10	0.01
13.60	4.59	1.13	0.00
13.80	4.63	1.16	0.00
14.00	4.68	1.18	0.00
14.20	4.72	1.21	0.00
14.40	4.77	1.23	0.00
14.60	4.81	1.25	0.00
14.80	4.85	1.28	0.00
15.00	4.89	1.30	0.00
15.20	4.91	1.32	0.00
15.40	4.94	1.33	0.00
15.60	4.96	1.35	0.00
15.80	4.99	1.36	0.00
16.00	5.01	1.37	0.00
16.20	5.03	1.39	0.00
16.40	5.05	1.40	0.00
16.60	5.08	1.42	0.00
16.80	5.10	1.43	0.00
17.00	5.12	1.44	0.00
17.20	5.14	1.45	0.00
17.40	5.16	1.47	0.00
17.60	5.18	1.48	0.00
17.80	5.20	1.49	0.00
18.00	5.22	1.50	0.00
18.20	5.24	1.51	0.00
18.40	5.25	1.52	0.00
18.60	5.27	1.53	0.00
18.80	5.29	1.55	0.00
19.00	5.30	1.56	0.00
19.20	5.32	1.57	0.00
19.40	5.34	1.58	0.00
19.60	5.35	1.58	0.00
19.80	5.37	1.59	0.00
20.00	**5.38**	**1.60**	0.00

Summary for Subcatchment 14S: to NDS 3-5

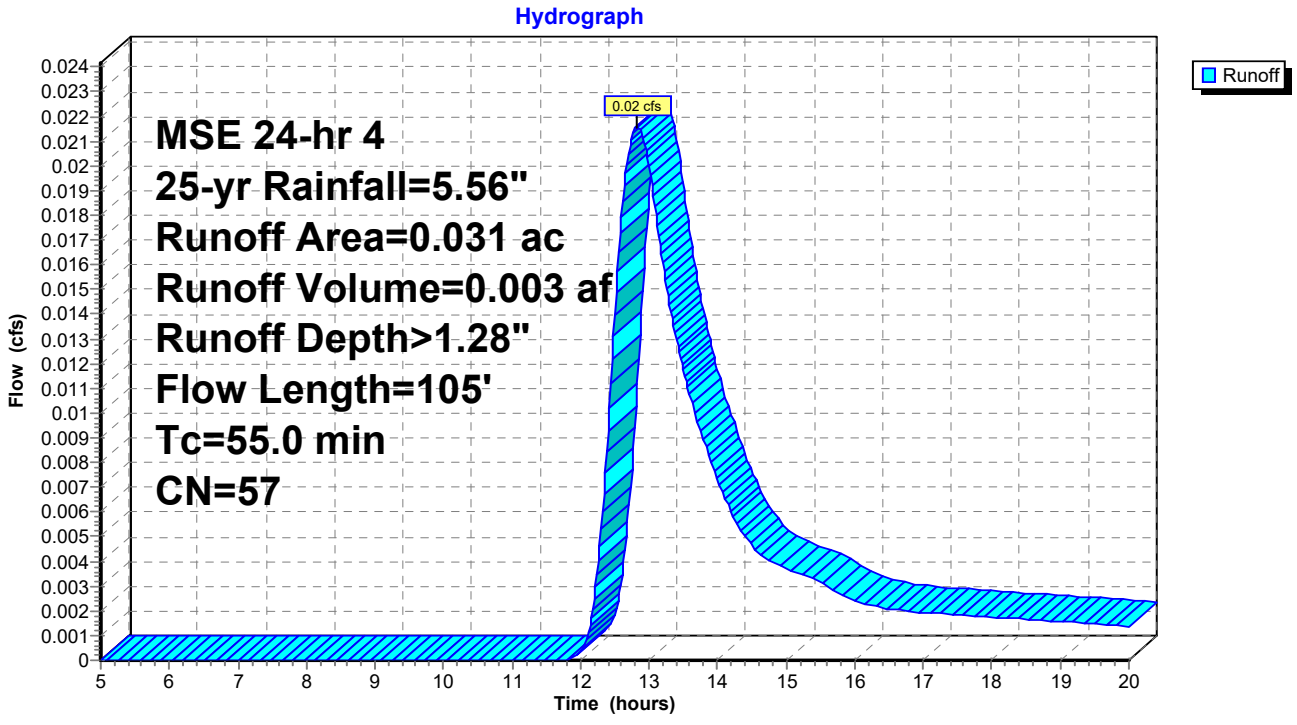
Runoff = 0.02 cfs @ 12.83 hrs, Volume= 0.003 af, Depth> 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.022	61	lawn, HSG B
*	0.008	39	LS
*	0.001	98	SW
	0.031	57	Weighted Average
	0.030		96.77% Pervious Area
	0.001		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	20		0.02		**Direct Entry, lawn**
20.0	75		0.06		**Direct Entry, LS**
20.0	10		0.01		**Direct Entry, SW via LS**
55.0	105	Total			

Subcatchment 14S: to NDS 3-5



Hydrograph for Subcatchment 14S: to NDS 3-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.00	0.00
7.40	0.48	0.00	0.00
7.60	0.51	0.00	0.00
7.80	0.53	0.00	0.00
8.00	0.55	0.00	0.00
8.20	0.57	0.00	0.00
8.40	0.60	0.00	0.00
8.60	0.62	0.00	0.00
8.80	0.65	0.00	0.00
9.00	0.67	0.00	0.00
9.20	0.71	0.00	0.00
9.40	0.75	0.00	0.00
9.60	0.79	0.00	0.00
9.80	0.84	0.00	0.00
10.00	0.88	0.00	0.00
10.20	0.93	0.00	0.00
10.40	0.97	0.00	0.00
10.60	1.03	0.00	0.00
10.80	1.11	0.00	0.00
11.00	1.20	0.00	0.00
11.20	1.31	0.00	0.00
11.40	1.44	0.00	0.00
11.60	1.61	0.00	0.00
11.80	1.91	0.02	0.00
12.00	2.61	0.14	0.00
12.20	3.65	0.47	0.00
12.40	3.95	0.60	0.01
12.60	4.12	0.67	0.02
12.80	4.25	0.73	**0.02**
13.00	4.36	0.78	**0.02**
13.20	4.45	0.83	0.02
13.40	4.53	0.86	0.01
13.60	4.59	0.89	0.01
13.80	4.63	0.92	0.01
14.00	4.68	0.94	0.01
14.20	4.72	0.96	0.01
14.40	4.77	0.98	0.01
14.60	4.81	1.00	0.00
14.80	4.85	1.02	0.00
15.00	4.89	1.04	0.00
15.20	4.91	1.06	0.00
15.40	4.94	1.07	0.00
15.60	4.96	1.08	0.00
15.80	4.99	1.10	0.00
16.00	5.01	1.11	0.00
16.20	5.03	1.12	0.00
16.40	5.05	1.13	0.00
16.60	5.08	1.15	0.00
16.80	5.10	1.16	0.00
17.00	5.12	1.17	0.00
17.20	5.14	1.18	0.00
17.40	5.16	1.19	0.00
17.60	5.18	1.20	0.00
17.80	5.20	1.21	0.00
18.00	5.22	1.22	0.00
18.20	5.24	1.23	0.00
18.40	5.25	1.24	0.00
18.60	5.27	1.25	0.00
18.80	5.29	1.26	0.00
19.00	5.30	1.27	0.00
19.20	5.32	1.28	0.00
19.40	5.34	1.29	0.00
19.60	5.35	1.30	0.00
19.80	5.37	1.30	0.00
20.00	**5.38**	**1.31**	0.00

Summary for Subcatchment 16S: to NDS11-6

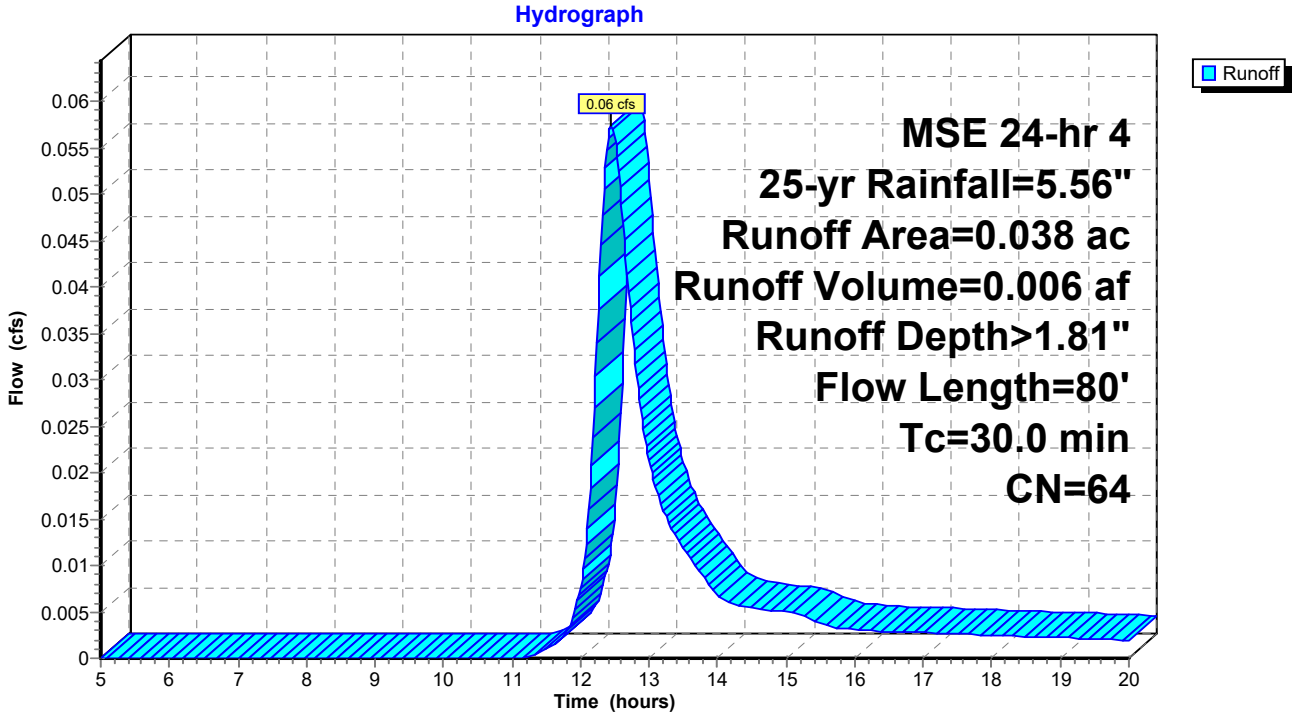
Runoff = 0.06 cfs @ 12.45 hrs, Volume= 0.006 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.022	39	LS
*	0.016	98	SW
	0.038	64	Weighted Average
	0.022		57.89% Pervious Area
	0.016		42.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	40		0.04		**Direct Entry, LS**
15.0	40		0.04		**Direct Entry, SW via LS**
30.0	80	Total			

Subcatchment 16S: to NDS11-6



Hydrograph for Subcatchment 16S: to NDS11-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.00	0.00
7.40	0.48	0.00	0.00
7.60	0.51	0.00	0.00
7.80	0.53	0.00	0.00
8.00	0.55	0.00	0.00
8.20	0.57	0.00	0.00
8.40	0.60	0.00	0.00
8.60	0.62	0.00	0.00
8.80	0.65	0.00	0.00
9.00	0.67	0.00	0.00
9.20	0.71	0.00	0.00
9.40	0.75	0.00	0.00
9.60	0.79	0.00	0.00
9.80	0.84	0.00	0.00
10.00	0.88	0.00	0.00
10.20	0.93	0.00	0.00
10.40	0.97	0.00	0.00
10.60	1.03	0.00	0.00
10.80	1.11	0.00	0.00
11.00	1.20	0.00	0.00
11.20	1.31	0.01	0.00
11.40	1.44	0.02	0.00
11.60	1.61	0.04	0.00
11.80	1.91	0.10	0.00
12.00	2.61	0.31	0.01
12.20	3.65	0.78	0.03
12.40	3.95	0.95	**0.06**
12.60	4.12	1.04	**0.05**
12.80	4.25	1.11	0.03
13.00	4.36	1.18	0.02
13.20	4.45	1.24	0.02
13.40	4.53	1.29	0.01
13.60	4.59	1.32	0.01
13.80	4.63	1.35	0.01
14.00	4.68	1.38	0.01
14.20	4.72	1.40	0.01
14.40	4.77	1.43	0.01
14.60	4.81	1.46	0.01
14.80	4.85	1.48	0.01
15.00	4.89	1.51	0.01
15.20	4.91	1.52	0.00
15.40	4.94	1.54	0.00
15.60	4.96	1.56	0.00
15.80	4.99	1.57	0.00
16.00	5.01	1.59	0.00
16.20	5.03	1.60	0.00
16.40	5.05	1.62	0.00
16.60	5.08	1.63	0.00
16.80	5.10	1.64	0.00
17.00	5.12	1.66	0.00
17.20	5.14	1.67	0.00
17.40	5.16	1.69	0.00
17.60	5.18	1.70	0.00
17.80	5.20	1.71	0.00
18.00	5.22	1.72	0.00
18.20	5.24	1.74	0.00
18.40	5.25	1.75	0.00
18.60	5.27	1.76	0.00
18.80	5.29	1.77	0.00
19.00	5.30	1.78	0.00
19.20	5.32	1.79	0.00
19.40	5.34	1.80	0.00
19.60	5.35	1.81	0.00
19.80	5.37	1.82	0.00
20.00	**5.38**	**1.83**	0.00

Summary for Reach 6R: 10" roof

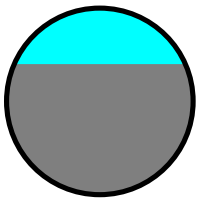
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 652% of Manning's capacity
[76] Warning: Detained 0.041 af (Pond w/culvert advised)

Inflow Area = 0.305 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 1.78 cfs @ 12.19 hrs, Volume= 0.128 af
Outflow = 0.29 cfs @ 11.72 hrs, Volume= 0.128 af, Atten= 84%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.40 fps, Avg. Travel Time= 0.3 min

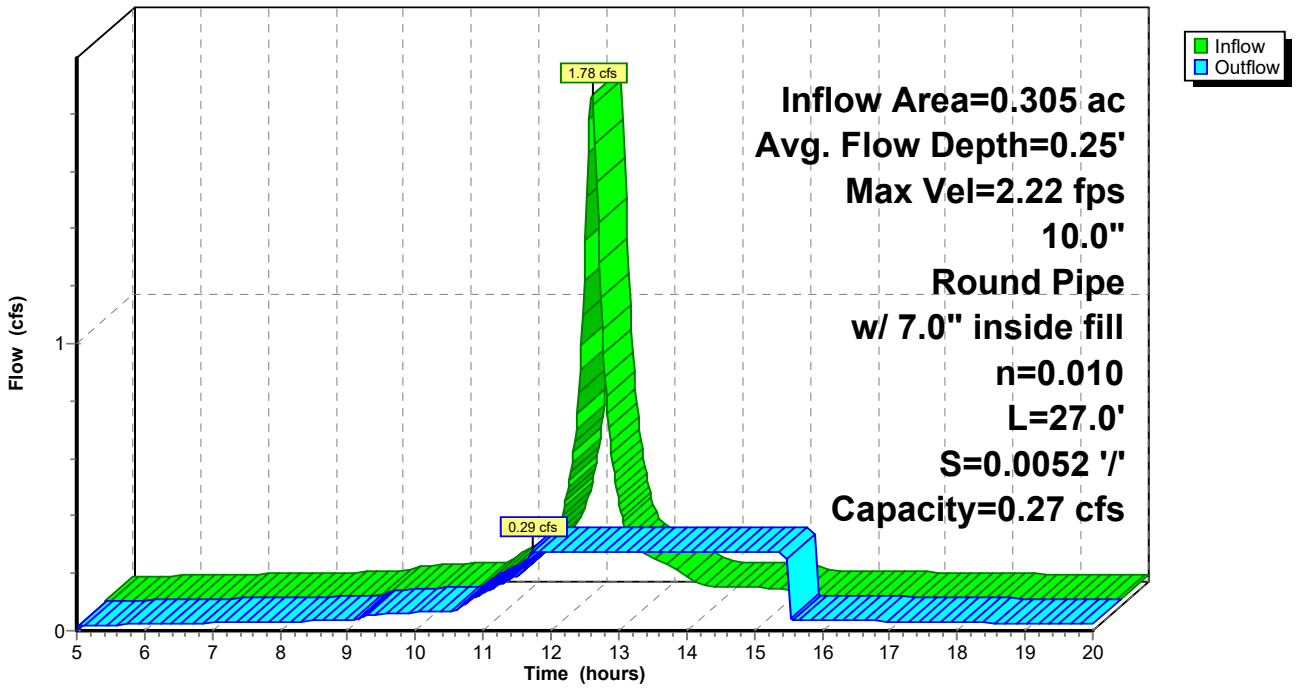
Peak Storage= 4 cf @ 11.74 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 27.0' Slope= 0.0052 '/'
Inlet Invert= 665.72', Outlet Invert= 665.58'



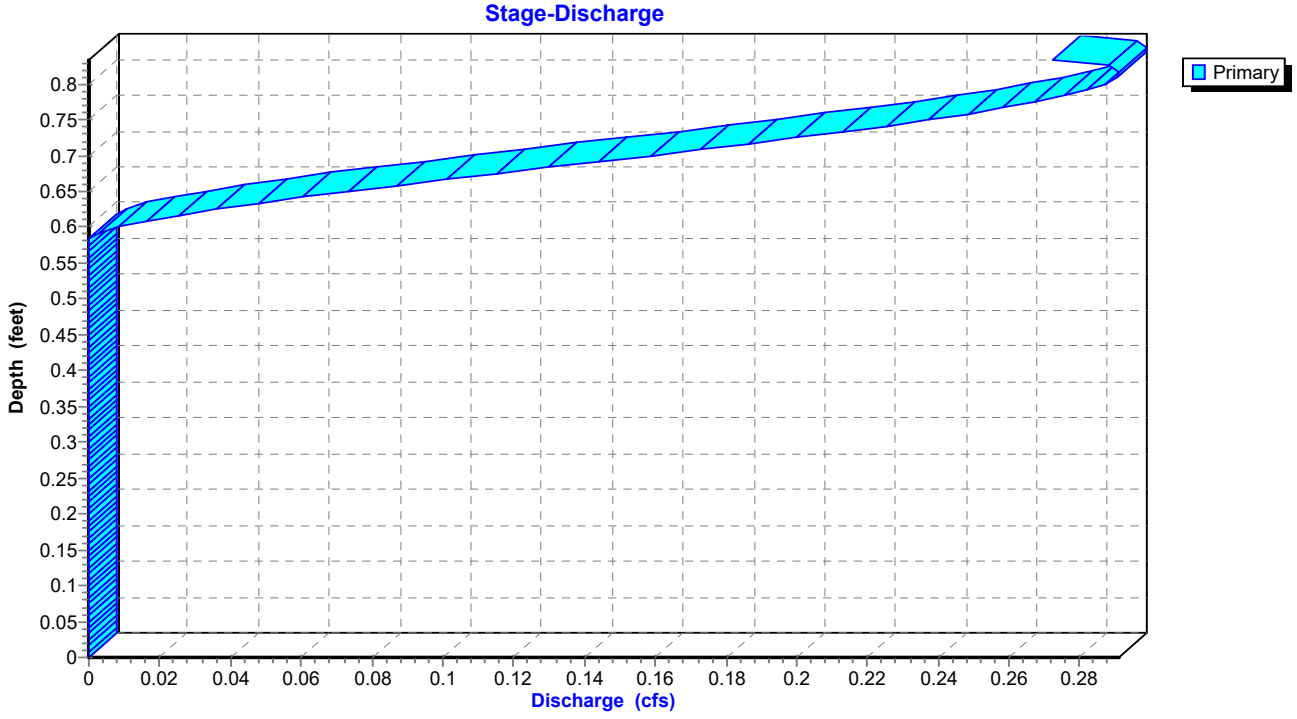
Reach 6R: 10" roof

Hydrograph

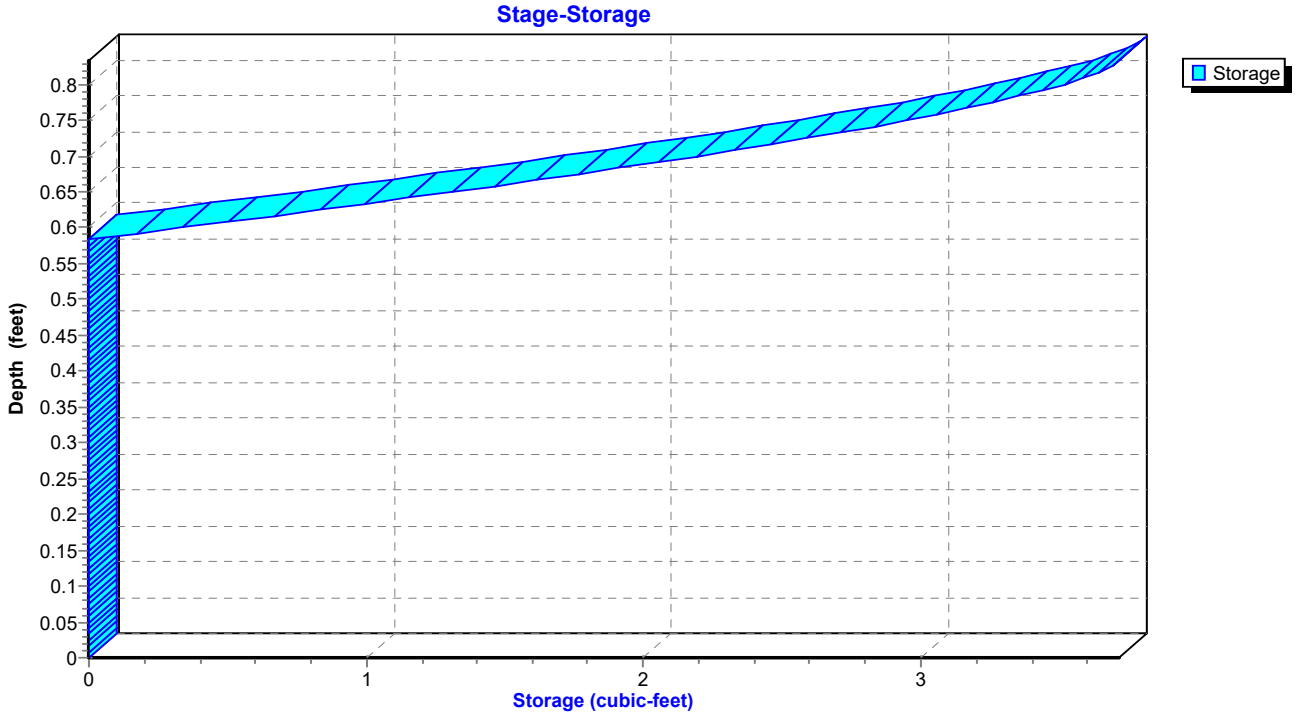


Reach 6R: 10" roof

Stage-Discharge



Reach 6R: 10" roof



Hydrograph for Reach 6R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.02	0	666.30	0.00
5.40	0.02	1	666.33	0.02
5.80	0.02	1	666.33	0.02
6.20	0.02	1	666.34	0.02
6.60	0.03	1	666.34	0.03
7.00	0.03	1	666.34	0.03
7.40	0.03	1	666.34	0.03
7.80	0.03	1	666.34	0.03
8.20	0.03	1	666.34	0.03
8.60	0.03	1	666.34	0.03
9.00	0.04	1	666.35	0.04
9.40	0.06	1	666.36	0.06
9.80	0.06	1	666.36	0.06
10.20	0.07	1	666.36	0.07
10.60	0.07	1	666.37	0.07
11.00	0.13	2	666.40	0.13
11.40	0.18	**2**	**666.43**	**0.18**
11.80	0.37	**4**	**666.55**	**0.27**
12.20	**1.77**	4	666.55	0.27
12.60	0.35	4	666.55	0.27
13.00	0.18	4	666.55	0.27
13.40	0.13	4	666.55	0.27
13.80	0.07	4	666.55	0.27
14.20	0.07	4	666.55	0.27
14.60	0.06	4	666.55	0.27
15.00	0.06	4	666.55	0.27
15.40	0.04	4	666.55	0.27
15.80	0.04	1	666.35	0.04
16.20	0.04	1	666.34	0.04
16.60	0.03	1	666.34	0.03
17.00	0.03	1	666.34	0.03
17.40	0.03	1	666.34	0.03
17.80	0.03	1	666.34	0.03
18.20	0.03	1	666.34	0.03
18.60	0.03	1	666.34	0.03
19.00	0.03	1	666.34	0.03
19.40	0.02	1	666.34	0.02
19.80	0.02	1	666.33	0.02

Stage-Discharge for Reach 6R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.35	0.00
666.32	0.67	0.01
666.33	0.90	0.02
666.34	1.08	0.03
666.35	1.25	0.04
666.36	1.39	0.06
666.37	1.51	0.07
666.38	1.62	0.09
666.39	1.72	0.11
666.40	1.81	0.12
666.41	1.88	0.14
666.42	1.95	0.16
666.43	2.01	0.18
666.44	2.06	0.19
666.45	2.11	0.21
666.46	2.14	0.22
666.47	2.17	0.24
666.48	2.19	0.25
666.49	2.21	0.26
666.50	**2.22**	0.27
666.51	2.21	0.28
666.52	2.20	0.29
666.53	2.18	**0.29**
666.54	2.14	0.29
666.55	2.03	0.28

Stage-Area-Storage for Reach 6R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	0
665.77	0.0	0	666.28	0.0	0
665.78	0.0	0	666.29	0.0	0
665.79	0.0	0	666.30	0.0	0
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	1
665.83	0.0	0	666.34	0.0	1
665.84	0.0	0	666.35	0.0	1
665.85	0.0	0	666.36	0.0	1
665.86	0.0	0	666.37	0.0	1
665.87	0.0	0	666.38	0.1	1
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	2
665.92	0.0	0	666.43	0.1	2
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	3
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	**0.1**	**4**
666.05	0.0	0			
666.06	0.0	0			
666.07	0.0	0			
666.08	0.0	0			
666.09	0.0	0			
666.10	0.0	0			
666.11	0.0	0			
666.12	0.0	0			
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			

Summary for Reach 7R: MH8 12"

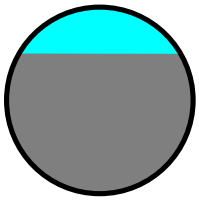
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 203% of Manning's capacity
[76] Warning: Detained 0.093 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 6R INLET depth by 0.15' @ 19.98 hrs
[63] Warning: Exceeded Reach 8R INLET depth by 0.06' @ 19.98 hrs

Inflow Area = 0.644 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 0.56 cfs @ 11.72 hrs, Volume= 0.270 af
Outflow = 0.29 cfs @ 11.04 hrs, Volume= 0.248 af, Atten= 48%, Lag= 0.0 min

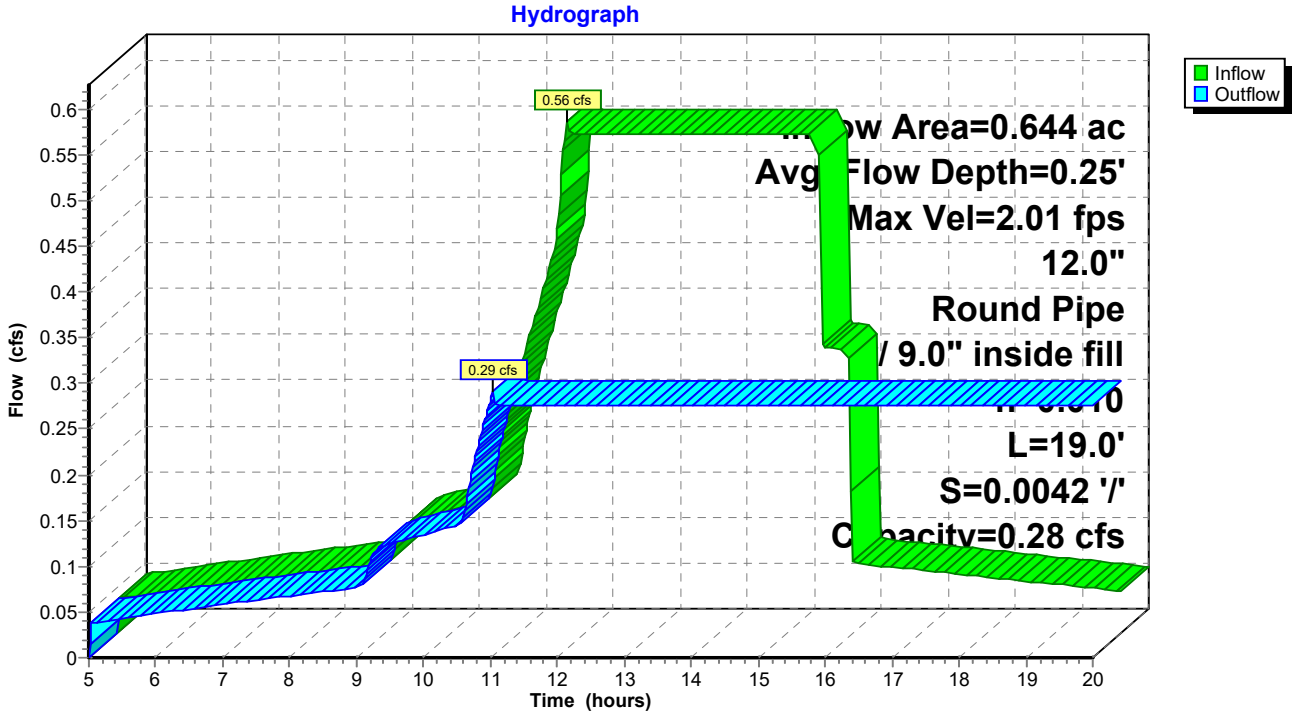
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.63 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 11.06 hrs
Average Depth at Peak Storage= 1.00' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.28 cfs

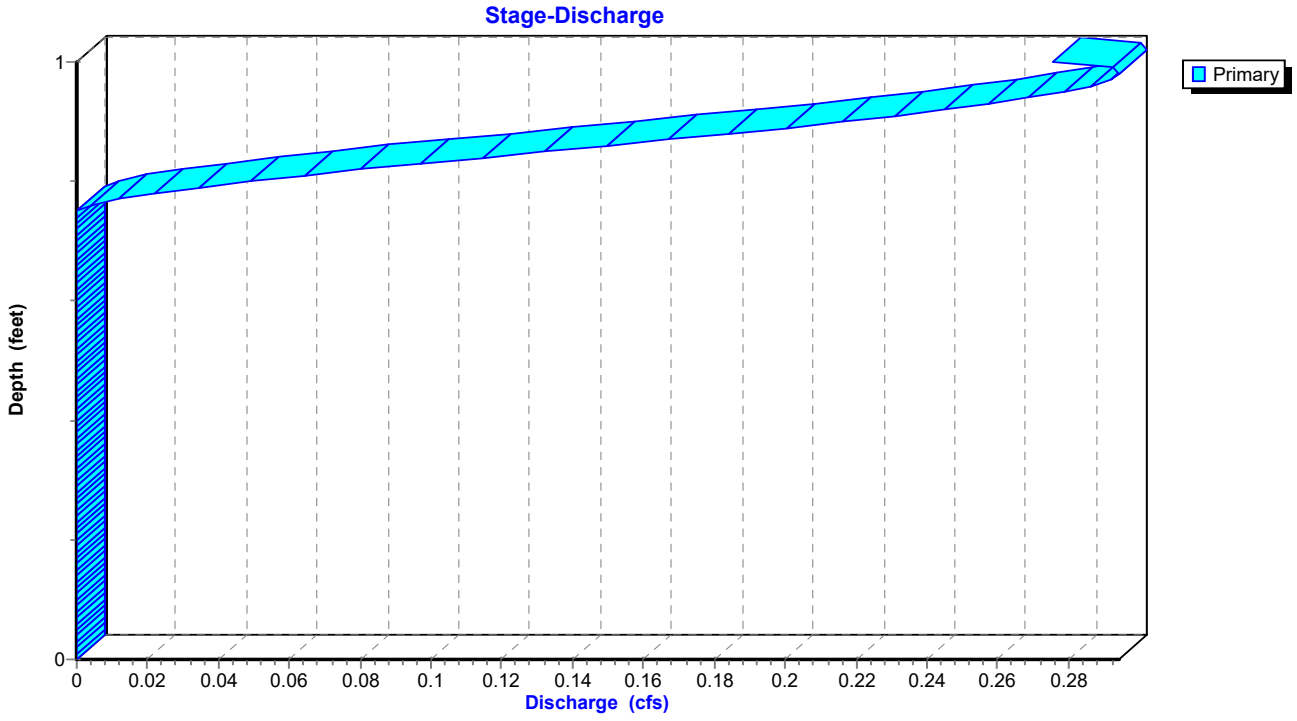
12.0" Round Pipe w/ 9.0" inside fill
n= 0.010
Length= 19.0' Slope= 0.0042 '/'
Inlet Invert= 665.48', Outlet Invert= 665.40'



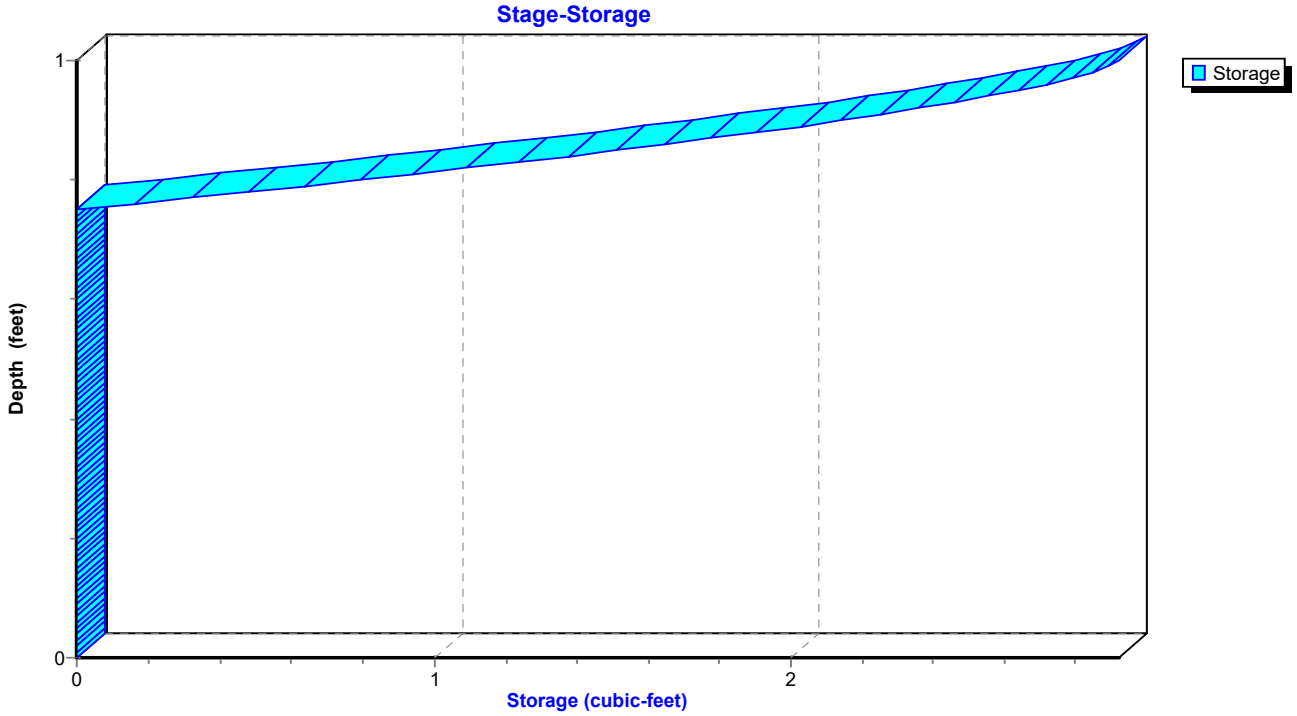
Reach 7R: MH8 12"



Reach 7R: MH8 12"



Reach 7R: MH8 12"



Hydrograph for Reach 7R: MH8 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.23	0.00
5.40	0.04	1	666.28	0.04
5.80	0.05	1	666.28	0.05
6.20	0.05	1	666.28	0.05
6.60	0.05	1	666.28	0.05
7.00	0.06	1	666.29	0.06
7.40	0.06	1	666.29	0.06
7.80	0.07	1	666.29	0.07
8.20	0.07	1	666.29	0.07
8.60	0.07	1	666.30	0.07
9.00	0.08	1	666.30	0.08
9.40	0.12	1	666.32	0.12
9.80	0.13	2	666.33	0.13
10.20	0.14	2	666.33	0.14
10.60	0.16	2	666.34	0.15
11.00	0.28	**3**	**666.43**	**0.28**
11.40	**0.38**	**3**	**666.48**	**0.28**
11.80	**0.55**	3	666.48	0.28
12.20	0.55	3	666.48	0.28
12.60	0.55	3	666.48	0.28
13.00	0.55	3	666.48	0.28
13.40	0.55	3	666.48	0.28
13.80	0.55	3	666.48	0.28
14.20	0.55	3	666.48	0.28
14.60	0.55	3	666.48	0.28
15.00	0.55	3	666.48	0.28
15.40	0.55	3	666.48	0.28
15.80	0.31	3	666.48	0.28
16.20	0.08	3	666.48	0.28
16.60	0.07	3	666.48	0.28
17.00	0.07	3	666.48	0.28
17.40	0.07	3	666.48	0.28
17.80	0.06	3	666.48	0.28
18.20	0.06	3	666.48	0.28
18.60	0.06	3	666.48	0.28
19.00	0.05	3	666.48	0.28
19.40	0.05	3	666.48	0.28
19.80	0.05	3	666.48	0.28

Stage-Discharge for Reach 7R: MH8 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.44	0.00
666.25	0.68	0.01
666.26	0.87	0.02
666.27	1.03	0.03
666.28	1.17	0.05
666.29	1.29	0.06
666.30	1.40	0.08
666.31	1.50	0.10
666.32	1.58	0.11
666.33	1.66	0.13
666.34	1.72	0.15
666.35	1.78	0.17
666.36	1.84	0.18
666.37	1.88	0.20
666.38	1.92	0.22
666.39	1.95	0.23
666.40	1.97	0.25
666.41	1.99	0.26
666.42	2.00	0.27
666.43	**2.01**	0.28
666.44	2.00	0.29
666.45	1.99	0.29
666.46	1.96	**0.29**
666.47	1.92	0.29
666.48	1.79	0.28

Stage-Area-Storage for Reach 7R: MH8 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.48	0.0	0	665.99	0.0	0
665.49	0.0	0	666.00	0.0	0
665.50	0.0	0	666.01	0.0	0
665.51	0.0	0	666.02	0.0	0
665.52	0.0	0	666.03	0.0	0
665.53	0.0	0	666.04	0.0	0
665.54	0.0	0	666.05	0.0	0
665.55	0.0	0	666.06	0.0	0
665.56	0.0	0	666.07	0.0	0
665.57	0.0	0	666.08	0.0	0
665.58	0.0	0	666.09	0.0	0
665.59	0.0	0	666.10	0.0	0
665.60	0.0	0	666.11	0.0	0
665.61	0.0	0	666.12	0.0	0
665.62	0.0	0	666.13	0.0	0
665.63	0.0	0	666.14	0.0	0
665.64	0.0	0	666.15	0.0	0
665.65	0.0	0	666.16	0.0	0
665.66	0.0	0	666.17	0.0	0
665.67	0.0	0	666.18	0.0	0
665.68	0.0	0	666.19	0.0	0
665.69	0.0	0	666.20	0.0	0
665.70	0.0	0	666.21	0.0	0
665.71	0.0	0	666.22	0.0	0
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	1
665.77	0.0	0	666.28	0.0	1
665.78	0.0	0	666.29	0.0	1
665.79	0.0	0	666.30	0.1	1
665.80	0.0	0	666.31	0.1	1
665.81	0.0	0	666.32	0.1	1
665.82	0.0	0	666.33	0.1	2
665.83	0.0	0	666.34	0.1	2
665.84	0.0	0	666.35	0.1	2
665.85	0.0	0	666.36	0.1	2
665.86	0.0	0	666.37	0.1	2
665.87	0.0	0	666.38	0.1	2
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	3
665.92	0.0	0	666.43	0.1	3
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.2	3
665.97	0.0	0	666.48	**0.2**	**3**
665.98	0.0	0			

Summary for Reach 8R: 10" roof

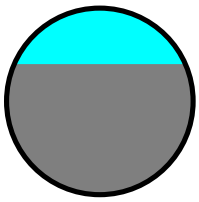
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 771% of Manning's capacity
[76] Warning: Detained 0.048 af (Pond w/culvert advised)

Inflow Area = 0.339 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 2.11 cfs @ 12.17 hrs, Volume= 0.142 af
Outflow = 0.28 cfs @ 11.66 hrs, Volume= 0.142 af, Atten= 87%, Lag= 0.0 min

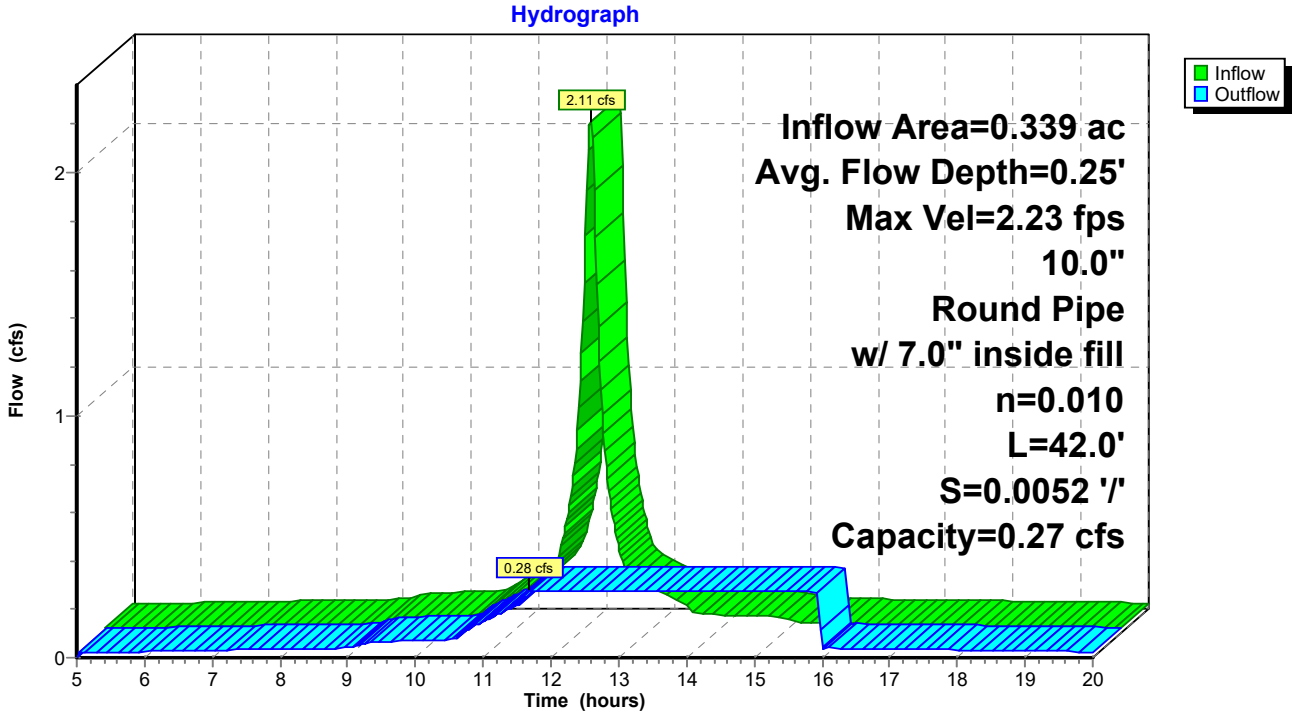
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.46 fps, Avg. Travel Time= 0.5 min

Peak Storage= 6 cf @ 11.68 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

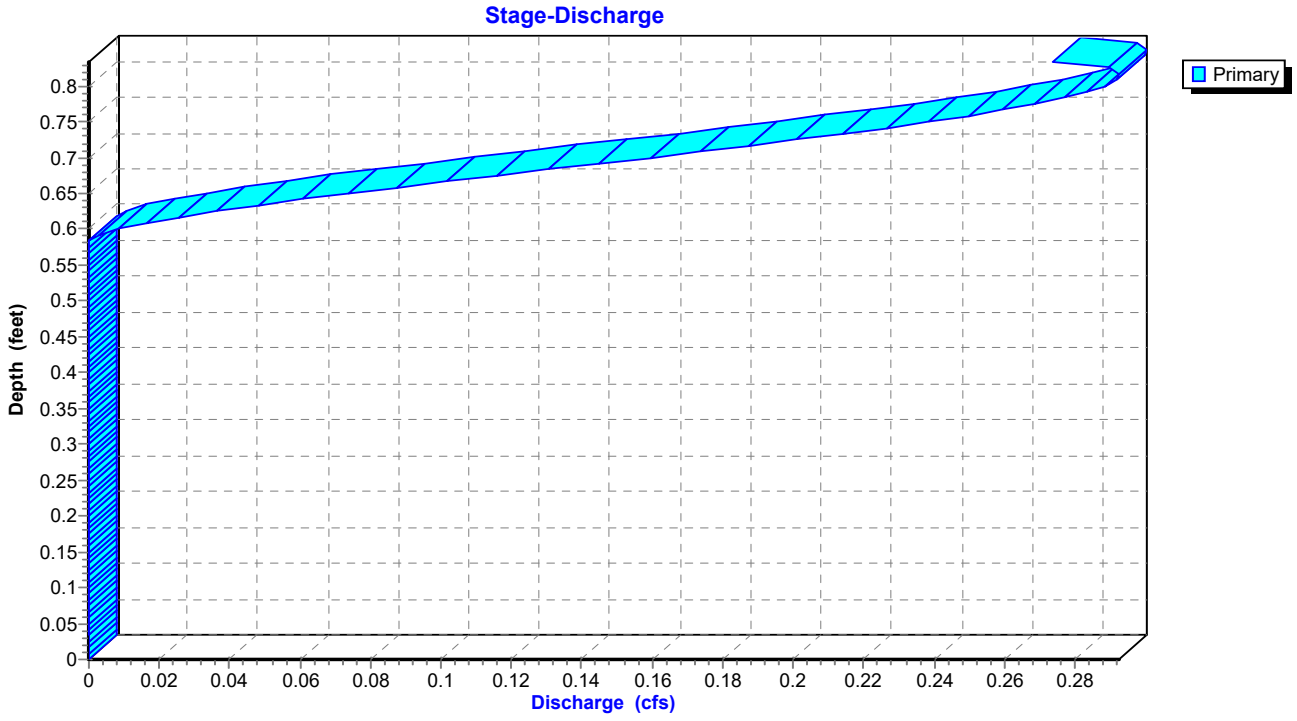
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 42.0' Slope= 0.0052 '/'
Inlet Invert= 665.80', Outlet Invert= 665.58'



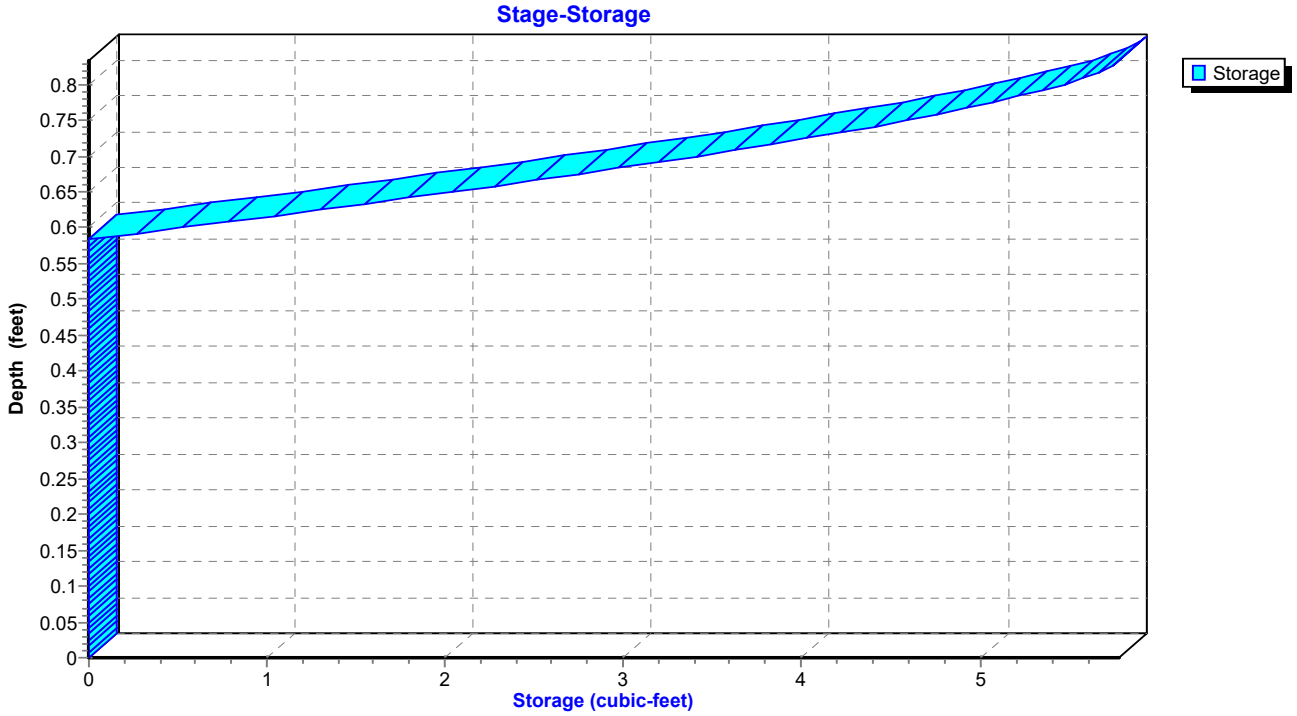
Reach 8R: 10" roof



Reach 8R: 10" roof



Reach 8R: 10" roof



Hydrograph for Reach 8R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.02	0	666.38	0.00
5.40	0.02	1	666.41	0.02
5.80	0.02	1	666.42	0.02
6.20	0.03	1	666.42	0.03
6.60	0.03	1	666.42	0.03
7.00	0.03	1	666.42	0.03
7.40	0.03	1	666.42	0.03
7.80	0.03	1	666.42	0.03
8.20	0.04	1	666.43	0.04
8.60	0.04	1	666.43	0.04
9.00	0.04	1	666.43	0.04
9.40	0.06	2	666.44	0.06
9.80	0.07	2	666.45	0.07
10.20	0.07	2	666.45	0.07
10.60	0.08	2	666.46	0.08
11.00	0.15	3	666.50	0.15
11.40	0.21	**4**	**666.53**	**0.20**
11.80	**0.44**	**6**	**666.63**	**0.27**
12.20	**2.00**	6	666.63	0.27
12.60	0.34	6	666.63	0.27
13.00	0.20	6	666.63	0.27
13.40	0.14	6	666.63	0.27
13.80	0.08	6	666.63	0.27
14.20	0.08	6	666.63	0.27
14.60	0.07	6	666.63	0.27
15.00	0.07	6	666.63	0.27
15.40	0.04	6	666.63	0.27
15.80	0.04	6	666.63	0.27
16.20	0.04	1	666.43	0.04
16.60	0.04	1	666.43	0.04
17.00	0.04	1	666.42	0.04
17.40	0.03	1	666.42	0.03
17.80	0.03	1	666.42	0.03
18.20	0.03	1	666.42	0.03
18.60	0.03	1	666.42	0.03
19.00	0.03	1	666.42	0.03
19.40	0.03	1	666.42	0.03
19.80	0.02	1	666.42	0.03

Stage-Discharge for Reach 8R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.35	0.00
666.40	0.68	0.01
666.41	0.90	0.02
666.42	1.09	0.03
666.43	1.25	0.04
666.44	1.39	0.06
666.45	1.52	0.07
666.46	1.63	0.09
666.47	1.73	0.11
666.48	1.81	0.12
666.49	1.89	0.14
666.50	1.96	0.16
666.51	2.02	0.18
666.52	2.07	0.19
666.53	2.12	0.21
666.54	2.15	0.22
666.55	2.18	0.24
666.56	2.21	0.25
666.57	2.22	0.26
666.58	**2.23**	0.27
666.59	2.23	0.28
666.60	2.21	0.29
666.61	2.19	**0.29**
666.62	2.15	0.29
666.63	2.04	0.28

Stage-Area-Storage for Reach 8R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	0
665.83	0.0	0	666.34	0.0	0
665.84	0.0	0	666.35	0.0	0
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	1
665.90	0.0	0	666.41	0.0	1
665.91	0.0	0	666.42	0.0	1
665.92	0.0	0	666.43	0.0	1
665.93	0.0	0	666.44	0.0	2
665.94	0.0	0	666.45	0.0	2
665.95	0.0	0	666.46	0.1	2
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	4
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	0.1	5
666.05	0.0	0	666.56	0.1	5
666.06	0.0	0	666.57	0.1	5
666.07	0.0	0	666.58	0.1	5
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	5
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	6
666.12	0.0	0	666.63	**0.1**	**6**
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			
666.23	0.0	0			
666.24	0.0	0			
666.25	0.0	0			
666.26	0.0	0			
666.27	0.0	0			
666.28	0.0	0			
666.29	0.0	0			
666.30	0.0	0			

Summary for Reach 9R: inlet 3 18"

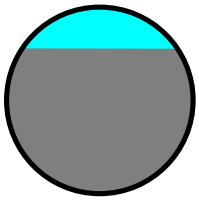
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 145% of Manning's capacity
[76] Warning: Detained 0.003 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 7R INLET depth by 0.32' @ 12.00 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 4.69" for 25-yr event
Inflow = 1.27 cfs @ 12.08 hrs, Volume= 0.300 af
Outflow = 0.88 cfs @ 12.02 hrs, Volume= 0.300 af, Atten= 31%, Lag= 0.0 min

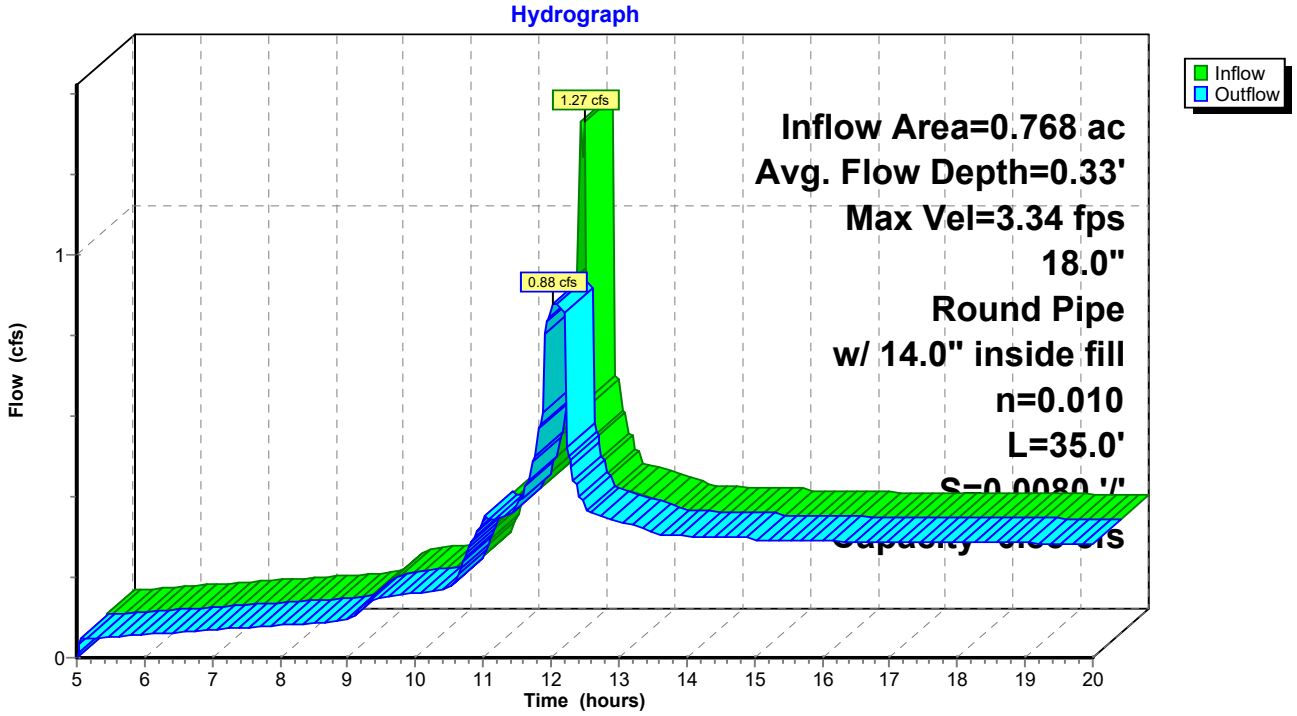
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.34 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.17 fps, Avg. Travel Time= 0.3 min

Peak Storage= 10 cf @ 12.00 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.88 cfs

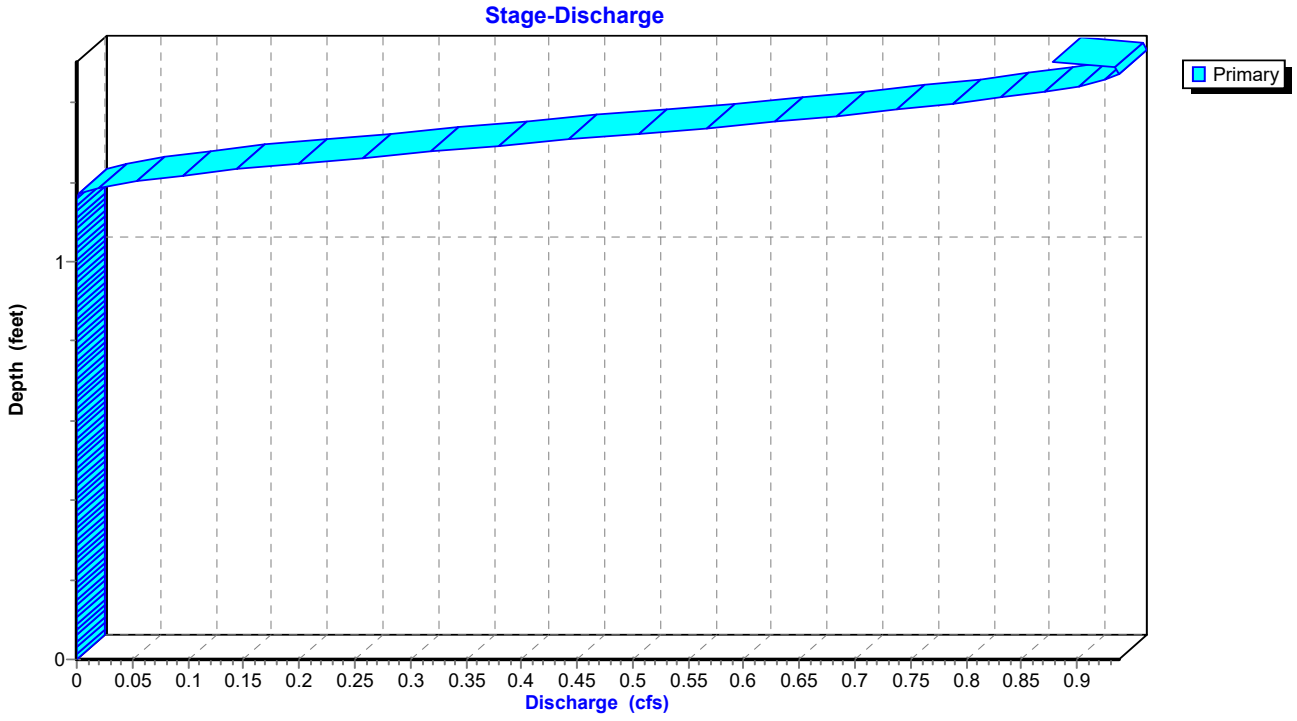
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 35.0' Slope= 0.0080 '/'
Inlet Invert= 665.30', Outlet Invert= 665.02'



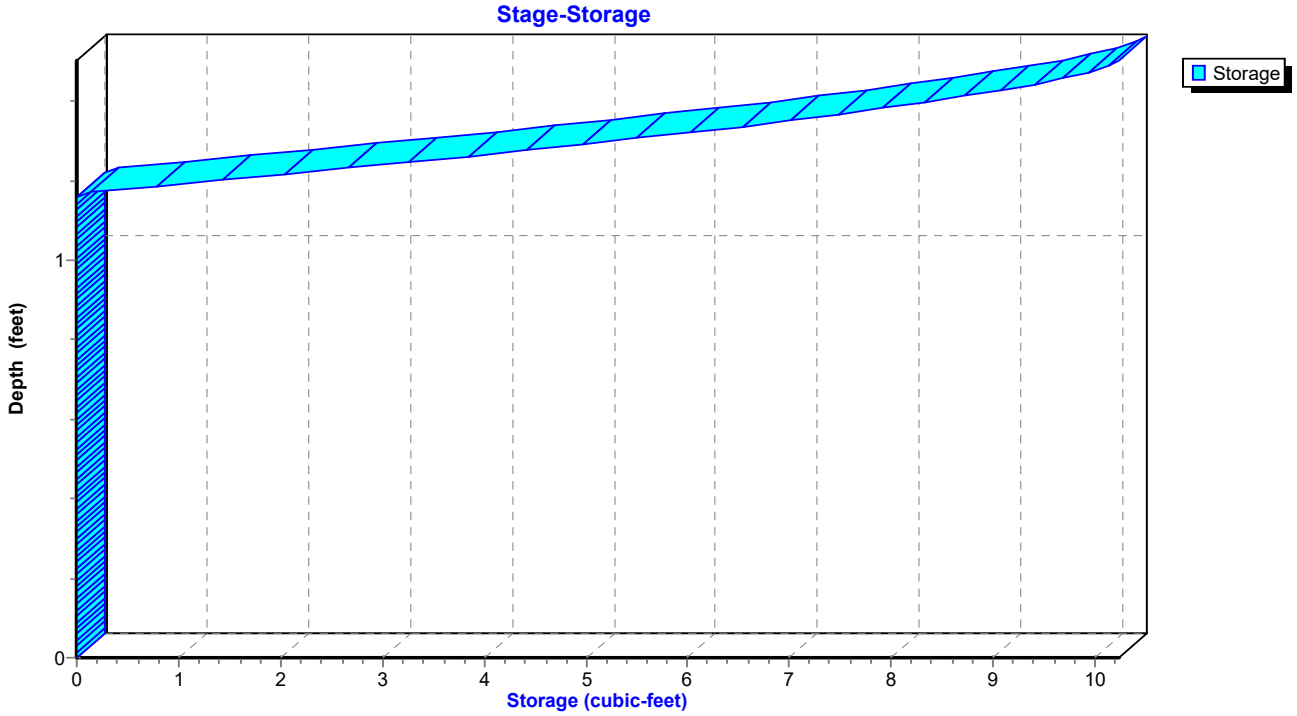
Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Hydrograph for Reach 9R: inlet 3 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.47	0.00
5.40	0.05	1	666.50	0.05
5.80	0.06	1	666.50	0.06
6.20	0.06	2	666.50	0.06
6.60	0.07	2	666.50	0.07
7.00	0.07	2	666.51	0.07
7.40	0.07	2	666.51	0.07
7.80	0.08	2	666.51	0.08
8.20	0.08	2	666.51	0.08
8.60	0.09	2	666.51	0.09
9.00	0.10	2	666.51	0.09
9.40	0.15	3	666.53	0.15
9.80	0.16	3	666.53	0.16
10.20	0.17	3	666.54	0.17
10.60	0.20	3	666.54	0.20
11.00	0.34	5	666.58	0.34
11.40	0.36	5	666.58	0.36
11.80	**0.54**	**6**	**666.63**	**0.52**
12.20	**0.54**	**10**	**666.80**	**0.88**
12.60	0.36	5	666.59	0.36
13.00	0.34	5	666.58	0.34
13.40	0.32	4	666.58	0.32
13.80	0.30	4	666.57	0.30
14.20	0.30	4	666.57	0.30
14.60	0.30	4	666.57	0.30
15.00	0.30	4	666.57	0.30
15.40	0.29	4	666.57	0.29
15.80	0.29	4	666.57	0.29
16.20	0.29	4	666.57	0.29
16.60	0.29	4	666.57	0.29
17.00	0.29	4	666.57	0.29
17.40	0.29	4	666.57	0.29
17.80	0.29	4	666.57	0.29
18.20	0.29	4	666.57	0.29
18.60	0.29	4	666.57	0.29
19.00	0.29	4	666.57	0.29
19.40	0.28	4	666.57	0.28
19.80	0.28	4	666.57	0.28

Stage-Discharge for Reach 9R: inlet 3 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.10	0.00
666.47	0.29	0.00
666.48	0.70	0.01
666.49	1.03	0.03
666.50	1.30	0.05
666.51	1.52	0.08
666.52	1.72	0.11
666.53	1.90	0.14
666.54	2.06	0.18
666.55	2.21	0.22
666.56	2.34	0.26
666.57	2.46	0.30
666.58	2.57	0.34
666.59	2.68	0.38
666.60	2.77	0.42
666.61	2.86	0.46
666.62	2.94	0.51
666.63	3.01	0.55
666.64	3.07	0.59
666.65	3.13	0.63
666.66	3.18	0.67
666.67	3.22	0.70
666.68	3.26	0.74
666.69	3.29	0.77
666.70	3.32	0.80
666.71	3.34	0.83
666.72	3.35	0.86
666.73	3.36	0.88
666.74	**3.36**	0.90
666.75	3.35	0.92
666.76	3.33	0.93
666.77	3.30	**0.94**
666.78	3.25	0.94
666.79	3.15	0.92
666.80	3.01	0.88

Stage-Area-Storage for Reach 9R: inlet 3 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	1
666.50	0.0	1
666.52	0.1	2
666.54	0.1	3
666.56	0.1	4
666.58	0.1	5
666.60	0.2	5
666.62	0.2	6
666.64	0.2	7
666.66	0.2	7
666.68	0.2	8
666.70	0.2	8
666.72	0.3	9
666.74	0.3	9
666.76	0.3	10
666.78	0.3	10
666.80	**0.3**	**10**

Summary for Reach 10R: MH7 18"

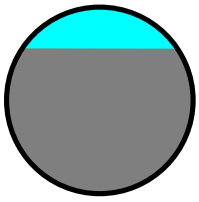
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 126% of Manning's capacity
[76] Warning: Detained 0.004 af (Pond w/culvert advised)
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=6)
[62] Hint: Exceeded Reach 9R OUTLET depth by 0.21' @ 12.42 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 4.69" for 25-yr event
Inflow = 0.88 cfs @ 12.02 hrs, Volume= 0.300 af
Outflow = 0.69 cfs @ 11.94 hrs, Volume= 0.300 af, Atten= 21%, Lag= 0.0 min

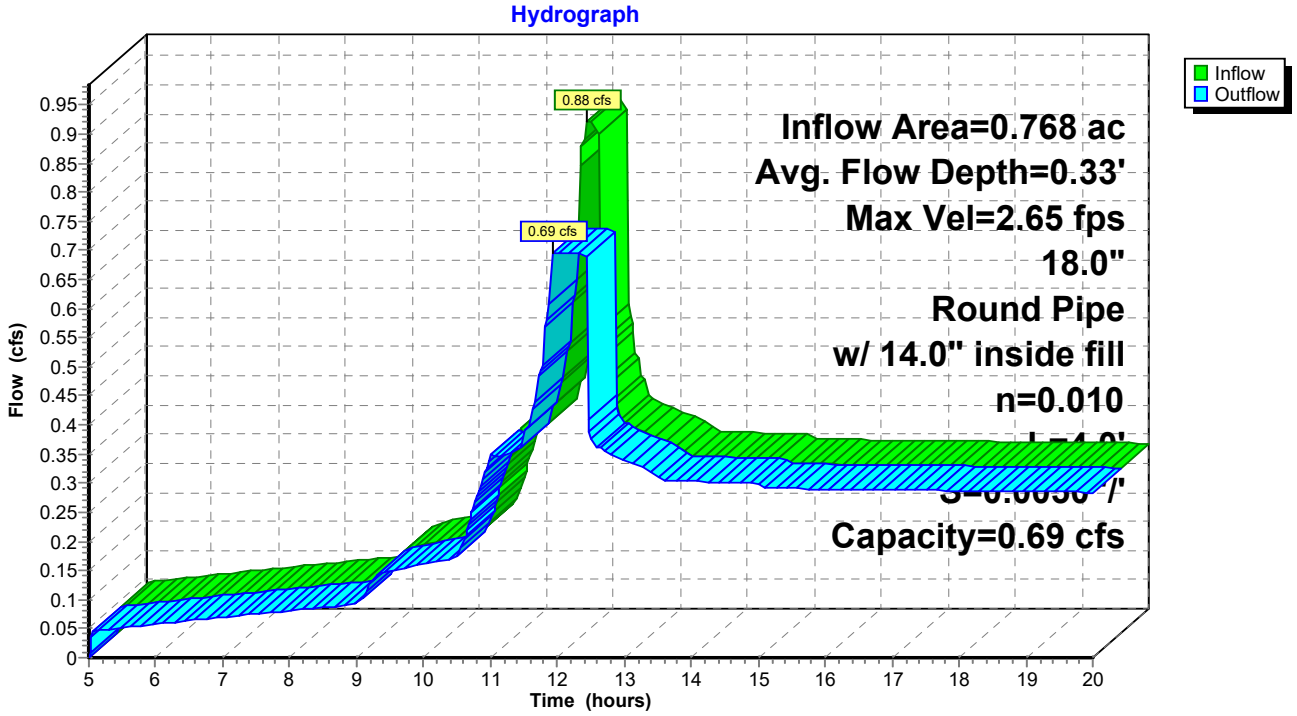
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.65 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.85 fps, Avg. Travel Time= 0.0 min

Peak Storage= 1 cf @ 11.92 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

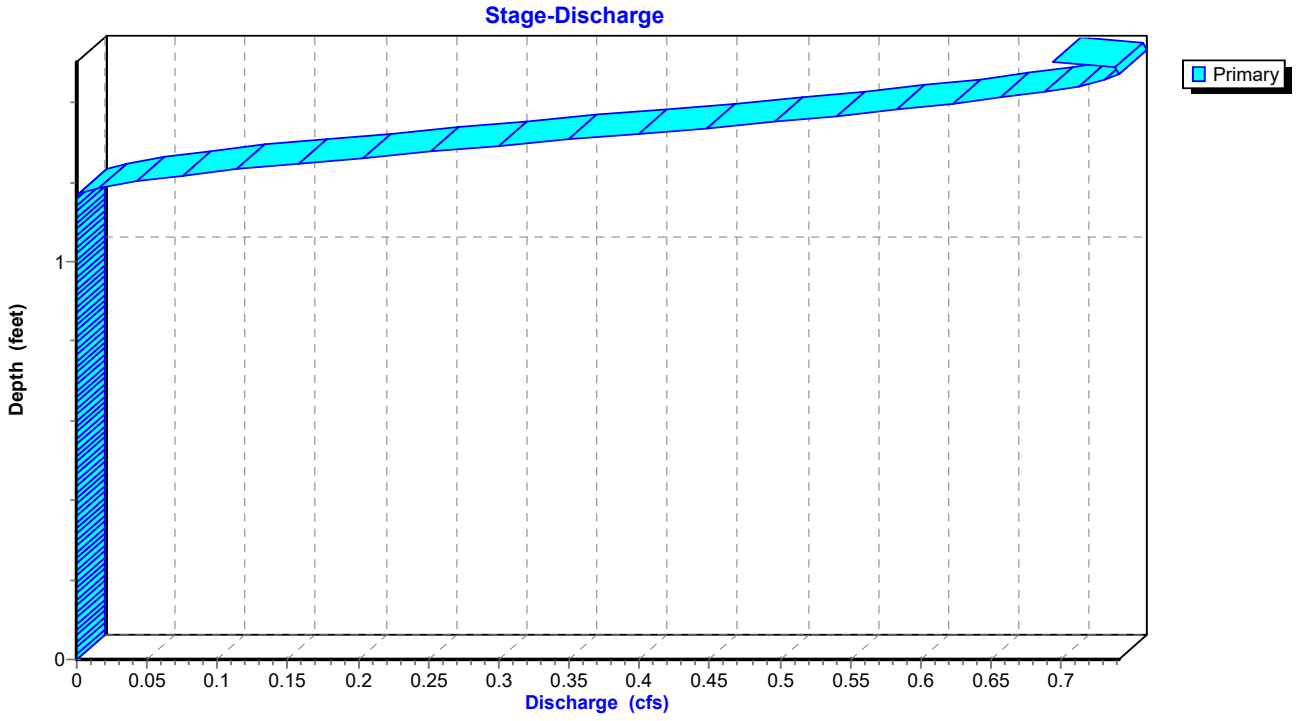
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 4.0' Slope= 0.0050 '/'
Inlet Invert= 665.02', Outlet Invert= 665.00'



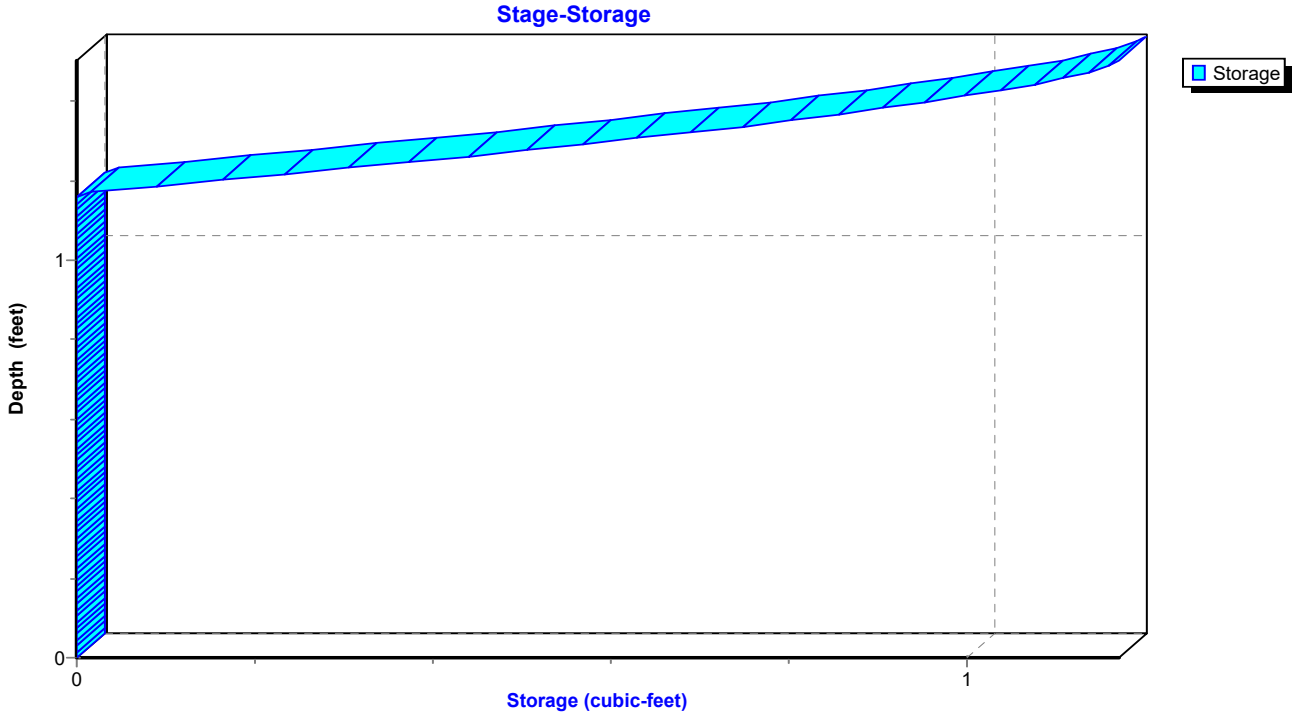
Reach 10R: MH7 18"



Reach 10R: MH7 18"



Reach 10R: MH7 18"



Hydrograph for Reach 10R: MH7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.19	0.00
5.40	0.05	0	666.22	0.05
5.80	0.06	0	666.23	0.06
6.20	0.06	0	666.23	0.06
6.60	0.07	0	666.23	0.07
7.00	0.07	0	666.23	0.07
7.40	0.07	0	666.23	0.07
7.80	0.08	0	666.24	0.08
8.20	0.08	0	666.24	0.08
8.60	0.09	0	666.24	0.09
9.00	0.09	0	666.24	0.09
9.40	0.15	0	666.26	0.15
9.80	0.16	0	666.26	0.16
10.20	0.17	0	666.27	0.17
10.60	0.20	0	666.28	0.19
11.00	0.34	1	666.32	0.34
11.40	0.36	1	666.33	0.36
11.80	**0.52**	**1**	**666.38**	**0.52**
12.20	**0.88**	**1**	**666.52**	**0.69**
12.60	0.36	1	666.33	0.36
13.00	0.34	1	666.32	0.34
13.40	0.32	1	666.32	0.32
13.80	0.30	1	666.31	0.30
14.20	0.30	1	666.31	0.30
14.60	0.30	1	666.31	0.30
15.00	0.30	1	666.31	0.30
15.40	0.29	1	666.31	0.29
15.80	0.29	1	666.31	0.29
16.20	0.29	1	666.31	0.29
16.60	0.29	1	666.31	0.29
17.00	0.29	1	666.31	0.29
17.40	0.29	1	666.31	0.29
17.80	0.29	1	666.31	0.29
18.20	0.29	1	666.31	0.29
18.60	0.29	1	666.31	0.29
19.00	0.29	1	666.31	0.29
19.40	0.28	1	666.31	0.28
19.80	0.28	1	666.30	0.28

Stage-Discharge for Reach 10R: MH7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.02	0.00	0.00	665.53	0.00	0.00	666.04	0.00	0.00
665.03	0.00	0.00	665.54	0.00	0.00	666.05	0.00	0.00
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.08	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.23	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.55	0.01
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.82	0.02
665.20	0.00	0.00	665.71	0.00	0.00	666.22	1.03	0.04
665.21	0.00	0.00	665.72	0.00	0.00	666.23	1.20	0.06
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.36	0.09
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.50	0.11
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.63	0.14
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.74	0.17
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.85	0.20
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.95	0.24
665.28	0.00	0.00	665.79	0.00	0.00	666.30	2.04	0.27
665.29	0.00	0.00	665.80	0.00	0.00	666.31	2.12	0.30
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.19	0.33
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.26	0.37
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.32	0.40
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.38	0.43
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.43	0.46
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.47	0.50
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.51	0.53
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.55	0.56
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.58	0.58
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.60	0.61
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.62	0.63
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.64	0.66
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.65	0.68
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.65	0.70
665.44	0.00	0.00	665.95	0.00	0.00	666.46	**2.65**	0.71
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.73
665.46	0.00	0.00	665.97	0.00	0.00	666.48	2.63	0.73
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.61	**0.74**
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.57	0.74
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.49	0.72
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.38	0.69
665.51	0.00	0.00	666.02	0.00	0.00			
665.52	0.00	0.00	666.03	0.00	0.00			

Stage-Area-Storage for Reach 10R: MH7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.02	0.0	0
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.1	0
666.26	0.1	0
666.28	0.1	0
666.30	0.1	1
666.32	0.2	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	1
666.40	0.2	1
666.42	0.2	1
666.44	0.3	1
666.46	0.3	1
666.48	0.3	1
666.50	0.3	1
666.52	**0.3**	**1**

Summary for Reach 11R: inlet 7 18"

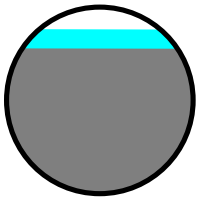
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 0.41 cfs @ 12.33 hrs, Volume= 0.041 af
Outflow = 0.41 cfs @ 12.34 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.7 min

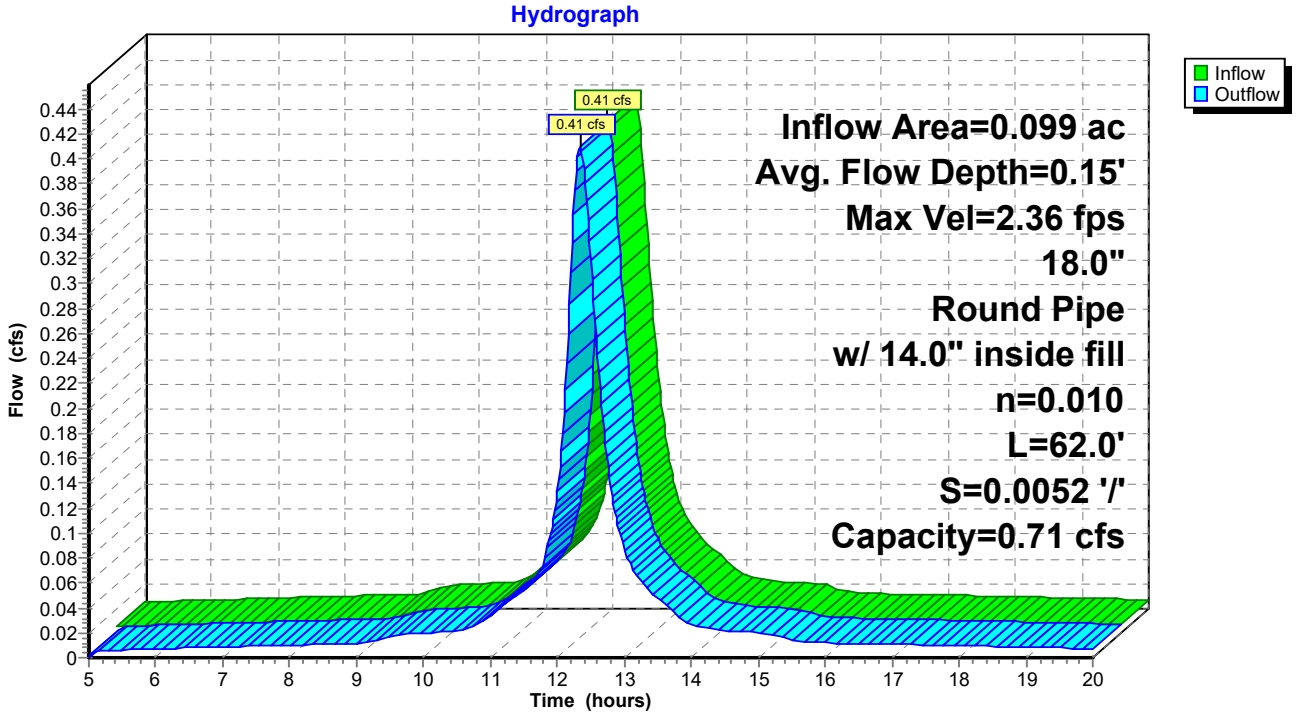
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.36 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 1.2 min

Peak Storage= 11 cf @ 12.33 hrs
Average Depth at Peak Storage= 1.32' above invert (0.15' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.71 cfs

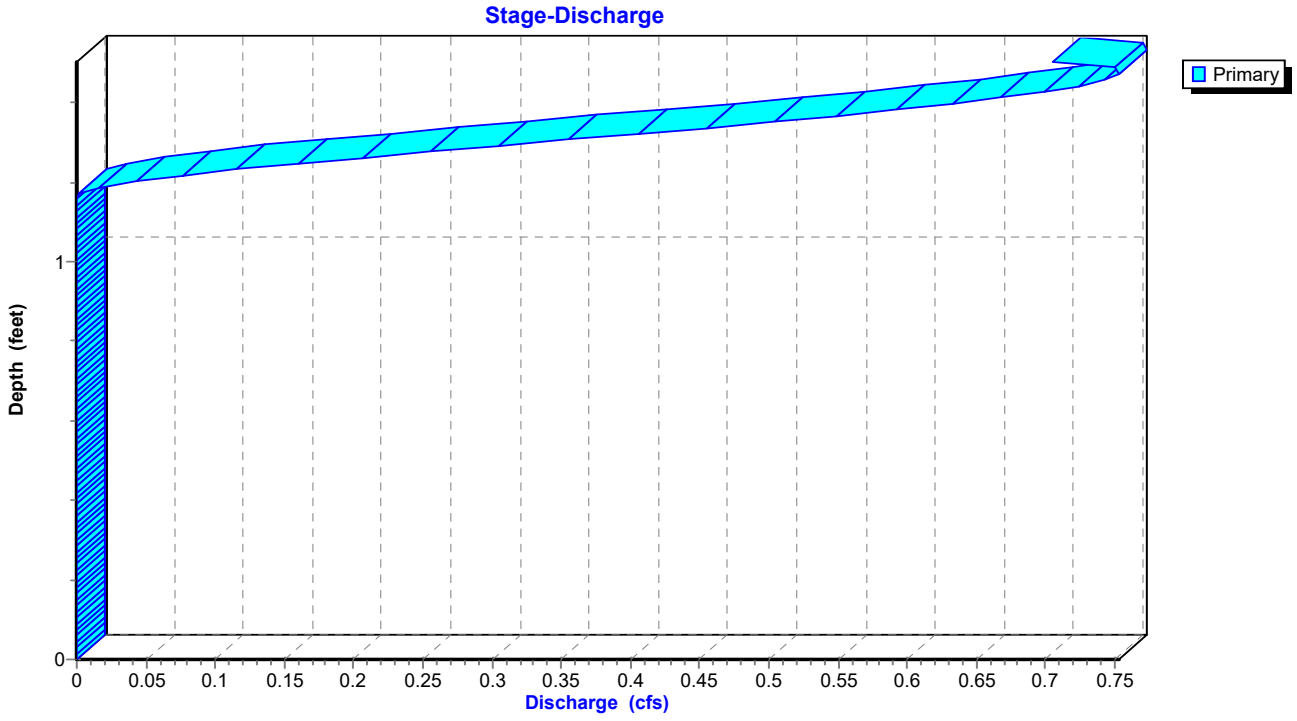
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0052 '/'
Inlet Invert= 665.36', Outlet Invert= 665.04'



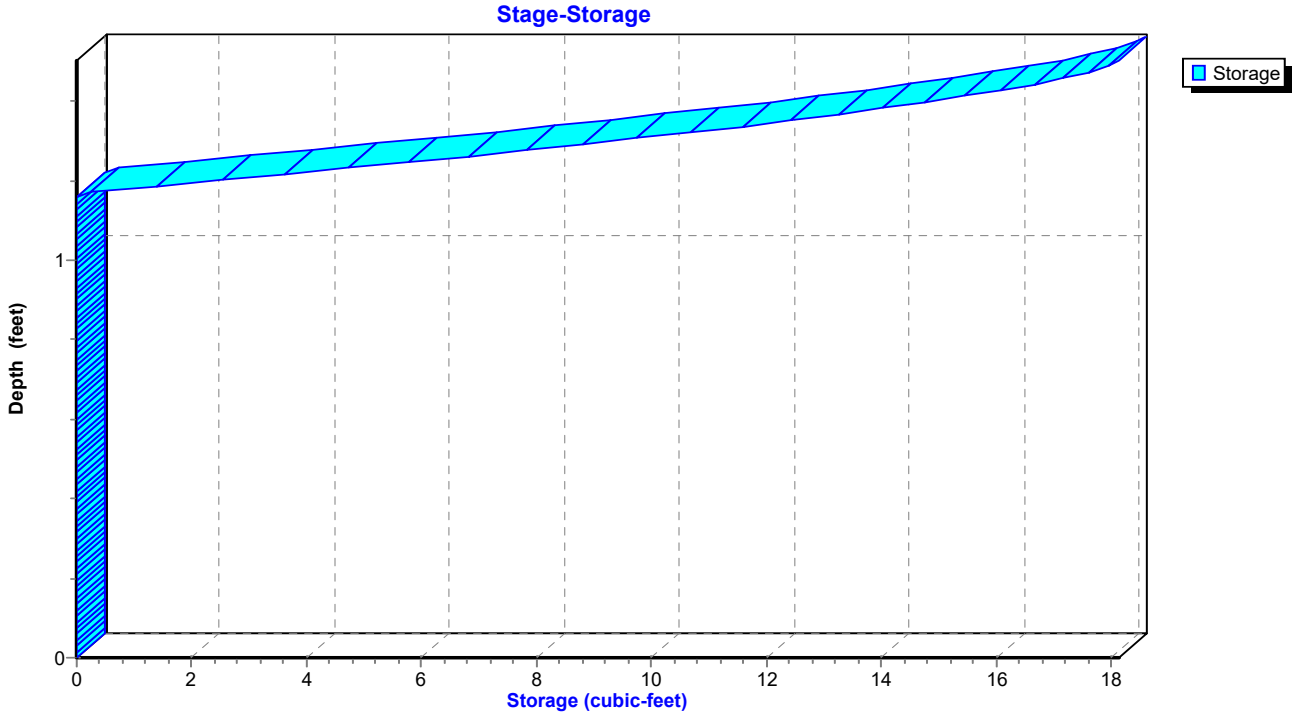
Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Hydrograph for Reach 11R: inlet 7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.53	0.00
5.40	0.01	1	666.54	0.01
5.80	0.01	1	666.54	0.01
6.20	0.01	1	666.54	0.01
6.60	0.01	1	666.54	0.01
7.00	0.01	1	666.54	0.01
7.40	0.01	1	666.54	0.01
7.80	0.01	1	666.54	0.01
8.20	0.01	1	666.54	0.01
8.60	0.01	1	666.54	0.01
9.00	0.01	1	666.54	0.01
9.40	0.02	1	666.54	0.02
9.80	0.02	2	666.55	0.02
10.20	0.02	2	666.55	0.02
10.60	0.02	2	666.55	0.02
11.00	0.04	2	666.56	0.03
11.40	0.05	3	666.56	0.05
11.80	0.08	4	666.58	0.08
12.20	**0.32**	**9**	**666.65**	**0.31**
12.60	**0.23**	**7**	**666.63**	**0.24**
13.00	0.08	4	666.58	0.09
13.40	0.05	3	666.56	0.05
13.80	0.03	2	666.55	0.03
14.20	0.02	2	666.55	0.02
14.60	0.02	2	666.55	0.02
15.00	0.02	2	666.55	0.02
15.40	0.02	1	666.54	0.02
15.80	0.01	1	666.54	0.01
16.20	0.01	1	666.54	0.01
16.60	0.01	1	666.54	0.01
17.00	0.01	1	666.54	0.01
17.40	0.01	1	666.54	0.01
17.80	0.01	1	666.54	0.01
18.20	0.01	1	666.54	0.01
18.60	0.01	1	666.54	0.01
19.00	0.01	1	666.54	0.01
19.40	0.01	1	666.54	0.01
19.80	0.01	1	666.54	0.01

Stage-Discharge for Reach 11R: inlet 7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.08	0.00
666.53	0.24	0.00
666.54	0.56	0.01
666.55	0.83	0.03
666.56	1.05	0.04
666.57	1.22	0.07
666.58	1.38	0.09
666.59	1.53	0.12
666.60	1.65	0.15
666.61	1.77	0.18
666.62	1.88	0.21
666.63	1.98	0.24
666.64	2.07	0.27
666.65	2.15	0.31
666.66	2.23	0.34
666.67	2.29	0.37
666.68	2.36	0.41
666.69	2.41	0.44
666.70	2.47	0.47
666.71	2.51	0.50
666.72	2.55	0.53
666.73	2.59	0.56
666.74	2.62	0.59
666.75	2.65	0.62
666.76	2.67	0.64
666.77	2.68	0.67
666.78	2.69	0.69
666.79	2.70	0.71
666.80	**2.70**	0.72
666.81	2.69	0.74
666.82	2.67	0.75
666.83	2.65	**0.75**
666.84	2.61	0.75
666.85	2.53	0.74
666.86	2.41	0.71

Stage-Area-Storage for Reach 11R: inlet 7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	0
666.50	0.0	0
666.52	0.0	0
666.54	0.0	1
666.56	0.0	3
666.58	0.1	4
666.60	0.1	5
666.62	0.1	7
666.64	0.1	8
666.66	0.2	9
666.68	0.2	11
666.70	0.2	12
666.72	0.2	13
666.74	0.2	14
666.76	0.2	15
666.78	0.3	16
666.80	0.3	17
666.82	0.3	17
666.84	0.3	18
666.86	**0.3**	**18**

Summary for Reach 12R: MH6 18"

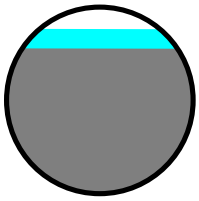
[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach 11R outlet invert by 1.32' @ 12.34 hrs

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 0.41 cfs @ 12.34 hrs, Volume= 0.041 af
Outflow = 0.41 cfs @ 12.34 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.1 min

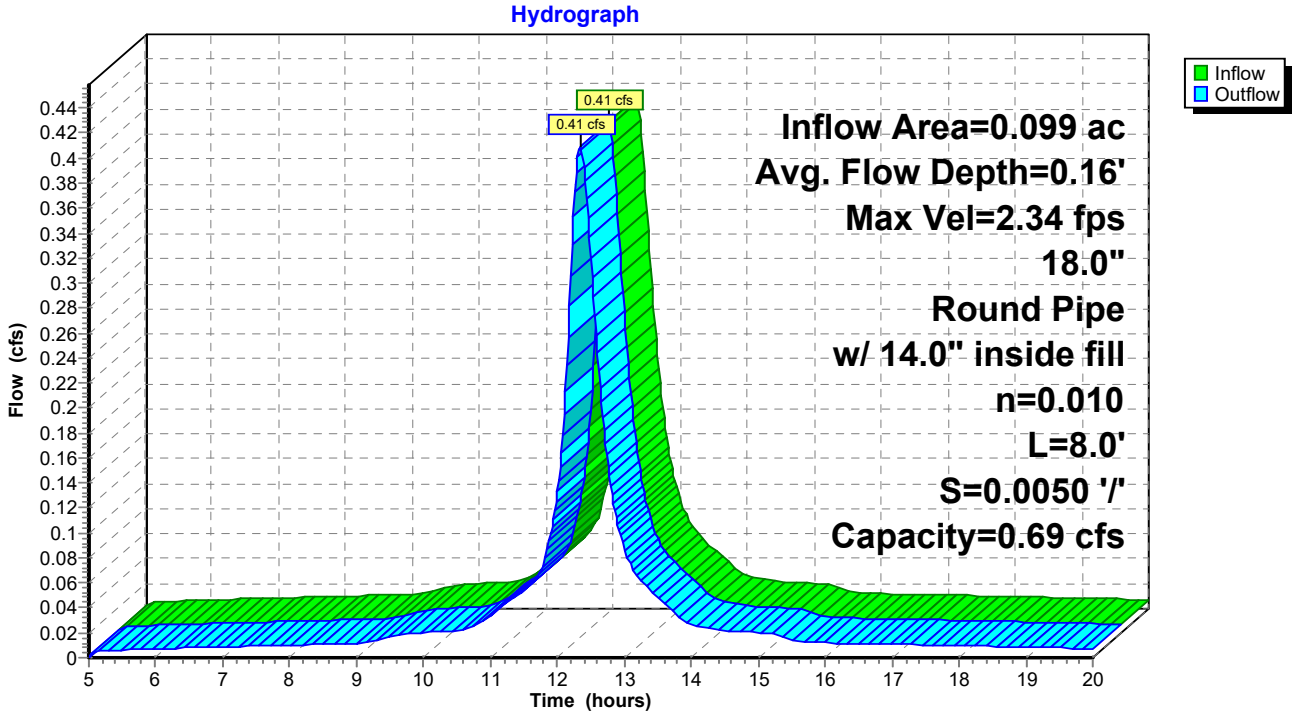
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.34 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.83 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.34 hrs
Average Depth at Peak Storage= 1.32' above invert (0.16' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

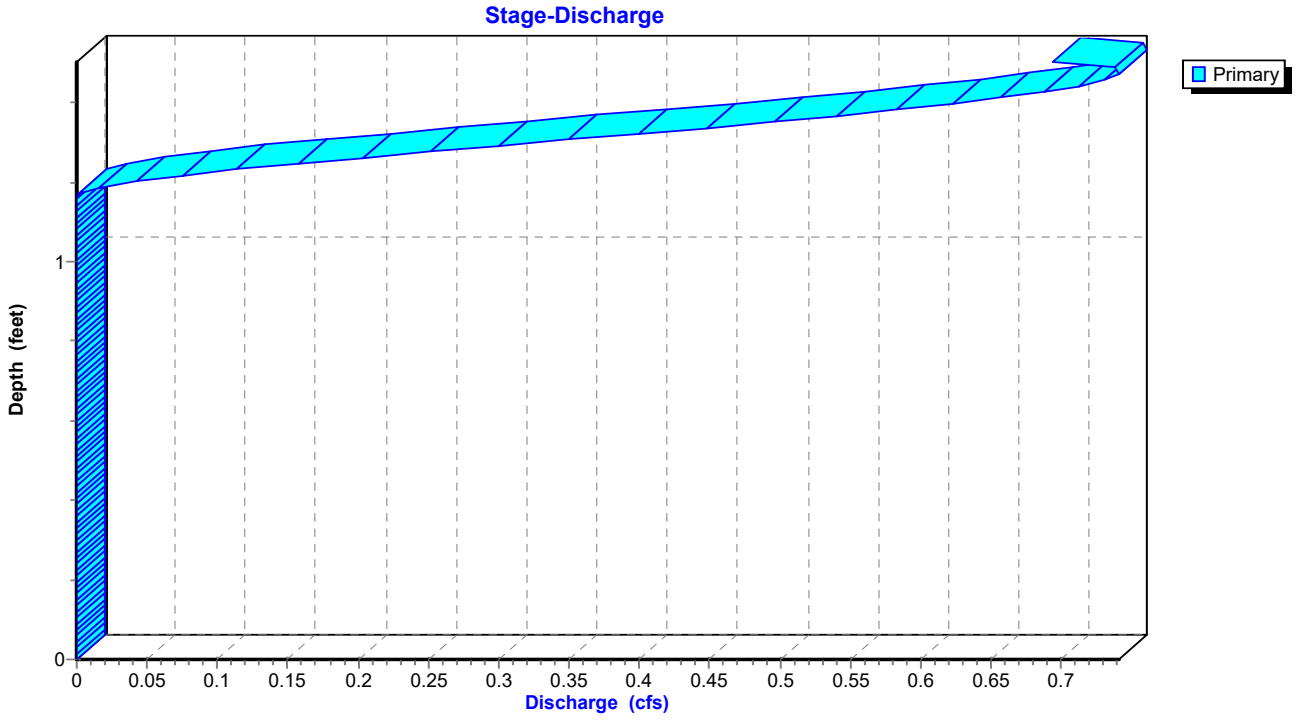
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 8.0' Slope= 0.0050 '/'
Inlet Invert= 665.04', Outlet Invert= 665.00'



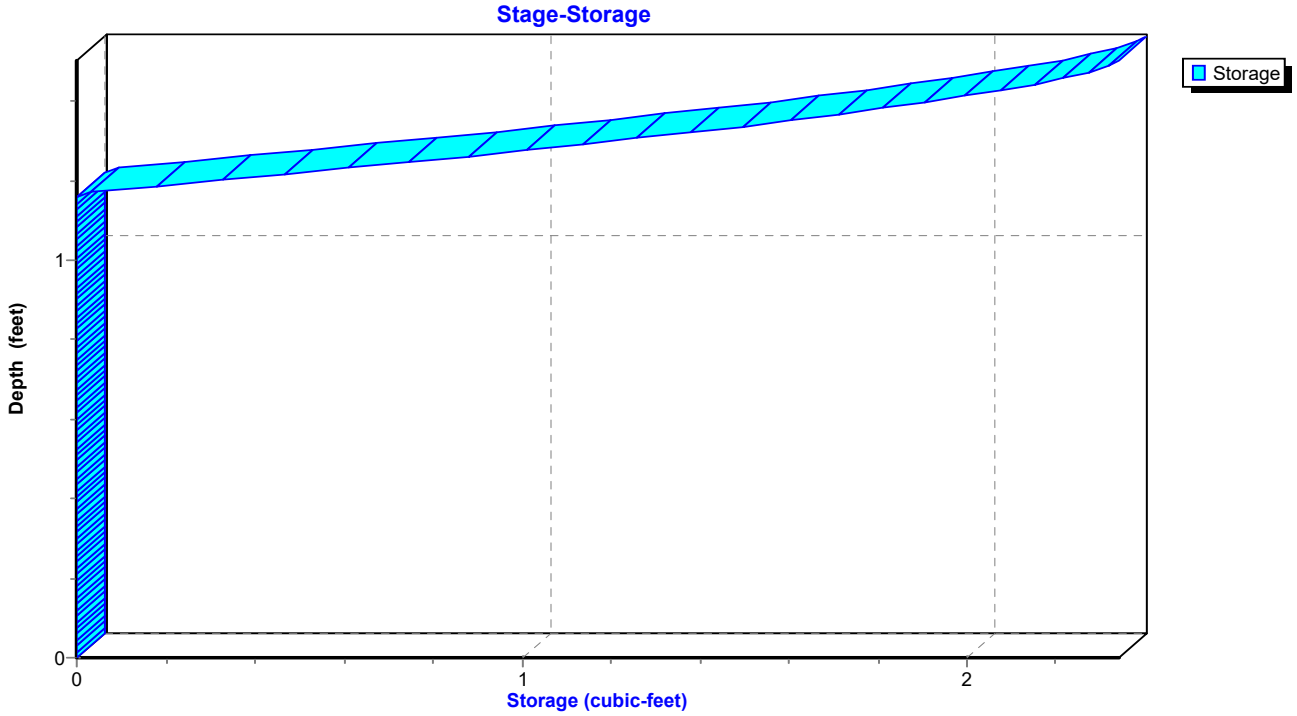
Reach 12R: MH6 18"



Reach 12R: MH6 18"



Reach 12R: MH6 18"



Hydrograph for Reach 12R: MH6 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.21	0.00
5.40	0.01	0	666.22	0.01
5.80	0.01	0	666.22	0.01
6.20	0.01	0	666.22	0.01
6.60	0.01	0	666.22	0.01
7.00	0.01	0	666.22	0.01
7.40	0.01	0	666.22	0.01
7.80	0.01	0	666.22	0.01
8.20	0.01	0	666.22	0.01
8.60	0.01	0	666.22	0.01
9.00	0.01	0	666.22	0.01
9.40	0.02	0	666.22	0.02
9.80	0.02	0	666.23	0.02
10.20	0.02	0	666.23	0.02
10.60	0.02	0	666.23	0.02
11.00	0.03	0	666.24	0.03
11.40	0.05	0	666.24	0.05
11.80	0.08	0	666.26	0.08
12.20	**0.31**	**1**	**666.33**	**0.31**
12.60	**0.24**	**1**	**666.31**	**0.24**
13.00	0.09	1	666.26	0.09
13.40	0.05	0	666.24	0.05
13.80	0.03	0	666.24	0.03
14.20	0.02	0	666.23	0.02
14.60	0.02	0	666.23	0.02
15.00	0.02	0	666.23	0.02
15.40	0.02	0	666.22	0.02
15.80	0.01	0	666.22	0.01
16.20	0.01	0	666.22	0.01
16.60	0.01	0	666.22	0.01
17.00	0.01	0	666.22	0.01
17.40	0.01	0	666.22	0.01
17.80	0.01	0	666.22	0.01
18.20	0.01	0	666.22	0.01
18.60	0.01	0	666.22	0.01
19.00	0.01	0	666.22	0.01
19.40	0.01	0	666.22	0.01
19.80	0.01	0	666.22	0.01

Stage-Discharge for Reach 12R: MH6 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.04	0.00	0.00
665.05	0.00	0.00
665.06	0.00	0.00
665.07	0.00	0.00
665.08	0.00	0.00
665.09	0.00	0.00
665.10	0.00	0.00
665.11	0.00	0.00
665.12	0.00	0.00
665.13	0.00	0.00
665.14	0.00	0.00
665.15	0.00	0.00
665.16	0.00	0.00
665.17	0.00	0.00
665.18	0.00	0.00
665.19	0.00	0.00
665.20	0.00	0.00
665.21	0.00	0.00
665.22	0.00	0.00
665.23	0.00	0.00
665.24	0.00	0.00
665.25	0.00	0.00
665.26	0.00	0.00
665.27	0.00	0.00
665.28	0.00	0.00
665.29	0.00	0.00
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.08	0.00
666.21	0.23	0.00
666.22	0.55	0.01
666.23	0.82	0.02
666.24	1.03	0.04
666.25	1.20	0.06
666.26	1.36	0.09
666.27	1.50	0.11
666.28	1.63	0.14
666.29	1.74	0.17
666.30	1.85	0.20
666.31	1.95	0.24
666.32	2.04	0.27
666.33	2.12	0.30
666.34	2.19	0.33
666.35	2.26	0.37
666.36	2.32	0.40
666.37	2.38	0.43
666.38	2.43	0.46
666.39	2.47	0.50
666.40	2.51	0.53
666.41	2.55	0.56
666.42	2.58	0.58
666.43	2.60	0.61
666.44	2.62	0.63
666.45	2.64	0.66
666.46	2.65	0.68
666.47	2.65	0.70
666.48	**2.65**	0.71
666.49	2.65	0.73
666.50	2.63	0.73
666.51	2.61	**0.74**
666.52	2.57	0.74
666.53	2.49	0.72
666.54	2.38	0.69

Stage-Area-Storage for Reach 12R: MH6 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.1	1
666.28	0.1	1
666.30	0.1	1
666.32	0.1	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	2
666.40	0.2	2
666.42	0.2	2
666.44	0.2	2
666.46	0.3	2
666.48	0.3	2
666.50	0.3	2
666.52	0.3	2
666.54	**0.3**	**2**

Summary for Reach 13R: to isolator 6"

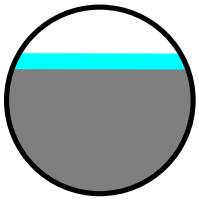
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.041 ac, 78.05% Impervious, Inflow Depth > 3.69" for 25-yr event
Inflow = 0.14 cfs @ 12.37 hrs, Volume= 0.013 af
Outflow = 0.14 cfs @ 12.37 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

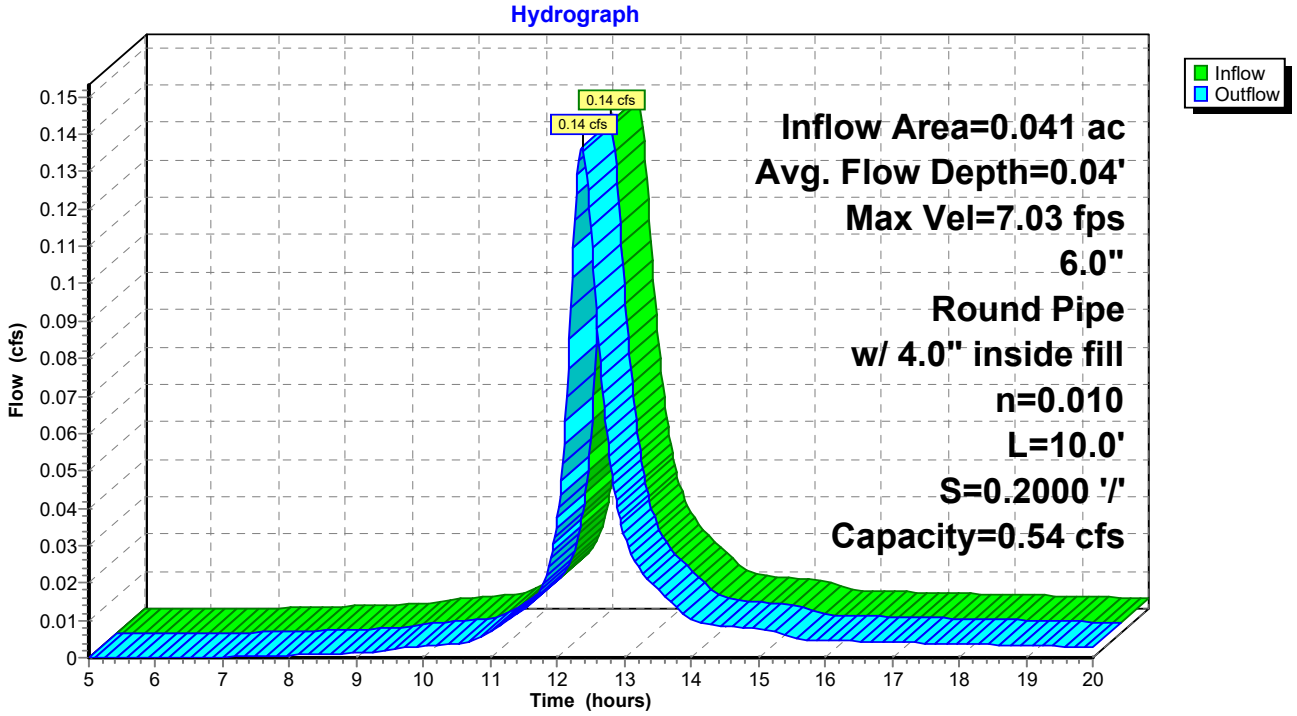
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 7.03 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.31 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.37 hrs
Average Depth at Peak Storage= 0.38' above invert (0.04' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

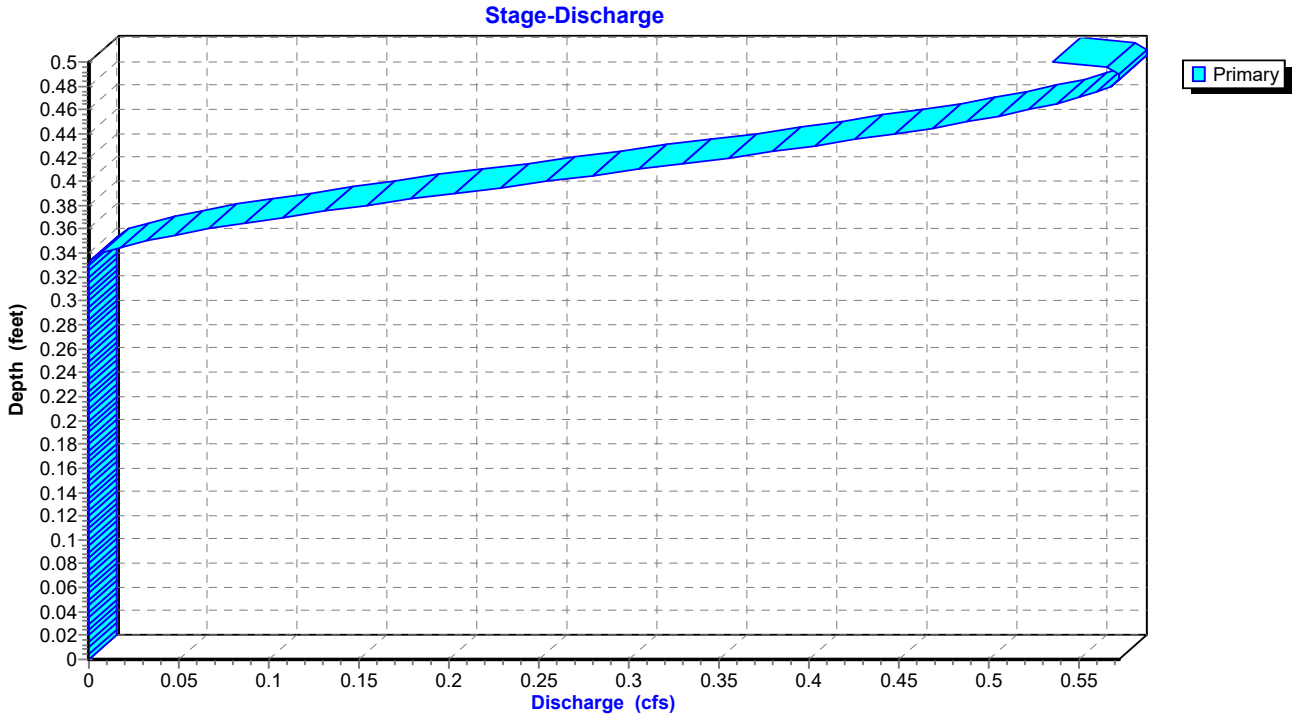
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



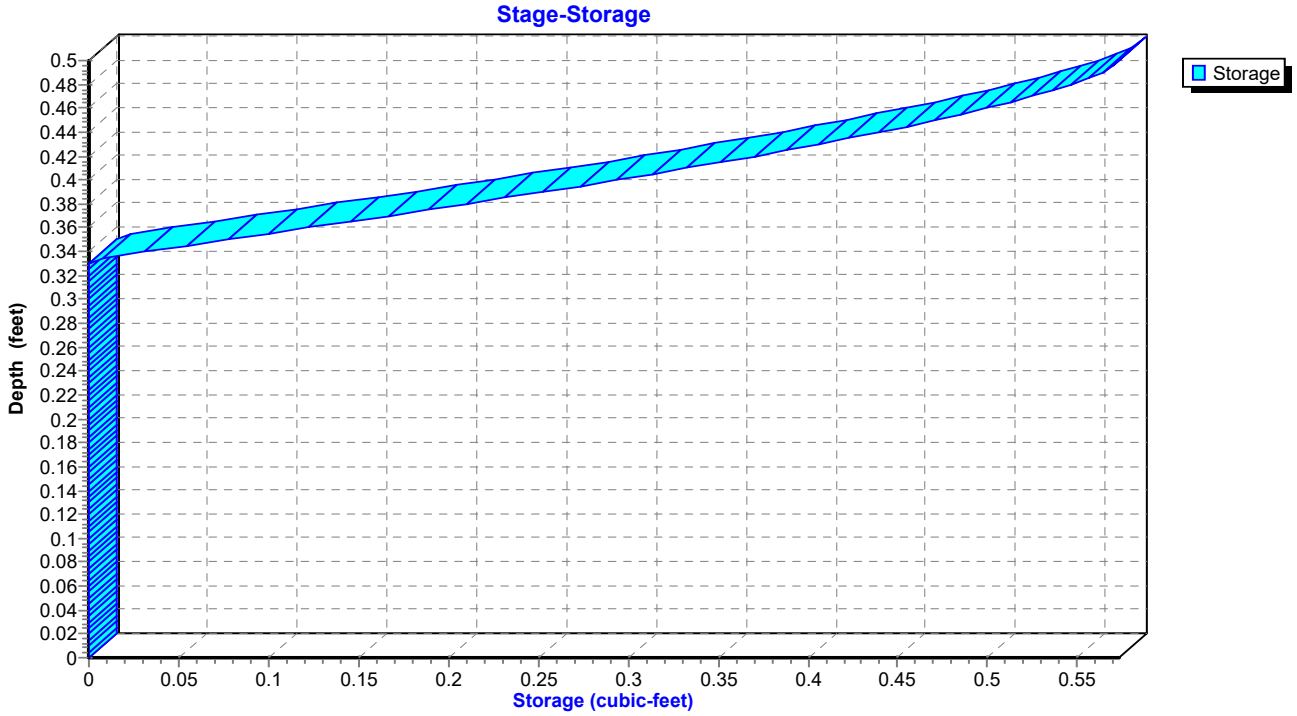
Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Hydrograph for Reach 13R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.01	0	668.34	0.01
11.40	0.01	0	668.34	0.01
11.80	0.02	0	668.35	0.02
12.20	**0.09**	**0**	**668.37**	**0.09**
12.60	**0.09**	**0**	**668.37**	**0.09**
13.00	0.03	0	668.35	0.03
13.40	0.02	0	668.35	0.02
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.01	0	668.34	0.01
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 13R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 13R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 14R: to isolator 6"

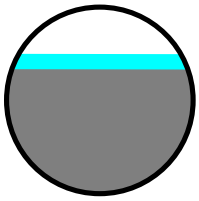
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.030 ac, 83.33% Impervious, Inflow Depth > 4.01" for 25-yr event
Inflow = 0.13 cfs @ 12.26 hrs, Volume= 0.010 af
Outflow = 0.13 cfs @ 12.26 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

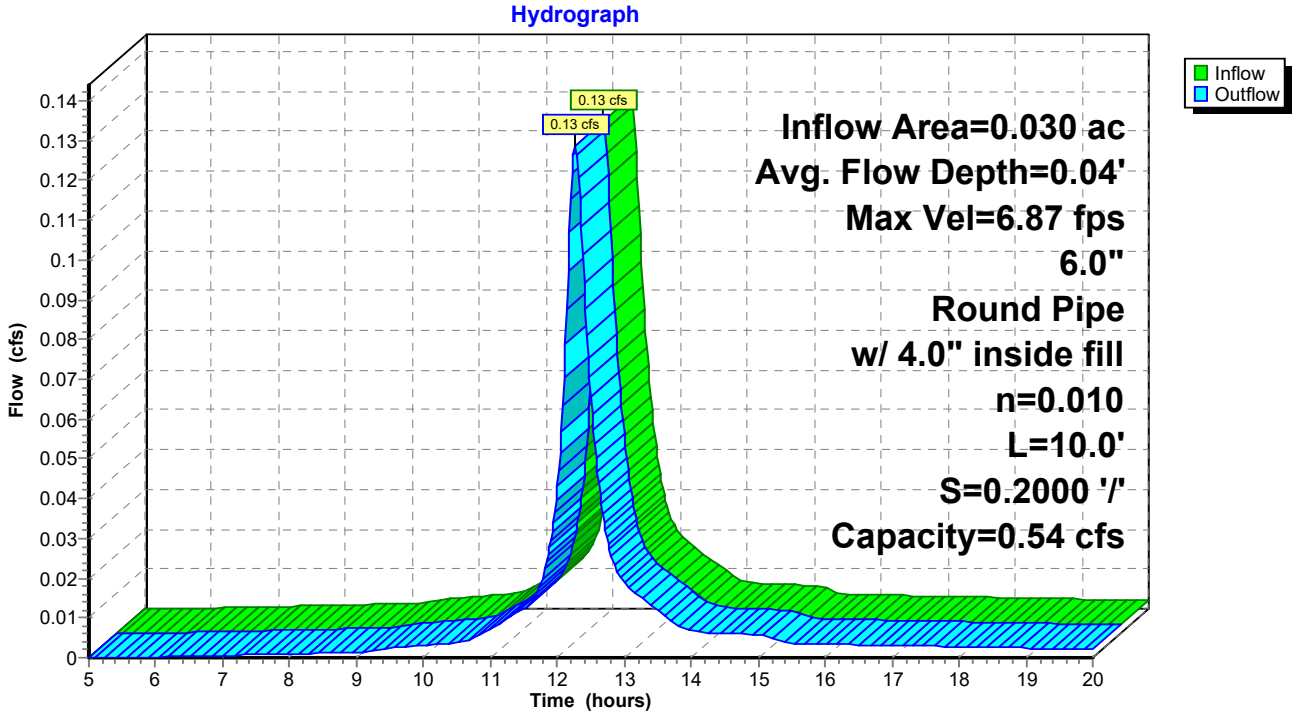
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 6.87 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.08 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.26 hrs
Average Depth at Peak Storage= 0.37' above invert (0.04' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

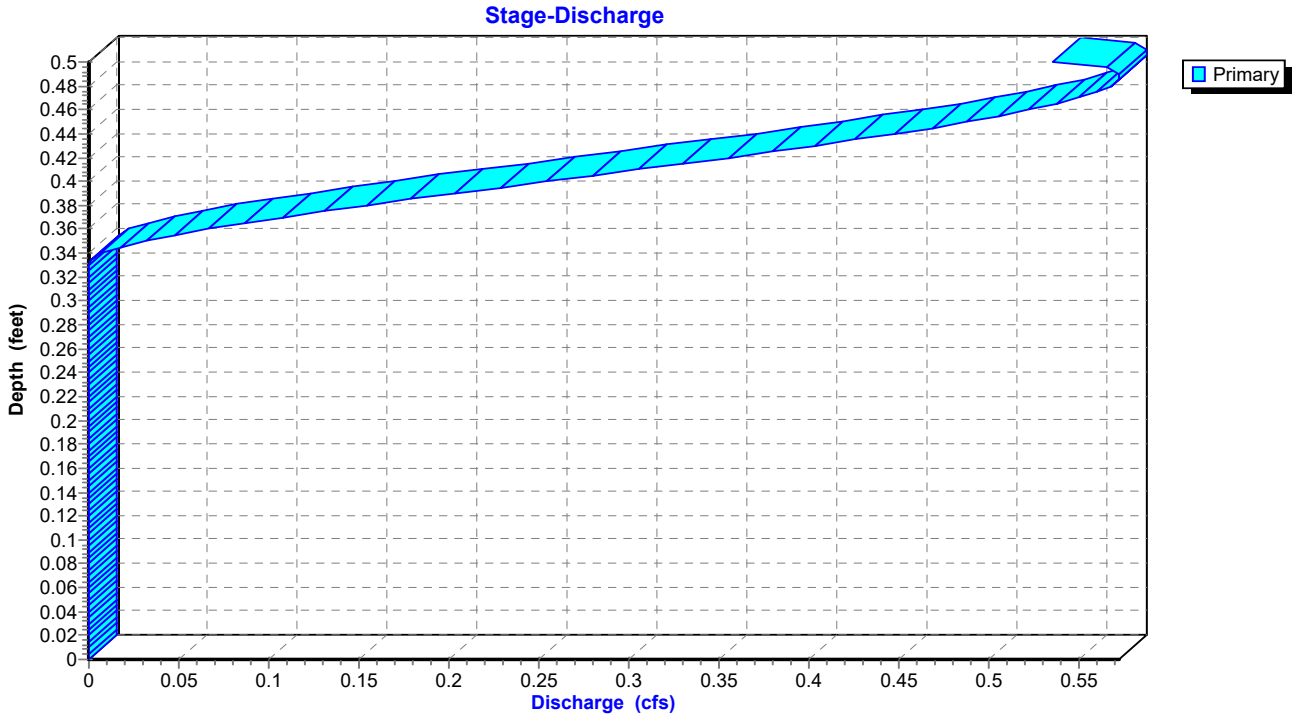
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



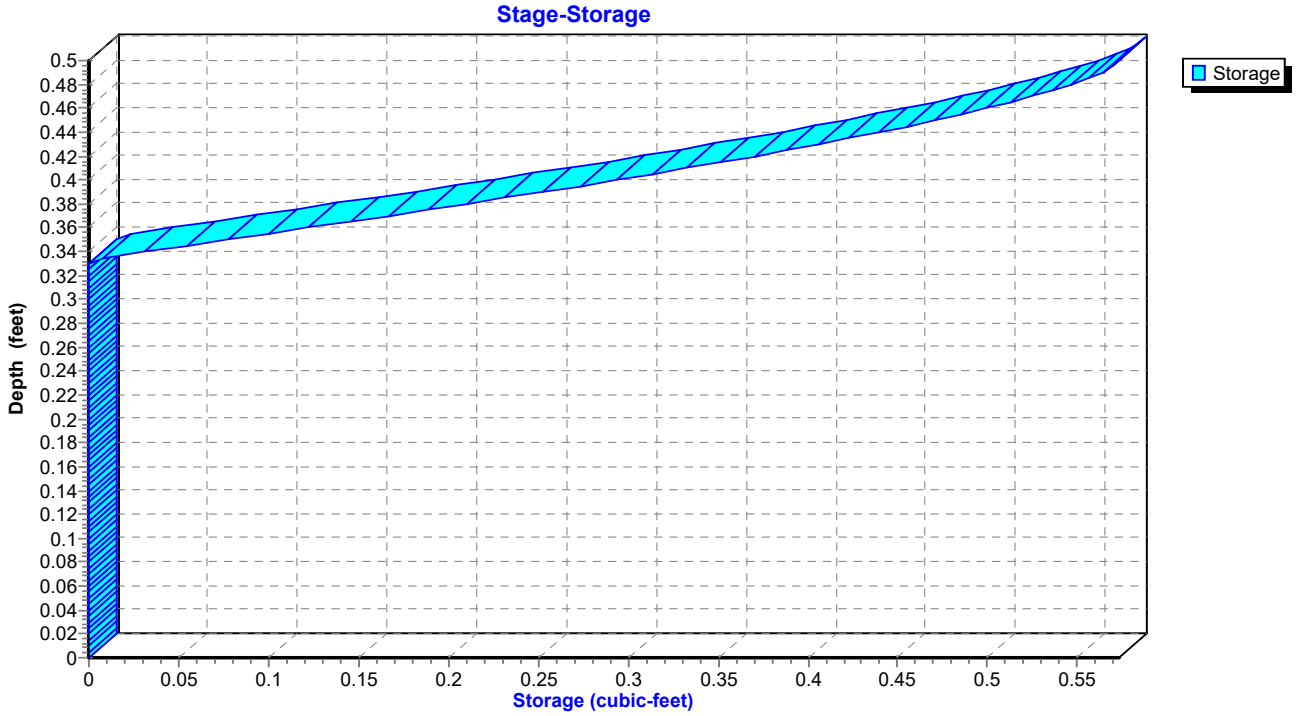
Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Hydrograph for Reach 14R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.01	0	668.34	0.01
11.40	0.01	0	668.34	0.01
11.80	0.02	0	668.35	0.02
12.20	**0.12**	**0**	**668.37**	**0.12**
12.60	**0.05**	**0**	**668.35**	**0.05**
13.00	0.02	0	668.35	0.02
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 14R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 14R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 15R: to isolator 6"

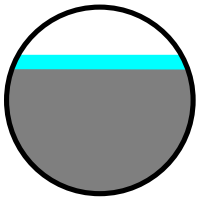
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 73.68% Impervious, Inflow Depth > 3.40" for 25-yr event
Inflow = 0.12 cfs @ 12.37 hrs, Volume= 0.011 af
Outflow = 0.12 cfs @ 12.37 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min

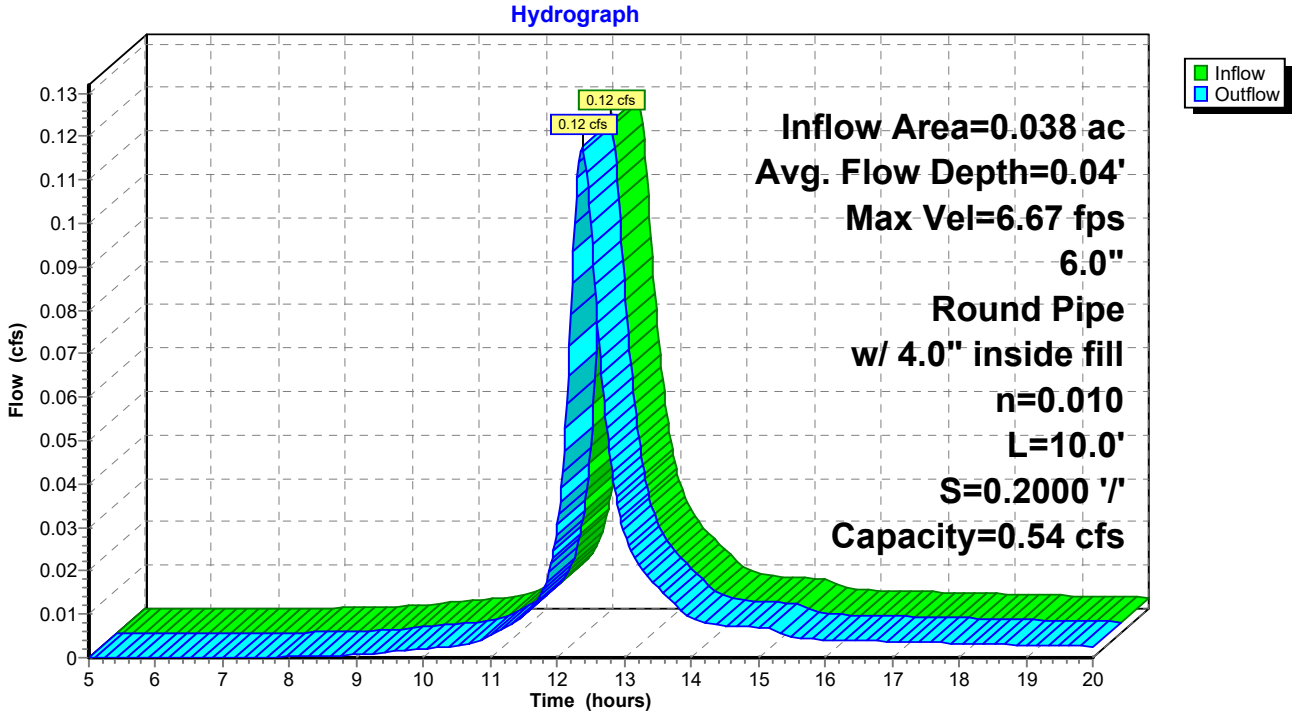
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 6.67 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.26 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.37 hrs
Average Depth at Peak Storage= 0.37' above invert (0.04' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

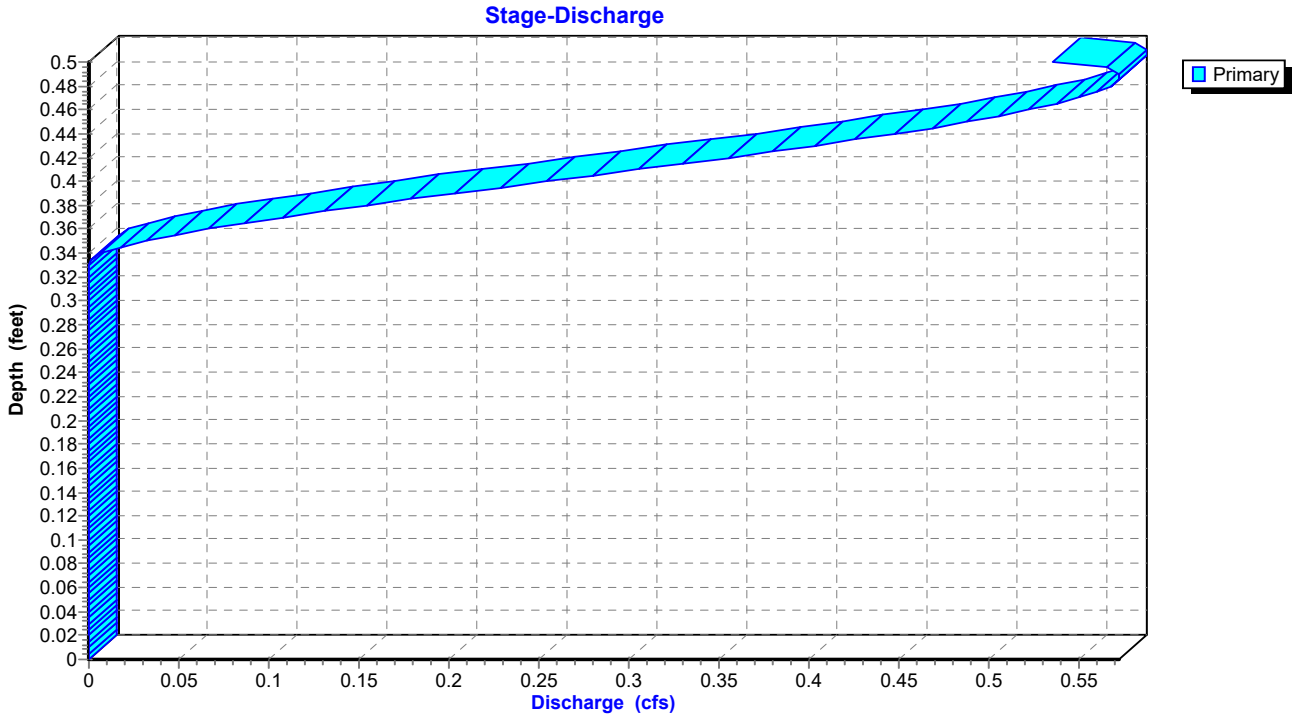
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



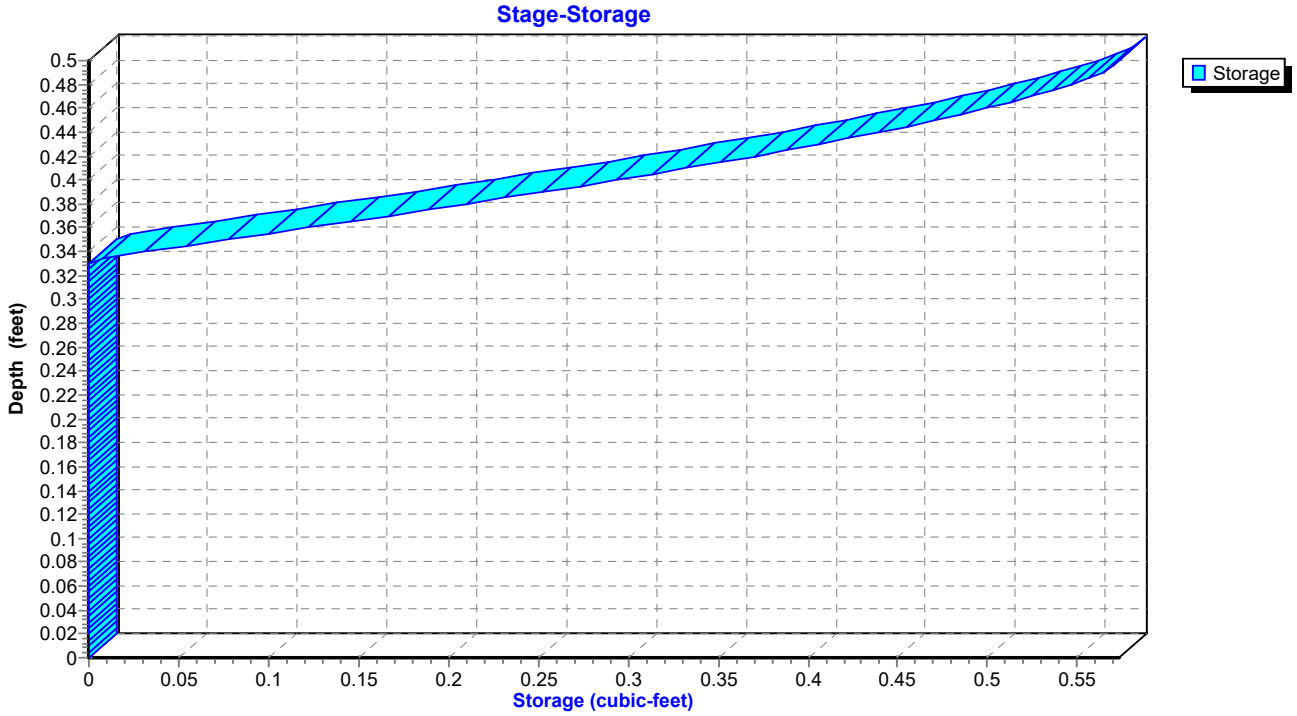
Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Hydrograph for Reach 15R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.01	0	668.34	0.01
11.40	0.01	0	668.34	0.01
11.80	0.02	0	668.34	0.02
12.20	**0.08**	**0**	**668.36**	**0.08**
12.60	**0.08**	**0**	**668.36**	**0.08**
13.00	0.03	0	668.35	0.03
13.40	0.02	0	668.34	0.02
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.01	0	668.34	0.01
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 15R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 15R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 17R: NDS2 6"

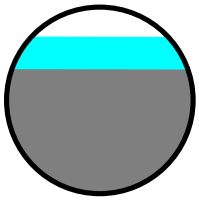
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 42.11% Impervious, Inflow Depth > 1.81" for 25-yr event
Inflow = 0.06 cfs @ 12.45 hrs, Volume= 0.006 af
Outflow = 0.06 cfs @ 12.49 hrs, Volume= 0.006 af, Atten= 0%, Lag= 2.6 min

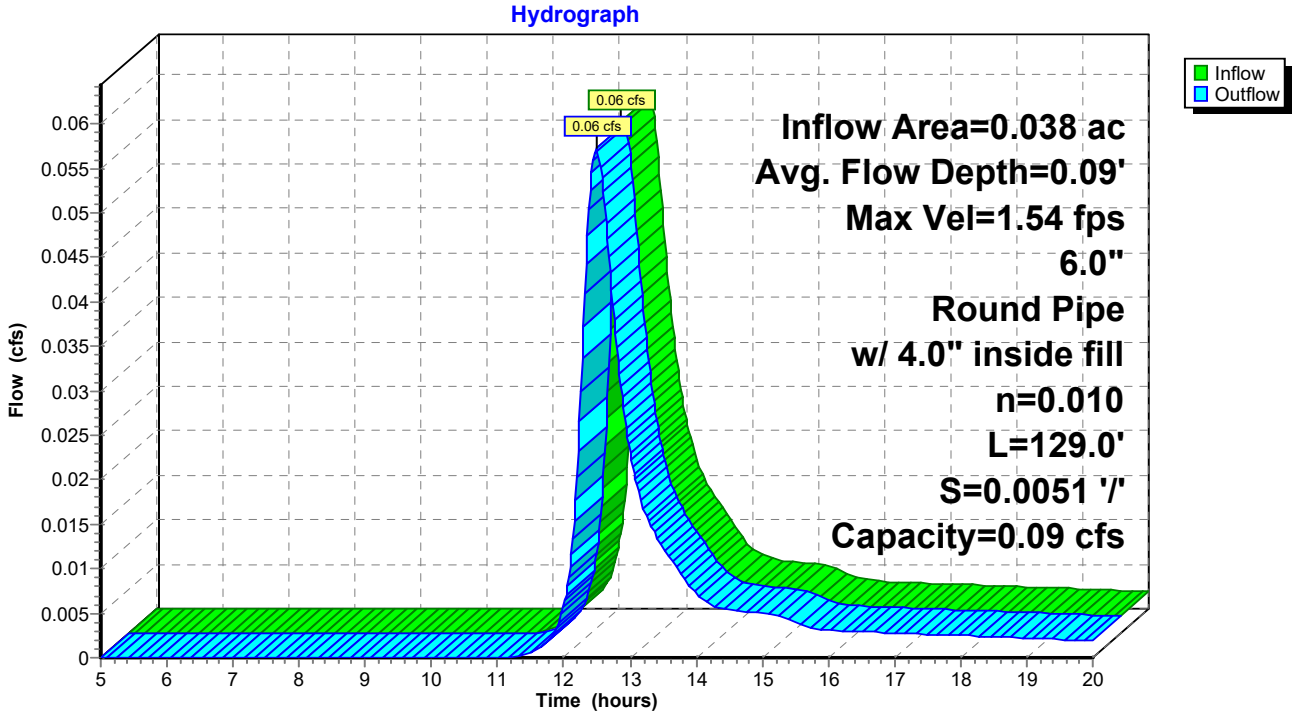
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.54 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 0.65 fps, Avg. Travel Time= 3.3 min

Peak Storage= 5 cf @ 12.47 hrs
Average Depth at Peak Storage= 0.42' above invert (0.09' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

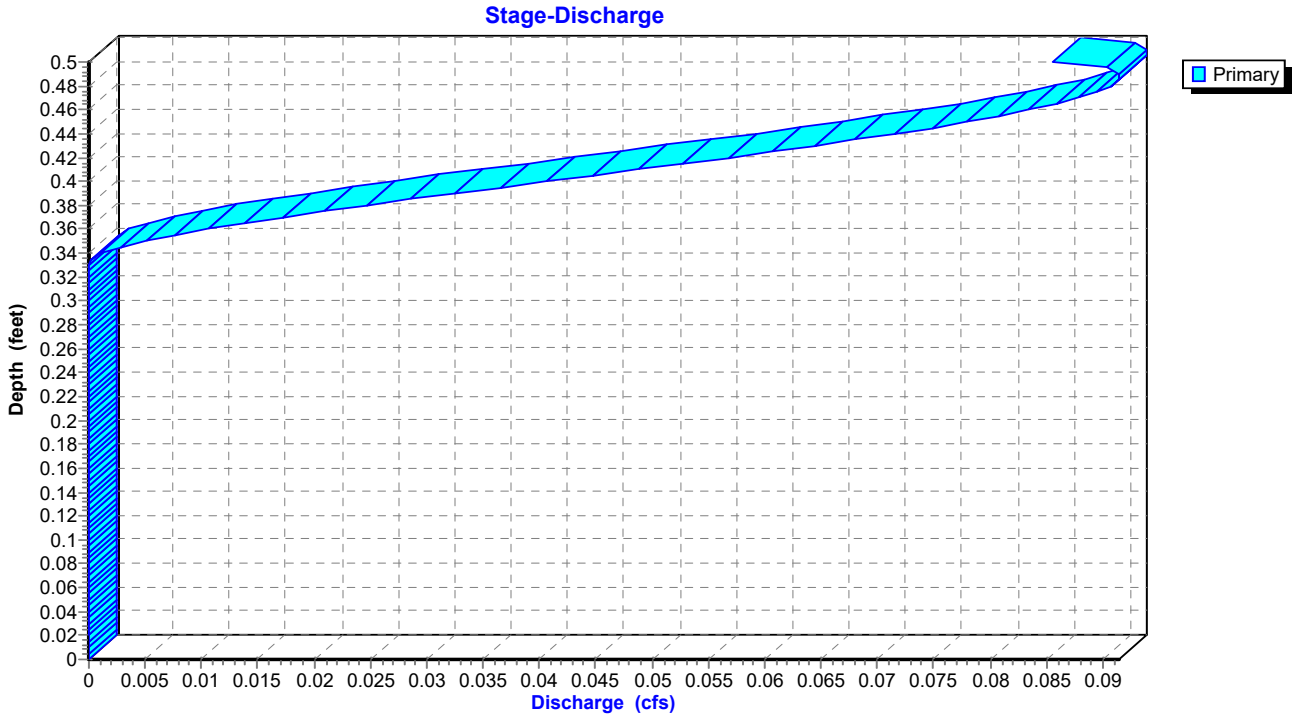
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0051 '/'
Inlet Invert= 668.84', Outlet Invert= 668.18'



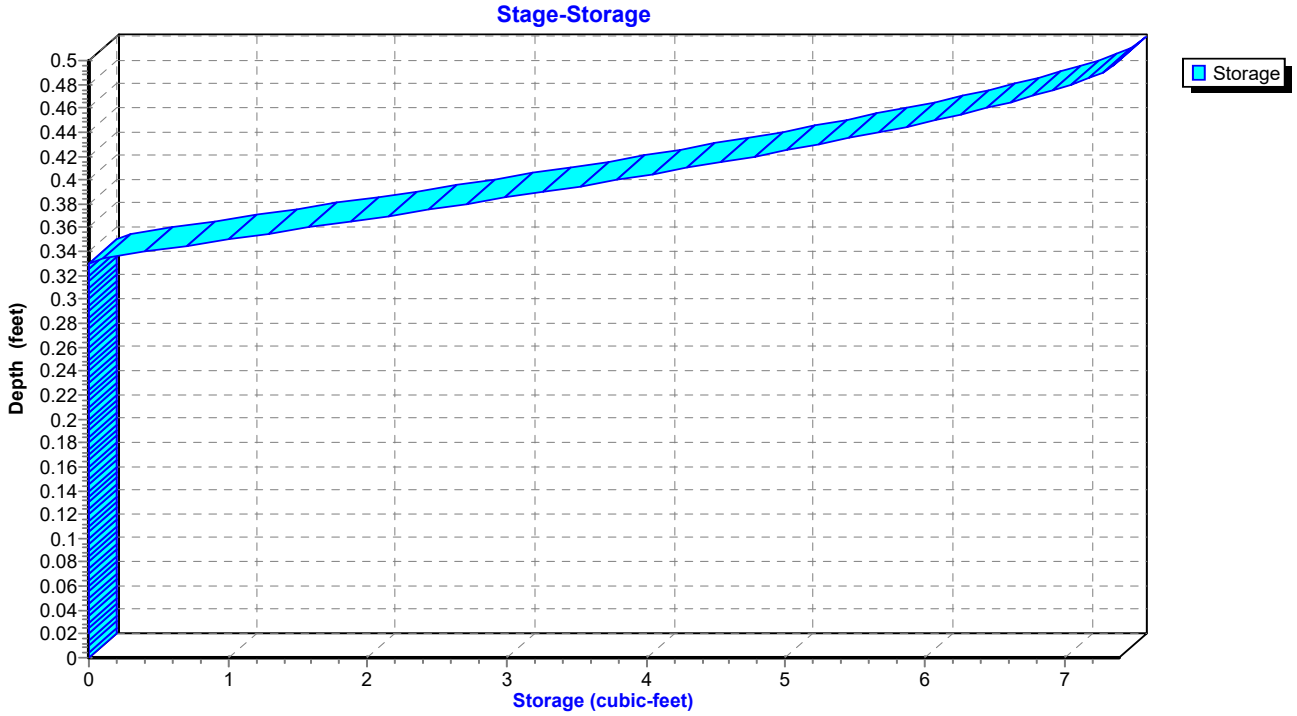
Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Hydrograph for Reach 17R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.17	0.00
5.40	0.00	0	669.17	0.00
5.80	0.00	0	669.17	0.00
6.20	0.00	0	669.17	0.00
6.60	0.00	0	669.17	0.00
7.00	0.00	0	669.17	0.00
7.40	0.00	0	669.17	0.00
7.80	0.00	0	669.17	0.00
8.20	0.00	0	669.17	0.00
8.60	0.00	0	669.17	0.00
9.00	0.00	0	669.17	0.00
9.40	0.00	0	669.17	0.00
9.80	0.00	0	669.17	0.00
10.20	0.00	0	669.17	0.00
10.60	0.00	0	669.17	0.00
11.00	0.00	0	669.17	0.00
11.40	0.00	0	669.18	0.00
11.80	0.00	1	669.18	0.00
12.20	**0.03**	**3**	**669.22**	**0.02**
12.60	**0.05**	**4**	**669.25**	**0.05**
13.00	0.02	3	669.22	0.02
13.40	0.01	2	669.20	0.01
13.80	0.01	1	669.20	0.01
14.20	0.01	1	669.19	0.01
14.60	0.01	1	669.19	0.01
15.00	0.01	1	669.19	0.01
15.40	0.00	1	669.19	0.00
15.80	0.00	1	669.19	0.00
16.20	0.00	1	669.19	0.00
16.60	0.00	1	669.19	0.00
17.00	0.00	1	669.18	0.00
17.40	0.00	1	669.18	0.00
17.80	0.00	1	669.18	0.00
18.20	0.00	1	669.18	0.00
18.60	0.00	1	669.18	0.00
19.00	0.00	1	669.18	0.00
19.40	0.00	1	669.18	0.00
19.80	0.00	1	669.18	0.00

Stage-Discharge for Reach 17R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.84	0.00	0.00
668.85	0.00	0.00
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.37	0.00
669.19	0.65	0.01
669.20	0.87	0.01
669.21	1.03	0.02
669.22	1.17	0.02
669.23	1.29	0.03
669.24	1.39	0.04
669.25	1.47	0.05
669.26	1.53	0.06
669.27	1.59	0.06
669.28	1.63	0.07
669.29	1.66	0.08
669.30	1.67	0.08
669.31	**1.67**	0.09
669.32	1.66	0.09
669.33	1.62	**0.09**
669.34	1.49	0.09

Stage-Area-Storage for Reach 17R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.84	0.0	0
668.85	0.0	0
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	1
669.20	0.0	2
669.21	0.0	2
669.22	0.0	3
669.23	0.0	3
669.24	0.0	4
669.25	0.0	4
669.26	0.0	5
669.27	0.0	5
669.28	0.0	6
669.29	0.0	6
669.30	0.0	6
669.31	0.1	7
669.32	0.1	7
669.33	0.1	7
669.34	**0.1**	**7**

Summary for Reach 18R: inlet 3 6"

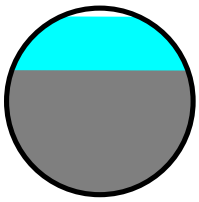
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 105% of Manning's capacity
[62] Hint: Exceeded Reach 17R OUTLET depth by 0.06' @ 12.50 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.12' @ 12.46 hrs

Inflow Area = 0.090 ac, 18.89% Impervious, Inflow Depth > 1.57" for 25-yr event
Inflow = 0.09 cfs @ 12.48 hrs, Volume= 0.012 af
Outflow = 0.09 cfs @ 12.50 hrs, Volume= 0.012 af, Atten= 0%, Lag= 1.5 min

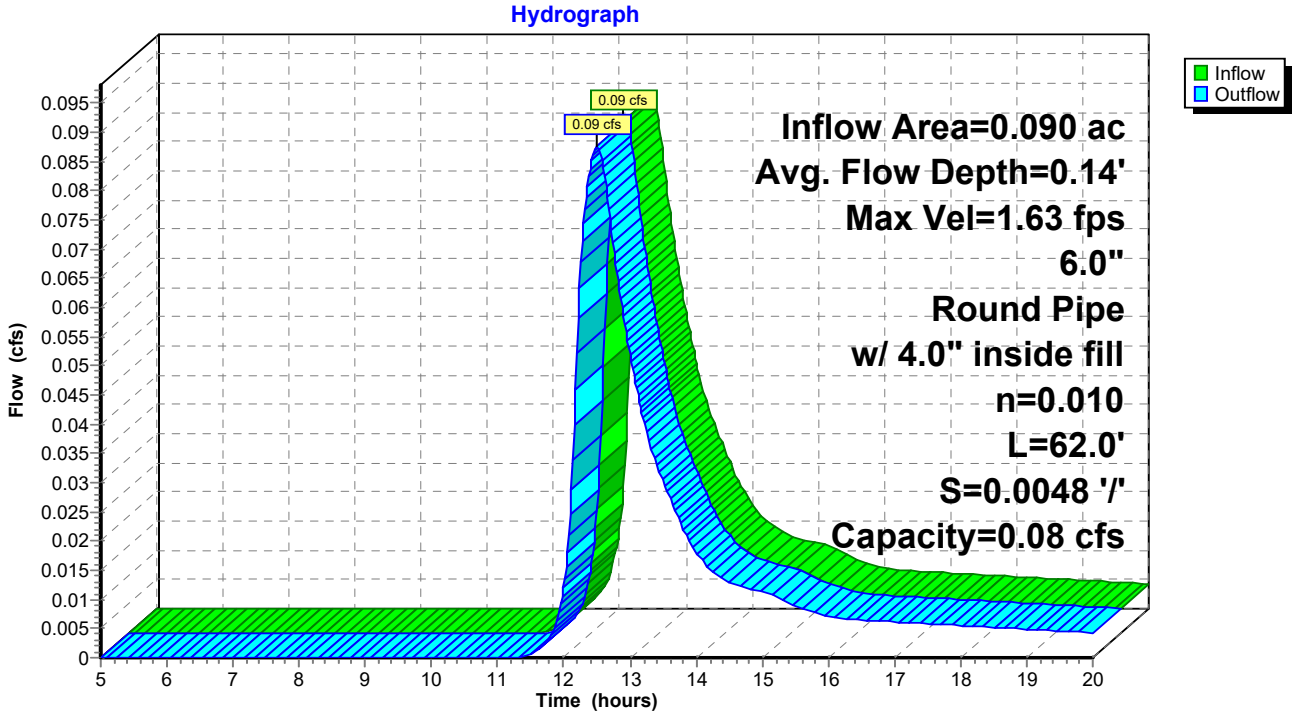
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.63 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 0.85 fps, Avg. Travel Time= 1.2 min

Peak Storage= 3 cf @ 12.49 hrs
Average Depth at Peak Storage= 0.48' above invert (0.14' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.08 cfs

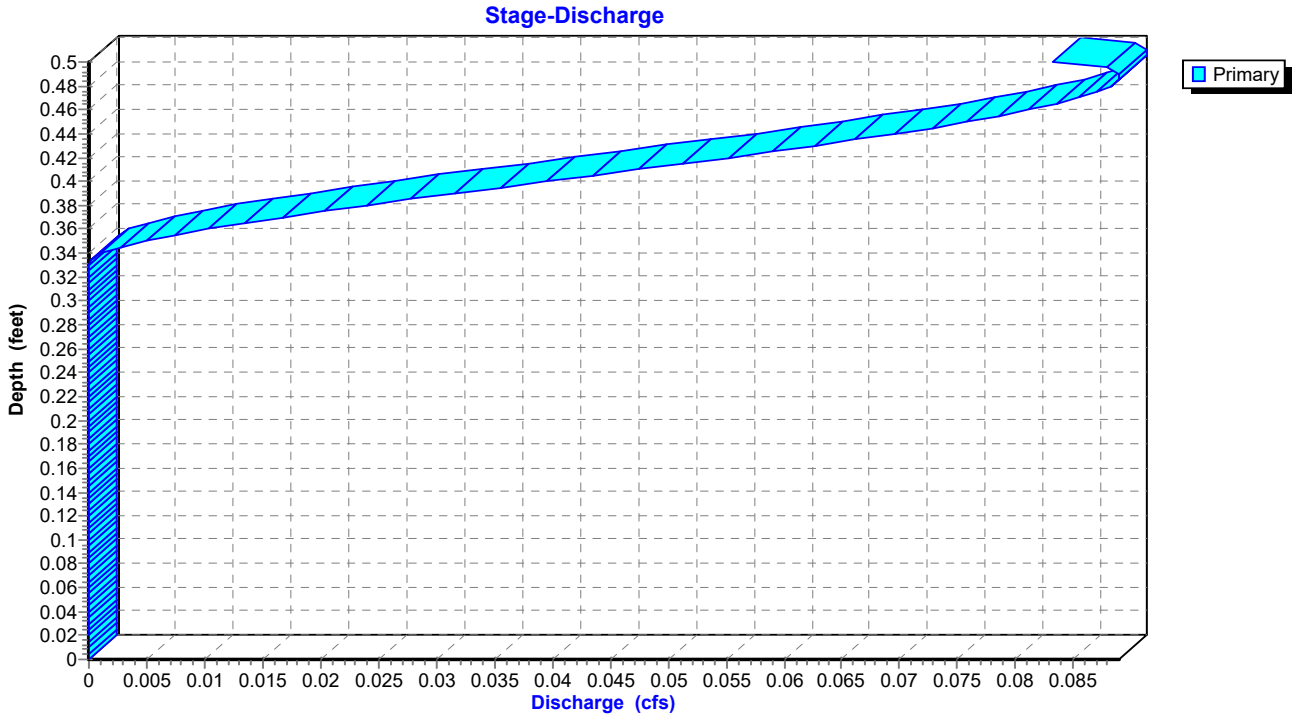
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0048 '/'
Inlet Invert= 668.18', Outlet Invert= 667.88'



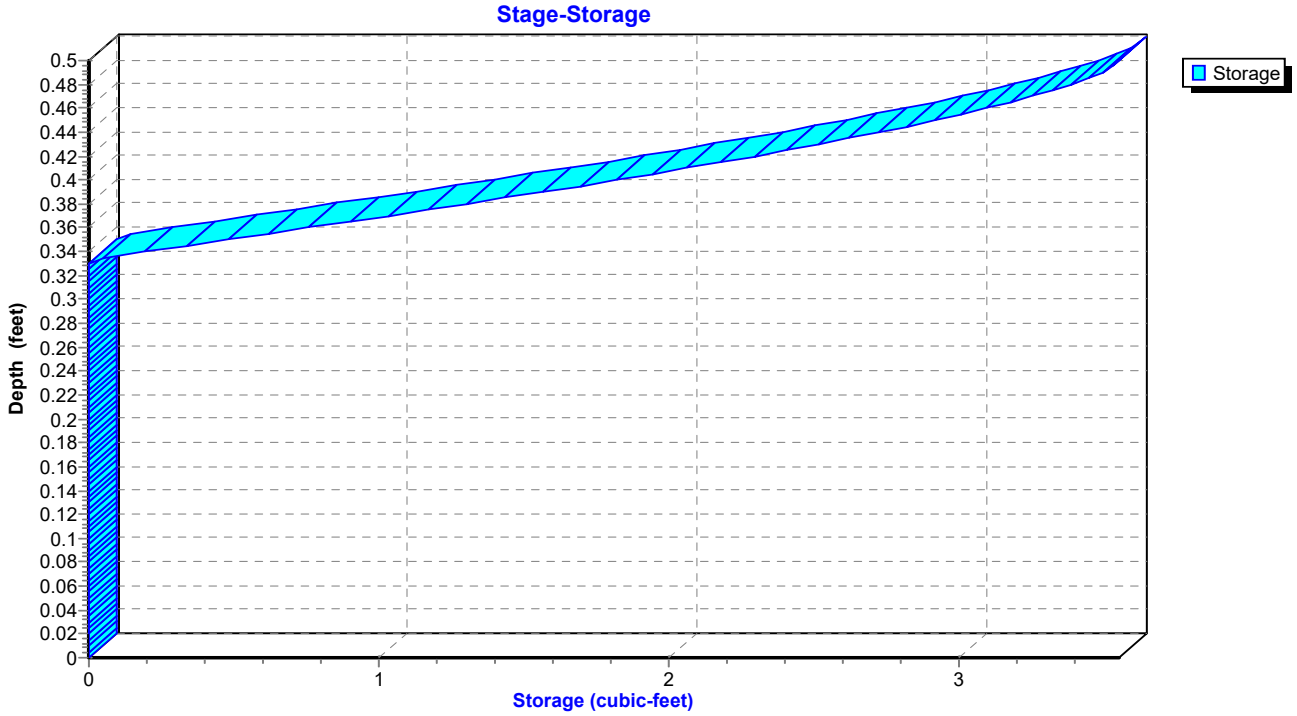
Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Hydrograph for Reach 18R: inlet 3 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.51	0.00
5.40	0.00	0	668.51	0.00
5.80	0.00	0	668.51	0.00
6.20	0.00	0	668.51	0.00
6.60	0.00	0	668.51	0.00
7.00	0.00	0	668.51	0.00
7.40	0.00	0	668.51	0.00
7.80	0.00	0	668.51	0.00
8.20	0.00	0	668.51	0.00
8.60	0.00	0	668.51	0.00
9.00	0.00	0	668.51	0.00
9.40	0.00	0	668.51	0.00
9.80	0.00	0	668.51	0.00
10.20	0.00	0	668.51	0.00
10.60	0.00	0	668.51	0.00
11.00	0.00	0	668.51	0.00
11.40	0.00	0	668.52	0.00
11.80	0.00	0	668.53	0.00
12.20	**0.06**	**2**	**668.60**	**0.05**
12.60	**0.08**	**3**	**668.64**	**0.08**
13.00	0.05	2	668.59	0.05
13.40	0.03	2	668.57	0.03
13.80	0.02	1	668.56	0.02
14.20	0.02	1	668.55	0.02
14.60	0.01	1	668.54	0.01
15.00	0.01	1	668.54	0.01
15.40	0.01	1	668.54	0.01
15.80	0.01	1	668.54	0.01
16.20	0.01	1	668.53	0.01
16.60	0.01	1	668.53	0.01
17.00	0.01	1	668.53	0.01
17.40	0.01	1	668.53	0.01
17.80	0.01	1	668.53	0.01
18.20	0.01	1	668.53	0.01
18.60	0.01	0	668.53	0.01
19.00	0.00	0	668.53	0.00
19.40	0.00	0	668.53	0.00
19.80	0.00	0	668.53	0.00

Stage-Discharge for Reach 18R: inlet 3 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	0.00	0.00
668.35	0.00	0.00
668.36	0.00	0.00
668.37	0.00	0.00
668.38	0.00	0.00
668.39	0.00	0.00
668.40	0.00	0.00
668.41	0.00	0.00
668.42	0.00	0.00
668.43	0.00	0.00
668.44	0.00	0.00
668.45	0.00	0.00
668.46	0.00	0.00
668.47	0.00	0.00
668.48	0.00	0.00
668.49	0.00	0.00
668.50	0.00	0.00
668.51	0.00	0.00
668.52	0.36	0.00
668.53	0.64	0.00
668.54	0.84	0.01
668.55	1.00	0.02
668.56	1.14	0.02
668.57	1.25	0.03
668.58	1.35	0.04
668.59	1.43	0.05
668.60	1.49	0.06
668.61	1.54	0.06
668.62	1.58	0.07
668.63	1.61	0.08
668.64	1.63	0.08
668.65	**1.63**	0.09
668.66	1.61	0.09
668.67	1.58	**0.09**
668.68	1.45	0.08

Stage-Area-Storage for Reach 18R: inlet 3 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.0	0
668.48	0.0	0
668.49	0.0	0
668.50	0.0	0
668.51	0.0	0
668.52	0.0	0
668.53	0.0	0
668.54	0.0	1
668.55	0.0	1
668.56	0.0	1
668.57	0.0	2
668.58	0.0	2
668.59	0.0	2
668.60	0.0	2
668.61	0.0	3
668.62	0.0	3
668.63	0.0	3
668.64	0.0	3
668.65	0.1	3
668.66	0.1	3
668.67	0.1	3
668.68	**0.1**	**4**

Summary for Reach 22R: NDS2 6"

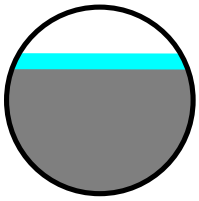
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.031 ac, 3.23% Impervious, Inflow Depth > 1.28" for 25-yr event
Inflow = 0.02 cfs @ 12.83 hrs, Volume= 0.003 af
Outflow = 0.02 cfs @ 12.88 hrs, Volume= 0.003 af, Atten= 0%, Lag= 3.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.13 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 0.59 fps, Avg. Travel Time= 3.7 min

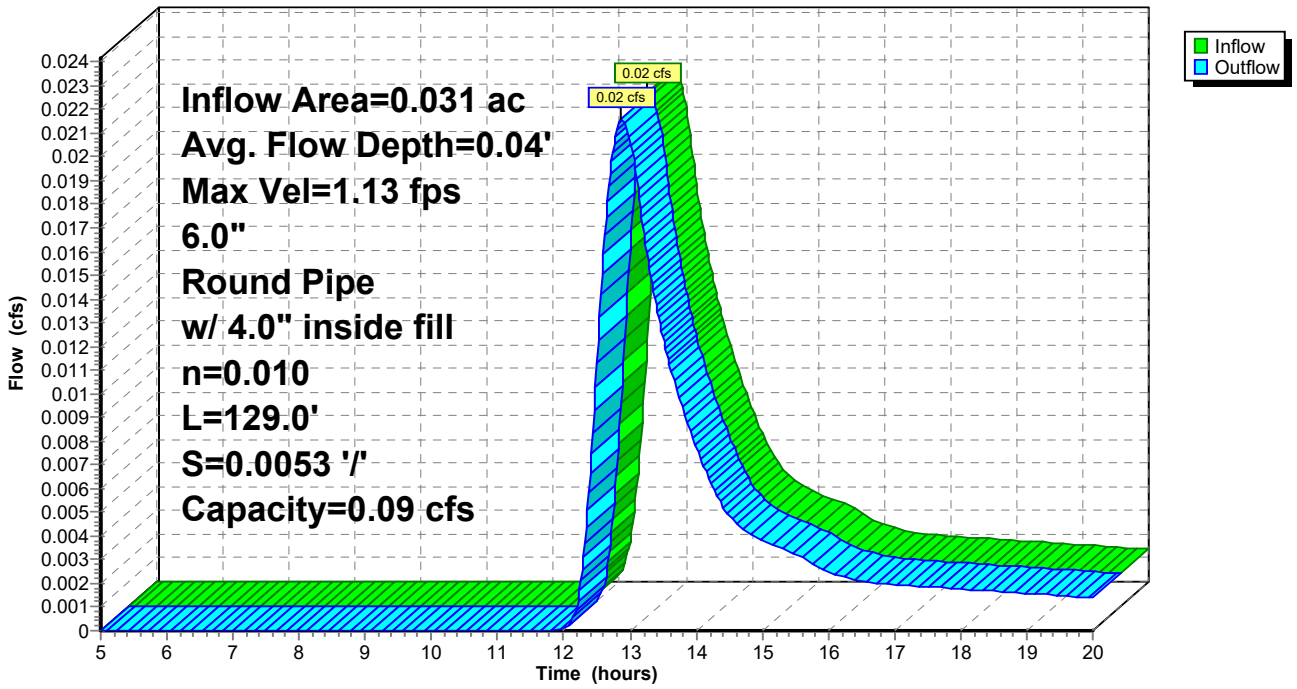
Peak Storage= 2 cf @ 12.84 hrs
Average Depth at Peak Storage= 0.38' above invert (0.04' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0053 '/'
Inlet Invert= 668.86', Outlet Invert= 668.18'



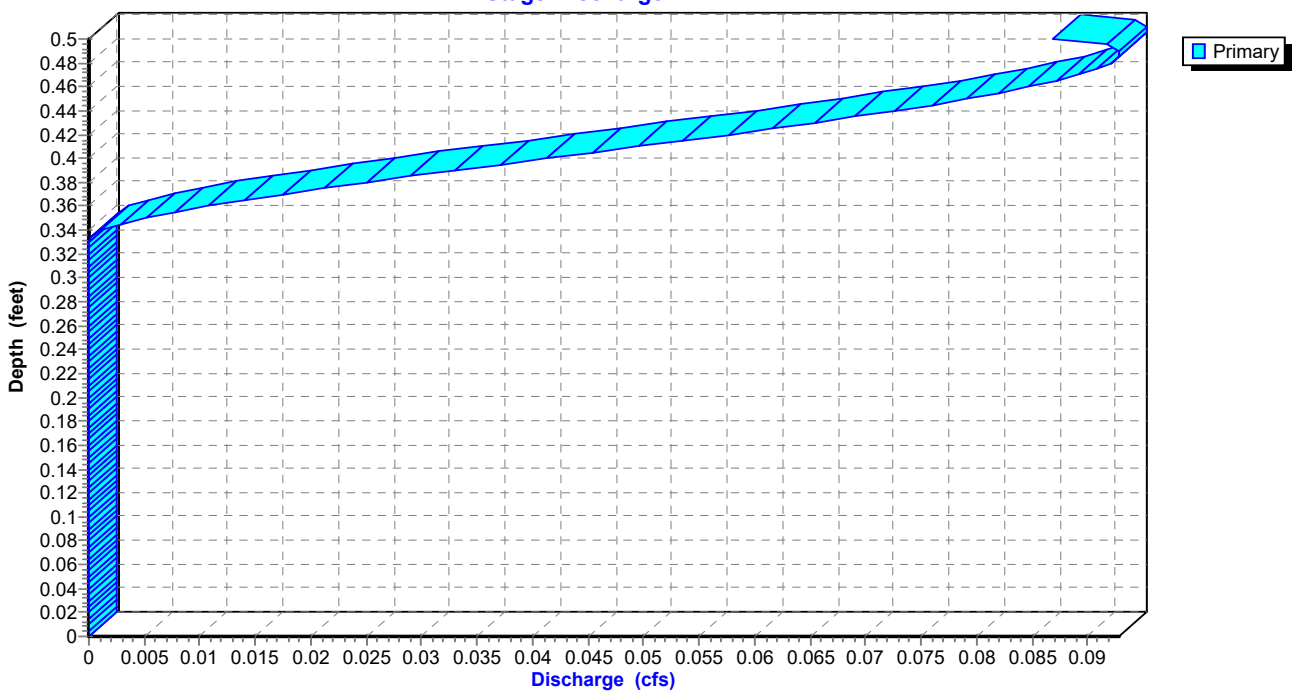
Reach 22R: NDS2 6"

Hydrograph

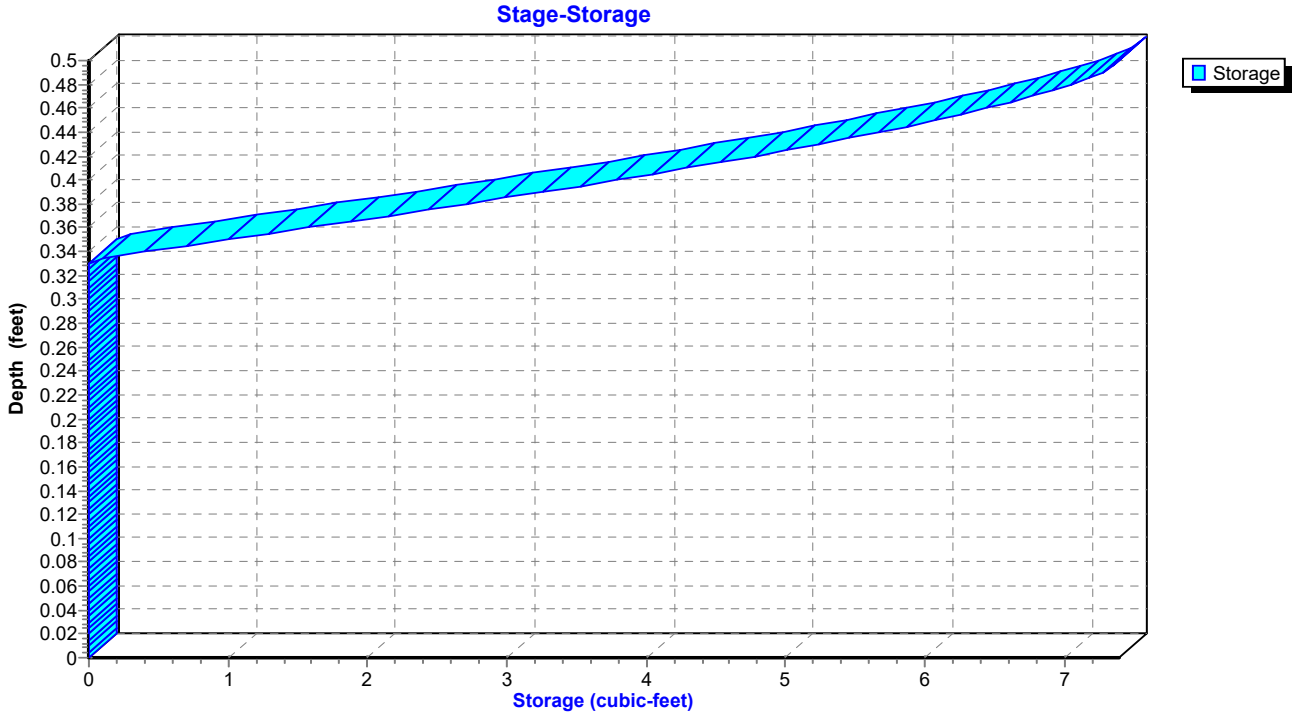


Reach 22R: NDS2 6"

Stage-Discharge



Reach 22R: NDS2 6"



Hydrograph for Reach 22R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.19	0.00
5.40	0.00	0	669.19	0.00
5.80	0.00	0	669.19	0.00
6.20	0.00	0	669.19	0.00
6.60	0.00	0	669.19	0.00
7.00	0.00	0	669.19	0.00
7.40	0.00	0	669.19	0.00
7.80	0.00	0	669.19	0.00
8.20	0.00	0	669.19	0.00
8.60	0.00	0	669.19	0.00
9.00	0.00	0	669.19	0.00
9.40	0.00	0	669.19	0.00
9.80	0.00	0	669.19	0.00
10.20	0.00	0	669.19	0.00
10.60	0.00	0	669.19	0.00
11.00	0.00	0	669.19	0.00
11.40	0.00	0	669.19	0.00
11.80	0.00	0	669.19	0.00
12.20	0.00	0	669.20	0.00
12.60	**0.02**	**2**	**669.23**	**0.02**
13.00	**0.02**	**2**	**669.23**	**0.02**
13.40	0.01	2	669.22	0.01
13.80	0.01	1	669.22	0.01
14.20	0.01	1	669.21	0.01
14.60	0.00	1	669.21	0.00
15.00	0.00	1	669.21	0.00
15.40	0.00	1	669.21	0.00
15.80	0.00	1	669.20	0.00
16.20	0.00	1	669.20	0.00
16.60	0.00	1	669.20	0.00
17.00	0.00	1	669.20	0.00
17.40	0.00	1	669.20	0.00
17.80	0.00	1	669.20	0.00
18.20	0.00	0	669.20	0.00
18.60	0.00	0	669.20	0.00
19.00	0.00	0	669.20	0.00
19.40	0.00	0	669.20	0.00
19.80	0.00	0	669.20	0.00

Stage-Discharge for Reach 22R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.00	0.00
669.19	0.00	0.00
669.20	0.37	0.00
669.21	0.66	0.01
669.22	0.88	0.01
669.23	1.05	0.02
669.24	1.19	0.03
669.25	1.31	0.03
669.26	1.41	0.04
669.27	1.49	0.05
669.28	1.56	0.06
669.29	1.61	0.07
669.30	1.65	0.07
669.31	1.68	0.08
669.32	1.70	0.08
669.33	**1.70**	0.09
669.34	1.69	0.09
669.35	1.65	**0.09**
669.36	1.52	0.09

Stage-Area-Storage for Reach 22R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	0
669.20	0.0	0
669.21	0.0	1
669.22	0.0	2
669.23	0.0	2
669.24	0.0	3
669.25	0.0	3
669.26	0.0	4
669.27	0.0	4
669.28	0.0	5
669.29	0.0	5
669.30	0.0	6
669.31	0.0	6
669.32	0.0	6
669.33	0.1	7
669.34	0.1	7
669.35	0.1	7
669.36	**0.1**	**7**

Summary for Pond 4P: stormtech SC310 16"x34" chambers

[44] Hint: Outlet device #2 is below defined storage
[63] Warning: Exceeded Reach 10R INLET depth by 0.16' @ 12.64 hrs
[63] Warning: Exceeded Reach 12R INLET depth by 0.19' @ 12.68 hrs
[62] Hint: Exceeded Reach 13R OUTLET depth by 0.13' @ 12.64 hrs
[62] Hint: Exceeded Reach 14R OUTLET depth by 0.14' @ 12.64 hrs
[62] Hint: Exceeded Reach 15R OUTLET depth by 0.13' @ 12.64 hrs

Inflow Area =	1.066 ac,	90.90% Impervious,	Inflow Depth >	4.35" for 25-yr event
Inflow =	1.55 cfs @	12.34 hrs, Volume=	0.387 af	
Outflow =	0.87 cfs @	12.62 hrs, Volume=	0.337 af,	Atten= 44%, Lag= 16.7 min
Primary =	0.56 cfs @	12.62 hrs, Volume=	0.099 af	
Secondary =	0.31 cfs @	12.62 hrs, Volume=	0.238 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 666.49' @ 12.62 hrs Surf.Area= 0.107 ac Storage= 0.079 af

Plug-Flow detention time= 84.9 min calculated for 0.337 af (87% of inflow)
Center-of-Mass det. time= 38.2 min (862.8 - 824.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	664.40'	0.076 af	**36.00'W x 120.45'L x 2.33'H Field A Z=0.5** 0.242 af Overall - 0.011 af Embedded = 0.231 af x 33.0% Voids
#2A	664.90'	0.011 af	**ADS_StormTech RC-310 +Cap** x 32 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 2 Rows
#3	665.00'	0.001 af	**8.0" Round Pipe Storage** L= 87.0' S= 0.5200 '/'
#4	664.90'	0.001 af	**12.0" Round Pipe Storage** L= 45.0' S= 0.7300 '/'
#5	665.40'	0.000 af	**12.0" Round Pipe Storage** L= 23.0' S= 0.5200 '/'
#6	665.58'	0.001 af	**10.0" Round Pipe Storage** L= 69.0' S= 0.5200 '/'
		0.090 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	665.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.75 0.75 2.10 2.10 3.00 Width (feet) 0.00 0.17 0.17 4.00 4.00
#2	Secondary	664.00'	**Tube/Siphon/Float Valve** 4.000" Diameter, C= 0.600 136.0' Long Tube, Hazen-Williams C= 130 Inlet / Outlet Elev. = 664.00' / 664.00'

Primary OutFlow Max=0.55 cfs @ 12.62 hrs HW=666.49' (Free Discharge)
↑—**1=Custom Weir/Orifice** (Weir Controls 0.55 cfs @ 3.26 fps)

Secondary OutFlow Max=0.31 cfs @ 12.62 hrs HW=666.49' (Free Discharge)
↑—**2=Tube/Siphon/Float Valve** (Tube Controls 0.31 cfs @ 3.60 fps)

Pond 4P: stormtech SC310 16"x34" chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-310 +Cap (ADS StormTech®RC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 48.0" Spacing = 82.0" C-C Row Spacing

16 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 115.12' Row Length +32.0" End Stone x 2 = 120.45' Base Length
2 Rows x 34.0" Wide + 48.0" Spacing x 1 + 158.0" Side Stone x 2 = 36.00' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

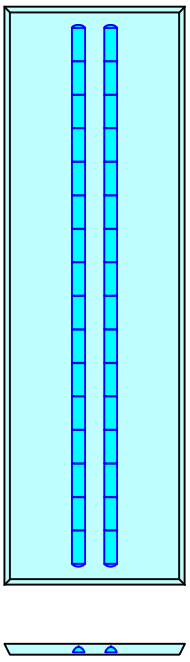
0.5 '/' Side-Z x Height = 14.0" Flare/Side
Base Length + Flare x 2 = 122.79' Top Length
Base Width + Flare x 2 = 38.33' Top Width

32 Chambers x 14.7 cf = 471.7 cf Chamber Storage

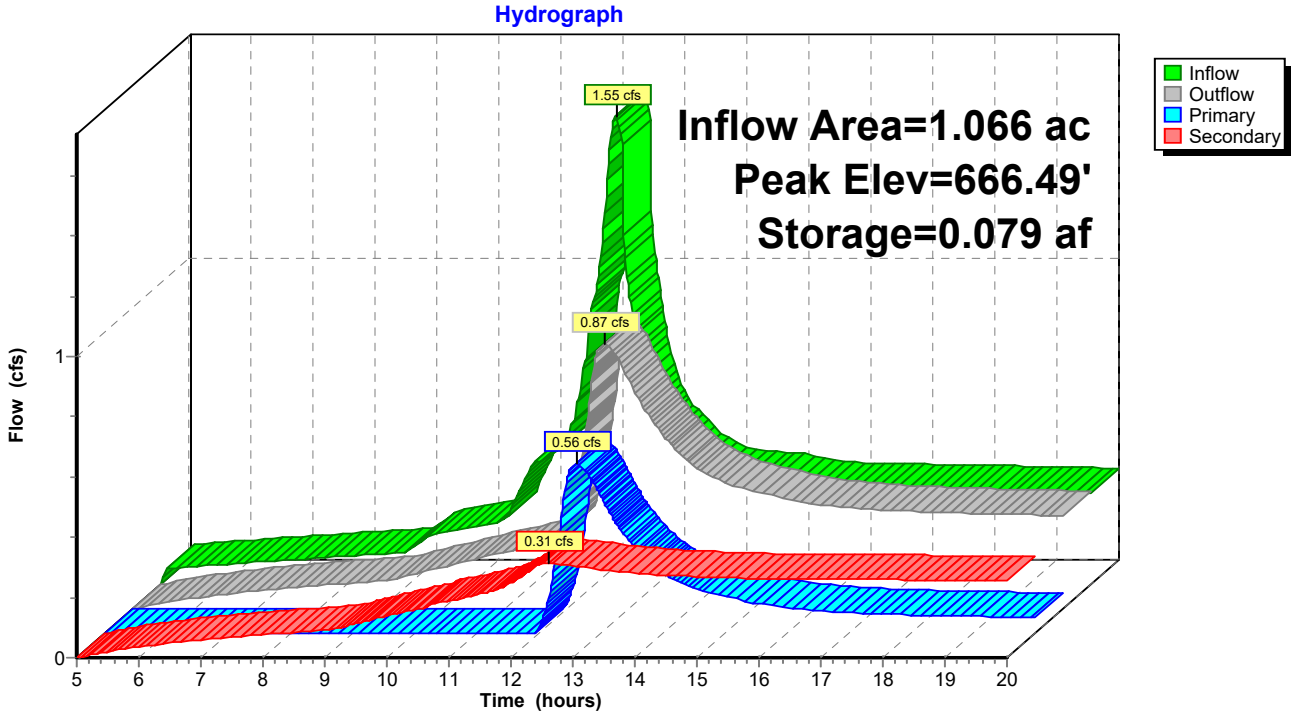
10,548.2 cf Field - 471.7 cf Chambers = 10,076.5 cf Stone x 33.0% Voids = 3,325.2 cf Stone Storage

Chamber Storage + Stone Storage = 3,797.0 cf = 0.087 af
Overall Storage Efficiency = 36.0%
Overall System Size = 120.45' x 36.00' x 2.33'

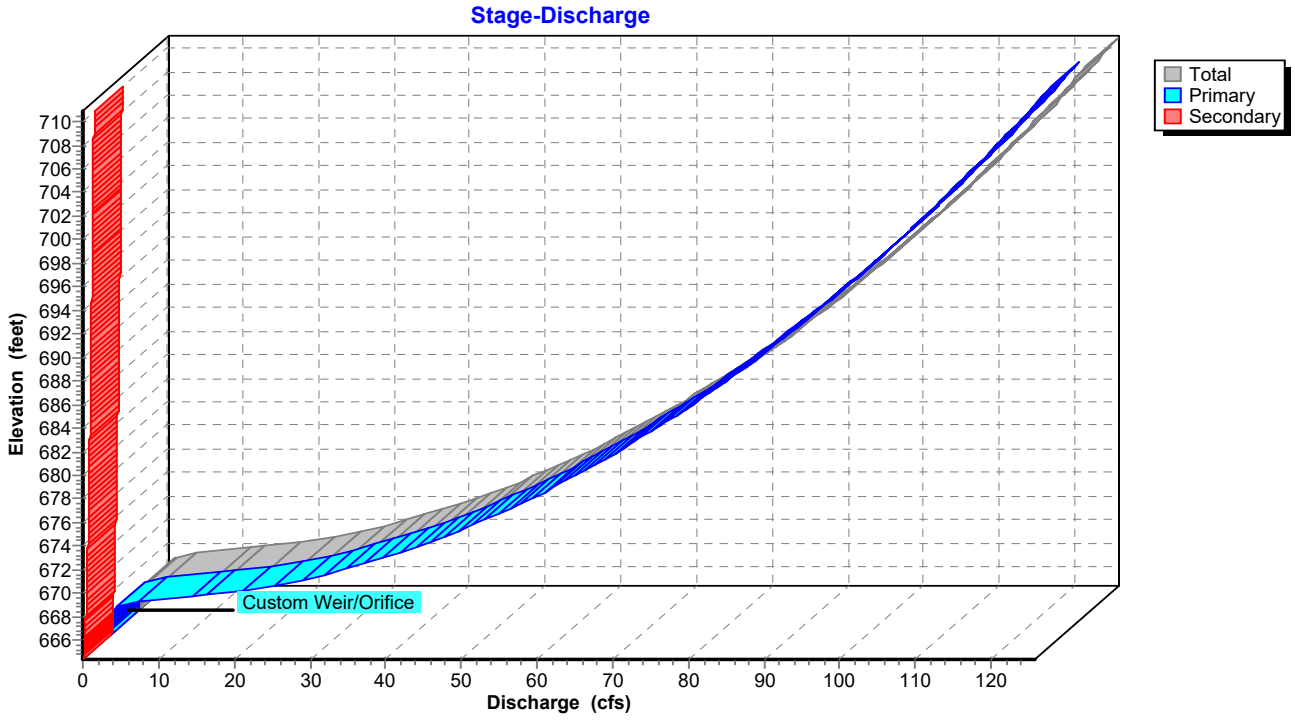
32 Chambers
390.7 cy Field
373.2 cy Stone



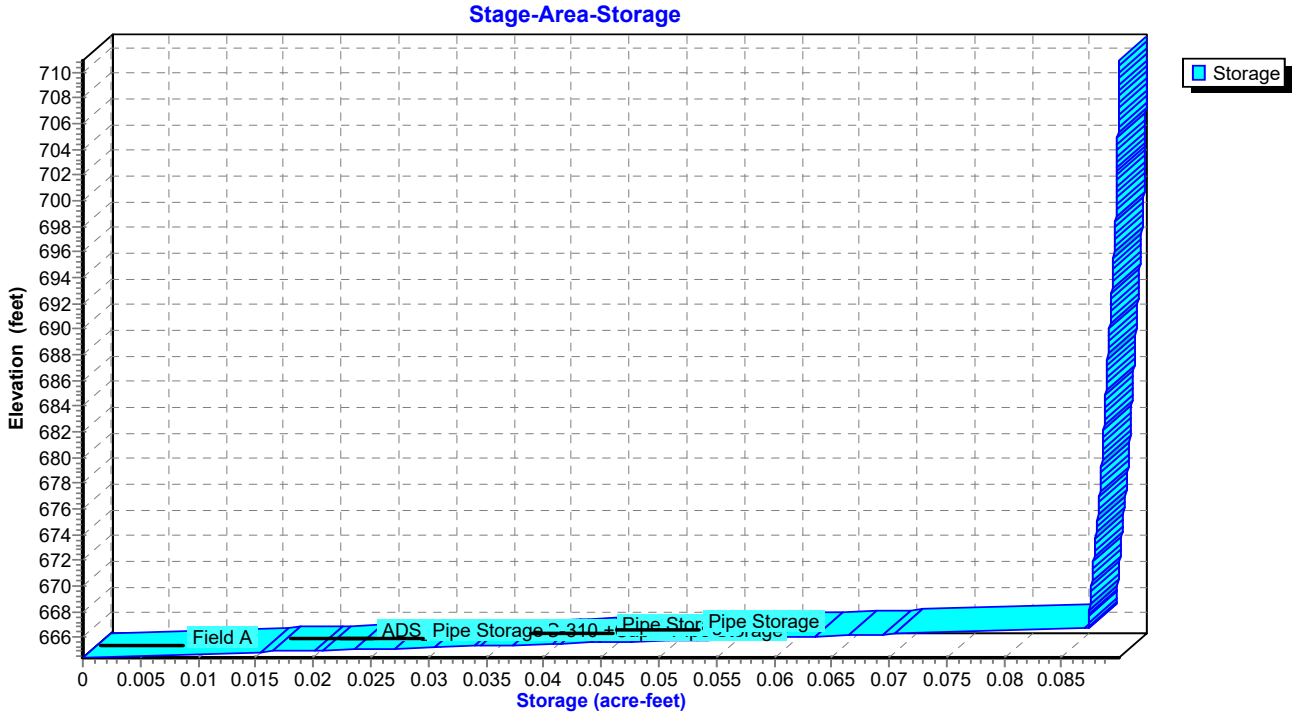
Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Hydrograph for Pond 4P: stormtech SC310 16"x34" chambers

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0.000	664.40	0.00	0.00	0.00
5.40	0.06	0.001	664.44	0.02	0.00	0.02
5.80	0.06	0.003	664.48	0.03	0.00	0.03
6.20	0.07	0.004	664.51	0.04	0.00	0.04
6.60	0.07	0.004	664.53	0.05	0.00	0.05
7.00	0.08	0.005	664.55	0.06	0.00	0.06
7.40	0.08	0.006	664.57	0.07	0.00	0.07
7.80	0.09	0.006	664.59	0.07	0.00	0.07
8.20	0.10	0.007	664.61	0.08	0.00	0.08
8.60	0.10	0.007	664.62	0.09	0.00	0.09
9.00	0.11	0.008	664.64	0.09	0.00	0.09
9.40	0.17	0.009	664.68	0.11	0.00	0.11
9.80	0.18	0.011	664.74	0.13	0.00	0.13
10.20	0.20	0.013	664.79	0.15	0.00	0.15
10.60	0.23	0.014	664.83	0.17	0.00	0.17
11.00	0.39	0.019	664.95	0.19	0.00	0.19
11.40	0.44	0.026	665.13	0.21	0.00	0.21
11.80	0.66	0.036	665.37	0.23	0.00	0.23
12.20	**1.34**	0.059	665.93	0.43	0.16	0.27
12.60	**0.90**	**0.079**	**666.49**	**0.87**	**0.56**	**0.31**
13.00	0.56	**0.074**	**666.36**	**0.76**	**0.45**	**0.31**
13.40	0.46	0.068	666.19	0.62	0.32	0.29
13.80	0.39	0.063	666.06	0.52	0.23	0.28
14.20	0.36	0.060	665.96	0.45	0.18	0.28
14.60	0.36	0.057	665.90	0.41	0.14	0.27
15.00	0.35	0.056	665.86	0.39	0.12	0.27
15.40	0.33	0.055	665.83	0.37	0.10	0.27
15.80	0.32	0.053	665.80	0.35	0.09	0.26
16.20	0.32	0.052	665.77	0.34	0.08	0.26
16.60	0.32	0.052	665.76	0.33	0.07	0.26
17.00	0.32	0.051	665.75	0.33	0.07	0.26
17.40	0.31	0.051	665.74	0.32	0.06	0.26
17.80	0.31	0.051	665.73	0.32	0.06	0.26
18.20	0.31	0.051	665.72	0.32	0.06	0.26
18.60	0.31	0.050	665.72	0.32	0.06	0.26
19.00	0.31	0.050	665.71	0.31	0.06	0.26
19.40	0.31	0.050	665.71	0.31	0.05	0.26
19.80	0.30	0.050	665.71	0.31	0.05	0.26

Stage-Discharge for Pond 4P: stormtech SC310 16"x34" chambers

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
664.40	0.00	0.00	0.00
664.90	0.18	0.00	0.18
665.40	0.23	0.00	0.23
665.90	0.41	0.14	0.27
666.40	0.78	0.48	0.31
666.90	1.40	1.06	0.34
667.40	6.94	6.57	0.37
667.90	15.20	14.80	0.40
668.40	20.51	20.09	0.42
668.90	24.60	24.15	0.45
669.40	28.07	27.60	0.47
669.90	31.15	30.65	0.50
670.40	33.94	33.43	0.52
670.90	36.52	35.98	0.54
671.40	38.93	38.37	0.56
671.90	41.19	40.61	0.58
672.40	43.34	42.74	0.60
672.90	45.38	44.76	0.62
673.40	47.33	46.70	0.64
673.90	49.21	48.56	0.65
674.40	51.02	50.35	0.67
674.90	52.76	52.08	0.69
675.40	54.45	53.75	0.70
675.90	56.09	55.37	0.72
676.40	57.68	56.95	0.74
676.90	59.23	58.48	0.75
677.40	60.74	59.98	0.77
677.90	62.22	61.43	0.78
678.40	63.65	62.86	0.80
678.90	65.06	64.25	0.81
679.40	66.44	65.61	0.82
679.90	67.79	66.95	0.84
680.40	69.11	68.26	0.85
680.90	70.41	69.54	0.87
681.40	71.68	70.80	0.88
681.90	72.94	72.04	0.89
682.40	74.17	73.26	0.91
682.90	75.38	74.46	0.92
683.40	76.57	75.64	0.93
683.90	77.74	76.80	0.94
684.40	78.90	77.94	0.96
684.90	80.04	79.07	0.97
685.40	81.16	80.18	0.98
685.90	82.27	81.28	0.99
686.40	83.36	82.36	1.01
686.90	84.44	83.43	1.02
687.40	85.51	84.48	1.03
687.90	86.56	85.52	1.04
688.40	87.60	86.55	1.05
688.90	88.63	87.57	1.06
689.40	89.65	88.57	1.08
689.90	90.65	89.56	1.09
690.40	91.64	90.55	1.10
690.90	92.63	91.52	1.11
691.40	93.60	92.48	1.12
691.90	94.56	93.43	1.13
692.40	95.51	94.37	1.14
692.90	96.46	95.31	1.15
693.40	97.39	96.23	1.16
693.90	98.32	97.15	1.17
694.40	99.23	98.05	1.18
694.90	100.14	98.95	1.19
695.40	101.04	99.84	1.20
695.90	101.94	100.72	1.21
696.40	102.82	101.60	1.22
696.90	103.70	102.47	1.23
697.40	104.57	103.32	1.24
697.90	105.43	104.18	1.25
698.40	106.29	105.02	1.26
698.90	107.13	105.86	1.27
699.40	107.98	106.70	1.28
699.90	108.81	107.52	1.29
700.40	109.64	108.34	1.30
700.90	110.46	109.15	1.31
701.40	111.28	109.96	1.32
701.90	112.09	110.76	1.33
702.40	112.90	111.56	1.34
702.90	113.70	112.35	1.35
703.40	114.49	113.14	1.36
703.90	115.28	113.91	1.37
704.40	116.06	114.69	1.37
704.90	116.84	115.46	1.38
705.40	117.61	116.22	1.39
705.90	118.38	116.98	1.40
706.40	119.14	117.73	1.41
706.90	119.90	118.48	1.42
707.40	120.65	119.23	1.43
707.90	121.40	119.97	1.44
708.40	122.15	120.70	1.44
708.90	122.89	121.43	1.45
709.40	123.62	122.16	1.46
709.90	124.35	122.88	1.47
710.40	125.08	123.60	1.48
710.90	**125.80**	**124.31**	**1.49**

Stage-Area-Storage for Pond 4P: stormtech SC310 16"x34" chambers

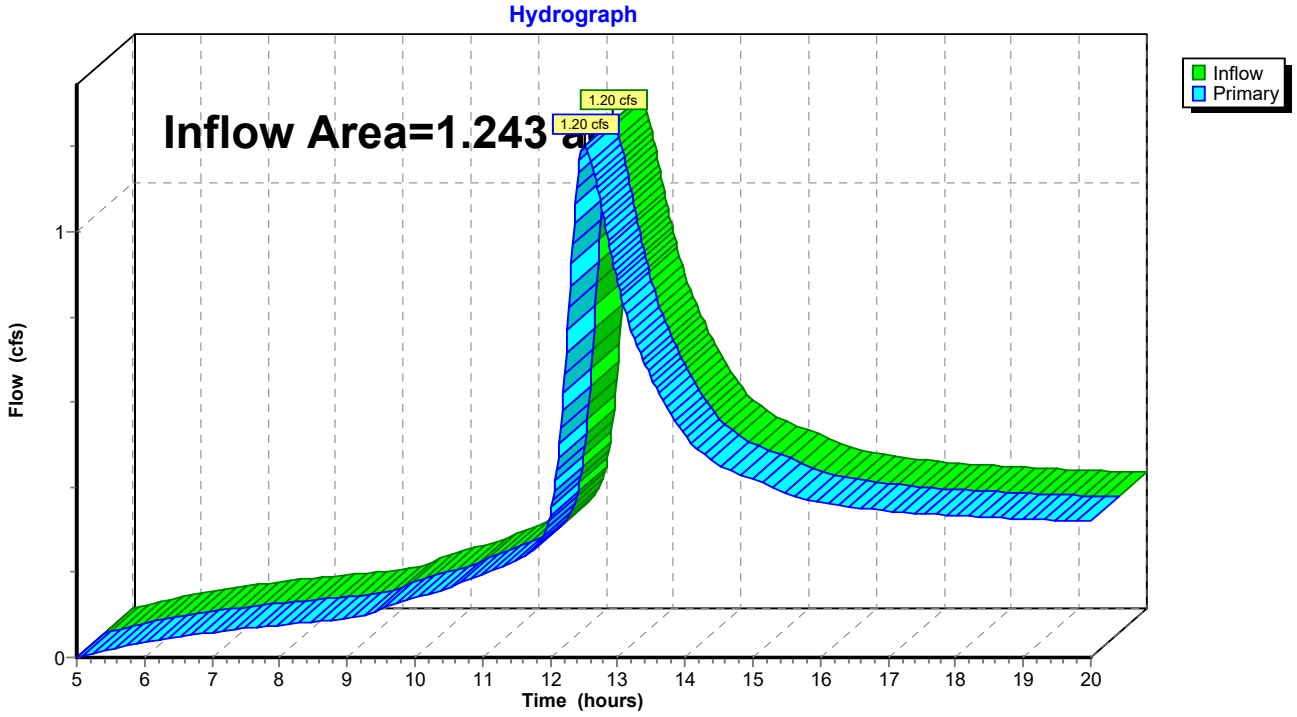
Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
664.40	0.000	689.90	0.089
664.90	0.017	690.40	0.089
665.40	0.037	690.90	0.089
665.90	0.057	691.40	0.089
666.40	0.075	691.90	0.089
666.90	0.087	692.40	0.089
667.40	0.087	692.90	0.089
667.90	0.087	693.40	0.089
668.40	0.087	693.90	0.089
668.90	0.087	694.40	0.089
669.40	0.088	694.90	0.089
669.90	0.088	695.40	0.089
670.40	0.088	695.90	0.090
670.90	0.088	696.40	0.090
671.40	0.088	696.90	0.090
671.90	0.088	697.40	0.090
672.40	0.088	697.90	0.090
672.90	0.088	698.40	0.090
673.40	0.088	698.90	0.090
673.90	0.088	699.40	0.090
674.40	0.088	699.90	0.090
674.90	0.088	700.40	0.090
675.40	0.088	700.90	0.090
675.90	0.088	701.40	0.090
676.40	0.088	701.90	0.090
676.90	0.088	702.40	0.090
677.40	0.088	702.90	0.090
677.90	0.088	703.40	0.090
678.40	0.088	703.90	0.090
678.90	0.088	704.40	0.090
679.40	0.088	704.90	0.090
679.90	0.088	705.40	0.090
680.40	0.089	705.90	0.090
680.90	0.089	706.40	0.090
681.40	0.089	706.90	0.090
681.90	0.089	707.40	0.090
682.40	0.089	707.90	0.090
682.90	0.089	708.40	0.090
683.40	0.089	708.90	0.090
683.90	0.089	709.40	0.090
684.40	0.089	709.90	0.090
684.90	0.089	710.40	0.090
685.40	0.089	710.90	**0.090**
685.90	0.089		
686.40	0.089		
686.90	0.089		
687.40	0.089		
687.90	0.089		
688.40	0.089		
688.90	0.089		
689.40	0.089		

Summary for Link 5L: HOM property run-off

Inflow Area = 1.243 ac, 84.96% Impervious, Inflow Depth > 3.59" for 25-yr event
Inflow = 1.20 cfs @ 12.51 hrs, Volume= 0.372 af
Primary = 1.20 cfs @ 12.51 hrs, Volume= 0.372 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Link 5L: HOM property run-off



Hydrograph for Link 5L: HOM property run-off

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.20	0.01	0.00	0.01
5.40	0.02	0.00	0.02
5.60	0.02	0.00	0.02
5.80	0.03	0.00	0.03
6.00	0.04	0.00	0.04
6.20	0.04	0.00	0.04
6.40	0.05	0.00	0.05
6.60	0.05	0.00	0.05
6.80	0.06	0.00	0.06
7.00	0.06	0.00	0.06
7.20	0.06	0.00	0.06
7.40	0.07	0.00	0.07
7.60	0.07	0.00	0.07
7.80	0.07	0.00	0.07
8.00	0.08	0.00	0.08
8.20	0.08	0.00	0.08
8.40	0.08	0.00	0.08
8.60	0.09	0.00	0.09
8.80	0.09	0.00	0.09
9.00	0.09	0.00	0.09
9.20	0.10	0.00	0.10
9.40	0.11	0.00	0.11
9.60	0.12	0.00	0.12
9.80	0.13	0.00	0.13
10.00	0.14	0.00	0.14
10.20	0.15	0.00	0.15
10.40	0.16	0.00	0.16
10.60	0.17	0.00	0.17
10.80	0.18	0.00	0.18
11.00	0.19	0.00	0.19
11.20	0.21	0.00	0.21
11.40	0.22	0.00	0.22
11.60	0.24	0.00	0.24
11.80	0.26	0.00	0.26
12.00	0.34	0.00	0.34
12.20	0.62	0.00	0.62
12.40	**1.10**	0.00	**1.10**
12.60	**1.17**	0.00	**1.17**
12.80	1.03	0.00	1.03
13.00	0.88	0.00	0.88
13.20	0.77	0.00	0.77
13.40	0.69	0.00	0.69
13.60	0.62	0.00	0.62
13.80	0.57	0.00	0.57
14.00	0.52	0.00	0.52
14.20	0.49	0.00	0.49
14.40	0.46	0.00	0.46
14.60	0.44	0.00	0.44
14.80	0.43	0.00	0.43
15.00	0.42	0.00	0.42
15.20	0.41	0.00	0.41
15.40	0.39	0.00	0.39
15.60	0.38	0.00	0.38
15.80	0.37	0.00	0.37
16.00	0.36	0.00	0.36
16.20	0.36	0.00	0.36
16.40	0.35	0.00	0.35
16.60	0.35	0.00	0.35
16.80	0.35	0.00	0.35
17.00	0.34	0.00	0.34
17.20	0.34	0.00	0.34
17.40	0.34	0.00	0.34
17.60	0.34	0.00	0.34
17.80	0.33	0.00	0.33
18.00	0.33	0.00	0.33
18.20	0.33	0.00	0.33
18.40	0.33	0.00	0.33
18.60	0.33	0.00	0.33
18.80	0.33	0.00	0.33
19.00	0.33	0.00	0.33
19.20	0.32	0.00	0.32
19.40	0.32	0.00	0.32
19.60	0.32	0.00	0.32
19.80	0.32	0.00	0.32
20.00	0.32	0.00	0.32

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SE roof to MH8 Runoff Area=0.339 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=130' Tc=10.0 min CN=98 Runoff=2.87 cfs 0.194 af

Subcatchment3S: untreated to streets Runoff Area=0.177 ac 49.15% Impervious Runoff Depth>3.94"
Flow Length=110' Tc=30.0 min CN=71 Runoff=0.60 cfs 0.058 af

Subcatchment6S: S roof to MH8 Runoff Area=0.305 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=170' Tc=12.0 min CN=98 Runoff=2.42 cfs 0.175 af

Subcatchment7S: to Inlets 8 & 9 Runoff Area=0.048 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=150' Tc=28.0 min CN=98 Runoff=0.26 cfs 0.028 af

Subcatchment8S: to Inlet 7 Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=90' Tc=21.0 min CN=98 Runoff=0.32 cfs 0.029 af

Subcatchment9S: to Inlet 6 Runoff Area=0.041 ac 78.05% Impervious Runoff Depth>5.51"
Flow Length=110' Tc=26.0 min CN=85 Runoff=0.20 cfs 0.019 af

Subcatchment10S: to Inlet 5 Runoff Area=0.030 ac 83.33% Impervious Runoff Depth>5.86"
Flow Length=60' Tc=18.0 min CN=88 Runoff=0.18 cfs 0.015 af

Subcatchment11S: to Inlet 4 Runoff Area=0.038 ac 73.68% Impervious Runoff Depth>5.17"
Flow Length=120' Tc=26.0 min CN=82 Runoff=0.18 cfs 0.016 af

Subcatchment12S: to inlet 3 Runoff Area=0.124 ac 100.00% Impervious Runoff Depth>6.88"
Tc=0.0 min CN=98 Runoff=1.36 cfs 0.071 af

Subcatchment13S: to NDS 2 Runoff Area=0.021 ac 0.00% Impervious Runoff Depth>2.91"
Flow Length=20' Tc=15.0 min CN=61 Runoff=0.07 cfs 0.005 af

Subcatchment14S: to NDS 3-5 Runoff Area=0.031 ac 3.23% Impervious Runoff Depth>2.46"
Flow Length=105' Tc=55.0 min CN=57 Runoff=0.04 cfs 0.006 af

Subcatchment16S: to NDS11-6 Runoff Area=0.038 ac 42.11% Impervious Runoff Depth>3.20"
Flow Length=80' Tc=30.0 min CN=64 Runoff=0.10 cfs 0.010 af

Reach 6R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.22 fps Inflow=2.42 cfs 0.175 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=27.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.175 af

Reach 7R: MH8 12" Avg. Flow Depth=0.25' Max Vel=2.01 fps Inflow=0.56 cfs 0.369 af
12.0" Round Pipe w/ 9.0" inside fill n=0.010 L=19.0' S=0.0042 '/' Capacity=0.28 cfs Outflow=0.29 cfs 0.264 af

Reach 8R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.23 fps Inflow=2.87 cfs 0.194 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=42.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.194 af

Reach 9R: inlet 3 18" Avg. Flow Depth=0.33' Max Vel=3.34 fps Inflow=1.63 cfs 0.335 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=35.0' S=0.0080 '/' Capacity=0.88 cfs Outflow=0.88 cfs 0.335 af

Reach 10R: MH7 18" Avg. Flow Depth=0.33' Max Vel=2.65 fps Inflow=0.88 cfs 0.335 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=4.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.76 cfs 0.335 af

Reach 11R: inlet 7 18" Avg. Flow Depth=0.20' Max Vel=2.58 fps Inflow=0.56 cfs 0.057 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=62.0' S=0.0052 '/' Capacity=0.71 cfs Outflow=0.56 cfs 0.057 af

Reach 12R: MH6 18" Avg. Flow Depth=0.20' Max Vel=2.55 fps Inflow=0.56 cfs 0.057 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=8.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.56 cfs 0.057 af

Reach 13R: to isolator 6" Avg. Flow Depth=0.06' Max Vel=8.01 fps Inflow=0.20 cfs 0.019 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.20 cfs 0.019 af

Reach 14R: to isolator 6" Avg. Flow Depth=0.05' Max Vel=7.79 fps Inflow=0.18 cfs 0.015 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.18 cfs 0.015 af

Reach 15R: to isolator 6" Avg. Flow Depth=0.05' Max Vel=7.67 fps Inflow=0.18 cfs 0.016 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.18 cfs 0.016 af

Reach 17R: NDS2 6" Avg. Flow Depth=0.17' Max Vel=1.67 fps Inflow=0.10 cfs 0.010 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0051 '/' Capacity=0.09 cfs Outflow=0.09 cfs 0.010 af

Reach 18R: inlet 3 6" Avg. Flow Depth=0.17' Max Vel=1.63 fps Inflow=0.16 cfs 0.022 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=62.0' S=0.0048 '/' Capacity=0.08 cfs Outflow=0.08 cfs 0.022 af

Reach 22R: NDS2 6" Avg. Flow Depth=0.07' Max Vel=1.44 fps Inflow=0.04 cfs 0.006 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0053 '/' Capacity=0.09 cfs Outflow=0.04 cfs 0.006 af

Pond 4P: stormtech SC310 16"x34" Peak Elev=666.94' Storage=0.087 af Inflow=1.87 cfs 0.463 af
Primary=1.65 cfs 0.153 af Secondary=0.34 cfs 0.259 af Outflow=2.00 cfs 0.413 af

Link 5L: HOM property run-off Inflow=2.59 cfs 0.471 af
Primary=2.59 cfs 0.471 af

Total Runoff Area = 1.243 ac Runoff Volume = 0.627 af Average Runoff Depth = 6.05"
15.04% Pervious = 0.187 ac 84.96% Impervious = 1.056 ac

Summary for Subcatchment 1S: SE roof to MH8

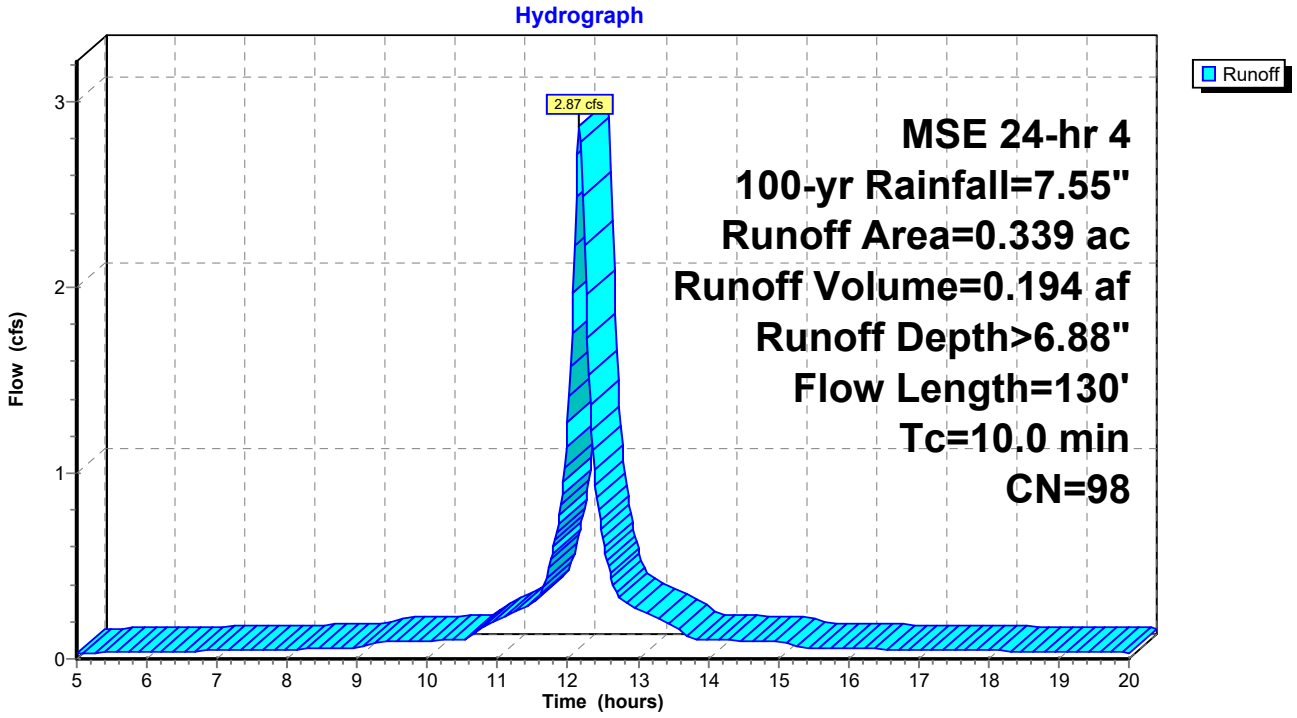
Runoff = 2.87 cfs @ 12.17 hrs, Volume= 0.194 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.339	98	fronting Main St
	0.339		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	130		0.22		**Direct Entry, S Bldg roof**

Subcatchment 1S: SE roof to MH8



Hydrograph for Subcatchment 1S: SE roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.03
5.20	0.37	0.20	0.03
5.40	0.39	0.22	0.03
5.60	0.42	0.24	0.03
5.80	0.44	0.26	0.04
6.00	0.46	0.29	0.04
6.20	0.49	0.31	0.04
6.40	0.52	0.33	0.04
6.60	0.54	0.36	0.04
6.80	0.57	0.38	0.04
7.00	0.60	0.41	0.04
7.20	0.63	0.43	0.05
7.40	0.66	0.46	0.05
7.60	0.69	0.49	0.05
7.80	0.72	0.52	0.05
8.00	0.75	0.55	0.05
8.20	0.78	0.58	0.05
8.40	0.81	0.61	0.05
8.60	0.85	0.64	0.05
8.80	0.88	0.67	0.06
9.00	0.91	0.71	0.06
9.20	0.97	0.76	0.08
9.40	1.02	0.81	0.09
9.60	1.08	0.87	0.09
9.80	1.14	0.92	0.10
10.00	1.20	0.98	0.10
10.20	1.26	1.04	0.10
10.40	1.32	1.10	0.10
10.60	1.40	1.18	0.12
10.80	1.50	1.28	0.17
11.00	1.63	1.41	0.21
11.20	1.78	1.56	0.24
11.40	1.96	1.73	0.28
11.60	2.18	1.95	0.34
11.80	2.59	2.36	0.60
12.00	3.54	3.30	**1.27**
12.20	4.96	4.72	**2.72**
12.40	5.37	5.13	0.94
12.60	5.59	5.36	0.47
12.80	5.77	5.53	0.31
13.00	5.92	5.68	0.27
13.20	6.05	5.81	0.23
13.40	6.15	5.92	0.19
13.60	6.23	5.99	0.15
13.80	6.29	6.06	0.11
14.00	6.35	6.12	0.10
14.20	6.41	6.17	0.10
14.40	6.47	6.23	0.10
14.60	6.53	6.29	0.10
14.80	6.58	6.34	0.09
15.00	6.64	6.40	0.09
15.20	6.67	6.43	0.07
15.40	6.70	6.47	0.06
15.60	6.74	6.50	0.06
15.80	6.77	6.53	0.06
16.00	6.80	6.56	0.05
16.20	6.83	6.59	0.05
16.40	6.86	6.63	0.05
16.60	6.89	6.66	0.05
16.80	6.92	6.68	0.05
17.00	6.95	6.71	0.05
17.20	6.98	6.74	0.05
17.40	7.01	6.77	0.05
17.60	7.03	6.80	0.05
17.80	7.06	6.82	0.04
18.00	7.09	6.85	0.04
18.20	7.11	6.87	0.04
18.40	7.13	6.90	0.04
18.60	7.16	6.92	0.04
18.80	7.18	6.94	0.04
19.00	7.20	6.96	0.04
19.20	7.23	6.99	0.04
19.40	7.25	7.01	0.04
19.60	7.27	7.03	0.03
19.80	7.29	7.05	0.03
20.00	**7.31**	**7.07**	0.03

Summary for Subcatchment 3S: untreated to streets

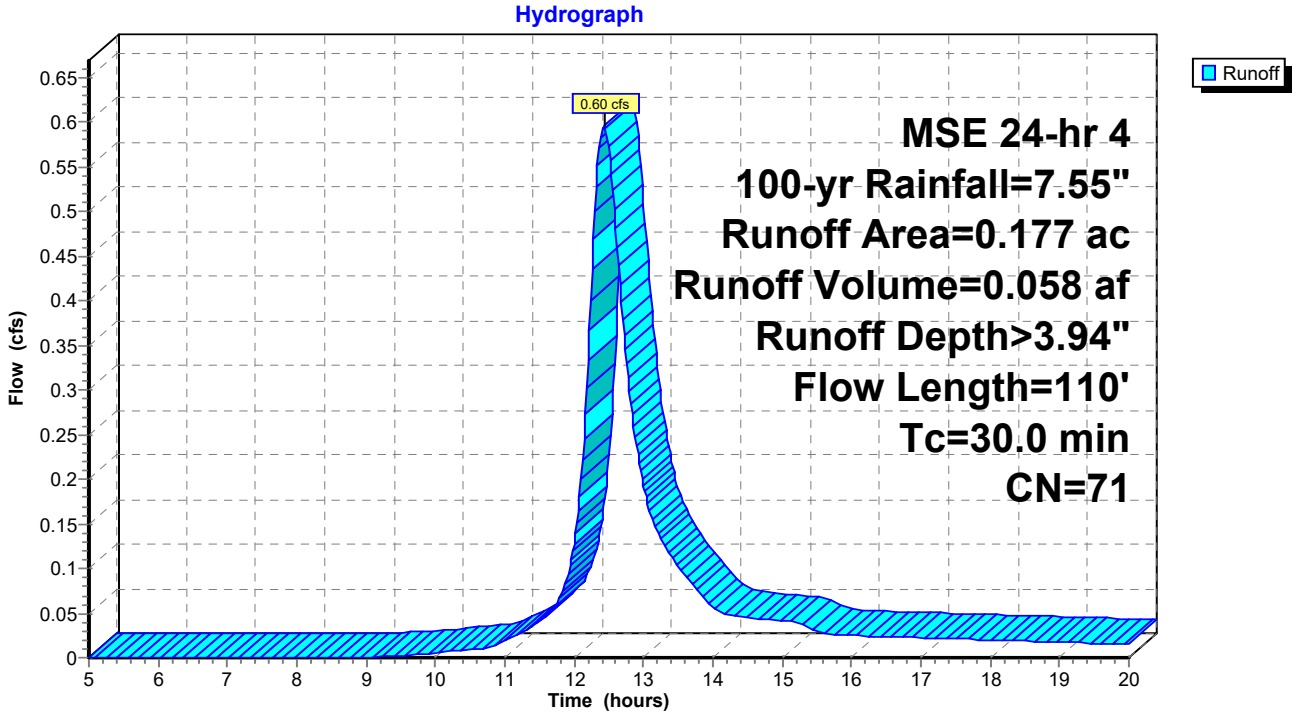
Runoff = 0.60 cfs @ 12.43 hrs, Volume= 0.058 af, Depth> 3.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.069	98	canopy
*	0.063	39	LS
*	0.027	61	lawn, HSG B
*	0.018	98	SW
	0.177	71	Weighted Average
	0.090		50.85% Pervious Area
	0.087		49.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	70		0.19		**Direct Entry, canopy**
12.0	20		0.03		**Direct Entry, LS**
12.0	20		0.03		**Direct Entry, lawn**
30.0	110	Total			

Subcatchment 3S: untreated to streets



Hydrograph for Subcatchment 3S: untreated to streets

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.00	0.00
6.20	0.49	0.00	0.00
6.40	0.52	0.00	0.00
6.60	0.54	0.00	0.00
6.80	0.57	0.00	0.00
7.00	0.60	0.00	0.00
7.20	0.63	0.00	0.00
7.40	0.66	0.00	0.00
7.60	0.69	0.00	0.00
7.80	0.72	0.00	0.00
8.00	0.75	0.00	0.00
8.20	0.78	0.00	0.00
8.40	0.81	0.00	0.00
8.60	0.85	0.00	0.00
8.80	0.88	0.00	0.00
9.00	0.91	0.00	0.00
9.20	0.97	0.01	0.00
9.40	1.02	0.01	0.00
9.60	1.08	0.02	0.00
9.80	1.14	0.02	0.00
10.00	1.20	0.03	0.01
10.20	1.26	0.04	0.01
10.40	1.32	0.05	0.01
10.60	1.40	0.07	0.01
10.80	1.50	0.10	0.01
11.00	1.63	0.14	0.02
11.20	1.78	0.19	0.03
11.40	1.96	0.25	0.04
11.60	2.18	0.34	0.05
11.80	2.59	0.54	0.07
12.00	3.54	1.09	0.13
12.20	4.96	2.08	0.33
12.40	5.37	2.40	**0.59**
12.60	5.59	2.58	**0.48**
12.80	5.77	2.71	0.30
13.00	5.92	2.83	0.19
13.20	6.05	2.94	0.14
13.40	6.15	3.02	0.11
13.60	6.23	3.09	0.09
13.80	6.29	3.14	0.07
14.00	6.35	3.19	0.06
14.20	6.41	3.24	0.05
14.40	6.47	3.28	0.05
14.60	6.53	3.33	0.04
14.80	6.58	3.37	0.04
15.00	6.64	3.42	0.04
15.20	6.67	3.45	0.04
15.40	6.70	3.48	0.03
15.60	6.74	3.50	0.03
15.80	6.77	3.53	0.03
16.00	6.80	3.56	0.02
16.20	6.83	3.58	0.02
16.40	6.86	3.61	0.02
16.60	6.89	3.63	0.02
16.80	6.92	3.66	0.02
17.00	6.95	3.68	0.02
17.20	6.98	3.71	0.02
17.40	7.01	3.73	0.02
17.60	7.03	3.75	0.02
17.80	7.06	3.77	0.02
18.00	7.09	3.80	0.02
18.20	7.11	3.82	0.02
18.40	7.13	3.84	0.02
18.60	7.16	3.86	0.02
18.80	7.18	3.88	0.02
19.00	7.20	3.90	0.02
19.20	7.23	3.91	0.02
19.40	7.25	3.93	0.02
19.60	7.27	3.95	0.02
19.80	7.29	3.97	0.02
20.00	**7.31**	**3.98**	0.02

Summary for Subcatchment 6S: S roof to MH8

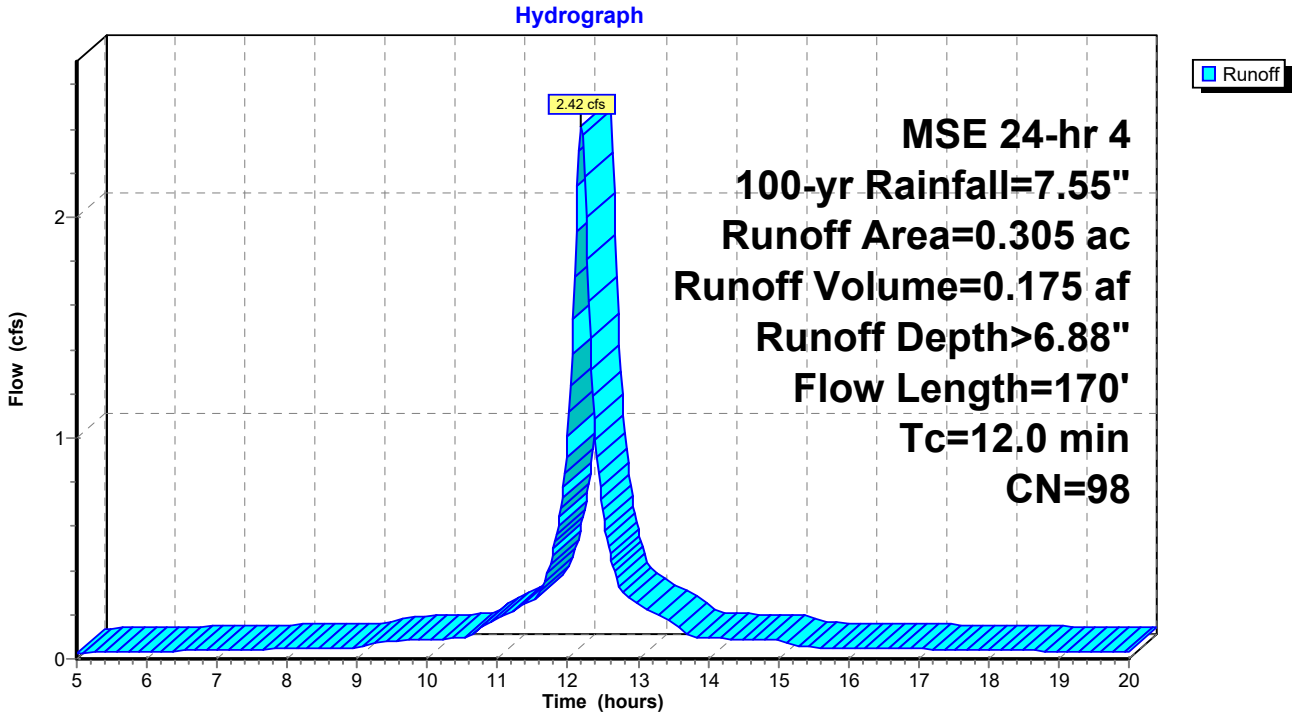
Runoff = 2.42 cfs @ 12.19 hrs, Volume= 0.175 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.305	98	fronting 10th
	0.305		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	170		0.24		**Direct Entry, NE Bldg Roof**

Subcatchment 6S: S roof to MH8



Hydrograph for Subcatchment 6S: S roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.03
5.20	0.37	0.20	0.03
5.40	0.39	0.22	0.03
5.60	0.42	0.24	0.03
5.80	0.44	0.26	0.03
6.00	0.46	0.29	0.03
6.20	0.49	0.31	0.03
6.40	0.52	0.33	0.04
6.60	0.54	0.36	0.04
6.80	0.57	0.38	0.04
7.00	0.60	0.41	0.04
7.20	0.63	0.43	0.04
7.40	0.66	0.46	0.04
7.60	0.69	0.49	0.04
7.80	0.72	0.52	0.04
8.00	0.75	0.55	0.05
8.20	0.78	0.58	0.05
8.40	0.81	0.61	0.05
8.60	0.85	0.64	0.05
8.80	0.88	0.67	0.05
9.00	0.91	0.71	0.05
9.20	0.97	0.76	0.07
9.40	1.02	0.81	0.08
9.60	1.08	0.87	0.08
9.80	1.14	0.92	0.09
10.00	1.20	0.98	0.09
10.20	1.26	1.04	0.09
10.40	1.32	1.10	0.09
10.60	1.40	1.18	0.10
10.80	1.50	1.28	0.15
11.00	1.63	1.41	0.18
11.20	1.78	1.56	0.21
11.40	1.96	1.73	0.25
11.60	2.18	1.95	0.29
11.80	2.59	2.36	0.50
12.00	3.54	3.30	1.01
12.20	4.96	4.72	**2.41**
12.40	5.37	5.13	0.99
12.60	5.59	5.36	0.48
12.80	5.77	5.53	0.29
13.00	5.92	5.68	0.25
13.20	6.05	5.81	0.21
13.40	6.15	5.92	0.18
13.60	6.23	5.99	0.14
13.80	6.29	6.06	0.10
14.00	6.35	6.12	0.09
14.20	6.41	6.17	0.09
14.40	6.47	6.23	0.09
14.60	6.53	6.29	0.09
14.80	6.58	6.34	0.09
15.00	6.64	6.40	0.08
15.20	6.67	6.43	0.06
15.40	6.70	6.47	0.05
15.60	6.74	6.50	0.05
15.80	6.77	6.53	0.05
16.00	6.80	6.56	0.05
16.20	6.83	6.59	0.05
16.40	6.86	6.63	0.05
16.60	6.89	6.66	0.05
16.80	6.92	6.68	0.05
17.00	6.95	6.71	0.04
17.20	6.98	6.74	0.04
17.40	7.01	6.77	0.04
17.60	7.03	6.80	0.04
17.80	7.06	6.82	0.04
18.00	7.09	6.85	0.04
18.20	7.11	6.87	0.04
18.40	7.13	6.90	0.04
18.60	7.16	6.92	0.04
18.80	7.18	6.94	0.04
19.00	7.20	6.96	0.03
19.20	7.23	6.99	0.03
19.40	7.25	7.01	0.03
19.60	7.27	7.03	0.03
19.80	7.29	7.05	0.03
20.00	**7.31**	**7.07**	0.03

Summary for Subcatchment 7S: to Inlets 8 & 9

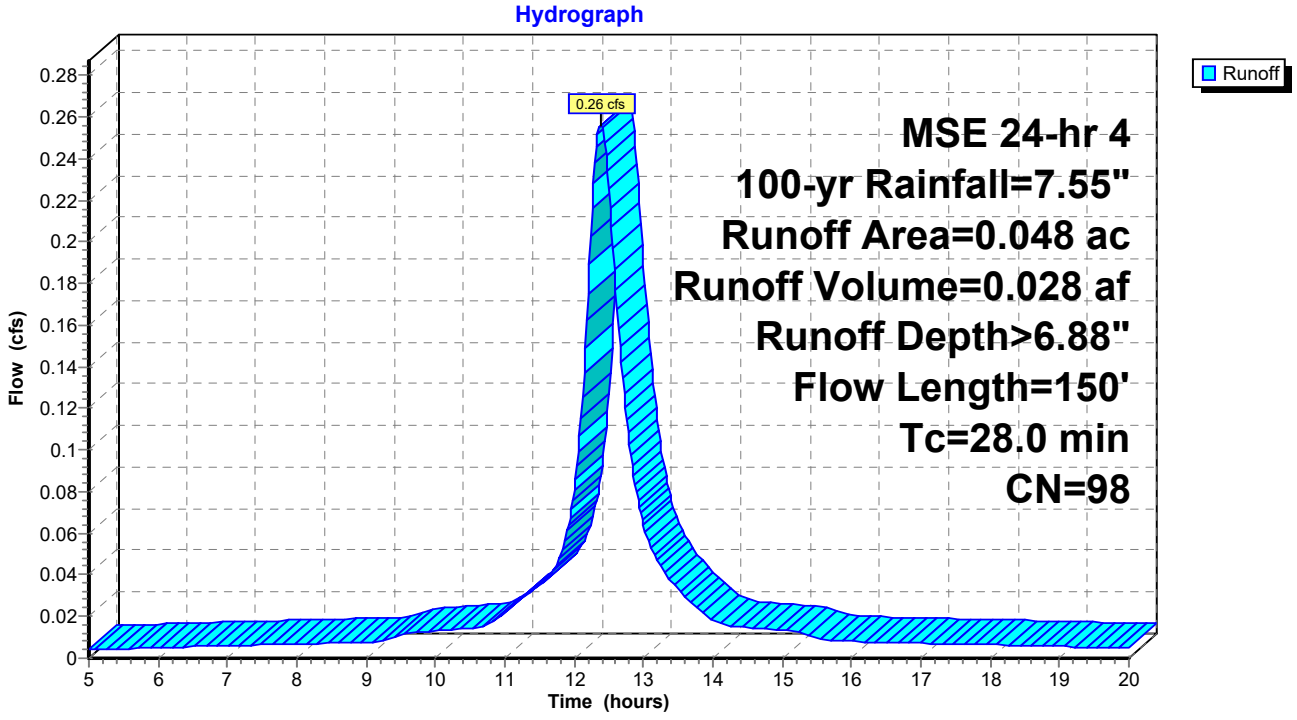
Runoff = 0.26 cfs @ 12.38 hrs, Volume= 0.028 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.046	98	pavement
*	0.002	98	SW
	0.048	98	Weighted Average
	0.048		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	55		0.13		**Direct Entry, pavement**
6.0	50		0.14		**Direct Entry, SW**
15.0	45		0.05		**Direct Entry, LS**
28.0	150	Total			

Subcatchment 7S: to Inlets 8 & 9



Hydrograph for Subcatchment 7S: to Inlets 8 & 9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.00
5.20	0.37	0.20	0.00
5.40	0.39	0.22	0.00
5.60	0.42	0.24	0.00
5.80	0.44	0.26	0.00
6.00	0.46	0.29	0.01
6.20	0.49	0.31	0.01
6.40	0.52	0.33	0.01
6.60	0.54	0.36	0.01
6.80	0.57	0.38	0.01
7.00	0.60	0.41	0.01
7.20	0.63	0.43	0.01
7.40	0.66	0.46	0.01
7.60	0.69	0.49	0.01
7.80	0.72	0.52	0.01
8.00	0.75	0.55	0.01
8.20	0.78	0.58	0.01
8.40	0.81	0.61	0.01
8.60	0.85	0.64	0.01
8.80	0.88	0.67	0.01
9.00	0.91	0.71	0.01
9.20	0.97	0.76	0.01
9.40	1.02	0.81	0.01
9.60	1.08	0.87	0.01
9.80	1.14	0.92	0.01
10.00	1.20	0.98	0.01
10.20	1.26	1.04	0.01
10.40	1.32	1.10	0.01
10.60	1.40	1.18	0.01
10.80	1.50	1.28	0.02
11.00	1.63	1.41	0.02
11.20	1.78	1.56	0.03
11.40	1.96	1.73	0.03
11.60	2.18	1.95	0.04
11.80	2.59	2.36	0.05
12.00	3.54	3.30	0.08
12.20	4.96	4.72	**0.18**
12.40	5.37	5.13	**0.26**
12.60	5.59	5.36	0.18
12.80	5.77	5.53	0.10
13.00	5.92	5.68	0.06
13.20	6.05	5.81	0.05
13.40	6.15	5.92	0.04
13.60	6.23	5.99	0.03
13.80	6.29	6.06	0.02
14.00	6.35	6.12	0.02
14.20	6.41	6.17	0.02
14.40	6.47	6.23	0.01
14.60	6.53	6.29	0.01
14.80	6.58	6.34	0.01
15.00	6.64	6.40	0.01
15.20	6.67	6.43	0.01
15.40	6.70	6.47	0.01
15.60	6.74	6.50	0.01
15.80	6.77	6.53	0.01
16.00	6.80	6.56	0.01
16.20	6.83	6.59	0.01
16.40	6.86	6.63	0.01
16.60	6.89	6.66	0.01
16.80	6.92	6.68	0.01
17.00	6.95	6.71	0.01
17.20	6.98	6.74	0.01
17.40	7.01	6.77	0.01
17.60	7.03	6.80	0.01
17.80	7.06	6.82	0.01
18.00	7.09	6.85	0.01
18.20	7.11	6.87	0.01
18.40	7.13	6.90	0.01
18.60	7.16	6.92	0.01
18.80	7.18	6.94	0.01
19.00	7.20	6.96	0.01
19.20	7.23	6.99	0.01
19.40	7.25	7.01	0.01
19.60	7.27	7.03	0.01
19.80	7.29	7.05	0.01
20.00	**7.31**	**7.07**	0.00

Summary for Subcatchment 8S: to Inlet 7

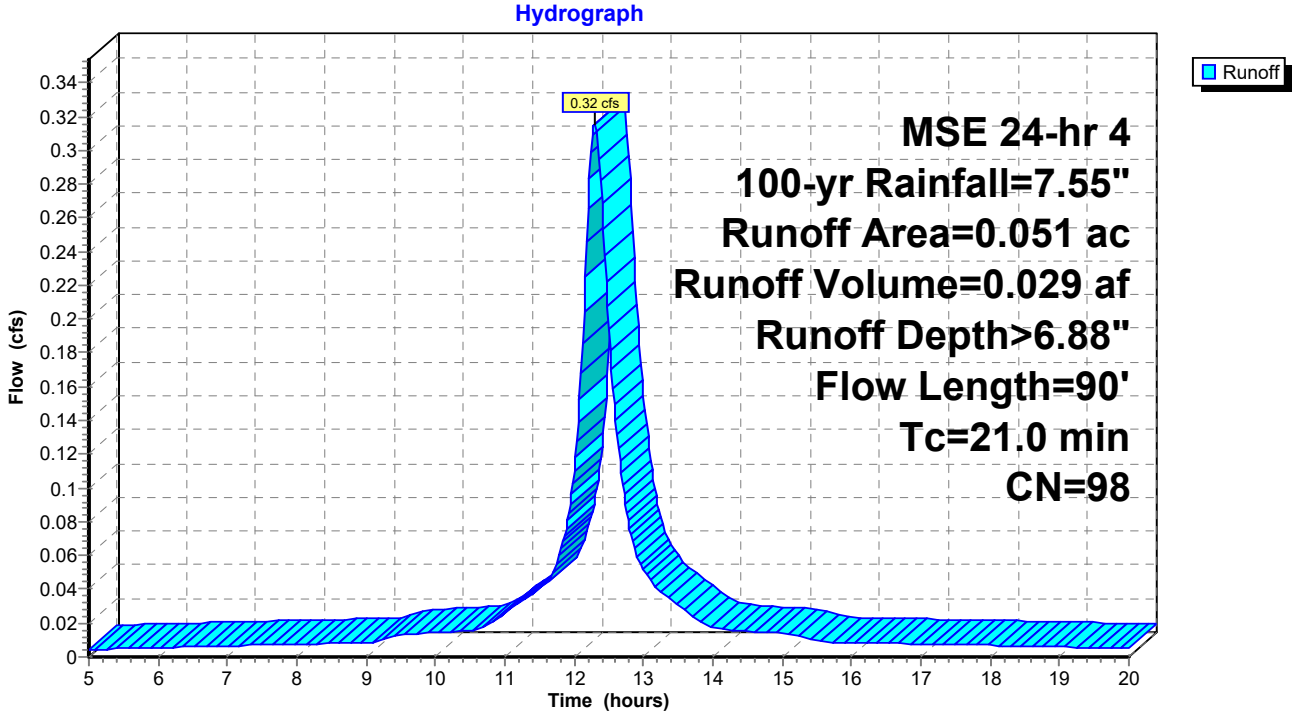
Runoff = 0.32 cfs @ 12.29 hrs, Volume= 0.029 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.051	98	pavement
	0.051		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50		0.14		**Direct Entry, pavement**
15.0	40		0.04		**Direct Entry, LS**
21.0	90	Total			

Subcatchment 8S: to Inlet 7



Hydrograph for Subcatchment 8S: to Inlet 7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.00
5.20	0.37	0.20	0.00
5.40	0.39	0.22	0.00
5.60	0.42	0.24	0.01
5.80	0.44	0.26	0.01
6.00	0.46	0.29	0.01
6.20	0.49	0.31	0.01
6.40	0.52	0.33	0.01
6.60	0.54	0.36	0.01
6.80	0.57	0.38	0.01
7.00	0.60	0.41	0.01
7.20	0.63	0.43	0.01
7.40	0.66	0.46	0.01
7.60	0.69	0.49	0.01
7.80	0.72	0.52	0.01
8.00	0.75	0.55	0.01
8.20	0.78	0.58	0.01
8.40	0.81	0.61	0.01
8.60	0.85	0.64	0.01
8.80	0.88	0.67	0.01
9.00	0.91	0.71	0.01
9.20	0.97	0.76	0.01
9.40	1.02	0.81	0.01
9.60	1.08	0.87	0.01
9.80	1.14	0.92	0.01
10.00	1.20	0.98	0.01
10.20	1.26	1.04	0.01
10.40	1.32	1.10	0.02
10.60	1.40	1.18	0.02
10.80	1.50	1.28	0.02
11.00	1.63	1.41	0.03
11.20	1.78	1.56	0.03
11.40	1.96	1.73	0.04
11.60	2.18	1.95	0.04
11.80	2.59	2.36	0.06
12.00	3.54	3.30	0.11
12.20	4.96	4.72	**0.27**
12.40	5.37	5.13	**0.27**
12.60	5.59	5.36	0.14
12.80	5.77	5.53	0.08
13.00	5.92	5.68	0.05
13.20	6.05	5.81	0.04
13.40	6.15	5.92	0.03
13.60	6.23	5.99	0.03
13.80	6.29	6.06	0.02
14.00	6.35	6.12	0.02
14.20	6.41	6.17	0.02
14.40	6.47	6.23	0.02
14.60	6.53	6.29	0.01
14.80	6.58	6.34	0.01
15.00	6.64	6.40	0.01
15.20	6.67	6.43	0.01
15.40	6.70	6.47	0.01
15.60	6.74	6.50	0.01
15.80	6.77	6.53	0.01
16.00	6.80	6.56	0.01
16.20	6.83	6.59	0.01
16.40	6.86	6.63	0.01
16.60	6.89	6.66	0.01
16.80	6.92	6.68	0.01
17.00	6.95	6.71	0.01
17.20	6.98	6.74	0.01
17.40	7.01	6.77	0.01
17.60	7.03	6.80	0.01
17.80	7.06	6.82	0.01
18.00	7.09	6.85	0.01
18.20	7.11	6.87	0.01
18.40	7.13	6.90	0.01
18.60	7.16	6.92	0.01
18.80	7.18	6.94	0.01
19.00	7.20	6.96	0.01
19.20	7.23	6.99	0.01
19.40	7.25	7.01	0.01
19.60	7.27	7.03	0.01
19.80	7.29	7.05	0.01
20.00	**7.31**	**7.07**	0.01

Summary for Subcatchment 9S: to Inlet 6

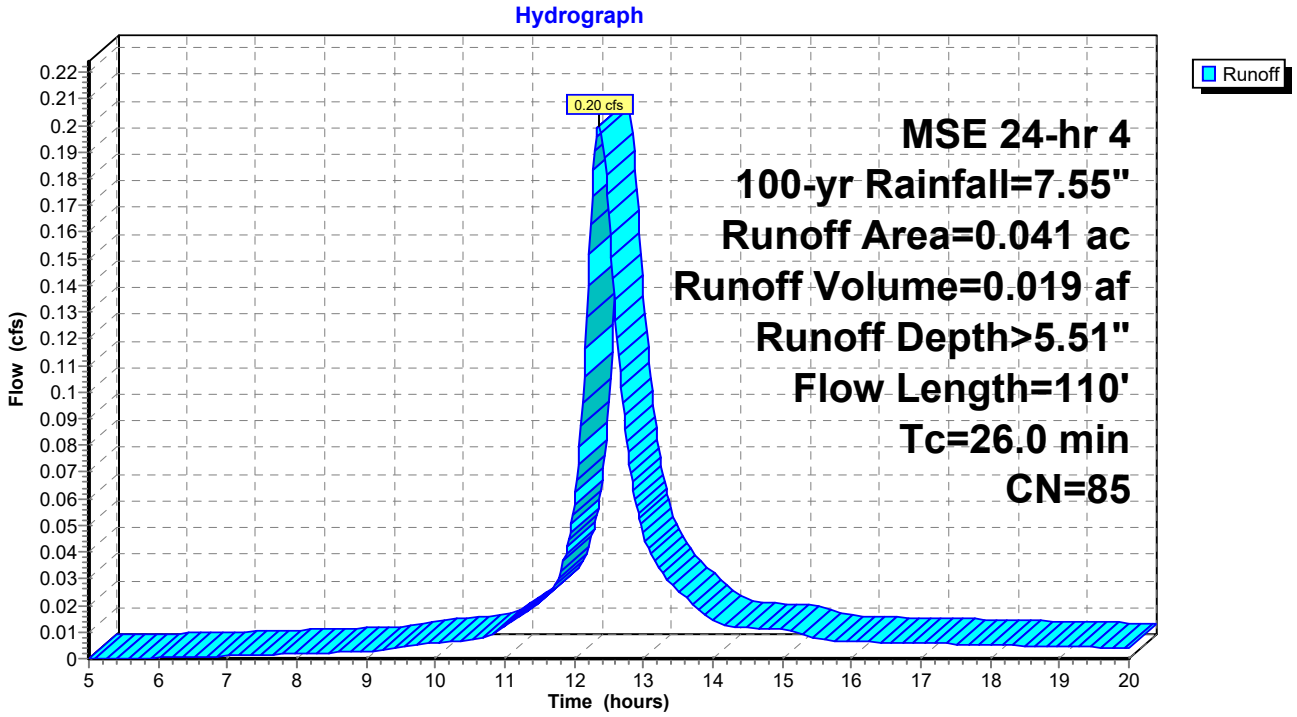
Runoff = 0.20 cfs @ 12.36 hrs, Volume= 0.019 af, Depth> 5.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.032	98	pavement
*	0.009	39	LS
	0.041	85	Weighted Average
	0.009		21.95% Pervious Area
	0.032		78.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	45		0.11		**Direct Entry, pavement**
7.0	45		0.11		**Direct Entry, SW**
12.0	20		0.03		**Direct Entry, LS**
26.0	110	Total			

Subcatchment 9S: to Inlet 6



Hydrograph for Subcatchment 9S: to Inlet 6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.01	0.00
6.20	0.49	0.01	0.00
6.40	0.52	0.01	0.00
6.60	0.54	0.02	0.00
6.80	0.57	0.02	0.00
7.00	0.60	0.03	0.00
7.20	0.63	0.04	0.00
7.40	0.66	0.04	0.00
7.60	0.69	0.05	0.00
7.80	0.72	0.06	0.00
8.00	0.75	0.07	0.00
8.20	0.78	0.08	0.00
8.40	0.81	0.09	0.00
8.60	0.85	0.11	0.00
8.80	0.88	0.12	0.00
9.00	0.91	0.14	0.00
9.20	0.97	0.16	0.00
9.40	1.02	0.18	0.00
9.60	1.08	0.21	0.00
9.80	1.14	0.24	0.01
10.00	1.20	0.27	0.01
10.20	1.26	0.31	0.01
10.40	1.32	0.34	0.01
10.60	1.40	0.39	0.01
10.80	1.50	0.45	0.01
11.00	1.63	0.54	0.01
11.20	1.78	0.64	0.02
11.40	1.96	0.76	0.02
11.60	2.18	0.93	0.02
11.80	2.59	1.25	0.03
12.00	3.54	2.05	0.06
12.20	4.96	3.33	**0.14**
12.40	5.37	3.71	**0.20**
12.60	5.59	3.92	0.13
12.80	5.77	4.08	0.07
13.00	5.92	4.22	0.05
13.20	6.05	4.35	0.04
13.40	6.15	4.45	0.03
13.60	6.23	4.52	0.02
13.80	6.29	4.58	0.02
14.00	6.35	4.64	0.01
14.20	6.41	4.69	0.01
14.40	6.47	4.75	0.01
14.60	6.53	4.80	0.01
14.80	6.58	4.85	0.01
15.00	6.64	4.91	0.01
15.20	6.67	4.94	0.01
15.40	6.70	4.97	0.01
15.60	6.74	5.00	0.01
15.80	6.77	5.03	0.01
16.00	6.80	5.06	0.01
16.20	6.83	5.09	0.01
16.40	6.86	5.12	0.01
16.60	6.89	5.15	0.01
16.80	6.92	5.18	0.01
17.00	6.95	5.21	0.01
17.20	6.98	5.23	0.01
17.40	7.01	5.26	0.01
17.60	7.03	5.29	0.01
17.80	7.06	5.31	0.01
18.00	7.09	5.33	0.01
18.20	7.11	5.36	0.01
18.40	7.13	5.38	0.00
18.60	7.16	5.40	0.00
18.80	7.18	5.43	0.00
19.00	7.20	5.45	0.00
19.20	7.23	5.47	0.00
19.40	7.25	5.49	0.00
19.60	7.27	5.51	0.00
19.80	7.29	5.53	0.00
20.00	**7.31**	**5.54**	0.00

Summary for Subcatchment 10S: to Inlet 5

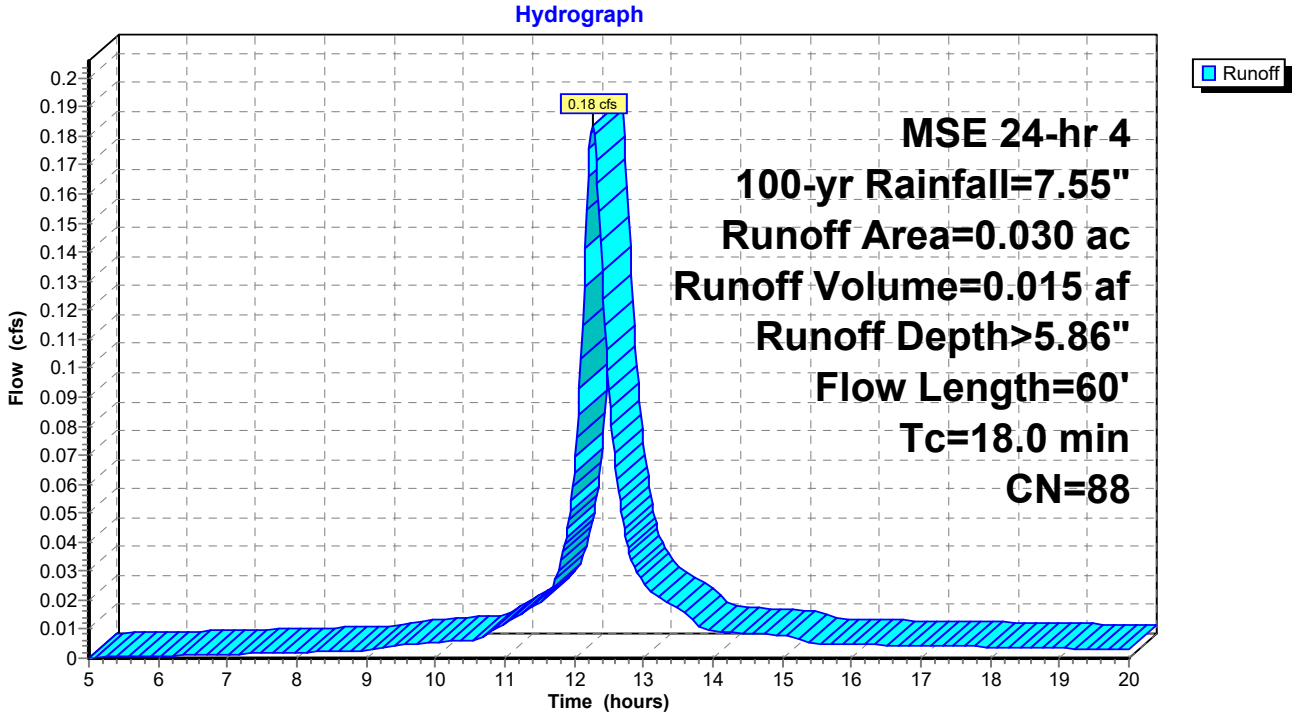
Runoff = 0.18 cfs @ 12.26 hrs, Volume= 0.015 af, Depth> 5.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.005	39	LS
	0.030	88	Weighted Average
	0.005		16.67% Pervious Area
	0.025		83.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40		0.11		**Direct Entry, pavement**
12.0	20		0.03		**Direct Entry, LS**
18.0	60	Total			

Subcatchment 10S: to Inlet 5



Hydrograph for Subcatchment 10S: to Inlet 5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.01	0.00
5.40	0.39	0.01	0.00
5.60	0.42	0.01	0.00
5.80	0.44	0.02	0.00
6.00	0.46	0.02	0.00
6.20	0.49	0.03	0.00
6.40	0.52	0.04	0.00
6.60	0.54	0.04	0.00
6.80	0.57	0.05	0.00
7.00	0.60	0.06	0.00
7.20	0.63	0.07	0.00
7.40	0.66	0.08	0.00
7.60	0.69	0.10	0.00
7.80	0.72	0.11	0.00
8.00	0.75	0.12	0.00
8.20	0.78	0.14	0.00
8.40	0.81	0.15	0.00
8.60	0.85	0.17	0.00
8.80	0.88	0.19	0.00
9.00	0.91	0.20	0.00
9.20	0.97	0.23	0.00
9.40	1.02	0.27	0.00
9.60	1.08	0.30	0.00
9.80	1.14	0.33	0.01
10.00	1.20	0.37	0.01
10.20	1.26	0.41	0.01
10.40	1.32	0.45	0.01
10.60	1.40	0.51	0.01
10.80	1.50	0.58	0.01
11.00	1.63	0.68	0.01
11.20	1.78	0.79	0.01
11.40	1.96	0.93	0.02
11.60	2.18	1.11	0.02
11.80	2.59	1.46	0.03
12.00	3.54	2.30	0.06
12.20	4.96	3.63	**0.17**
12.40	5.37	4.02	**0.13**
12.60	5.59	4.24	0.07
12.80	5.77	4.40	0.04
13.00	5.92	4.55	0.03
13.20	6.05	4.67	0.02
13.40	6.15	4.77	0.02
13.60	6.23	4.85	0.02
13.80	6.29	4.91	0.01
14.00	6.35	4.97	0.01
14.20	6.41	5.02	0.01
14.40	6.47	5.08	0.01
14.60	6.53	5.14	0.01
14.80	6.58	5.19	0.01
15.00	6.64	5.24	0.01
15.20	6.67	5.27	0.01
15.40	6.70	5.31	0.01
15.60	6.74	5.34	0.01
15.80	6.77	5.37	0.00
16.00	6.80	5.40	0.00
16.20	6.83	5.43	0.00
16.40	6.86	5.46	0.00
16.60	6.89	5.49	0.00
16.80	6.92	5.52	0.00
17.00	6.95	5.55	0.00
17.20	6.98	5.57	0.00
17.40	7.01	5.60	0.00
17.60	7.03	5.63	0.00
17.80	7.06	5.65	0.00
18.00	7.09	5.68	0.00
18.20	7.11	5.70	0.00
18.40	7.13	5.72	0.00
18.60	7.16	5.75	0.00
18.80	7.18	5.77	0.00
19.00	7.20	5.79	0.00
19.20	7.23	5.81	0.00
19.40	7.25	5.83	0.00
19.60	7.27	5.85	0.00
19.80	7.29	5.87	0.00
20.00	**7.31**	**5.89**	0.00

Summary for Subcatchment 11S: to Inlet 4

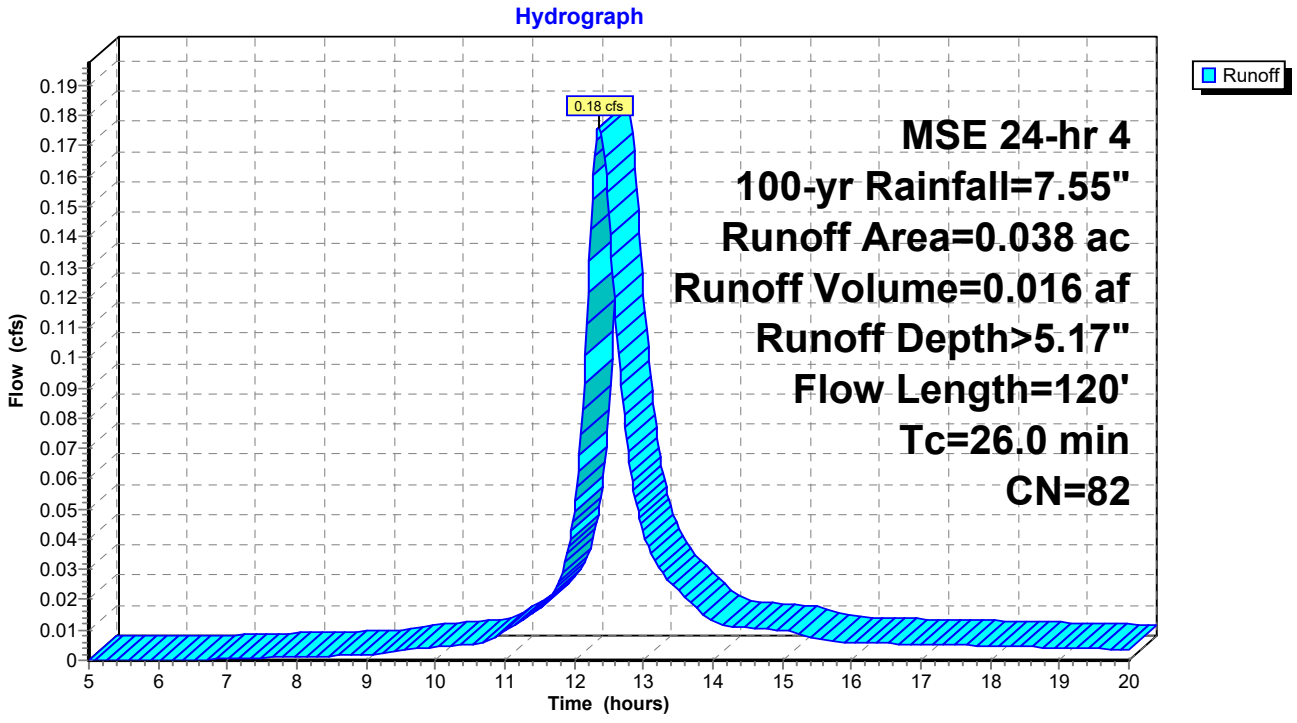
Runoff = 0.18 cfs @ 12.36 hrs, Volume= 0.016 af, Depth> 5.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.003	98	SW
*	0.010	39	LS
	0.038	82	Weighted Average
	0.010		26.32% Pervious Area
	0.028		73.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	40		0.10		**Direct Entry, pavement**
7.0	40		0.10		**Direct Entry, SW**
12.0	40		0.06		**Direct Entry, LS**
26.0	120	Total			

Subcatchment 11S: to Inlet 4



Hydrograph for Subcatchment 11S: to Inlet 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.00	0.00
6.20	0.49	0.00	0.00
6.40	0.52	0.00	0.00
6.60	0.54	0.00	0.00
6.80	0.57	0.01	0.00
7.00	0.60	0.01	0.00
7.20	0.63	0.01	0.00
7.40	0.66	0.02	0.00
7.60	0.69	0.02	0.00
7.80	0.72	0.03	0.00
8.00	0.75	0.04	0.00
8.20	0.78	0.05	0.00
8.40	0.81	0.05	0.00
8.60	0.85	0.06	0.00
8.80	0.88	0.07	0.00
9.00	0.91	0.08	0.00
9.20	0.97	0.10	0.00
9.40	1.02	0.12	0.00
9.60	1.08	0.14	0.00
9.80	1.14	0.17	0.00
10.00	1.20	0.19	0.00
10.20	1.26	0.22	0.00
10.40	1.32	0.25	0.01
10.60	1.40	0.29	0.01
10.80	1.50	0.35	0.01
11.00	1.63	0.42	0.01
11.20	1.78	0.51	0.01
11.40	1.96	0.62	0.02
11.60	2.18	0.77	0.02
11.80	2.59	1.07	0.03
12.00	3.54	1.81	0.05
12.20	4.96	3.04	**0.12**
12.40	5.37	3.41	**0.17**
12.60	5.59	3.62	0.11
12.80	5.77	3.77	0.07
13.00	5.92	3.91	0.04
13.20	6.05	4.03	0.03
13.40	6.15	4.13	0.03
13.60	6.23	4.20	0.02
13.80	6.29	4.26	0.02
14.00	6.35	4.31	0.01
14.20	6.41	4.37	0.01
14.40	6.47	4.42	0.01
14.60	6.53	4.48	0.01
14.80	6.58	4.53	0.01
15.00	6.64	4.58	0.01
15.20	6.67	4.61	0.01
15.40	6.70	4.64	0.01
15.60	6.74	4.67	0.01
15.80	6.77	4.70	0.01
16.00	6.80	4.73	0.01
16.20	6.83	4.76	0.01
16.40	6.86	4.79	0.01
16.60	6.89	4.82	0.01
16.80	6.92	4.84	0.01
17.00	6.95	4.87	0.01
17.20	6.98	4.90	0.01
17.40	7.01	4.92	0.01
17.60	7.03	4.95	0.00
17.80	7.06	4.97	0.00
18.00	7.09	5.00	0.00
18.20	7.11	5.02	0.00
18.40	7.13	5.04	0.00
18.60	7.16	5.06	0.00
18.80	7.18	5.09	0.00
19.00	7.20	5.11	0.00
19.20	7.23	5.13	0.00
19.40	7.25	5.15	0.00
19.60	7.27	5.17	0.00
19.80	7.29	5.18	0.00
20.00	**7.31**	**5.20**	0.00

Summary for Subcatchment 12S: to inlet 3

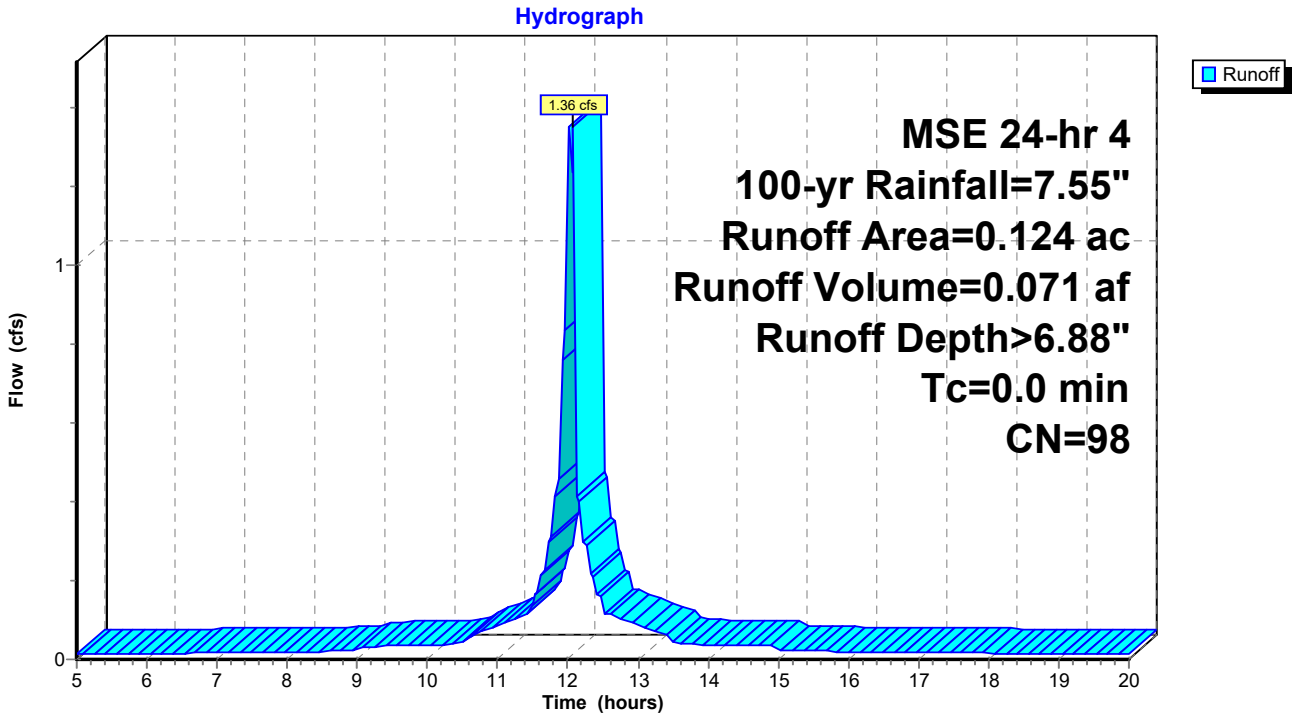
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 1.36 cfs @ 12.08 hrs, Volume= 0.071 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.009	98	open shelter
*	0.059	98	SW
*	0.034	98	parking AC pavement
*	0.022	98	PIP play surface
	0.124	98	Weighted Average
	0.124		100.00% Impervious Area

Subcatchment 12S: to inlet 3



Hydrograph for Subcatchment 12S: to inlet 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.01
5.20	0.37	0.20	0.01
5.40	0.39	0.22	0.01
5.60	0.42	0.24	0.01
5.80	0.44	0.26	0.01
6.00	0.46	0.29	0.01
6.20	0.49	0.31	0.01
6.40	0.52	0.33	0.02
6.60	0.54	0.36	0.02
6.80	0.57	0.38	0.02
7.00	0.60	0.41	0.02
7.20	0.63	0.43	0.02
7.40	0.66	0.46	0.02
7.60	0.69	0.49	0.02
7.80	0.72	0.52	0.02
8.00	0.75	0.55	0.02
8.20	0.78	0.58	0.02
8.40	0.81	0.61	0.02
8.60	0.85	0.64	0.02
8.80	0.88	0.67	0.02
9.00	0.91	0.71	0.03
9.20	0.97	0.76	0.03
9.40	1.02	0.81	0.03
9.60	1.08	0.87	0.03
9.80	1.14	0.92	0.04
10.00	1.20	0.98	0.04
10.20	1.26	1.04	0.04
10.40	1.32	1.10	0.04
10.60	1.40	1.18	0.06
10.80	1.50	1.28	0.07
11.00	1.63	1.41	0.09
11.20	1.78	1.56	0.10
11.40	1.96	1.73	0.11
11.60	2.18	1.95	0.19
11.80	2.59	2.36	0.36
12.00	3.54	3.30	**1.06**
12.20	4.96	4.72	**0.36**
12.40	5.37	5.13	0.19
12.60	5.59	5.36	0.11
12.80	5.77	5.53	0.10
13.00	5.92	5.68	0.09
13.20	6.05	5.81	0.07
13.40	6.15	5.92	0.06
13.60	6.23	5.99	0.04
13.80	6.29	6.06	0.04
14.00	6.35	6.12	0.04
14.20	6.41	6.17	0.04
14.40	6.47	6.23	0.04
14.60	6.53	6.29	0.03
14.80	6.58	6.34	0.03
15.00	6.64	6.40	0.03
15.20	6.67	6.43	0.02
15.40	6.70	6.47	0.02
15.60	6.74	6.50	0.02
15.80	6.77	6.53	0.02
16.00	6.80	6.56	0.02
16.20	6.83	6.59	0.02
16.40	6.86	6.63	0.02
16.60	6.89	6.66	0.02
16.80	6.92	6.68	0.02
17.00	6.95	6.71	0.02
17.20	6.98	6.74	0.02
17.40	7.01	6.77	0.02
17.60	7.03	6.80	0.02
17.80	7.06	6.82	0.02
18.00	7.09	6.85	0.02
18.20	7.11	6.87	0.02
18.40	7.13	6.90	0.01
18.60	7.16	6.92	0.01
18.80	7.18	6.94	0.01
19.00	7.20	6.96	0.01
19.20	7.23	6.99	0.01
19.40	7.25	7.01	0.01
19.60	7.27	7.03	0.01
19.80	7.29	7.05	0.01
20.00	**7.31**	**7.07**	0.01

Summary for Subcatchment 13S: to NDS 2

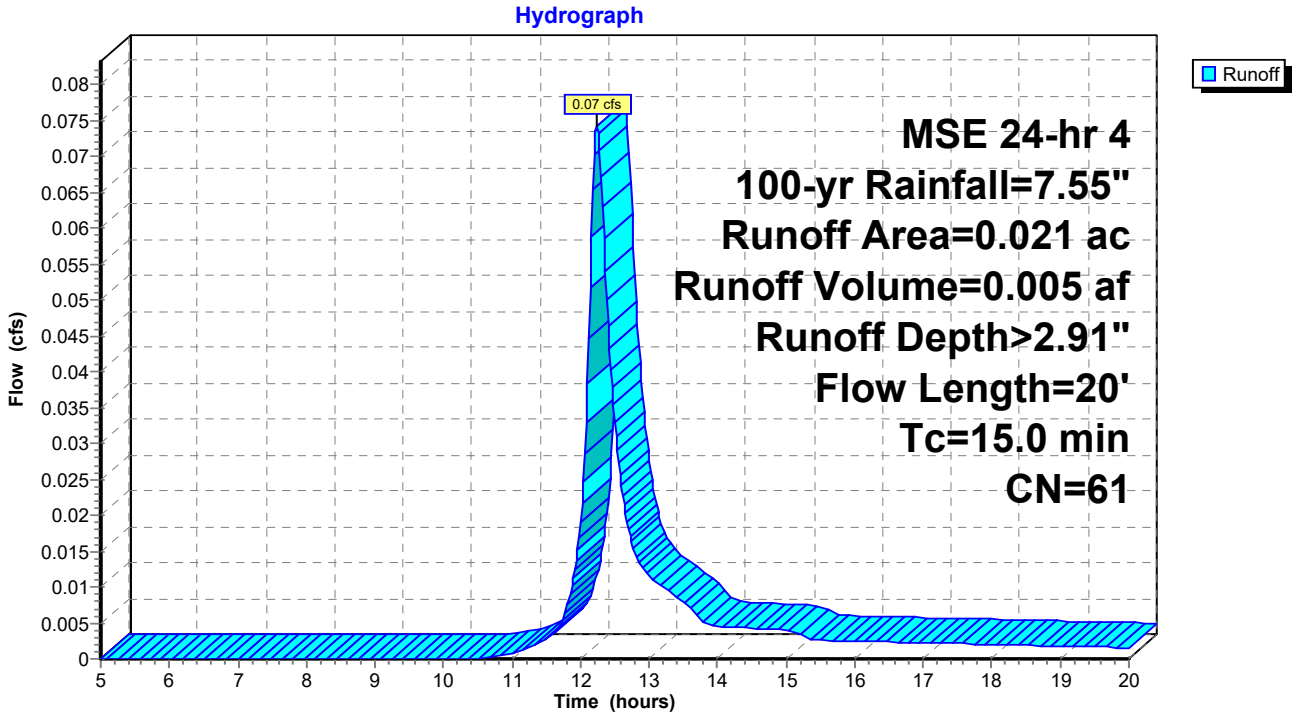
Runoff = 0.07 cfs @ 12.24 hrs, Volume= 0.005 af, Depth> 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.021	61	lawn, HSG B
	0.021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	20		0.02		**Direct Entry, lawn**

Subcatchment 13S: to NDS 2



Hydrograph for Subcatchment 13S: to NDS 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.00	0.00
6.20	0.49	0.00	0.00
6.40	0.52	0.00	0.00
6.60	0.54	0.00	0.00
6.80	0.57	0.00	0.00
7.00	0.60	0.00	0.00
7.20	0.63	0.00	0.00
7.40	0.66	0.00	0.00
7.60	0.69	0.00	0.00
7.80	0.72	0.00	0.00
8.00	0.75	0.00	0.00
8.20	0.78	0.00	0.00
8.40	0.81	0.00	0.00
8.60	0.85	0.00	0.00
8.80	0.88	0.00	0.00
9.00	0.91	0.00	0.00
9.20	0.97	0.00	0.00
9.40	1.02	0.00	0.00
9.60	1.08	0.00	0.00
9.80	1.14	0.00	0.00
10.00	1.20	0.00	0.00
10.20	1.26	0.00	0.00
10.40	1.32	0.00	0.00
10.60	1.40	0.00	0.00
10.80	1.50	0.01	0.00
11.00	1.63	0.02	0.00
11.20	1.78	0.04	0.00
11.40	1.96	0.06	0.00
11.60	2.18	0.11	0.00
11.80	2.59	0.22	0.01
12.00	3.54	0.59	0.02
12.20	4.96	1.34	**0.07**
12.40	5.37	1.60	**0.05**
12.60	5.59	1.74	0.02
12.80	5.77	1.85	0.01
13.00	5.92	1.95	0.01
13.20	6.05	2.04	0.01
13.40	6.15	2.11	0.01
13.60	6.23	2.16	0.01
13.80	6.29	2.20	0.01
14.00	6.35	2.25	0.00
14.20	6.41	2.29	0.00
14.40	6.47	2.33	0.00
14.60	6.53	2.37	0.00
14.80	6.58	2.41	0.00
15.00	6.64	2.44	0.00
15.20	6.67	2.47	0.00
15.40	6.70	2.49	0.00
15.60	6.74	2.51	0.00
15.80	6.77	2.54	0.00
16.00	6.80	2.56	0.00
16.20	6.83	2.58	0.00
16.40	6.86	2.60	0.00
16.60	6.89	2.63	0.00
16.80	6.92	2.65	0.00
17.00	6.95	2.67	0.00
17.20	6.98	2.69	0.00
17.40	7.01	2.71	0.00
17.60	7.03	2.73	0.00
17.80	7.06	2.75	0.00
18.00	7.09	2.76	0.00
18.20	7.11	2.78	0.00
18.40	7.13	2.80	0.00
18.60	7.16	2.82	0.00
18.80	7.18	2.83	0.00
19.00	7.20	2.85	0.00
19.20	7.23	2.87	0.00
19.40	7.25	2.88	0.00
19.60	7.27	2.90	0.00
19.80	7.29	2.91	0.00
20.00	**7.31**	**2.92**	0.00

Summary for Subcatchment 14S: to NDS 3-5

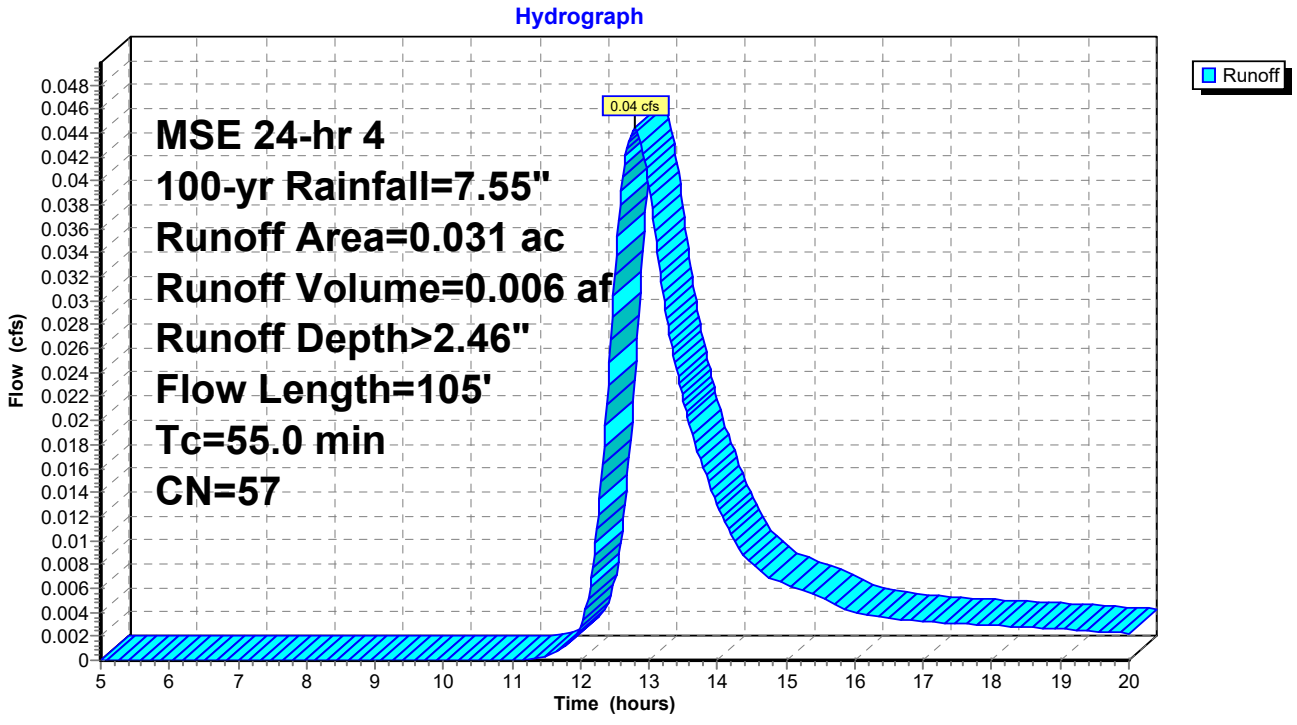
Runoff = 0.04 cfs @ 12.78 hrs, Volume= 0.006 af, Depth> 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.022	61	lawn, HSG B
*	0.008	39	LS
*	0.001	98	SW
	0.031	57	Weighted Average
	0.030		96.77% Pervious Area
	0.001		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	20		0.02		**Direct Entry, lawn**
20.0	75		0.06		**Direct Entry, LS**
20.0	10		0.01		**Direct Entry, SW via LS**
55.0	105	Total			

Subcatchment 14S: to NDS 3-5



Hydrograph for Subcatchment 14S: to NDS 3-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.00	0.00
6.20	0.49	0.00	0.00
6.40	0.52	0.00	0.00
6.60	0.54	0.00	0.00
6.80	0.57	0.00	0.00
7.00	0.60	0.00	0.00
7.20	0.63	0.00	0.00
7.40	0.66	0.00	0.00
7.60	0.69	0.00	0.00
7.80	0.72	0.00	0.00
8.00	0.75	0.00	0.00
8.20	0.78	0.00	0.00
8.40	0.81	0.00	0.00
8.60	0.85	0.00	0.00
8.80	0.88	0.00	0.00
9.00	0.91	0.00	0.00
9.20	0.97	0.00	0.00
9.40	1.02	0.00	0.00
9.60	1.08	0.00	0.00
9.80	1.14	0.00	0.00
10.00	1.20	0.00	0.00
10.20	1.26	0.00	0.00
10.40	1.32	0.00	0.00
10.60	1.40	0.00	0.00
10.80	1.50	0.00	0.00
11.00	1.63	0.00	0.00
11.20	1.78	0.01	0.00
11.40	1.96	0.03	0.00
11.60	2.18	0.06	0.00
11.80	2.59	0.14	0.00
12.00	3.54	0.43	0.00
12.20	4.96	1.08	0.01
12.40	5.37	1.31	0.02
12.60	5.59	1.44	**0.04**
12.80	5.77	1.54	**0.04**
13.00	5.92	1.63	0.04
13.20	6.05	1.70	0.03
13.40	6.15	1.77	0.02
13.60	6.23	1.82	0.02
13.80	6.29	1.86	0.02
14.00	6.35	1.90	0.01
14.20	6.41	1.93	0.01
14.40	6.47	1.97	0.01
14.60	6.53	2.01	0.01
14.80	6.58	2.04	0.01
15.00	6.64	2.07	0.01
15.20	6.67	2.10	0.01
15.40	6.70	2.12	0.01
15.60	6.74	2.14	0.01
15.80	6.77	2.16	0.00
16.00	6.80	2.18	0.00
16.20	6.83	2.20	0.00
16.40	6.86	2.22	0.00
16.60	6.89	2.24	0.00
16.80	6.92	2.26	0.00
17.00	6.95	2.28	0.00
17.20	6.98	2.30	0.00
17.40	7.01	2.32	0.00
17.60	7.03	2.34	0.00
17.80	7.06	2.35	0.00
18.00	7.09	2.37	0.00
18.20	7.11	2.39	0.00
18.40	7.13	2.40	0.00
18.60	7.16	2.42	0.00
18.80	7.18	2.43	0.00
19.00	7.20	2.45	0.00
19.20	7.23	2.46	0.00
19.40	7.25	2.48	0.00
19.60	7.27	2.49	0.00
19.80	7.29	2.51	0.00
20.00	**7.31**	**2.52**	0.00

Summary for Subcatchment 16S: to NDS11-6

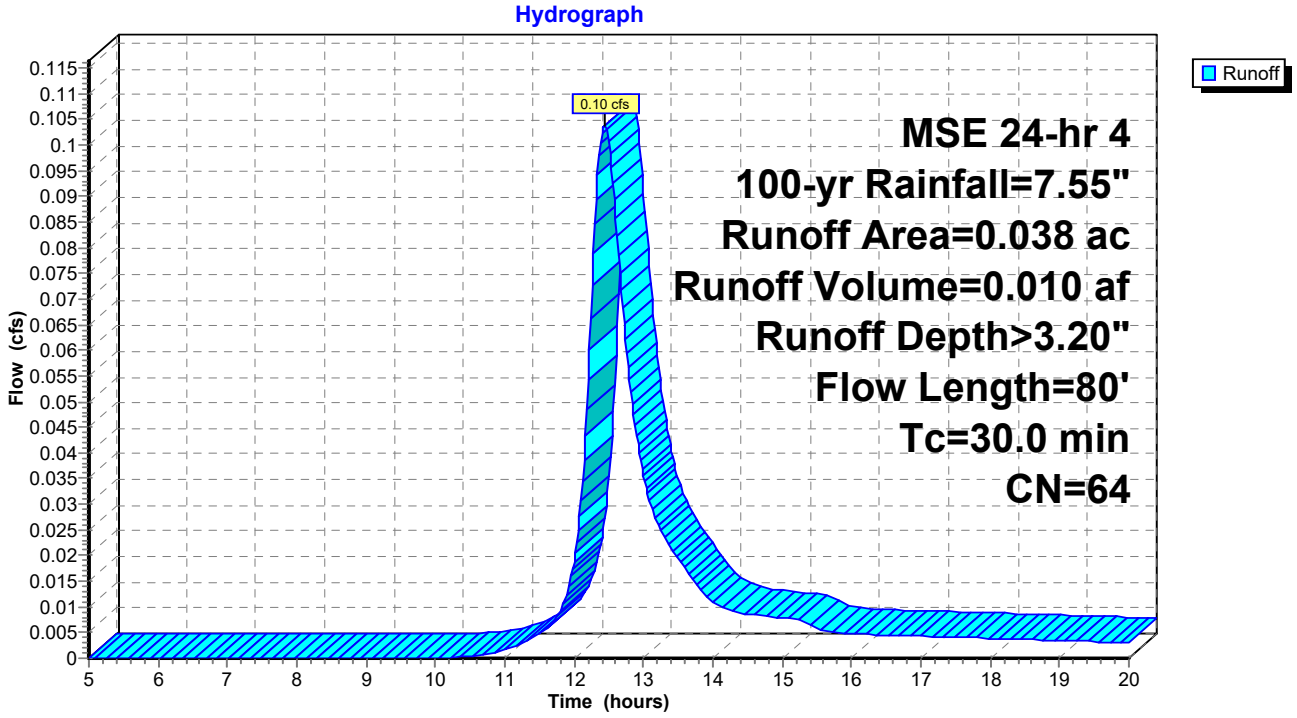
Runoff = 0.10 cfs @ 12.44 hrs, Volume= 0.010 af, Depth> 3.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.022	39	LS
*	0.016	98	SW
	0.038	64	Weighted Average
	0.022		57.89% Pervious Area
	0.016		42.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	40		0.04		**Direct Entry, LS**
15.0	40		0.04		**Direct Entry, SW via LS**
30.0	80	Total			

Subcatchment 16S: to NDS11-6



Hydrograph for Subcatchment 16S: to NDS11-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.00	0.00
6.20	0.49	0.00	0.00
6.40	0.52	0.00	0.00
6.60	0.54	0.00	0.00
6.80	0.57	0.00	0.00
7.00	0.60	0.00	0.00
7.20	0.63	0.00	0.00
7.40	0.66	0.00	0.00
7.60	0.69	0.00	0.00
7.80	0.72	0.00	0.00
8.00	0.75	0.00	0.00
8.20	0.78	0.00	0.00
8.40	0.81	0.00	0.00
8.60	0.85	0.00	0.00
8.80	0.88	0.00	0.00
9.00	0.91	0.00	0.00
9.20	0.97	0.00	0.00
9.40	1.02	0.00	0.00
9.60	1.08	0.00	0.00
9.80	1.14	0.00	0.00
10.00	1.20	0.00	0.00
10.20	1.26	0.00	0.00
10.40	1.32	0.01	0.00
10.60	1.40	0.01	0.00
10.80	1.50	0.02	0.00
11.00	1.63	0.04	0.00
11.20	1.78	0.07	0.00
11.40	1.96	0.11	0.00
11.60	2.18	0.17	0.01
11.80	2.59	0.30	0.01
12.00	3.54	0.72	0.02
12.20	4.96	1.55	0.05
12.40	5.37	1.82	**0.10**
12.60	5.59	1.98	**0.09**
12.80	5.77	2.10	0.05
13.00	5.92	2.20	0.04
13.20	6.05	2.30	0.03
13.40	6.15	2.37	0.02
13.60	6.23	2.43	0.02
13.80	6.29	2.47	0.01
14.00	6.35	2.52	0.01
14.20	6.41	2.56	0.01
14.40	6.47	2.61	0.01
14.60	6.53	2.65	0.01
14.80	6.58	2.69	0.01
15.00	6.64	2.73	0.01
15.20	6.67	2.75	0.01
15.40	6.70	2.78	0.01
15.60	6.74	2.80	0.01
15.80	6.77	2.83	0.01
16.00	6.80	2.85	0.00
16.20	6.83	2.88	0.00
16.40	6.86	2.90	0.00
16.60	6.89	2.92	0.00
16.80	6.92	2.94	0.00
17.00	6.95	2.96	0.00
17.20	6.98	2.99	0.00
17.40	7.01	3.01	0.00
17.60	7.03	3.03	0.00
17.80	7.06	3.05	0.00
18.00	7.09	3.07	0.00
18.20	7.11	3.09	0.00
18.40	7.13	3.10	0.00
18.60	7.16	3.12	0.00
18.80	7.18	3.14	0.00
19.00	7.20	3.16	0.00
19.20	7.23	3.17	0.00
19.40	7.25	3.19	0.00
19.60	7.27	3.21	0.00
19.80	7.29	3.22	0.00
20.00	**7.31**	**3.24**	0.00

Summary for Reach 6R: 10" roof

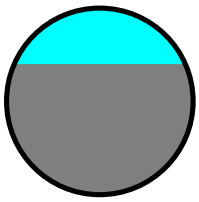
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 887% of Manning's capacity
[76] Warning: Detained 0.065 af (Pond w/culvert advised)

Inflow Area = 0.305 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 2.42 cfs @ 12.19 hrs, Volume= 0.175 af
Outflow = 0.29 cfs @ 11.60 hrs, Volume= 0.175 af, Atten= 88%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.58 fps, Avg. Travel Time= 0.3 min

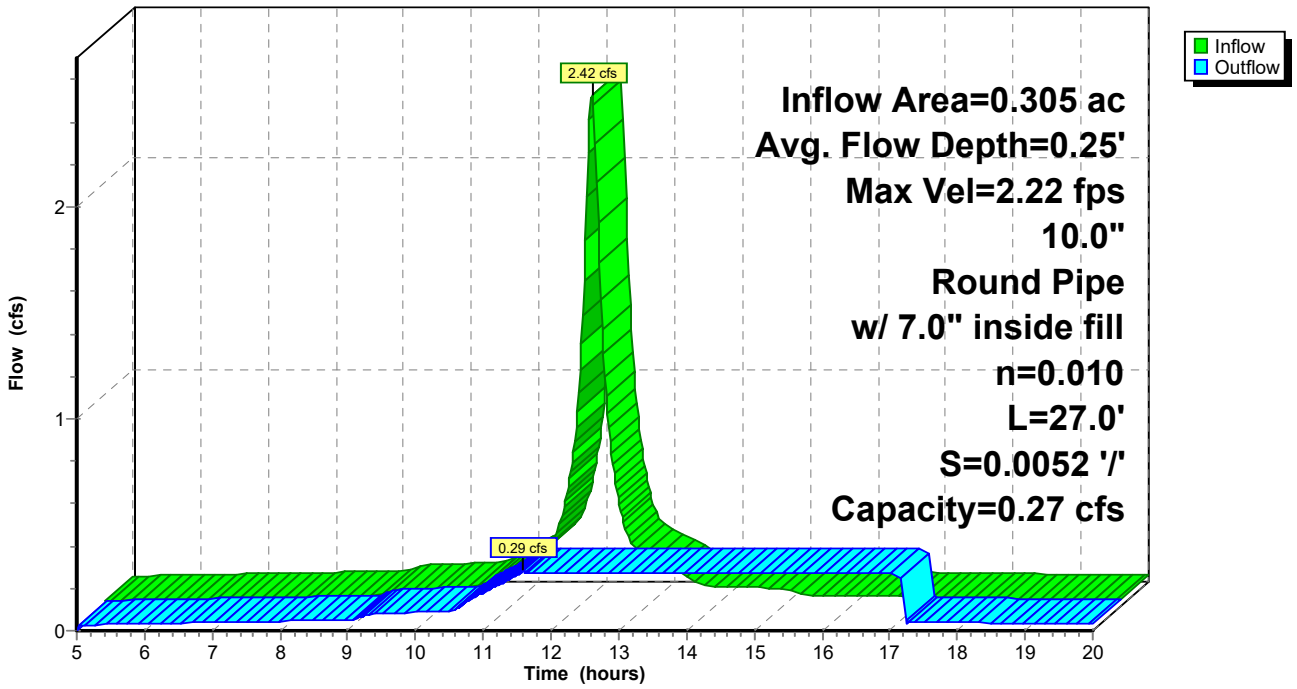
Peak Storage= 4 cf @ 11.62 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 27.0' Slope= 0.0052 '/'
Inlet Invert= 665.72', Outlet Invert= 665.58'



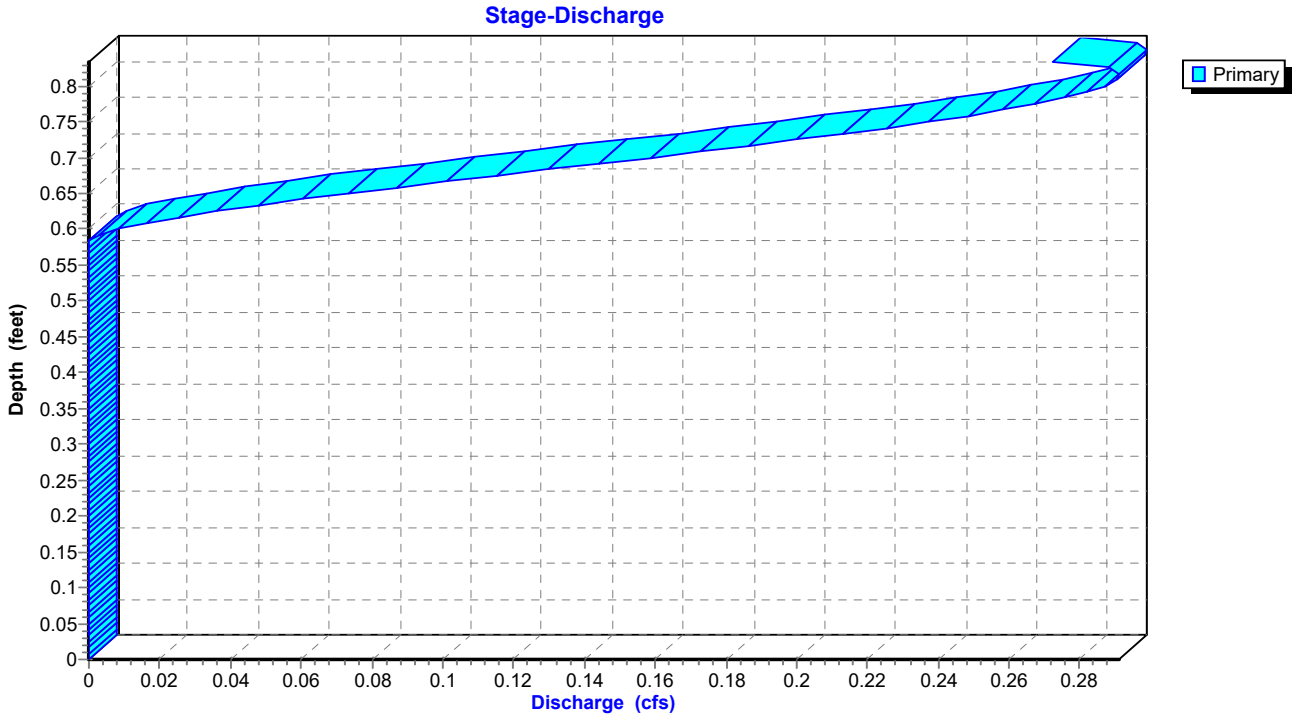
Reach 6R: 10" roof

Hydrograph

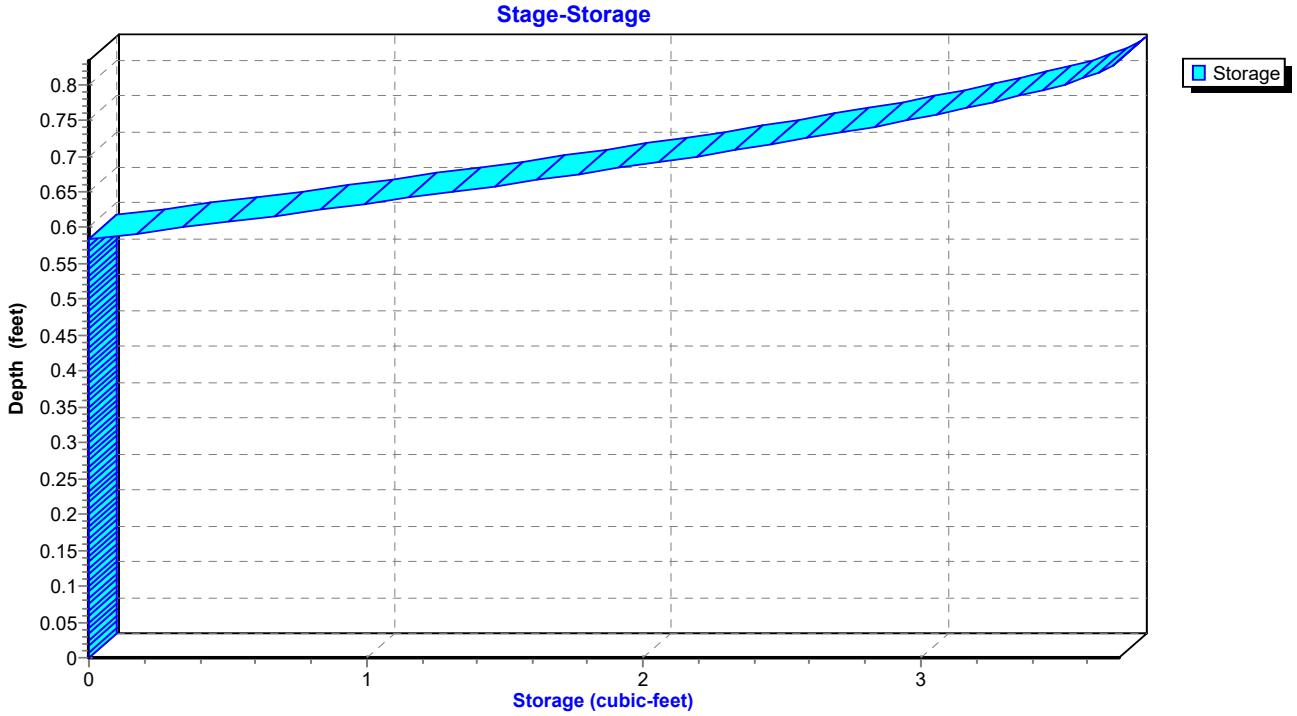


Reach 6R: 10" roof

Stage-Discharge



Reach 6R: 10" roof



Hydrograph for Reach 6R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.03	0	666.30	0.00
5.40	0.03	1	666.34	0.03
5.80	0.03	1	666.34	0.03
6.20	0.03	1	666.34	0.03
6.60	0.04	1	666.35	0.04
7.00	0.04	1	666.35	0.04
7.40	0.04	1	666.35	0.04
7.80	0.04	1	666.35	0.04
8.20	0.05	1	666.35	0.05
8.60	0.05	1	666.35	0.05
9.00	0.05	1	666.36	0.05
9.40	0.08	1	666.37	0.08
9.80	0.09	1	666.38	0.09
10.20	0.09	2	666.38	0.09
10.60	0.10	2	666.39	0.10
11.00	0.18	2	666.43	0.18
11.40	0.25	**3**	**666.48**	**0.25**
11.80	0.50	**4**	**666.55**	**0.27**
12.20	**2.41**	4	666.55	0.27
12.60	0.48	4	666.55	0.27
13.00	0.25	4	666.55	0.27
13.40	0.18	4	666.55	0.27
13.80	0.10	4	666.55	0.27
14.20	0.09	4	666.55	0.27
14.60	0.09	4	666.55	0.27
15.00	0.08	4	666.55	0.27
15.40	0.05	4	666.55	0.27
15.80	0.05	4	666.55	0.27
16.20	0.05	4	666.55	0.27
16.60	0.05	4	666.55	0.27
17.00	0.04	4	666.55	0.27
17.40	0.04	1	666.35	0.04
17.80	0.04	1	666.35	0.04
18.20	0.04	1	666.35	0.04
18.60	0.04	1	666.35	0.04
19.00	0.03	1	666.34	0.03
19.40	0.03	1	666.34	0.03
19.80	0.03	1	666.34	0.03

Stage-Discharge for Reach 6R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.35	0.00
666.32	0.67	0.01
666.33	0.90	0.02
666.34	1.08	0.03
666.35	1.25	0.04
666.36	1.39	0.06
666.37	1.51	0.07
666.38	1.62	0.09
666.39	1.72	0.11
666.40	1.81	0.12
666.41	1.88	0.14
666.42	1.95	0.16
666.43	2.01	0.18
666.44	2.06	0.19
666.45	2.11	0.21
666.46	2.14	0.22
666.47	2.17	0.24
666.48	2.19	0.25
666.49	2.21	0.26
666.50	**2.22**	0.27
666.51	2.21	0.28
666.52	2.20	0.29
666.53	2.18	**0.29**
666.54	2.14	0.29
666.55	2.03	0.28

Stage-Area-Storage for Reach 6R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.72	0.0	0
665.73	0.0	0
665.74	0.0	0
665.75	0.0	0
665.76	0.0	0
665.77	0.0	0
665.78	0.0	0
665.79	0.0	0
665.80	0.0	0
665.81	0.0	0
665.82	0.0	0
665.83	0.0	0
665.84	0.0	0
665.85	0.0	0
665.86	0.0	0
665.87	0.0	0
665.88	0.0	0
665.89	0.0	0
665.90	0.0	0
665.91	0.0	0
665.92	0.0	0
665.93	0.0	0
665.94	0.0	0
665.95	0.0	0
665.96	0.0	0
665.97	0.0	0
665.98	0.0	0
665.99	0.0	0
666.00	0.0	0
666.01	0.0	0
666.02	0.0	0
666.03	0.0	0
666.04	0.0	0
666.05	0.0	0
666.06	0.0	0
666.07	0.0	0
666.08	0.0	0
666.09	0.0	0
666.10	0.0	0
666.11	0.0	0
666.12	0.0	0
666.13	0.0	0
666.14	0.0	0
666.15	0.0	0
666.16	0.0	0
666.17	0.0	0
666.18	0.0	0
666.19	0.0	0
666.20	0.0	0
666.21	0.0	0
666.22	0.0	0
666.23	0.0	0
666.24	0.0	0
666.25	0.0	0
666.26	0.0	0
666.27	0.0	0
666.28	0.0	0
666.29	0.0	0
666.30	0.0	0
666.31	0.0	0
666.32	0.0	0
666.33	0.0	1
666.34	0.0	1
666.35	0.0	1
666.36	0.0	1
666.37	0.0	1
666.38	0.1	1
666.39	0.1	2
666.40	0.1	2
666.41	0.1	2
666.42	0.1	2
666.43	0.1	2
666.44	0.1	3
666.45	0.1	3
666.46	0.1	3
666.47	0.1	3
666.48	0.1	3
666.49	0.1	3
666.50	0.1	3
666.51	0.1	3
666.52	0.1	4
666.53	0.1	4
666.54	0.1	4
666.55	**0.1**	**4**

Summary for Reach 7R: MH8 12"

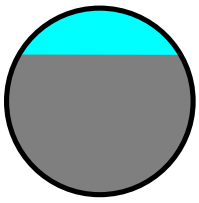
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 205% of Manning's capacity
[76] Warning: Detained 0.140 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 6R INLET depth by 0.15' @ 17.24 hrs
[63] Warning: Exceeded Reach 8R INLET depth by 0.06' @ 17.94 hrs

Inflow Area = 0.644 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 0.56 cfs @ 11.60 hrs, Volume= 0.369 af
Outflow = 0.29 cfs @ 10.74 hrs, Volume= 0.264 af, Atten= 49%, Lag= 0.0 min

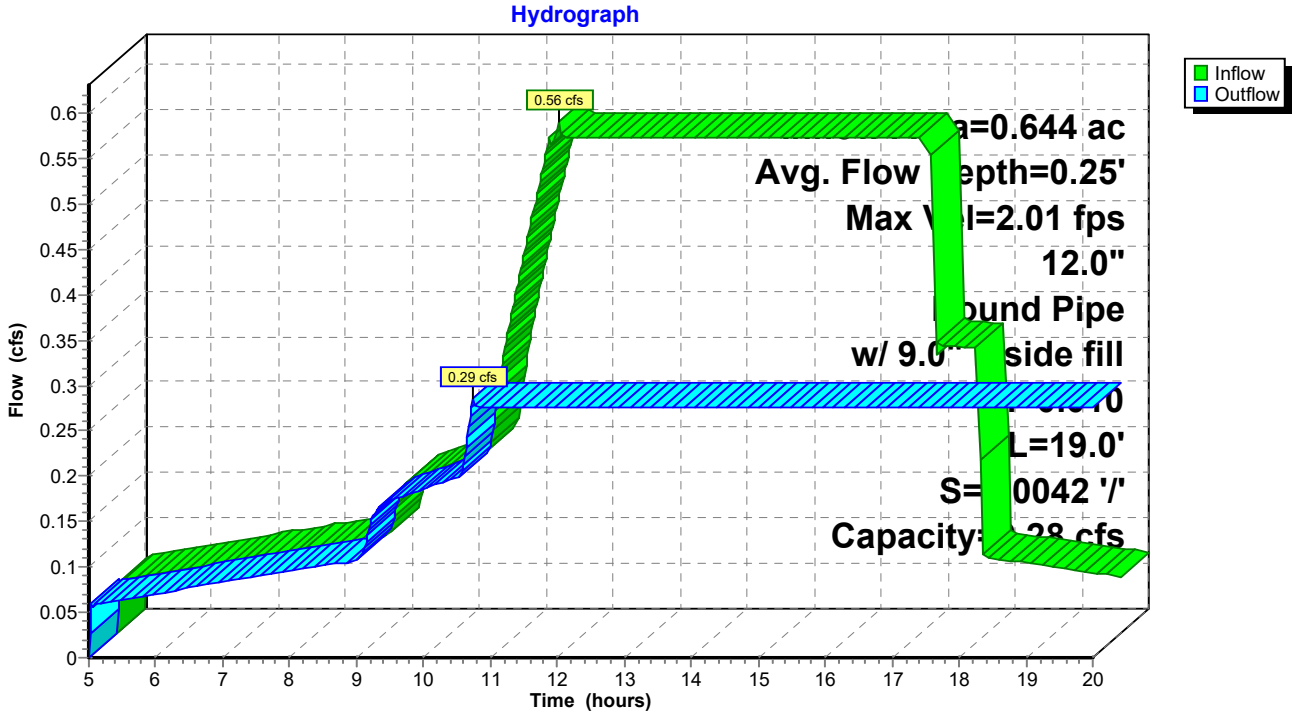
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.69 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 10.76 hrs
Average Depth at Peak Storage= 1.00' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.28 cfs

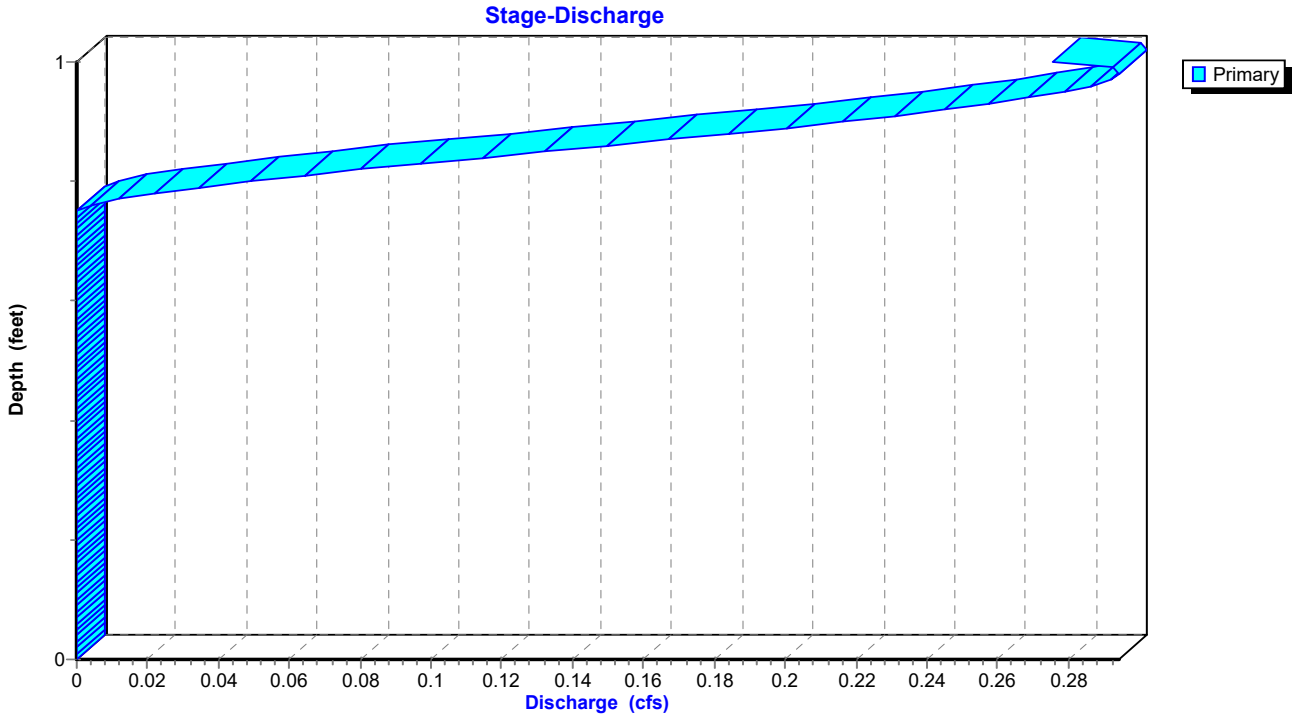
12.0" Round Pipe w/ 9.0" inside fill
n= 0.010
Length= 19.0' Slope= 0.0042 '/'
Inlet Invert= 665.48', Outlet Invert= 665.40'



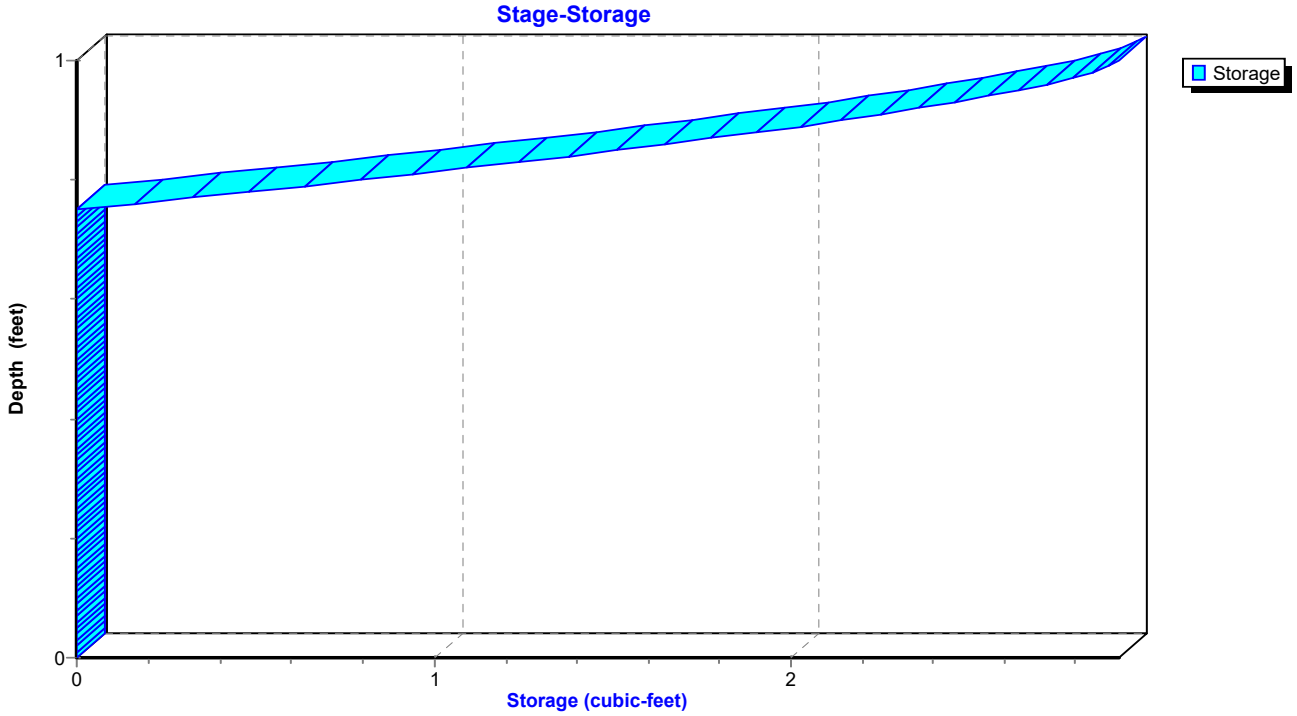
Reach 7R: MH8 12"



Reach 7R: MH8 12"



Reach 7R: MH8 12"



Hydrograph for Reach 7R: MH8 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.23	0.00
5.40	0.06	1	666.29	0.06
5.80	0.07	1	666.29	0.07
6.20	0.07	1	666.30	0.07
6.60	0.08	1	666.30	0.08
7.00	0.08	1	666.30	0.08
7.40	0.09	1	666.30	0.09
7.80	0.09	1	666.31	0.09
8.20	0.10	1	666.31	0.10
8.60	0.10	1	666.31	0.10
9.00	0.11	1	666.32	0.11
9.40	0.17	2	666.35	0.17
9.80	0.18	2	666.36	0.18
10.20	0.19	2	666.36	0.19
10.60	0.21	**2**	**666.38**	**0.21**
11.00	0.39	**3**	**666.48**	**0.28**
11.40	**0.53**	3	666.48	0.28
11.80	**0.55**	3	666.48	0.28
12.20	0.55	3	666.48	0.28
12.60	0.55	3	666.48	0.28
13.00	0.55	3	666.48	0.28
13.40	0.55	3	666.48	0.28
13.80	0.55	3	666.48	0.28
14.20	0.55	3	666.48	0.28
14.60	0.55	3	666.48	0.28
15.00	0.55	3	666.48	0.28
15.40	0.55	3	666.48	0.28
15.80	0.55	3	666.48	0.28
16.20	0.55	3	666.48	0.28
16.60	0.55	3	666.48	0.28
17.00	0.55	3	666.48	0.28
17.40	0.32	3	666.48	0.28
17.80	0.31	3	666.48	0.28
18.20	0.08	3	666.48	0.28
18.60	0.08	3	666.48	0.28
19.00	0.07	3	666.48	0.28
19.40	0.07	3	666.48	0.28
19.80	0.06	3	666.48	0.28

Stage-Discharge for Reach 7R: MH8 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.48	0.00	0.00	665.99	0.00	0.00
665.49	0.00	0.00	666.00	0.00	0.00
665.50	0.00	0.00	666.01	0.00	0.00
665.51	0.00	0.00	666.02	0.00	0.00
665.52	0.00	0.00	666.03	0.00	0.00
665.53	0.00	0.00	666.04	0.00	0.00
665.54	0.00	0.00	666.05	0.00	0.00
665.55	0.00	0.00	666.06	0.00	0.00
665.56	0.00	0.00	666.07	0.00	0.00
665.57	0.00	0.00	666.08	0.00	0.00
665.58	0.00	0.00	666.09	0.00	0.00
665.59	0.00	0.00	666.10	0.00	0.00
665.60	0.00	0.00	666.11	0.00	0.00
665.61	0.00	0.00	666.12	0.00	0.00
665.62	0.00	0.00	666.13	0.00	0.00
665.63	0.00	0.00	666.14	0.00	0.00
665.64	0.00	0.00	666.15	0.00	0.00
665.65	0.00	0.00	666.16	0.00	0.00
665.66	0.00	0.00	666.17	0.00	0.00
665.67	0.00	0.00	666.18	0.00	0.00
665.68	0.00	0.00	666.19	0.00	0.00
665.69	0.00	0.00	666.20	0.00	0.00
665.70	0.00	0.00	666.21	0.00	0.00
665.71	0.00	0.00	666.22	0.00	0.00
665.72	0.00	0.00	666.23	0.00	0.00
665.73	0.00	0.00	666.24	0.44	0.00
665.74	0.00	0.00	666.25	0.68	0.01
665.75	0.00	0.00	666.26	0.87	0.02
665.76	0.00	0.00	666.27	1.03	0.03
665.77	0.00	0.00	666.28	1.17	0.05
665.78	0.00	0.00	666.29	1.29	0.06
665.79	0.00	0.00	666.30	1.40	0.08
665.80	0.00	0.00	666.31	1.50	0.10
665.81	0.00	0.00	666.32	1.58	0.11
665.82	0.00	0.00	666.33	1.66	0.13
665.83	0.00	0.00	666.34	1.72	0.15
665.84	0.00	0.00	666.35	1.78	0.17
665.85	0.00	0.00	666.36	1.84	0.18
665.86	0.00	0.00	666.37	1.88	0.20
665.87	0.00	0.00	666.38	1.92	0.22
665.88	0.00	0.00	666.39	1.95	0.23
665.89	0.00	0.00	666.40	1.97	0.25
665.90	0.00	0.00	666.41	1.99	0.26
665.91	0.00	0.00	666.42	2.00	0.27
665.92	0.00	0.00	666.43	**2.01**	0.28
665.93	0.00	0.00	666.44	2.00	0.29
665.94	0.00	0.00	666.45	1.99	0.29
665.95	0.00	0.00	666.46	1.96	**0.29**
665.96	0.00	0.00	666.47	1.92	0.29
665.97	0.00	0.00	666.48	1.79	0.28
665.98	0.00	0.00			

Stage-Area-Storage for Reach 7R: MH8 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.48	0.0	0	665.99	0.0	0
665.49	0.0	0	666.00	0.0	0
665.50	0.0	0	666.01	0.0	0
665.51	0.0	0	666.02	0.0	0
665.52	0.0	0	666.03	0.0	0
665.53	0.0	0	666.04	0.0	0
665.54	0.0	0	666.05	0.0	0
665.55	0.0	0	666.06	0.0	0
665.56	0.0	0	666.07	0.0	0
665.57	0.0	0	666.08	0.0	0
665.58	0.0	0	666.09	0.0	0
665.59	0.0	0	666.10	0.0	0
665.60	0.0	0	666.11	0.0	0
665.61	0.0	0	666.12	0.0	0
665.62	0.0	0	666.13	0.0	0
665.63	0.0	0	666.14	0.0	0
665.64	0.0	0	666.15	0.0	0
665.65	0.0	0	666.16	0.0	0
665.66	0.0	0	666.17	0.0	0
665.67	0.0	0	666.18	0.0	0
665.68	0.0	0	666.19	0.0	0
665.69	0.0	0	666.20	0.0	0
665.70	0.0	0	666.21	0.0	0
665.71	0.0	0	666.22	0.0	0
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	1
665.77	0.0	0	666.28	0.0	1
665.78	0.0	0	666.29	0.0	1
665.79	0.0	0	666.30	0.1	1
665.80	0.0	0	666.31	0.1	1
665.81	0.0	0	666.32	0.1	1
665.82	0.0	0	666.33	0.1	2
665.83	0.0	0	666.34	0.1	2
665.84	0.0	0	666.35	0.1	2
665.85	0.0	0	666.36	0.1	2
665.86	0.0	0	666.37	0.1	2
665.87	0.0	0	666.38	0.1	2
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	3
665.92	0.0	0	666.43	0.1	3
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.2	3
665.97	0.0	0	666.48	**0.2**	**3**
665.98	0.0	0			

Summary for Reach 8R: 10" roof

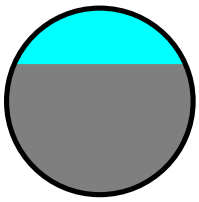
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 1050% of Manning's capacity
[76] Warning: Detained 0.076 af (Pond w/culvert advised)

Inflow Area = 0.339 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 2.87 cfs @ 12.17 hrs, Volume= 0.194 af
Outflow = 0.29 cfs @ 11.45 hrs, Volume= 0.194 af, Atten= 90%, Lag= 0.0 min

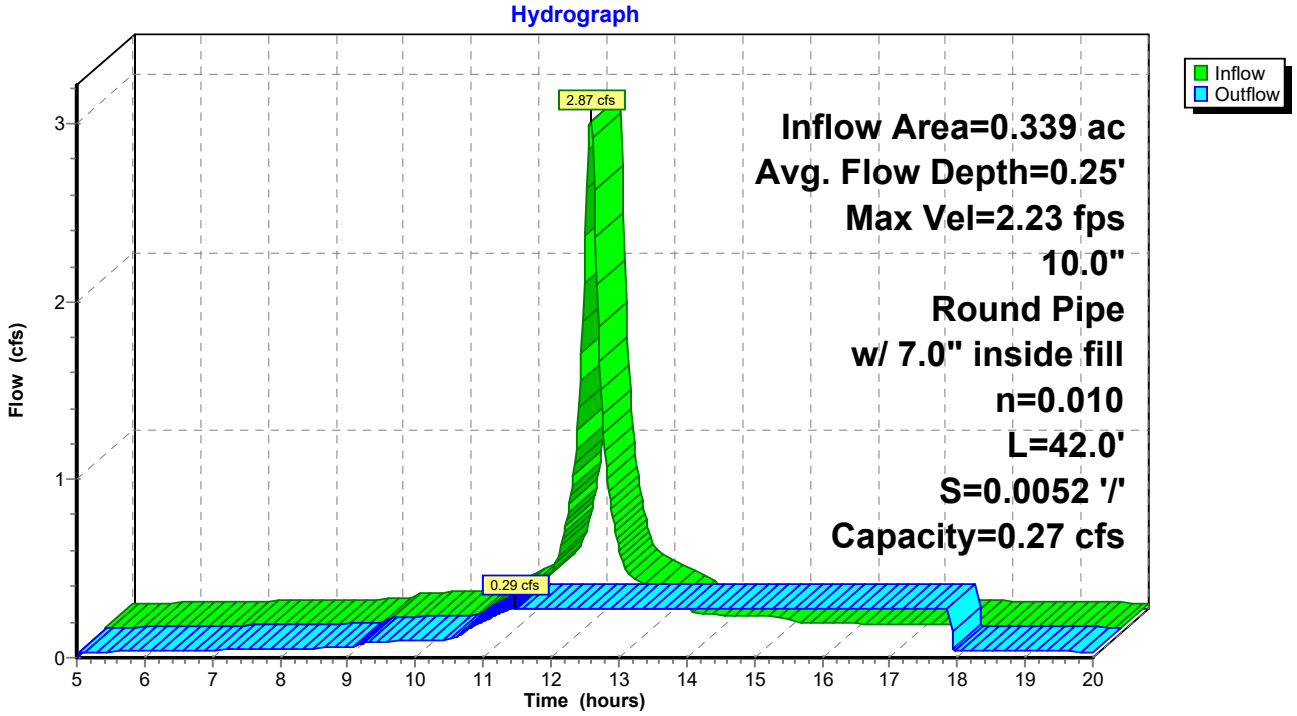
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.65 fps, Avg. Travel Time= 0.4 min

Peak Storage= 6 cf @ 11.48 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

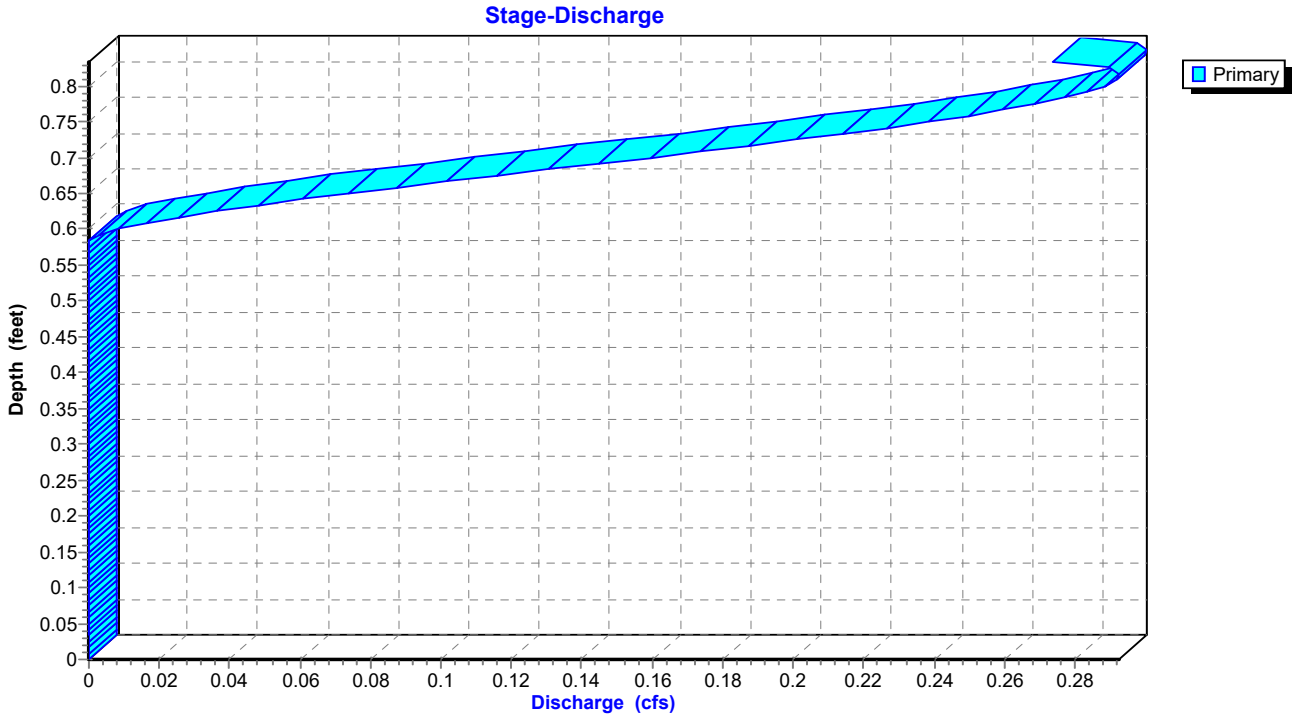
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 42.0' Slope= 0.0052 '/'
Inlet Invert= 665.80', Outlet Invert= 665.58'



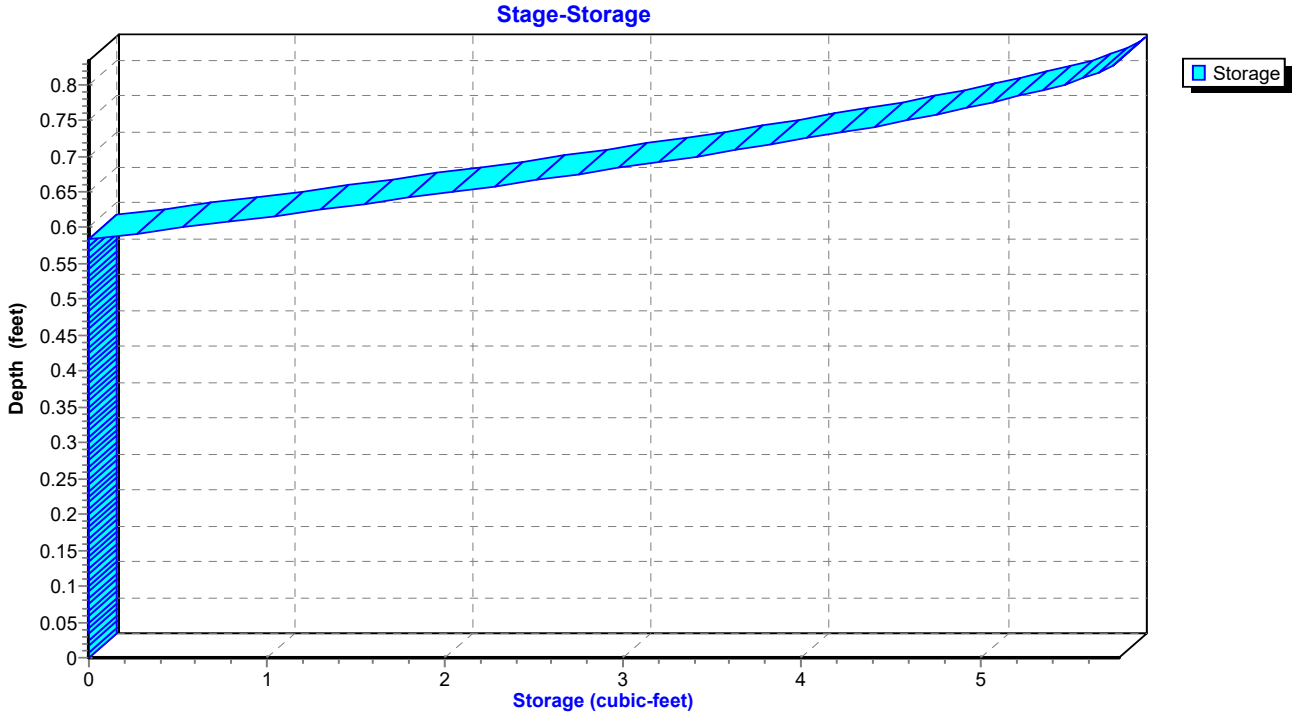
Reach 8R: 10" roof



Reach 8R: 10" roof



Reach 8R: 10" roof



Hydrograph for Reach 8R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.03	0	666.38	0.00
5.40	0.03	1	666.42	0.03
5.80	0.04	1	666.42	0.04
6.20	0.04	1	666.43	0.04
6.60	0.04	1	666.43	0.04
7.00	0.04	1	666.43	0.04
7.40	0.05	2	666.43	0.05
7.80	0.05	2	666.43	0.05
8.20	0.05	2	666.44	0.05
8.60	0.05	2	666.44	0.05
9.00	0.06	2	666.44	0.06
9.40	0.09	2	666.46	0.09
9.80	0.10	2	666.46	0.10
10.20	0.10	3	666.47	0.10
10.60	0.12	3	666.47	0.11
11.00	0.21	4	666.53	0.21
11.40	0.28	**5**	**666.59**	**0.28**
11.80	**0.60**	**6**	**666.63**	**0.27**
12.20	**2.72**	6	666.63	0.27
12.60	0.47	6	666.63	0.27
13.00	0.27	6	666.63	0.27
13.40	0.19	6	666.63	0.27
13.80	0.11	6	666.63	0.27
14.20	0.10	6	666.63	0.27
14.60	0.10	6	666.63	0.27
15.00	0.09	6	666.63	0.27
15.40	0.06	6	666.63	0.27
15.80	0.06	6	666.63	0.27
16.20	0.05	6	666.63	0.27
16.60	0.05	6	666.63	0.27
17.00	0.05	6	666.63	0.27
17.40	0.05	6	666.63	0.27
17.80	0.04	6	666.63	0.27
18.20	0.04	1	666.43	0.04
18.60	0.04	1	666.43	0.04
19.00	0.04	1	666.43	0.04
19.40	0.04	1	666.42	0.04
19.80	0.03	1	666.42	0.03

Stage-Discharge for Reach 8R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.35	0.00
666.40	0.68	0.01
666.41	0.90	0.02
666.42	1.09	0.03
666.43	1.25	0.04
666.44	1.39	0.06
666.45	1.52	0.07
666.46	1.63	0.09
666.47	1.73	0.11
666.48	1.81	0.12
666.49	1.89	0.14
666.50	1.96	0.16
666.51	2.02	0.18
666.52	2.07	0.19
666.53	2.12	0.21
666.54	2.15	0.22
666.55	2.18	0.24
666.56	2.21	0.25
666.57	2.22	0.26
666.58	**2.23**	0.27
666.59	2.23	0.28
666.60	2.21	0.29
666.61	2.19	**0.29**
666.62	2.15	0.29
666.63	2.04	0.28

Stage-Area-Storage for Reach 8R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	0
665.83	0.0	0	666.34	0.0	0
665.84	0.0	0	666.35	0.0	0
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	1
665.90	0.0	0	666.41	0.0	1
665.91	0.0	0	666.42	0.0	1
665.92	0.0	0	666.43	0.0	1
665.93	0.0	0	666.44	0.0	2
665.94	0.0	0	666.45	0.0	2
665.95	0.0	0	666.46	0.1	2
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	4
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	0.1	5
666.05	0.0	0	666.56	0.1	5
666.06	0.0	0	666.57	0.1	5
666.07	0.0	0	666.58	0.1	5
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	5
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	6
666.12	0.0	0	666.63	**0.1**	**6**
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			
666.23	0.0	0			
666.24	0.0	0			
666.25	0.0	0			
666.26	0.0	0			
666.27	0.0	0			
666.28	0.0	0			
666.29	0.0	0			
666.30	0.0	0			

Summary for Reach 9R: inlet 3 18"

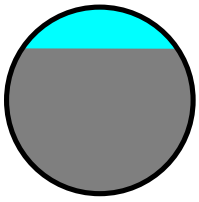
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 186% of Manning's capacity
[76] Warning: Detained 0.007 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 7R INLET depth by 0.32' @ 11.92 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 5.24" for 100-yr event
Inflow = 1.63 cfs @ 12.08 hrs, Volume= 0.335 af
Outflow = 0.88 cfs @ 11.94 hrs, Volume= 0.335 af, Atten= 46%, Lag= 0.0 min

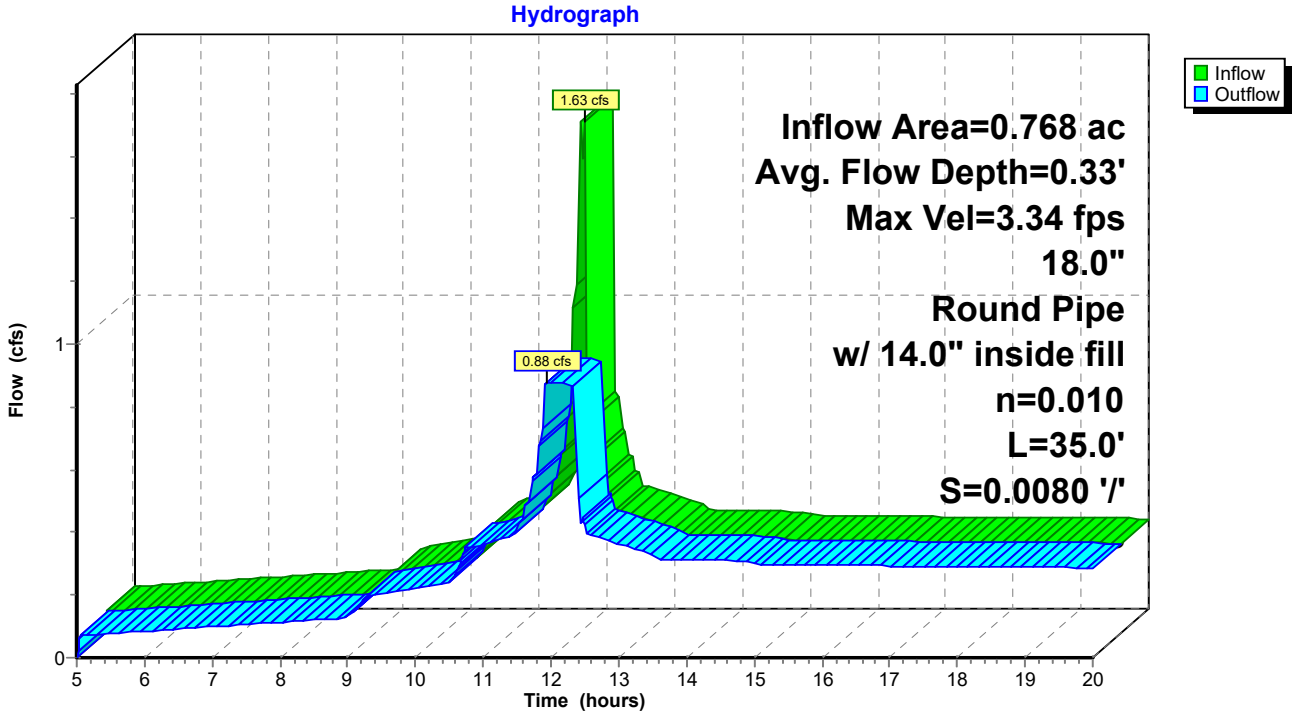
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.34 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.27 fps, Avg. Travel Time= 0.3 min

Peak Storage= 10 cf @ 11.92 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.88 cfs

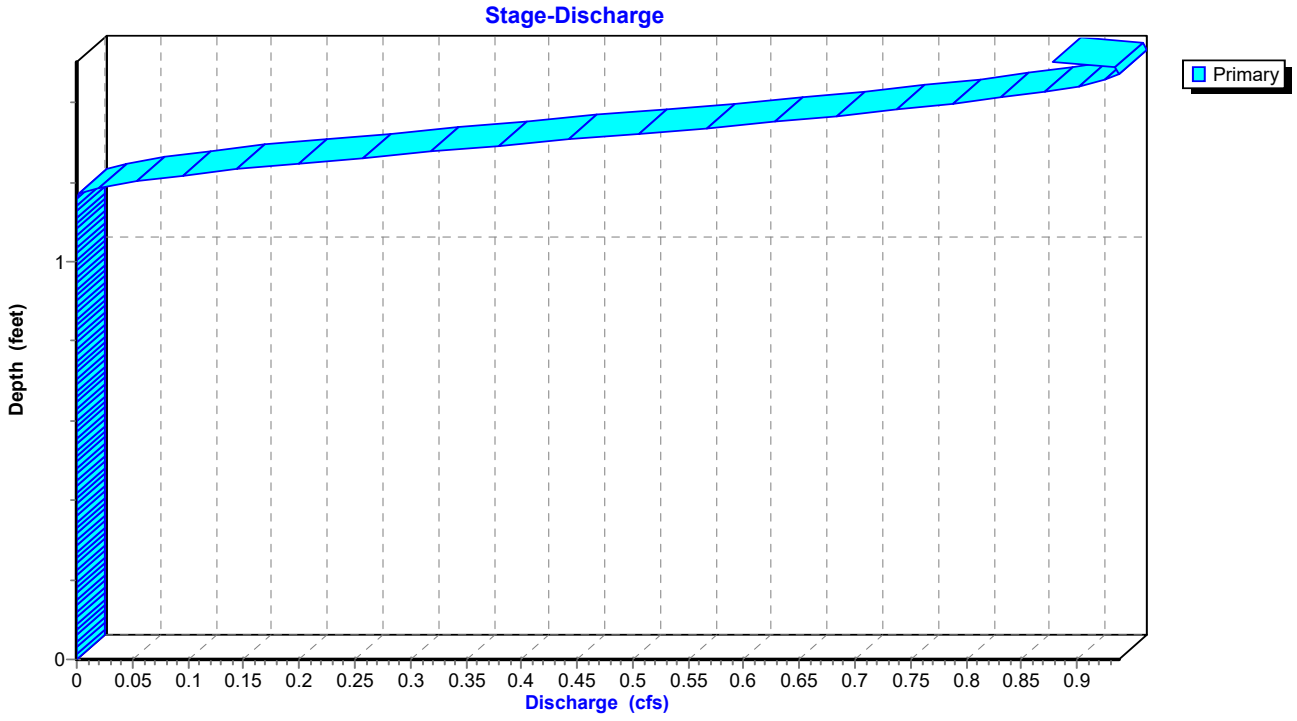
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 35.0' Slope= 0.0080 '/'
Inlet Invert= 665.30', Outlet Invert= 665.02'



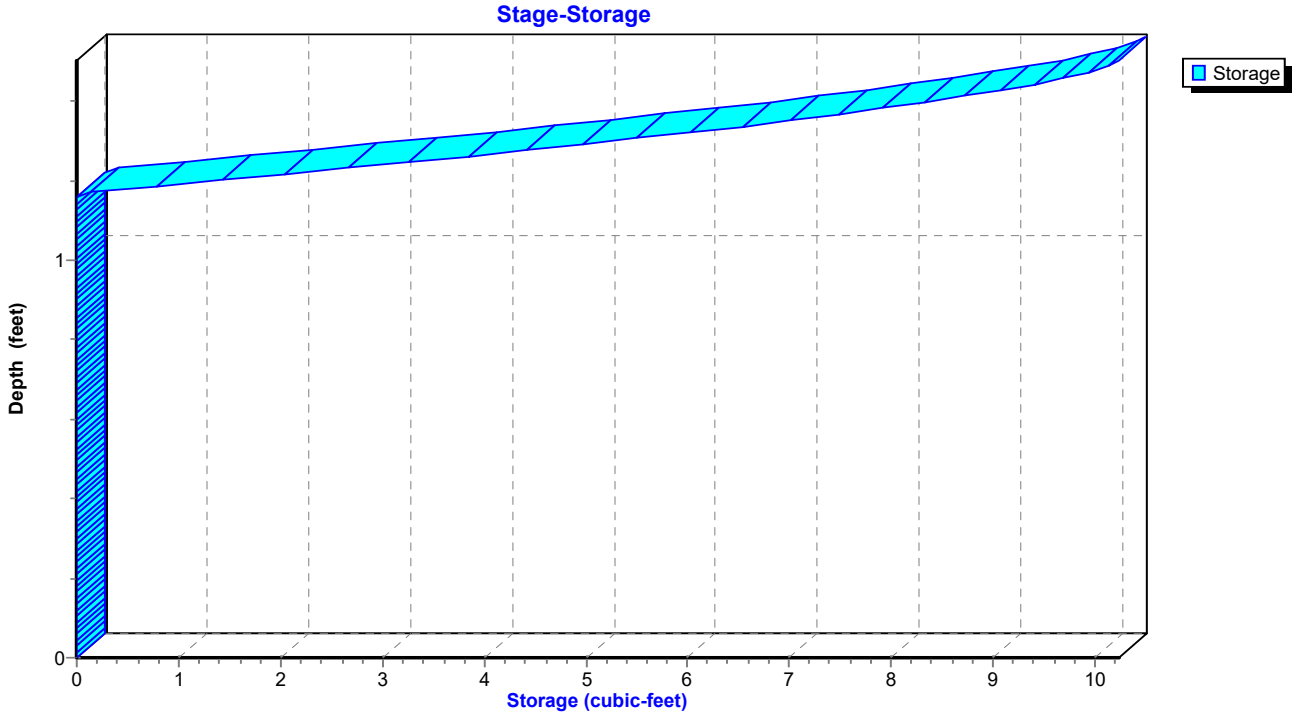
Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Hydrograph for Reach 9R: inlet 3 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.47	0.00
5.40	0.08	2	666.51	0.08
5.80	0.08	2	666.51	0.08
6.20	0.09	2	666.51	0.09
6.60	0.09	2	666.51	0.09
7.00	0.10	2	666.52	0.10
7.40	0.11	2	666.52	0.11
7.80	0.11	2	666.52	0.11
8.20	0.12	2	666.52	0.12
8.60	0.12	2	666.52	0.12
9.00	0.13	3	666.53	0.13
9.40	0.20	3	666.55	0.20
9.80	0.22	3	666.55	0.22
10.20	0.23	4	666.55	0.23
10.60	0.27	4	666.56	0.27
11.00	0.36	5	666.59	0.36
11.40	0.39	5	666.59	0.39
11.80	**0.63**	**7**	**666.65**	**0.61**
12.20	**0.63**	**10**	**666.80**	**0.88**
12.60	0.39	5	666.59	0.39
13.00	0.36	5	666.59	0.36
13.40	0.34	5	666.58	0.34
13.80	0.31	4	666.57	0.31
14.20	0.31	4	666.57	0.31
14.60	0.31	4	666.57	0.31
15.00	0.30	4	666.57	0.30
15.40	0.30	4	666.57	0.30
15.80	0.30	4	666.57	0.30
16.20	0.29	4	666.57	0.29
16.60	0.29	4	666.57	0.29
17.00	0.29	4	666.57	0.29
17.40	0.29	4	666.57	0.29
17.80	0.29	4	666.57	0.29
18.20	0.29	4	666.57	0.29
18.60	0.29	4	666.57	0.29
19.00	0.29	4	666.57	0.29
19.40	0.29	4	666.57	0.29
19.80	0.29	4	666.57	0.29

Stage-Discharge for Reach 9R: inlet 3 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.10	0.00
666.47	0.29	0.00
666.48	0.70	0.01
666.49	1.03	0.03
666.50	1.30	0.05
666.51	1.52	0.08
666.52	1.72	0.11
666.53	1.90	0.14
666.54	2.06	0.18
666.55	2.21	0.22
666.56	2.34	0.26
666.57	2.46	0.30
666.58	2.57	0.34
666.59	2.68	0.38
666.60	2.77	0.42
666.61	2.86	0.46
666.62	2.94	0.51
666.63	3.01	0.55
666.64	3.07	0.59
666.65	3.13	0.63
666.66	3.18	0.67
666.67	3.22	0.70
666.68	3.26	0.74
666.69	3.29	0.77
666.70	3.32	0.80
666.71	3.34	0.83
666.72	3.35	0.86
666.73	3.36	0.88
666.74	**3.36**	0.90
666.75	3.35	0.92
666.76	3.33	0.93
666.77	3.30	**0.94**
666.78	3.25	0.94
666.79	3.15	0.92
666.80	3.01	0.88

Stage-Area-Storage for Reach 9R: inlet 3 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	1
666.50	0.0	1
666.52	0.1	2
666.54	0.1	3
666.56	0.1	4
666.58	0.1	5
666.60	0.2	5
666.62	0.2	6
666.64	0.2	7
666.66	0.2	7
666.68	0.2	8
666.70	0.2	8
666.72	0.3	9
666.74	0.3	9
666.76	0.3	10
666.78	0.3	10
666.80	**0.3**	**10**

Summary for Reach 10R: MH7 18"

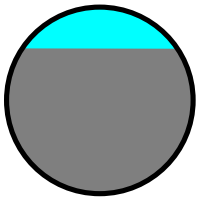
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 126% of Manning's capacity
[76] Warning: Detained 0.008 af (Pond w/culvert advised)
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=4)
[62] Hint: Exceeded Reach 9R OUTLET depth by 0.21' @ 12.70 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 5.24" for 100-yr event
Inflow = 0.88 cfs @ 11.94 hrs, Volume= 0.335 af
Outflow = 0.76 cfs @ 12.71 hrs, Volume= 0.335 af, Atten= 14%, Lag= 46.3 min

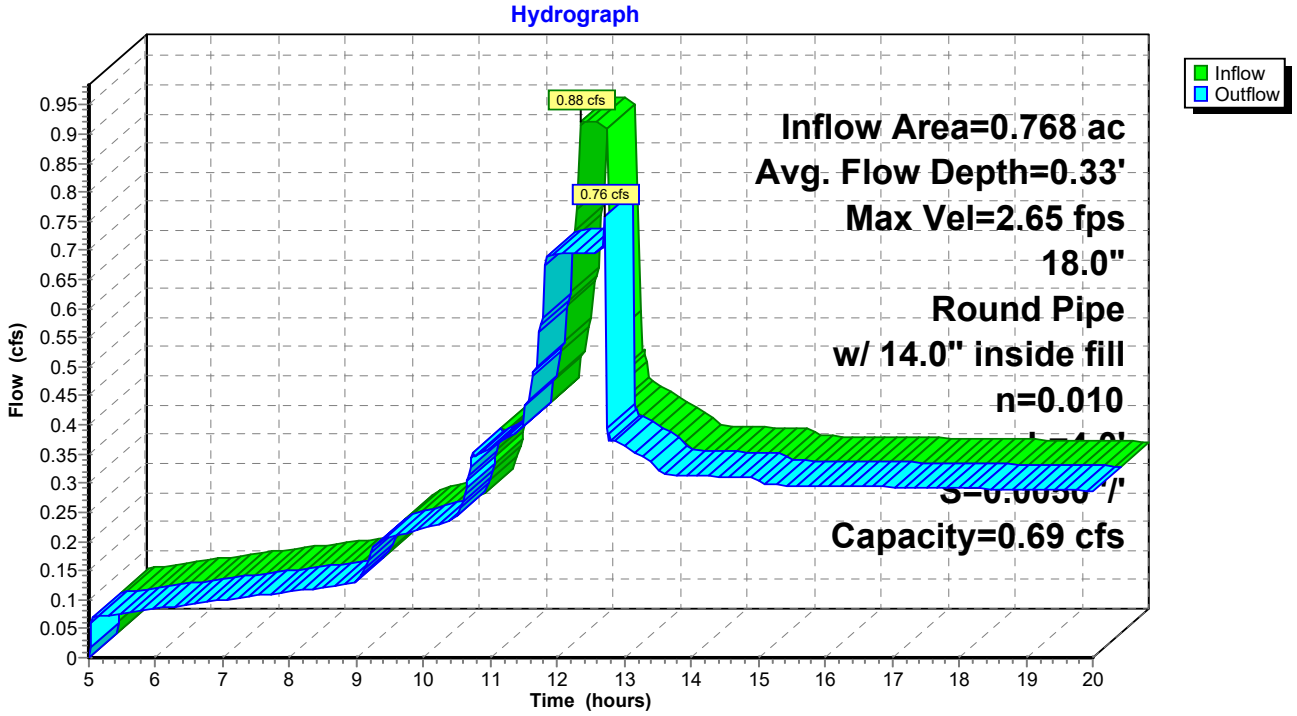
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.65 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 0.0 min

Peak Storage= 1 cf @ 11.90 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

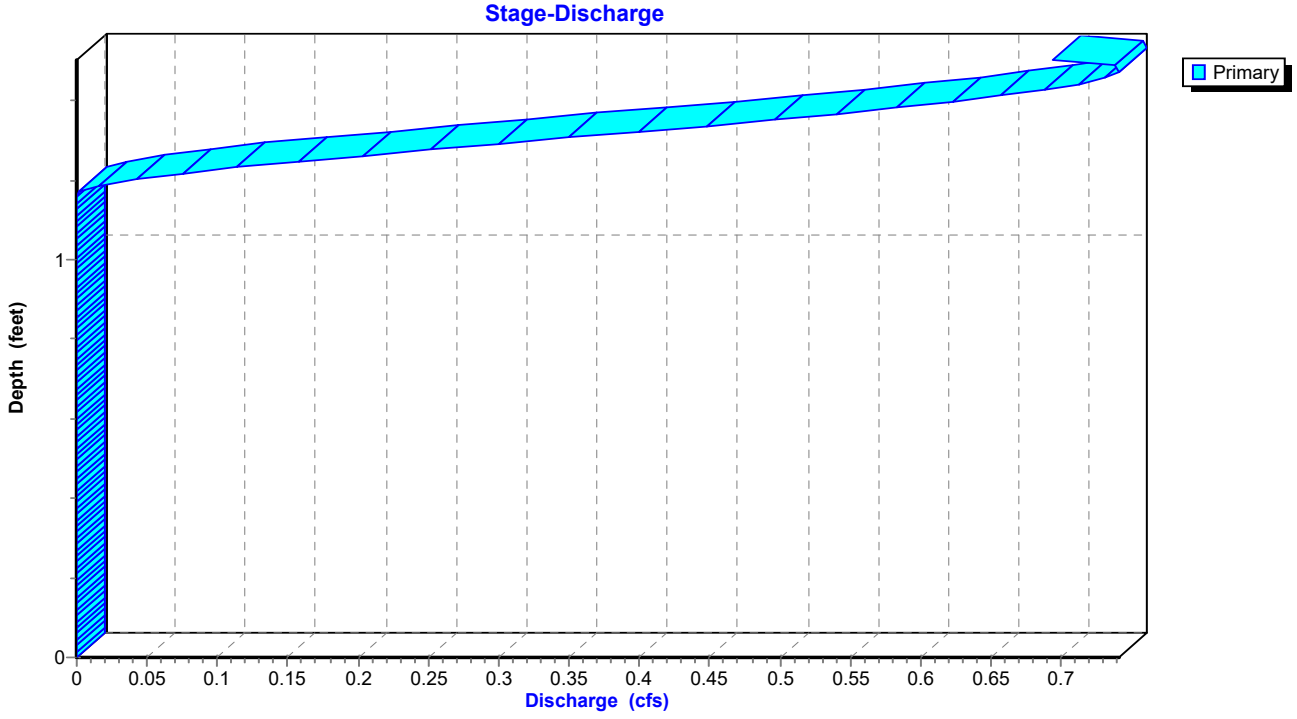
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 4.0' Slope= 0.0050 '/'
Inlet Invert= 665.02', Outlet Invert= 665.00'



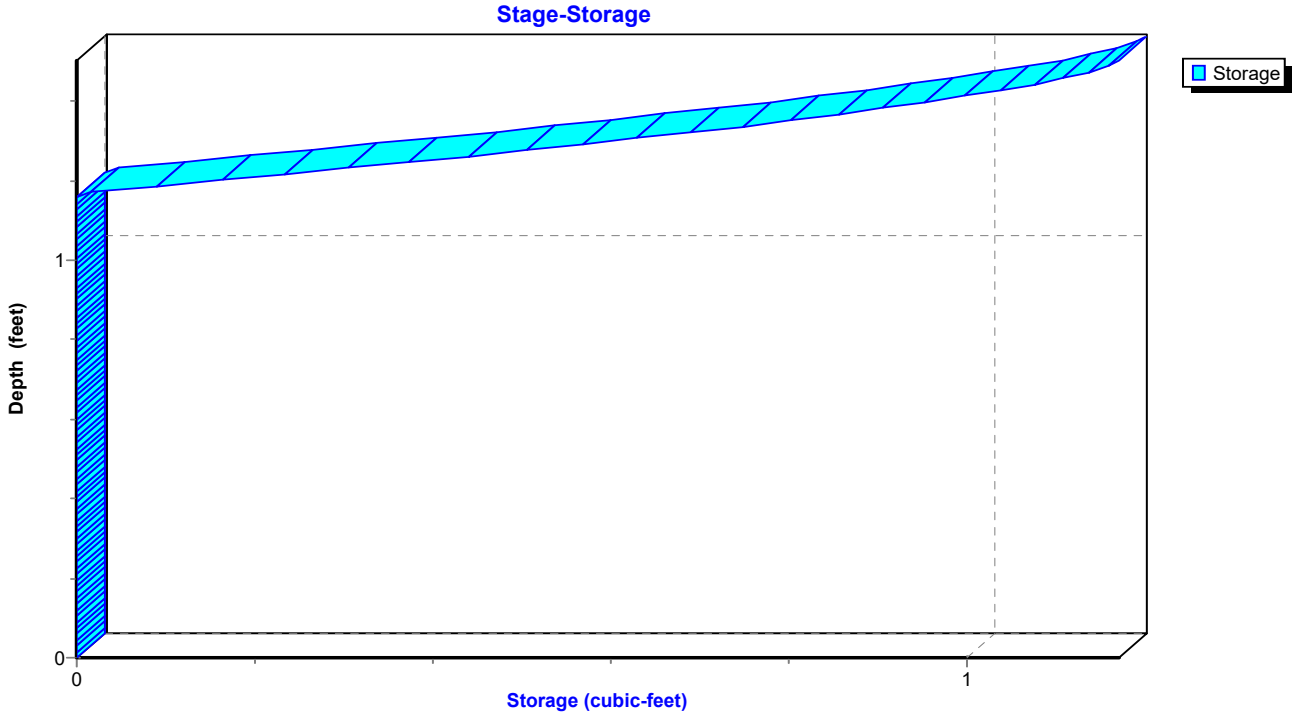
Reach 10R: MH7 18"



Reach 10R: MH7 18"



Reach 10R: MH7 18"



Hydrograph for Reach 10R: MH7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.19	0.00
5.40	0.08	0	666.23	0.08
5.80	0.08	0	666.24	0.08
6.20	0.09	0	666.24	0.09
6.60	0.09	0	666.24	0.09
7.00	0.10	0	666.24	0.10
7.40	0.11	0	666.25	0.11
7.80	0.11	0	666.25	0.11
8.20	0.12	0	666.25	0.12
8.60	0.12	0	666.25	0.12
9.00	0.13	0	666.26	0.13
9.40	0.20	0	666.28	0.20
9.80	0.22	0	666.28	0.22
10.20	0.23	0	666.29	0.23
10.60	0.27	1	666.30	0.27
11.00	0.36	1	666.33	0.36
11.40	0.39	1	666.34	0.39
11.80	**0.61**	**1**	**666.41**	0.61
12.20	**0.88**	**1**	**666.52**	0.69
12.60	0.39	1	666.52	**0.69**
13.00	0.36	1	666.33	**0.36**
13.40	0.34	1	666.32	0.34
13.80	0.31	1	666.31	0.31
14.20	0.31	1	666.31	0.31
14.60	0.31	1	666.31	0.31
15.00	0.30	1	666.31	0.30
15.40	0.30	1	666.31	0.30
15.80	0.30	1	666.31	0.30
16.20	0.29	1	666.31	0.29
16.60	0.29	1	666.31	0.29
17.00	0.29	1	666.31	0.29
17.40	0.29	1	666.31	0.29
17.80	0.29	1	666.31	0.29
18.20	0.29	1	666.31	0.29
18.60	0.29	1	666.31	0.29
19.00	0.29	1	666.31	0.29
19.40	0.29	1	666.31	0.29
19.80	0.29	1	666.31	0.29

Stage-Discharge for Reach 10R: MH7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.02	0.00	0.00	665.53	0.00	0.00	666.04	0.00	0.00
665.03	0.00	0.00	665.54	0.00	0.00	666.05	0.00	0.00
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.08	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.23	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.55	0.01
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.82	0.02
665.20	0.00	0.00	665.71	0.00	0.00	666.22	1.03	0.04
665.21	0.00	0.00	665.72	0.00	0.00	666.23	1.20	0.06
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.36	0.09
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.50	0.11
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.63	0.14
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.74	0.17
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.85	0.20
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.95	0.24
665.28	0.00	0.00	665.79	0.00	0.00	666.30	2.04	0.27
665.29	0.00	0.00	665.80	0.00	0.00	666.31	2.12	0.30
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.19	0.33
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.26	0.37
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.32	0.40
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.38	0.43
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.43	0.46
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.47	0.50
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.51	0.53
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.55	0.56
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.58	0.58
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.60	0.61
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.62	0.63
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.64	0.66
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.65	0.68
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.65	0.70
665.44	0.00	0.00	665.95	0.00	0.00	666.46	**2.65**	0.71
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.73
665.46	0.00	0.00	665.97	0.00	0.00	666.48	2.63	0.73
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.61	**0.74**
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.57	0.74
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.49	0.72
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.38	0.69
665.51	0.00	0.00	666.02	0.00	0.00			
665.52	0.00	0.00	666.03	0.00	0.00			

Stage-Area-Storage for Reach 10R: MH7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.02	0.0	0
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.1	0
666.26	0.1	0
666.28	0.1	0
666.30	0.1	1
666.32	0.2	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	1
666.40	0.2	1
666.42	0.2	1
666.44	0.3	1
666.46	0.3	1
666.48	0.3	1
666.50	0.3	1
666.52	**0.3**	**1**

Summary for Reach 11R: inlet 7 18"

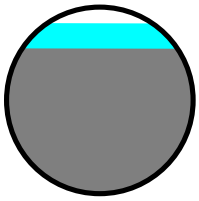
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 0.56 cfs @ 12.33 hrs, Volume= 0.057 af
Outflow = 0.56 cfs @ 12.34 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.6 min

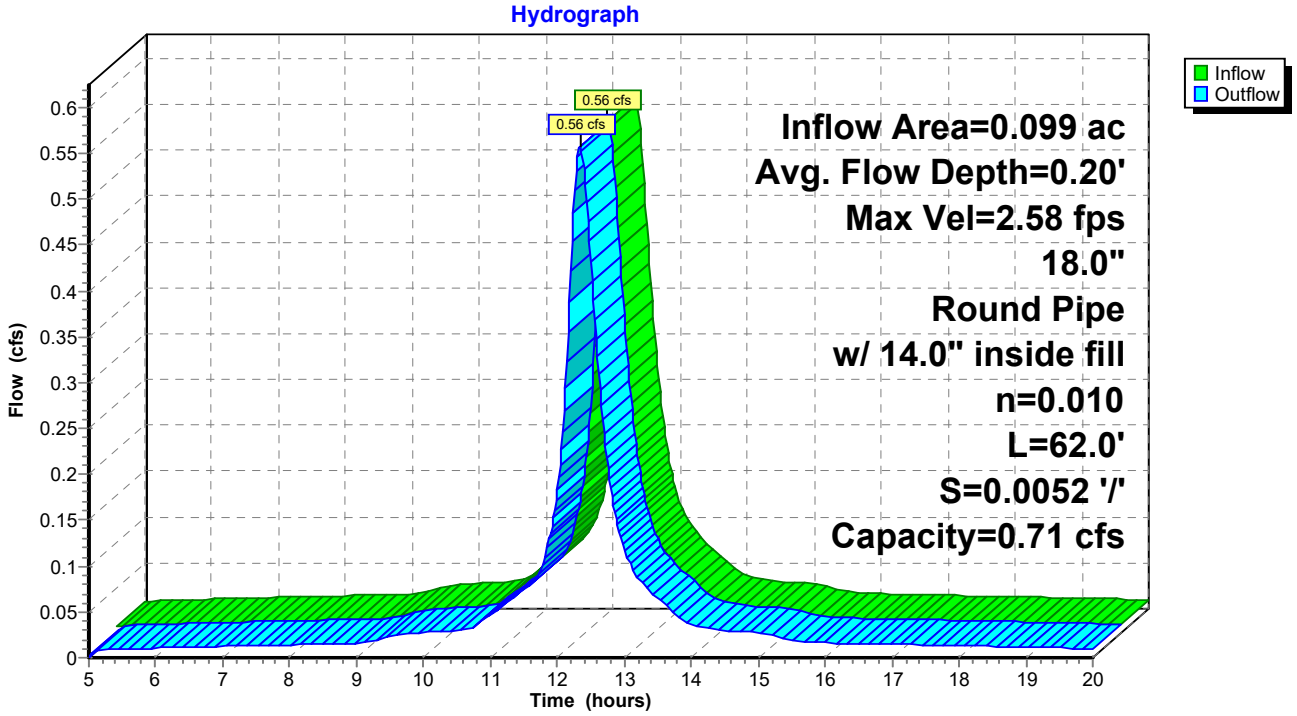
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.58 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.92 fps, Avg. Travel Time= 1.1 min

Peak Storage= 13 cf @ 12.33 hrs
Average Depth at Peak Storage= 1.37' above invert (0.20' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.71 cfs

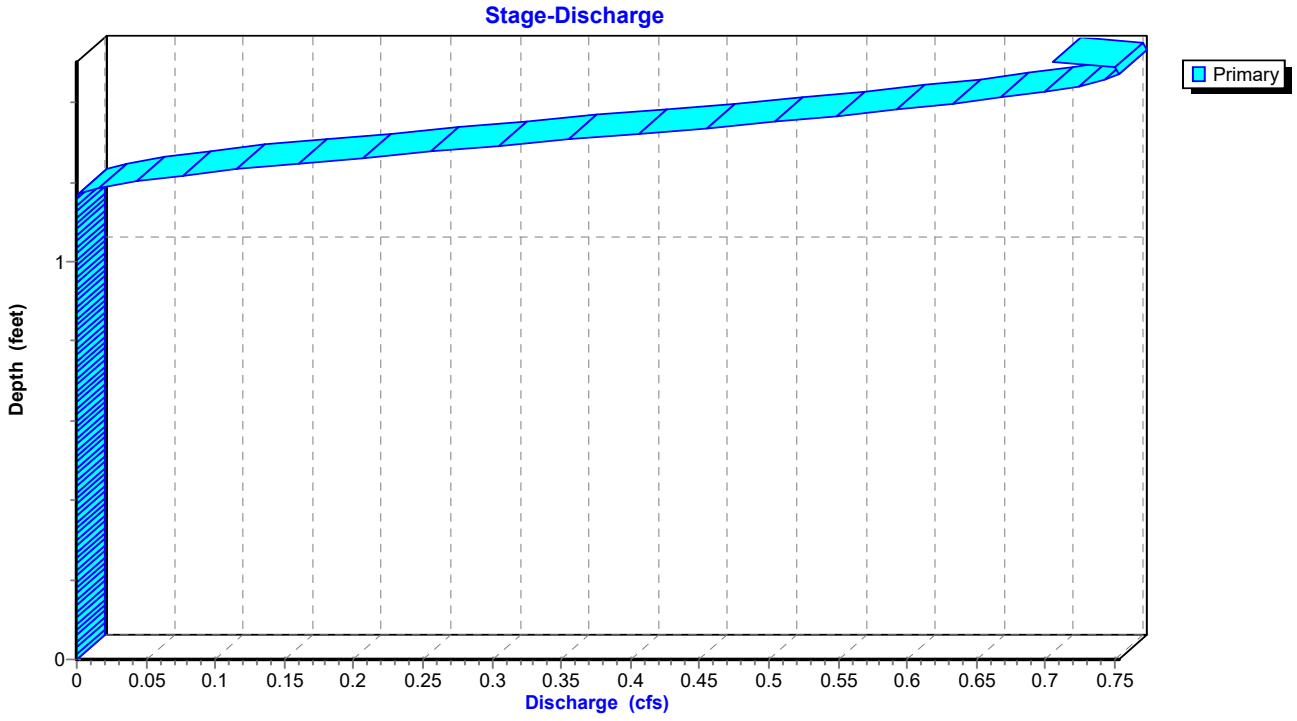
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0052 '/'
Inlet Invert= 665.36', Outlet Invert= 665.04'



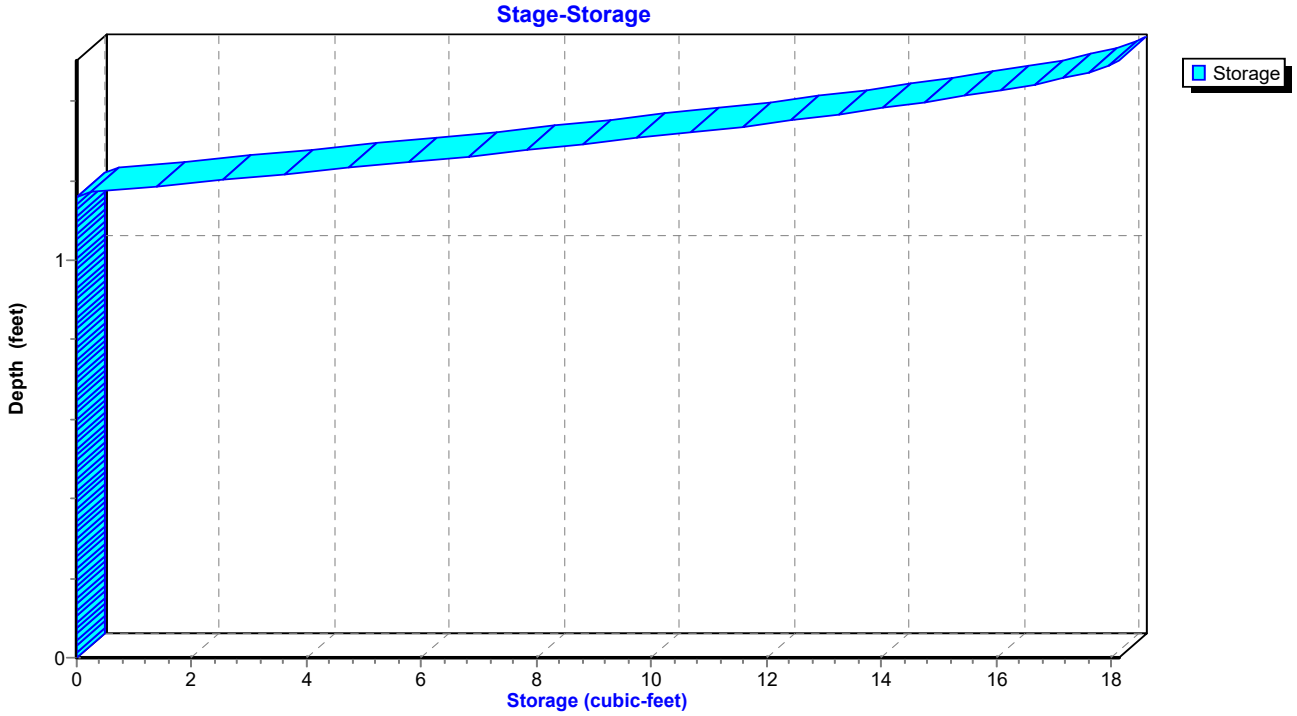
Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Hydrograph for Reach 11R: inlet 7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.53	0.00
5.40	0.01	1	666.54	0.01
5.80	0.01	1	666.54	0.01
6.20	0.01	1	666.54	0.01
6.60	0.01	1	666.54	0.01
7.00	0.01	1	666.54	0.01
7.40	0.01	1	666.54	0.01
7.80	0.01	1	666.54	0.01
8.20	0.01	1	666.54	0.01
8.60	0.02	1	666.54	0.02
9.00	0.02	1	666.54	0.02
9.40	0.02	2	666.55	0.02
9.80	0.03	2	666.55	0.03
10.20	0.03	2	666.55	0.03
10.60	0.03	2	666.55	0.03
11.00	0.05	3	666.56	0.05
11.40	0.07	3	666.57	0.07
11.80	0.11	5	666.59	0.11
12.20	**0.44**	**11**	**666.69**	**0.42**
12.60	**0.32**	**9**	**666.65**	**0.33**
13.00	0.12	5	666.59	0.12
13.40	0.07	3	666.57	0.07
13.80	0.04	3	666.56	0.05
14.20	0.03	2	666.55	0.03
14.60	0.03	2	666.55	0.03
15.00	0.03	2	666.55	0.03
15.40	0.02	2	666.55	0.02
15.80	0.02	1	666.55	0.02
16.20	0.02	1	666.54	0.02
16.60	0.02	1	666.54	0.02
17.00	0.01	1	666.54	0.01
17.40	0.01	1	666.54	0.01
17.80	0.01	1	666.54	0.01
18.20	0.01	1	666.54	0.01
18.60	0.01	1	666.54	0.01
19.00	0.01	1	666.54	0.01
19.40	0.01	1	666.54	0.01
19.80	0.01	1	666.54	0.01

Stage-Discharge for Reach 11R: inlet 7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.08	0.00
666.53	0.24	0.00
666.54	0.56	0.01
666.55	0.83	0.03
666.56	1.05	0.04
666.57	1.22	0.07
666.58	1.38	0.09
666.59	1.53	0.12
666.60	1.65	0.15
666.61	1.77	0.18
666.62	1.88	0.21
666.63	1.98	0.24
666.64	2.07	0.27
666.65	2.15	0.31
666.66	2.23	0.34
666.67	2.29	0.37
666.68	2.36	0.41
666.69	2.41	0.44
666.70	2.47	0.47
666.71	2.51	0.50
666.72	2.55	0.53
666.73	2.59	0.56
666.74	2.62	0.59
666.75	2.65	0.62
666.76	2.67	0.64
666.77	2.68	0.67
666.78	2.69	0.69
666.79	2.70	0.71
666.80	**2.70**	0.72
666.81	2.69	0.74
666.82	2.67	0.75
666.83	2.65	**0.75**
666.84	2.61	0.75
666.85	2.53	0.74
666.86	2.41	0.71

Stage-Area-Storage for Reach 11R: inlet 7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	0
666.50	0.0	0
666.52	0.0	0
666.54	0.0	1
666.56	0.0	3
666.58	0.1	4
666.60	0.1	5
666.62	0.1	7
666.64	0.1	8
666.66	0.2	9
666.68	0.2	11
666.70	0.2	12
666.72	0.2	13
666.74	0.2	14
666.76	0.2	15
666.78	0.3	16
666.80	0.3	17
666.82	0.3	17
666.84	0.3	18
666.86	**0.3**	**18**

Summary for Reach 12R: MH6 18"

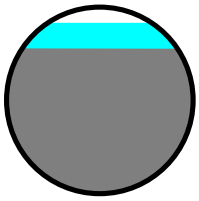
[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach 11R outlet invert by 1.37' @ 12.34 hrs

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 0.56 cfs @ 12.34 hrs, Volume= 0.057 af
Outflow = 0.56 cfs @ 12.34 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.1 min

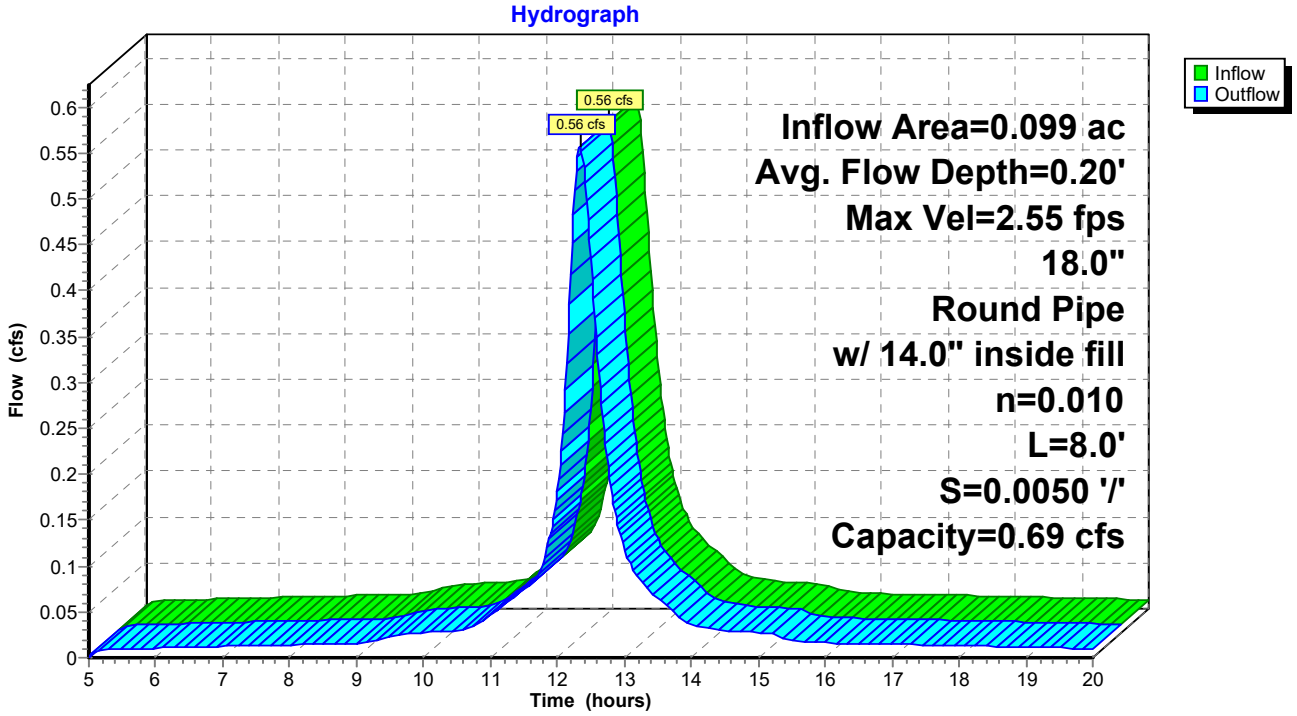
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.55 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.91 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 12.34 hrs
Average Depth at Peak Storage= 1.37' above invert (0.20' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

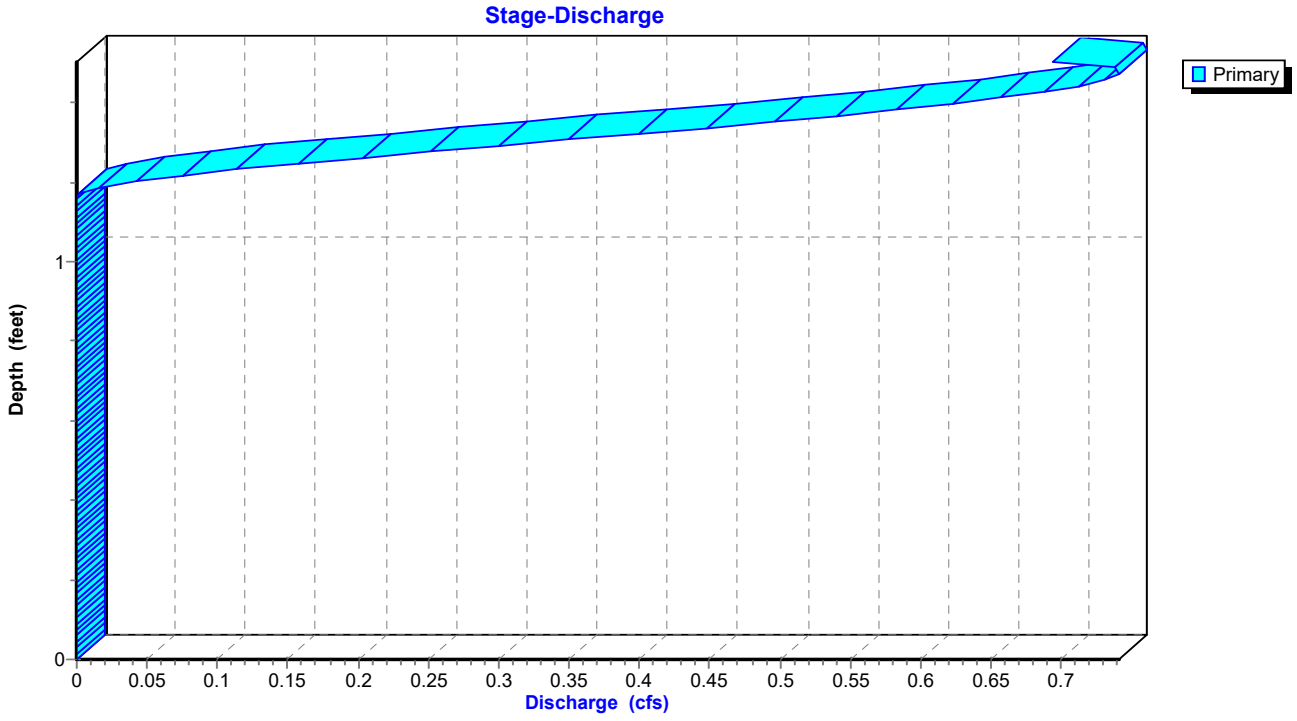
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 8.0' Slope= 0.0050 '/'
Inlet Invert= 665.04', Outlet Invert= 665.00'



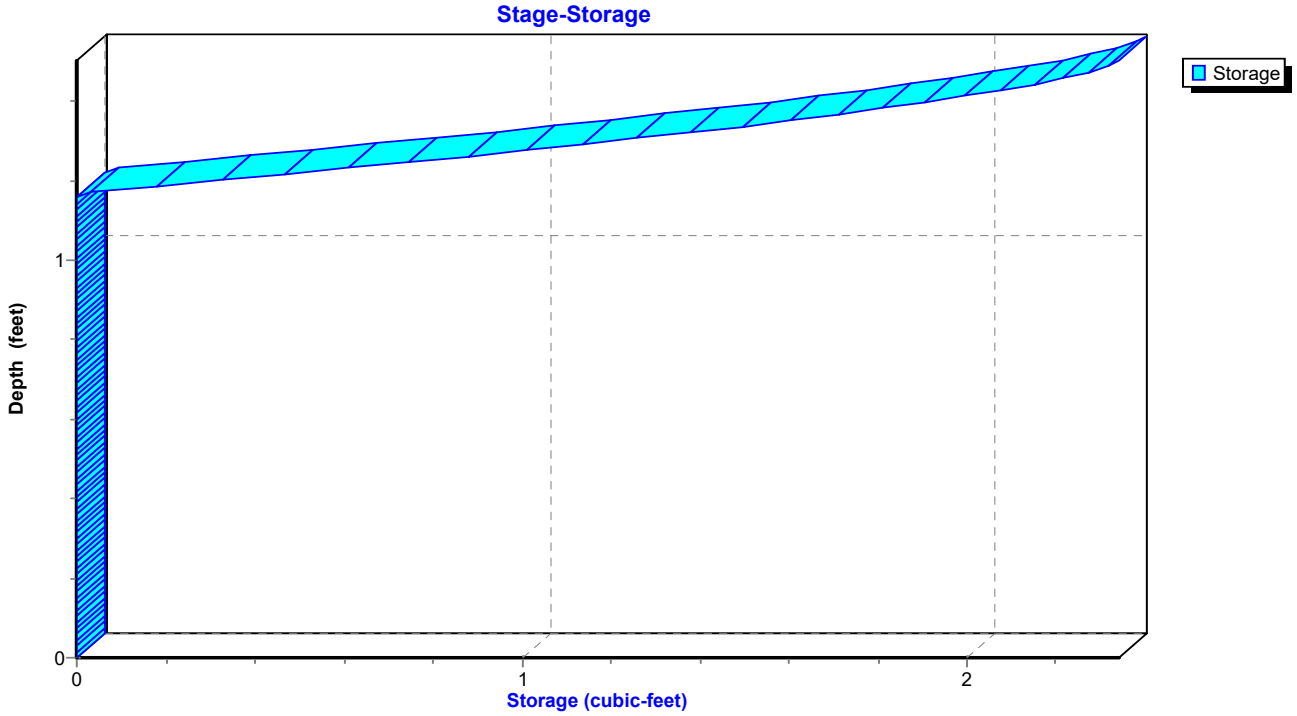
Reach 12R: MH6 18"



Reach 12R: MH6 18"



Reach 12R: MH6 18"



Hydrograph for Reach 12R: MH6 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.21	0.00
5.40	0.01	0	666.22	0.01
5.80	0.01	0	666.22	0.01
6.20	0.01	0	666.22	0.01
6.60	0.01	0	666.22	0.01
7.00	0.01	0	666.22	0.01
7.40	0.01	0	666.22	0.01
7.80	0.01	0	666.22	0.01
8.20	0.01	0	666.22	0.01
8.60	0.02	0	666.22	0.02
9.00	0.02	0	666.22	0.02
9.40	0.02	0	666.23	0.02
9.80	0.03	0	666.23	0.03
10.20	0.03	0	666.23	0.03
10.60	0.03	0	666.23	0.03
11.00	0.05	0	666.24	0.05
11.40	0.07	0	666.25	0.07
11.80	0.11	1	666.27	0.11
12.20	**0.42**	**1**	**666.37**	**0.42**
12.60	**0.33**	**1**	**666.34**	**0.33**
13.00	0.12	1	666.27	0.12
13.40	0.07	0	666.25	0.07
13.80	0.05	0	666.24	0.05
14.20	0.03	0	666.23	0.03
14.60	0.03	0	666.23	0.03
15.00	0.03	0	666.23	0.03
15.40	0.02	0	666.23	0.02
15.80	0.02	0	666.23	0.02
16.20	0.02	0	666.23	0.02
16.60	0.02	0	666.22	0.02
17.00	0.01	0	666.22	0.01
17.40	0.01	0	666.22	0.01
17.80	0.01	0	666.22	0.01
18.20	0.01	0	666.22	0.01
18.60	0.01	0	666.22	0.01
19.00	0.01	0	666.22	0.01
19.40	0.01	0	666.22	0.01
19.80	0.01	0	666.22	0.01

Stage-Discharge for Reach 12R: MH6 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.04	0.00	0.00
665.05	0.00	0.00
665.06	0.00	0.00
665.07	0.00	0.00
665.08	0.00	0.00
665.09	0.00	0.00
665.10	0.00	0.00
665.11	0.00	0.00
665.12	0.00	0.00
665.13	0.00	0.00
665.14	0.00	0.00
665.15	0.00	0.00
665.16	0.00	0.00
665.17	0.00	0.00
665.18	0.00	0.00
665.19	0.00	0.00
665.20	0.00	0.00
665.21	0.00	0.00
665.22	0.00	0.00
665.23	0.00	0.00
665.24	0.00	0.00
665.25	0.00	0.00
665.26	0.00	0.00
665.27	0.00	0.00
665.28	0.00	0.00
665.29	0.00	0.00
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.08	0.00
666.21	0.23	0.00
666.22	0.55	0.01
666.23	0.82	0.02
666.24	1.03	0.04
666.25	1.20	0.06
666.26	1.36	0.09
666.27	1.50	0.11
666.28	1.63	0.14
666.29	1.74	0.17
666.30	1.85	0.20
666.31	1.95	0.24
666.32	2.04	0.27
666.33	2.12	0.30
666.34	2.19	0.33
666.35	2.26	0.37
666.36	2.32	0.40
666.37	2.38	0.43
666.38	2.43	0.46
666.39	2.47	0.50
666.40	2.51	0.53
666.41	2.55	0.56
666.42	2.58	0.58
666.43	2.60	0.61
666.44	2.62	0.63
666.45	2.64	0.66
666.46	2.65	0.68
666.47	2.65	0.70
666.48	**2.65**	0.71
666.49	2.65	0.73
666.50	2.63	0.73
666.51	2.61	**0.74**
666.52	2.57	0.74
666.53	2.49	0.72
666.54	2.38	0.69

Stage-Area-Storage for Reach 12R: MH6 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.1	1
666.28	0.1	1
666.30	0.1	1
666.32	0.1	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	2
666.40	0.2	2
666.42	0.2	2
666.44	0.2	2
666.46	0.3	2
666.48	0.3	2
666.50	0.3	2
666.52	0.3	2
666.54	**0.3**	**2**

Summary for Reach 13R: to isolator 6"

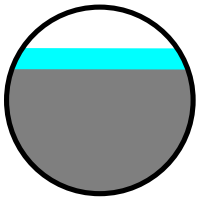
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.041 ac, 78.05% Impervious, Inflow Depth > 5.51" for 100-yr event
Inflow = 0.20 cfs @ 12.36 hrs, Volume= 0.019 af
Outflow = 0.20 cfs @ 12.36 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min

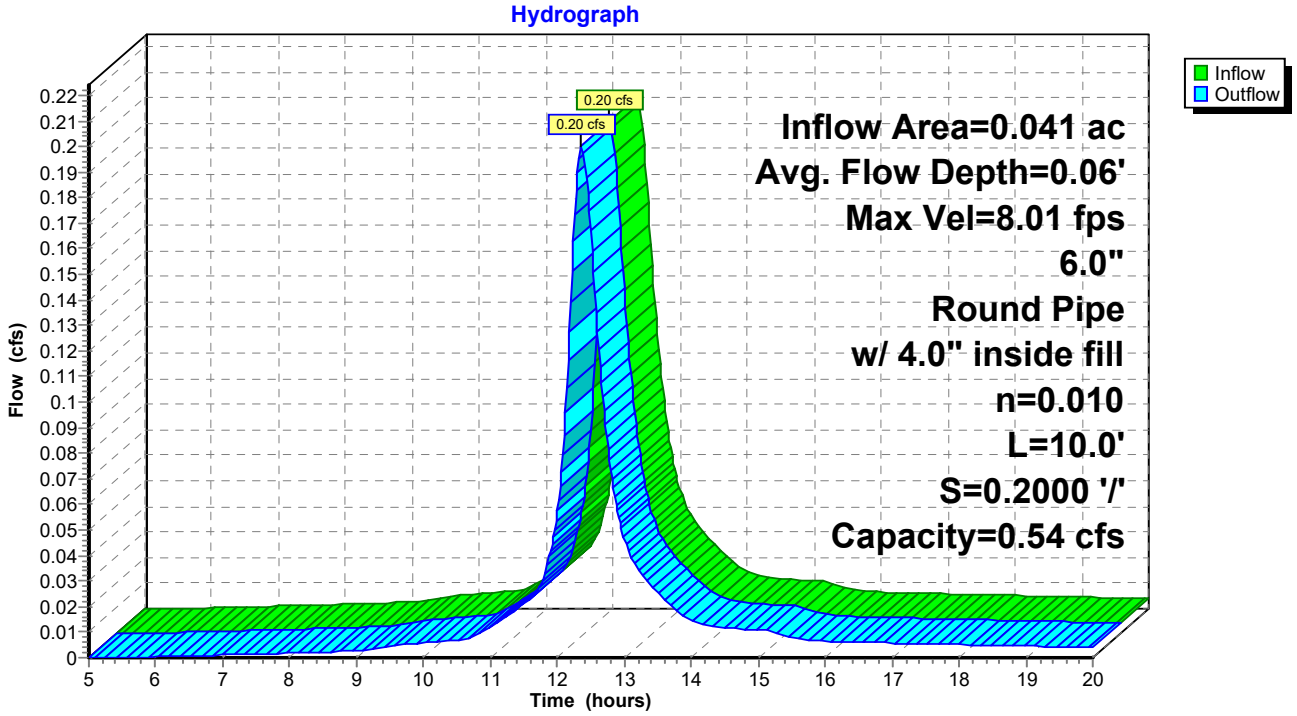
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 8.01 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.55 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.36 hrs
Average Depth at Peak Storage= 0.39' above invert (0.06' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

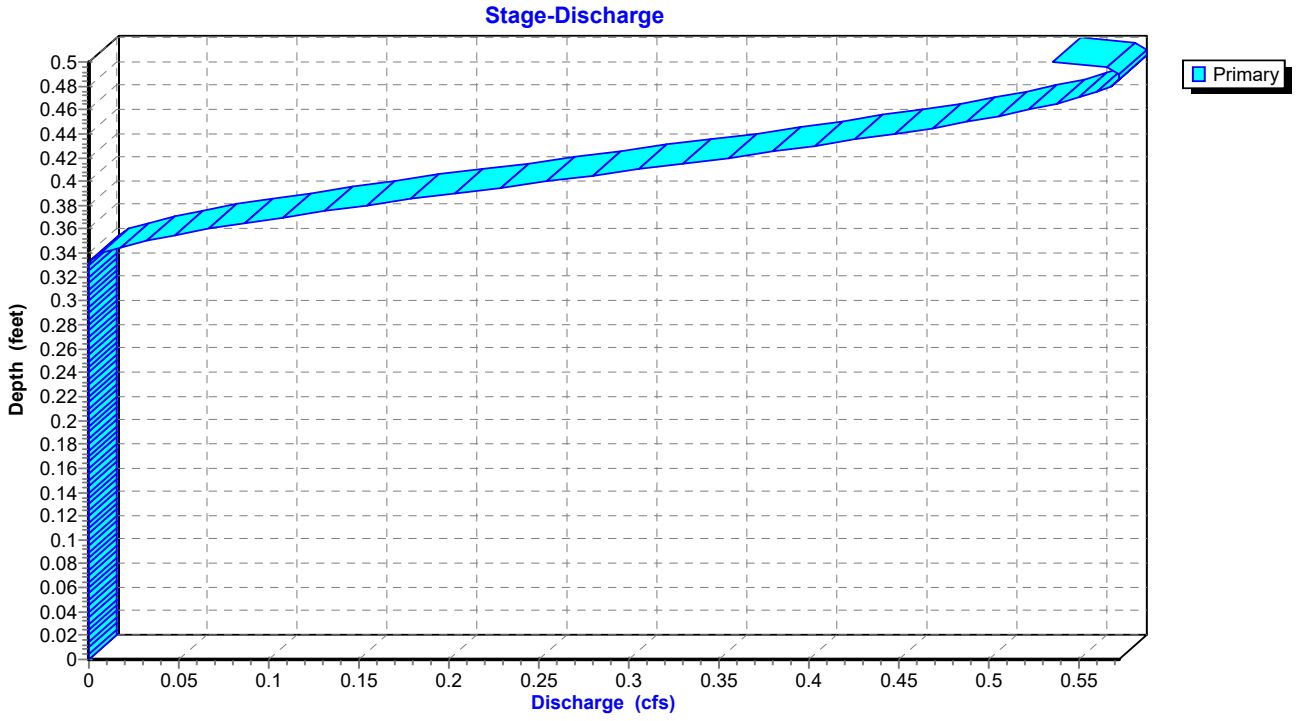
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



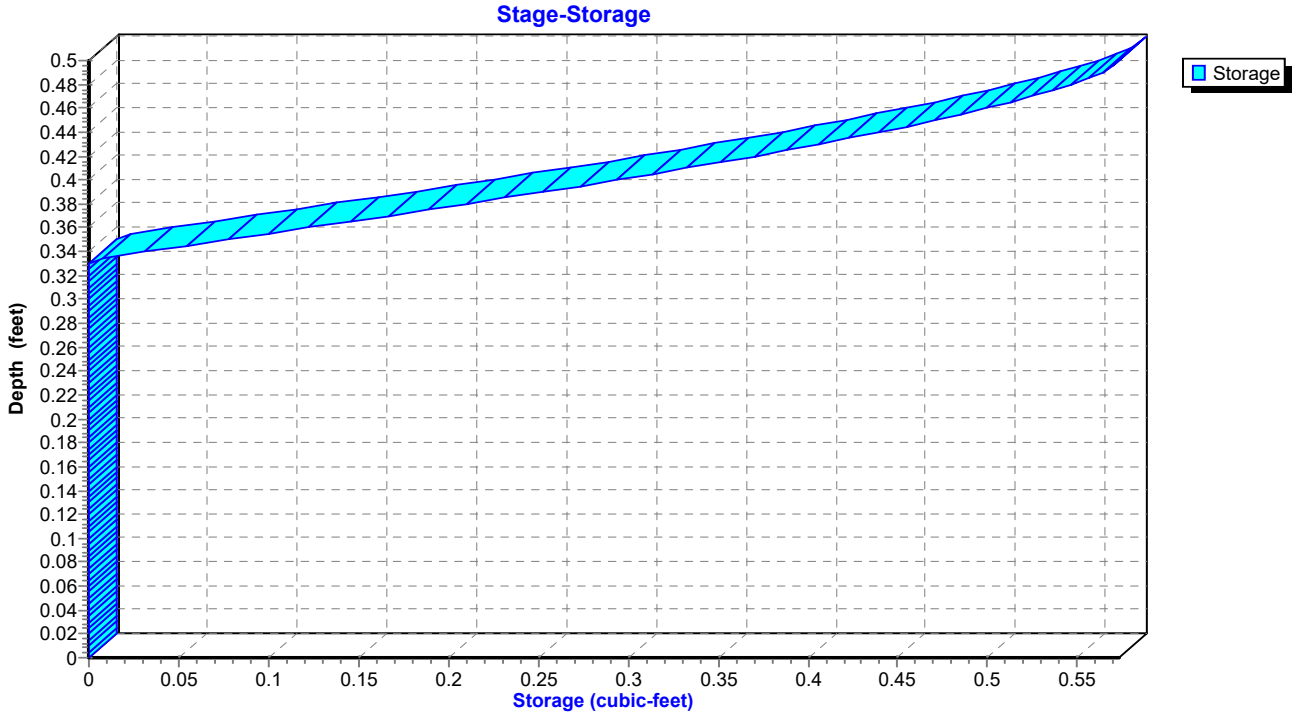
Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Hydrograph for Reach 13R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.34	0.00
7.00	0.00	0	668.34	0.00
7.40	0.00	0	668.34	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.01	0	668.34	0.01
10.20	0.01	0	668.34	0.01
10.60	0.01	0	668.34	0.01
11.00	0.01	0	668.34	0.01
11.40	0.02	0	668.35	0.02
11.80	0.03	0	668.35	0.03
12.20	**0.14**	**0**	**668.38**	**0.14**
12.60	**0.13**	**0**	**668.37**	**0.13**
13.00	0.05	0	668.35	0.05
13.40	0.03	0	668.35	0.03
13.80	0.02	0	668.35	0.02
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.01	0	668.34	0.01
15.80	0.01	0	668.34	0.01
16.20	0.01	0	668.34	0.01
16.60	0.01	0	668.34	0.01
17.00	0.01	0	668.34	0.01
17.40	0.01	0	668.34	0.01
17.80	0.01	0	668.34	0.01
18.20	0.01	0	668.34	0.01
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 13R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 13R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 14R: to isolator 6"

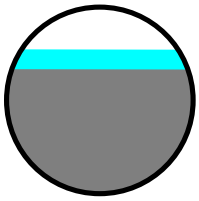
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.030 ac, 83.33% Impervious, Inflow Depth > 5.86" for 100-yr event
Inflow = 0.18 cfs @ 12.26 hrs, Volume= 0.015 af
Outflow = 0.18 cfs @ 12.26 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min

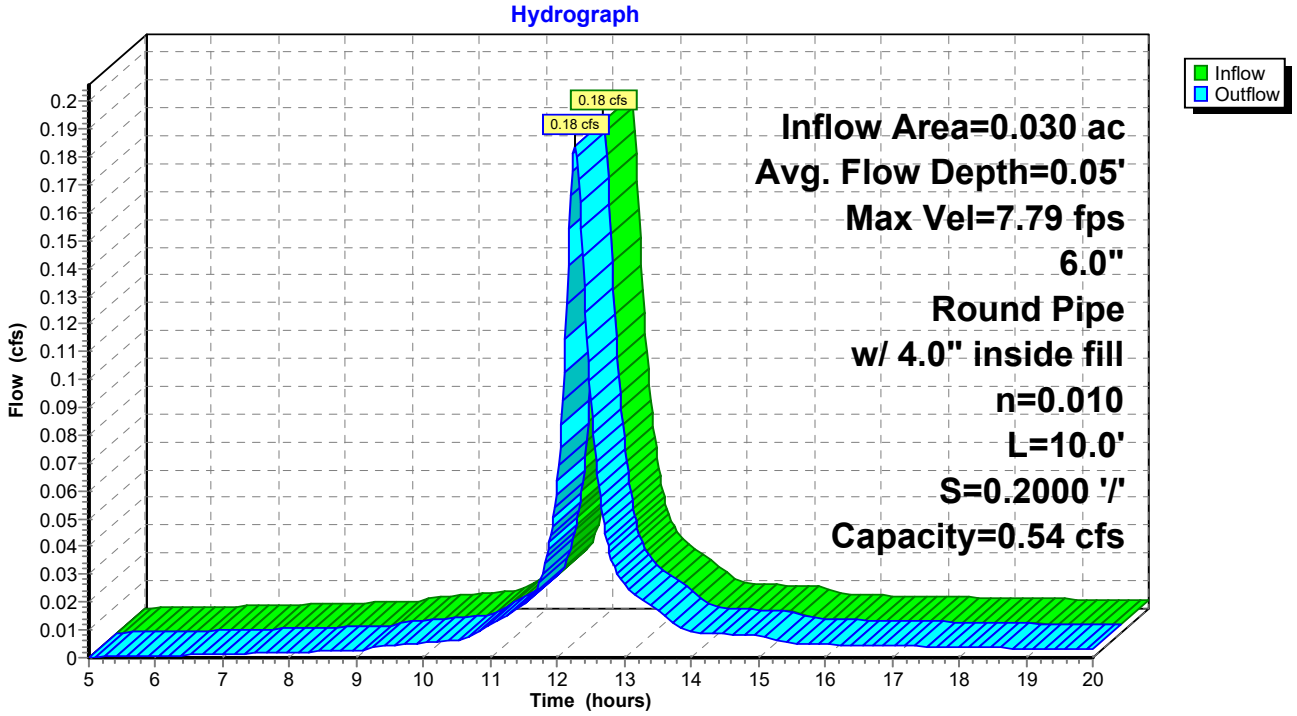
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 7.79 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.33 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.26 hrs
Average Depth at Peak Storage= 0.39' above invert (0.05' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

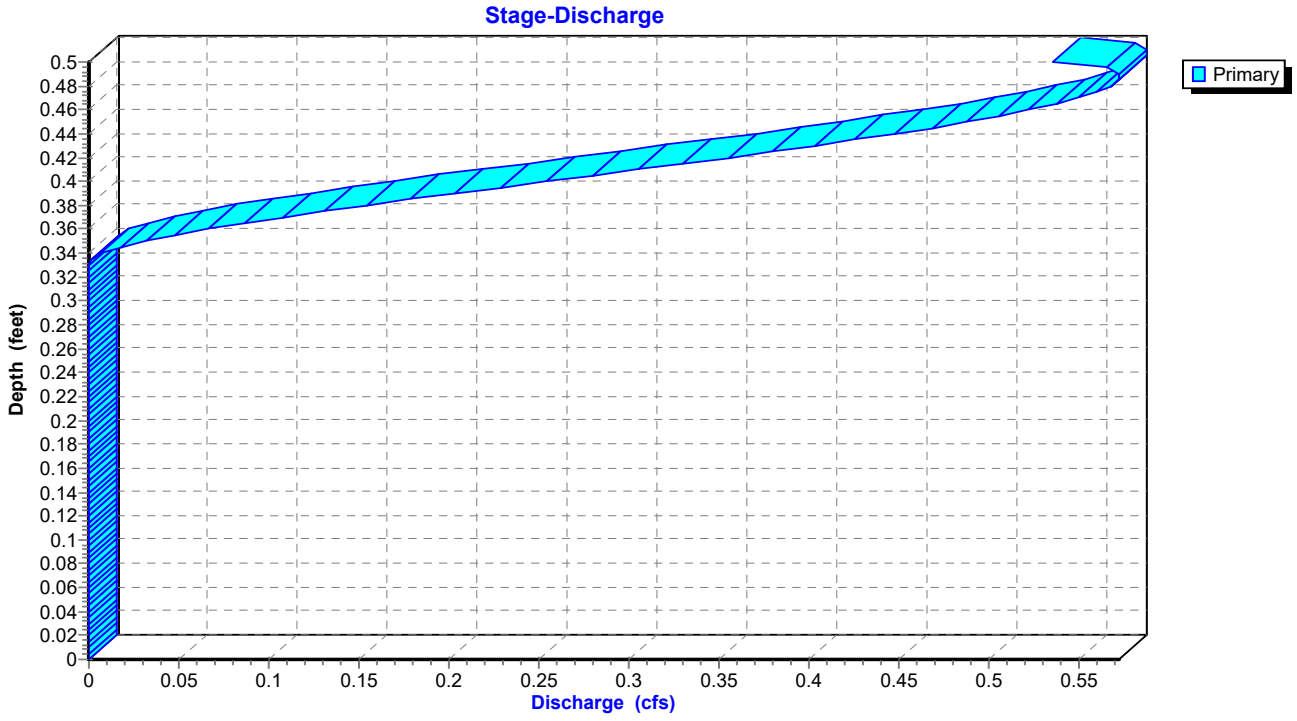
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



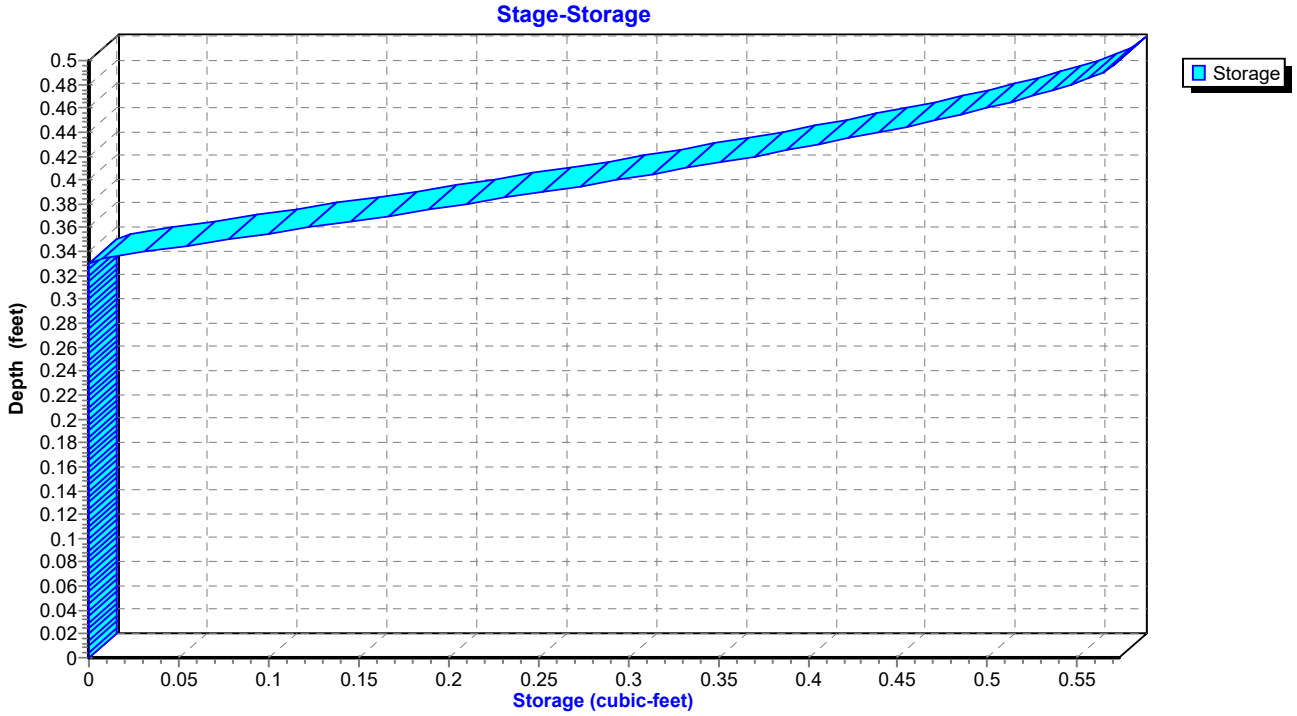
Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Hydrograph for Reach 14R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.34	0.00
6.60	0.00	0	668.34	0.00
7.00	0.00	0	668.34	0.00
7.40	0.00	0	668.34	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.01	0	668.34	0.01
10.20	0.01	0	668.34	0.01
10.60	0.01	0	668.34	0.01
11.00	0.01	0	668.34	0.01
11.40	0.02	0	668.34	0.02
11.80	0.03	0	668.35	0.03
12.20	**0.17**	**0**	**668.38**	**0.17**
12.60	**0.07**	**0**	**668.36**	**0.07**
13.00	0.03	0	668.35	0.03
13.40	0.02	0	668.35	0.02
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.01	0	668.34	0.01
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 14R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 14R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 15R: to isolator 6"

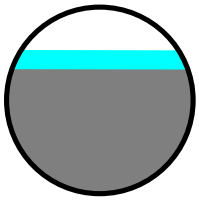
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 73.68% Impervious, Inflow Depth > 5.17" for 100-yr event
Inflow = 0.18 cfs @ 12.36 hrs, Volume= 0.016 af
Outflow = 0.18 cfs @ 12.37 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

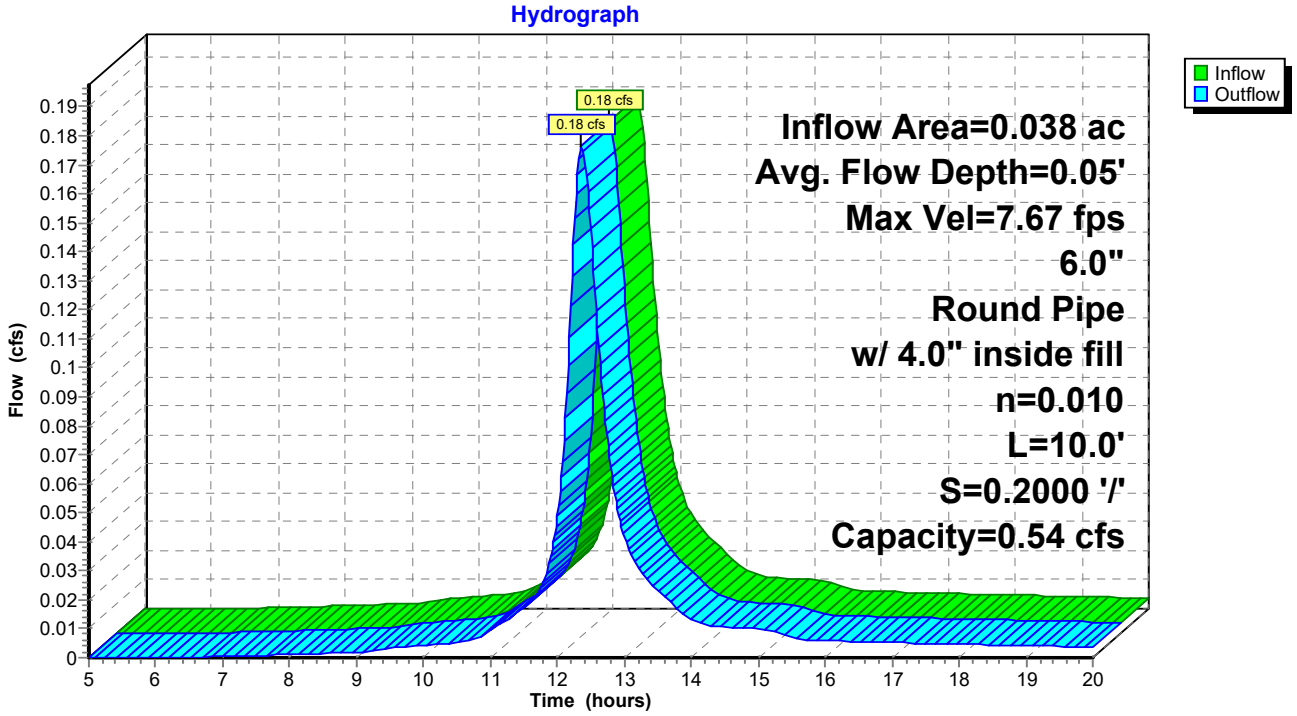
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 7.67 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.49 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.37 hrs
Average Depth at Peak Storage= 0.38' above invert (0.05' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

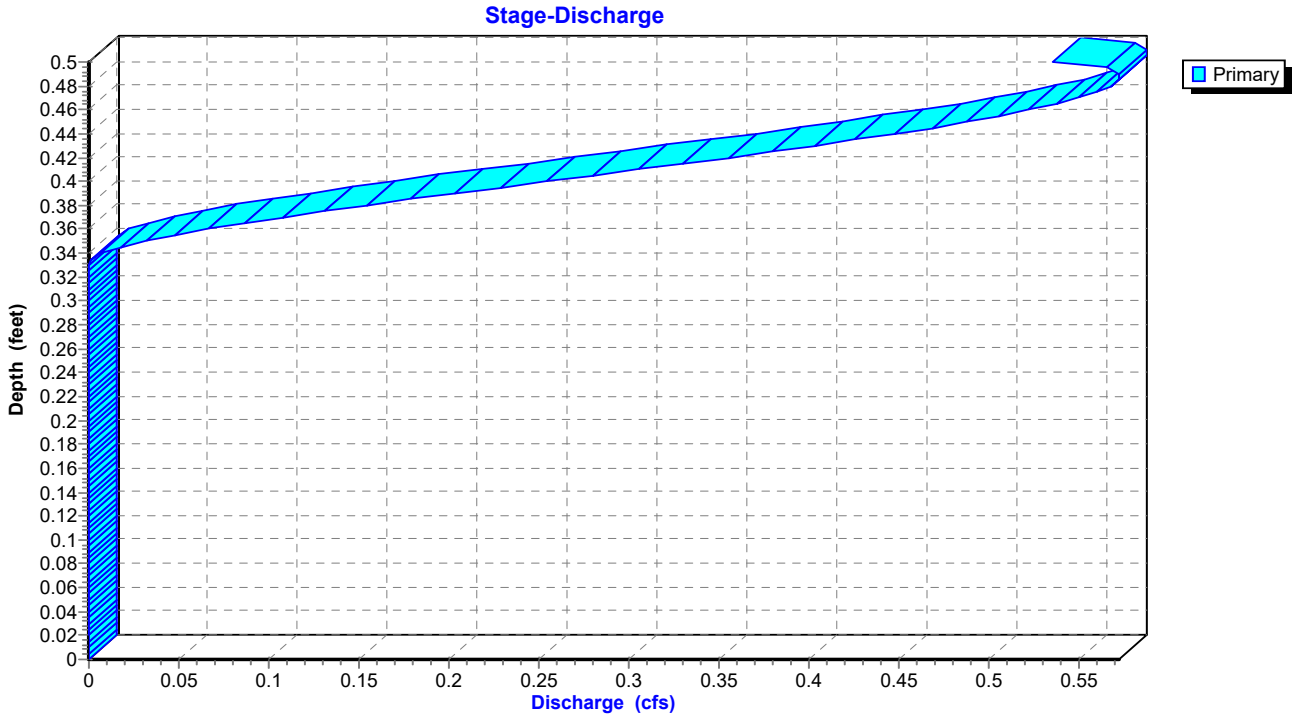
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



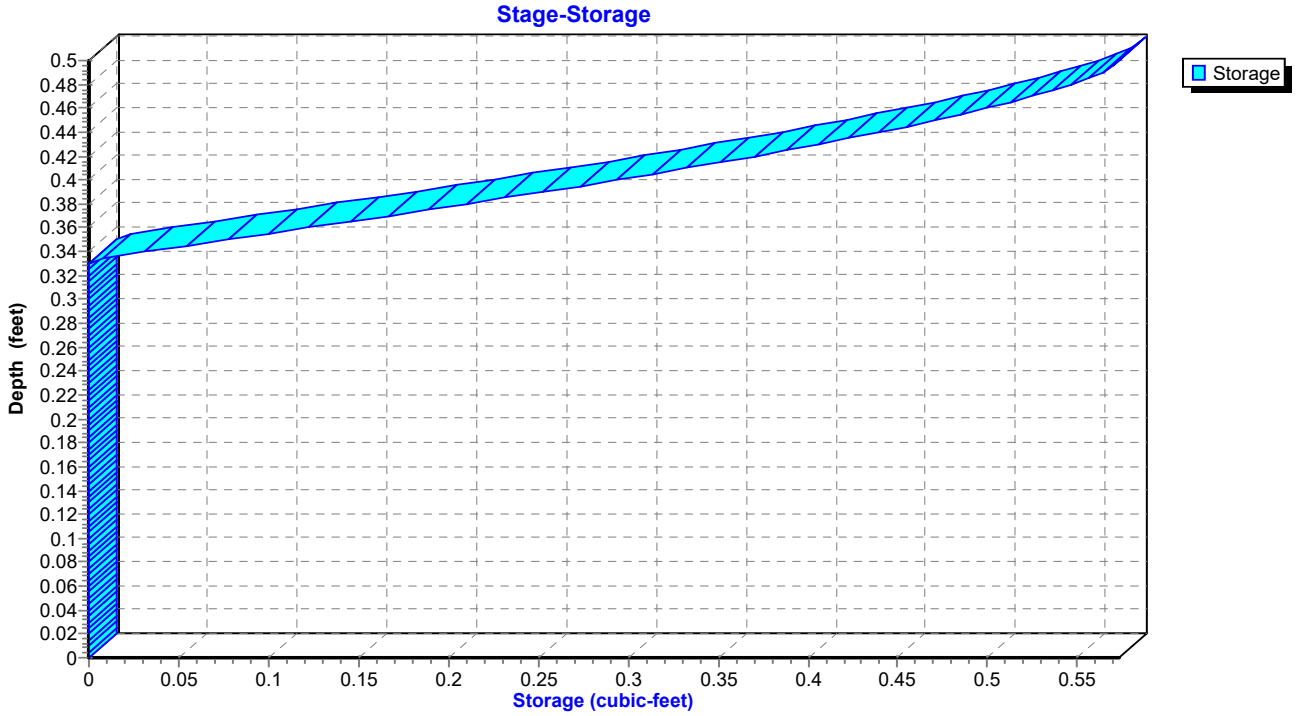
Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Hydrograph for Reach 15R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.01	0	668.34	0.01
11.00	0.01	0	668.34	0.01
11.40	0.02	0	668.34	0.02
11.80	0.03	0	668.35	0.03
12.20	**0.12**	**0**	**668.37**	**0.12**
12.60	**0.11**	**0**	**668.37**	**0.11**
13.00	0.04	0	668.35	0.04
13.40	0.03	0	668.35	0.03
13.80	0.02	0	668.34	0.02
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.01	0	668.34	0.01
15.80	0.01	0	668.34	0.01
16.20	0.01	0	668.34	0.01
16.60	0.01	0	668.34	0.01
17.00	0.01	0	668.34	0.01
17.40	0.01	0	668.34	0.01
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 15R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 15R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 17R: NDS2 6"

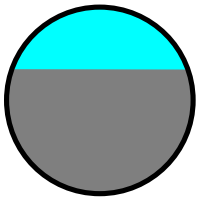
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 121% of Manning's capacity

Inflow Area = 0.038 ac, 42.11% Impervious, Inflow Depth > 3.20" for 100-yr event
Inflow = 0.10 cfs @ 12.44 hrs, Volume= 0.010 af
Outflow = 0.09 cfs @ 12.38 hrs, Volume= 0.010 af, Atten= 13%, Lag= 0.0 min

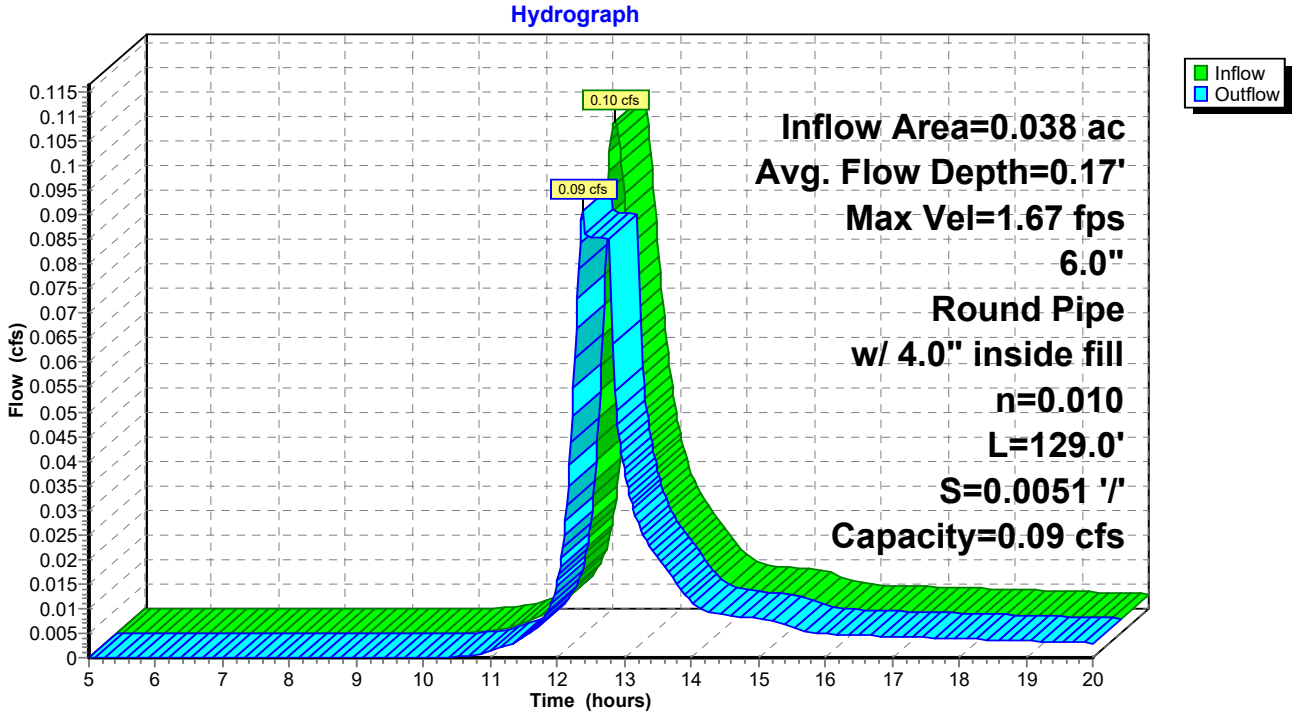
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.67 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 0.74 fps, Avg. Travel Time= 2.9 min

Peak Storage= 7 cf @ 12.38 hrs
Average Depth at Peak Storage= 0.50' above invert (0.17' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

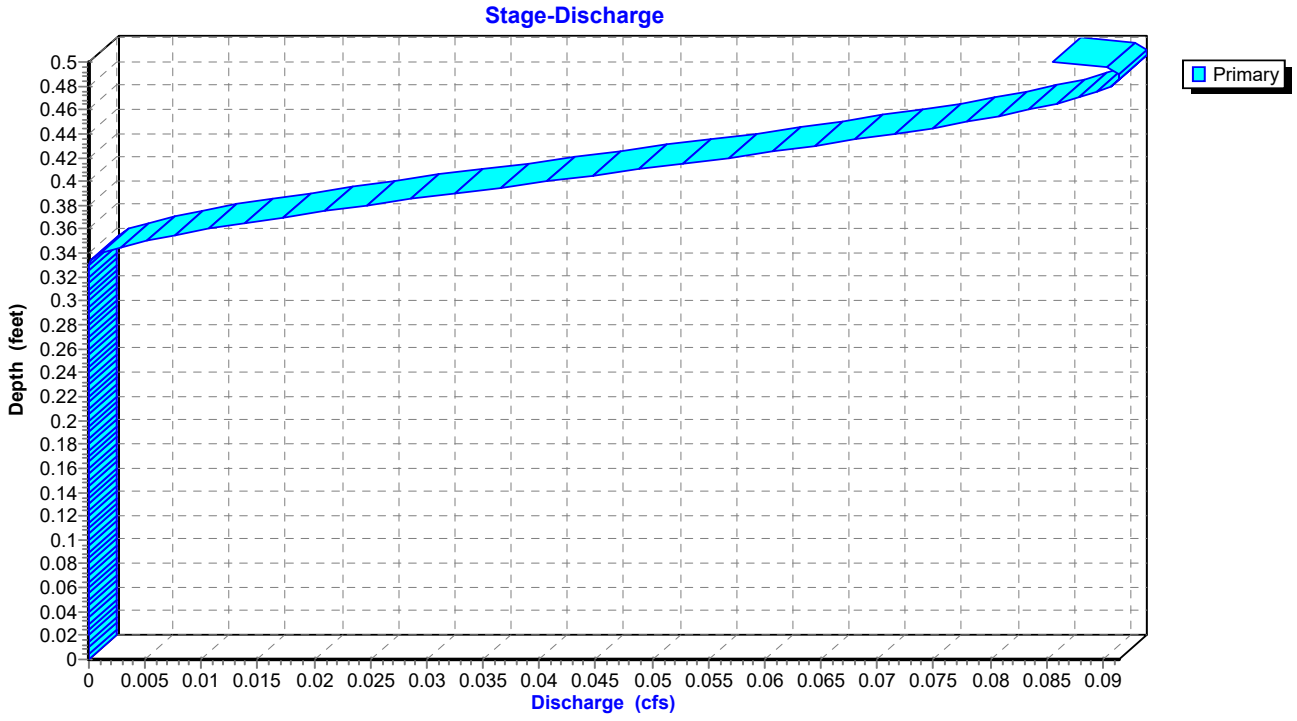
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0051 '/'
Inlet Invert= 668.84', Outlet Invert= 668.18'



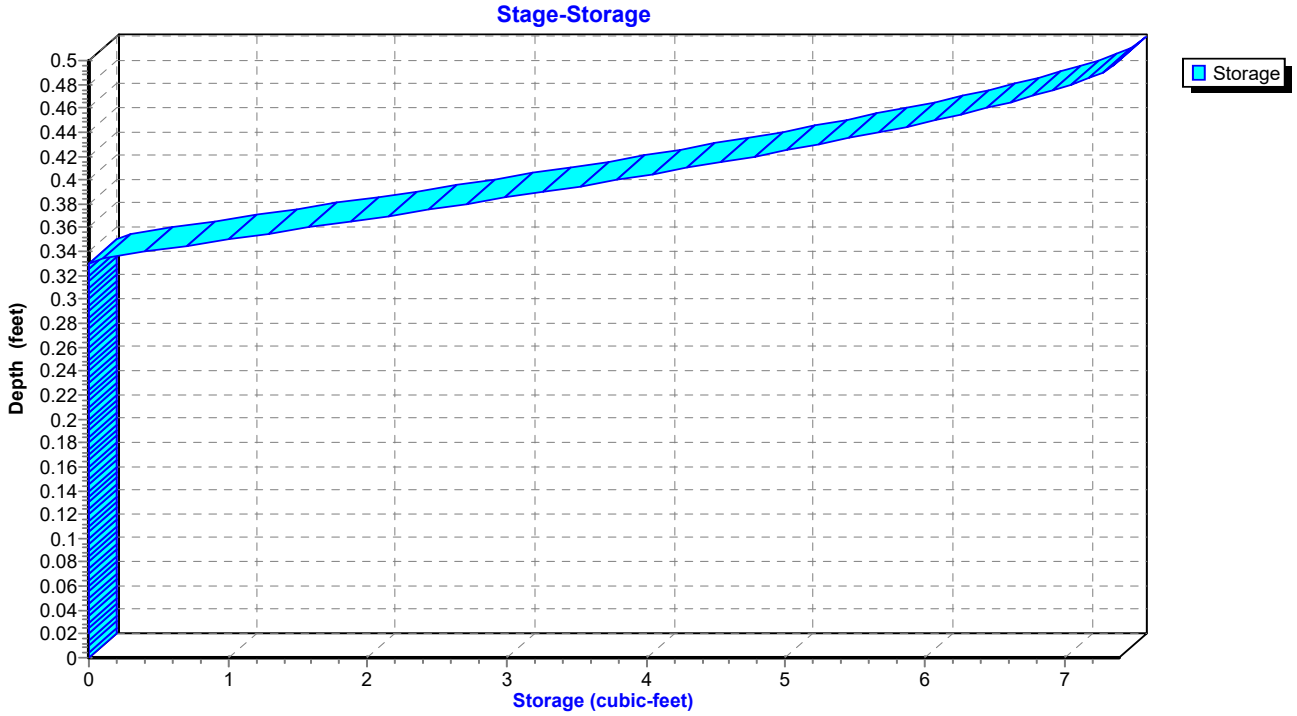
Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Hydrograph for Reach 17R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.17	0.00
5.40	0.00	0	669.17	0.00
5.80	0.00	0	669.17	0.00
6.20	0.00	0	669.17	0.00
6.60	0.00	0	669.17	0.00
7.00	0.00	0	669.17	0.00
7.40	0.00	0	669.17	0.00
7.80	0.00	0	669.17	0.00
8.20	0.00	0	669.17	0.00
8.60	0.00	0	669.17	0.00
9.00	0.00	0	669.17	0.00
9.40	0.00	0	669.17	0.00
9.80	0.00	0	669.17	0.00
10.20	0.00	0	669.17	0.00
10.60	0.00	0	669.18	0.00
11.00	0.00	0	669.18	0.00
11.40	0.00	1	669.19	0.00
11.80	0.01	1	669.20	0.01
12.20	**0.05**	**4**	**669.25**	**0.04**
12.60	**0.09**	**7**	**669.34**	**0.09**
13.00	0.04	4	669.24	0.04
13.40	0.02	3	669.22	0.02
13.80	0.01	2	669.21	0.01
14.20	0.01	1	669.20	0.01
14.60	0.01	1	669.20	0.01
15.00	0.01	1	669.20	0.01
15.40	0.01	1	669.19	0.01
15.80	0.01	1	669.19	0.01
16.20	0.00	1	669.19	0.00
16.60	0.00	1	669.19	0.00
17.00	0.00	1	669.19	0.00
17.40	0.00	1	669.19	0.00
17.80	0.00	1	669.19	0.00
18.20	0.00	1	669.19	0.00
18.60	0.00	1	669.19	0.00
19.00	0.00	1	669.19	0.00
19.40	0.00	1	669.19	0.00
19.80	0.00	1	669.19	0.00

Stage-Discharge for Reach 17R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.84	0.00	0.00
668.85	0.00	0.00
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.37	0.00
669.19	0.65	0.01
669.20	0.87	0.01
669.21	1.03	0.02
669.22	1.17	0.02
669.23	1.29	0.03
669.24	1.39	0.04
669.25	1.47	0.05
669.26	1.53	0.06
669.27	1.59	0.06
669.28	1.63	0.07
669.29	1.66	0.08
669.30	1.67	0.08
669.31	**1.67**	0.09
669.32	1.66	0.09
669.33	1.62	**0.09**
669.34	1.49	0.09

Stage-Area-Storage for Reach 17R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.84	0.0	0
668.85	0.0	0
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	1
669.20	0.0	2
669.21	0.0	2
669.22	0.0	3
669.23	0.0	3
669.24	0.0	4
669.25	0.0	4
669.26	0.0	5
669.27	0.0	5
669.28	0.0	6
669.29	0.0	6
669.30	0.0	6
669.31	0.1	7
669.32	0.1	7
669.33	0.1	7
669.34	**0.1**	**7**

Summary for Reach 18R: inlet 3 6"

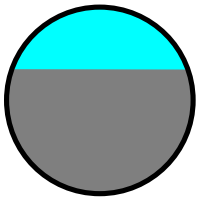
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 191% of Manning's capacity
[76] Warning: Detained 0.004 af (Pond w/culvert advised)
[62] Hint: Exceeded Reach 17R OUTLET depth by 0.14' @ 14.24 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.15' @ 12.16 hrs

Inflow Area = 0.090 ac, 18.89% Impervious, Inflow Depth > 2.87" for 100-yr event
Inflow = 0.16 cfs @ 12.36 hrs, Volume= 0.022 af
Outflow = 0.08 cfs @ 12.18 hrs, Volume= 0.022 af, Atten= 48%, Lag= 0.0 min

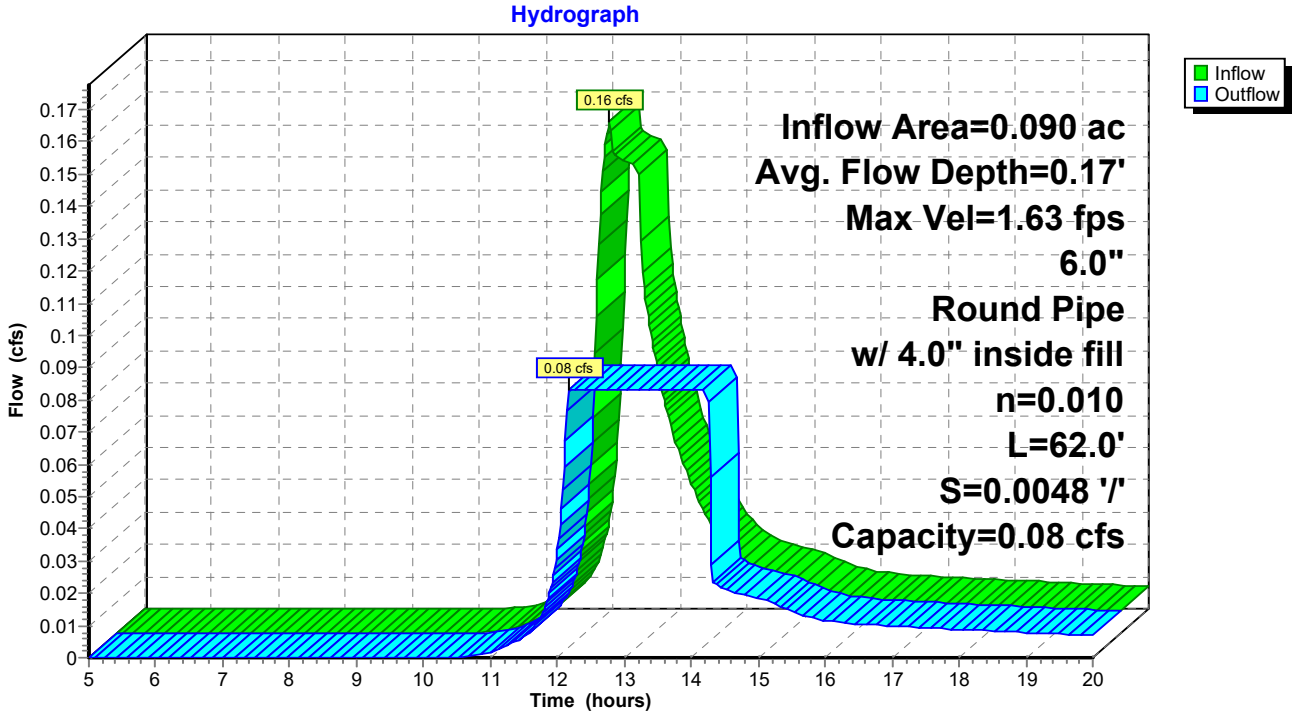
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.63 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 0.94 fps, Avg. Travel Time= 1.1 min

Peak Storage= 4 cf @ 12.16 hrs
Average Depth at Peak Storage= 0.50' above invert (0.17' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.08 cfs

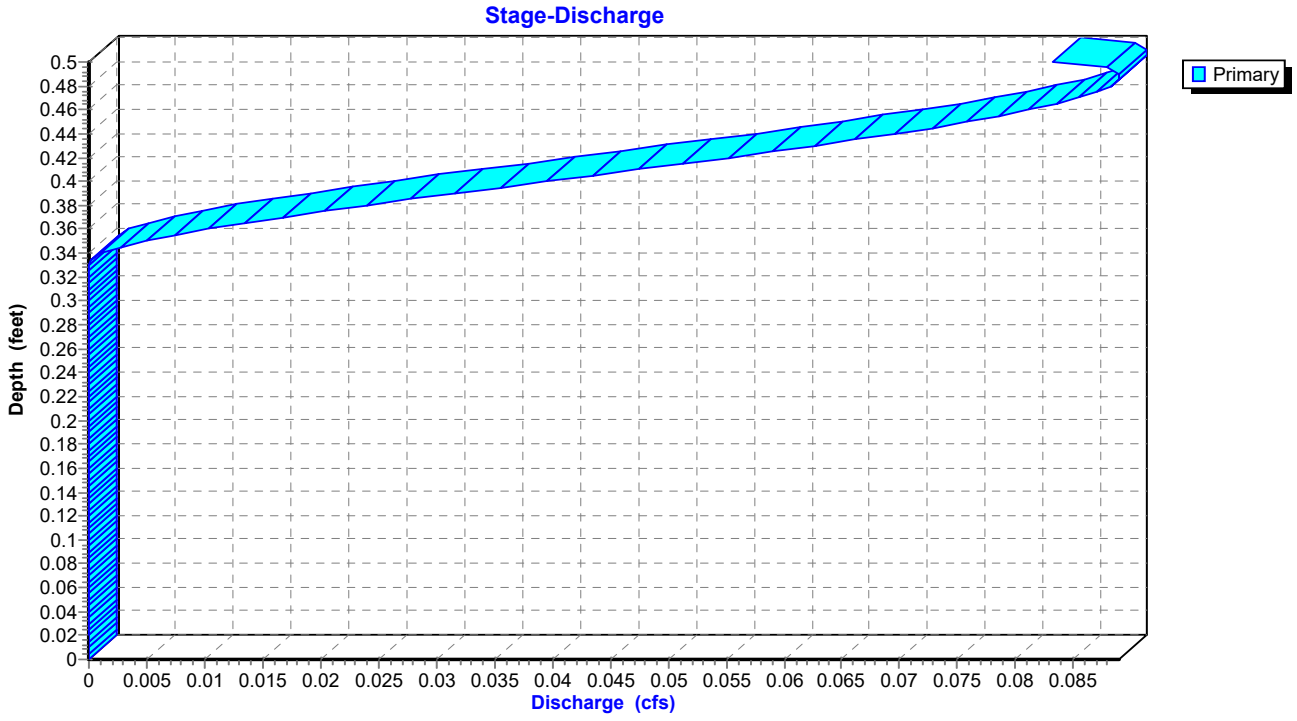
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0048 '/'
Inlet Invert= 668.18', Outlet Invert= 667.88'



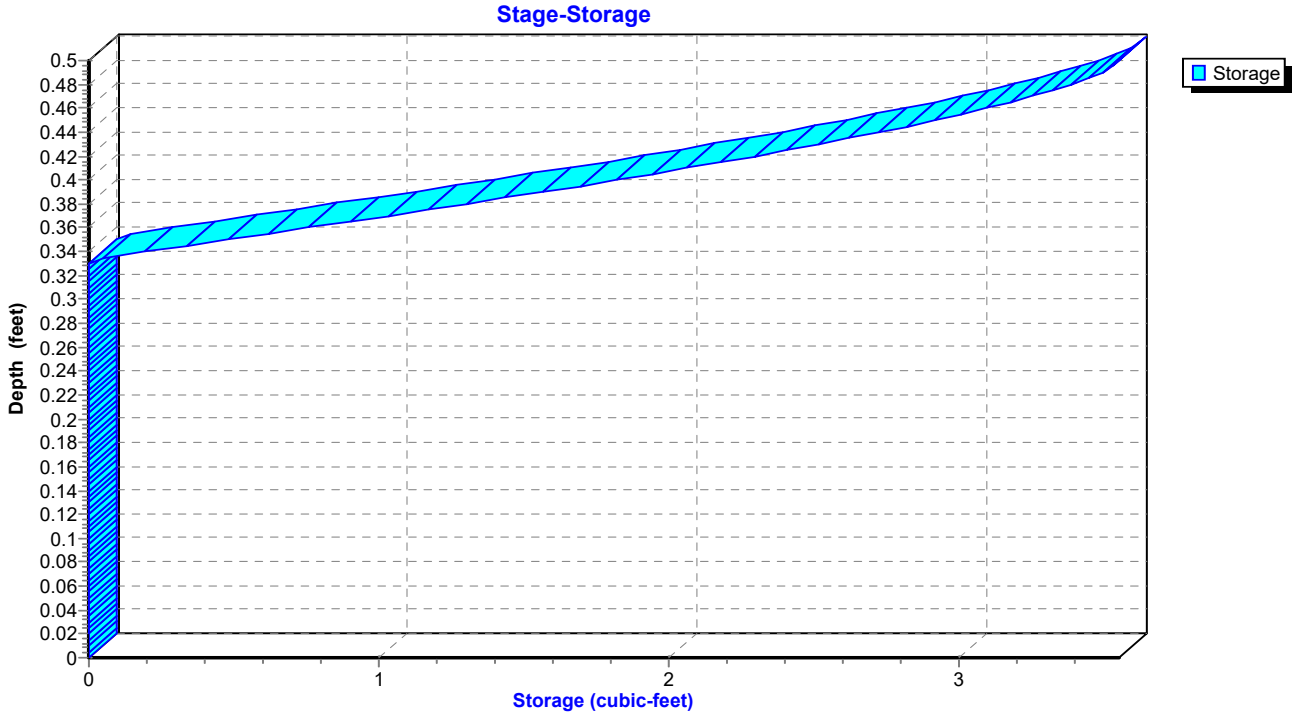
Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Hydrograph for Reach 18R: inlet 3 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.51	0.00
5.40	0.00	0	668.51	0.00
5.80	0.00	0	668.51	0.00
6.20	0.00	0	668.51	0.00
6.60	0.00	0	668.51	0.00
7.00	0.00	0	668.51	0.00
7.40	0.00	0	668.51	0.00
7.80	0.00	0	668.51	0.00
8.20	0.00	0	668.51	0.00
8.60	0.00	0	668.51	0.00
9.00	0.00	0	668.51	0.00
9.40	0.00	0	668.51	0.00
9.80	0.00	0	668.51	0.00
10.20	0.00	0	668.51	0.00
10.60	0.00	0	668.52	0.00
11.00	0.00	0	668.52	0.00
11.40	0.01	1	668.53	0.01
11.80	0.02	**1**	**668.55**	**0.01**
12.20	**0.12**	**4**	**668.68**	**0.08**
12.60	**0.15**	4	668.68	0.08
13.00	0.09	4	668.68	0.08
13.40	0.06	4	668.68	0.08
13.80	0.04	4	668.68	0.08
14.20	0.03	4	668.68	0.08
14.60	0.02	1	668.56	0.02
15.00	0.02	1	668.55	0.02
15.40	0.02	1	668.55	0.02
15.80	0.01	1	668.54	0.01
16.20	0.01	1	668.54	0.01
16.60	0.01	1	668.54	0.01
17.00	0.01	1	668.54	0.01
17.40	0.01	1	668.54	0.01
17.80	0.01	1	668.54	0.01
18.20	0.01	1	668.54	0.01
18.60	0.01	1	668.54	0.01
19.00	0.01	1	668.54	0.01
19.40	0.01	1	668.53	0.01
19.80	0.01	1	668.53	0.01

Stage-Discharge for Reach 18R: inlet 3 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	0.00	0.00
668.35	0.00	0.00
668.36	0.00	0.00
668.37	0.00	0.00
668.38	0.00	0.00
668.39	0.00	0.00
668.40	0.00	0.00
668.41	0.00	0.00
668.42	0.00	0.00
668.43	0.00	0.00
668.44	0.00	0.00
668.45	0.00	0.00
668.46	0.00	0.00
668.47	0.00	0.00
668.48	0.00	0.00
668.49	0.00	0.00
668.50	0.00	0.00
668.51	0.00	0.00
668.52	0.36	0.00
668.53	0.64	0.00
668.54	0.84	0.01
668.55	1.00	0.02
668.56	1.14	0.02
668.57	1.25	0.03
668.58	1.35	0.04
668.59	1.43	0.05
668.60	1.49	0.06
668.61	1.54	0.06
668.62	1.58	0.07
668.63	1.61	0.08
668.64	1.63	0.08
668.65	**1.63**	0.09
668.66	1.61	0.09
668.67	1.58	**0.09**
668.68	1.45	0.08

Stage-Area-Storage for Reach 18R: inlet 3 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.0	0
668.48	0.0	0
668.49	0.0	0
668.50	0.0	0
668.51	0.0	0
668.52	0.0	0
668.53	0.0	0
668.54	0.0	1
668.55	0.0	1
668.56	0.0	1
668.57	0.0	2
668.58	0.0	2
668.59	0.0	2
668.60	0.0	2
668.61	0.0	3
668.62	0.0	3
668.63	0.0	3
668.64	0.0	3
668.65	0.1	3
668.66	0.1	3
668.67	0.1	3
668.68	**0.1**	**4**

Summary for Reach 22R: NDS2 6"

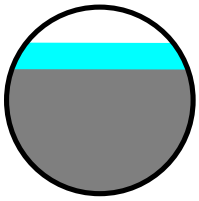
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.031 ac, 3.23% Impervious, Inflow Depth > 2.46" for 100-yr event
Inflow = 0.04 cfs @ 12.78 hrs, Volume= 0.006 af
Outflow = 0.04 cfs @ 12.82 hrs, Volume= 0.006 af, Atten= 0%, Lag= 2.6 min

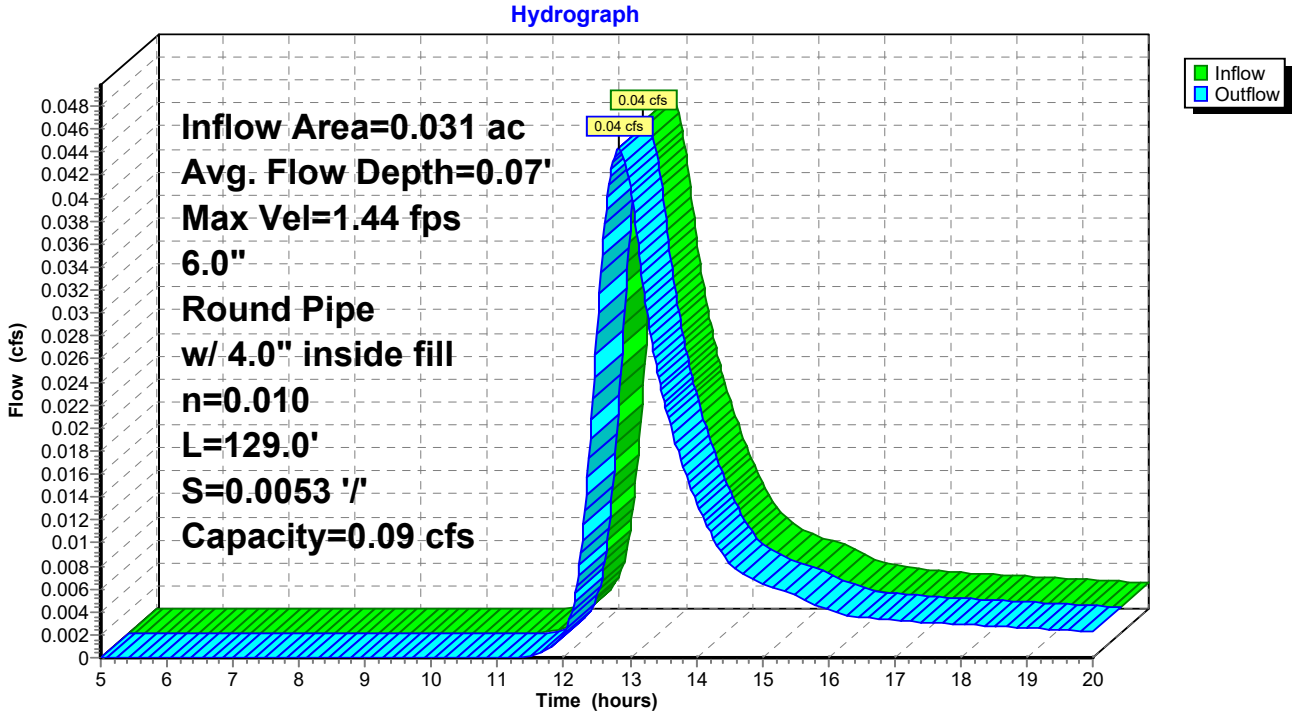
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.44 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 0.70 fps, Avg. Travel Time= 3.1 min

Peak Storage= 4 cf @ 12.80 hrs
Average Depth at Peak Storage= 0.40' above invert (0.07' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

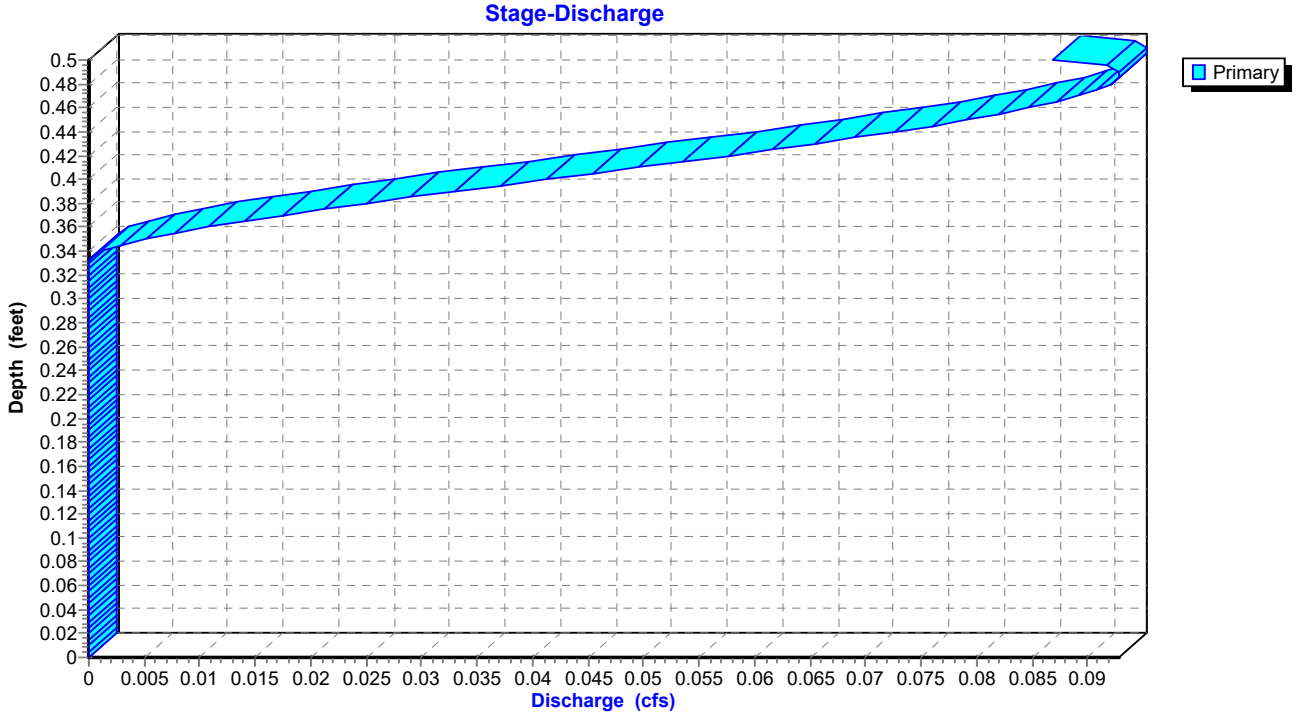
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0053 '/'
Inlet Invert= 668.86', Outlet Invert= 668.18'



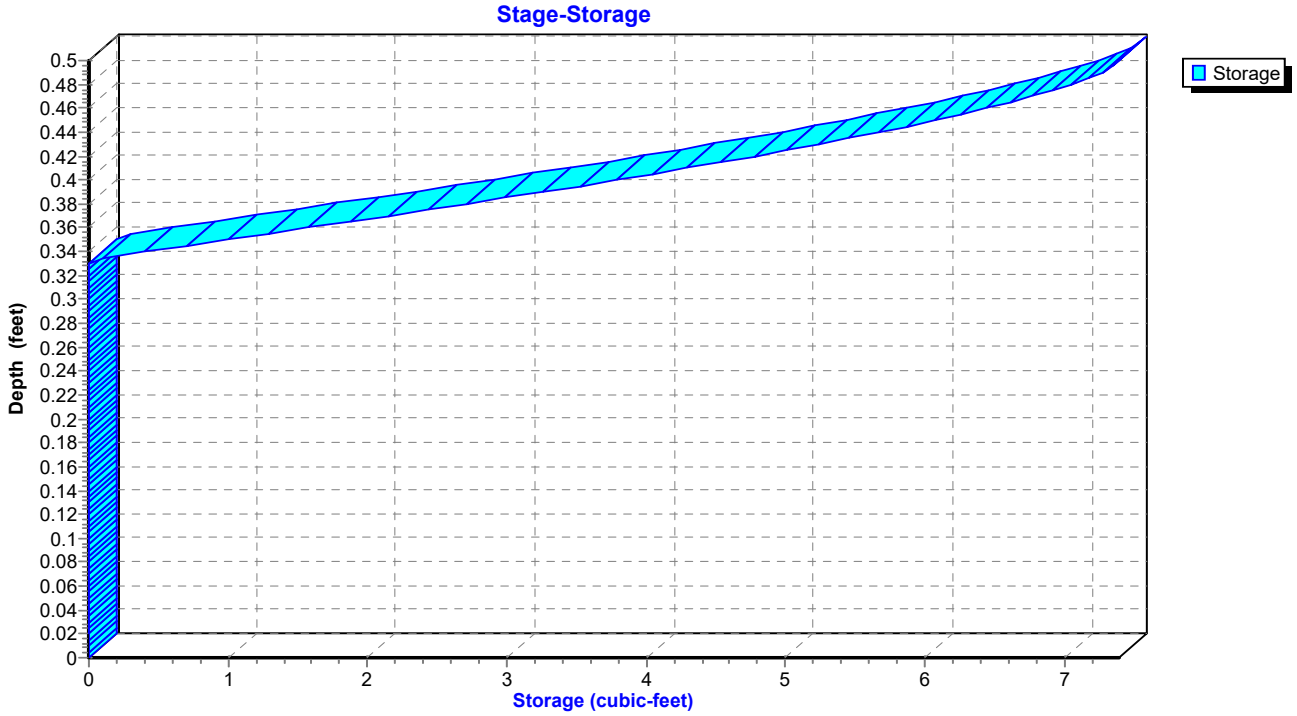
Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Hydrograph for Reach 22R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.19	0.00
5.40	0.00	0	669.19	0.00
5.80	0.00	0	669.19	0.00
6.20	0.00	0	669.19	0.00
6.60	0.00	0	669.19	0.00
7.00	0.00	0	669.19	0.00
7.40	0.00	0	669.19	0.00
7.80	0.00	0	669.19	0.00
8.20	0.00	0	669.19	0.00
8.60	0.00	0	669.19	0.00
9.00	0.00	0	669.19	0.00
9.40	0.00	0	669.19	0.00
9.80	0.00	0	669.19	0.00
10.20	0.00	0	669.19	0.00
10.60	0.00	0	669.19	0.00
11.00	0.00	0	669.19	0.00
11.40	0.00	0	669.19	0.00
11.80	0.00	0	669.20	0.00
12.20	0.01	1	669.21	0.01
12.60	**0.04**	**4**	**669.26**	**0.04**
13.00	**0.04**	**4**	**669.26**	**0.04**
13.40	0.02	3	669.24	0.03
13.80	0.02	2	669.23	0.02
14.20	0.01	2	669.22	0.01
14.60	0.01	1	669.21	0.01
15.00	0.01	1	669.21	0.01
15.40	0.01	1	669.21	0.01
15.80	0.00	1	669.21	0.00
16.20	0.00	1	669.21	0.00
16.60	0.00	1	669.21	0.00
17.00	0.00	1	669.21	0.00
17.40	0.00	1	669.21	0.00
17.80	0.00	1	669.21	0.00
18.20	0.00	1	669.20	0.00
18.60	0.00	1	669.20	0.00
19.00	0.00	1	669.20	0.00
19.40	0.00	1	669.20	0.00
19.80	0.00	1	669.20	0.00

Stage-Discharge for Reach 22R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.00	0.00
669.19	0.00	0.00
669.20	0.37	0.00
669.21	0.66	0.01
669.22	0.88	0.01
669.23	1.05	0.02
669.24	1.19	0.03
669.25	1.31	0.03
669.26	1.41	0.04
669.27	1.49	0.05
669.28	1.56	0.06
669.29	1.61	0.07
669.30	1.65	0.07
669.31	1.68	0.08
669.32	1.70	0.08
669.33	**1.70**	0.09
669.34	1.69	0.09
669.35	1.65	**0.09**
669.36	1.52	0.09

Stage-Area-Storage for Reach 22R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	0
669.20	0.0	0
669.21	0.0	1
669.22	0.0	2
669.23	0.0	2
669.24	0.0	3
669.25	0.0	3
669.26	0.0	4
669.27	0.0	4
669.28	0.0	5
669.29	0.0	5
669.30	0.0	6
669.31	0.0	6
669.32	0.0	6
669.33	0.1	7
669.34	0.1	7
669.35	0.1	7
669.36	**0.1**	**7**

Summary for Pond 4P: stormtech SC310 16"x34" chambers

[44] Hint: Outlet device #2 is below defined storage
[88] Warning: Qout>Qin may require smaller dt or Finer Routing
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=5)
[63] Warning: Exceeded Reach 10R INLET depth by 0.42' @ 12.42 hrs
[63] Warning: Exceeded Reach 12R INLET depth by 0.56' @ 12.70 hrs
[62] Hint: Exceeded Reach 13R OUTLET depth by 0.55' @ 12.42 hrs
[62] Hint: Exceeded Reach 14R OUTLET depth by 0.57' @ 12.42 hrs
[62] Hint: Exceeded Reach 15R OUTLET depth by 0.56' @ 12.42 hrs

Inflow Area = 1.066 ac, 90.90% Impervious, Inflow Depth > 5.22" for 100-yr event
Inflow = 1.87 cfs @ 12.33 hrs, Volume= 0.463 af
Outflow = 2.00 cfs @ 12.42 hrs, Volume= 0.413 af, Atten= 0%, Lag= 5.5 min
Primary = 1.65 cfs @ 12.42 hrs, Volume= 0.153 af
Secondary = 0.34 cfs @ 12.42 hrs, Volume= 0.259 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 666.94' @ 12.42 hrs Surf.Area= 0.108 ac Storage= 0.087 af

Plug-Flow detention time= 78.0 min calculated for 0.413 af (89% of inflow)
Center-of-Mass det. time= 36.6 min (842.2 - 805.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	664.40'	0.076 af	**36.00'W x 120.45'L x 2.33'H Field A Z=0.5** 0.242 af Overall - 0.011 af Embedded = 0.231 af x 33.0% Voids
#2A	664.90'	0.011 af	**ADS_StormTech RC-310 +Cap** x 32 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 2 Rows
#3	665.00'	0.001 af	**8.0" Round Pipe Storage** L= 87.0' S= 0.5200 '/'
#4	664.90'	0.001 af	**12.0" Round Pipe Storage** L= 45.0' S= 0.7300 '/'
#5	665.40'	0.000 af	**12.0" Round Pipe Storage** L= 23.0' S= 0.5200 '/'
#6	665.58'	0.001 af	**10.0" Round Pipe Storage** L= 69.0' S= 0.5200 '/'
		0.090 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	665.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.75 0.75 2.10 2.10 3.00 Width (feet) 0.00 0.17 0.17 4.00 4.00
#2	Secondary	664.00'	**Tube/Siphon/Float Valve** 4.000" Diameter, C= 0.600 136.0' Long Tube, Hazen-Williams C= 130 Inlet / Outlet Elev. = 664.00' / 664.00'

Primary OutFlow Max=1.25 cfs @ 12.42 hrs HW=666.93' (Free Discharge)
↑—**1=Custom Weir/Orifice** (Weir Controls 1.25 cfs @ 2.24 fps)

Secondary OutFlow Max=0.34 cfs @ 12.42 hrs HW=666.94' (Free Discharge)
↑—**2=Tube/Siphon/Float Valve** (Tube Controls 0.34 cfs @ 3.93 fps)

Pond 4P: stormtech SC310 16"x34" chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-310 +Cap (ADS StormTech®RC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 48.0" Spacing = 82.0" C-C Row Spacing

16 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 115.12' Row Length +32.0" End Stone x 2 = 120.45' Base Length
2 Rows x 34.0" Wide + 48.0" Spacing x 1 + 158.0" Side Stone x 2 = 36.00' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

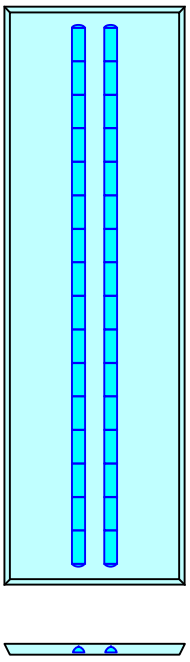
0.5 '/' Side-Z x Height = 14.0" Flare/Side
Base Length + Flare x 2 = 122.79' Top Length
Base Width + Flare x 2 = 38.33' Top Width

32 Chambers x 14.7 cf = 471.7 cf Chamber Storage

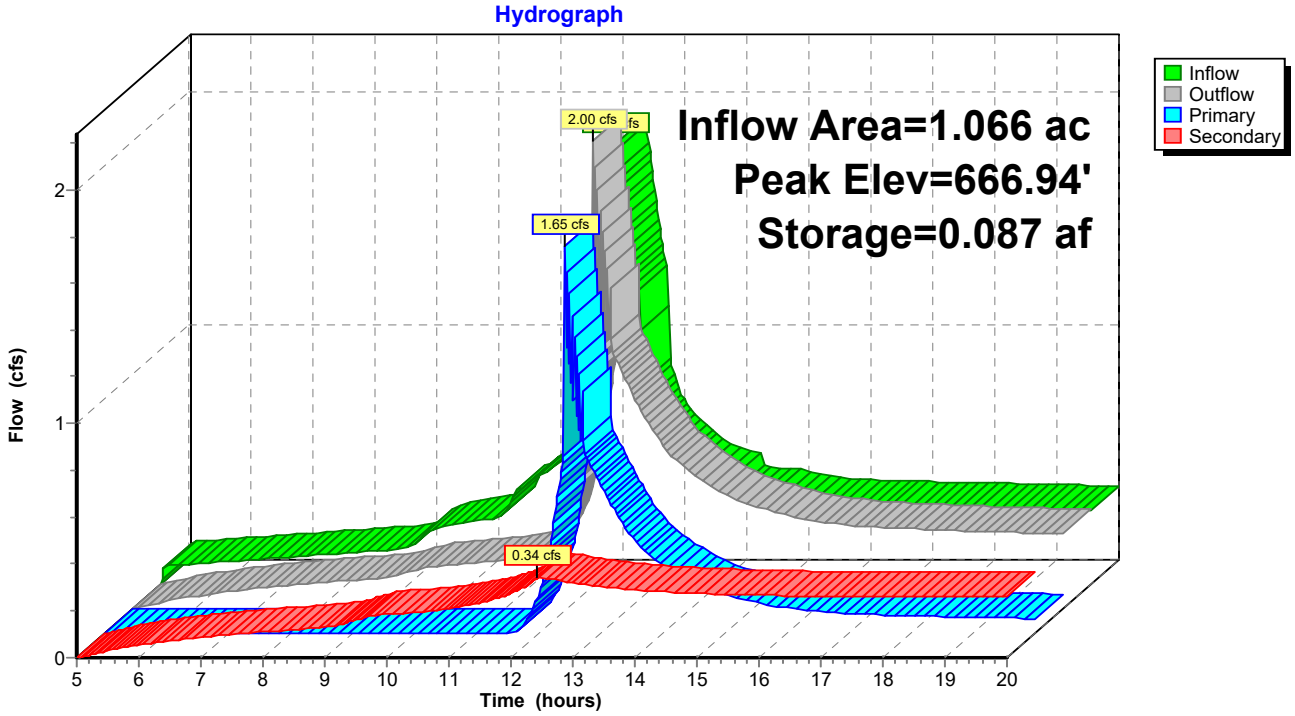
10,548.2 cf Field - 471.7 cf Chambers = 10,076.5 cf Stone x 33.0% Voids = 3,325.2 cf Stone Storage

Chamber Storage + Stone Storage = 3,797.0 cf = 0.087 af
Overall Storage Efficiency = 36.0%
Overall System Size = 120.45' x 36.00' x 2.33'

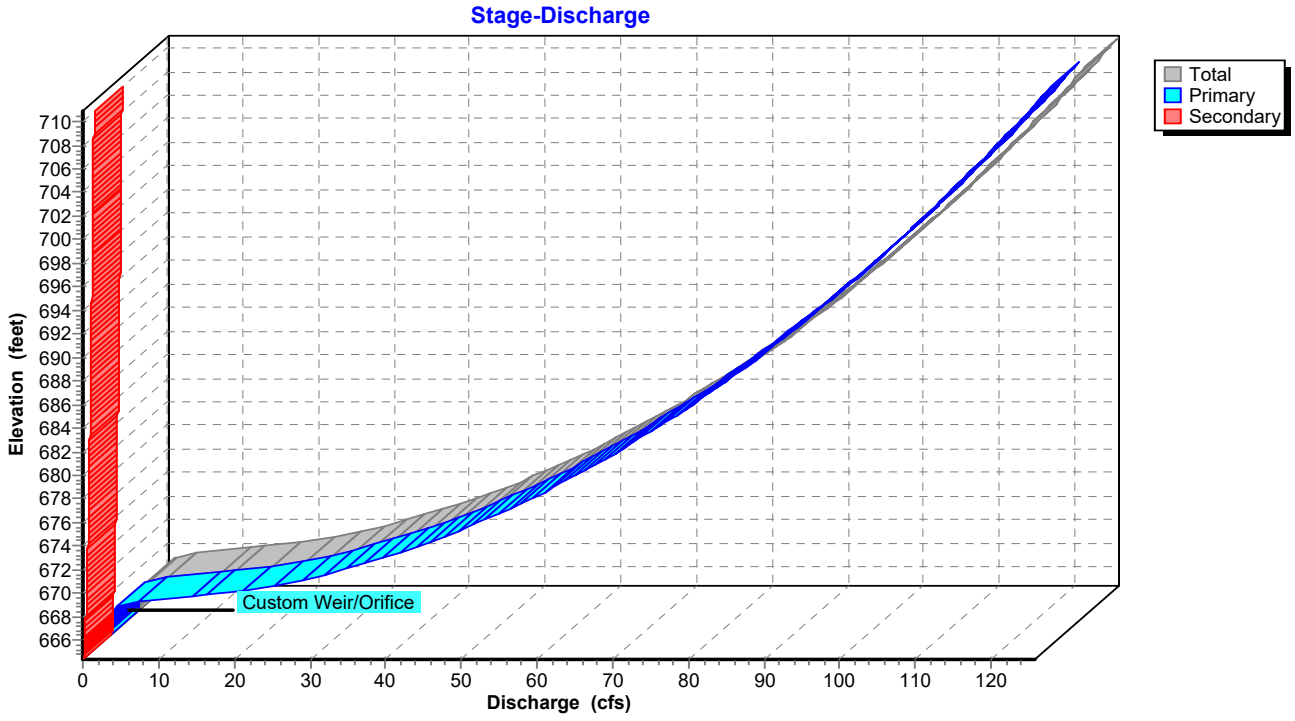
32 Chambers
390.7 cy Field
373.2 cy Stone



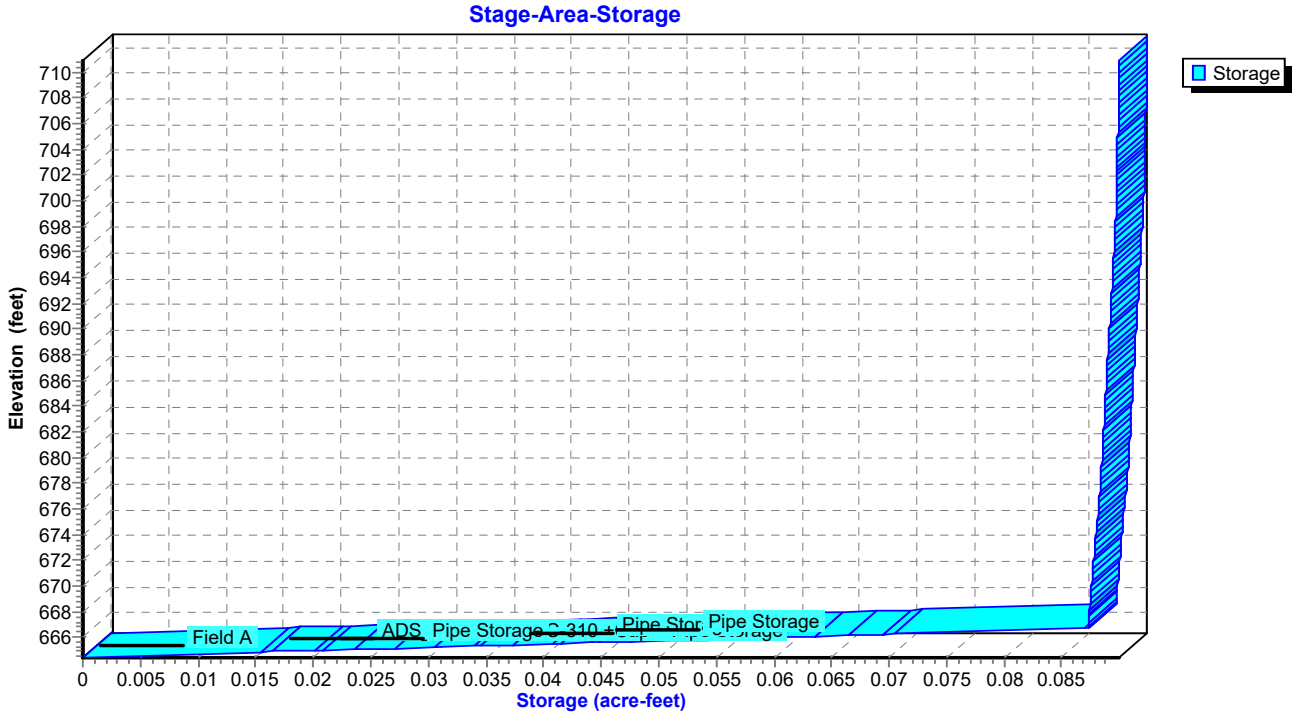
Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Hydrograph for Pond 4P: stormtech SC310 16"x34" chambers

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0.000	664.40	0.00	0.00	0.00
5.40	0.08	0.002	664.46	0.02	0.00	0.02
5.80	0.09	0.004	664.52	0.04	0.00	0.04
6.20	0.10	0.005	664.56	0.06	0.00	0.06
6.60	0.11	0.006	664.59	0.07	0.00	0.07
7.00	0.11	0.007	664.62	0.09	0.00	0.09
7.40	0.12	0.008	664.65	0.10	0.00	0.10
7.80	0.13	0.009	664.68	0.11	0.00	0.11
8.20	0.14	0.010	664.70	0.11	0.00	0.11
8.60	0.14	0.011	664.72	0.12	0.00	0.12
9.00	0.15	0.011	664.74	0.13	0.00	0.13
9.40	0.24	0.013	664.80	0.15	0.00	0.15
9.80	0.26	0.016	664.88	0.18	0.00	0.18
10.20	0.27	0.019	664.95	0.19	0.00	0.19
10.60	0.32	0.022	665.02	0.20	0.00	0.20
11.00	0.44	0.028	665.18	0.21	0.00	0.21
11.40	0.51	0.037	665.38	0.23	0.00	0.23
11.80	0.82	0.049	665.69	0.30	0.05	0.26
12.20	**1.62**	**0.072**	**666.30**	**0.70**	**0.40**	**0.30**
12.60	**1.41**	**0.087**	**666.86**	**1.27**	**0.93**	**0.34**
13.00	0.68	0.082	666.58	0.95	0.63	0.32
13.40	0.56	0.074	666.36	0.76	0.45	0.30
13.80	0.49	0.069	666.21	0.63	0.33	0.29
14.20	0.46	0.065	666.10	0.55	0.26	0.29
14.60	0.39	0.061	666.01	0.48	0.20	0.28
15.00	0.38	0.059	665.94	0.44	0.16	0.28
15.40	0.35	0.057	665.89	0.41	0.14	0.27
15.80	0.34	0.055	665.85	0.38	0.12	0.27
16.20	0.34	0.054	665.82	0.37	0.10	0.27
16.60	0.34	0.054	665.80	0.36	0.09	0.26
17.00	0.33	0.053	665.79	0.35	0.09	0.26
17.40	0.33	0.052	665.77	0.34	0.08	0.26
17.80	0.33	0.052	665.77	0.34	0.08	0.26
18.20	0.33	0.052	665.76	0.33	0.07	0.26
18.60	0.32	0.052	665.75	0.33	0.07	0.26
19.00	0.32	0.051	665.74	0.33	0.07	0.26
19.40	0.32	0.051	665.74	0.32	0.07	0.26
19.80	0.32	0.051	665.73	0.32	0.06	0.26

Stage-Discharge for Pond 4P: stormtech SC310 16"x34" chambers

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
664.40	0.00	0.00	0.00
664.90	0.18	0.00	0.18
665.40	0.23	0.00	0.23
665.90	0.41	0.14	0.27
666.40	0.78	0.48	0.31
666.90	1.40	1.06	0.34
667.40	6.94	6.57	0.37
667.90	15.20	14.80	0.40
668.40	20.51	20.09	0.42
668.90	24.60	24.15	0.45
669.40	28.07	27.60	0.47
669.90	31.15	30.65	0.50
670.40	33.94	33.43	0.52
670.90	36.52	35.98	0.54
671.40	38.93	38.37	0.56
671.90	41.19	40.61	0.58
672.40	43.34	42.74	0.60
672.90	45.38	44.76	0.62
673.40	47.33	46.70	0.64
673.90	49.21	48.56	0.65
674.40	51.02	50.35	0.67
674.90	52.76	52.08	0.69
675.40	54.45	53.75	0.70
675.90	56.09	55.37	0.72
676.40	57.68	56.95	0.74
676.90	59.23	58.48	0.75
677.40	60.74	59.98	0.77
677.90	62.22	61.43	0.78
678.40	63.65	62.86	0.80
678.90	65.06	64.25	0.81
679.40	66.44	65.61	0.82
679.90	67.79	66.95	0.84
680.40	69.11	68.26	0.85
680.90	70.41	69.54	0.87
681.40	71.68	70.80	0.88
681.90	72.94	72.04	0.89
682.40	74.17	73.26	0.91
682.90	75.38	74.46	0.92
683.40	76.57	75.64	0.93
683.90	77.74	76.80	0.94
684.40	78.90	77.94	0.96
684.90	80.04	79.07	0.97
685.40	81.16	80.18	0.98
685.90	82.27	81.28	0.99
686.40	83.36	82.36	1.01
686.90	84.44	83.43	1.02
687.40	85.51	84.48	1.03
687.90	86.56	85.52	1.04
688.40	87.60	86.55	1.05
688.90	88.63	87.57	1.06
689.40	89.65	88.57	1.08
689.90	90.65	89.56	1.09
690.40	91.64	90.55	1.10
690.90	92.63	91.52	1.11
691.40	93.60	92.48	1.12
691.90	94.56	93.43	1.13
692.40	95.51	94.37	1.14
692.90	96.46	95.31	1.15
693.40	97.39	96.23	1.16
693.90	98.32	97.15	1.17
694.40	99.23	98.05	1.18
694.90	100.14	98.95	1.19
695.40	101.04	99.84	1.20
695.90	101.94	100.72	1.21
696.40	102.82	101.60	1.22
696.90	103.70	102.47	1.23
697.40	104.57	103.32	1.24
697.90	105.43	104.18	1.25
698.40	106.29	105.02	1.26
698.90	107.13	105.86	1.27
699.40	107.98	106.70	1.28
699.90	108.81	107.52	1.29
700.40	109.64	108.34	1.30
700.90	110.46	109.15	1.31
701.40	111.28	109.96	1.32
701.90	112.09	110.76	1.33
702.40	112.90	111.56	1.34
702.90	113.70	112.35	1.35
703.40	114.49	113.14	1.36
703.90	115.28	113.91	1.37
704.40	116.06	114.69	1.37
704.90	116.84	115.46	1.38
705.40	117.61	116.22	1.39
705.90	118.38	116.98	1.40
706.40	119.14	117.73	1.41
706.90	119.90	118.48	1.42
707.40	120.65	119.23	1.43
707.90	121.40	119.97	1.44
708.40	122.15	120.70	1.44
708.90	122.89	121.43	1.45
709.40	123.62	122.16	1.46
709.90	124.35	122.88	1.47
710.40	125.08	123.60	1.48
710.90	**125.80**	**124.31**	**1.49**

Stage-Area-Storage for Pond 4P: stormtech SC310 16"x34" chambers

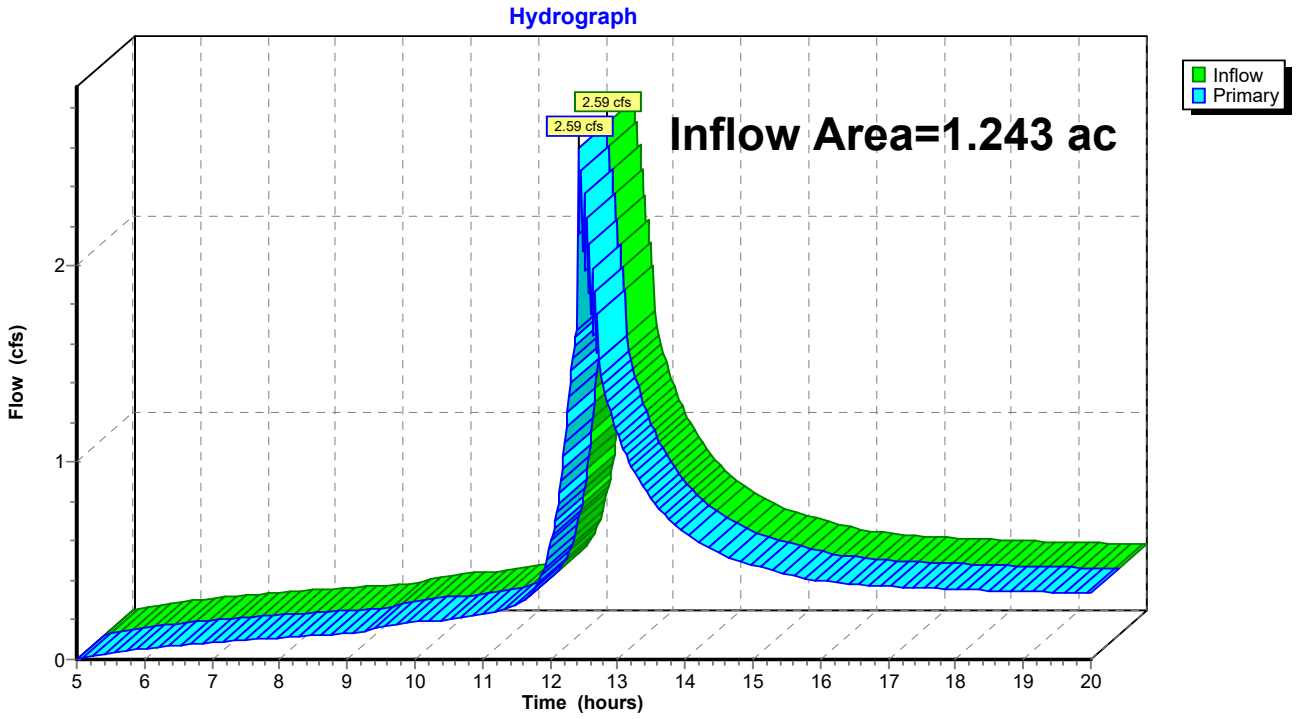
Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
664.40	0.000	689.90	0.089
664.90	0.017	690.40	0.089
665.40	0.037	690.90	0.089
665.90	0.057	691.40	0.089
666.40	0.075	691.90	0.089
666.90	0.087	692.40	0.089
667.40	0.087	692.90	0.089
667.90	0.087	693.40	0.089
668.40	0.087	693.90	0.089
668.90	0.087	694.40	0.089
669.40	0.088	694.90	0.089
669.90	0.088	695.40	0.089
670.40	0.088	695.90	0.090
670.90	0.088	696.40	0.090
671.40	0.088	696.90	0.090
671.90	0.088	697.40	0.090
672.40	0.088	697.90	0.090
672.90	0.088	698.40	0.090
673.40	0.088	698.90	0.090
673.90	0.088	699.40	0.090
674.40	0.088	699.90	0.090
674.90	0.088	700.40	0.090
675.40	0.088	700.90	0.090
675.90	0.088	701.40	0.090
676.40	0.088	701.90	0.090
676.90	0.088	702.40	0.090
677.40	0.088	702.90	0.090
677.90	0.088	703.40	0.090
678.40	0.088	703.90	0.090
678.90	0.088	704.40	0.090
679.40	0.088	704.90	0.090
679.90	0.088	705.40	0.090
680.40	0.089	705.90	0.090
680.90	0.089	706.40	0.090
681.40	0.089	706.90	0.090
681.90	0.089	707.40	0.090
682.40	0.089	707.90	0.090
682.90	0.089	708.40	0.090
683.40	0.089	708.90	0.090
683.90	0.089	709.40	0.090
684.40	0.089	709.90	0.090
684.90	0.089	710.40	0.090
685.40	0.089	710.90	**0.090**
685.90	0.089		
686.40	0.089		
686.90	0.089		
687.40	0.089		
687.90	0.089		
688.40	0.089		
688.90	0.089		
689.40	0.089		

Summary for Link 5L: HOM property run-off

Inflow Area = 1.243 ac, 84.96% Impervious, Inflow Depth > 4.54" for 100-yr event
Inflow = 2.59 cfs @ 12.42 hrs, Volume= 0.471 af
Primary = 2.59 cfs @ 12.42 hrs, Volume= 0.471 af, Atten= 0%, Lag= 0.0 min

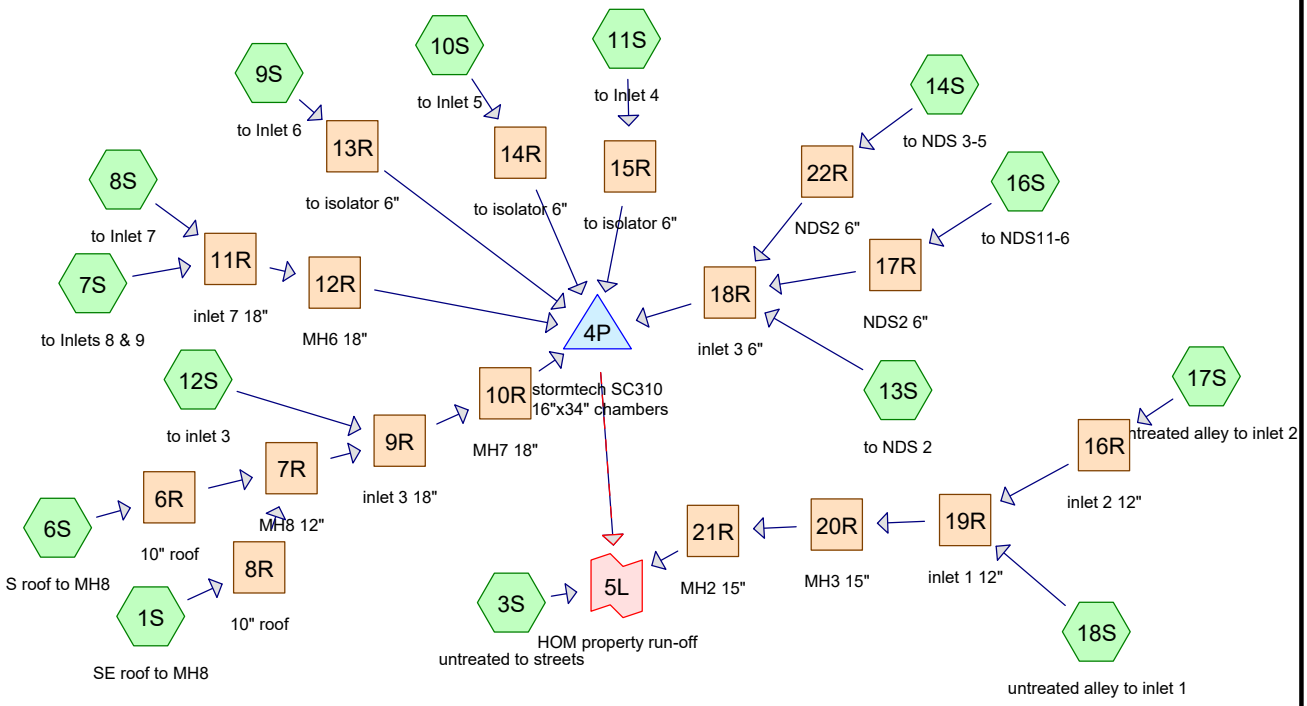
Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Link 5L: HOM property run-off



Hydrograph for Link 5L: HOM property run-off

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.20	0.01	0.00	0.01
5.40	0.02	0.00	0.02
5.60	0.04	0.00	0.04
5.80	0.04	0.00	0.04
6.00	0.05	0.00	0.05
6.20	0.06	0.00	0.06
6.40	0.07	0.00	0.07
6.60	0.07	0.00	0.07
6.80	0.08	0.00	0.08
7.00	0.09	0.00	0.09
7.20	0.09	0.00	0.09
7.40	0.10	0.00	0.10
7.60	0.10	0.00	0.10
7.80	0.11	0.00	0.11
8.00	0.11	0.00	0.11
8.20	0.11	0.00	0.11
8.40	0.12	0.00	0.12
8.60	0.12	0.00	0.12
8.80	0.13	0.00	0.13
9.00	0.13	0.00	0.13
9.20	0.14	0.00	0.14
9.40	0.16	0.00	0.16
9.60	0.17	0.00	0.17
9.80	0.18	0.00	0.18
10.00	0.19	0.00	0.19
10.20	0.19	0.00	0.19
10.40	0.20	0.00	0.20
10.60	0.21	0.00	0.21
10.80	0.22	0.00	0.22
11.00	0.23	0.00	0.23
11.20	0.25	0.00	0.25
11.40	0.27	0.00	0.27
11.60	0.29	0.00	0.29
11.80	0.37	0.00	0.37
12.00	0.57	0.00	0.57
12.20	1.03	0.00	1.03
12.40	**1.67**	0.00	**1.67**
12.60	**1.75**	0.00	**1.75**
12.80	1.36	0.00	1.36
13.00	1.14	0.00	1.14
13.20	0.99	0.00	0.99
13.40	0.87	0.00	0.87
13.60	0.77	0.00	0.77
13.80	0.70	0.00	0.70
14.00	0.64	0.00	0.64
14.20	0.60	0.00	0.60
14.40	0.56	0.00	0.56
14.60	0.52	0.00	0.52
14.80	0.50	0.00	0.50
15.00	0.48	0.00	0.48
15.20	0.46	0.00	0.46
15.40	0.44	0.00	0.44
15.60	0.42	0.00	0.42
15.80	0.41	0.00	0.41
16.00	0.40	0.00	0.40
16.20	0.39	0.00	0.39
16.40	0.39	0.00	0.39
16.60	0.38	0.00	0.38
16.80	0.37	0.00	0.37
17.00	0.37	0.00	0.37
17.20	0.37	0.00	0.37
17.40	0.36	0.00	0.36
17.60	0.36	0.00	0.36
17.80	0.36	0.00	0.36
18.00	0.36	0.00	0.36
18.20	0.35	0.00	0.35
18.40	0.35	0.00	0.35
18.60	0.35	0.00	0.35
18.80	0.35	0.00	0.35
19.00	0.35	0.00	0.35
19.20	0.34	0.00	0.34
19.40	0.34	0.00	0.34
19.60	0.34	0.00	0.34
19.80	0.34	0.00	0.34
20.00	0.34	0.00	0.34



Subcat Reach Pond Link

Routing Diagram for SC310 system with run-on + alleys
Prepared by Paragon Associates, Printed 4/18/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.108	39	LS (3S, 10S, 11S, 14S, 16S)
0.022	98	PIP play surface (12S)
0.107	98	SW (3S, 7S, 9S, 11S, 12S, 16S)
0.001	98	SW via LS (14S)
0.069	98	canopy (3S)
0.042	98	conc alley (17S)
0.070	98	concrete alley (18S)
0.305	98	fronting 10th (6S)
0.339	98	fronting Main St (1S)
0.070	61	lawn, HSG B (3S, 13S, 14S)
0.009	98	open shelter (12S)
0.034	98	parking AC pavement (12S)
0.179	98	pavement (7S, 8S, 9S, 10S, 11S)
0.108	98	roof + alley run-on (17S)
1.463	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.070	HSG B	3S, 13S, 14S
0.000	HSG C	
0.000	HSG D	
1.393	Other	1S, 3S, 6S, 7S, 8S, 9S, 10S, 11S, 12S, 14S, 16S, 17S, 18S
1.463		**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
0.000	0.000	0.000	0.000	0.108	0.108	LS	3S, 10S, 11S, 14S, 16S
0.000	0.000	0.000	0.000	0.022	0.022	PIP play surface	12S
0.000	0.000	0.000	0.000	0.107	0.107	SW	3S, 7S, 9S, 11S, 12S, 16S
0.000	0.000	0.000	0.000	0.001	0.001	SW via LS	14S
0.000	0.000	0.000	0.000	0.069	0.069	canopy	3S
0.000	0.000	0.000	0.000	0.042	0.042	conc alley	17S
0.000	0.000	0.000	0.000	0.070	0.070	concrete alley	18S
0.000	0.000	0.000	0.000	0.305	0.305	fronting 10th	6S
0.000	0.000	0.000	0.000	0.339	0.339	fronting Main St	1S
0.000	0.070	0.000	0.000	0.000	0.070	lawn	3S, 13S, 14S
0.000	0.000	0.000	0.000	0.009	0.009	open shelter	12S
0.000	0.000	0.000	0.000	0.034	0.034	parking AC pavement	12S
0.000	0.000	0.000	0.000	0.179	0.179	pavement	7S, 8S, 9S, 10S, 11S
0.000	0.000	0.000	0.000	0.108	0.108	roof + alley run-on	17S
0.000	**0.070**	**0.000**	**0.000**	**1.393**	**1.463**	**TOTAL AREA**	

SC310 system with run-on + alleys

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	6R	665.72	665.58	27.0	0.0052	0.010	10.0	0.0	7.0
2	7R	665.48	665.40	19.0	0.0042	0.010	12.0	0.0	9.0
3	8R	665.80	665.58	42.0	0.0052	0.010	10.0	0.0	7.0
4	9R	665.30	665.02	35.0	0.0080	0.010	18.0	0.0	14.0
5	10R	665.02	665.00	4.0	0.0050	0.010	18.0	0.0	14.0
6	11R	665.36	665.04	62.0	0.0052	0.010	18.0	0.0	14.0
7	12R	665.04	665.00	8.0	0.0050	0.010	18.0	0.0	14.0
8	13R	668.00	666.00	10.0	0.2000	0.010	6.0	0.0	4.0
9	14R	668.00	666.00	10.0	0.2000	0.010	6.0	0.0	4.0
10	15R	668.00	666.00	10.0	0.2000	0.010	6.0	0.0	4.0
11	16R	666.21	665.95	50.0	0.0052	0.010	12.0	0.0	8.0
12	17R	668.84	668.18	129.0	0.0051	0.010	6.0	0.0	4.0
13	18R	668.18	667.88	62.0	0.0048	0.010	6.0	0.0	4.0
14	19R	665.85	665.47	73.0	0.0052	0.010	12.0	0.0	8.0
15	20R	663.47	663.19	53.0	0.0053	0.010	15.0	0.0	12.0
16	21R	663.09	662.30	151.0	0.0052	0.010	15.0	0.0	12.0
17	22R	668.86	668.18	129.0	0.0053	0.010	6.0	0.0	4.0

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SE roof to MH8 Runoff Area=0.339 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=130' Tc=10.0 min CN=98 Runoff=0.98 cfs 0.064 af

Subcatchment3S: untreated to streets Runoff Area=0.177 ac 49.15% Impervious Runoff Depth>0.50"
Flow Length=110' Tc=30.0 min CN=71 Runoff=0.07 cfs 0.007 af

Subcatchment6S: S roof to MH8 Runoff Area=0.305 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=170' Tc=12.0 min CN=98 Runoff=0.82 cfs 0.058 af

Subcatchment7S: to Inlets 8 & 9 Runoff Area=0.048 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=105' Tc=15.0 min CN=98 Runoff=0.12 cfs 0.009 af

Subcatchment8S: to Inlet 7 Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=50' Tc=7.0 min CN=98 Runoff=0.16 cfs 0.010 af

Subcatchment9S: to Inlet 6 Runoff Area=0.041 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=90' Tc=14.0 min CN=98 Runoff=0.10 cfs 0.008 af

Subcatchment10S: to Inlet 5 Runoff Area=0.030 ac 83.33% Impervious Runoff Depth>1.40"
Flow Length=60' Tc=18.0 min CN=88 Runoff=0.05 cfs 0.003 af

Subcatchment11S: to Inlet 4 Runoff Area=0.038 ac 73.68% Impervious Runoff Depth>1.01"
Flow Length=120' Tc=26.0 min CN=82 Runoff=0.04 cfs 0.003 af

Subcatchment12S: to inlet 3 Runoff Area=0.124 ac 100.00% Impervious Runoff Depth>2.27"
Tc=0.0 min CN=98 Runoff=0.46 cfs 0.024 af

Subcatchment13S: to NDS 2 Runoff Area=0.021 ac 0.00% Impervious Runoff Depth>0.20"
Flow Length=20' Tc=20.0 min CN=61 Runoff=0.00 cfs 0.000 af

Subcatchment14S: to NDS 3-5 Runoff Area=0.031 ac 3.23% Impervious Runoff Depth>0.11"
Flow Length=95' Tc=52.0 min CN=57 Runoff=0.00 cfs 0.000 af

Subcatchment16S: to NDS11-6 Runoff Area=0.038 ac 42.11% Impervious Runoff Depth>0.27"
Flow Length=50' Tc=30.0 min CN=64 Runoff=0.01 cfs 0.001 af

Subcatchment17S: untreated alley to Runoff Area=0.150 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=265' Tc=20.0 min CN=98 Runoff=0.32 cfs 0.028 af

Subcatchment18S: untreated alley to Runoff Area=0.070 ac 100.00% Impervious Runoff Depth>2.27"
Flow Length=108' Tc=10.0 min CN=98 Runoff=0.20 cfs 0.013 af

Reach 6R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.22 fps Inflow=0.82 cfs 0.058 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=27.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.28 cfs 0.058 af

Reach 7R: MH8 12" Avg. Flow Depth=0.25' Max Vel=2.01 fps Inflow=0.55 cfs 0.122 af
12.0" Round Pipe w/ 9.0" inside fill n=0.010 L=19.0' S=0.0042 '/' Capacity=0.28 cfs Outflow=0.28 cfs 0.122 af

Reach 8R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.23 fps Inflow=0.98 cfs 0.064 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=42.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.064 af

Reach 9R: inlet 3 18" Avg. Flow Depth=0.21' Max Vel=3.27 fps Inflow=0.74 cfs 0.145 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=35.0' S=0.0080 '/' Capacity=0.88 cfs Outflow=0.74 cfs 0.145 af

Reach 10R: MH7 18" Avg. Flow Depth=0.30' Max Vel=2.65 fps Inflow=0.74 cfs 0.145 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=4.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.74 cfs 0.145 af

Reach 11R: inlet 7 18" Avg. Flow Depth=0.11' Max Vel=2.04 fps Inflow=0.26 cfs 0.019 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=62.0' S=0.0052 '/' Capacity=0.71 cfs Outflow=0.26 cfs 0.019 af

Reach 12R: MH6 18" Avg. Flow Depth=0.11' Max Vel=2.01 fps Inflow=0.26 cfs 0.019 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=8.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.26 cfs 0.019 af

Reach 13R: to isolator 6" Avg. Flow Depth=0.04' Max Vel=6.37 fps Inflow=0.10 cfs 0.008 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.10 cfs 0.008 af

Reach 14R: to isolator 6" Avg. Flow Depth=0.02' Max Vel=4.73 fps Inflow=0.05 cfs 0.003 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.05 cfs 0.003 af

Reach 15R: to isolator 6" Avg. Flow Depth=0.02' Max Vel=4.26 fps Inflow=0.04 cfs 0.003 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.04 cfs 0.003 af

Reach 16R: inlet 2 12" Avg. Flow Depth=0.16' Max Vel=2.37 fps Inflow=0.32 cfs 0.028 af
12.0" Round Pipe w/ 8.0" inside fill n=0.010 L=50.0' S=0.0052 '/' Capacity=0.55 cfs Outflow=0.32 cfs 0.028 af

Reach 17R: NDS2 6" Avg. Flow Depth=0.02' Max Vel=0.70 fps Inflow=0.01 cfs 0.001 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0051 '/' Capacity=0.09 cfs Outflow=0.01 cfs 0.001 af

Reach 18R: inlet 3 6" Avg. Flow Depth=0.02' Max Vel=0.76 fps Inflow=0.01 cfs 0.002 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=62.0' S=0.0048 '/' Capacity=0.08 cfs Outflow=0.01 cfs 0.001 af

Reach 19R: inlet 1 12" Avg. Flow Depth=0.22' Max Vel=2.61 fps Inflow=0.46 cfs 0.042 af
12.0" Round Pipe w/ 8.0" inside fill n=0.010 L=73.0' S=0.0052 '/' Capacity=0.55 cfs Outflow=0.46 cfs 0.042 af

Reach 20R: MH3 15" Avg. Flow Depth=0.25' Max Vel=2.26 fps Inflow=0.46 cfs 0.042 af
15.0" Round Pipe w/ 12.0" inside fill n=0.010 L=53.0' S=0.0053 '/' Capacity=0.35 cfs Outflow=0.35 cfs 0.042 af

Reach 21R: MH2 15" Avg. Flow Depth=0.20' Max Vel=2.25 fps Inflow=0.35 cfs 0.042 af
15.0" Round Pipe w/ 12.0" inside fill n=0.010 L=151.0' S=0.0052 '/' Capacity=0.35 cfs Outflow=0.35 cfs 0.042 af

Reach 22R: NDS2 6" Avg. Flow Depth=0.01' Max Vel=0.36 fps Inflow=0.00 cfs 0.000 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0053 '/' Capacity=0.09 cfs Outflow=0.00 cfs 0.000 af

Pond 4P: stormtech SC310 16"x34" Peak Elev=665.74' Storage=0.051 af Inflow=1.01 cfs 0.180 af
Primary=0.07 cfs 0.014 af Secondary=0.26 cfs 0.161 af Outflow=0.33 cfs 0.175 af

Link 5L: HOM property run-off Inflow=0.69 cfs 0.224 af
Primary=0.69 cfs 0.224 af

Total Runoff Area = 1.463 ac Runoff Volume = 0.229 af Average Runoff Depth = 1.88"
12.17% Pervious = 0.178 ac 87.83% Impervious = 1.285 ac

Summary for Subcatchment 1S: SE roof to MH8

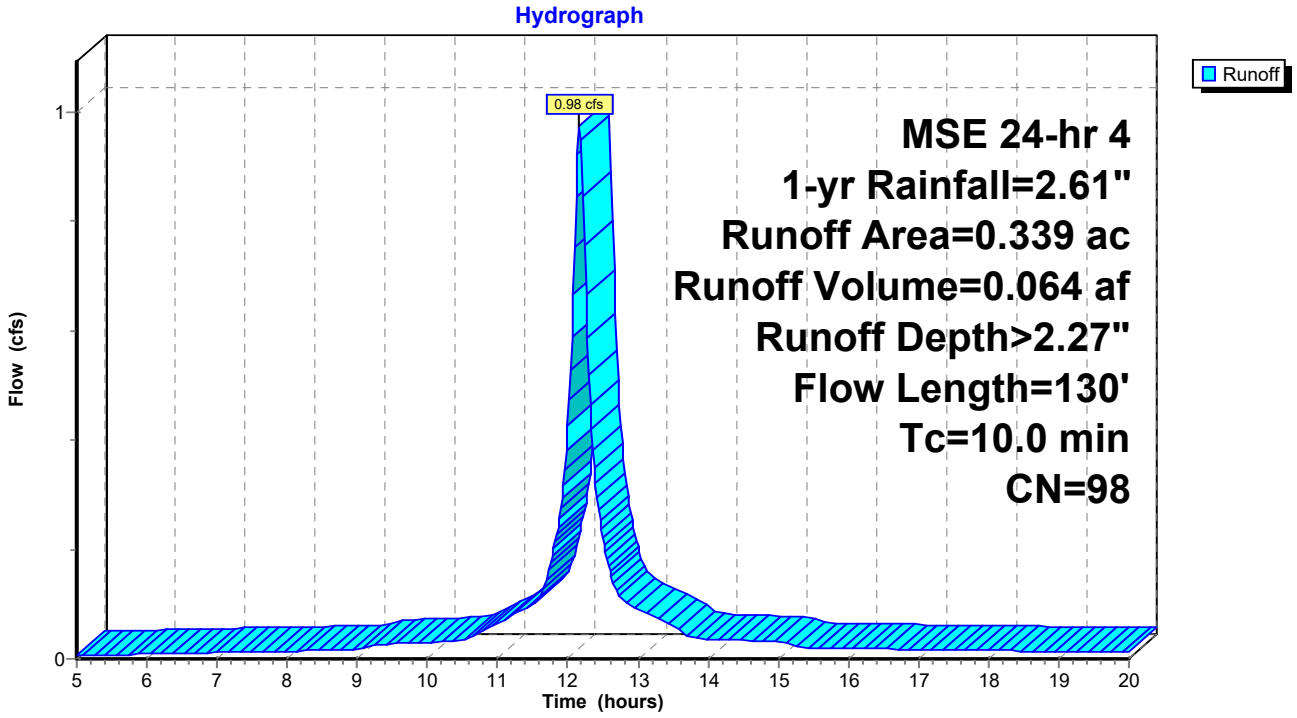
Runoff = 0.98 cfs @ 12.17 hrs, Volume= 0.064 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.339	98	fronting Main St
	0.339		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	130		0.22		**Direct Entry, S Bldg roof**

Subcatchment 1S: SE roof to MH8



Hydrograph for Subcatchment 1S: SE roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.01
5.20	0.13	0.03	0.01
5.40	0.14	0.03	0.01
5.60	0.14	0.03	0.01
5.80	0.15	0.04	0.01
6.00	0.16	0.04	0.01
6.20	0.17	0.05	0.01
6.40	0.18	0.06	0.01
6.60	0.19	0.06	0.01
6.80	0.20	0.07	0.01
7.00	0.21	0.07	0.01
7.20	0.22	0.08	0.01
7.40	0.23	0.09	0.01
7.60	0.24	0.10	0.01
7.80	0.25	0.10	0.01
8.00	0.26	0.11	0.01
8.20	0.27	0.12	0.01
8.40	0.28	0.13	0.01
8.60	0.29	0.14	0.02
8.80	0.30	0.15	0.02
9.00	0.32	0.16	0.02
9.20	0.33	0.17	0.02
9.40	0.35	0.19	0.03
9.60	0.37	0.21	0.03
9.80	0.39	0.22	0.03
10.00	0.41	0.24	0.03
10.20	0.43	0.26	0.03
10.40	0.46	0.28	0.03
10.60	0.48	0.30	0.04
10.80	0.52	0.34	0.05
11.00	0.56	0.38	0.07
11.20	0.62	0.43	0.08
11.40	0.68	0.48	0.09
11.60	0.75	0.55	0.11
11.80	0.90	0.69	0.20
12.00	1.22	1.01	**0.43**
12.20	1.71	1.49	**0.93**
12.40	1.86	1.63	0.32
12.60	1.93	1.71	0.16
12.80	1.99	1.77	0.11
13.00	2.05	1.82	0.09
13.20	2.09	1.86	0.08
13.40	2.13	1.90	0.07
13.60	2.15	1.93	0.05
13.80	2.18	1.95	0.04
14.00	2.20	1.97	0.04
14.20	2.22	1.99	0.04
14.40	2.24	2.01	0.03
14.60	2.26	2.03	0.03
14.80	2.28	2.05	0.03
15.00	2.29	2.07	0.03
15.20	2.31	2.08	0.02
15.40	2.32	2.09	0.02
15.60	2.33	2.10	0.02
15.80	2.34	2.11	0.02
16.00	2.35	2.12	0.02
16.20	2.36	2.13	0.02
16.40	2.37	2.14	0.02
16.60	2.38	2.15	0.02
16.80	2.39	2.16	0.02
17.00	2.40	2.17	0.02
17.20	2.41	2.18	0.02
17.40	2.42	2.19	0.02
17.60	2.43	2.20	0.02
17.80	2.44	2.21	0.02
18.00	2.45	2.22	0.02
18.20	2.46	2.23	0.01
18.40	2.47	2.24	0.01
18.60	2.47	2.25	0.01
18.80	2.48	2.25	0.01
19.00	2.49	2.26	0.01
19.20	2.50	2.27	0.01
19.40	2.50	2.28	0.01
19.60	2.51	2.28	0.01
19.80	2.52	2.29	0.01
20.00	**2.53**	**2.30**	0.01

Summary for Subcatchment 3S: untreated to streets

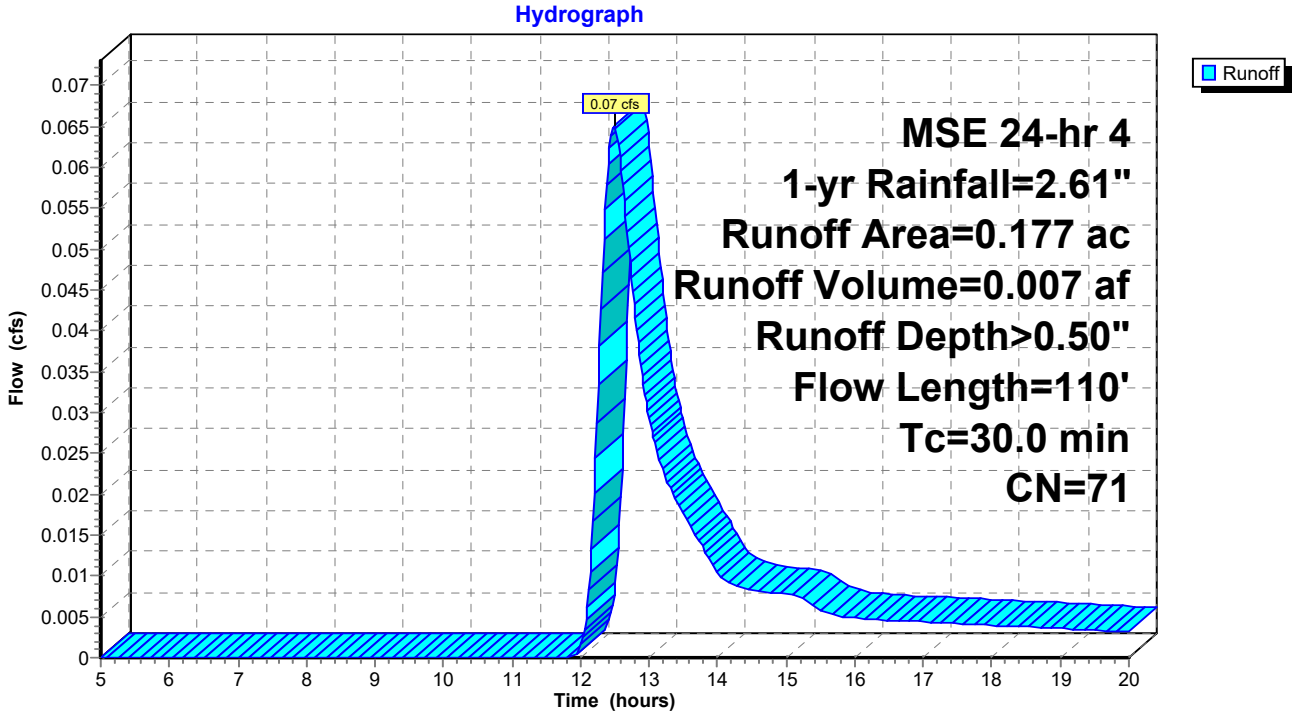
Runoff = 0.07 cfs @ 12.49 hrs, Volume= 0.007 af, Depth> 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.069	98	canopy
*	0.063	39	LS
*	0.027	61	lawn, HSG B
*	0.018	98	SW
	0.177	71	Weighted Average
	0.090		50.85% Pervious Area
	0.087		49.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	70		0.19		**Direct Entry, canopy**
12.0	20		0.03		**Direct Entry, LS**
12.0	20		0.03		**Direct Entry, lawn**
30.0	110	Total			

Subcatchment 3S: untreated to streets



Hydrograph for Subcatchment 3S: untreated to streets

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.00	0.00
10.60	0.48	0.00	0.00
10.80	0.52	0.00	0.00
11.00	0.56	0.00	0.00
11.20	0.62	0.00	0.00
11.40	0.68	0.00	0.00
11.60	0.75	0.00	0.00
11.80	0.90	0.00	0.00
12.00	1.22	0.04	0.00
12.20	1.71	0.16	0.02
12.40	1.86	0.21	**0.06**
12.60	1.93	0.24	**0.06**
12.80	1.99	0.26	0.04
13.00	2.05	0.28	0.03
13.20	2.09	0.30	0.02
13.40	2.13	0.32	0.02
13.60	2.15	0.33	0.02
13.80	2.18	0.34	0.01
14.00	2.20	0.35	0.01
14.20	2.22	0.36	0.01
14.40	2.24	0.37	0.01
14.60	2.26	0.38	0.01
14.80	2.28	0.38	0.01
15.00	2.29	0.39	0.01
15.20	2.31	0.40	0.01
15.40	2.32	0.40	0.01
15.60	2.33	0.41	0.01
15.80	2.34	0.41	0.01
16.00	2.35	0.42	0.00
16.20	2.36	0.42	0.00
16.40	2.37	0.43	0.00
16.60	2.38	0.43	0.00
16.80	2.39	0.44	0.00
17.00	2.40	0.44	0.00
17.20	2.41	0.45	0.00
17.40	2.42	0.45	0.00
17.60	2.43	0.46	0.00
17.80	2.44	0.46	0.00
18.00	2.45	0.47	0.00
18.20	2.46	0.47	0.00
18.40	2.47	0.47	0.00
18.60	2.47	0.48	0.00
18.80	2.48	0.48	0.00
19.00	2.49	0.49	0.00
19.20	2.50	0.49	0.00
19.40	2.50	0.49	0.00
19.60	2.51	0.50	0.00
19.80	2.52	0.50	0.00
20.00	**2.53**	**0.50**	0.00

Summary for Subcatchment 6S: S roof to MH8

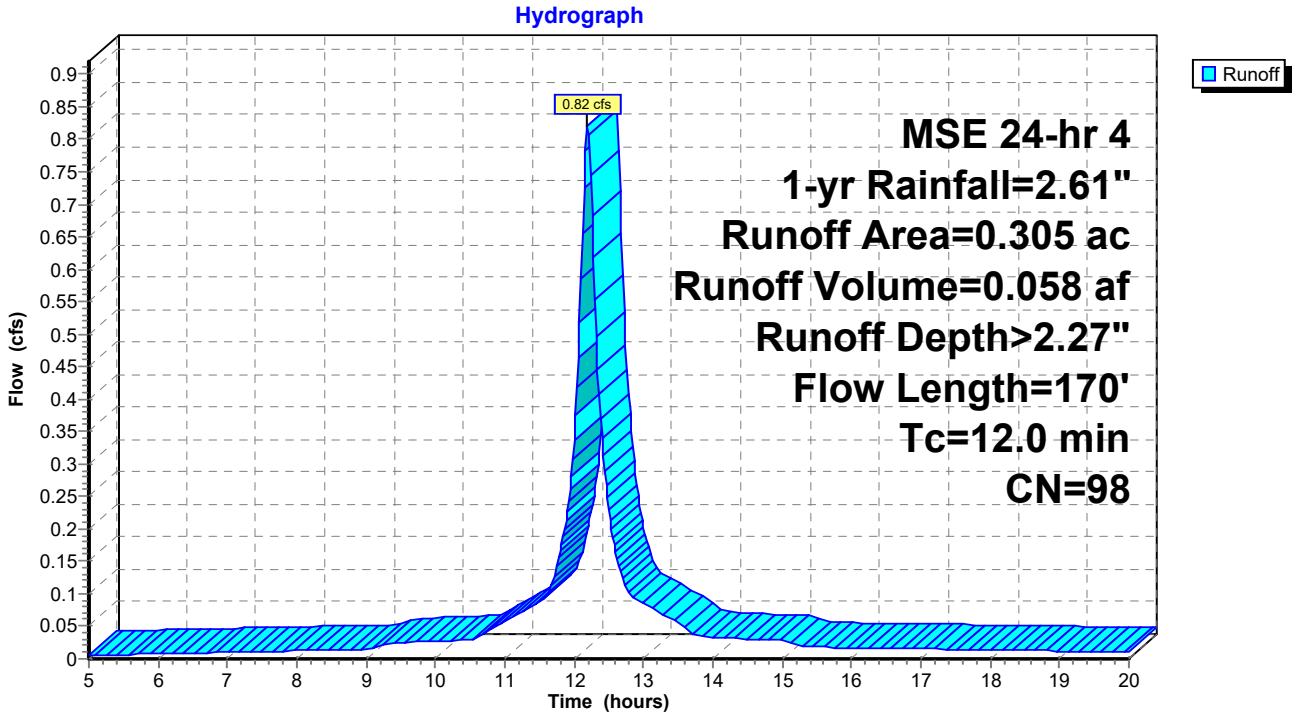
Runoff = 0.82 cfs @ 12.19 hrs, Volume= 0.058 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.305	98	fronting 10th
	0.305		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	170		0.24		**Direct Entry, NE Bldg Roof**

Subcatchment 6S: S roof to MH8



Hydrograph for Subcatchment 6S: S roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.01
5.20	0.13	0.03	0.01
5.40	0.14	0.03	0.01
5.60	0.14	0.03	0.01
5.80	0.15	0.04	0.01
6.00	0.16	0.04	0.01
6.20	0.17	0.05	0.01
6.40	0.18	0.06	0.01
6.60	0.19	0.06	0.01
6.80	0.20	0.07	0.01
7.00	0.21	0.07	0.01
7.20	0.22	0.08	0.01
7.40	0.23	0.09	0.01
7.60	0.24	0.10	0.01
7.80	0.25	0.10	0.01
8.00	0.26	0.11	0.01
8.20	0.27	0.12	0.01
8.40	0.28	0.13	0.01
8.60	0.29	0.14	0.01
8.80	0.30	0.15	0.01
9.00	0.32	0.16	0.01
9.20	0.33	0.17	0.02
9.40	0.35	0.19	0.02
9.60	0.37	0.21	0.03
9.80	0.39	0.22	0.03
10.00	0.41	0.24	0.03
10.20	0.43	0.26	0.03
10.40	0.46	0.28	0.03
10.60	0.48	0.30	0.03
10.80	0.52	0.34	0.05
11.00	0.56	0.38	0.06
11.20	0.62	0.43	0.07
11.40	0.68	0.48	0.08
11.60	0.75	0.55	0.10
11.80	0.90	0.69	0.17
12.00	1.22	1.01	0.34
12.20	1.71	1.49	**0.82**
12.40	1.86	1.63	0.34
12.60	1.93	1.71	0.16
12.80	1.99	1.77	0.10
13.00	2.05	1.82	0.08
13.20	2.09	1.86	0.07
13.40	2.13	1.90	0.06
13.60	2.15	1.93	0.05
13.80	2.18	1.95	0.03
14.00	2.20	1.97	0.03
14.20	2.22	1.99	0.03
14.40	2.24	2.01	0.03
14.60	2.26	2.03	0.03
14.80	2.28	2.05	0.03
15.00	2.29	2.07	0.03
15.20	2.31	2.08	0.02
15.40	2.32	2.09	0.02
15.60	2.33	2.10	0.02
15.80	2.34	2.11	0.02
16.00	2.35	2.12	0.02
16.20	2.36	2.13	0.02
16.40	2.37	2.14	0.02
16.60	2.38	2.15	0.02
16.80	2.39	2.16	0.02
17.00	2.40	2.17	0.02
17.20	2.41	2.18	0.01
17.40	2.42	2.19	0.01
17.60	2.43	2.20	0.01
17.80	2.44	2.21	0.01
18.00	2.45	2.22	0.01
18.20	2.46	2.23	0.01
18.40	2.47	2.24	0.01
18.60	2.47	2.25	0.01
18.80	2.48	2.25	0.01
19.00	2.49	2.26	0.01
19.20	2.50	2.27	0.01
19.40	2.50	2.28	0.01
19.60	2.51	2.28	0.01
19.80	2.52	2.29	0.01
20.00	**2.53**	**2.30**	0.01

Summary for Subcatchment 7S: to Inlets 8 & 9

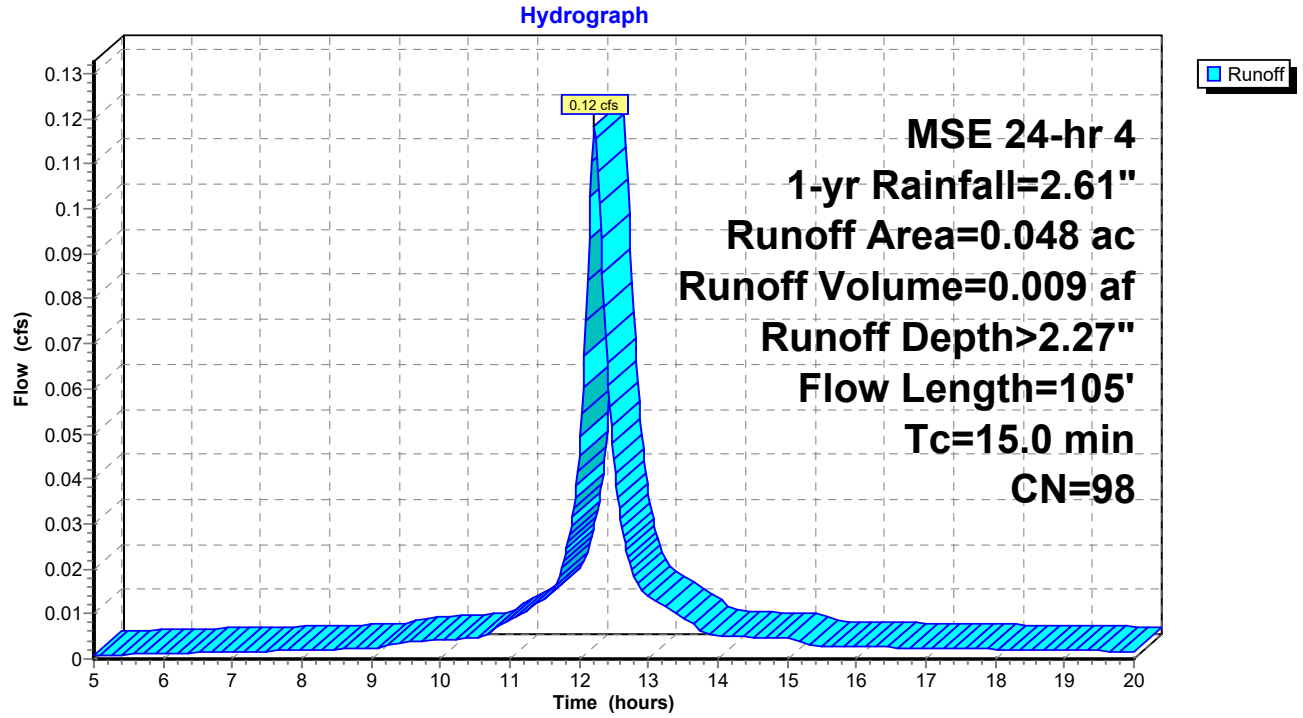
Runoff = 0.12 cfs @ 12.22 hrs, Volume= 0.009 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.046	98	pavement
*	0.002	98	SW
	0.048	98	Weighted Average
	0.048		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	55		0.13		**Direct Entry, pavement**
8.0	50		0.10		**Direct Entry, SW**
15.0	105	Total			

Subcatchment 7S: to Inlets 8 & 9



Hydrograph for Subcatchment 7S: to Inlets 8 & 9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.00
5.20	0.13	0.03	0.00
5.40	0.14	0.03	0.00
5.60	0.14	0.03	0.00
5.80	0.15	0.04	0.00
6.00	0.16	0.04	0.00
6.20	0.17	0.05	0.00
6.40	0.18	0.06	0.00
6.60	0.19	0.06	0.00
6.80	0.20	0.07	0.00
7.00	0.21	0.07	0.00
7.20	0.22	0.08	0.00
7.40	0.23	0.09	0.00
7.60	0.24	0.10	0.00
7.80	0.25	0.10	0.00
8.00	0.26	0.11	0.00
8.20	0.27	0.12	0.00
8.40	0.28	0.13	0.00
8.60	0.29	0.14	0.00
8.80	0.30	0.15	0.00
9.00	0.32	0.16	0.00
9.20	0.33	0.17	0.00
9.40	0.35	0.19	0.00
9.60	0.37	0.21	0.00
9.80	0.39	0.22	0.00
10.00	0.41	0.24	0.00
10.20	0.43	0.26	0.00
10.40	0.46	0.28	0.00
10.60	0.48	0.30	0.00
10.80	0.52	0.34	0.01
11.00	0.56	0.38	0.01
11.20	0.62	0.43	0.01
11.40	0.68	0.48	0.01
11.60	0.75	0.55	0.01
11.80	0.90	0.69	0.02
12.00	1.22	1.01	0.05
12.20	1.71	1.49	**0.12**
12.40	1.86	1.63	**0.07**
12.60	1.93	1.71	0.03
12.80	1.99	1.77	0.02
13.00	2.05	1.82	0.01
13.20	2.09	1.86	0.01
13.40	2.13	1.90	0.01
13.60	2.15	1.93	0.01
13.80	2.18	1.95	0.01
14.00	2.20	1.97	0.01
14.20	2.22	1.99	0.01
14.40	2.24	2.01	0.00
14.60	2.26	2.03	0.00
14.80	2.28	2.05	0.00
15.00	2.29	2.07	0.00
15.20	2.31	2.08	0.00
15.40	2.32	2.09	0.00
15.60	2.33	2.10	0.00
15.80	2.34	2.11	0.00
16.00	2.35	2.12	0.00
16.20	2.36	2.13	0.00
16.40	2.37	2.14	0.00
16.60	2.38	2.15	0.00
16.80	2.39	2.16	0.00
17.00	2.40	2.17	0.00
17.20	2.41	2.18	0.00
17.40	2.42	2.19	0.00
17.60	2.43	2.20	0.00
17.80	2.44	2.21	0.00
18.00	2.45	2.22	0.00
18.20	2.46	2.23	0.00
18.40	2.47	2.24	0.00
18.60	2.47	2.25	0.00
18.80	2.48	2.25	0.00
19.00	2.49	2.26	0.00
19.20	2.50	2.27	0.00
19.40	2.50	2.28	0.00
19.60	2.51	2.28	0.00
19.80	2.52	2.29	0.00
20.00	**2.53**	**2.30**	0.00

Summary for Subcatchment 8S: to Inlet 7

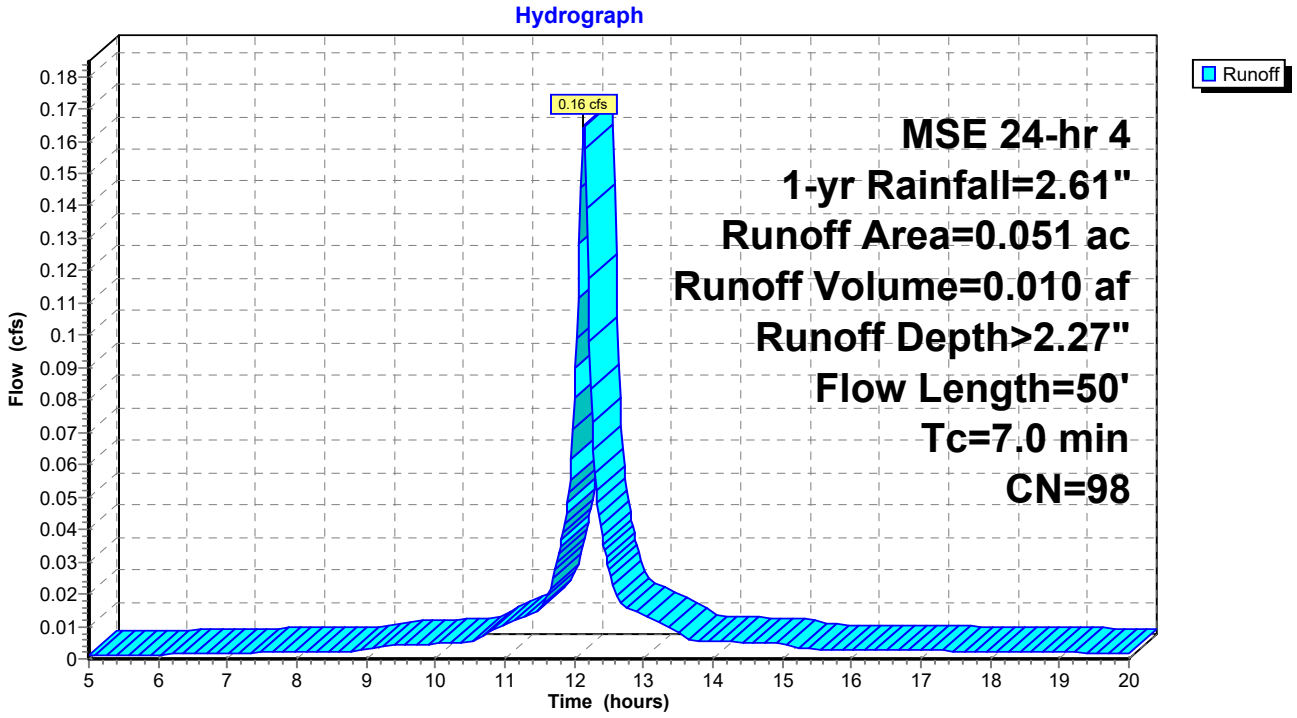
Runoff = 0.16 cfs @ 12.14 hrs, Volume= 0.010 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.051	98	pavement
	0.051		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	50		0.12		**Direct Entry, pavement**

Subcatchment 8S: to Inlet 7



Hydrograph for Subcatchment 8S: to Inlet 7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.00
5.20	0.13	0.03	0.00
5.40	0.14	0.03	0.00
5.60	0.14	0.03	0.00
5.80	0.15	0.04	0.00
6.00	0.16	0.04	0.00
6.20	0.17	0.05	0.00
6.40	0.18	0.06	0.00
6.60	0.19	0.06	0.00
6.80	0.20	0.07	0.00
7.00	0.21	0.07	0.00
7.20	0.22	0.08	0.00
7.40	0.23	0.09	0.00
7.60	0.24	0.10	0.00
7.80	0.25	0.10	0.00
8.00	0.26	0.11	0.00
8.20	0.27	0.12	0.00
8.40	0.28	0.13	0.00
8.60	0.29	0.14	0.00
8.80	0.30	0.15	0.00
9.00	0.32	0.16	0.00
9.20	0.33	0.17	0.00
9.40	0.35	0.19	0.00
9.60	0.37	0.21	0.00
9.80	0.39	0.22	0.00
10.00	0.41	0.24	0.00
10.20	0.43	0.26	0.00
10.40	0.46	0.28	0.00
10.60	0.48	0.30	0.01
10.80	0.52	0.34	0.01
11.00	0.56	0.38	0.01
11.20	0.62	0.43	0.01
11.40	0.68	0.48	0.01
11.60	0.75	0.55	0.02
11.80	0.90	0.69	0.03
12.00	1.22	1.01	**0.08**
12.20	1.71	1.49	**0.12**
12.40	1.86	1.63	0.04
12.60	1.93	1.71	0.02
12.80	1.99	1.77	0.02
13.00	2.05	1.82	0.01
13.20	2.09	1.86	0.01
13.40	2.13	1.90	0.01
13.60	2.15	1.93	0.01
13.80	2.18	1.95	0.01
14.00	2.20	1.97	0.01
14.20	2.22	1.99	0.01
14.40	2.24	2.01	0.01
14.60	2.26	2.03	0.00
14.80	2.28	2.05	0.00
15.00	2.29	2.07	0.00
15.20	2.31	2.08	0.00
15.40	2.32	2.09	0.00
15.60	2.33	2.10	0.00
15.80	2.34	2.11	0.00
16.00	2.35	2.12	0.00
16.20	2.36	2.13	0.00
16.40	2.37	2.14	0.00
16.60	2.38	2.15	0.00
16.80	2.39	2.16	0.00
17.00	2.40	2.17	0.00
17.20	2.41	2.18	0.00
17.40	2.42	2.19	0.00
17.60	2.43	2.20	0.00
17.80	2.44	2.21	0.00
18.00	2.45	2.22	0.00
18.20	2.46	2.23	0.00
18.40	2.47	2.24	0.00
18.60	2.47	2.25	0.00
18.80	2.48	2.25	0.00
19.00	2.49	2.26	0.00
19.20	2.50	2.27	0.00
19.40	2.50	2.28	0.00
19.60	2.51	2.28	0.00
19.80	2.52	2.29	0.00
20.00	**2.53**	**2.30**	0.00

Summary for Subcatchment 9S: to Inlet 6

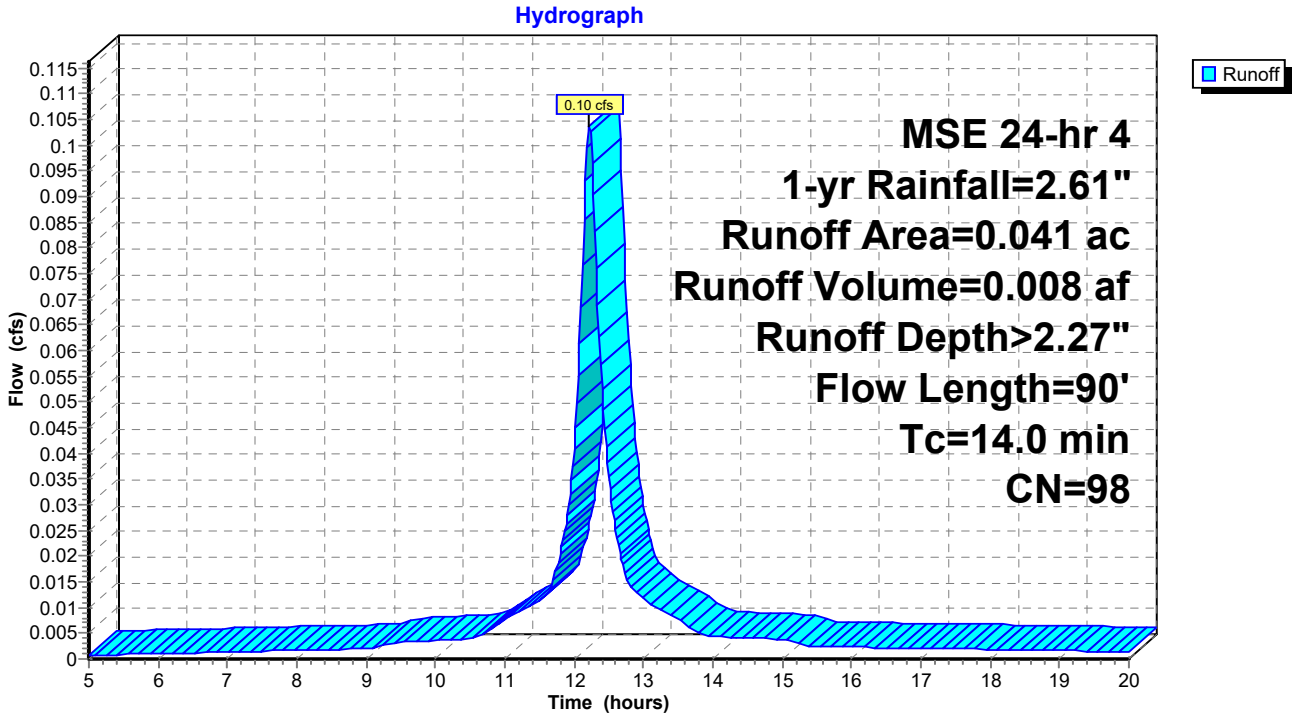
Runoff = 0.10 cfs @ 12.21 hrs, Volume= 0.008 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.032	98	pavement
*	0.009	98	SW
	0.041	98	Weighted Average
	0.041		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	45		0.11		**Direct Entry, pavement**
7.0	45		0.11		**Direct Entry, SW**
14.0	90	Total			

Subcatchment 9S: to Inlet 6



Hydrograph for Subcatchment 9S: to Inlet 6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.00
5.20	0.13	0.03	0.00
5.40	0.14	0.03	0.00
5.60	0.14	0.03	0.00
5.80	0.15	0.04	0.00
6.00	0.16	0.04	0.00
6.20	0.17	0.05	0.00
6.40	0.18	0.06	0.00
6.60	0.19	0.06	0.00
6.80	0.20	0.07	0.00
7.00	0.21	0.07	0.00
7.20	0.22	0.08	0.00
7.40	0.23	0.09	0.00
7.60	0.24	0.10	0.00
7.80	0.25	0.10	0.00
8.00	0.26	0.11	0.00
8.20	0.27	0.12	0.00
8.40	0.28	0.13	0.00
8.60	0.29	0.14	0.00
8.80	0.30	0.15	0.00
9.00	0.32	0.16	0.00
9.20	0.33	0.17	0.00
9.40	0.35	0.19	0.00
9.60	0.37	0.21	0.00
9.80	0.39	0.22	0.00
10.00	0.41	0.24	0.00
10.20	0.43	0.26	0.00
10.40	0.46	0.28	0.00
10.60	0.48	0.30	0.00
10.80	0.52	0.34	0.01
11.00	0.56	0.38	0.01
11.20	0.62	0.43	0.01
11.40	0.68	0.48	0.01
11.60	0.75	0.55	0.01
11.80	0.90	0.69	0.02
12.00	1.22	1.01	0.04
12.20	1.71	1.49	**0.10**
12.40	1.86	1.63	**0.05**
12.60	1.93	1.71	0.03
12.80	1.99	1.77	0.01
13.00	2.05	1.82	0.01
13.20	2.09	1.86	0.01
13.40	2.13	1.90	0.01
13.60	2.15	1.93	0.01
13.80	2.18	1.95	0.00
14.00	2.20	1.97	0.00
14.20	2.22	1.99	0.00
14.40	2.24	2.01	0.00
14.60	2.26	2.03	0.00
14.80	2.28	2.05	0.00
15.00	2.29	2.07	0.00
15.20	2.31	2.08	0.00
15.40	2.32	2.09	0.00
15.60	2.33	2.10	0.00
15.80	2.34	2.11	0.00
16.00	2.35	2.12	0.00
16.20	2.36	2.13	0.00
16.40	2.37	2.14	0.00
16.60	2.38	2.15	0.00
16.80	2.39	2.16	0.00
17.00	2.40	2.17	0.00
17.20	2.41	2.18	0.00
17.40	2.42	2.19	0.00
17.60	2.43	2.20	0.00
17.80	2.44	2.21	0.00
18.00	2.45	2.22	0.00
18.20	2.46	2.23	0.00
18.40	2.47	2.24	0.00
18.60	2.47	2.25	0.00
18.80	2.48	2.25	0.00
19.00	2.49	2.26	0.00
19.20	2.50	2.27	0.00
19.40	2.50	2.28	0.00
19.60	2.51	2.28	0.00
19.80	2.52	2.29	0.00
20.00	**2.53**	**2.30**	0.00

Summary for Subcatchment 10S: to Inlet 5

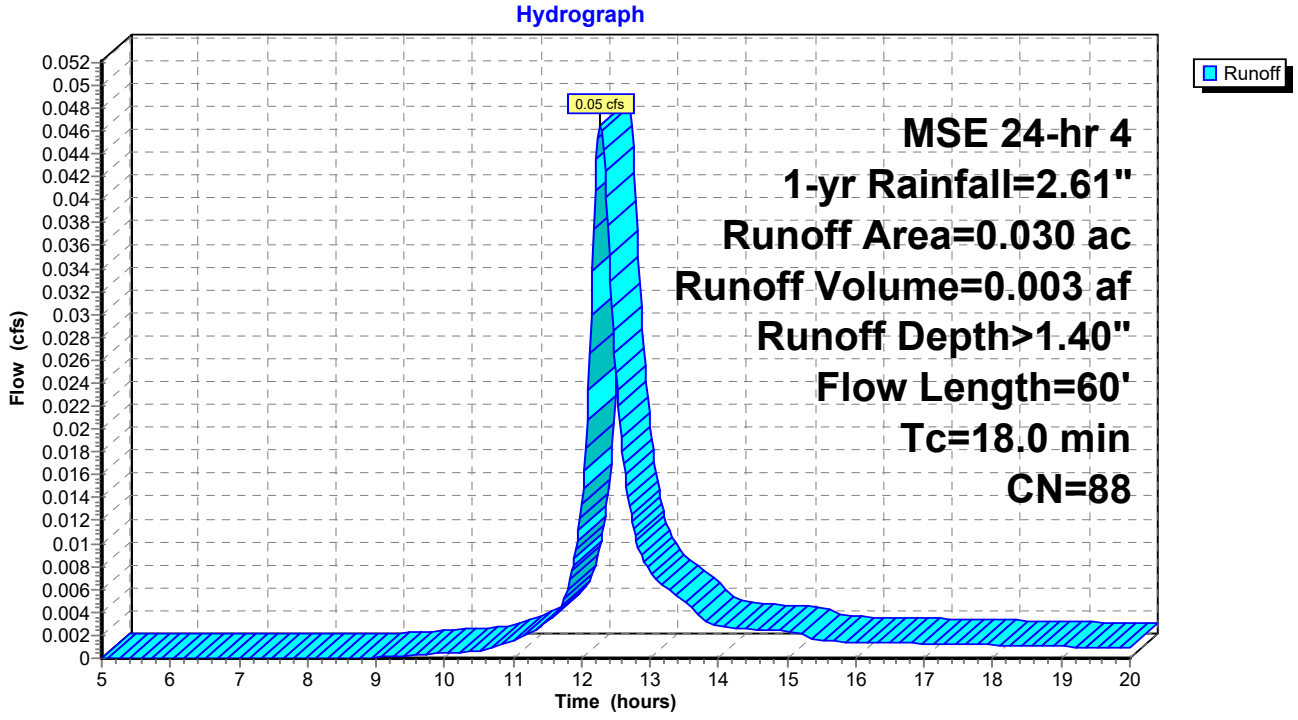
Runoff = 0.05 cfs @ 12.27 hrs, Volume= 0.003 af, Depth> 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.005	39	LS
	0.030	88	Weighted Average
	0.005		16.67% Pervious Area
	0.025		83.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40		0.11		**Direct Entry, pavement**
12.0	20		0.03		**Direct Entry, LS**
18.0	60	Total			

Subcatchment 10S: to Inlet 5



Hydrograph for Subcatchment 10S: to Inlet 5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.01	0.00
9.80	0.39	0.01	0.00
10.00	0.41	0.01	0.00
10.20	0.43	0.02	0.00
10.40	0.46	0.02	0.00
10.60	0.48	0.03	0.00
10.80	0.52	0.04	0.00
11.00	0.56	0.05	0.00
11.20	0.62	0.07	0.00
11.40	0.68	0.09	0.00
11.60	0.75	0.13	0.00
11.80	0.90	0.20	0.01
12.00	1.22	0.39	0.01
12.20	1.71	0.74	**0.04**
12.40	1.86	0.85	**0.04**
12.60	1.93	0.91	0.02
12.80	1.99	0.96	0.01
13.00	2.05	1.00	0.01
13.20	2.09	1.04	0.01
13.40	2.13	1.07	0.01
13.60	2.15	1.09	0.00
13.80	2.18	1.11	0.00
14.00	2.20	1.13	0.00
14.20	2.22	1.14	0.00
14.40	2.24	1.16	0.00
14.60	2.26	1.18	0.00
14.80	2.28	1.19	0.00
15.00	2.29	1.21	0.00
15.20	2.31	1.22	0.00
15.40	2.32	1.23	0.00
15.60	2.33	1.24	0.00
15.80	2.34	1.25	0.00
16.00	2.35	1.26	0.00
16.20	2.36	1.26	0.00
16.40	2.37	1.27	0.00
16.60	2.38	1.28	0.00
16.80	2.39	1.29	0.00
17.00	2.40	1.30	0.00
17.20	2.41	1.31	0.00
17.40	2.42	1.32	0.00
17.60	2.43	1.32	0.00
17.80	2.44	1.33	0.00
18.00	2.45	1.34	0.00
18.20	2.46	1.35	0.00
18.40	2.47	1.35	0.00
18.60	2.47	1.36	0.00
18.80	2.48	1.37	0.00
19.00	2.49	1.37	0.00
19.20	2.50	1.38	0.00
19.40	2.50	1.39	0.00
19.60	2.51	1.39	0.00
19.80	2.52	1.40	0.00
20.00	**2.53**	**1.40**	0.00

Summary for Subcatchment 11S: to Inlet 4

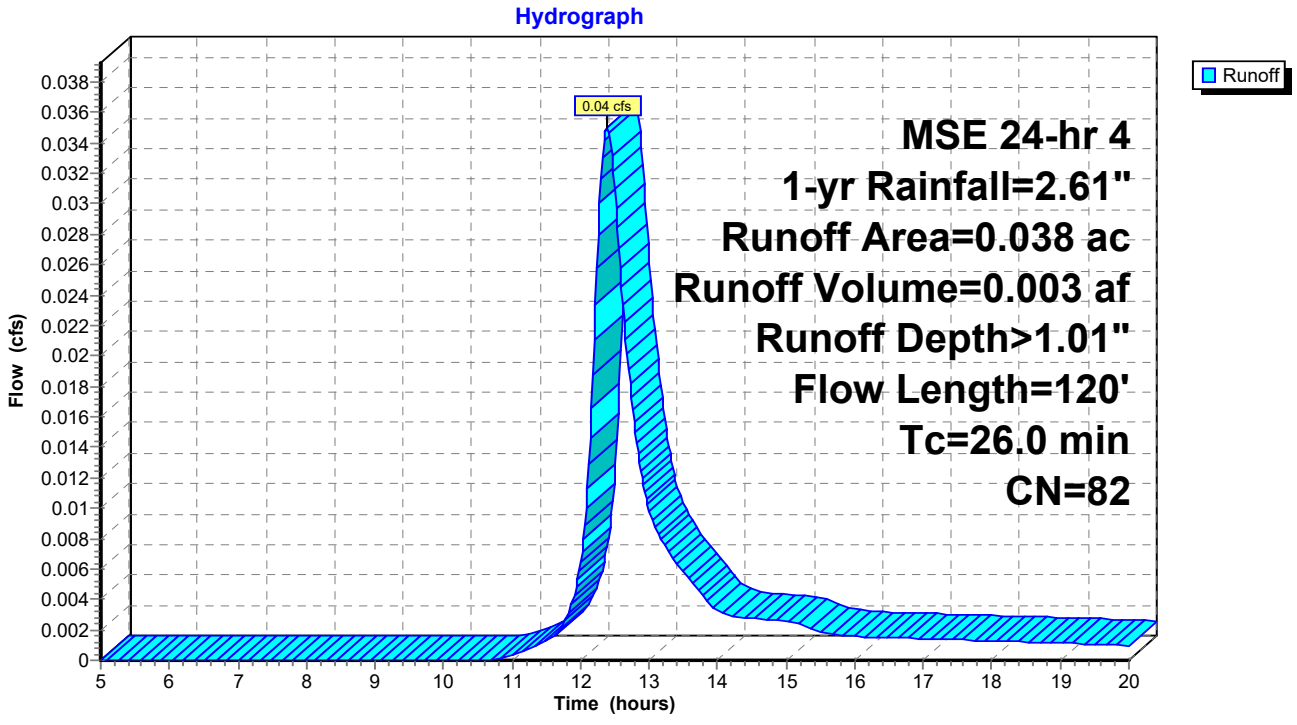
Runoff = 0.04 cfs @ 12.39 hrs, Volume= 0.003 af, Depth> 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.003	98	SW
*	0.010	39	LS
	0.038	82	Weighted Average
	0.010		26.32% Pervious Area
	0.028		73.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	40		0.10		**Direct Entry, pavement**
7.0	40		0.10		**Direct Entry, SW**
12.0	40		0.06		**Direct Entry, LS**
26.0	120	Total			

Subcatchment 11S: to Inlet 4



Hydrograph for Subcatchment 11S: to Inlet 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.00	0.00
10.60	0.48	0.00	0.00
10.80	0.52	0.00	0.00
11.00	0.56	0.01	0.00
11.20	0.62	0.01	0.00
11.40	0.68	0.02	0.00
11.60	0.75	0.04	0.00
11.80	0.90	0.08	0.00
12.00	1.22	0.21	0.01
12.20	1.71	0.47	**0.02**
12.40	1.86	0.56	**0.04**
12.60	1.93	0.61	0.02
12.80	1.99	0.64	0.01
13.00	2.05	0.68	0.01
13.20	2.09	0.71	0.01
13.40	2.13	0.73	0.01
13.60	2.15	0.75	0.01
13.80	2.18	0.77	0.00
14.00	2.20	0.78	0.00
14.20	2.22	0.80	0.00
14.40	2.24	0.81	0.00
14.60	2.26	0.82	0.00
14.80	2.28	0.84	0.00
15.00	2.29	0.85	0.00
15.20	2.31	0.86	0.00
15.40	2.32	0.87	0.00
15.60	2.33	0.87	0.00
15.80	2.34	0.88	0.00
16.00	2.35	0.89	0.00
16.20	2.36	0.90	0.00
16.40	2.37	0.91	0.00
16.60	2.38	0.91	0.00
16.80	2.39	0.92	0.00
17.00	2.40	0.93	0.00
17.20	2.41	0.93	0.00
17.40	2.42	0.94	0.00
17.60	2.43	0.95	0.00
17.80	2.44	0.95	0.00
18.00	2.45	0.96	0.00
18.20	2.46	0.97	0.00
18.40	2.47	0.97	0.00
18.60	2.47	0.98	0.00
18.80	2.48	0.99	0.00
19.00	2.49	0.99	0.00
19.20	2.50	1.00	0.00
19.40	2.50	1.00	0.00
19.60	2.51	1.01	0.00
19.80	2.52	1.01	0.00
20.00	**2.53**	**1.02**	0.00

Summary for Subcatchment 12S: to inlet 3

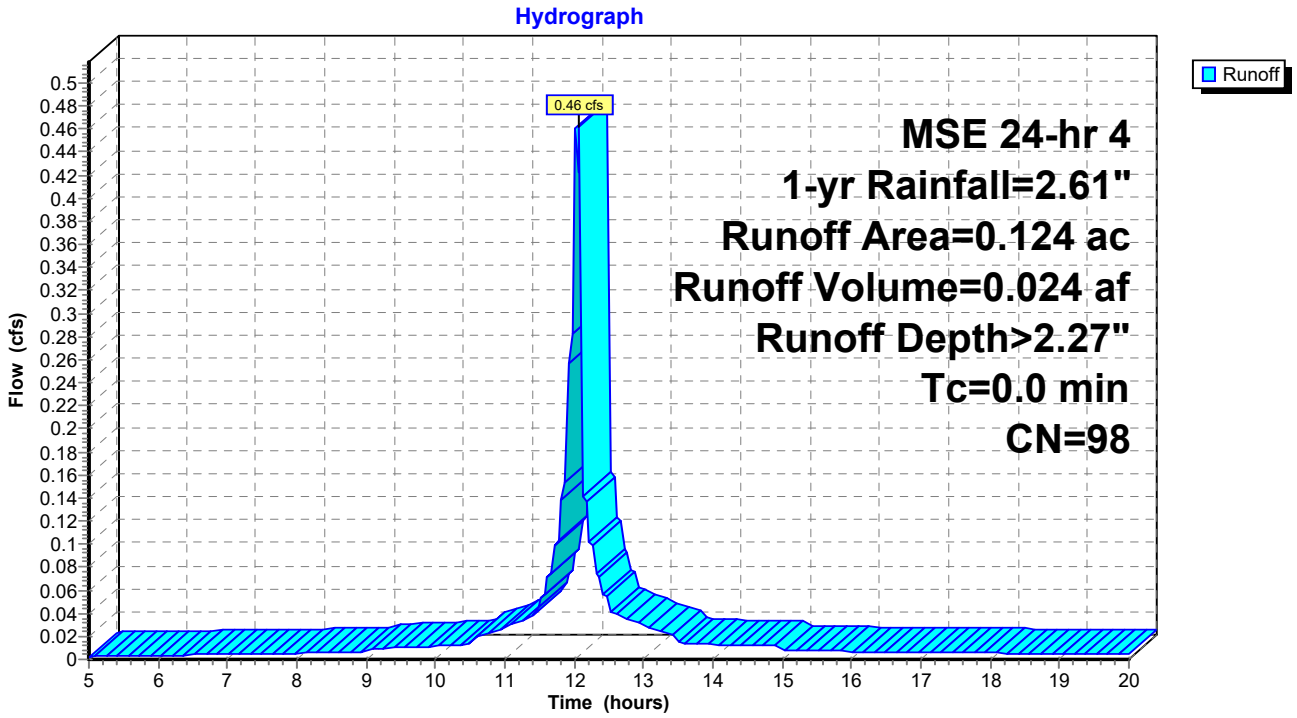
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.46 cfs @ 12.08 hrs, Volume= 0.024 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.009	98	open shelter
*	0.059	98	SW
*	0.034	98	parking AC pavement
*	0.022	98	PIP play surface
	0.124	98	Weighted Average
	0.124		100.00% Impervious Area

Subcatchment 12S: to inlet 3



Hydrograph for Subcatchment 12S: to inlet 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.00
5.20	0.13	0.03	0.00
5.40	0.14	0.03	0.00
5.60	0.14	0.03	0.00
5.80	0.15	0.04	0.00
6.00	0.16	0.04	0.00
6.20	0.17	0.05	0.00
6.40	0.18	0.06	0.00
6.60	0.19	0.06	0.00
6.80	0.20	0.07	0.00
7.00	0.21	0.07	0.00
7.20	0.22	0.08	0.00
7.40	0.23	0.09	0.00
7.60	0.24	0.10	0.00
7.80	0.25	0.10	0.01
8.00	0.26	0.11	0.01
8.20	0.27	0.12	0.01
8.40	0.28	0.13	0.01
8.60	0.29	0.14	0.01
8.80	0.30	0.15	0.01
9.00	0.32	0.16	0.01
9.20	0.33	0.17	0.01
9.40	0.35	0.19	0.01
9.60	0.37	0.21	0.01
9.80	0.39	0.22	0.01
10.00	0.41	0.24	0.01
10.20	0.43	0.26	0.01
10.40	0.46	0.28	0.01
10.60	0.48	0.30	0.02
10.80	0.52	0.34	0.02
11.00	0.56	0.38	0.03
11.20	0.62	0.43	0.03
11.40	0.68	0.48	0.04
11.60	0.75	0.55	0.06
11.80	0.90	0.69	0.12
12.00	1.22	1.01	**0.36**
12.20	1.71	1.49	**0.12**
12.40	1.86	1.63	0.07
12.60	1.93	1.71	0.04
12.80	1.99	1.77	0.03
13.00	2.05	1.82	0.03
13.20	2.09	1.86	0.03
13.40	2.13	1.90	0.02
13.60	2.15	1.93	0.01
13.80	2.18	1.95	0.01
14.00	2.20	1.97	0.01
14.20	2.22	1.99	0.01
14.40	2.24	2.01	0.01
14.60	2.26	2.03	0.01
14.80	2.28	2.05	0.01
15.00	2.29	2.07	0.01
15.20	2.31	2.08	0.01
15.40	2.32	2.09	0.01
15.60	2.33	2.10	0.01
15.80	2.34	2.11	0.01
16.00	2.35	2.12	0.01
16.20	2.36	2.13	0.01
16.40	2.37	2.14	0.01
16.60	2.38	2.15	0.01
16.80	2.39	2.16	0.01
17.00	2.40	2.17	0.01
17.20	2.41	2.18	0.01
17.40	2.42	2.19	0.01
17.60	2.43	2.20	0.01
17.80	2.44	2.21	0.01
18.00	2.45	2.22	0.01
18.20	2.46	2.23	0.01
18.40	2.47	2.24	0.01
18.60	2.47	2.25	0.00
18.80	2.48	2.25	0.00
19.00	2.49	2.26	0.00
19.20	2.50	2.27	0.00
19.40	2.50	2.28	0.00
19.60	2.51	2.28	0.00
19.80	2.52	2.29	0.00
20.00	**2.53**	**2.30**	0.00

Summary for Subcatchment 13S: to NDS 2

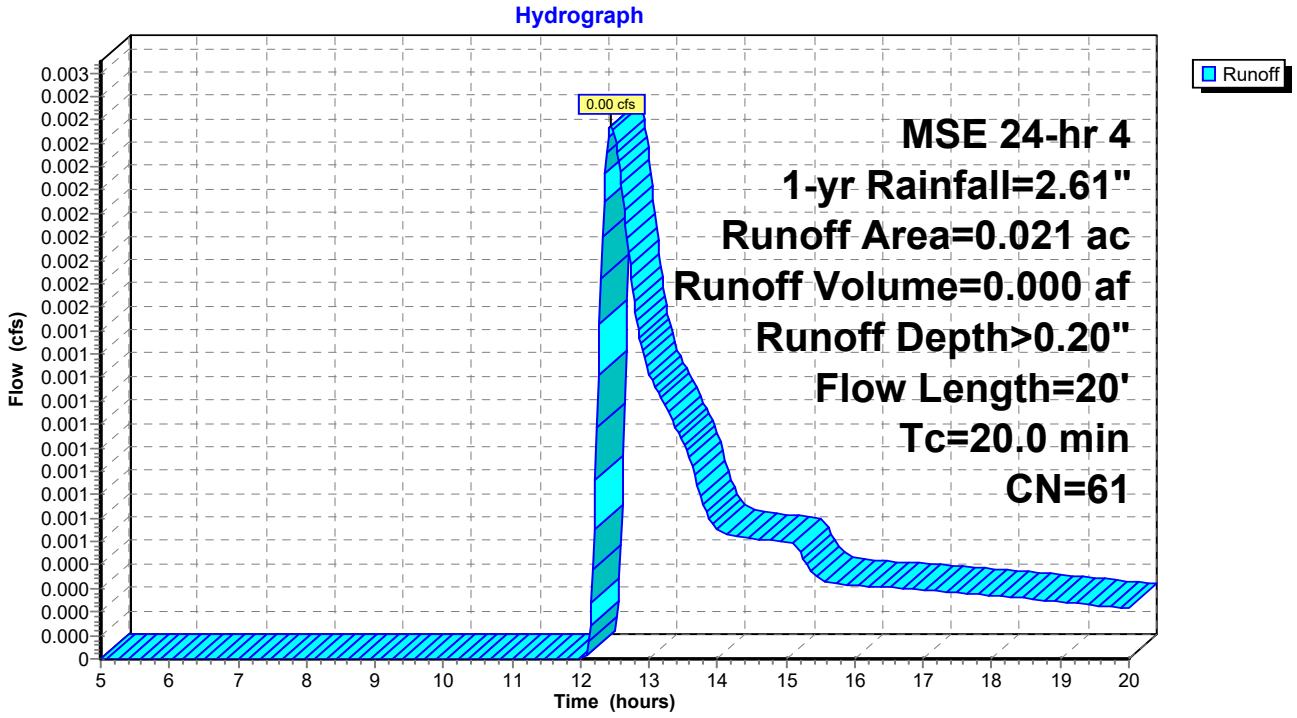
Runoff = 0.00 cfs @ 12.44 hrs, Volume= 0.000 af, Depth> 0.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.021	61	lawn, HSG B
	0.021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	20		0.02		**Direct Entry, lawn**

Subcatchment 13S: to NDS 2



Hydrograph for Subcatchment 13S: to NDS 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.00	0.00
10.60	0.48	0.00	0.00
10.80	0.52	0.00	0.00
11.00	0.56	0.00	0.00
11.20	0.62	0.00	0.00
11.40	0.68	0.00	0.00
11.60	0.75	0.00	0.00
11.80	0.90	0.00	0.00
12.00	1.22	0.00	0.00
12.20	1.71	0.03	0.00
12.40	1.86	0.05	**0.00**
12.60	1.93	0.06	**0.00**
12.80	1.99	0.07	0.00
13.00	2.05	0.08	0.00
13.20	2.09	0.09	0.00
13.40	2.13	0.10	0.00
13.60	2.15	0.11	0.00
13.80	2.18	0.11	0.00
14.00	2.20	0.12	0.00
14.20	2.22	0.12	0.00
14.40	2.24	0.12	0.00
14.60	2.26	0.13	0.00
14.80	2.28	0.13	0.00
15.00	2.29	0.14	0.00
15.20	2.31	0.14	0.00
15.40	2.32	0.15	0.00
15.60	2.33	0.15	0.00
15.80	2.34	0.15	0.00
16.00	2.35	0.15	0.00
16.20	2.36	0.16	0.00
16.40	2.37	0.16	0.00
16.60	2.38	0.16	0.00
16.80	2.39	0.17	0.00
17.00	2.40	0.17	0.00
17.20	2.41	0.17	0.00
17.40	2.42	0.17	0.00
17.60	2.43	0.18	0.00
17.80	2.44	0.18	0.00
18.00	2.45	0.18	0.00
18.20	2.46	0.18	0.00
18.40	2.47	0.19	0.00
18.60	2.47	0.19	0.00
18.80	2.48	0.19	0.00
19.00	2.49	0.19	0.00
19.20	2.50	0.20	0.00
19.40	2.50	0.20	0.00
19.60	2.51	0.20	0.00
19.80	2.52	0.20	0.00
20.00	**2.53**	**0.20**	0.00

Summary for Subcatchment 14S: to NDS 3-5

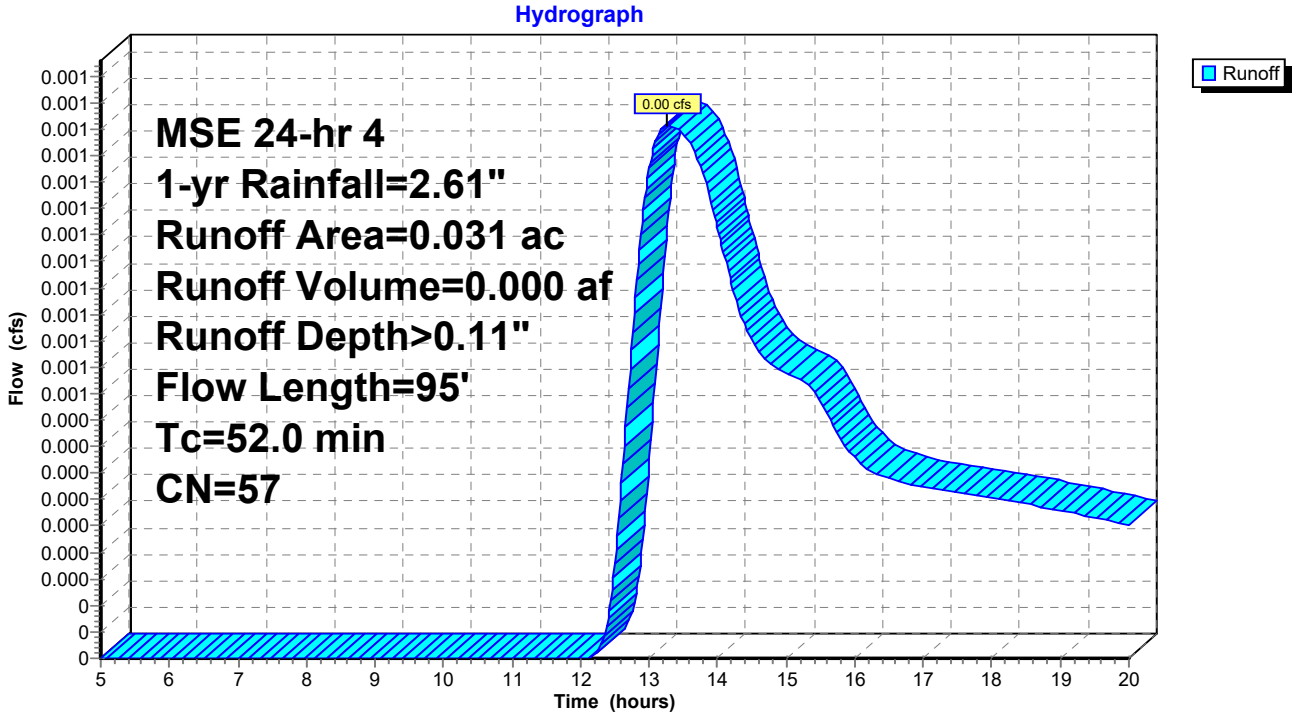
Runoff = 0.00 cfs @ 13.25 hrs, Volume= 0.000 af, Depth> 0.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.022	61	lawn, HSG B
*	0.008	39	LS
*	0.001	98	SW via LS
	0.031	57	Weighted Average
	0.030		96.77% Pervious Area
	0.001		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	75		0.10		**Direct Entry, lawn**
20.0	10		0.01		**Direct Entry, LS**
20.0	10		0.01		**Direct Entry, SW via LS**
52.0	95	Total			

Subcatchment 14S: to NDS 3-5



Hydrograph for Subcatchment 14S: to NDS 3-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.00	0.00
10.60	0.48	0.00	0.00
10.80	0.52	0.00	0.00
11.00	0.56	0.00	0.00
11.20	0.62	0.00	0.00
11.40	0.68	0.00	0.00
11.60	0.75	0.00	0.00
11.80	0.90	0.00	0.00
12.00	1.22	0.00	0.00
12.20	1.71	0.01	0.00
12.40	1.86	0.02	0.00
12.60	1.93	0.02	0.00
12.80	1.99	0.03	0.00
13.00	2.05	0.04	0.00
13.20	2.09	0.04	**0.00**
13.40	2.13	0.05	**0.00**
13.60	2.15	0.05	0.00
13.80	2.18	0.05	0.00
14.00	2.20	0.06	0.00
14.20	2.22	0.06	0.00
14.40	2.24	0.06	0.00
14.60	2.26	0.07	0.00
14.80	2.28	0.07	0.00
15.00	2.29	0.07	0.00
15.20	2.31	0.08	0.00
15.40	2.32	0.08	0.00
15.60	2.33	0.08	0.00
15.80	2.34	0.08	0.00
16.00	2.35	0.08	0.00
16.20	2.36	0.09	0.00
16.40	2.37	0.09	0.00
16.60	2.38	0.09	0.00
16.80	2.39	0.09	0.00
17.00	2.40	0.09	0.00
17.20	2.41	0.10	0.00
17.40	2.42	0.10	0.00
17.60	2.43	0.10	0.00
17.80	2.44	0.10	0.00
18.00	2.45	0.10	0.00
18.20	2.46	0.11	0.00
18.40	2.47	0.11	0.00
18.60	2.47	0.11	0.00
18.80	2.48	0.11	0.00
19.00	2.49	0.11	0.00
19.20	2.50	0.11	0.00
19.40	2.50	0.12	0.00
19.60	2.51	0.12	0.00
19.80	2.52	0.12	0.00
20.00	**2.53**	**0.12**	0.00

Summary for Subcatchment 16S: to NDS11-6

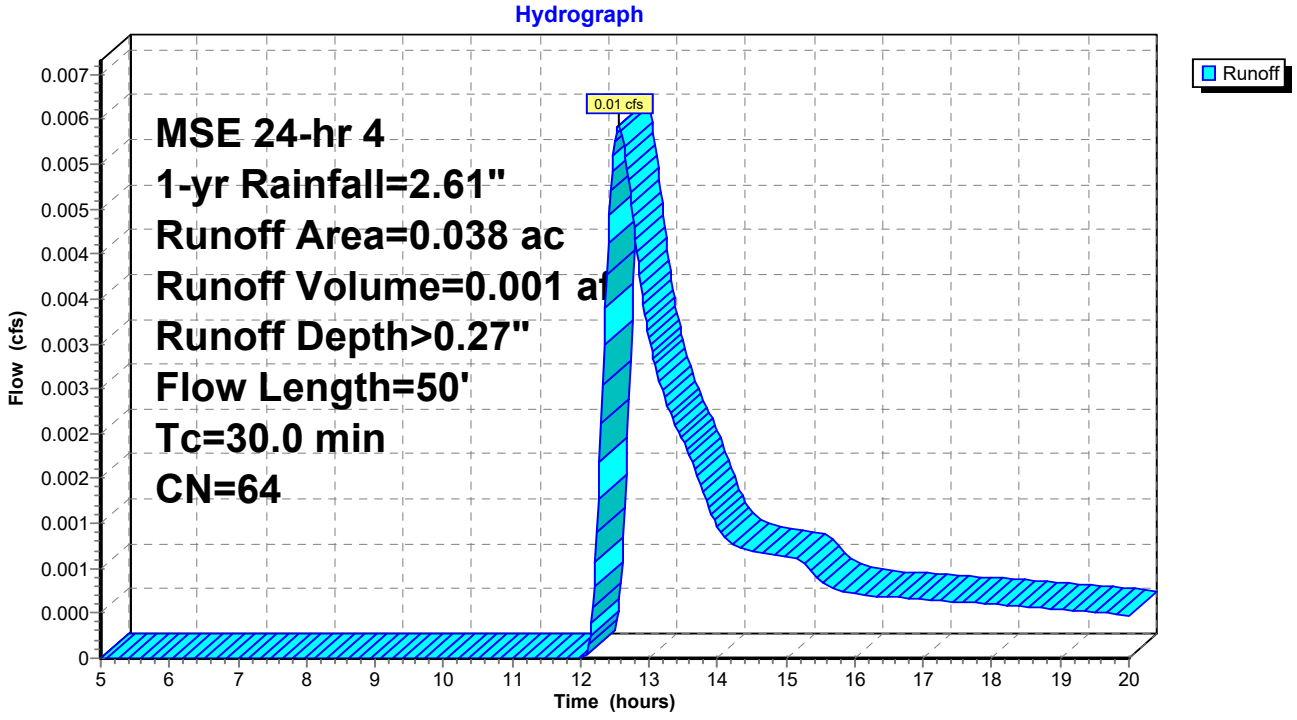
Runoff = 0.01 cfs @ 12.56 hrs, Volume= 0.001 af, Depth> 0.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.022	39	LS
*	0.016	98	SW
	0.038	64	Weighted Average
	0.022		57.89% Pervious Area
	0.016		42.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	40		0.04		**Direct Entry, LS**
15.0	10		0.01		**Direct Entry, SW via LS**
30.0	50	Total			

Subcatchment 16S: to NDS11-6



Hydrograph for Subcatchment 16S: to NDS11-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.00	0.00
5.20	0.13	0.00	0.00
5.40	0.14	0.00	0.00
5.60	0.14	0.00	0.00
5.80	0.15	0.00	0.00
6.00	0.16	0.00	0.00
6.20	0.17	0.00	0.00
6.40	0.18	0.00	0.00
6.60	0.19	0.00	0.00
6.80	0.20	0.00	0.00
7.00	0.21	0.00	0.00
7.20	0.22	0.00	0.00
7.40	0.23	0.00	0.00
7.60	0.24	0.00	0.00
7.80	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.20	0.27	0.00	0.00
8.40	0.28	0.00	0.00
8.60	0.29	0.00	0.00
8.80	0.30	0.00	0.00
9.00	0.32	0.00	0.00
9.20	0.33	0.00	0.00
9.40	0.35	0.00	0.00
9.60	0.37	0.00	0.00
9.80	0.39	0.00	0.00
10.00	0.41	0.00	0.00
10.20	0.43	0.00	0.00
10.40	0.46	0.00	0.00
10.60	0.48	0.00	0.00
10.80	0.52	0.00	0.00
11.00	0.56	0.00	0.00
11.20	0.62	0.00	0.00
11.40	0.68	0.00	0.00
11.60	0.75	0.00	0.00
11.80	0.90	0.00	0.00
12.00	1.22	0.00	0.00
12.20	1.71	0.06	0.00
12.40	1.86	0.08	**0.00**
12.60	1.93	0.10	**0.01**
12.80	1.99	0.12	0.00
13.00	2.05	0.13	0.00
13.20	2.09	0.14	0.00
13.40	2.13	0.15	0.00
13.60	2.15	0.16	0.00
13.80	2.18	0.17	0.00
14.00	2.20	0.17	0.00
14.20	2.22	0.18	0.00
14.40	2.24	0.18	0.00
14.60	2.26	0.19	0.00
14.80	2.28	0.20	0.00
15.00	2.29	0.20	0.00
15.20	2.31	0.20	0.00
15.40	2.32	0.21	0.00
15.60	2.33	0.21	0.00
15.80	2.34	0.22	0.00
16.00	2.35	0.22	0.00
16.20	2.36	0.22	0.00
16.40	2.37	0.23	0.00
16.60	2.38	0.23	0.00
16.80	2.39	0.23	0.00
17.00	2.40	0.24	0.00
17.20	2.41	0.24	0.00
17.40	2.42	0.24	0.00
17.60	2.43	0.25	0.00
17.80	2.44	0.25	0.00
18.00	2.45	0.25	0.00
18.20	2.46	0.26	0.00
18.40	2.47	0.26	0.00
18.60	2.47	0.26	0.00
18.80	2.48	0.26	0.00
19.00	2.49	0.27	0.00
19.20	2.50	0.27	0.00
19.40	2.50	0.27	0.00
19.60	2.51	0.27	0.00
19.80	2.52	0.28	0.00
20.00	**2.53**	**0.28**	0.00

Summary for Subcatchment 17S: untreated alley to inlet 2

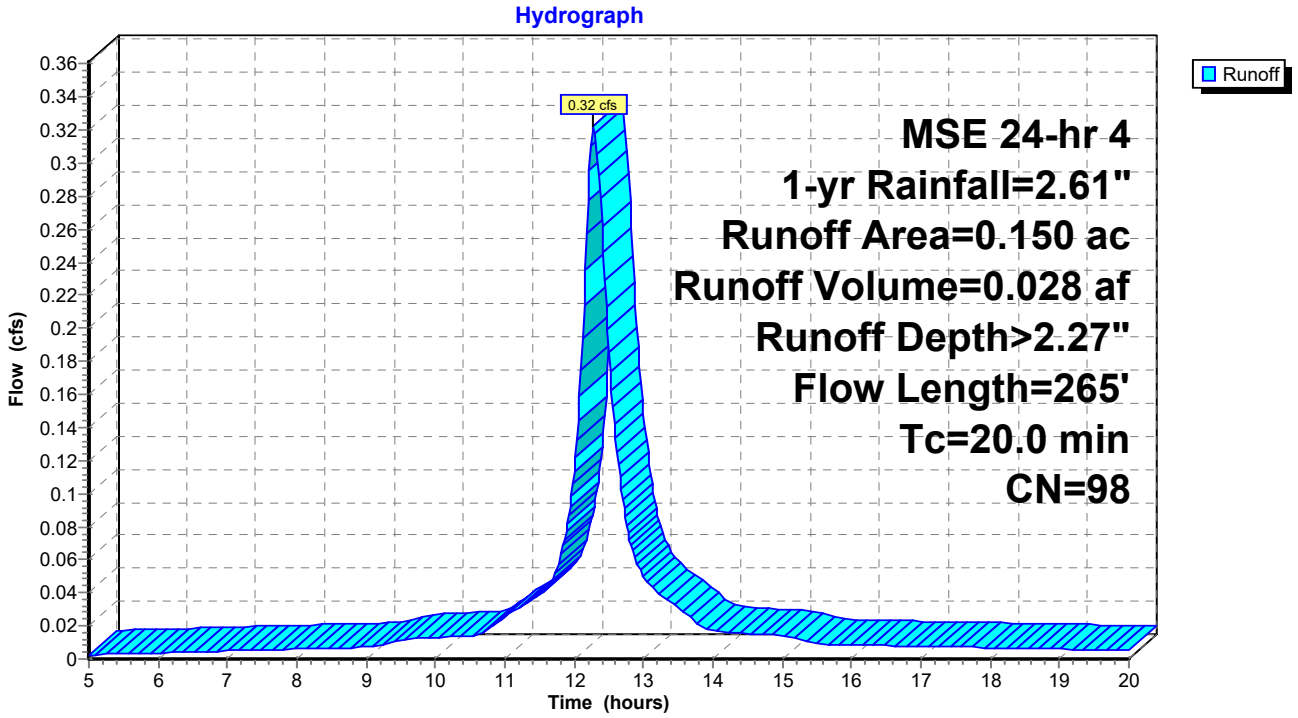
Runoff = 0.32 cfs @ 12.28 hrs, Volume= 0.028 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.042	98	conc alley
*	0.108	98	roof + alley run-on
	0.150	98	Weighted Average
	0.150		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	80		0.17		**Direct Entry, conc alley**
12.0	185		0.26		**Direct Entry, roof + alley run-on**
20.0	265	Total			

Subcatchment 17S: untreated alley to inlet 2



Hydrograph for Subcatchment 17S: untreated alley to inlet 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.00
5.20	0.13	0.03	0.00
5.40	0.14	0.03	0.00
5.60	0.14	0.03	0.00
5.80	0.15	0.04	0.00
6.00	0.16	0.04	0.00
6.20	0.17	0.05	0.00
6.40	0.18	0.06	0.00
6.60	0.19	0.06	0.00
6.80	0.20	0.07	0.00
7.00	0.21	0.07	0.00
7.20	0.22	0.08	0.01
7.40	0.23	0.09	0.01
7.60	0.24	0.10	0.01
7.80	0.25	0.10	0.01
8.00	0.26	0.11	0.01
8.20	0.27	0.12	0.01
8.40	0.28	0.13	0.01
8.60	0.29	0.14	0.01
8.80	0.30	0.15	0.01
9.00	0.32	0.16	0.01
9.20	0.33	0.17	0.01
9.40	0.35	0.19	0.01
9.60	0.37	0.21	0.01
9.80	0.39	0.22	0.01
10.00	0.41	0.24	0.01
10.20	0.43	0.26	0.01
10.40	0.46	0.28	0.01
10.60	0.48	0.30	0.01
10.80	0.52	0.34	0.02
11.00	0.56	0.38	0.03
11.20	0.62	0.43	0.03
11.40	0.68	0.48	0.04
11.60	0.75	0.55	0.04
11.80	0.90	0.69	0.06
12.00	1.22	1.01	0.11
12.20	1.71	1.49	**0.28**
12.40	1.86	1.63	**0.26**
12.60	1.93	1.71	0.13
12.80	1.99	1.77	0.07
13.00	2.05	1.82	0.05
13.20	2.09	1.86	0.04
13.40	2.13	1.90	0.03
13.60	2.15	1.93	0.03
13.80	2.18	1.95	0.02
14.00	2.20	1.97	0.02
14.20	2.22	1.99	0.02
14.40	2.24	2.01	0.02
14.60	2.26	2.03	0.02
14.80	2.28	2.05	0.01
15.00	2.29	2.07	0.01
15.20	2.31	2.08	0.01
15.40	2.32	2.09	0.01
15.60	2.33	2.10	0.01
15.80	2.34	2.11	0.01
16.00	2.35	2.12	0.01
16.20	2.36	2.13	0.01
16.40	2.37	2.14	0.01
16.60	2.38	2.15	0.01
16.80	2.39	2.16	0.01
17.00	2.40	2.17	0.01
17.20	2.41	2.18	0.01
17.40	2.42	2.19	0.01
17.60	2.43	2.20	0.01
17.80	2.44	2.21	0.01
18.00	2.45	2.22	0.01
18.20	2.46	2.23	0.01
18.40	2.47	2.24	0.01
18.60	2.47	2.25	0.01
18.80	2.48	2.25	0.01
19.00	2.49	2.26	0.01
19.20	2.50	2.27	0.01
19.40	2.50	2.28	0.01
19.60	2.51	2.28	0.01
19.80	2.52	2.29	0.01
20.00	**2.53**	**2.30**	0.01

Summary for Subcatchment 18S: untreated alley to inlet 1

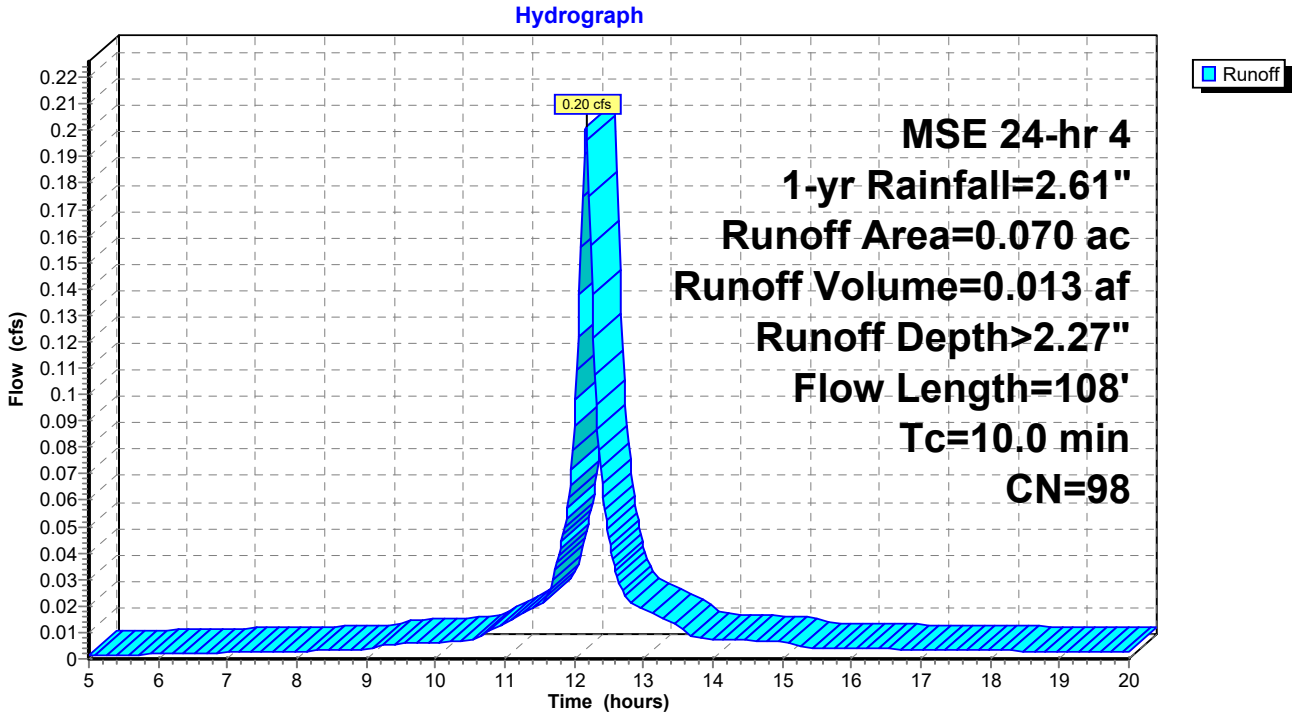
Runoff = 0.20 cfs @ 12.17 hrs, Volume= 0.013 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 1-yr Rainfall=2.61"

	Area (ac)	CN	Description
*	0.070	98	concrete alley
	0.070		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	108		0.18		**Direct Entry, concrete alley**

Subcatchment 18S: untreated alley to inlet 1



Hydrograph for Subcatchment 18S: untreated alley to inlet 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.12	0.02	0.00
5.20	0.13	0.03	0.00
5.40	0.14	0.03	0.00
5.60	0.14	0.03	0.00
5.80	0.15	0.04	0.00
6.00	0.16	0.04	0.00
6.20	0.17	0.05	0.00
6.40	0.18	0.06	0.00
6.60	0.19	0.06	0.00
6.80	0.20	0.07	0.00
7.00	0.21	0.07	0.00
7.20	0.22	0.08	0.00
7.40	0.23	0.09	0.00
7.60	0.24	0.10	0.00
7.80	0.25	0.10	0.00
8.00	0.26	0.11	0.00
8.20	0.27	0.12	0.00
8.40	0.28	0.13	0.00
8.60	0.29	0.14	0.00
8.80	0.30	0.15	0.00
9.00	0.32	0.16	0.00
9.20	0.33	0.17	0.00
9.40	0.35	0.19	0.01
9.60	0.37	0.21	0.01
9.80	0.39	0.22	0.01
10.00	0.41	0.24	0.01
10.20	0.43	0.26	0.01
10.40	0.46	0.28	0.01
10.60	0.48	0.30	0.01
10.80	0.52	0.34	0.01
11.00	0.56	0.38	0.01
11.20	0.62	0.43	0.02
11.40	0.68	0.48	0.02
11.60	0.75	0.55	0.02
11.80	0.90	0.69	0.04
12.00	1.22	1.01	**0.09**
12.20	1.71	1.49	**0.19**
12.40	1.86	1.63	0.07
12.60	1.93	1.71	0.03
12.80	1.99	1.77	0.02
13.00	2.05	1.82	0.02
13.20	2.09	1.86	0.02
13.40	2.13	1.90	0.01
13.60	2.15	1.93	0.01
13.80	2.18	1.95	0.01
14.00	2.20	1.97	0.01
14.20	2.22	1.99	0.01
14.40	2.24	2.01	0.01
14.60	2.26	2.03	0.01
14.80	2.28	2.05	0.01
15.00	2.29	2.07	0.01
15.20	2.31	2.08	0.00
15.40	2.32	2.09	0.00
15.60	2.33	2.10	0.00
15.80	2.34	2.11	0.00
16.00	2.35	2.12	0.00
16.20	2.36	2.13	0.00
16.40	2.37	2.14	0.00
16.60	2.38	2.15	0.00
16.80	2.39	2.16	0.00
17.00	2.40	2.17	0.00
17.20	2.41	2.18	0.00
17.40	2.42	2.19	0.00
17.60	2.43	2.20	0.00
17.80	2.44	2.21	0.00
18.00	2.45	2.22	0.00
18.20	2.46	2.23	0.00
18.40	2.47	2.24	0.00
18.60	2.47	2.25	0.00
18.80	2.48	2.25	0.00
19.00	2.49	2.26	0.00
19.20	2.50	2.27	0.00
19.40	2.50	2.28	0.00
19.60	2.51	2.28	0.00
19.80	2.52	2.29	0.00
20.00	**2.53**	**2.30**	0.00

Summary for Reach 6R: 10" roof

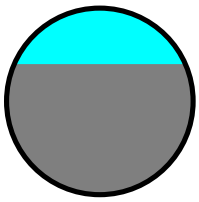
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 302% of Manning's capacity
[76] Warning: Detained 0.010 af (Pond w/culvert advised)

Inflow Area = 0.305 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.82 cfs @ 12.19 hrs, Volume= 0.058 af
Outflow = 0.28 cfs @ 11.97 hrs, Volume= 0.058 af, Atten= 66%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.03 fps, Avg. Travel Time= 0.4 min

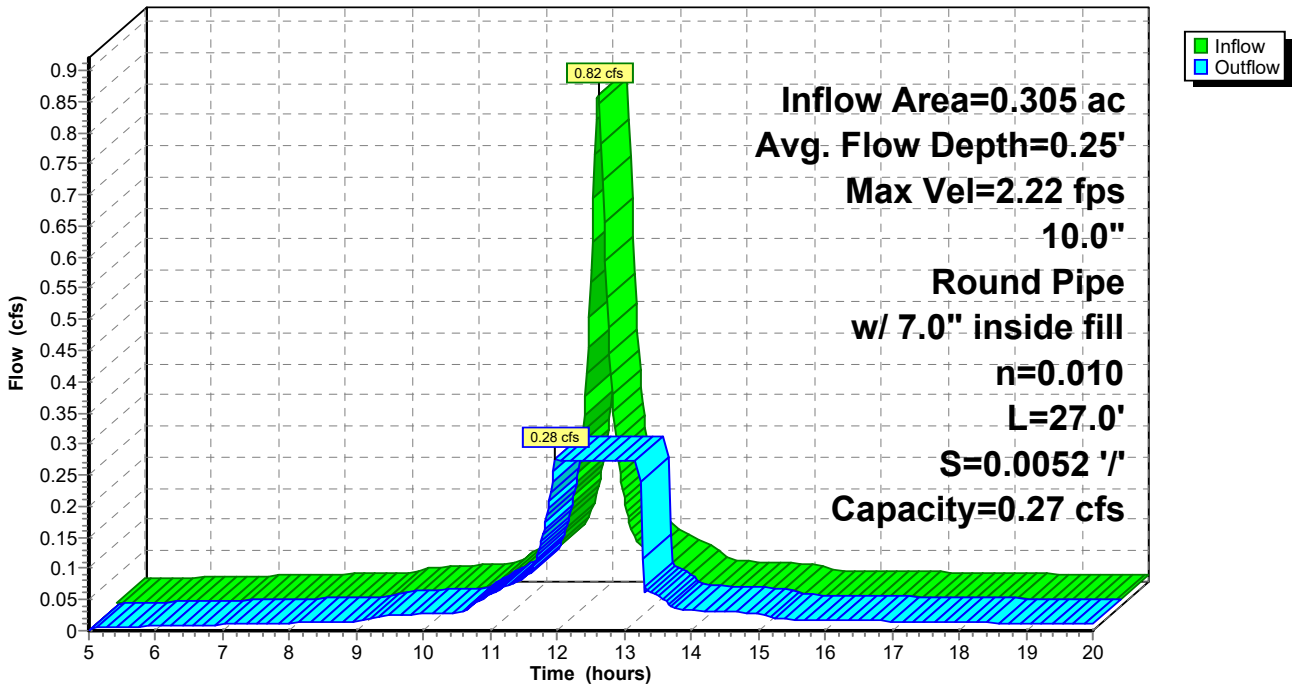
Peak Storage= 4 cf @ 11.98 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 27.0' Slope= 0.0052 '/'
Inlet Invert= 665.72', Outlet Invert= 665.58'



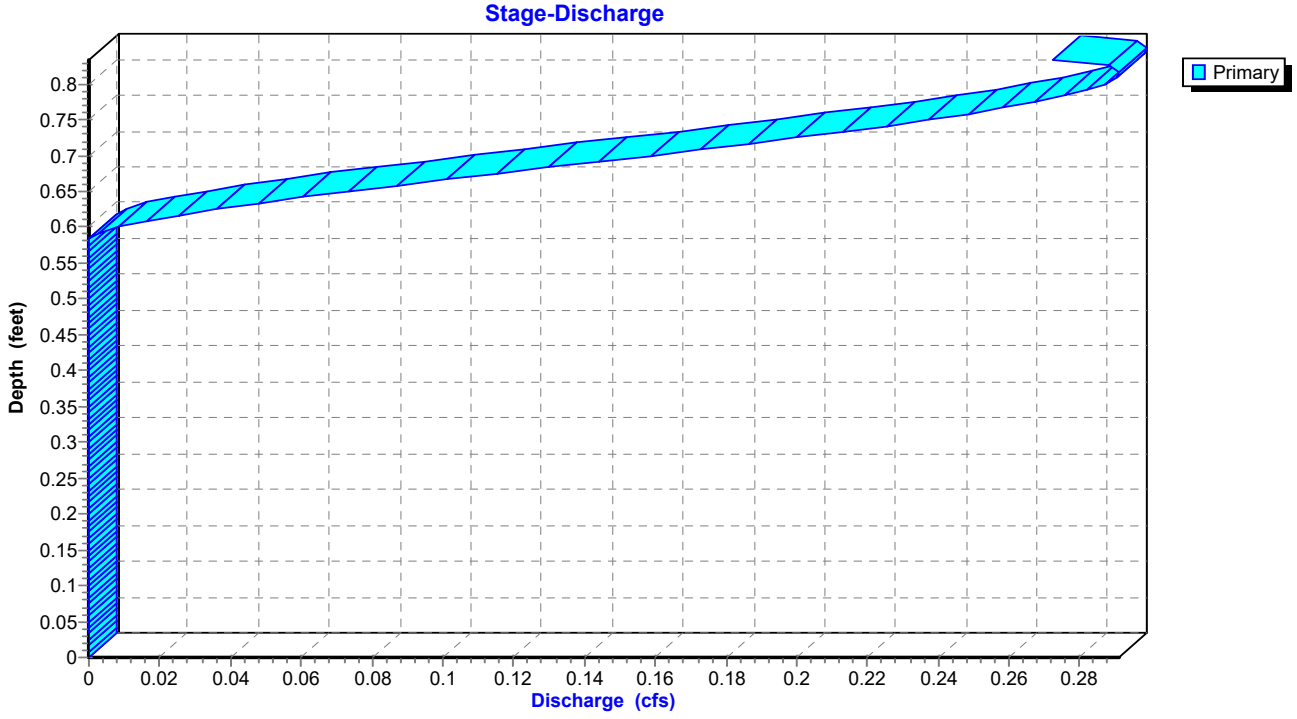
Reach 6R: 10" roof

Hydrograph

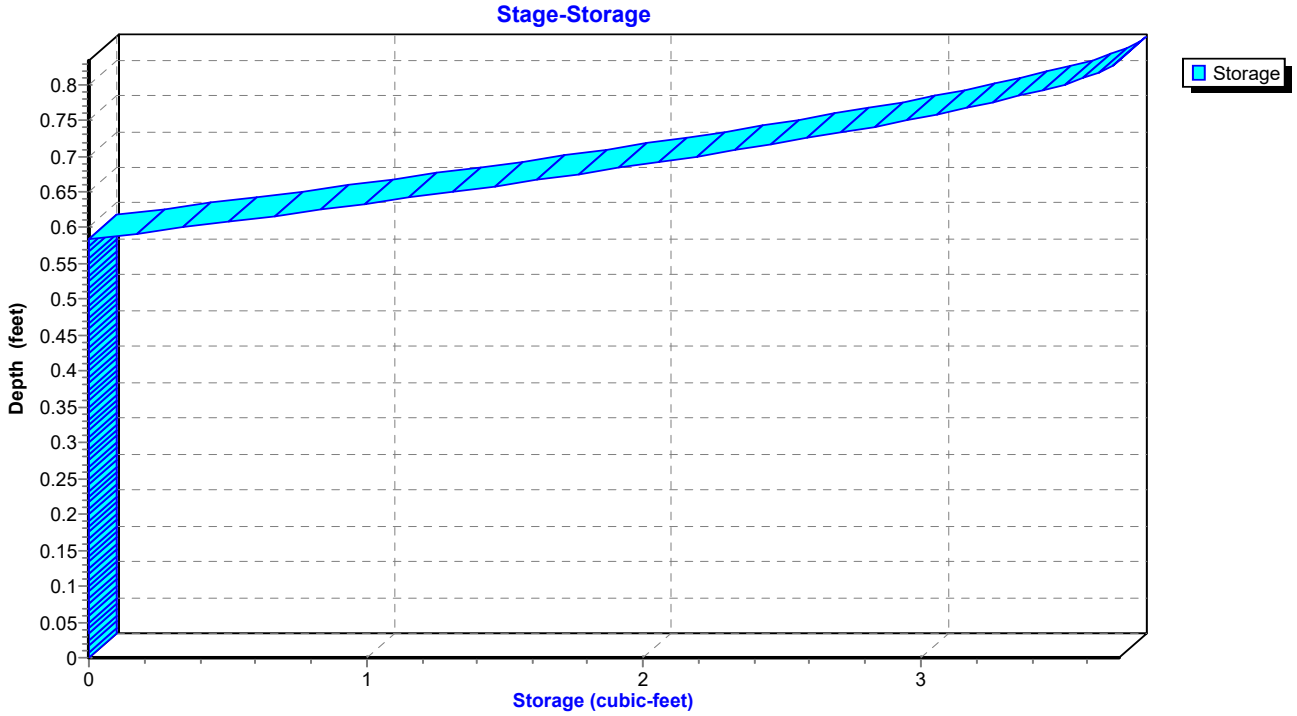


Reach 6R: 10" roof

Stage-Discharge



Reach 6R: 10" roof



Hydrograph for Reach 6R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.30	0.00
5.40	0.01	0	666.32	0.01
5.80	0.01	0	666.32	0.01
6.20	0.01	0	666.32	0.01
6.60	0.01	0	666.32	0.01
7.00	0.01	0	666.32	0.01
7.40	0.01	0	666.32	0.01
7.80	0.01	0	666.32	0.01
8.20	0.01	0	666.32	0.01
8.60	0.01	0	666.33	0.01
9.00	0.01	0	666.33	0.01
9.40	0.02	1	666.34	0.02
9.80	0.03	1	666.34	0.03
10.20	0.03	1	666.34	0.03
10.60	0.03	1	666.34	0.03
11.00	0.06	1	666.36	0.06
11.40	0.08	1	666.37	0.08
11.80	0.17	**2**	**666.42**	**0.16**
12.20	**0.82**	**4**	**666.55**	**0.27**
12.60	0.16	4	666.55	0.27
13.00	0.08	4	666.55	0.27
13.40	0.06	1	666.36	0.06
13.80	0.03	1	666.34	0.04
14.20	0.03	1	666.34	0.03
14.60	0.03	1	666.34	0.03
15.00	0.03	1	666.34	0.03
15.40	0.02	1	666.33	0.02
15.80	0.02	1	666.33	0.02
16.20	0.02	1	666.33	0.02
16.60	0.02	1	666.33	0.02
17.00	0.02	0	666.33	0.02
17.40	0.01	0	666.33	0.01
17.80	0.01	0	666.33	0.01
18.20	0.01	0	666.33	0.01
18.60	0.01	0	666.32	0.01
19.00	0.01	0	666.32	0.01
19.40	0.01	0	666.32	0.01
19.80	0.01	0	666.32	0.01

Stage-Discharge for Reach 6R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.35	0.00
666.32	0.67	0.01
666.33	0.90	0.02
666.34	1.08	0.03
666.35	1.25	0.04
666.36	1.39	0.06
666.37	1.51	0.07
666.38	1.62	0.09
666.39	1.72	0.11
666.40	1.81	0.12
666.41	1.88	0.14
666.42	1.95	0.16
666.43	2.01	0.18
666.44	2.06	0.19
666.45	2.11	0.21
666.46	2.14	0.22
666.47	2.17	0.24
666.48	2.19	0.25
666.49	2.21	0.26
666.50	**2.22**	0.27
666.51	2.21	0.28
666.52	2.20	0.29
666.53	2.18	**0.29**
666.54	2.14	0.29
666.55	2.03	0.28

Stage-Area-Storage for Reach 6R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	0
665.77	0.0	0	666.28	0.0	0
665.78	0.0	0	666.29	0.0	0
665.79	0.0	0	666.30	0.0	0
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	1
665.83	0.0	0	666.34	0.0	1
665.84	0.0	0	666.35	0.0	1
665.85	0.0	0	666.36	0.0	1
665.86	0.0	0	666.37	0.0	1
665.87	0.0	0	666.38	0.1	1
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	2
665.92	0.0	0	666.43	0.1	2
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	3
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	**0.1**	**4**
666.05	0.0	0			
666.06	0.0	0			
666.07	0.0	0			
666.08	0.0	0			
666.09	0.0	0			
666.10	0.0	0			
666.11	0.0	0			
666.12	0.0	0			
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			

Summary for Reach 7R: MH8 12"

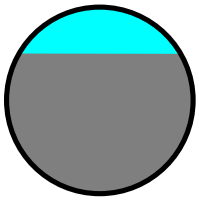
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 200% of Manning's capacity
[76] Warning: Detained 0.033 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 6R INLET depth by 0.15' @ 15.34 hrs
[63] Warning: Exceeded Reach 8R INLET depth by 0.07' @ 15.34 hrs

Inflow Area = 0.644 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.55 cfs @ 11.97 hrs, Volume= 0.122 af
Outflow = 0.28 cfs @ 11.73 hrs, Volume= 0.122 af, Atten= 49%, Lag= 0.0 min

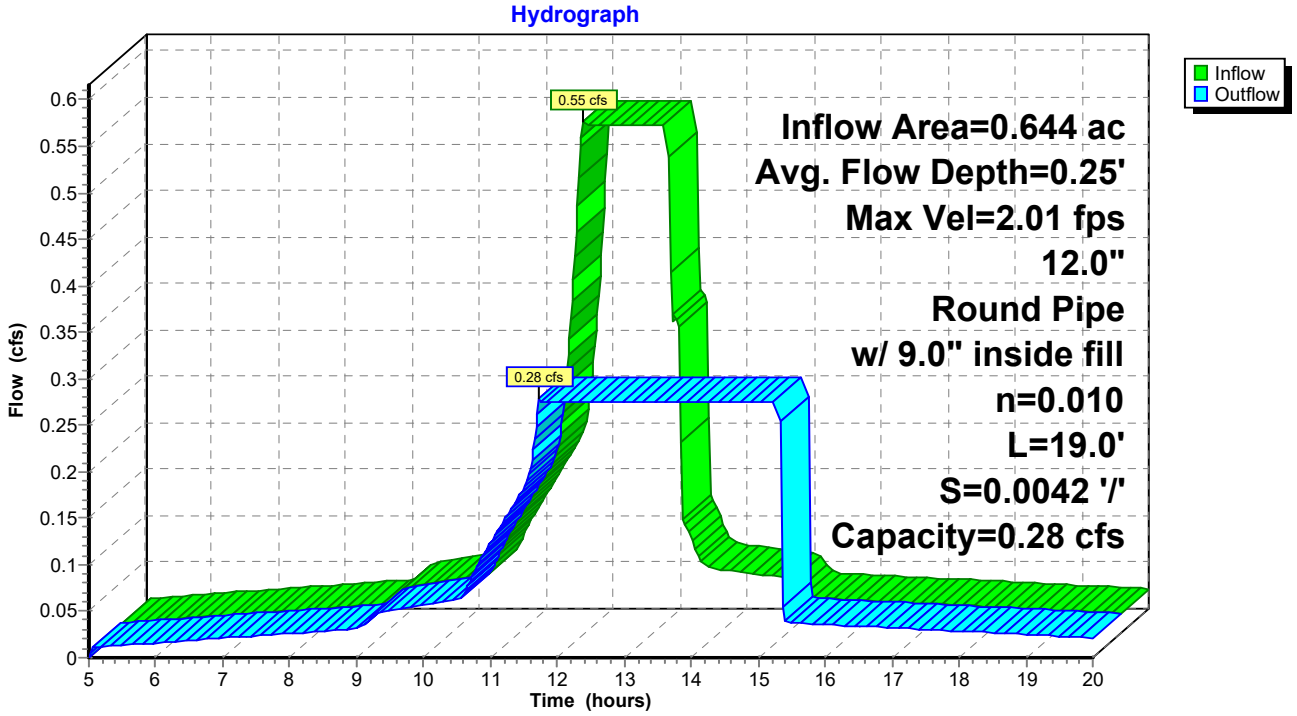
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.22 fps, Avg. Travel Time= 0.3 min

Peak Storage= 3 cf @ 11.74 hrs
Average Depth at Peak Storage= 1.00' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.28 cfs

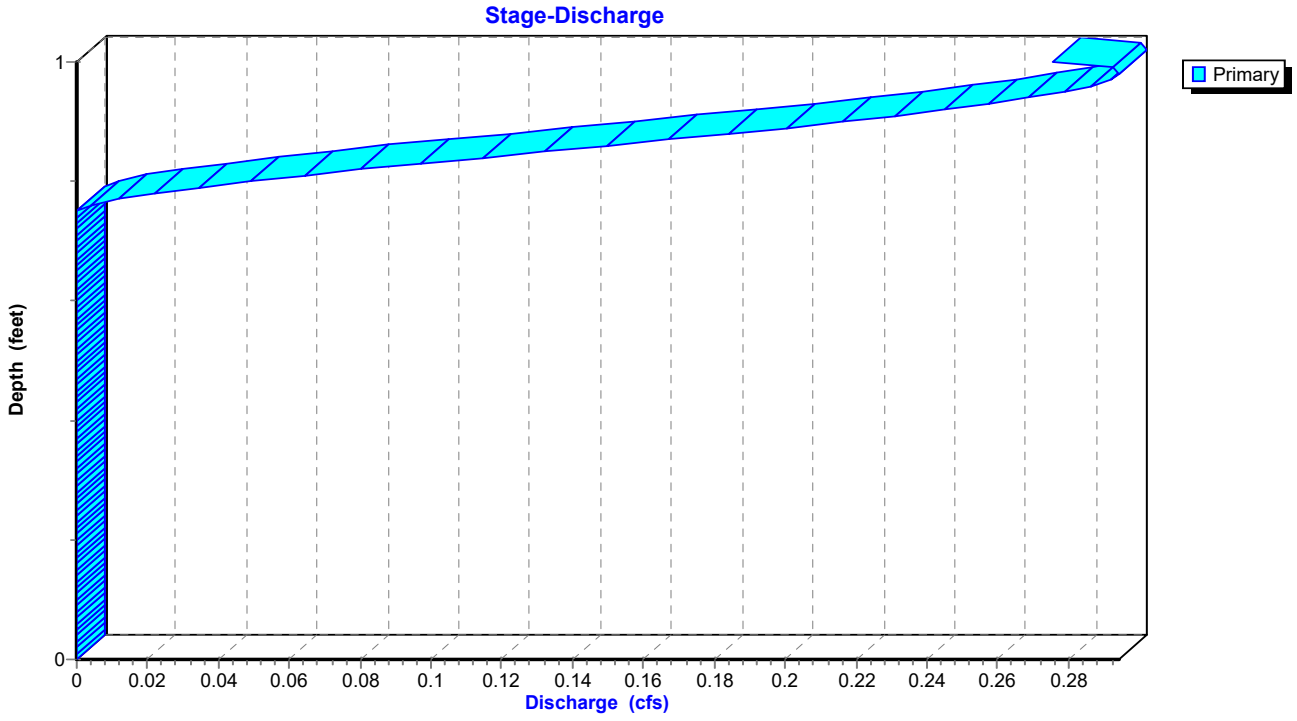
12.0" Round Pipe w/ 9.0" inside fill
n= 0.010
Length= 19.0' Slope= 0.0042 '/'
Inlet Invert= 665.48', Outlet Invert= 665.40'



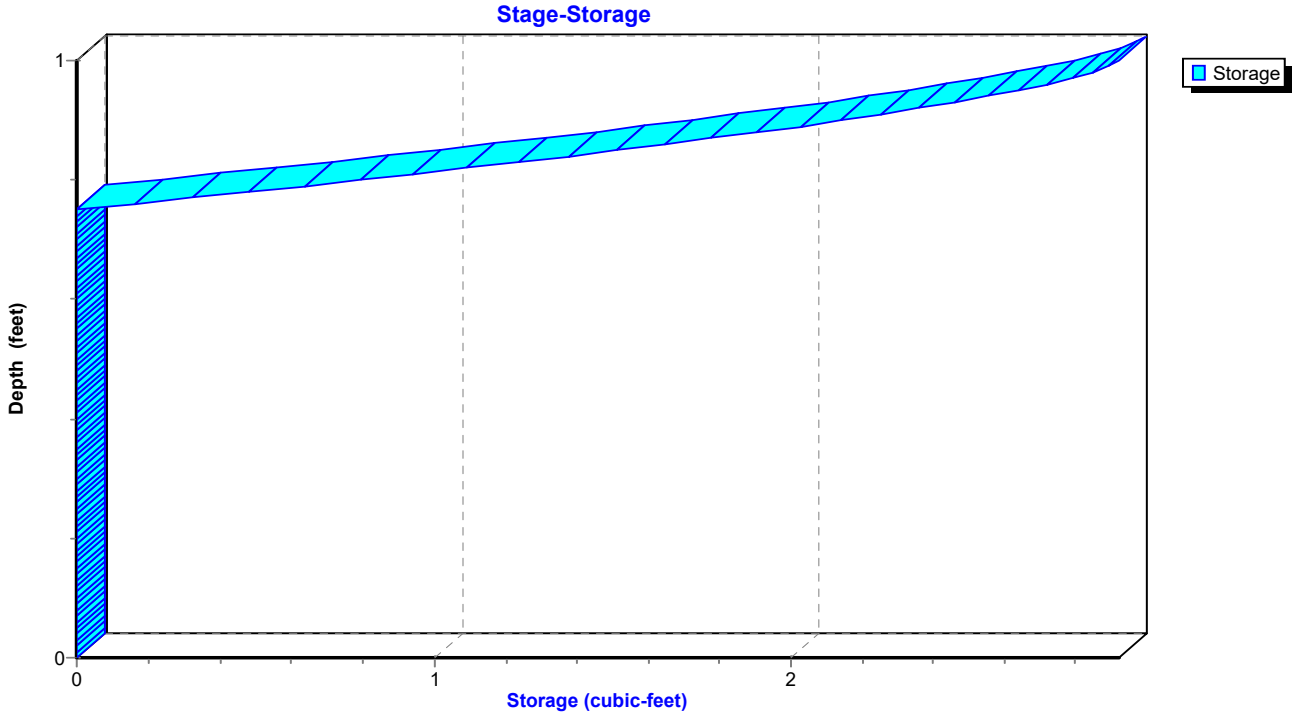
Reach 7R: MH8 12"



Reach 7R: MH8 12"



Reach 7R: MH8 12"



Hydrograph for Reach 7R: MH8 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.23	0.00
5.40	0.01	0	666.25	0.01
5.80	0.02	0	666.25	0.01
6.20	0.02	0	666.26	0.02
6.60	0.02	0	666.26	0.02
7.00	0.02	0	666.26	0.02
7.40	0.02	0	666.26	0.02
7.80	0.03	1	666.26	0.03
8.20	0.03	1	666.26	0.03
8.60	0.03	1	666.27	0.03
9.00	0.03	1	666.27	0.03
9.40	0.05	1	666.28	0.05
9.80	0.06	1	666.28	0.06
10.20	0.06	1	666.29	0.06
10.60	0.07	1	666.29	0.07
11.00	0.12	1	666.33	0.12
11.40	0.17	**2**	**666.35**	**0.17**
11.80	**0.36**	**3**	**666.48**	**0.28**
12.20	**0.55**	3	666.48	0.28
12.60	0.55	3	666.48	0.28
13.00	0.55	3	666.48	0.28
13.40	0.34	3	666.48	0.28
13.80	0.07	3	666.48	0.28
14.20	0.07	3	666.48	0.28
14.60	0.06	3	666.48	0.28
15.00	0.06	3	666.48	0.28
15.40	0.04	1	666.27	0.04
15.80	0.04	1	666.27	0.04
16.20	0.04	1	666.27	0.04
16.60	0.03	1	666.27	0.03
17.00	0.03	1	666.27	0.03
17.40	0.03	1	666.27	0.03
17.80	0.03	1	666.27	0.03
18.20	0.03	1	666.26	0.03
18.60	0.03	1	666.26	0.03
19.00	0.03	1	666.26	0.03
19.40	0.02	1	666.26	0.02
19.80	0.02	0	666.26	0.02

Stage-Discharge for Reach 7R: MH8 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.44	0.00
666.25	0.68	0.01
666.26	0.87	0.02
666.27	1.03	0.03
666.28	1.17	0.05
666.29	1.29	0.06
666.30	1.40	0.08
666.31	1.50	0.10
666.32	1.58	0.11
666.33	1.66	0.13
666.34	1.72	0.15
666.35	1.78	0.17
666.36	1.84	0.18
666.37	1.88	0.20
666.38	1.92	0.22
666.39	1.95	0.23
666.40	1.97	0.25
666.41	1.99	0.26
666.42	2.00	0.27
666.43	**2.01**	0.28
666.44	2.00	0.29
666.45	1.99	0.29
666.46	1.96	**0.29**
666.47	1.92	0.29
666.48	1.79	0.28

Stage-Area-Storage for Reach 7R: MH8 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.48	0.0	0	665.99	0.0	0
665.49	0.0	0	666.00	0.0	0
665.50	0.0	0	666.01	0.0	0
665.51	0.0	0	666.02	0.0	0
665.52	0.0	0	666.03	0.0	0
665.53	0.0	0	666.04	0.0	0
665.54	0.0	0	666.05	0.0	0
665.55	0.0	0	666.06	0.0	0
665.56	0.0	0	666.07	0.0	0
665.57	0.0	0	666.08	0.0	0
665.58	0.0	0	666.09	0.0	0
665.59	0.0	0	666.10	0.0	0
665.60	0.0	0	666.11	0.0	0
665.61	0.0	0	666.12	0.0	0
665.62	0.0	0	666.13	0.0	0
665.63	0.0	0	666.14	0.0	0
665.64	0.0	0	666.15	0.0	0
665.65	0.0	0	666.16	0.0	0
665.66	0.0	0	666.17	0.0	0
665.67	0.0	0	666.18	0.0	0
665.68	0.0	0	666.19	0.0	0
665.69	0.0	0	666.20	0.0	0
665.70	0.0	0	666.21	0.0	0
665.71	0.0	0	666.22	0.0	0
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	1
665.77	0.0	0	666.28	0.0	1
665.78	0.0	0	666.29	0.0	1
665.79	0.0	0	666.30	0.1	1
665.80	0.0	0	666.31	0.1	1
665.81	0.0	0	666.32	0.1	1
665.82	0.0	0	666.33	0.1	2
665.83	0.0	0	666.34	0.1	2
665.84	0.0	0	666.35	0.1	2
665.85	0.0	0	666.36	0.1	2
665.86	0.0	0	666.37	0.1	2
665.87	0.0	0	666.38	0.1	2
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	3
665.92	0.0	0	666.43	0.1	3
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.2	3
665.97	0.0	0	666.48	**0.2**	**3**
665.98	0.0	0			

Summary for Reach 8R: 10" roof

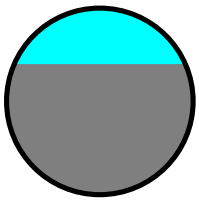
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 357% of Manning's capacity
[76] Warning: Detained 0.013 af (Pond w/culvert advised)

Inflow Area = 0.339 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.98 cfs @ 12.17 hrs, Volume= 0.064 af
Outflow = 0.29 cfs @ 11.92 hrs, Volume= 0.064 af, Atten= 71%, Lag= 0.0 min

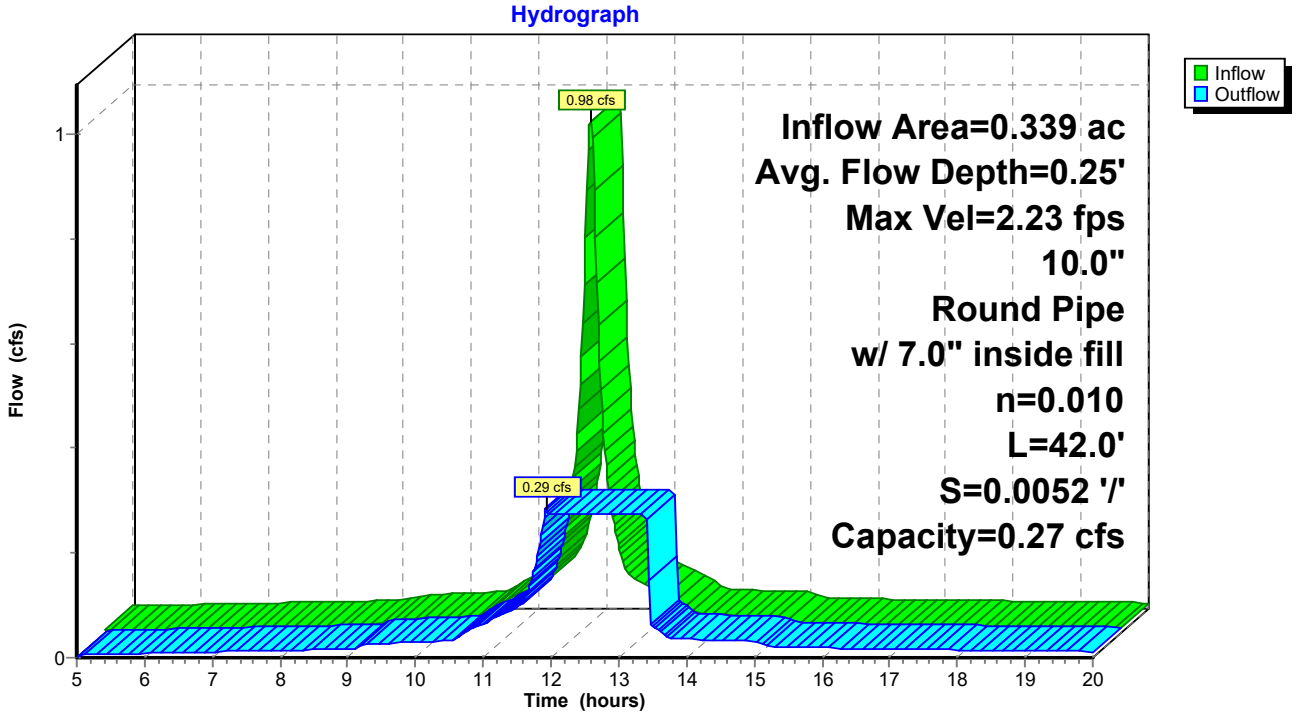
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.07 fps, Avg. Travel Time= 0.7 min

Peak Storage= 6 cf @ 11.94 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

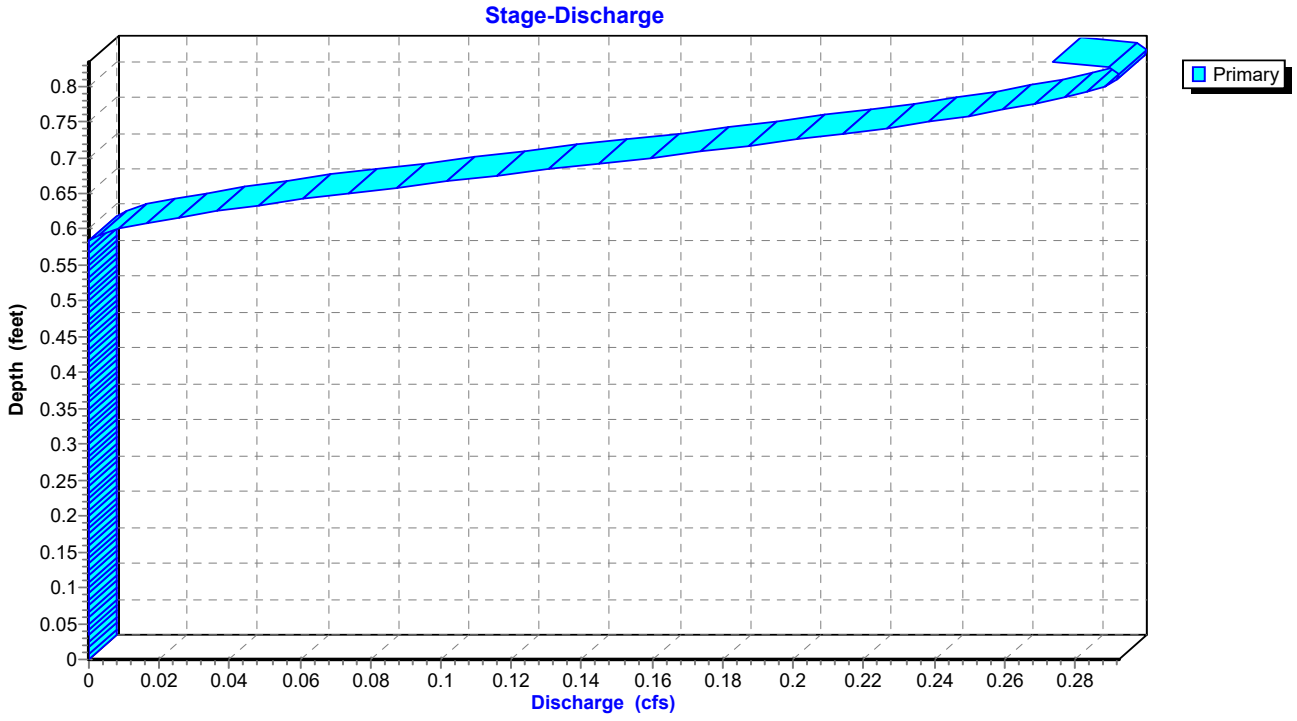
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 42.0' Slope= 0.0052 '/'
Inlet Invert= 665.80', Outlet Invert= 665.58'



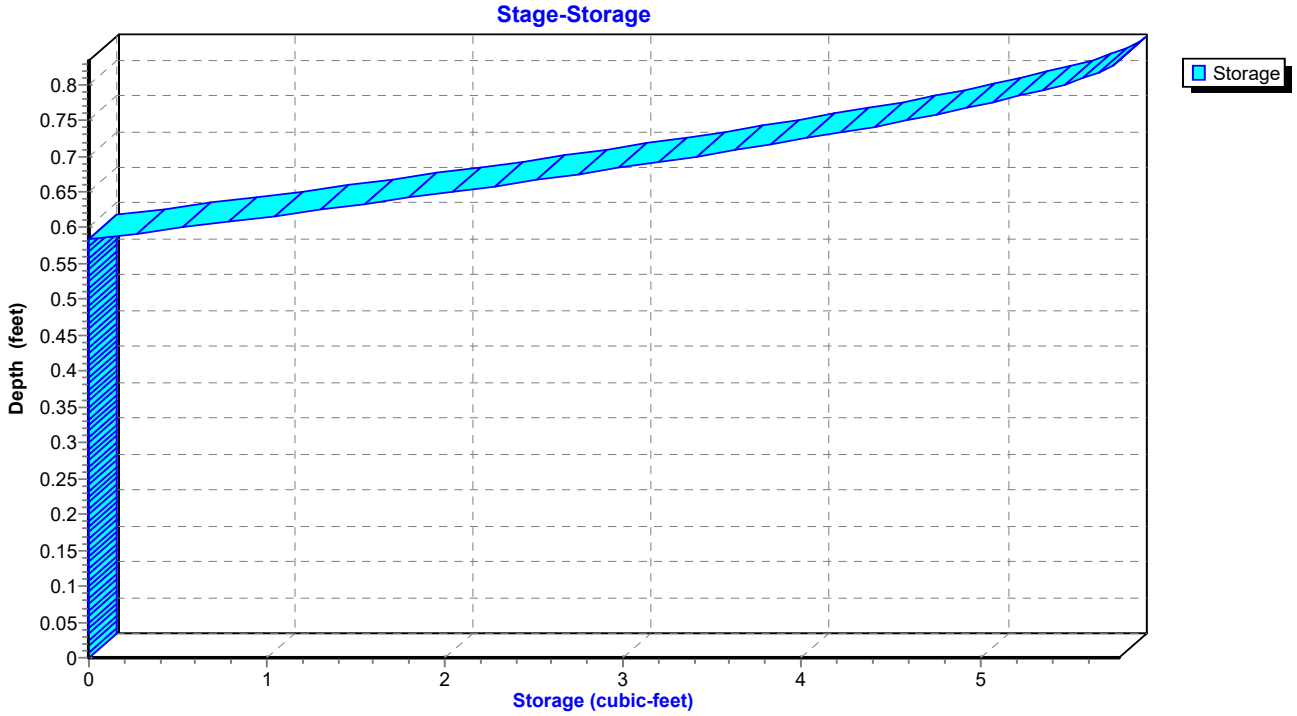
Reach 8R: 10" roof



Reach 8R: 10" roof



Reach 8R: 10" roof



Hydrograph for Reach 8R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.38	0.00
5.40	0.01	0	666.40	0.01
5.80	0.01	1	666.40	0.01
6.20	0.01	1	666.40	0.01
6.60	0.01	1	666.40	0.01
7.00	0.01	1	666.40	0.01
7.40	0.01	1	666.40	0.01
7.80	0.01	1	666.41	0.01
8.20	0.01	1	666.41	0.01
8.60	0.02	1	666.41	0.02
9.00	0.02	1	666.41	0.02
9.40	0.03	1	666.42	0.03
9.80	0.03	1	666.42	0.03
10.20	0.03	1	666.42	0.03
10.60	0.04	1	666.42	0.04
11.00	0.07	2	666.45	0.07
11.40	0.09	2	666.46	0.09
11.80	**0.20**	**4**	**666.52**	**0.19**
12.20	**0.93**	**6**	**666.63**	**0.27**
12.60	0.16	6	666.63	0.27
13.00	0.09	6	666.63	0.27
13.40	0.07	6	666.63	0.27
13.80	0.04	1	666.43	0.04
14.20	0.04	1	666.42	0.04
14.60	0.03	1	666.42	0.03
15.00	0.03	1	666.42	0.03
15.40	0.02	1	666.41	0.02
15.80	0.02	1	666.41	0.02
16.20	0.02	1	666.41	0.02
16.60	0.02	1	666.41	0.02
17.00	0.02	1	666.41	0.02
17.40	0.02	1	666.41	0.02
17.80	0.02	1	666.41	0.02
18.20	0.01	1	666.41	0.01
18.60	0.01	1	666.41	0.01
19.00	0.01	1	666.40	0.01
19.40	0.01	1	666.40	0.01
19.80	0.01	1	666.40	0.01

Stage-Discharge for Reach 8R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.35	0.00
666.40	0.68	0.01
666.41	0.90	0.02
666.42	1.09	0.03
666.43	1.25	0.04
666.44	1.39	0.06
666.45	1.52	0.07
666.46	1.63	0.09
666.47	1.73	0.11
666.48	1.81	0.12
666.49	1.89	0.14
666.50	1.96	0.16
666.51	2.02	0.18
666.52	2.07	0.19
666.53	2.12	0.21
666.54	2.15	0.22
666.55	2.18	0.24
666.56	2.21	0.25
666.57	2.22	0.26
666.58	**2.23**	0.27
666.59	2.23	0.28
666.60	2.21	0.29
666.61	2.19	**0.29**
666.62	2.15	0.29
666.63	2.04	0.28

Stage-Area-Storage for Reach 8R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.80	0.0	0
665.81	0.0	0
665.82	0.0	0
665.83	0.0	0
665.84	0.0	0
665.85	0.0	0
665.86	0.0	0
665.87	0.0	0
665.88	0.0	0
665.89	0.0	0
665.90	0.0	0
665.91	0.0	0
665.92	0.0	0
665.93	0.0	0
665.94	0.0	0
665.95	0.0	0
665.96	0.0	0
665.97	0.0	0
665.98	0.0	0
665.99	0.0	0
666.00	0.0	0
666.01	0.0	0
666.02	0.0	0
666.03	0.0	0
666.04	0.0	0
666.05	0.0	0
666.06	0.0	0
666.07	0.0	0
666.08	0.0	0
666.09	0.0	0
666.10	0.0	0
666.11	0.0	0
666.12	0.0	0
666.13	0.0	0
666.14	0.0	0
666.15	0.0	0
666.16	0.0	0
666.17	0.0	0
666.18	0.0	0
666.19	0.0	0
666.20	0.0	0
666.21	0.0	0
666.22	0.0	0
666.23	0.0	0
666.24	0.0	0
666.25	0.0	0
666.26	0.0	0
666.27	0.0	0
666.28	0.0	0
666.29	0.0	0
666.30	0.0	0
666.31	0.0	0
666.32	0.0	0
666.33	0.0	0
666.34	0.0	0
666.35	0.0	0
666.36	0.0	0
666.37	0.0	0
666.38	0.0	0
666.39	0.0	0
666.40	0.0	1
666.41	0.0	1
666.42	0.0	1
666.43	0.0	1
666.44	0.0	2
666.45	0.0	2
666.46	0.1	2
666.47	0.1	3
666.48	0.1	3
666.49	0.1	3
666.50	0.1	3
666.51	0.1	4
666.52	0.1	4
666.53	0.1	4
666.54	0.1	4
666.55	0.1	5
666.56	0.1	5
666.57	0.1	5
666.58	0.1	5
666.59	0.1	5
666.60	0.1	5
666.61	0.1	6
666.62	0.1	6
666.63	**0.1**	**6**

Summary for Reach 9R: inlet 3 18"

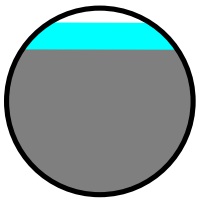
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[63] Warning: Exceeded Reach 7R INLET depth by 0.24' @ 15.38 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.74 cfs @ 12.08 hrs, Volume= 0.145 af
Outflow = 0.74 cfs @ 12.04 hrs, Volume= 0.145 af, Atten= 0%, Lag= 0.0 min

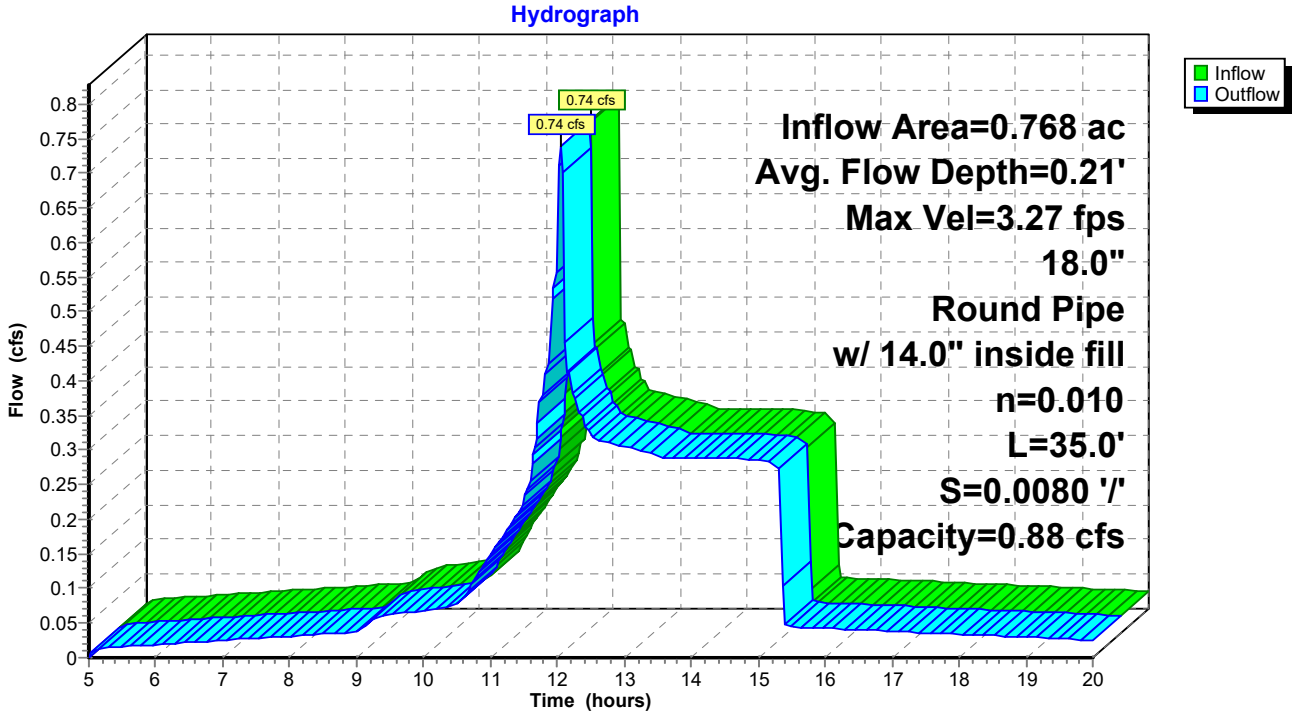
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.27 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.53 fps, Avg. Travel Time= 0.4 min

Peak Storage= 8 cf @ 12.04 hrs
Average Depth at Peak Storage= 1.38' above invert (0.21' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.88 cfs

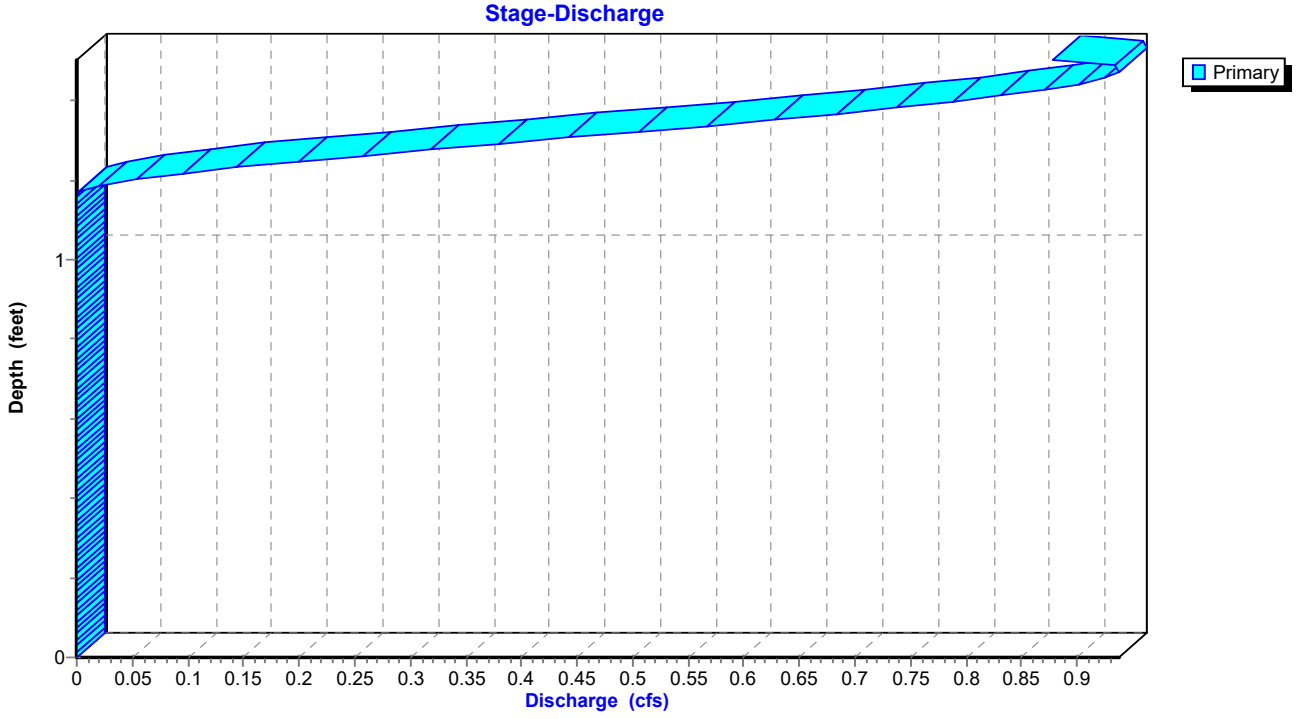
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 35.0' Slope= 0.0080 '/'
Inlet Invert= 665.30', Outlet Invert= 665.02'



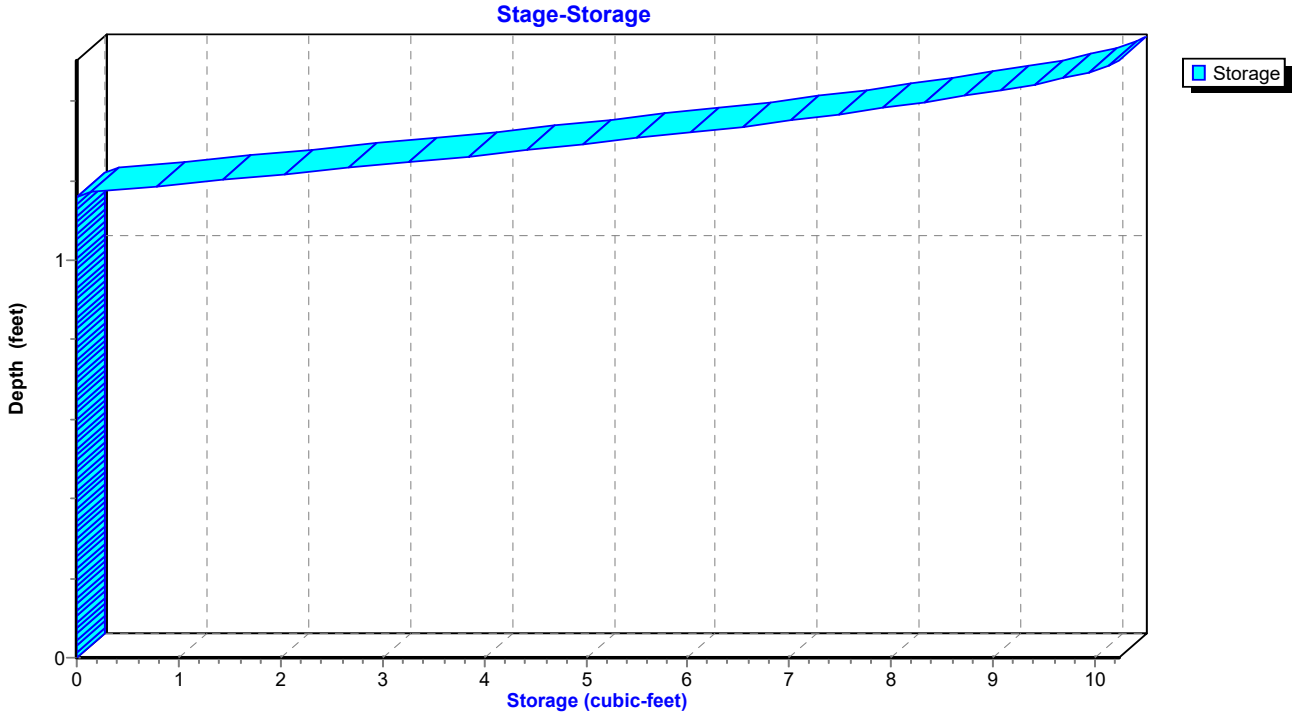
Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Hydrograph for Reach 9R: inlet 3 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.47	0.00
5.40	0.02	1	666.48	0.02
5.80	0.02	1	666.48	0.02
6.20	0.02	1	666.49	0.02
6.60	0.02	1	666.49	0.02
7.00	0.03	1	666.49	0.03
7.40	0.03	1	666.49	0.03
7.80	0.03	1	666.49	0.03
8.20	0.03	1	666.49	0.03
8.60	0.03	1	666.49	0.03
9.00	0.04	1	666.49	0.04
9.40	0.06	2	666.50	0.06
9.80	0.07	2	666.50	0.07
10.20	0.07	2	666.51	0.07
10.60	0.09	2	666.51	0.08
11.00	0.15	3	666.53	0.15
11.40	0.21	3	666.55	0.21
11.80	**0.39**	**5**	**666.59**	**0.39**
12.20	**0.40**	**5**	**666.60**	**0.40**
12.60	0.31	4	666.57	0.32
13.00	0.31	4	666.57	0.31
13.40	0.30	4	666.57	0.30
13.80	0.29	4	666.57	0.29
14.20	0.29	4	666.57	0.29
14.60	0.29	4	666.57	0.29
15.00	0.28	4	666.57	0.29
15.40	0.05	1	666.49	0.05
15.80	0.04	1	666.50	0.04
16.20	0.04	1	666.49	0.04
16.60	0.04	1	666.49	0.04
17.00	0.04	1	666.49	0.04
17.40	0.04	1	666.49	0.04
17.80	0.03	1	666.49	0.04
18.20	0.03	1	666.49	0.03
18.60	0.03	1	666.49	0.03
19.00	0.03	1	666.49	0.03
19.40	0.03	1	666.49	0.03
19.80	0.03	1	666.49	0.03

Stage-Discharge for Reach 9R: inlet 3 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.30	0.00	0.00	665.81	0.00	0.00	666.32	0.00	0.00
665.31	0.00	0.00	665.82	0.00	0.00	666.33	0.00	0.00
665.32	0.00	0.00	665.83	0.00	0.00	666.34	0.00	0.00
665.33	0.00	0.00	665.84	0.00	0.00	666.35	0.00	0.00
665.34	0.00	0.00	665.85	0.00	0.00	666.36	0.00	0.00
665.35	0.00	0.00	665.86	0.00	0.00	666.37	0.00	0.00
665.36	0.00	0.00	665.87	0.00	0.00	666.38	0.00	0.00
665.37	0.00	0.00	665.88	0.00	0.00	666.39	0.00	0.00
665.38	0.00	0.00	665.89	0.00	0.00	666.40	0.00	0.00
665.39	0.00	0.00	665.90	0.00	0.00	666.41	0.00	0.00
665.40	0.00	0.00	665.91	0.00	0.00	666.42	0.00	0.00
665.41	0.00	0.00	665.92	0.00	0.00	666.43	0.00	0.00
665.42	0.00	0.00	665.93	0.00	0.00	666.44	0.00	0.00
665.43	0.00	0.00	665.94	0.00	0.00	666.45	0.00	0.00
665.44	0.00	0.00	665.95	0.00	0.00	666.46	0.10	0.00
665.45	0.00	0.00	665.96	0.00	0.00	666.47	0.29	0.00
665.46	0.00	0.00	665.97	0.00	0.00	666.48	0.70	0.01
665.47	0.00	0.00	665.98	0.00	0.00	666.49	1.03	0.03
665.48	0.00	0.00	665.99	0.00	0.00	666.50	1.30	0.05
665.49	0.00	0.00	666.00	0.00	0.00	666.51	1.52	0.08
665.50	0.00	0.00	666.01	0.00	0.00	666.52	1.72	0.11
665.51	0.00	0.00	666.02	0.00	0.00	666.53	1.90	0.14
665.52	0.00	0.00	666.03	0.00	0.00	666.54	2.06	0.18
665.53	0.00	0.00	666.04	0.00	0.00	666.55	2.21	0.22
665.54	0.00	0.00	666.05	0.00	0.00	666.56	2.34	0.26
665.55	0.00	0.00	666.06	0.00	0.00	666.57	2.46	0.30
665.56	0.00	0.00	666.07	0.00	0.00	666.58	2.57	0.34
665.57	0.00	0.00	666.08	0.00	0.00	666.59	2.68	0.38
665.58	0.00	0.00	666.09	0.00	0.00	666.60	2.77	0.42
665.59	0.00	0.00	666.10	0.00	0.00	666.61	2.86	0.46
665.60	0.00	0.00	666.11	0.00	0.00	666.62	2.94	0.51
665.61	0.00	0.00	666.12	0.00	0.00	666.63	3.01	0.55
665.62	0.00	0.00	666.13	0.00	0.00	666.64	3.07	0.59
665.63	0.00	0.00	666.14	0.00	0.00	666.65	3.13	0.63
665.64	0.00	0.00	666.15	0.00	0.00	666.66	3.18	0.67
665.65	0.00	0.00	666.16	0.00	0.00	666.67	3.22	0.70
665.66	0.00	0.00	666.17	0.00	0.00	666.68	3.26	0.74
665.67	0.00	0.00	666.18	0.00	0.00	666.69	3.29	0.77
665.68	0.00	0.00	666.19	0.00	0.00	666.70	3.32	0.80
665.69	0.00	0.00	666.20	0.00	0.00	666.71	3.34	0.83
665.70	0.00	0.00	666.21	0.00	0.00	666.72	3.35	0.86
665.71	0.00	0.00	666.22	0.00	0.00	666.73	3.36	0.88
665.72	0.00	0.00	666.23	0.00	0.00	666.74	**3.36**	0.90
665.73	0.00	0.00	666.24	0.00	0.00	666.75	3.35	0.92
665.74	0.00	0.00	666.25	0.00	0.00	666.76	3.33	0.93
665.75	0.00	0.00	666.26	0.00	0.00	666.77	3.30	**0.94**
665.76	0.00	0.00	666.27	0.00	0.00	666.78	3.25	0.94
665.77	0.00	0.00	666.28	0.00	0.00	666.79	3.15	0.92
665.78	0.00	0.00	666.29	0.00	0.00	666.80	3.01	0.88
665.79	0.00	0.00	666.30	0.00	0.00			
665.80	0.00	0.00	666.31	0.00	0.00			

Stage-Area-Storage for Reach 9R: inlet 3 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	1
666.50	0.0	1
666.52	0.1	2
666.54	0.1	3
666.56	0.1	4
666.58	0.1	5
666.60	0.2	5
666.62	0.2	6
666.64	0.2	7
666.66	0.2	7
666.68	0.2	8
666.70	0.2	8
666.72	0.3	9
666.74	0.3	9
666.76	0.3	10
666.78	0.3	10
666.80	**0.3**	**10**

Summary for Reach 10R: MH7 18"

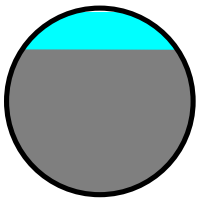
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 106% of Manning's capacity
[62] Hint: Exceeded Reach 9R OUTLET depth by 0.09' @ 12.04 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.74 cfs @ 12.04 hrs, Volume= 0.145 af
Outflow = 0.74 cfs @ 12.08 hrs, Volume= 0.145 af, Atten= 0%, Lag= 2.4 min

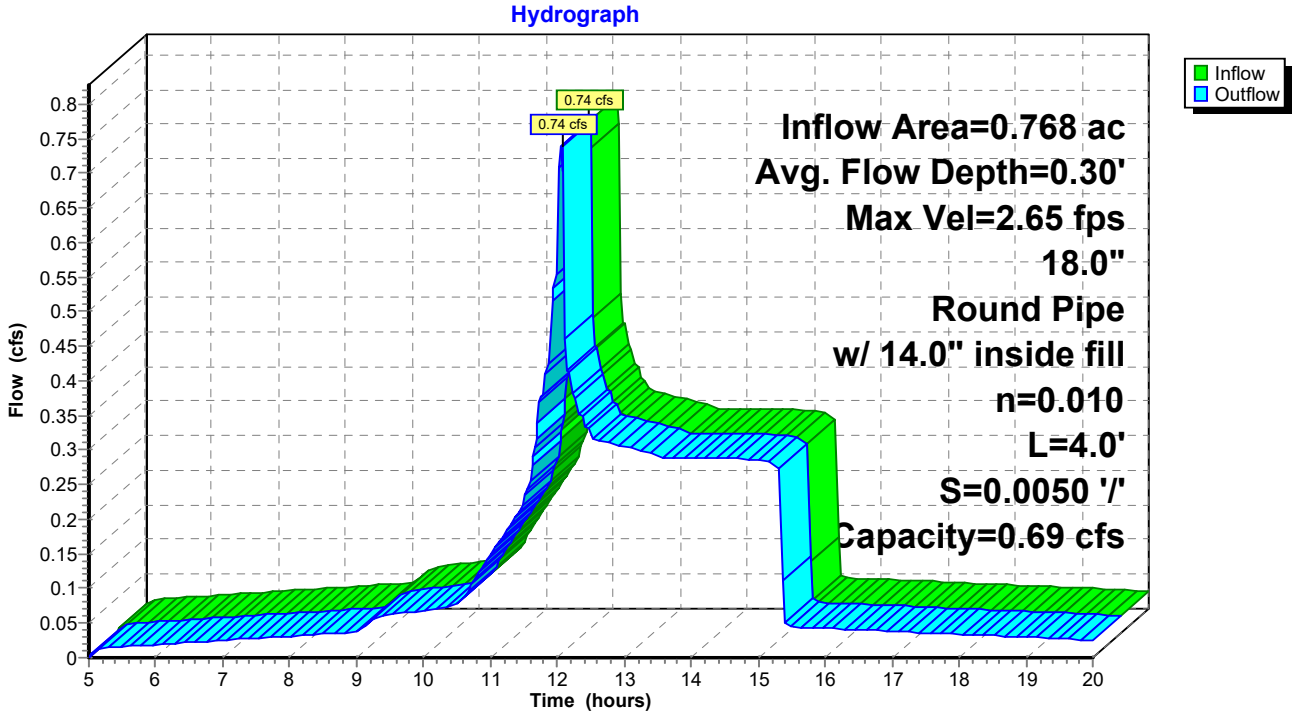
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.65 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.31 fps, Avg. Travel Time= 0.1 min

Peak Storage= 1 cf @ 12.04 hrs
Average Depth at Peak Storage= 1.47' above invert (0.30' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

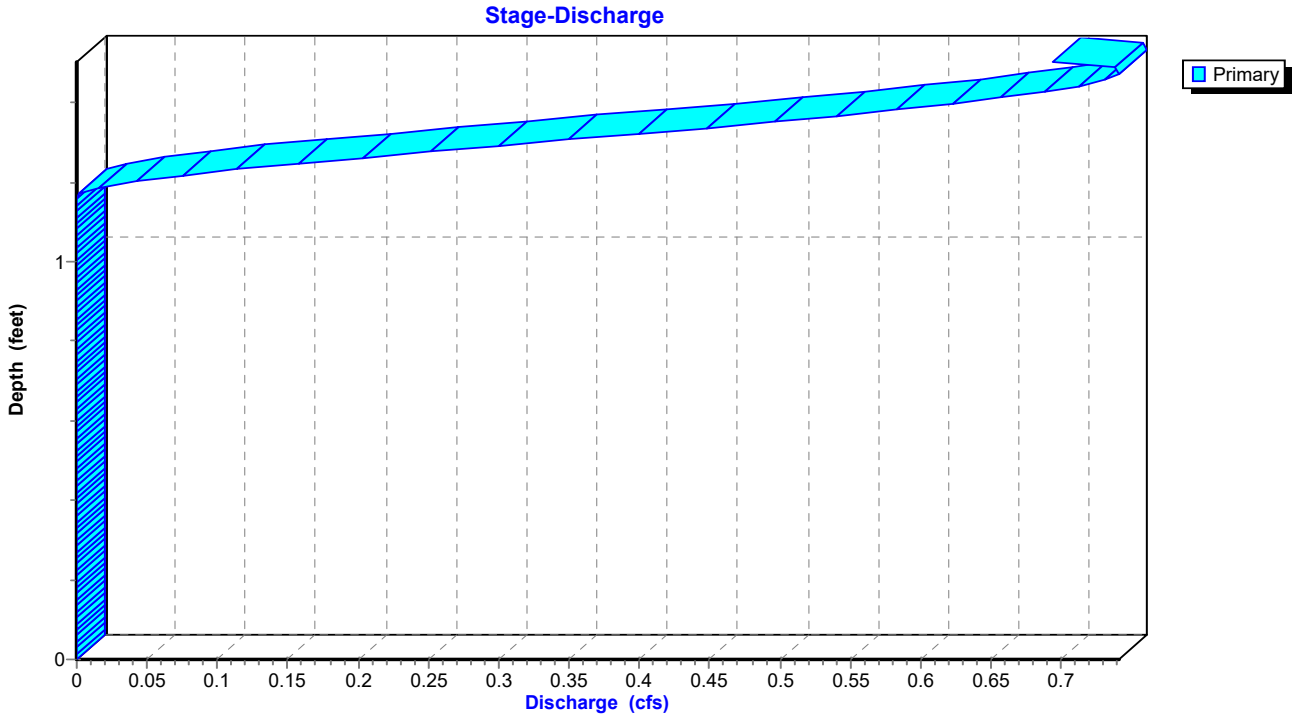
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 4.0' Slope= 0.0050 '/'
Inlet Invert= 665.02', Outlet Invert= 665.00'



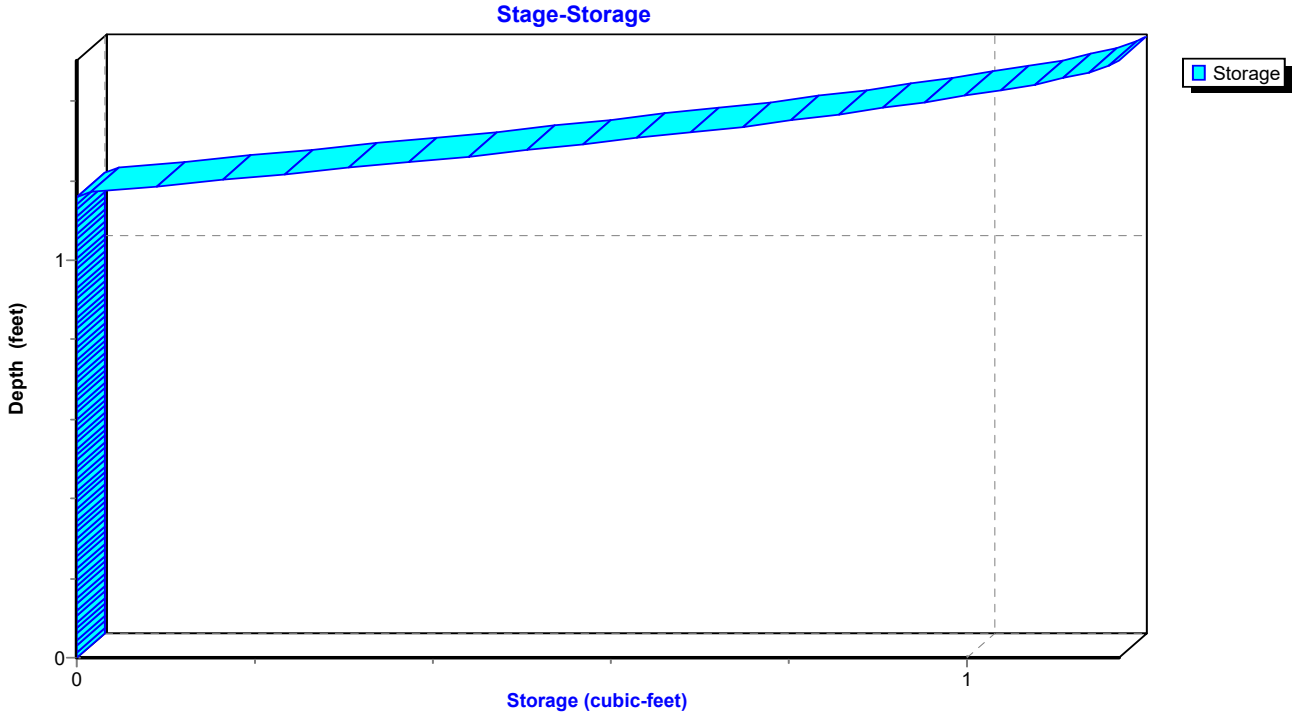
Reach 10R: MH7 18"



Reach 10R: MH7 18"



Reach 10R: MH7 18"



Hydrograph for Reach 10R: MH7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.19	0.00
5.40	0.02	0	666.20	0.02
5.80	0.02	0	666.21	0.02
6.20	0.02	0	666.21	0.02
6.60	0.02	0	666.21	0.02
7.00	0.03	0	666.21	0.03
7.40	0.03	0	666.21	0.03
7.80	0.03	0	666.21	0.03
8.20	0.03	0	666.21	0.03
8.60	0.03	0	666.22	0.03
9.00	0.04	0	666.22	0.04
9.40	0.06	0	666.23	0.06
9.80	0.07	0	666.23	0.07
10.20	0.07	0	666.23	0.07
10.60	0.08	0	666.24	0.08
11.00	0.15	0	666.26	0.15
11.40	0.21	0	666.28	0.21
11.80	**0.39**	**1**	**666.34**	**0.39**
12.20	**0.40**	**1**	**666.34**	**0.40**
12.60	0.32	1	666.31	0.31
13.00	0.31	1	666.31	0.31
13.40	0.30	1	666.31	0.30
13.80	0.29	1	666.31	0.29
14.20	0.29	1	666.31	0.29
14.60	0.29	1	666.31	0.29
15.00	0.29	1	666.31	0.29
15.40	0.05	0	666.22	0.05
15.80	0.04	0	666.22	0.04
16.20	0.04	0	666.22	0.04
16.60	0.04	0	666.22	0.04
17.00	0.04	0	666.22	0.04
17.40	0.04	0	666.22	0.04
17.80	0.04	0	666.22	0.04
18.20	0.03	0	666.21	0.03
18.60	0.03	0	666.21	0.03
19.00	0.03	0	666.21	0.03
19.40	0.03	0	666.21	0.03
19.80	0.03	0	666.21	0.03

Stage-Discharge for Reach 10R: MH7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.02	0.00	0.00	665.53	0.00	0.00	666.04	0.00	0.00
665.03	0.00	0.00	665.54	0.00	0.00	666.05	0.00	0.00
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.08	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.23	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.55	0.01
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.82	0.02
665.20	0.00	0.00	665.71	0.00	0.00	666.22	1.03	0.04
665.21	0.00	0.00	665.72	0.00	0.00	666.23	1.20	0.06
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.36	0.09
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.50	0.11
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.63	0.14
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.74	0.17
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.85	0.20
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.95	0.24
665.28	0.00	0.00	665.79	0.00	0.00	666.30	2.04	0.27
665.29	0.00	0.00	665.80	0.00	0.00	666.31	2.12	0.30
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.19	0.33
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.26	0.37
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.32	0.40
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.38	0.43
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.43	0.46
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.47	0.50
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.51	0.53
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.55	0.56
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.58	0.58
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.60	0.61
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.62	0.63
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.64	0.66
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.65	0.68
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.65	0.70
665.44	0.00	0.00	665.95	0.00	0.00	666.46	**2.65**	0.71
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.73
665.46	0.00	0.00	665.97	0.00	0.00	666.48	2.63	0.73
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.61	**0.74**
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.57	0.74
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.49	0.72
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.38	0.69
665.51	0.00	0.00	666.02	0.00	0.00			
665.52	0.00	0.00	666.03	0.00	0.00			

Stage-Area-Storage for Reach 10R: MH7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.02	0.0	0
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.1	0
666.26	0.1	0
666.28	0.1	0
666.30	0.1	1
666.32	0.2	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	1
666.40	0.2	1
666.42	0.2	1
666.44	0.3	1
666.46	0.3	1
666.48	0.3	1
666.50	0.3	1
666.52	**0.3**	**1**

Summary for Reach 11R: inlet 7 18"

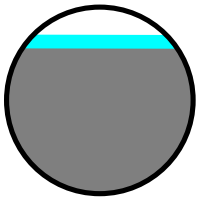
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.26 cfs @ 12.15 hrs, Volume= 0.019 af
Outflow = 0.26 cfs @ 12.17 hrs, Volume= 0.019 af, Atten= 1%, Lag= 0.9 min

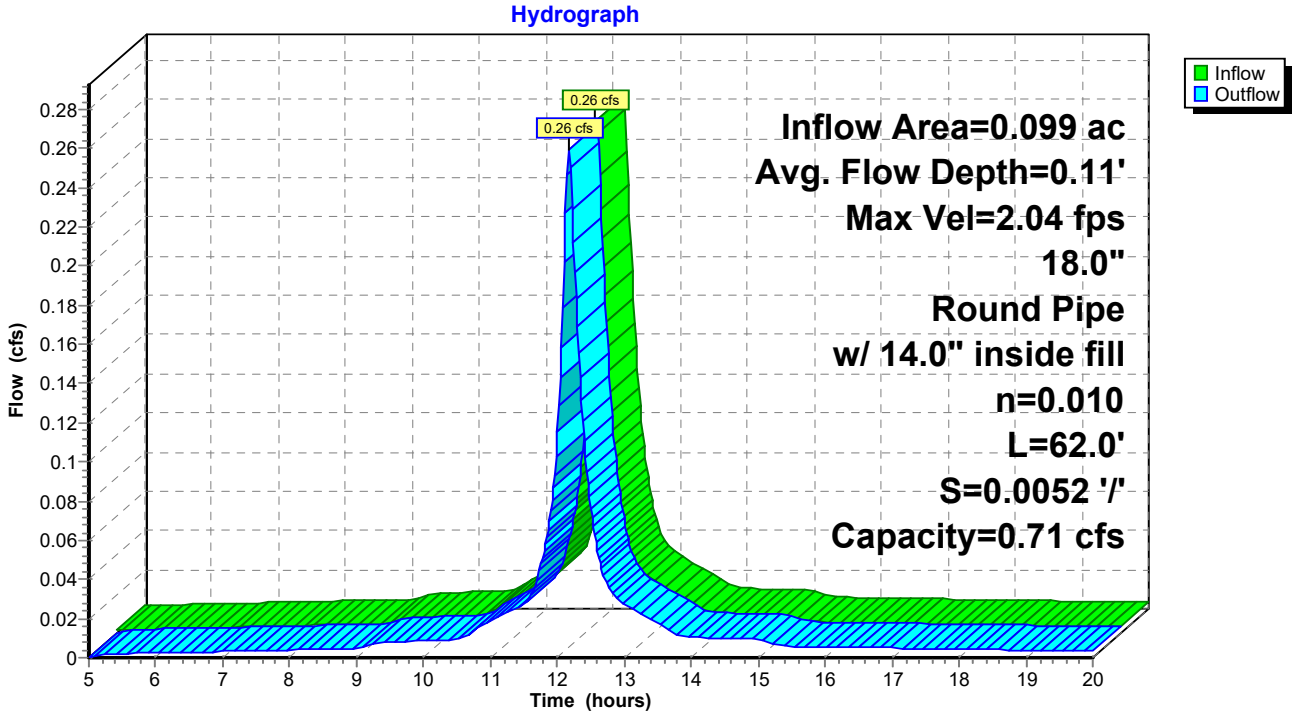
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.04 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.64 fps, Avg. Travel Time= 1.6 min

Peak Storage= 8 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.28' above invert (0.11' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.71 cfs

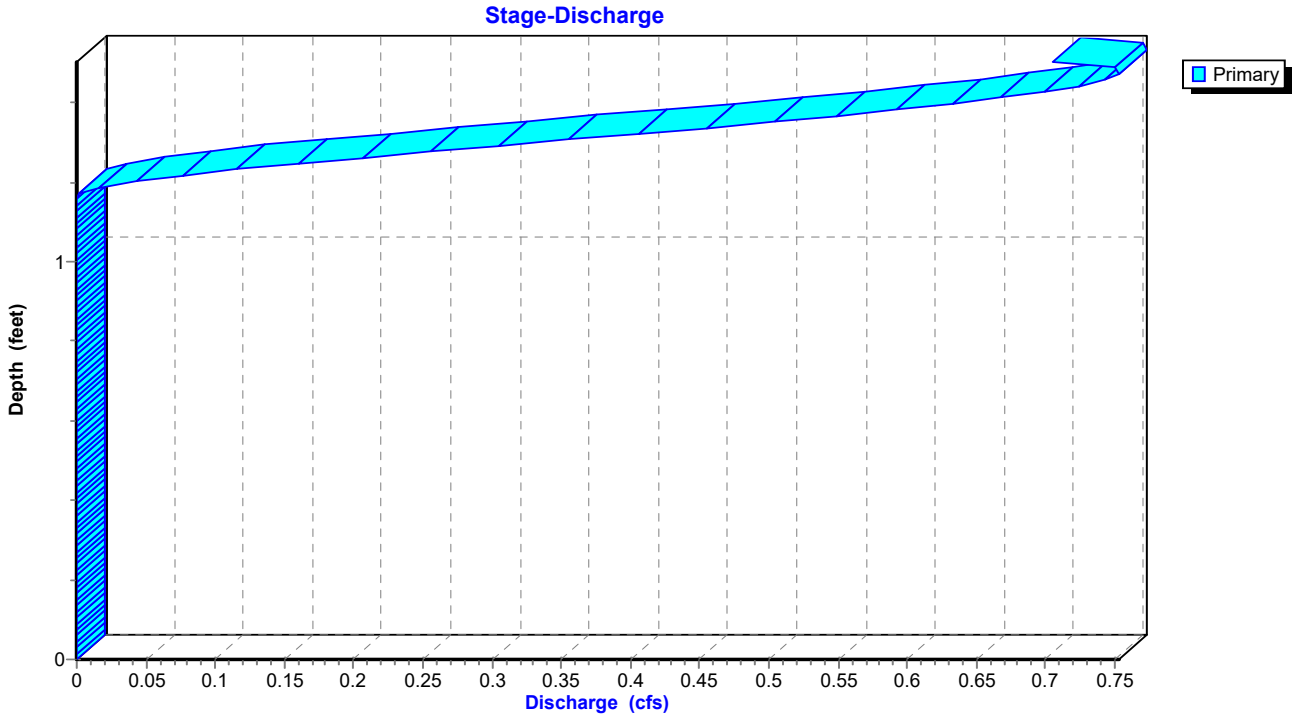
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0052 '/'
Inlet Invert= 665.36', Outlet Invert= 665.04'



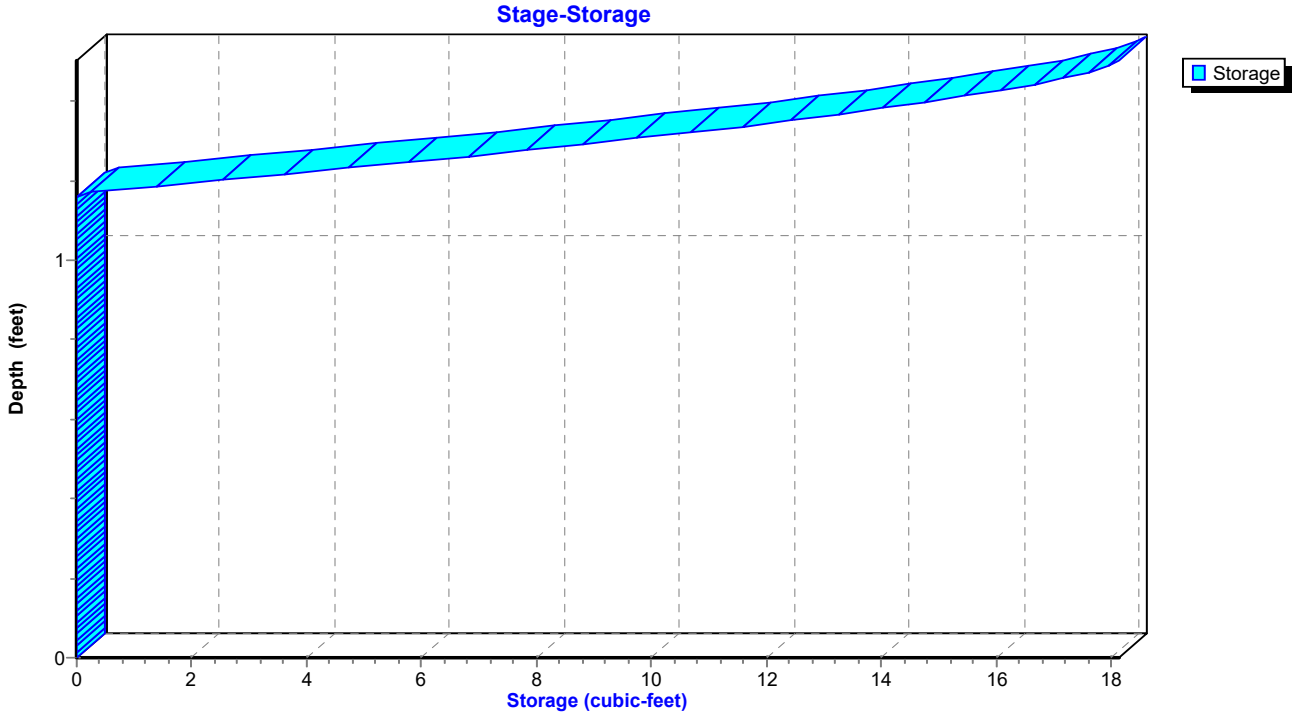
Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Hydrograph for Reach 11R: inlet 7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.53	0.00
5.40	0.00	0	666.53	0.00
5.80	0.00	0	666.53	0.00
6.20	0.00	0	666.53	0.00
6.60	0.00	0	666.53	0.00
7.00	0.00	0	666.53	0.00
7.40	0.00	0	666.53	0.00
7.80	0.00	0	666.53	0.00
8.20	0.00	0	666.53	0.00
8.60	0.00	1	666.53	0.00
9.00	0.00	1	666.53	0.00
9.40	0.01	1	666.54	0.01
9.80	0.01	1	666.54	0.01
10.20	0.01	1	666.54	0.01
10.60	0.01	1	666.54	0.01
11.00	0.02	2	666.55	0.02
11.40	0.03	2	666.55	0.03
11.80	**0.06**	**3**	**666.57**	**0.05**
12.20	**0.23**	**7**	**666.63**	**0.24**
12.60	0.05	3	666.56	0.05
13.00	0.03	2	666.55	0.03
13.40	0.02	2	666.55	0.02
13.80	0.01	1	666.54	0.01
14.20	0.01	1	666.54	0.01
14.60	0.01	1	666.54	0.01
15.00	0.01	1	666.54	0.01
15.40	0.01	1	666.53	0.01
15.80	0.01	1	666.53	0.01
16.20	0.01	1	666.53	0.01
16.60	0.01	1	666.53	0.01
17.00	0.00	1	666.53	0.00
17.40	0.00	1	666.53	0.00
17.80	0.00	1	666.53	0.00
18.20	0.00	1	666.53	0.00
18.60	0.00	0	666.53	0.00
19.00	0.00	0	666.53	0.00
19.40	0.00	0	666.53	0.00
19.80	0.00	0	666.53	0.00

Stage-Discharge for Reach 11R: inlet 7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.08	0.00
666.53	0.24	0.00
666.54	0.56	0.01
666.55	0.83	0.03
666.56	1.05	0.04
666.57	1.22	0.07
666.58	1.38	0.09
666.59	1.53	0.12
666.60	1.65	0.15
666.61	1.77	0.18
666.62	1.88	0.21
666.63	1.98	0.24
666.64	2.07	0.27
666.65	2.15	0.31
666.66	2.23	0.34
666.67	2.29	0.37
666.68	2.36	0.41
666.69	2.41	0.44
666.70	2.47	0.47
666.71	2.51	0.50
666.72	2.55	0.53
666.73	2.59	0.56
666.74	2.62	0.59
666.75	2.65	0.62
666.76	2.67	0.64
666.77	2.68	0.67
666.78	2.69	0.69
666.79	2.70	0.71
666.80	**2.70**	0.72
666.81	2.69	0.74
666.82	2.67	0.75
666.83	2.65	**0.75**
666.84	2.61	0.75
666.85	2.53	0.74
666.86	2.41	0.71

Stage-Area-Storage for Reach 11R: inlet 7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	0
666.50	0.0	0
666.52	0.0	0
666.54	0.0	1
666.56	0.0	3
666.58	0.1	4
666.60	0.1	5
666.62	0.1	7
666.64	0.1	8
666.66	0.2	9
666.68	0.2	11
666.70	0.2	12
666.72	0.2	13
666.74	0.2	14
666.76	0.2	15
666.78	0.3	16
666.80	0.3	17
666.82	0.3	17
666.84	0.3	18
666.86	**0.3**	**18**

Summary for Reach 12R: MH6 18"

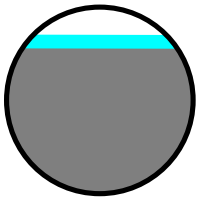
[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach 11R outlet invert by 1.28' @ 12.16 hrs

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.26 cfs @ 12.17 hrs, Volume= 0.019 af
Outflow = 0.26 cfs @ 12.17 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.1 min

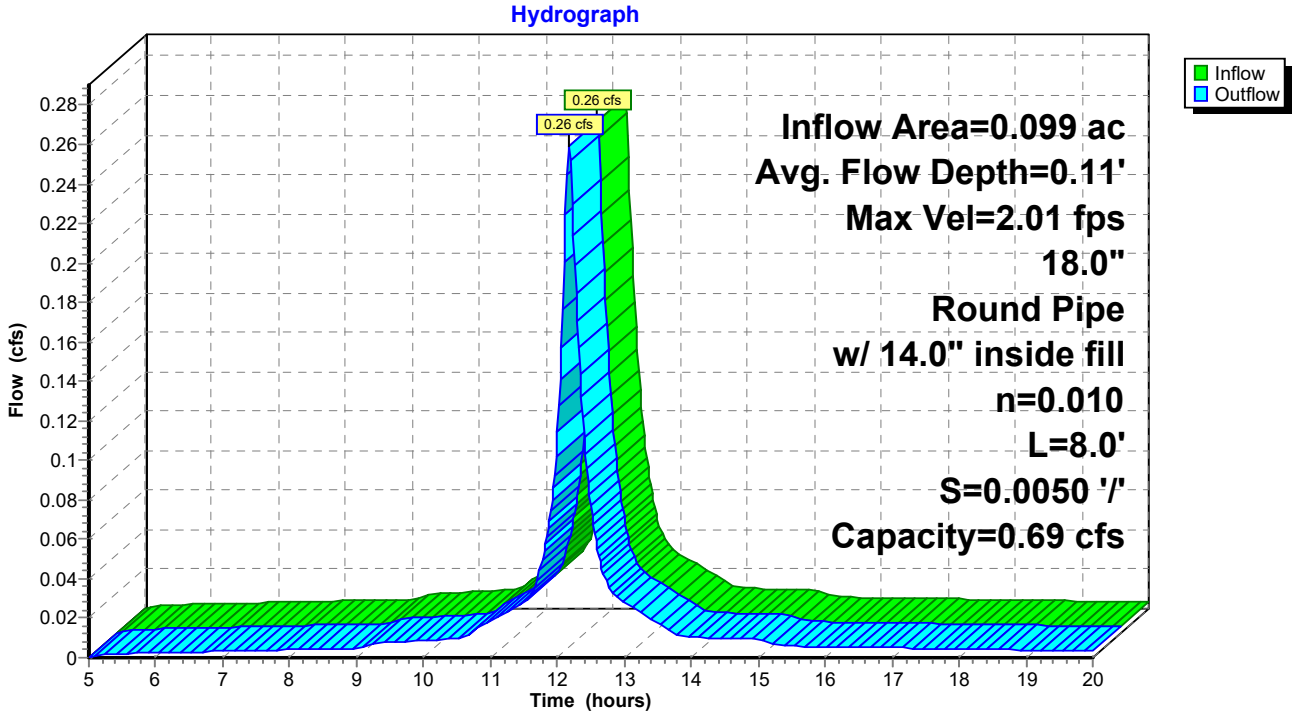
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.64 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.17 hrs
Average Depth at Peak Storage= 1.28' above invert (0.11' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

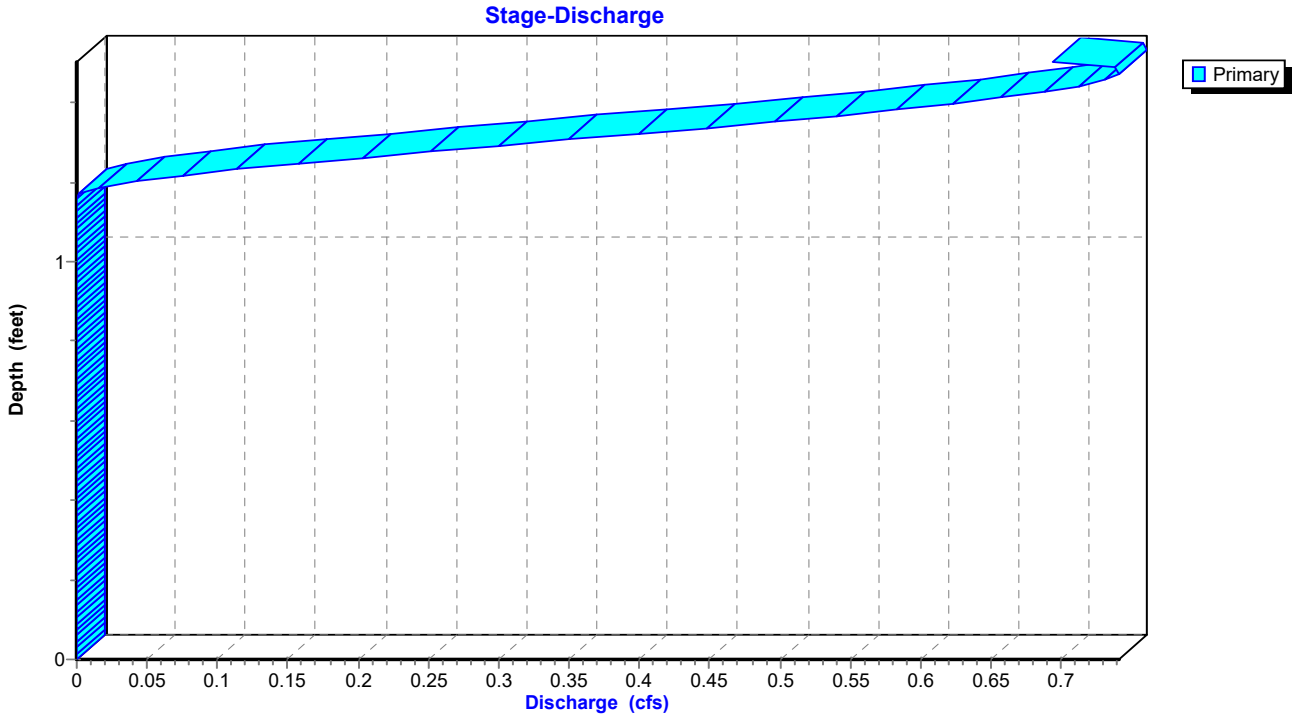
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 8.0' Slope= 0.0050 '/'
Inlet Invert= 665.04', Outlet Invert= 665.00'



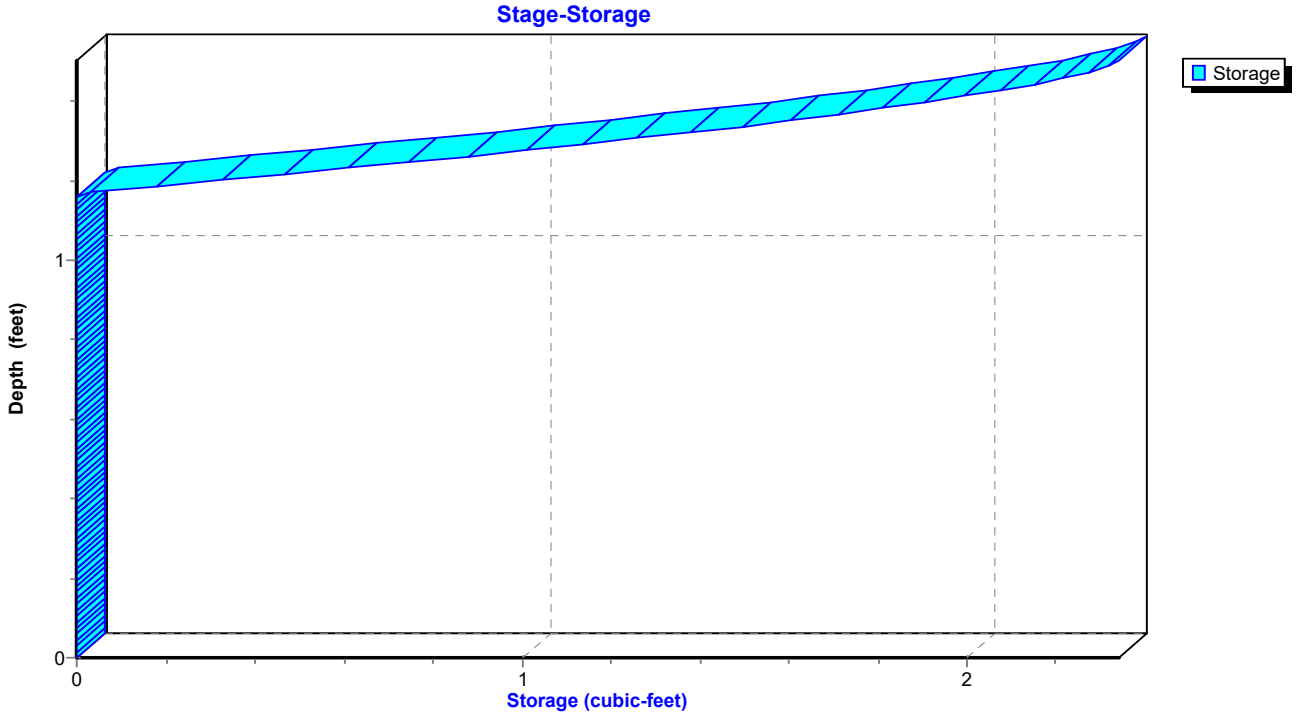
Reach 12R: MH6 18"



Reach 12R: MH6 18"



Reach 12R: MH6 18"



Hydrograph for Reach 12R: MH6 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.21	0.00
5.40	0.00	0	666.21	0.00
5.80	0.00	0	666.21	0.00
6.20	0.00	0	666.21	0.00
6.60	0.00	0	666.21	0.00
7.00	0.00	0	666.21	0.00
7.40	0.00	0	666.21	0.00
7.80	0.00	0	666.21	0.00
8.20	0.00	0	666.21	0.00
8.60	0.00	0	666.21	0.00
9.00	0.00	0	666.21	0.00
9.40	0.01	0	666.22	0.01
9.80	0.01	0	666.22	0.01
10.20	0.01	0	666.22	0.01
10.60	0.01	0	666.22	0.01
11.00	0.02	0	666.23	0.02
11.40	0.03	0	666.23	0.03
11.80	**0.05**	**0**	**666.25**	**0.05**
12.20	**0.24**	**1**	**666.31**	**0.25**
12.60	0.05	0	666.25	0.06
13.00	0.03	0	666.23	0.03
13.40	0.02	0	666.23	0.02
13.80	0.01	0	666.22	0.01
14.20	0.01	0	666.22	0.01
14.60	0.01	0	666.22	0.01
15.00	0.01	0	666.22	0.01
15.40	0.01	0	666.22	0.01
15.80	0.01	0	666.21	0.01
16.20	0.01	0	666.21	0.01
16.60	0.01	0	666.21	0.01
17.00	0.00	0	666.21	0.00
17.40	0.00	0	666.21	0.00
17.80	0.00	0	666.21	0.00
18.20	0.00	0	666.21	0.00
18.60	0.00	0	666.21	0.00
19.00	0.00	0	666.21	0.00
19.40	0.00	0	666.21	0.00
19.80	0.00	0	666.21	0.00

Stage-Discharge for Reach 12R: MH6 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.00	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.00	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.08	0.00
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.23	0.00
665.20	0.00	0.00	665.71	0.00	0.00	666.22	0.55	0.01
665.21	0.00	0.00	665.72	0.00	0.00	666.23	0.82	0.02
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.03	0.04
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.20	0.06
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.36	0.09
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.50	0.11
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.63	0.14
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.74	0.17
665.28	0.00	0.00	665.79	0.00	0.00	666.30	1.85	0.20
665.29	0.00	0.00	665.80	0.00	0.00	666.31	1.95	0.24
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.04	0.27
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.12	0.30
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.19	0.33
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.26	0.37
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.32	0.40
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.38	0.43
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.43	0.46
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.47	0.50
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.51	0.53
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.55	0.56
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.58	0.58
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.60	0.61
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.62	0.63
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.64	0.66
665.44	0.00	0.00	665.95	0.00	0.00	666.46	2.65	0.68
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.70
665.46	0.00	0.00	665.97	0.00	0.00	666.48	**2.65**	0.71
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.65	0.73
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.63	0.73
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.61	**0.74**
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.57	0.74
665.51	0.00	0.00	666.02	0.00	0.00	666.53	2.49	0.72
665.52	0.00	0.00	666.03	0.00	0.00	666.54	2.38	0.69
665.53	0.00	0.00	666.04	0.00	0.00			
665.54	0.00	0.00	666.05	0.00	0.00			

Stage-Area-Storage for Reach 12R: MH6 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.1	1
666.28	0.1	1
666.30	0.1	1
666.32	0.1	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	2
666.40	0.2	2
666.42	0.2	2
666.44	0.2	2
666.46	0.3	2
666.48	0.3	2
666.50	0.3	2
666.52	0.3	2
666.54	**0.3**	**2**

Summary for Reach 13R: to isolator 6"

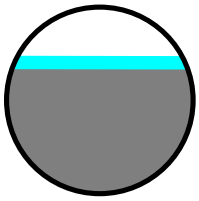
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.10 cfs @ 12.21 hrs, Volume= 0.008 af
Outflow = 0.10 cfs @ 12.21 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min

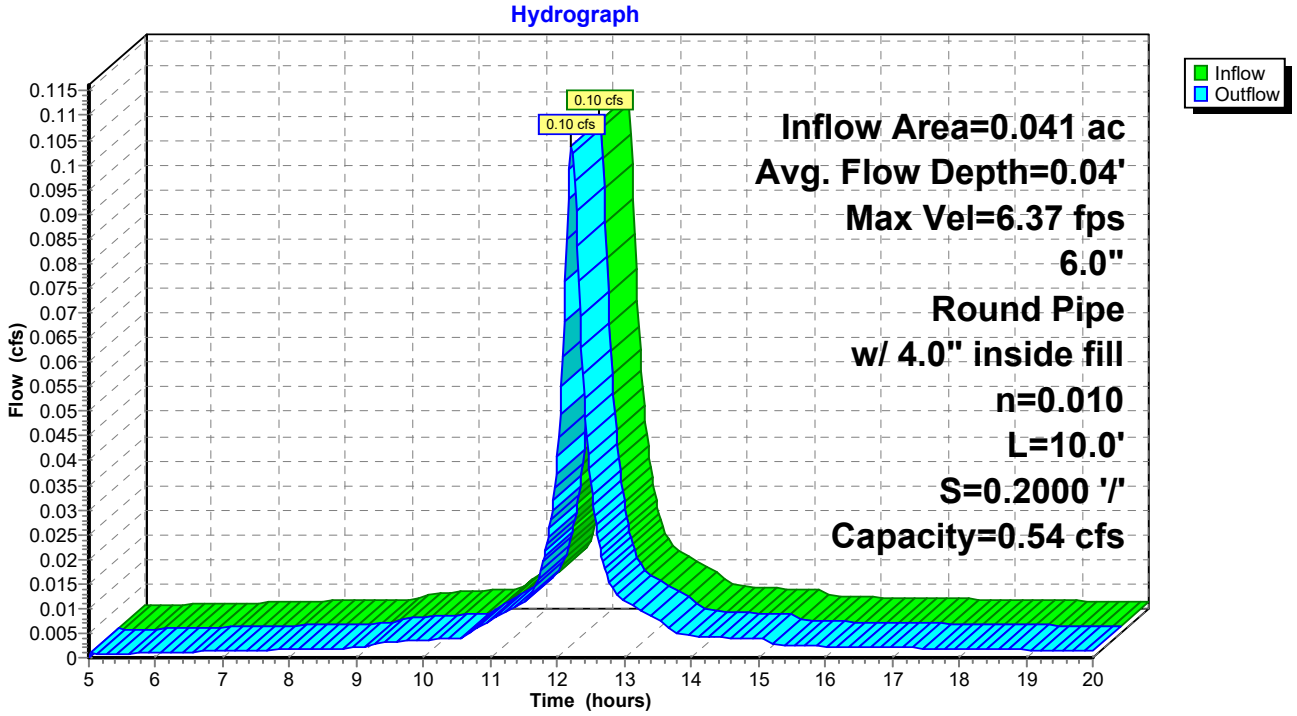
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 6.37 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.93 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.37' above invert (0.04' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

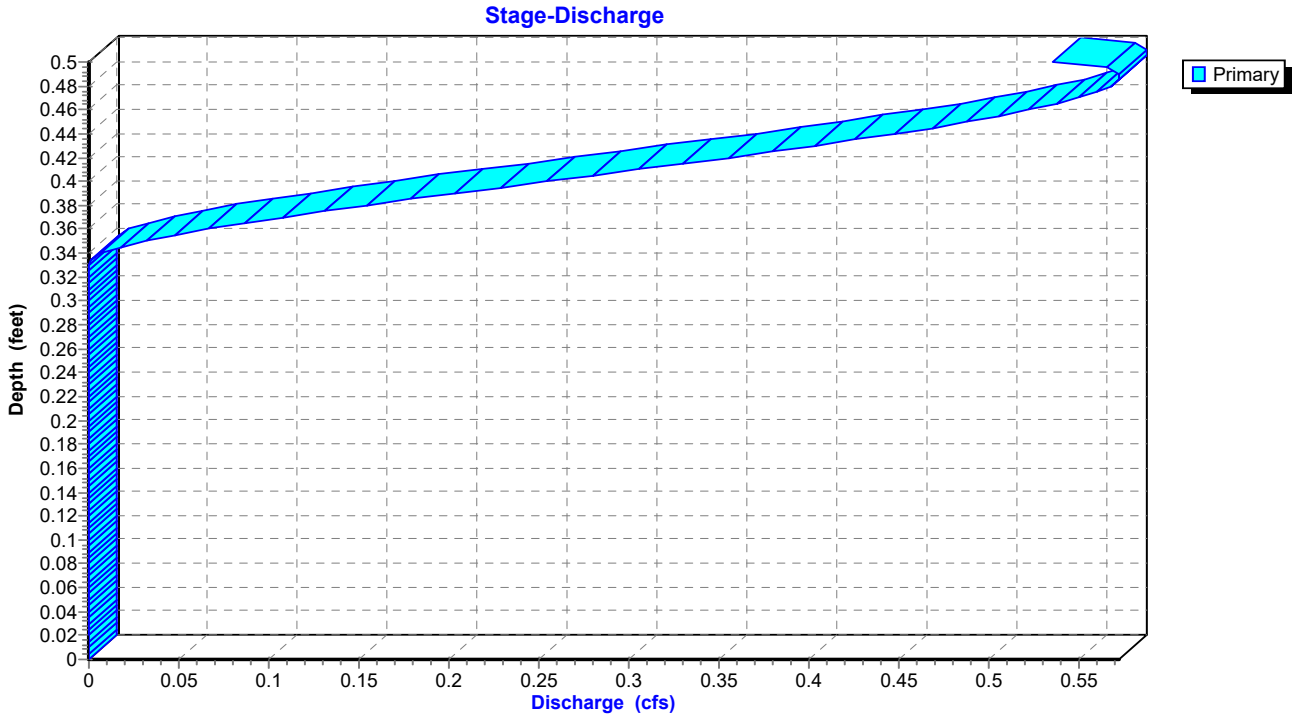
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



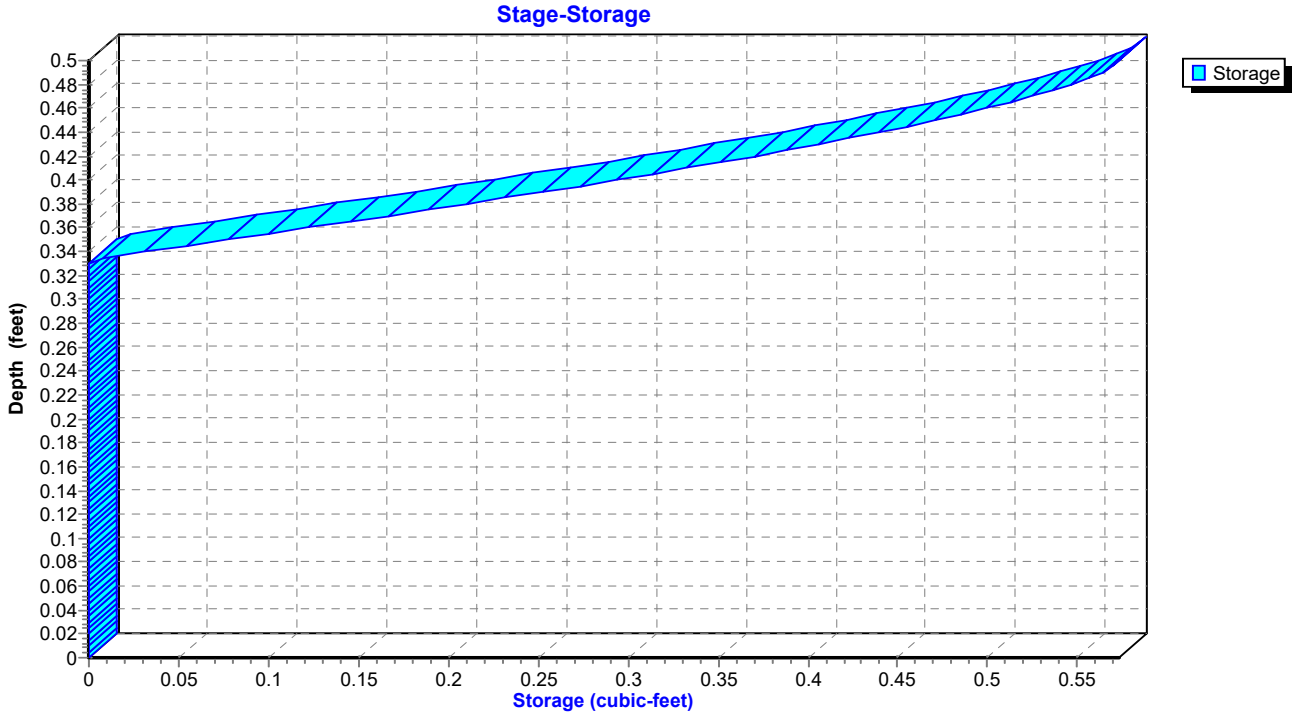
Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Hydrograph for Reach 13R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.34	0.00
5.80	0.00	0	668.34	0.00
6.20	0.00	0	668.34	0.00
6.60	0.00	0	668.34	0.00
7.00	0.00	0	668.34	0.00
7.40	0.00	0	668.34	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.01	0	668.34	0.01
11.40	0.01	0	668.34	0.01
11.80	0.02	0	668.35	0.02
12.20	**0.10**	**0**	**668.37**	**0.10**
12.60	**0.03**	**0**	**668.35**	**0.03**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.00	0	668.34	0.00
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 13R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 13R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 14R: to isolator 6"

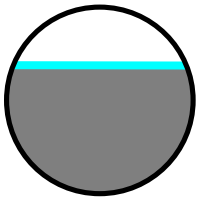
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.030 ac, 83.33% Impervious, Inflow Depth > 1.40" for 1-yr event
Inflow = 0.05 cfs @ 12.27 hrs, Volume= 0.003 af
Outflow = 0.05 cfs @ 12.27 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.1 min

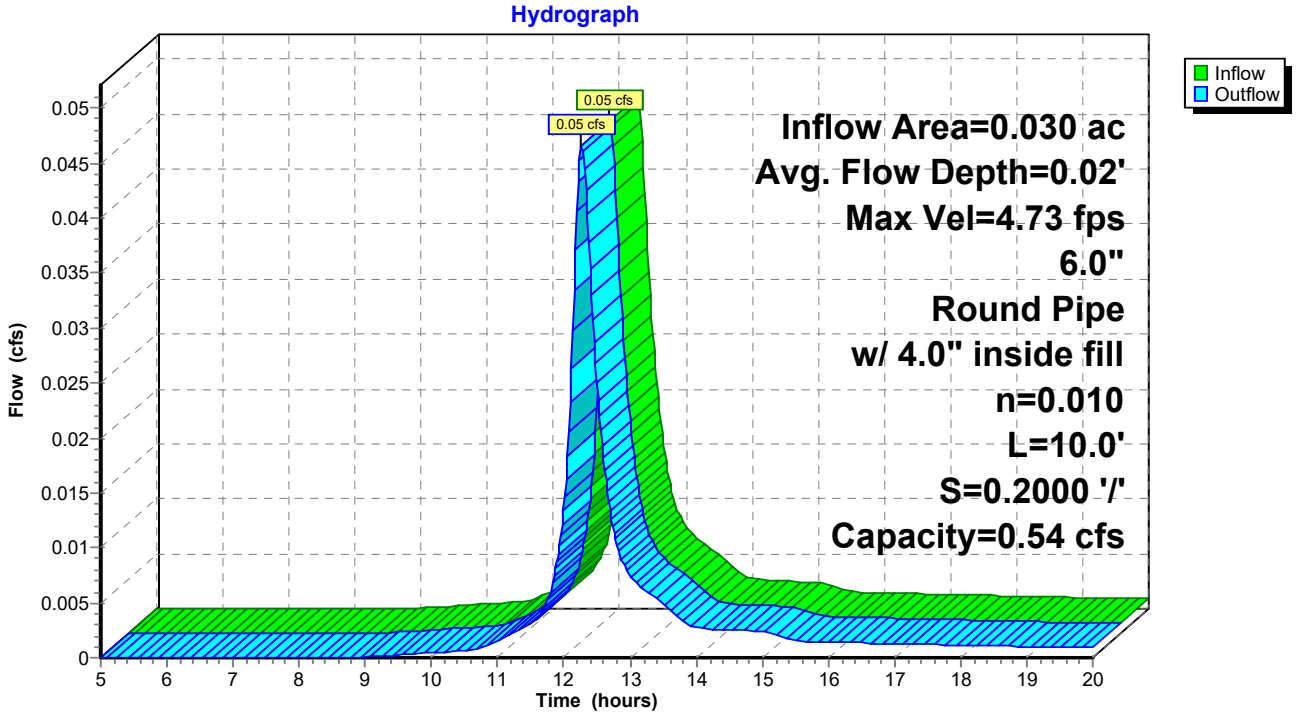
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.73 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.62 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.35' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

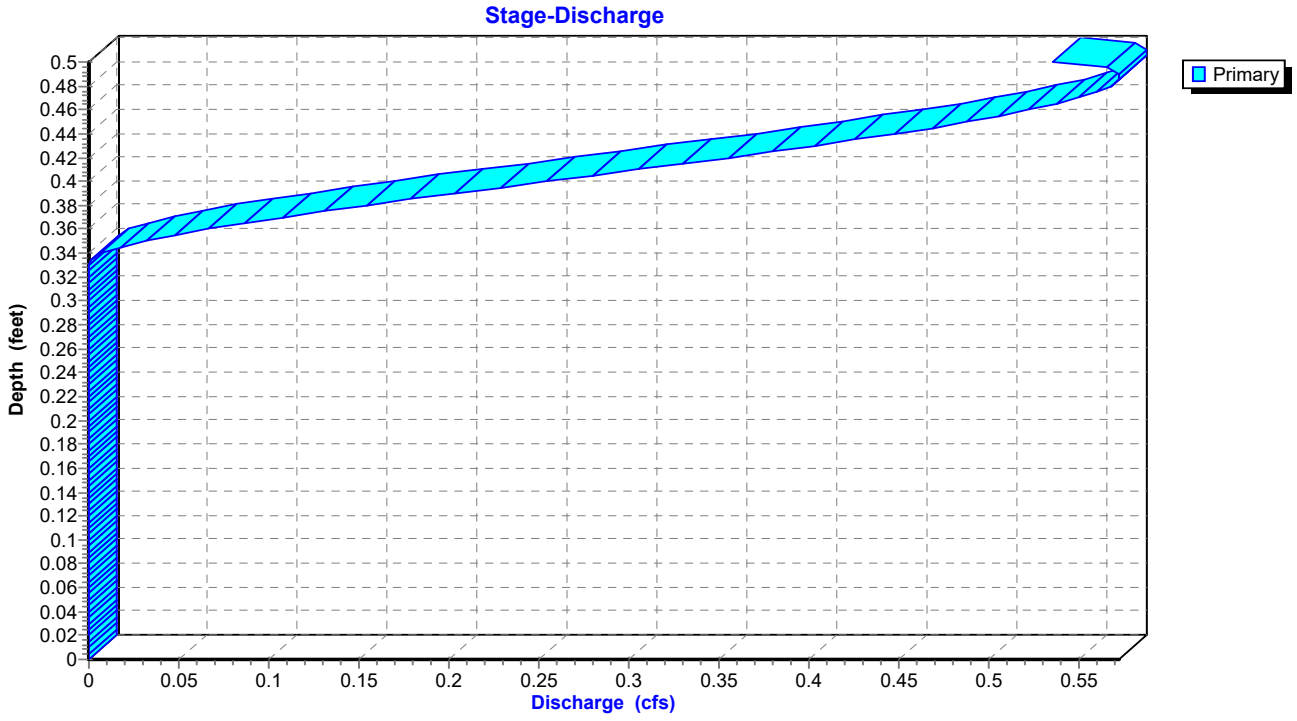
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



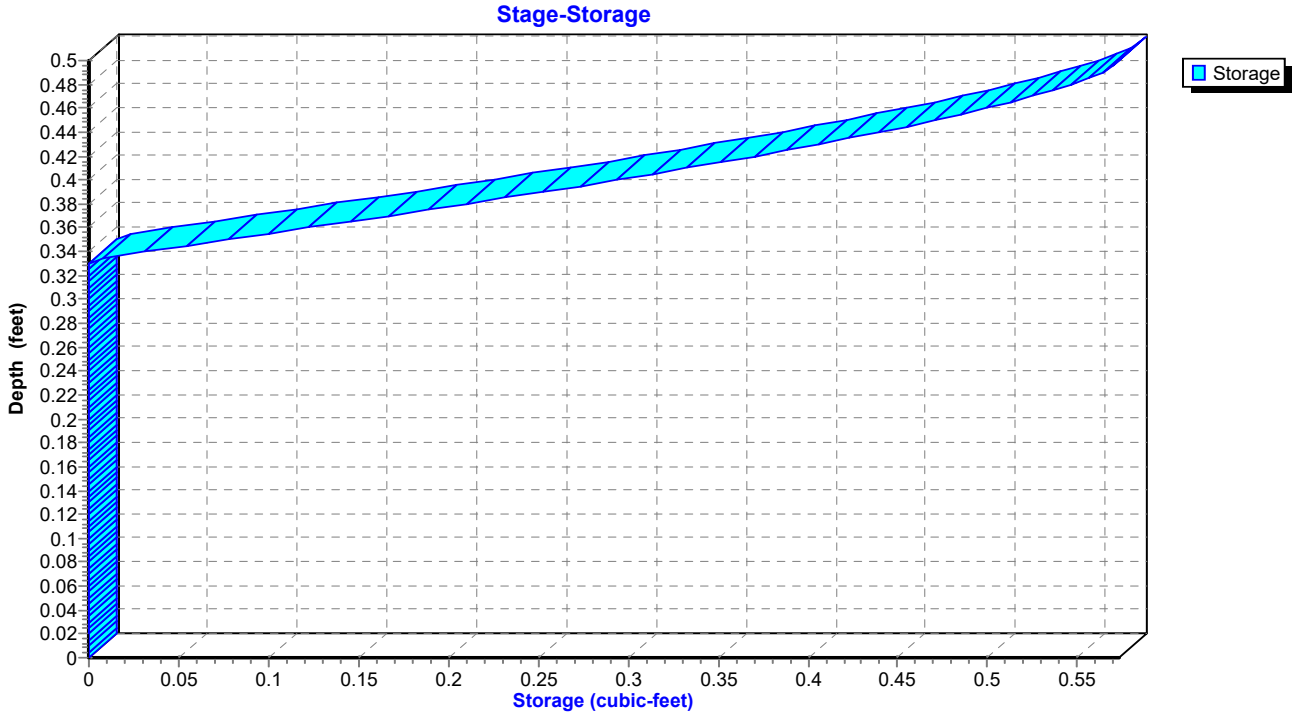
Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Hydrograph for Reach 14R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.33	0.00
10.20	0.00	0	668.33	0.00
10.60	0.00	0	668.33	0.00
11.00	0.00	0	668.34	0.00
11.40	0.00	0	668.34	0.00
11.80	0.01	0	668.34	0.01
12.20	**0.04**	**0**	**668.35**	**0.04**
12.60	**0.02**	**0**	**668.35**	**0.02**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.00	0	668.34	0.00
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 14R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 14R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 15R: to isolator 6"

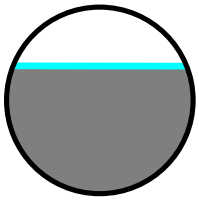
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 73.68% Impervious, Inflow Depth > 1.01" for 1-yr event
Inflow = 0.04 cfs @ 12.39 hrs, Volume= 0.003 af
Outflow = 0.04 cfs @ 12.39 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.1 min

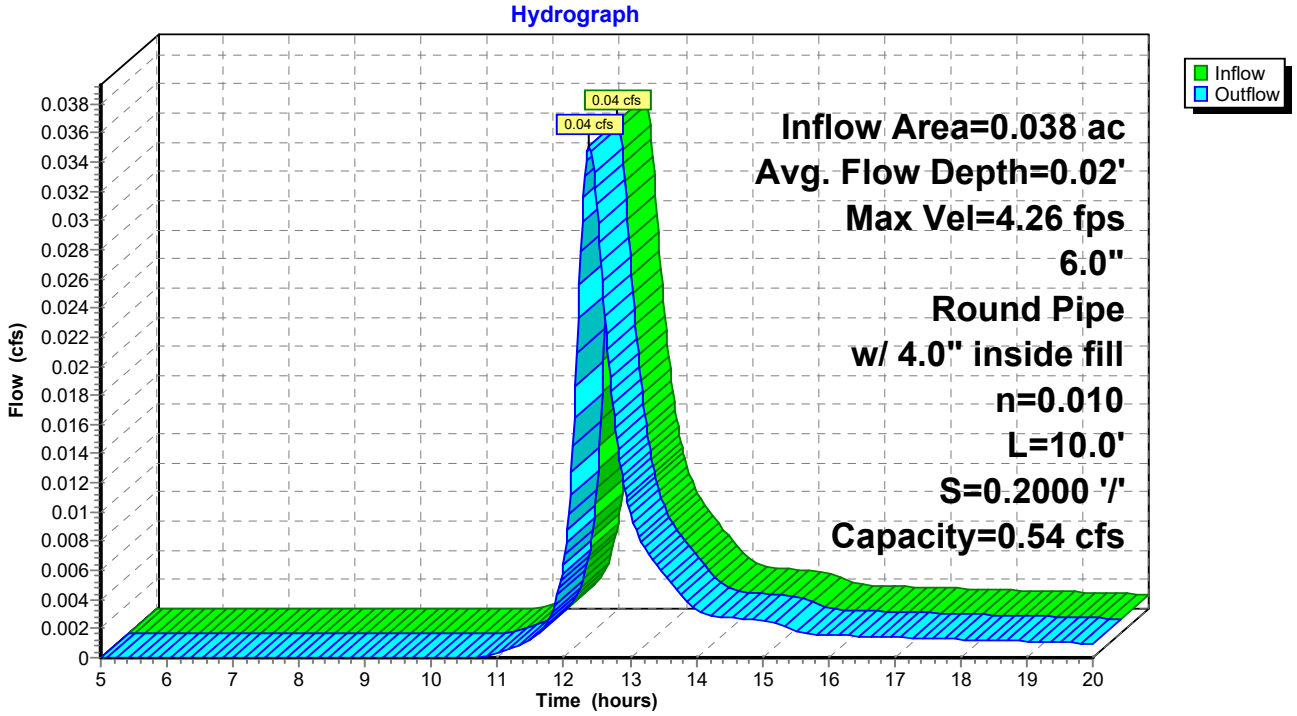
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.26 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.71 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.39 hrs
Average Depth at Peak Storage= 0.35' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

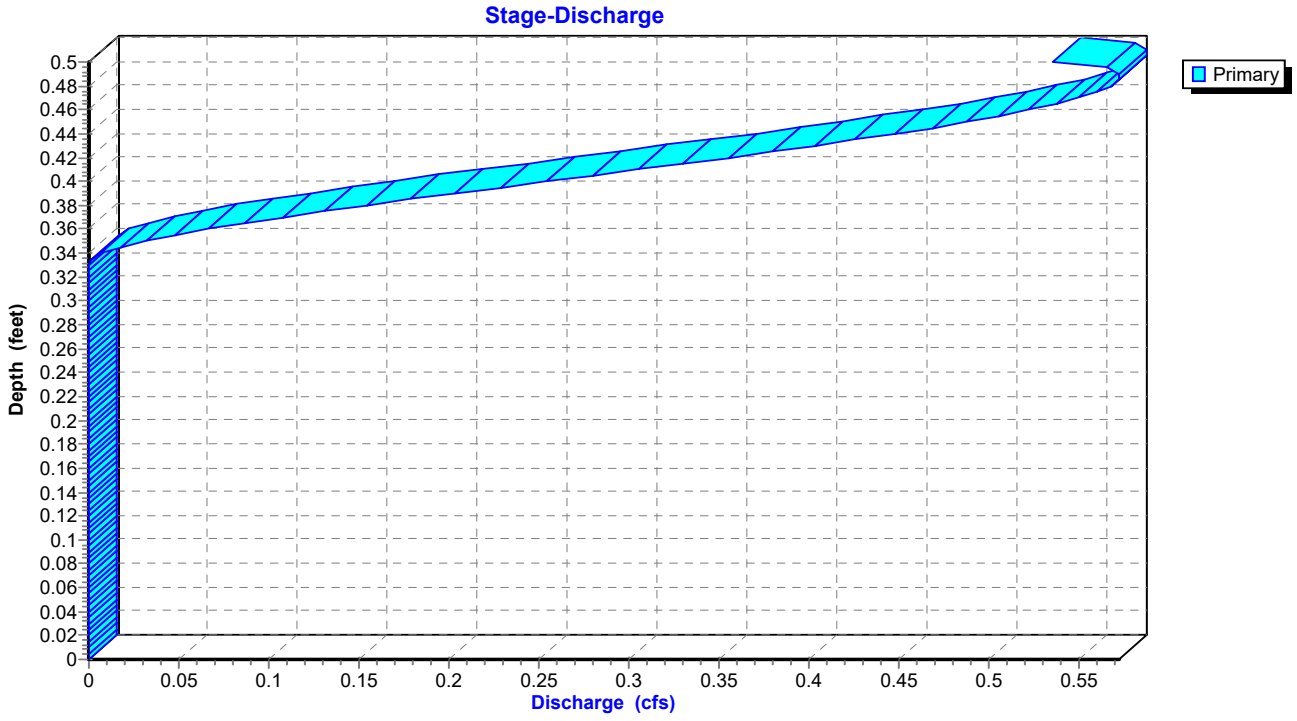
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



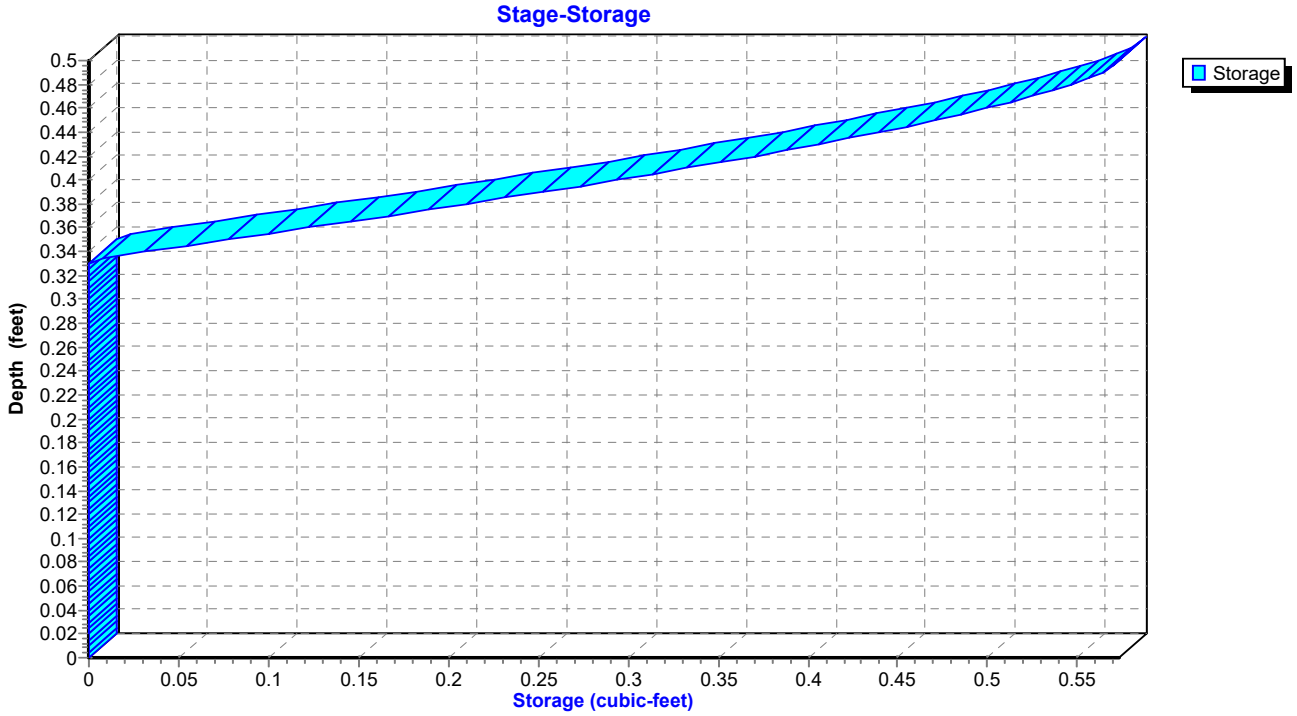
Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Hydrograph for Reach 15R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.33	0.00
10.20	0.00	0	668.33	0.00
10.60	0.00	0	668.33	0.00
11.00	0.00	0	668.33	0.00
11.40	0.00	0	668.34	0.00
11.80	0.00	0	668.34	0.00
12.20	**0.02**	**0**	**668.35**	**0.02**
12.60	**0.02**	**0**	**668.35**	**0.02**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.00	0	668.34	0.00
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 15R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 15R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 16R: inlet 2 12"

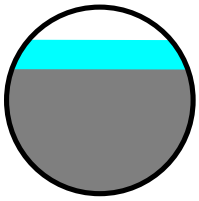
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.150 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.32 cfs @ 12.28 hrs, Volume= 0.028 af
Outflow = 0.32 cfs @ 12.29 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.6 min

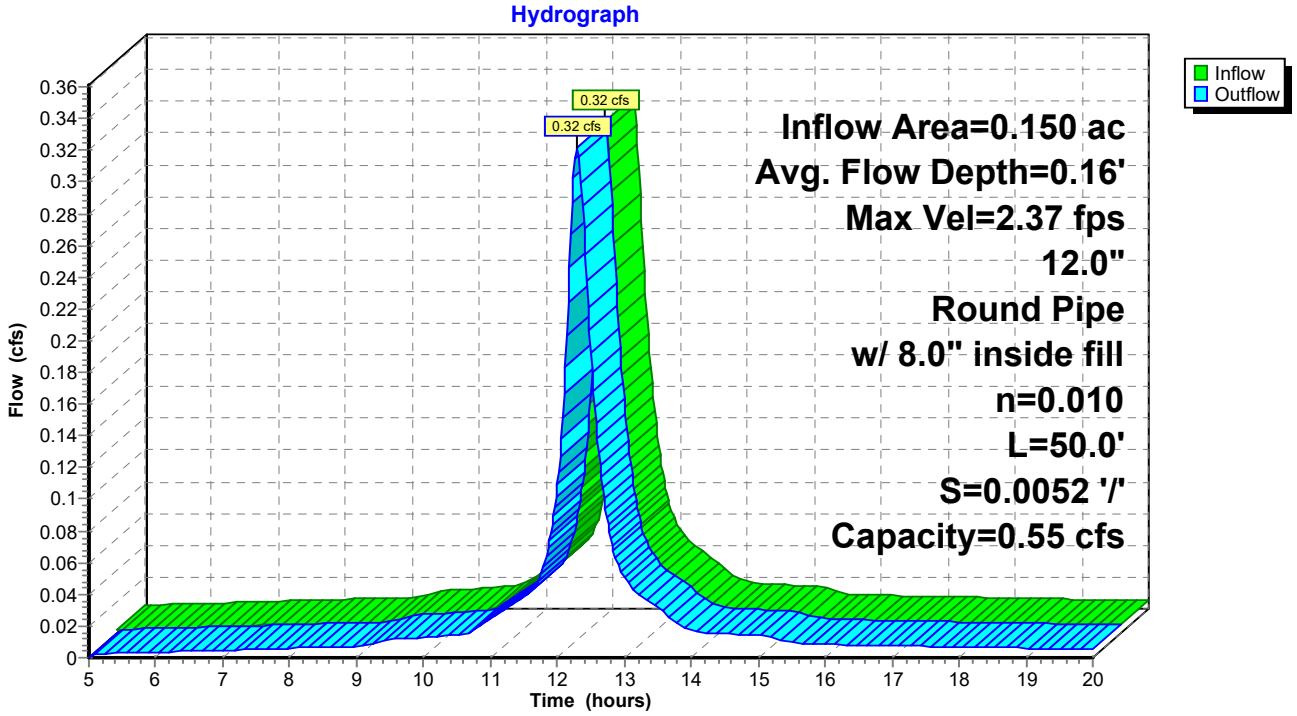
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.37 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.76 fps, Avg. Travel Time= 1.1 min

Peak Storage= 7 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.82' above invert (0.16' above fill)
Bank-Full Depth= 1.00' above invert (0.33' above fill) Flow Area= 0.2 sf, Capacity= 0.55 cfs

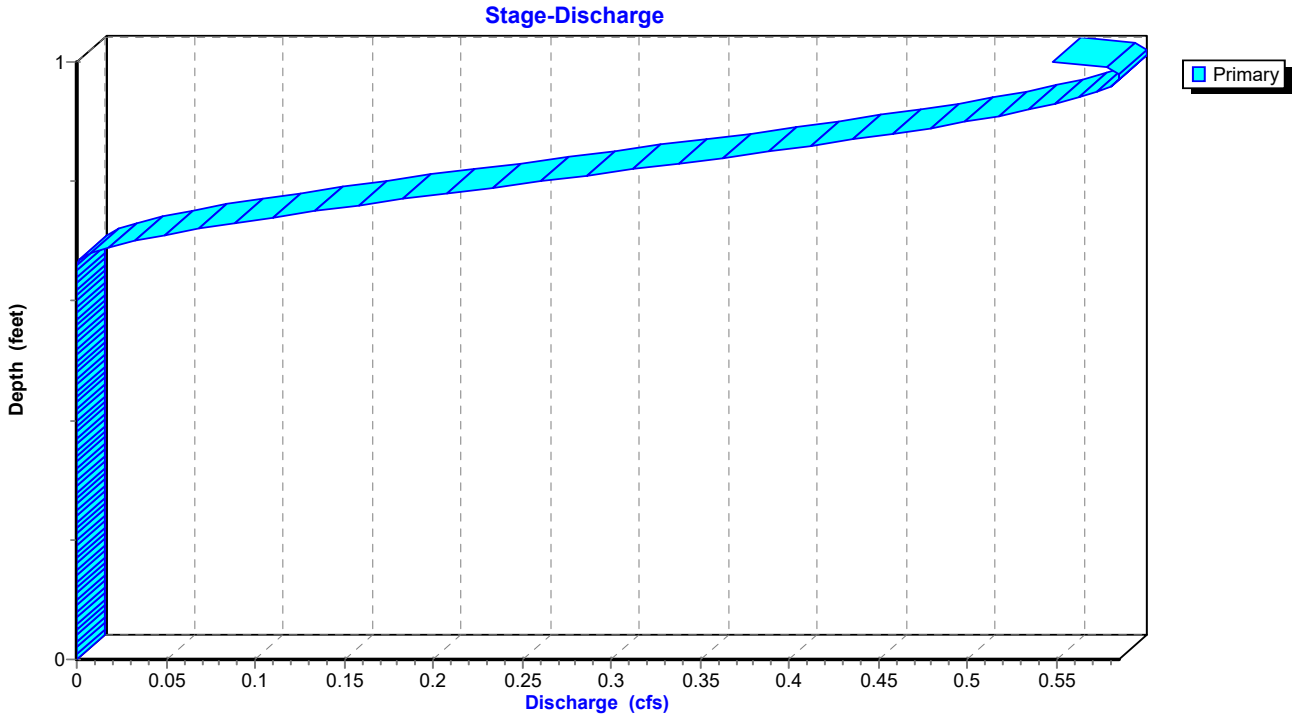
12.0" Round Pipe w/ 8.0" inside fill
n= 0.010
Length= 50.0' Slope= 0.0052 '/'
Inlet Invert= 666.21', Outlet Invert= 665.95'



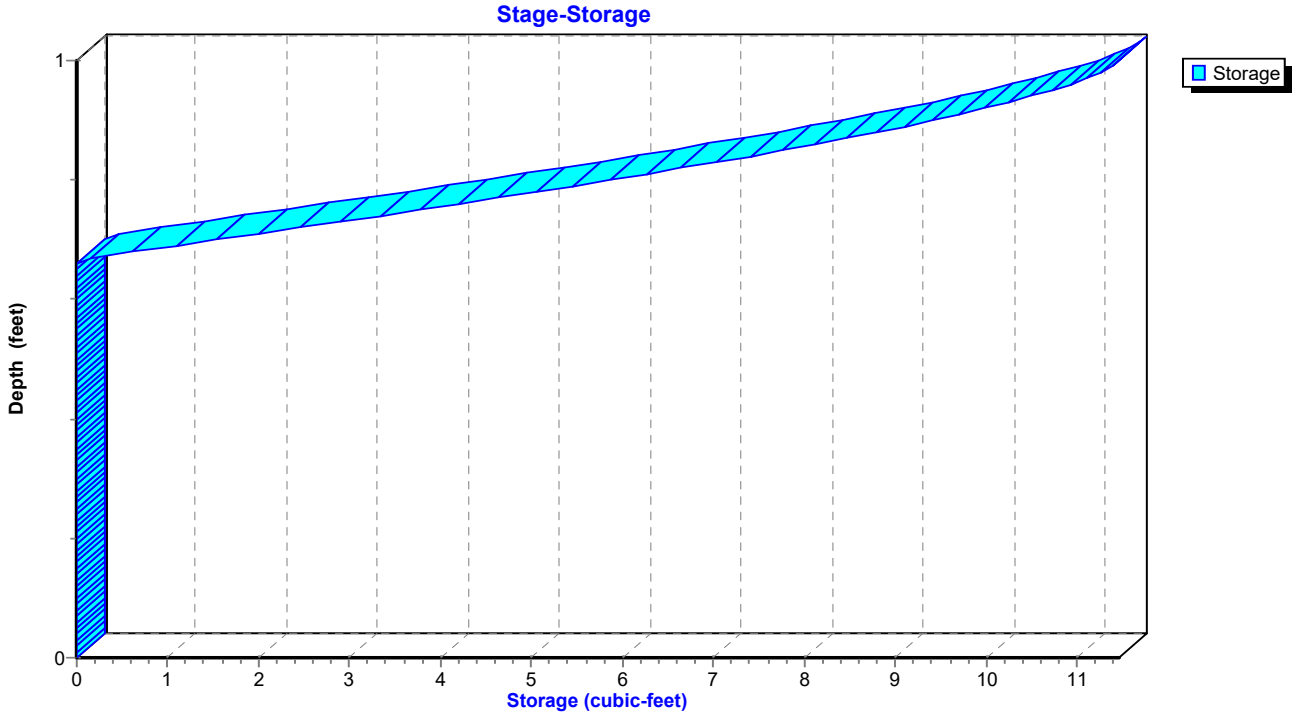
Reach 16R: inlet 2 12"



Reach 16R: inlet 2 12"



Reach 16R: inlet 2 12"



Hydrograph for Reach 16R: inlet 2 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.88	0.00
5.40	0.00	0	666.88	0.00
5.80	0.00	0	666.88	0.00
6.20	0.00	0	666.88	0.00
6.60	0.00	0	666.89	0.00
7.00	0.00	0	666.89	0.00
7.40	0.01	0	666.89	0.01
7.80	0.01	1	666.89	0.01
8.20	0.01	1	666.89	0.01
8.60	0.01	1	666.89	0.01
9.00	0.01	1	666.89	0.01
9.40	0.01	1	666.89	0.01
9.80	0.01	1	666.89	0.01
10.20	0.01	1	666.90	0.01
10.60	0.01	1	666.90	0.01
11.00	0.03	1	666.90	0.02
11.40	0.04	2	666.91	0.04
11.80	0.06	2	666.93	0.06
12.20	**0.28**	**6**	**667.02**	**0.27**
12.60	**0.13**	**4**	**666.96**	**0.14**
13.00	0.05	2	666.92	0.05
13.40	0.03	2	666.91	0.03
13.80	0.02	1	666.90	0.02
14.20	0.02	1	666.90	0.02
14.60	0.02	1	666.90	0.02
15.00	0.01	1	666.90	0.01
15.40	0.01	1	666.89	0.01
15.80	0.01	1	666.89	0.01
16.20	0.01	1	666.89	0.01
16.60	0.01	1	666.89	0.01
17.00	0.01	1	666.89	0.01
17.40	0.01	1	666.89	0.01
17.80	0.01	1	666.89	0.01
18.20	0.01	1	666.89	0.01
18.60	0.01	1	666.89	0.01
19.00	0.01	1	666.89	0.01
19.40	0.01	1	666.89	0.01
19.80	0.01	0	666.89	0.01

Stage-Discharge for Reach 16R: inlet 2 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.00	0.00
666.53	0.00	0.00
666.54	0.00	0.00
666.55	0.00	0.00
666.56	0.00	0.00
666.57	0.00	0.00
666.58	0.00	0.00
666.59	0.00	0.00
666.60	0.00	0.00
666.61	0.00	0.00
666.62	0.00	0.00
666.63	0.00	0.00
666.64	0.00	0.00
666.65	0.00	0.00
666.66	0.00	0.00
666.67	0.00	0.00
666.68	0.00	0.00
666.69	0.00	0.00
666.70	0.00	0.00
666.71	0.00	0.00
666.72	0.00	0.00
666.73	0.00	0.00
666.74	0.00	0.00
666.75	0.00	0.00
666.76	0.00	0.00
666.77	0.00	0.00
666.78	0.00	0.00
666.79	0.00	0.00
666.80	0.00	0.00
666.81	0.00	0.00
666.82	0.00	0.00
666.83	0.00	0.00
666.84	0.00	0.00
666.85	0.00	0.00
666.86	0.00	0.00
666.87	0.00	0.00
666.88	0.24	0.00
666.89	0.59	0.01
666.90	0.84	0.02
666.91	1.05	0.03
666.92	1.23	0.05
666.93	1.38	0.07
666.94	1.53	0.09
666.95	1.65	0.11
666.96	1.77	0.13
666.97	1.88	0.16
666.98	1.97	0.18
666.99	2.06	0.21
667.00	2.14	0.23
667.01	2.22	0.26
667.02	2.29	0.29
667.03	2.35	0.31
667.04	2.40	0.34
667.05	2.45	0.36
667.06	2.50	0.39
667.07	2.54	0.41
667.08	2.58	0.44
667.09	2.61	0.46
667.10	2.63	0.48
667.11	2.65	0.50
667.12	2.67	0.52
667.13	2.68	0.53
667.14	**2.68**	0.55
667.15	2.68	0.56
667.16	2.67	0.57
667.17	2.66	0.58
667.18	2.63	0.59
667.19	2.60	**0.59**
667.20	2.54	0.58
667.21	2.39	0.55

Stage-Area-Storage for Reach 16R: inlet 2 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
666.21	0.0	0	666.72	0.0	0
666.22	0.0	0	666.73	0.0	0
666.23	0.0	0	666.74	0.0	0
666.24	0.0	0	666.75	0.0	0
666.25	0.0	0	666.76	0.0	0
666.26	0.0	0	666.77	0.0	0
666.27	0.0	0	666.78	0.0	0
666.28	0.0	0	666.79	0.0	0
666.29	0.0	0	666.80	0.0	0
666.30	0.0	0	666.81	0.0	0
666.31	0.0	0	666.82	0.0	0
666.32	0.0	0	666.83	0.0	0
666.33	0.0	0	666.84	0.0	0
666.34	0.0	0	666.85	0.0	0
666.35	0.0	0	666.86	0.0	0
666.36	0.0	0	666.87	0.0	0
666.37	0.0	0	666.88	0.0	0
666.38	0.0	0	666.89	0.0	1
666.39	0.0	0	666.90	0.0	1
666.40	0.0	0	666.91	0.0	2
666.41	0.0	0	666.92	0.0	2
666.42	0.0	0	666.93	0.0	2
666.43	0.0	0	666.94	0.1	3
666.44	0.0	0	666.95	0.1	3
666.45	0.0	0	666.96	0.1	4
666.46	0.0	0	666.97	0.1	4
666.47	0.0	0	666.98	0.1	5
666.48	0.0	0	666.99	0.1	5
666.49	0.0	0	667.00	0.1	5
666.50	0.0	0	667.01	0.1	6
666.51	0.0	0	667.02	0.1	6
666.52	0.0	0	667.03	0.1	7
666.53	0.0	0	667.04	0.1	7
666.54	0.0	0	667.05	0.1	7
666.55	0.0	0	667.06	0.2	8
666.56	0.0	0	667.07	0.2	8
666.57	0.0	0	667.08	0.2	8
666.58	0.0	0	667.09	0.2	9
666.59	0.0	0	667.10	0.2	9
666.60	0.0	0	667.11	0.2	9
666.61	0.0	0	667.12	0.2	10
666.62	0.0	0	667.13	0.2	10
666.63	0.0	0	667.14	0.2	10
666.64	0.0	0	667.15	0.2	10
666.65	0.0	0	667.16	0.2	11
666.66	0.0	0	667.17	0.2	11
666.67	0.0	0	667.18	0.2	11
666.68	0.0	0	667.19	0.2	11
666.69	0.0	0	667.20	0.2	11
666.70	0.0	0	667.21	**0.2**	**11**
666.71	0.0	0			

Summary for Reach 17R: NDS2 6"

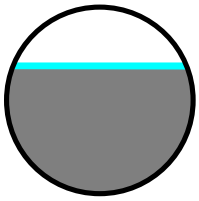
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 42.11% Impervious, Inflow Depth > 0.27" for 1-yr event
Inflow = 0.01 cfs @ 12.56 hrs, Volume= 0.001 af
Outflow = 0.01 cfs @ 12.65 hrs, Volume= 0.001 af, Atten= 1%, Lag= 5.1 min

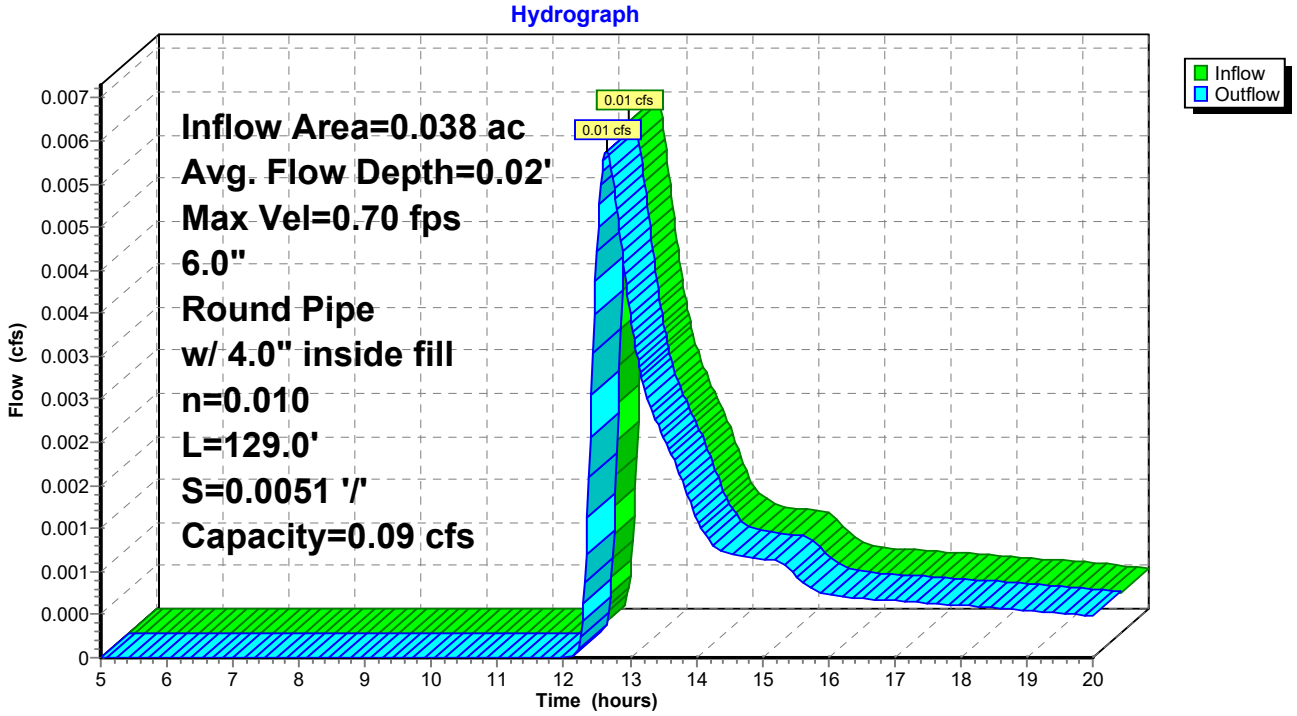
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.70 fps, Min. Travel Time= 3.1 min
Avg. Velocity = 0.38 fps, Avg. Travel Time= 5.7 min

Peak Storage= 1 cf @ 12.59 hrs
Average Depth at Peak Storage= 0.35' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

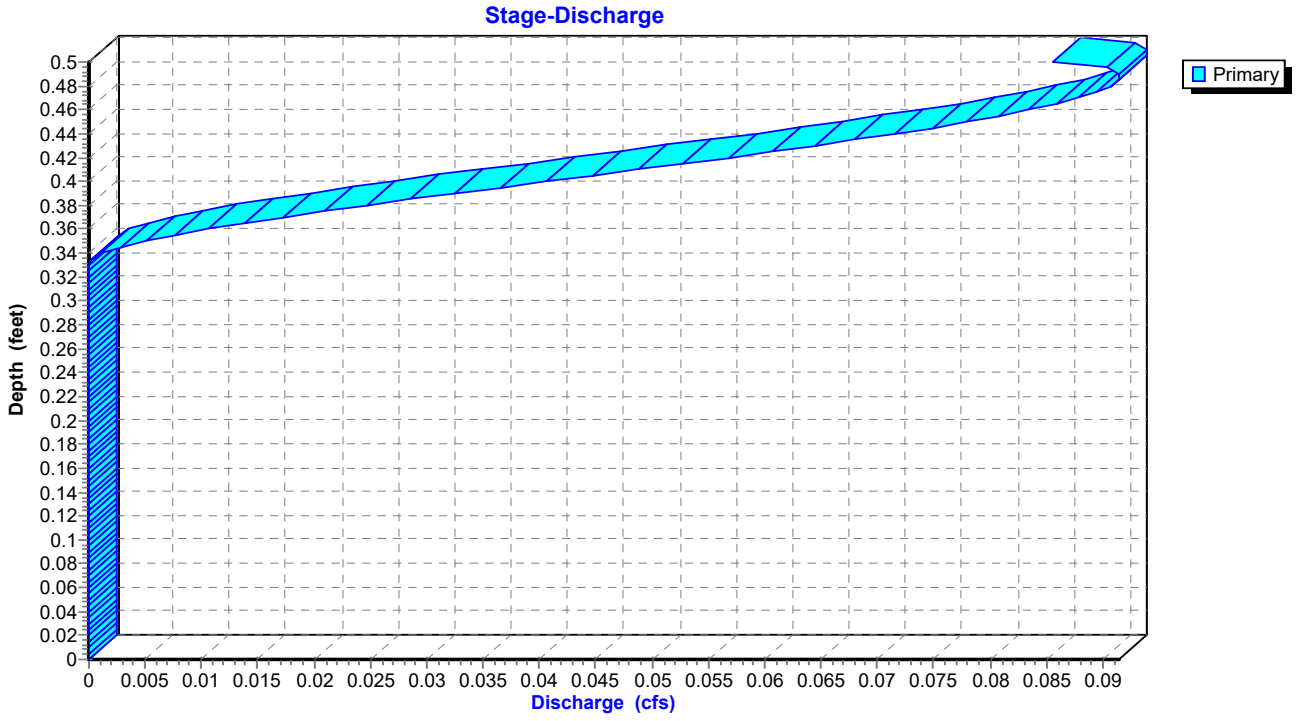
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0051 '/'
Inlet Invert= 668.84', Outlet Invert= 668.18'



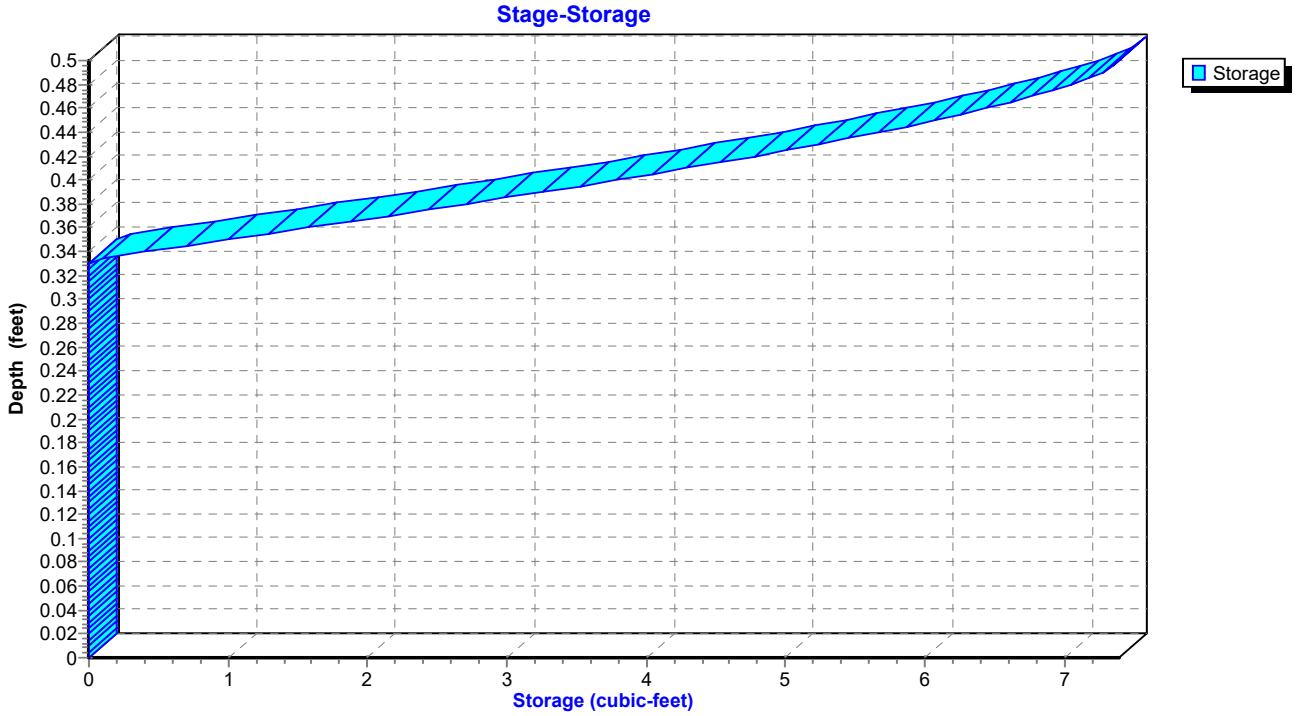
Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Hydrograph for Reach 17R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.17	0.00
5.40	0.00	0	669.17	0.00
5.80	0.00	0	669.17	0.00
6.20	0.00	0	669.17	0.00
6.60	0.00	0	669.17	0.00
7.00	0.00	0	669.17	0.00
7.40	0.00	0	669.17	0.00
7.80	0.00	0	669.17	0.00
8.20	0.00	0	669.17	0.00
8.60	0.00	0	669.17	0.00
9.00	0.00	0	669.17	0.00
9.40	0.00	0	669.17	0.00
9.80	0.00	0	669.17	0.00
10.20	0.00	0	669.17	0.00
10.60	0.00	0	669.17	0.00
11.00	0.00	0	669.17	0.00
11.40	0.00	0	669.17	0.00
11.80	0.00	0	669.17	0.00
12.20	**0.00**	0	669.18	0.00
12.60	**0.01**	**1**	**669.19**	**0.01**
13.00	0.00	1	669.19	**0.00**
13.40	0.00	1	669.18	0.00
13.80	0.00	1	669.18	0.00
14.20	0.00	0	669.18	0.00
14.60	0.00	0	669.18	0.00
15.00	0.00	0	669.18	0.00
15.40	0.00	0	669.18	0.00
15.80	0.00	0	669.18	0.00
16.20	0.00	0	669.18	0.00
16.60	0.00	0	669.18	0.00
17.00	0.00	0	669.18	0.00
17.40	0.00	0	669.18	0.00
17.80	0.00	0	669.18	0.00
18.20	0.00	0	669.18	0.00
18.60	0.00	0	669.18	0.00
19.00	0.00	0	669.18	0.00
19.40	0.00	0	669.18	0.00
19.80	0.00	0	669.18	0.00

Stage-Discharge for Reach 17R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.84	0.00	0.00
668.85	0.00	0.00
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.37	0.00
669.19	0.65	0.01
669.20	0.87	0.01
669.21	1.03	0.02
669.22	1.17	0.02
669.23	1.29	0.03
669.24	1.39	0.04
669.25	1.47	0.05
669.26	1.53	0.06
669.27	1.59	0.06
669.28	1.63	0.07
669.29	1.66	0.08
669.30	1.67	0.08
669.31	**1.67**	0.09
669.32	1.66	0.09
669.33	1.62	**0.09**
669.34	1.49	0.09

Stage-Area-Storage for Reach 17R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.84	0.0	0
668.85	0.0	0
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	1
669.20	0.0	2
669.21	0.0	2
669.22	0.0	3
669.23	0.0	3
669.24	0.0	4
669.25	0.0	4
669.26	0.0	5
669.27	0.0	5
669.28	0.0	6
669.29	0.0	6
669.30	0.0	6
669.31	0.1	7
669.32	0.1	7
669.33	0.1	7
669.34	**0.1**	**7**

Summary for Reach 18R: inlet 3 6"

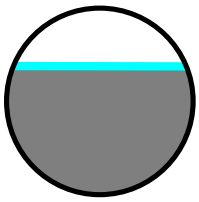
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 17R OUTLET depth by 0.01' @ 13.40 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.02' @ 12.54 hrs

Inflow Area = 0.090 ac, 18.89% Impervious, Inflow Depth > 0.20" for 1-yr event
Inflow = 0.01 cfs @ 12.62 hrs, Volume= 0.002 af
Outflow = 0.01 cfs @ 12.66 hrs, Volume= 0.001 af, Atten= 0%, Lag= 2.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.76 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 0.45 fps, Avg. Travel Time= 2.3 min

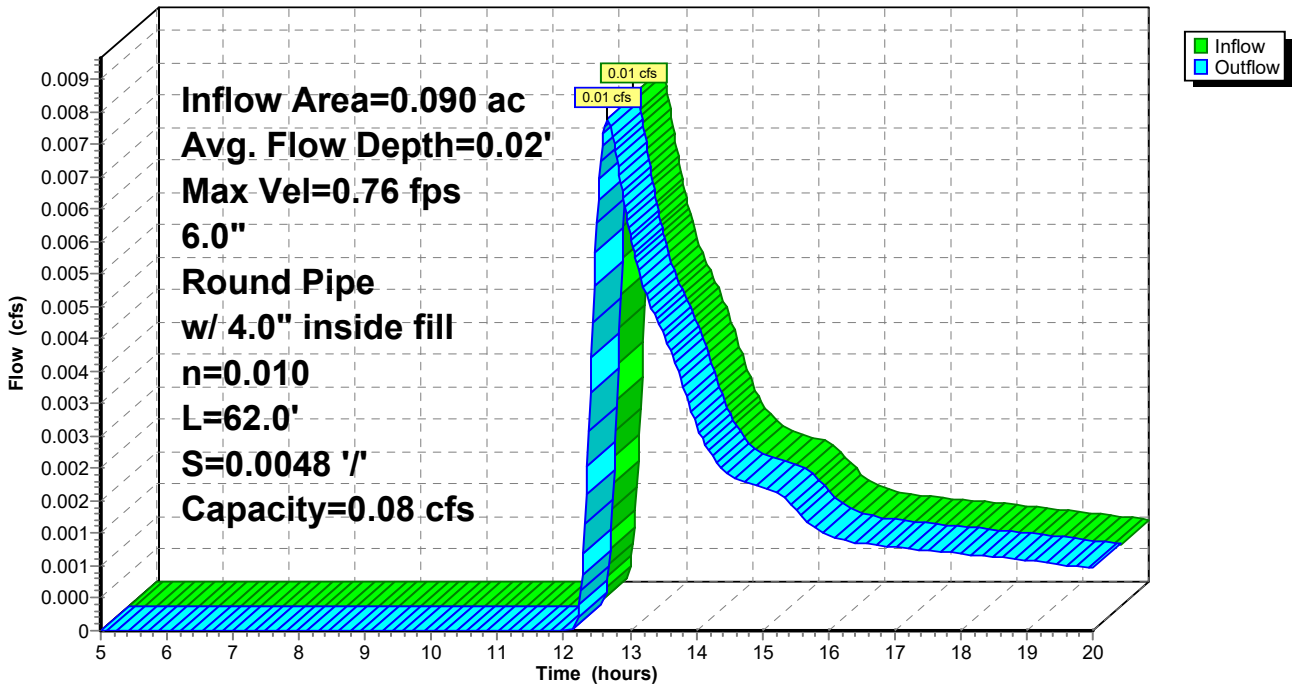
Peak Storage= 1 cf @ 12.64 hrs
Average Depth at Peak Storage= 0.36' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.08 cfs

6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0048 '/'
Inlet Invert= 668.18', Outlet Invert= 667.88'



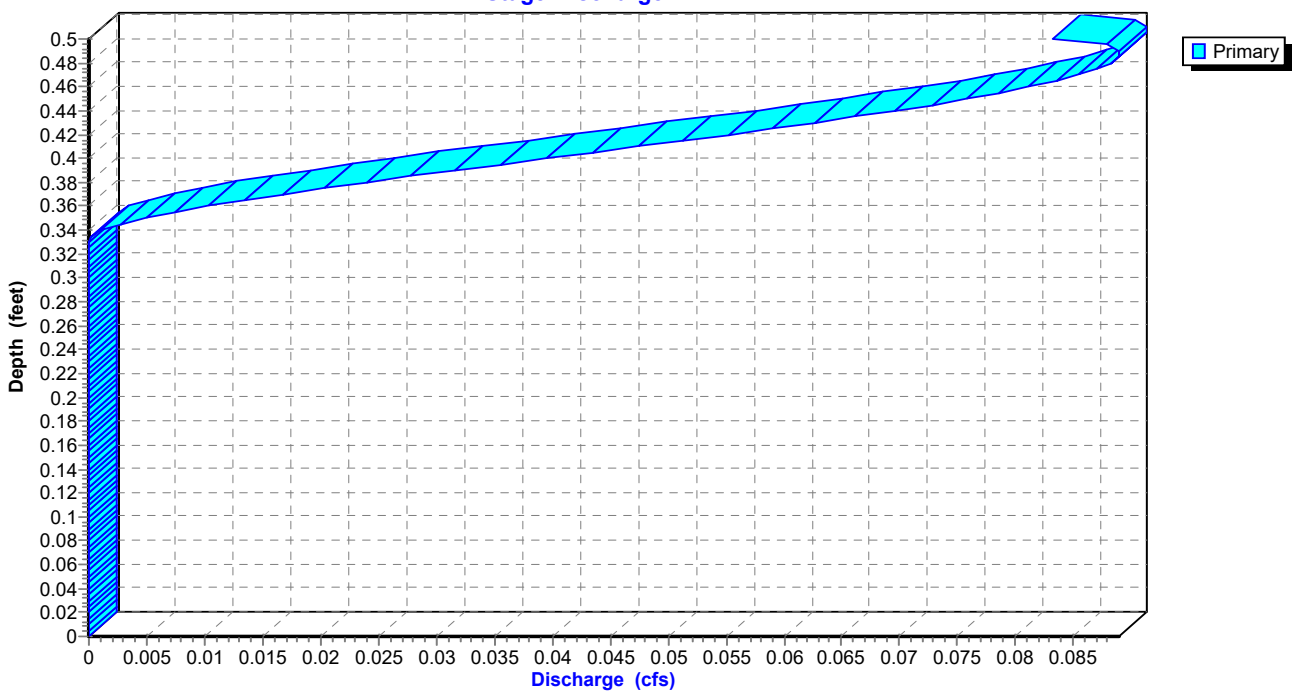
Reach 18R: inlet 3 6"

Hydrograph

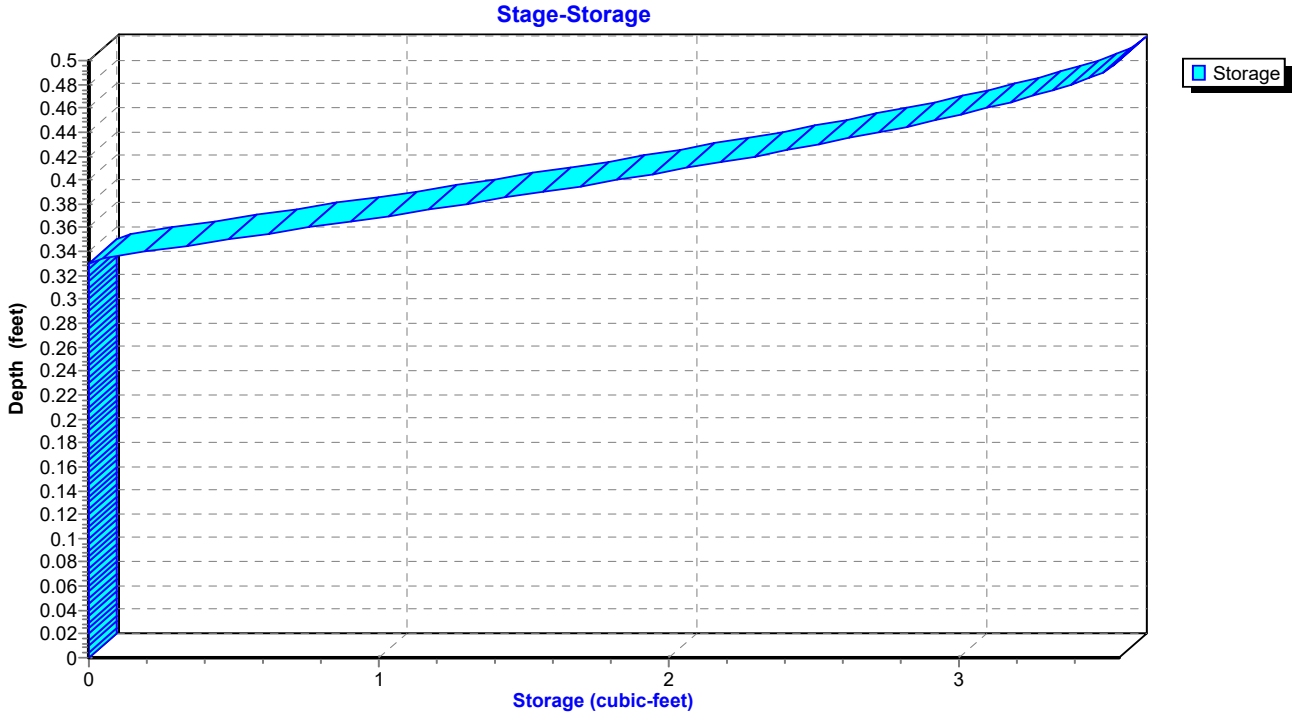


Reach 18R: inlet 3 6"

Stage-Discharge



Reach 18R: inlet 3 6"



Hydrograph for Reach 18R: inlet 3 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.51	0.00
5.40	0.00	0	668.51	0.00
5.80	0.00	0	668.51	0.00
6.20	0.00	0	668.51	0.00
6.60	0.00	0	668.51	0.00
7.00	0.00	0	668.51	0.00
7.40	0.00	0	668.51	0.00
7.80	0.00	0	668.51	0.00
8.20	0.00	0	668.51	0.00
8.60	0.00	0	668.51	0.00
9.00	0.00	0	668.51	0.00
9.40	0.00	0	668.51	0.00
9.80	0.00	0	668.51	0.00
10.20	0.00	0	668.51	0.00
10.60	0.00	0	668.51	0.00
11.00	0.00	0	668.51	0.00
11.40	0.00	0	668.51	0.00
11.80	0.00	0	668.51	0.00
12.20	0.00	0	668.52	0.00
12.60	**0.01**	**1**	**668.54**	**0.01**
13.00	**0.01**	**1**	**668.53**	**0.01**
13.40	0.00	0	668.53	0.00
13.80	0.00	0	668.53	0.00
14.20	0.00	0	668.52	0.00
14.60	0.00	0	668.52	0.00
15.00	0.00	0	668.52	0.00
15.40	0.00	0	668.52	0.00
15.80	0.00	0	668.52	0.00
16.20	0.00	0	668.52	0.00
16.60	0.00	0	668.52	0.00
17.00	0.00	0	668.52	0.00
17.40	0.00	0	668.52	0.00
17.80	0.00	0	668.52	0.00
18.20	0.00	0	668.52	0.00
18.60	0.00	0	668.52	0.00
19.00	0.00	0	668.52	0.00
19.40	0.00	0	668.52	0.00
19.80	0.00	0	668.52	0.00

Stage-Discharge for Reach 18R: inlet 3 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	0.00	0.00
668.35	0.00	0.00
668.36	0.00	0.00
668.37	0.00	0.00
668.38	0.00	0.00
668.39	0.00	0.00
668.40	0.00	0.00
668.41	0.00	0.00
668.42	0.00	0.00
668.43	0.00	0.00
668.44	0.00	0.00
668.45	0.00	0.00
668.46	0.00	0.00
668.47	0.00	0.00
668.48	0.00	0.00
668.49	0.00	0.00
668.50	0.00	0.00
668.51	0.00	0.00
668.52	0.36	0.00
668.53	0.64	0.00
668.54	0.84	0.01
668.55	1.00	0.02
668.56	1.14	0.02
668.57	1.25	0.03
668.58	1.35	0.04
668.59	1.43	0.05
668.60	1.49	0.06
668.61	1.54	0.06
668.62	1.58	0.07
668.63	1.61	0.08
668.64	1.63	0.08
668.65	**1.63**	0.09
668.66	1.61	0.09
668.67	1.58	**0.09**
668.68	1.45	0.08

Stage-Area-Storage for Reach 18R: inlet 3 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.0	0
668.48	0.0	0
668.49	0.0	0
668.50	0.0	0
668.51	0.0	0
668.52	0.0	0
668.53	0.0	0
668.54	0.0	1
668.55	0.0	1
668.56	0.0	1
668.57	0.0	2
668.58	0.0	2
668.59	0.0	2
668.60	0.0	2
668.61	0.0	3
668.62	0.0	3
668.63	0.0	3
668.64	0.0	3
668.65	0.1	3
668.66	0.1	3
668.67	0.1	3
668.68	**0.1**	**4**

Summary for Reach 19R: inlet 1 12"

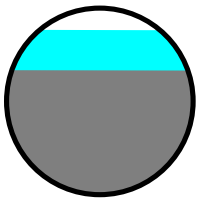
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[61] Hint: Exceeded Reach 16R outlet invert by 0.78' @ 12.22 hrs

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.46 cfs @ 12.22 hrs, Volume= 0.042 af
Outflow = 0.46 cfs @ 12.24 hrs, Volume= 0.042 af, Atten= 0%, Lag= 0.9 min

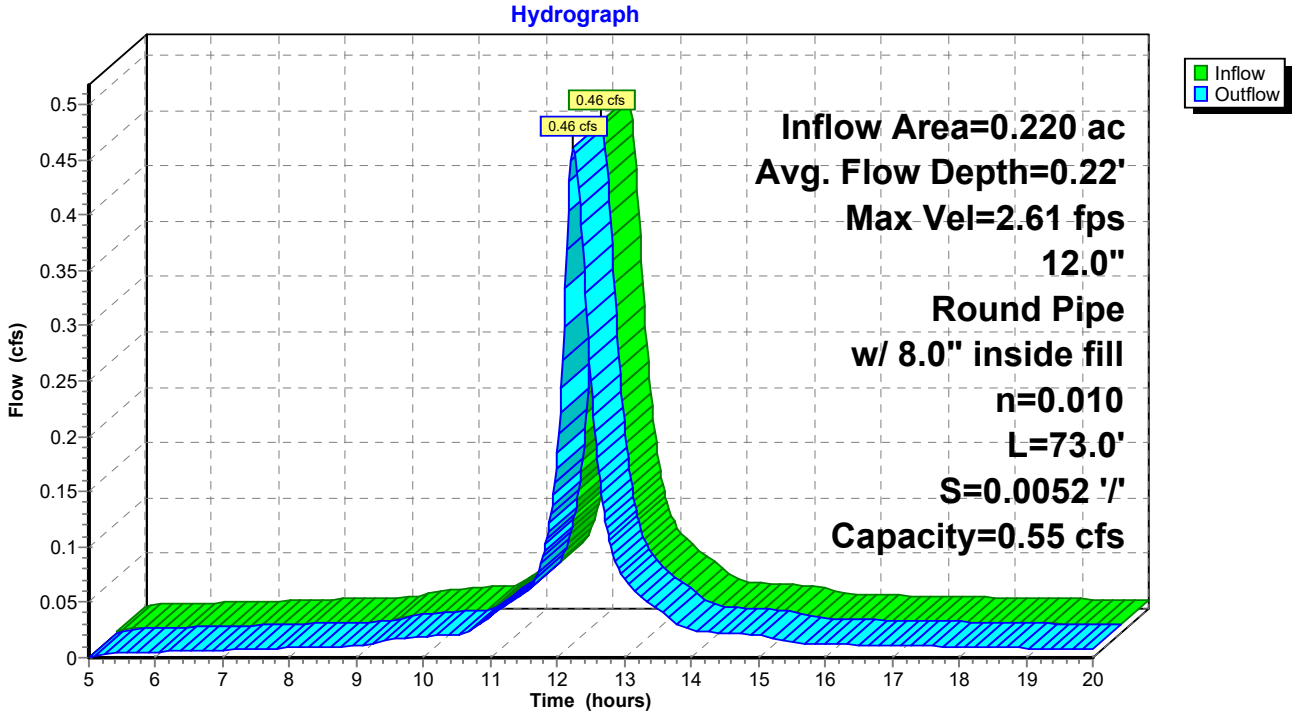
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.61 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.87 fps, Avg. Travel Time= 1.4 min

Peak Storage= 13 cf @ 12.23 hrs
Average Depth at Peak Storage= 0.88' above invert (0.22' above fill)
Bank-Full Depth= 1.00' above invert (0.33' above fill) Flow Area= 0.2 sf, Capacity= 0.55 cfs

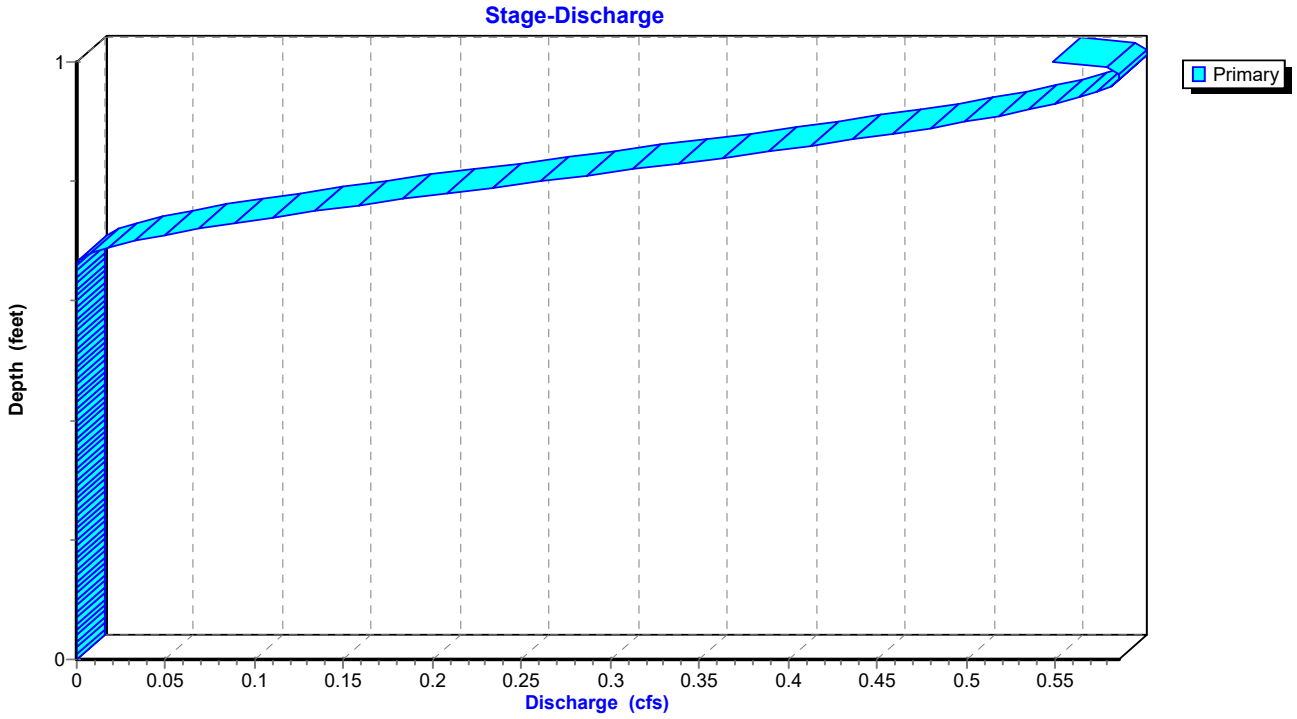
12.0" Round Pipe w/ 8.0" inside fill
n= 0.010
Length= 73.0' Slope= 0.0052 '/'
Inlet Invert= 665.85', Outlet Invert= 665.47'



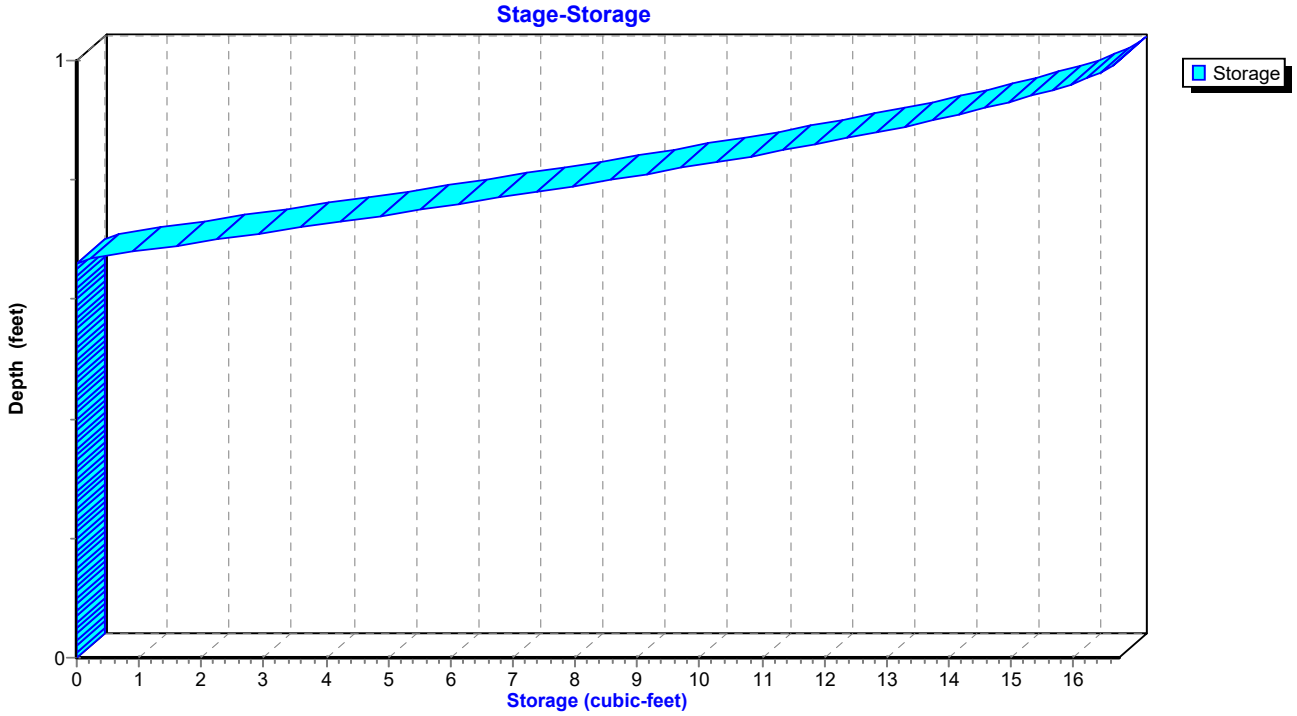
Reach 19R: inlet 1 12"



Reach 19R: inlet 1 12"



Reach 19R: inlet 1 12"



Hydrograph for Reach 19R: inlet 1 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.52	0.00
5.40	0.00	1	666.53	0.00
5.80	0.00	1	666.53	0.00
6.20	0.01	1	666.53	0.01
6.60	0.01	1	666.53	0.01
7.00	0.01	1	666.53	0.01
7.40	0.01	1	666.53	0.01
7.80	0.01	1	666.53	0.01
8.20	0.01	1	666.53	0.01
8.60	0.01	1	666.53	0.01
9.00	0.01	1	666.53	0.01
9.40	0.02	1	666.54	0.02
9.80	0.02	2	666.54	0.02
10.20	0.02	2	666.54	0.02
10.60	0.02	2	666.54	0.02
11.00	0.04	2	666.55	0.04
11.40	0.05	3	666.56	0.05
11.80	0.10	5	666.58	0.10
12.20	**0.46**	**13**	**666.73**	**0.45**
12.60	**0.17**	**7**	**666.62**	**0.18**
13.00	0.07	4	666.57	0.07
13.40	0.05	3	666.56	0.05
13.80	0.03	2	666.55	0.03
14.20	0.02	2	666.54	0.02
14.60	0.02	2	666.54	0.02
15.00	0.02	2	666.54	0.02
15.40	0.01	1	666.54	0.01
15.80	0.01	1	666.53	0.01
16.20	0.01	1	666.53	0.01
16.60	0.01	1	666.53	0.01
17.00	0.01	1	666.53	0.01
17.40	0.01	1	666.53	0.01
17.80	0.01	1	666.53	0.01
18.20	0.01	1	666.53	0.01
18.60	0.01	1	666.53	0.01
19.00	0.01	1	666.53	0.01
19.40	0.01	1	666.53	0.01
19.80	0.01	1	666.53	0.01

Stage-Discharge for Reach 19R: inlet 1 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.85	0.00	0.00	666.36	0.00	0.00
665.86	0.00	0.00	666.37	0.00	0.00
665.87	0.00	0.00	666.38	0.00	0.00
665.88	0.00	0.00	666.39	0.00	0.00
665.89	0.00	0.00	666.40	0.00	0.00
665.90	0.00	0.00	666.41	0.00	0.00
665.91	0.00	0.00	666.42	0.00	0.00
665.92	0.00	0.00	666.43	0.00	0.00
665.93	0.00	0.00	666.44	0.00	0.00
665.94	0.00	0.00	666.45	0.00	0.00
665.95	0.00	0.00	666.46	0.00	0.00
665.96	0.00	0.00	666.47	0.00	0.00
665.97	0.00	0.00	666.48	0.00	0.00
665.98	0.00	0.00	666.49	0.00	0.00
665.99	0.00	0.00	666.50	0.00	0.00
666.00	0.00	0.00	666.51	0.00	0.00
666.01	0.00	0.00	666.52	0.24	0.00
666.02	0.00	0.00	666.53	0.59	0.01
666.03	0.00	0.00	666.54	0.84	0.02
666.04	0.00	0.00	666.55	1.05	0.03
666.05	0.00	0.00	666.56	1.23	0.05
666.06	0.00	0.00	666.57	1.39	0.07
666.07	0.00	0.00	666.58	1.53	0.09
666.08	0.00	0.00	666.59	1.65	0.11
666.09	0.00	0.00	666.60	1.77	0.13
666.10	0.00	0.00	666.61	1.88	0.16
666.11	0.00	0.00	666.62	1.97	0.18
666.12	0.00	0.00	666.63	2.06	0.21
666.13	0.00	0.00	666.64	2.14	0.23
666.14	0.00	0.00	666.65	2.22	0.26
666.15	0.00	0.00	666.66	2.29	0.29
666.16	0.00	0.00	666.67	2.35	0.31
666.17	0.00	0.00	666.68	2.40	0.34
666.18	0.00	0.00	666.69	2.46	0.36
666.19	0.00	0.00	666.70	2.50	0.39
666.20	0.00	0.00	666.71	2.54	0.41
666.21	0.00	0.00	666.72	2.58	0.44
666.22	0.00	0.00	666.73	2.61	0.46
666.23	0.00	0.00	666.74	2.63	0.48
666.24	0.00	0.00	666.75	2.65	0.50
666.25	0.00	0.00	666.76	2.67	0.52
666.26	0.00	0.00	666.77	2.68	0.53
666.27	0.00	0.00	666.78	**2.68**	0.55
666.28	0.00	0.00	666.79	2.68	0.56
666.29	0.00	0.00	666.80	2.67	0.57
666.30	0.00	0.00	666.81	2.66	0.58
666.31	0.00	0.00	666.82	2.63	0.59
666.32	0.00	0.00	666.83	2.60	**0.59**
666.33	0.00	0.00	666.84	2.54	0.58
666.34	0.00	0.00	666.85	2.39	0.55
666.35	0.00	0.00			

Stage-Area-Storage for Reach 19R: inlet 1 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	0
665.90	0.0	0	666.41	0.0	0
665.91	0.0	0	666.42	0.0	0
665.92	0.0	0	666.43	0.0	0
665.93	0.0	0	666.44	0.0	0
665.94	0.0	0	666.45	0.0	0
665.95	0.0	0	666.46	0.0	0
665.96	0.0	0	666.47	0.0	0
665.97	0.0	0	666.48	0.0	0
665.98	0.0	0	666.49	0.0	0
665.99	0.0	0	666.50	0.0	0
666.00	0.0	0	666.51	0.0	0
666.01	0.0	0	666.52	0.0	0
666.02	0.0	0	666.53	0.0	1
666.03	0.0	0	666.54	0.0	2
666.04	0.0	0	666.55	0.0	2
666.05	0.0	0	666.56	0.0	3
666.06	0.0	0	666.57	0.0	4
666.07	0.0	0	666.58	0.1	4
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	6
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	7
666.12	0.0	0	666.63	0.1	7
666.13	0.0	0	666.64	0.1	8
666.14	0.0	0	666.65	0.1	9
666.15	0.0	0	666.66	0.1	9
666.16	0.0	0	666.67	0.1	10
666.17	0.0	0	666.68	0.1	10
666.18	0.0	0	666.69	0.1	11
666.19	0.0	0	666.70	0.2	11
666.20	0.0	0	666.71	0.2	12
666.21	0.0	0	666.72	0.2	12
666.22	0.0	0	666.73	0.2	13
666.23	0.0	0	666.74	0.2	13
666.24	0.0	0	666.75	0.2	14
666.25	0.0	0	666.76	0.2	14
666.26	0.0	0	666.77	0.2	15
666.27	0.0	0	666.78	0.2	15
666.28	0.0	0	666.79	0.2	15
666.29	0.0	0	666.80	0.2	16
666.30	0.0	0	666.81	0.2	16
666.31	0.0	0	666.82	0.2	16
666.32	0.0	0	666.83	0.2	16
666.33	0.0	0	666.84	0.2	17
666.34	0.0	0	666.85	**0.2**	**17**
666.35	0.0	0			

Summary for Reach 20R: MH3 15"

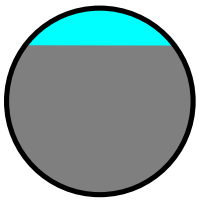
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 131% of Manning's capacity
[76] Warning: Detained 0.001 af (Pond w/culvert advised)

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.46 cfs @ 12.24 hrs, Volume= 0.042 af
Outflow = 0.35 cfs @ 12.16 hrs, Volume= 0.042 af, Atten= 23%, Lag= 0.0 min

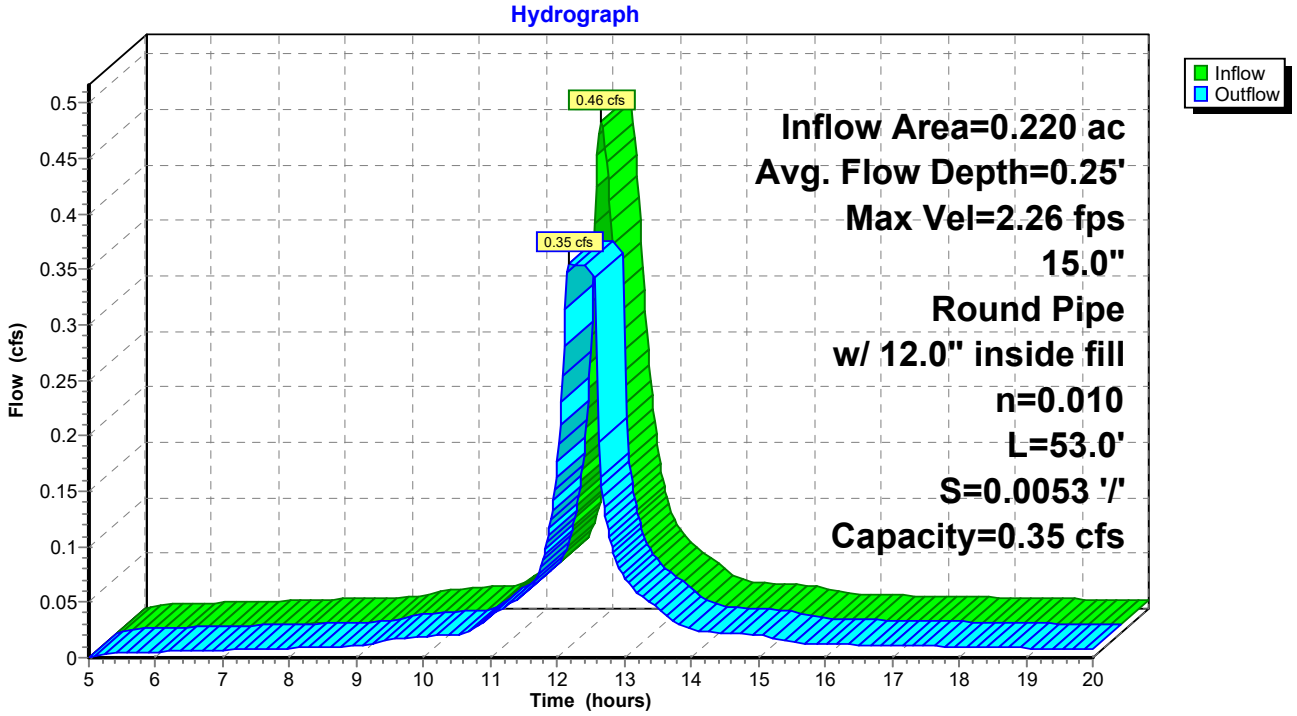
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.26 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.85 fps, Avg. Travel Time= 1.0 min

Peak Storage= 9 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.25' above invert (0.25' above fill)
Bank-Full Depth= 1.25' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.35 cfs

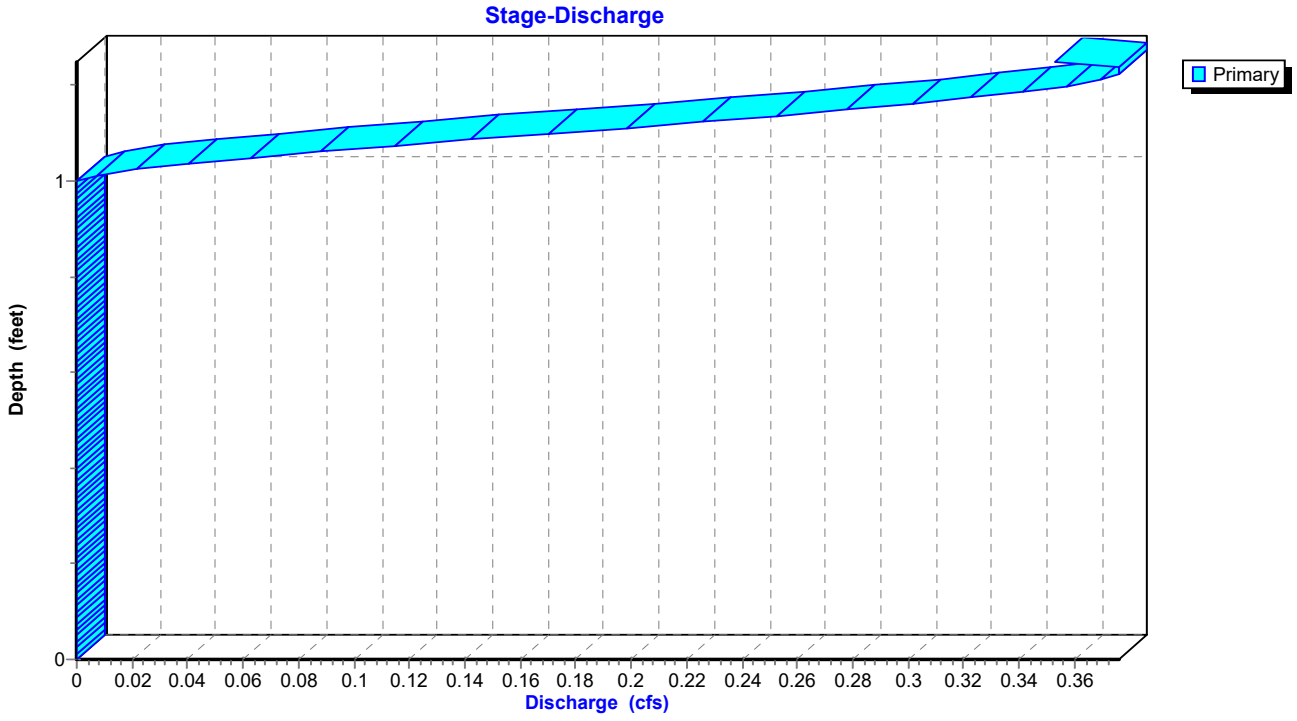
15.0" Round Pipe w/ 12.0" inside fill
n= 0.010
Length= 53.0' Slope= 0.0053 '/'
Inlet Invert= 663.47', Outlet Invert= 663.19'



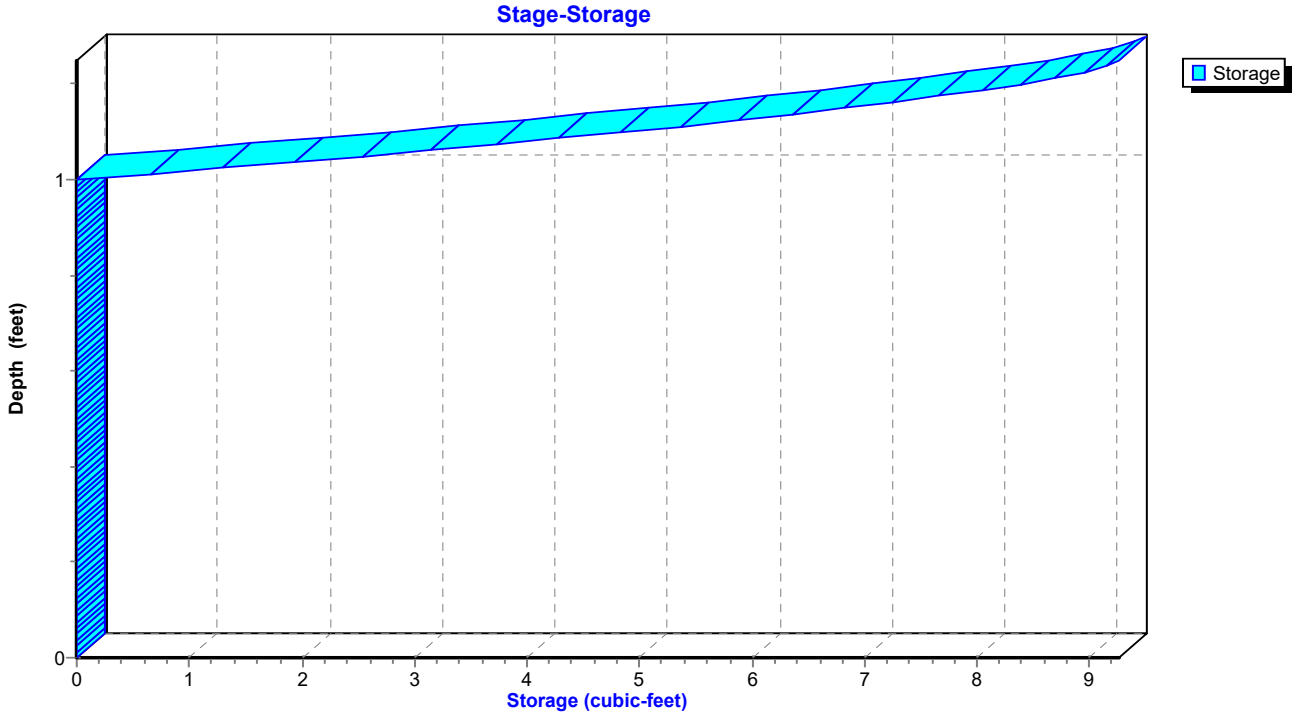
Reach 20R: MH3 15"



Reach 20R: MH3 15"



Reach 20R: MH3 15"



Hydrograph for Reach 20R: MH3 15"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	664.47	0.00
5.40	0.00	0	664.48	0.00
5.80	0.00	0	664.48	0.00
6.20	0.01	1	664.48	0.01
6.60	0.01	1	664.48	0.01
7.00	0.01	1	664.48	0.01
7.40	0.01	1	664.48	0.01
7.80	0.01	1	664.48	0.01
8.20	0.01	1	664.48	0.01
8.60	0.01	1	664.48	0.01
9.00	0.01	1	664.49	0.01
9.40	0.02	1	664.49	0.02
9.80	0.02	1	664.49	0.02
10.20	0.02	1	664.49	0.02
10.60	0.02	1	664.49	0.02
11.00	0.04	2	664.51	0.04
11.40	0.05	2	664.51	0.05
11.80	0.10	**3**	**664.54**	**0.09**
12.20	**0.45**	**9**	**664.72**	**0.35**
12.60	**0.18**	7	664.61	0.29
13.00	0.07	3	664.52	0.07
13.40	0.05	2	664.51	0.05
13.80	0.03	2	664.50	0.03
14.20	0.02	1	664.50	0.02
14.60	0.02	1	664.50	0.02
15.00	0.02	1	664.49	0.02
15.40	0.01	1	664.49	0.01
15.80	0.01	1	664.49	0.01
16.20	0.01	1	664.49	0.01
16.60	0.01	1	664.49	0.01
17.00	0.01	1	664.49	0.01
17.40	0.01	1	664.49	0.01
17.80	0.01	1	664.49	0.01
18.20	0.01	1	664.48	0.01
18.60	0.01	1	664.48	0.01
19.00	0.01	1	664.48	0.01
19.40	0.01	1	664.48	0.01
19.80	0.01	1	664.48	0.01

Stage-Discharge for Reach 20R: MH3 15"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
663.47	0.00	0.00
663.48	0.00	0.00
663.49	0.00	0.00
663.50	0.00	0.00
663.51	0.00	0.00
663.52	0.00	0.00
663.53	0.00	0.00
663.54	0.00	0.00
663.55	0.00	0.00
663.56	0.00	0.00
663.57	0.00	0.00
663.58	0.00	0.00
663.59	0.00	0.00
663.60	0.00	0.00
663.61	0.00	0.00
663.62	0.00	0.00
663.63	0.00	0.00
663.64	0.00	0.00
663.65	0.00	0.00
663.66	0.00	0.00
663.67	0.00	0.00
663.68	0.00	0.00
663.69	0.00	0.00
663.70	0.00	0.00
663.71	0.00	0.00
663.72	0.00	0.00
663.73	0.00	0.00
663.74	0.00	0.00
663.75	0.00	0.00
663.76	0.00	0.00
663.77	0.00	0.00
663.78	0.00	0.00
663.79	0.00	0.00
663.80	0.00	0.00
663.81	0.00	0.00
663.82	0.00	0.00
663.83	0.00	0.00
663.84	0.00	0.00
663.85	0.00	0.00
663.86	0.00	0.00
663.87	0.00	0.00
663.88	0.00	0.00
663.89	0.00	0.00
663.90	0.00	0.00
663.91	0.00	0.00
663.92	0.00	0.00
663.93	0.00	0.00
663.94	0.00	0.00
663.95	0.00	0.00
663.96	0.00	0.00
663.97	0.00	0.00
663.98	0.00	0.00
663.99	0.00	0.00
664.00	0.00	0.00
664.01	0.00	0.00
664.02	0.00	0.00
664.03	0.00	0.00
664.04	0.00	0.00
664.05	0.00	0.00
664.06	0.00	0.00
664.07	0.00	0.00
664.08	0.00	0.00
664.09	0.00	0.00
664.10	0.00	0.00
664.11	0.00	0.00
664.12	0.00	0.00
664.13	0.00	0.00
664.14	0.00	0.00
664.15	0.00	0.00
664.16	0.00	0.00
664.17	0.00	0.00
664.18	0.00	0.00
664.19	0.00	0.00
664.20	0.00	0.00
664.21	0.00	0.00
664.22	0.00	0.00
664.23	0.00	0.00
664.24	0.00	0.00
664.25	0.00	0.00
664.26	0.00	0.00
664.27	0.00	0.00
664.28	0.00	0.00
664.29	0.00	0.00
664.30	0.00	0.00
664.31	0.00	0.00
664.32	0.00	0.00
664.33	0.00	0.00
664.34	0.00	0.00
664.35	0.00	0.00
664.36	0.00	0.00
664.37	0.00	0.00
664.38	0.00	0.00
664.39	0.00	0.00
664.40	0.00	0.00
664.41	0.00	0.00
664.42	0.00	0.00
664.43	0.00	0.00
664.44	0.00	0.00
664.45	0.00	0.00
664.46	0.00	0.00
664.47	0.00	0.00
664.48	0.45	0.01
664.49	0.75	0.02
664.50	0.97	0.03
664.51	1.16	0.05
664.52	1.31	0.06
664.53	1.45	0.08
664.54	1.57	0.10
664.55	1.68	0.13
664.56	1.78	0.15
664.57	1.86	0.17
664.58	1.94	0.19
664.59	2.00	0.21
664.60	2.06	0.24
664.61	2.11	0.26
664.62	2.16	0.28
664.63	2.19	0.30
664.64	2.22	0.31
664.65	2.24	0.33
664.66	2.25	0.34
664.67	**2.26**	0.36
664.68	2.25	0.37
664.69	2.24	0.37
664.70	2.21	**0.38**
664.71	2.15	0.37
664.72	2.02	0.35

Stage-Area-Storage for Reach 20R: MH3 15"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
663.47	0.0	0
663.49	0.0	0
663.51	0.0	0
663.53	0.0	0
663.55	0.0	0
663.57	0.0	0
663.59	0.0	0
663.61	0.0	0
663.63	0.0	0
663.65	0.0	0
663.67	0.0	0
663.69	0.0	0
663.71	0.0	0
663.73	0.0	0
663.75	0.0	0
663.77	0.0	0
663.79	0.0	0
663.81	0.0	0
663.83	0.0	0
663.85	0.0	0
663.87	0.0	0
663.89	0.0	0
663.91	0.0	0
663.93	0.0	0
663.95	0.0	0
663.97	0.0	0
663.99	0.0	0
664.01	0.0	0
664.03	0.0	0
664.05	0.0	0
664.07	0.0	0
664.09	0.0	0
664.11	0.0	0
664.13	0.0	0
664.15	0.0	0
664.17	0.0	0
664.19	0.0	0
664.21	0.0	0
664.23	0.0	0
664.25	0.0	0
664.27	0.0	0
664.29	0.0	0
664.31	0.0	0
664.33	0.0	0
664.35	0.0	0
664.37	0.0	0
664.39	0.0	0
664.41	0.0	0
664.43	0.0	0
664.45	0.0	0
664.47	0.0	0
664.49	0.0	1
664.51	0.0	2
664.53	0.1	3
664.55	0.1	4
664.57	0.1	5
664.59	0.1	6
664.61	0.1	6
664.63	0.1	7
664.65	0.1	8
664.67	0.2	8
664.69	0.2	9
664.71	**0.2**	**9**

Summary for Reach 21R: MH2 15"

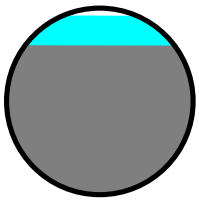
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 101% of Manning's capacity
[61] Hint: Exceeded Reach 20R outlet invert by 1.10' @ 12.56 hrs

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 2.27" for 1-yr event
Inflow = 0.35 cfs @ 12.16 hrs, Volume= 0.042 af
Outflow = 0.35 cfs @ 12.58 hrs, Volume= 0.042 af, Atten= 1%, Lag= 25.2 min

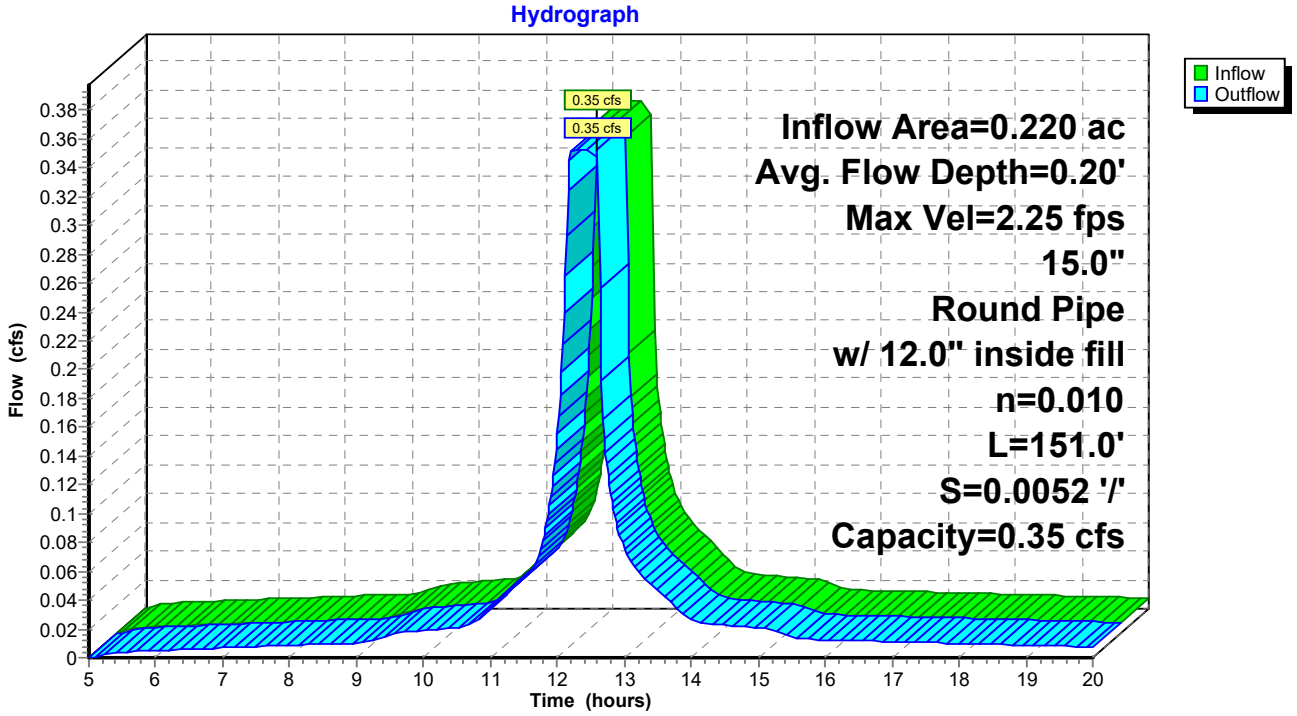
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.25 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 0.86 fps, Avg. Travel Time= 2.9 min

Peak Storage= 24 cf @ 12.58 hrs
Average Depth at Peak Storage= 1.20' above invert (0.20' above fill)
Bank-Full Depth= 1.25' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.35 cfs

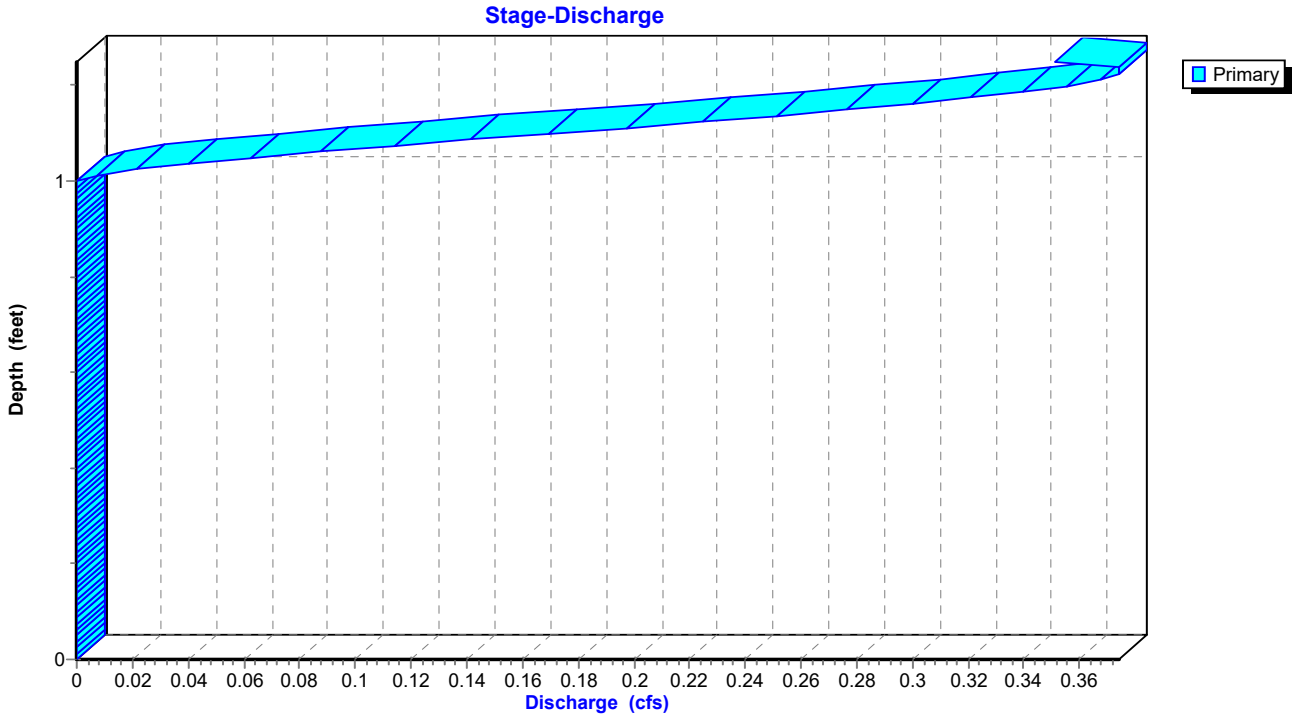
15.0" Round Pipe w/ 12.0" inside fill
n= 0.010
Length= 151.0' Slope= 0.0052 '/'
Inlet Invert= 663.09', Outlet Invert= 662.30'



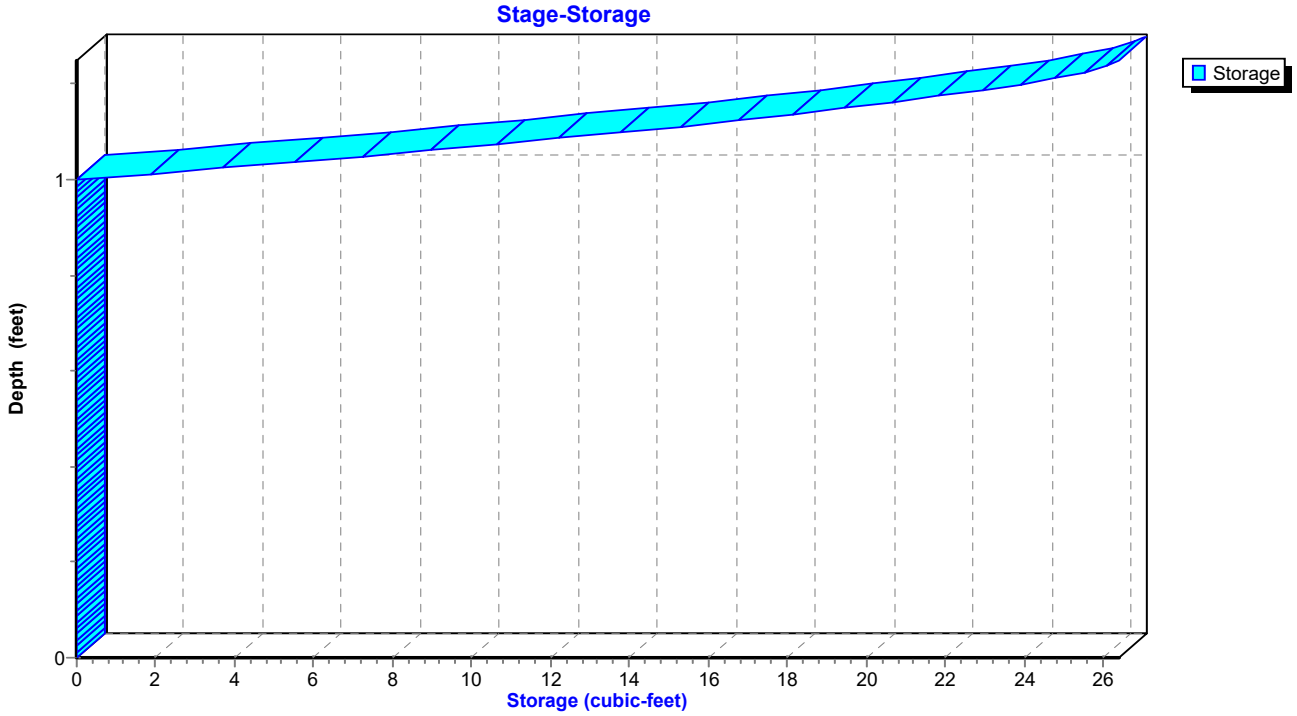
Reach 21R: MH2 15"



Reach 21R: MH2 15"



Reach 21R: MH2 15"



Hydrograph for Reach 21R: MH2 15"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	664.09	0.00
5.40	0.00	1	664.10	0.00
5.80	0.00	1	664.10	0.00
6.20	0.01	1	664.10	0.01
6.60	0.01	2	664.10	0.01
7.00	0.01	2	664.10	0.01
7.40	0.01	2	664.10	0.01
7.80	0.01	2	664.10	0.01
8.20	0.01	2	664.10	0.01
8.60	0.01	2	664.10	0.01
9.00	0.01	2	664.11	0.01
9.40	0.02	3	664.11	0.01
9.80	0.02	3	664.11	0.02
10.20	0.02	3	664.11	0.02
10.60	0.02	4	664.11	0.02
11.00	0.04	5	664.12	0.04
11.40	0.05	6	664.13	0.05
11.80	**0.09**	9	664.15	0.08
12.20	**0.35**	**24**	**664.29**	**0.35**
12.60	0.29	**22**	**664.27**	**0.35**
13.00	0.07	8	664.15	0.08
13.40	0.05	6	664.13	0.05
13.80	0.03	5	664.12	0.03
14.20	0.02	4	664.12	0.02
14.60	0.02	4	664.12	0.02
15.00	0.02	4	664.11	0.02
15.40	0.01	3	664.11	0.02
15.80	0.01	3	664.11	0.01
16.20	0.01	3	664.11	0.01
16.60	0.01	2	664.11	0.01
17.00	0.01	2	664.11	0.01
17.40	0.01	2	664.11	0.01
17.80	0.01	2	664.11	0.01
18.20	0.01	2	664.10	0.01
18.60	0.01	2	664.10	0.01
19.00	0.01	2	664.10	0.01
19.40	0.01	2	664.10	0.01
19.80	0.01	2	664.10	0.01

Stage-Discharge for Reach 21R: MH2 15"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
663.09	0.00	0.00
663.10	0.00	0.00
663.11	0.00	0.00
663.12	0.00	0.00
663.13	0.00	0.00
663.14	0.00	0.00
663.15	0.00	0.00
663.16	0.00	0.00
663.17	0.00	0.00
663.18	0.00	0.00
663.19	0.00	0.00
663.20	0.00	0.00
663.21	0.00	0.00
663.22	0.00	0.00
663.23	0.00	0.00
663.24	0.00	0.00
663.25	0.00	0.00
663.26	0.00	0.00
663.27	0.00	0.00
663.28	0.00	0.00
663.29	0.00	0.00
663.30	0.00	0.00
663.31	0.00	0.00
663.32	0.00	0.00
663.33	0.00	0.00
663.34	0.00	0.00
663.35	0.00	0.00
663.36	0.00	0.00
663.37	0.00	0.00
663.38	0.00	0.00
663.39	0.00	0.00
663.40	0.00	0.00
663.41	0.00	0.00
663.42	0.00	0.00
663.43	0.00	0.00
663.44	0.00	0.00
663.45	0.00	0.00
663.46	0.00	0.00
663.47	0.00	0.00
663.48	0.00	0.00
663.49	0.00	0.00
663.50	0.00	0.00
663.51	0.00	0.00
663.52	0.00	0.00
663.53	0.00	0.00
663.54	0.00	0.00
663.55	0.00	0.00
663.56	0.00	0.00
663.57	0.00	0.00
663.58	0.00	0.00
663.59	0.00	0.00
663.60	0.00	0.00
663.61	0.00	0.00
663.62	0.00	0.00
663.63	0.00	0.00
663.64	0.00	0.00
663.65	0.00	0.00
663.66	0.00	0.00
663.67	0.00	0.00
663.68	0.00	0.00
663.69	0.00	0.00
663.70	0.00	0.00
663.71	0.00	0.00
663.72	0.00	0.00
663.73	0.00	0.00
663.74	0.00	0.00
663.75	0.00	0.00
663.76	0.00	0.00
663.77	0.00	0.00
663.78	0.00	0.00
663.79	0.00	0.00
663.80	0.00	0.00
663.81	0.00	0.00
663.82	0.00	0.00
663.83	0.00	0.00
663.84	0.00	0.00
663.85	0.00	0.00
663.86	0.00	0.00
663.87	0.00	0.00
663.88	0.00	0.00
663.89	0.00	0.00
663.90	0.00	0.00
663.91	0.00	0.00
663.92	0.00	0.00
663.93	0.00	0.00
663.94	0.00	0.00
663.95	0.00	0.00
663.96	0.00	0.00
663.97	0.00	0.00
663.98	0.00	0.00
663.99	0.00	0.00
664.00	0.00	0.00
664.01	0.00	0.00
664.02	0.00	0.00
664.03	0.00	0.00
664.04	0.00	0.00
664.05	0.00	0.00
664.06	0.00	0.00
664.07	0.00	0.00
664.08	0.00	0.00
664.09	0.00	0.00
664.10	0.45	0.01
664.11	0.75	0.02
664.12	0.97	0.03
664.13	1.15	0.04
664.14	1.31	0.06
664.15	1.44	0.08
664.16	1.56	0.10
664.17	1.67	0.12
664.18	1.77	0.15
664.19	1.85	0.17
664.20	1.93	0.19
664.21	1.99	0.21
664.22	2.05	0.24
664.23	2.10	0.26
664.24	2.15	0.28
664.25	2.18	0.30
664.26	2.21	0.31
664.27	2.23	0.33
664.28	2.24	0.34
664.29	**2.25**	0.36
664.30	2.24	0.36
664.31	2.23	0.37
664.32	2.20	**0.37**
664.33	2.13	0.37
664.34	2.01	0.35

Stage-Area-Storage for Reach 21R: MH2 15"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
663.09	0.0	0
663.11	0.0	0
663.13	0.0	0
663.15	0.0	0
663.17	0.0	0
663.19	0.0	0
663.21	0.0	0
663.23	0.0	0
663.25	0.0	0
663.27	0.0	0
663.29	0.0	0
663.31	0.0	0
663.33	0.0	0
663.35	0.0	0
663.37	0.0	0
663.39	0.0	0
663.41	0.0	0
663.43	0.0	0
663.45	0.0	0
663.47	0.0	0
663.49	0.0	0
663.51	0.0	0
663.53	0.0	0
663.55	0.0	0
663.57	0.0	0
663.59	0.0	0
663.61	0.0	0
663.63	0.0	0
663.65	0.0	0
663.67	0.0	0
663.69	0.0	0
663.71	0.0	0
663.73	0.0	0
663.75	0.0	0
663.77	0.0	0
663.79	0.0	0
663.81	0.0	0
663.83	0.0	0
663.85	0.0	0
663.87	0.0	0
663.89	0.0	0
663.91	0.0	0
663.93	0.0	0
663.95	0.0	0
663.97	0.0	0
663.99	0.0	0
664.01	0.0	0
664.03	0.0	0
664.05	0.0	0
664.07	0.0	0
664.09	0.0	0
664.11	0.0	3
664.13	0.0	6
664.15	0.1	9
664.17	0.1	11
664.19	0.1	14
664.21	0.1	16
664.23	0.1	18
664.25	0.1	20
664.27	0.1	22
664.29	0.2	24
664.31	0.2	25
664.33	**0.2**	**26**

Summary for Reach 22R: NDS2 6"

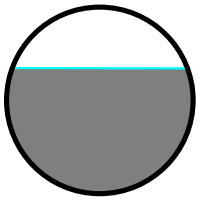
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.031 ac, 3.23% Impervious, Inflow Depth > 0.11" for 1-yr event
Inflow = 0.00 cfs @ 13.25 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 13.48 hrs, Volume= 0.000 af, Atten= 0%, Lag= 14.0 min

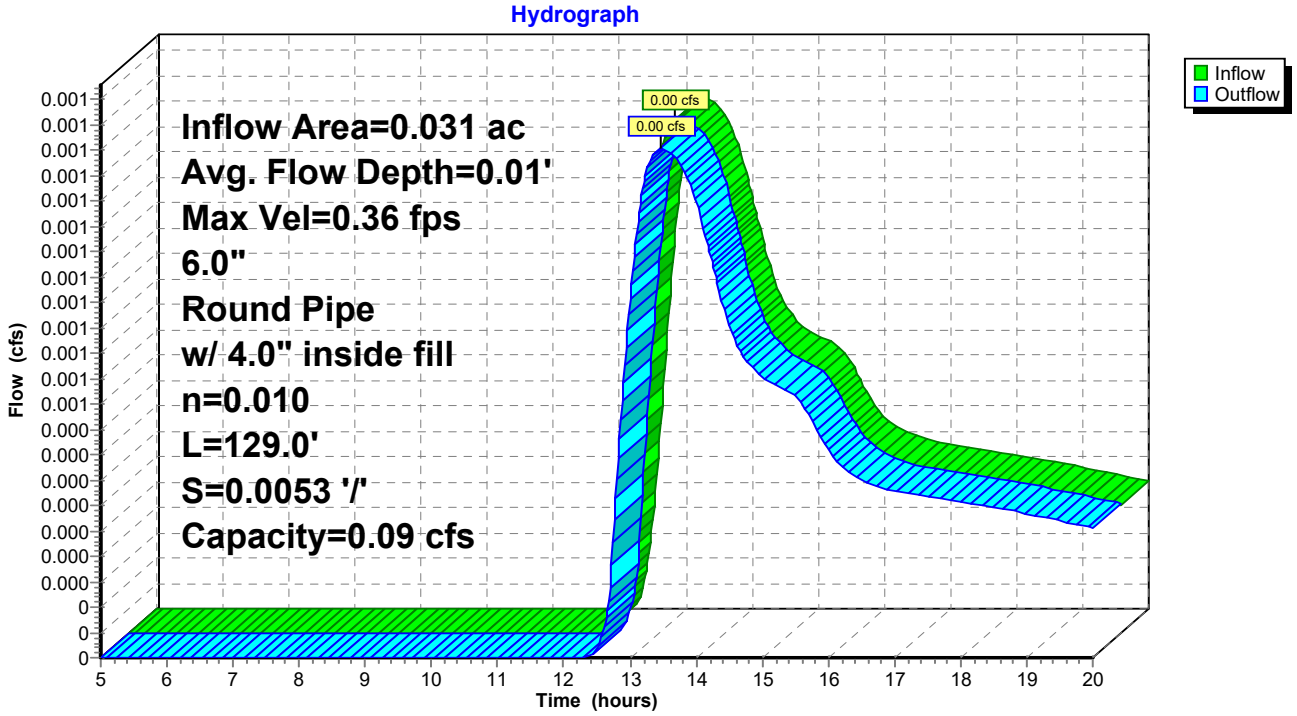
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.36 fps, Min. Travel Time= 5.9 min
Avg. Velocity = 0.28 fps, Avg. Travel Time= 7.6 min

Peak Storage= 0 cf @ 13.38 hrs
Average Depth at Peak Storage= 0.34' above invert (0.01' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

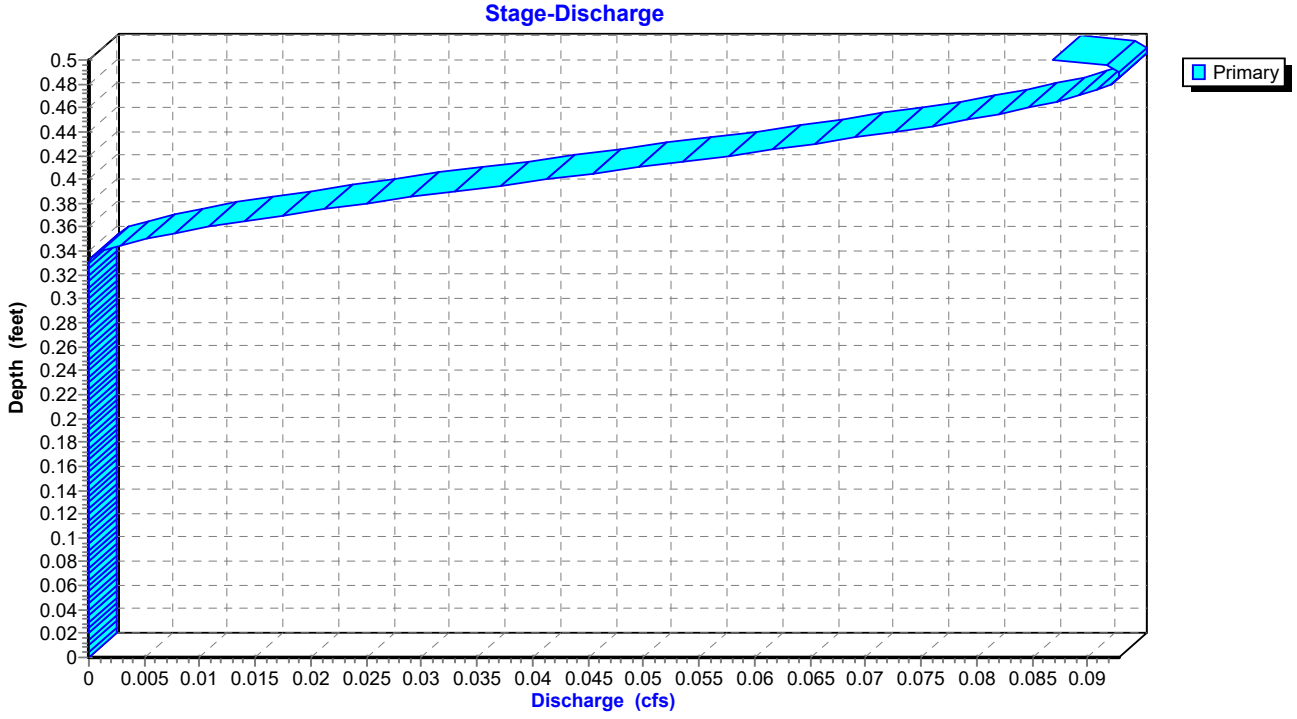
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0053 '/'
Inlet Invert= 668.86', Outlet Invert= 668.18'



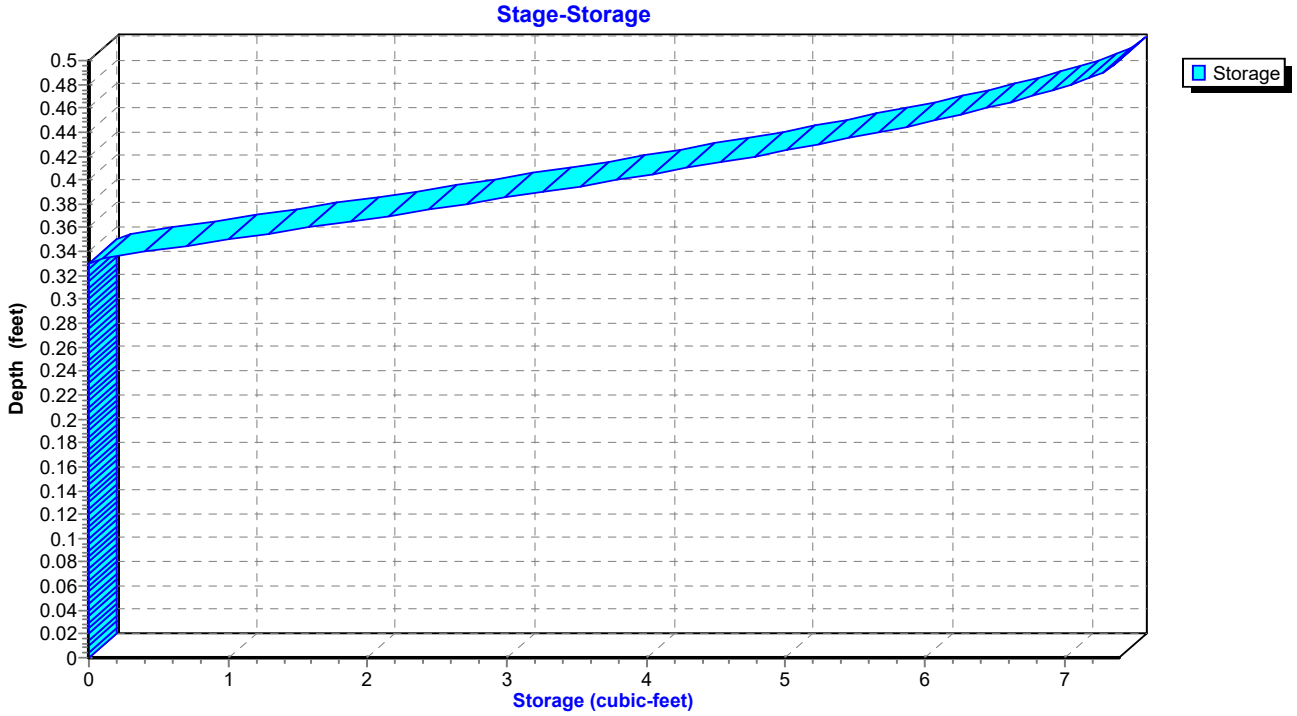
Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Hydrograph for Reach 22R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.19	0.00
5.40	0.00	0	669.19	0.00
5.80	0.00	0	669.19	0.00
6.20	0.00	0	669.19	0.00
6.60	0.00	0	669.19	0.00
7.00	0.00	0	669.19	0.00
7.40	0.00	0	669.19	0.00
7.80	0.00	0	669.19	0.00
8.20	0.00	0	669.19	0.00
8.60	0.00	0	669.19	0.00
9.00	0.00	0	669.19	0.00
9.40	0.00	0	669.19	0.00
9.80	0.00	0	669.19	0.00
10.20	0.00	0	669.19	0.00
10.60	0.00	0	669.19	0.00
11.00	0.00	0	669.19	0.00
11.40	0.00	0	669.19	0.00
11.80	0.00	0	669.19	0.00
12.20	0.00	0	669.19	0.00
12.60	0.00	0	669.20	0.00
13.00	**0.00**	**0**	**669.20**	0.00
13.40	**0.00**	**0**	**669.20**	**0.00**
13.80	0.00	0	669.20	**0.00**
14.20	0.00	0	669.20	0.00
14.60	0.00	0	669.20	0.00
15.00	0.00	0	669.20	0.00
15.40	0.00	0	669.20	0.00
15.80	0.00	0	669.20	0.00
16.20	0.00	0	669.20	0.00
16.60	0.00	0	669.20	0.00
17.00	0.00	0	669.20	0.00
17.40	0.00	0	669.20	0.00
17.80	0.00	0	669.20	0.00
18.20	0.00	0	669.20	0.00
18.60	0.00	0	669.20	0.00
19.00	0.00	0	669.20	0.00
19.40	0.00	0	669.20	0.00
19.80	0.00	0	669.20	0.00

Stage-Discharge for Reach 22R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.00	0.00
669.19	0.00	0.00
669.20	0.37	0.00
669.21	0.66	0.01
669.22	0.88	0.01
669.23	1.05	0.02
669.24	1.19	0.03
669.25	1.31	0.03
669.26	1.41	0.04
669.27	1.49	0.05
669.28	1.56	0.06
669.29	1.61	0.07
669.30	1.65	0.07
669.31	1.68	0.08
669.32	1.70	0.08
669.33	**1.70**	0.09
669.34	1.69	0.09
669.35	1.65	**0.09**
669.36	1.52	0.09

Stage-Area-Storage for Reach 22R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	0
669.20	0.0	0
669.21	0.0	1
669.22	0.0	2
669.23	0.0	2
669.24	0.0	3
669.25	0.0	3
669.26	0.0	4
669.27	0.0	4
669.28	0.0	5
669.29	0.0	5
669.30	0.0	6
669.31	0.0	6
669.32	0.0	6
669.33	0.1	7
669.34	0.1	7
669.35	0.1	7
669.36	**0.1**	**7**

Summary for Pond 4P: stormtech SC310 16"x34" chambers

[44] Hint: Outlet device #2 is below defined storage
[61] Hint: Exceeded Reach 10R outlet invert by 0.74' @ 13.60 hrs
[61] Hint: Exceeded Reach 12R outlet invert by 0.74' @ 13.60 hrs

Inflow Area =	1.066 ac,	91.74% Impervious,	Inflow Depth >	2.03"	for 1-yr event
Inflow =	1.01 cfs @	12.08 hrs,	Volume=	0.180 af	
Outflow =	0.33 cfs @	13.60 hrs,	Volume=	0.175 af,	Atten= 68%, Lag= 91.7 min
Primary =	0.07 cfs @	13.60 hrs,	Volume=	0.014 af	
Secondary =	0.26 cfs @	13.60 hrs,	Volume=	0.161 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 665.74' @ 13.60 hrs Surf.Area= 0.104 ac Storage= 0.051 af

Plug-Flow detention time= 97.2 min calculated for 0.175 af (97% of inflow)
Center-of-Mass det. time= 87.1 min (862.6 - 775.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	664.40'	0.076 af	**36.00'W x 120.45'L x 2.33'H Field A Z=0.5** 0.242 af Overall - 0.011 af Embedded = 0.231 af x 33.0% Voids
#2A	664.90'	0.011 af	**ADS_StormTech RC-310 +Cap** x 32 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 2 Rows
#3	665.00'	0.001 af	**8.0" Round Pipe Storage** L= 87.0' S= 0.5200 '/'
#4	664.90'	0.001 af	**12.0" Round Pipe Storage** L= 45.0' S= 0.7300 '/'
#5	665.40'	0.000 af	**12.0" Round Pipe Storage** L= 23.0' S= 0.5200 '/'
#6	665.58'	0.001 af	**10.0" Round Pipe Storage** L= 69.0' S= 0.5200 '/'
		0.090 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	665.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.75 0.75 2.10 2.10 3.00 Width (feet) 0.00 0.17 0.17 4.00 4.00
#2	Secondary	664.00'	**Tube/Siphon/Float Valve** 4.000" Diameter, C= 0.600 136.0' Long Tube, Hazen-Williams C= 130 Inlet / Outlet Elev. = 664.00' / 664.00'

Primary OutFlow Max=0.07 cfs @ 13.60 hrs HW=665.74' (Free Discharge)
↑└**1=Custom Weir/Orifice** (Weir Controls 0.07 cfs @ 1.61 fps)

Secondary OutFlow Max=0.26 cfs @ 13.60 hrs HW=665.74' (Free Discharge)
↑└**2=Tube/Siphon/Float Valve** (Tube Controls 0.26 cfs @ 2.98 fps)

Pond 4P: stormtech SC310 16"x34" chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-310 +Cap (ADS StormTech®RC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 48.0" Spacing = 82.0" C-C Row Spacing

16 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 115.12' Row Length +32.0" End Stone x 2 = 120.45' Base Length
2 Rows x 34.0" Wide + 48.0" Spacing x 1 + 158.0" Side Stone x 2 = 36.00' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

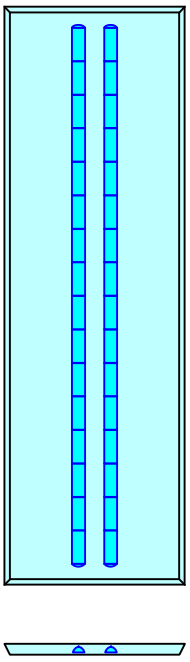
0.5 '/' Side-Z x Height = 14.0" Flare/Side
Base Length + Flare x 2 = 122.79' Top Length
Base Width + Flare x 2 = 38.33' Top Width

32 Chambers x 14.7 cf = 471.7 cf Chamber Storage

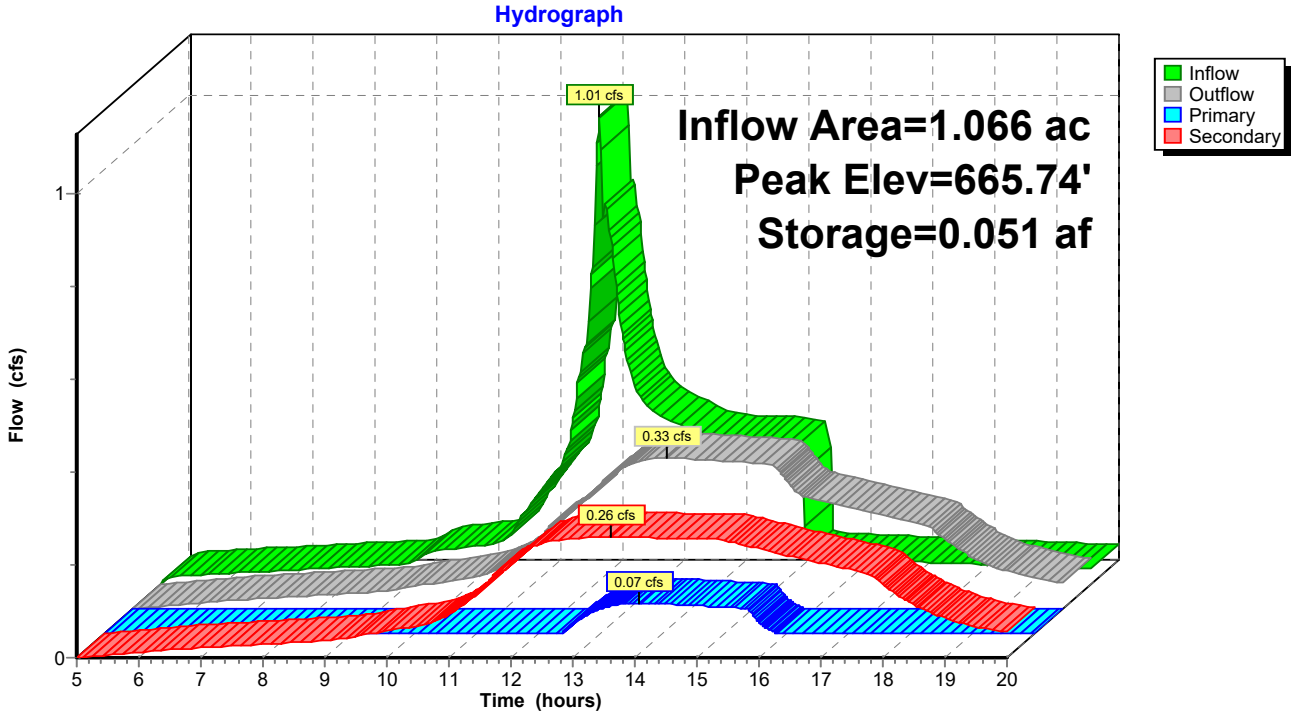
10,548.2 cf Field - 471.7 cf Chambers = 10,076.5 cf Stone x 33.0% Voids = 3,325.2 cf Stone Storage

Chamber Storage + Stone Storage = 3,797.0 cf = 0.087 af
Overall Storage Efficiency = 36.0%
Overall System Size = 120.45' x 36.00' x 2.33'

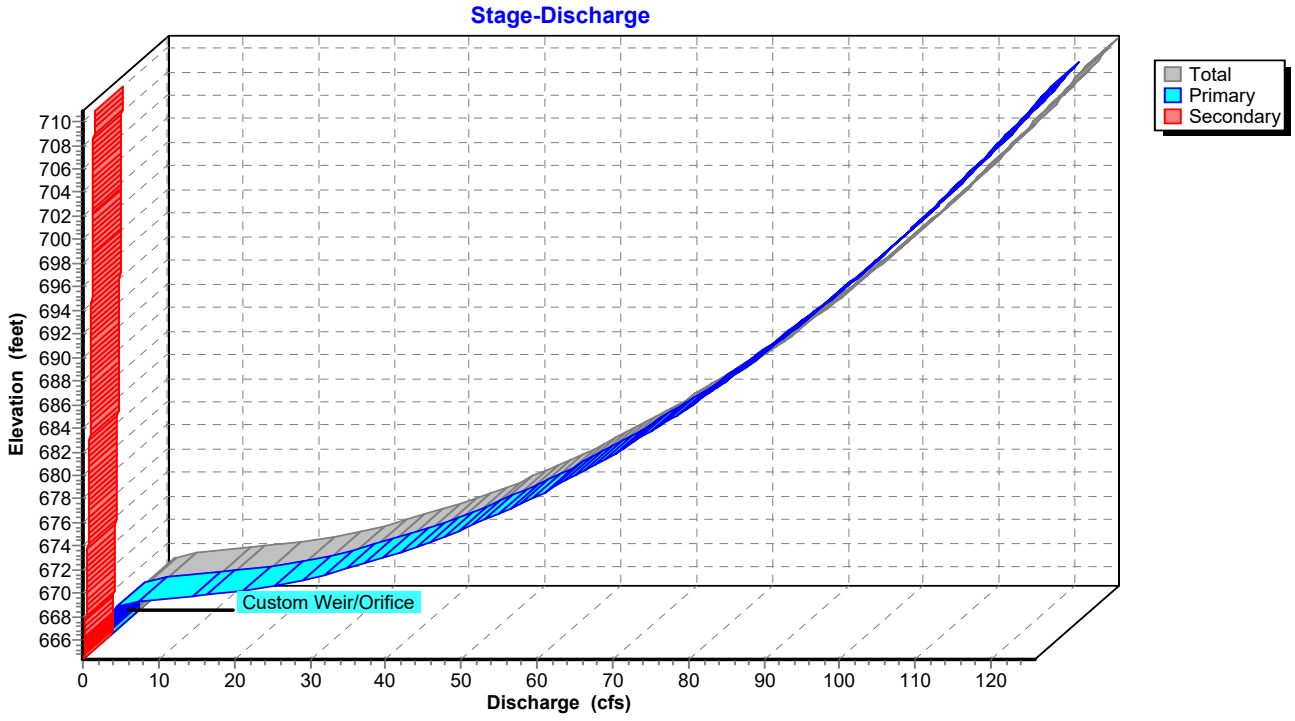
32 Chambers
390.7 cy Field
373.2 cy Stone



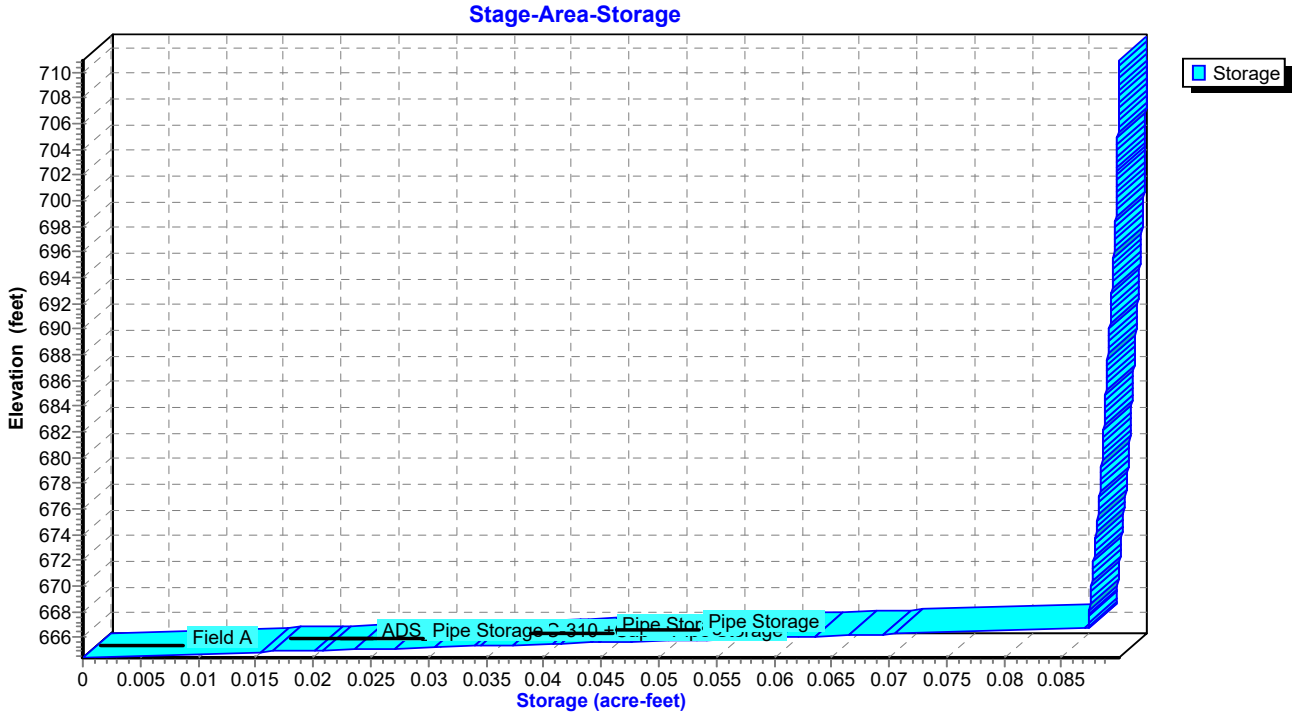
Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Hydrograph for Pond 4P: stormtech SC310 16"x34" chambers

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0.000	664.40	0.00	0.00	0.00
5.40	0.02	0.000	664.41	0.00	0.00	0.00
5.80	0.02	0.001	664.43	0.01	0.00	0.01
6.20	0.02	0.001	664.44	0.01	0.00	0.01
6.60	0.03	0.002	664.45	0.02	0.00	0.02
7.00	0.03	0.002	664.45	0.02	0.00	0.02
7.40	0.03	0.002	664.46	0.02	0.00	0.02
7.80	0.04	0.002	664.47	0.03	0.00	0.03
8.20	0.04	0.003	664.48	0.03	0.00	0.03
8.60	0.04	0.003	664.49	0.03	0.00	0.03
9.00	0.04	0.003	664.49	0.04	0.00	0.04
9.40	0.07	0.004	664.51	0.04	0.00	0.04
9.80	0.08	0.005	664.54	0.05	0.00	0.05
10.20	0.08	0.005	664.56	0.06	0.00	0.06
10.60	0.10	0.006	664.58	0.07	0.00	0.07
11.00	0.18	0.008	664.64	0.09	0.00	0.09
11.40	0.25	0.011	664.74	0.13	0.00	0.13
11.80	**0.47**	0.017	664.92	0.18	0.00	0.18
12.20	**0.82**	0.035	665.34	0.23	0.00	0.23
12.60	0.45	0.046	665.62	0.28	0.02	0.25
13.00	0.37	0.050	665.71	0.31	0.05	0.26
13.40	0.34	**0.051**	**665.74**	**0.32**	**0.06**	**0.26**
13.80	0.32	**0.051**	**665.74**	**0.32**	**0.07**	**0.26**
14.20	0.31	0.051	665.73	0.32	0.06	0.26
14.60	0.31	0.050	665.72	0.32	0.06	0.26
15.00	0.31	0.050	665.72	0.31	0.06	0.26
15.40	0.06	0.049	665.69	0.30	0.05	0.26
15.80	0.06	0.042	665.52	0.24	0.00	0.24
16.20	0.05	0.036	665.37	0.23	0.00	0.23
16.60	0.05	0.031	665.24	0.22	0.00	0.22
17.00	0.05	0.025	665.11	0.20	0.00	0.20
17.40	0.05	0.020	664.99	0.19	0.00	0.19
17.80	0.05	0.016	664.88	0.18	0.00	0.18
18.20	0.04	0.012	664.76	0.14	0.00	0.14
18.60	0.04	0.009	664.68	0.11	0.00	0.11
19.00	0.04	0.007	664.62	0.09	0.00	0.09
19.40	0.04	0.006	664.58	0.07	0.00	0.07
19.80	0.03	0.005	664.55	0.06	0.00	0.06

Stage-Discharge for Pond 4P: stormtech SC310 16"x34" chambers

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
664.40	0.00	0.00	0.00
664.90	0.18	0.00	0.18
665.40	0.23	0.00	0.23
665.90	0.41	0.14	0.27
666.40	0.78	0.48	0.31
666.90	1.40	1.06	0.34
667.40	6.94	6.57	0.37
667.90	15.20	14.80	0.40
668.40	20.51	20.09	0.42
668.90	24.60	24.15	0.45
669.40	28.07	27.60	0.47
669.90	31.15	30.65	0.50
670.40	33.94	33.43	0.52
670.90	36.52	35.98	0.54
671.40	38.93	38.37	0.56
671.90	41.19	40.61	0.58
672.40	43.34	42.74	0.60
672.90	45.38	44.76	0.62
673.40	47.33	46.70	0.64
673.90	49.21	48.56	0.65
674.40	51.02	50.35	0.67
674.90	52.76	52.08	0.69
675.40	54.45	53.75	0.70
675.90	56.09	55.37	0.72
676.40	57.68	56.95	0.74
676.90	59.23	58.48	0.75
677.40	60.74	59.98	0.77
677.90	62.22	61.43	0.78
678.40	63.65	62.86	0.80
678.90	65.06	64.25	0.81
679.40	66.44	65.61	0.82
679.90	67.79	66.95	0.84
680.40	69.11	68.26	0.85
680.90	70.41	69.54	0.87
681.40	71.68	70.80	0.88
681.90	72.94	72.04	0.89
682.40	74.17	73.26	0.91
682.90	75.38	74.46	0.92
683.40	76.57	75.64	0.93
683.90	77.74	76.80	0.94
684.40	78.90	77.94	0.96
684.90	80.04	79.07	0.97
685.40	81.16	80.18	0.98
685.90	82.27	81.28	0.99
686.40	83.36	82.36	1.01
686.90	84.44	83.43	1.02
687.40	85.51	84.48	1.03
687.90	86.56	85.52	1.04
688.40	87.60	86.55	1.05
688.90	88.63	87.57	1.06
689.40	89.65	88.57	1.08
689.90	90.65	89.56	1.09
690.40	91.64	90.55	1.10
690.90	92.63	91.52	1.11
691.40	93.60	92.48	1.12
691.90	94.56	93.43	1.13
692.40	95.51	94.37	1.14
692.90	96.46	95.31	1.15
693.40	97.39	96.23	1.16
693.90	98.32	97.15	1.17
694.40	99.23	98.05	1.18
694.90	100.14	98.95	1.19
695.40	101.04	99.84	1.20
695.90	101.94	100.72	1.21
696.40	102.82	101.60	1.22
696.90	103.70	102.47	1.23
697.40	104.57	103.32	1.24
697.90	105.43	104.18	1.25
698.40	106.29	105.02	1.26
698.90	107.13	105.86	1.27
699.40	107.98	106.70	1.28
699.90	108.81	107.52	1.29
700.40	109.64	108.34	1.30
700.90	110.46	109.15	1.31
701.40	111.28	109.96	1.32
701.90	112.09	110.76	1.33
702.40	112.90	111.56	1.34
702.90	113.70	112.35	1.35
703.40	114.49	113.14	1.36
703.90	115.28	113.91	1.37
704.40	116.06	114.69	1.37
704.90	116.84	115.46	1.38
705.40	117.61	116.22	1.39
705.90	118.38	116.98	1.40
706.40	119.14	117.73	1.41
706.90	119.90	118.48	1.42
707.40	120.65	119.23	1.43
707.90	121.40	119.97	1.44
708.40	122.15	120.70	1.44
708.90	122.89	121.43	1.45
709.40	123.62	122.16	1.46
709.90	124.35	122.88	1.47
710.40	125.08	123.60	1.48
710.90	**125.80**	**124.31**	**1.49**

Stage-Area-Storage for Pond 4P: stormtech SC310 16"x34" chambers

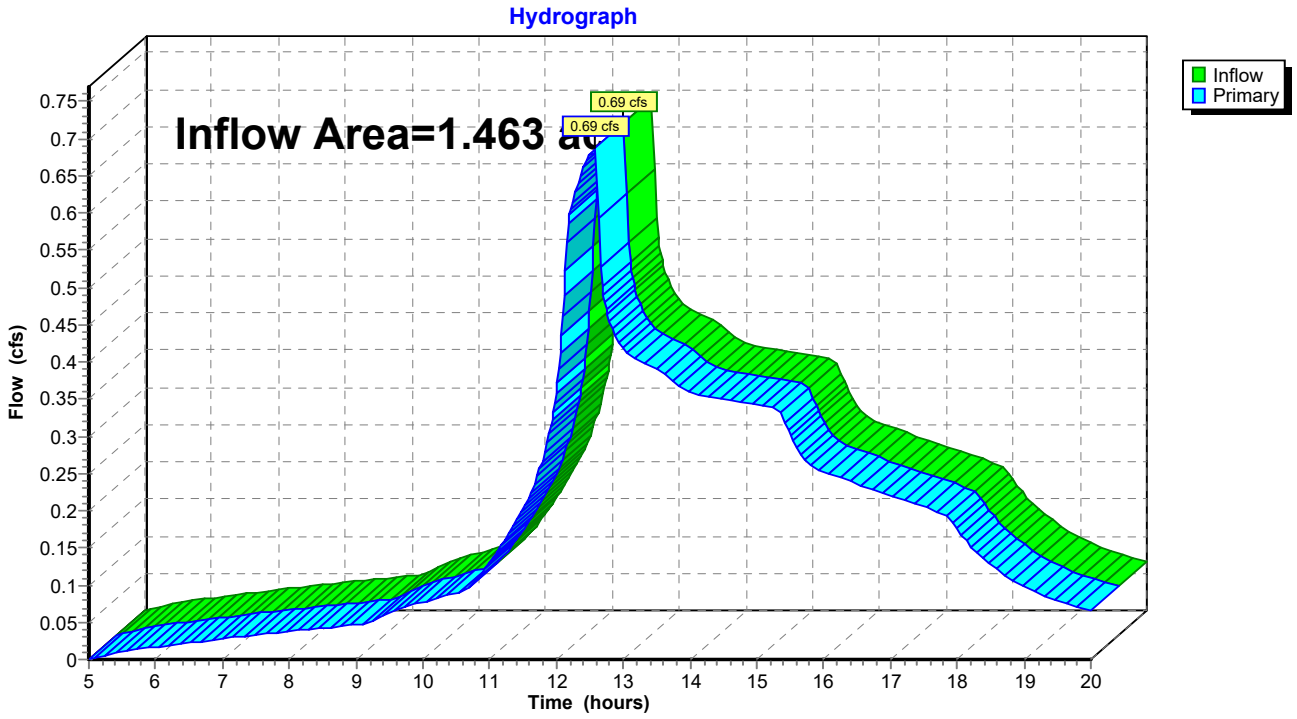
Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
664.40	0.000	689.90	0.089
664.90	0.017	690.40	0.089
665.40	0.037	690.90	0.089
665.90	0.057	691.40	0.089
666.40	0.075	691.90	0.089
666.90	0.087	692.40	0.089
667.40	0.087	692.90	0.089
667.90	0.087	693.40	0.089
668.40	0.087	693.90	0.089
668.90	0.087	694.40	0.089
669.40	0.088	694.90	0.089
669.90	0.088	695.40	0.089
670.40	0.088	695.90	0.090
670.90	0.088	696.40	0.090
671.40	0.088	696.90	0.090
671.90	0.088	697.40	0.090
672.40	0.088	697.90	0.090
672.90	0.088	698.40	0.090
673.40	0.088	698.90	0.090
673.90	0.088	699.40	0.090
674.40	0.088	699.90	0.090
674.90	0.088	700.40	0.090
675.40	0.088	700.90	0.090
675.90	0.088	701.40	0.090
676.40	0.088	701.90	0.090
676.90	0.088	702.40	0.090
677.40	0.088	702.90	0.090
677.90	0.088	703.40	0.090
678.40	0.088	703.90	0.090
678.90	0.088	704.40	0.090
679.40	0.088	704.90	0.090
679.90	0.088	705.40	0.090
680.40	0.089	705.90	0.090
680.90	0.089	706.40	0.090
681.40	0.089	706.90	0.090
681.90	0.089	707.40	0.090
682.40	0.089	707.90	0.090
682.90	0.089	708.40	0.090
683.40	0.089	708.90	0.090
683.90	0.089	709.40	0.090
684.40	0.089	709.90	0.090
684.90	0.089	710.40	0.090
685.40	0.089	710.90	**0.090**
685.90	0.089		
686.40	0.089		
686.90	0.089		
687.40	0.089		
687.90	0.089		
688.40	0.089		
688.90	0.089		
689.40	0.089		

Summary for Link 5L: HOM property run-off

Inflow Area = 1.463 ac, 87.83% Impervious, Inflow Depth > 1.84" for 1-yr event
Inflow = 0.69 cfs @ 12.58 hrs, Volume= 0.224 af
Primary = 0.69 cfs @ 12.58 hrs, Volume= 0.224 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Link 5L: HOM property run-off



Hydrograph for Link 5L: HOM property run-off

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.20	0.00	0.00	0.00
5.40	0.01	0.00	0.01
5.60	0.01	0.00	0.01
5.80	0.01	0.00	0.01
6.00	0.02	0.00	0.02
6.20	0.02	0.00	0.02
6.40	0.02	0.00	0.02
6.60	0.02	0.00	0.02
6.80	0.03	0.00	0.03
7.00	0.03	0.00	0.03
7.20	0.03	0.00	0.03
7.40	0.03	0.00	0.03
7.60	0.03	0.00	0.03
7.80	0.04	0.00	0.04
8.00	0.04	0.00	0.04
8.20	0.04	0.00	0.04
8.40	0.04	0.00	0.04
8.60	0.04	0.00	0.04
8.80	0.05	0.00	0.05
9.00	0.05	0.00	0.05
9.20	0.05	0.00	0.05
9.40	0.06	0.00	0.06
9.60	0.07	0.00	0.07
9.80	0.07	0.00	0.07
10.00	0.08	0.00	0.08
10.20	0.08	0.00	0.08
10.40	0.09	0.00	0.09
10.60	0.09	0.00	0.09
10.80	0.11	0.00	0.11
11.00	0.13	0.00	0.13
11.20	0.16	0.00	0.16
11.40	0.18	0.00	0.18
11.60	0.22	0.00	0.22
11.80	0.27	0.00	0.27
12.00	0.36	0.00	0.36
12.20	0.60	0.00	0.60
12.40	**0.66**	0.00	**0.66**
12.60	**0.69**	0.00	**0.69**
12.80	0.45	0.00	0.45
13.00	0.42	0.00	0.42
13.20	0.40	0.00	0.40
13.40	0.39	0.00	0.39
13.60	0.38	0.00	0.38
13.80	0.37	0.00	0.37
14.00	0.36	0.00	0.36
14.20	0.35	0.00	0.35
14.40	0.35	0.00	0.35
14.60	0.35	0.00	0.35
14.80	0.35	0.00	0.35
15.00	0.34	0.00	0.34
15.20	0.34	0.00	0.34
15.40	0.33	0.00	0.33
15.60	0.29	0.00	0.29
15.80	0.26	0.00	0.26
16.00	0.25	0.00	0.25
16.20	0.25	0.00	0.25
16.40	0.24	0.00	0.24
16.60	0.23	0.00	0.23
16.80	0.23	0.00	0.23
17.00	0.22	0.00	0.22
17.20	0.21	0.00	0.21
17.40	0.21	0.00	0.21
17.60	0.20	0.00	0.20
17.80	0.19	0.00	0.19
18.00	0.17	0.00	0.17
18.20	0.15	0.00	0.15
18.40	0.14	0.00	0.14
18.60	0.12	0.00	0.12
18.80	0.11	0.00	0.11
19.00	0.10	0.00	0.10
19.20	0.09	0.00	0.09
19.40	0.08	0.00	0.08
19.60	0.08	0.00	0.08
19.80	0.07	0.00	0.07
20.00	0.07	0.00	0.07

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SE roof to MH8 Runoff Area=0.339 ac 100.00% Impervious Runoff Depth>2.65"
Flow Length=130' Tc=10.0 min CN=98 Runoff=1.13 cfs 0.075 af

Subcatchment3S: untreated to streets Runoff Area=0.177 ac 49.15% Impervious Runoff Depth>0.70"
Flow Length=110' Tc=30.0 min CN=71 Runoff=0.10 cfs 0.010 af

Subcatchment6S: S roof to MH8 Runoff Area=0.305 ac 100.00% Impervious Runoff Depth>2.65"
Flow Length=170' Tc=12.0 min CN=98 Runoff=0.95 cfs 0.067 af

Subcatchment7S: to Inlets 8 & 9 Runoff Area=0.048 ac 100.00% Impervious Runoff Depth>2.65"
Flow Length=105' Tc=15.0 min CN=98 Runoff=0.14 cfs 0.011 af

Subcatchment8S: to Inlet 7 Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>2.65"
Flow Length=50' Tc=7.0 min CN=98 Runoff=0.19 cfs 0.011 af

Subcatchment9S: to Inlet 6 Runoff Area=0.041 ac 100.00% Impervious Runoff Depth>2.65"
Flow Length=90' Tc=14.0 min CN=98 Runoff=0.12 cfs 0.009 af

Subcatchment10S: to Inlet 5 Runoff Area=0.030 ac 83.33% Impervious Runoff Depth>1.73"
Flow Length=60' Tc=18.0 min CN=88 Runoff=0.06 cfs 0.004 af

Subcatchment11S: to Inlet 4 Runoff Area=0.038 ac 73.68% Impervious Runoff Depth>1.30"
Flow Length=120' Tc=26.0 min CN=82 Runoff=0.05 cfs 0.004 af

Subcatchment12S: to inlet 3 Runoff Area=0.124 ac 100.00% Impervious Runoff Depth>2.65"
Tc=0.0 min CN=98 Runoff=0.54 cfs 0.027 af

Subcatchment13S: to NDS 2 Runoff Area=0.021 ac 0.00% Impervious Runoff Depth>0.33"
Flow Length=20' Tc=20.0 min CN=61 Runoff=0.00 cfs 0.001 af

Subcatchment14S: to NDS 3-5 Runoff Area=0.031 ac 3.23% Impervious Runoff Depth>0.21"
Flow Length=95' Tc=52.0 min CN=57 Runoff=0.00 cfs 0.001 af

Subcatchment16S: to NDS11-6 Runoff Area=0.038 ac 42.11% Impervious Runoff Depth>0.42"
Flow Length=50' Tc=30.0 min CN=64 Runoff=0.01 cfs 0.001 af

Subcatchment17S: untreated alley to Runoff Area=0.150 ac 100.00% Impervious Runoff Depth>2.65"
Flow Length=265' Tc=20.0 min CN=98 Runoff=0.37 cfs 0.033 af

Subcatchment18S: untreated alley to Runoff Area=0.070 ac 100.00% Impervious Runoff Depth>2.65"
Flow Length=108' Tc=10.0 min CN=98 Runoff=0.23 cfs 0.015 af

Reach 6R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.22 fps Inflow=0.95 cfs 0.067 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=27.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.28 cfs 0.067 af

Reach 7R: MH8 12" Avg. Flow Depth=0.25' Max Vel=2.01 fps Inflow=0.55 cfs 0.142 af
12.0" Round Pipe w/ 9.0" inside fill n=0.010 L=19.0' S=0.0042 '/' Capacity=0.28 cfs Outflow=0.29 cfs 0.142 af

Reach 8R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.23 fps Inflow=1.13 cfs 0.075 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=42.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.075 af

Reach 9R: inlet 3 18" Avg. Flow Depth=0.24' Max Vel=3.33 fps Inflow=0.81 cfs 0.169 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=35.0' S=0.0080 '/' Capacity=0.88 cfs Outflow=0.81 cfs 0.169 af

Reach 10R: MH7 18" Avg. Flow Depth=0.33' Max Vel=2.64 fps Inflow=0.81 cfs 0.169 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=4.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.69 cfs 0.169 af

Reach 11R: inlet 7 18" Avg. Flow Depth=0.12' Max Vel=2.14 fps Inflow=0.30 cfs 0.022 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=62.0' S=0.0052 '/' Capacity=0.71 cfs Outflow=0.30 cfs 0.022 af

Reach 12R: MH6 18" Avg. Flow Depth=0.12' Max Vel=2.11 fps Inflow=0.30 cfs 0.022 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=8.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.30 cfs 0.022 af

Reach 13R: to isolator 6" Avg. Flow Depth=0.04' Max Vel=6.71 fps Inflow=0.12 cfs 0.009 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.12 cfs 0.009 af

Reach 14R: to isolator 6" Avg. Flow Depth=0.02' Max Vel=5.13 fps Inflow=0.06 cfs 0.004 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.06 cfs 0.004 af

Reach 15R: to isolator 6" Avg. Flow Depth=0.02' Max Vel=4.70 fps Inflow=0.05 cfs 0.004 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.05 cfs 0.004 af

Reach 16R: inlet 2 12" Avg. Flow Depth=0.18' Max Vel=2.47 fps Inflow=0.37 cfs 0.033 af
12.0" Round Pipe w/ 8.0" inside fill n=0.010 L=50.0' S=0.0052 '/' Capacity=0.55 cfs Outflow=0.37 cfs 0.033 af

Reach 17R: NDS2 6" Avg. Flow Depth=0.03' Max Vel=0.86 fps Inflow=0.01 cfs 0.001 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0051 '/' Capacity=0.09 cfs Outflow=0.01 cfs 0.001 af

Reach 18R: inlet 3 6" Avg. Flow Depth=0.03' Max Vel=0.96 fps Inflow=0.01 cfs 0.002 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=62.0' S=0.0048 '/' Capacity=0.08 cfs Outflow=0.01 cfs 0.002 af

Reach 19R: inlet 1 12" Avg. Flow Depth=0.25' Max Vel=2.68 fps Inflow=0.54 cfs 0.048 af
12.0" Round Pipe w/ 8.0" inside fill n=0.010 L=73.0' S=0.0052 '/' Capacity=0.55 cfs Outflow=0.53 cfs 0.048 af

Reach 20R: MH3 15" Avg. Flow Depth=0.25' Max Vel=2.25 fps Inflow=0.53 cfs 0.048 af
15.0" Round Pipe w/ 12.0" inside fill n=0.010 L=53.0' S=0.0053 '/' Capacity=0.35 cfs Outflow=0.37 cfs 0.048 af

Reach 21R: MH2 15" Avg. Flow Depth=0.20' Max Vel=2.25 fps Inflow=0.37 cfs 0.048 af
15.0" Round Pipe w/ 12.0" inside fill n=0.010 L=151.0' S=0.0052 '/' Capacity=0.35 cfs Outflow=0.36 cfs 0.048 af

Reach 22R: NDS2 6" Avg. Flow Depth=0.01' Max Vel=0.50 fps Inflow=0.00 cfs 0.001 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0053 '/' Capacity=0.09 cfs Outflow=0.00 cfs 0.001 af

Pond 4P: stormtech SC310 16"x34" Peak Elev=665.83' Storage=0.055 af Inflow=1.10 cfs 0.211 af
Primary=0.10 cfs 0.025 af Secondary=0.27 cfs 0.180 af Outflow=0.37 cfs 0.205 af

Link 5L: HOM property run-off Inflow=0.78 cfs 0.263 af
Primary=0.78 cfs 0.263 af

Total Runoff Area = 1.463 ac Runoff Volume = 0.270 af Average Runoff Depth = 2.22"
12.17% Pervious = 0.178 ac 87.83% Impervious = 1.285 ac

Summary for Subcatchment 1S: SE roof to MH8

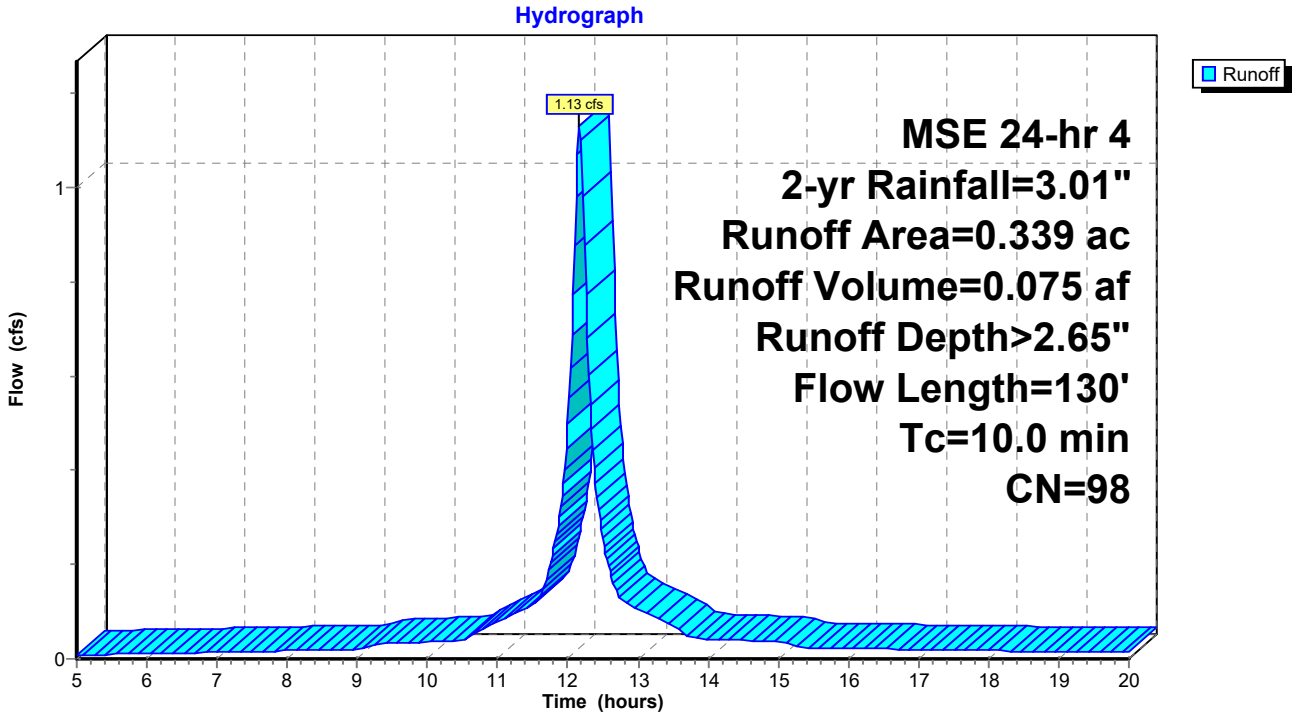
Runoff = 1.13 cfs @ 12.17 hrs, Volume= 0.075 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.339	98	fronting Main St
	0.339		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	130		0.22		**Direct Entry, S Bldg roof**

Subcatchment 1S: SE roof to MH8



Hydrograph for Subcatchment 1S: SE roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.01
5.20	0.15	0.04	0.01
5.40	0.16	0.04	0.01
5.60	0.17	0.05	0.01
5.80	0.18	0.05	0.01
6.00	0.19	0.06	0.01
6.20	0.20	0.07	0.01
6.40	0.21	0.07	0.01
6.60	0.22	0.08	0.01
6.80	0.23	0.09	0.01
7.00	0.24	0.10	0.01
7.20	0.25	0.11	0.01
7.40	0.26	0.11	0.02
7.60	0.27	0.12	0.02
7.80	0.29	0.13	0.02
8.00	0.30	0.14	0.02
8.20	0.31	0.15	0.02
8.40	0.32	0.16	0.02
8.60	0.34	0.18	0.02
8.80	0.35	0.19	0.02
9.00	0.36	0.20	0.02
9.20	0.39	0.22	0.03
9.40	0.41	0.24	0.03
9.60	0.43	0.26	0.03
9.80	0.45	0.28	0.03
10.00	0.48	0.30	0.04
10.20	0.50	0.32	0.04
10.40	0.53	0.34	0.04
10.60	0.56	0.37	0.04
10.80	0.60	0.41	0.06
11.00	0.65	0.46	0.08
11.20	0.71	0.51	0.09
11.40	0.78	0.58	0.11
11.60	0.87	0.66	0.13
11.80	1.03	0.82	0.23
12.00	1.41	1.19	**0.50**
12.20	1.98	1.75	**1.07**
12.40	2.14	1.91	0.37
12.60	2.23	2.00	0.18
12.80	2.30	2.07	0.12
13.00	2.36	2.13	0.11
13.20	2.41	2.18	0.09
13.40	2.45	2.22	0.08
13.60	2.48	2.26	0.06
13.80	2.51	2.28	0.04
14.00	2.53	2.30	0.04
14.20	2.56	2.33	0.04
14.40	2.58	2.35	0.04
14.60	2.60	2.37	0.04
14.80	2.62	2.39	0.04
15.00	2.65	2.42	0.04
15.20	2.66	2.43	0.03
15.40	2.67	2.44	0.02
15.60	2.69	2.46	0.02
15.80	2.70	2.47	0.02
16.00	2.71	2.48	0.02
16.20	2.72	2.49	0.02
16.40	2.74	2.51	0.02
16.60	2.75	2.52	0.02
16.80	2.76	2.53	0.02
17.00	2.77	2.54	0.02
17.20	2.78	2.55	0.02
17.40	2.79	2.56	0.02
17.60	2.80	2.57	0.02
17.80	2.81	2.58	0.02
18.00	2.82	2.59	0.02
18.20	2.83	2.60	0.02
18.40	2.84	2.61	0.02
18.60	2.85	2.62	0.02
18.80	2.86	2.63	0.02
19.00	2.87	2.64	0.02
19.20	2.88	2.65	0.01
19.40	2.89	2.66	0.01
19.60	2.90	2.67	0.01
19.80	2.90	2.67	0.01
20.00	**2.91**	**2.68**	0.01

Summary for Subcatchment 3S: untreated to streets

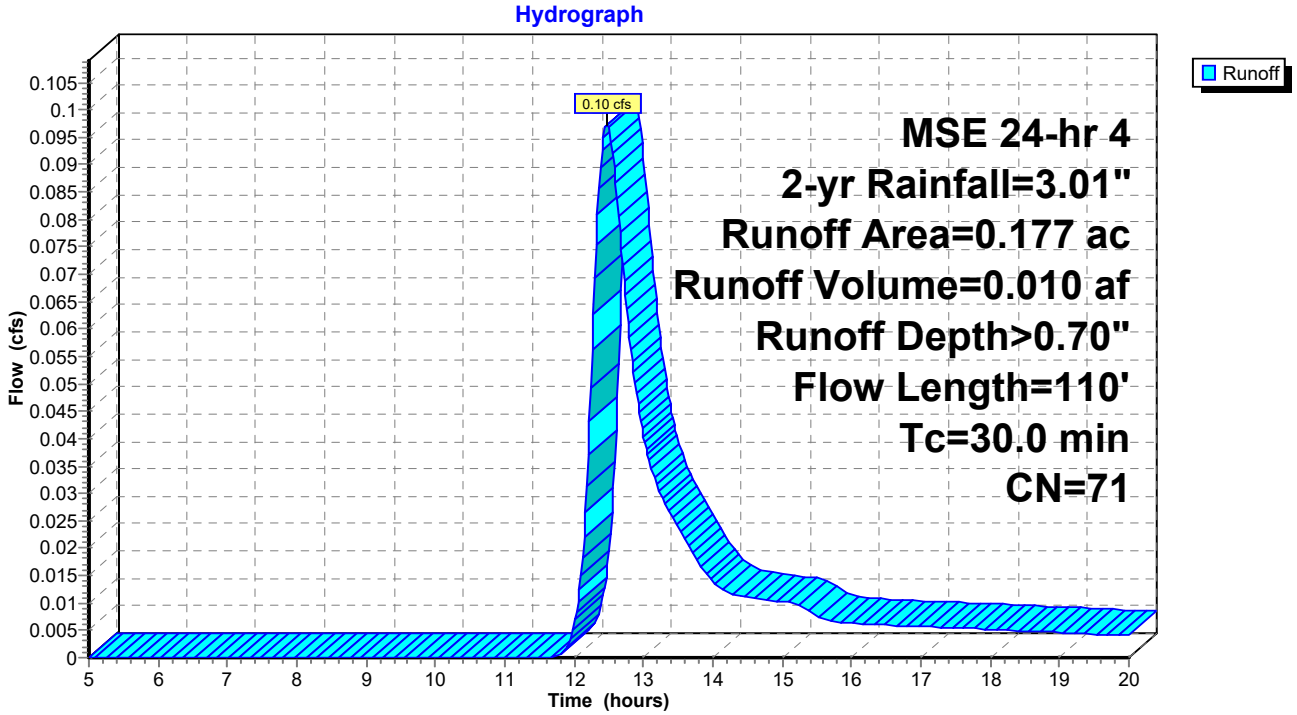
Runoff = 0.10 cfs @ 12.47 hrs, Volume= 0.010 af, Depth> 0.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.069	98	canopy
*	0.063	39	LS
*	0.027	61	lawn, HSG B
*	0.018	98	SW
	0.177	71	Weighted Average
	0.090		50.85% Pervious Area
	0.087		49.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	70		0.19		**Direct Entry, canopy**
12.0	20		0.03		**Direct Entry, LS**
12.0	20		0.03		**Direct Entry, lawn**
30.0	110	Total			

Subcatchment 3S: untreated to streets



Hydrograph for Subcatchment 3S: untreated to streets

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.20	0.50	0.00	0.00
10.40	0.53	0.00	0.00
10.60	0.56	0.00	0.00
10.80	0.60	0.00	0.00
11.00	0.65	0.00	0.00
11.20	0.71	0.00	0.00
11.40	0.78	0.00	0.00
11.60	0.87	0.00	0.00
11.80	1.03	0.01	0.00
12.00	1.41	0.08	0.01
12.20	1.98	0.26	0.04
12.40	2.14	0.32	**0.09**
12.60	2.23	0.36	**0.09**
12.80	2.30	0.39	0.06
13.00	2.36	0.42	0.04
13.20	2.41	0.45	0.03
13.40	2.45	0.47	0.03
13.60	2.48	0.48	0.02
13.80	2.51	0.50	0.02
14.00	2.53	0.51	0.01
14.20	2.56	0.52	0.01
14.40	2.58	0.53	0.01
14.60	2.60	0.54	0.01
14.80	2.62	0.55	0.01
15.00	2.65	0.57	0.01
15.20	2.66	0.57	0.01
15.40	2.67	0.58	0.01
15.60	2.69	0.59	0.01
15.80	2.70	0.59	0.01
16.00	2.71	0.60	0.01
16.20	2.72	0.61	0.01
16.40	2.74	0.61	0.01
16.60	2.75	0.62	0.01
16.80	2.76	0.63	0.01
17.00	2.77	0.63	0.01
17.20	2.78	0.64	0.01
17.40	2.79	0.64	0.01
17.60	2.80	0.65	0.01
17.80	2.81	0.66	0.01
18.00	2.82	0.66	0.01
18.20	2.83	0.67	0.01
18.40	2.84	0.67	0.00
18.60	2.85	0.68	0.00
18.80	2.86	0.68	0.00
19.00	2.87	0.69	0.00
19.20	2.88	0.69	0.00
19.40	2.89	0.70	0.00
19.60	2.90	0.70	0.00
19.80	2.90	0.71	0.00
20.00	**2.91**	**0.71**	0.00

Summary for Subcatchment 6S: S roof to MH8

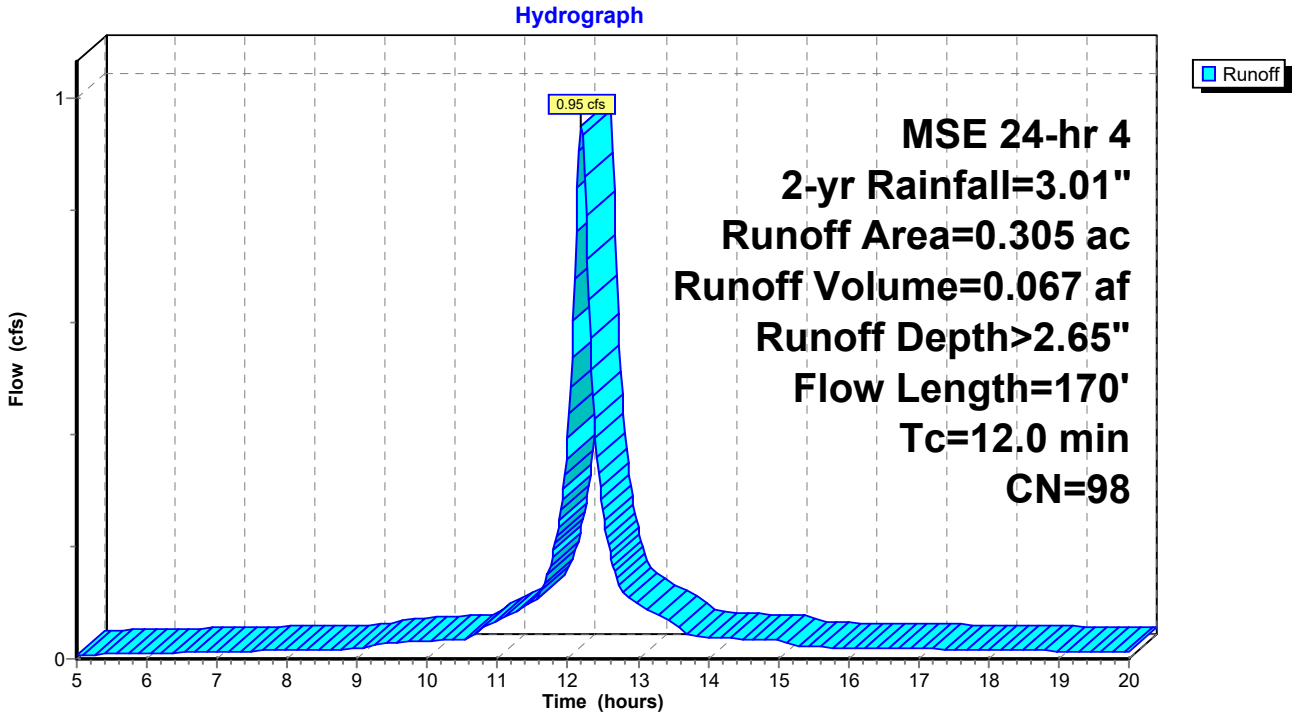
Runoff = 0.95 cfs @ 12.19 hrs, Volume= 0.067 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.305	98	fronting 10th
	0.305		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	170		0.24		**Direct Entry, NE Bldg Roof**

Subcatchment 6S: S roof to MH8



Hydrograph for Subcatchment 6S: S roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.01
5.20	0.15	0.04	0.01
5.40	0.16	0.04	0.01
5.60	0.17	0.05	0.01
5.80	0.18	0.05	0.01
6.00	0.19	0.06	0.01
6.20	0.20	0.07	0.01
6.40	0.21	0.07	0.01
6.60	0.22	0.08	0.01
6.80	0.23	0.09	0.01
7.00	0.24	0.10	0.01
7.20	0.25	0.11	0.01
7.40	0.26	0.11	0.01
7.60	0.27	0.12	0.01
7.80	0.29	0.13	0.01
8.00	0.30	0.14	0.02
8.20	0.31	0.15	0.02
8.40	0.32	0.16	0.02
8.60	0.34	0.18	0.02
8.80	0.35	0.19	0.02
9.00	0.36	0.20	0.02
9.20	0.39	0.22	0.02
9.40	0.41	0.24	0.03
9.60	0.43	0.26	0.03
9.80	0.45	0.28	0.03
10.00	0.48	0.30	0.03
10.20	0.50	0.32	0.03
10.40	0.53	0.34	0.03
10.60	0.56	0.37	0.04
10.80	0.60	0.41	0.05
11.00	0.65	0.46	0.07
11.20	0.71	0.51	0.08
11.40	0.78	0.58	0.09
11.60	0.87	0.66	0.11
11.80	1.03	0.82	0.19
12.00	1.41	1.19	0.39
12.20	1.98	1.75	**0.95**
12.40	2.14	1.91	0.39
12.60	2.23	2.00	0.19
12.80	2.30	2.07	0.12
13.00	2.36	2.13	0.10
13.20	2.41	2.18	0.08
13.40	2.45	2.22	0.07
13.60	2.48	2.26	0.06
13.80	2.51	2.28	0.04
14.00	2.53	2.30	0.04
14.20	2.56	2.33	0.04
14.40	2.58	2.35	0.04
14.60	2.60	2.37	0.03
14.80	2.62	2.39	0.03
15.00	2.65	2.42	0.03
15.20	2.66	2.43	0.03
15.40	2.67	2.44	0.02
15.60	2.69	2.46	0.02
15.80	2.70	2.47	0.02
16.00	2.71	2.48	0.02
16.20	2.72	2.49	0.02
16.40	2.74	2.51	0.02
16.60	2.75	2.52	0.02
16.80	2.76	2.53	0.02
17.00	2.77	2.54	0.02
17.20	2.78	2.55	0.02
17.40	2.79	2.56	0.02
17.60	2.80	2.57	0.02
17.80	2.81	2.58	0.02
18.00	2.82	2.59	0.02
18.20	2.83	2.60	0.02
18.40	2.84	2.61	0.01
18.60	2.85	2.62	0.01
18.80	2.86	2.63	0.01
19.00	2.87	2.64	0.01
19.20	2.88	2.65	0.01
19.40	2.89	2.66	0.01
19.60	2.90	2.67	0.01
19.80	2.90	2.67	0.01
20.00	**2.91**	**2.68**	0.01

Summary for Subcatchment 7S: to Inlets 8 & 9

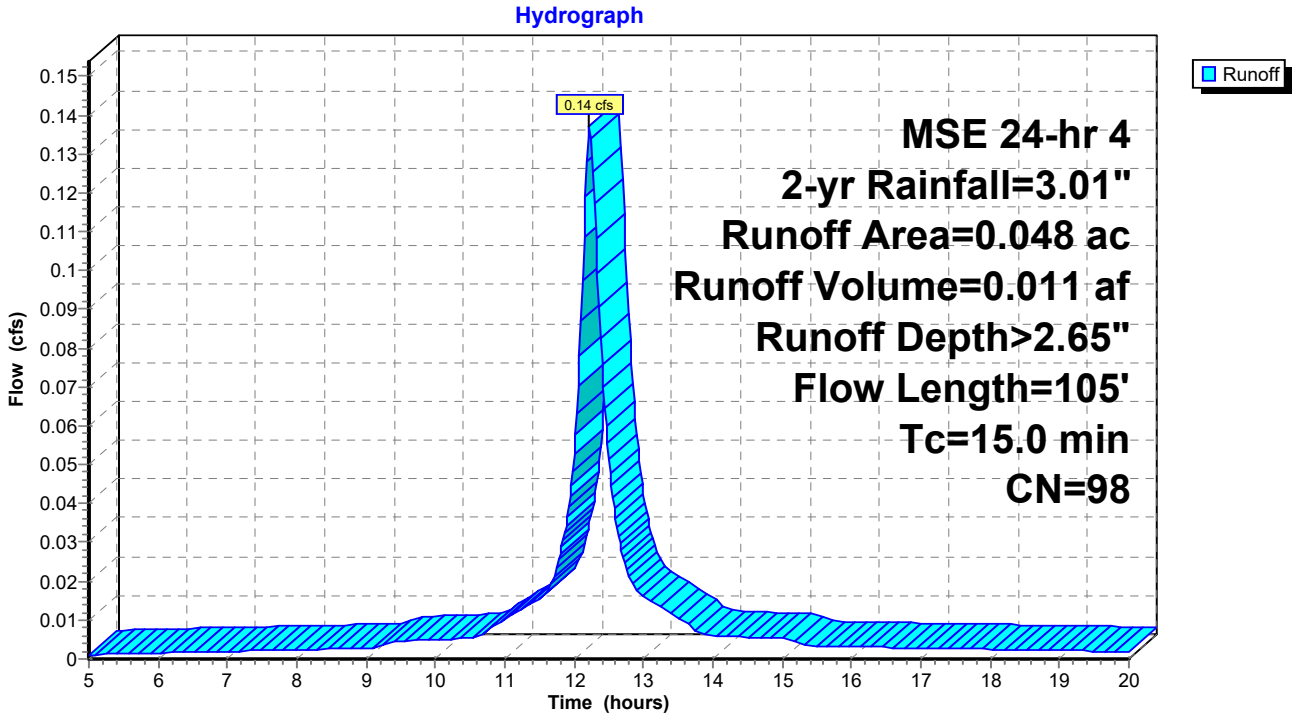
Runoff = 0.14 cfs @ 12.22 hrs, Volume= 0.011 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.046	98	pavement
*	0.002	98	SW
	0.048	98	Weighted Average
	0.048		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	55		0.13		**Direct Entry, pavement**
8.0	50		0.10		**Direct Entry, SW**
15.0	105	Total			

Subcatchment 7S: to Inlets 8 & 9



Hydrograph for Subcatchment 7S: to Inlets 8 & 9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.00
5.20	0.15	0.04	0.00
5.40	0.16	0.04	0.00
5.60	0.17	0.05	0.00
5.80	0.18	0.05	0.00
6.00	0.19	0.06	0.00
6.20	0.20	0.07	0.00
6.40	0.21	0.07	0.00
6.60	0.22	0.08	0.00
6.80	0.23	0.09	0.00
7.00	0.24	0.10	0.00
7.20	0.25	0.11	0.00
7.40	0.26	0.11	0.00
7.60	0.27	0.12	0.00
7.80	0.29	0.13	0.00
8.00	0.30	0.14	0.00
8.20	0.31	0.15	0.00
8.40	0.32	0.16	0.00
8.60	0.34	0.18	0.00
8.80	0.35	0.19	0.00
9.00	0.36	0.20	0.00
9.20	0.39	0.22	0.00
9.40	0.41	0.24	0.00
9.60	0.43	0.26	0.00
9.80	0.45	0.28	0.00
10.00	0.48	0.30	0.01
10.20	0.50	0.32	0.01
10.40	0.53	0.34	0.01
10.60	0.56	0.37	0.01
10.80	0.60	0.41	0.01
11.00	0.65	0.46	0.01
11.20	0.71	0.51	0.01
11.40	0.78	0.58	0.01
11.60	0.87	0.66	0.02
11.80	1.03	0.82	0.03
12.00	1.41	1.19	0.05
12.20	1.98	1.75	**0.13**
12.40	2.14	1.91	**0.08**
12.60	2.23	2.00	0.04
12.80	2.30	2.07	0.02
13.00	2.36	2.13	0.02
13.20	2.41	2.18	0.01
13.40	2.45	2.22	0.01
13.60	2.48	2.26	0.01
13.80	2.51	2.28	0.01
14.00	2.53	2.30	0.01
14.20	2.56	2.33	0.01
14.40	2.58	2.35	0.01
14.60	2.60	2.37	0.01
14.80	2.62	2.39	0.01
15.00	2.65	2.42	0.01
15.20	2.66	2.43	0.00
15.40	2.67	2.44	0.00
15.60	2.69	2.46	0.00
15.80	2.70	2.47	0.00
16.00	2.71	2.48	0.00
16.20	2.72	2.49	0.00
16.40	2.74	2.51	0.00
16.60	2.75	2.52	0.00
16.80	2.76	2.53	0.00
17.00	2.77	2.54	0.00
17.20	2.78	2.55	0.00
17.40	2.79	2.56	0.00
17.60	2.80	2.57	0.00
17.80	2.81	2.58	0.00
18.00	2.82	2.59	0.00
18.20	2.83	2.60	0.00
18.40	2.84	2.61	0.00
18.60	2.85	2.62	0.00
18.80	2.86	2.63	0.00
19.00	2.87	2.64	0.00
19.20	2.88	2.65	0.00
19.40	2.89	2.66	0.00
19.60	2.90	2.67	0.00
19.80	2.90	2.67	0.00
20.00	**2.91**	**2.68**	0.00

Summary for Subcatchment 8S: to Inlet 7

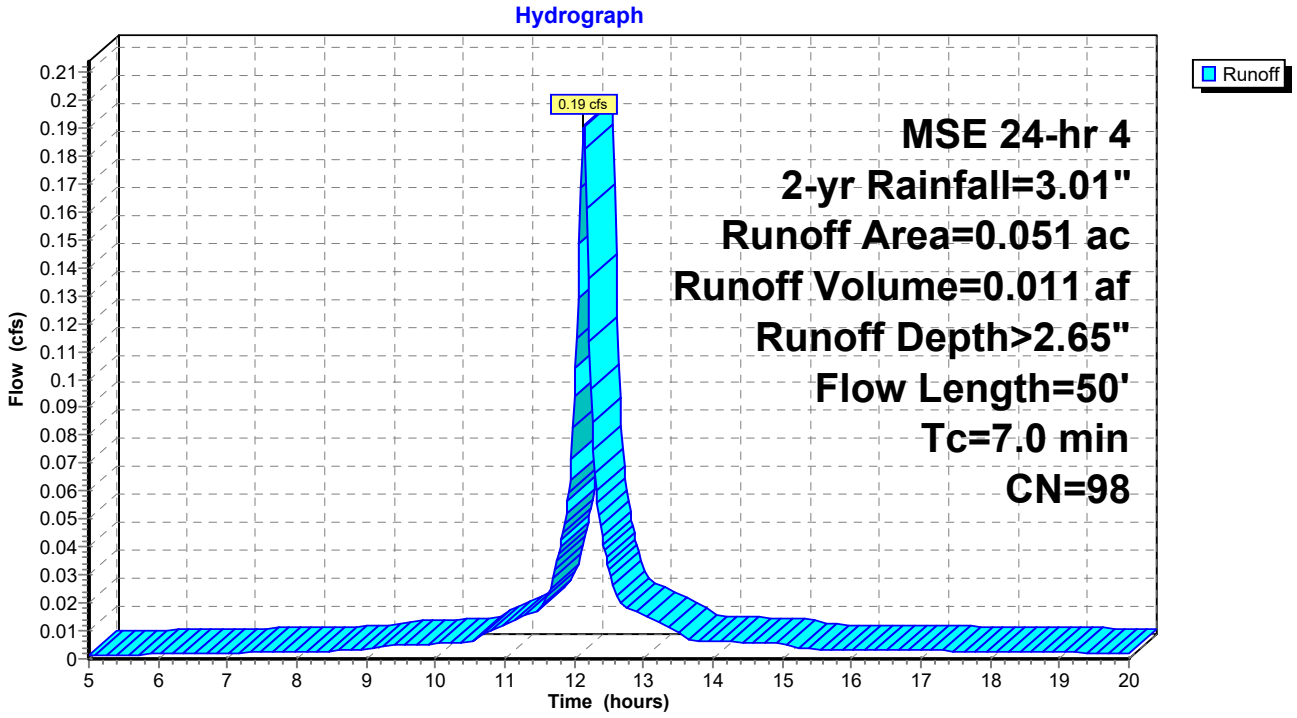
Runoff = 0.19 cfs @ 12.14 hrs, Volume= 0.011 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.051	98	pavement
	0.051		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	50		0.12		**Direct Entry, pavement**

Subcatchment 8S: to Inlet 7



Hydrograph for Subcatchment 8S: to Inlet 7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.00
5.20	0.15	0.04	0.00
5.40	0.16	0.04	0.00
5.60	0.17	0.05	0.00
5.80	0.18	0.05	0.00
6.00	0.19	0.06	0.00
6.20	0.20	0.07	0.00
6.40	0.21	0.07	0.00
6.60	0.22	0.08	0.00
6.80	0.23	0.09	0.00
7.00	0.24	0.10	0.00
7.20	0.25	0.11	0.00
7.40	0.26	0.11	0.00
7.60	0.27	0.12	0.00
7.80	0.29	0.13	0.00
8.00	0.30	0.14	0.00
8.20	0.31	0.15	0.00
8.40	0.32	0.16	0.00
8.60	0.34	0.18	0.00
8.80	0.35	0.19	0.00
9.00	0.36	0.20	0.00
9.20	0.39	0.22	0.00
9.40	0.41	0.24	0.00
9.60	0.43	0.26	0.01
9.80	0.45	0.28	0.01
10.00	0.48	0.30	0.01
10.20	0.50	0.32	0.01
10.40	0.53	0.34	0.01
10.60	0.56	0.37	0.01
10.80	0.60	0.41	0.01
11.00	0.65	0.46	0.01
11.20	0.71	0.51	0.01
11.40	0.78	0.58	0.02
11.60	0.87	0.66	0.02
11.80	1.03	0.82	0.04
12.00	1.41	1.19	**0.09**
12.20	1.98	1.75	**0.14**
12.40	2.14	1.91	0.04
12.60	2.23	2.00	0.02
12.80	2.30	2.07	0.02
13.00	2.36	2.13	0.02
13.20	2.41	2.18	0.01
13.40	2.45	2.22	0.01
13.60	2.48	2.26	0.01
13.80	2.51	2.28	0.01
14.00	2.53	2.30	0.01
14.20	2.56	2.33	0.01
14.40	2.58	2.35	0.01
14.60	2.60	2.37	0.01
14.80	2.62	2.39	0.01
15.00	2.65	2.42	0.01
15.20	2.66	2.43	0.00
15.40	2.67	2.44	0.00
15.60	2.69	2.46	0.00
15.80	2.70	2.47	0.00
16.00	2.71	2.48	0.00
16.20	2.72	2.49	0.00
16.40	2.74	2.51	0.00
16.60	2.75	2.52	0.00
16.80	2.76	2.53	0.00
17.00	2.77	2.54	0.00
17.20	2.78	2.55	0.00
17.40	2.79	2.56	0.00
17.60	2.80	2.57	0.00
17.80	2.81	2.58	0.00
18.00	2.82	2.59	0.00
18.20	2.83	2.60	0.00
18.40	2.84	2.61	0.00
18.60	2.85	2.62	0.00
18.80	2.86	2.63	0.00
19.00	2.87	2.64	0.00
19.20	2.88	2.65	0.00
19.40	2.89	2.66	0.00
19.60	2.90	2.67	0.00
19.80	2.90	2.67	0.00
20.00	**2.91**	**2.68**	0.00

Summary for Subcatchment 9S: to Inlet 6

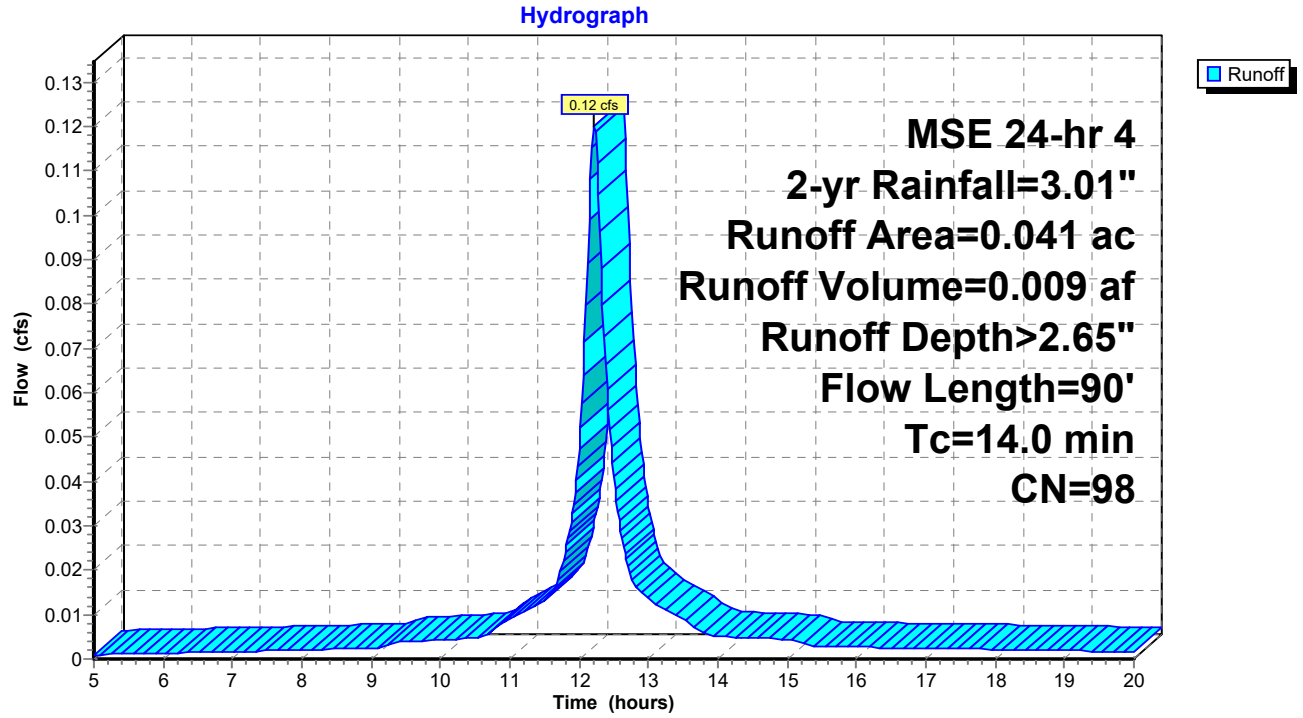
Runoff = 0.12 cfs @ 12.21 hrs, Volume= 0.009 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.032	98	pavement
*	0.009	98	SW
	0.041	98	Weighted Average
	0.041		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	45		0.11		**Direct Entry, pavement**
7.0	45		0.11		**Direct Entry, SW**
14.0	90	Total			

Subcatchment 9S: to Inlet 6



Hydrograph for Subcatchment 9S: to Inlet 6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.00
5.20	0.15	0.04	0.00
5.40	0.16	0.04	0.00
5.60	0.17	0.05	0.00
5.80	0.18	0.05	0.00
6.00	0.19	0.06	0.00
6.20	0.20	0.07	0.00
6.40	0.21	0.07	0.00
6.60	0.22	0.08	0.00
6.80	0.23	0.09	0.00
7.00	0.24	0.10	0.00
7.20	0.25	0.11	0.00
7.40	0.26	0.11	0.00
7.60	0.27	0.12	0.00
7.80	0.29	0.13	0.00
8.00	0.30	0.14	0.00
8.20	0.31	0.15	0.00
8.40	0.32	0.16	0.00
8.60	0.34	0.18	0.00
8.80	0.35	0.19	0.00
9.00	0.36	0.20	0.00
9.20	0.39	0.22	0.00
9.40	0.41	0.24	0.00
9.60	0.43	0.26	0.00
9.80	0.45	0.28	0.00
10.00	0.48	0.30	0.00
10.20	0.50	0.32	0.00
10.40	0.53	0.34	0.00
10.60	0.56	0.37	0.00
10.80	0.60	0.41	0.01
11.00	0.65	0.46	0.01
11.20	0.71	0.51	0.01
11.40	0.78	0.58	0.01
11.60	0.87	0.66	0.01
11.80	1.03	0.82	0.02
12.00	1.41	1.19	0.05
12.20	1.98	1.75	**0.12**
12.40	2.14	1.91	**0.06**
12.60	2.23	2.00	0.03
12.80	2.30	2.07	0.02
13.00	2.36	2.13	0.01
13.20	2.41	2.18	0.01
13.40	2.45	2.22	0.01
13.60	2.48	2.26	0.01
13.80	2.51	2.28	0.01
14.00	2.53	2.30	0.01
14.20	2.56	2.33	0.00
14.40	2.58	2.35	0.00
14.60	2.60	2.37	0.00
14.80	2.62	2.39	0.00
15.00	2.65	2.42	0.00
15.20	2.66	2.43	0.00
15.40	2.67	2.44	0.00
15.60	2.69	2.46	0.00
15.80	2.70	2.47	0.00
16.00	2.71	2.48	0.00
16.20	2.72	2.49	0.00
16.40	2.74	2.51	0.00
16.60	2.75	2.52	0.00
16.80	2.76	2.53	0.00
17.00	2.77	2.54	0.00
17.20	2.78	2.55	0.00
17.40	2.79	2.56	0.00
17.60	2.80	2.57	0.00
17.80	2.81	2.58	0.00
18.00	2.82	2.59	0.00
18.20	2.83	2.60	0.00
18.40	2.84	2.61	0.00
18.60	2.85	2.62	0.00
18.80	2.86	2.63	0.00
19.00	2.87	2.64	0.00
19.20	2.88	2.65	0.00
19.40	2.89	2.66	0.00
19.60	2.90	2.67	0.00
19.80	2.90	2.67	0.00
20.00	**2.91**	**2.68**	0.00

Summary for Subcatchment 10S: to Inlet 5

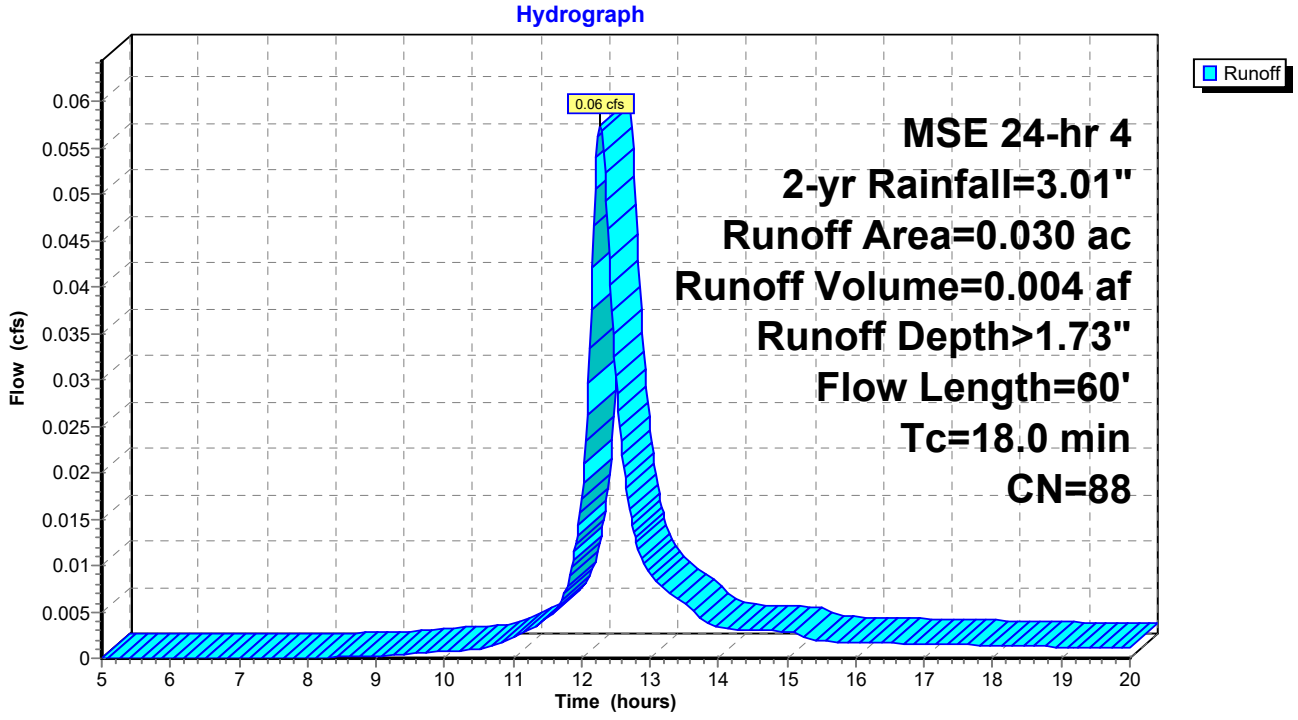
Runoff = 0.06 cfs @ 12.27 hrs, Volume= 0.004 af, Depth> 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.005	39	LS
	0.030	88	Weighted Average
	0.005		16.67% Pervious Area
	0.025		83.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40		0.11		**Direct Entry, pavement**
12.0	20		0.03		**Direct Entry, LS**
18.0	60	Total			

Subcatchment 10S: to Inlet 5



Hydrograph for Subcatchment 10S: to Inlet 5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.01	0.00
9.20	0.39	0.01	0.00
9.40	0.41	0.01	0.00
9.60	0.43	0.02	0.00
9.80	0.45	0.02	0.00
10.00	0.48	0.03	0.00
10.20	0.50	0.03	0.00
10.40	0.53	0.04	0.00
10.60	0.56	0.05	0.00
10.80	0.60	0.06	0.00
11.00	0.65	0.08	0.00
11.20	0.71	0.11	0.00
11.40	0.78	0.14	0.00
11.60	0.87	0.18	0.00
11.80	1.03	0.27	0.01
12.00	1.41	0.52	0.02
12.20	1.98	0.95	**0.05**
12.40	2.14	1.08	**0.04**
12.60	2.23	1.15	0.02
12.80	2.30	1.21	0.01
13.00	2.36	1.26	0.01
13.20	2.41	1.31	0.01
13.40	2.45	1.34	0.01
13.60	2.48	1.37	0.01
13.80	2.51	1.39	0.00
14.00	2.53	1.41	0.00
14.20	2.56	1.43	0.00
14.40	2.58	1.45	0.00
14.60	2.60	1.47	0.00
14.80	2.62	1.49	0.00
15.00	2.65	1.51	0.00
15.20	2.66	1.52	0.00
15.40	2.67	1.53	0.00
15.60	2.69	1.54	0.00
15.80	2.70	1.55	0.00
16.00	2.71	1.56	0.00
16.20	2.72	1.58	0.00
16.40	2.74	1.59	0.00
16.60	2.75	1.60	0.00
16.80	2.76	1.61	0.00
17.00	2.77	1.62	0.00
17.20	2.78	1.63	0.00
17.40	2.79	1.64	0.00
17.60	2.80	1.65	0.00
17.80	2.81	1.65	0.00
18.00	2.82	1.66	0.00
18.20	2.83	1.67	0.00
18.40	2.84	1.68	0.00
18.60	2.85	1.69	0.00
18.80	2.86	1.70	0.00
19.00	2.87	1.70	0.00
19.20	2.88	1.71	0.00
19.40	2.89	1.72	0.00
19.60	2.90	1.73	0.00
19.80	2.90	1.73	0.00
20.00	**2.91**	**1.74**	0.00

Summary for Subcatchment 11S: to Inlet 4

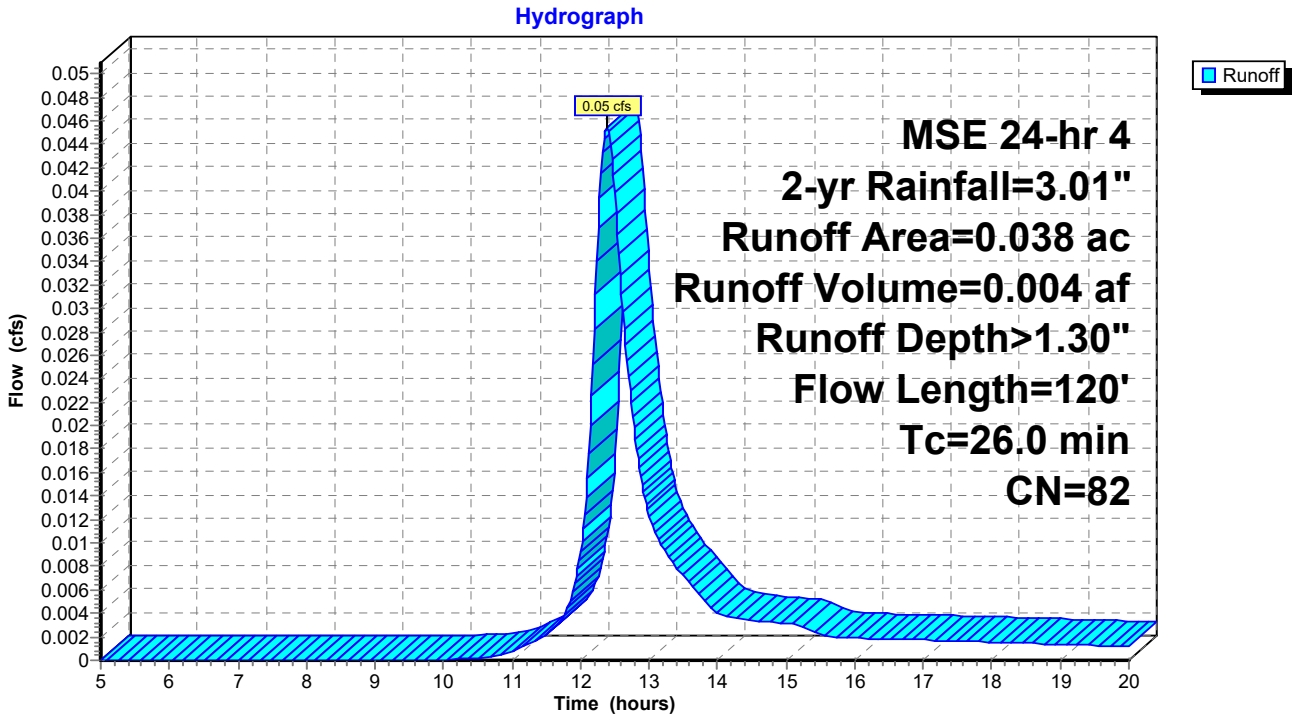
Runoff = 0.05 cfs @ 12.38 hrs, Volume= 0.004 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.003	98	SW
*	0.010	39	LS
	0.038	82	Weighted Average
	0.010		26.32% Pervious Area
	0.028		73.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	40		0.10		**Direct Entry, pavement**
7.0	40		0.10		**Direct Entry, SW**
12.0	40		0.06		**Direct Entry, LS**
26.0	120	Total			

Subcatchment 11S: to Inlet 4



Hydrograph for Subcatchment 11S: to Inlet 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.20	0.50	0.00	0.00
10.40	0.53	0.00	0.00
10.60	0.56	0.01	0.00
10.80	0.60	0.01	0.00
11.00	0.65	0.02	0.00
11.20	0.71	0.03	0.00
11.40	0.78	0.05	0.00
11.60	0.87	0.07	0.00
11.80	1.03	0.13	0.00
12.00	1.41	0.30	0.01
12.20	1.98	0.63	**0.03**
12.40	2.14	0.74	**0.05**
12.60	2.23	0.80	0.03
12.80	2.30	0.85	0.02
13.00	2.36	0.90	0.01
13.20	2.41	0.93	0.01
13.40	2.45	0.96	0.01
13.60	2.48	0.99	0.01
13.80	2.51	1.00	0.01
14.00	2.53	1.02	0.00
14.20	2.56	1.04	0.00
14.40	2.58	1.06	0.00
14.60	2.60	1.07	0.00
14.80	2.62	1.09	0.00
15.00	2.65	1.11	0.00
15.20	2.66	1.12	0.00
15.40	2.67	1.13	0.00
15.60	2.69	1.14	0.00
15.80	2.70	1.15	0.00
16.00	2.71	1.16	0.00
16.20	2.72	1.17	0.00
16.40	2.74	1.17	0.00
16.60	2.75	1.18	0.00
16.80	2.76	1.19	0.00
17.00	2.77	1.20	0.00
17.20	2.78	1.21	0.00
17.40	2.79	1.22	0.00
17.60	2.80	1.23	0.00
17.80	2.81	1.23	0.00
18.00	2.82	1.24	0.00
18.20	2.83	1.25	0.00
18.40	2.84	1.26	0.00
18.60	2.85	1.26	0.00
18.80	2.86	1.27	0.00
19.00	2.87	1.28	0.00
19.20	2.88	1.29	0.00
19.40	2.89	1.29	0.00
19.60	2.90	1.30	0.00
19.80	2.90	1.30	0.00
20.00	**2.91**	**1.31**	0.00

Summary for Subcatchment 12S: to inlet 3

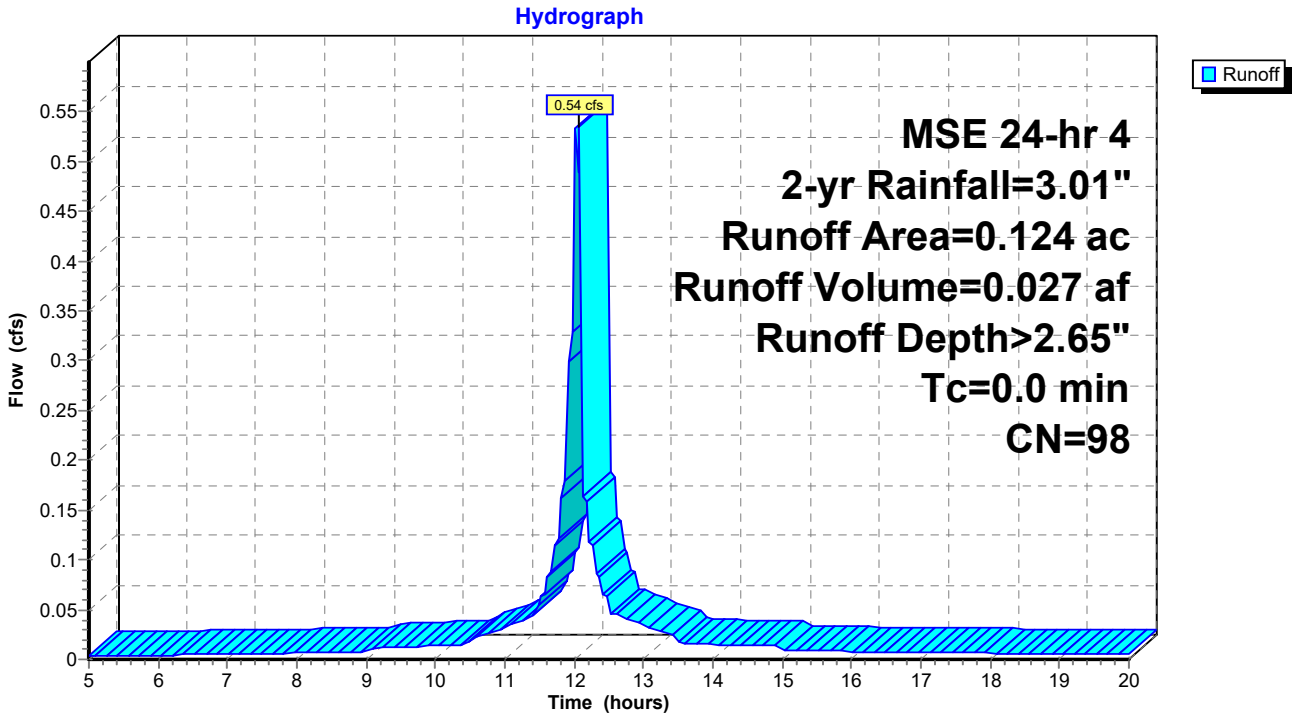
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.54 cfs @ 12.08 hrs, Volume= 0.027 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.009	98	open shelter
*	0.059	98	SW
*	0.034	98	parking AC pavement
*	0.022	98	PIP play surface
	0.124	98	Weighted Average
	0.124		100.00% Impervious Area

Subcatchment 12S: to inlet 3



Hydrograph for Subcatchment 12S: to inlet 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.00
5.20	0.15	0.04	0.00
5.40	0.16	0.04	0.00
5.60	0.17	0.05	0.00
5.80	0.18	0.05	0.00
6.00	0.19	0.06	0.00
6.20	0.20	0.07	0.00
6.40	0.21	0.07	0.00
6.60	0.22	0.08	0.00
6.80	0.23	0.09	0.01
7.00	0.24	0.10	0.01
7.20	0.25	0.11	0.01
7.40	0.26	0.11	0.01
7.60	0.27	0.12	0.01
7.80	0.29	0.13	0.01
8.00	0.30	0.14	0.01
8.20	0.31	0.15	0.01
8.40	0.32	0.16	0.01
8.60	0.34	0.18	0.01
8.80	0.35	0.19	0.01
9.00	0.36	0.20	0.01
9.20	0.39	0.22	0.01
9.40	0.41	0.24	0.01
9.60	0.43	0.26	0.01
9.80	0.45	0.28	0.01
10.00	0.48	0.30	0.01
10.20	0.50	0.32	0.01
10.40	0.53	0.34	0.01
10.60	0.56	0.37	0.02
10.80	0.60	0.41	0.03
11.00	0.65	0.46	0.03
11.20	0.71	0.51	0.04
11.40	0.78	0.58	0.04
11.60	0.87	0.66	0.07
11.80	1.03	0.82	0.14
12.00	1.41	1.19	**0.42**
12.20	1.98	1.75	**0.14**
12.40	2.14	1.91	0.08
12.60	2.23	2.00	0.05
12.80	2.30	2.07	0.04
13.00	2.36	2.13	0.03
13.20	2.41	2.18	0.03
13.40	2.45	2.22	0.02
13.60	2.48	2.26	0.02
13.80	2.51	2.28	0.02
14.00	2.53	2.30	0.01
14.20	2.56	2.33	0.01
14.40	2.58	2.35	0.01
14.60	2.60	2.37	0.01
14.80	2.62	2.39	0.01
15.00	2.65	2.42	0.01
15.20	2.66	2.43	0.01
15.40	2.67	2.44	0.01
15.60	2.69	2.46	0.01
15.80	2.70	2.47	0.01
16.00	2.71	2.48	0.01
16.20	2.72	2.49	0.01
16.40	2.74	2.51	0.01
16.60	2.75	2.52	0.01
16.80	2.76	2.53	0.01
17.00	2.77	2.54	0.01
17.20	2.78	2.55	0.01
17.40	2.79	2.56	0.01
17.60	2.80	2.57	0.01
17.80	2.81	2.58	0.01
18.00	2.82	2.59	0.01
18.20	2.83	2.60	0.01
18.40	2.84	2.61	0.01
18.60	2.85	2.62	0.01
18.80	2.86	2.63	0.01
19.00	2.87	2.64	0.01
19.20	2.88	2.65	0.01
19.40	2.89	2.66	0.01
19.60	2.90	2.67	0.00
19.80	2.90	2.67	0.00
20.00	**2.91**	**2.68**	0.00

Summary for Subcatchment 13S: to NDS 2

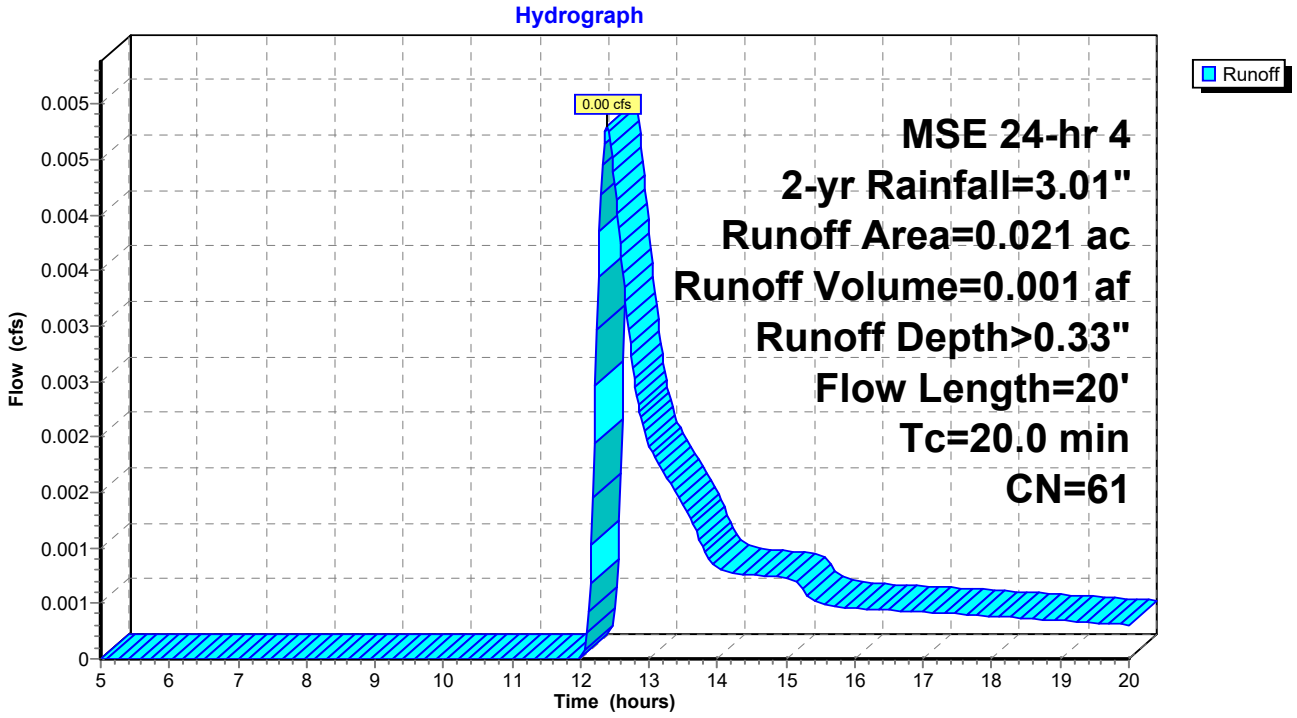
Runoff = 0.00 cfs @ 12.39 hrs, Volume= 0.001 af, Depth> 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.021	61	lawn, HSG B
	0.021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	20		0.02		**Direct Entry, lawn**

Subcatchment 13S: to NDS 2



Hydrograph for Subcatchment 13S: to NDS 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.20	0.50	0.00	0.00
10.40	0.53	0.00	0.00
10.60	0.56	0.00	0.00
10.80	0.60	0.00	0.00
11.00	0.65	0.00	0.00
11.20	0.71	0.00	0.00
11.40	0.78	0.00	0.00
11.60	0.87	0.00	0.00
11.80	1.03	0.00	0.00
12.00	1.41	0.00	0.00
12.20	1.98	0.07	**0.00**
12.40	2.14	0.10	**0.00**
12.60	2.23	0.12	0.00
12.80	2.30	0.14	0.00
13.00	2.36	0.16	0.00
13.20	2.41	0.17	0.00
13.40	2.45	0.18	0.00
13.60	2.48	0.19	0.00
13.80	2.51	0.20	0.00
14.00	2.53	0.21	0.00
14.20	2.56	0.21	0.00
14.40	2.58	0.22	0.00
14.60	2.60	0.23	0.00
14.80	2.62	0.23	0.00
15.00	2.65	0.24	0.00
15.20	2.66	0.25	0.00
15.40	2.67	0.25	0.00
15.60	2.69	0.25	0.00
15.80	2.70	0.26	0.00
16.00	2.71	0.26	0.00
16.20	2.72	0.27	0.00
16.40	2.74	0.27	0.00
16.60	2.75	0.27	0.00
16.80	2.76	0.28	0.00
17.00	2.77	0.28	0.00
17.20	2.78	0.29	0.00
17.40	2.79	0.29	0.00
17.60	2.80	0.29	0.00
17.80	2.81	0.30	0.00
18.00	2.82	0.30	0.00
18.20	2.83	0.30	0.00
18.40	2.84	0.31	0.00
18.60	2.85	0.31	0.00
18.80	2.86	0.31	0.00
19.00	2.87	0.32	0.00
19.20	2.88	0.32	0.00
19.40	2.89	0.32	0.00
19.60	2.90	0.33	0.00
19.80	2.90	0.33	0.00
20.00	**2.91**	**0.33**	0.00

Summary for Subcatchment 14S: to NDS 3-5

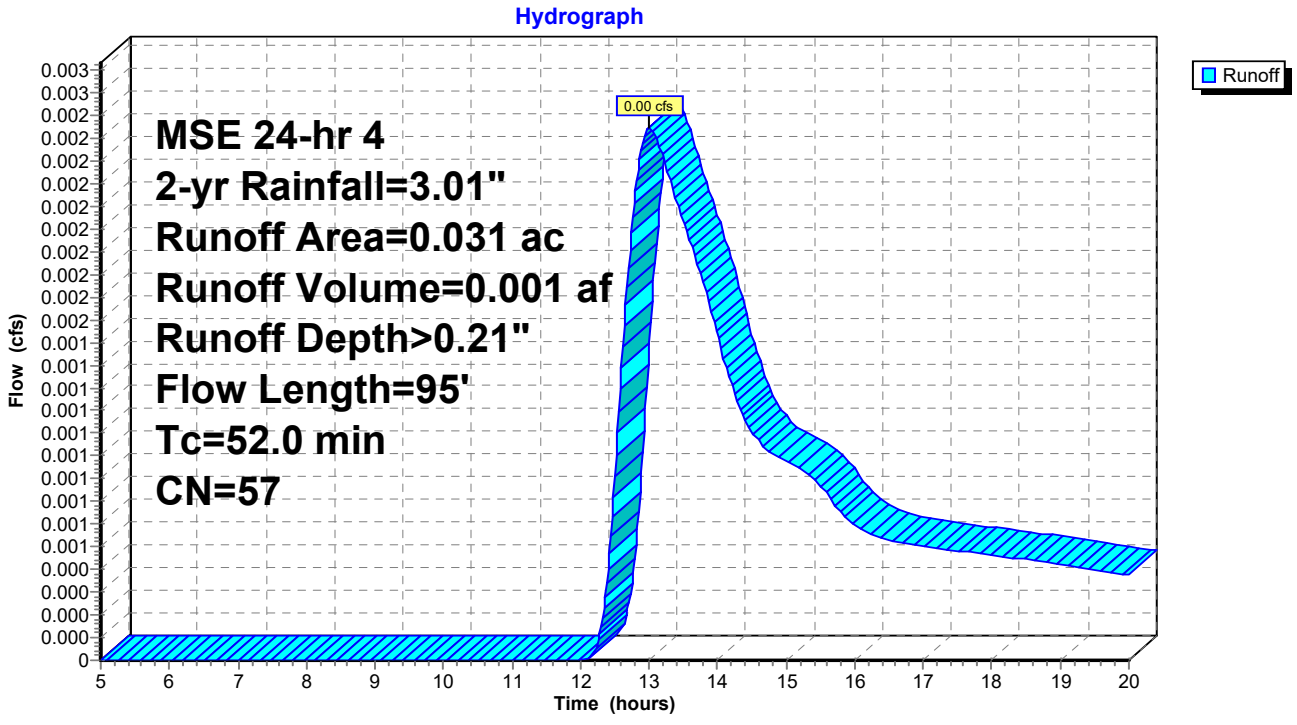
Runoff = 0.00 cfs @ 13.00 hrs, Volume= 0.001 af, Depth> 0.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.022	61	lawn, HSG B
*	0.008	39	LS
*	0.001	98	SW via LS
	0.031	57	Weighted Average
	0.030		96.77% Pervious Area
	0.001		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	75		0.10		**Direct Entry, lawn**
20.0	10		0.01		**Direct Entry, LS**
20.0	10		0.01		**Direct Entry, SW via LS**
52.0	95	Total			

Subcatchment 14S: to NDS 3-5



Hydrograph for Subcatchment 14S: to NDS 3-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.20	0.50	0.00	0.00
10.40	0.53	0.00	0.00
10.60	0.56	0.00	0.00
10.80	0.60	0.00	0.00
11.00	0.65	0.00	0.00
11.20	0.71	0.00	0.00
11.40	0.78	0.00	0.00
11.60	0.87	0.00	0.00
11.80	1.03	0.00	0.00
12.00	1.41	0.00	0.00
12.20	1.98	0.03	0.00
12.40	2.14	0.05	0.00
12.60	2.23	0.06	0.00
12.80	2.30	0.07	0.00
13.00	2.36	0.09	**0.00**
13.20	2.41	0.10	0.00
13.40	2.45	0.11	0.00
13.60	2.48	0.11	0.00
13.80	2.51	0.12	0.00
14.00	2.53	0.12	0.00
14.20	2.56	0.13	0.00
14.40	2.58	0.13	0.00
14.60	2.60	0.14	0.00
14.80	2.62	0.14	0.00
15.00	2.65	0.15	0.00
15.20	2.66	0.15	0.00
15.40	2.67	0.16	0.00
15.60	2.69	0.16	0.00
15.80	2.70	0.16	0.00
16.00	2.71	0.17	0.00
16.20	2.72	0.17	0.00
16.40	2.74	0.17	0.00
16.60	2.75	0.17	0.00
16.80	2.76	0.18	0.00
17.00	2.77	0.18	0.00
17.20	2.78	0.18	0.00
17.40	2.79	0.19	0.00
17.60	2.80	0.19	0.00
17.80	2.81	0.19	0.00
18.00	2.82	0.20	0.00
18.20	2.83	0.20	0.00
18.40	2.84	0.20	0.00
18.60	2.85	0.20	0.00
18.80	2.86	0.21	0.00
19.00	2.87	0.21	0.00
19.20	2.88	0.21	0.00
19.40	2.89	0.21	0.00
19.60	2.90	0.22	0.00
19.80	2.90	0.22	0.00
20.00	**2.91**	**0.22**	0.00

Summary for Subcatchment 16S: to NDS11-6

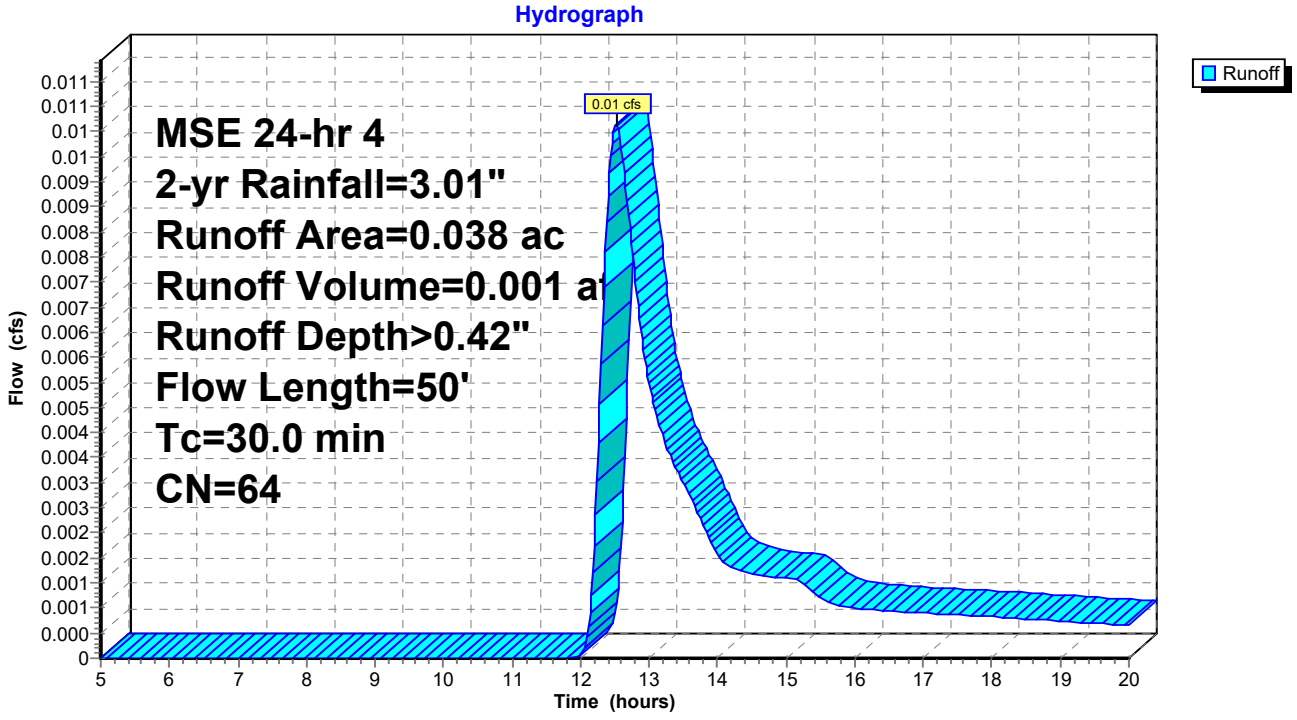
Runoff = 0.01 cfs @ 12.52 hrs, Volume= 0.001 af, Depth> 0.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.022	39	LS
*	0.016	98	SW
	0.038	64	Weighted Average
	0.022		57.89% Pervious Area
	0.016		42.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	40		0.04		**Direct Entry, LS**
15.0	10		0.01		**Direct Entry, SW via LS**
30.0	50	Total			

Subcatchment 16S: to NDS11-6



Hydrograph for Subcatchment 16S: to NDS11-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.00	0.00
5.20	0.15	0.00	0.00
5.40	0.16	0.00	0.00
5.60	0.17	0.00	0.00
5.80	0.18	0.00	0.00
6.00	0.19	0.00	0.00
6.20	0.20	0.00	0.00
6.40	0.21	0.00	0.00
6.60	0.22	0.00	0.00
6.80	0.23	0.00	0.00
7.00	0.24	0.00	0.00
7.20	0.25	0.00	0.00
7.40	0.26	0.00	0.00
7.60	0.27	0.00	0.00
7.80	0.29	0.00	0.00
8.00	0.30	0.00	0.00
8.20	0.31	0.00	0.00
8.40	0.32	0.00	0.00
8.60	0.34	0.00	0.00
8.80	0.35	0.00	0.00
9.00	0.36	0.00	0.00
9.20	0.39	0.00	0.00
9.40	0.41	0.00	0.00
9.60	0.43	0.00	0.00
9.80	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.20	0.50	0.00	0.00
10.40	0.53	0.00	0.00
10.60	0.56	0.00	0.00
10.80	0.60	0.00	0.00
11.00	0.65	0.00	0.00
11.20	0.71	0.00	0.00
11.40	0.78	0.00	0.00
11.60	0.87	0.00	0.00
11.80	1.03	0.00	0.00
12.00	1.41	0.01	0.00
12.20	1.98	0.11	0.00
12.40	2.14	0.16	**0.01**
12.60	2.23	0.18	**0.01**
12.80	2.30	0.20	0.01
13.00	2.36	0.22	0.01
13.20	2.41	0.24	0.00
13.40	2.45	0.25	0.00
13.60	2.48	0.26	0.00
13.80	2.51	0.27	0.00
14.00	2.53	0.28	0.00
14.20	2.56	0.29	0.00
14.40	2.58	0.30	0.00
14.60	2.60	0.31	0.00
14.80	2.62	0.32	0.00
15.00	2.65	0.32	0.00
15.20	2.66	0.33	0.00
15.40	2.67	0.33	0.00
15.60	2.69	0.34	0.00
15.80	2.70	0.34	0.00
16.00	2.71	0.35	0.00
16.20	2.72	0.35	0.00
16.40	2.74	0.36	0.00
16.60	2.75	0.36	0.00
16.80	2.76	0.37	0.00
17.00	2.77	0.37	0.00
17.20	2.78	0.38	0.00
17.40	2.79	0.38	0.00
17.60	2.80	0.39	0.00
17.80	2.81	0.39	0.00
18.00	2.82	0.39	0.00
18.20	2.83	0.40	0.00
18.40	2.84	0.40	0.00
18.60	2.85	0.41	0.00
18.80	2.86	0.41	0.00
19.00	2.87	0.41	0.00
19.20	2.88	0.42	0.00
19.40	2.89	0.42	0.00
19.60	2.90	0.42	0.00
19.80	2.90	0.43	0.00
20.00	**2.91**	**0.43**	0.00

Summary for Subcatchment 17S: untreated alley to inlet 2

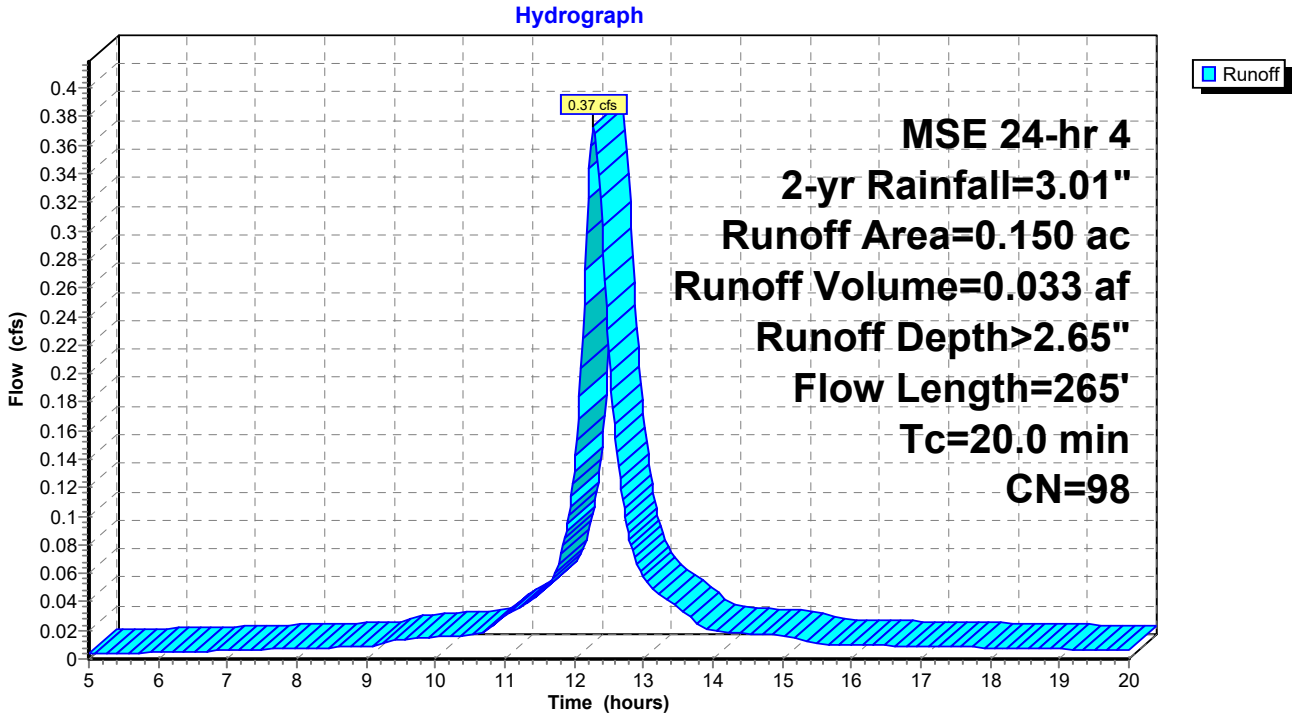
Runoff = 0.37 cfs @ 12.28 hrs, Volume= 0.033 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.042	98	conc alley
*	0.108	98	roof + alley run-on
	0.150	98	Weighted Average
	0.150		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	80		0.17		**Direct Entry, conc alley**
12.0	185		0.26		**Direct Entry, roof + alley run-on**
20.0	265	Total			

Subcatchment 17S: untreated alley to inlet 2



Hydrograph for Subcatchment 17S: untreated alley to inlet 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.00
5.20	0.15	0.04	0.00
5.40	0.16	0.04	0.00
5.60	0.17	0.05	0.00
5.80	0.18	0.05	0.00
6.00	0.19	0.06	0.00
6.20	0.20	0.07	0.00
6.40	0.21	0.07	0.01
6.60	0.22	0.08	0.01
6.80	0.23	0.09	0.01
7.00	0.24	0.10	0.01
7.20	0.25	0.11	0.01
7.40	0.26	0.11	0.01
7.60	0.27	0.12	0.01
7.80	0.29	0.13	0.01
8.00	0.30	0.14	0.01
8.20	0.31	0.15	0.01
8.40	0.32	0.16	0.01
8.60	0.34	0.18	0.01
8.80	0.35	0.19	0.01
9.00	0.36	0.20	0.01
9.20	0.39	0.22	0.01
9.40	0.41	0.24	0.01
9.60	0.43	0.26	0.01
9.80	0.45	0.28	0.01
10.00	0.48	0.30	0.02
10.20	0.50	0.32	0.02
10.40	0.53	0.34	0.02
10.60	0.56	0.37	0.02
10.80	0.60	0.41	0.02
11.00	0.65	0.46	0.03
11.20	0.71	0.51	0.04
11.40	0.78	0.58	0.04
11.60	0.87	0.66	0.05
11.80	1.03	0.82	0.07
12.00	1.41	1.19	0.13
12.20	1.98	1.75	**0.32**
12.40	2.14	1.91	**0.30**
12.60	2.23	2.00	0.15
12.80	2.30	2.07	0.08
13.00	2.36	2.13	0.06
13.20	2.41	2.18	0.05
13.40	2.45	2.22	0.04
13.60	2.48	2.26	0.03
13.80	2.51	2.28	0.02
14.00	2.53	2.30	0.02
14.20	2.56	2.33	0.02
14.40	2.58	2.35	0.02
14.60	2.60	2.37	0.02
14.80	2.62	2.39	0.02
15.00	2.65	2.42	0.02
15.20	2.66	2.43	0.01
15.40	2.67	2.44	0.01
15.60	2.69	2.46	0.01
15.80	2.70	2.47	0.01
16.00	2.71	2.48	0.01
16.20	2.72	2.49	0.01
16.40	2.74	2.51	0.01
16.60	2.75	2.52	0.01
16.80	2.76	2.53	0.01
17.00	2.77	2.54	0.01
17.20	2.78	2.55	0.01
17.40	2.79	2.56	0.01
17.60	2.80	2.57	0.01
17.80	2.81	2.58	0.01
18.00	2.82	2.59	0.01
18.20	2.83	2.60	0.01
18.40	2.84	2.61	0.01
18.60	2.85	2.62	0.01
18.80	2.86	2.63	0.01
19.00	2.87	2.64	0.01
19.20	2.88	2.65	0.01
19.40	2.89	2.66	0.01
19.60	2.90	2.67	0.01
19.80	2.90	2.67	0.01
20.00	**2.91**	**2.68**	0.01

Summary for Subcatchment 18S: untreated alley to inlet 1

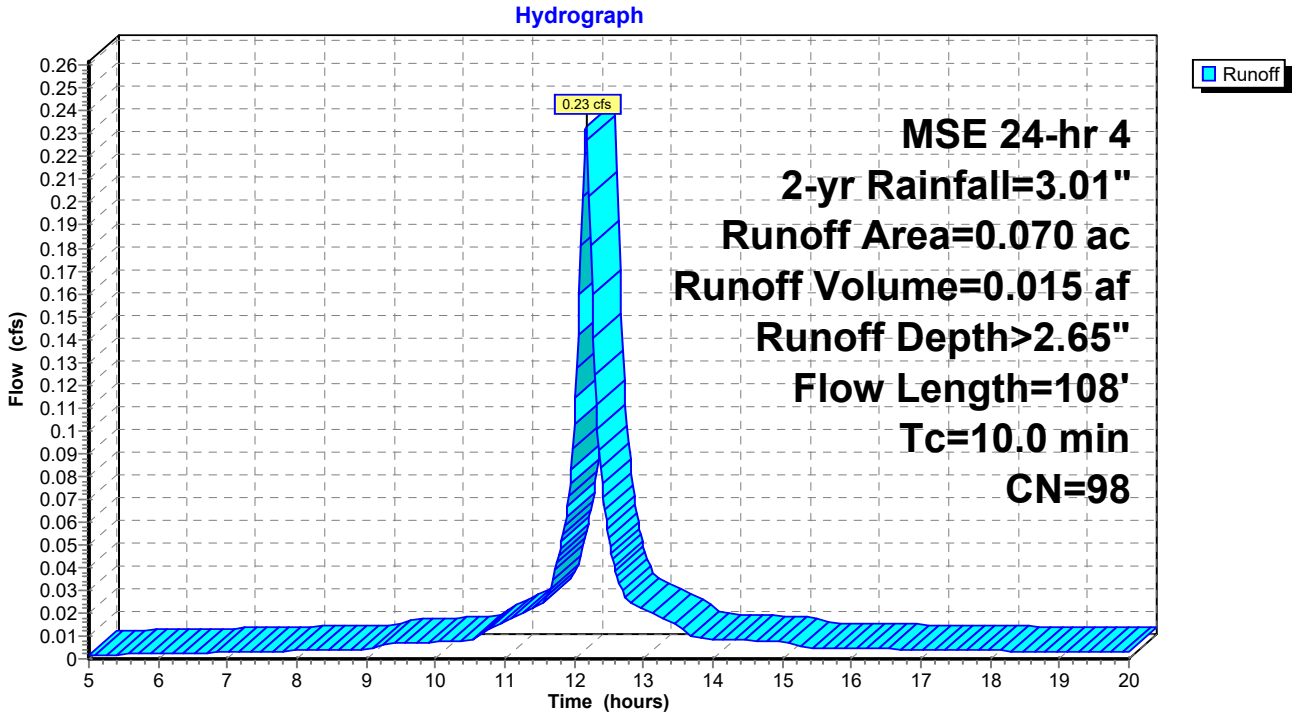
Runoff = 0.23 cfs @ 12.17 hrs, Volume= 0.015 af, Depth> 2.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 2-yr Rainfall=3.01"

	Area (ac)	CN	Description
*	0.070	98	concrete alley
	0.070		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	108		0.18		**Direct Entry, concrete alley**

Subcatchment 18S: untreated alley to inlet 1



Hydrograph for Subcatchment 18S: untreated alley to inlet 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.14	0.03	0.00
5.20	0.15	0.04	0.00
5.40	0.16	0.04	0.00
5.60	0.17	0.05	0.00
5.80	0.18	0.05	0.00
6.00	0.19	0.06	0.00
6.20	0.20	0.07	0.00
6.40	0.21	0.07	0.00
6.60	0.22	0.08	0.00
6.80	0.23	0.09	0.00
7.00	0.24	0.10	0.00
7.20	0.25	0.11	0.00
7.40	0.26	0.11	0.00
7.60	0.27	0.12	0.00
7.80	0.29	0.13	0.00
8.00	0.30	0.14	0.00
8.20	0.31	0.15	0.00
8.40	0.32	0.16	0.00
8.60	0.34	0.18	0.00
8.80	0.35	0.19	0.00
9.00	0.36	0.20	0.00
9.20	0.39	0.22	0.01
9.40	0.41	0.24	0.01
9.60	0.43	0.26	0.01
9.80	0.45	0.28	0.01
10.00	0.48	0.30	0.01
10.20	0.50	0.32	0.01
10.40	0.53	0.34	0.01
10.60	0.56	0.37	0.01
10.80	0.60	0.41	0.01
11.00	0.65	0.46	0.02
11.20	0.71	0.51	0.02
11.40	0.78	0.58	0.02
11.60	0.87	0.66	0.03
11.80	1.03	0.82	0.05
12.00	1.41	1.19	**0.10**
12.20	1.98	1.75	**0.22**
12.40	2.14	1.91	0.08
12.60	2.23	2.00	0.04
12.80	2.30	2.07	0.03
13.00	2.36	2.13	0.02
13.20	2.41	2.18	0.02
13.40	2.45	2.22	0.02
13.60	2.48	2.26	0.01
13.80	2.51	2.28	0.01
14.00	2.53	2.30	0.01
14.20	2.56	2.33	0.01
14.40	2.58	2.35	0.01
14.60	2.60	2.37	0.01
14.80	2.62	2.39	0.01
15.00	2.65	2.42	0.01
15.20	2.66	2.43	0.01
15.40	2.67	2.44	0.00
15.60	2.69	2.46	0.00
15.80	2.70	2.47	0.00
16.00	2.71	2.48	0.00
16.20	2.72	2.49	0.00
16.40	2.74	2.51	0.00
16.60	2.75	2.52	0.00
16.80	2.76	2.53	0.00
17.00	2.77	2.54	0.00
17.20	2.78	2.55	0.00
17.40	2.79	2.56	0.00
17.60	2.80	2.57	0.00
17.80	2.81	2.58	0.00
18.00	2.82	2.59	0.00
18.20	2.83	2.60	0.00
18.40	2.84	2.61	0.00
18.60	2.85	2.62	0.00
18.80	2.86	2.63	0.00
19.00	2.87	2.64	0.00
19.20	2.88	2.65	0.00
19.40	2.89	2.66	0.00
19.60	2.90	2.67	0.00
19.80	2.90	2.67	0.00
20.00	**2.91**	**2.68**	0.00

Summary for Reach 6R: 10" roof

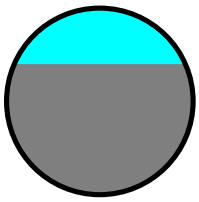
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 349% of Manning's capacity
[76] Warning: Detained 0.014 af (Pond w/culvert advised)

Inflow Area = 0.305 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.95 cfs @ 12.19 hrs, Volume= 0.067 af
Outflow = 0.28 cfs @ 11.93 hrs, Volume= 0.067 af, Atten= 71%, Lag= 0.0 min

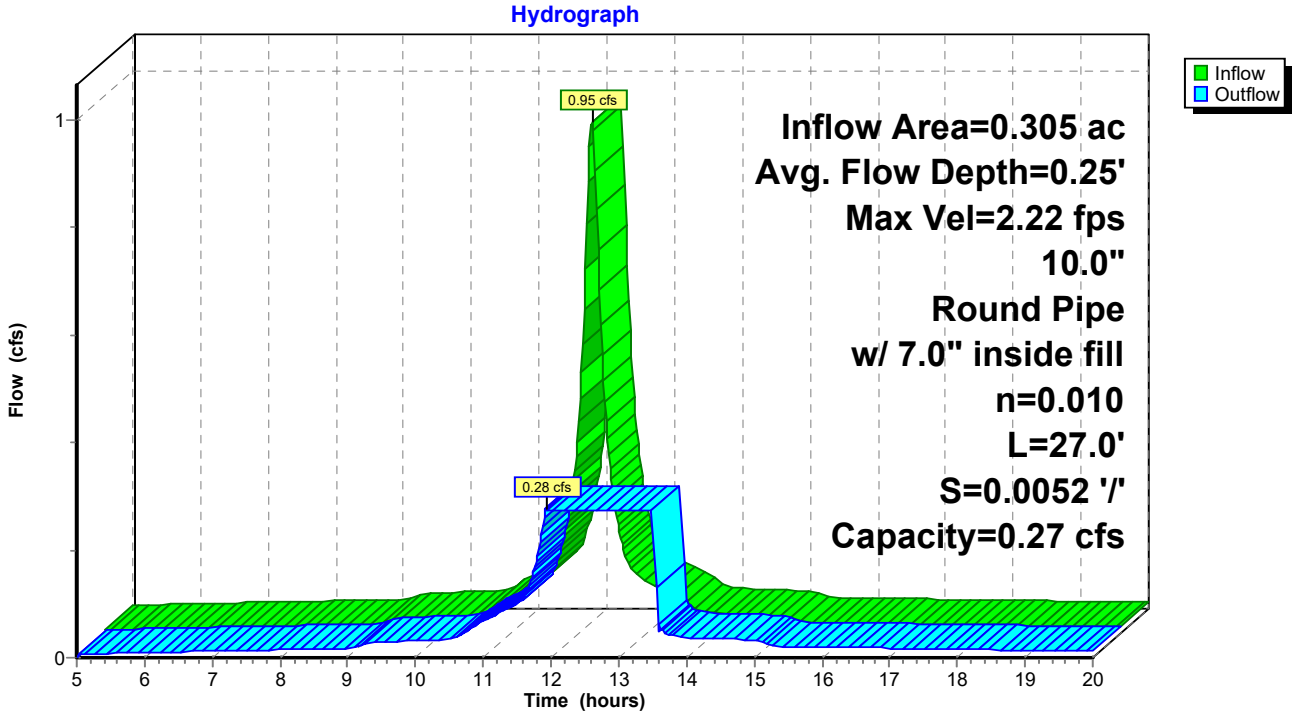
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.09 fps, Avg. Travel Time= 0.4 min

Peak Storage= 4 cf @ 11.94 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

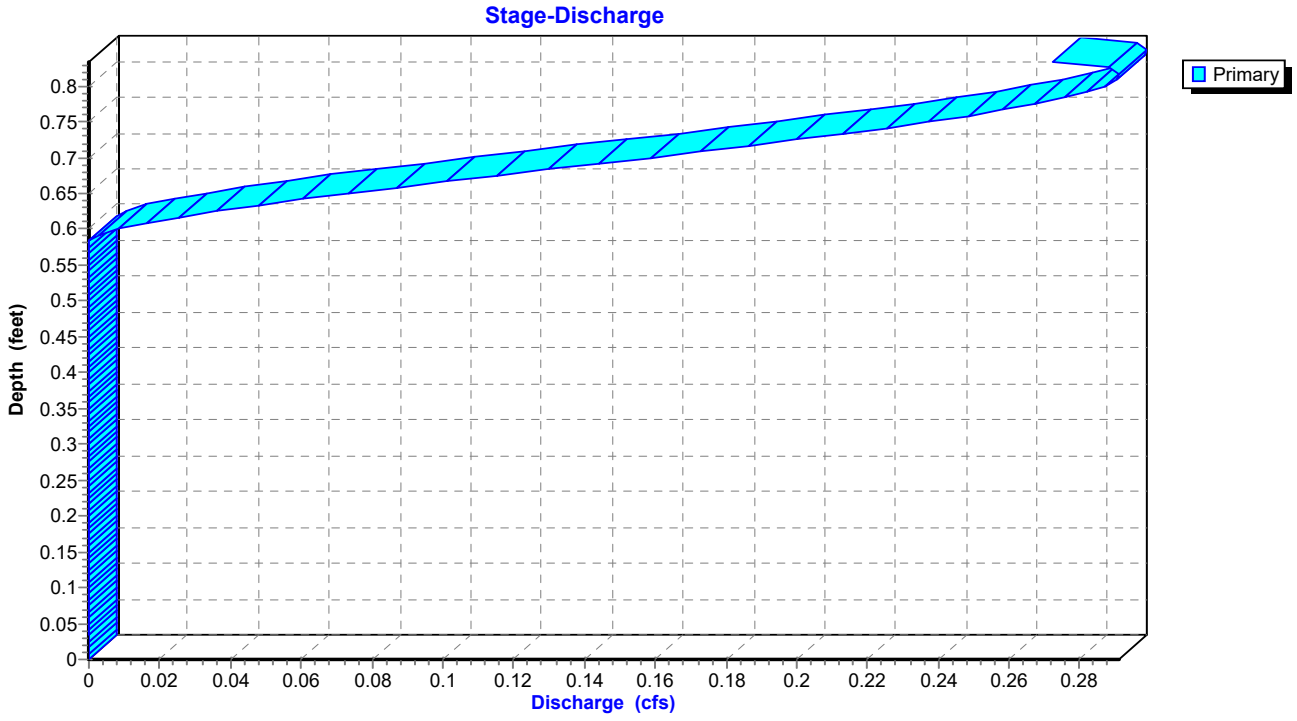
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 27.0' Slope= 0.0052 '/'
Inlet Invert= 665.72', Outlet Invert= 665.58'



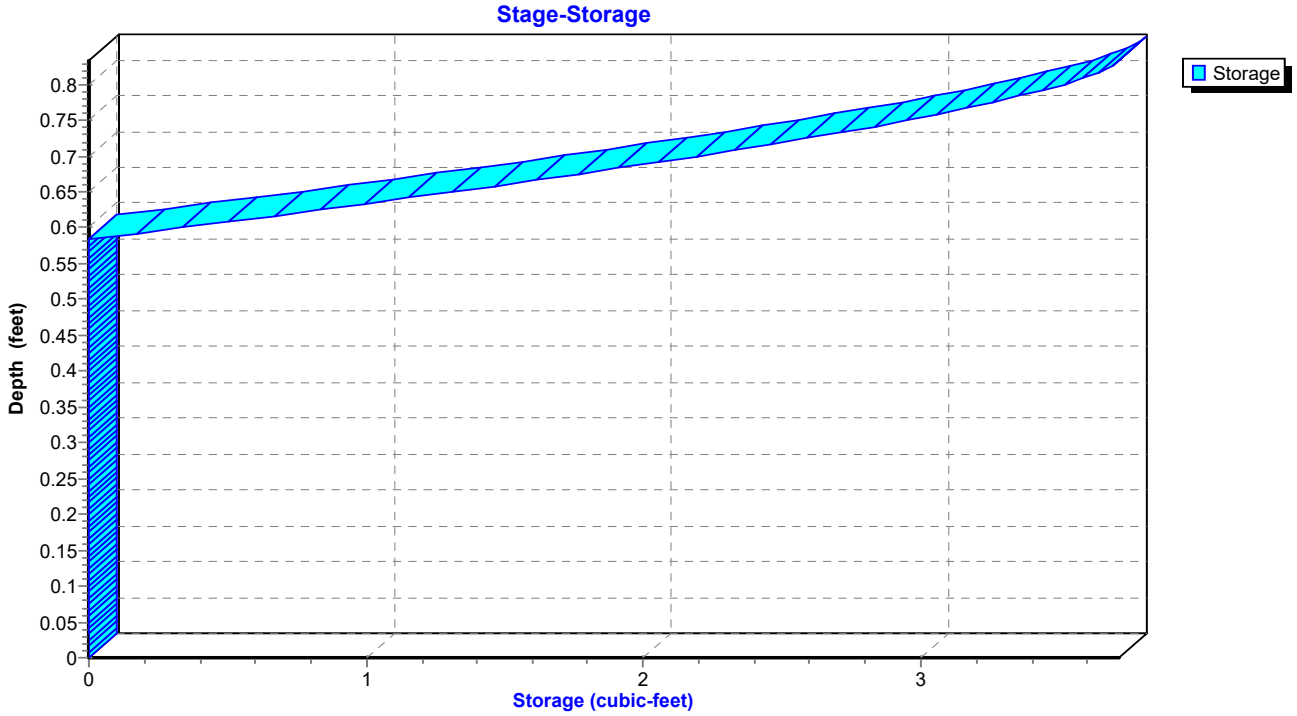
Reach 6R: 10" roof



Reach 6R: 10" roof



Reach 6R: 10" roof



Hydrograph for Reach 6R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.30	0.00
5.40	0.01	0	666.32	0.01
5.80	0.01	0	666.32	0.01
6.20	0.01	0	666.32	0.01
6.60	0.01	0	666.32	0.01
7.00	0.01	0	666.32	0.01
7.40	0.01	0	666.33	0.01
7.80	0.01	0	666.33	0.01
8.20	0.02	0	666.33	0.02
8.60	0.02	1	666.33	0.02
9.00	0.02	1	666.33	0.02
9.40	0.03	1	666.34	0.03
9.80	0.03	1	666.34	0.03
10.20	0.03	1	666.34	0.03
10.60	0.04	1	666.35	0.04
11.00	0.07	1	666.37	0.07
11.40	0.09	2	666.38	0.09
11.80	0.19	**3**	**666.44**	**0.19**
12.20	**0.95**	**4**	**666.55**	**0.27**
12.60	0.19	4	666.55	0.27
13.00	0.10	4	666.55	0.27
13.40	0.07	4	666.55	0.27
13.80	0.04	1	666.35	0.04
14.20	0.04	1	666.35	0.04
14.60	0.03	1	666.34	0.03
15.00	0.03	1	666.34	0.03
15.40	0.02	1	666.33	0.02
15.80	0.02	1	666.33	0.02
16.20	0.02	1	666.33	0.02
16.60	0.02	1	666.33	0.02
17.00	0.02	1	666.33	0.02
17.40	0.02	1	666.33	0.02
17.80	0.02	1	666.33	0.02
18.20	0.02	0	666.33	0.02
18.60	0.01	0	666.33	0.01
19.00	0.01	0	666.33	0.01
19.40	0.01	0	666.32	0.01
19.80	0.01	0	666.32	0.01

Stage-Discharge for Reach 6R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.35	0.00
666.32	0.67	0.01
666.33	0.90	0.02
666.34	1.08	0.03
666.35	1.25	0.04
666.36	1.39	0.06
666.37	1.51	0.07
666.38	1.62	0.09
666.39	1.72	0.11
666.40	1.81	0.12
666.41	1.88	0.14
666.42	1.95	0.16
666.43	2.01	0.18
666.44	2.06	0.19
666.45	2.11	0.21
666.46	2.14	0.22
666.47	2.17	0.24
666.48	2.19	0.25
666.49	2.21	0.26
666.50	**2.22**	0.27
666.51	2.21	0.28
666.52	2.20	0.29
666.53	2.18	**0.29**
666.54	2.14	0.29
666.55	2.03	0.28

Stage-Area-Storage for Reach 6R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	0
665.77	0.0	0	666.28	0.0	0
665.78	0.0	0	666.29	0.0	0
665.79	0.0	0	666.30	0.0	0
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	1
665.83	0.0	0	666.34	0.0	1
665.84	0.0	0	666.35	0.0	1
665.85	0.0	0	666.36	0.0	1
665.86	0.0	0	666.37	0.0	1
665.87	0.0	0	666.38	0.1	1
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	2
665.92	0.0	0	666.43	0.1	2
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	3
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	**0.1**	**4**
666.05	0.0	0			
666.06	0.0	0			
666.07	0.0	0			
666.08	0.0	0			
666.09	0.0	0			
666.10	0.0	0			
666.11	0.0	0			
666.12	0.0	0			
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			

Summary for Reach 7R: MH8 12"

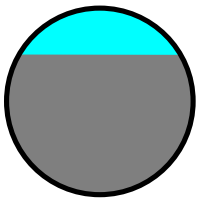
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 200% of Manning's capacity
[76] Warning: Detained 0.040 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 6R INLET depth by 0.15' @ 16.02 hrs
[63] Warning: Exceeded Reach 8R INLET depth by 0.07' @ 16.02 hrs

Inflow Area = 0.644 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.55 cfs @ 11.93 hrs, Volume= 0.142 af
Outflow = 0.29 cfs @ 11.68 hrs, Volume= 0.142 af, Atten= 48%, Lag= 0.0 min

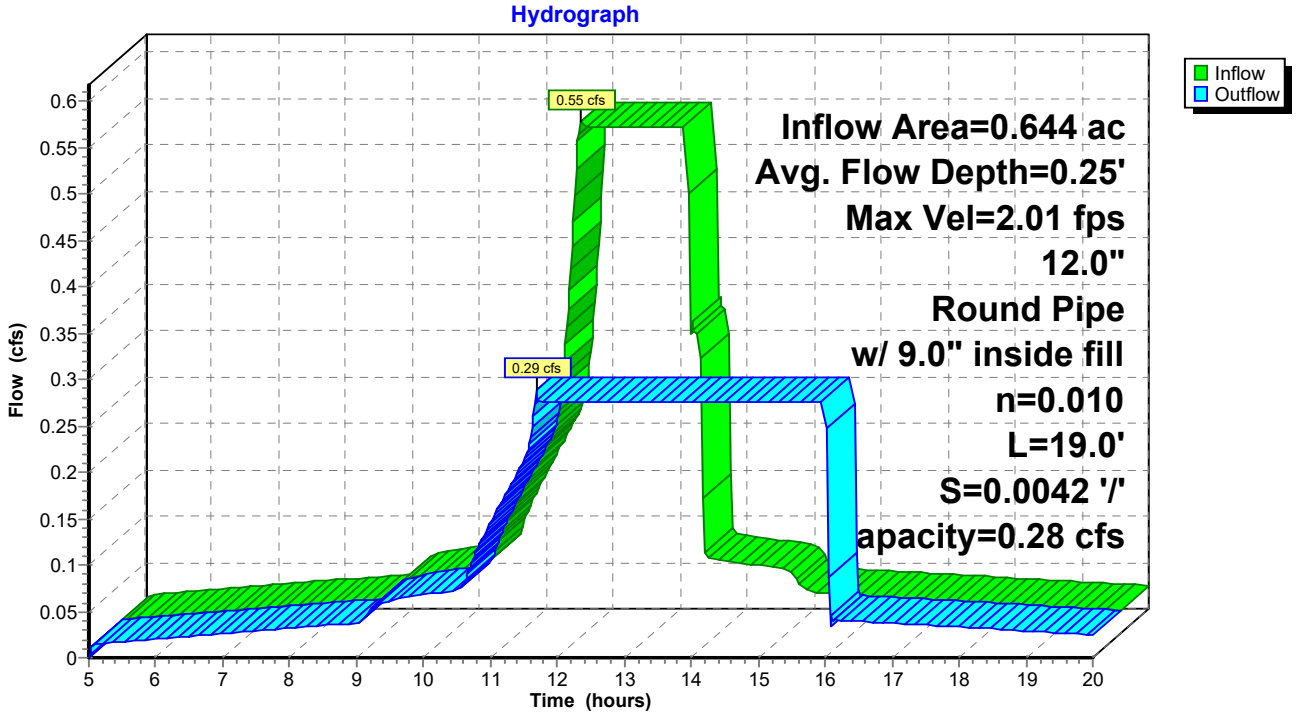
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.30 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 11.70 hrs
Average Depth at Peak Storage= 1.00' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.28 cfs

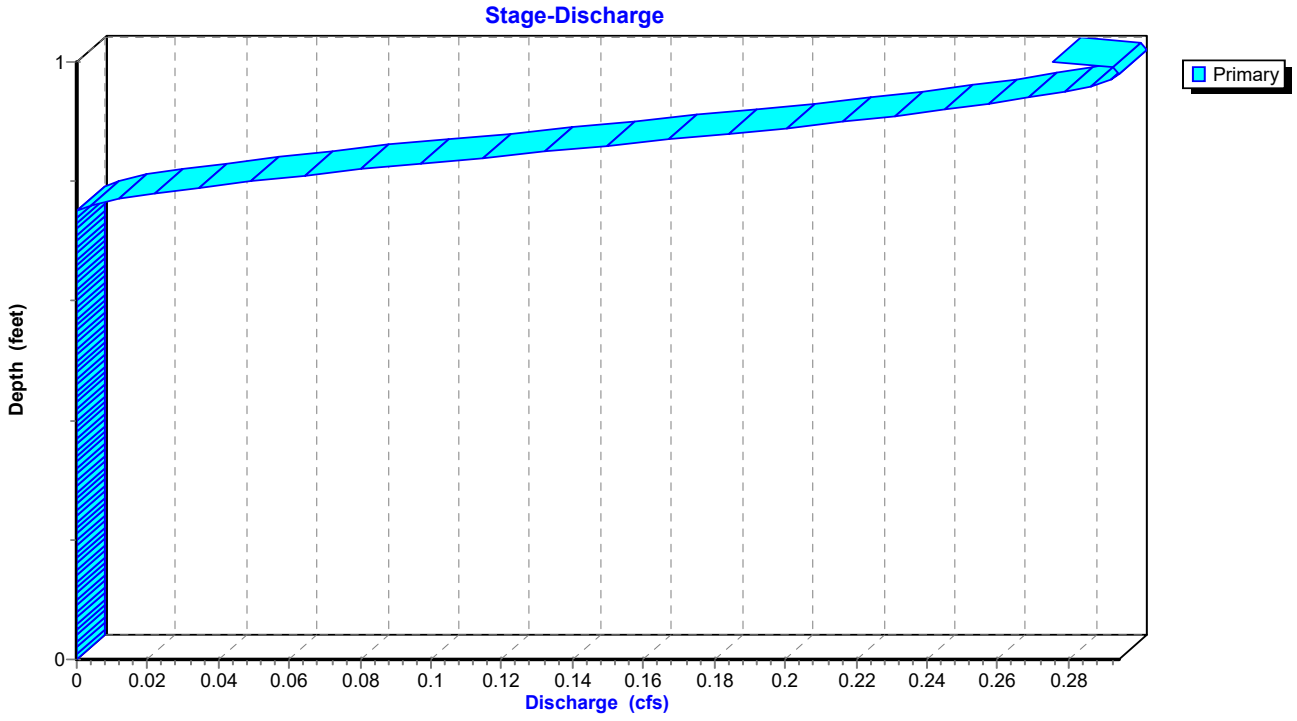
12.0" Round Pipe w/ 9.0" inside fill
n= 0.010
Length= 19.0' Slope= 0.0042 '/'
Inlet Invert= 665.48', Outlet Invert= 665.40'



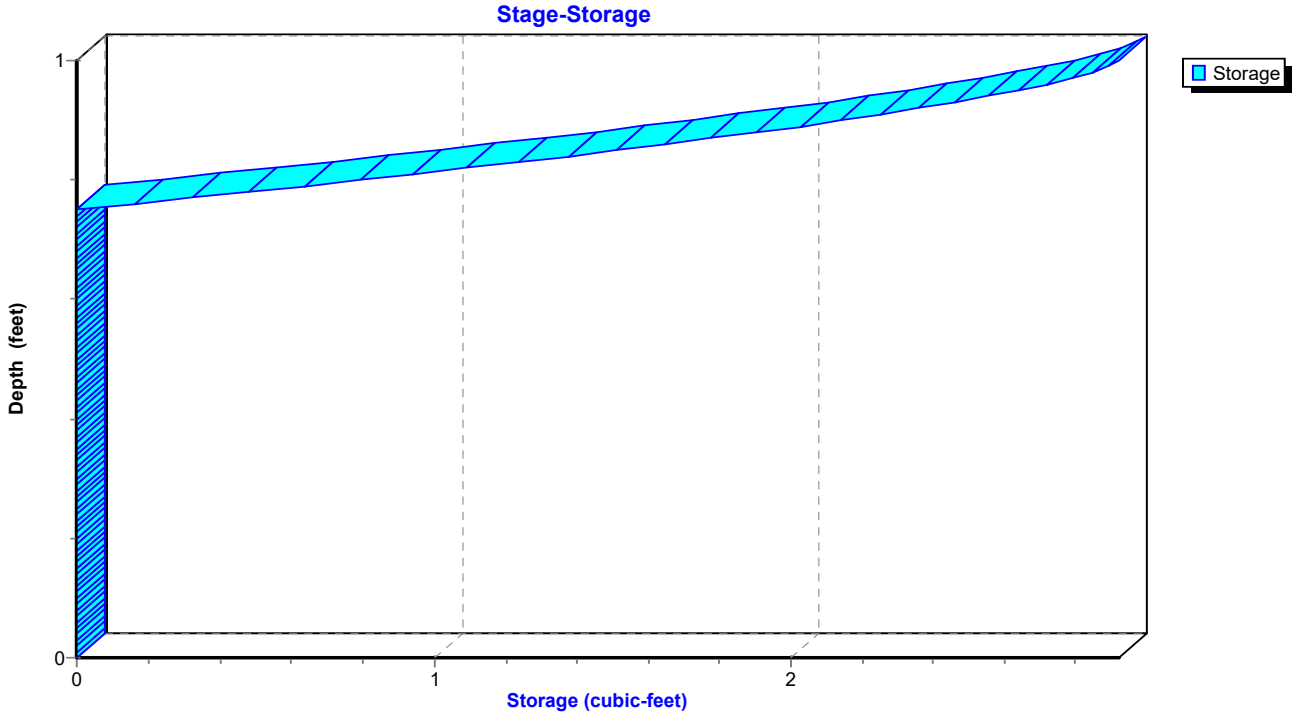
Reach 7R: MH8 12"



Reach 7R: MH8 12"



Reach 7R: MH8 12"



Hydrograph for Reach 7R: MH8 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.23	0.00
5.40	0.02	0	666.25	0.02
5.80	0.02	0	666.26	0.02
6.20	0.02	0	666.26	0.02
6.60	0.02	1	666.26	0.02
7.00	0.03	1	666.26	0.03
7.40	0.03	1	666.27	0.03
7.80	0.03	1	666.27	0.03
8.20	0.03	1	666.27	0.03
8.60	0.04	1	666.27	0.04
9.00	0.04	1	666.27	0.04
9.40	0.06	1	666.29	0.06
9.80	0.07	1	666.29	0.07
10.20	0.07	1	666.29	0.07
10.60	0.08	1	666.30	0.08
11.00	0.15	2	666.34	0.14
11.40	0.20	**2**	**666.37**	**0.20**
11.80	**0.42**	**3**	**666.48**	**0.28**
12.20	**0.55**	3	666.48	0.28
12.60	0.55	3	666.48	0.28
13.00	0.55	3	666.48	0.28
13.40	0.55	3	666.48	0.28
13.80	0.08	3	666.48	0.28
14.20	0.08	3	666.48	0.28
14.60	0.07	3	666.48	0.28
15.00	0.07	3	666.48	0.28
15.40	0.04	3	666.48	0.28
15.80	0.04	3	666.48	0.28
16.20	0.04	1	666.27	0.04
16.60	0.04	1	666.27	0.04
17.00	0.04	1	666.27	0.04
17.40	0.04	1	666.27	0.04
17.80	0.03	1	666.27	0.03
18.20	0.03	1	666.27	0.03
18.60	0.03	1	666.27	0.03
19.00	0.03	1	666.27	0.03
19.40	0.03	1	666.26	0.03
19.80	0.03	1	666.26	0.03

Stage-Discharge for Reach 7R: MH8 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.44	0.00
666.25	0.68	0.01
666.26	0.87	0.02
666.27	1.03	0.03
666.28	1.17	0.05
666.29	1.29	0.06
666.30	1.40	0.08
666.31	1.50	0.10
666.32	1.58	0.11
666.33	1.66	0.13
666.34	1.72	0.15
666.35	1.78	0.17
666.36	1.84	0.18
666.37	1.88	0.20
666.38	1.92	0.22
666.39	1.95	0.23
666.40	1.97	0.25
666.41	1.99	0.26
666.42	2.00	0.27
666.43	**2.01**	0.28
666.44	2.00	0.29
666.45	1.99	0.29
666.46	1.96	**0.29**
666.47	1.92	0.29
666.48	1.79	0.28

Stage-Area-Storage for Reach 7R: MH8 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.48	0.0	0	665.99	0.0	0
665.49	0.0	0	666.00	0.0	0
665.50	0.0	0	666.01	0.0	0
665.51	0.0	0	666.02	0.0	0
665.52	0.0	0	666.03	0.0	0
665.53	0.0	0	666.04	0.0	0
665.54	0.0	0	666.05	0.0	0
665.55	0.0	0	666.06	0.0	0
665.56	0.0	0	666.07	0.0	0
665.57	0.0	0	666.08	0.0	0
665.58	0.0	0	666.09	0.0	0
665.59	0.0	0	666.10	0.0	0
665.60	0.0	0	666.11	0.0	0
665.61	0.0	0	666.12	0.0	0
665.62	0.0	0	666.13	0.0	0
665.63	0.0	0	666.14	0.0	0
665.64	0.0	0	666.15	0.0	0
665.65	0.0	0	666.16	0.0	0
665.66	0.0	0	666.17	0.0	0
665.67	0.0	0	666.18	0.0	0
665.68	0.0	0	666.19	0.0	0
665.69	0.0	0	666.20	0.0	0
665.70	0.0	0	666.21	0.0	0
665.71	0.0	0	666.22	0.0	0
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	1
665.77	0.0	0	666.28	0.0	1
665.78	0.0	0	666.29	0.0	1
665.79	0.0	0	666.30	0.1	1
665.80	0.0	0	666.31	0.1	1
665.81	0.0	0	666.32	0.1	1
665.82	0.0	0	666.33	0.1	2
665.83	0.0	0	666.34	0.1	2
665.84	0.0	0	666.35	0.1	2
665.85	0.0	0	666.36	0.1	2
665.86	0.0	0	666.37	0.1	2
665.87	0.0	0	666.38	0.1	2
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	3
665.92	0.0	0	666.43	0.1	3
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.2	3
665.97	0.0	0	666.48	**0.2**	**3**
665.98	0.0	0			

Summary for Reach 8R: 10" roof

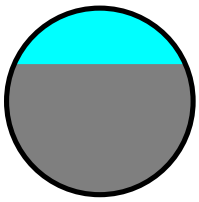
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 413% of Manning's capacity
[76] Warning: Detained 0.017 af (Pond w/culvert advised)

Inflow Area = 0.339 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 1.13 cfs @ 12.17 hrs, Volume= 0.075 af
Outflow = 0.29 cfs @ 11.88 hrs, Volume= 0.075 af, Atten= 75%, Lag= 0.0 min

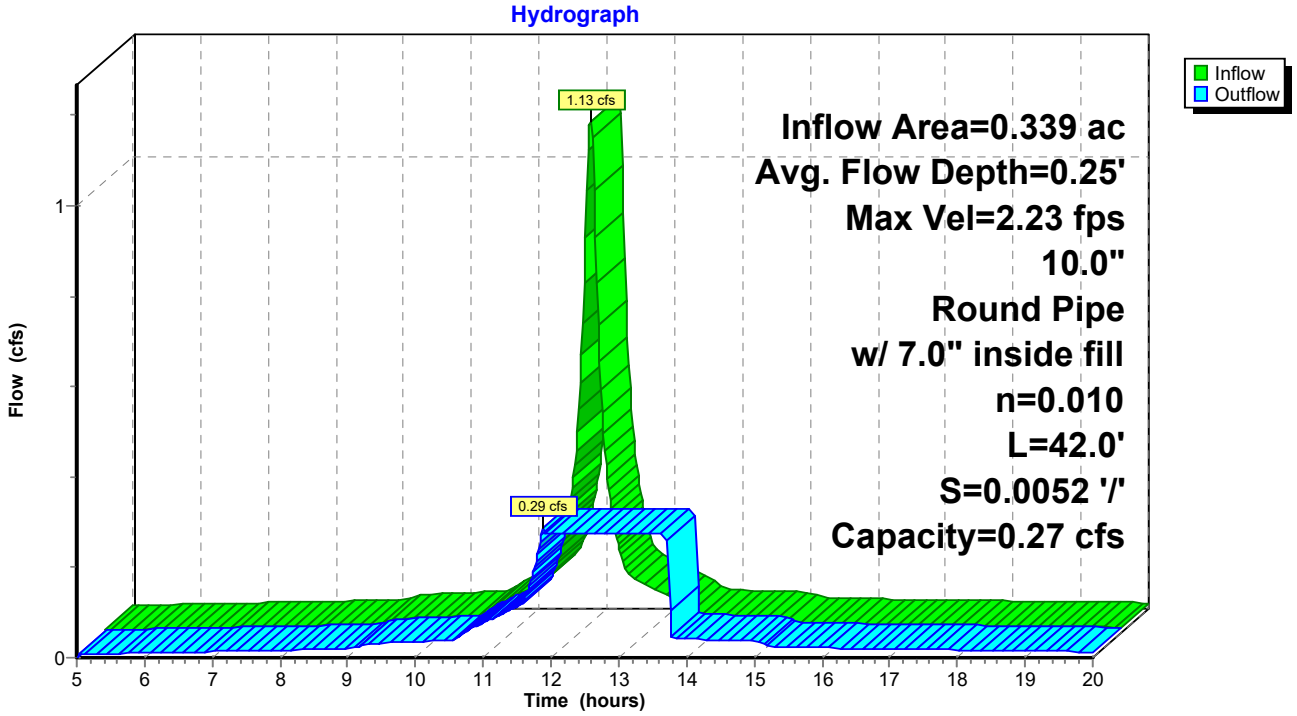
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.14 fps, Avg. Travel Time= 0.6 min

Peak Storage= 6 cf @ 11.90 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

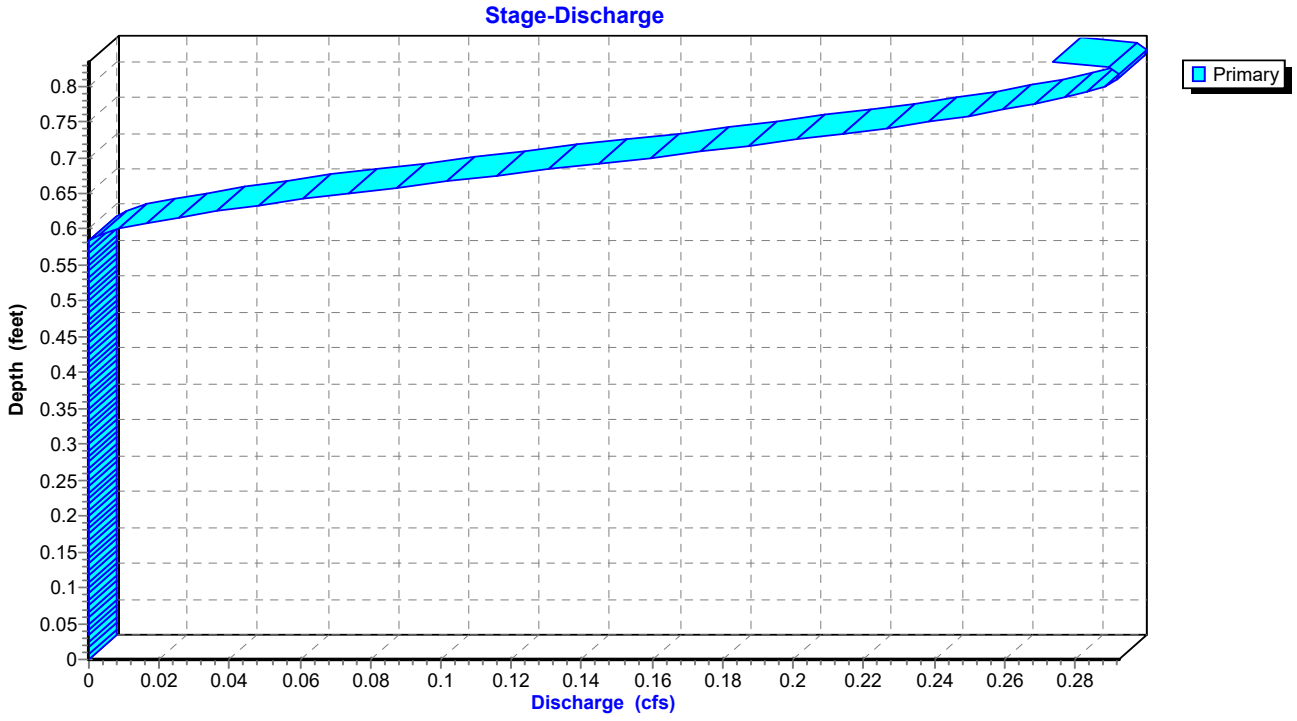
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 42.0' Slope= 0.0052 '/'
Inlet Invert= 665.80', Outlet Invert= 665.58'



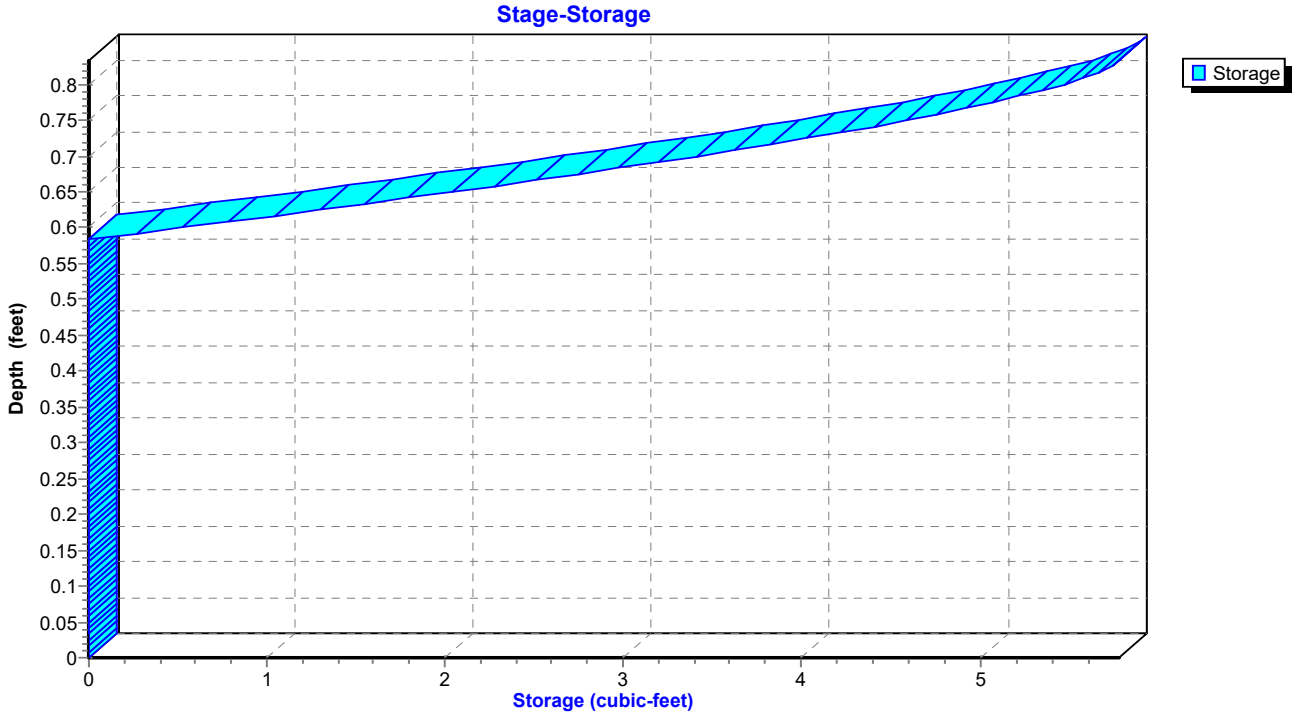
Reach 8R: 10" roof



Reach 8R: 10" roof



Reach 8R: 10" roof



Hydrograph for Reach 8R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.38	0.00
5.40	0.01	1	666.40	0.01
5.80	0.01	1	666.40	0.01
6.20	0.01	1	666.40	0.01
6.60	0.01	1	666.40	0.01
7.00	0.01	1	666.41	0.01
7.40	0.02	1	666.41	0.02
7.80	0.02	1	666.41	0.02
8.20	0.02	1	666.41	0.02
8.60	0.02	1	666.41	0.02
9.00	0.02	1	666.41	0.02
9.40	0.03	1	666.42	0.03
9.80	0.03	1	666.42	0.03
10.20	0.04	1	666.43	0.04
10.60	0.04	1	666.43	0.04
11.00	0.08	2	666.45	0.08
11.40	0.11	3	666.47	0.11
11.80	**0.23**	**4**	**666.54**	**0.23**
12.20	**1.07**	**6**	**666.63**	**0.27**
12.60	0.18	6	666.63	0.27
13.00	0.11	6	666.63	0.27
13.40	0.08	6	666.63	0.27
13.80	0.04	1	666.43	0.04
14.20	0.04	1	666.43	0.04
14.60	0.04	1	666.43	0.04
15.00	0.04	1	666.43	0.04
15.40	0.02	1	666.41	0.02
15.80	0.02	1	666.41	0.02
16.20	0.02	1	666.41	0.02
16.60	0.02	1	666.41	0.02
17.00	0.02	1	666.41	0.02
17.40	0.02	1	666.41	0.02
17.80	0.02	1	666.41	0.02
18.20	0.02	1	666.41	0.02
18.60	0.02	1	666.41	0.02
19.00	0.02	1	666.41	0.02
19.40	0.01	1	666.41	0.01
19.80	0.01	1	666.41	0.01

Stage-Discharge for Reach 8R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.35	0.00
666.40	0.68	0.01
666.41	0.90	0.02
666.42	1.09	0.03
666.43	1.25	0.04
666.44	1.39	0.06
666.45	1.52	0.07
666.46	1.63	0.09
666.47	1.73	0.11
666.48	1.81	0.12
666.49	1.89	0.14
666.50	1.96	0.16
666.51	2.02	0.18
666.52	2.07	0.19
666.53	2.12	0.21
666.54	2.15	0.22
666.55	2.18	0.24
666.56	2.21	0.25
666.57	2.22	0.26
666.58	**2.23**	0.27
666.59	2.23	0.28
666.60	2.21	0.29
666.61	2.19	**0.29**
666.62	2.15	0.29
666.63	2.04	0.28

Stage-Area-Storage for Reach 8R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	0
665.83	0.0	0	666.34	0.0	0
665.84	0.0	0	666.35	0.0	0
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	1
665.90	0.0	0	666.41	0.0	1
665.91	0.0	0	666.42	0.0	1
665.92	0.0	0	666.43	0.0	1
665.93	0.0	0	666.44	0.0	2
665.94	0.0	0	666.45	0.0	2
665.95	0.0	0	666.46	0.1	2
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	4
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	0.1	5
666.05	0.0	0	666.56	0.1	5
666.06	0.0	0	666.57	0.1	5
666.07	0.0	0	666.58	0.1	5
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	5
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	6
666.12	0.0	0	666.63	**0.1**	**6**
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			
666.23	0.0	0			
666.24	0.0	0			
666.25	0.0	0			
666.26	0.0	0			
666.27	0.0	0			
666.28	0.0	0			
666.29	0.0	0			
666.30	0.0	0			

Summary for Reach 9R: inlet 3 18"

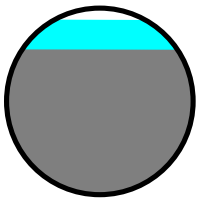
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[63] Warning: Exceeded Reach 7R INLET depth by 0.24' @ 5.00 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.81 cfs @ 12.08 hrs, Volume= 0.169 af
Outflow = 0.81 cfs @ 12.04 hrs, Volume= 0.169 af, Atten= 0%, Lag= 0.0 min

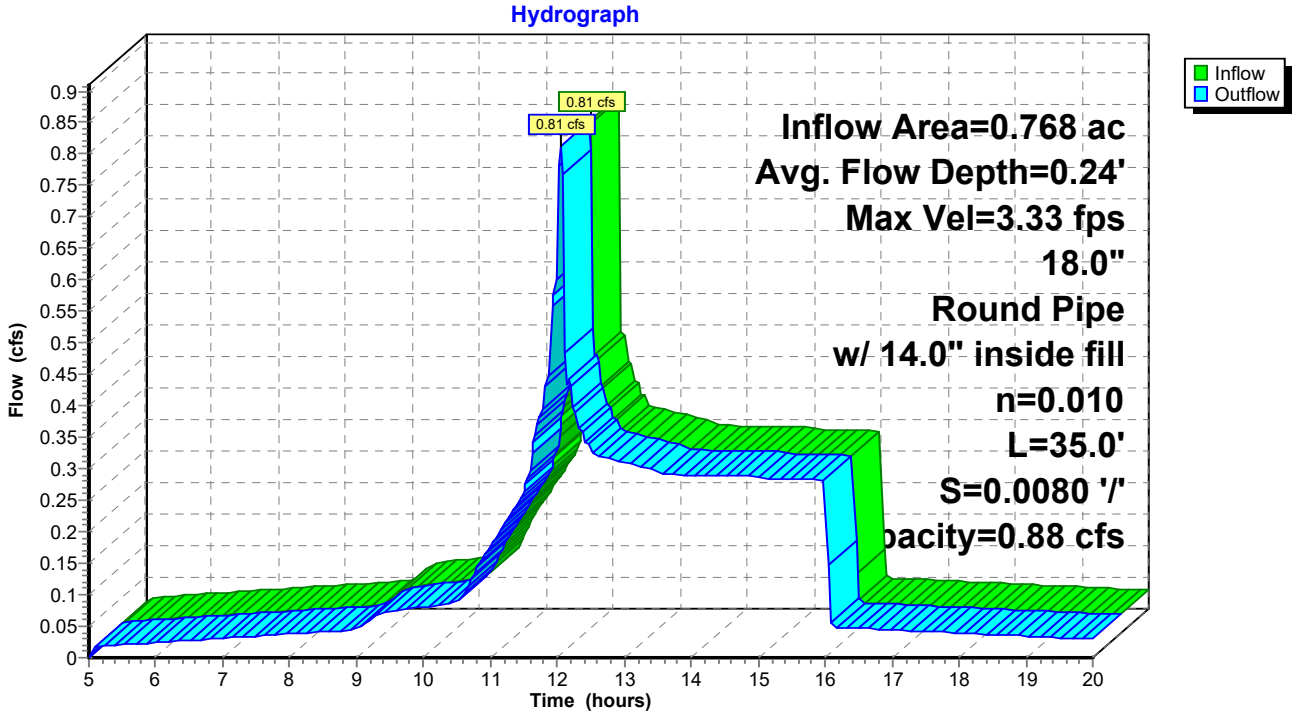
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.33 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.65 fps, Avg. Travel Time= 0.4 min

Peak Storage= 9 cf @ 12.04 hrs
Average Depth at Peak Storage= 1.40' above invert (0.24' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.88 cfs

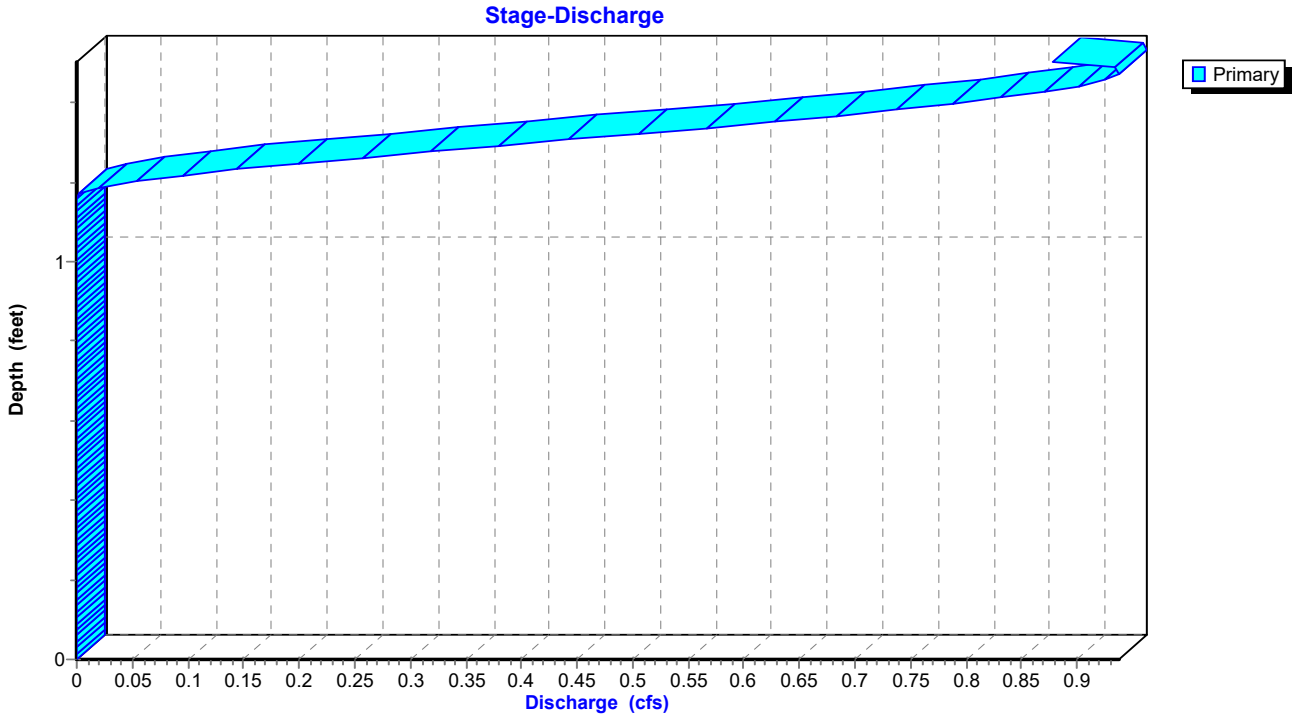
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 35.0' Slope= 0.0080 '/'
Inlet Invert= 665.30', Outlet Invert= 665.02'



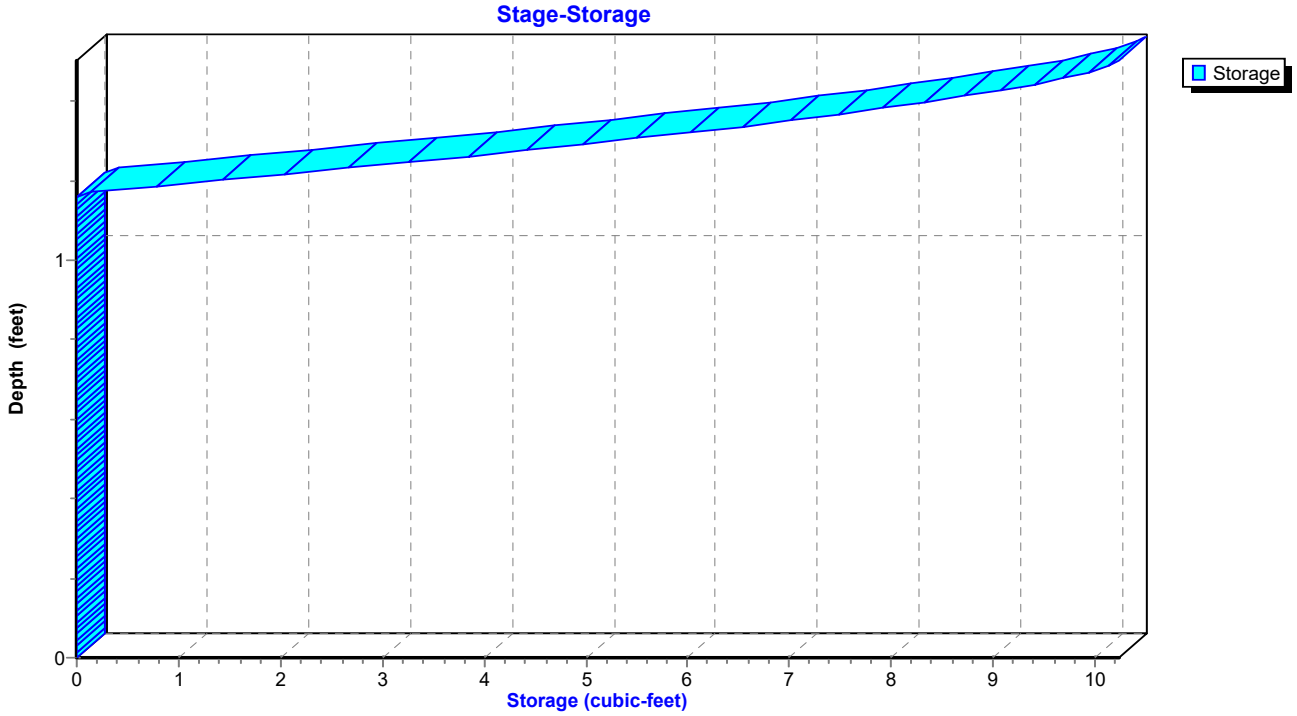
Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Hydrograph for Reach 9R: inlet 3 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.47	0.00
5.40	0.02	1	666.48	0.02
5.80	0.02	1	666.49	0.02
6.20	0.03	1	666.49	0.03
6.60	0.03	1	666.49	0.03
7.00	0.03	1	666.49	0.03
7.40	0.03	1	666.49	0.03
7.80	0.04	1	666.49	0.04
8.20	0.04	1	666.49	0.04
8.60	0.04	1	666.49	0.04
9.00	0.05	1	666.50	0.05
9.40	0.07	2	666.51	0.07
9.80	0.08	2	666.51	0.08
10.20	0.08	2	666.51	0.08
10.60	0.10	2	666.52	0.10
11.00	0.18	3	666.54	0.18
11.40	0.24	4	666.56	0.24
11.80	**0.41**	**5**	**666.60**	**0.41**
12.20	**0.42**	**5**	**666.60**	**0.42**
12.60	0.32	4	666.58	0.32
13.00	0.31	4	666.57	0.31
13.40	0.30	4	666.57	0.30
13.80	0.29	4	666.57	0.29
14.20	0.29	4	666.57	0.29
14.60	0.29	4	666.57	0.29
15.00	0.29	4	666.57	0.29
15.40	0.28	4	666.57	0.28
15.80	0.28	4	666.57	0.28
16.20	0.05	1	666.50	0.05
16.60	0.05	1	666.50	0.05
17.00	0.04	1	666.50	0.04
17.40	0.04	1	666.50	0.04
17.80	0.04	1	666.49	0.04
18.20	0.04	1	666.49	0.04
18.60	0.04	1	666.49	0.04
19.00	0.03	1	666.49	0.03
19.40	0.03	1	666.49	0.03
19.80	0.03	1	666.49	0.03

Stage-Discharge for Reach 9R: inlet 3 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.30	0.00	0.00	665.81	0.00	0.00	666.32	0.00	0.00
665.31	0.00	0.00	665.82	0.00	0.00	666.33	0.00	0.00
665.32	0.00	0.00	665.83	0.00	0.00	666.34	0.00	0.00
665.33	0.00	0.00	665.84	0.00	0.00	666.35	0.00	0.00
665.34	0.00	0.00	665.85	0.00	0.00	666.36	0.00	0.00
665.35	0.00	0.00	665.86	0.00	0.00	666.37	0.00	0.00
665.36	0.00	0.00	665.87	0.00	0.00	666.38	0.00	0.00
665.37	0.00	0.00	665.88	0.00	0.00	666.39	0.00	0.00
665.38	0.00	0.00	665.89	0.00	0.00	666.40	0.00	0.00
665.39	0.00	0.00	665.90	0.00	0.00	666.41	0.00	0.00
665.40	0.00	0.00	665.91	0.00	0.00	666.42	0.00	0.00
665.41	0.00	0.00	665.92	0.00	0.00	666.43	0.00	0.00
665.42	0.00	0.00	665.93	0.00	0.00	666.44	0.00	0.00
665.43	0.00	0.00	665.94	0.00	0.00	666.45	0.00	0.00
665.44	0.00	0.00	665.95	0.00	0.00	666.46	0.10	0.00
665.45	0.00	0.00	665.96	0.00	0.00	666.47	0.29	0.00
665.46	0.00	0.00	665.97	0.00	0.00	666.48	0.70	0.01
665.47	0.00	0.00	665.98	0.00	0.00	666.49	1.03	0.03
665.48	0.00	0.00	665.99	0.00	0.00	666.50	1.30	0.05
665.49	0.00	0.00	666.00	0.00	0.00	666.51	1.52	0.08
665.50	0.00	0.00	666.01	0.00	0.00	666.52	1.72	0.11
665.51	0.00	0.00	666.02	0.00	0.00	666.53	1.90	0.14
665.52	0.00	0.00	666.03	0.00	0.00	666.54	2.06	0.18
665.53	0.00	0.00	666.04	0.00	0.00	666.55	2.21	0.22
665.54	0.00	0.00	666.05	0.00	0.00	666.56	2.34	0.26
665.55	0.00	0.00	666.06	0.00	0.00	666.57	2.46	0.30
665.56	0.00	0.00	666.07	0.00	0.00	666.58	2.57	0.34
665.57	0.00	0.00	666.08	0.00	0.00	666.59	2.68	0.38
665.58	0.00	0.00	666.09	0.00	0.00	666.60	2.77	0.42
665.59	0.00	0.00	666.10	0.00	0.00	666.61	2.86	0.46
665.60	0.00	0.00	666.11	0.00	0.00	666.62	2.94	0.51
665.61	0.00	0.00	666.12	0.00	0.00	666.63	3.01	0.55
665.62	0.00	0.00	666.13	0.00	0.00	666.64	3.07	0.59
665.63	0.00	0.00	666.14	0.00	0.00	666.65	3.13	0.63
665.64	0.00	0.00	666.15	0.00	0.00	666.66	3.18	0.67
665.65	0.00	0.00	666.16	0.00	0.00	666.67	3.22	0.70
665.66	0.00	0.00	666.17	0.00	0.00	666.68	3.26	0.74
665.67	0.00	0.00	666.18	0.00	0.00	666.69	3.29	0.77
665.68	0.00	0.00	666.19	0.00	0.00	666.70	3.32	0.80
665.69	0.00	0.00	666.20	0.00	0.00	666.71	3.34	0.83
665.70	0.00	0.00	666.21	0.00	0.00	666.72	3.35	0.86
665.71	0.00	0.00	666.22	0.00	0.00	666.73	3.36	0.88
665.72	0.00	0.00	666.23	0.00	0.00	666.74	**3.36**	0.90
665.73	0.00	0.00	666.24	0.00	0.00	666.75	3.35	0.92
665.74	0.00	0.00	666.25	0.00	0.00	666.76	3.33	0.93
665.75	0.00	0.00	666.26	0.00	0.00	666.77	3.30	**0.94**
665.76	0.00	0.00	666.27	0.00	0.00	666.78	3.25	0.94
665.77	0.00	0.00	666.28	0.00	0.00	666.79	3.15	0.92
665.78	0.00	0.00	666.29	0.00	0.00	666.80	3.01	0.88
665.79	0.00	0.00	666.30	0.00	0.00			
665.80	0.00	0.00	666.31	0.00	0.00			

Stage-Area-Storage for Reach 9R: inlet 3 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	1
666.50	0.0	1
666.52	0.1	2
666.54	0.1	3
666.56	0.1	4
666.58	0.1	5
666.60	0.2	5
666.62	0.2	6
666.64	0.2	7
666.66	0.2	7
666.68	0.2	8
666.70	0.2	8
666.72	0.3	9
666.74	0.3	9
666.76	0.3	10
666.78	0.3	10
666.80	**0.3**	**10**

Summary for Reach 10R: MH7 18"

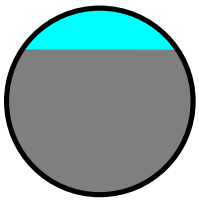
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 117% of Manning's capacity
[76] Warning: Detained 0.001 af (Pond w/culvert advised)
[62] Hint: Exceeded Reach 9R OUTLET depth by 0.19' @ 12.12 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.81 cfs @ 12.04 hrs, Volume= 0.169 af
Outflow = 0.69 cfs @ 12.04 hrs, Volume= 0.169 af, Atten= 14%, Lag= 0.0 min

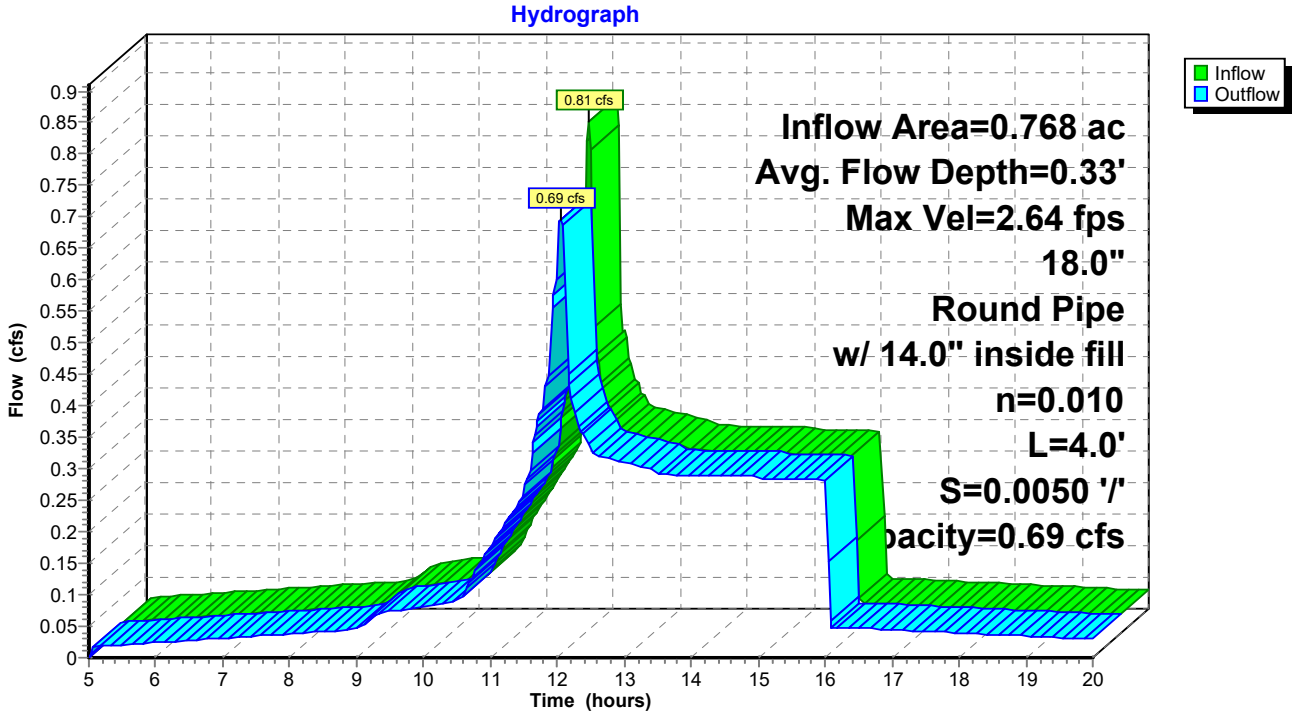
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.64 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.41 fps, Avg. Travel Time= 0.0 min

Peak Storage= 1 cf @ 12.02 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

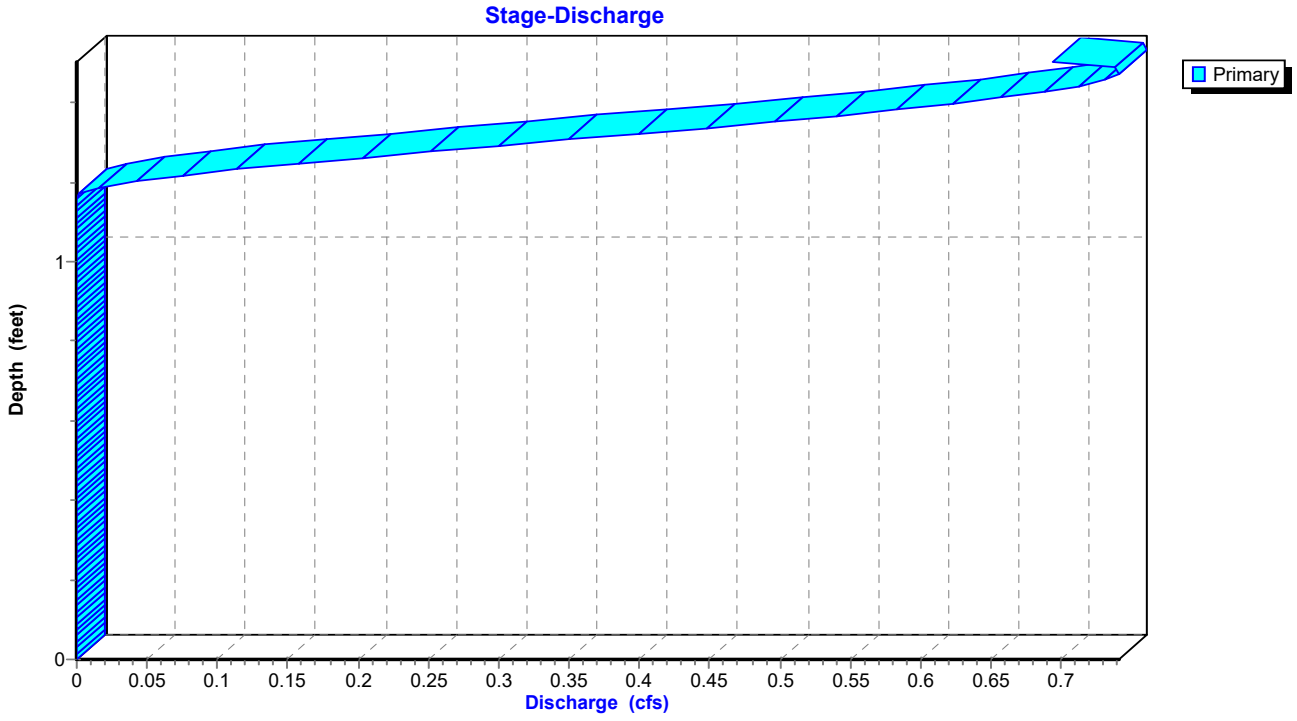
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 4.0' Slope= 0.0050 '/'
Inlet Invert= 665.02', Outlet Invert= 665.00'



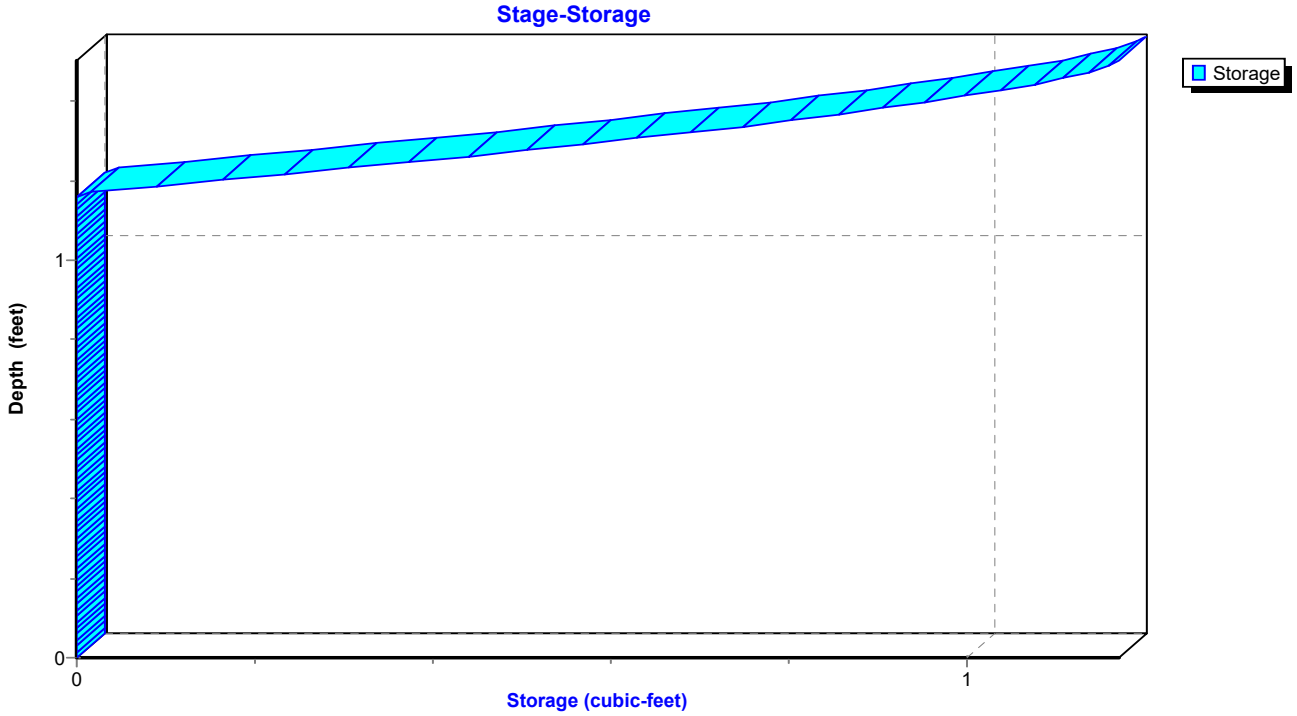
Reach 10R: MH7 18"



Reach 10R: MH7 18"



Reach 10R: MH7 18"



Hydrograph for Reach 10R: MH7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.19	0.00
5.40	0.02	0	666.21	0.02
5.80	0.02	0	666.21	0.02
6.20	0.03	0	666.21	0.03
6.60	0.03	0	666.21	0.03
7.00	0.03	0	666.21	0.03
7.40	0.03	0	666.22	0.03
7.80	0.04	0	666.22	0.04
8.20	0.04	0	666.22	0.04
8.60	0.04	0	666.22	0.04
9.00	0.05	0	666.22	0.05
9.40	0.07	0	666.23	0.07
9.80	0.08	0	666.24	0.08
10.20	0.08	0	666.24	0.08
10.60	0.10	0	666.24	0.10
11.00	0.18	0	666.27	0.18
11.40	0.24	0	666.29	0.24
11.80	**0.41**	**1**	**666.34**	**0.41**
12.20	**0.42**	**1**	**666.35**	**0.43**
12.60	0.32	1	666.32	0.32
13.00	0.31	1	666.31	0.31
13.40	0.30	1	666.31	0.30
13.80	0.29	1	666.31	0.29
14.20	0.29	1	666.31	0.29
14.60	0.29	1	666.31	0.29
15.00	0.29	1	666.31	0.29
15.40	0.28	1	666.30	0.28
15.80	0.28	1	666.30	0.28
16.20	0.05	0	666.22	0.05
16.60	0.05	0	666.22	0.05
17.00	0.04	0	666.22	0.04
17.40	0.04	0	666.22	0.04
17.80	0.04	0	666.22	0.04
18.20	0.04	0	666.22	0.04
18.60	0.04	0	666.22	0.04
19.00	0.03	0	666.22	0.03
19.40	0.03	0	666.21	0.03
19.80	0.03	0	666.21	0.03

Stage-Discharge for Reach 10R: MH7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.02	0.00	0.00	665.53	0.00	0.00	666.04	0.00	0.00
665.03	0.00	0.00	665.54	0.00	0.00	666.05	0.00	0.00
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.08	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.23	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.55	0.01
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.82	0.02
665.20	0.00	0.00	665.71	0.00	0.00	666.22	1.03	0.04
665.21	0.00	0.00	665.72	0.00	0.00	666.23	1.20	0.06
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.36	0.09
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.50	0.11
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.63	0.14
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.74	0.17
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.85	0.20
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.95	0.24
665.28	0.00	0.00	665.79	0.00	0.00	666.30	2.04	0.27
665.29	0.00	0.00	665.80	0.00	0.00	666.31	2.12	0.30
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.19	0.33
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.26	0.37
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.32	0.40
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.38	0.43
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.43	0.46
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.47	0.50
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.51	0.53
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.55	0.56
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.58	0.58
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.60	0.61
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.62	0.63
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.64	0.66
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.65	0.68
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.65	0.70
665.44	0.00	0.00	665.95	0.00	0.00	666.46	**2.65**	0.71
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.73
665.46	0.00	0.00	665.97	0.00	0.00	666.48	2.63	0.73
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.61	**0.74**
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.57	0.74
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.49	0.72
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.38	0.69
665.51	0.00	0.00	666.02	0.00	0.00			
665.52	0.00	0.00	666.03	0.00	0.00			

Stage-Area-Storage for Reach 10R: MH7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.02	0.0	0
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.1	0
666.26	0.1	0
666.28	0.1	0
666.30	0.1	1
666.32	0.2	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	1
666.40	0.2	1
666.42	0.2	1
666.44	0.3	1
666.46	0.3	1
666.48	0.3	1
666.50	0.3	1
666.52	**0.3**	**1**

Summary for Reach 11R: inlet 7 18"

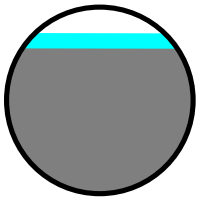
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.30 cfs @ 12.15 hrs, Volume= 0.022 af
Outflow = 0.30 cfs @ 12.17 hrs, Volume= 0.022 af, Atten= 1%, Lag= 0.8 min

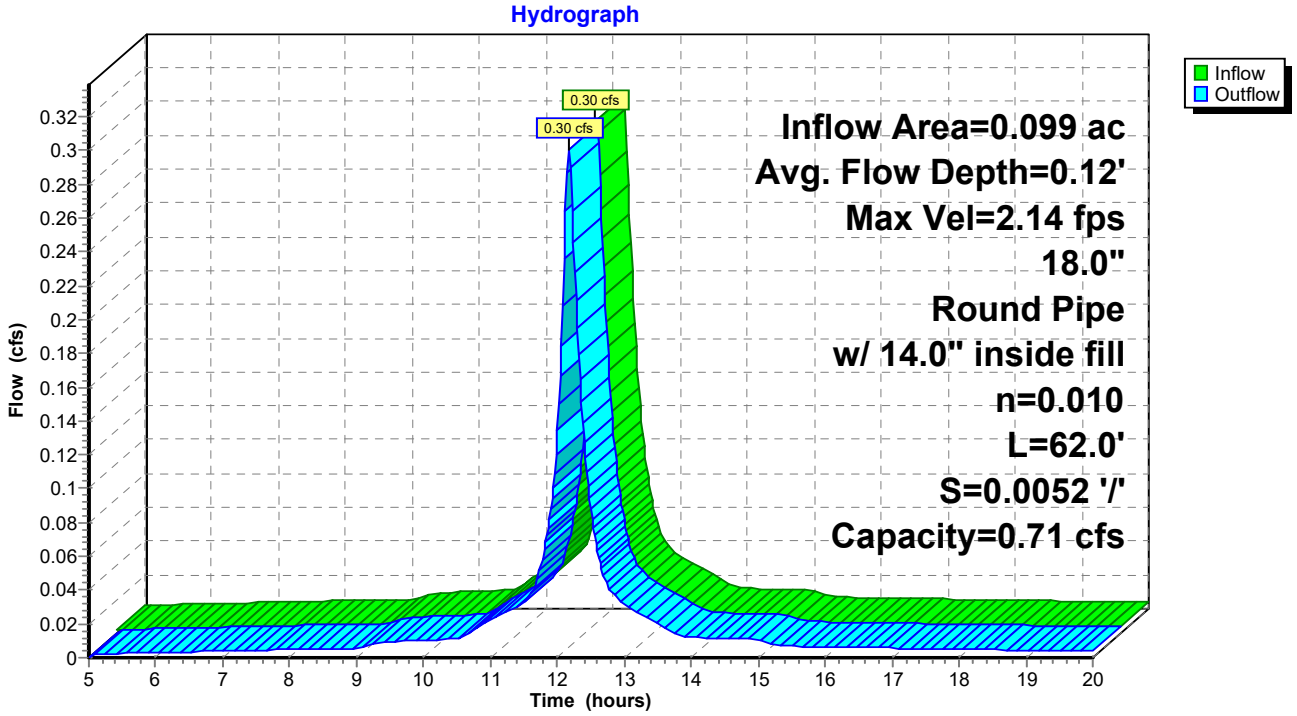
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.14 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.68 fps, Avg. Travel Time= 1.5 min

Peak Storage= 9 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.29' above invert (0.12' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.71 cfs

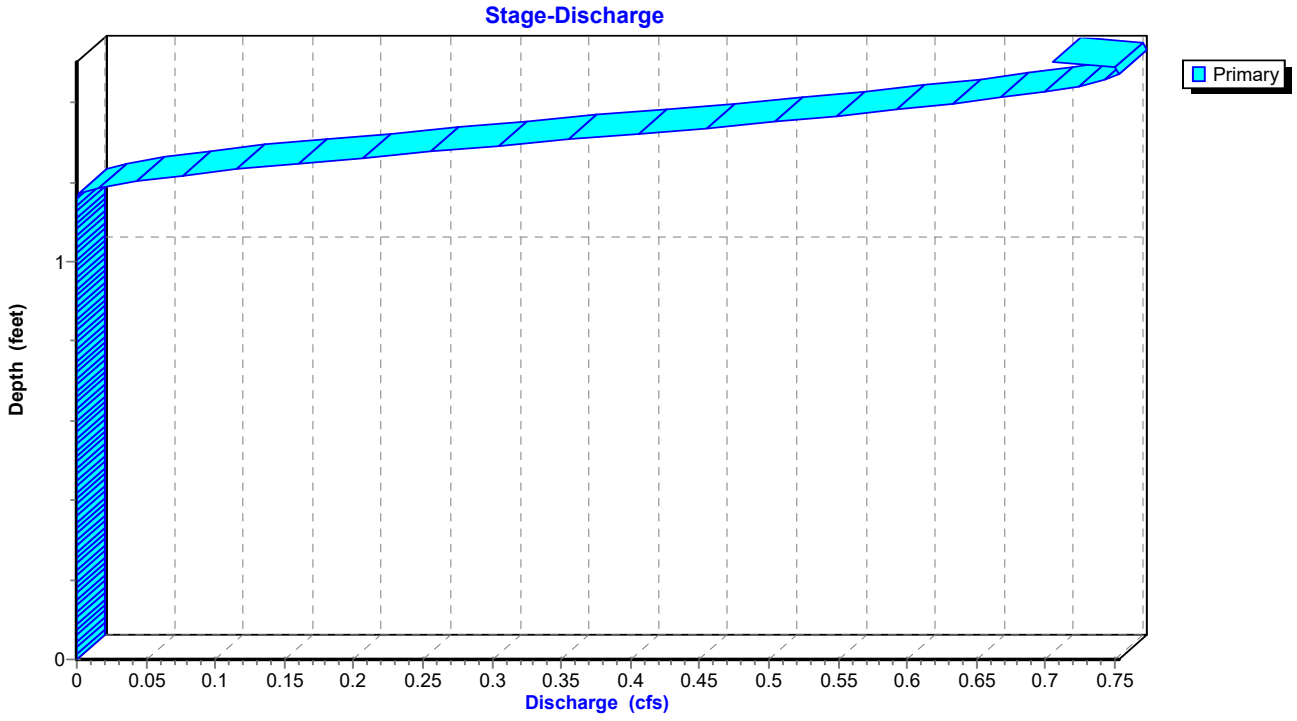
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0052 '/'
Inlet Invert= 665.36', Outlet Invert= 665.04'



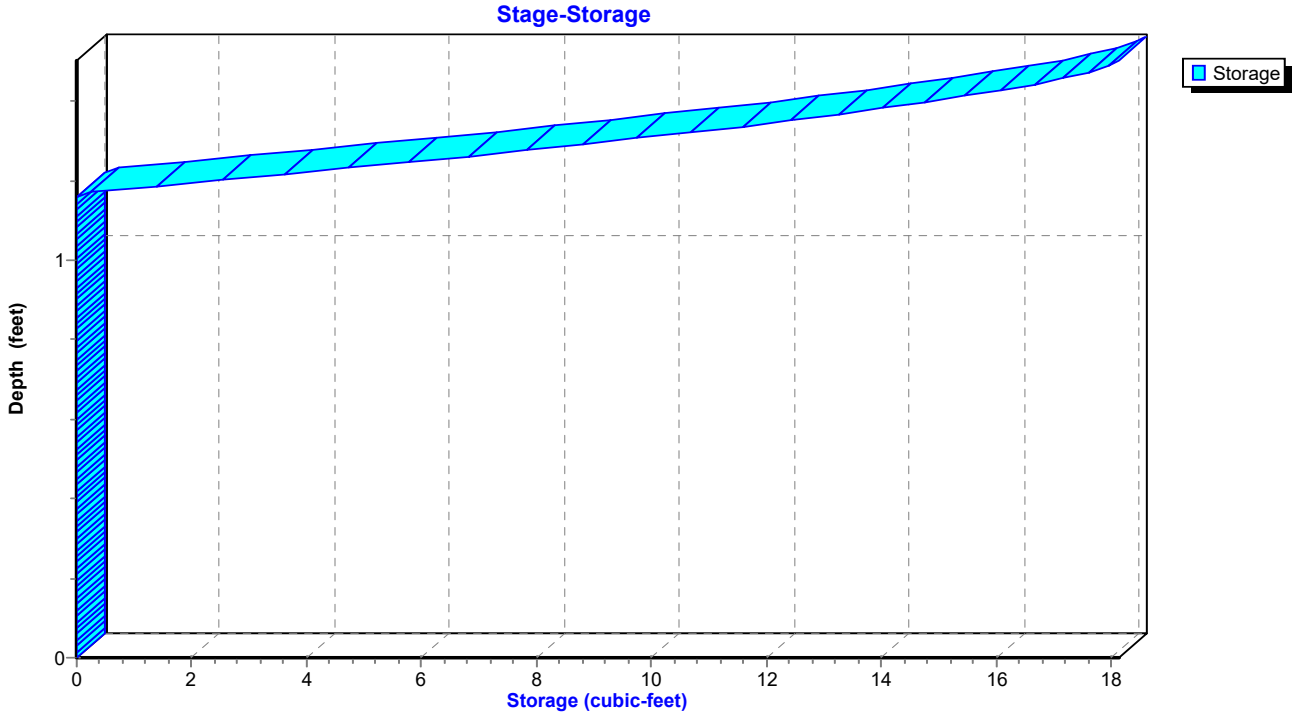
Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Hydrograph for Reach 11R: inlet 7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.53	0.00
5.40	0.00	0	666.53	0.00
5.80	0.00	0	666.53	0.00
6.20	0.00	0	666.53	0.00
6.60	0.00	0	666.53	0.00
7.00	0.00	0	666.53	0.00
7.40	0.00	1	666.53	0.00
7.80	0.00	1	666.53	0.00
8.20	0.01	1	666.53	0.01
8.60	0.01	1	666.53	0.01
9.00	0.01	1	666.53	0.01
9.40	0.01	1	666.54	0.01
9.80	0.01	1	666.54	0.01
10.20	0.01	1	666.54	0.01
10.60	0.01	1	666.54	0.01
11.00	0.02	2	666.55	0.02
11.40	0.03	2	666.55	0.03
11.80	**0.07**	**3**	**666.57**	**0.06**
12.20	**0.27**	**8**	**666.64**	**0.28**
12.60	0.06	3	666.57	0.06
13.00	0.03	2	666.55	0.03
13.40	0.02	2	666.55	0.02
13.80	0.01	1	666.54	0.01
14.20	0.01	1	666.54	0.01
14.60	0.01	1	666.54	0.01
15.00	0.01	1	666.54	0.01
15.40	0.01	1	666.54	0.01
15.80	0.01	1	666.54	0.01
16.20	0.01	1	666.54	0.01
16.60	0.01	1	666.53	0.01
17.00	0.01	1	666.53	0.01
17.40	0.01	1	666.53	0.01
17.80	0.01	1	666.53	0.01
18.20	0.00	1	666.53	0.00
18.60	0.00	1	666.53	0.00
19.00	0.00	1	666.53	0.00
19.40	0.00	0	666.53	0.00
19.80	0.00	0	666.53	0.00

Stage-Discharge for Reach 11R: inlet 7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.08	0.00
666.53	0.24	0.00
666.54	0.56	0.01
666.55	0.83	0.03
666.56	1.05	0.04
666.57	1.22	0.07
666.58	1.38	0.09
666.59	1.53	0.12
666.60	1.65	0.15
666.61	1.77	0.18
666.62	1.88	0.21
666.63	1.98	0.24
666.64	2.07	0.27
666.65	2.15	0.31
666.66	2.23	0.34
666.67	2.29	0.37
666.68	2.36	0.41
666.69	2.41	0.44
666.70	2.47	0.47
666.71	2.51	0.50
666.72	2.55	0.53
666.73	2.59	0.56
666.74	2.62	0.59
666.75	2.65	0.62
666.76	2.67	0.64
666.77	2.68	0.67
666.78	2.69	0.69
666.79	2.70	0.71
666.80	**2.70**	0.72
666.81	2.69	0.74
666.82	2.67	0.75
666.83	2.65	**0.75**
666.84	2.61	0.75
666.85	2.53	0.74
666.86	2.41	0.71

Stage-Area-Storage for Reach 11R: inlet 7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	0
666.50	0.0	0
666.52	0.0	0
666.54	0.0	1
666.56	0.0	3
666.58	0.1	4
666.60	0.1	5
666.62	0.1	7
666.64	0.1	8
666.66	0.2	9
666.68	0.2	11
666.70	0.2	12
666.72	0.2	13
666.74	0.2	14
666.76	0.2	15
666.78	0.3	16
666.80	0.3	17
666.82	0.3	17
666.84	0.3	18
666.86	**0.3**	**18**

Summary for Reach 12R: MH6 18"

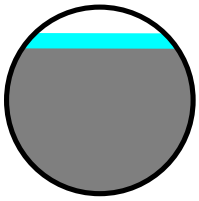
[52] Hint: Inlet/Outlet conditions not evaluated
[61] Hint: Exceeded Reach 11R outlet invert by 1.29' @ 12.16 hrs

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.30 cfs @ 12.17 hrs, Volume= 0.022 af
Outflow = 0.30 cfs @ 12.17 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.1 min

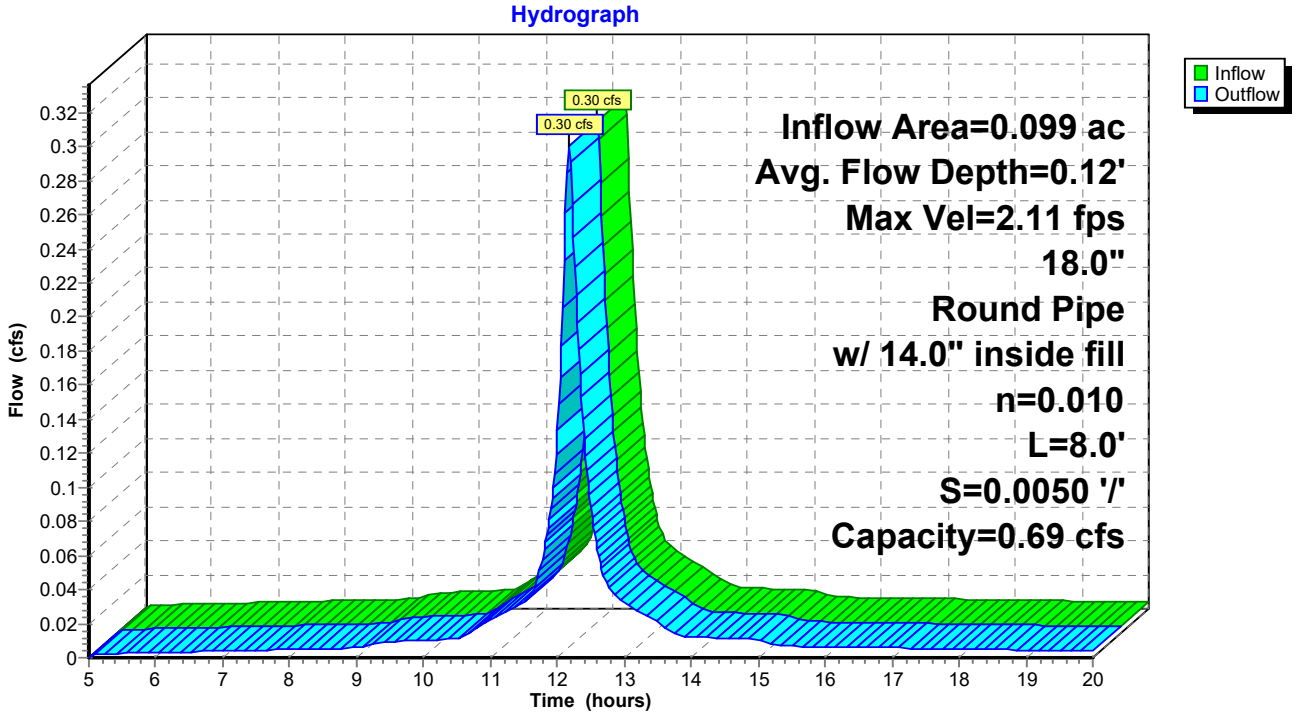
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.11 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.67 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.17 hrs
Average Depth at Peak Storage= 1.29' above invert (0.12' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

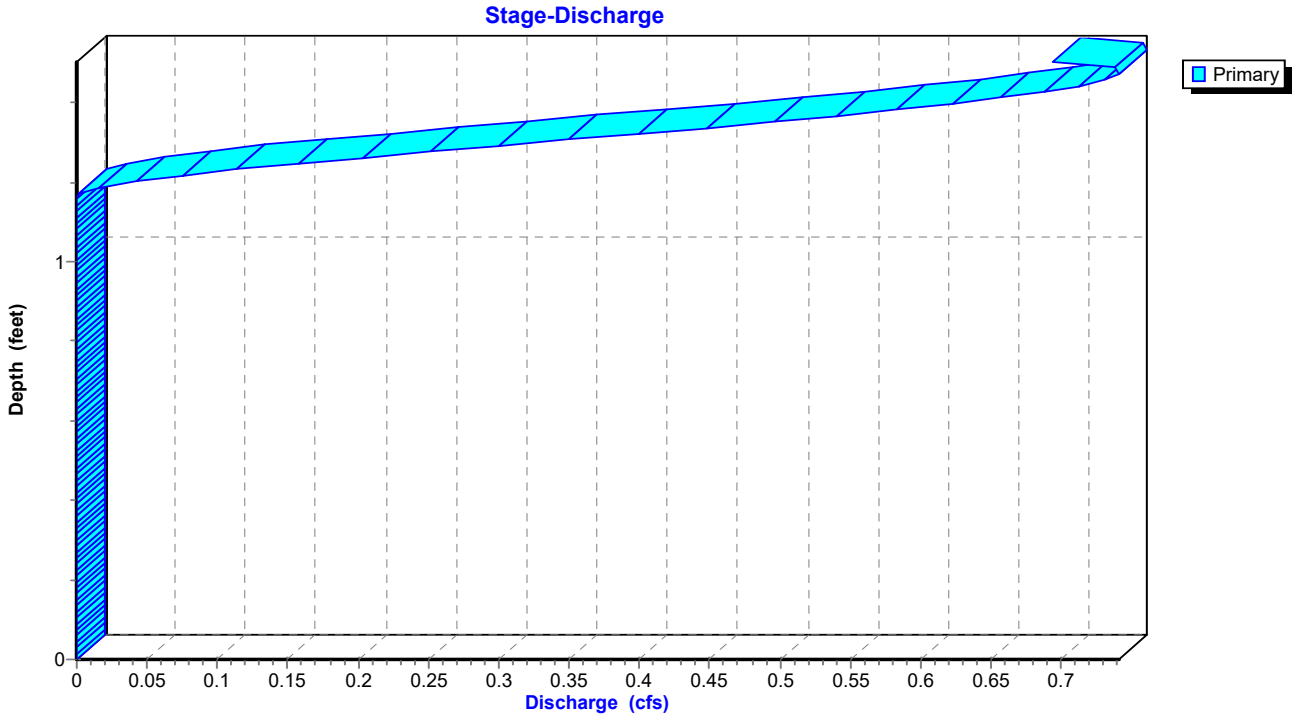
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 8.0' Slope= 0.0050 '/'
Inlet Invert= 665.04', Outlet Invert= 665.00'



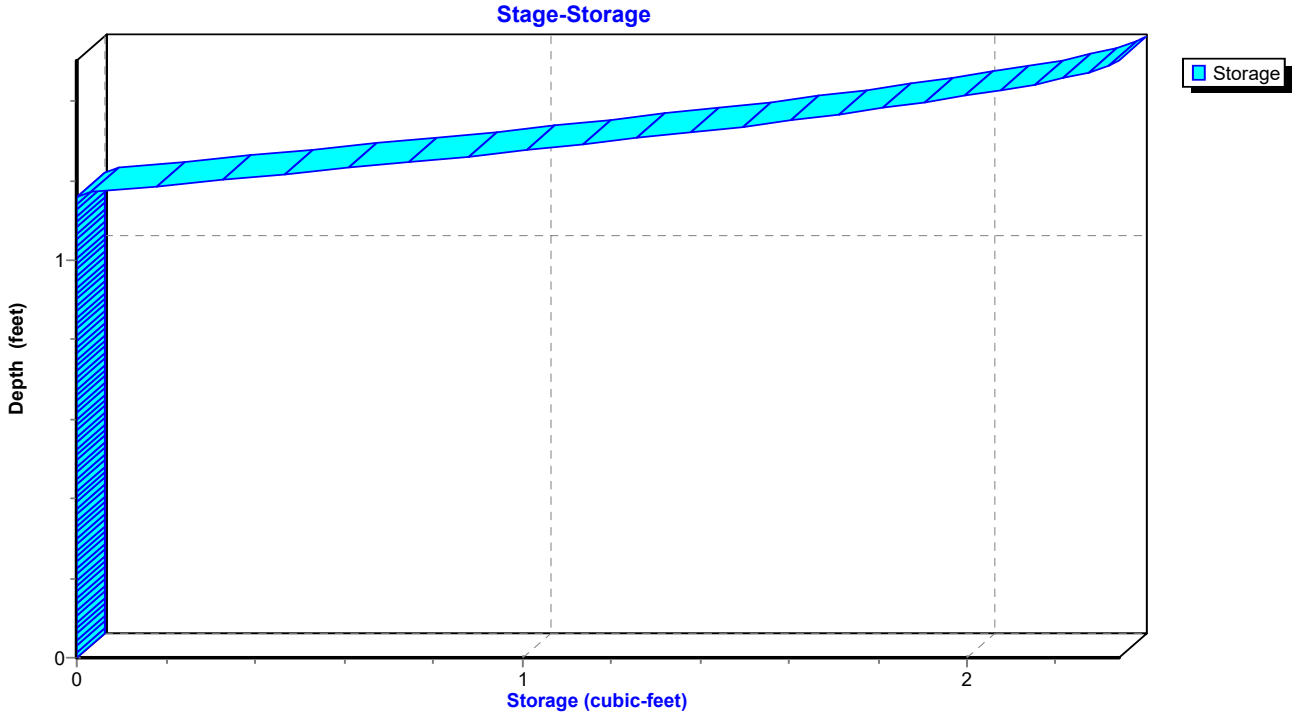
Reach 12R: MH6 18"



Reach 12R: MH6 18"



Reach 12R: MH6 18"



Hydrograph for Reach 12R: MH6 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.21	0.00
5.40	0.00	0	666.21	0.00
5.80	0.00	0	666.21	0.00
6.20	0.00	0	666.21	0.00
6.60	0.00	0	666.21	0.00
7.00	0.00	0	666.21	0.00
7.40	0.00	0	666.21	0.00
7.80	0.00	0	666.21	0.00
8.20	0.01	0	666.21	0.01
8.60	0.01	0	666.21	0.01
9.00	0.01	0	666.21	0.01
9.40	0.01	0	666.22	0.01
9.80	0.01	0	666.22	0.01
10.20	0.01	0	666.22	0.01
10.60	0.01	0	666.22	0.01
11.00	0.02	0	666.23	0.02
11.40	0.03	0	666.23	0.03
11.80	**0.06**	**0**	**666.25**	**0.06**
12.20	**0.28**	**1**	**666.32**	**0.28**
12.60	0.06	0	666.25	0.06
13.00	0.03	0	666.23	0.03
13.40	0.02	0	666.23	0.02
13.80	0.01	0	666.22	0.01
14.20	0.01	0	666.22	0.01
14.60	0.01	0	666.22	0.01
15.00	0.01	0	666.22	0.01
15.40	0.01	0	666.22	0.01
15.80	0.01	0	666.22	0.01
16.20	0.01	0	666.22	0.01
16.60	0.01	0	666.22	0.01
17.00	0.01	0	666.21	0.01
17.40	0.01	0	666.21	0.01
17.80	0.01	0	666.21	0.01
18.20	0.00	0	666.21	0.00
18.60	0.00	0	666.21	0.00
19.00	0.00	0	666.21	0.00
19.40	0.00	0	666.21	0.00
19.80	0.00	0	666.21	0.00

Stage-Discharge for Reach 12R: MH6 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.00	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.00	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.08	0.00
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.23	0.00
665.20	0.00	0.00	665.71	0.00	0.00	666.22	0.55	0.01
665.21	0.00	0.00	665.72	0.00	0.00	666.23	0.82	0.02
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.03	0.04
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.20	0.06
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.36	0.09
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.50	0.11
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.63	0.14
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.74	0.17
665.28	0.00	0.00	665.79	0.00	0.00	666.30	1.85	0.20
665.29	0.00	0.00	665.80	0.00	0.00	666.31	1.95	0.24
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.04	0.27
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.12	0.30
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.19	0.33
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.26	0.37
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.32	0.40
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.38	0.43
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.43	0.46
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.47	0.50
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.51	0.53
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.55	0.56
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.58	0.58
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.60	0.61
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.62	0.63
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.64	0.66
665.44	0.00	0.00	665.95	0.00	0.00	666.46	2.65	0.68
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.70
665.46	0.00	0.00	665.97	0.00	0.00	666.48	**2.65**	0.71
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.65	0.73
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.63	0.73
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.61	**0.74**
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.57	0.74
665.51	0.00	0.00	666.02	0.00	0.00	666.53	2.49	0.72
665.52	0.00	0.00	666.03	0.00	0.00	666.54	2.38	0.69
665.53	0.00	0.00	666.04	0.00	0.00			
665.54	0.00	0.00	666.05	0.00	0.00			

Stage-Area-Storage for Reach 12R: MH6 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.1	1
666.28	0.1	1
666.30	0.1	1
666.32	0.1	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	2
666.40	0.2	2
666.42	0.2	2
666.44	0.2	2
666.46	0.3	2
666.48	0.3	2
666.50	0.3	2
666.52	0.3	2
666.54	**0.3**	**2**

Summary for Reach 13R: to isolator 6"

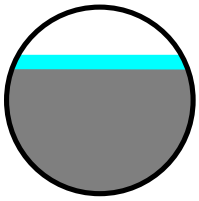
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.12 cfs @ 12.21 hrs, Volume= 0.009 af
Outflow = 0.12 cfs @ 12.21 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

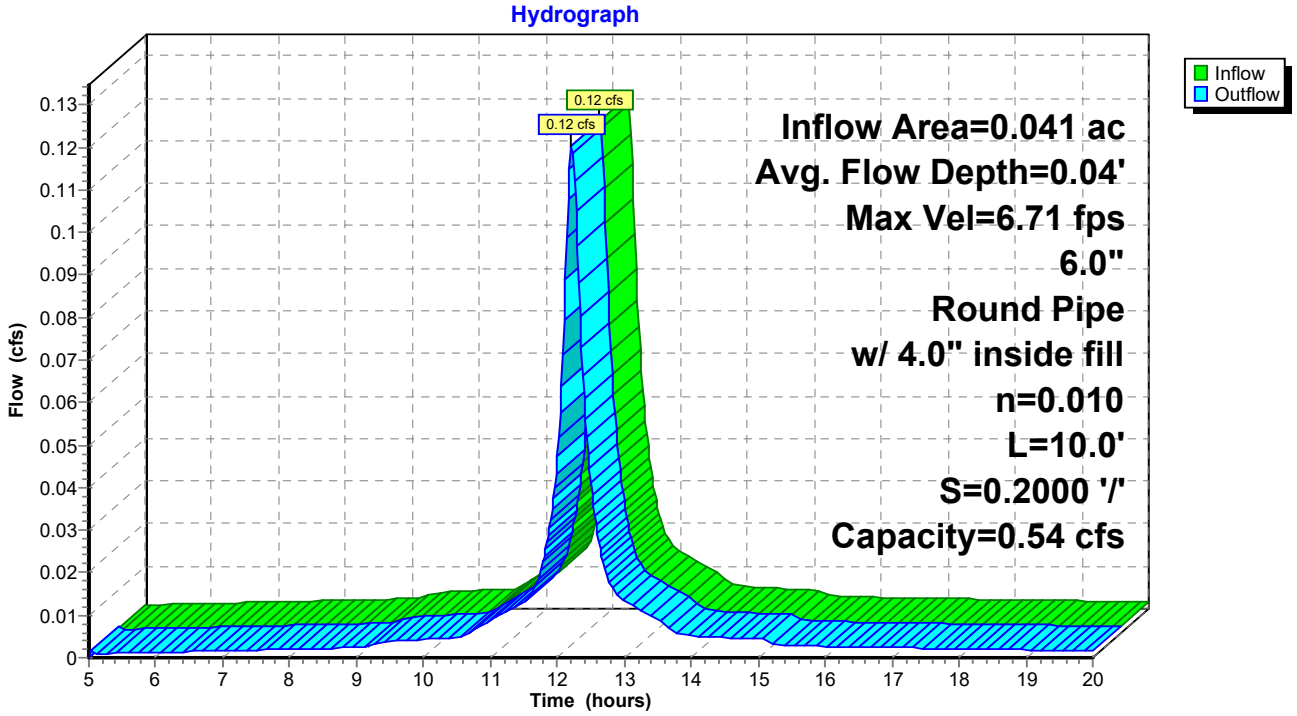
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 6.71 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.06 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.37' above invert (0.04' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

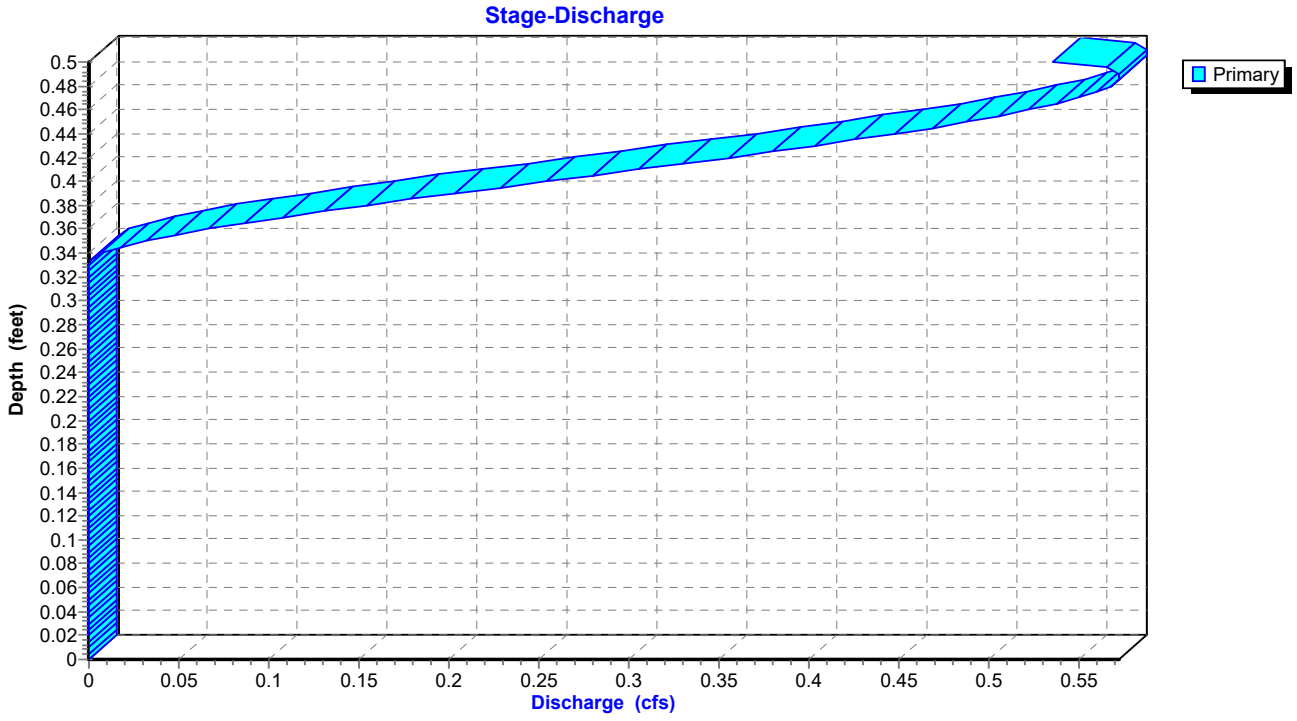
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



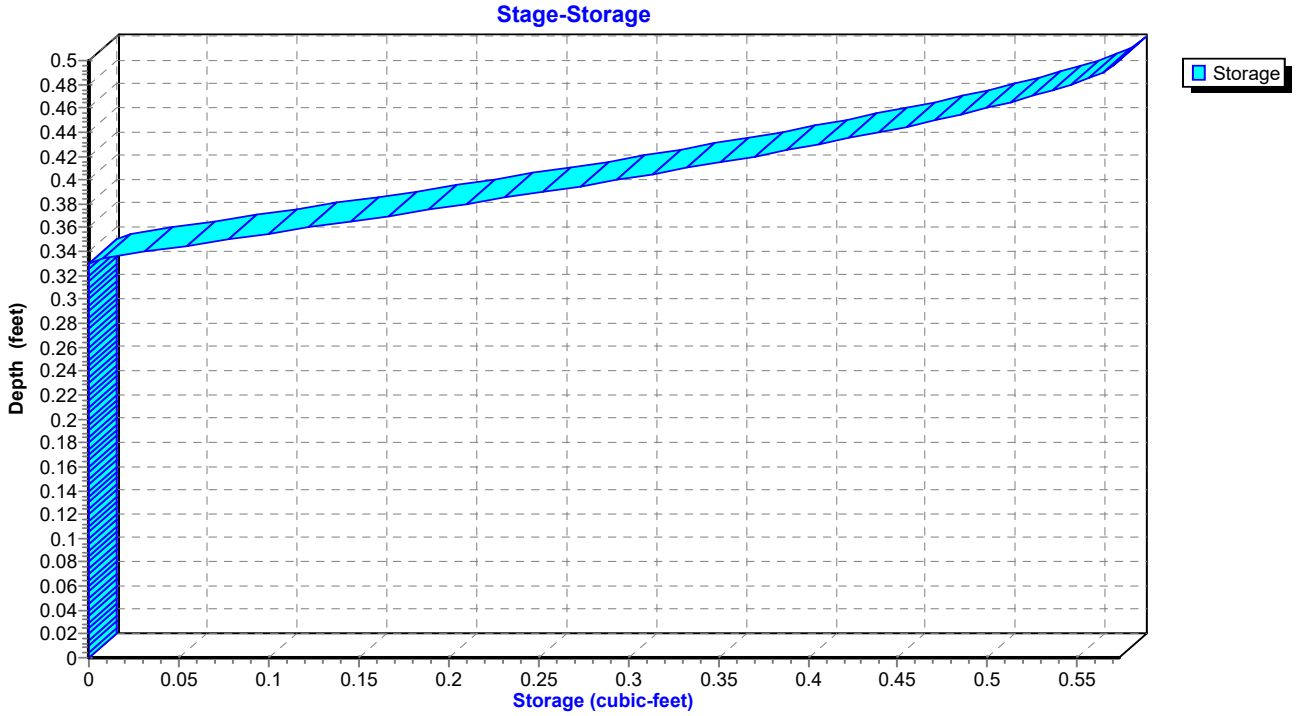
Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Hydrograph for Reach 13R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.34	0.00
5.80	0.00	0	668.34	0.00
6.20	0.00	0	668.34	0.00
6.60	0.00	0	668.34	0.00
7.00	0.00	0	668.34	0.00
7.40	0.00	0	668.34	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.01	0	668.34	0.01
11.40	0.01	0	668.34	0.01
11.80	0.02	0	668.35	0.02
12.20	**0.12**	**0**	**668.37**	**0.12**
12.60	**0.03**	**0**	**668.35**	**0.03**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 13R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 13R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 14R: to isolator 6"

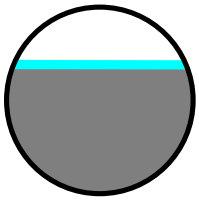
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.030 ac, 83.33% Impervious, Inflow Depth > 1.73" for 2-yr event
Inflow = 0.06 cfs @ 12.27 hrs, Volume= 0.004 af
Outflow = 0.06 cfs @ 12.27 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.1 min

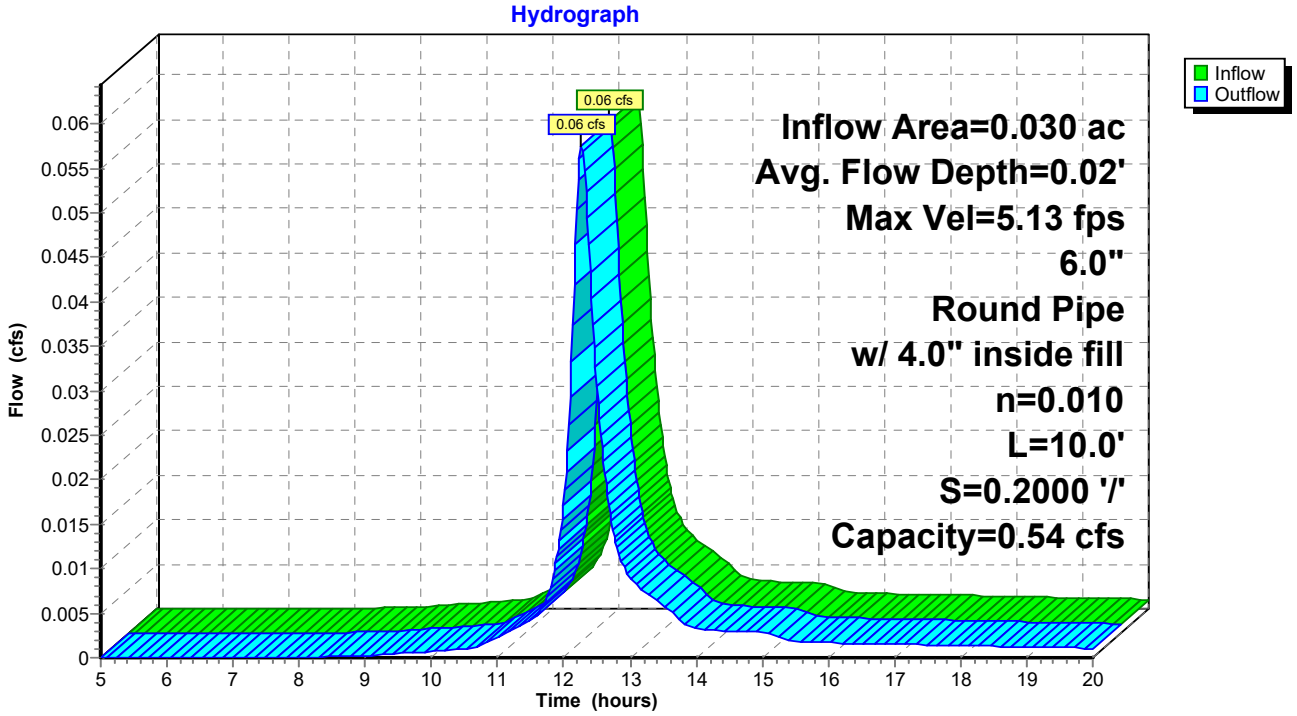
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 5.13 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.70 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.36' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

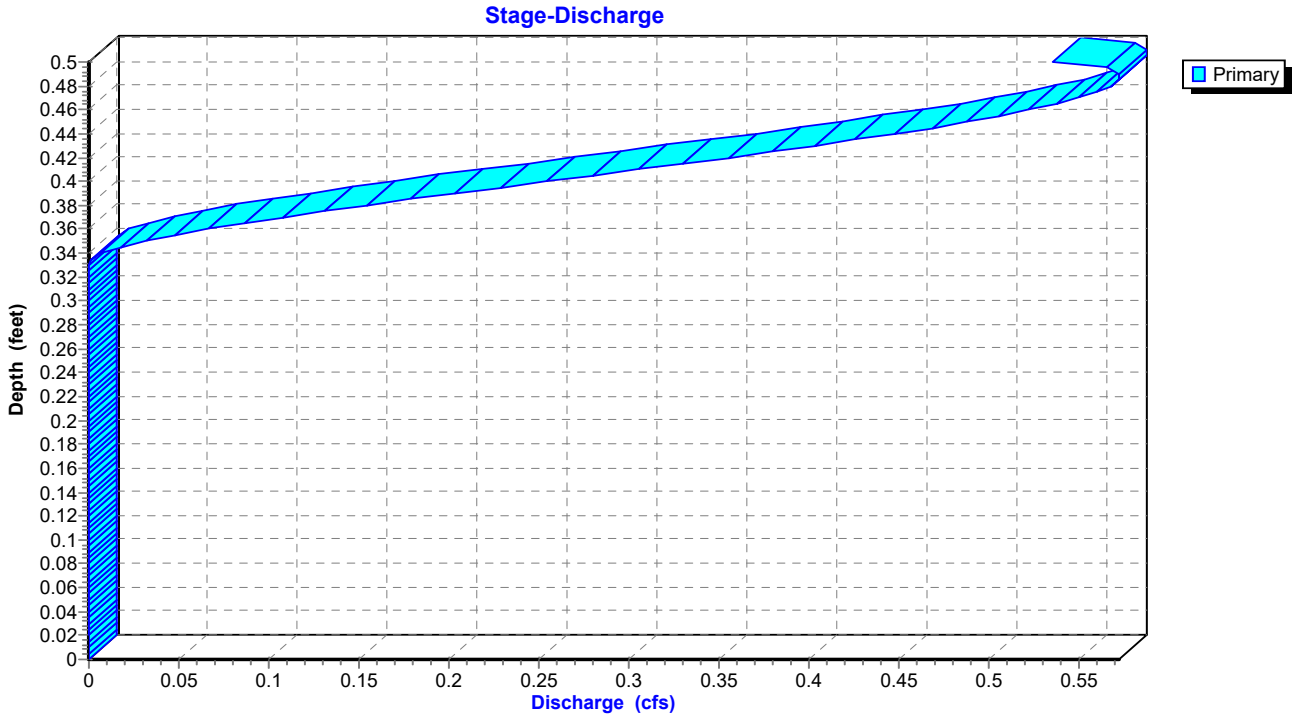
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



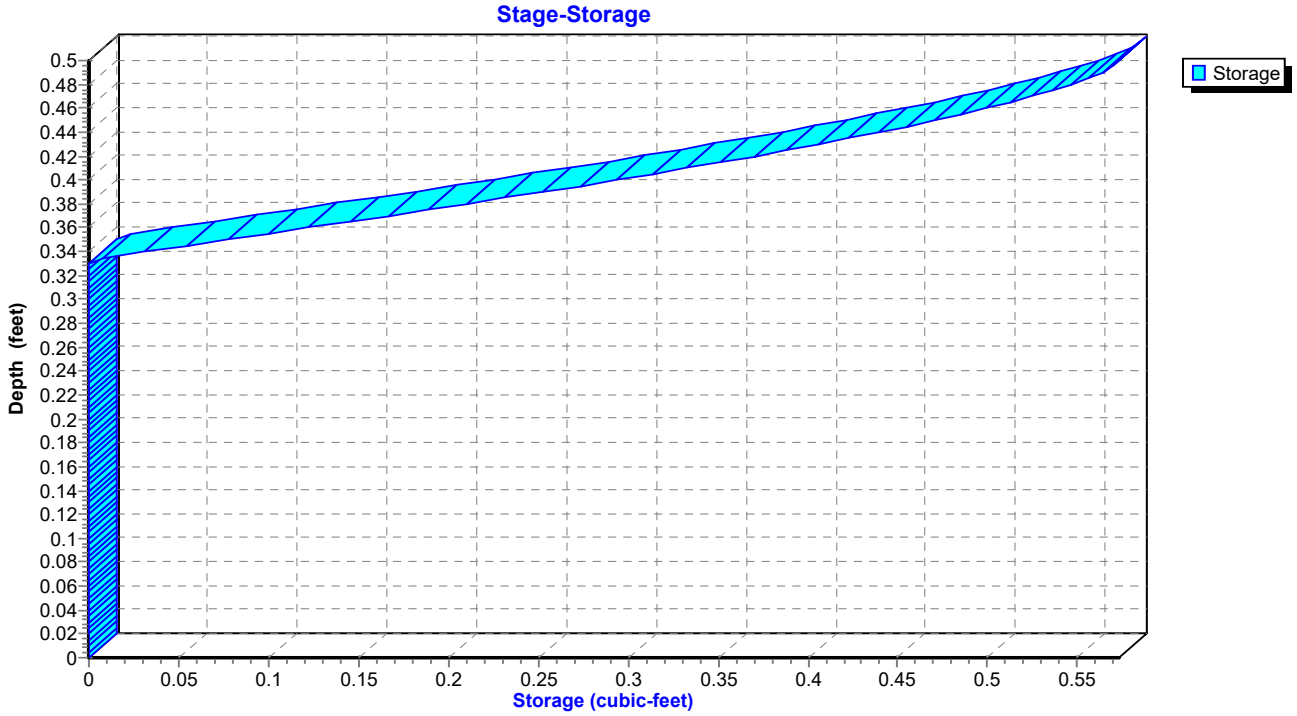
Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Hydrograph for Reach 14R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.33	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.00	0	668.34	0.00
11.40	0.00	0	668.34	0.00
11.80	0.01	0	668.34	0.01
12.20	**0.05**	**0**	**668.36**	**0.05**
12.60	**0.02**	**0**	**668.35**	**0.02**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.00	0	668.34	0.00
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 14R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 14R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 15R: to isolator 6"

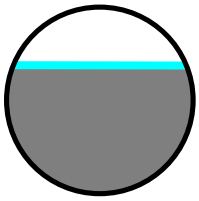
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 73.68% Impervious, Inflow Depth > 1.30" for 2-yr event
Inflow = 0.05 cfs @ 12.38 hrs, Volume= 0.004 af
Outflow = 0.05 cfs @ 12.39 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.1 min

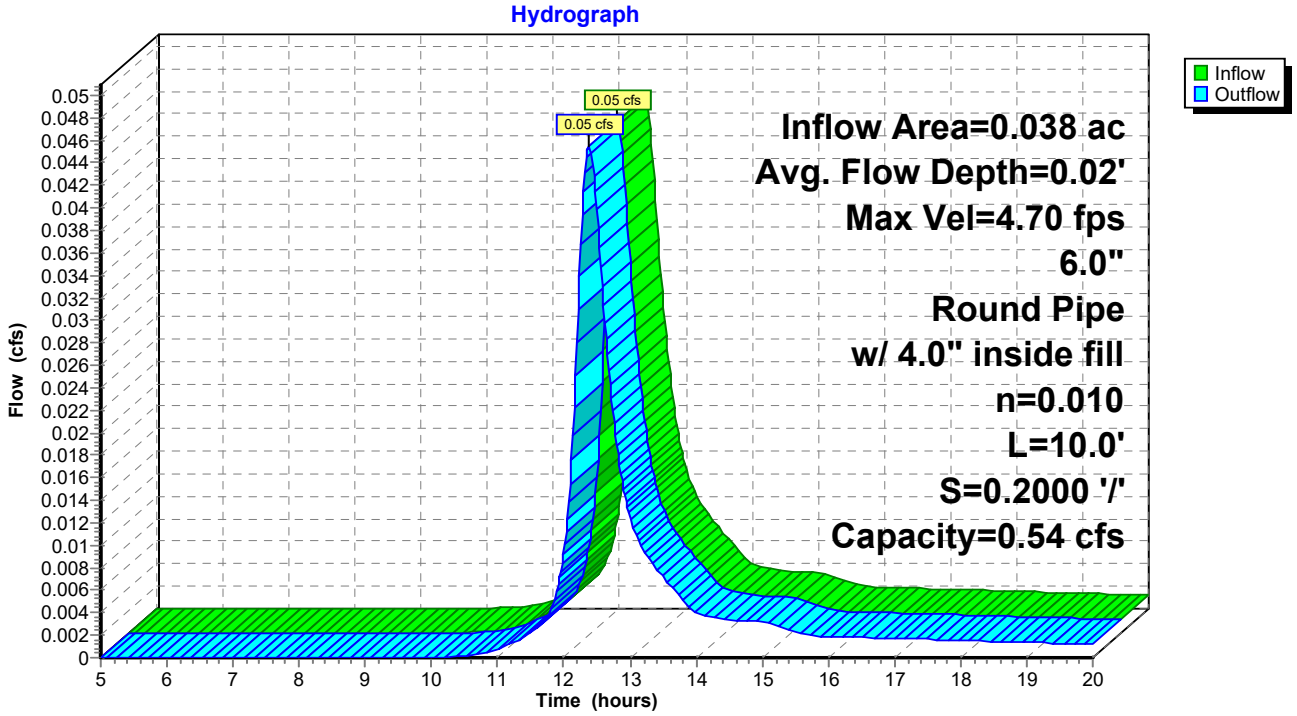
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 4.70 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.84 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.38 hrs
Average Depth at Peak Storage= 0.35' above invert (0.02' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

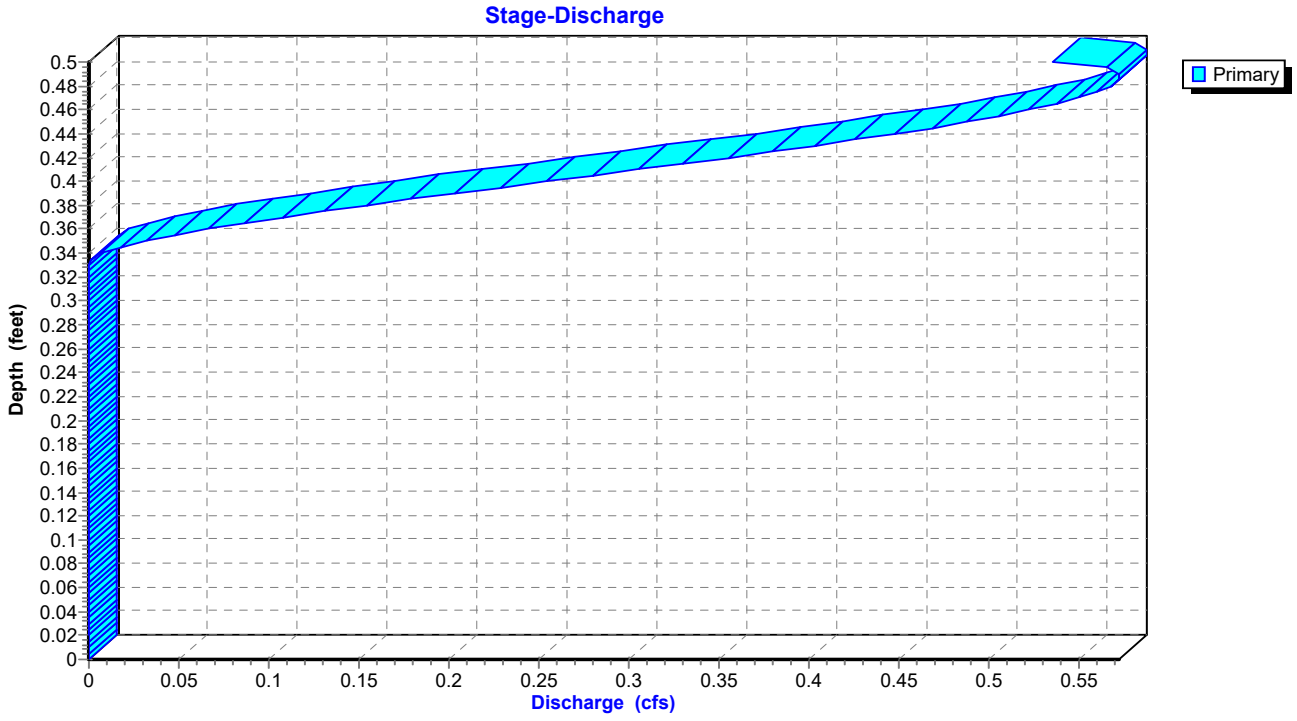
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



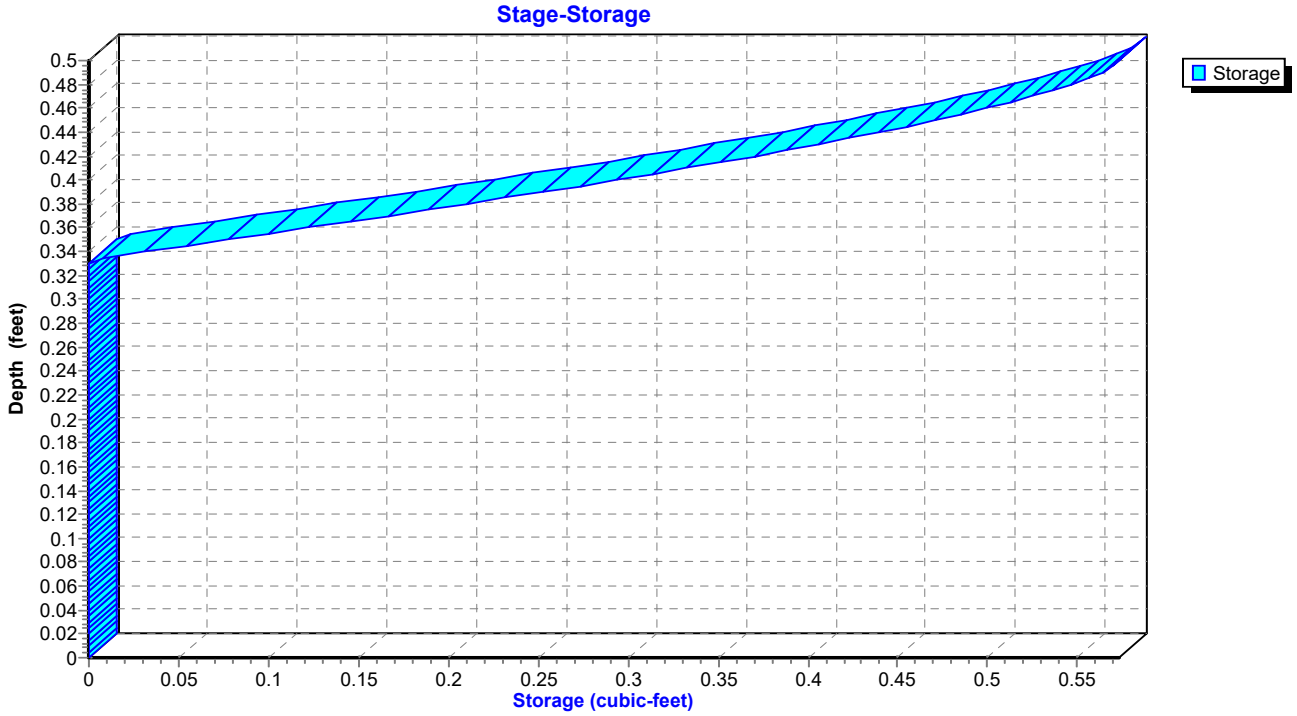
Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Hydrograph for Reach 15R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.33	0.00
10.20	0.00	0	668.33	0.00
10.60	0.00	0	668.33	0.00
11.00	0.00	0	668.34	0.00
11.40	0.00	0	668.34	0.00
11.80	0.00	0	668.34	0.00
12.20	**0.03**	**0**	**668.35**	**0.03**
12.60	**0.03**	**0**	**668.35**	**0.03**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.00	0	668.34	0.00
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 15R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 15R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 16R: inlet 2 12"

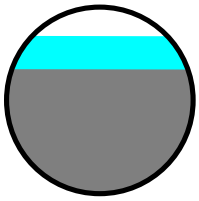
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.150 ac,100.00% Impervious, Inflow Depth > 2.65" for 2-yr event
Inflow = 0.37 cfs @ 12.28 hrs, Volume= 0.033 af
Outflow = 0.37 cfs @ 12.29 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.6 min

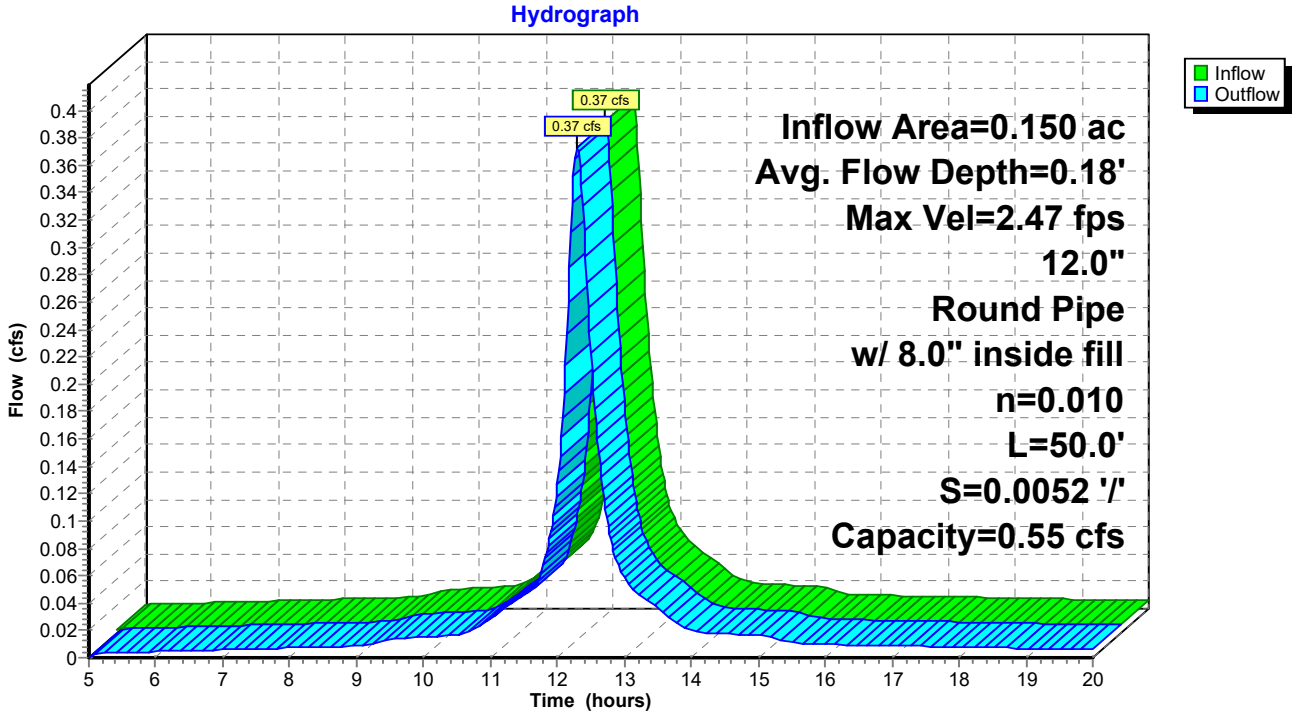
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.47 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 0.81 fps, Avg. Travel Time= 1.0 min

Peak Storage= 8 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.84' above invert (0.18' above fill)
Bank-Full Depth= 1.00' above invert (0.33' above fill) Flow Area= 0.2 sf, Capacity= 0.55 cfs

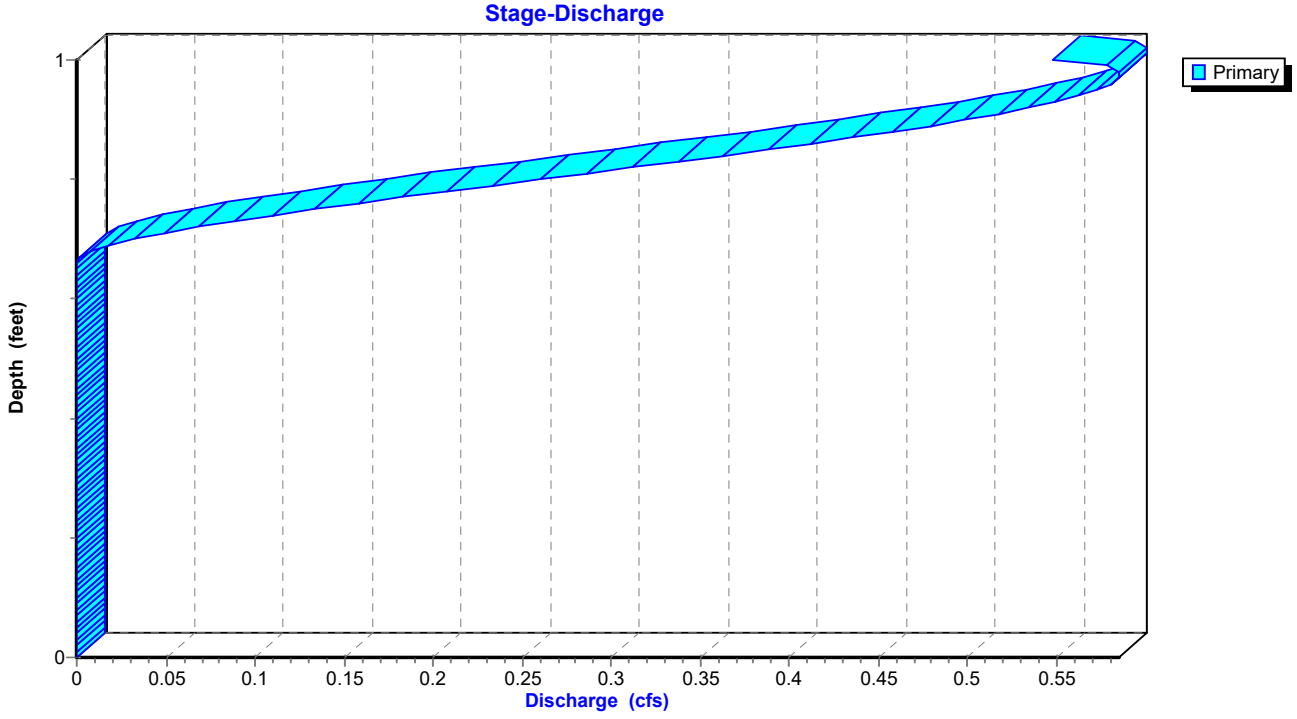
12.0" Round Pipe w/ 8.0" inside fill
n= 0.010
Length= 50.0' Slope= 0.0052 '/'
Inlet Invert= 666.21', Outlet Invert= 665.95'



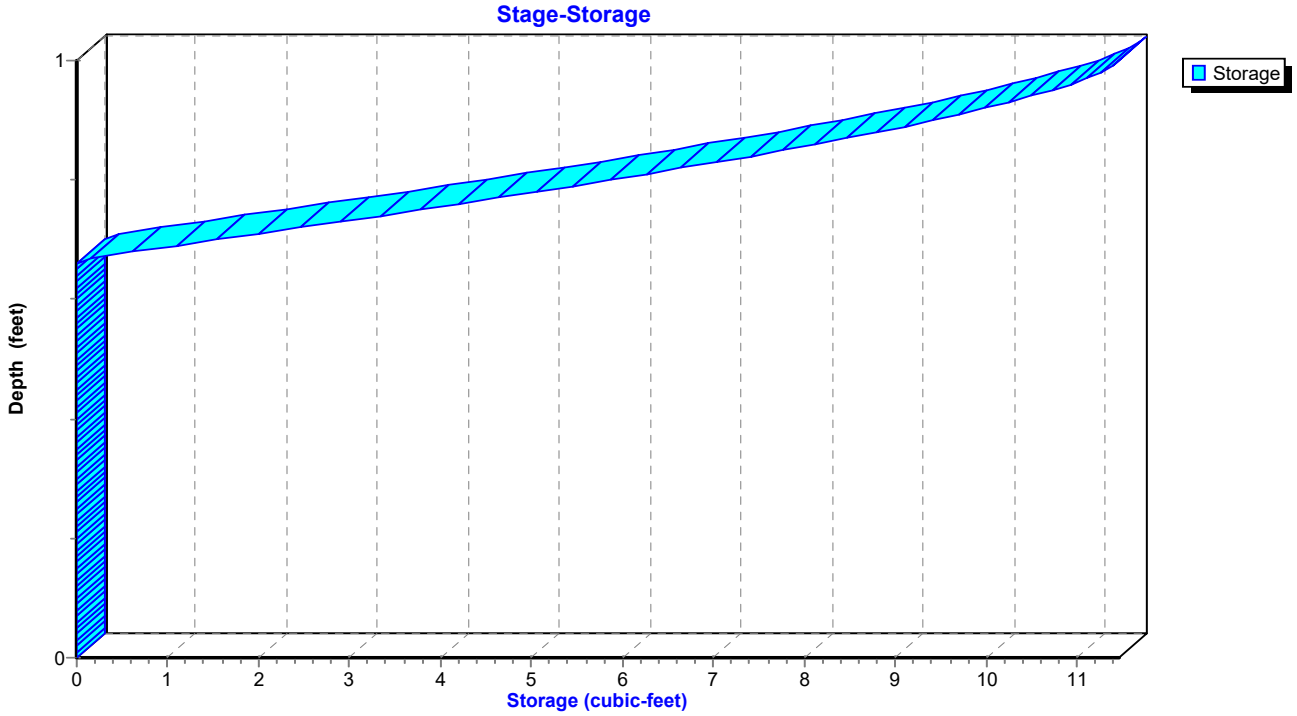
Reach 16R: inlet 2 12"



Reach 16R: inlet 2 12"



Reach 16R: inlet 2 12"



Hydrograph for Reach 16R: inlet 2 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.88	0.00
5.40	0.00	0	666.88	0.00
5.80	0.00	0	666.89	0.00
6.20	0.00	0	666.89	0.00
6.60	0.01	0	666.89	0.01
7.00	0.01	1	666.89	0.01
7.40	0.01	1	666.89	0.01
7.80	0.01	1	666.89	0.01
8.20	0.01	1	666.89	0.01
8.60	0.01	1	666.89	0.01
9.00	0.01	1	666.89	0.01
9.40	0.01	1	666.89	0.01
9.80	0.01	1	666.90	0.01
10.20	0.02	1	666.90	0.02
10.60	0.02	1	666.90	0.02
11.00	0.03	1	666.91	0.03
11.40	0.04	2	666.92	0.04
11.80	0.07	3	666.93	0.07
12.20	**0.32**	**7**	**667.03**	**0.31**
12.60	**0.15**	**4**	**666.97**	**0.16**
13.00	0.06	2	666.92	0.06
13.40	0.04	2	666.91	0.04
13.80	0.02	1	666.90	0.02
14.20	0.02	1	666.90	0.02
14.60	0.02	1	666.90	0.02
15.00	0.02	1	666.90	0.02
15.40	0.01	1	666.89	0.01
15.80	0.01	1	666.89	0.01
16.20	0.01	1	666.89	0.01
16.60	0.01	1	666.89	0.01
17.00	0.01	1	666.89	0.01
17.40	0.01	1	666.89	0.01
17.80	0.01	1	666.89	0.01
18.20	0.01	1	666.89	0.01
18.60	0.01	1	666.89	0.01
19.00	0.01	1	666.89	0.01
19.40	0.01	1	666.89	0.01
19.80	0.01	1	666.89	0.01

Stage-Discharge for Reach 16R: inlet 2 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
666.21	0.00	0.00	666.72	0.00	0.00
666.22	0.00	0.00	666.73	0.00	0.00
666.23	0.00	0.00	666.74	0.00	0.00
666.24	0.00	0.00	666.75	0.00	0.00
666.25	0.00	0.00	666.76	0.00	0.00
666.26	0.00	0.00	666.77	0.00	0.00
666.27	0.00	0.00	666.78	0.00	0.00
666.28	0.00	0.00	666.79	0.00	0.00
666.29	0.00	0.00	666.80	0.00	0.00
666.30	0.00	0.00	666.81	0.00	0.00
666.31	0.00	0.00	666.82	0.00	0.00
666.32	0.00	0.00	666.83	0.00	0.00
666.33	0.00	0.00	666.84	0.00	0.00
666.34	0.00	0.00	666.85	0.00	0.00
666.35	0.00	0.00	666.86	0.00	0.00
666.36	0.00	0.00	666.87	0.00	0.00
666.37	0.00	0.00	666.88	0.24	0.00
666.38	0.00	0.00	666.89	0.59	0.01
666.39	0.00	0.00	666.90	0.84	0.02
666.40	0.00	0.00	666.91	1.05	0.03
666.41	0.00	0.00	666.92	1.23	0.05
666.42	0.00	0.00	666.93	1.38	0.07
666.43	0.00	0.00	666.94	1.53	0.09
666.44	0.00	0.00	666.95	1.65	0.11
666.45	0.00	0.00	666.96	1.77	0.13
666.46	0.00	0.00	666.97	1.88	0.16
666.47	0.00	0.00	666.98	1.97	0.18
666.48	0.00	0.00	666.99	2.06	0.21
666.49	0.00	0.00	667.00	2.14	0.23
666.50	0.00	0.00	667.01	2.22	0.26
666.51	0.00	0.00	667.02	2.29	0.29
666.52	0.00	0.00	667.03	2.35	0.31
666.53	0.00	0.00	667.04	2.40	0.34
666.54	0.00	0.00	667.05	2.45	0.36
666.55	0.00	0.00	667.06	2.50	0.39
666.56	0.00	0.00	667.07	2.54	0.41
666.57	0.00	0.00	667.08	2.58	0.44
666.58	0.00	0.00	667.09	2.61	0.46
666.59	0.00	0.00	667.10	2.63	0.48
666.60	0.00	0.00	667.11	2.65	0.50
666.61	0.00	0.00	667.12	2.67	0.52
666.62	0.00	0.00	667.13	2.68	0.53
666.63	0.00	0.00	667.14	**2.68**	0.55
666.64	0.00	0.00	667.15	2.68	0.56
666.65	0.00	0.00	667.16	2.67	0.57
666.66	0.00	0.00	667.17	2.66	0.58
666.67	0.00	0.00	667.18	2.63	0.59
666.68	0.00	0.00	667.19	2.60	**0.59**
666.69	0.00	0.00	667.20	2.54	0.58
666.70	0.00	0.00	667.21	2.39	0.55
666.71	0.00	0.00			

Stage-Area-Storage for Reach 16R: inlet 2 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
666.21	0.0	0	666.72	0.0	0
666.22	0.0	0	666.73	0.0	0
666.23	0.0	0	666.74	0.0	0
666.24	0.0	0	666.75	0.0	0
666.25	0.0	0	666.76	0.0	0
666.26	0.0	0	666.77	0.0	0
666.27	0.0	0	666.78	0.0	0
666.28	0.0	0	666.79	0.0	0
666.29	0.0	0	666.80	0.0	0
666.30	0.0	0	666.81	0.0	0
666.31	0.0	0	666.82	0.0	0
666.32	0.0	0	666.83	0.0	0
666.33	0.0	0	666.84	0.0	0
666.34	0.0	0	666.85	0.0	0
666.35	0.0	0	666.86	0.0	0
666.36	0.0	0	666.87	0.0	0
666.37	0.0	0	666.88	0.0	0
666.38	0.0	0	666.89	0.0	1
666.39	0.0	0	666.90	0.0	1
666.40	0.0	0	666.91	0.0	2
666.41	0.0	0	666.92	0.0	2
666.42	0.0	0	666.93	0.0	2
666.43	0.0	0	666.94	0.1	3
666.44	0.0	0	666.95	0.1	3
666.45	0.0	0	666.96	0.1	4
666.46	0.0	0	666.97	0.1	4
666.47	0.0	0	666.98	0.1	5
666.48	0.0	0	666.99	0.1	5
666.49	0.0	0	667.00	0.1	5
666.50	0.0	0	667.01	0.1	6
666.51	0.0	0	667.02	0.1	6
666.52	0.0	0	667.03	0.1	7
666.53	0.0	0	667.04	0.1	7
666.54	0.0	0	667.05	0.1	7
666.55	0.0	0	667.06	0.2	8
666.56	0.0	0	667.07	0.2	8
666.57	0.0	0	667.08	0.2	8
666.58	0.0	0	667.09	0.2	9
666.59	0.0	0	667.10	0.2	9
666.60	0.0	0	667.11	0.2	9
666.61	0.0	0	667.12	0.2	10
666.62	0.0	0	667.13	0.2	10
666.63	0.0	0	667.14	0.2	10
666.64	0.0	0	667.15	0.2	10
666.65	0.0	0	667.16	0.2	11
666.66	0.0	0	667.17	0.2	11
666.67	0.0	0	667.18	0.2	11
666.68	0.0	0	667.19	0.2	11
666.69	0.0	0	667.20	0.2	11
666.70	0.0	0	667.21	**0.2**	**11**
666.71	0.0	0			

Summary for Reach 17R: NDS2 6"

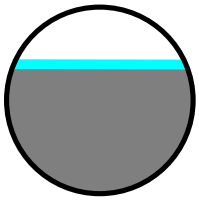
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 42.11% Impervious, Inflow Depth > 0.42" for 2-yr event
Inflow = 0.01 cfs @ 12.52 hrs, Volume= 0.001 af
Outflow = 0.01 cfs @ 12.59 hrs, Volume= 0.001 af, Atten= 1%, Lag= 4.4 min

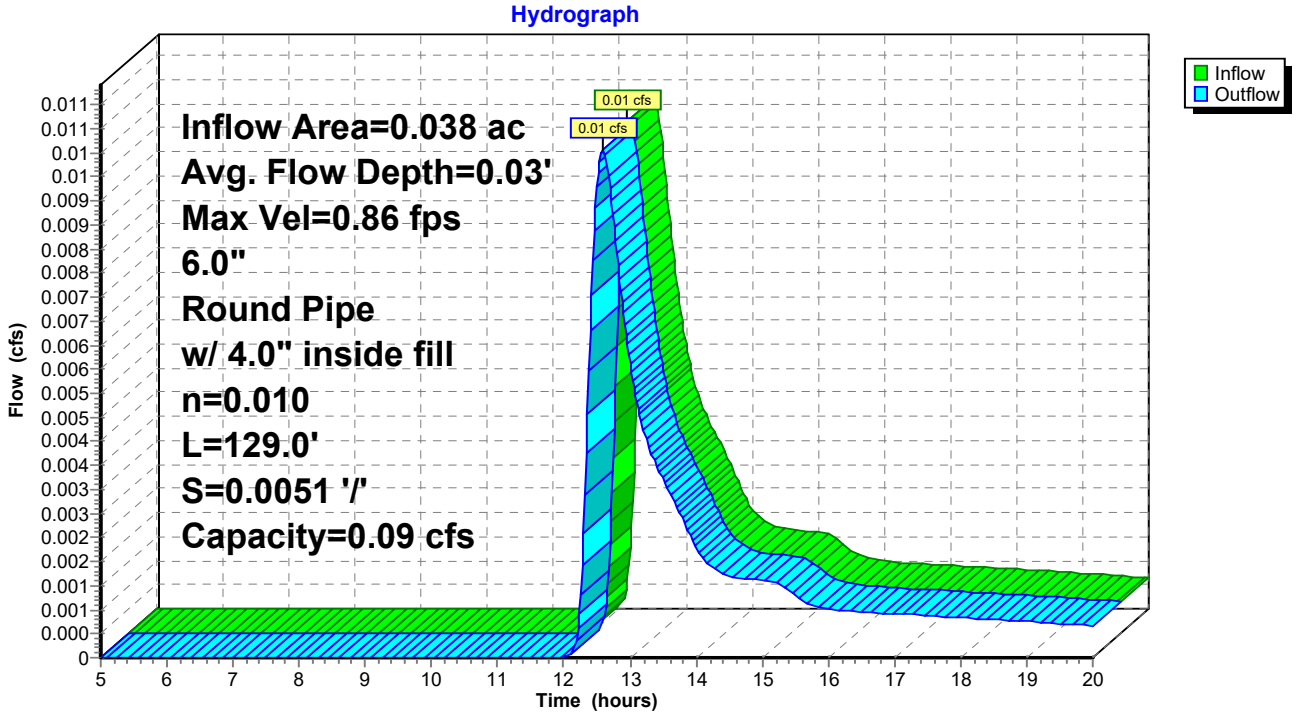
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.86 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 0.43 fps, Avg. Travel Time= 5.0 min

Peak Storage= 2 cf @ 12.55 hrs
Average Depth at Peak Storage= 0.36' above invert (0.03' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

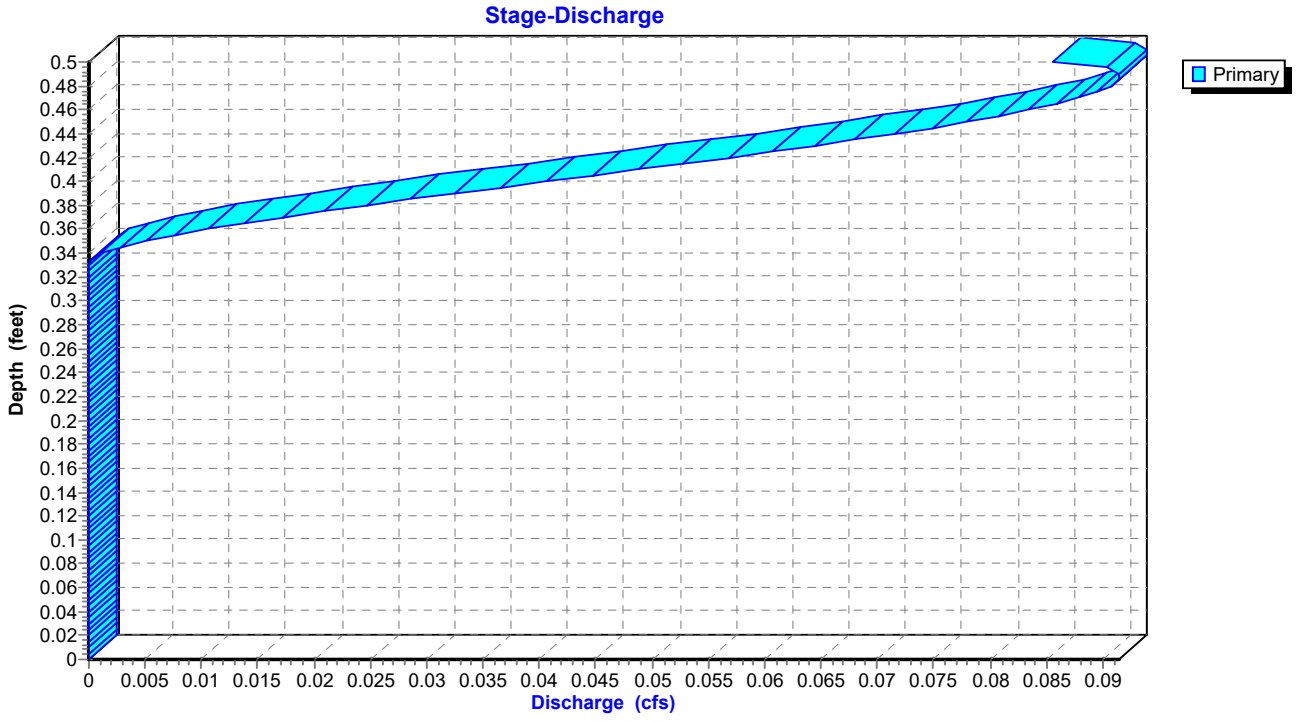
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0051 '/'
Inlet Invert= 668.84', Outlet Invert= 668.18'



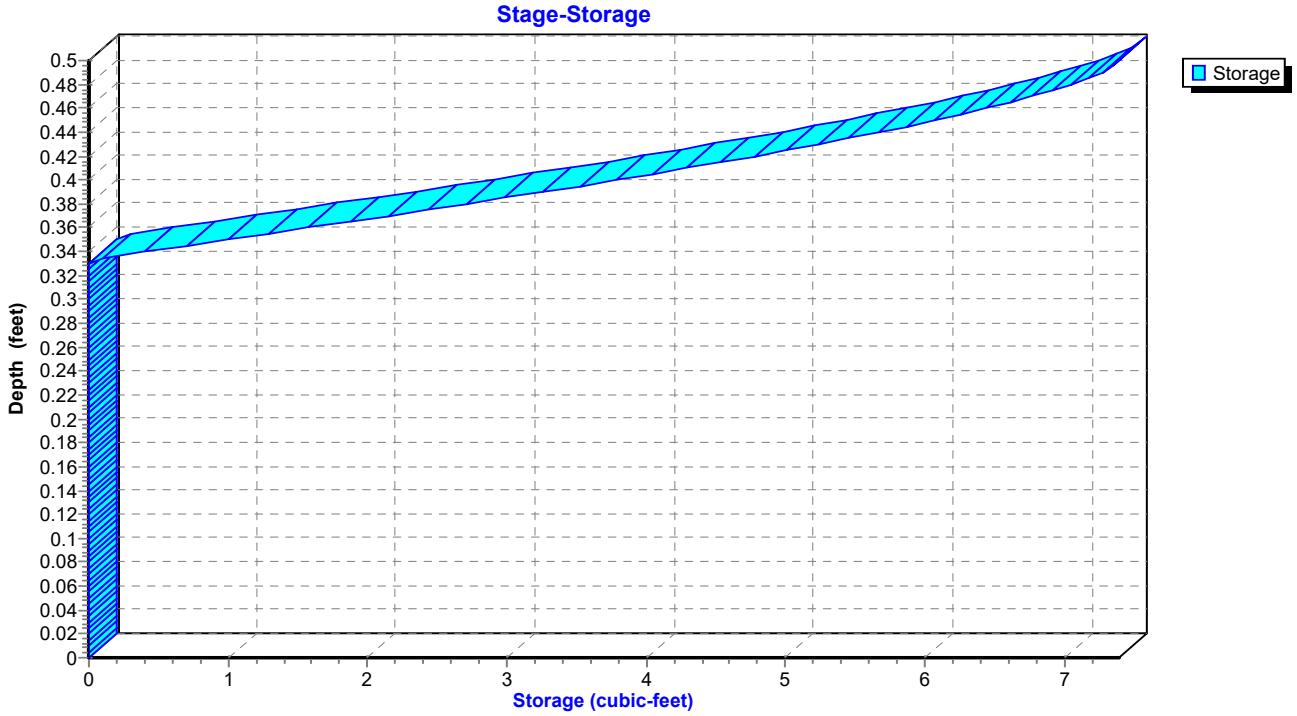
Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Hydrograph for Reach 17R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.17	0.00
5.40	0.00	0	669.17	0.00
5.80	0.00	0	669.17	0.00
6.20	0.00	0	669.17	0.00
6.60	0.00	0	669.17	0.00
7.00	0.00	0	669.17	0.00
7.40	0.00	0	669.17	0.00
7.80	0.00	0	669.17	0.00
8.20	0.00	0	669.17	0.00
8.60	0.00	0	669.17	0.00
9.00	0.00	0	669.17	0.00
9.40	0.00	0	669.17	0.00
9.80	0.00	0	669.17	0.00
10.20	0.00	0	669.17	0.00
10.60	0.00	0	669.17	0.00
11.00	0.00	0	669.17	0.00
11.40	0.00	0	669.17	0.00
11.80	0.00	0	669.17	0.00
12.20	**0.00**	**0**	**669.18**	0.00
12.60	**0.01**	**2**	**669.20**	**0.01**
13.00	0.01	1	669.19	0.01
13.40	0.00	1	669.19	0.00
13.80	0.00	1	669.18	0.00
14.20	0.00	1	669.18	0.00
14.60	0.00	0	669.18	0.00
15.00	0.00	0	669.18	0.00
15.40	0.00	0	669.18	0.00
15.80	0.00	0	669.18	0.00
16.20	0.00	0	669.18	0.00
16.60	0.00	0	669.18	0.00
17.00	0.00	0	669.18	0.00
17.40	0.00	0	669.18	0.00
17.80	0.00	0	669.18	0.00
18.20	0.00	0	669.18	0.00
18.60	0.00	0	669.18	0.00
19.00	0.00	0	669.18	0.00
19.40	0.00	0	669.18	0.00
19.80	0.00	0	669.18	0.00

Stage-Discharge for Reach 17R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.84	0.00	0.00
668.85	0.00	0.00
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.37	0.00
669.19	0.65	0.01
669.20	0.87	0.01
669.21	1.03	0.02
669.22	1.17	0.02
669.23	1.29	0.03
669.24	1.39	0.04
669.25	1.47	0.05
669.26	1.53	0.06
669.27	1.59	0.06
669.28	1.63	0.07
669.29	1.66	0.08
669.30	1.67	0.08
669.31	**1.67**	0.09
669.32	1.66	0.09
669.33	1.62	**0.09**
669.34	1.49	0.09

Stage-Area-Storage for Reach 17R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.84	0.0	0
668.85	0.0	0
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	1
669.20	0.0	2
669.21	0.0	2
669.22	0.0	3
669.23	0.0	3
669.24	0.0	4
669.25	0.0	4
669.26	0.0	5
669.27	0.0	5
669.28	0.0	6
669.29	0.0	6
669.30	0.0	6
669.31	0.1	7
669.32	0.1	7
669.33	0.1	7
669.34	**0.1**	**7**

Summary for Reach 18R: inlet 3 6"

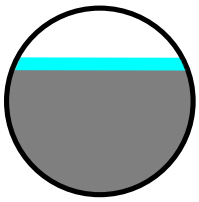
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 17R OUTLET depth by 0.01' @ 13.00 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.03' @ 12.52 hrs

Inflow Area = 0.090 ac, 18.89% Impervious, Inflow Depth > 0.33" for 2-yr event
Inflow = 0.01 cfs @ 12.58 hrs, Volume= 0.002 af
Outflow = 0.01 cfs @ 12.61 hrs, Volume= 0.002 af, Atten= 0%, Lag= 1.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.96 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 0.54 fps, Avg. Travel Time= 1.9 min

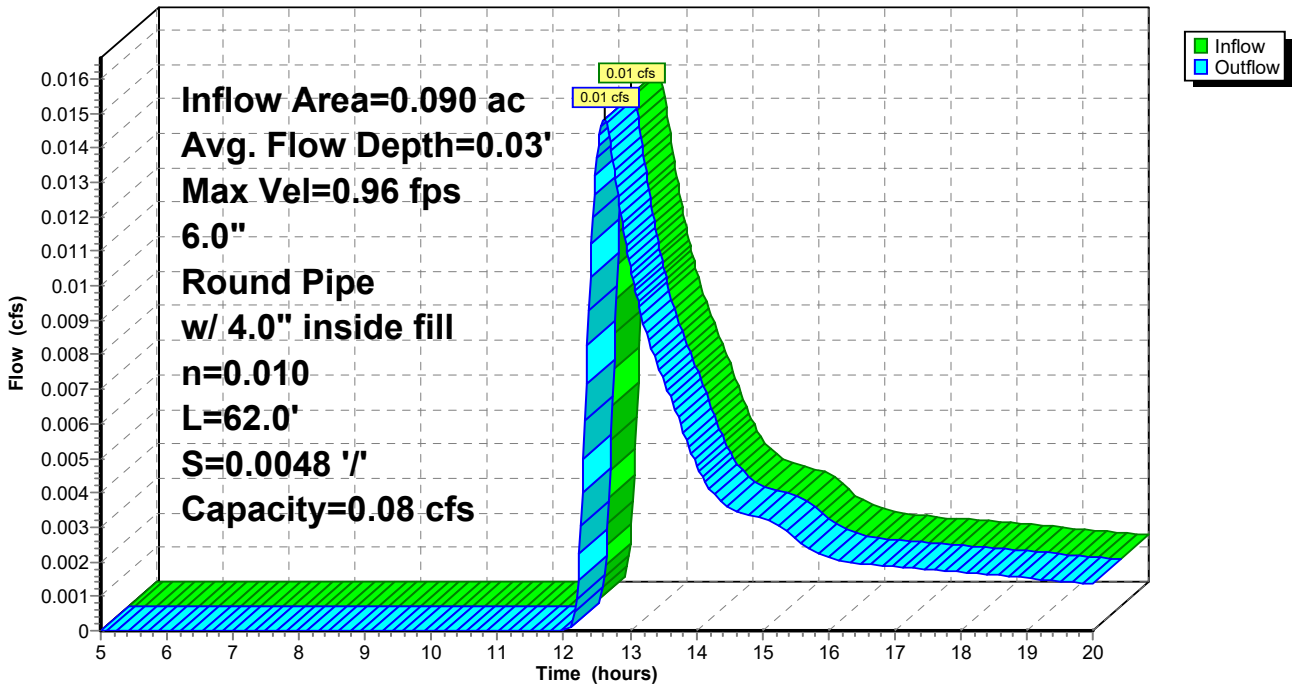
Peak Storage= 1 cf @ 12.59 hrs
Average Depth at Peak Storage= 0.37' above invert (0.03' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.08 cfs

6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0048 '/'
Inlet Invert= 668.18', Outlet Invert= 667.88'



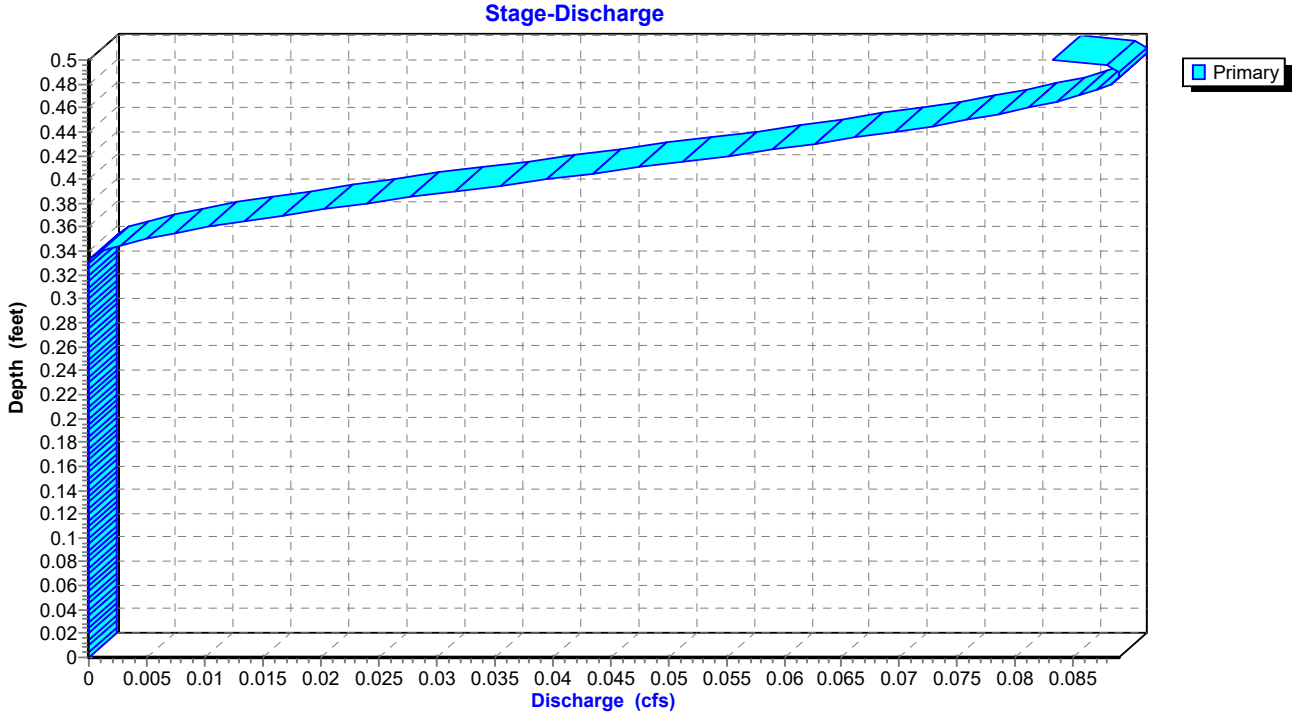
Reach 18R: inlet 3 6"

Hydrograph

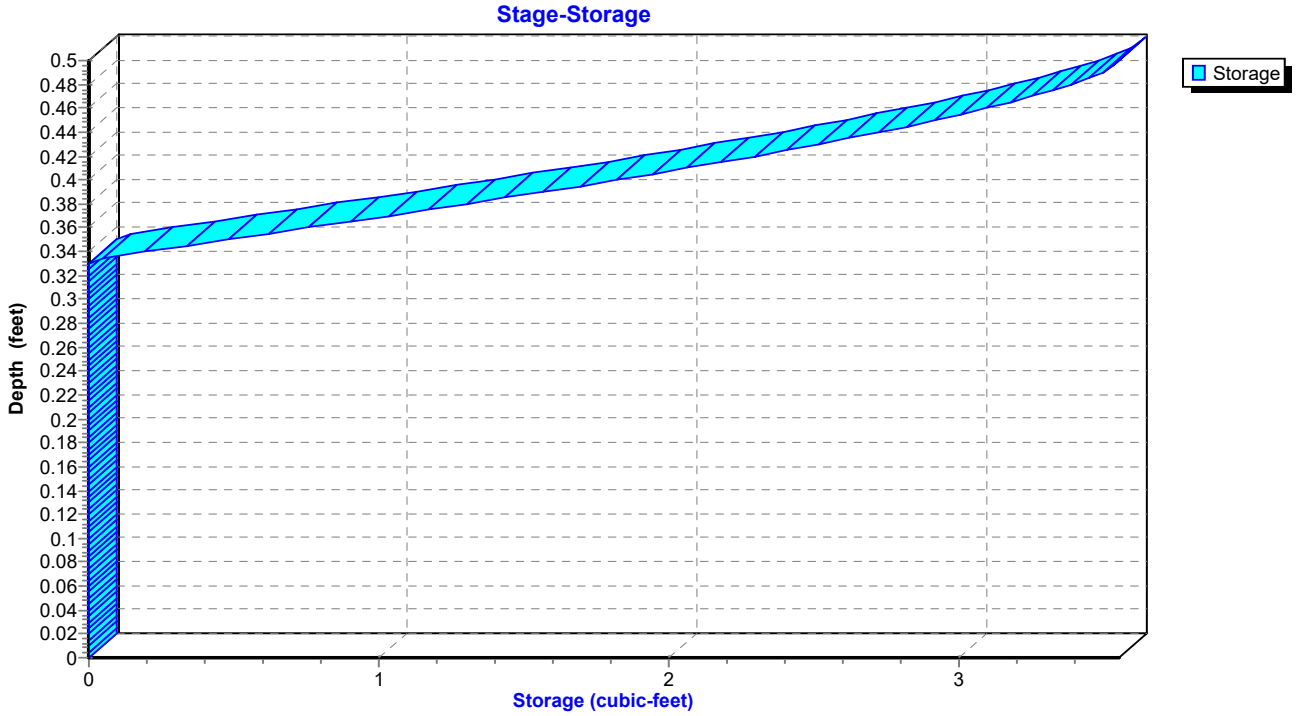


Reach 18R: inlet 3 6"

Stage-Discharge



Reach 18R: inlet 3 6"



Hydrograph for Reach 18R: inlet 3 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.51	0.00
5.40	0.00	0	668.51	0.00
5.80	0.00	0	668.51	0.00
6.20	0.00	0	668.51	0.00
6.60	0.00	0	668.51	0.00
7.00	0.00	0	668.51	0.00
7.40	0.00	0	668.51	0.00
7.80	0.00	0	668.51	0.00
8.20	0.00	0	668.51	0.00
8.60	0.00	0	668.51	0.00
9.00	0.00	0	668.51	0.00
9.40	0.00	0	668.51	0.00
9.80	0.00	0	668.51	0.00
10.20	0.00	0	668.51	0.00
10.60	0.00	0	668.51	0.00
11.00	0.00	0	668.51	0.00
11.40	0.00	0	668.51	0.00
11.80	0.00	0	668.51	0.00
12.20	**0.00**	**0**	**668.52**	0.00
12.60	**0.01**	**1**	**668.55**	**0.01**
13.00	0.01	1	668.54	0.01
13.40	0.01	1	668.54	0.01
13.80	0.01	1	668.53	0.01
14.20	0.00	0	668.53	0.00
14.60	0.00	0	668.53	0.00
15.00	0.00	0	668.53	0.00
15.40	0.00	0	668.53	0.00
15.80	0.00	0	668.52	0.00
16.20	0.00	0	668.52	0.00
16.60	0.00	0	668.52	0.00
17.00	0.00	0	668.52	0.00
17.40	0.00	0	668.52	0.00
17.80	0.00	0	668.52	0.00
18.20	0.00	0	668.52	0.00
18.60	0.00	0	668.52	0.00
19.00	0.00	0	668.52	0.00
19.40	0.00	0	668.52	0.00
19.80	0.00	0	668.52	0.00

Stage-Discharge for Reach 18R: inlet 3 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	0.00	0.00
668.35	0.00	0.00
668.36	0.00	0.00
668.37	0.00	0.00
668.38	0.00	0.00
668.39	0.00	0.00
668.40	0.00	0.00
668.41	0.00	0.00
668.42	0.00	0.00
668.43	0.00	0.00
668.44	0.00	0.00
668.45	0.00	0.00
668.46	0.00	0.00
668.47	0.00	0.00
668.48	0.00	0.00
668.49	0.00	0.00
668.50	0.00	0.00
668.51	0.00	0.00
668.52	0.36	0.00
668.53	0.64	0.00
668.54	0.84	0.01
668.55	1.00	0.02
668.56	1.14	0.02
668.57	1.25	0.03
668.58	1.35	0.04
668.59	1.43	0.05
668.60	1.49	0.06
668.61	1.54	0.06
668.62	1.58	0.07
668.63	1.61	0.08
668.64	1.63	0.08
668.65	**1.63**	0.09
668.66	1.61	0.09
668.67	1.58	**0.09**
668.68	1.45	0.08

Stage-Area-Storage for Reach 18R: inlet 3 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.0	0
668.48	0.0	0
668.49	0.0	0
668.50	0.0	0
668.51	0.0	0
668.52	0.0	0
668.53	0.0	0
668.54	0.0	1
668.55	0.0	1
668.56	0.0	1
668.57	0.0	2
668.58	0.0	2
668.59	0.0	2
668.60	0.0	2
668.61	0.0	3
668.62	0.0	3
668.63	0.0	3
668.64	0.0	3
668.65	0.1	3
668.66	0.1	3
668.67	0.1	3
668.68	**0.1**	**4**

Summary for Reach 19R: inlet 1 12"

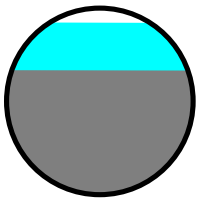
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[61] Hint: Exceeded Reach 16R outlet invert by 0.82' @ 12.22 hrs

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 2.64" for 2-yr event
Inflow = 0.54 cfs @ 12.22 hrs, Volume= 0.048 af
Outflow = 0.53 cfs @ 12.24 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.9 min

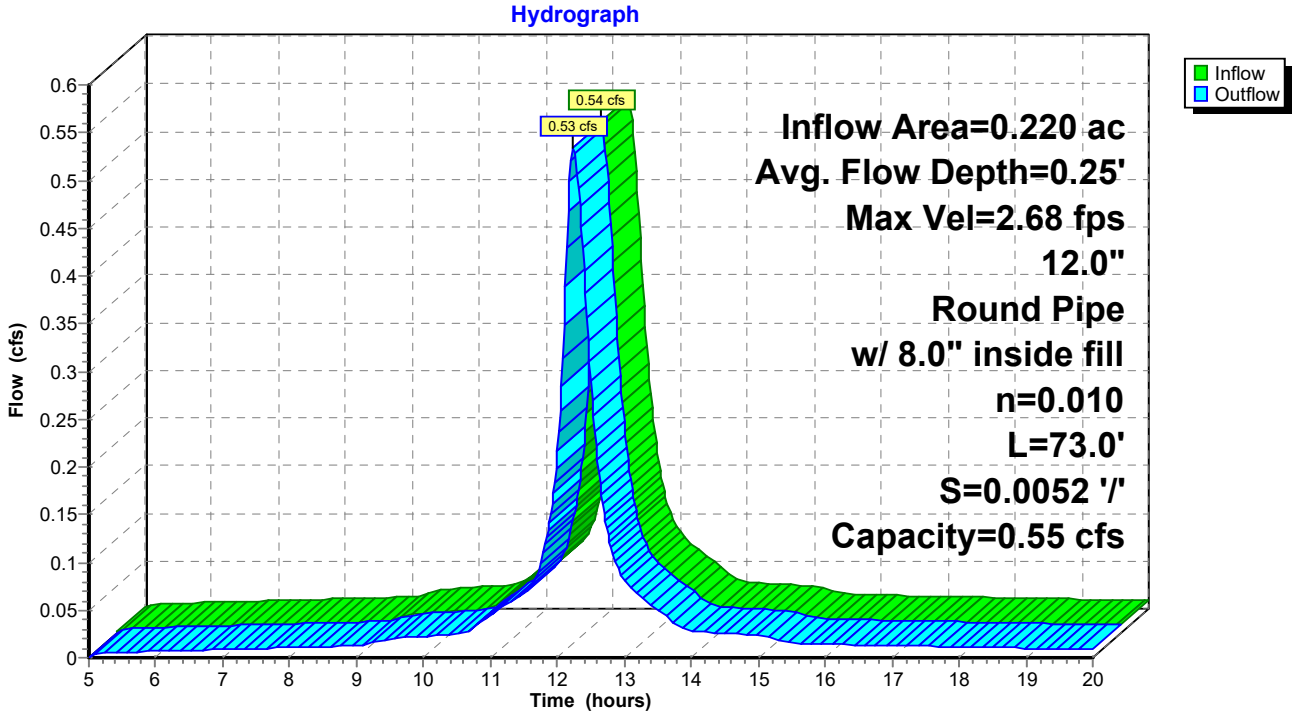
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.68 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.93 fps, Avg. Travel Time= 1.3 min

Peak Storage= 15 cf @ 12.23 hrs
Average Depth at Peak Storage= 0.92' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.33' above fill) Flow Area= 0.2 sf, Capacity= 0.55 cfs

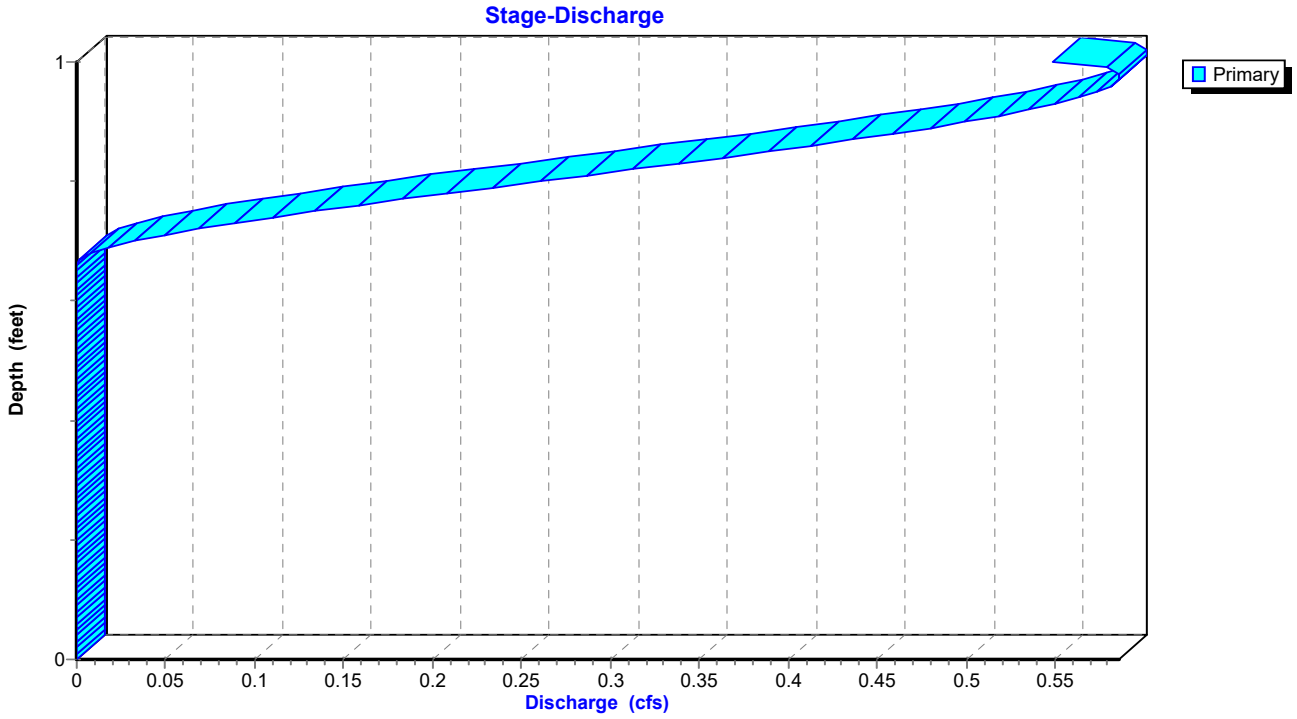
12.0" Round Pipe w/ 8.0" inside fill
n= 0.010
Length= 73.0' Slope= 0.0052 '/'
Inlet Invert= 665.85', Outlet Invert= 665.47'



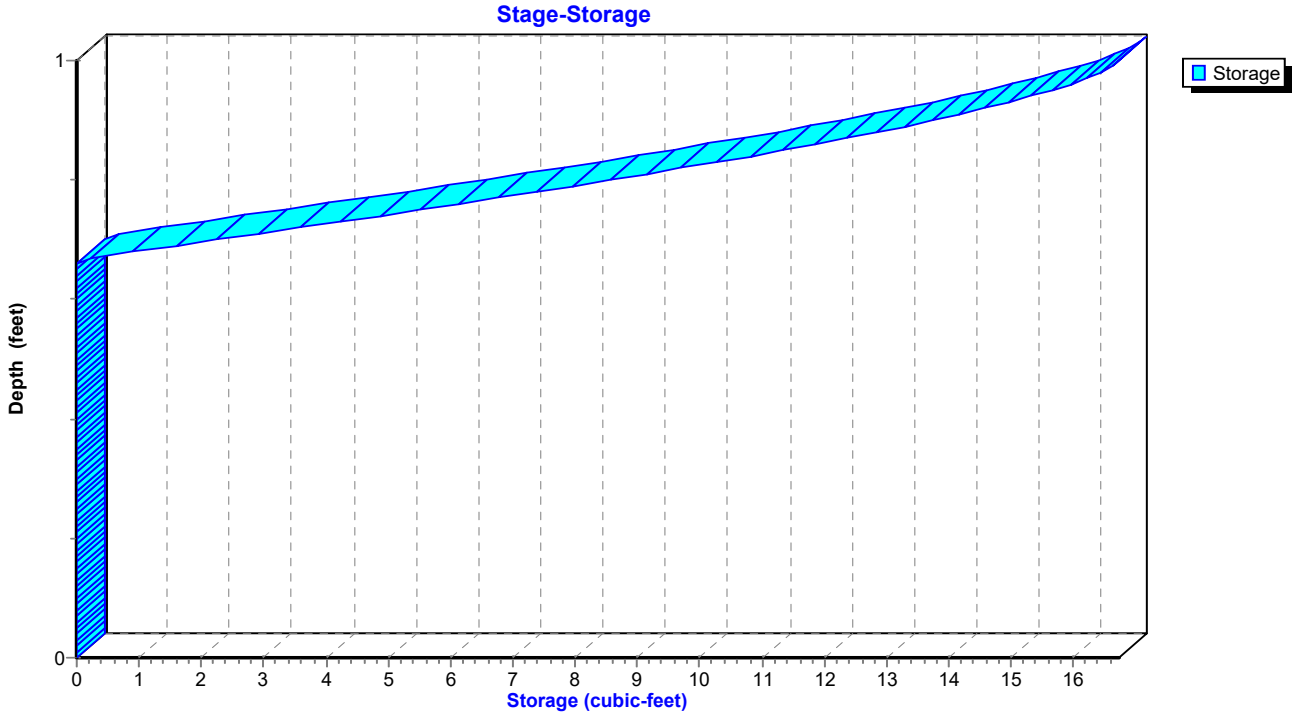
Reach 19R: inlet 1 12"



Reach 19R: inlet 1 12"



Reach 19R: inlet 1 12"



Hydrograph for Reach 19R: inlet 1 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.52	0.00
5.40	0.01	1	666.53	0.01
5.80	0.01	1	666.53	0.01
6.20	0.01	1	666.53	0.01
6.60	0.01	1	666.53	0.01
7.00	0.01	1	666.53	0.01
7.40	0.01	1	666.53	0.01
7.80	0.01	1	666.53	0.01
8.20	0.01	1	666.53	0.01
8.60	0.01	1	666.53	0.01
9.00	0.01	1	666.53	0.01
9.40	0.02	2	666.54	0.02
9.80	0.02	2	666.54	0.02
10.20	0.02	2	666.54	0.02
10.60	0.03	2	666.55	0.03
11.00	0.05	3	666.56	0.04
11.40	0.06	3	666.57	0.06
11.80	0.12	5	666.59	0.11
12.20	**0.53**	**14**	**666.77**	**0.52**
12.60	**0.20**	**7**	**666.63**	**0.21**
13.00	0.08	4	666.58	0.08
13.40	0.06	3	666.56	0.06
13.80	0.03	2	666.55	0.03
14.20	0.03	2	666.55	0.03
14.60	0.03	2	666.54	0.03
15.00	0.02	2	666.54	0.02
15.40	0.02	1	666.54	0.02
15.80	0.01	1	666.54	0.01
16.20	0.01	1	666.54	0.01
16.60	0.01	1	666.54	0.01
17.00	0.01	1	666.54	0.01
17.40	0.01	1	666.53	0.01
17.80	0.01	1	666.53	0.01
18.20	0.01	1	666.53	0.01
18.60	0.01	1	666.53	0.01
19.00	0.01	1	666.53	0.01
19.40	0.01	1	666.53	0.01
19.80	0.01	1	666.53	0.01

Stage-Discharge for Reach 19R: inlet 1 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.85	0.00	0.00	666.36	0.00	0.00
665.86	0.00	0.00	666.37	0.00	0.00
665.87	0.00	0.00	666.38	0.00	0.00
665.88	0.00	0.00	666.39	0.00	0.00
665.89	0.00	0.00	666.40	0.00	0.00
665.90	0.00	0.00	666.41	0.00	0.00
665.91	0.00	0.00	666.42	0.00	0.00
665.92	0.00	0.00	666.43	0.00	0.00
665.93	0.00	0.00	666.44	0.00	0.00
665.94	0.00	0.00	666.45	0.00	0.00
665.95	0.00	0.00	666.46	0.00	0.00
665.96	0.00	0.00	666.47	0.00	0.00
665.97	0.00	0.00	666.48	0.00	0.00
665.98	0.00	0.00	666.49	0.00	0.00
665.99	0.00	0.00	666.50	0.00	0.00
666.00	0.00	0.00	666.51	0.00	0.00
666.01	0.00	0.00	666.52	0.24	0.00
666.02	0.00	0.00	666.53	0.59	0.01
666.03	0.00	0.00	666.54	0.84	0.02
666.04	0.00	0.00	666.55	1.05	0.03
666.05	0.00	0.00	666.56	1.23	0.05
666.06	0.00	0.00	666.57	1.39	0.07
666.07	0.00	0.00	666.58	1.53	0.09
666.08	0.00	0.00	666.59	1.65	0.11
666.09	0.00	0.00	666.60	1.77	0.13
666.10	0.00	0.00	666.61	1.88	0.16
666.11	0.00	0.00	666.62	1.97	0.18
666.12	0.00	0.00	666.63	2.06	0.21
666.13	0.00	0.00	666.64	2.14	0.23
666.14	0.00	0.00	666.65	2.22	0.26
666.15	0.00	0.00	666.66	2.29	0.29
666.16	0.00	0.00	666.67	2.35	0.31
666.17	0.00	0.00	666.68	2.40	0.34
666.18	0.00	0.00	666.69	2.46	0.36
666.19	0.00	0.00	666.70	2.50	0.39
666.20	0.00	0.00	666.71	2.54	0.41
666.21	0.00	0.00	666.72	2.58	0.44
666.22	0.00	0.00	666.73	2.61	0.46
666.23	0.00	0.00	666.74	2.63	0.48
666.24	0.00	0.00	666.75	2.65	0.50
666.25	0.00	0.00	666.76	2.67	0.52
666.26	0.00	0.00	666.77	2.68	0.53
666.27	0.00	0.00	666.78	**2.68**	0.55
666.28	0.00	0.00	666.79	2.68	0.56
666.29	0.00	0.00	666.80	2.67	0.57
666.30	0.00	0.00	666.81	2.66	0.58
666.31	0.00	0.00	666.82	2.63	0.59
666.32	0.00	0.00	666.83	2.60	**0.59**
666.33	0.00	0.00	666.84	2.54	0.58
666.34	0.00	0.00	666.85	2.39	0.55
666.35	0.00	0.00			

Stage-Area-Storage for Reach 19R: inlet 1 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	0
665.90	0.0	0	666.41	0.0	0
665.91	0.0	0	666.42	0.0	0
665.92	0.0	0	666.43	0.0	0
665.93	0.0	0	666.44	0.0	0
665.94	0.0	0	666.45	0.0	0
665.95	0.0	0	666.46	0.0	0
665.96	0.0	0	666.47	0.0	0
665.97	0.0	0	666.48	0.0	0
665.98	0.0	0	666.49	0.0	0
665.99	0.0	0	666.50	0.0	0
666.00	0.0	0	666.51	0.0	0
666.01	0.0	0	666.52	0.0	0
666.02	0.0	0	666.53	0.0	1
666.03	0.0	0	666.54	0.0	2
666.04	0.0	0	666.55	0.0	2
666.05	0.0	0	666.56	0.0	3
666.06	0.0	0	666.57	0.0	4
666.07	0.0	0	666.58	0.1	4
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	6
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	7
666.12	0.0	0	666.63	0.1	7
666.13	0.0	0	666.64	0.1	8
666.14	0.0	0	666.65	0.1	9
666.15	0.0	0	666.66	0.1	9
666.16	0.0	0	666.67	0.1	10
666.17	0.0	0	666.68	0.1	10
666.18	0.0	0	666.69	0.1	11
666.19	0.0	0	666.70	0.2	11
666.20	0.0	0	666.71	0.2	12
666.21	0.0	0	666.72	0.2	12
666.22	0.0	0	666.73	0.2	13
666.23	0.0	0	666.74	0.2	13
666.24	0.0	0	666.75	0.2	14
666.25	0.0	0	666.76	0.2	14
666.26	0.0	0	666.77	0.2	15
666.27	0.0	0	666.78	0.2	15
666.28	0.0	0	666.79	0.2	15
666.29	0.0	0	666.80	0.2	16
666.30	0.0	0	666.81	0.2	16
666.31	0.0	0	666.82	0.2	16
666.32	0.0	0	666.83	0.2	16
666.33	0.0	0	666.84	0.2	17
666.34	0.0	0	666.85	**0.2**	**17**
666.35	0.0	0			

Summary for Reach 20R: MH3 15"

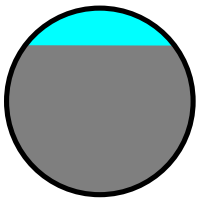
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 151% of Manning's capacity
[76] Warning: Detained 0.003 af (Pond w/culvert advised)

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 2.64" for 2-yr event
Inflow = 0.53 cfs @ 12.24 hrs, Volume= 0.048 af
Outflow = 0.37 cfs @ 12.13 hrs, Volume= 0.048 af, Atten= 32%, Lag= 0.0 min

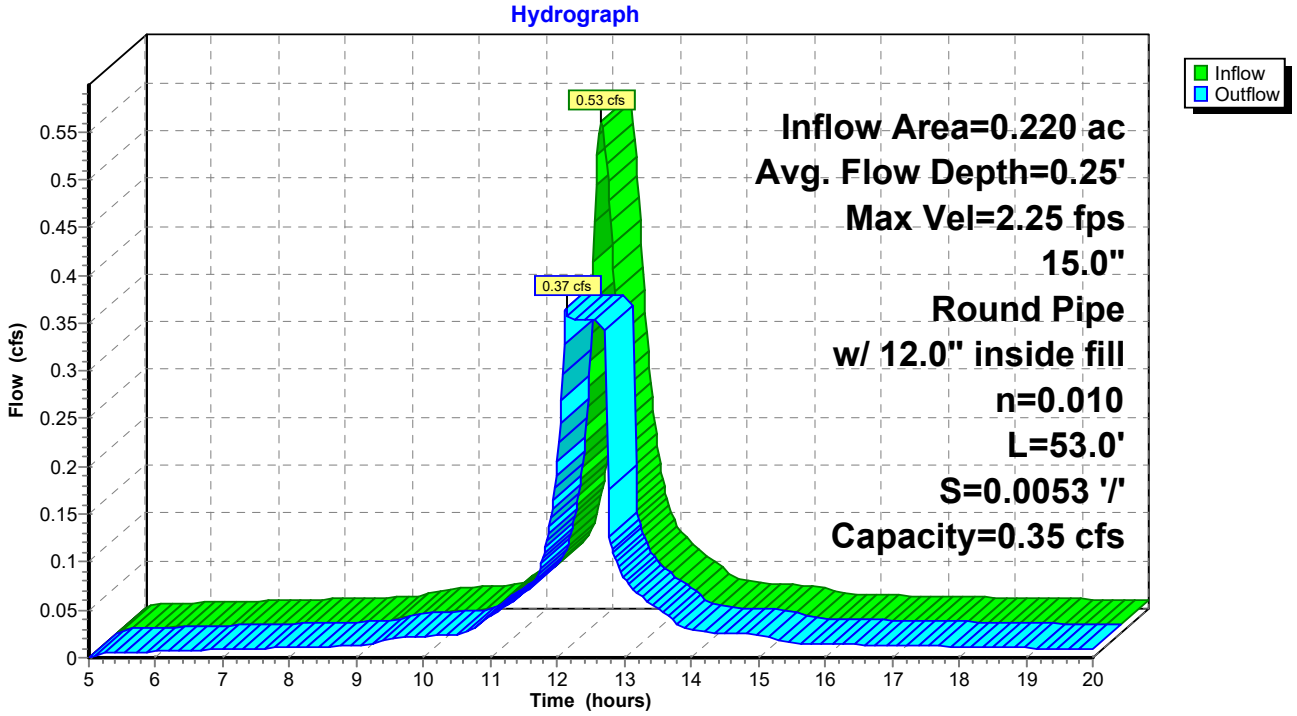
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.25 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.90 fps, Avg. Travel Time= 1.0 min

Peak Storage= 9 cf @ 12.14 hrs
Average Depth at Peak Storage= 1.25' above invert (0.25' above fill)
Bank-Full Depth= 1.25' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.35 cfs

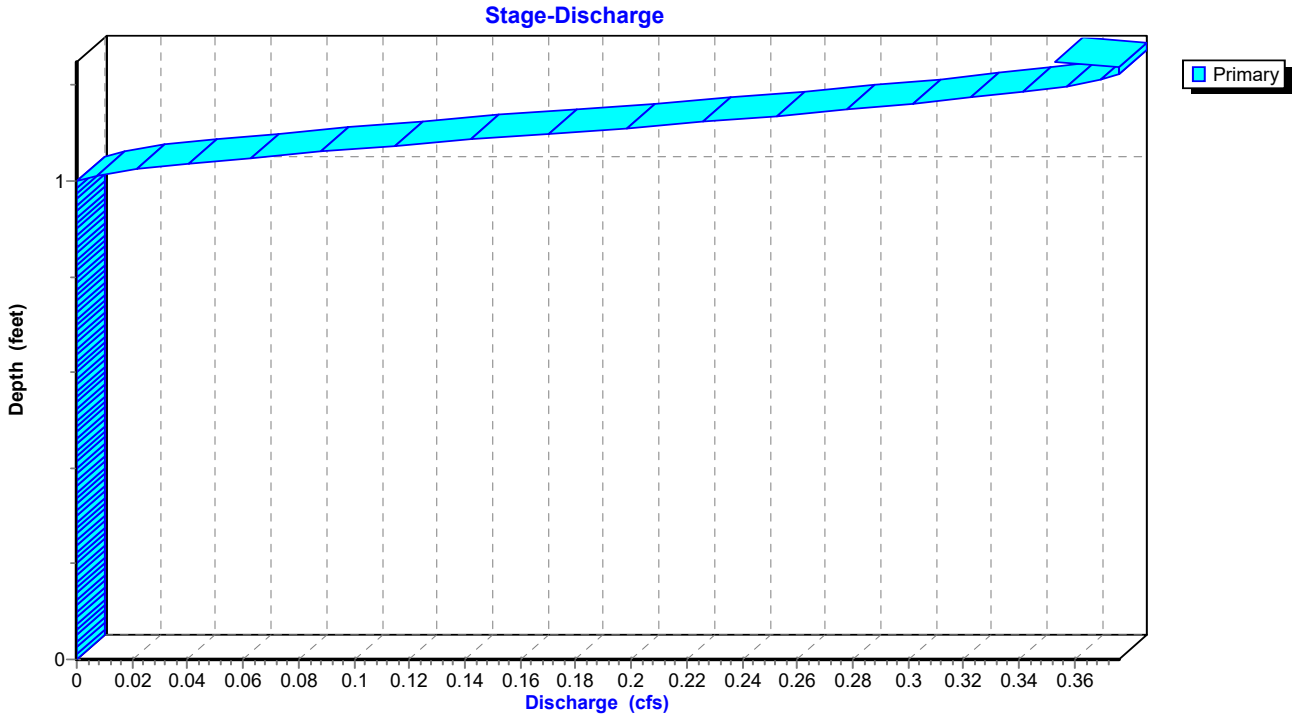
15.0" Round Pipe w/ 12.0" inside fill
n= 0.010
Length= 53.0' Slope= 0.0053 '/'
Inlet Invert= 663.47', Outlet Invert= 663.19'



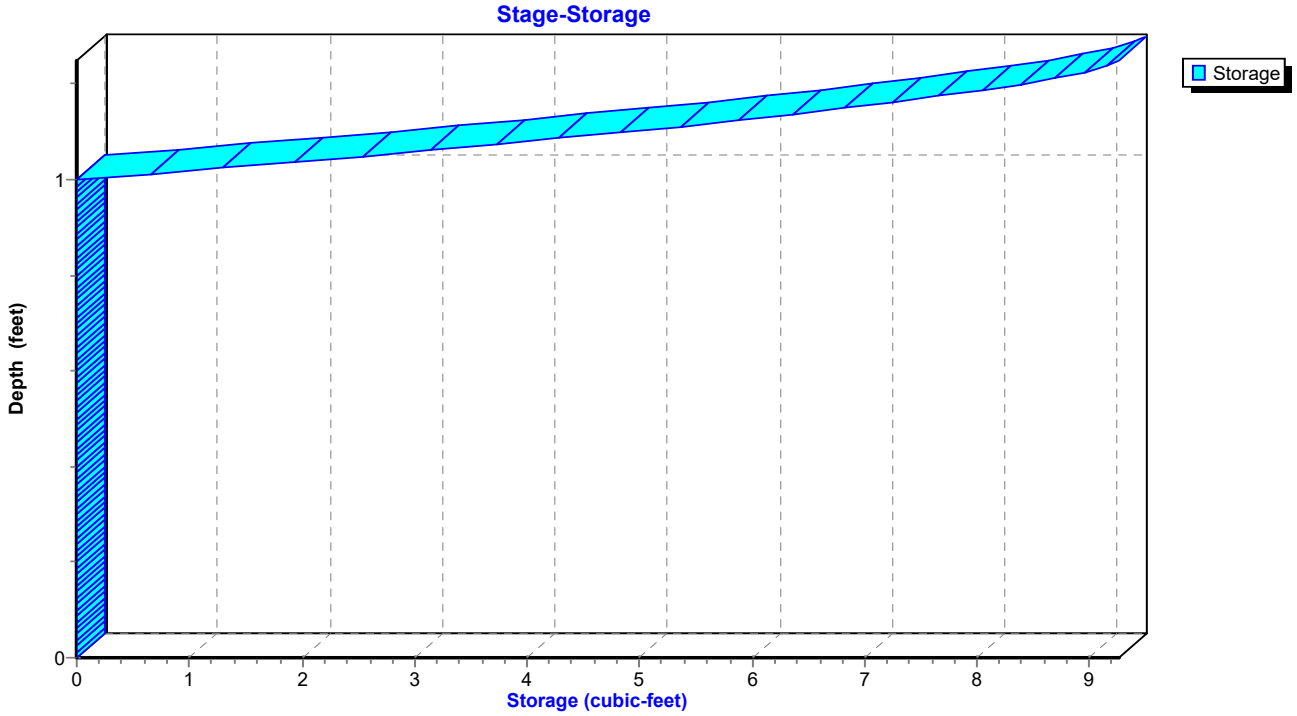
Reach 20R: MH3 15"



Reach 20R: MH3 15"



Reach 20R: MH3 15"



Hydrograph for Reach 20R: MH3 15"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	664.47	0.00
5.40	0.01	1	664.48	0.01
5.80	0.01	1	664.48	0.01
6.20	0.01	1	664.48	0.01
6.60	0.01	1	664.48	0.01
7.00	0.01	1	664.48	0.01
7.40	0.01	1	664.48	0.01
7.80	0.01	1	664.49	0.01
8.20	0.01	1	664.49	0.01
8.60	0.01	1	664.49	0.01
9.00	0.01	1	664.49	0.01
9.40	0.02	1	664.49	0.02
9.80	0.02	1	664.50	0.02
10.20	0.02	1	664.50	0.02
10.60	0.03	1	664.50	0.03
11.00	0.04	2	664.51	0.04
11.40	0.06	3	664.52	0.06
11.80	0.11	**4**	**664.54**	**0.11**
12.20	**0.52**	**9**	**664.72**	**0.35**
12.60	**0.21**	9	664.72	0.35
13.00	0.08	3	664.53	0.08
13.40	0.06	2	664.52	0.06
13.80	0.03	2	664.50	0.04
14.20	0.03	1	664.50	0.03
14.60	0.03	1	664.50	0.03
15.00	0.02	1	664.50	0.02
15.40	0.02	1	664.49	0.02
15.80	0.01	1	664.49	0.01
16.20	0.01	1	664.49	0.01
16.60	0.01	1	664.49	0.01
17.00	0.01	1	664.49	0.01
17.40	0.01	1	664.49	0.01
17.80	0.01	1	664.49	0.01
18.20	0.01	1	664.49	0.01
18.60	0.01	1	664.49	0.01
19.00	0.01	1	664.49	0.01
19.40	0.01	1	664.48	0.01
19.80	0.01	1	664.48	0.01

Stage-Discharge for Reach 20R: MH3 15"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
663.47	0.00	0.00
663.48	0.00	0.00
663.49	0.00	0.00
663.50	0.00	0.00
663.51	0.00	0.00
663.52	0.00	0.00
663.53	0.00	0.00
663.54	0.00	0.00
663.55	0.00	0.00
663.56	0.00	0.00
663.57	0.00	0.00
663.58	0.00	0.00
663.59	0.00	0.00
663.60	0.00	0.00
663.61	0.00	0.00
663.62	0.00	0.00
663.63	0.00	0.00
663.64	0.00	0.00
663.65	0.00	0.00
663.66	0.00	0.00
663.67	0.00	0.00
663.68	0.00	0.00
663.69	0.00	0.00
663.70	0.00	0.00
663.71	0.00	0.00
663.72	0.00	0.00
663.73	0.00	0.00
663.74	0.00	0.00
663.75	0.00	0.00
663.76	0.00	0.00
663.77	0.00	0.00
663.78	0.00	0.00
663.79	0.00	0.00
663.80	0.00	0.00
663.81	0.00	0.00
663.82	0.00	0.00
663.83	0.00	0.00
663.84	0.00	0.00
663.85	0.00	0.00
663.86	0.00	0.00
663.87	0.00	0.00
663.88	0.00	0.00
663.89	0.00	0.00
663.90	0.00	0.00
663.91	0.00	0.00
663.92	0.00	0.00
663.93	0.00	0.00
663.94	0.00	0.00
663.95	0.00	0.00
663.96	0.00	0.00
663.97	0.00	0.00
663.98	0.00	0.00
663.99	0.00	0.00
664.00	0.00	0.00
664.01	0.00	0.00
664.02	0.00	0.00
664.03	0.00	0.00
664.04	0.00	0.00
664.05	0.00	0.00
664.06	0.00	0.00
664.07	0.00	0.00
664.08	0.00	0.00
664.09	0.00	0.00
664.10	0.00	0.00
664.11	0.00	0.00
664.12	0.00	0.00
664.13	0.00	0.00
664.14	0.00	0.00
664.15	0.00	0.00
664.16	0.00	0.00
664.17	0.00	0.00
664.18	0.00	0.00
664.19	0.00	0.00
664.20	0.00	0.00
664.21	0.00	0.00
664.22	0.00	0.00
664.23	0.00	0.00
664.24	0.00	0.00
664.25	0.00	0.00
664.26	0.00	0.00
664.27	0.00	0.00
664.28	0.00	0.00
664.29	0.00	0.00
664.30	0.00	0.00
664.31	0.00	0.00
664.32	0.00	0.00
664.33	0.00	0.00
664.34	0.00	0.00
664.35	0.00	0.00
664.36	0.00	0.00
664.37	0.00	0.00
664.38	0.00	0.00
664.39	0.00	0.00
664.40	0.00	0.00
664.41	0.00	0.00
664.42	0.00	0.00
664.43	0.00	0.00
664.44	0.00	0.00
664.45	0.00	0.00
664.46	0.00	0.00
664.47	0.00	0.00
664.48	0.45	0.01
664.49	0.75	0.02
664.50	0.97	0.03
664.51	1.16	0.05
664.52	1.31	0.06
664.53	1.45	0.08
664.54	1.57	0.10
664.55	1.68	0.13
664.56	1.78	0.15
664.57	1.86	0.17
664.58	1.94	0.19
664.59	2.00	0.21
664.60	2.06	0.24
664.61	2.11	0.26
664.62	2.16	0.28
664.63	2.19	0.30
664.64	2.22	0.31
664.65	2.24	0.33
664.66	2.25	0.34
664.67	**2.26**	0.36
664.68	2.25	0.37
664.69	2.24	0.37
664.70	2.21	**0.38**
664.71	2.15	0.37
664.72	2.02	0.35

Stage-Area-Storage for Reach 20R: MH3 15"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
663.47	0.0	0
663.49	0.0	0
663.51	0.0	0
663.53	0.0	0
663.55	0.0	0
663.57	0.0	0
663.59	0.0	0
663.61	0.0	0
663.63	0.0	0
663.65	0.0	0
663.67	0.0	0
663.69	0.0	0
663.71	0.0	0
663.73	0.0	0
663.75	0.0	0
663.77	0.0	0
663.79	0.0	0
663.81	0.0	0
663.83	0.0	0
663.85	0.0	0
663.87	0.0	0
663.89	0.0	0
663.91	0.0	0
663.93	0.0	0
663.95	0.0	0
663.97	0.0	0
663.99	0.0	0
664.01	0.0	0
664.03	0.0	0
664.05	0.0	0
664.07	0.0	0
664.09	0.0	0
664.11	0.0	0
664.13	0.0	0
664.15	0.0	0
664.17	0.0	0
664.19	0.0	0
664.21	0.0	0
664.23	0.0	0
664.25	0.0	0
664.27	0.0	0
664.29	0.0	0
664.31	0.0	0
664.33	0.0	0
664.35	0.0	0
664.37	0.0	0
664.39	0.0	0
664.41	0.0	0
664.43	0.0	0
664.45	0.0	0
664.47	0.0	0
664.49	0.0	1
664.51	0.0	2
664.53	0.1	3
664.55	0.1	4
664.57	0.1	5
664.59	0.1	6
664.61	0.1	6
664.63	0.1	7
664.65	0.1	8
664.67	0.2	8
664.69	0.2	9
664.71	**0.2**	**9**

Summary for Reach 21R: MH2 15"

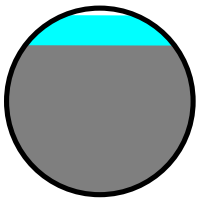
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 104% of Manning's capacity
[61] Hint: Exceeded Reach 20R outlet invert by 1.10' @ 12.16 hrs

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 2.64" for 2-yr event
Inflow = 0.37 cfs @ 12.13 hrs, Volume= 0.048 af
Outflow = 0.36 cfs @ 12.18 hrs, Volume= 0.048 af, Atten= 3%, Lag= 2.9 min

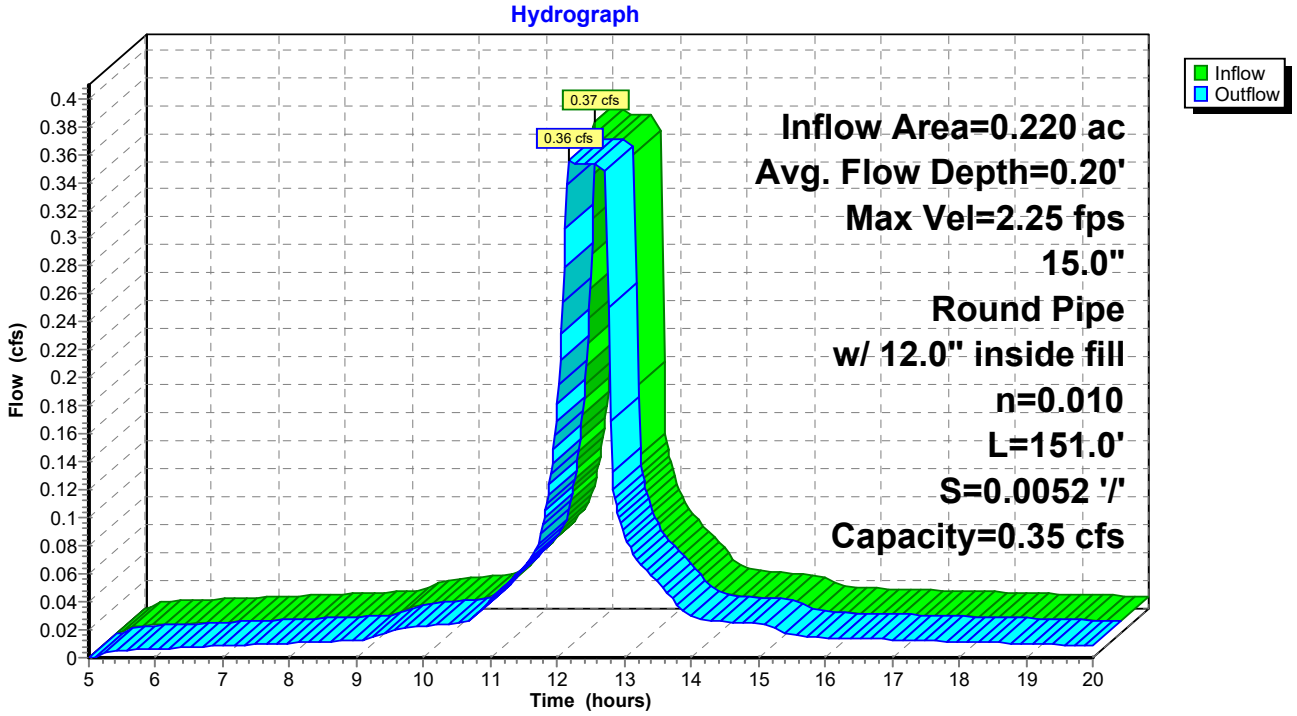
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.25 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 0.91 fps, Avg. Travel Time= 2.8 min

Peak Storage= 24 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.20' above invert (0.20' above fill)
Bank-Full Depth= 1.25' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.35 cfs

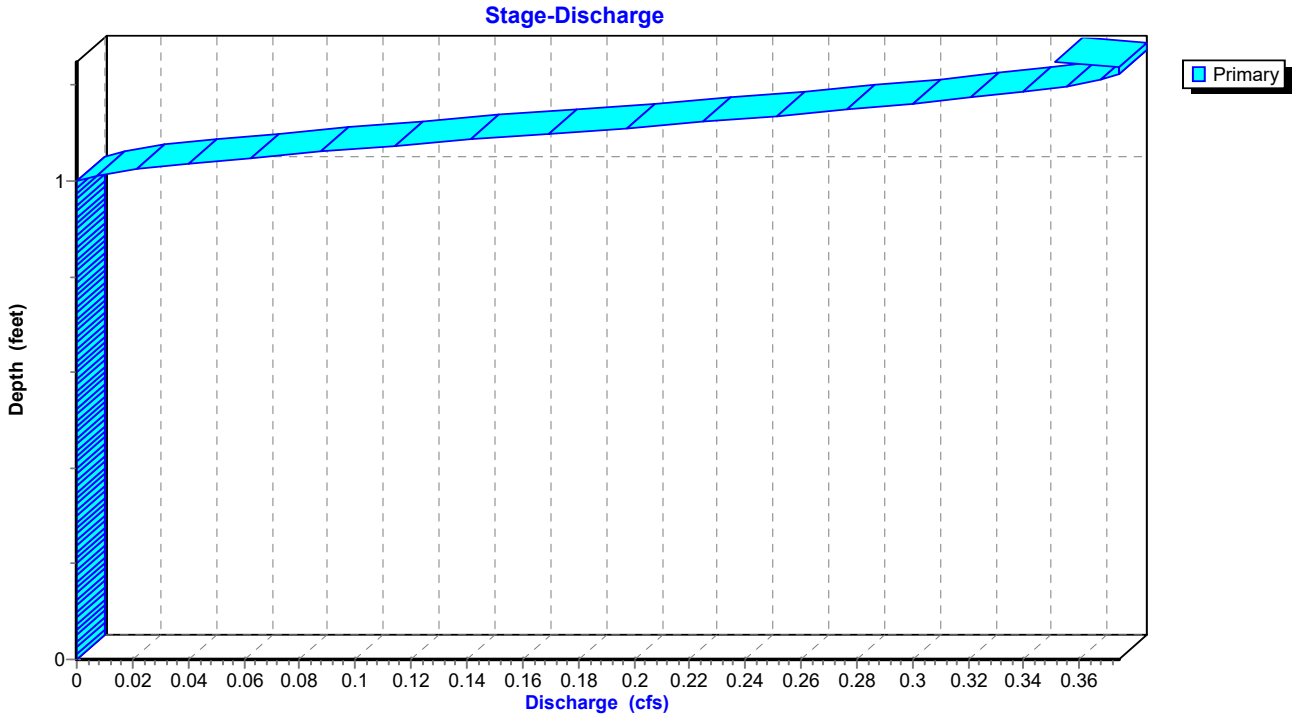
15.0" Round Pipe w/ 12.0" inside fill
n= 0.010
Length= 151.0' Slope= 0.0052 '/'
Inlet Invert= 663.09', Outlet Invert= 662.30'



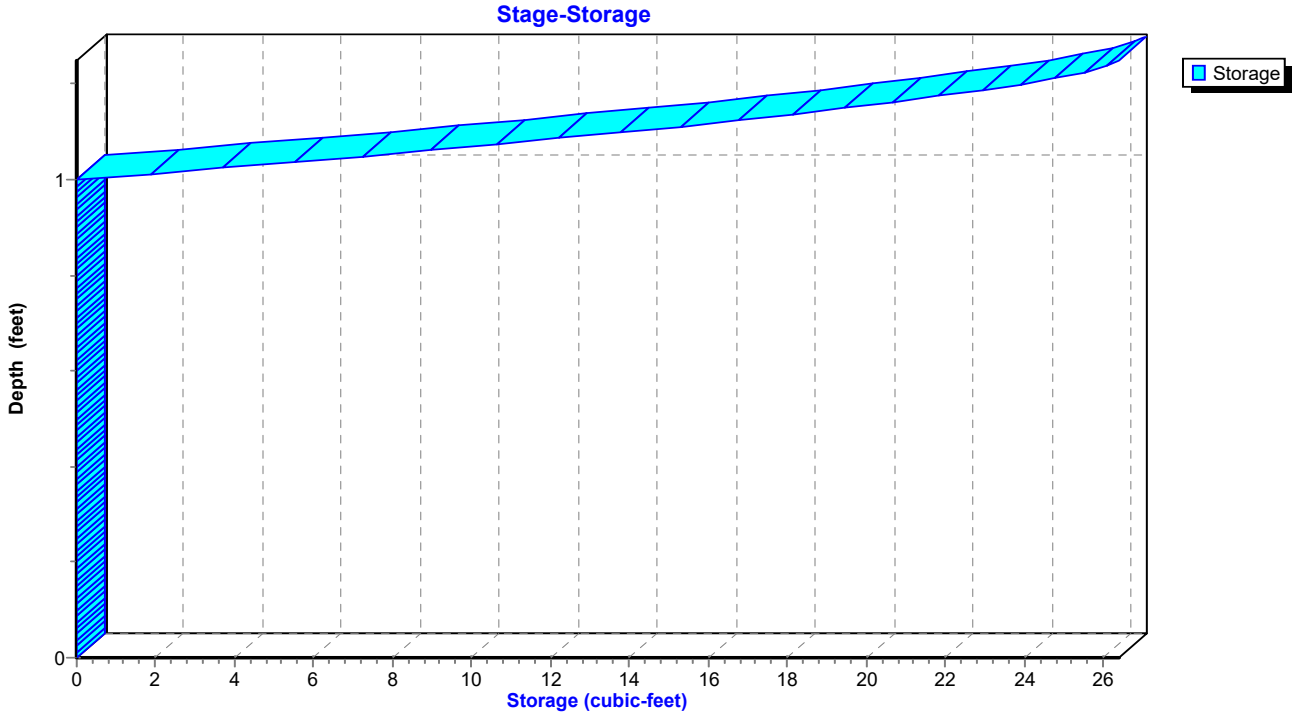
Reach 21R: MH2 15"



Reach 21R: MH2 15"



Reach 21R: MH2 15"



Hydrograph for Reach 21R: MH2 15"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	664.09	0.00
5.40	0.01	1	664.10	0.01
5.80	0.01	2	664.10	0.01
6.20	0.01	2	664.10	0.01
6.60	0.01	2	664.10	0.01
7.00	0.01	2	664.10	0.01
7.40	0.01	2	664.10	0.01
7.80	0.01	2	664.11	0.01
8.20	0.01	2	664.11	0.01
8.60	0.01	2	664.11	0.01
9.00	0.01	3	664.11	0.01
9.40	0.02	3	664.11	0.02
9.80	0.02	4	664.12	0.02
10.20	0.02	4	664.12	0.02
10.60	0.03	4	664.12	0.02
11.00	0.04	6	664.13	0.04
11.40	0.06	7	664.14	0.06
11.80	**0.11**	**10**	**664.16**	**0.10**
12.20	**0.35**	**24**	**664.29**	**0.35**
12.60	0.35	24	664.29	0.35
13.00	0.08	9	664.15	0.09
13.40	0.06	7	664.14	0.06
13.80	0.04	5	664.12	0.04
14.20	0.03	4	664.12	0.03
14.60	0.03	4	664.12	0.03
15.00	0.02	4	664.12	0.02
15.40	0.02	3	664.11	0.02
15.80	0.01	3	664.11	0.01
16.20	0.01	3	664.11	0.01
16.60	0.01	3	664.11	0.01
17.00	0.01	3	664.11	0.01
17.40	0.01	3	664.11	0.01
17.80	0.01	2	664.11	0.01
18.20	0.01	2	664.11	0.01
18.60	0.01	2	664.11	0.01
19.00	0.01	2	664.11	0.01
19.40	0.01	2	664.10	0.01
19.80	0.01	2	664.10	0.01

Stage-Discharge for Reach 21R: MH2 15"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
663.09	0.00	0.00
663.10	0.00	0.00
663.11	0.00	0.00
663.12	0.00	0.00
663.13	0.00	0.00
663.14	0.00	0.00
663.15	0.00	0.00
663.16	0.00	0.00
663.17	0.00	0.00
663.18	0.00	0.00
663.19	0.00	0.00
663.20	0.00	0.00
663.21	0.00	0.00
663.22	0.00	0.00
663.23	0.00	0.00
663.24	0.00	0.00
663.25	0.00	0.00
663.26	0.00	0.00
663.27	0.00	0.00
663.28	0.00	0.00
663.29	0.00	0.00
663.30	0.00	0.00
663.31	0.00	0.00
663.32	0.00	0.00
663.33	0.00	0.00
663.34	0.00	0.00
663.35	0.00	0.00
663.36	0.00	0.00
663.37	0.00	0.00
663.38	0.00	0.00
663.39	0.00	0.00
663.40	0.00	0.00
663.41	0.00	0.00
663.42	0.00	0.00
663.43	0.00	0.00
663.44	0.00	0.00
663.45	0.00	0.00
663.46	0.00	0.00
663.47	0.00	0.00
663.48	0.00	0.00
663.49	0.00	0.00
663.50	0.00	0.00
663.51	0.00	0.00
663.52	0.00	0.00
663.53	0.00	0.00
663.54	0.00	0.00
663.55	0.00	0.00
663.56	0.00	0.00
663.57	0.00	0.00
663.58	0.00	0.00
663.59	0.00	0.00
663.60	0.00	0.00
663.61	0.00	0.00
663.62	0.00	0.00
663.63	0.00	0.00
663.64	0.00	0.00
663.65	0.00	0.00
663.66	0.00	0.00
663.67	0.00	0.00
663.68	0.00	0.00
663.69	0.00	0.00
663.70	0.00	0.00
663.71	0.00	0.00
663.72	0.00	0.00
663.73	0.00	0.00
663.74	0.00	0.00
663.75	0.00	0.00
663.76	0.00	0.00
663.77	0.00	0.00
663.78	0.00	0.00
663.79	0.00	0.00
663.80	0.00	0.00
663.81	0.00	0.00
663.82	0.00	0.00
663.83	0.00	0.00
663.84	0.00	0.00
663.85	0.00	0.00
663.86	0.00	0.00
663.87	0.00	0.00
663.88	0.00	0.00
663.89	0.00	0.00
663.90	0.00	0.00
663.91	0.00	0.00
663.92	0.00	0.00
663.93	0.00	0.00
663.94	0.00	0.00
663.95	0.00	0.00
663.96	0.00	0.00
663.97	0.00	0.00
663.98	0.00	0.00
663.99	0.00	0.00
664.00	0.00	0.00
664.01	0.00	0.00
664.02	0.00	0.00
664.03	0.00	0.00
664.04	0.00	0.00
664.05	0.00	0.00
664.06	0.00	0.00
664.07	0.00	0.00
664.08	0.00	0.00
664.09	0.00	0.00
664.10	0.45	0.01
664.11	0.75	0.02
664.12	0.97	0.03
664.13	1.15	0.04
664.14	1.31	0.06
664.15	1.44	0.08
664.16	1.56	0.10
664.17	1.67	0.12
664.18	1.77	0.15
664.19	1.85	0.17
664.20	1.93	0.19
664.21	1.99	0.21
664.22	2.05	0.24
664.23	2.10	0.26
664.24	2.15	0.28
664.25	2.18	0.30
664.26	2.21	0.31
664.27	2.23	0.33
664.28	2.24	0.34
664.29	**2.25**	0.36
664.30	2.24	0.36
664.31	2.23	0.37
664.32	2.20	**0.37**
664.33	2.13	0.37
664.34	2.01	0.35

Stage-Area-Storage for Reach 21R: MH2 15"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
663.09	0.0	0
663.11	0.0	0
663.13	0.0	0
663.15	0.0	0
663.17	0.0	0
663.19	0.0	0
663.21	0.0	0
663.23	0.0	0
663.25	0.0	0
663.27	0.0	0
663.29	0.0	0
663.31	0.0	0
663.33	0.0	0
663.35	0.0	0
663.37	0.0	0
663.39	0.0	0
663.41	0.0	0
663.43	0.0	0
663.45	0.0	0
663.47	0.0	0
663.49	0.0	0
663.51	0.0	0
663.53	0.0	0
663.55	0.0	0
663.57	0.0	0
663.59	0.0	0
663.61	0.0	0
663.63	0.0	0
663.65	0.0	0
663.67	0.0	0
663.69	0.0	0
663.71	0.0	0
663.73	0.0	0
663.75	0.0	0
663.77	0.0	0
663.79	0.0	0
663.81	0.0	0
663.83	0.0	0
663.85	0.0	0
663.87	0.0	0
663.89	0.0	0
663.91	0.0	0
663.93	0.0	0
663.95	0.0	0
663.97	0.0	0
663.99	0.0	0
664.01	0.0	0
664.03	0.0	0
664.05	0.0	0
664.07	0.0	0
664.09	0.0	0
664.11	0.0	3
664.13	0.0	6
664.15	0.1	9
664.17	0.1	11
664.19	0.1	14
664.21	0.1	16
664.23	0.1	18
664.25	0.1	20
664.27	0.1	22
664.29	0.2	24
664.31	0.2	25
664.33	**0.2**	**26**

Summary for Reach 22R: NDS2 6"

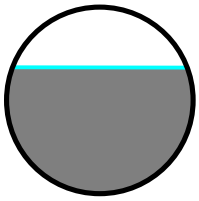
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.031 ac, 3.23% Impervious, Inflow Depth > 0.21" for 2-yr event
Inflow = 0.00 cfs @ 13.00 hrs, Volume= 0.001 af
Outflow = 0.00 cfs @ 13.13 hrs, Volume= 0.001 af, Atten= 1%, Lag= 7.5 min

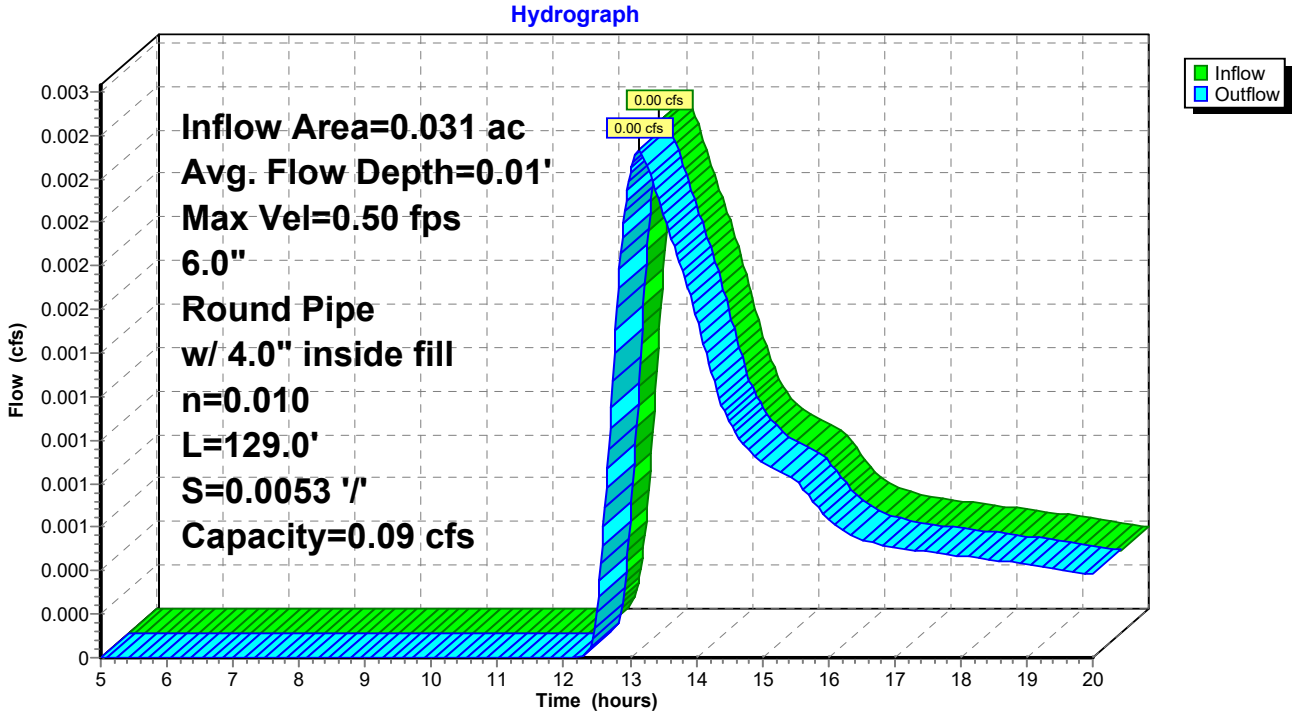
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.50 fps, Min. Travel Time= 4.3 min
Avg. Velocity = 0.34 fps, Avg. Travel Time= 6.3 min

Peak Storage= 1 cf @ 13.05 hrs
Average Depth at Peak Storage= 0.34' above invert (0.01' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

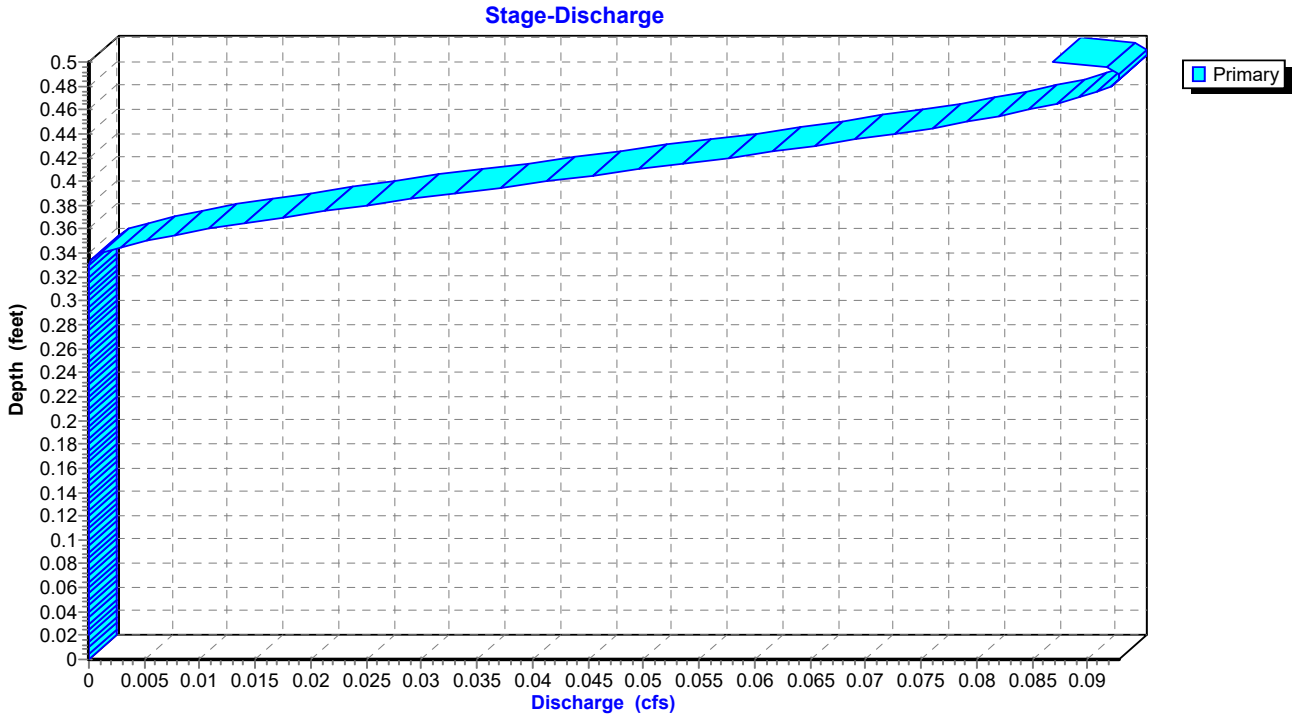
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0053 '/'
Inlet Invert= 668.86', Outlet Invert= 668.18'



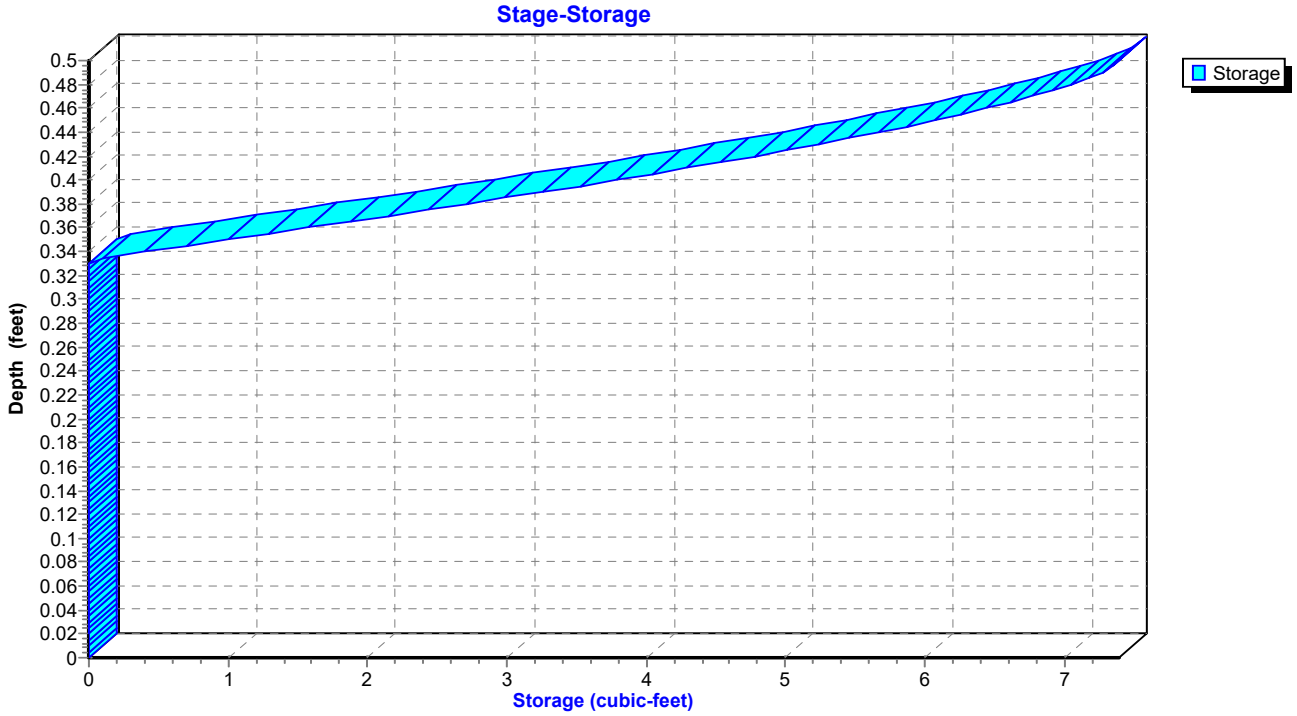
Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Hydrograph for Reach 22R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.19	0.00
5.40	0.00	0	669.19	0.00
5.80	0.00	0	669.19	0.00
6.20	0.00	0	669.19	0.00
6.60	0.00	0	669.19	0.00
7.00	0.00	0	669.19	0.00
7.40	0.00	0	669.19	0.00
7.80	0.00	0	669.19	0.00
8.20	0.00	0	669.19	0.00
8.60	0.00	0	669.19	0.00
9.00	0.00	0	669.19	0.00
9.40	0.00	0	669.19	0.00
9.80	0.00	0	669.19	0.00
10.20	0.00	0	669.19	0.00
10.60	0.00	0	669.19	0.00
11.00	0.00	0	669.19	0.00
11.40	0.00	0	669.19	0.00
11.80	0.00	0	669.19	0.00
12.20	0.00	0	669.19	0.00
12.60	0.00	0	669.20	0.00
13.00	**0.00**	**1**	**669.20**	**0.00**
13.40	0.00	**1**	**669.20**	**0.00**
13.80	0.00	0	669.20	0.00
14.20	0.00	0	669.20	0.00
14.60	0.00	0	669.20	0.00
15.00	0.00	0	669.20	0.00
15.40	0.00	0	669.20	0.00
15.80	0.00	0	669.20	0.00
16.20	0.00	0	669.20	0.00
16.60	0.00	0	669.20	0.00
17.00	0.00	0	669.20	0.00
17.40	0.00	0	669.20	0.00
17.80	0.00	0	669.20	0.00
18.20	0.00	0	669.20	0.00
18.60	0.00	0	669.20	0.00
19.00	0.00	0	669.20	0.00
19.40	0.00	0	669.20	0.00
19.80	0.00	0	669.20	0.00

Stage-Discharge for Reach 22R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.00	0.00
669.19	0.00	0.00
669.20	0.37	0.00
669.21	0.66	0.01
669.22	0.88	0.01
669.23	1.05	0.02
669.24	1.19	0.03
669.25	1.31	0.03
669.26	1.41	0.04
669.27	1.49	0.05
669.28	1.56	0.06
669.29	1.61	0.07
669.30	1.65	0.07
669.31	1.68	0.08
669.32	1.70	0.08
669.33	**1.70**	0.09
669.34	1.69	0.09
669.35	1.65	**0.09**
669.36	1.52	0.09

Stage-Area-Storage for Reach 22R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	0
669.20	0.0	0
669.21	0.0	1
669.22	0.0	2
669.23	0.0	2
669.24	0.0	3
669.25	0.0	3
669.26	0.0	4
669.27	0.0	4
669.28	0.0	5
669.29	0.0	5
669.30	0.0	6
669.31	0.0	6
669.32	0.0	6
669.33	0.1	7
669.34	0.1	7
669.35	0.1	7
669.36	**0.1**	**7**

Summary for Pond 4P: stormtech SC310 16"x34" chambers

[44] Hint: Outlet device #2 is below defined storage
[61] Hint: Exceeded Reach 10R outlet invert by 0.83' @ 13.20 hrs
[61] Hint: Exceeded Reach 12R outlet invert by 0.83' @ 13.20 hrs

Inflow Area =	1.066 ac,	91.74% Impervious,	Inflow Depth >	2.38"	for 2-yr event
Inflow =	1.10 cfs @	12.13 hrs,	Volume=	0.211 af	
Outflow =	0.37 cfs @	13.19 hrs,	Volume=	0.205 af,	Atten= 66%, Lag= 63.9 min
Primary =	0.10 cfs @	13.19 hrs,	Volume=	0.025 af	
Secondary =	0.27 cfs @	13.19 hrs,	Volume=	0.180 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 665.83' @ 13.19 hrs Surf.Area= 0.105 ac Storage= 0.055 af

Plug-Flow detention time= 96.9 min calculated for 0.204 af (97% of inflow)
Center-of-Mass det. time= 85.3 min (867.4 - 782.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	664.40'	0.076 af	**36.00'W x 120.45'L x 2.33'H Field A Z=0.5** 0.242 af Overall - 0.011 af Embedded = 0.231 af x 33.0% Voids
#2A	664.90'	0.011 af	**ADS_StormTech RC-310 +Cap** x 32 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 2 Rows
#3	665.00'	0.001 af	**8.0" Round Pipe Storage** L= 87.0' S= 0.5200 '/'
#4	664.90'	0.001 af	**12.0" Round Pipe Storage** L= 45.0' S= 0.7300 '/'
#5	665.40'	0.000 af	**12.0" Round Pipe Storage** L= 23.0' S= 0.5200 '/'
#6	665.58'	0.001 af	**10.0" Round Pipe Storage** L= 69.0' S= 0.5200 '/'
		0.090 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	665.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.75 0.75 2.10 2.10 3.00 Width (feet) 0.00 0.17 0.17 4.00 4.00
#2	Secondary	664.00'	**Tube/Siphon/Float Valve** 4.000" Diameter, C= 0.600 136.0' Long Tube, Hazen-Williams C= 130 Inlet / Outlet Elev. = 664.00' / 664.00'

Primary OutFlow Max=0.10 cfs @ 13.19 hrs HW=665.83' (Free Discharge)
↑└**1=Custom Weir/Orifice** (Weir Controls 0.10 cfs @ 1.87 fps)

Secondary OutFlow Max=0.27 cfs @ 13.19 hrs HW=665.83' (Free Discharge)
↑└**2=Tube/Siphon/Float Valve** (Tube Controls 0.27 cfs @ 3.05 fps)

Pond 4P: stormtech SC310 16"x34" chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-310 +Cap (ADS StormTech®RC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 48.0" Spacing = 82.0" C-C Row Spacing

16 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 115.12' Row Length +32.0" End Stone x 2 = 120.45' Base Length
2 Rows x 34.0" Wide + 48.0" Spacing x 1 + 158.0" Side Stone x 2 = 36.00' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

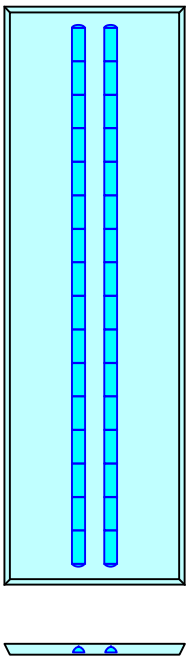
0.5 '/' Side-Z x Height = 14.0" Flare/Side
Base Length + Flare x 2 = 122.79' Top Length
Base Width + Flare x 2 = 38.33' Top Width

32 Chambers x 14.7 cf = 471.7 cf Chamber Storage

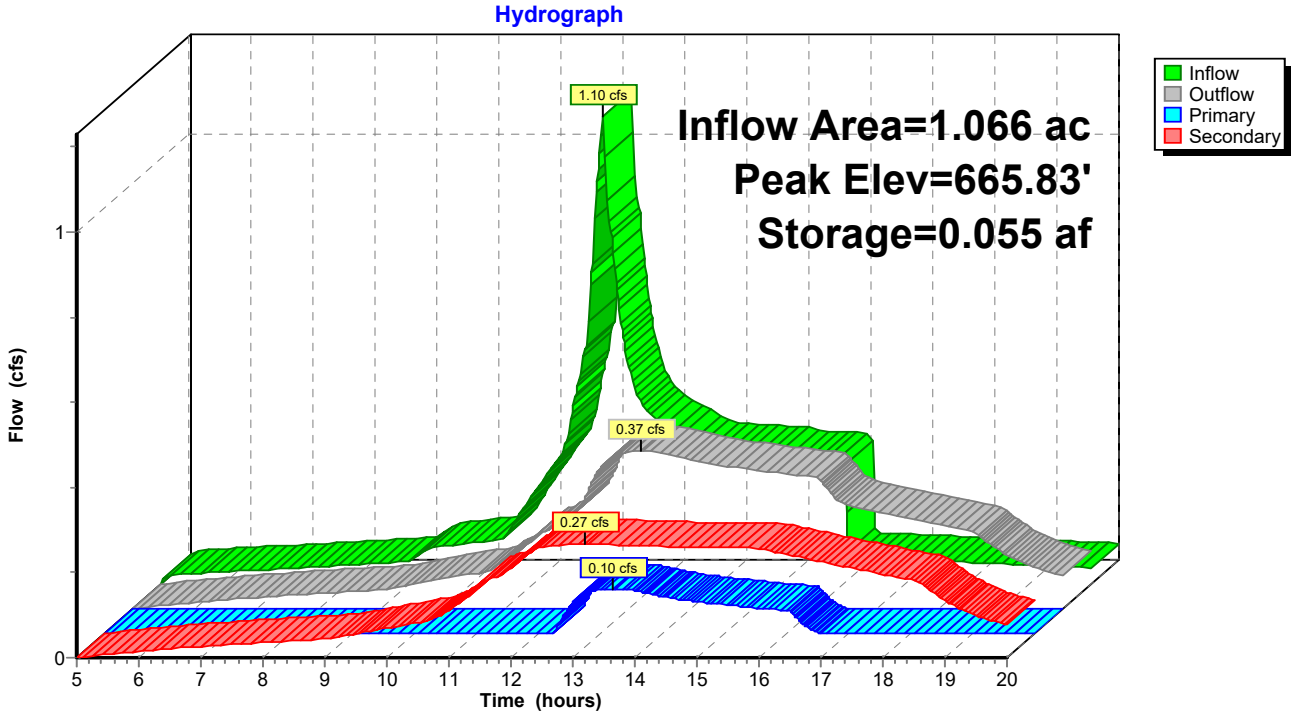
10,548.2 cf Field - 471.7 cf Chambers = 10,076.5 cf Stone x 33.0% Voids = 3,325.2 cf Stone Storage

Chamber Storage + Stone Storage = 3,797.0 cf = 0.087 af
Overall Storage Efficiency = 36.0%
Overall System Size = 120.45' x 36.00' x 2.33'

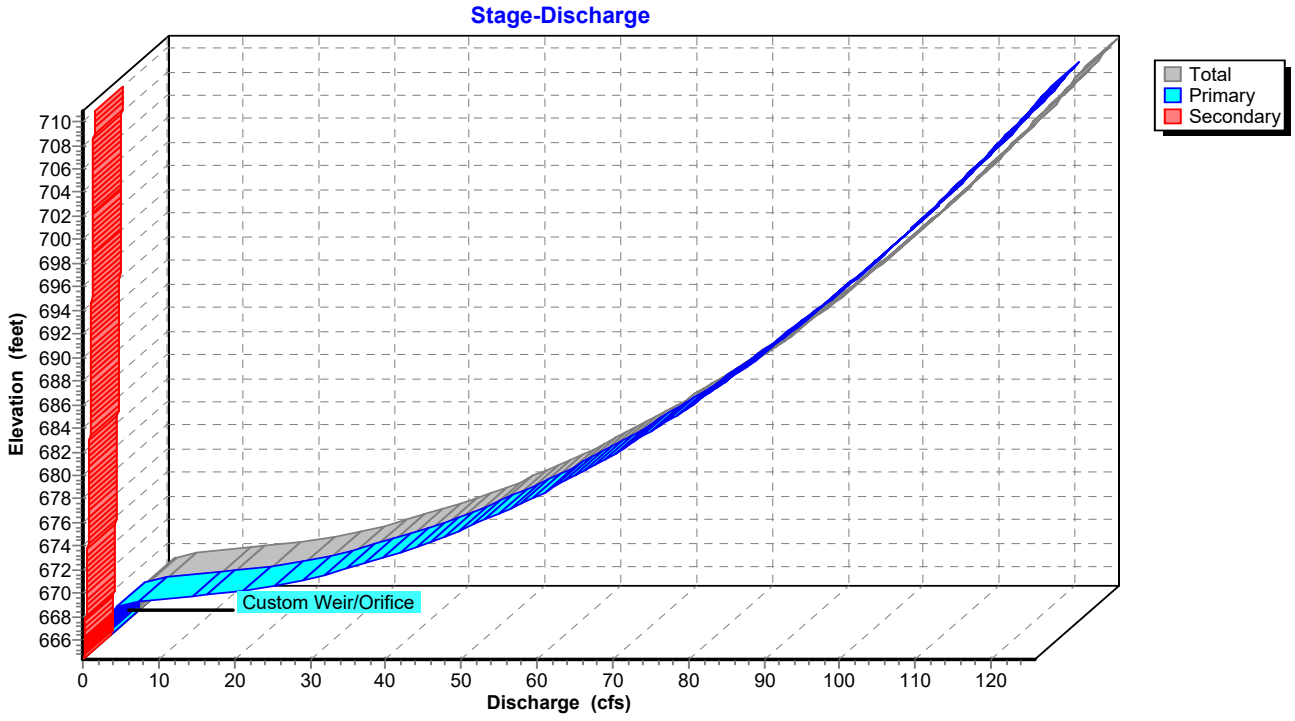
32 Chambers
390.7 cy Field
373.2 cy Stone



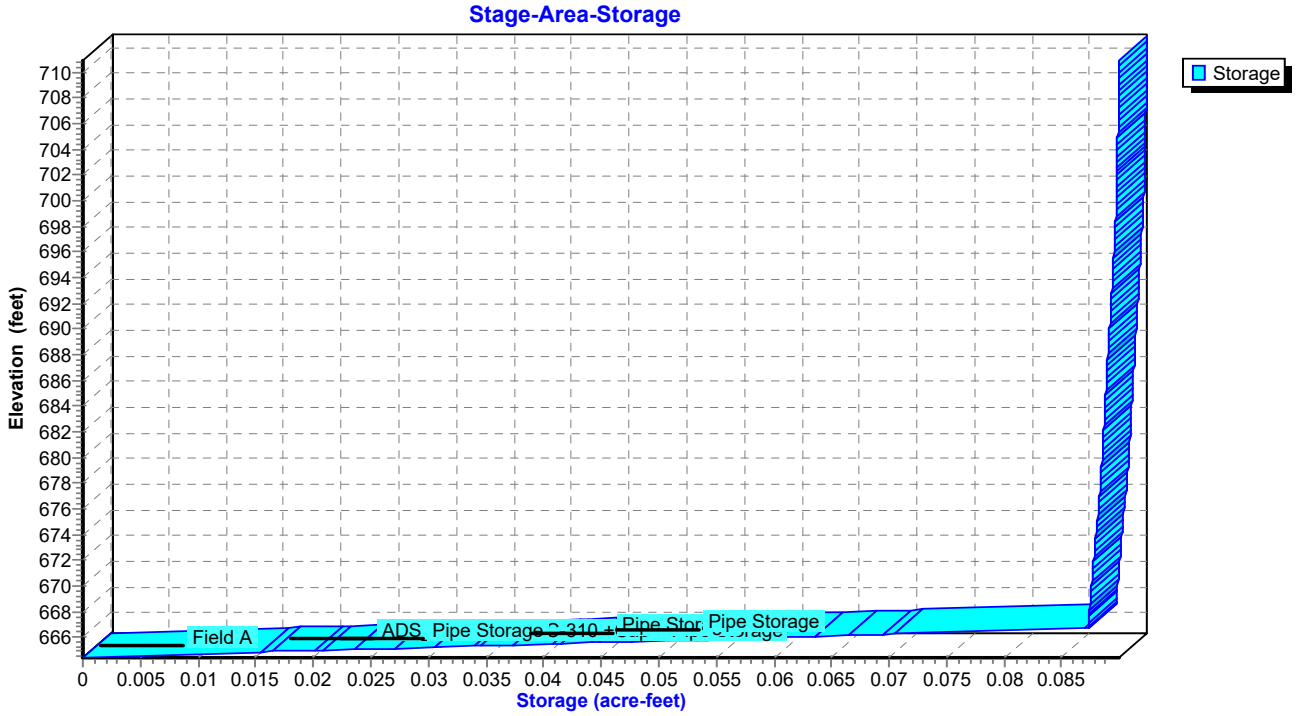
Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Hydrograph for Pond 4P: stormtech SC310 16"x34" chambers

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0.000	664.40	0.00	0.00	0.00
5.40	0.02	0.001	664.42	0.01	0.00	0.01
5.80	0.03	0.001	664.43	0.01	0.00	0.01
6.20	0.03	0.002	664.45	0.02	0.00	0.02
6.60	0.03	0.002	664.46	0.02	0.00	0.02
7.00	0.04	0.002	664.47	0.03	0.00	0.03
7.40	0.04	0.003	664.48	0.03	0.00	0.03
7.80	0.04	0.003	664.49	0.03	0.00	0.03
8.20	0.05	0.003	664.50	0.04	0.00	0.04
8.60	0.05	0.004	664.51	0.04	0.00	0.04
9.00	0.05	0.004	664.52	0.04	0.00	0.04
9.40	0.09	0.005	664.54	0.05	0.00	0.05
9.80	0.09	0.006	664.57	0.07	0.00	0.07
10.20	0.10	0.006	664.59	0.08	0.00	0.08
10.60	0.12	0.007	664.62	0.08	0.00	0.08
11.00	0.21	0.010	664.69	0.11	0.00	0.11
11.40	0.29	0.013	664.81	0.16	0.00	0.16
11.80	**0.51**	0.020	664.99	0.19	0.00	0.19
12.20	**0.91**	0.040	665.47	0.24	0.00	0.24
12.60	0.48	0.052	665.77	0.34	0.08	0.26
13.00	0.39	**0.054**	**665.82**	**0.37**	**0.10**	**0.27**
13.40	0.36	**0.054**	**665.82**	**0.37**	**0.10**	**0.27**
13.80	0.32	0.054	665.80	0.36	0.09	0.26
14.20	0.32	0.053	665.78	0.34	0.08	0.26
14.60	0.32	0.052	665.76	0.33	0.07	0.26
15.00	0.31	0.051	665.74	0.33	0.07	0.26
15.40	0.30	0.051	665.73	0.32	0.06	0.26
15.80	0.30	0.050	665.71	0.31	0.06	0.26
16.20	0.06	0.047	665.64	0.28	0.03	0.25
16.60	0.06	0.041	665.48	0.24	0.00	0.24
17.00	0.06	0.035	665.34	0.23	0.00	0.23
17.40	0.06	0.030	665.21	0.21	0.00	0.21
17.80	0.05	0.024	665.09	0.20	0.00	0.20
18.20	0.05	0.020	664.97	0.19	0.00	0.19
18.60	0.05	0.015	664.86	0.18	0.00	0.18
19.00	0.04	0.012	664.75	0.13	0.00	0.13
19.40	0.04	0.009	664.67	0.11	0.00	0.11
19.80	0.04	0.007	664.62	0.09	0.00	0.09

Stage-Discharge for Pond 4P: stormtech SC310 16"x34" chambers

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
664.40	0.00	0.00	0.00
664.90	0.18	0.00	0.18
665.40	0.23	0.00	0.23
665.90	0.41	0.14	0.27
666.40	0.78	0.48	0.31
666.90	1.40	1.06	0.34
667.40	6.94	6.57	0.37
667.90	15.20	14.80	0.40
668.40	20.51	20.09	0.42
668.90	24.60	24.15	0.45
669.40	28.07	27.60	0.47
669.90	31.15	30.65	0.50
670.40	33.94	33.43	0.52
670.90	36.52	35.98	0.54
671.40	38.93	38.37	0.56
671.90	41.19	40.61	0.58
672.40	43.34	42.74	0.60
672.90	45.38	44.76	0.62
673.40	47.33	46.70	0.64
673.90	49.21	48.56	0.65
674.40	51.02	50.35	0.67
674.90	52.76	52.08	0.69
675.40	54.45	53.75	0.70
675.90	56.09	55.37	0.72
676.40	57.68	56.95	0.74
676.90	59.23	58.48	0.75
677.40	60.74	59.98	0.77
677.90	62.22	61.43	0.78
678.40	63.65	62.86	0.80
678.90	65.06	64.25	0.81
679.40	66.44	65.61	0.82
679.90	67.79	66.95	0.84
680.40	69.11	68.26	0.85
680.90	70.41	69.54	0.87
681.40	71.68	70.80	0.88
681.90	72.94	72.04	0.89
682.40	74.17	73.26	0.91
682.90	75.38	74.46	0.92
683.40	76.57	75.64	0.93
683.90	77.74	76.80	0.94
684.40	78.90	77.94	0.96
684.90	80.04	79.07	0.97
685.40	81.16	80.18	0.98
685.90	82.27	81.28	0.99
686.40	83.36	82.36	1.01
686.90	84.44	83.43	1.02
687.40	85.51	84.48	1.03
687.90	86.56	85.52	1.04
688.40	87.60	86.55	1.05
688.90	88.63	87.57	1.06
689.40	89.65	88.57	1.08
689.90	90.65	89.56	1.09
690.40	91.64	90.55	1.10
690.90	92.63	91.52	1.11
691.40	93.60	92.48	1.12
691.90	94.56	93.43	1.13
692.40	95.51	94.37	1.14
692.90	96.46	95.31	1.15
693.40	97.39	96.23	1.16
693.90	98.32	97.15	1.17
694.40	99.23	98.05	1.18
694.90	100.14	98.95	1.19
695.40	101.04	99.84	1.20
695.90	101.94	100.72	1.21
696.40	102.82	101.60	1.22
696.90	103.70	102.47	1.23
697.40	104.57	103.32	1.24
697.90	105.43	104.18	1.25
698.40	106.29	105.02	1.26
698.90	107.13	105.86	1.27
699.40	107.98	106.70	1.28
699.90	108.81	107.52	1.29
700.40	109.64	108.34	1.30
700.90	110.46	109.15	1.31
701.40	111.28	109.96	1.32
701.90	112.09	110.76	1.33
702.40	112.90	111.56	1.34
702.90	113.70	112.35	1.35
703.40	114.49	113.14	1.36
703.90	115.28	113.91	1.37
704.40	116.06	114.69	1.37
704.90	116.84	115.46	1.38
705.40	117.61	116.22	1.39
705.90	118.38	116.98	1.40
706.40	119.14	117.73	1.41
706.90	119.90	118.48	1.42
707.40	120.65	119.23	1.43
707.90	121.40	119.97	1.44
708.40	122.15	120.70	1.44
708.90	122.89	121.43	1.45
709.40	123.62	122.16	1.46
709.90	124.35	122.88	1.47
710.40	125.08	123.60	1.48
710.90	**125.80**	**124.31**	**1.49**

Stage-Area-Storage for Pond 4P: stormtech SC310 16"x34" chambers

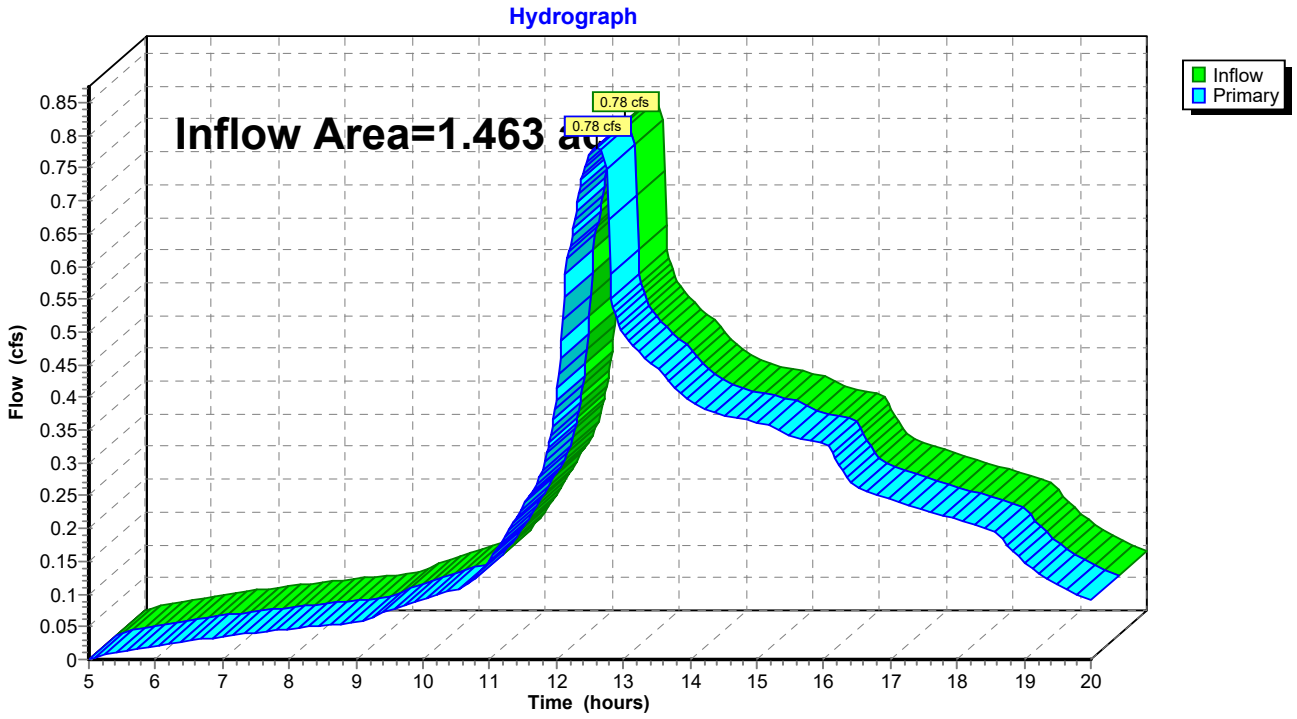
Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
664.40	0.000	689.90	0.089
664.90	0.017	690.40	0.089
665.40	0.037	690.90	0.089
665.90	0.057	691.40	0.089
666.40	0.075	691.90	0.089
666.90	0.087	692.40	0.089
667.40	0.087	692.90	0.089
667.90	0.087	693.40	0.089
668.40	0.087	693.90	0.089
668.90	0.087	694.40	0.089
669.40	0.088	694.90	0.089
669.90	0.088	695.40	0.089
670.40	0.088	695.90	0.090
670.90	0.088	696.40	0.090
671.40	0.088	696.90	0.090
671.90	0.088	697.40	0.090
672.40	0.088	697.90	0.090
672.90	0.088	698.40	0.090
673.40	0.088	698.90	0.090
673.90	0.088	699.40	0.090
674.40	0.088	699.90	0.090
674.90	0.088	700.40	0.090
675.40	0.088	700.90	0.090
675.90	0.088	701.40	0.090
676.40	0.088	701.90	0.090
676.90	0.088	702.40	0.090
677.40	0.088	702.90	0.090
677.90	0.088	703.40	0.090
678.40	0.088	703.90	0.090
678.90	0.088	704.40	0.090
679.40	0.088	704.90	0.090
679.90	0.088	705.40	0.090
680.40	0.089	705.90	0.090
680.90	0.089	706.40	0.090
681.40	0.089	706.90	0.090
681.90	0.089	707.40	0.090
682.40	0.089	707.90	0.090
682.90	0.089	708.40	0.090
683.40	0.089	708.90	0.090
683.90	0.089	709.40	0.090
684.40	0.089	709.90	0.090
684.90	0.089	710.40	0.090
685.40	0.089	710.90	**0.090**
685.90	0.089		
686.40	0.089		
686.90	0.089		
687.40	0.089		
687.90	0.089		
688.40	0.089		
688.90	0.089		
689.40	0.089		

Summary for Link 5L: HOM property run-off

Inflow Area = 1.463 ac, 87.83% Impervious, Inflow Depth > 2.16" for 2-yr event
Inflow = 0.78 cfs @ 12.61 hrs, Volume= 0.263 af
Primary = 0.78 cfs @ 12.61 hrs, Volume= 0.263 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Link 5L: HOM property run-off



Hydrograph for Link 5L: HOM property run-off

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.20	0.01	0.00	0.01
5.40	0.01	0.00	0.01
5.60	0.02	0.00	0.02
5.80	0.02	0.00	0.02
6.00	0.02	0.00	0.02
6.20	0.02	0.00	0.02
6.40	0.03	0.00	0.03
6.60	0.03	0.00	0.03
6.80	0.03	0.00	0.03
7.00	0.04	0.00	0.04
7.20	0.04	0.00	0.04
7.40	0.04	0.00	0.04
7.60	0.04	0.00	0.04
7.80	0.04	0.00	0.04
8.00	0.05	0.00	0.05
8.20	0.05	0.00	0.05
8.40	0.05	0.00	0.05
8.60	0.05	0.00	0.05
8.80	0.05	0.00	0.05
9.00	0.06	0.00	0.06
9.20	0.06	0.00	0.06
9.40	0.07	0.00	0.07
9.60	0.08	0.00	0.08
9.80	0.09	0.00	0.09
10.00	0.09	0.00	0.09
10.20	0.10	0.00	0.10
10.40	0.10	0.00	0.10
10.60	0.11	0.00	0.11
10.80	0.13	0.00	0.13
11.00	0.15	0.00	0.15
11.20	0.18	0.00	0.18
11.40	0.22	0.00	0.22
11.60	0.25	0.00	0.25
11.80	0.29	0.00	0.29
12.00	0.40	0.00	0.40
12.20	0.63	0.00	0.63
12.40	0.74	0.00	0.74
12.60	**0.78**	0.00	**0.78**
12.80	0.59	0.00	0.59
13.00	0.50	0.00	0.50
13.20	0.47	0.00	0.47
13.40	0.45	0.00	0.45
13.60	0.44	0.00	0.44
13.80	0.41	0.00	0.41
14.00	0.39	0.00	0.39
14.20	0.38	0.00	0.38
14.40	0.38	0.00	0.38
14.60	0.37	0.00	0.37
14.80	0.37	0.00	0.37
15.00	0.36	0.00	0.36
15.20	0.36	0.00	0.36
15.40	0.35	0.00	0.35
15.60	0.34	0.00	0.34
15.80	0.33	0.00	0.33
16.00	0.33	0.00	0.33
16.20	0.30	0.00	0.30
16.40	0.27	0.00	0.27
16.60	0.26	0.00	0.26
16.80	0.25	0.00	0.25
17.00	0.24	0.00	0.24
17.20	0.24	0.00	0.24
17.40	0.23	0.00	0.23
17.60	0.23	0.00	0.23
17.80	0.22	0.00	0.22
18.00	0.21	0.00	0.21
18.20	0.21	0.00	0.21
18.40	0.20	0.00	0.20
18.60	0.19	0.00	0.19
18.80	0.17	0.00	0.17
19.00	0.15	0.00	0.15
19.20	0.13	0.00	0.13
19.40	0.12	0.00	0.12
19.60	0.11	0.00	0.11
19.80	0.10	0.00	0.10
20.00	0.09	0.00	0.09

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SE roof to MH8 Runoff Area=0.339 ac 100.00% Impervious Runoff Depth>4.01"
Flow Length=130' Tc=10.0 min CN=98 Runoff=1.69 cfs 0.113 af

Subcatchment3S: untreated to streets Runoff Area=0.177 ac 49.15% Impervious Runoff Depth>1.60"
Flow Length=110' Tc=30.0 min CN=71 Runoff=0.24 cfs 0.024 af

Subcatchment6S: S roof to MH8 Runoff Area=0.305 ac 100.00% Impervious Runoff Depth>4.01"
Flow Length=170' Tc=12.0 min CN=98 Runoff=1.42 cfs 0.102 af

Subcatchment7S: to Inlets 8 & 9 Runoff Area=0.048 ac 100.00% Impervious Runoff Depth>4.00"
Flow Length=105' Tc=15.0 min CN=98 Runoff=0.21 cfs 0.016 af

Subcatchment8S: to Inlet 7 Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>4.01"
Flow Length=50' Tc=7.0 min CN=98 Runoff=0.28 cfs 0.017 af

Subcatchment9S: to Inlet 6 Runoff Area=0.041 ac 100.00% Impervious Runoff Depth>4.00"
Flow Length=90' Tc=14.0 min CN=98 Runoff=0.18 cfs 0.014 af

Subcatchment10S: to Inlet 5 Runoff Area=0.030 ac 83.33% Impervious Runoff Depth>3.01"
Flow Length=60' Tc=18.0 min CN=88 Runoff=0.10 cfs 0.008 af

Subcatchment11S: to Inlet 4 Runoff Area=0.038 ac 73.68% Impervious Runoff Depth>2.46"
Flow Length=120' Tc=26.0 min CN=82 Runoff=0.09 cfs 0.008 af

Subcatchment12S: to inlet 3 Runoff Area=0.124 ac 100.00% Impervious Runoff Depth>4.01"
Tc=0.0 min CN=98 Runoff=0.80 cfs 0.041 af

Subcatchment13S: to NDS 2 Runoff Area=0.021 ac 0.00% Impervious Runoff Depth>0.97"
Flow Length=20' Tc=20.0 min CN=61 Runoff=0.02 cfs 0.002 af

Subcatchment14S: to NDS 3-5 Runoff Area=0.031 ac 3.23% Impervious Runoff Depth>0.74"
Flow Length=95' Tc=52.0 min CN=57 Runoff=0.01 cfs 0.002 af

Subcatchment16S: to NDS11-6 Runoff Area=0.038 ac 42.11% Impervious Runoff Depth>1.14"
Flow Length=50' Tc=30.0 min CN=64 Runoff=0.03 cfs 0.004 af

Subcatchment17S: untreated alley to Runoff Area=0.150 ac 100.00% Impervious Runoff Depth>4.00"
Flow Length=265' Tc=20.0 min CN=98 Runoff=0.56 cfs 0.050 af

Subcatchment18S: untreated alley to Runoff Area=0.070 ac 100.00% Impervious Runoff Depth>4.01"
Flow Length=108' Tc=10.0 min CN=98 Runoff=0.35 cfs 0.023 af

Reach 6R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.22 fps Inflow=1.42 cfs 0.102 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=27.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.102 af

Reach 7R: MH8 12" Avg. Flow Depth=0.25' Max Vel=2.01 fps Inflow=0.56 cfs 0.215 af
12.0" Round Pipe w/ 9.0" inside fill n=0.010 L=19.0' S=0.0042 '/' Capacity=0.28 cfs Outflow=0.29 cfs 0.215 af

Reach 8R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.23 fps Inflow=1.69 cfs 0.113 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=42.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.30 cfs 0.113 af

Reach 9R: inlet 3 18" Avg. Flow Depth=0.33' Max Vel=3.36 fps Inflow=1.07 cfs 0.256 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=35.0' S=0.0080 '/' Capacity=0.88 cfs Outflow=0.88 cfs 0.256 af

Reach 10R: MH7 18" Avg. Flow Depth=0.33' Max Vel=2.65 fps Inflow=0.88 cfs 0.256 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=4.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.72 cfs 0.256 af

Reach 11R: inlet 7 18" Avg. Flow Depth=0.17' Max Vel=2.44 fps Inflow=0.45 cfs 0.033 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=62.0' S=0.0052 '/' Capacity=0.71 cfs Outflow=0.45 cfs 0.033 af

Reach 12R: MH6 18" Avg. Flow Depth=0.17' Max Vel=2.40 fps Inflow=0.45 cfs 0.033 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=8.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.45 cfs 0.033 af

Reach 13R: to isolator 6" Avg. Flow Depth=0.05' Max Vel=7.72 fps Inflow=0.18 cfs 0.014 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.18 cfs 0.014 af

Reach 14R: to isolator 6" Avg. Flow Depth=0.03' Max Vel=6.24 fps Inflow=0.10 cfs 0.008 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.10 cfs 0.008 af

Reach 15R: to isolator 6" Avg. Flow Depth=0.03' Max Vel=5.94 fps Inflow=0.09 cfs 0.008 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.09 cfs 0.008 af

Reach 16R: inlet 2 12" Avg. Flow Depth=0.27' Max Vel=2.68 fps Inflow=0.56 cfs 0.050 af
12.0" Round Pipe w/ 8.0" inside fill n=0.010 L=50.0' S=0.0052 '/' Capacity=0.55 cfs Outflow=0.56 cfs 0.050 af

Reach 17R: NDS2 6" Avg. Flow Depth=0.06' Max Vel=1.32 fps Inflow=0.03 cfs 0.004 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0051 '/' Capacity=0.09 cfs Outflow=0.03 cfs 0.004 af

Reach 18R: inlet 3 6" Avg. Flow Depth=0.08' Max Vel=1.48 fps Inflow=0.05 cfs 0.007 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=62.0' S=0.0048 '/' Capacity=0.08 cfs Outflow=0.05 cfs 0.007 af

Reach 19R: inlet 1 12" Avg. Flow Depth=0.33' Max Vel=2.68 fps Inflow=0.80 cfs 0.073 af
12.0" Round Pipe w/ 8.0" inside fill n=0.010 L=73.0' S=0.0052 '/' Capacity=0.55 cfs Outflow=0.55 cfs 0.073 af

Reach 20R: MH3 15" Avg. Flow Depth=0.25' Max Vel=2.25 fps Inflow=0.55 cfs 0.073 af
15.0" Round Pipe w/ 12.0" inside fill n=0.010 L=53.0' S=0.0053 '/' Capacity=0.35 cfs Outflow=0.37 cfs 0.073 af

Reach 21R: MH2 15" Avg. Flow Depth=0.20' Max Vel=2.25 fps Inflow=0.37 cfs 0.073 af
15.0" Round Pipe w/ 12.0" inside fill n=0.010 L=151.0' S=0.0052 '/' Capacity=0.35 cfs Outflow=0.36 cfs 0.073 af

Reach 22R: NDS2 6" Avg. Flow Depth=0.03' Max Vel=0.91 fps Inflow=0.01 cfs 0.002 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0053 '/' Capacity=0.09 cfs Outflow=0.01 cfs 0.002 af

Pond 4P: stormtech SC310 16"x34" Peak Elev=666.23' Storage=0.070 af Inflow=1.46 cfs 0.325 af
Primary=0.35 cfs 0.070 af Secondary=0.30 cfs 0.224 af Outflow=0.65 cfs 0.294 af

Link 5L: HOM property run-off Inflow=1.23 cfs 0.390 af
Primary=1.23 cfs 0.390 af

Total Runoff Area = 1.463 ac Runoff Volume = 0.423 af Average Runoff Depth = 3.47"
12.17% Pervious = 0.178 ac 87.83% Impervious = 1.285 ac

Summary for Subcatchment 1S: SE roof to MH8

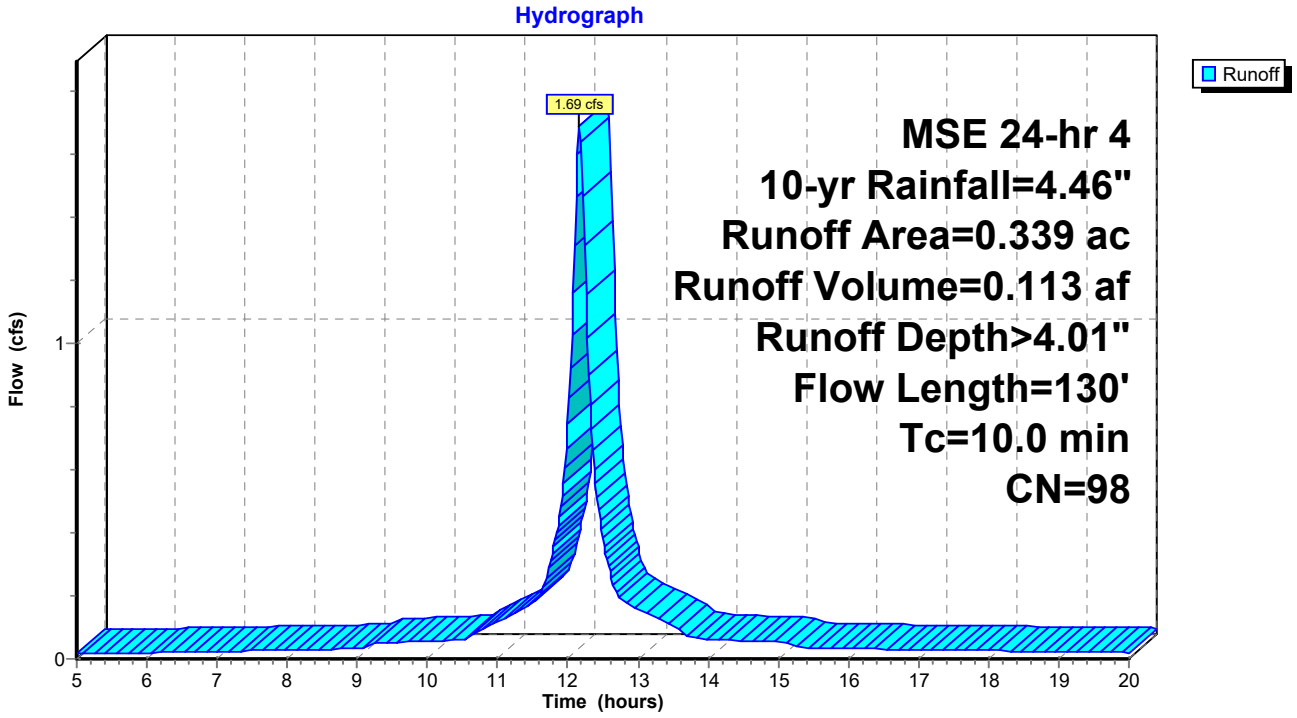
Runoff = 1.69 cfs @ 12.17 hrs, Volume= 0.113 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.339	98	fronting Main St
	0.339		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	130		0.22		**Direct Entry, S Bldg roof**

Subcatchment 1S: SE roof to MH8



Hydrograph for Subcatchment 1S: SE roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.01
5.20	0.22	0.08	0.02
5.40	0.23	0.09	0.02
5.60	0.25	0.10	0.02
5.80	0.26	0.11	0.02
6.00	0.27	0.12	0.02
6.20	0.29	0.14	0.02
6.40	0.30	0.15	0.02
6.60	0.32	0.16	0.02
6.80	0.34	0.18	0.02
7.00	0.35	0.19	0.02
7.20	0.37	0.20	0.02
7.40	0.39	0.22	0.03
7.60	0.41	0.23	0.03
7.80	0.42	0.25	0.03
8.00	0.44	0.27	0.03
8.20	0.46	0.28	0.03
8.40	0.48	0.30	0.03
8.60	0.50	0.32	0.03
8.80	0.52	0.34	0.03
9.00	0.54	0.35	0.03
9.20	0.57	0.38	0.05
9.40	0.60	0.41	0.05
9.60	0.64	0.44	0.05
9.80	0.67	0.48	0.05
10.00	0.71	0.51	0.06
10.20	0.74	0.54	0.06
10.40	0.78	0.58	0.06
10.60	0.82	0.62	0.07
10.80	0.89	0.68	0.10
11.00	0.96	0.76	0.12
11.20	1.05	0.84	0.14
11.40	1.16	0.94	0.16
11.60	1.29	1.07	0.20
11.80	1.53	1.31	0.35
12.00	2.09	1.86	**0.75**
12.20	2.93	2.70	**1.60**
12.40	3.17	2.94	0.55
12.60	3.30	3.07	0.28
12.80	3.41	3.17	0.18
13.00	3.50	3.26	0.16
13.20	3.57	3.34	0.14
13.40	3.64	3.40	0.11
13.60	3.68	3.45	0.09
13.80	3.72	3.48	0.06
14.00	3.75	3.52	0.06
14.20	3.79	3.55	0.06
14.40	3.82	3.59	0.06
14.60	3.86	3.62	0.06
14.80	3.89	3.65	0.06
15.00	3.92	3.69	0.05
15.20	3.94	3.71	0.04
15.40	3.96	3.73	0.03
15.60	3.98	3.75	0.03
15.80	4.00	3.76	0.03
16.00	4.02	3.78	0.03
16.20	4.04	3.80	0.03
16.40	4.05	3.82	0.03
16.60	4.07	3.84	0.03
16.80	4.09	3.85	0.03
17.00	4.11	3.87	0.03
17.20	4.12	3.89	0.03
17.40	4.14	3.90	0.03
17.60	4.16	3.92	0.03
17.80	4.17	3.94	0.03
18.00	4.19	3.95	0.03
18.20	4.20	3.97	0.03
18.40	4.21	3.98	0.02
18.60	4.23	3.99	0.02
18.80	4.24	4.01	0.02
19.00	4.26	4.02	0.02
19.20	4.27	4.03	0.02
19.40	4.28	4.04	0.02
19.60	4.29	4.06	0.02
19.80	4.30	4.07	0.02
20.00	**4.32**	**4.08**	0.02

Summary for Subcatchment 3S: untreated to streets

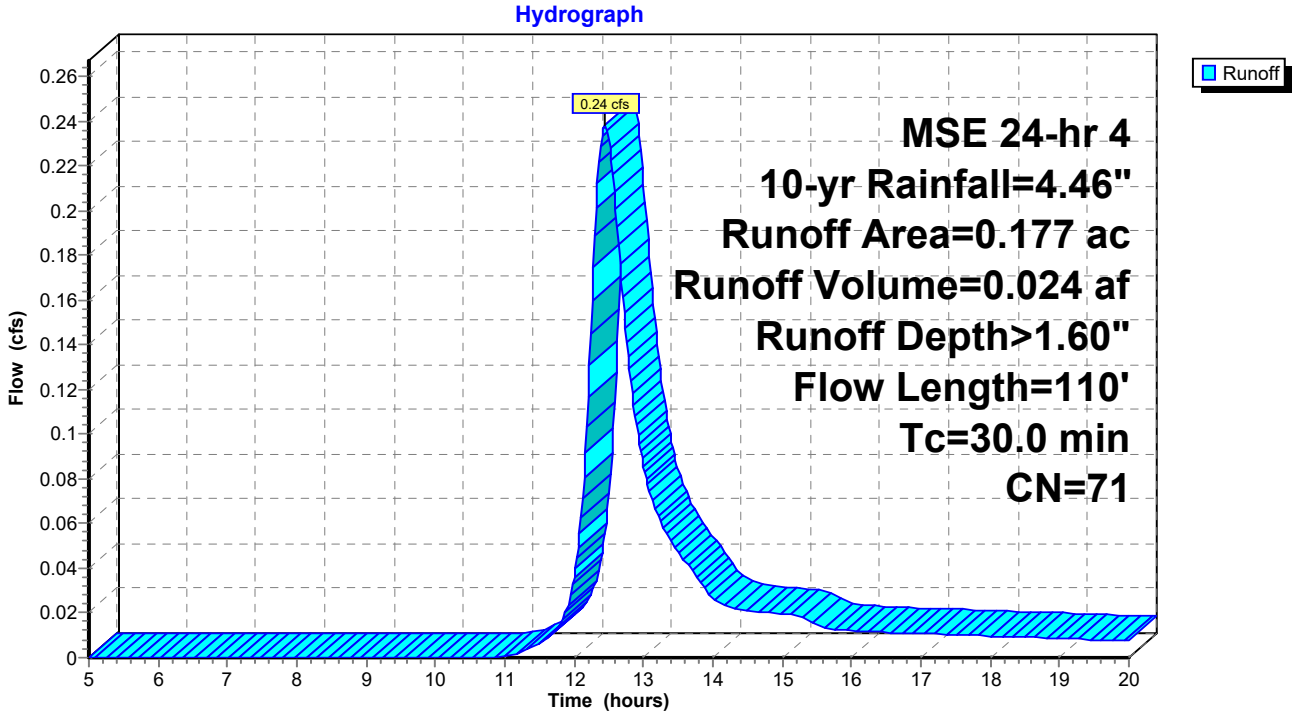
Runoff = 0.24 cfs @ 12.44 hrs, Volume= 0.024 af, Depth> 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.069	98	canopy
*	0.063	39	LS
*	0.027	61	lawn, HSG B
*	0.018	98	SW
	0.177	71	Weighted Average
	0.090		50.85% Pervious Area
	0.087		49.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	70		0.19		**Direct Entry, canopy**
12.0	20		0.03		**Direct Entry, LS**
12.0	20		0.03		**Direct Entry, lawn**
30.0	110	Total			

Subcatchment 3S: untreated to streets



Hydrograph for Subcatchment 3S: untreated to streets

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.00	0.00
8.40	0.48	0.00	0.00
8.60	0.50	0.00	0.00
8.80	0.52	0.00	0.00
9.00	0.54	0.00	0.00
9.20	0.57	0.00	0.00
9.40	0.60	0.00	0.00
9.60	0.64	0.00	0.00
9.80	0.67	0.00	0.00
10.00	0.71	0.00	0.00
10.20	0.74	0.00	0.00
10.40	0.78	0.00	0.00
10.60	0.82	0.00	0.00
10.80	0.89	0.00	0.00
11.00	0.96	0.01	0.00
11.20	1.05	0.01	0.00
11.40	1.16	0.03	0.00
11.60	1.29	0.05	0.01
11.80	1.53	0.11	0.02
12.00	2.09	0.30	0.04
12.20	2.93	0.72	0.12
12.40	3.17	0.86	**0.23**
12.60	3.30	0.94	**0.20**
12.80	3.41	1.00	0.13
13.00	3.50	1.06	0.09
13.20	3.57	1.11	0.06
13.40	3.64	1.15	0.05
13.60	3.68	1.18	0.04
13.80	3.72	1.20	0.03
14.00	3.75	1.23	0.03
14.20	3.79	1.25	0.02
14.40	3.82	1.27	0.02
14.60	3.86	1.30	0.02
14.80	3.89	1.32	0.02
15.00	3.92	1.34	0.02
15.20	3.94	1.35	0.02
15.40	3.96	1.37	0.02
15.60	3.98	1.38	0.01
15.80	4.00	1.39	0.01
16.00	4.02	1.41	0.01
16.20	4.04	1.42	0.01
16.40	4.05	1.43	0.01
16.60	4.07	1.44	0.01
16.80	4.09	1.46	0.01
17.00	4.11	1.47	0.01
17.20	4.12	1.48	0.01
17.40	4.14	1.49	0.01
17.60	4.16	1.50	0.01
17.80	4.17	1.51	0.01
18.00	4.19	1.52	0.01
18.20	4.20	1.53	0.01
18.40	4.21	1.54	0.01
18.60	4.23	1.55	0.01
18.80	4.24	1.56	0.01
19.00	4.26	1.57	0.01
19.20	4.27	1.58	0.01
19.40	4.28	1.59	0.01
19.60	4.29	1.60	0.01
19.80	4.30	1.61	0.01
20.00	**4.32**	**1.61**	0.01

Summary for Subcatchment 6S: S roof to MH8

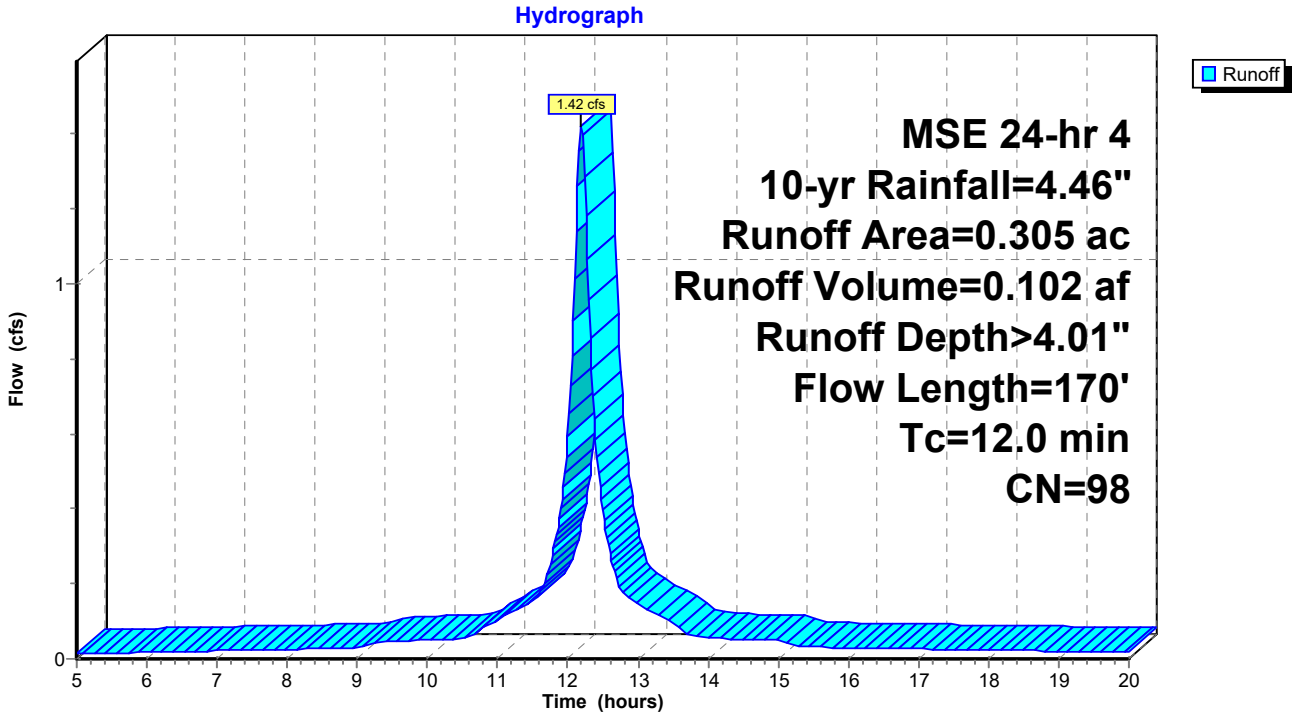
Runoff = 1.42 cfs @ 12.19 hrs, Volume= 0.102 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.305	98	fronting 10th
	0.305		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	170		0.24		**Direct Entry, NE Bldg Roof**

Subcatchment 6S: S roof to MH8



Hydrograph for Subcatchment 6S: S roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.01
5.20	0.22	0.08	0.01
5.40	0.23	0.09	0.01
5.60	0.25	0.10	0.02
5.80	0.26	0.11	0.02
6.00	0.27	0.12	0.02
6.20	0.29	0.14	0.02
6.40	0.30	0.15	0.02
6.60	0.32	0.16	0.02
6.80	0.34	0.18	0.02
7.00	0.35	0.19	0.02
7.20	0.37	0.20	0.02
7.40	0.39	0.22	0.02
7.60	0.41	0.23	0.02
7.80	0.42	0.25	0.02
8.00	0.44	0.27	0.02
8.20	0.46	0.28	0.03
8.40	0.48	0.30	0.03
8.60	0.50	0.32	0.03
8.80	0.52	0.34	0.03
9.00	0.54	0.35	0.03
9.20	0.57	0.38	0.04
9.40	0.60	0.41	0.05
9.60	0.64	0.44	0.05
9.80	0.67	0.48	0.05
10.00	0.71	0.51	0.05
10.20	0.74	0.54	0.05
10.40	0.78	0.58	0.05
10.60	0.82	0.62	0.06
10.80	0.89	0.68	0.08
11.00	0.96	0.76	0.10
11.20	1.05	0.84	0.12
11.40	1.16	0.94	0.14
11.60	1.29	1.07	0.17
11.80	1.53	1.31	0.29
12.00	2.09	1.86	0.59
12.20	2.93	2.70	**1.42**
12.40	3.17	2.94	0.59
12.60	3.30	3.07	0.28
12.80	3.41	3.17	0.17
13.00	3.50	3.26	0.15
13.20	3.57	3.34	0.13
13.40	3.64	3.40	0.11
13.60	3.68	3.45	0.08
13.80	3.72	3.48	0.06
14.00	3.75	3.52	0.06
14.20	3.79	3.55	0.05
14.40	3.82	3.59	0.05
14.60	3.86	3.62	0.05
14.80	3.89	3.65	0.05
15.00	3.92	3.69	0.05
15.20	3.94	3.71	0.04
15.40	3.96	3.73	0.03
15.60	3.98	3.75	0.03
15.80	4.00	3.76	0.03
16.00	4.02	3.78	0.03
16.20	4.04	3.80	0.03
16.40	4.05	3.82	0.03
16.60	4.07	3.84	0.03
16.80	4.09	3.85	0.03
17.00	4.11	3.87	0.03
17.20	4.12	3.89	0.03
17.40	4.14	3.90	0.03
17.60	4.16	3.92	0.02
17.80	4.17	3.94	0.02
18.00	4.19	3.95	0.02
18.20	4.20	3.97	0.02
18.40	4.21	3.98	0.02
18.60	4.23	3.99	0.02
18.80	4.24	4.01	0.02
19.00	4.26	4.02	0.02
19.20	4.27	4.03	0.02
19.40	4.28	4.04	0.02
19.60	4.29	4.06	0.02
19.80	4.30	4.07	0.02
20.00	**4.32**	**4.08**	0.02

Summary for Subcatchment 7S: to Inlets 8 & 9

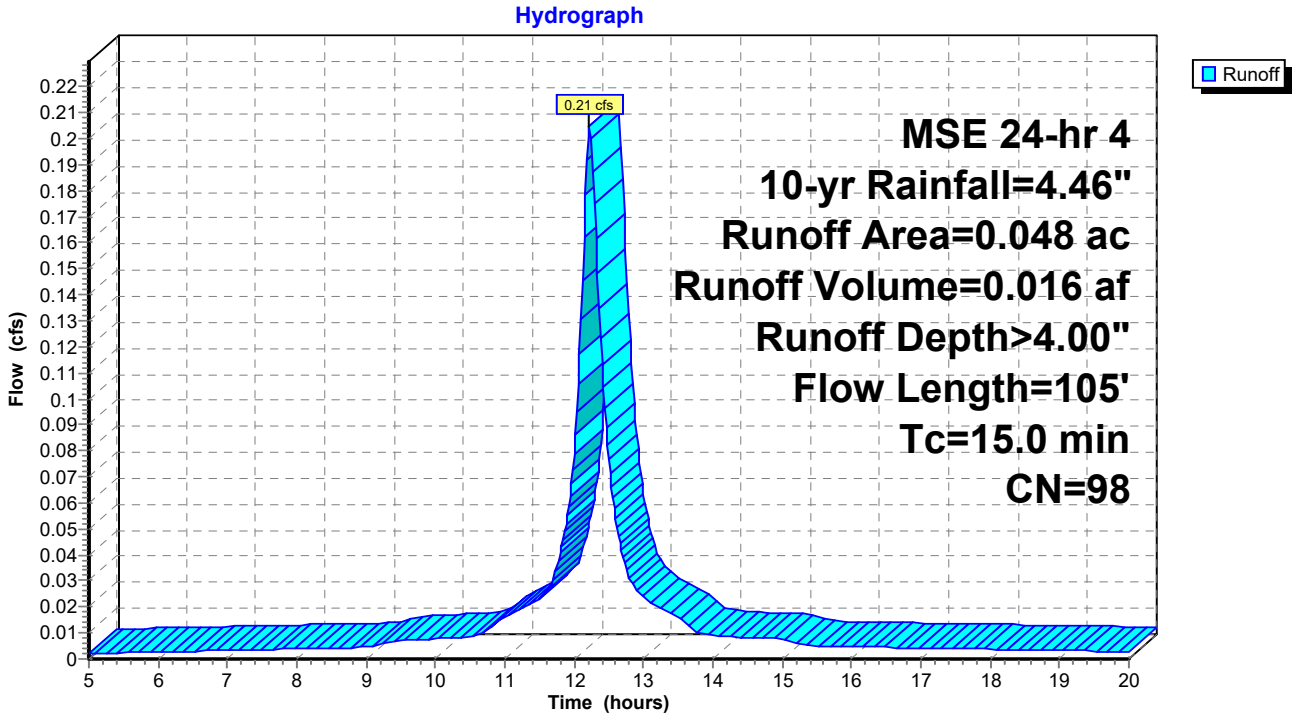
Runoff = 0.21 cfs @ 12.22 hrs, Volume= 0.016 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.046	98	pavement
*	0.002	98	SW
	0.048	98	Weighted Average
	0.048		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	55		0.13		**Direct Entry, pavement**
8.0	50		0.10		**Direct Entry, SW**
15.0	105	Total			

Subcatchment 7S: to Inlets 8 & 9



Hydrograph for Subcatchment 7S: to Inlets 8 & 9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.00
5.20	0.22	0.08	0.00
5.40	0.23	0.09	0.00
5.60	0.25	0.10	0.00
5.80	0.26	0.11	0.00
6.00	0.27	0.12	0.00
6.20	0.29	0.14	0.00
6.40	0.30	0.15	0.00
6.60	0.32	0.16	0.00
6.80	0.34	0.18	0.00
7.00	0.35	0.19	0.00
7.20	0.37	0.20	0.00
7.40	0.39	0.22	0.00
7.60	0.41	0.23	0.00
7.80	0.42	0.25	0.00
8.00	0.44	0.27	0.00
8.20	0.46	0.28	0.00
8.40	0.48	0.30	0.00
8.60	0.50	0.32	0.00
8.80	0.52	0.34	0.00
9.00	0.54	0.35	0.00
9.20	0.57	0.38	0.01
9.40	0.60	0.41	0.01
9.60	0.64	0.44	0.01
9.80	0.67	0.48	0.01
10.00	0.71	0.51	0.01
10.20	0.74	0.54	0.01
10.40	0.78	0.58	0.01
10.60	0.82	0.62	0.01
10.80	0.89	0.68	0.01
11.00	0.96	0.76	0.02
11.20	1.05	0.84	0.02
11.40	1.16	0.94	0.02
11.60	1.29	1.07	0.03
11.80	1.53	1.31	0.04
12.00	2.09	1.86	0.08
12.20	2.93	2.70	**0.20**
12.40	3.17	2.94	**0.11**
12.60	3.30	3.07	0.05
12.80	3.41	3.17	0.03
13.00	3.50	3.26	0.02
13.20	3.57	3.34	0.02
13.40	3.64	3.40	0.02
13.60	3.68	3.45	0.01
13.80	3.72	3.48	0.01
14.00	3.75	3.52	0.01
14.20	3.79	3.55	0.01
14.40	3.82	3.59	0.01
14.60	3.86	3.62	0.01
14.80	3.89	3.65	0.01
15.00	3.92	3.69	0.01
15.20	3.94	3.71	0.01
15.40	3.96	3.73	0.01
15.60	3.98	3.75	0.00
15.80	4.00	3.76	0.00
16.00	4.02	3.78	0.00
16.20	4.04	3.80	0.00
16.40	4.05	3.82	0.00
16.60	4.07	3.84	0.00
16.80	4.09	3.85	0.00
17.00	4.11	3.87	0.00
17.20	4.12	3.89	0.00
17.40	4.14	3.90	0.00
17.60	4.16	3.92	0.00
17.80	4.17	3.94	0.00
18.00	4.19	3.95	0.00
18.20	4.20	3.97	0.00
18.40	4.21	3.98	0.00
18.60	4.23	3.99	0.00
18.80	4.24	4.01	0.00
19.00	4.26	4.02	0.00
19.20	4.27	4.03	0.00
19.40	4.28	4.04	0.00
19.60	4.29	4.06	0.00
19.80	4.30	4.07	0.00
20.00	**4.32**	**4.08**	0.00

Summary for Subcatchment 8S: to Inlet 7

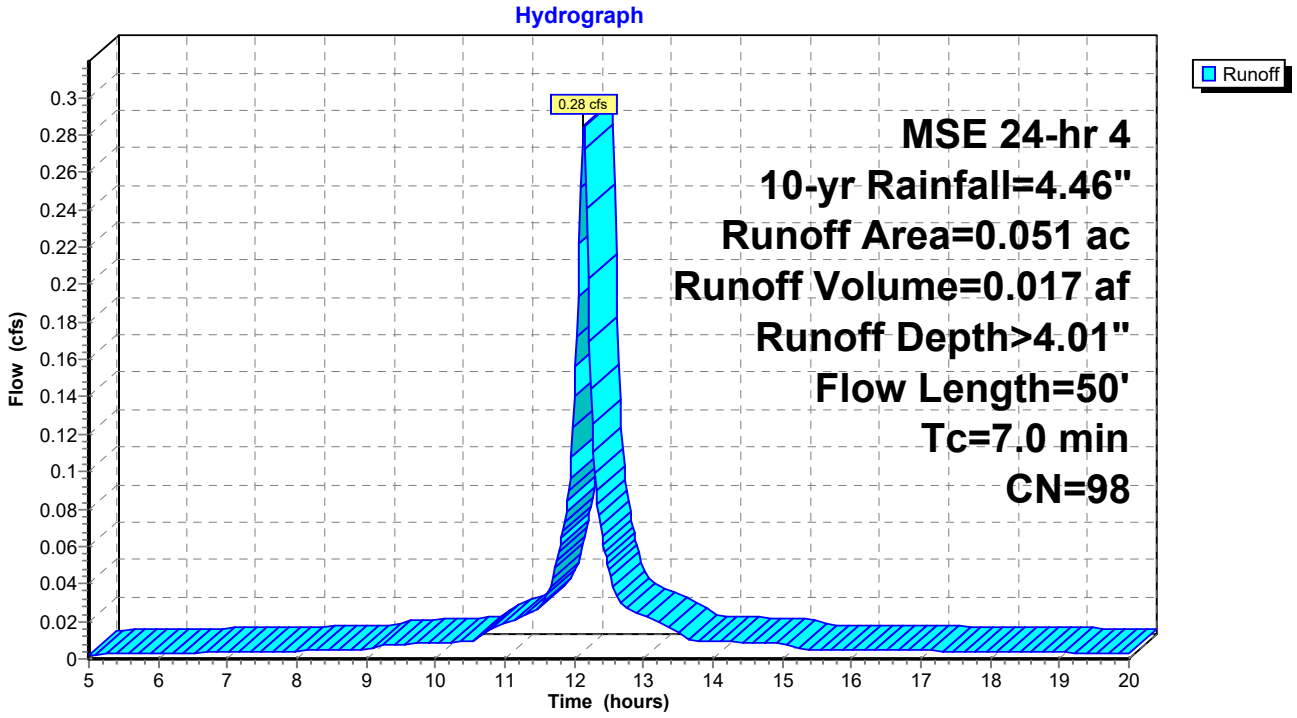
Runoff = 0.28 cfs @ 12.14 hrs, Volume= 0.017 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.051	98	pavement
	0.051		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	50		0.12		**Direct Entry, pavement**

Subcatchment 8S: to Inlet 7



Hydrograph for Subcatchment 8S: to Inlet 7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.00
5.20	0.22	0.08	0.00
5.40	0.23	0.09	0.00
5.60	0.25	0.10	0.00
5.80	0.26	0.11	0.00
6.00	0.27	0.12	0.00
6.20	0.29	0.14	0.00
6.40	0.30	0.15	0.00
6.60	0.32	0.16	0.00
6.80	0.34	0.18	0.00
7.00	0.35	0.19	0.00
7.20	0.37	0.20	0.00
7.40	0.39	0.22	0.00
7.60	0.41	0.23	0.00
7.80	0.42	0.25	0.00
8.00	0.44	0.27	0.00
8.20	0.46	0.28	0.00
8.40	0.48	0.30	0.00
8.60	0.50	0.32	0.00
8.80	0.52	0.34	0.00
9.00	0.54	0.35	0.00
9.20	0.57	0.38	0.01
9.40	0.60	0.41	0.01
9.60	0.64	0.44	0.01
9.80	0.67	0.48	0.01
10.00	0.71	0.51	0.01
10.20	0.74	0.54	0.01
10.40	0.78	0.58	0.01
10.60	0.82	0.62	0.01
10.80	0.89	0.68	0.02
11.00	0.96	0.76	0.02
11.20	1.05	0.84	0.02
11.40	1.16	0.94	0.03
11.60	1.29	1.07	0.03
11.80	1.53	1.31	0.06
12.00	2.09	1.86	**0.14**
12.20	2.93	2.70	**0.20**
12.40	3.17	2.94	0.07
12.60	3.30	3.07	0.03
12.80	3.41	3.17	0.03
13.00	3.50	3.26	0.02
13.20	3.57	3.34	0.02
13.40	3.64	3.40	0.02
13.60	3.68	3.45	0.01
13.80	3.72	3.48	0.01
14.00	3.75	3.52	0.01
14.20	3.79	3.55	0.01
14.40	3.82	3.59	0.01
14.60	3.86	3.62	0.01
14.80	3.89	3.65	0.01
15.00	3.92	3.69	0.01
15.20	3.94	3.71	0.01
15.40	3.96	3.73	0.01
15.60	3.98	3.75	0.01
15.80	4.00	3.76	0.00
16.00	4.02	3.78	0.00
16.20	4.04	3.80	0.00
16.40	4.05	3.82	0.00
16.60	4.07	3.84	0.00
16.80	4.09	3.85	0.00
17.00	4.11	3.87	0.00
17.20	4.12	3.89	0.00
17.40	4.14	3.90	0.00
17.60	4.16	3.92	0.00
17.80	4.17	3.94	0.00
18.00	4.19	3.95	0.00
18.20	4.20	3.97	0.00
18.40	4.21	3.98	0.00
18.60	4.23	3.99	0.00
18.80	4.24	4.01	0.00
19.00	4.26	4.02	0.00
19.20	4.27	4.03	0.00
19.40	4.28	4.04	0.00
19.60	4.29	4.06	0.00
19.80	4.30	4.07	0.00
20.00	**4.32**	**4.08**	0.00

Summary for Subcatchment 9S: to Inlet 6

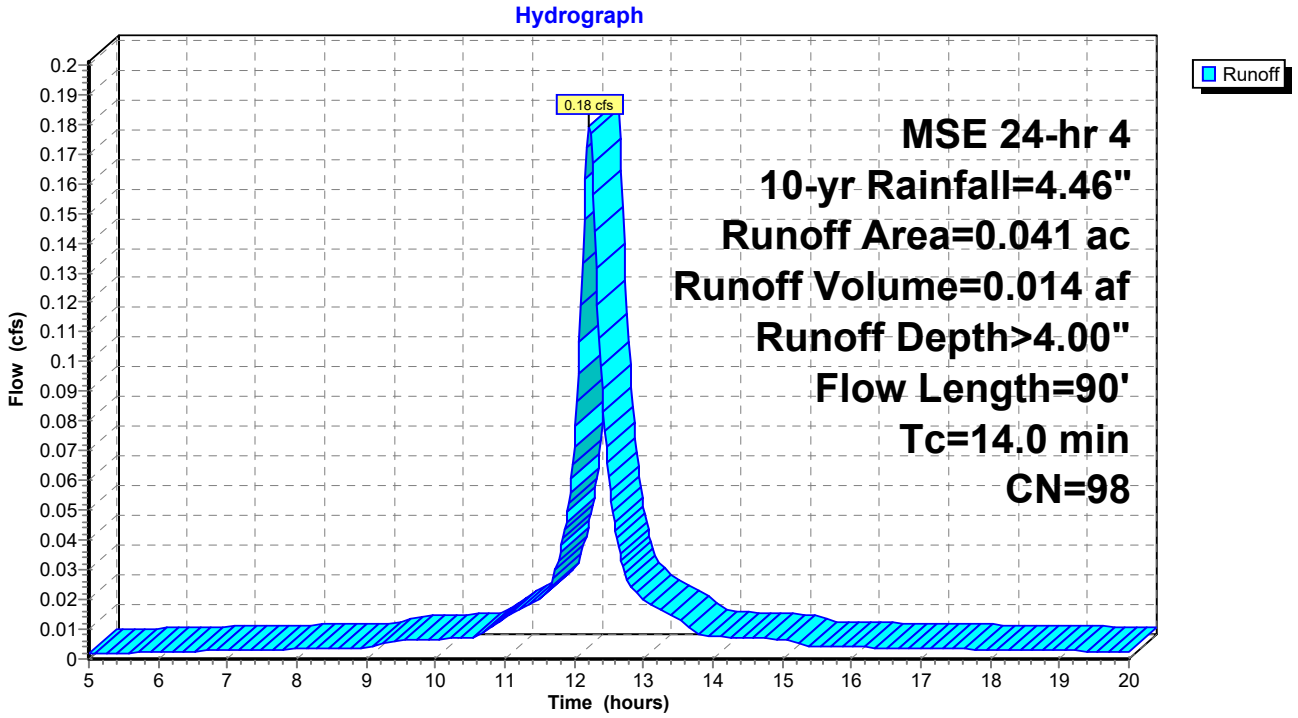
Runoff = 0.18 cfs @ 12.21 hrs, Volume= 0.014 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.032	98	pavement
*	0.009	98	SW
	0.041	98	Weighted Average
	0.041		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	45		0.11		**Direct Entry, pavement**
7.0	45		0.11		**Direct Entry, SW**
14.0	90	Total			

Subcatchment 9S: to Inlet 6



Hydrograph for Subcatchment 9S: to Inlet 6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.00
5.20	0.22	0.08	0.00
5.40	0.23	0.09	0.00
5.60	0.25	0.10	0.00
5.80	0.26	0.11	0.00
6.00	0.27	0.12	0.00
6.20	0.29	0.14	0.00
6.40	0.30	0.15	0.00
6.60	0.32	0.16	0.00
6.80	0.34	0.18	0.00
7.00	0.35	0.19	0.00
7.20	0.37	0.20	0.00
7.40	0.39	0.22	0.00
7.60	0.41	0.23	0.00
7.80	0.42	0.25	0.00
8.00	0.44	0.27	0.00
8.20	0.46	0.28	0.00
8.40	0.48	0.30	0.00
8.60	0.50	0.32	0.00
8.80	0.52	0.34	0.00
9.00	0.54	0.35	0.00
9.20	0.57	0.38	0.00
9.40	0.60	0.41	0.01
9.60	0.64	0.44	0.01
9.80	0.67	0.48	0.01
10.00	0.71	0.51	0.01
10.20	0.74	0.54	0.01
10.40	0.78	0.58	0.01
10.60	0.82	0.62	0.01
10.80	0.89	0.68	0.01
11.00	0.96	0.76	0.01
11.20	1.05	0.84	0.02
11.40	1.16	0.94	0.02
11.60	1.29	1.07	0.02
11.80	1.53	1.31	0.04
12.00	2.09	1.86	0.07
12.20	2.93	2.70	**0.18**
12.40	3.17	2.94	**0.09**
12.60	3.30	3.07	0.04
12.80	3.41	3.17	0.03
13.00	3.50	3.26	0.02
13.20	3.57	3.34	0.02
13.40	3.64	3.40	0.01
13.60	3.68	3.45	0.01
13.80	3.72	3.48	0.01
14.00	3.75	3.52	0.01
14.20	3.79	3.55	0.01
14.40	3.82	3.59	0.01
14.60	3.86	3.62	0.01
14.80	3.89	3.65	0.01
15.00	3.92	3.69	0.01
15.20	3.94	3.71	0.01
15.40	3.96	3.73	0.00
15.60	3.98	3.75	0.00
15.80	4.00	3.76	0.00
16.00	4.02	3.78	0.00
16.20	4.04	3.80	0.00
16.40	4.05	3.82	0.00
16.60	4.07	3.84	0.00
16.80	4.09	3.85	0.00
17.00	4.11	3.87	0.00
17.20	4.12	3.89	0.00
17.40	4.14	3.90	0.00
17.60	4.16	3.92	0.00
17.80	4.17	3.94	0.00
18.00	4.19	3.95	0.00
18.20	4.20	3.97	0.00
18.40	4.21	3.98	0.00
18.60	4.23	3.99	0.00
18.80	4.24	4.01	0.00
19.00	4.26	4.02	0.00
19.20	4.27	4.03	0.00
19.40	4.28	4.04	0.00
19.60	4.29	4.06	0.00
19.80	4.30	4.07	0.00
20.00	**4.32**	**4.08**	0.00

Summary for Subcatchment 10S: to Inlet 5

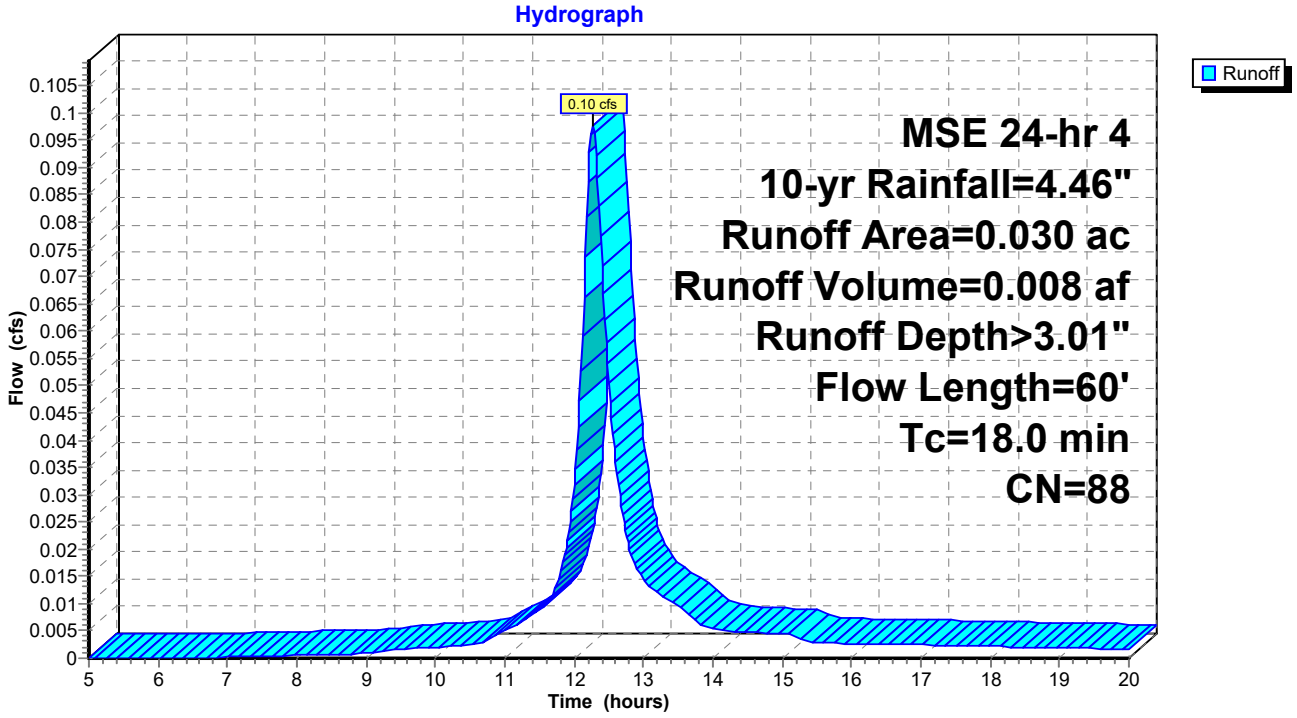
Runoff = 0.10 cfs @ 12.26 hrs, Volume= 0.008 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.005	39	LS
	0.030	88	Weighted Average
	0.005		16.67% Pervious Area
	0.025		83.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40		0.11		**Direct Entry, pavement**
12.0	20		0.03		**Direct Entry, LS**
18.0	60	Total			

Subcatchment 10S: to Inlet 5



Hydrograph for Subcatchment 10S: to Inlet 5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.01	0.00
7.40	0.39	0.01	0.00
7.60	0.41	0.01	0.00
7.80	0.42	0.01	0.00
8.00	0.44	0.02	0.00
8.20	0.46	0.02	0.00
8.40	0.48	0.03	0.00
8.60	0.50	0.03	0.00
8.80	0.52	0.04	0.00
9.00	0.54	0.04	0.00
9.20	0.57	0.05	0.00
9.40	0.60	0.06	0.00
9.60	0.64	0.08	0.00
9.80	0.67	0.09	0.00
10.00	0.71	0.10	0.00
10.20	0.74	0.12	0.00
10.40	0.78	0.14	0.00
10.60	0.82	0.16	0.00
10.80	0.89	0.19	0.00
11.00	0.96	0.23	0.01
11.20	1.05	0.28	0.01
11.40	1.16	0.35	0.01
11.60	1.29	0.43	0.01
11.80	1.53	0.60	0.02
12.00	2.09	1.04	0.03
12.20	2.93	1.75	**0.09**
12.40	3.17	1.97	**0.07**
12.60	3.30	2.09	0.04
12.80	3.41	2.18	0.02
13.00	3.50	2.26	0.01
13.20	3.57	2.33	0.01
13.40	3.64	2.39	0.01
13.60	3.68	2.43	0.01
13.80	3.72	2.47	0.01
14.00	3.75	2.50	0.01
14.20	3.79	2.53	0.01
14.40	3.82	2.56	0.00
14.60	3.86	2.60	0.00
14.80	3.89	2.63	0.00
15.00	3.92	2.65	0.00
15.20	3.94	2.67	0.00
15.40	3.96	2.69	0.00
15.60	3.98	2.71	0.00
15.80	4.00	2.73	0.00
16.00	4.02	2.75	0.00
16.20	4.04	2.76	0.00
16.40	4.05	2.78	0.00
16.60	4.07	2.80	0.00
16.80	4.09	2.81	0.00
17.00	4.11	2.83	0.00
17.20	4.12	2.84	0.00
17.40	4.14	2.86	0.00
17.60	4.16	2.87	0.00
17.80	4.17	2.89	0.00
18.00	4.19	2.90	0.00
18.20	4.20	2.92	0.00
18.40	4.21	2.93	0.00
18.60	4.23	2.94	0.00
18.80	4.24	2.95	0.00
19.00	4.26	2.97	0.00
19.20	4.27	2.98	0.00
19.40	4.28	2.99	0.00
19.60	4.29	3.00	0.00
19.80	4.30	3.01	0.00
20.00	**4.32**	**3.02**	0.00

Summary for Subcatchment 11S: to Inlet 4

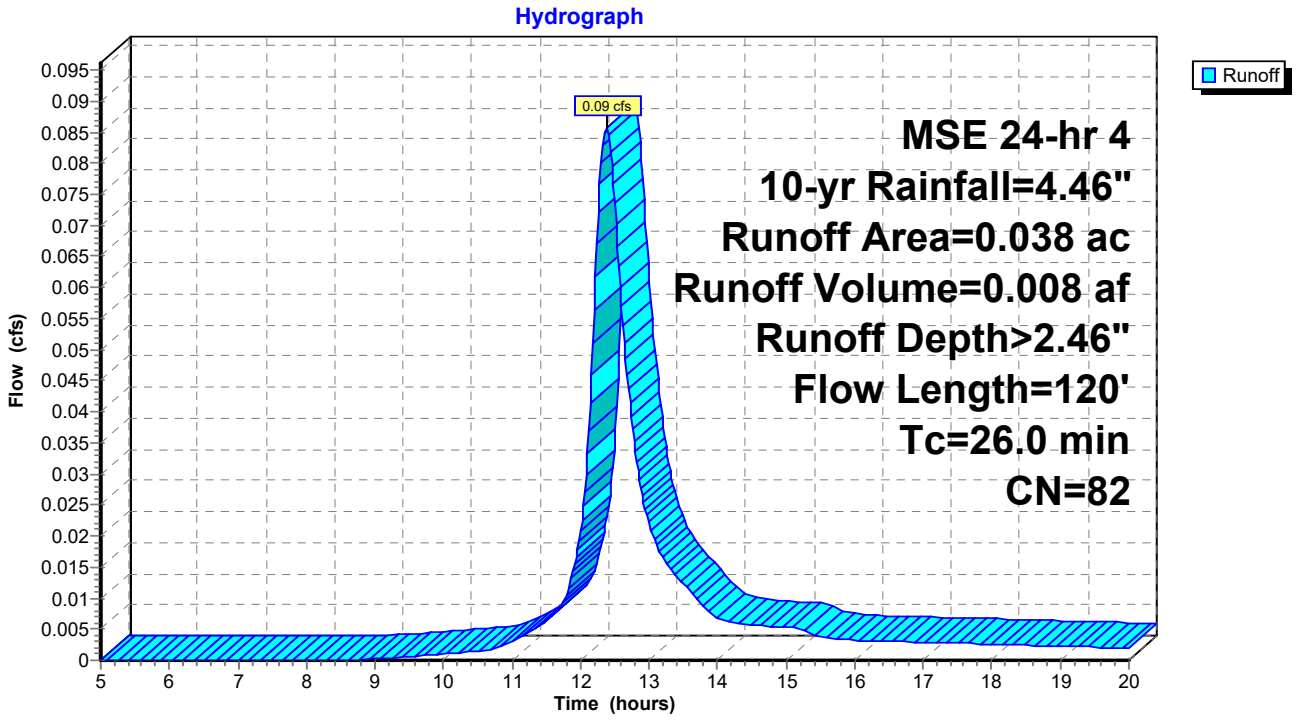
Runoff = 0.09 cfs @ 12.37 hrs, Volume= 0.008 af, Depth> 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.003	98	SW
*	0.010	39	LS
	0.038	82	Weighted Average
	0.010		26.32% Pervious Area
	0.028		73.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	40		0.10		**Direct Entry, pavement**
7.0	40		0.10		**Direct Entry, SW**
12.0	40		0.06		**Direct Entry, LS**
26.0	120	Total			

Subcatchment 11S: to Inlet 4



Hydrograph for Subcatchment 11S: to Inlet 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.00	0.00
8.40	0.48	0.00	0.00
8.60	0.50	0.00	0.00
8.80	0.52	0.00	0.00
9.00	0.54	0.00	0.00
9.20	0.57	0.01	0.00
9.40	0.60	0.01	0.00
9.60	0.64	0.02	0.00
9.80	0.67	0.02	0.00
10.00	0.71	0.03	0.00
10.20	0.74	0.04	0.00
10.40	0.78	0.05	0.00
10.60	0.82	0.06	0.00
10.80	0.89	0.08	0.00
11.00	0.96	0.10	0.00
11.20	1.05	0.13	0.00
11.40	1.16	0.18	0.01
11.60	1.29	0.24	0.01
11.80	1.53	0.36	0.01
12.00	2.09	0.71	0.02
12.20	2.93	1.32	**0.06**
12.40	3.17	1.52	**0.09**
12.60	3.30	1.62	0.06
12.80	3.41	1.71	0.03
13.00	3.50	1.78	0.02
13.20	3.57	1.84	0.02
13.40	3.64	1.89	0.01
13.60	3.68	1.93	0.01
13.80	3.72	1.96	0.01
14.00	3.75	1.99	0.01
14.20	3.79	2.02	0.01
14.40	3.82	2.05	0.01
14.60	3.86	2.08	0.01
14.80	3.89	2.11	0.01
15.00	3.92	2.13	0.01
15.20	3.94	2.15	0.01
15.40	3.96	2.17	0.00
15.60	3.98	2.19	0.00
15.80	4.00	2.20	0.00
16.00	4.02	2.22	0.00
16.20	4.04	2.23	0.00
16.40	4.05	2.25	0.00
16.60	4.07	2.27	0.00
16.80	4.09	2.28	0.00
17.00	4.11	2.29	0.00
17.20	4.12	2.31	0.00
17.40	4.14	2.32	0.00
17.60	4.16	2.34	0.00
17.80	4.17	2.35	0.00
18.00	4.19	2.36	0.00
18.20	4.20	2.38	0.00
18.40	4.21	2.39	0.00
18.60	4.23	2.40	0.00
18.80	4.24	2.41	0.00
19.00	4.26	2.42	0.00
19.20	4.27	2.43	0.00
19.40	4.28	2.44	0.00
19.60	4.29	2.45	0.00
19.80	4.30	2.47	0.00
20.00	**4.32**	**2.47**	0.00

Summary for Subcatchment 12S: to inlet 3

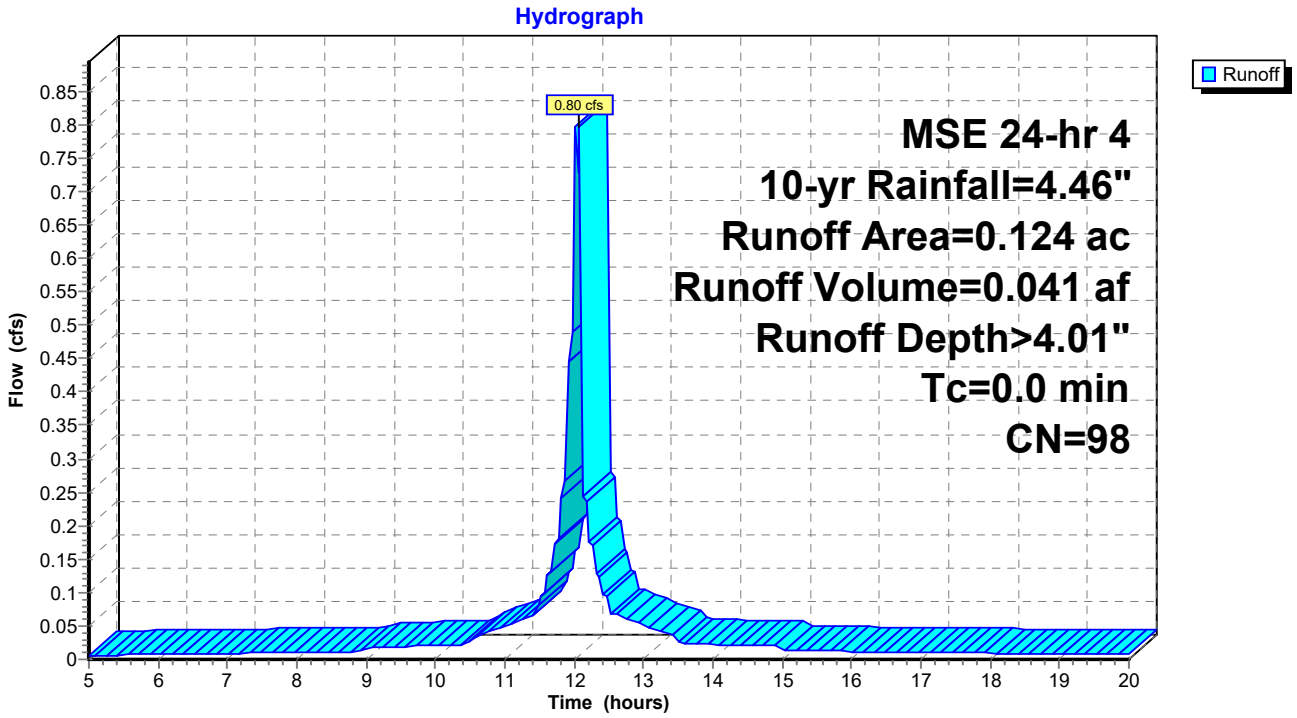
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.80 cfs @ 12.08 hrs, Volume= 0.041 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.009	98	open shelter
*	0.059	98	SW
*	0.034	98	parking AC pavement
*	0.022	98	PIP play surface
	0.124	98	Weighted Average
	0.124		100.00% Impervious Area

Subcatchment 12S: to inlet 3



Hydrograph for Subcatchment 12S: to inlet 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.01
5.20	0.22	0.08	0.01
5.40	0.23	0.09	0.01
5.60	0.25	0.10	0.01
5.80	0.26	0.11	0.01
6.00	0.27	0.12	0.01
6.20	0.29	0.14	0.01
6.40	0.30	0.15	0.01
6.60	0.32	0.16	0.01
6.80	0.34	0.18	0.01
7.00	0.35	0.19	0.01
7.20	0.37	0.20	0.01
7.40	0.39	0.22	0.01
7.60	0.41	0.23	0.01
7.80	0.42	0.25	0.01
8.00	0.44	0.27	0.01
8.20	0.46	0.28	0.01
8.40	0.48	0.30	0.01
8.60	0.50	0.32	0.01
8.80	0.52	0.34	0.01
9.00	0.54	0.35	0.01
9.20	0.57	0.38	0.02
9.40	0.60	0.41	0.02
9.60	0.64	0.44	0.02
9.80	0.67	0.48	0.02
10.00	0.71	0.51	0.02
10.20	0.74	0.54	0.02
10.40	0.78	0.58	0.02
10.60	0.82	0.62	0.03
10.80	0.89	0.68	0.04
11.00	0.96	0.76	0.05
11.20	1.05	0.84	0.06
11.40	1.16	0.94	0.07
11.60	1.29	1.07	0.11
11.80	1.53	1.31	0.21
12.00	2.09	1.86	**0.62**
12.20	2.93	2.70	**0.21**
12.40	3.17	2.94	0.11
12.60	3.30	3.07	0.07
12.80	3.41	3.17	0.06
13.00	3.50	3.26	0.05
13.20	3.57	3.34	0.04
13.40	3.64	3.40	0.04
13.60	3.68	3.45	0.02
13.80	3.72	3.48	0.02
14.00	3.75	3.52	0.02
14.20	3.79	3.55	0.02
14.40	3.82	3.59	0.02
14.60	3.86	3.62	0.02
14.80	3.89	3.65	0.02
15.00	3.92	3.69	0.02
15.20	3.94	3.71	0.01
15.40	3.96	3.73	0.01
15.60	3.98	3.75	0.01
15.80	4.00	3.76	0.01
16.00	4.02	3.78	0.01
16.20	4.04	3.80	0.01
16.40	4.05	3.82	0.01
16.60	4.07	3.84	0.01
16.80	4.09	3.85	0.01
17.00	4.11	3.87	0.01
17.20	4.12	3.89	0.01
17.40	4.14	3.90	0.01
17.60	4.16	3.92	0.01
17.80	4.17	3.94	0.01
18.00	4.19	3.95	0.01
18.20	4.20	3.97	0.01
18.40	4.21	3.98	0.01
18.60	4.23	3.99	0.01
18.80	4.24	4.01	0.01
19.00	4.26	4.02	0.01
19.20	4.27	4.03	0.01
19.40	4.28	4.04	0.01
19.60	4.29	4.06	0.01
19.80	4.30	4.07	0.01
20.00	**4.32**	**4.08**	0.01

Summary for Subcatchment 13S: to NDS 2

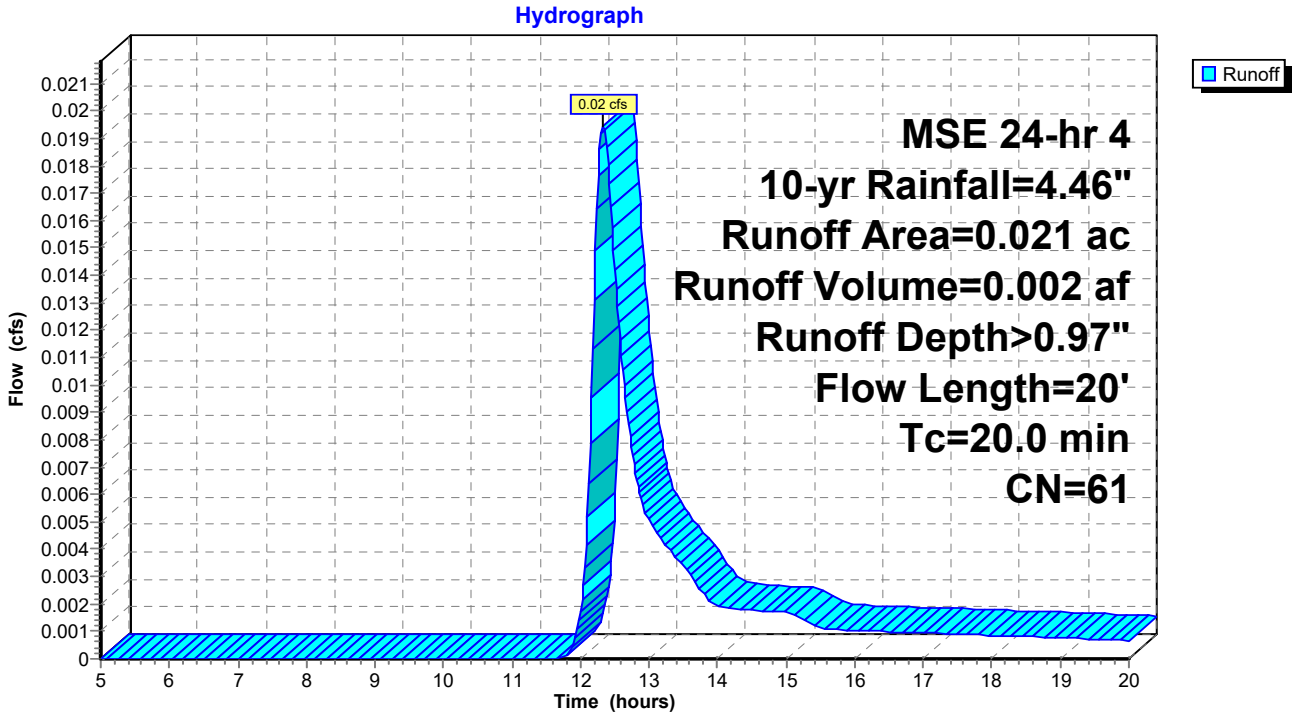
Runoff = 0.02 cfs @ 12.33 hrs, Volume= 0.002 af, Depth> 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.021	61	lawn, HSG B
	0.021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	20		0.02		**Direct Entry, lawn**

Subcatchment 13S: to NDS 2



Hydrograph for Subcatchment 13S: to NDS 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.00	0.00
8.40	0.48	0.00	0.00
8.60	0.50	0.00	0.00
8.80	0.52	0.00	0.00
9.00	0.54	0.00	0.00
9.20	0.57	0.00	0.00
9.40	0.60	0.00	0.00
9.60	0.64	0.00	0.00
9.80	0.67	0.00	0.00
10.00	0.71	0.00	0.00
10.20	0.74	0.00	0.00
10.40	0.78	0.00	0.00
10.60	0.82	0.00	0.00
10.80	0.89	0.00	0.00
11.00	0.96	0.00	0.00
11.20	1.05	0.00	0.00
11.40	1.16	0.00	0.00
11.60	1.29	0.00	0.00
11.80	1.53	0.01	0.00
12.00	2.09	0.09	0.00
12.20	2.93	0.34	**0.01**
12.40	3.17	0.43	**0.02**
12.60	3.30	0.49	0.01
12.80	3.41	0.53	0.01
13.00	3.50	0.57	0.01
13.20	3.57	0.61	0.00
13.40	3.64	0.63	0.00
13.60	3.68	0.66	0.00
13.80	3.72	0.67	0.00
14.00	3.75	0.69	0.00
14.20	3.79	0.71	0.00
14.40	3.82	0.72	0.00
14.60	3.86	0.74	0.00
14.80	3.89	0.76	0.00
15.00	3.92	0.77	0.00
15.20	3.94	0.78	0.00
15.40	3.96	0.79	0.00
15.60	3.98	0.80	0.00
15.80	4.00	0.81	0.00
16.00	4.02	0.82	0.00
16.20	4.04	0.83	0.00
16.40	4.05	0.84	0.00
16.60	4.07	0.85	0.00
16.80	4.09	0.86	0.00
17.00	4.11	0.87	0.00
17.20	4.12	0.88	0.00
17.40	4.14	0.88	0.00
17.60	4.16	0.89	0.00
17.80	4.17	0.90	0.00
18.00	4.19	0.91	0.00
18.20	4.20	0.92	0.00
18.40	4.21	0.92	0.00
18.60	4.23	0.93	0.00
18.80	4.24	0.94	0.00
19.00	4.26	0.95	0.00
19.20	4.27	0.95	0.00
19.40	4.28	0.96	0.00
19.60	4.29	0.97	0.00
19.80	4.30	0.97	0.00
20.00	**4.32**	**0.98**	0.00

Summary for Subcatchment 14S: to NDS 3-5

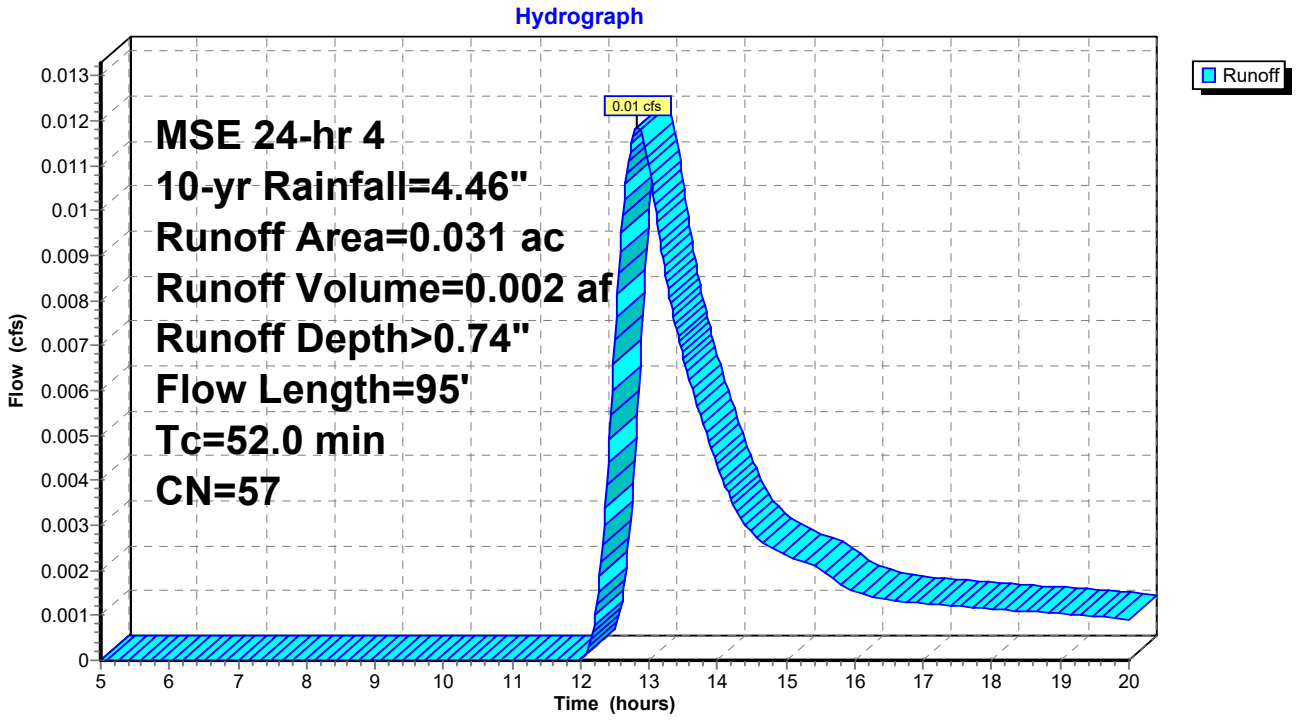
Runoff = 0.01 cfs @ 12.83 hrs, Volume= 0.002 af, Depth> 0.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.022	61	lawn, HSG B
*	0.008	39	LS
*	0.001	98	SW via LS
	0.031	57	Weighted Average
	0.030		96.77% Pervious Area
	0.001		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	75		0.10		**Direct Entry, lawn**
20.0	10		0.01		**Direct Entry, LS**
20.0	10		0.01		**Direct Entry, SW via LS**
52.0	95	Total			

Subcatchment 14S: to NDS 3-5



Hydrograph for Subcatchment 14S: to NDS 3-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.00	0.00
8.40	0.48	0.00	0.00
8.60	0.50	0.00	0.00
8.80	0.52	0.00	0.00
9.00	0.54	0.00	0.00
9.20	0.57	0.00	0.00
9.40	0.60	0.00	0.00
9.60	0.64	0.00	0.00
9.80	0.67	0.00	0.00
10.00	0.71	0.00	0.00
10.20	0.74	0.00	0.00
10.40	0.78	0.00	0.00
10.60	0.82	0.00	0.00
10.80	0.89	0.00	0.00
11.00	0.96	0.00	0.00
11.20	1.05	0.00	0.00
11.40	1.16	0.00	0.00
11.60	1.29	0.00	0.00
11.80	1.53	0.00	0.00
12.00	2.09	0.04	0.00
12.20	2.93	0.22	0.00
12.40	3.17	0.30	0.00
12.60	3.30	0.35	0.01
12.80	3.41	0.38	**0.01**
13.00	3.50	0.41	**0.01**
13.20	3.57	0.44	0.01
13.40	3.64	0.47	0.01
13.60	3.68	0.49	0.01
13.80	3.72	0.50	0.01
14.00	3.75	0.51	0.00
14.20	3.79	0.53	0.00
14.40	3.82	0.54	0.00
14.60	3.86	0.56	0.00
14.80	3.89	0.57	0.00
15.00	3.92	0.58	0.00
15.20	3.94	0.59	0.00
15.40	3.96	0.60	0.00
15.60	3.98	0.61	0.00
15.80	4.00	0.62	0.00
16.00	4.02	0.63	0.00
16.20	4.04	0.63	0.00
16.40	4.05	0.64	0.00
16.60	4.07	0.65	0.00
16.80	4.09	0.66	0.00
17.00	4.11	0.67	0.00
17.20	4.12	0.67	0.00
17.40	4.14	0.68	0.00
17.60	4.16	0.69	0.00
17.80	4.17	0.69	0.00
18.00	4.19	0.70	0.00
18.20	4.20	0.71	0.00
18.40	4.21	0.71	0.00
18.60	4.23	0.72	0.00
18.80	4.24	0.73	0.00
19.00	4.26	0.73	0.00
19.20	4.27	0.74	0.00
19.40	4.28	0.74	0.00
19.60	4.29	0.75	0.00
19.80	4.30	0.76	0.00
20.00	**4.32**	**0.76**	0.00

Summary for Subcatchment 16S: to NDS11-6

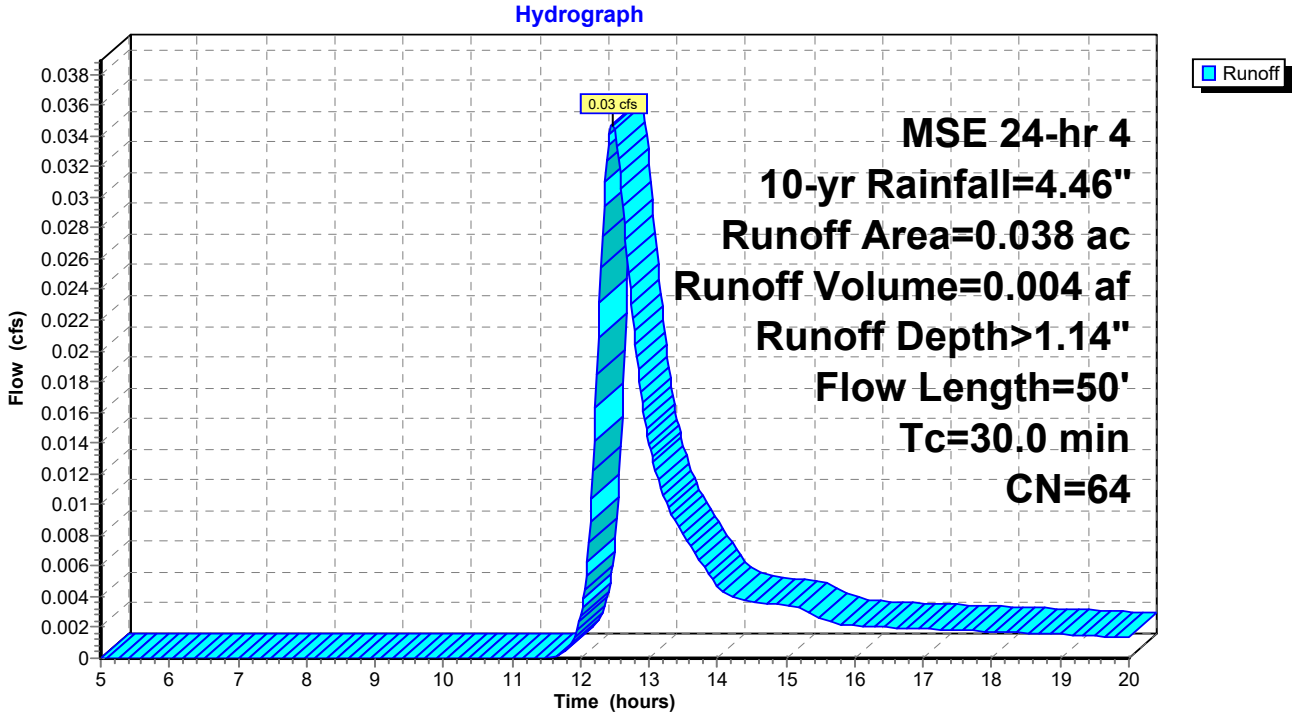
Runoff = 0.03 cfs @ 12.46 hrs, Volume= 0.004 af, Depth> 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.022	39	LS
*	0.016	98	SW
	0.038	64	Weighted Average
	0.022		57.89% Pervious Area
	0.016		42.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	40		0.04		**Direct Entry, LS**
15.0	10		0.01		**Direct Entry, SW via LS**
30.0	50	Total			

Subcatchment 16S: to NDS11-6



Hydrograph for Subcatchment 16S: to NDS11-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.20	0.22	0.00	0.00
5.40	0.23	0.00	0.00
5.60	0.25	0.00	0.00
5.80	0.26	0.00	0.00
6.00	0.27	0.00	0.00
6.20	0.29	0.00	0.00
6.40	0.30	0.00	0.00
6.60	0.32	0.00	0.00
6.80	0.34	0.00	0.00
7.00	0.35	0.00	0.00
7.20	0.37	0.00	0.00
7.40	0.39	0.00	0.00
7.60	0.41	0.00	0.00
7.80	0.42	0.00	0.00
8.00	0.44	0.00	0.00
8.20	0.46	0.00	0.00
8.40	0.48	0.00	0.00
8.60	0.50	0.00	0.00
8.80	0.52	0.00	0.00
9.00	0.54	0.00	0.00
9.20	0.57	0.00	0.00
9.40	0.60	0.00	0.00
9.60	0.64	0.00	0.00
9.80	0.67	0.00	0.00
10.00	0.71	0.00	0.00
10.20	0.74	0.00	0.00
10.40	0.78	0.00	0.00
10.60	0.82	0.00	0.00
10.80	0.89	0.00	0.00
11.00	0.96	0.00	0.00
11.20	1.05	0.00	0.00
11.40	1.16	0.00	0.00
11.60	1.29	0.00	0.00
11.80	1.53	0.03	0.00
12.00	2.09	0.14	0.00
12.20	2.93	0.44	0.01
12.40	3.17	0.55	**0.03**
12.60	3.30	0.61	**0.03**
12.80	3.41	0.66	0.02
13.00	3.50	0.70	0.01
13.20	3.57	0.74	0.01
13.40	3.64	0.77	0.01
13.60	3.68	0.80	0.01
13.80	3.72	0.82	0.01
14.00	3.75	0.84	0.00
14.20	3.79	0.86	0.00
14.40	3.82	0.87	0.00
14.60	3.86	0.89	0.00
14.80	3.89	0.91	0.00
15.00	3.92	0.93	0.00
15.20	3.94	0.94	0.00
15.40	3.96	0.95	0.00
15.60	3.98	0.96	0.00
15.80	4.00	0.97	0.00
16.00	4.02	0.98	0.00
16.20	4.04	0.99	0.00
16.40	4.05	1.00	0.00
16.60	4.07	1.01	0.00
16.80	4.09	1.02	0.00
17.00	4.11	1.03	0.00
17.20	4.12	1.04	0.00
17.40	4.14	1.05	0.00
17.60	4.16	1.06	0.00
17.80	4.17	1.07	0.00
18.00	4.19	1.08	0.00
18.20	4.20	1.09	0.00
18.40	4.21	1.10	0.00
18.60	4.23	1.10	0.00
18.80	4.24	1.11	0.00
19.00	4.26	1.12	0.00
19.20	4.27	1.13	0.00
19.40	4.28	1.13	0.00
19.60	4.29	1.14	0.00
19.80	4.30	1.15	0.00
20.00	**4.32**	**1.15**	0.00

Summary for Subcatchment 17S: untreated alley to inlet 2

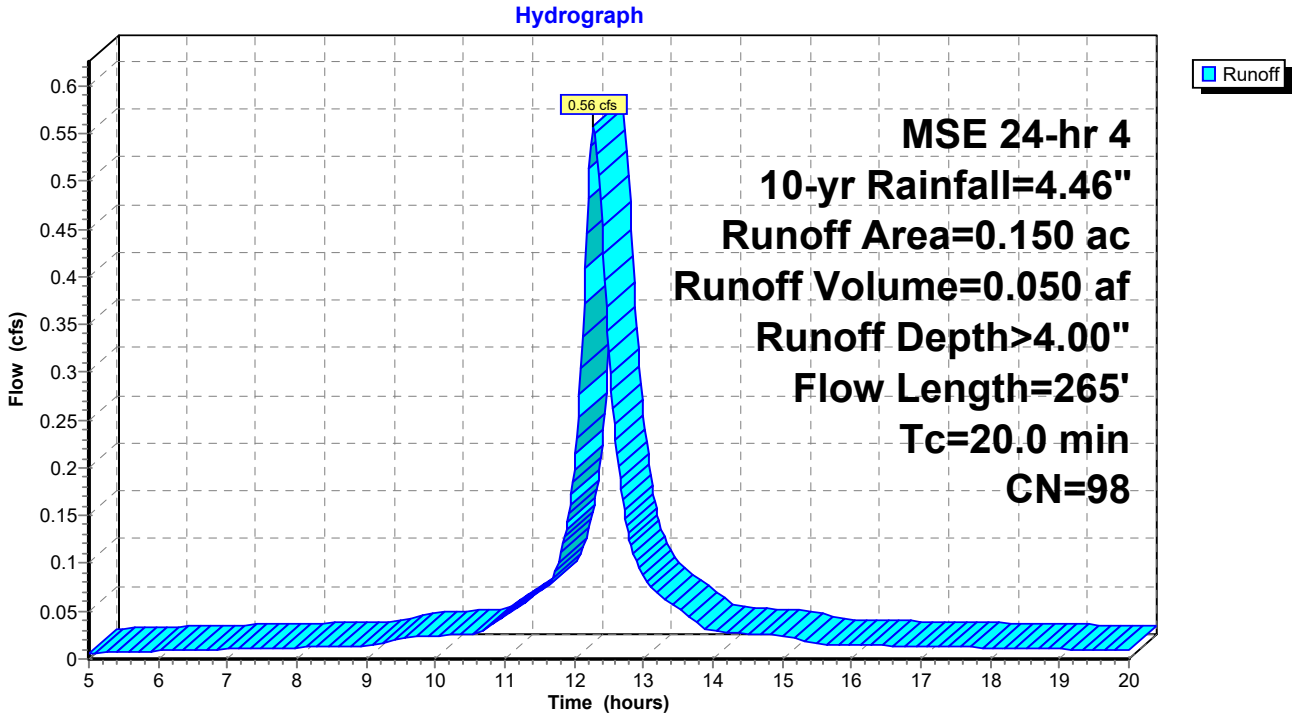
Runoff = 0.56 cfs @ 12.28 hrs, Volume= 0.050 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.042	98	conc alley
*	0.108	98	roof + alley run-on
	0.150	98	Weighted Average
	0.150		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	80		0.17		**Direct Entry, conc alley**
12.0	185		0.26		**Direct Entry, roof + alley run-on**
20.0	265	Total			

Subcatchment 17S: untreated alley to inlet 2



Hydrograph for Subcatchment 17S: untreated alley to inlet 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.01
5.20	0.22	0.08	0.01
5.40	0.23	0.09	0.01
5.60	0.25	0.10	0.01
5.80	0.26	0.11	0.01
6.00	0.27	0.12	0.01
6.20	0.29	0.14	0.01
6.40	0.30	0.15	0.01
6.60	0.32	0.16	0.01
6.80	0.34	0.18	0.01
7.00	0.35	0.19	0.01
7.20	0.37	0.20	0.01
7.40	0.39	0.22	0.01
7.60	0.41	0.23	0.01
7.80	0.42	0.25	0.01
8.00	0.44	0.27	0.01
8.20	0.46	0.28	0.01
8.40	0.48	0.30	0.01
8.60	0.50	0.32	0.01
8.80	0.52	0.34	0.01
9.00	0.54	0.35	0.01
9.20	0.57	0.38	0.02
9.40	0.60	0.41	0.02
9.60	0.64	0.44	0.02
9.80	0.67	0.48	0.02
10.00	0.71	0.51	0.02
10.20	0.74	0.54	0.02
10.40	0.78	0.58	0.03
10.60	0.82	0.62	0.03
10.80	0.89	0.68	0.03
11.00	0.96	0.76	0.05
11.20	1.05	0.84	0.06
11.40	1.16	0.94	0.06
11.60	1.29	1.07	0.08
11.80	1.53	1.31	0.11
12.00	2.09	1.86	0.20
12.20	2.93	2.70	**0.48**
12.40	3.17	2.94	**0.45**
12.60	3.30	3.07	0.23
12.80	3.41	3.17	0.12
13.00	3.50	3.26	0.09
13.20	3.57	3.34	0.07
13.40	3.64	3.40	0.06
13.60	3.68	3.45	0.05
13.80	3.72	3.48	0.04
14.00	3.75	3.52	0.03
14.20	3.79	3.55	0.03
14.40	3.82	3.59	0.03
14.60	3.86	3.62	0.03
14.80	3.89	3.65	0.03
15.00	3.92	3.69	0.02
15.20	3.94	3.71	0.02
15.40	3.96	3.73	0.02
15.60	3.98	3.75	0.02
15.80	4.00	3.76	0.01
16.00	4.02	3.78	0.01
16.20	4.04	3.80	0.01
16.40	4.05	3.82	0.01
16.60	4.07	3.84	0.01
16.80	4.09	3.85	0.01
17.00	4.11	3.87	0.01
17.20	4.12	3.89	0.01
17.40	4.14	3.90	0.01
17.60	4.16	3.92	0.01
17.80	4.17	3.94	0.01
18.00	4.19	3.95	0.01
18.20	4.20	3.97	0.01
18.40	4.21	3.98	0.01
18.60	4.23	3.99	0.01
18.80	4.24	4.01	0.01
19.00	4.26	4.02	0.01
19.20	4.27	4.03	0.01
19.40	4.28	4.04	0.01
19.60	4.29	4.06	0.01
19.80	4.30	4.07	0.01
20.00	**4.32**	**4.08**	0.01

Summary for Subcatchment 18S: untreated alley to inlet 1

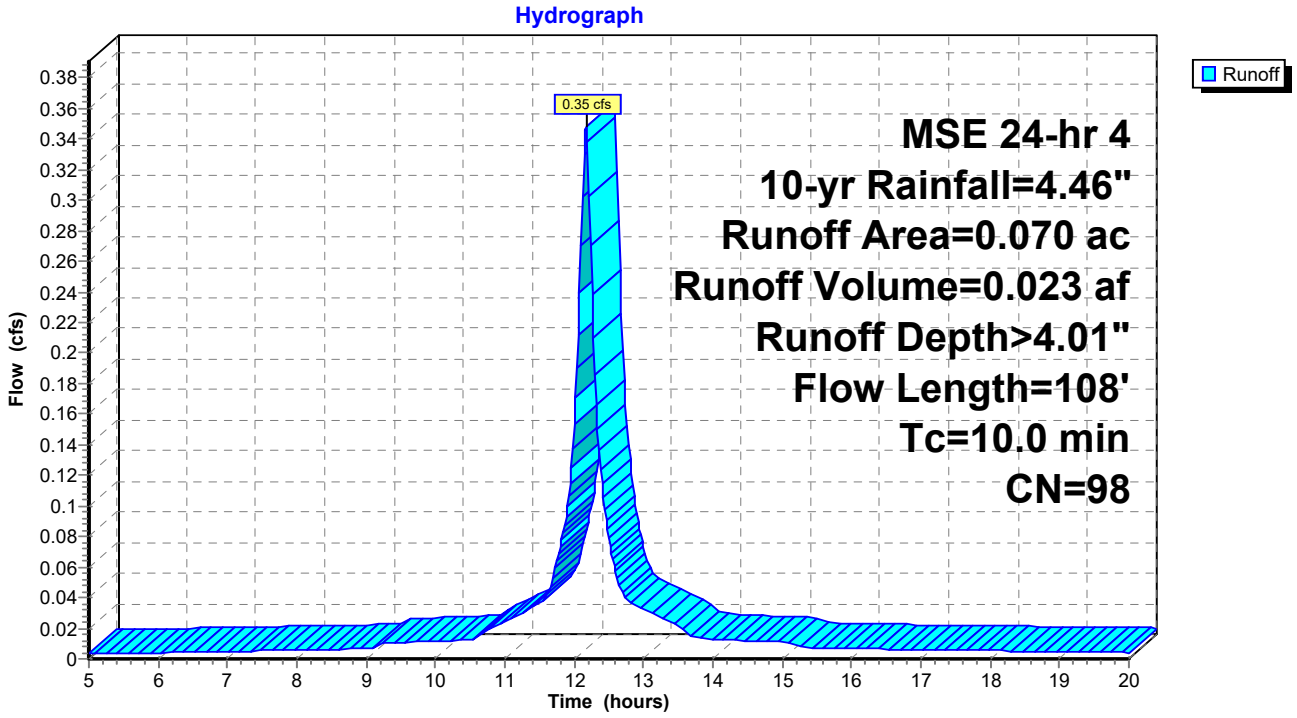
Runoff = 0.35 cfs @ 12.17 hrs, Volume= 0.023 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 10-yr Rainfall=4.46"

	Area (ac)	CN	Description
*	0.070	98	concrete alley
	0.070		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	108		0.18		**Direct Entry, concrete alley**

Subcatchment 18S: untreated alley to inlet 1



Hydrograph for Subcatchment 18S: untreated alley to inlet 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.07	0.00
5.20	0.22	0.08	0.00
5.40	0.23	0.09	0.00
5.60	0.25	0.10	0.00
5.80	0.26	0.11	0.00
6.00	0.27	0.12	0.00
6.20	0.29	0.14	0.00
6.40	0.30	0.15	0.00
6.60	0.32	0.16	0.00
6.80	0.34	0.18	0.00
7.00	0.35	0.19	0.00
7.20	0.37	0.20	0.01
7.40	0.39	0.22	0.01
7.60	0.41	0.23	0.01
7.80	0.42	0.25	0.01
8.00	0.44	0.27	0.01
8.20	0.46	0.28	0.01
8.40	0.48	0.30	0.01
8.60	0.50	0.32	0.01
8.80	0.52	0.34	0.01
9.00	0.54	0.35	0.01
9.20	0.57	0.38	0.01
9.40	0.60	0.41	0.01
9.60	0.64	0.44	0.01
9.80	0.67	0.48	0.01
10.00	0.71	0.51	0.01
10.20	0.74	0.54	0.01
10.40	0.78	0.58	0.01
10.60	0.82	0.62	0.01
10.80	0.89	0.68	0.02
11.00	0.96	0.76	0.02
11.20	1.05	0.84	0.03
11.40	1.16	0.94	0.03
11.60	1.29	1.07	0.04
11.80	1.53	1.31	0.07
12.00	2.09	1.86	**0.15**
12.20	2.93	2.70	**0.33**
12.40	3.17	2.94	0.11
12.60	3.30	3.07	0.06
12.80	3.41	3.17	0.04
13.00	3.50	3.26	0.03
13.20	3.57	3.34	0.03
13.40	3.64	3.40	0.02
13.60	3.68	3.45	0.02
13.80	3.72	3.48	0.01
14.00	3.75	3.52	0.01
14.20	3.79	3.55	0.01
14.40	3.82	3.59	0.01
14.60	3.86	3.62	0.01
14.80	3.89	3.65	0.01
15.00	3.92	3.69	0.01
15.20	3.94	3.71	0.01
15.40	3.96	3.73	0.01
15.60	3.98	3.75	0.01
15.80	4.00	3.76	0.01
16.00	4.02	3.78	0.01
16.20	4.04	3.80	0.01
16.40	4.05	3.82	0.01
16.60	4.07	3.84	0.01
16.80	4.09	3.85	0.01
17.00	4.11	3.87	0.01
17.20	4.12	3.89	0.01
17.40	4.14	3.90	0.01
17.60	4.16	3.92	0.01
17.80	4.17	3.94	0.01
18.00	4.19	3.95	0.01
18.20	4.20	3.97	0.01
18.40	4.21	3.98	0.01
18.60	4.23	3.99	0.00
18.80	4.24	4.01	0.00
19.00	4.26	4.02	0.00
19.20	4.27	4.03	0.00
19.40	4.28	4.04	0.00
19.60	4.29	4.06	0.00
19.80	4.30	4.07	0.00
20.00	**4.32**	**4.08**	0.00

Summary for Reach 6R: 10" roof

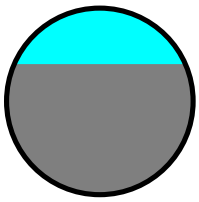
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 522% of Manning's capacity
[76] Warning: Detained 0.029 af (Pond w/culvert advised)

Inflow Area = 0.305 ac,100.00% Impervious, Inflow Depth > 4.01" for 10-yr event
Inflow = 1.42 cfs @ 12.19 hrs, Volume= 0.102 af
Outflow = 0.29 cfs @ 11.80 hrs, Volume= 0.102 af, Atten= 80%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.28 fps, Avg. Travel Time= 0.4 min

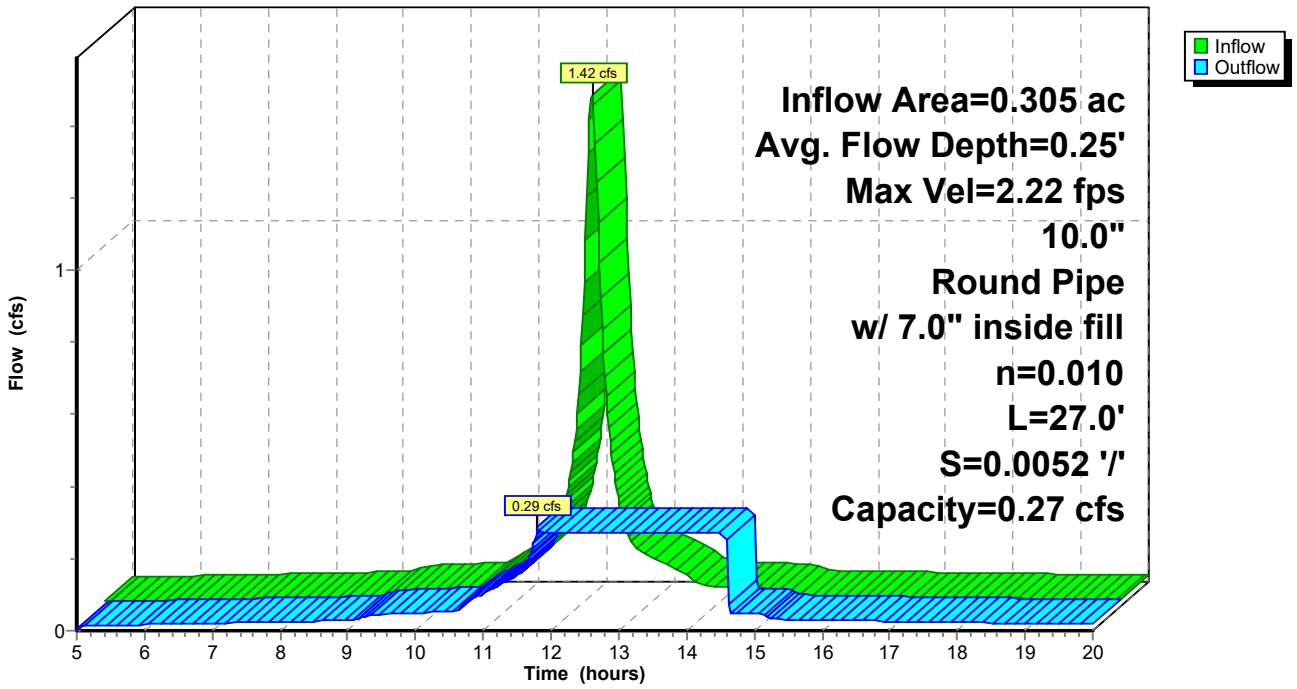
Peak Storage= 4 cf @ 11.82 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 27.0' Slope= 0.0052 '/'
Inlet Invert= 665.72', Outlet Invert= 665.58'



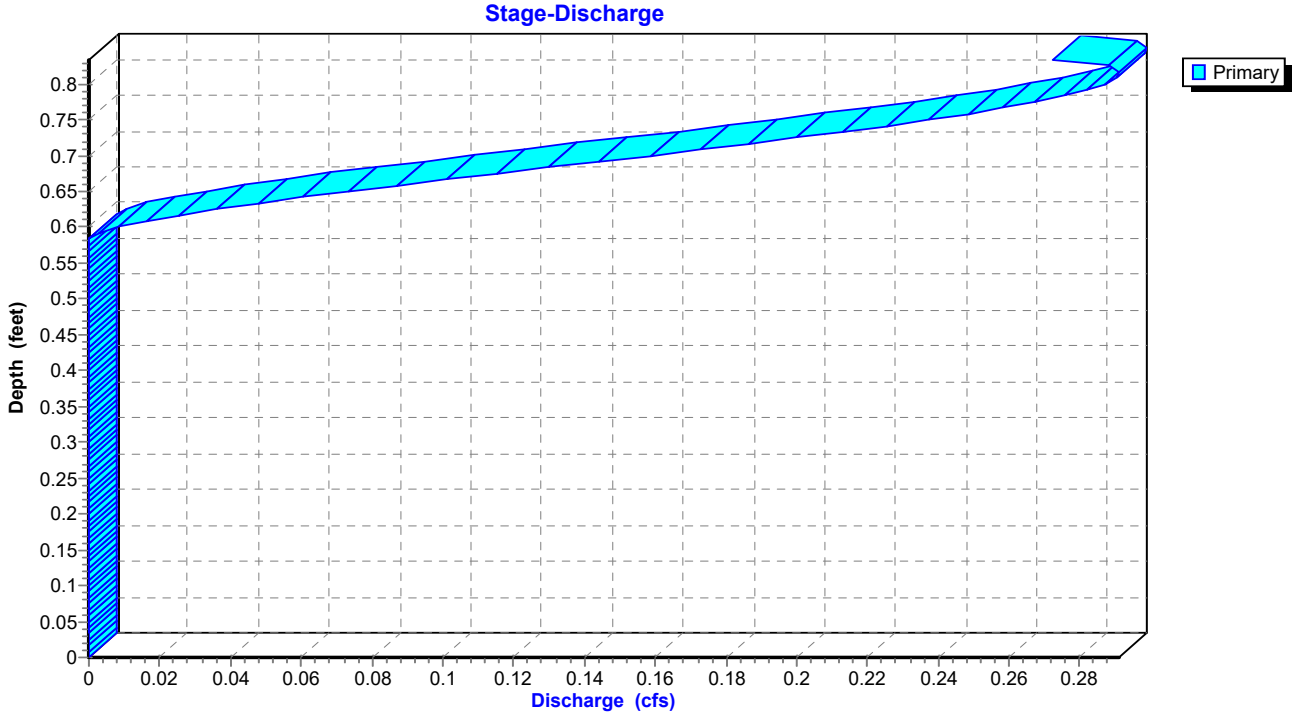
Reach 6R: 10" roof

Hydrograph

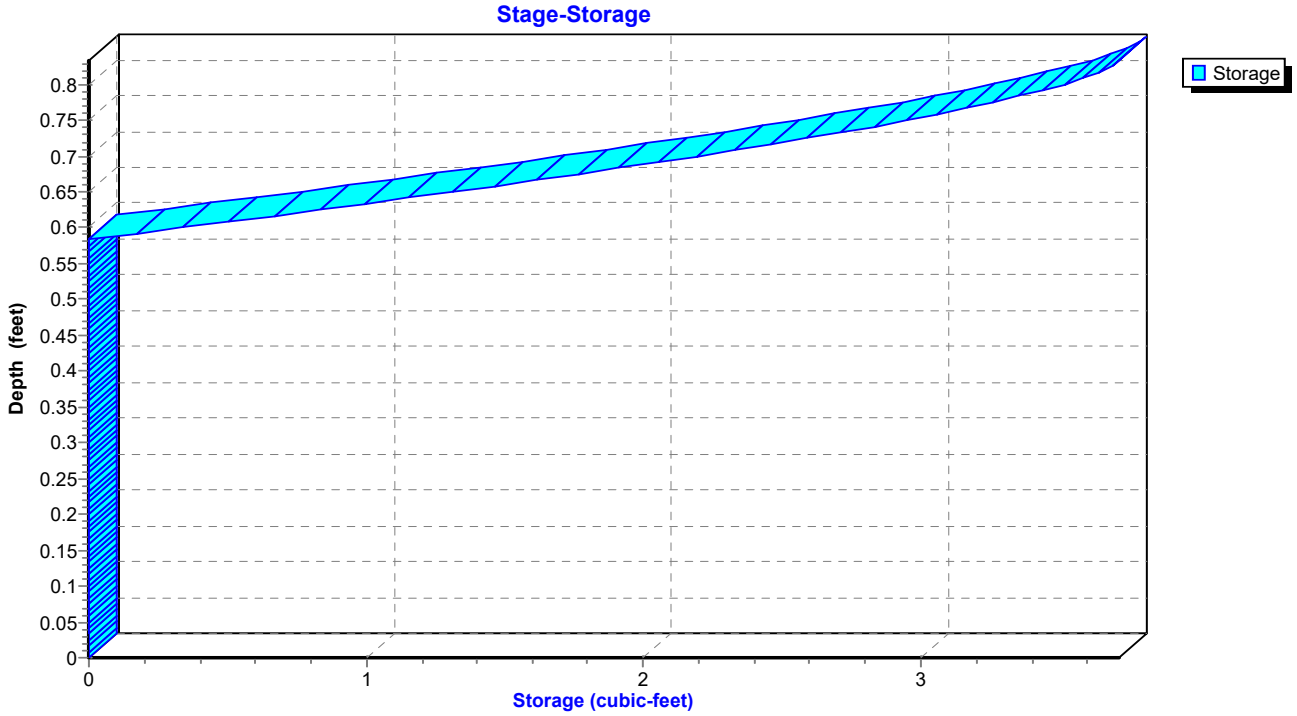


Reach 6R: 10" roof

Stage-Discharge



Reach 6R: 10" roof



Hydrograph for Reach 6R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.30	0.00
5.40	0.01	0	666.33	0.01
5.80	0.02	1	666.33	0.02
6.20	0.02	1	666.33	0.02
6.60	0.02	1	666.33	0.02
7.00	0.02	1	666.33	0.02
7.40	0.02	1	666.33	0.02
7.80	0.02	1	666.34	0.02
8.20	0.03	1	666.34	0.03
8.60	0.03	1	666.34	0.03
9.00	0.03	1	666.34	0.03
9.40	0.05	1	666.35	0.05
9.80	0.05	1	666.35	0.05
10.20	0.05	1	666.36	0.05
10.60	0.06	1	666.36	0.06
11.00	0.10	2	666.39	0.10
11.40	0.14	2	666.41	0.14
11.80	0.29	**4**	**666.52**	**0.29**
12.20	**1.42**	**4**	**666.55**	0.27
12.60	0.28	4	666.55	0.27
13.00	0.15	4	666.55	0.27
13.40	0.11	4	666.55	0.27
13.80	0.06	4	666.55	0.27
14.20	0.05	4	666.55	0.27
14.60	0.05	4	666.55	0.27
15.00	0.05	1	666.35	0.05
15.40	0.03	1	666.34	0.03
15.80	0.03	1	666.34	0.03
16.20	0.03	1	666.34	0.03
16.60	0.03	1	666.34	0.03
17.00	0.03	1	666.34	0.03
17.40	0.03	1	666.34	0.03
17.80	0.02	1	666.34	0.02
18.20	0.02	1	666.33	0.02
18.60	0.02	1	666.33	0.02
19.00	0.02	1	666.33	0.02
19.40	0.02	1	666.33	0.02
19.80	0.02	1	666.33	0.02

Stage-Discharge for Reach 6R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.35	0.00
666.32	0.67	0.01
666.33	0.90	0.02
666.34	1.08	0.03
666.35	1.25	0.04
666.36	1.39	0.06
666.37	1.51	0.07
666.38	1.62	0.09
666.39	1.72	0.11
666.40	1.81	0.12
666.41	1.88	0.14
666.42	1.95	0.16
666.43	2.01	0.18
666.44	2.06	0.19
666.45	2.11	0.21
666.46	2.14	0.22
666.47	2.17	0.24
666.48	2.19	0.25
666.49	2.21	0.26
666.50	**2.22**	0.27
666.51	2.21	0.28
666.52	2.20	0.29
666.53	2.18	**0.29**
666.54	2.14	0.29
666.55	2.03	0.28

Stage-Area-Storage for Reach 6R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	0
665.77	0.0	0	666.28	0.0	0
665.78	0.0	0	666.29	0.0	0
665.79	0.0	0	666.30	0.0	0
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	1
665.83	0.0	0	666.34	0.0	1
665.84	0.0	0	666.35	0.0	1
665.85	0.0	0	666.36	0.0	1
665.86	0.0	0	666.37	0.0	1
665.87	0.0	0	666.38	0.1	1
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	2
665.92	0.0	0	666.43	0.1	2
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	3
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	**0.1**	**4**
666.05	0.0	0			
666.06	0.0	0			
666.07	0.0	0			
666.08	0.0	0			
666.09	0.0	0			
666.10	0.0	0			
666.11	0.0	0			
666.12	0.0	0			
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			

Summary for Reach 7R: MH8 12"

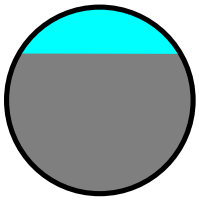
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 203% of Manning's capacity
[76] Warning: Detained 0.069 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 6R INLET depth by 0.15' @ 18.78 hrs
[63] Warning: Exceeded Reach 8R INLET depth by 0.07' @ 18.78 hrs

Inflow Area = 0.644 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.56 cfs @ 11.80 hrs, Volume= 0.215 af
Outflow = 0.29 cfs @ 11.33 hrs, Volume= 0.215 af, Atten= 48%, Lag= 0.0 min

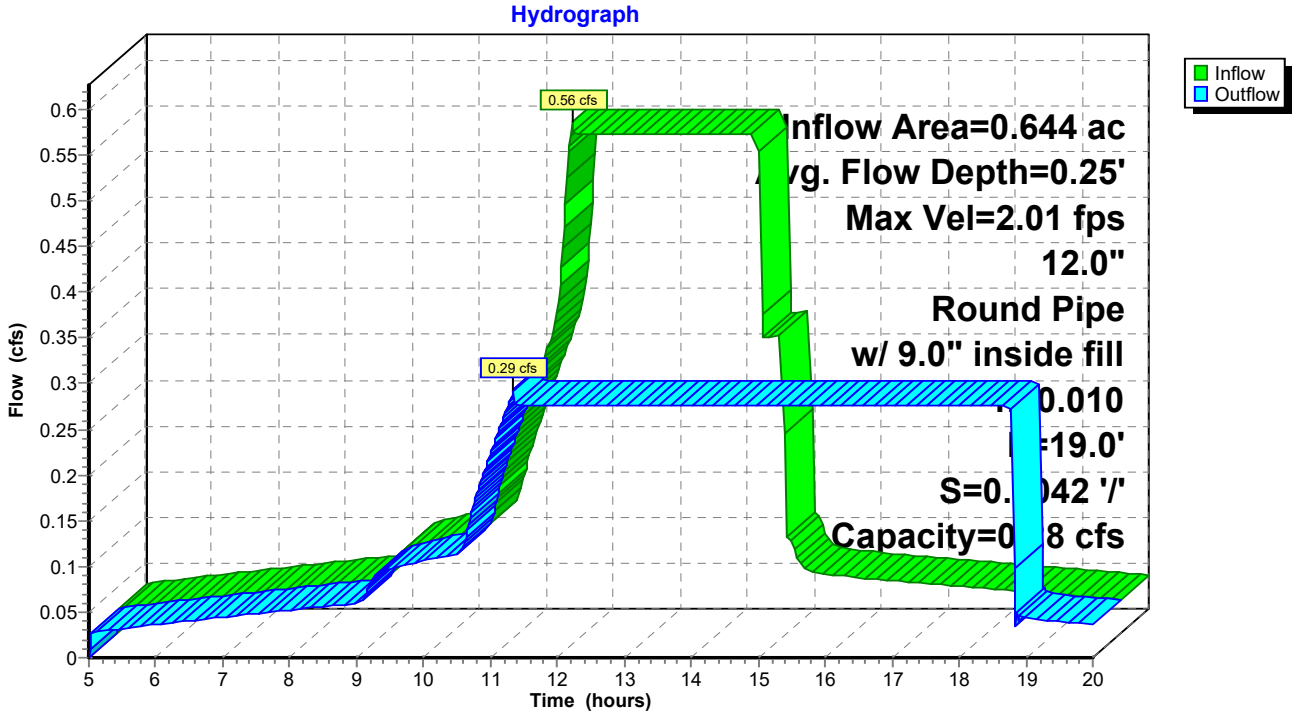
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.53 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 11.36 hrs
Average Depth at Peak Storage= 1.00' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.28 cfs

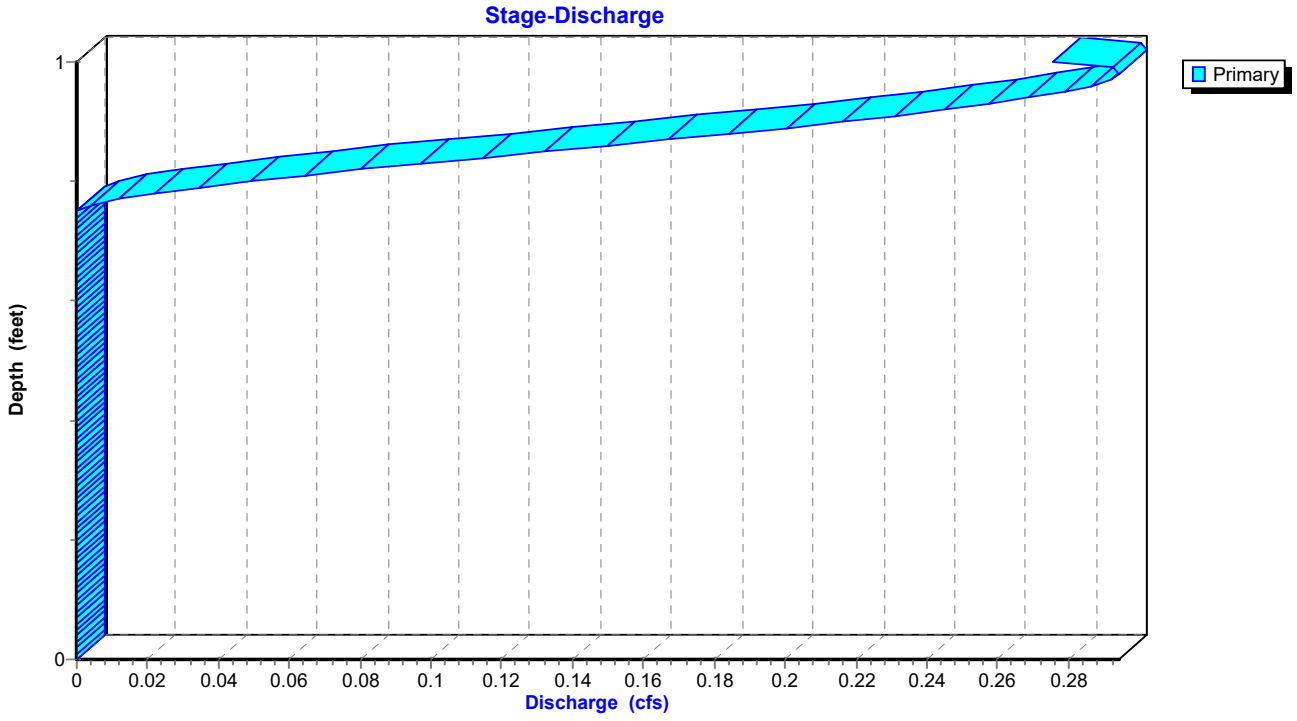
12.0" Round Pipe w/ 9.0" inside fill
n= 0.010
Length= 19.0' Slope= 0.0042 '/'
Inlet Invert= 665.48', Outlet Invert= 665.40'



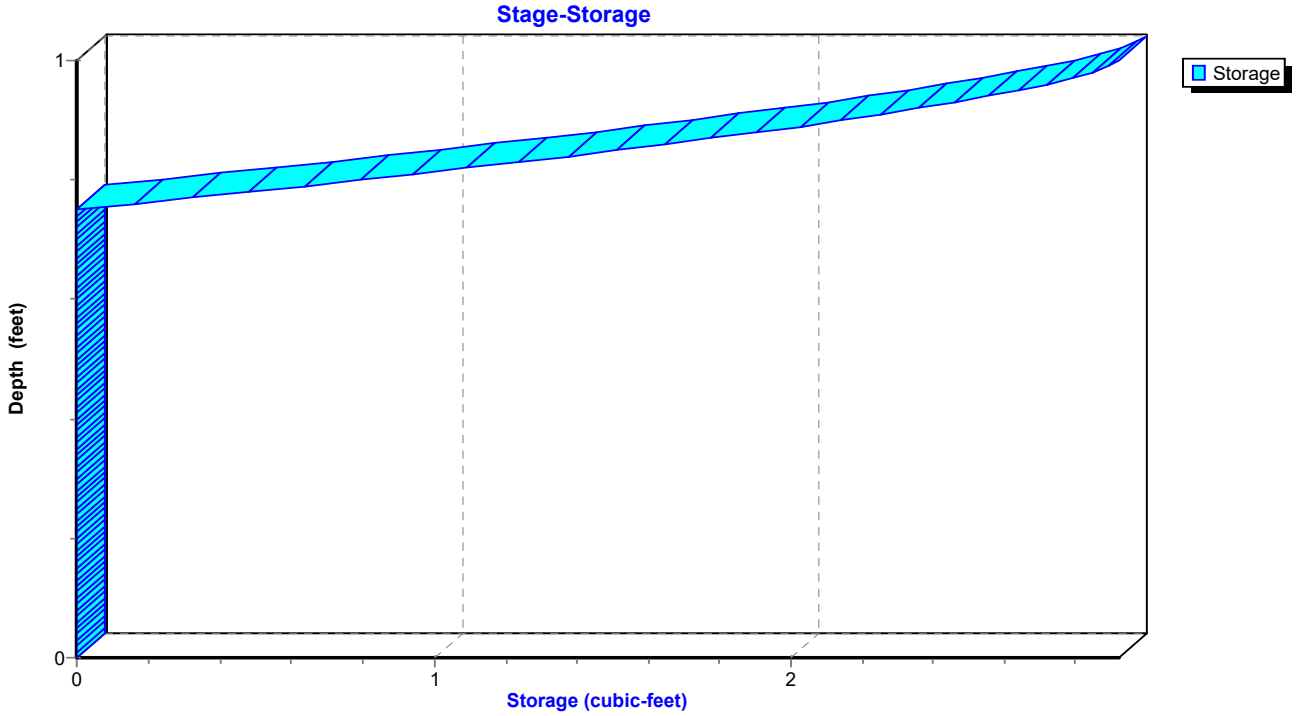
Reach 7R: MH8 12"



Reach 7R: MH8 12"



Reach 7R: MH8 12"



Hydrograph for Reach 7R: MH8 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.23	0.00
5.40	0.03	1	666.27	0.03
5.80	0.03	1	666.27	0.03
6.20	0.04	1	666.27	0.04
6.60	0.04	1	666.27	0.04
7.00	0.04	1	666.28	0.04
7.40	0.05	1	666.28	0.05
7.80	0.05	1	666.28	0.05
8.20	0.05	1	666.28	0.05
8.60	0.06	1	666.29	0.06
9.00	0.06	1	666.29	0.06
9.40	0.10	1	666.31	0.10
9.80	0.10	1	666.31	0.10
10.20	0.11	1	666.32	0.11
10.60	0.12	1	666.32	0.12
11.00	0.22	**2**	**666.38**	**0.22**
11.40	0.31	**3**	**666.48**	**0.28**
11.80	**0.56**	3	666.48	0.28
12.20	0.55	3	666.48	0.28
12.60	0.55	3	666.48	0.28
13.00	0.55	3	666.48	0.28
13.40	0.55	3	666.48	0.28
13.80	0.55	3	666.48	0.28
14.20	0.55	3	666.48	0.28
14.60	0.55	3	666.48	0.28
15.00	0.10	3	666.48	0.28
15.40	0.07	3	666.48	0.28
15.80	0.06	3	666.48	0.28
16.20	0.06	3	666.48	0.28
16.60	0.06	3	666.48	0.28
17.00	0.06	3	666.48	0.28
17.40	0.05	3	666.48	0.28
17.80	0.05	3	666.48	0.28
18.20	0.05	3	666.48	0.28
18.60	0.05	3	666.48	0.28
19.00	0.04	1	666.28	0.04
19.40	0.04	1	666.27	0.04
19.80	0.04	1	666.27	0.04

Stage-Discharge for Reach 7R: MH8 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.44	0.00
666.25	0.68	0.01
666.26	0.87	0.02
666.27	1.03	0.03
666.28	1.17	0.05
666.29	1.29	0.06
666.30	1.40	0.08
666.31	1.50	0.10
666.32	1.58	0.11
666.33	1.66	0.13
666.34	1.72	0.15
666.35	1.78	0.17
666.36	1.84	0.18
666.37	1.88	0.20
666.38	1.92	0.22
666.39	1.95	0.23
666.40	1.97	0.25
666.41	1.99	0.26
666.42	2.00	0.27
666.43	**2.01**	0.28
666.44	2.00	0.29
666.45	1.99	0.29
666.46	1.96	**0.29**
666.47	1.92	0.29
666.48	1.79	0.28

Stage-Area-Storage for Reach 7R: MH8 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.48	0.0	0	665.99	0.0	0
665.49	0.0	0	666.00	0.0	0
665.50	0.0	0	666.01	0.0	0
665.51	0.0	0	666.02	0.0	0
665.52	0.0	0	666.03	0.0	0
665.53	0.0	0	666.04	0.0	0
665.54	0.0	0	666.05	0.0	0
665.55	0.0	0	666.06	0.0	0
665.56	0.0	0	666.07	0.0	0
665.57	0.0	0	666.08	0.0	0
665.58	0.0	0	666.09	0.0	0
665.59	0.0	0	666.10	0.0	0
665.60	0.0	0	666.11	0.0	0
665.61	0.0	0	666.12	0.0	0
665.62	0.0	0	666.13	0.0	0
665.63	0.0	0	666.14	0.0	0
665.64	0.0	0	666.15	0.0	0
665.65	0.0	0	666.16	0.0	0
665.66	0.0	0	666.17	0.0	0
665.67	0.0	0	666.18	0.0	0
665.68	0.0	0	666.19	0.0	0
665.69	0.0	0	666.20	0.0	0
665.70	0.0	0	666.21	0.0	0
665.71	0.0	0	666.22	0.0	0
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	1
665.77	0.0	0	666.28	0.0	1
665.78	0.0	0	666.29	0.0	1
665.79	0.0	0	666.30	0.1	1
665.80	0.0	0	666.31	0.1	1
665.81	0.0	0	666.32	0.1	1
665.82	0.0	0	666.33	0.1	2
665.83	0.0	0	666.34	0.1	2
665.84	0.0	0	666.35	0.1	2
665.85	0.0	0	666.36	0.1	2
665.86	0.0	0	666.37	0.1	2
665.87	0.0	0	666.38	0.1	2
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	3
665.92	0.0	0	666.43	0.1	3
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.2	3
665.97	0.0	0	666.48	**0.2**	**3**
665.98	0.0	0			

Summary for Reach 8R: 10" roof

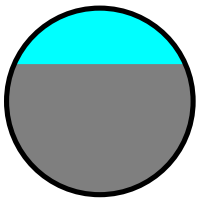
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 617% of Manning's capacity
[76] Warning: Detained 0.034 af (Pond w/culvert advised)

Inflow Area = 0.339 ac,100.00% Impervious, Inflow Depth > 4.01" for 10-yr event
Inflow = 1.69 cfs @ 12.17 hrs, Volume= 0.113 af
Outflow = 0.30 cfs @ 14.95 hrs, Volume= 0.113 af, Atten= 82%, Lag= 166.9 min

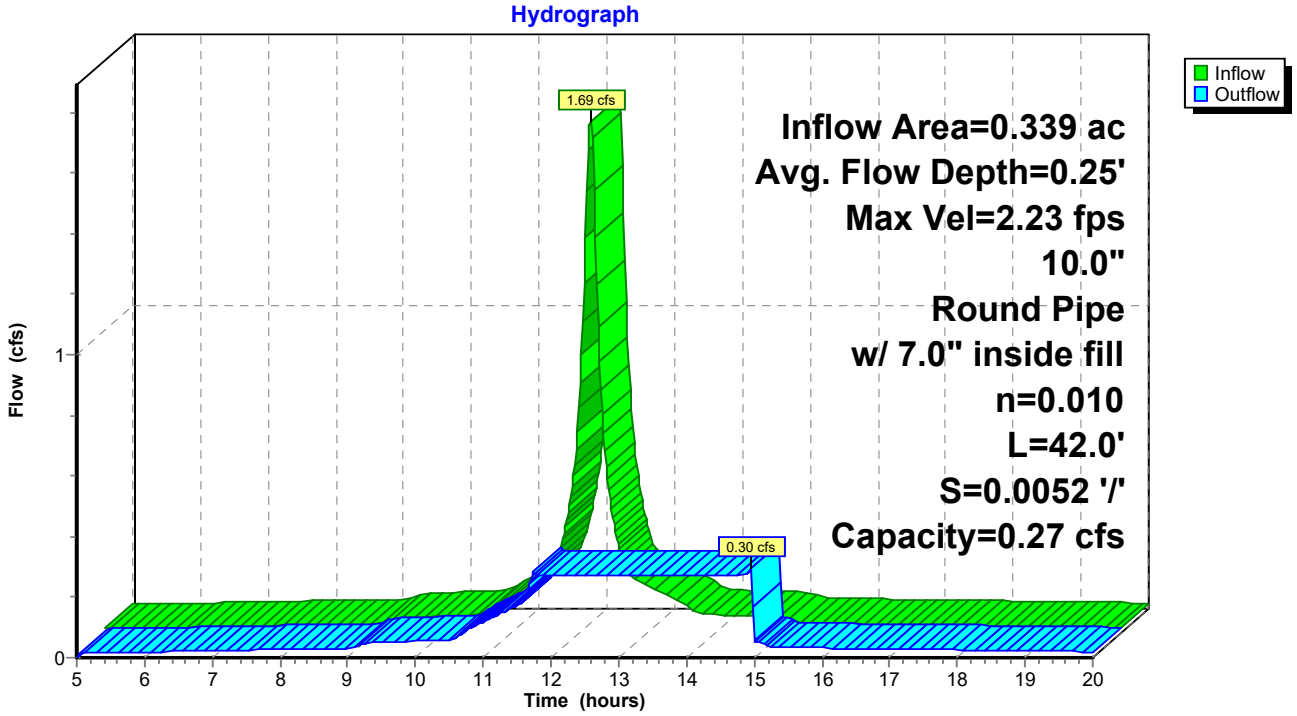
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.34 fps, Avg. Travel Time= 0.5 min

Peak Storage= 6 cf @ 11.76 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

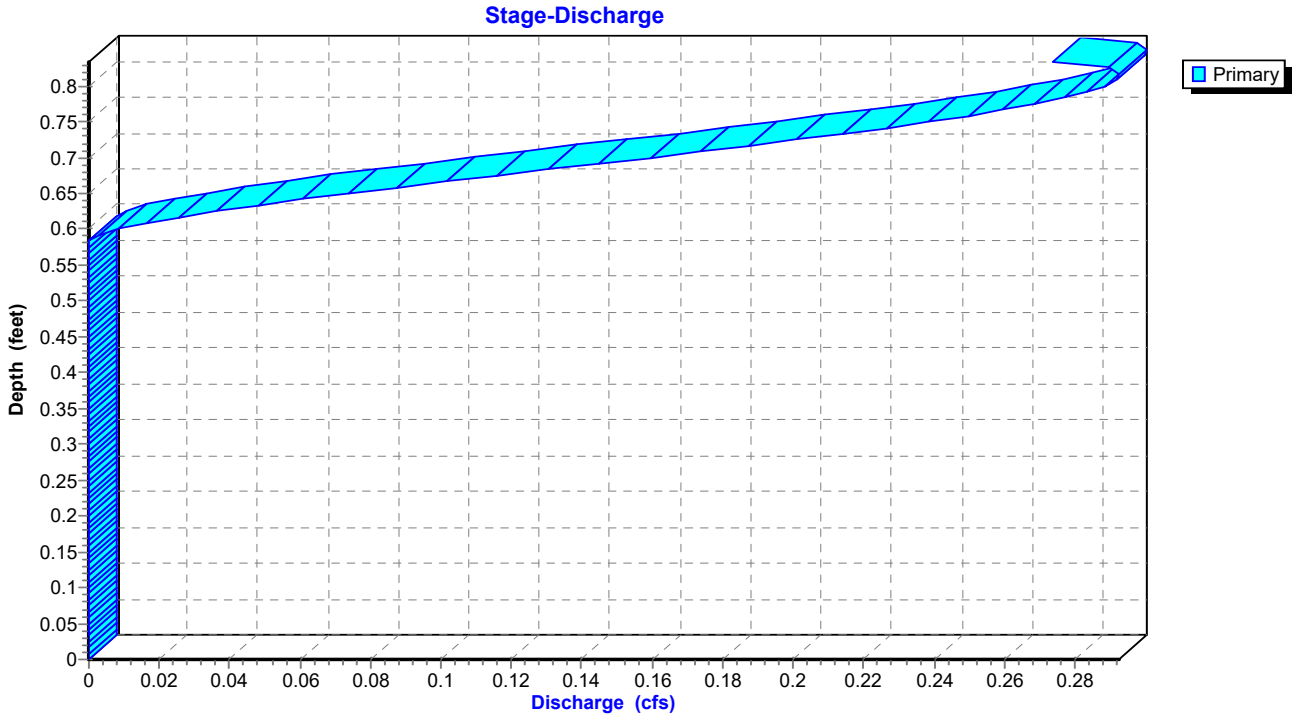
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 42.0' Slope= 0.0052 '/'
Inlet Invert= 665.80', Outlet Invert= 665.58'



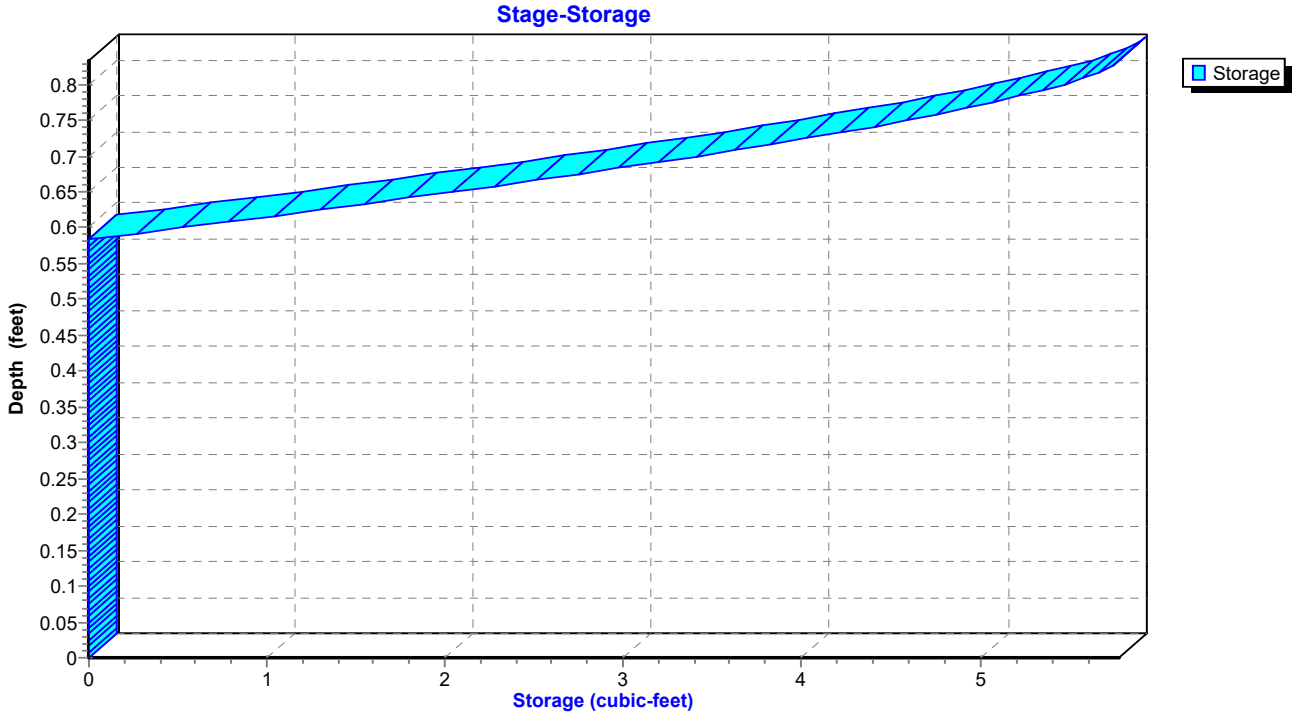
Reach 8R: 10" roof



Reach 8R: 10" roof



Reach 8R: 10" roof



Hydrograph for Reach 8R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.38	0.00
5.40	0.02	1	666.41	0.02
5.80	0.02	1	666.41	0.02
6.20	0.02	1	666.41	0.02
6.60	0.02	1	666.41	0.02
7.00	0.02	1	666.41	0.02
7.40	0.03	1	666.42	0.03
7.80	0.03	1	666.42	0.03
8.20	0.03	1	666.42	0.03
8.60	0.03	1	666.42	0.03
9.00	0.03	1	666.42	0.03
9.40	0.05	2	666.44	0.05
9.80	0.05	2	666.44	0.05
10.20	0.06	2	666.44	0.06
10.60	0.07	2	666.45	0.07
11.00	0.12	3	666.48	0.12
11.40	0.16	**3**	**666.50**	0.16
11.80	**0.35**	**6**	**666.63**	0.27
12.20	**1.60**	6	666.63	0.27
12.60	0.28	6	666.63	0.27
13.00	0.16	6	666.63	0.27
13.40	0.11	6	666.63	0.27
13.80	0.06	6	666.63	0.27
14.20	0.06	6	666.63	0.27
14.60	0.06	6	666.63	**0.27**
15.00	0.05	1	666.42	**0.06**
15.40	0.03	1	666.42	0.03
15.80	0.03	1	666.42	0.03
16.20	0.03	1	666.42	0.03
16.60	0.03	1	666.42	0.03
17.00	0.03	1	666.42	0.03
17.40	0.03	1	666.42	0.03
17.80	0.03	1	666.42	0.03
18.20	0.03	1	666.42	0.03
18.60	0.02	1	666.42	0.02
19.00	0.02	1	666.41	0.02
19.40	0.02	1	666.41	0.02
19.80	0.02	1	666.41	0.02

Stage-Discharge for Reach 8R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.35	0.00
666.40	0.68	0.01
666.41	0.90	0.02
666.42	1.09	0.03
666.43	1.25	0.04
666.44	1.39	0.06
666.45	1.52	0.07
666.46	1.63	0.09
666.47	1.73	0.11
666.48	1.81	0.12
666.49	1.89	0.14
666.50	1.96	0.16
666.51	2.02	0.18
666.52	2.07	0.19
666.53	2.12	0.21
666.54	2.15	0.22
666.55	2.18	0.24
666.56	2.21	0.25
666.57	2.22	0.26
666.58	**2.23**	0.27
666.59	2.23	0.28
666.60	2.21	0.29
666.61	2.19	**0.29**
666.62	2.15	0.29
666.63	2.04	0.28

Stage-Area-Storage for Reach 8R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	0
665.83	0.0	0	666.34	0.0	0
665.84	0.0	0	666.35	0.0	0
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	1
665.90	0.0	0	666.41	0.0	1
665.91	0.0	0	666.42	0.0	1
665.92	0.0	0	666.43	0.0	1
665.93	0.0	0	666.44	0.0	2
665.94	0.0	0	666.45	0.0	2
665.95	0.0	0	666.46	0.1	2
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	4
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	0.1	5
666.05	0.0	0	666.56	0.1	5
666.06	0.0	0	666.57	0.1	5
666.07	0.0	0	666.58	0.1	5
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	5
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	6
666.12	0.0	0	666.63	**0.1**	**6**
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			
666.23	0.0	0			
666.24	0.0	0			
666.25	0.0	0			
666.26	0.0	0			
666.27	0.0	0			
666.28	0.0	0			
666.29	0.0	0			
666.30	0.0	0			

Summary for Reach 9R: inlet 3 18"

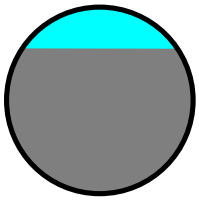
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 122% of Manning's capacity
[76] Warning: Detained 0.001 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 7R INLET depth by 0.32' @ 12.02 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 1.07 cfs @ 12.08 hrs, Volume= 0.256 af
Outflow = 0.88 cfs @ 12.14 hrs, Volume= 0.256 af, Atten= 18%, Lag= 3.6 min

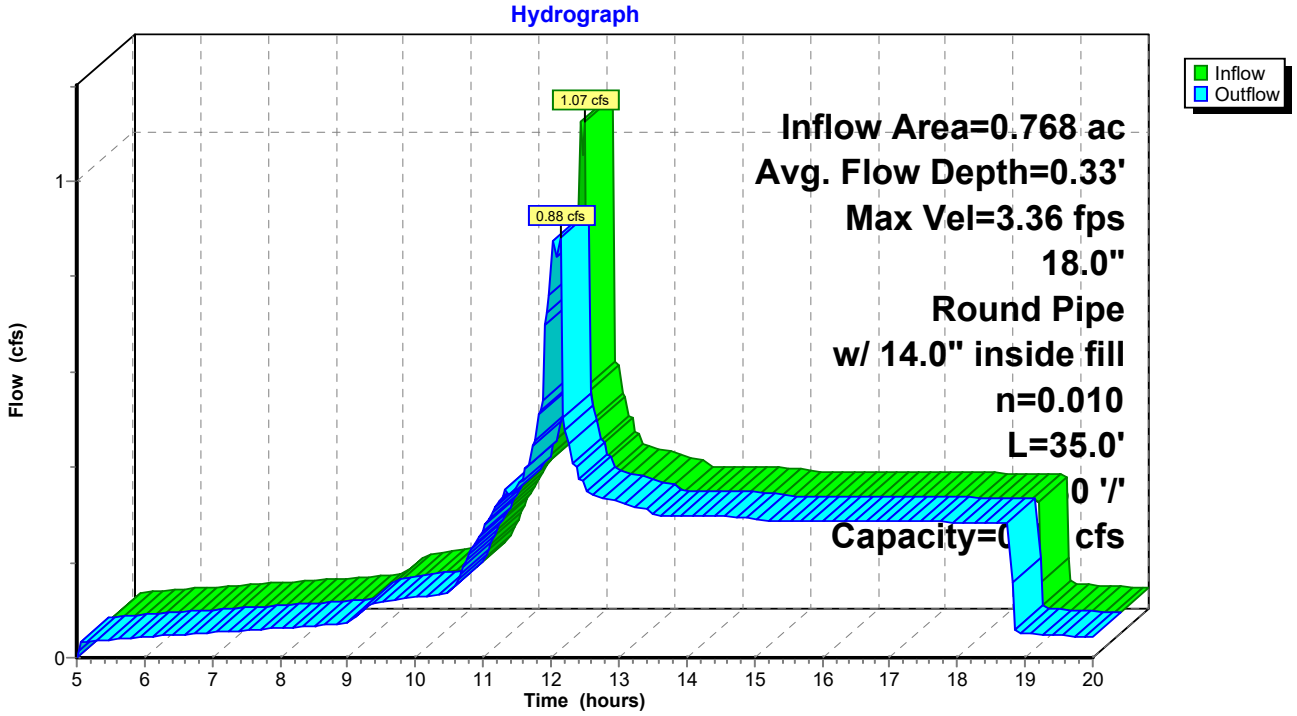
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.36 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.01 fps, Avg. Travel Time= 0.3 min

Peak Storage= 10 cf @ 12.02 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.88 cfs

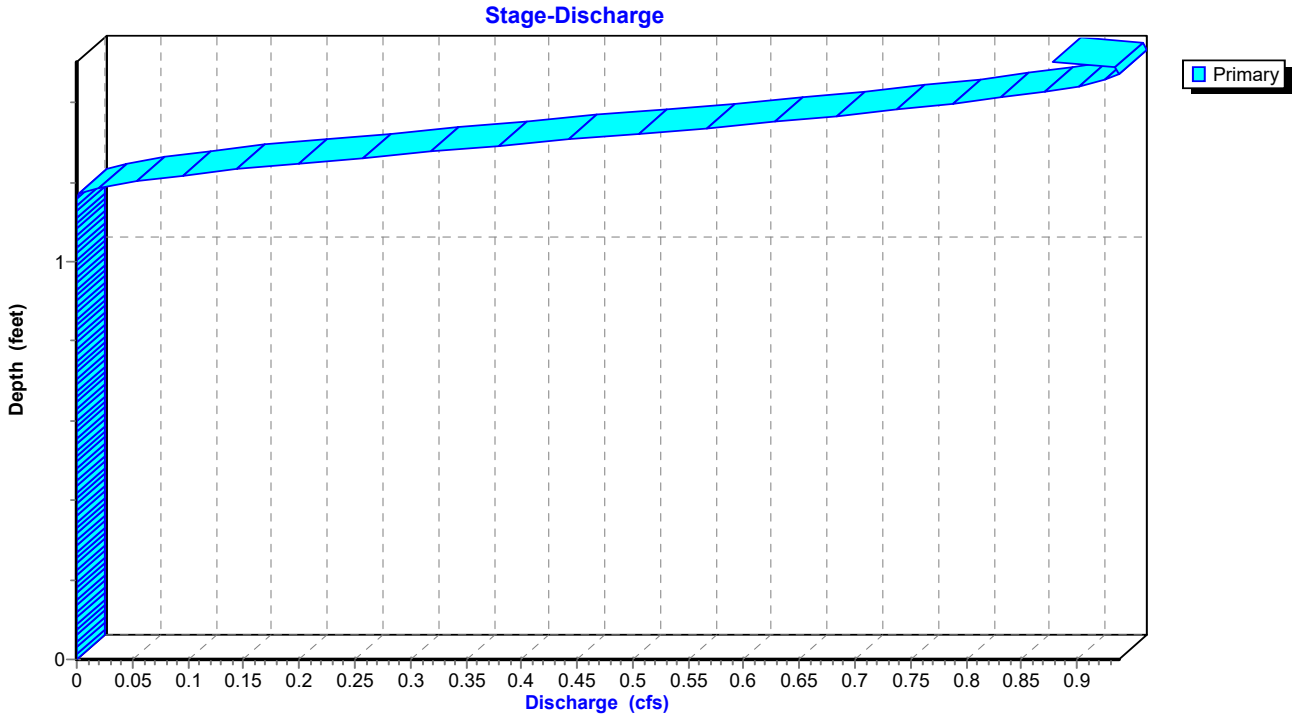
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 35.0' Slope= 0.0080 '/'
Inlet Invert= 665.30', Outlet Invert= 665.02'



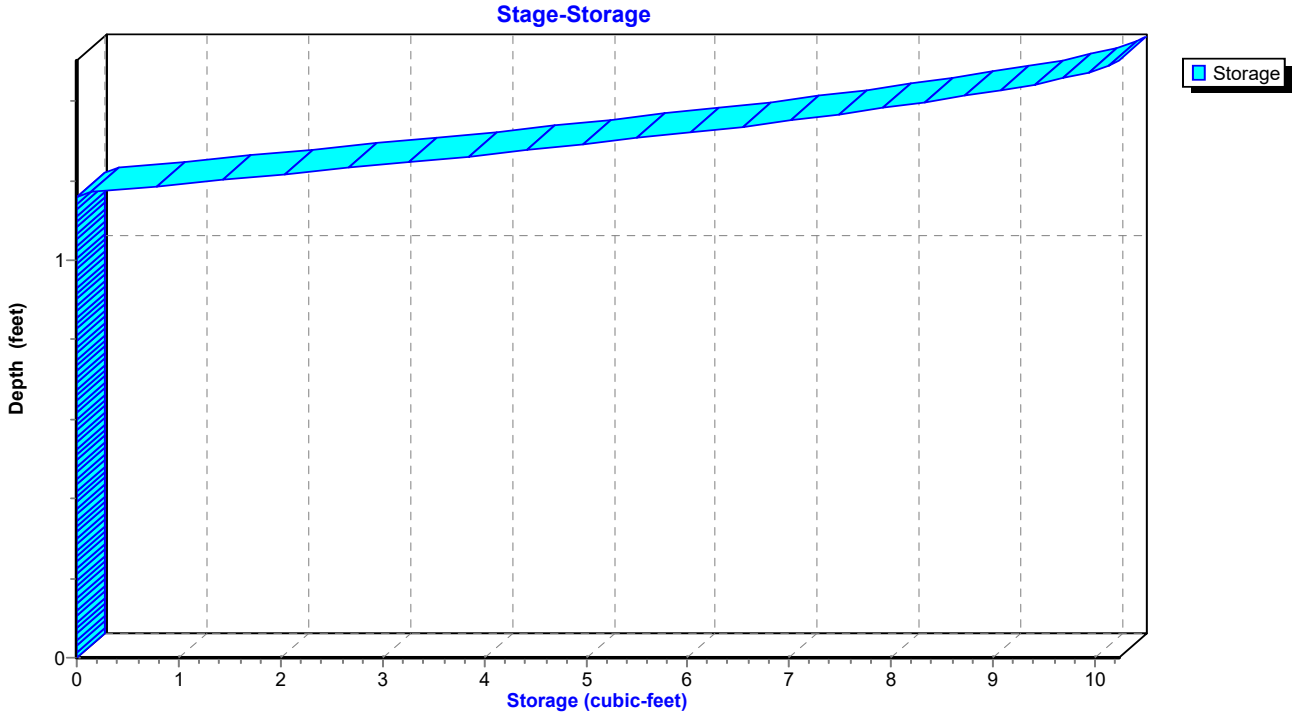
Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Hydrograph for Reach 9R: inlet 3 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.47	0.00
5.40	0.04	1	666.49	0.04
5.80	0.04	1	666.49	0.04
6.20	0.05	1	666.50	0.05
6.60	0.05	1	666.50	0.05
7.00	0.05	1	666.50	0.05
7.40	0.06	1	666.50	0.06
7.80	0.06	2	666.50	0.06
8.20	0.06	2	666.50	0.06
8.60	0.07	2	666.51	0.07
9.00	0.07	2	666.51	0.07
9.40	0.11	2	666.52	0.11
9.80	0.12	2	666.52	0.12
10.20	0.13	2	666.53	0.13
10.60	0.16	3	666.53	0.15
11.00	0.27	4	666.56	0.27
11.40	0.34	5	666.58	0.34
11.80	**0.48**	**6**	**666.61**	**0.47**
12.20	**0.49**	**6**	**666.62**	**0.51**
12.60	0.34	5	666.58	0.34
13.00	0.33	4	666.58	0.33
13.40	0.31	4	666.57	0.31
13.80	0.30	4	666.57	0.30
14.20	0.30	4	666.57	0.30
14.60	0.30	4	666.57	0.30
15.00	0.29	4	666.57	0.29
15.40	0.29	4	666.57	0.29
15.80	0.29	4	666.57	0.29
16.20	0.29	4	666.57	0.29
16.60	0.29	4	666.57	0.29
17.00	0.29	4	666.57	0.29
17.40	0.29	4	666.57	0.29
17.80	0.28	4	666.57	0.28
18.20	0.28	4	666.57	0.28
18.60	0.28	4	666.57	0.28
19.00	0.05	1	666.50	0.05
19.40	0.05	1	666.50	0.05
19.80	0.05	1	666.50	0.05

Stage-Discharge for Reach 9R: inlet 3 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.10	0.00
666.47	0.29	0.00
666.48	0.70	0.01
666.49	1.03	0.03
666.50	1.30	0.05
666.51	1.52	0.08
666.52	1.72	0.11
666.53	1.90	0.14
666.54	2.06	0.18
666.55	2.21	0.22
666.56	2.34	0.26
666.57	2.46	0.30
666.58	2.57	0.34
666.59	2.68	0.38
666.60	2.77	0.42
666.61	2.86	0.46
666.62	2.94	0.51
666.63	3.01	0.55
666.64	3.07	0.59
666.65	3.13	0.63
666.66	3.18	0.67
666.67	3.22	0.70
666.68	3.26	0.74
666.69	3.29	0.77
666.70	3.32	0.80
666.71	3.34	0.83
666.72	3.35	0.86
666.73	3.36	0.88
666.74	**3.36**	0.90
666.75	3.35	0.92
666.76	3.33	0.93
666.77	3.30	**0.94**
666.78	3.25	0.94
666.79	3.15	0.92
666.80	3.01	0.88

Stage-Area-Storage for Reach 9R: inlet 3 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	1
666.50	0.0	1
666.52	0.1	2
666.54	0.1	3
666.56	0.1	4
666.58	0.1	5
666.60	0.2	5
666.62	0.2	6
666.64	0.2	7
666.66	0.2	7
666.68	0.2	8
666.70	0.2	8
666.72	0.3	9
666.74	0.3	9
666.76	0.3	10
666.78	0.3	10
666.80	**0.3**	**10**

Summary for Reach 10R: MH7 18"

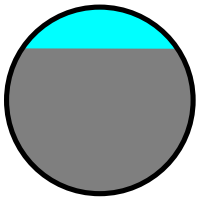
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 127% of Manning's capacity
[76] Warning: Detained 0.002 af (Pond w/culvert advised)
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=3)
[62] Hint: Exceeded Reach 9R OUTLET depth by 0.20' @ 12.22 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.88 cfs @ 12.14 hrs, Volume= 0.256 af
Outflow = 0.72 cfs @ 11.94 hrs, Volume= 0.256 af, Atten= 18%, Lag= 0.0 min

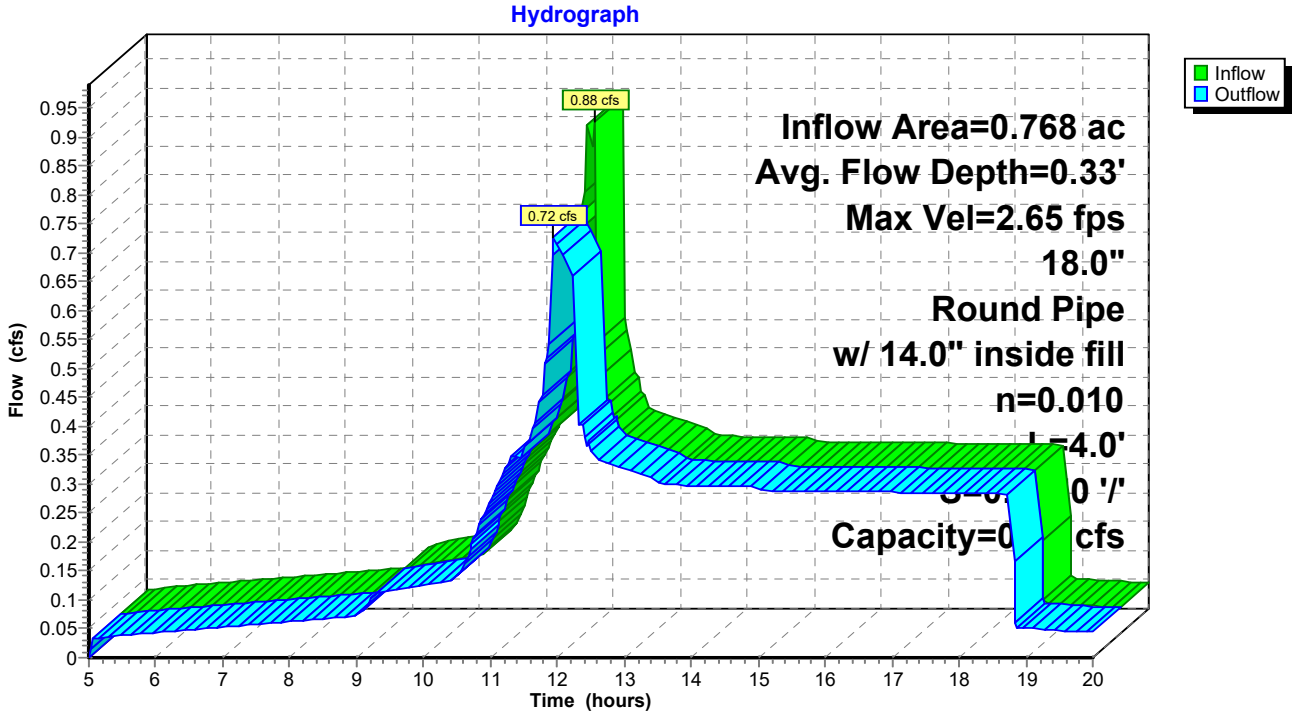
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.65 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.72 fps, Avg. Travel Time= 0.0 min

Peak Storage= 1 cf @ 12.00 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

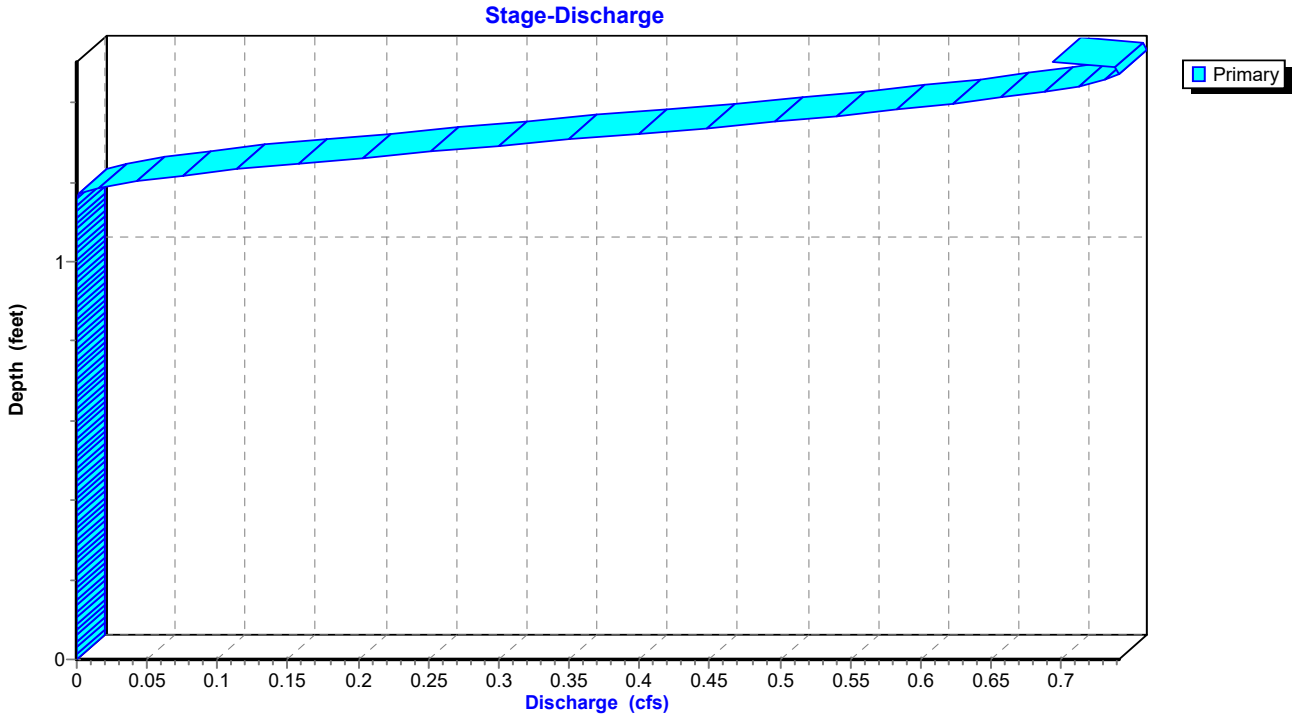
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 4.0' Slope= 0.0050 '/'
Inlet Invert= 665.02', Outlet Invert= 665.00'



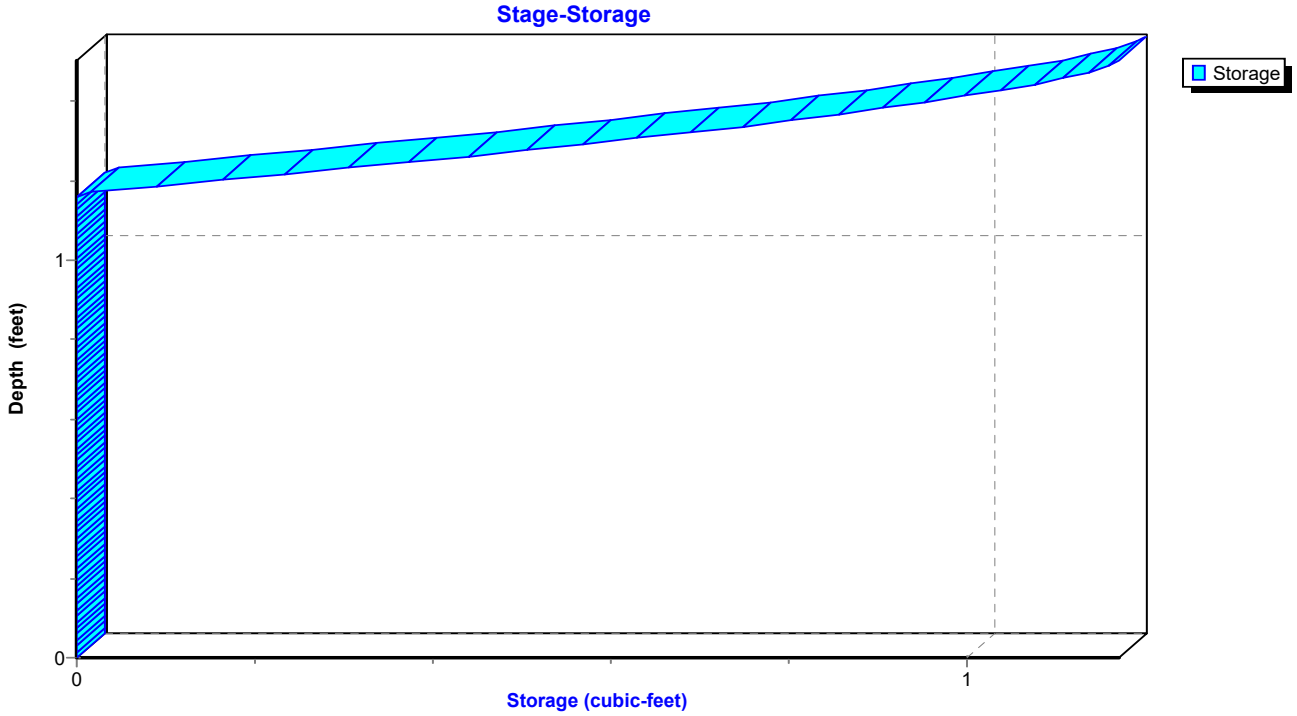
Reach 10R: MH7 18"



Reach 10R: MH7 18"



Reach 10R: MH7 18"



Hydrograph for Reach 10R: MH7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.19	0.00
5.40	0.04	0	666.22	0.04
5.80	0.04	0	666.22	0.04
6.20	0.05	0	666.22	0.05
6.60	0.05	0	666.22	0.05
7.00	0.05	0	666.22	0.05
7.40	0.06	0	666.23	0.06
7.80	0.06	0	666.23	0.06
8.20	0.06	0	666.23	0.06
8.60	0.07	0	666.23	0.07
9.00	0.07	0	666.23	0.07
9.40	0.11	0	666.25	0.11
9.80	0.12	0	666.25	0.12
10.20	0.13	0	666.26	0.13
10.60	0.15	0	666.26	0.15
11.00	0.27	1	666.30	0.27
11.40	0.34	1	666.32	0.34
11.80	**0.47**	**1**	**666.36**	**0.47**
12.20	**0.51**	**1**	**666.52**	**0.69**
12.60	0.34	1	666.32	0.34
13.00	0.33	1	666.32	0.33
13.40	0.31	1	666.31	0.31
13.80	0.30	1	666.31	0.30
14.20	0.30	1	666.31	0.30
14.60	0.30	1	666.31	0.30
15.00	0.29	1	666.31	0.29
15.40	0.29	1	666.31	0.29
15.80	0.29	1	666.31	0.29
16.20	0.29	1	666.31	0.29
16.60	0.29	1	666.31	0.29
17.00	0.29	1	666.31	0.29
17.40	0.29	1	666.31	0.29
17.80	0.28	1	666.31	0.28
18.20	0.28	1	666.31	0.28
18.60	0.28	1	666.30	0.28
19.00	0.05	0	666.22	0.05
19.40	0.05	0	666.22	0.05
19.80	0.05	0	666.22	0.05

Stage-Discharge for Reach 10R: MH7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.02	0.00	0.00	665.53	0.00	0.00	666.04	0.00	0.00
665.03	0.00	0.00	665.54	0.00	0.00	666.05	0.00	0.00
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.08	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.23	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.55	0.01
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.82	0.02
665.20	0.00	0.00	665.71	0.00	0.00	666.22	1.03	0.04
665.21	0.00	0.00	665.72	0.00	0.00	666.23	1.20	0.06
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.36	0.09
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.50	0.11
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.63	0.14
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.74	0.17
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.85	0.20
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.95	0.24
665.28	0.00	0.00	665.79	0.00	0.00	666.30	2.04	0.27
665.29	0.00	0.00	665.80	0.00	0.00	666.31	2.12	0.30
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.19	0.33
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.26	0.37
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.32	0.40
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.38	0.43
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.43	0.46
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.47	0.50
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.51	0.53
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.55	0.56
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.58	0.58
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.60	0.61
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.62	0.63
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.64	0.66
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.65	0.68
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.65	0.70
665.44	0.00	0.00	665.95	0.00	0.00	666.46	**2.65**	0.71
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.73
665.46	0.00	0.00	665.97	0.00	0.00	666.48	2.63	0.73
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.61	**0.74**
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.57	0.74
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.49	0.72
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.38	0.69
665.51	0.00	0.00	666.02	0.00	0.00			
665.52	0.00	0.00	666.03	0.00	0.00			

Stage-Area-Storage for Reach 10R: MH7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.02	0.0	0
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.1	0
666.26	0.1	0
666.28	0.1	0
666.30	0.1	1
666.32	0.2	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	1
666.40	0.2	1
666.42	0.2	1
666.44	0.3	1
666.46	0.3	1
666.48	0.3	1
666.50	0.3	1
666.52	**0.3**	**1**

Summary for Reach 11R: inlet 7 18"

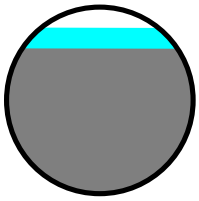
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 4.01" for 10-yr event
Inflow = 0.45 cfs @ 12.15 hrs, Volume= 0.033 af
Outflow = 0.45 cfs @ 12.17 hrs, Volume= 0.033 af, Atten= 1%, Lag= 0.7 min

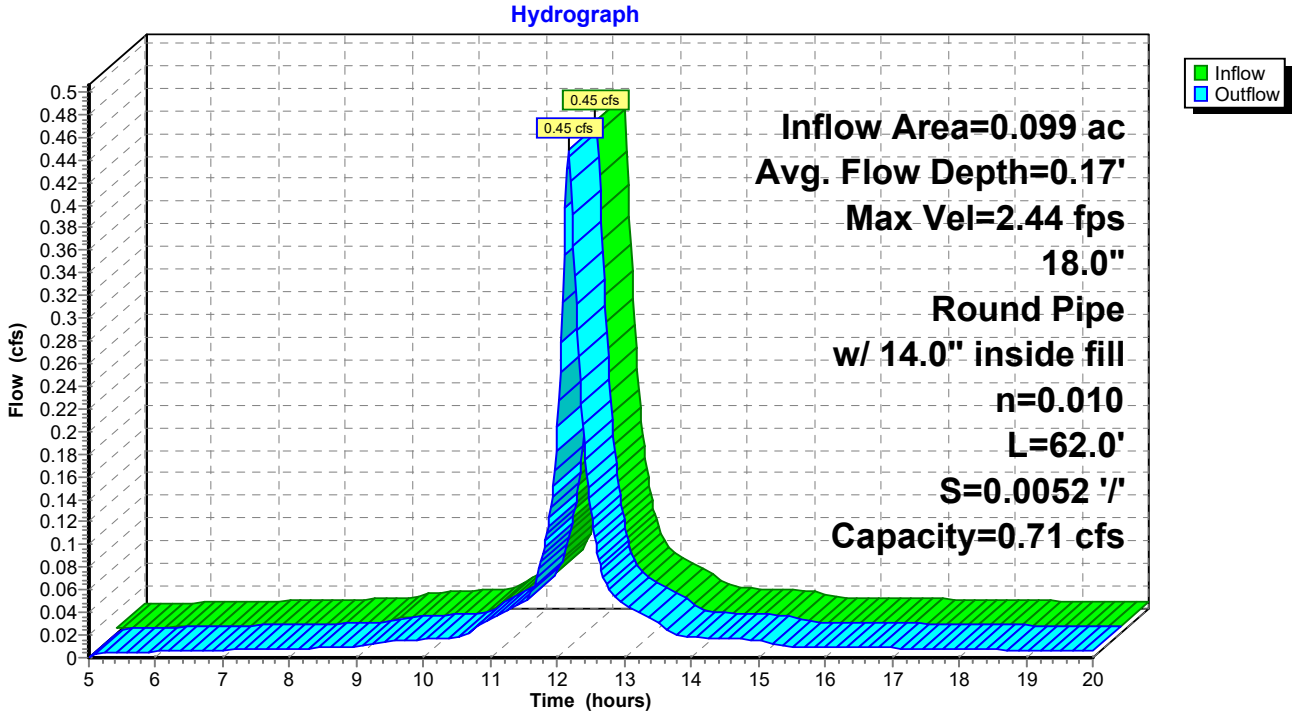
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.44 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.78 fps, Avg. Travel Time= 1.3 min

Peak Storage= 11 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.33' above invert (0.17' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.71 cfs

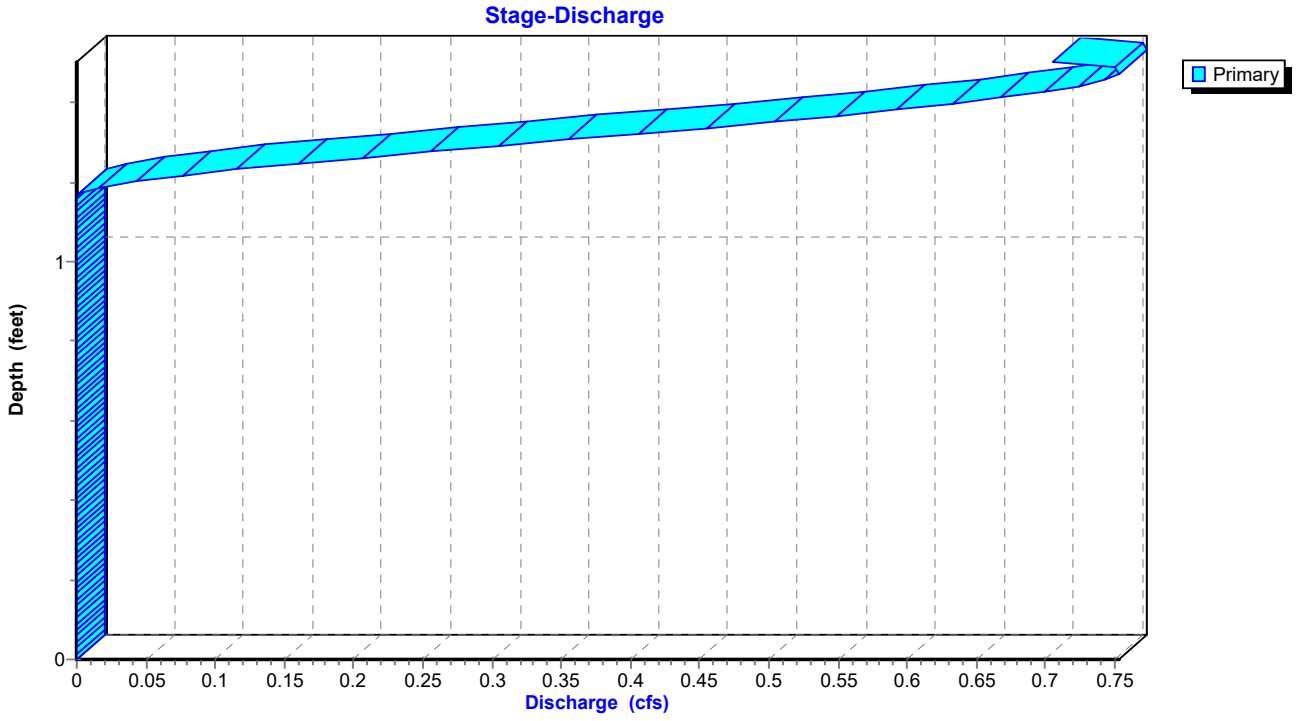
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0052 '/'
Inlet Invert= 665.36', Outlet Invert= 665.04'



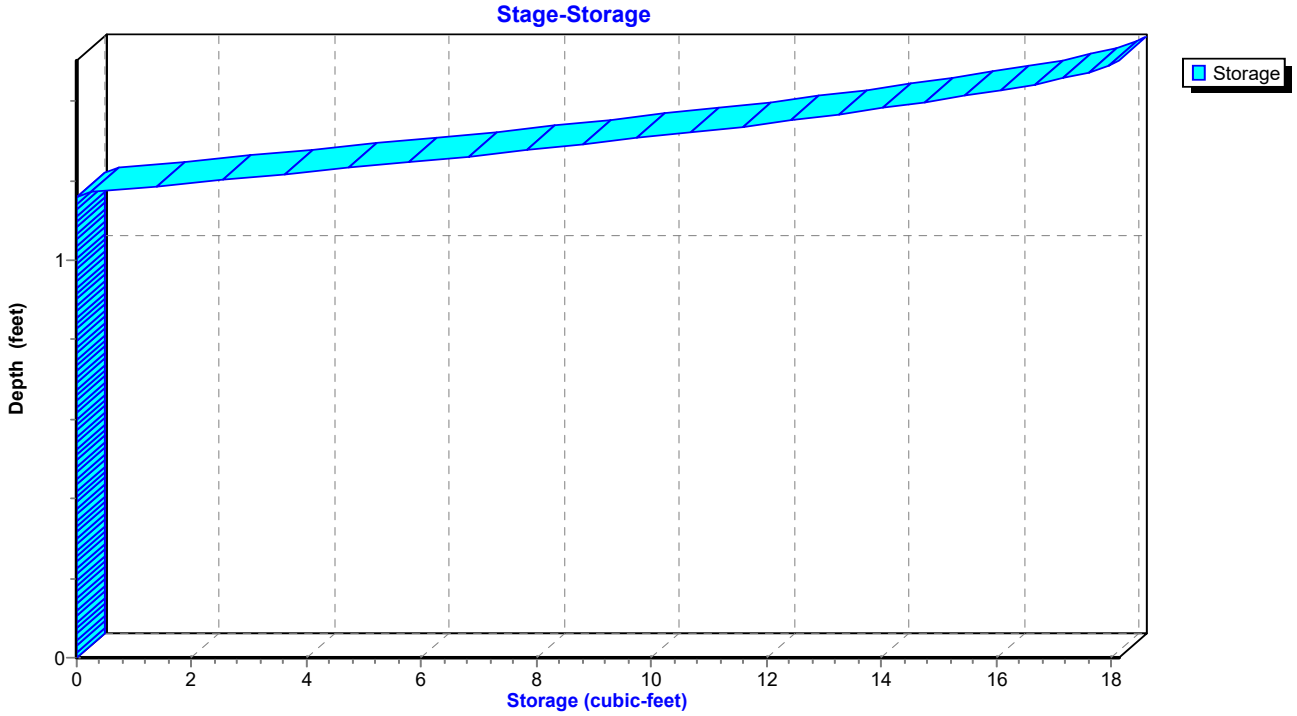
Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Hydrograph for Reach 11R: inlet 7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.53	0.00
5.40	0.00	1	666.53	0.00
5.80	0.01	1	666.53	0.01
6.20	0.01	1	666.53	0.01
6.60	0.01	1	666.54	0.01
7.00	0.01	1	666.54	0.01
7.40	0.01	1	666.54	0.01
7.80	0.01	1	666.54	0.01
8.20	0.01	1	666.54	0.01
8.60	0.01	1	666.54	0.01
9.00	0.01	1	666.54	0.01
9.40	0.01	1	666.54	0.01
9.80	0.02	1	666.54	0.02
10.20	0.02	1	666.55	0.02
10.60	0.02	2	666.55	0.02
11.00	0.03	2	666.56	0.03
11.40	0.05	3	666.56	0.05
11.80	**0.10**	**4**	**666.58**	**0.10**
12.20	**0.40**	**11**	**666.68**	**0.42**
12.60	0.09	4	666.58	0.09
13.00	0.05	3	666.56	0.05
13.40	0.03	2	666.56	0.03
13.80	0.02	2	666.55	0.02
14.20	0.02	1	666.55	0.02
14.60	0.02	1	666.55	0.02
15.00	0.02	1	666.54	0.02
15.40	0.01	1	666.54	0.01
15.80	0.01	1	666.54	0.01
16.20	0.01	1	666.54	0.01
16.60	0.01	1	666.54	0.01
17.00	0.01	1	666.54	0.01
17.40	0.01	1	666.54	0.01
17.80	0.01	1	666.54	0.01
18.20	0.01	1	666.54	0.01
18.60	0.01	1	666.54	0.01
19.00	0.01	1	666.54	0.01
19.40	0.01	1	666.54	0.01
19.80	0.01	1	666.53	0.01

Stage-Discharge for Reach 11R: inlet 7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.08	0.00
666.53	0.24	0.00
666.54	0.56	0.01
666.55	0.83	0.03
666.56	1.05	0.04
666.57	1.22	0.07
666.58	1.38	0.09
666.59	1.53	0.12
666.60	1.65	0.15
666.61	1.77	0.18
666.62	1.88	0.21
666.63	1.98	0.24
666.64	2.07	0.27
666.65	2.15	0.31
666.66	2.23	0.34
666.67	2.29	0.37
666.68	2.36	0.41
666.69	2.41	0.44
666.70	2.47	0.47
666.71	2.51	0.50
666.72	2.55	0.53
666.73	2.59	0.56
666.74	2.62	0.59
666.75	2.65	0.62
666.76	2.67	0.64
666.77	2.68	0.67
666.78	2.69	0.69
666.79	2.70	0.71
666.80	**2.70**	0.72
666.81	2.69	0.74
666.82	2.67	0.75
666.83	2.65	**0.75**
666.84	2.61	0.75
666.85	2.53	0.74
666.86	2.41	0.71

Stage-Area-Storage for Reach 11R: inlet 7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	0
666.50	0.0	0
666.52	0.0	0
666.54	0.0	1
666.56	0.0	3
666.58	0.1	4
666.60	0.1	5
666.62	0.1	7
666.64	0.1	8
666.66	0.2	9
666.68	0.2	11
666.70	0.2	12
666.72	0.2	13
666.74	0.2	14
666.76	0.2	15
666.78	0.3	16
666.80	0.3	17
666.82	0.3	17
666.84	0.3	18
666.86	**0.3**	**18**

Summary for Reach 12R: MH6 18"

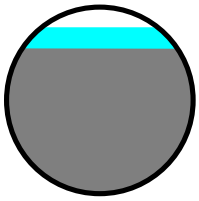
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 11R OUTLET depth by 0.01' @ 12.22 hrs

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.45 cfs @ 12.17 hrs, Volume= 0.033 af
Outflow = 0.45 cfs @ 12.17 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.1 min

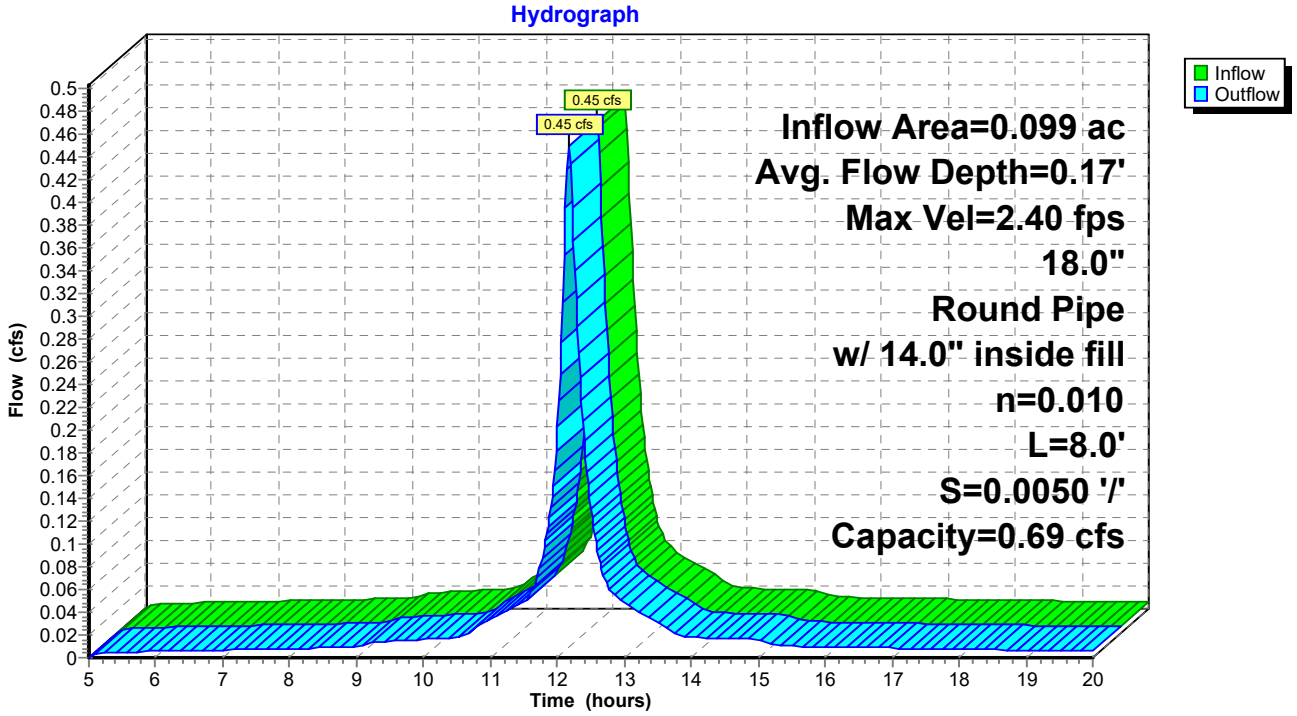
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.40 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.77 fps, Avg. Travel Time= 0.2 min

Peak Storage= 1 cf @ 12.17 hrs
Average Depth at Peak Storage= 1.33' above invert (0.17' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

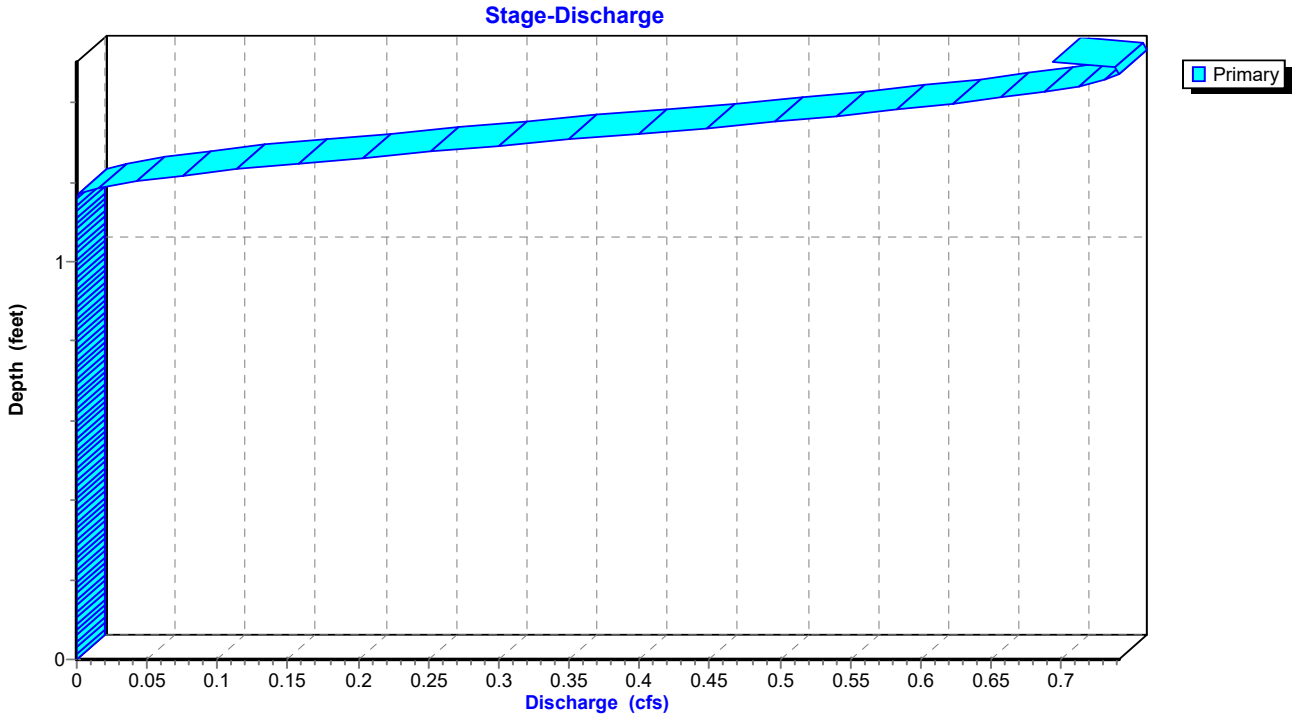
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 8.0' Slope= 0.0050 '/'
Inlet Invert= 665.04', Outlet Invert= 665.00'



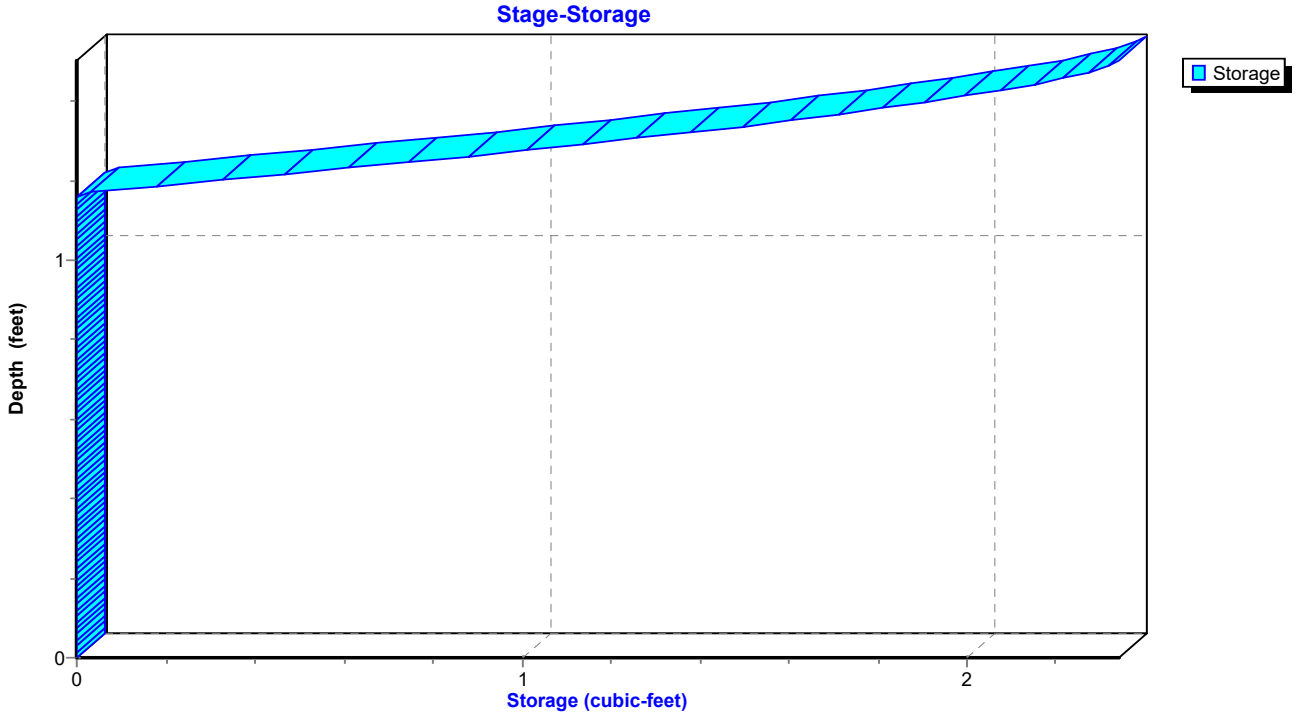
Reach 12R: MH6 18"



Reach 12R: MH6 18"



Reach 12R: MH6 18"



Hydrograph for Reach 12R: MH6 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.21	0.00
5.40	0.00	0	666.21	0.00
5.80	0.01	0	666.21	0.01
6.20	0.01	0	666.21	0.01
6.60	0.01	0	666.22	0.01
7.00	0.01	0	666.22	0.01
7.40	0.01	0	666.22	0.01
7.80	0.01	0	666.22	0.01
8.20	0.01	0	666.22	0.01
8.60	0.01	0	666.22	0.01
9.00	0.01	0	666.22	0.01
9.40	0.01	0	666.22	0.01
9.80	0.02	0	666.22	0.02
10.20	0.02	0	666.23	0.02
10.60	0.02	0	666.23	0.02
11.00	0.03	0	666.24	0.03
11.40	0.05	0	666.24	0.05
11.80	**0.10**	**1**	**666.26**	**0.10**
12.20	**0.42**	**1**	**666.37**	**0.42**
12.60	0.09	1	666.26	0.09
13.00	0.05	0	666.24	0.05
13.40	0.03	0	666.24	0.03
13.80	0.02	0	666.23	0.02
14.20	0.02	0	666.23	0.02
14.60	0.02	0	666.23	0.02
15.00	0.02	0	666.22	0.02
15.40	0.01	0	666.22	0.01
15.80	0.01	0	666.22	0.01
16.20	0.01	0	666.22	0.01
16.60	0.01	0	666.22	0.01
17.00	0.01	0	666.22	0.01
17.40	0.01	0	666.22	0.01
17.80	0.01	0	666.22	0.01
18.20	0.01	0	666.22	0.01
18.60	0.01	0	666.22	0.01
19.00	0.01	0	666.22	0.01
19.40	0.01	0	666.22	0.01
19.80	0.01	0	666.21	0.01

Stage-Discharge for Reach 12R: MH6 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.04	0.00	0.00
665.05	0.00	0.00
665.06	0.00	0.00
665.07	0.00	0.00
665.08	0.00	0.00
665.09	0.00	0.00
665.10	0.00	0.00
665.11	0.00	0.00
665.12	0.00	0.00
665.13	0.00	0.00
665.14	0.00	0.00
665.15	0.00	0.00
665.16	0.00	0.00
665.17	0.00	0.00
665.18	0.00	0.00
665.19	0.00	0.00
665.20	0.00	0.00
665.21	0.00	0.00
665.22	0.00	0.00
665.23	0.00	0.00
665.24	0.00	0.00
665.25	0.00	0.00
665.26	0.00	0.00
665.27	0.00	0.00
665.28	0.00	0.00
665.29	0.00	0.00
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.08	0.00
666.21	0.23	0.00
666.22	0.55	0.01
666.23	0.82	0.02
666.24	1.03	0.04
666.25	1.20	0.06
666.26	1.36	0.09
666.27	1.50	0.11
666.28	1.63	0.14
666.29	1.74	0.17
666.30	1.85	0.20
666.31	1.95	0.24
666.32	2.04	0.27
666.33	2.12	0.30
666.34	2.19	0.33
666.35	2.26	0.37
666.36	2.32	0.40
666.37	2.38	0.43
666.38	2.43	0.46
666.39	2.47	0.50
666.40	2.51	0.53
666.41	2.55	0.56
666.42	2.58	0.58
666.43	2.60	0.61
666.44	2.62	0.63
666.45	2.64	0.66
666.46	2.65	0.68
666.47	2.65	0.70
666.48	**2.65**	0.71
666.49	2.65	0.73
666.50	2.63	0.73
666.51	2.61	**0.74**
666.52	2.57	0.74
666.53	2.49	0.72
666.54	2.38	0.69

Stage-Area-Storage for Reach 12R: MH6 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.1	1
666.28	0.1	1
666.30	0.1	1
666.32	0.1	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	2
666.40	0.2	2
666.42	0.2	2
666.44	0.2	2
666.46	0.3	2
666.48	0.3	2
666.50	0.3	2
666.52	0.3	2
666.54	**0.3**	**2**

Summary for Reach 13R: to isolator 6"

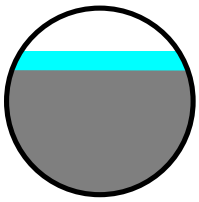
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.18 cfs @ 12.21 hrs, Volume= 0.014 af
Outflow = 0.18 cfs @ 12.21 hrs, Volume= 0.014 af, Atten= 0%, Lag= 0.0 min

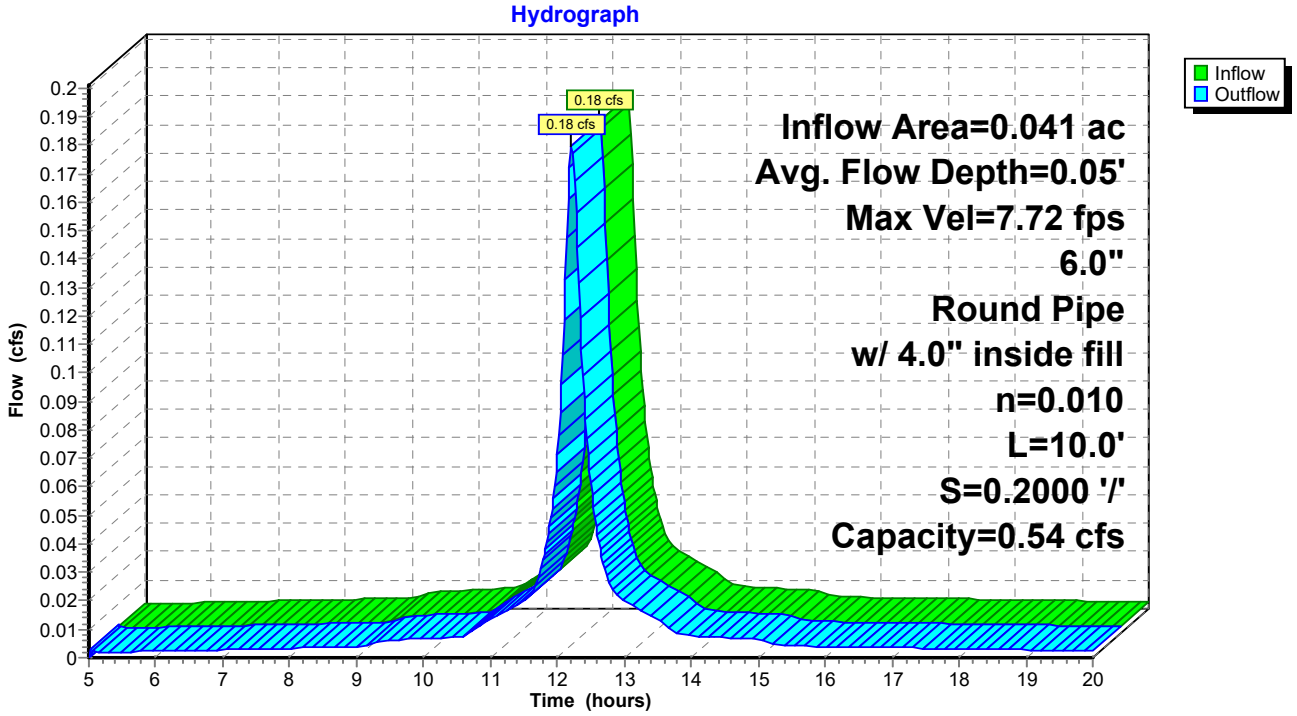
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 7.72 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.39 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.39' above invert (0.05' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

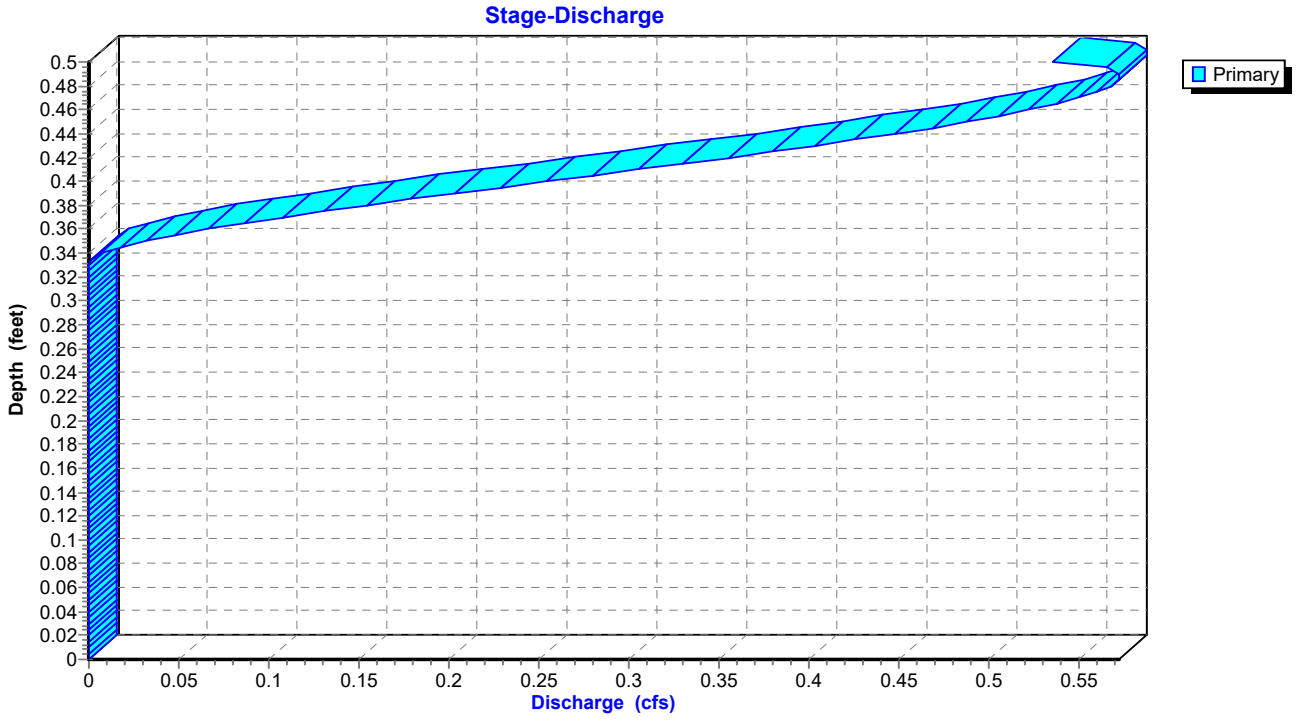
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



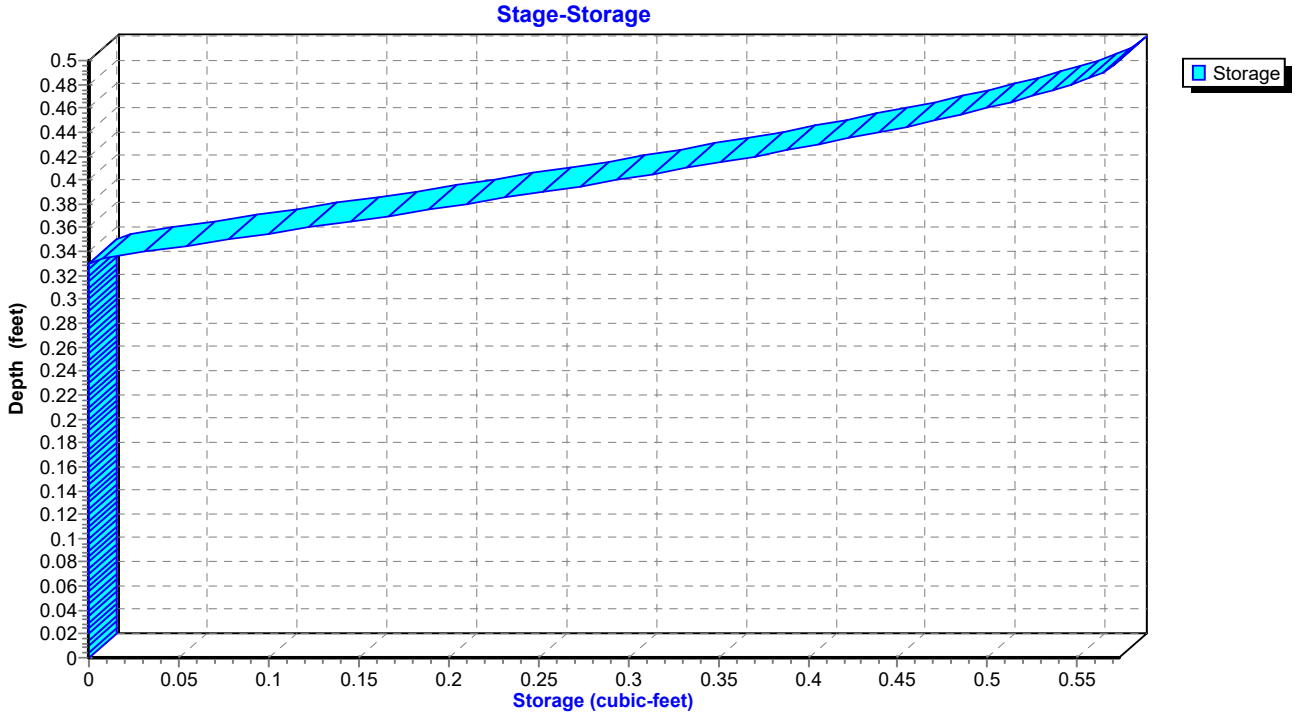
Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Hydrograph for Reach 13R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.34	0.00
5.80	0.00	0	668.34	0.00
6.20	0.00	0	668.34	0.00
6.60	0.00	0	668.34	0.00
7.00	0.00	0	668.34	0.00
7.40	0.00	0	668.34	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.01	0	668.34	0.01
9.80	0.01	0	668.34	0.01
10.20	0.01	0	668.34	0.01
10.60	0.01	0	668.34	0.01
11.00	0.01	0	668.34	0.01
11.40	0.02	0	668.35	0.02
11.80	0.04	0	668.35	0.04
12.20	**0.18**	**0**	**668.38**	**0.18**
12.60	**0.04**	**0**	**668.35**	**0.04**
13.00	0.02	0	668.35	0.02
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 13R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 13R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 14R: to isolator 6"

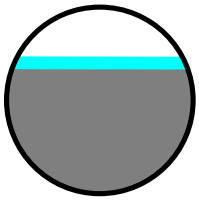
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.030 ac, 83.33% Impervious, Inflow Depth > 3.01" for 10-yr event
Inflow = 0.10 cfs @ 12.26 hrs, Volume= 0.008 af
Outflow = 0.10 cfs @ 12.27 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min

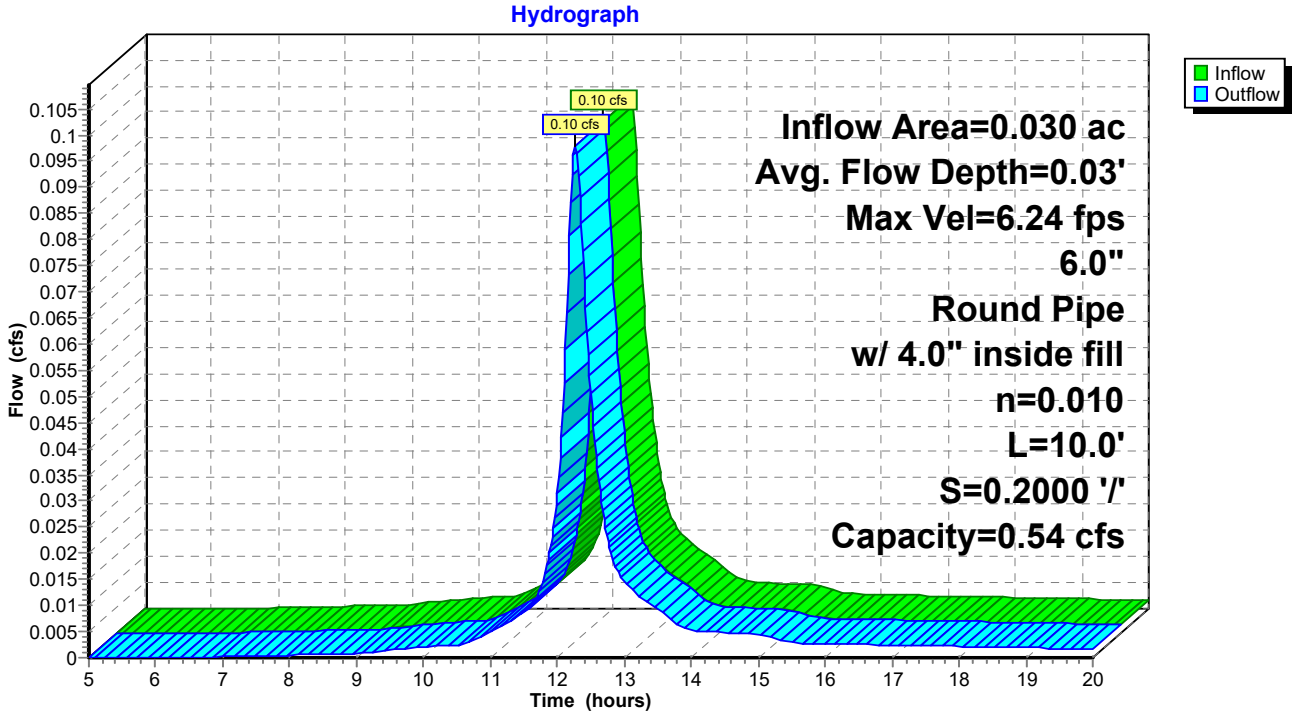
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 6.24 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.37' above invert (0.03' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

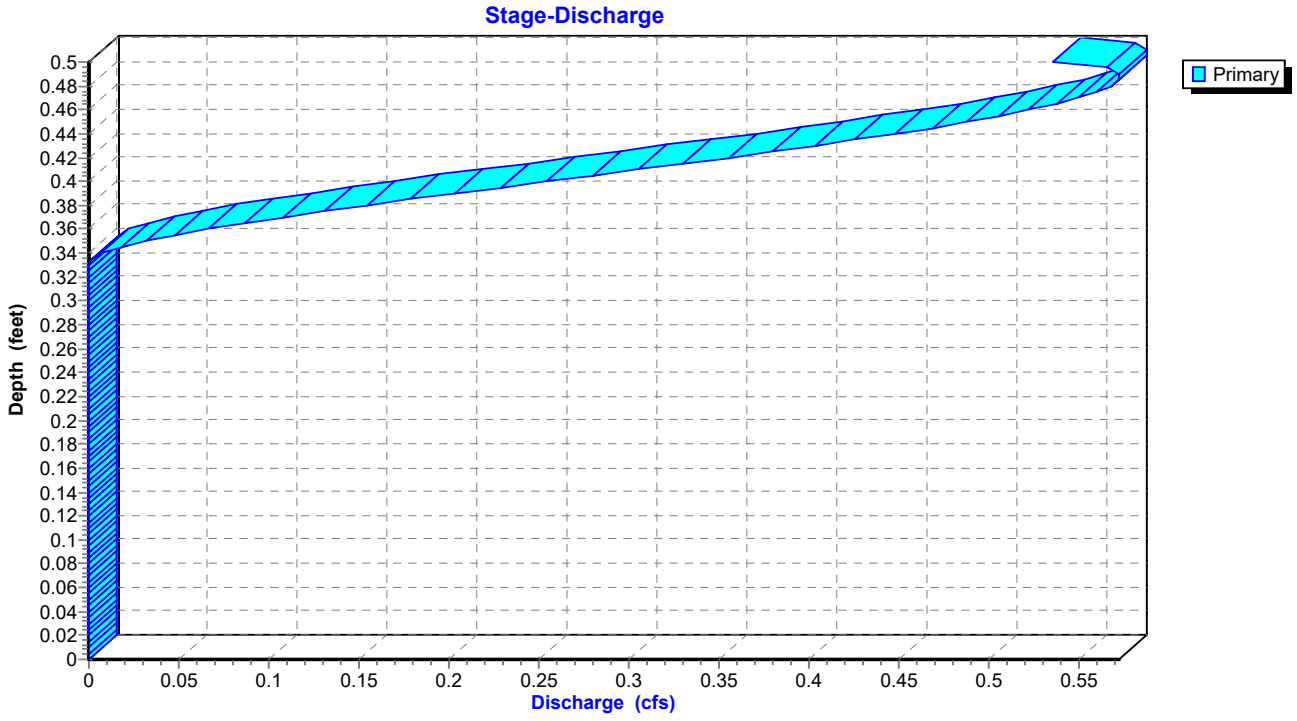
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



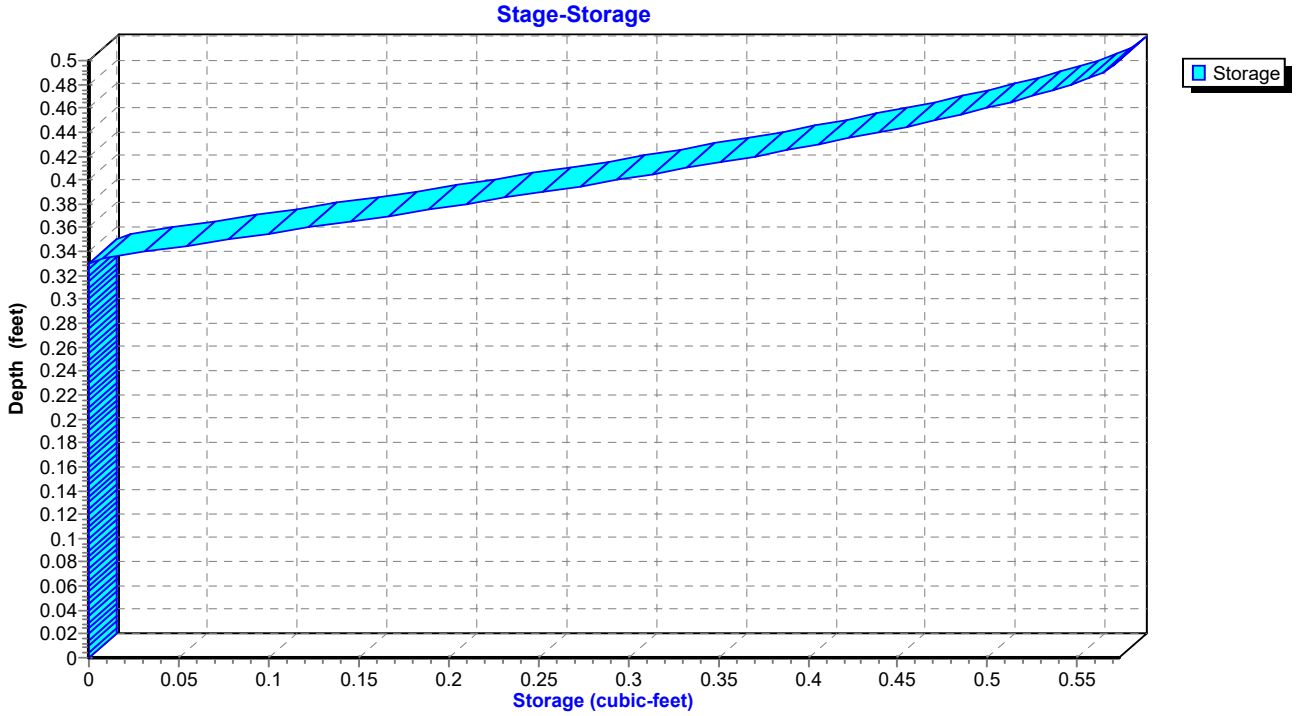
Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Hydrograph for Reach 14R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.01	0	668.34	0.01
11.40	0.01	0	668.34	0.01
11.80	0.02	0	668.34	0.02
12.20	**0.09**	**0**	**668.37**	**0.09**
12.60	**0.04**	**0**	**668.35**	**0.04**
13.00	0.01	0	668.34	0.01
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.00	0	668.34	0.00
15.00	0.00	0	668.34	0.00
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 14R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 14R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 15R: to isolator 6"

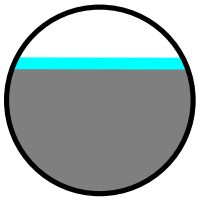
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 73.68% Impervious, Inflow Depth > 2.46" for 10-yr event
Inflow = 0.09 cfs @ 12.37 hrs, Volume= 0.008 af
Outflow = 0.09 cfs @ 12.38 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min

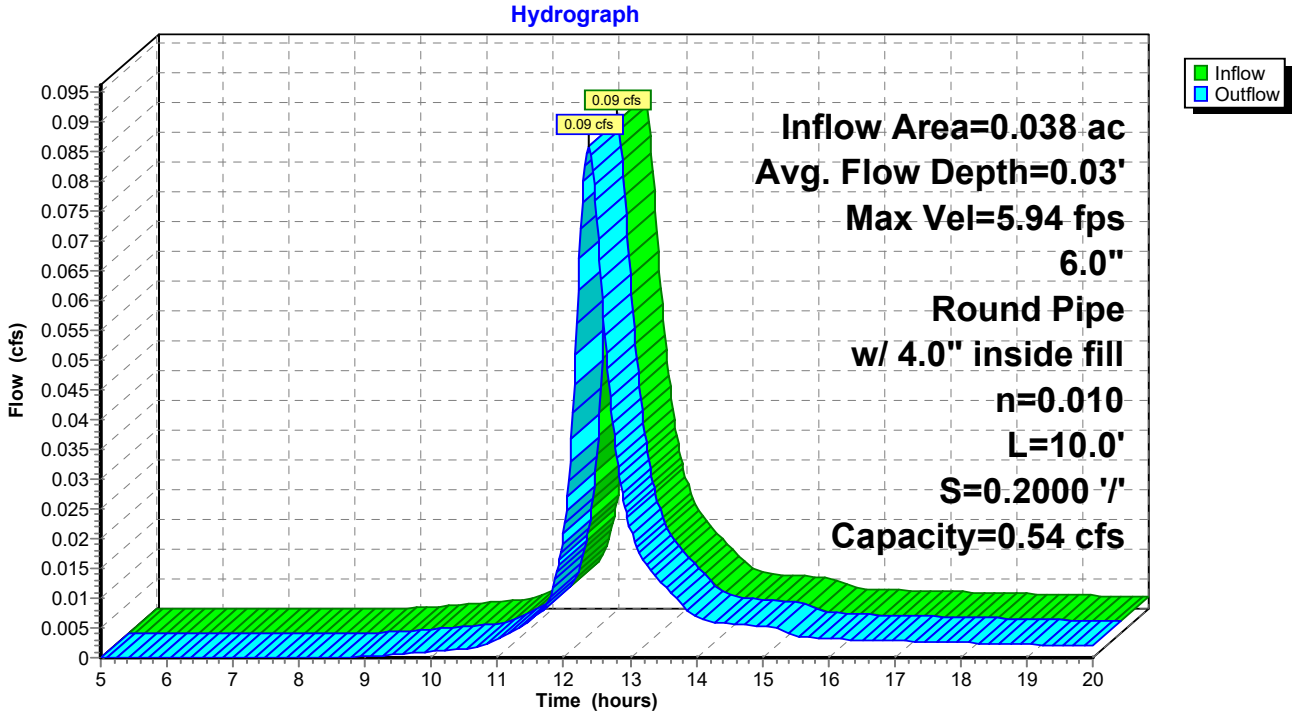
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 5.94 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.12 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.37 hrs
Average Depth at Peak Storage= 0.36' above invert (0.03' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

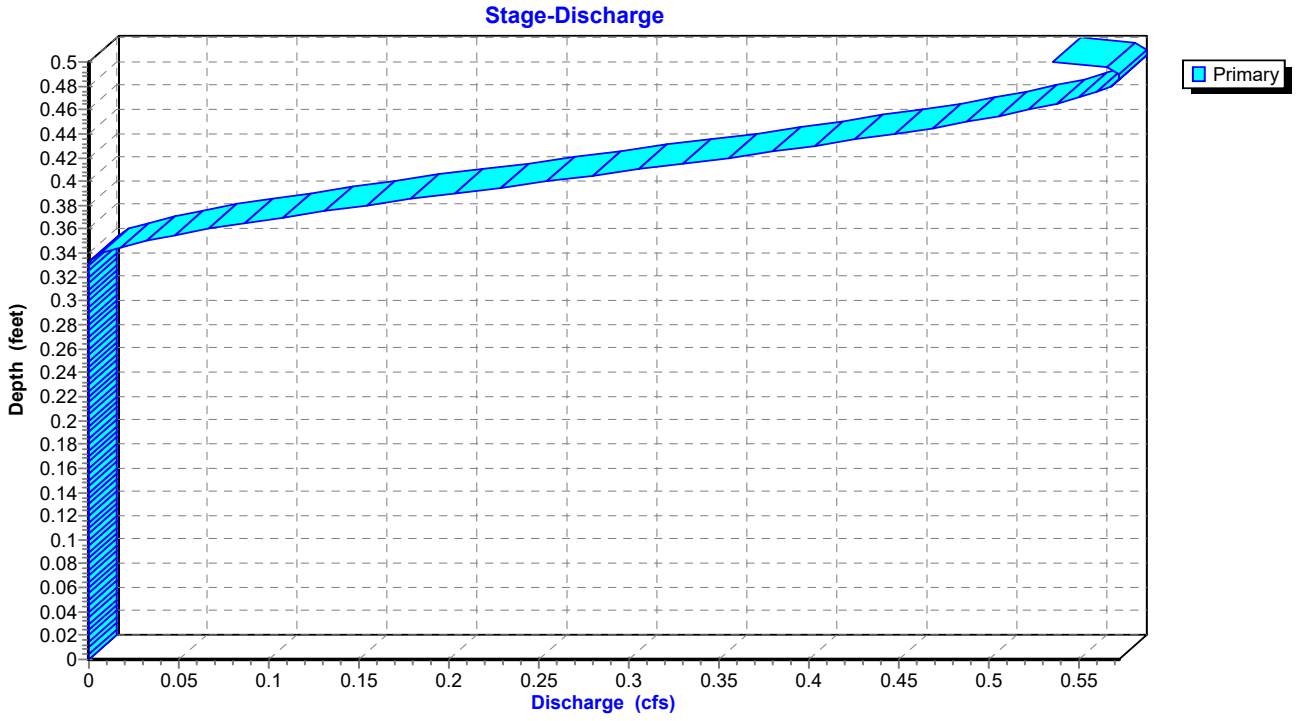
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



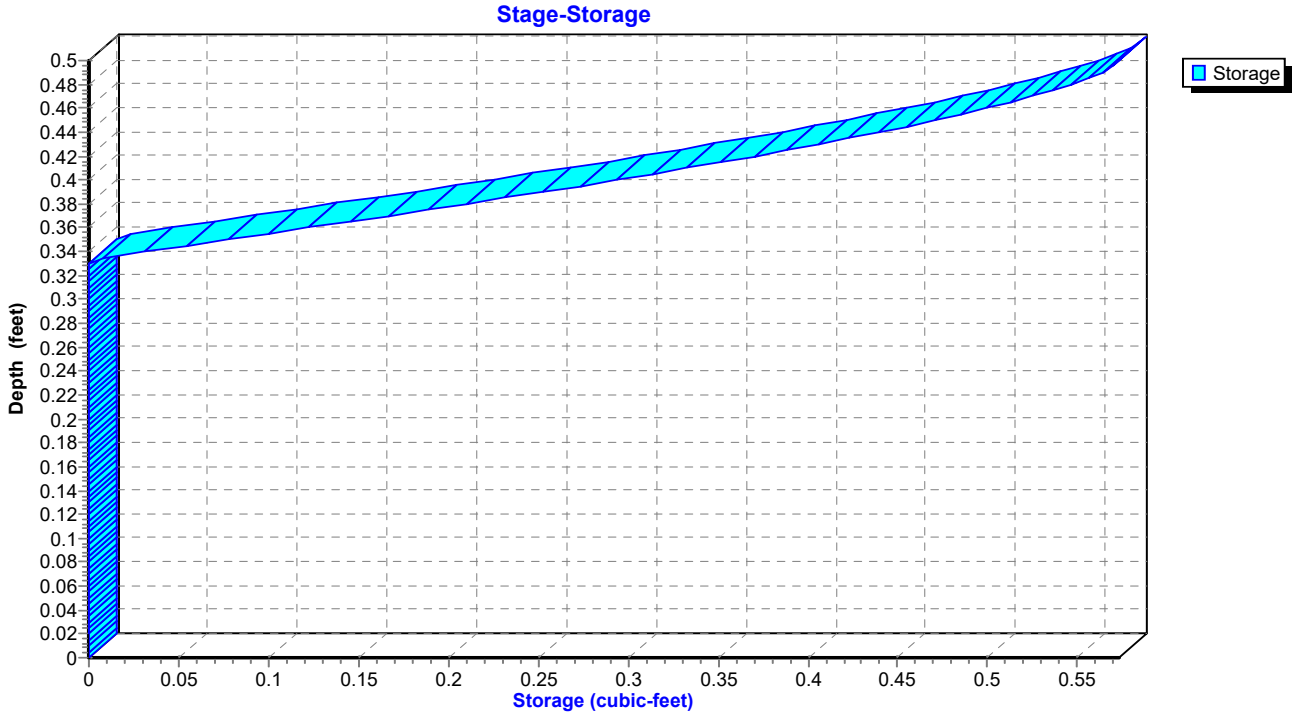
Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Hydrograph for Reach 15R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.33	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.00	0	668.34	0.00
11.40	0.01	0	668.34	0.01
11.80	0.01	0	668.34	0.01
12.20	**0.06**	**0**	**668.36**	**0.06**
12.60	**0.06**	**0**	**668.36**	**0.06**
13.00	0.02	0	668.35	0.02
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 15R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 15R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 16R: inlet 2 12"

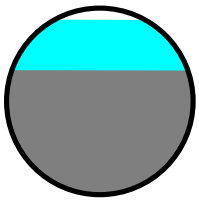
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 102% of Manning's capacity

Inflow Area = 0.150 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.56 cfs @ 12.28 hrs, Volume= 0.050 af
Outflow = 0.56 cfs @ 12.29 hrs, Volume= 0.050 af, Atten= 0%, Lag= 0.6 min

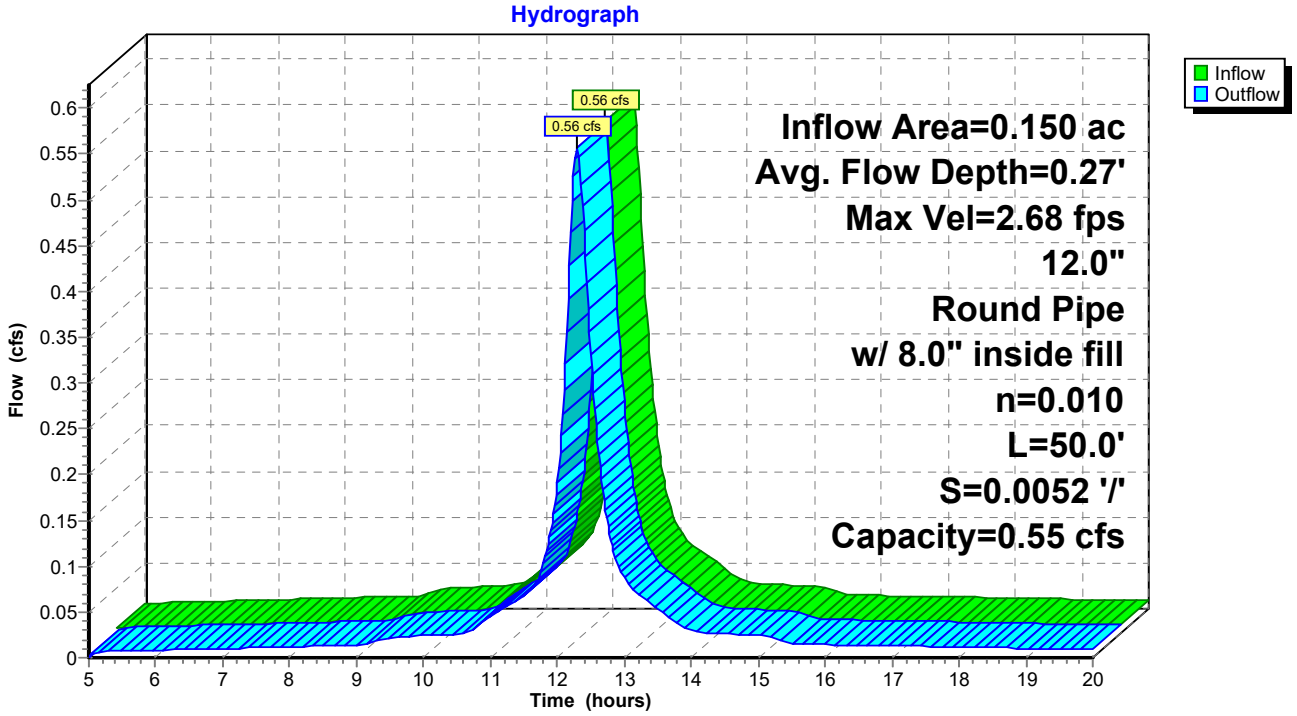
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.68 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 0.94 fps, Avg. Travel Time= 0.9 min

Peak Storage= 10 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.94' above invert (0.27' above fill)
Bank-Full Depth= 1.00' above invert (0.33' above fill) Flow Area= 0.2 sf, Capacity= 0.55 cfs

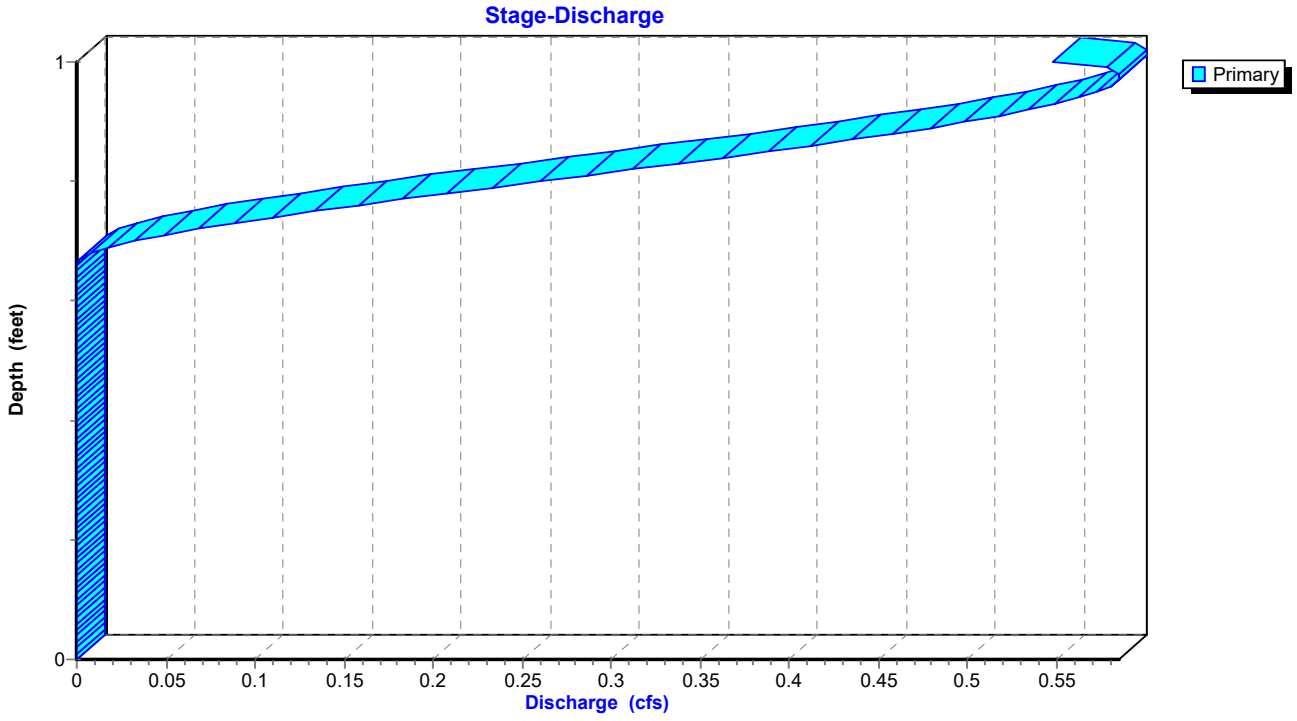
12.0" Round Pipe w/ 8.0" inside fill
n= 0.010
Length= 50.0' Slope= 0.0052 '/'
Inlet Invert= 666.21', Outlet Invert= 665.95'



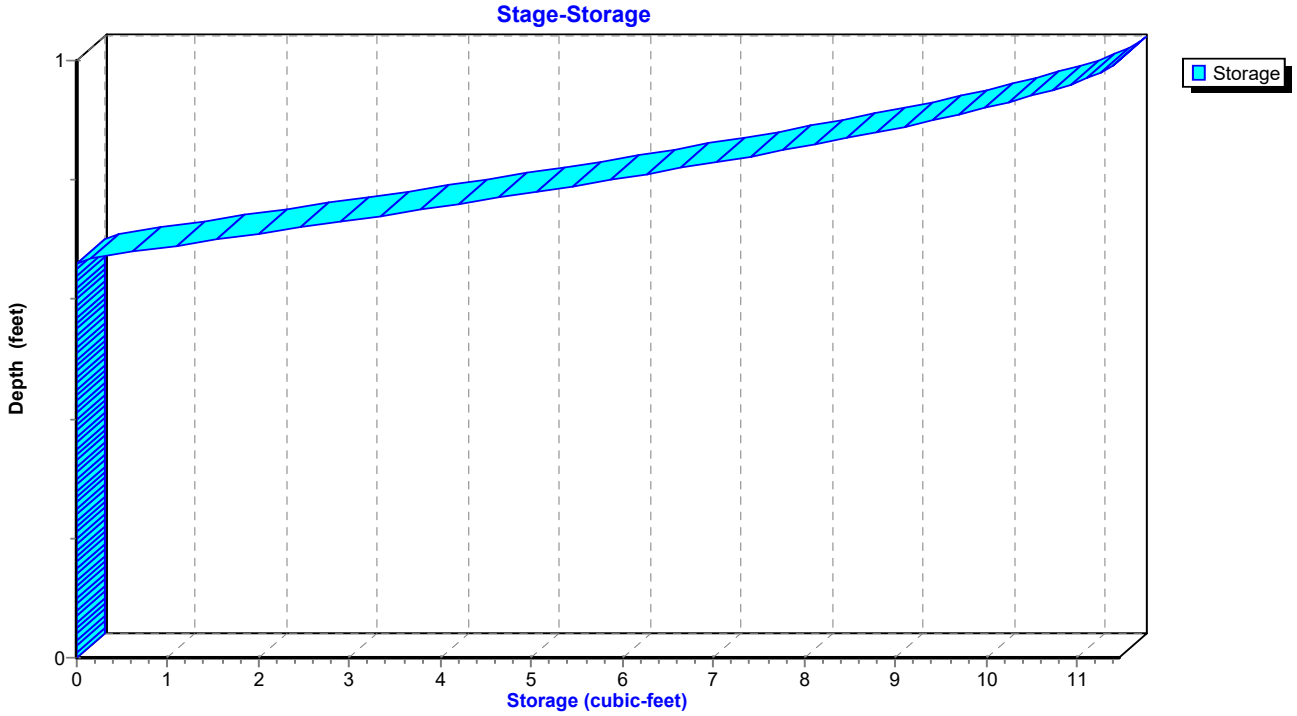
Reach 16R: inlet 2 12"



Reach 16R: inlet 2 12"



Reach 16R: inlet 2 12"



Hydrograph for Reach 16R: inlet 2 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.88	0.00
5.40	0.01	1	666.89	0.01
5.80	0.01	1	666.89	0.01
6.20	0.01	1	666.89	0.01
6.60	0.01	1	666.89	0.01
7.00	0.01	1	666.89	0.01
7.40	0.01	1	666.89	0.01
7.80	0.01	1	666.89	0.01
8.20	0.01	1	666.89	0.01
8.60	0.01	1	666.90	0.01
9.00	0.01	1	666.90	0.01
9.40	0.02	1	666.90	0.02
9.80	0.02	1	666.90	0.02
10.20	0.02	1	666.90	0.02
10.60	0.03	1	666.91	0.03
11.00	0.05	2	666.92	0.04
11.40	0.06	2	666.93	0.06
11.80	0.11	3	666.95	0.11
12.20	**0.48**	**9**	**667.10**	**0.47**
12.60	**0.23**	**5**	**667.00**	**0.24**
13.00	0.09	3	666.94	0.09
13.40	0.06	2	666.92	0.06
13.80	0.04	2	666.91	0.04
14.20	0.03	1	666.91	0.03
14.60	0.03	1	666.91	0.03
15.00	0.02	1	666.90	0.02
15.40	0.02	1	666.90	0.02
15.80	0.01	1	666.90	0.01
16.20	0.01	1	666.90	0.01
16.60	0.01	1	666.90	0.01
17.00	0.01	1	666.90	0.01
17.40	0.01	1	666.89	0.01
17.80	0.01	1	666.89	0.01
18.20	0.01	1	666.89	0.01
18.60	0.01	1	666.89	0.01
19.00	0.01	1	666.89	0.01
19.40	0.01	1	666.89	0.01
19.80	0.01	1	666.89	0.01

Stage-Discharge for Reach 16R: inlet 2 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.00	0.00
666.53	0.00	0.00
666.54	0.00	0.00
666.55	0.00	0.00
666.56	0.00	0.00
666.57	0.00	0.00
666.58	0.00	0.00
666.59	0.00	0.00
666.60	0.00	0.00
666.61	0.00	0.00
666.62	0.00	0.00
666.63	0.00	0.00
666.64	0.00	0.00
666.65	0.00	0.00
666.66	0.00	0.00
666.67	0.00	0.00
666.68	0.00	0.00
666.69	0.00	0.00
666.70	0.00	0.00
666.71	0.00	0.00
666.72	0.00	0.00
666.73	0.00	0.00
666.74	0.00	0.00
666.75	0.00	0.00
666.76	0.00	0.00
666.77	0.00	0.00
666.78	0.00	0.00
666.79	0.00	0.00
666.80	0.00	0.00
666.81	0.00	0.00
666.82	0.00	0.00
666.83	0.00	0.00
666.84	0.00	0.00
666.85	0.00	0.00
666.86	0.00	0.00
666.87	0.00	0.00
666.88	0.24	0.00
666.89	0.59	0.01
666.90	0.84	0.02
666.91	1.05	0.03
666.92	1.23	0.05
666.93	1.38	0.07
666.94	1.53	0.09
666.95	1.65	0.11
666.96	1.77	0.13
666.97	1.88	0.16
666.98	1.97	0.18
666.99	2.06	0.21
667.00	2.14	0.23
667.01	2.22	0.26
667.02	2.29	0.29
667.03	2.35	0.31
667.04	2.40	0.34
667.05	2.45	0.36
667.06	2.50	0.39
667.07	2.54	0.41
667.08	2.58	0.44
667.09	2.61	0.46
667.10	2.63	0.48
667.11	2.65	0.50
667.12	2.67	0.52
667.13	2.68	0.53
667.14	**2.68**	0.55
667.15	2.68	0.56
667.16	2.67	0.57
667.17	2.66	0.58
667.18	2.63	0.59
667.19	2.60	**0.59**
667.20	2.54	0.58
667.21	2.39	0.55

Stage-Area-Storage for Reach 16R: inlet 2 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
666.21	0.0	0	666.72	0.0	0
666.22	0.0	0	666.73	0.0	0
666.23	0.0	0	666.74	0.0	0
666.24	0.0	0	666.75	0.0	0
666.25	0.0	0	666.76	0.0	0
666.26	0.0	0	666.77	0.0	0
666.27	0.0	0	666.78	0.0	0
666.28	0.0	0	666.79	0.0	0
666.29	0.0	0	666.80	0.0	0
666.30	0.0	0	666.81	0.0	0
666.31	0.0	0	666.82	0.0	0
666.32	0.0	0	666.83	0.0	0
666.33	0.0	0	666.84	0.0	0
666.34	0.0	0	666.85	0.0	0
666.35	0.0	0	666.86	0.0	0
666.36	0.0	0	666.87	0.0	0
666.37	0.0	0	666.88	0.0	0
666.38	0.0	0	666.89	0.0	1
666.39	0.0	0	666.90	0.0	1
666.40	0.0	0	666.91	0.0	2
666.41	0.0	0	666.92	0.0	2
666.42	0.0	0	666.93	0.0	2
666.43	0.0	0	666.94	0.1	3
666.44	0.0	0	666.95	0.1	3
666.45	0.0	0	666.96	0.1	4
666.46	0.0	0	666.97	0.1	4
666.47	0.0	0	666.98	0.1	5
666.48	0.0	0	666.99	0.1	5
666.49	0.0	0	667.00	0.1	5
666.50	0.0	0	667.01	0.1	6
666.51	0.0	0	667.02	0.1	6
666.52	0.0	0	667.03	0.1	7
666.53	0.0	0	667.04	0.1	7
666.54	0.0	0	667.05	0.1	7
666.55	0.0	0	667.06	0.2	8
666.56	0.0	0	667.07	0.2	8
666.57	0.0	0	667.08	0.2	8
666.58	0.0	0	667.09	0.2	9
666.59	0.0	0	667.10	0.2	9
666.60	0.0	0	667.11	0.2	9
666.61	0.0	0	667.12	0.2	10
666.62	0.0	0	667.13	0.2	10
666.63	0.0	0	667.14	0.2	10
666.64	0.0	0	667.15	0.2	10
666.65	0.0	0	667.16	0.2	11
666.66	0.0	0	667.17	0.2	11
666.67	0.0	0	667.18	0.2	11
666.68	0.0	0	667.19	0.2	11
666.69	0.0	0	667.20	0.2	11
666.70	0.0	0	667.21	**0.2**	**11**
666.71	0.0	0			

Summary for Reach 17R: NDS2 6"

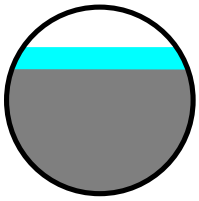
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 42.11% Impervious, Inflow Depth > 1.14" for 10-yr event
Inflow = 0.03 cfs @ 12.46 hrs, Volume= 0.004 af
Outflow = 0.03 cfs @ 12.51 hrs, Volume= 0.004 af, Atten= 0%, Lag= 2.9 min

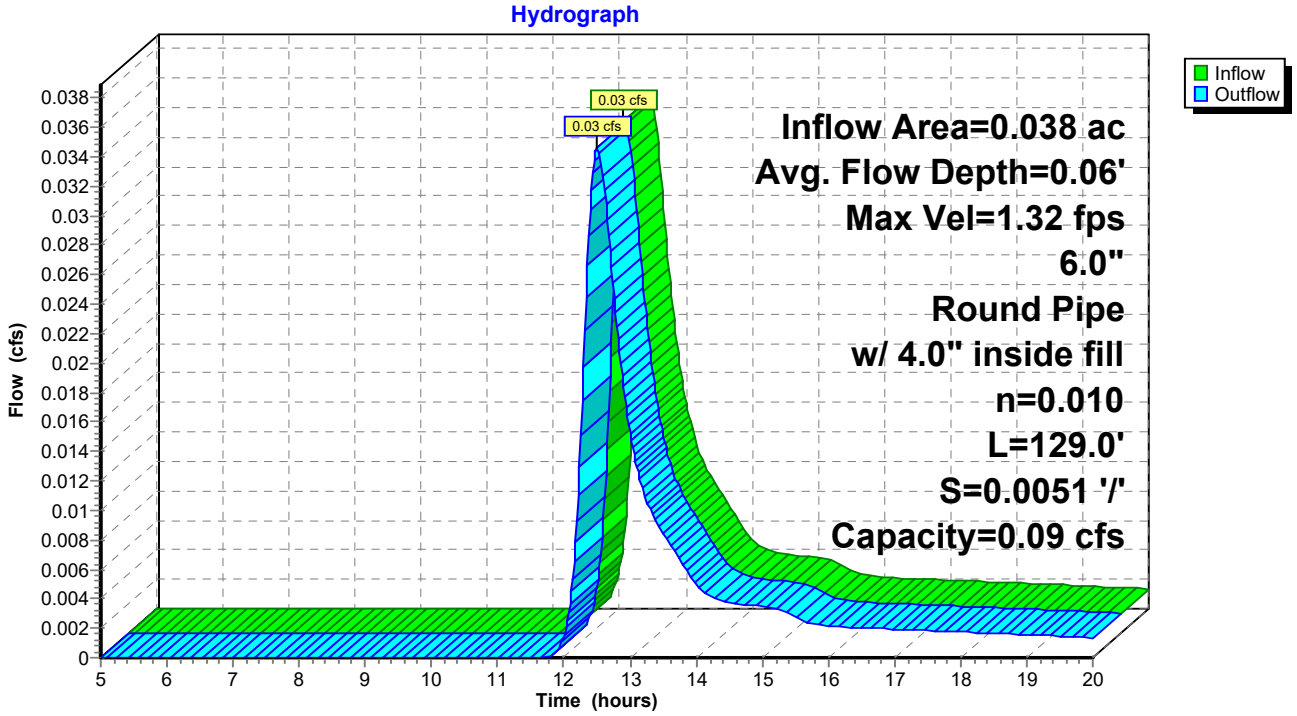
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.32 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 0.58 fps, Avg. Travel Time= 3.7 min

Peak Storage= 3 cf @ 12.48 hrs
Average Depth at Peak Storage= 0.39' above invert (0.06' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

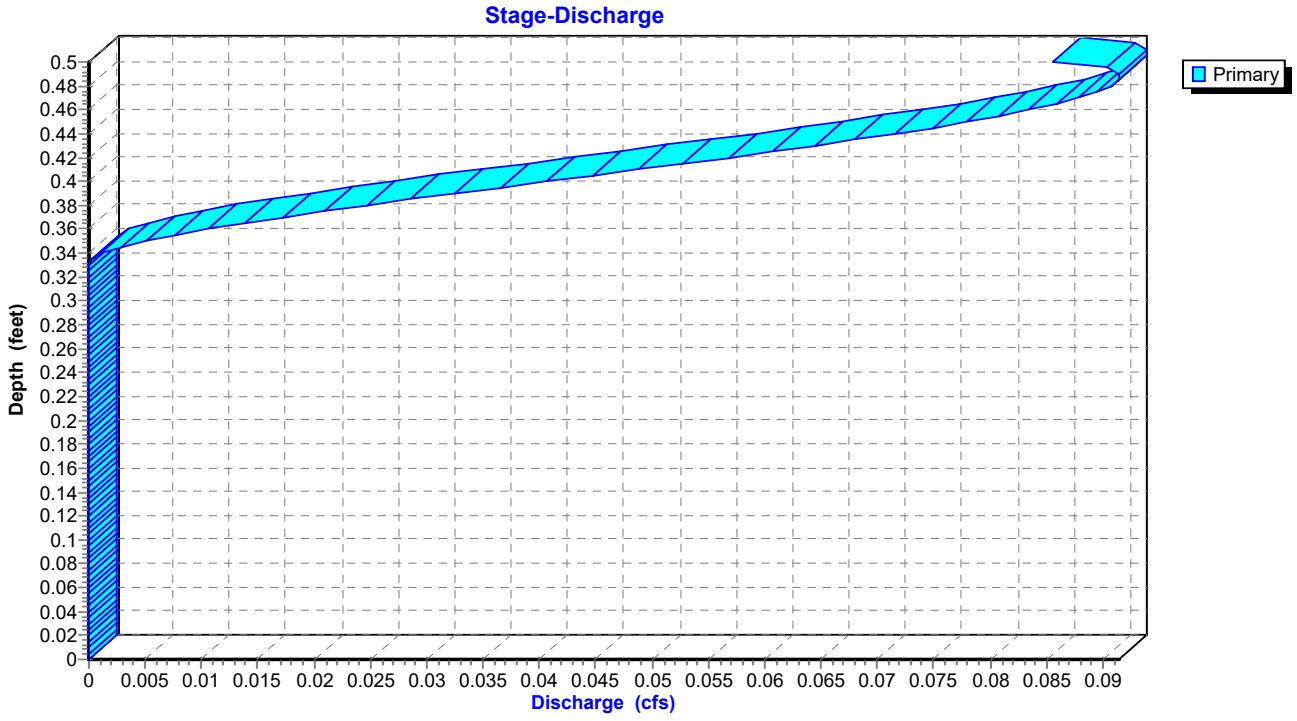
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0051 '/'
Inlet Invert= 668.84', Outlet Invert= 668.18'



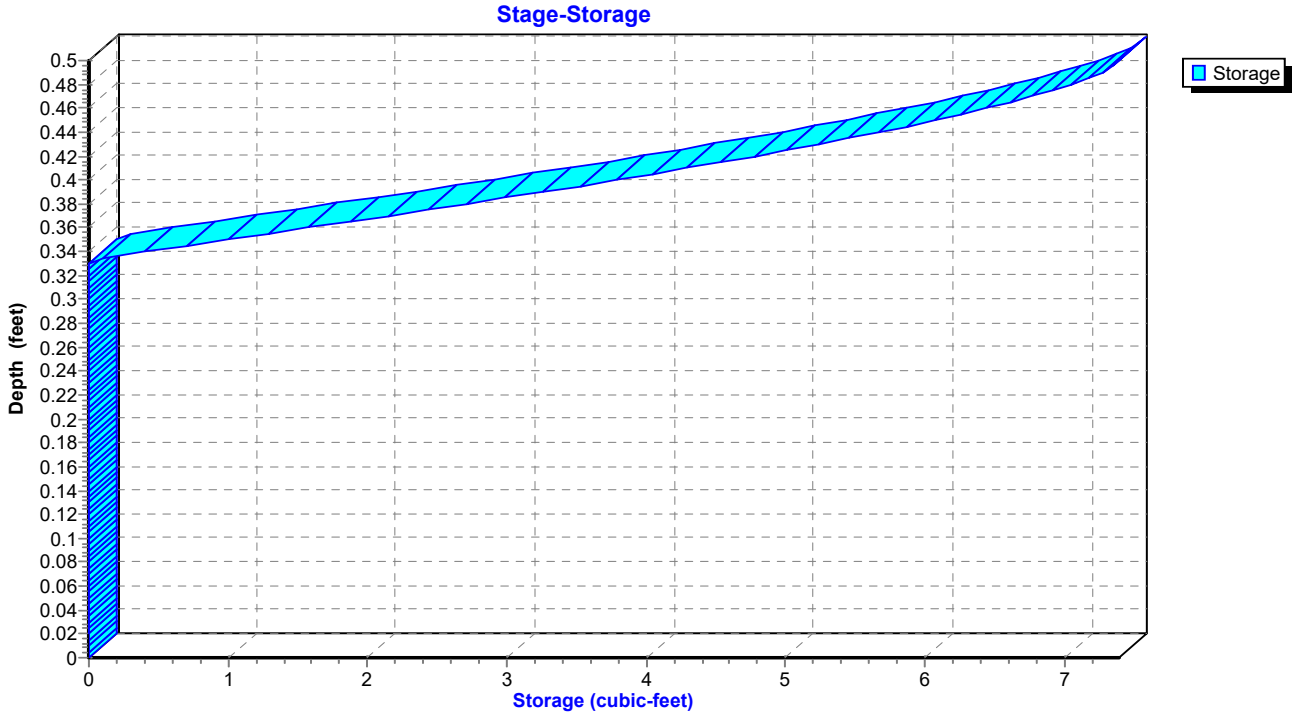
Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Hydrograph for Reach 17R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.17	0.00
5.40	0.00	0	669.17	0.00
5.80	0.00	0	669.17	0.00
6.20	0.00	0	669.17	0.00
6.60	0.00	0	669.17	0.00
7.00	0.00	0	669.17	0.00
7.40	0.00	0	669.17	0.00
7.80	0.00	0	669.17	0.00
8.20	0.00	0	669.17	0.00
8.60	0.00	0	669.17	0.00
9.00	0.00	0	669.17	0.00
9.40	0.00	0	669.17	0.00
9.80	0.00	0	669.17	0.00
10.20	0.00	0	669.17	0.00
10.60	0.00	0	669.17	0.00
11.00	0.00	0	669.17	0.00
11.40	0.00	0	669.17	0.00
11.80	0.00	0	669.18	0.00
12.20	**0.01**	**2**	**669.20**	**0.01**
12.60	**0.03**	**3**	**669.23**	**0.03**
13.00	0.01	2	669.21	0.02
13.40	0.01	1	669.20	0.01
13.80	0.01	1	669.19	0.01
14.20	0.00	1	669.19	0.00
14.60	0.00	1	669.19	0.00
15.00	0.00	1	669.19	0.00
15.40	0.00	1	669.19	0.00
15.80	0.00	1	669.18	0.00
16.20	0.00	1	669.18	0.00
16.60	0.00	1	669.18	0.00
17.00	0.00	1	669.18	0.00
17.40	0.00	1	669.18	0.00
17.80	0.00	1	669.18	0.00
18.20	0.00	1	669.18	0.00
18.60	0.00	0	669.18	0.00
19.00	0.00	0	669.18	0.00
19.40	0.00	0	669.18	0.00
19.80	0.00	0	669.18	0.00

Stage-Discharge for Reach 17R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.84	0.00	0.00
668.85	0.00	0.00
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.37	0.00
669.19	0.65	0.01
669.20	0.87	0.01
669.21	1.03	0.02
669.22	1.17	0.02
669.23	1.29	0.03
669.24	1.39	0.04
669.25	1.47	0.05
669.26	1.53	0.06
669.27	1.59	0.06
669.28	1.63	0.07
669.29	1.66	0.08
669.30	1.67	0.08
669.31	**1.67**	0.09
669.32	1.66	0.09
669.33	1.62	**0.09**
669.34	1.49	0.09

Stage-Area-Storage for Reach 17R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.84	0.0	0
668.85	0.0	0
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	1
669.20	0.0	2
669.21	0.0	2
669.22	0.0	3
669.23	0.0	3
669.24	0.0	4
669.25	0.0	4
669.26	0.0	5
669.27	0.0	5
669.28	0.0	6
669.29	0.0	6
669.30	0.0	6
669.31	0.1	7
669.32	0.1	7
669.33	0.1	7
669.34	**0.1**	**7**

Summary for Reach 18R: inlet 3 6"

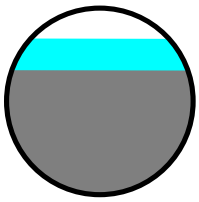
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 17R OUTLET depth by 0.03' @ 12.66 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.07' @ 12.44 hrs

Inflow Area = 0.090 ac, 18.89% Impervious, Inflow Depth > 0.96" for 10-yr event
Inflow = 0.05 cfs @ 12.50 hrs, Volume= 0.007 af
Outflow = 0.05 cfs @ 12.52 hrs, Volume= 0.007 af, Atten= 0%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.48 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 0.75 fps, Avg. Travel Time= 1.4 min

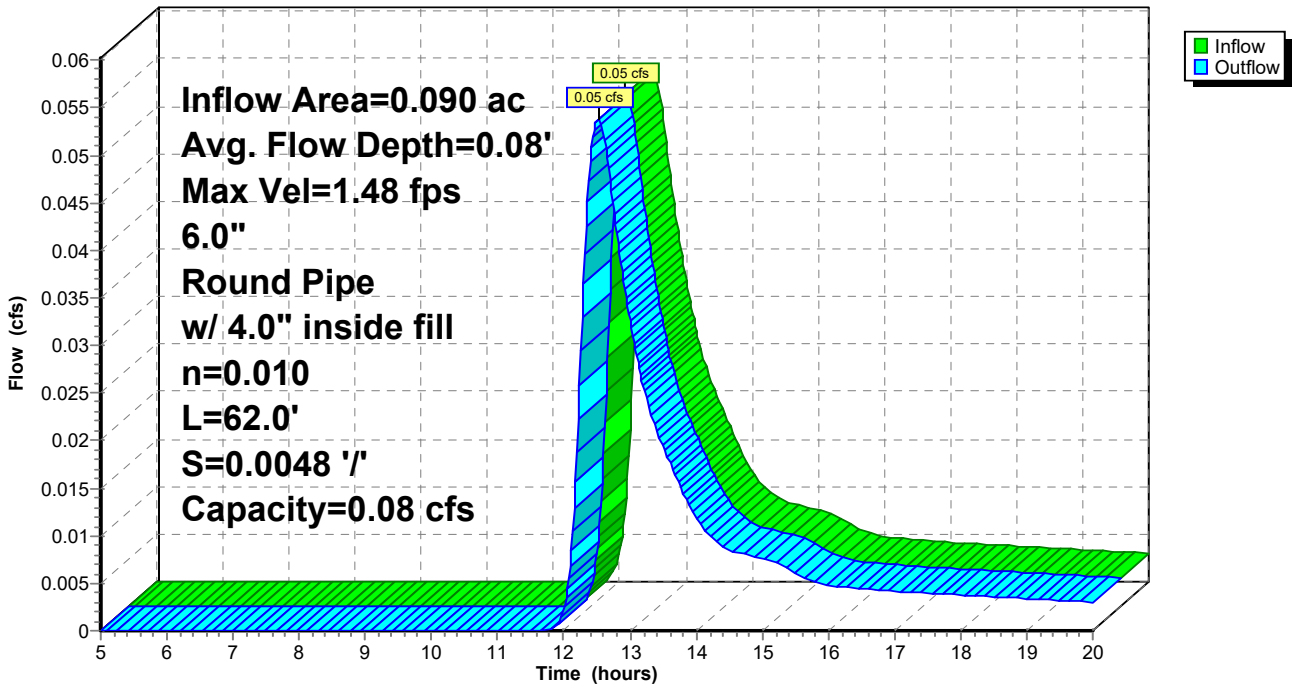
Peak Storage= 2 cf @ 12.51 hrs
Average Depth at Peak Storage= 0.42' above invert (0.08' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.08 cfs

6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0048 '/'
Inlet Invert= 668.18', Outlet Invert= 667.88'



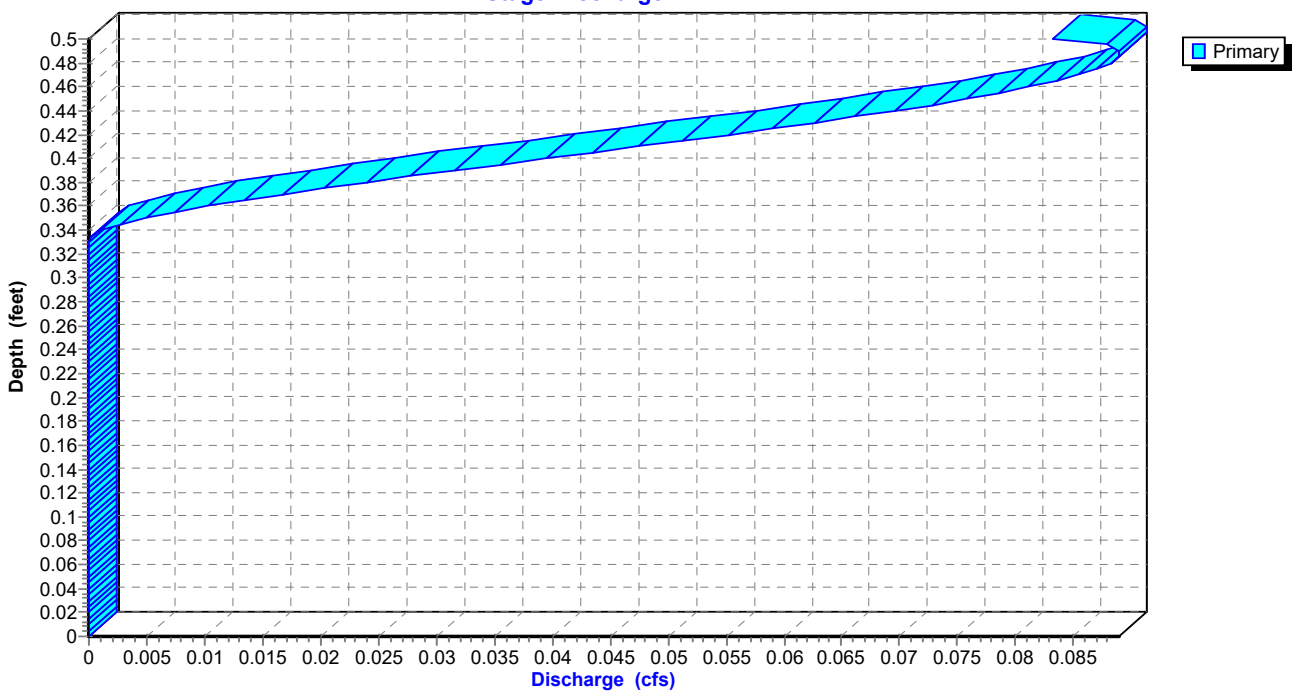
Reach 18R: inlet 3 6"

Hydrograph

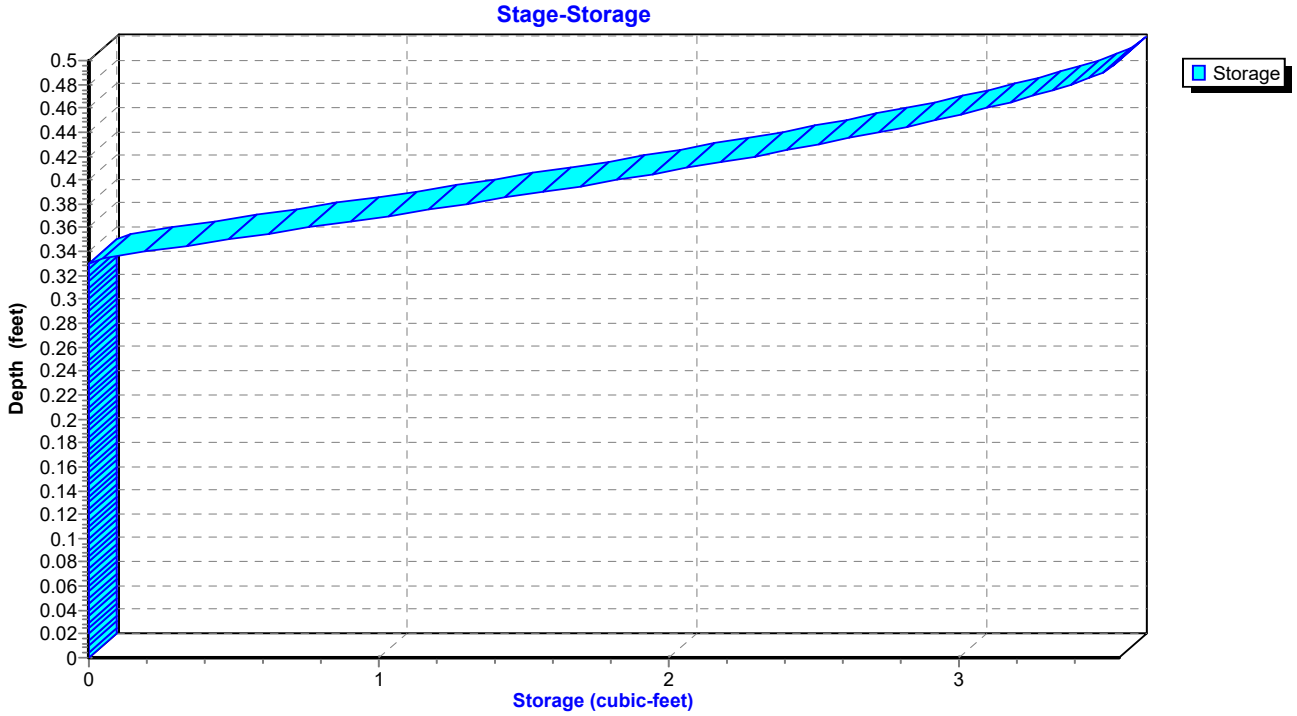


Reach 18R: inlet 3 6"

Stage-Discharge



Reach 18R: inlet 3 6"



Hydrograph for Reach 18R: inlet 3 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.51	0.00
5.40	0.00	0	668.51	0.00
5.80	0.00	0	668.51	0.00
6.20	0.00	0	668.51	0.00
6.60	0.00	0	668.51	0.00
7.00	0.00	0	668.51	0.00
7.40	0.00	0	668.51	0.00
7.80	0.00	0	668.51	0.00
8.20	0.00	0	668.51	0.00
8.60	0.00	0	668.51	0.00
9.00	0.00	0	668.51	0.00
9.40	0.00	0	668.51	0.00
9.80	0.00	0	668.51	0.00
10.20	0.00	0	668.51	0.00
10.60	0.00	0	668.51	0.00
11.00	0.00	0	668.51	0.00
11.40	0.00	0	668.51	0.00
11.80	0.00	0	668.51	0.00
12.20	**0.02**	**1**	**668.56**	**0.02**
12.60	**0.05**	**2**	**668.60**	**0.05**
13.00	0.03	2	668.57	0.03
13.40	0.02	1	668.56	0.02
13.80	0.01	1	668.55	0.01
14.20	0.01	1	668.54	0.01
14.60	0.01	1	668.54	0.01
15.00	0.01	1	668.54	0.01
15.40	0.01	1	668.53	0.01
15.80	0.01	0	668.53	0.01
16.20	0.00	0	668.53	0.00
16.60	0.00	0	668.53	0.00
17.00	0.00	0	668.53	0.00
17.40	0.00	0	668.53	0.00
17.80	0.00	0	668.53	0.00
18.20	0.00	0	668.53	0.00
18.60	0.00	0	668.53	0.00
19.00	0.00	0	668.53	0.00
19.40	0.00	0	668.53	0.00
19.80	0.00	0	668.53	0.00

Stage-Discharge for Reach 18R: inlet 3 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	0.00	0.00
668.35	0.00	0.00
668.36	0.00	0.00
668.37	0.00	0.00
668.38	0.00	0.00
668.39	0.00	0.00
668.40	0.00	0.00
668.41	0.00	0.00
668.42	0.00	0.00
668.43	0.00	0.00
668.44	0.00	0.00
668.45	0.00	0.00
668.46	0.00	0.00
668.47	0.00	0.00
668.48	0.00	0.00
668.49	0.00	0.00
668.50	0.00	0.00
668.51	0.00	0.00
668.52	0.36	0.00
668.53	0.64	0.00
668.54	0.84	0.01
668.55	1.00	0.02
668.56	1.14	0.02
668.57	1.25	0.03
668.58	1.35	0.04
668.59	1.43	0.05
668.60	1.49	0.06
668.61	1.54	0.06
668.62	1.58	0.07
668.63	1.61	0.08
668.64	1.63	0.08
668.65	**1.63**	0.09
668.66	1.61	0.09
668.67	1.58	**0.09**
668.68	1.45	0.08

Stage-Area-Storage for Reach 18R: inlet 3 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.0	0
668.48	0.0	0
668.49	0.0	0
668.50	0.0	0
668.51	0.0	0
668.52	0.0	0
668.53	0.0	0
668.54	0.0	1
668.55	0.0	1
668.56	0.0	1
668.57	0.0	2
668.58	0.0	2
668.59	0.0	2
668.60	0.0	2
668.61	0.0	3
668.62	0.0	3
668.63	0.0	3
668.64	0.0	3
668.65	0.1	3
668.66	0.1	3
668.67	0.1	3
668.68	**0.1**	**4**

Summary for Reach 19R: inlet 1 12"

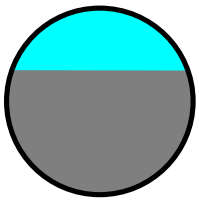
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 146% of Manning's capacity
[76] Warning: Detained 0.004 af (Pond w/culvert advised)
[62] Hint: Exceeded Reach 16R OUTLET depth by 0.13' @ 12.66 hrs

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.80 cfs @ 12.22 hrs, Volume= 0.073 af
Outflow = 0.55 cfs @ 12.14 hrs, Volume= 0.073 af, Atten= 32%, Lag= 0.0 min

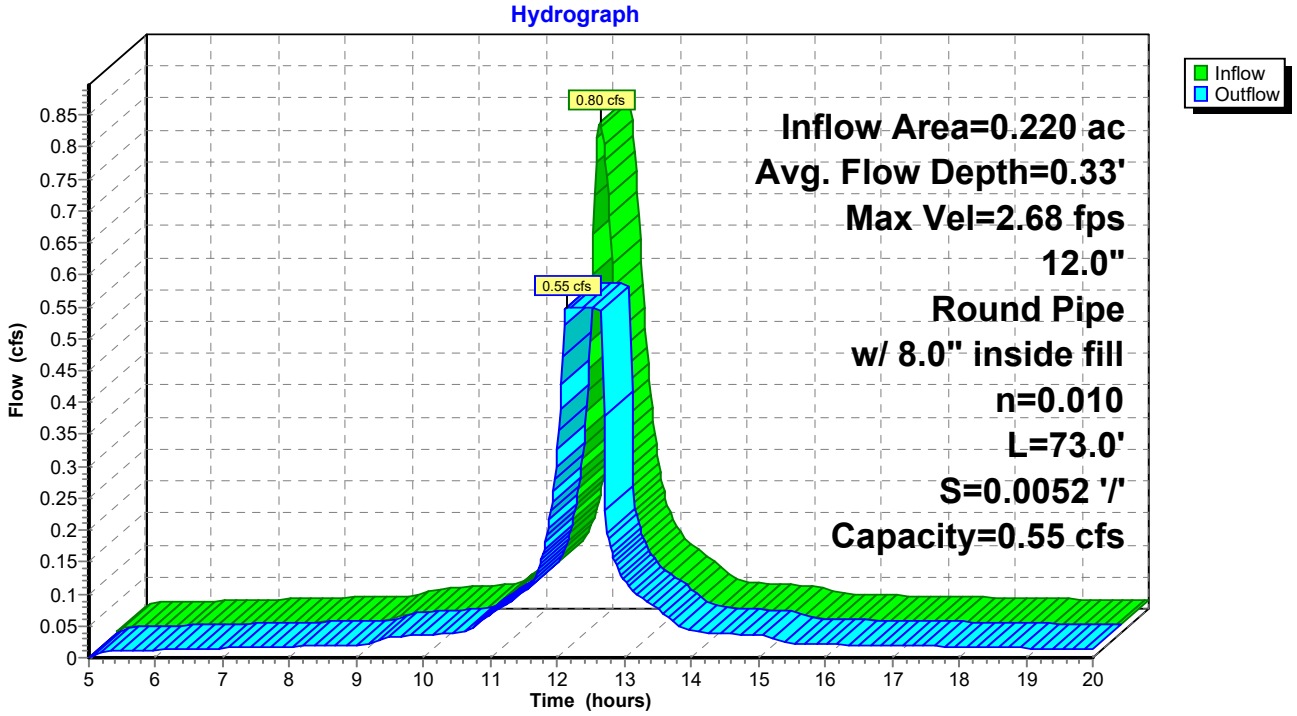
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.68 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.07 fps, Avg. Travel Time= 1.1 min

Peak Storage= 17 cf @ 12.12 hrs
Average Depth at Peak Storage= 1.00' above invert (0.33' above fill)
Bank-Full Depth= 1.00' above invert (0.33' above fill) Flow Area= 0.2 sf, Capacity= 0.55 cfs

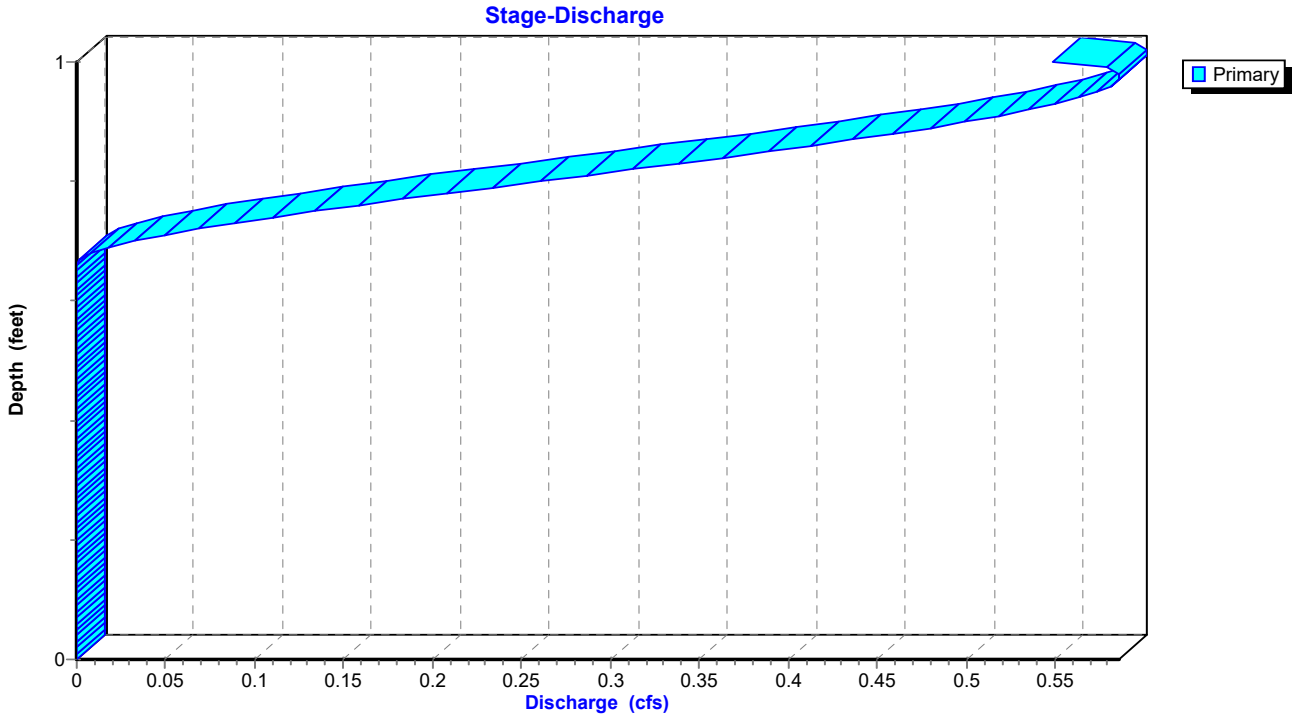
12.0" Round Pipe w/ 8.0" inside fill
n= 0.010
Length= 73.0' Slope= 0.0052 '/'
Inlet Invert= 665.85', Outlet Invert= 665.47'



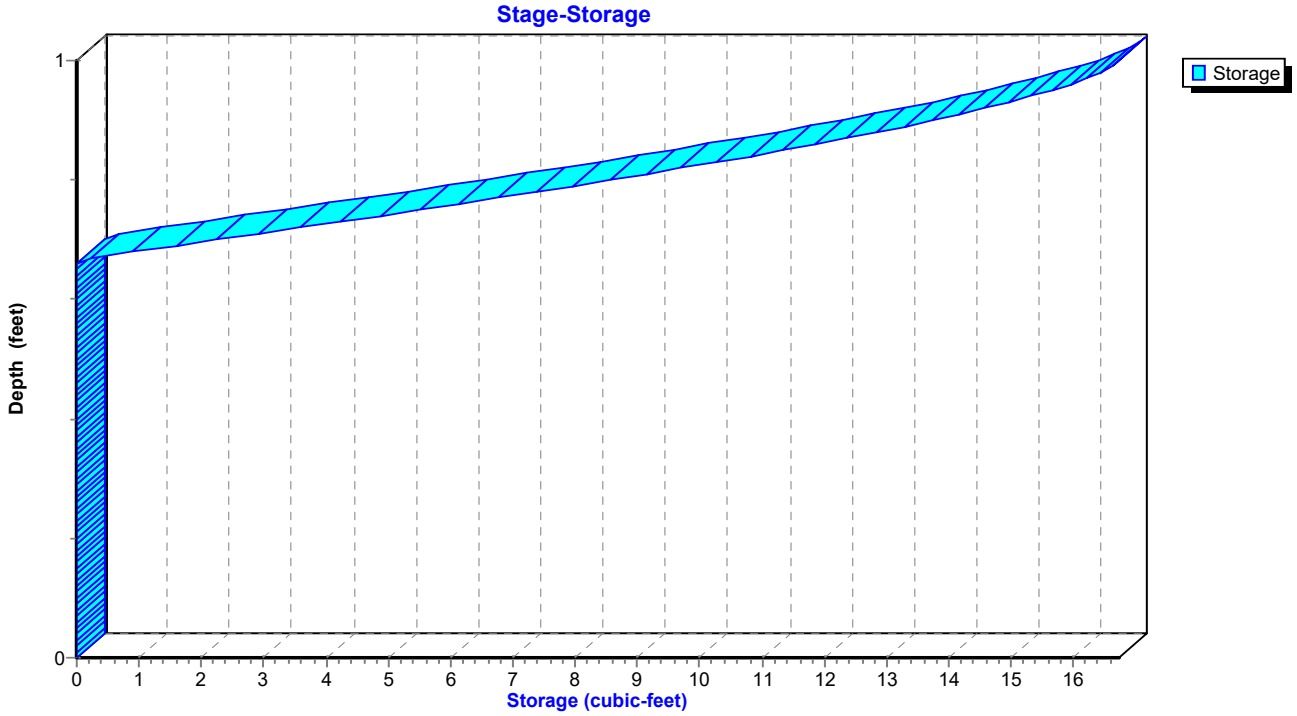
Reach 19R: inlet 1 12"



Reach 19R: inlet 1 12"



Reach 19R: inlet 1 12"



Hydrograph for Reach 19R: inlet 1 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.52	0.00
5.40	0.01	1	666.53	0.01
5.80	0.01	1	666.53	0.01
6.20	0.01	1	666.53	0.01
6.60	0.01	1	666.54	0.01
7.00	0.01	1	666.54	0.01
7.40	0.02	1	666.54	0.02
7.80	0.02	2	666.54	0.02
8.20	0.02	2	666.54	0.02
8.60	0.02	2	666.54	0.02
9.00	0.02	2	666.54	0.02
9.40	0.03	2	666.55	0.03
9.80	0.03	2	666.55	0.03
10.20	0.04	2	666.55	0.04
10.60	0.04	3	666.55	0.04
11.00	0.07	4	666.57	0.07
11.40	0.10	4	666.58	0.10
11.80	0.18	**7**	**666.62**	**0.17**
12.20	**0.80**	**17**	**666.85**	**0.55**
12.60	**0.29**	17	666.85	0.55
13.00	0.12	5	666.59	0.12
13.40	0.08	4	666.58	0.08
13.80	0.05	3	666.56	0.05
14.20	0.04	3	666.55	0.04
14.60	0.04	2	666.55	0.04
15.00	0.04	2	666.55	0.04
15.40	0.02	2	666.54	0.02
15.80	0.02	2	666.54	0.02
16.20	0.02	2	666.54	0.02
16.60	0.02	2	666.54	0.02
17.00	0.02	2	666.54	0.02
17.40	0.02	2	666.54	0.02
17.80	0.02	2	666.54	0.02
18.20	0.02	1	666.54	0.02
18.60	0.02	1	666.54	0.02
19.00	0.01	1	666.54	0.01
19.40	0.01	1	666.54	0.01
19.80	0.01	1	666.54	0.01

Stage-Discharge for Reach 19R: inlet 1 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.85	0.00	0.00	666.36	0.00	0.00
665.86	0.00	0.00	666.37	0.00	0.00
665.87	0.00	0.00	666.38	0.00	0.00
665.88	0.00	0.00	666.39	0.00	0.00
665.89	0.00	0.00	666.40	0.00	0.00
665.90	0.00	0.00	666.41	0.00	0.00
665.91	0.00	0.00	666.42	0.00	0.00
665.92	0.00	0.00	666.43	0.00	0.00
665.93	0.00	0.00	666.44	0.00	0.00
665.94	0.00	0.00	666.45	0.00	0.00
665.95	0.00	0.00	666.46	0.00	0.00
665.96	0.00	0.00	666.47	0.00	0.00
665.97	0.00	0.00	666.48	0.00	0.00
665.98	0.00	0.00	666.49	0.00	0.00
665.99	0.00	0.00	666.50	0.00	0.00
666.00	0.00	0.00	666.51	0.00	0.00
666.01	0.00	0.00	666.52	0.24	0.00
666.02	0.00	0.00	666.53	0.59	0.01
666.03	0.00	0.00	666.54	0.84	0.02
666.04	0.00	0.00	666.55	1.05	0.03
666.05	0.00	0.00	666.56	1.23	0.05
666.06	0.00	0.00	666.57	1.39	0.07
666.07	0.00	0.00	666.58	1.53	0.09
666.08	0.00	0.00	666.59	1.65	0.11
666.09	0.00	0.00	666.60	1.77	0.13
666.10	0.00	0.00	666.61	1.88	0.16
666.11	0.00	0.00	666.62	1.97	0.18
666.12	0.00	0.00	666.63	2.06	0.21
666.13	0.00	0.00	666.64	2.14	0.23
666.14	0.00	0.00	666.65	2.22	0.26
666.15	0.00	0.00	666.66	2.29	0.29
666.16	0.00	0.00	666.67	2.35	0.31
666.17	0.00	0.00	666.68	2.40	0.34
666.18	0.00	0.00	666.69	2.46	0.36
666.19	0.00	0.00	666.70	2.50	0.39
666.20	0.00	0.00	666.71	2.54	0.41
666.21	0.00	0.00	666.72	2.58	0.44
666.22	0.00	0.00	666.73	2.61	0.46
666.23	0.00	0.00	666.74	2.63	0.48
666.24	0.00	0.00	666.75	2.65	0.50
666.25	0.00	0.00	666.76	2.67	0.52
666.26	0.00	0.00	666.77	2.68	0.53
666.27	0.00	0.00	666.78	**2.68**	0.55
666.28	0.00	0.00	666.79	2.68	0.56
666.29	0.00	0.00	666.80	2.67	0.57
666.30	0.00	0.00	666.81	2.66	0.58
666.31	0.00	0.00	666.82	2.63	0.59
666.32	0.00	0.00	666.83	2.60	**0.59**
666.33	0.00	0.00	666.84	2.54	0.58
666.34	0.00	0.00	666.85	2.39	0.55
666.35	0.00	0.00			

Stage-Area-Storage for Reach 19R: inlet 1 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	0
665.90	0.0	0	666.41	0.0	0
665.91	0.0	0	666.42	0.0	0
665.92	0.0	0	666.43	0.0	0
665.93	0.0	0	666.44	0.0	0
665.94	0.0	0	666.45	0.0	0
665.95	0.0	0	666.46	0.0	0
665.96	0.0	0	666.47	0.0	0
665.97	0.0	0	666.48	0.0	0
665.98	0.0	0	666.49	0.0	0
665.99	0.0	0	666.50	0.0	0
666.00	0.0	0	666.51	0.0	0
666.01	0.0	0	666.52	0.0	0
666.02	0.0	0	666.53	0.0	1
666.03	0.0	0	666.54	0.0	2
666.04	0.0	0	666.55	0.0	2
666.05	0.0	0	666.56	0.0	3
666.06	0.0	0	666.57	0.0	4
666.07	0.0	0	666.58	0.1	4
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	6
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	7
666.12	0.0	0	666.63	0.1	7
666.13	0.0	0	666.64	0.1	8
666.14	0.0	0	666.65	0.1	9
666.15	0.0	0	666.66	0.1	9
666.16	0.0	0	666.67	0.1	10
666.17	0.0	0	666.68	0.1	10
666.18	0.0	0	666.69	0.1	11
666.19	0.0	0	666.70	0.2	11
666.20	0.0	0	666.71	0.2	12
666.21	0.0	0	666.72	0.2	12
666.22	0.0	0	666.73	0.2	13
666.23	0.0	0	666.74	0.2	13
666.24	0.0	0	666.75	0.2	14
666.25	0.0	0	666.76	0.2	14
666.26	0.0	0	666.77	0.2	15
666.27	0.0	0	666.78	0.2	15
666.28	0.0	0	666.79	0.2	15
666.29	0.0	0	666.80	0.2	16
666.30	0.0	0	666.81	0.2	16
666.31	0.0	0	666.82	0.2	16
666.32	0.0	0	666.83	0.2	16
666.33	0.0	0	666.84	0.2	17
666.34	0.0	0	666.85	**0.2**	**17**
666.35	0.0	0			

Summary for Reach 20R: MH3 15"

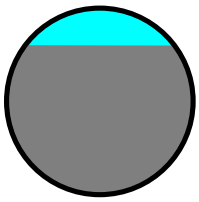
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 155% of Manning's capacity
[76] Warning: Detained 0.010 af (Pond w/culvert advised)

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.55 cfs @ 12.14 hrs, Volume= 0.073 af
Outflow = 0.37 cfs @ 12.05 hrs, Volume= 0.073 af, Atten= 33%, Lag= 0.0 min

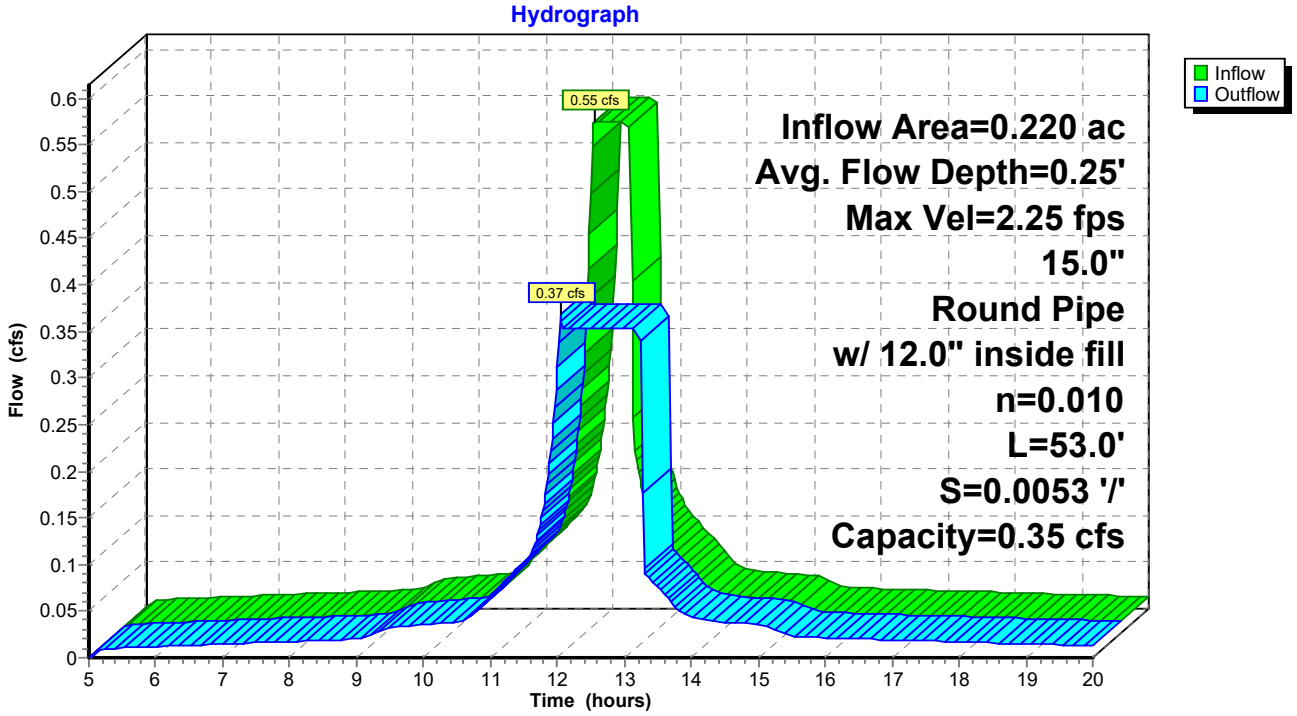
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.25 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.05 fps, Avg. Travel Time= 0.8 min

Peak Storage= 9 cf @ 12.06 hrs
Average Depth at Peak Storage= 1.25' above invert (0.25' above fill)
Bank-Full Depth= 1.25' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.35 cfs

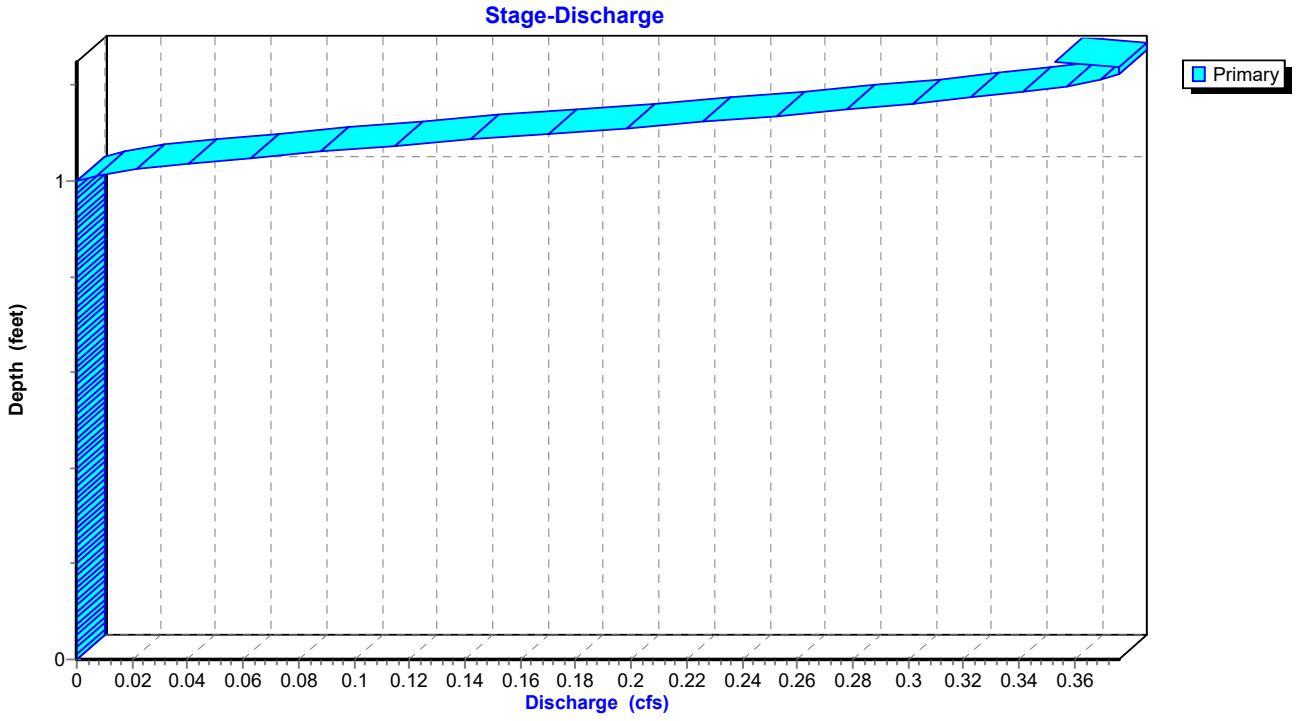
15.0" Round Pipe w/ 12.0" inside fill
n= 0.010
Length= 53.0' Slope= 0.0053 '/'
Inlet Invert= 663.47', Outlet Invert= 663.19'



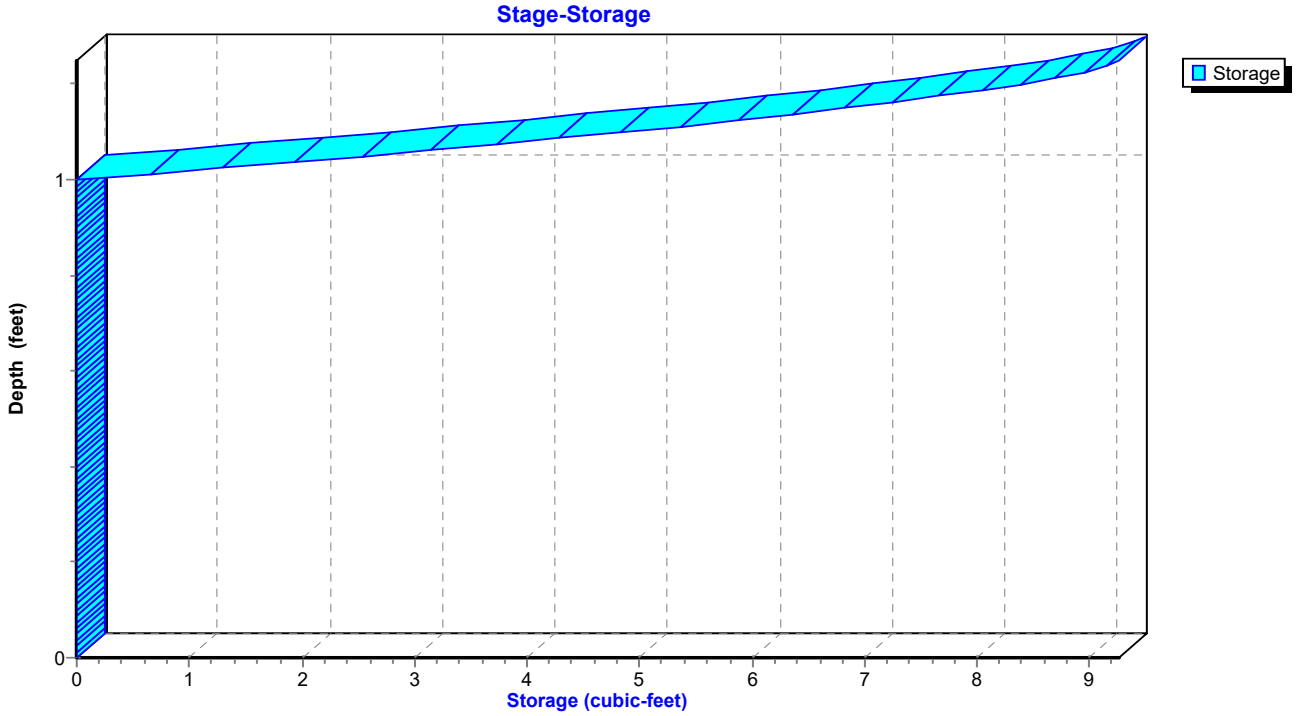
Reach 20R: MH3 15"



Reach 20R: MH3 15"



Reach 20R: MH3 15"



Hydrograph for Reach 20R: MH3 15"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	664.47	0.00
5.40	0.01	1	664.49	0.01
5.80	0.01	1	664.49	0.01
6.20	0.01	1	664.49	0.01
6.60	0.01	1	664.49	0.01
7.00	0.01	1	664.49	0.01
7.40	0.02	1	664.49	0.02
7.80	0.02	1	664.49	0.02
8.20	0.02	1	664.49	0.02
8.60	0.02	1	664.49	0.02
9.00	0.02	1	664.49	0.02
9.40	0.03	2	664.50	0.03
9.80	0.03	2	664.50	0.03
10.20	0.04	2	664.50	0.04
10.60	0.04	2	664.51	0.04
11.00	0.07	3	664.52	0.07
11.40	0.10	3	664.54	0.10
11.80	**0.17**	**5**	**664.57**	**0.17**
12.20	**0.55**	**9**	**664.72**	**0.35**
12.60	0.55	9	664.72	0.35
13.00	0.12	9	664.72	0.35
13.40	0.08	3	664.53	0.08
13.80	0.05	2	664.51	0.05
14.20	0.04	2	664.51	0.04
14.60	0.04	2	664.51	0.04
15.00	0.04	2	664.50	0.04
15.40	0.02	1	664.50	0.03
15.80	0.02	1	664.50	0.02
16.20	0.02	1	664.49	0.02
16.60	0.02	1	664.49	0.02
17.00	0.02	1	664.49	0.02
17.40	0.02	1	664.49	0.02
17.80	0.02	1	664.49	0.02
18.20	0.02	1	664.49	0.02
18.60	0.02	1	664.49	0.02
19.00	0.01	1	664.49	0.01
19.40	0.01	1	664.49	0.01
19.80	0.01	1	664.49	0.01

Stage-Discharge for Reach 20R: MH3 15"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
663.47	0.00	0.00
663.48	0.00	0.00
663.49	0.00	0.00
663.50	0.00	0.00
663.51	0.00	0.00
663.52	0.00	0.00
663.53	0.00	0.00
663.54	0.00	0.00
663.55	0.00	0.00
663.56	0.00	0.00
663.57	0.00	0.00
663.58	0.00	0.00
663.59	0.00	0.00
663.60	0.00	0.00
663.61	0.00	0.00
663.62	0.00	0.00
663.63	0.00	0.00
663.64	0.00	0.00
663.65	0.00	0.00
663.66	0.00	0.00
663.67	0.00	0.00
663.68	0.00	0.00
663.69	0.00	0.00
663.70	0.00	0.00
663.71	0.00	0.00
663.72	0.00	0.00
663.73	0.00	0.00
663.74	0.00	0.00
663.75	0.00	0.00
663.76	0.00	0.00
663.77	0.00	0.00
663.78	0.00	0.00
663.79	0.00	0.00
663.80	0.00	0.00
663.81	0.00	0.00
663.82	0.00	0.00
663.83	0.00	0.00
663.84	0.00	0.00
663.85	0.00	0.00
663.86	0.00	0.00
663.87	0.00	0.00
663.88	0.00	0.00
663.89	0.00	0.00
663.90	0.00	0.00
663.91	0.00	0.00
663.92	0.00	0.00
663.93	0.00	0.00
663.94	0.00	0.00
663.95	0.00	0.00
663.96	0.00	0.00
663.97	0.00	0.00
663.98	0.00	0.00
663.99	0.00	0.00
664.00	0.00	0.00
664.01	0.00	0.00
664.02	0.00	0.00
664.03	0.00	0.00
664.04	0.00	0.00
664.05	0.00	0.00
664.06	0.00	0.00
664.07	0.00	0.00
664.08	0.00	0.00
664.09	0.00	0.00
664.10	0.00	0.00
664.11	0.00	0.00
664.12	0.00	0.00
664.13	0.00	0.00
664.14	0.00	0.00
664.15	0.00	0.00
664.16	0.00	0.00
664.17	0.00	0.00
664.18	0.00	0.00
664.19	0.00	0.00
664.20	0.00	0.00
664.21	0.00	0.00
664.22	0.00	0.00
664.23	0.00	0.00
664.24	0.00	0.00
664.25	0.00	0.00
664.26	0.00	0.00
664.27	0.00	0.00
664.28	0.00	0.00
664.29	0.00	0.00
664.30	0.00	0.00
664.31	0.00	0.00
664.32	0.00	0.00
664.33	0.00	0.00
664.34	0.00	0.00
664.35	0.00	0.00
664.36	0.00	0.00
664.37	0.00	0.00
664.38	0.00	0.00
664.39	0.00	0.00
664.40	0.00	0.00
664.41	0.00	0.00
664.42	0.00	0.00
664.43	0.00	0.00
664.44	0.00	0.00
664.45	0.00	0.00
664.46	0.00	0.00
664.47	0.00	0.00
664.48	0.45	0.01
664.49	0.75	0.02
664.50	0.97	0.03
664.51	1.16	0.05
664.52	1.31	0.06
664.53	1.45	0.08
664.54	1.57	0.10
664.55	1.68	0.13
664.56	1.78	0.15
664.57	1.86	0.17
664.58	1.94	0.19
664.59	2.00	0.21
664.60	2.06	0.24
664.61	2.11	0.26
664.62	2.16	0.28
664.63	2.19	0.30
664.64	2.22	0.31
664.65	2.24	0.33
664.66	2.25	0.34
664.67	**2.26**	0.36
664.68	2.25	0.37
664.69	2.24	0.37
664.70	2.21	**0.38**
664.71	2.15	0.37
664.72	2.02	0.35

Stage-Area-Storage for Reach 20R: MH3 15"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
663.47	0.0	0
663.49	0.0	0
663.51	0.0	0
663.53	0.0	0
663.55	0.0	0
663.57	0.0	0
663.59	0.0	0
663.61	0.0	0
663.63	0.0	0
663.65	0.0	0
663.67	0.0	0
663.69	0.0	0
663.71	0.0	0
663.73	0.0	0
663.75	0.0	0
663.77	0.0	0
663.79	0.0	0
663.81	0.0	0
663.83	0.0	0
663.85	0.0	0
663.87	0.0	0
663.89	0.0	0
663.91	0.0	0
663.93	0.0	0
663.95	0.0	0
663.97	0.0	0
663.99	0.0	0
664.01	0.0	0
664.03	0.0	0
664.05	0.0	0
664.07	0.0	0
664.09	0.0	0
664.11	0.0	0
664.13	0.0	0
664.15	0.0	0
664.17	0.0	0
664.19	0.0	0
664.21	0.0	0
664.23	0.0	0
664.25	0.0	0
664.27	0.0	0
664.29	0.0	0
664.31	0.0	0
664.33	0.0	0
664.35	0.0	0
664.37	0.0	0
664.39	0.0	0
664.41	0.0	0
664.43	0.0	0
664.45	0.0	0
664.47	0.0	0
664.49	0.0	1
664.51	0.0	2
664.53	0.1	3
664.55	0.1	4
664.57	0.1	5
664.59	0.1	6
664.61	0.1	6
664.63	0.1	7
664.65	0.1	8
664.67	0.2	8
664.69	0.2	9
664.71	**0.2**	**9**

Summary for Reach 21R: MH2 15"

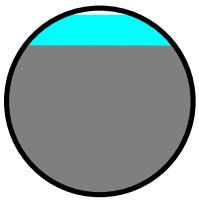
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 105% of Manning's capacity
[61] Hint: Exceeded Reach 20R outlet invert by 1.10' @ 12.06 hrs

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 4.00" for 10-yr event
Inflow = 0.37 cfs @ 12.05 hrs, Volume= 0.073 af
Outflow = 0.36 cfs @ 12.09 hrs, Volume= 0.073 af, Atten= 2%, Lag= 2.5 min

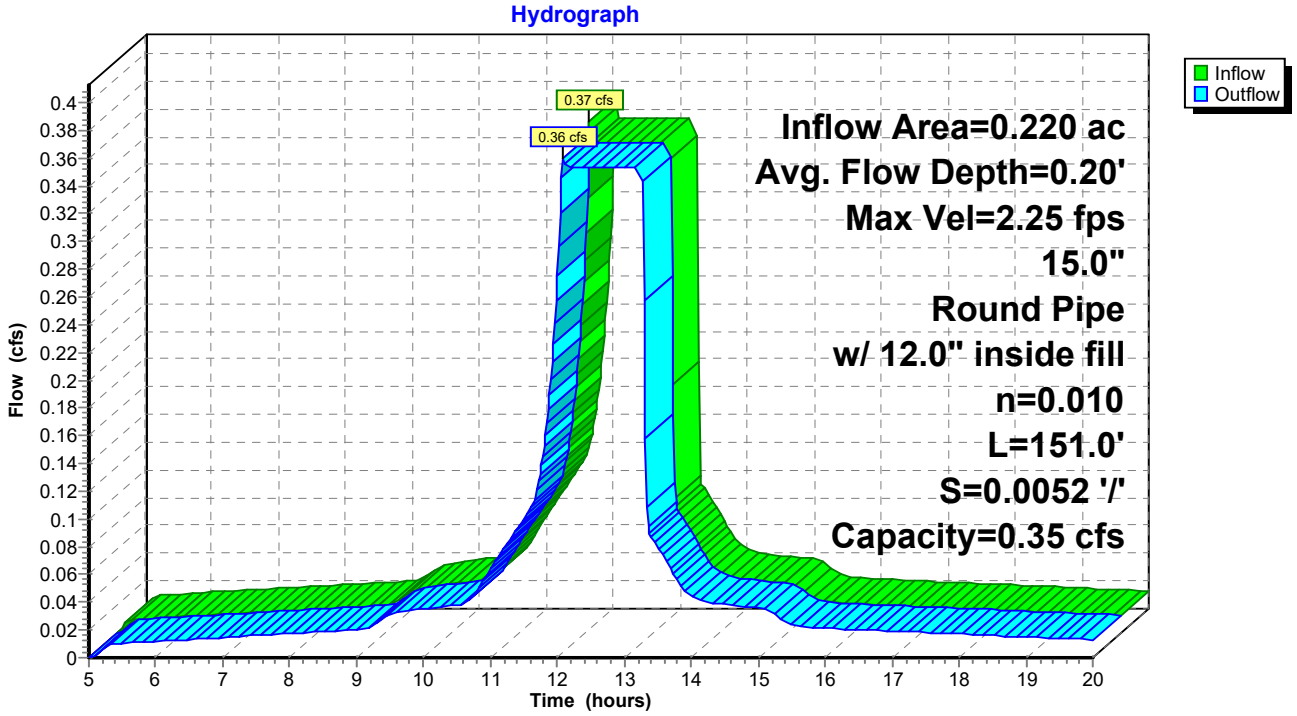
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.25 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 1.06 fps, Avg. Travel Time= 2.4 min

Peak Storage= 24 cf @ 12.07 hrs
Average Depth at Peak Storage= 1.20' above invert (0.20' above fill)
Bank-Full Depth= 1.25' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.35 cfs

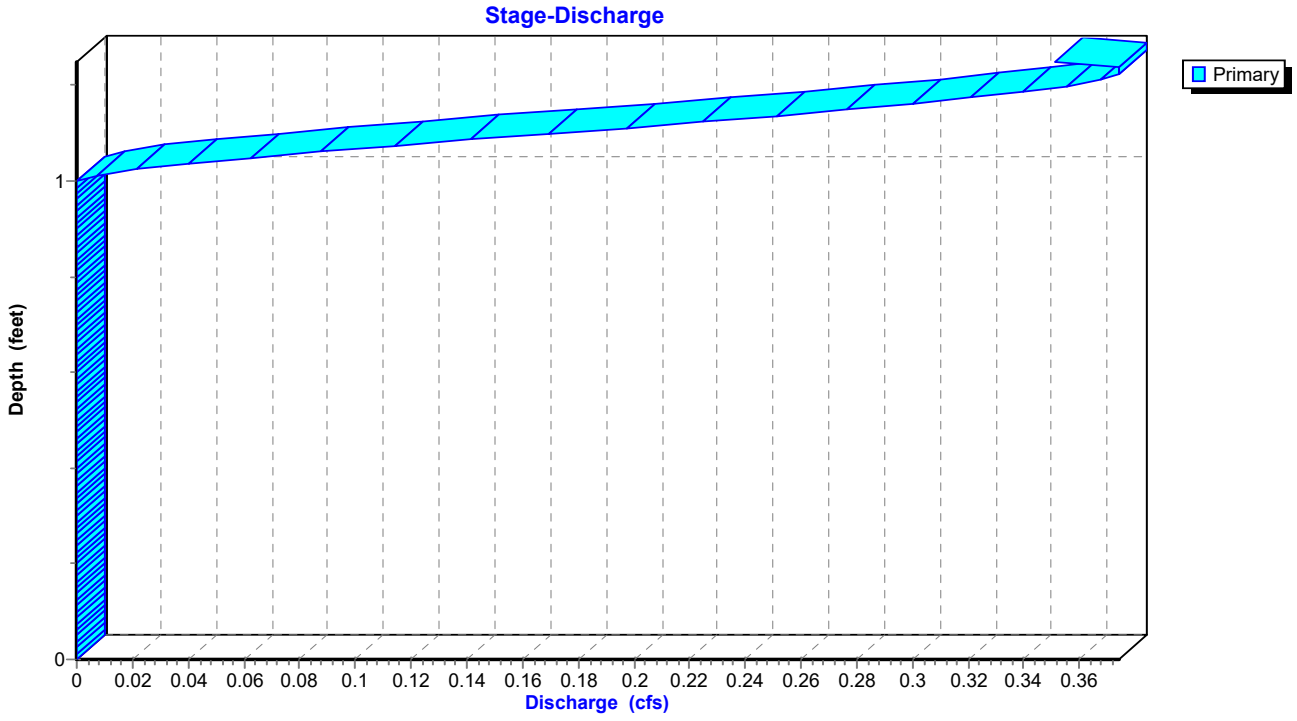
15.0" Round Pipe w/ 12.0" inside fill
n= 0.010
Length= 151.0' Slope= 0.0052 '/'
Inlet Invert= 663.09', Outlet Invert= 662.30'



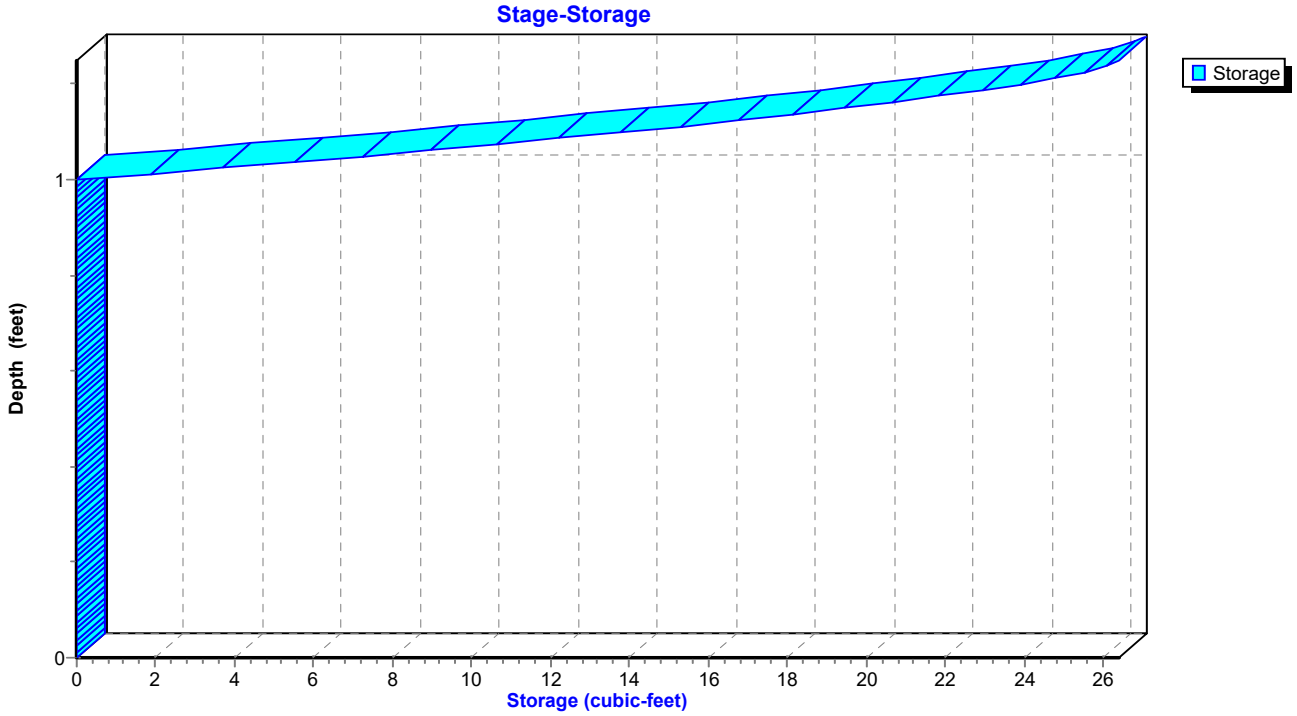
Reach 21R: MH2 15"



Reach 21R: MH2 15"



Reach 21R: MH2 15"



Hydrograph for Reach 21R: MH2 15"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	664.09	0.00
5.40	0.01	2	664.11	0.01
5.80	0.01	2	664.11	0.01
6.20	0.01	3	664.11	0.01
6.60	0.01	3	664.11	0.01
7.00	0.01	3	664.11	0.01
7.40	0.02	3	664.11	0.02
7.80	0.02	3	664.11	0.02
8.20	0.02	3	664.11	0.02
8.60	0.02	3	664.11	0.02
9.00	0.02	4	664.11	0.02
9.40	0.03	4	664.12	0.03
9.80	0.03	5	664.12	0.03
10.20	0.04	5	664.12	0.04
10.60	0.04	5	664.13	0.04
11.00	0.07	7	664.14	0.06
11.40	0.10	9	664.16	0.09
11.80	**0.17**	**13**	**664.19**	**0.15**
12.20	**0.35**	**24**	**664.29**	**0.35**
12.60	0.35	24	664.29	0.35
13.00	0.35	24	664.29	0.35
13.40	0.08	9	664.15	0.09
13.80	0.05	7	664.13	0.06
14.20	0.04	5	664.13	0.04
14.60	0.04	5	664.13	0.04
15.00	0.04	5	664.12	0.04
15.40	0.03	4	664.12	0.03
15.80	0.02	4	664.12	0.02
16.20	0.02	4	664.11	0.02
16.60	0.02	4	664.11	0.02
17.00	0.02	3	664.11	0.02
17.40	0.02	3	664.11	0.02
17.80	0.02	3	664.11	0.02
18.20	0.02	3	664.11	0.02
18.60	0.02	3	664.11	0.02
19.00	0.01	3	664.11	0.02
19.40	0.01	3	664.11	0.01
19.80	0.01	3	664.11	0.01

Stage-Discharge for Reach 21R: MH2 15"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
663.09	0.00	0.00
663.10	0.00	0.00
663.11	0.00	0.00
663.12	0.00	0.00
663.13	0.00	0.00
663.14	0.00	0.00
663.15	0.00	0.00
663.16	0.00	0.00
663.17	0.00	0.00
663.18	0.00	0.00
663.19	0.00	0.00
663.20	0.00	0.00
663.21	0.00	0.00
663.22	0.00	0.00
663.23	0.00	0.00
663.24	0.00	0.00
663.25	0.00	0.00
663.26	0.00	0.00
663.27	0.00	0.00
663.28	0.00	0.00
663.29	0.00	0.00
663.30	0.00	0.00
663.31	0.00	0.00
663.32	0.00	0.00
663.33	0.00	0.00
663.34	0.00	0.00
663.35	0.00	0.00
663.36	0.00	0.00
663.37	0.00	0.00
663.38	0.00	0.00
663.39	0.00	0.00
663.40	0.00	0.00
663.41	0.00	0.00
663.42	0.00	0.00
663.43	0.00	0.00
663.44	0.00	0.00
663.45	0.00	0.00
663.46	0.00	0.00
663.47	0.00	0.00
663.48	0.00	0.00
663.49	0.00	0.00
663.50	0.00	0.00
663.51	0.00	0.00
663.52	0.00	0.00
663.53	0.00	0.00
663.54	0.00	0.00
663.55	0.00	0.00
663.56	0.00	0.00
663.57	0.00	0.00
663.58	0.00	0.00
663.59	0.00	0.00
663.60	0.00	0.00
663.61	0.00	0.00
663.62	0.00	0.00
663.63	0.00	0.00
663.64	0.00	0.00
663.65	0.00	0.00
663.66	0.00	0.00
663.67	0.00	0.00
663.68	0.00	0.00
663.69	0.00	0.00
663.70	0.00	0.00
663.71	0.00	0.00
663.72	0.00	0.00
663.73	0.00	0.00
663.74	0.00	0.00
663.75	0.00	0.00
663.76	0.00	0.00
663.77	0.00	0.00
663.78	0.00	0.00
663.79	0.00	0.00
663.80	0.00	0.00
663.81	0.00	0.00
663.82	0.00	0.00
663.83	0.00	0.00
663.84	0.00	0.00
663.85	0.00	0.00
663.86	0.00	0.00
663.87	0.00	0.00
663.88	0.00	0.00
663.89	0.00	0.00
663.90	0.00	0.00
663.91	0.00	0.00
663.92	0.00	0.00
663.93	0.00	0.00
663.94	0.00	0.00
663.95	0.00	0.00
663.96	0.00	0.00
663.97	0.00	0.00
663.98	0.00	0.00
663.99	0.00	0.00
664.00	0.00	0.00
664.01	0.00	0.00
664.02	0.00	0.00
664.03	0.00	0.00
664.04	0.00	0.00
664.05	0.00	0.00
664.06	0.00	0.00
664.07	0.00	0.00
664.08	0.00	0.00
664.09	0.00	0.00
664.10	0.45	0.01
664.11	0.75	0.02
664.12	0.97	0.03
664.13	1.15	0.04
664.14	1.31	0.06
664.15	1.44	0.08
664.16	1.56	0.10
664.17	1.67	0.12
664.18	1.77	0.15
664.19	1.85	0.17
664.20	1.93	0.19
664.21	1.99	0.21
664.22	2.05	0.24
664.23	2.10	0.26
664.24	2.15	0.28
664.25	2.18	0.30
664.26	2.21	0.31
664.27	2.23	0.33
664.28	2.24	0.34
664.29	**2.25**	0.36
664.30	2.24	0.36
664.31	2.23	0.37
664.32	2.20	**0.37**
664.33	2.13	0.37
664.34	2.01	0.35

Stage-Area-Storage for Reach 21R: MH2 15"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
663.09	0.0	0
663.11	0.0	0
663.13	0.0	0
663.15	0.0	0
663.17	0.0	0
663.19	0.0	0
663.21	0.0	0
663.23	0.0	0
663.25	0.0	0
663.27	0.0	0
663.29	0.0	0
663.31	0.0	0
663.33	0.0	0
663.35	0.0	0
663.37	0.0	0
663.39	0.0	0
663.41	0.0	0
663.43	0.0	0
663.45	0.0	0
663.47	0.0	0
663.49	0.0	0
663.51	0.0	0
663.53	0.0	0
663.55	0.0	0
663.57	0.0	0
663.59	0.0	0
663.61	0.0	0
663.63	0.0	0
663.65	0.0	0
663.67	0.0	0
663.69	0.0	0
663.71	0.0	0
663.73	0.0	0
663.75	0.0	0
663.77	0.0	0
663.79	0.0	0
663.81	0.0	0
663.83	0.0	0
663.85	0.0	0
663.87	0.0	0
663.89	0.0	0
663.91	0.0	0
663.93	0.0	0
663.95	0.0	0
663.97	0.0	0
663.99	0.0	0
664.01	0.0	0
664.03	0.0	0
664.05	0.0	0
664.07	0.0	0
664.09	0.0	0
664.11	0.0	3
664.13	0.0	6
664.15	0.1	9
664.17	0.1	11
664.19	0.1	14
664.21	0.1	16
664.23	0.1	18
664.25	0.1	20
664.27	0.1	22
664.29	0.2	24
664.31	0.2	25
664.33	**0.2**	**26**

Summary for Reach 22R: NDS2 6"

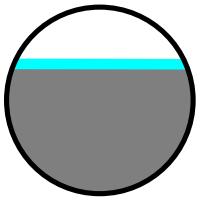
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.031 ac, 3.23% Impervious, Inflow Depth > 0.74" for 10-yr event
Inflow = 0.01 cfs @ 12.83 hrs, Volume= 0.002 af
Outflow = 0.01 cfs @ 12.90 hrs, Volume= 0.002 af, Atten= 0%, Lag= 4.2 min

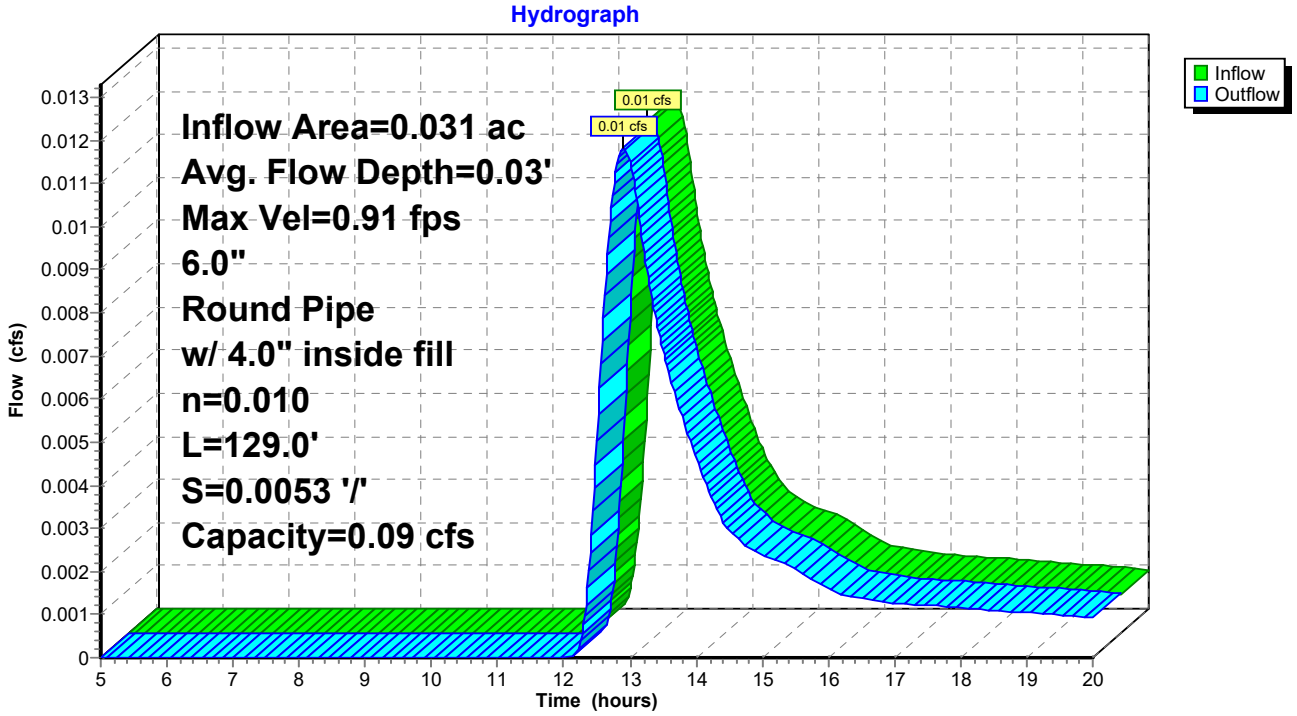
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.91 fps, Min. Travel Time= 2.4 min
Avg. Velocity = 0.49 fps, Avg. Travel Time= 4.4 min

Peak Storage= 2 cf @ 12.86 hrs
Average Depth at Peak Storage= 0.36' above invert (0.03' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

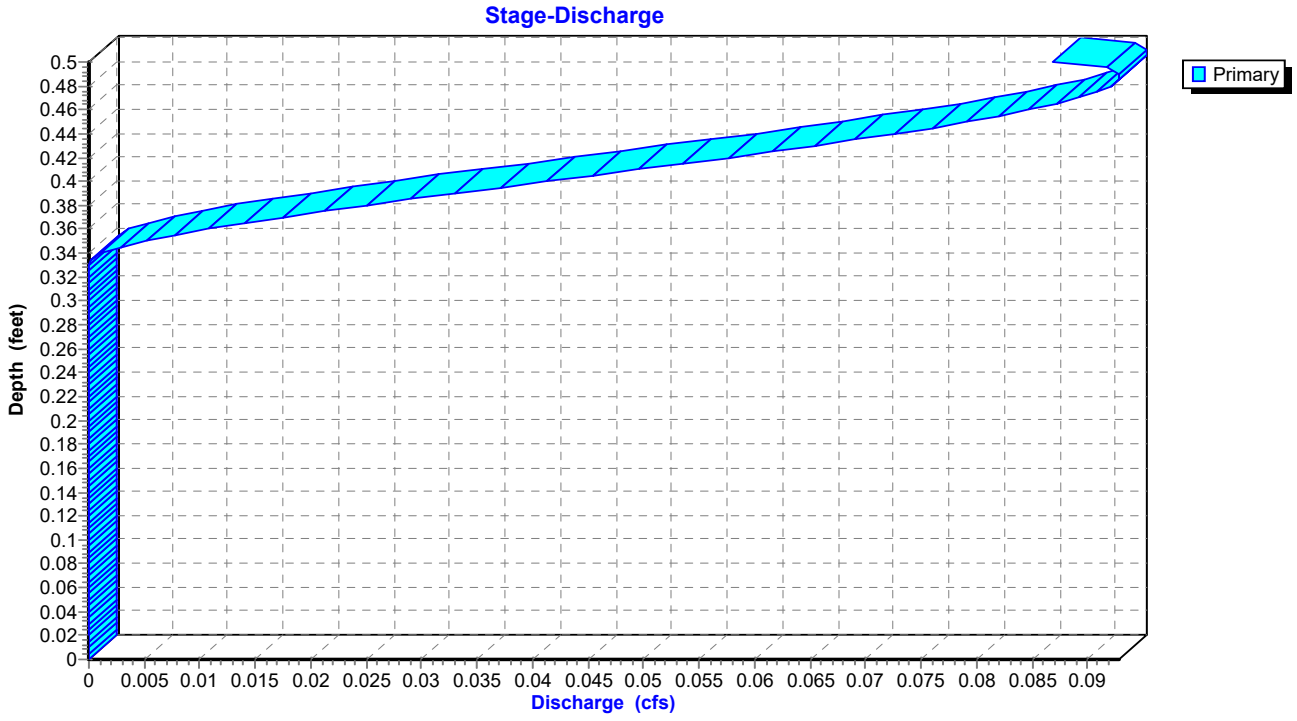
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0053 '/'
Inlet Invert= 668.86', Outlet Invert= 668.18'



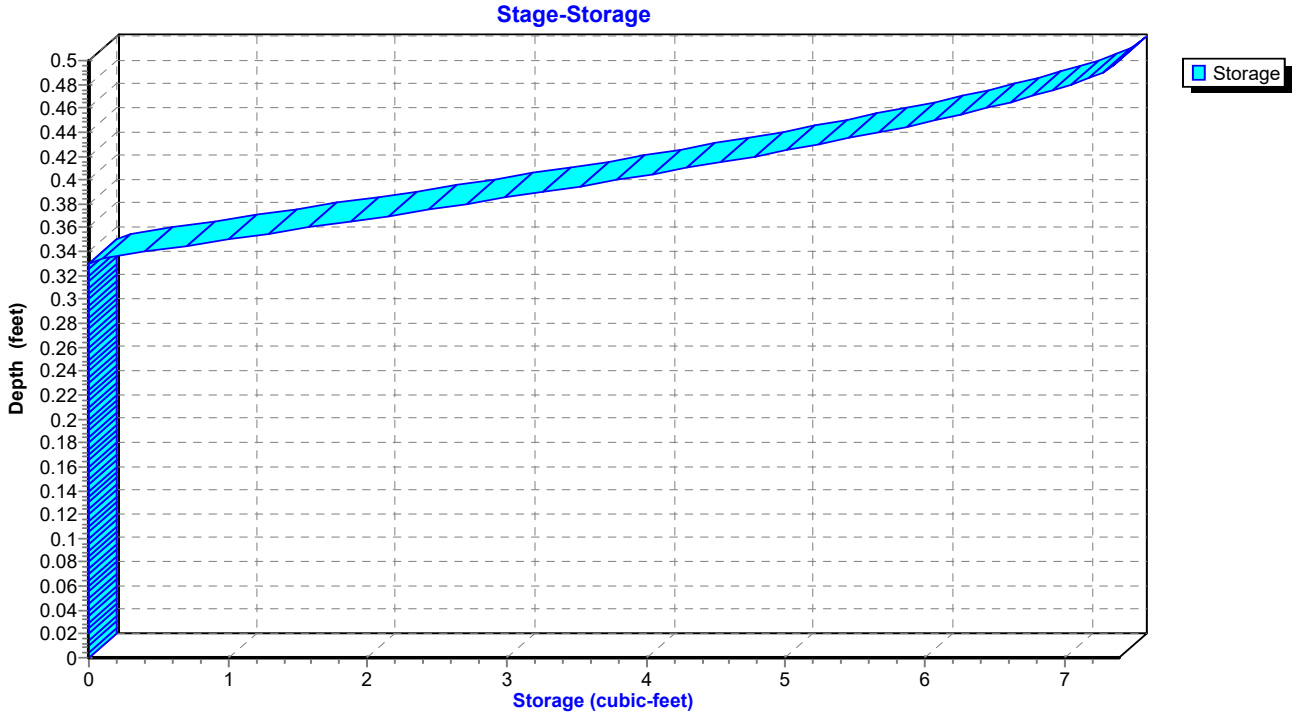
Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Hydrograph for Reach 22R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.19	0.00
5.40	0.00	0	669.19	0.00
5.80	0.00	0	669.19	0.00
6.20	0.00	0	669.19	0.00
6.60	0.00	0	669.19	0.00
7.00	0.00	0	669.19	0.00
7.40	0.00	0	669.19	0.00
7.80	0.00	0	669.19	0.00
8.20	0.00	0	669.19	0.00
8.60	0.00	0	669.19	0.00
9.00	0.00	0	669.19	0.00
9.40	0.00	0	669.19	0.00
9.80	0.00	0	669.19	0.00
10.20	0.00	0	669.19	0.00
10.60	0.00	0	669.19	0.00
11.00	0.00	0	669.19	0.00
11.40	0.00	0	669.19	0.00
11.80	0.00	0	669.19	0.00
12.20	0.00	0	669.20	0.00
12.60	**0.01**	**1**	**669.22**	**0.01**
13.00	**0.01**	**2**	**669.22**	**0.01**
13.40	0.01	1	669.21	0.01
13.80	0.01	1	669.21	0.01
14.20	0.00	1	669.21	0.00
14.60	0.00	1	669.20	0.00
15.00	0.00	1	669.20	0.00
15.40	0.00	1	669.20	0.00
15.80	0.00	1	669.20	0.00
16.20	0.00	0	669.20	0.00
16.60	0.00	0	669.20	0.00
17.00	0.00	0	669.20	0.00
17.40	0.00	0	669.20	0.00
17.80	0.00	0	669.20	0.00
18.20	0.00	0	669.20	0.00
18.60	0.00	0	669.20	0.00
19.00	0.00	0	669.20	0.00
19.40	0.00	0	669.20	0.00
19.80	0.00	0	669.20	0.00

Stage-Discharge for Reach 22R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.00	0.00
669.19	0.00	0.00
669.20	0.37	0.00
669.21	0.66	0.01
669.22	0.88	0.01
669.23	1.05	0.02
669.24	1.19	0.03
669.25	1.31	0.03
669.26	1.41	0.04
669.27	1.49	0.05
669.28	1.56	0.06
669.29	1.61	0.07
669.30	1.65	0.07
669.31	1.68	0.08
669.32	1.70	0.08
669.33	**1.70**	0.09
669.34	1.69	0.09
669.35	1.65	**0.09**
669.36	1.52	0.09

Stage-Area-Storage for Reach 22R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	0
669.20	0.0	0
669.21	0.0	1
669.22	0.0	2
669.23	0.0	2
669.24	0.0	3
669.25	0.0	3
669.26	0.0	4
669.27	0.0	4
669.28	0.0	5
669.29	0.0	5
669.30	0.0	6
669.31	0.0	6
669.32	0.0	6
669.33	0.1	7
669.34	0.1	7
669.35	0.1	7
669.36	**0.1**	**7**

Summary for Pond 4P: stormtech SC310 16"x34" chambers

[44] Hint: Outlet device #2 is below defined storage
[61] Hint: Exceeded Reach 10R outlet invert by 1.23' @ 12.58 hrs
[62] Hint: Exceeded Reach 12R OUTLET depth by 0.01' @ 12.64 hrs
[61] Hint: Exceeded Reach 13R outlet invert by 0.23' @ 12.58 hrs
[61] Hint: Exceeded Reach 14R outlet invert by 0.23' @ 12.58 hrs
[61] Hint: Exceeded Reach 15R outlet invert by 0.23' @ 12.58 hrs

Inflow Area = 1.066 ac, 91.74% Impervious, Inflow Depth > 3.66" for 10-yr event
Inflow = 1.46 cfs @ 12.19 hrs, Volume= 0.325 af
Outflow = 0.65 cfs @ 12.58 hrs, Volume= 0.294 af, Atten= 56%, Lag= 23.2 min
Primary = 0.35 cfs @ 12.58 hrs, Volume= 0.070 af
Secondary = 0.30 cfs @ 12.58 hrs, Volume= 0.224 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 666.23' @ 12.58 hrs Surf.Area= 0.106 ac Storage= 0.070 af

Plug-Flow detention time= 89.0 min calculated for 0.293 af (90% of inflow)
Center-of-Mass det. time= 56.8 min (869.5 - 812.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	664.40'	0.076 af	**36.00'W x 120.45'L x 2.33'H Field A Z=0.5** 0.242 af Overall - 0.011 af Embedded = 0.231 af x 33.0% Voids
#2A	664.90'	0.011 af	**ADS_StormTech RC-310 +Cap** x 32 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 2 Rows
#3	665.00'	0.001 af	**8.0" Round Pipe Storage** L= 87.0' S= 0.5200 '/'
#4	664.90'	0.001 af	**12.0" Round Pipe Storage** L= 45.0' S= 0.7300 '/'
#5	665.40'	0.000 af	**12.0" Round Pipe Storage** L= 23.0' S= 0.5200 '/'
#6	665.58'	0.001 af	**10.0" Round Pipe Storage** L= 69.0' S= 0.5200 '/'
		0.090 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	665.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.75 0.75 2.10 2.10 3.00 Width (feet) 0.00 0.17 0.17 4.00 4.00
#2	Secondary	664.00'	**Tube/Siphon/Float Valve** 4.000" Diameter, C= 0.600 136.0' Long Tube, Hazen-Williams C= 130 Inlet / Outlet Elev. = 664.00' / 664.00'

Primary OutFlow Max=0.35 cfs @ 12.58 hrs HW=666.23' (Free Discharge)
↑—**1=Custom Weir/Orifice** (Weir Controls 0.35 cfs @ 2.80 fps)

Secondary OutFlow Max=0.30 cfs @ 12.58 hrs HW=666.23' (Free Discharge)
↑—**2=Tube/Siphon/Float Valve** (Tube Controls 0.30 cfs @ 3.40 fps)

Pond 4P: stormtech SC310 16"x34" chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-310 +Cap (ADS StormTech®RC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 48.0" Spacing = 82.0" C-C Row Spacing

16 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 115.12' Row Length +32.0" End Stone x 2 = 120.45' Base Length
2 Rows x 34.0" Wide + 48.0" Spacing x 1 + 158.0" Side Stone x 2 = 36.00' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

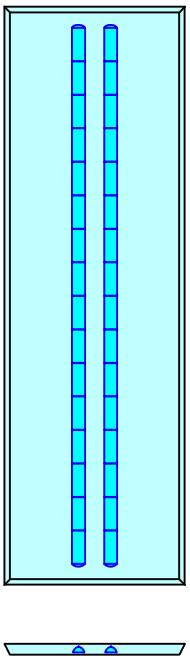
0.5 '/' Side-Z x Height = 14.0" Flare/Side
Base Length + Flare x 2 = 122.79' Top Length
Base Width + Flare x 2 = 38.33' Top Width

32 Chambers x 14.7 cf = 471.7 cf Chamber Storage

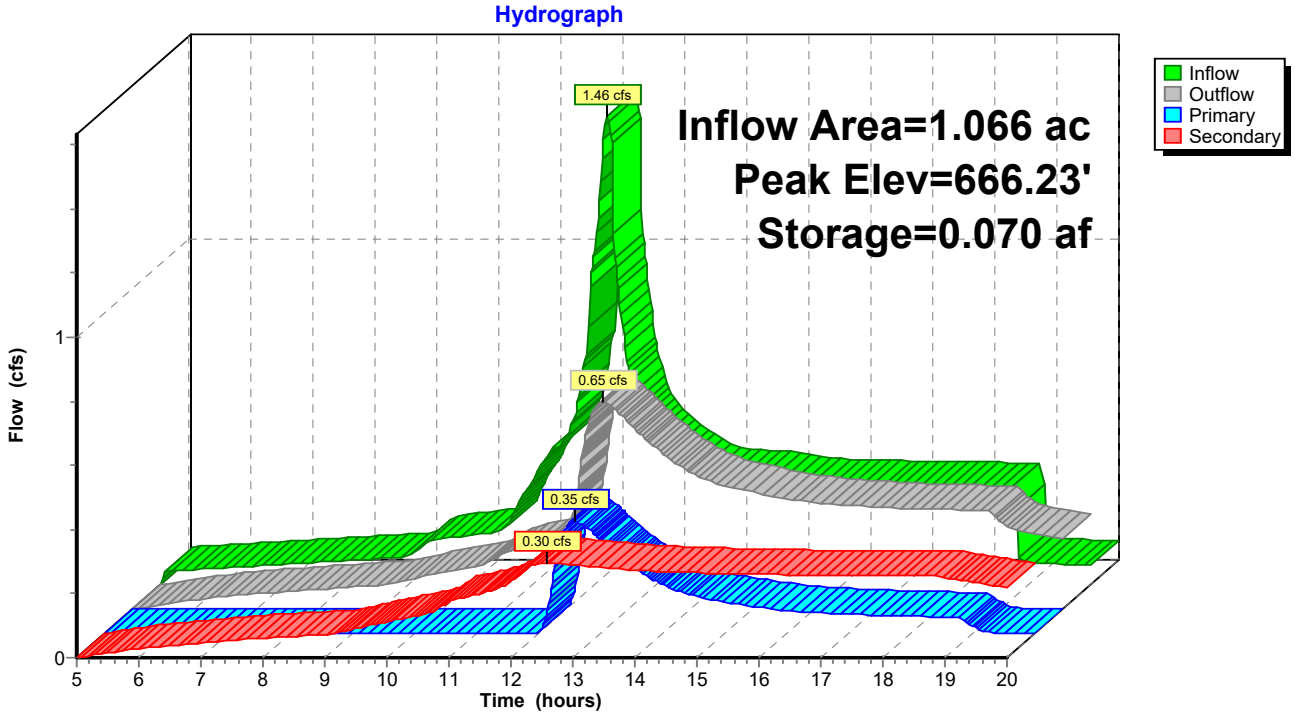
10,548.2 cf Field - 471.7 cf Chambers = 10,076.5 cf Stone x 33.0% Voids = 3,325.2 cf Stone Storage

Chamber Storage + Stone Storage = 3,797.0 cf = 0.087 af
Overall Storage Efficiency = 36.0%
Overall System Size = 120.45' x 36.00' x 2.33'

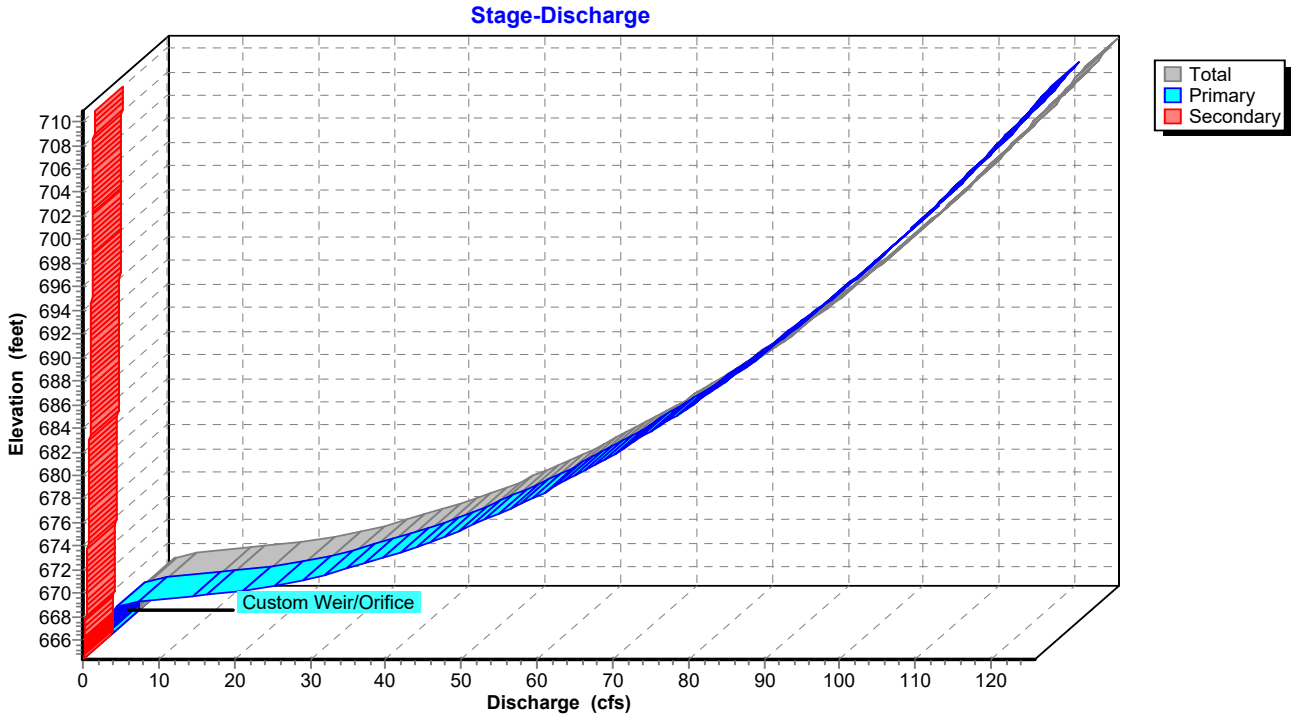
32 Chambers
390.7 cy Field
373.2 cy Stone



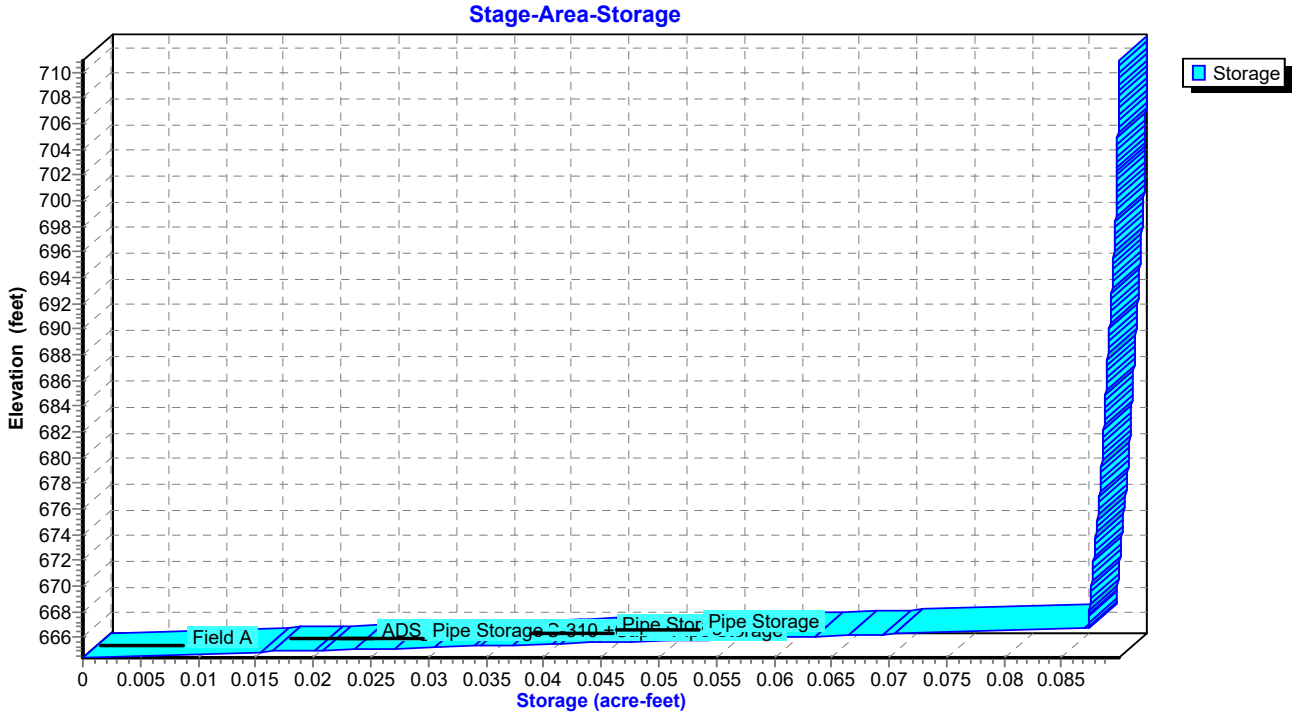
Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Hydrograph for Pond 4P: stormtech SC310 16"x34" chambers

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0.000	664.40	0.00	0.00	0.00
5.40	0.04	0.001	664.43	0.01	0.00	0.01
5.80	0.05	0.002	664.46	0.02	0.00	0.02
6.20	0.05	0.003	664.48	0.03	0.00	0.03
6.60	0.06	0.003	664.50	0.04	0.00	0.04
7.00	0.06	0.004	664.52	0.05	0.00	0.05
7.40	0.07	0.005	664.54	0.05	0.00	0.05
7.80	0.07	0.005	664.55	0.06	0.00	0.06
8.20	0.08	0.005	664.56	0.06	0.00	0.06
8.60	0.08	0.006	664.58	0.07	0.00	0.07
9.00	0.09	0.006	664.59	0.07	0.00	0.07
9.40	0.14	0.007	664.63	0.09	0.00	0.09
9.80	0.15	0.009	664.67	0.10	0.00	0.10
10.20	0.16	0.010	664.71	0.12	0.00	0.12
10.60	0.18	0.012	664.75	0.13	0.00	0.13
11.00	0.33	0.015	664.86	0.18	0.00	0.18
11.40	0.42	0.022	665.02	0.20	0.00	0.20
11.80	0.63	0.031	665.25	0.22	0.00	0.22
12.20	**1.46**	**0.057**	**665.89**	**0.41**	**0.14**	**0.27**
12.60	0.62	**0.069**	**666.23**	**0.64**	**0.35**	**0.30**
13.00	0.46	0.066	666.15	0.58	0.29	0.29
13.40	0.41	0.063	666.05	0.51	0.22	0.28
13.80	0.36	0.060	665.96	0.45	0.17	0.28
14.20	0.34	0.057	665.89	0.41	0.14	0.27
14.60	0.34	0.055	665.84	0.38	0.11	0.27
15.00	0.33	0.054	665.81	0.36	0.10	0.27
15.40	0.32	0.053	665.79	0.35	0.09	0.26
15.80	0.31	0.052	665.76	0.34	0.08	0.26
16.20	0.31	0.051	665.74	0.33	0.07	0.26
16.60	0.31	0.051	665.73	0.32	0.06	0.26
17.00	0.31	0.050	665.72	0.32	0.06	0.26
17.40	0.31	0.050	665.72	0.31	0.06	0.26
17.80	0.30	0.050	665.71	0.31	0.05	0.26
18.20	0.30	0.050	665.70	0.31	0.05	0.26
18.60	0.30	0.050	665.70	0.31	0.05	0.26
19.00	0.07	0.046	665.62	0.27	0.02	0.25
19.40	0.06	0.040	665.47	0.24	0.00	0.24
19.80	0.06	0.035	665.33	0.23	0.00	0.23

Stage-Discharge for Pond 4P: stormtech SC310 16"x34" chambers

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
664.40	0.00	0.00	0.00
664.90	0.18	0.00	0.18
665.40	0.23	0.00	0.23
665.90	0.41	0.14	0.27
666.40	0.78	0.48	0.31
666.90	1.40	1.06	0.34
667.40	6.94	6.57	0.37
667.90	15.20	14.80	0.40
668.40	20.51	20.09	0.42
668.90	24.60	24.15	0.45
669.40	28.07	27.60	0.47
669.90	31.15	30.65	0.50
670.40	33.94	33.43	0.52
670.90	36.52	35.98	0.54
671.40	38.93	38.37	0.56
671.90	41.19	40.61	0.58
672.40	43.34	42.74	0.60
672.90	45.38	44.76	0.62
673.40	47.33	46.70	0.64
673.90	49.21	48.56	0.65
674.40	51.02	50.35	0.67
674.90	52.76	52.08	0.69
675.40	54.45	53.75	0.70
675.90	56.09	55.37	0.72
676.40	57.68	56.95	0.74
676.90	59.23	58.48	0.75
677.40	60.74	59.98	0.77
677.90	62.22	61.43	0.78
678.40	63.65	62.86	0.80
678.90	65.06	64.25	0.81
679.40	66.44	65.61	0.82
679.90	67.79	66.95	0.84
680.40	69.11	68.26	0.85
680.90	70.41	69.54	0.87
681.40	71.68	70.80	0.88
681.90	72.94	72.04	0.89
682.40	74.17	73.26	0.91
682.90	75.38	74.46	0.92
683.40	76.57	75.64	0.93
683.90	77.74	76.80	0.94
684.40	78.90	77.94	0.96
684.90	80.04	79.07	0.97
685.40	81.16	80.18	0.98
685.90	82.27	81.28	0.99
686.40	83.36	82.36	1.01
686.90	84.44	83.43	1.02
687.40	85.51	84.48	1.03
687.90	86.56	85.52	1.04
688.40	87.60	86.55	1.05
688.90	88.63	87.57	1.06
689.40	89.65	88.57	1.08
689.90	90.65	89.56	1.09
690.40	91.64	90.55	1.10
690.90	92.63	91.52	1.11
691.40	93.60	92.48	1.12
691.90	94.56	93.43	1.13
692.40	95.51	94.37	1.14
692.90	96.46	95.31	1.15
693.40	97.39	96.23	1.16
693.90	98.32	97.15	1.17
694.40	99.23	98.05	1.18
694.90	100.14	98.95	1.19
695.40	101.04	99.84	1.20
695.90	101.94	100.72	1.21
696.40	102.82	101.60	1.22
696.90	103.70	102.47	1.23
697.40	104.57	103.32	1.24
697.90	105.43	104.18	1.25
698.40	106.29	105.02	1.26
698.90	107.13	105.86	1.27
699.40	107.98	106.70	1.28
699.90	108.81	107.52	1.29
700.40	109.64	108.34	1.30
700.90	110.46	109.15	1.31
701.40	111.28	109.96	1.32
701.90	112.09	110.76	1.33
702.40	112.90	111.56	1.34
702.90	113.70	112.35	1.35
703.40	114.49	113.14	1.36
703.90	115.28	113.91	1.37
704.40	116.06	114.69	1.37
704.90	116.84	115.46	1.38
705.40	117.61	116.22	1.39
705.90	118.38	116.98	1.40
706.40	119.14	117.73	1.41
706.90	119.90	118.48	1.42
707.40	120.65	119.23	1.43
707.90	121.40	119.97	1.44
708.40	122.15	120.70	1.44
708.90	122.89	121.43	1.45
709.40	123.62	122.16	1.46
709.90	124.35	122.88	1.47
710.40	125.08	123.60	1.48
710.90	**125.80**	**124.31**	**1.49**

Stage-Area-Storage for Pond 4P: stormtech SC310 16"x34" chambers

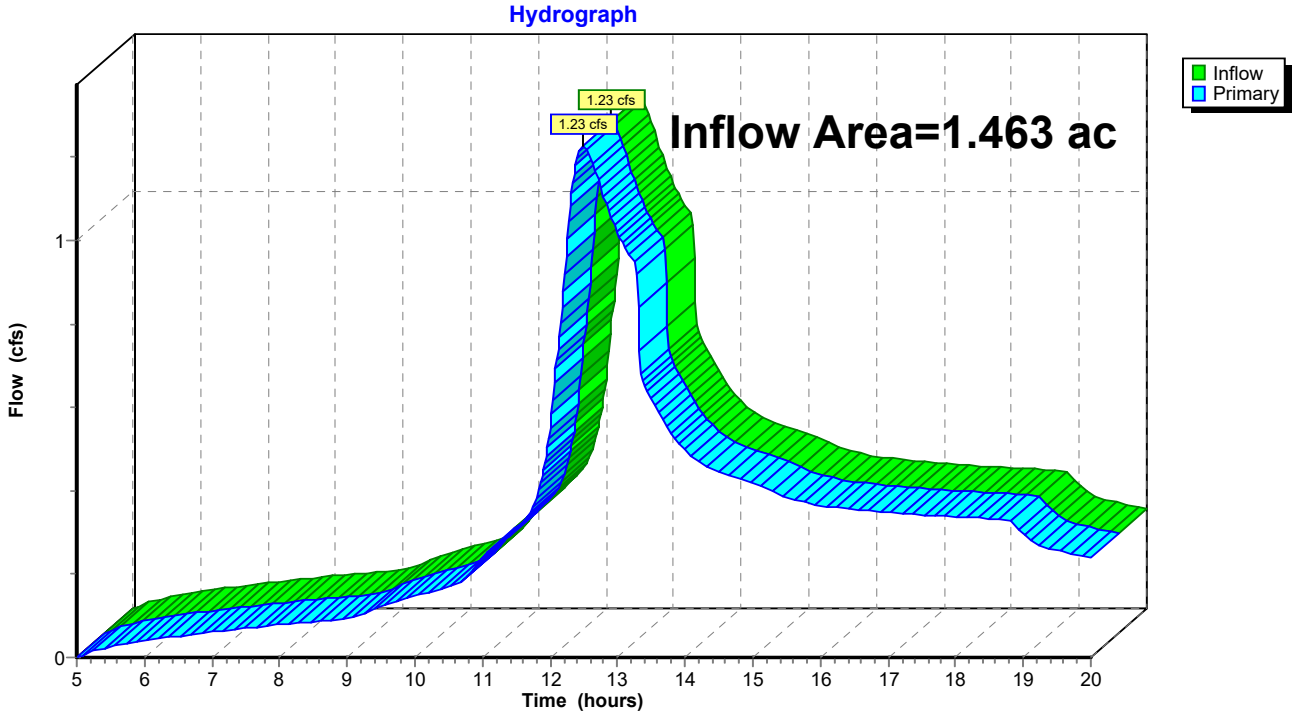
Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
664.40	0.000	689.90	0.089
664.90	0.017	690.40	0.089
665.40	0.037	690.90	0.089
665.90	0.057	691.40	0.089
666.40	0.075	691.90	0.089
666.90	0.087	692.40	0.089
667.40	0.087	692.90	0.089
667.90	0.087	693.40	0.089
668.40	0.087	693.90	0.089
668.90	0.087	694.40	0.089
669.40	0.088	694.90	0.089
669.90	0.088	695.40	0.089
670.40	0.088	695.90	0.090
670.90	0.088	696.40	0.090
671.40	0.088	696.90	0.090
671.90	0.088	697.40	0.090
672.40	0.088	697.90	0.090
672.90	0.088	698.40	0.090
673.40	0.088	698.90	0.090
673.90	0.088	699.40	0.090
674.40	0.088	699.90	0.090
674.90	0.088	700.40	0.090
675.40	0.088	700.90	0.090
675.90	0.088	701.40	0.090
676.40	0.088	701.90	0.090
676.90	0.088	702.40	0.090
677.40	0.088	702.90	0.090
677.90	0.088	703.40	0.090
678.40	0.088	703.90	0.090
678.90	0.088	704.40	0.090
679.40	0.088	704.90	0.090
679.90	0.088	705.40	0.090
680.40	0.089	705.90	0.090
680.90	0.089	706.40	0.090
681.40	0.089	706.90	0.090
681.90	0.089	707.40	0.090
682.40	0.089	707.90	0.090
682.90	0.089	708.40	0.090
683.40	0.089	708.90	0.090
683.90	0.089	709.40	0.090
684.40	0.089	709.90	0.090
684.90	0.089	710.40	0.090
685.40	0.089	710.90	**0.090**
685.90	0.089		
686.40	0.089		
686.90	0.089		
687.40	0.089		
687.90	0.089		
688.40	0.089		
688.90	0.089		
689.40	0.089		

Summary for Link 5L: HOM property run-off

Inflow Area = 1.463 ac, 87.83% Impervious, Inflow Depth > 3.20" for 10-yr event
Inflow = 1.23 cfs @ 12.50 hrs, Volume= 0.390 af
Primary = 1.23 cfs @ 12.50 hrs, Volume= 0.390 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Link 5L: HOM property run-off



Hydrograph for Link 5L: HOM property run-off

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00	15.20	0.41	0.00	0.41
5.20	0.01	0.00	0.01	15.40	0.39	0.00	0.39
5.40	0.02	0.00	0.02	15.60	0.38	0.00	0.38
5.60	0.03	0.00	0.03	15.80	0.37	0.00	0.37
5.80	0.03	0.00	0.03	16.00	0.37	0.00	0.37
6.00	0.04	0.00	0.04	16.20	0.36	0.00	0.36
6.20	0.04	0.00	0.04	16.40	0.36	0.00	0.36
6.40	0.05	0.00	0.05	16.60	0.35	0.00	0.35
6.60	0.05	0.00	0.05	16.80	0.35	0.00	0.35
6.80	0.06	0.00	0.06	17.00	0.35	0.00	0.35
7.00	0.06	0.00	0.06	17.20	0.35	0.00	0.35
7.20	0.06	0.00	0.06	17.40	0.34	0.00	0.34
7.40	0.07	0.00	0.07	17.60	0.34	0.00	0.34
7.60	0.07	0.00	0.07	17.80	0.34	0.00	0.34
7.80	0.07	0.00	0.07	18.00	0.34	0.00	0.34
8.00	0.08	0.00	0.08	18.20	0.34	0.00	0.34
8.20	0.08	0.00	0.08	18.40	0.33	0.00	0.33
8.40	0.08	0.00	0.08	18.60	0.33	0.00	0.33
8.60	0.09	0.00	0.09	18.80	0.33	0.00	0.33
8.80	0.09	0.00	0.09	19.00	0.30	0.00	0.30
9.00	0.09	0.00	0.09	19.20	0.27	0.00	0.27
9.20	0.10	0.00	0.10	19.40	0.26	0.00	0.26
9.40	0.12	0.00	0.12	19.60	0.25	0.00	0.25
9.60	0.13	0.00	0.13	19.80	0.25	0.00	0.25
9.80	0.14	0.00	0.14	20.00	0.24	0.00	0.24
10.00	0.15	0.00	0.15				
10.20	0.16	0.00	0.16				
10.40	0.16	0.00	0.16				
10.60	0.17	0.00	0.17				
10.80	0.20	0.00	0.20				
11.00	0.24	0.00	0.24				
11.20	0.27	0.00	0.27				
11.40	0.29	0.00	0.29				
11.60	0.32	0.00	0.32				
11.80	0.39	0.00	0.39				
12.00	0.55	0.00	0.55				
12.20	0.88	0.00	0.88				
12.40	**1.20**	0.00	**1.20**				
12.60	**1.20**	0.00	**1.20**				
12.80	1.10	0.00	1.10				
13.00	1.02	0.00	1.02				
13.20	0.96	0.00	0.96				
13.40	0.65	0.00	0.65				
13.60	0.59	0.00	0.59				
13.80	0.54	0.00	0.54				
14.00	0.50	0.00	0.50				
14.20	0.47	0.00	0.47				
14.40	0.45	0.00	0.45				
14.60	0.44	0.00	0.44				
14.80	0.43	0.00	0.43				
15.00	0.42	0.00	0.42				

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SE roof to MH8 Runoff Area=0.339 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=130' Tc=10.0 min CN=98 Runoff=2.11 cfs 0.142 af

Subcatchment3S: untreated to streets Runoff Area=0.177 ac 49.15% Impervious Runoff Depth>2.38"
Flow Length=110' Tc=30.0 min CN=71 Runoff=0.36 cfs 0.035 af

Subcatchment6S: S roof to MH8 Runoff Area=0.305 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=170' Tc=12.0 min CN=98 Runoff=1.78 cfs 0.128 af

Subcatchment7S: to Inlets 8 & 9 Runoff Area=0.048 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=105' Tc=15.0 min CN=98 Runoff=0.26 cfs 0.020 af

Subcatchment8S: to Inlet 7 Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=50' Tc=7.0 min CN=98 Runoff=0.36 cfs 0.021 af

Subcatchment9S: to Inlet 6 Runoff Area=0.041 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=90' Tc=14.0 min CN=98 Runoff=0.22 cfs 0.017 af

Subcatchment10S: to Inlet 5 Runoff Area=0.030 ac 83.33% Impervious Runoff Depth>4.01"
Flow Length=60' Tc=18.0 min CN=88 Runoff=0.13 cfs 0.010 af

Subcatchment11S: to Inlet 4 Runoff Area=0.038 ac 73.68% Impervious Runoff Depth>3.40"
Flow Length=120' Tc=26.0 min CN=82 Runoff=0.12 cfs 0.011 af

Subcatchment12S: to inlet 3 Runoff Area=0.124 ac 100.00% Impervious Runoff Depth>5.03"
Tc=0.0 min CN=98 Runoff=1.00 cfs 0.052 af

Subcatchment13S: to NDS 2 Runoff Area=0.021 ac 0.00% Impervious Runoff Depth>1.59"
Flow Length=20' Tc=20.0 min CN=61 Runoff=0.03 cfs 0.003 af

Subcatchment14S: to NDS 3-5 Runoff Area=0.031 ac 3.23% Impervious Runoff Depth>1.28"
Flow Length=95' Tc=52.0 min CN=57 Runoff=0.02 cfs 0.003 af

Subcatchment16S: to NDS11-6 Runoff Area=0.038 ac 42.11% Impervious Runoff Depth>1.81"
Flow Length=50' Tc=30.0 min CN=64 Runoff=0.06 cfs 0.006 af

Subcatchment17S: untreated alley to Runoff Area=0.150 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=265' Tc=20.0 min CN=98 Runoff=0.70 cfs 0.063 af

Subcatchment18S: untreated alley to Runoff Area=0.070 ac 100.00% Impervious Runoff Depth>5.03"
Flow Length=108' Tc=10.0 min CN=98 Runoff=0.44 cfs 0.029 af

Reach 6R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.22 fps Inflow=1.78 cfs 0.128 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=27.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.128 af

Reach 7R: MH8 12" Avg. Flow Depth=0.25' Max Vel=2.01 fps Inflow=0.56 cfs 0.270 af
12.0" Round Pipe w/ 9.0" inside fill n=0.010 L=19.0' S=0.0042 '/' Capacity=0.28 cfs Outflow=0.29 cfs 0.248 af

Reach 8R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.23 fps Inflow=2.11 cfs 0.142 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=42.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.28 cfs 0.142 af

Reach 9R: inlet 3 18" Avg. Flow Depth=0.33' Max Vel=3.34 fps Inflow=1.27 cfs 0.300 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=35.0' S=0.0080 '/' Capacity=0.88 cfs Outflow=0.88 cfs 0.300 af

Reach 10R: MH7 18" Avg. Flow Depth=0.33' Max Vel=2.65 fps Inflow=0.88 cfs 0.300 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=4.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.69 cfs 0.300 af

Reach 11R: inlet 7 18" Avg. Flow Depth=0.20' Max Vel=2.59 fps Inflow=0.56 cfs 0.042 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=62.0' S=0.0052 '/' Capacity=0.71 cfs Outflow=0.56 cfs 0.041 af

Reach 12R: MH6 18" Avg. Flow Depth=0.21' Max Vel=2.55 fps Inflow=0.56 cfs 0.041 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=8.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.56 cfs 0.041 af

Reach 13R: to isolator 6" Avg. Flow Depth=0.06' Max Vel=8.32 fps Inflow=0.22 cfs 0.017 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.22 cfs 0.017 af

Reach 14R: to isolator 6" Avg. Flow Depth=0.04' Max Vel=6.87 fps Inflow=0.13 cfs 0.010 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.13 cfs 0.010 af

Reach 15R: to isolator 6" Avg. Flow Depth=0.04' Max Vel=6.67 fps Inflow=0.12 cfs 0.011 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.12 cfs 0.011 af

Reach 16R: inlet 2 12" Avg. Flow Depth=0.33' Max Vel=2.68 fps Inflow=0.70 cfs 0.063 af
12.0" Round Pipe w/ 8.0" inside fill n=0.010 L=50.0' S=0.0052 '/' Capacity=0.55 cfs Outflow=0.58 cfs 0.063 af

Reach 17R: NDS2 6" Avg. Flow Depth=0.09' Max Vel=1.54 fps Inflow=0.06 cfs 0.006 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0051 '/' Capacity=0.09 cfs Outflow=0.06 cfs 0.006 af

Reach 18R: inlet 3 6" Avg. Flow Depth=0.17' Max Vel=1.63 fps Inflow=0.09 cfs 0.012 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=62.0' S=0.0048 '/' Capacity=0.08 cfs Outflow=0.09 cfs 0.012 af

Reach 19R: inlet 1 12" Avg. Flow Depth=0.33' Max Vel=2.68 fps Inflow=0.99 cfs 0.092 af
12.0" Round Pipe w/ 8.0" inside fill n=0.010 L=73.0' S=0.0052 '/' Capacity=0.55 cfs Outflow=0.56 cfs 0.092 af

Reach 20R: MH3 15" Avg. Flow Depth=0.25' Max Vel=2.25 fps Inflow=0.56 cfs 0.092 af
15.0" Round Pipe w/ 12.0" inside fill n=0.010 L=53.0' S=0.0053 '/' Capacity=0.35 cfs Outflow=0.36 cfs 0.092 af

Reach 21R: MH2 15" Avg. Flow Depth=0.20' Max Vel=2.25 fps Inflow=0.36 cfs 0.092 af
15.0" Round Pipe w/ 12.0" inside fill n=0.010 L=151.0' S=0.0052 '/' Capacity=0.35 cfs Outflow=0.35 cfs 0.092 af

Reach 22R: NDS2 6" Avg. Flow Depth=0.04' Max Vel=1.15 fps Inflow=0.02 cfs 0.003 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0053 '/' Capacity=0.09 cfs Outflow=0.02 cfs 0.003 af

Pond 4P: stormtech SC310 16"x34" Peak Elev=666.55' Storage=0.081 af Inflow=1.68 cfs 0.391 af
Primary=0.61 cfs 0.102 af Secondary=0.32 cfs 0.240 af Outflow=0.93 cfs 0.342 af

Link 5L: HOM property run-off Inflow=1.64 cfs 0.469 af
Primary=1.64 cfs 0.469 af

Total Runoff Area = 1.463 ac Runoff Volume = 0.541 af Average Runoff Depth = 4.44"
12.17% Pervious = 0.178 ac 87.83% Impervious = 1.285 ac

Summary for Subcatchment 1S: SE roof to MH8

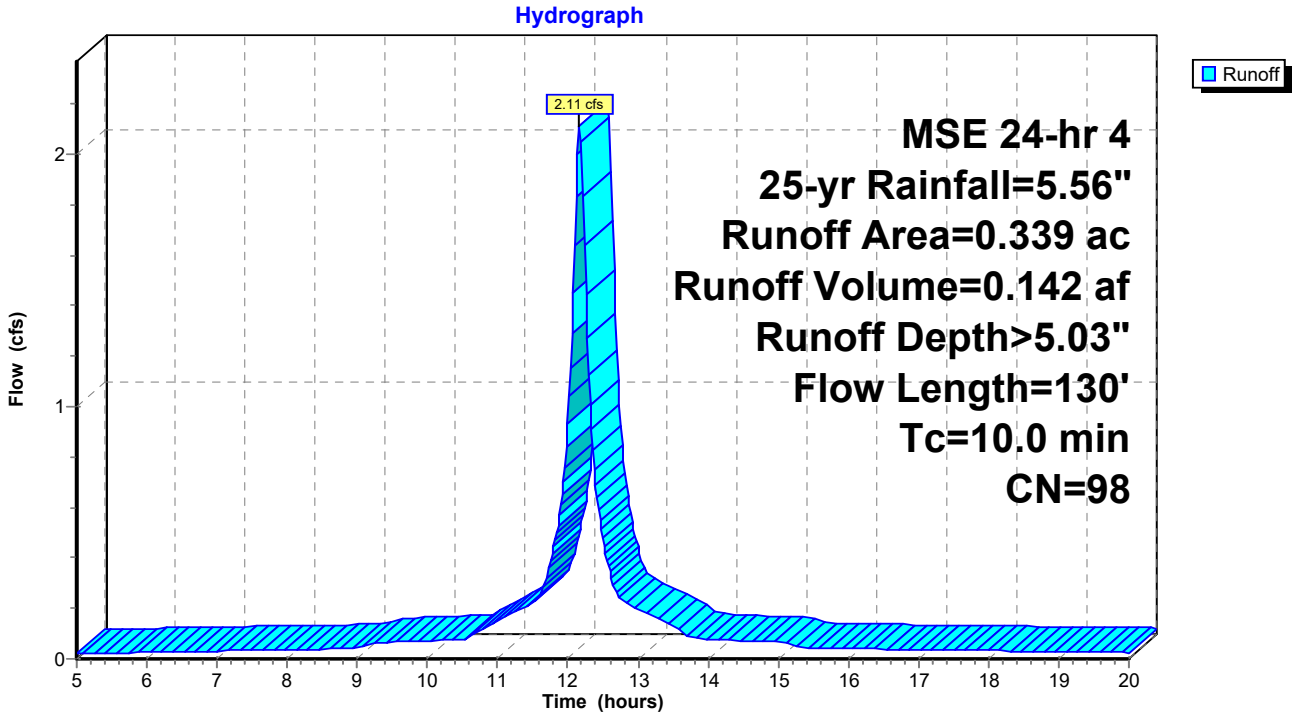
Runoff = 2.11 cfs @ 12.17 hrs, Volume= 0.142 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.339	98	fronting Main St
	0.339		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	130		0.22		**Direct Entry, S Bldg roof**

Subcatchment 1S: SE roof to MH8



Hydrograph for Subcatchment 1S: SE roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.02
5.20	0.27	0.12	0.02
5.40	0.29	0.14	0.02
5.60	0.31	0.15	0.02
5.80	0.32	0.16	0.02
6.00	0.34	0.18	0.03
6.20	0.36	0.20	0.03
6.40	0.38	0.21	0.03
6.60	0.40	0.23	0.03
6.80	0.42	0.25	0.03
7.00	0.44	0.26	0.03
7.20	0.46	0.28	0.03
7.40	0.48	0.30	0.03
7.60	0.51	0.32	0.03
7.80	0.53	0.34	0.03
8.00	0.55	0.36	0.04
8.20	0.57	0.39	0.04
8.40	0.60	0.41	0.04
8.60	0.62	0.43	0.04
8.80	0.65	0.45	0.04
9.00	0.67	0.48	0.04
9.20	0.71	0.52	0.06
9.40	0.75	0.55	0.06
9.60	0.79	0.59	0.07
9.80	0.84	0.63	0.07
10.00	0.88	0.68	0.07
10.20	0.93	0.72	0.07
10.40	0.97	0.76	0.08
10.60	1.03	0.82	0.08
10.80	1.11	0.90	0.12
11.00	1.20	0.99	0.15
11.20	1.31	1.10	0.18
11.40	1.44	1.22	0.21
11.60	1.61	1.38	0.25
11.80	1.91	1.69	0.44
12.00	2.61	2.38	**0.93**
12.20	3.65	3.42	**2.00**
12.40	3.95	3.72	0.69
12.60	4.12	3.88	0.34
12.80	4.25	4.01	0.23
13.00	4.36	4.12	0.20
13.20	4.45	4.22	0.17
13.40	4.53	4.30	0.14
13.60	4.59	4.35	0.11
13.80	4.63	4.40	0.08
14.00	4.68	4.44	0.08
14.20	4.72	4.49	0.08
14.40	4.77	4.53	0.07
14.60	4.81	4.57	0.07
14.80	4.85	4.61	0.07
15.00	4.89	4.65	0.07
15.20	4.91	4.68	0.05
15.40	4.94	4.70	0.04
15.60	4.96	4.73	0.04
15.80	4.99	4.75	0.04
16.00	5.01	4.77	0.04
16.20	5.03	4.80	0.04
16.40	5.05	4.82	0.04
16.60	5.08	4.84	0.04
16.80	5.10	4.86	0.04
17.00	5.12	4.88	0.04
17.20	5.14	4.90	0.04
17.40	5.16	4.92	0.03
17.60	5.18	4.94	0.03
17.80	5.20	4.96	0.03
18.00	5.22	4.98	0.03
18.20	5.24	5.00	0.03
18.40	5.25	5.02	0.03
18.60	5.27	5.03	0.03
18.80	5.29	5.05	0.03
19.00	5.30	5.07	0.03
19.20	5.32	5.08	0.03
19.40	5.34	5.10	0.03
19.60	5.35	5.11	0.03
19.80	5.37	5.13	0.02
20.00	**5.38**	**5.14**	0.02

Summary for Subcatchment 3S: untreated to streets

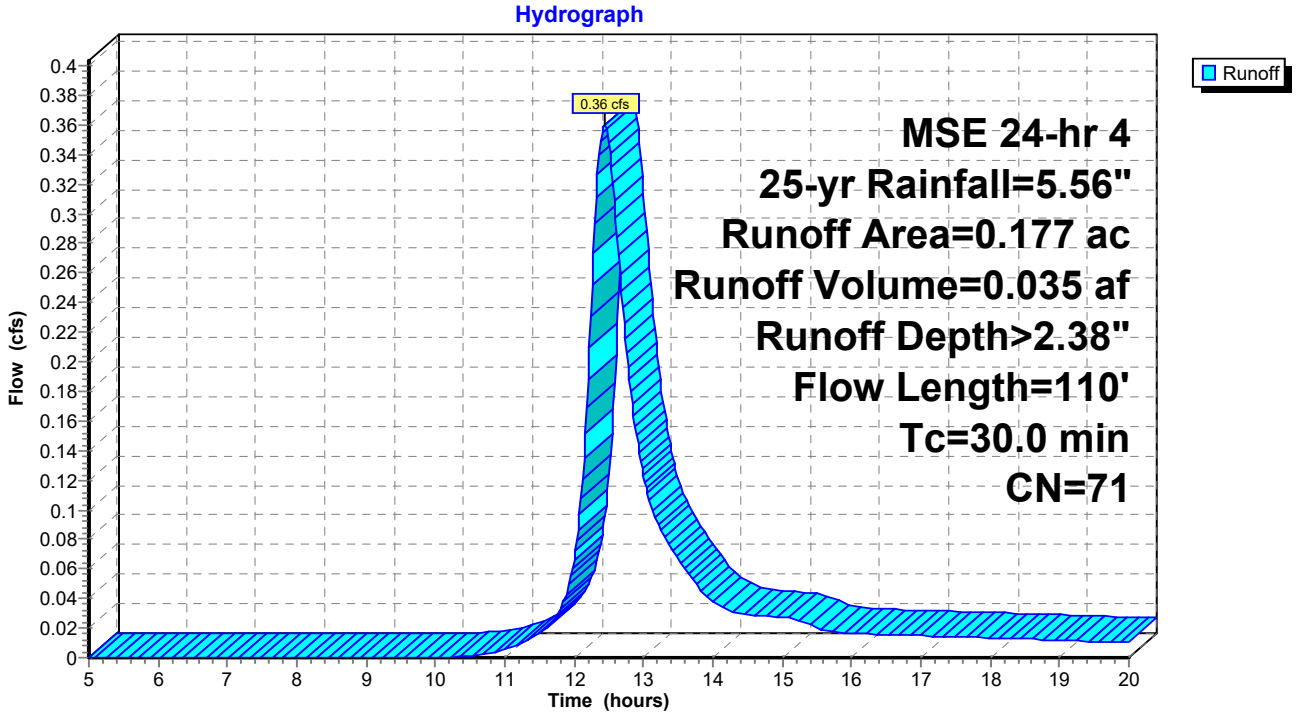
Runoff = 0.36 cfs @ 12.44 hrs, Volume= 0.035 af, Depth> 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.069	98	canopy
*	0.063	39	LS
*	0.027	61	lawn, HSG B
*	0.018	98	SW
	0.177	71	Weighted Average
	0.090		50.85% Pervious Area
	0.087		49.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	70		0.19		**Direct Entry, canopy**
12.0	20		0.03		**Direct Entry, LS**
12.0	20		0.03		**Direct Entry, lawn**
30.0	110	Total			

Subcatchment 3S: untreated to streets



Hydrograph for Subcatchment 3S: untreated to streets

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.00	0.00
7.40	0.48	0.00	0.00
7.60	0.51	0.00	0.00
7.80	0.53	0.00	0.00
8.00	0.55	0.00	0.00
8.20	0.57	0.00	0.00
8.40	0.60	0.00	0.00
8.60	0.62	0.00	0.00
8.80	0.65	0.00	0.00
9.00	0.67	0.00	0.00
9.20	0.71	0.00	0.00
9.40	0.75	0.00	0.00
9.60	0.79	0.00	0.00
9.80	0.84	0.00	0.00
10.00	0.88	0.00	0.00
10.20	0.93	0.00	0.00
10.40	0.97	0.01	0.00
10.60	1.03	0.01	0.00
10.80	1.11	0.02	0.00
11.00	1.20	0.03	0.01
11.20	1.31	0.05	0.01
11.40	1.44	0.08	0.01
11.60	1.61	0.13	0.02
11.80	1.91	0.23	0.03
12.00	2.61	0.54	0.07
12.20	3.65	1.16	0.19
12.40	3.95	1.36	**0.36**
12.60	4.12	1.48	**0.30**
12.80	4.25	1.57	0.19
13.00	4.36	1.64	0.12
13.20	4.45	1.71	0.09
13.40	4.53	1.77	0.07
13.60	4.59	1.81	0.06
13.80	4.63	1.84	0.05
14.00	4.68	1.88	0.04
14.20	4.72	1.91	0.03
14.40	4.77	1.94	0.03
14.60	4.81	1.97	0.03
14.80	4.85	2.00	0.03
15.00	4.89	2.03	0.03
15.20	4.91	2.05	0.03
15.40	4.94	2.07	0.02
15.60	4.96	2.09	0.02
15.80	4.99	2.11	0.02
16.00	5.01	2.12	0.02
16.20	5.03	2.14	0.02
16.40	5.05	2.16	0.02
16.60	5.08	2.17	0.02
16.80	5.10	2.19	0.02
17.00	5.12	2.21	0.01
17.20	5.14	2.22	0.01
17.40	5.16	2.24	0.01
17.60	5.18	2.25	0.01
17.80	5.20	2.27	0.01
18.00	5.22	2.28	0.01
18.20	5.24	2.30	0.01
18.40	5.25	2.31	0.01
18.60	5.27	2.32	0.01
18.80	5.29	2.34	0.01
19.00	5.30	2.35	0.01
19.20	5.32	2.36	0.01
19.40	5.34	2.37	0.01
19.60	5.35	2.39	0.01
19.80	5.37	2.40	0.01
20.00	**5.38**	**2.41**	0.01

Summary for Subcatchment 6S: S roof to MH8

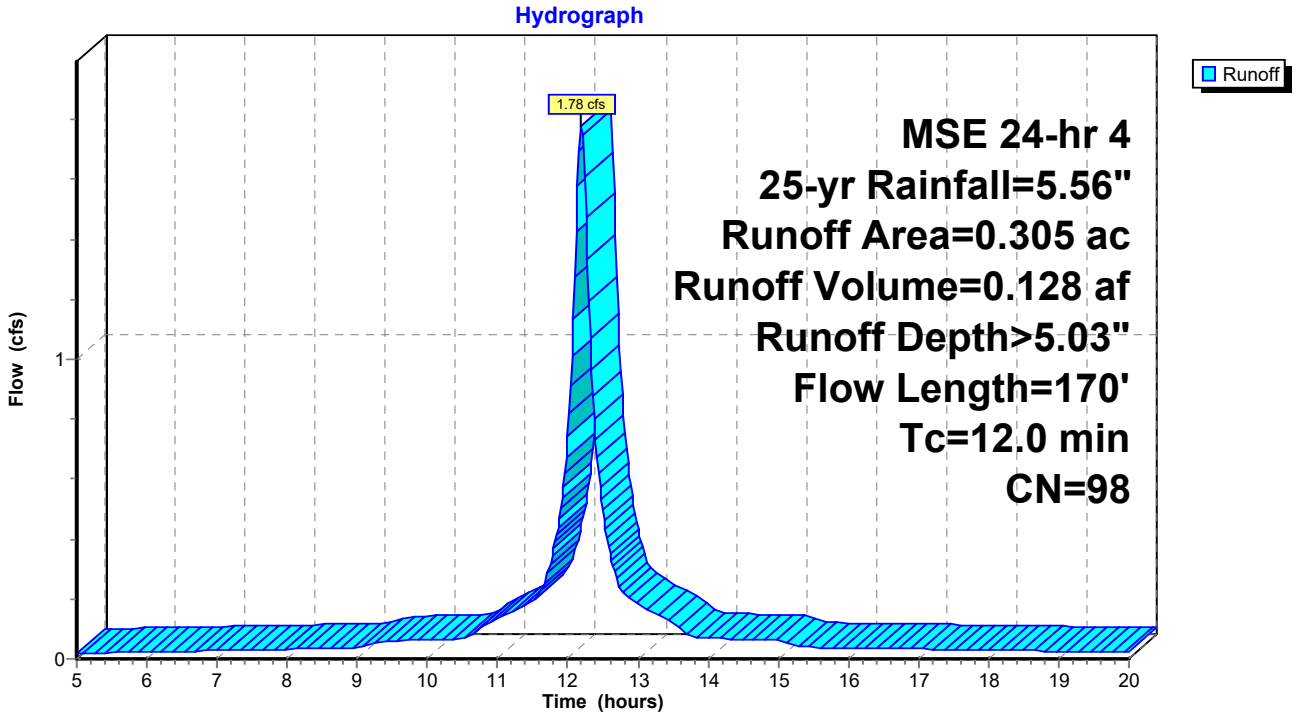
Runoff = 1.78 cfs @ 12.19 hrs, Volume= 0.128 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.305	98	fronting 10th
	0.305		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	170		0.24		**Direct Entry, NE Bldg Roof**

Subcatchment 6S: S roof to MH8



Hydrograph for Subcatchment 6S: S roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.02
5.20	0.27	0.12	0.02
5.40	0.29	0.14	0.02
5.60	0.31	0.15	0.02
5.80	0.32	0.16	0.02
6.00	0.34	0.18	0.02
6.20	0.36	0.20	0.02
6.40	0.38	0.21	0.02
6.60	0.40	0.23	0.03
6.80	0.42	0.25	0.03
7.00	0.44	0.26	0.03
7.20	0.46	0.28	0.03
7.40	0.48	0.30	0.03
7.60	0.51	0.32	0.03
7.80	0.53	0.34	0.03
8.00	0.55	0.36	0.03
8.20	0.57	0.39	0.03
8.40	0.60	0.41	0.03
8.60	0.62	0.43	0.03
8.80	0.65	0.45	0.04
9.00	0.67	0.48	0.04
9.20	0.71	0.52	0.05
9.40	0.75	0.55	0.06
9.60	0.79	0.59	0.06
9.80	0.84	0.63	0.06
10.00	0.88	0.68	0.06
10.20	0.93	0.72	0.07
10.40	0.97	0.76	0.07
10.60	1.03	0.82	0.07
10.80	1.11	0.90	0.11
11.00	1.20	0.99	0.13
11.20	1.31	1.10	0.16
11.40	1.44	1.22	0.18
11.60	1.61	1.38	0.22
11.80	1.91	1.69	0.37
12.00	2.61	2.38	0.74
12.20	3.65	3.42	**1.77**
12.40	3.95	3.72	0.73
12.60	4.12	3.88	0.35
12.80	4.25	4.01	0.22
13.00	4.36	4.12	0.18
13.20	4.45	4.22	0.16
13.40	4.53	4.30	0.13
13.60	4.59	4.35	0.11
13.80	4.63	4.40	0.07
14.00	4.68	4.44	0.07
14.20	4.72	4.49	0.07
14.40	4.77	4.53	0.07
14.60	4.81	4.57	0.06
14.80	4.85	4.61	0.06
15.00	4.89	4.65	0.06
15.20	4.91	4.68	0.05
15.40	4.94	4.70	0.04
15.60	4.96	4.73	0.04
15.80	4.99	4.75	0.04
16.00	5.01	4.77	0.04
16.20	5.03	4.80	0.04
16.40	5.05	4.82	0.03
16.60	5.08	4.84	0.03
16.80	5.10	4.86	0.03
17.00	5.12	4.88	0.03
17.20	5.14	4.90	0.03
17.40	5.16	4.92	0.03
17.60	5.18	4.94	0.03
17.80	5.20	4.96	0.03
18.00	5.22	4.98	0.03
18.20	5.24	5.00	0.03
18.40	5.25	5.02	0.03
18.60	5.27	5.03	0.03
18.80	5.29	5.05	0.03
19.00	5.30	5.07	0.03
19.20	5.32	5.08	0.02
19.40	5.34	5.10	0.02
19.60	5.35	5.11	0.02
19.80	5.37	5.13	0.02
20.00	**5.38**	**5.14**	0.02

Summary for Subcatchment 7S: to Inlets 8 & 9

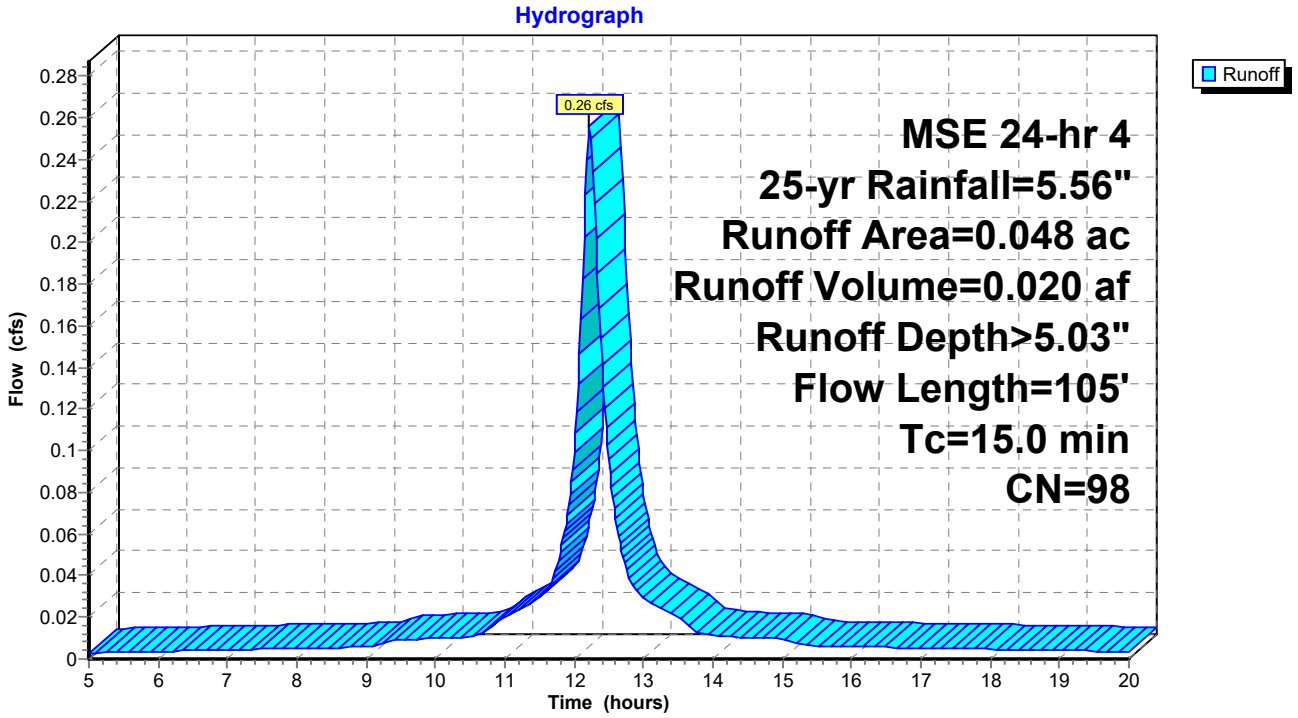
Runoff = 0.26 cfs @ 12.22 hrs, Volume= 0.020 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.046	98	pavement
*	0.002	98	SW
	0.048	98	Weighted Average
	0.048		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	55		0.13		**Direct Entry, pavement**
8.0	50		0.10		**Direct Entry, SW**
15.0	105	Total			

Subcatchment 7S: to Inlets 8 & 9



Hydrograph for Subcatchment 7S: to Inlets 8 & 9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.00
5.20	0.27	0.12	0.00
5.40	0.29	0.14	0.00
5.60	0.31	0.15	0.00
5.80	0.32	0.16	0.00
6.00	0.34	0.18	0.00
6.20	0.36	0.20	0.00
6.40	0.38	0.21	0.00
6.60	0.40	0.23	0.00
6.80	0.42	0.25	0.00
7.00	0.44	0.26	0.00
7.20	0.46	0.28	0.00
7.40	0.48	0.30	0.00
7.60	0.51	0.32	0.00
7.80	0.53	0.34	0.00
8.00	0.55	0.36	0.01
8.20	0.57	0.39	0.01
8.40	0.60	0.41	0.01
8.60	0.62	0.43	0.01
8.80	0.65	0.45	0.01
9.00	0.67	0.48	0.01
9.20	0.71	0.52	0.01
9.40	0.75	0.55	0.01
9.60	0.79	0.59	0.01
9.80	0.84	0.63	0.01
10.00	0.88	0.68	0.01
10.20	0.93	0.72	0.01
10.40	0.97	0.76	0.01
10.60	1.03	0.82	0.01
10.80	1.11	0.90	0.02
11.00	1.20	0.99	0.02
11.20	1.31	1.10	0.02
11.40	1.44	1.22	0.03
11.60	1.61	1.38	0.03
11.80	1.91	1.69	0.05
12.00	2.61	2.38	0.10
12.20	3.65	3.42	**0.25**
12.40	3.95	3.72	**0.14**
12.60	4.12	3.88	0.07
12.80	4.25	4.01	0.04
13.00	4.36	4.12	0.03
13.20	4.45	4.22	0.03
13.40	4.53	4.30	0.02
13.60	4.59	4.35	0.02
13.80	4.63	4.40	0.01
14.00	4.68	4.44	0.01
14.20	4.72	4.49	0.01
14.40	4.77	4.53	0.01
14.60	4.81	4.57	0.01
14.80	4.85	4.61	0.01
15.00	4.89	4.65	0.01
15.20	4.91	4.68	0.01
15.40	4.94	4.70	0.01
15.60	4.96	4.73	0.01
15.80	4.99	4.75	0.01
16.00	5.01	4.77	0.01
16.20	5.03	4.80	0.01
16.40	5.05	4.82	0.01
16.60	5.08	4.84	0.01
16.80	5.10	4.86	0.01
17.00	5.12	4.88	0.01
17.20	5.14	4.90	0.01
17.40	5.16	4.92	0.00
17.60	5.18	4.94	0.00
17.80	5.20	4.96	0.00
18.00	5.22	4.98	0.00
18.20	5.24	5.00	0.00
18.40	5.25	5.02	0.00
18.60	5.27	5.03	0.00
18.80	5.29	5.05	0.00
19.00	5.30	5.07	0.00
19.20	5.32	5.08	0.00
19.40	5.34	5.10	0.00
19.60	5.35	5.11	0.00
19.80	5.37	5.13	0.00
20.00	**5.38**	**5.14**	0.00

Summary for Subcatchment 8S: to Inlet 7

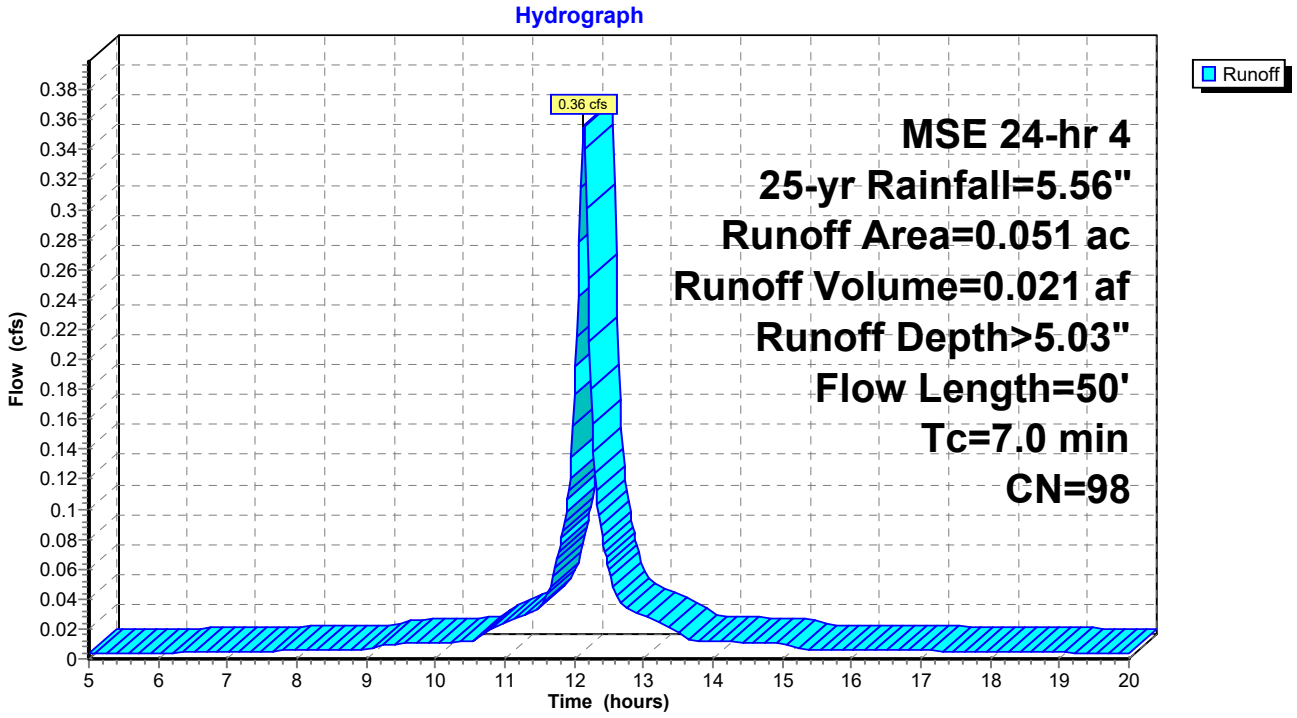
Runoff = 0.36 cfs @ 12.14 hrs, Volume= 0.021 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.051	98	pavement
	0.051		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	50		0.12		**Direct Entry, pavement**

Subcatchment 8S: to Inlet 7



Hydrograph for Subcatchment 8S: to Inlet 7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.00
5.20	0.27	0.12	0.00
5.40	0.29	0.14	0.00
5.60	0.31	0.15	0.00
5.80	0.32	0.16	0.00
6.00	0.34	0.18	0.00
6.20	0.36	0.20	0.00
6.40	0.38	0.21	0.00
6.60	0.40	0.23	0.00
6.80	0.42	0.25	0.00
7.00	0.44	0.26	0.00
7.20	0.46	0.28	0.00
7.40	0.48	0.30	0.00
7.60	0.51	0.32	0.01
7.80	0.53	0.34	0.01
8.00	0.55	0.36	0.01
8.20	0.57	0.39	0.01
8.40	0.60	0.41	0.01
8.60	0.62	0.43	0.01
8.80	0.65	0.45	0.01
9.00	0.67	0.48	0.01
9.20	0.71	0.52	0.01
9.40	0.75	0.55	0.01
9.60	0.79	0.59	0.01
9.80	0.84	0.63	0.01
10.00	0.88	0.68	0.01
10.20	0.93	0.72	0.01
10.40	0.97	0.76	0.01
10.60	1.03	0.82	0.01
10.80	1.11	0.90	0.02
11.00	1.20	0.99	0.02
11.20	1.31	1.10	0.03
11.40	1.44	1.22	0.03
11.60	1.61	1.38	0.04
11.80	1.91	1.69	0.08
12.00	2.61	2.38	**0.18**
12.20	3.65	3.42	**0.25**
12.40	3.95	3.72	0.08
12.60	4.12	3.88	0.04
12.80	4.25	4.01	0.03
13.00	4.36	4.12	0.03
13.20	4.45	4.22	0.02
13.40	4.53	4.30	0.02
13.60	4.59	4.35	0.01
13.80	4.63	4.40	0.01
14.00	4.68	4.44	0.01
14.20	4.72	4.49	0.01
14.40	4.77	4.53	0.01
14.60	4.81	4.57	0.01
14.80	4.85	4.61	0.01
15.00	4.89	4.65	0.01
15.20	4.91	4.68	0.01
15.40	4.94	4.70	0.01
15.60	4.96	4.73	0.01
15.80	4.99	4.75	0.01
16.00	5.01	4.77	0.01
16.20	5.03	4.80	0.01
16.40	5.05	4.82	0.01
16.60	5.08	4.84	0.01
16.80	5.10	4.86	0.01
17.00	5.12	4.88	0.01
17.20	5.14	4.90	0.01
17.40	5.16	4.92	0.01
17.60	5.18	4.94	0.01
17.80	5.20	4.96	0.00
18.00	5.22	4.98	0.00
18.20	5.24	5.00	0.00
18.40	5.25	5.02	0.00
18.60	5.27	5.03	0.00
18.80	5.29	5.05	0.00
19.00	5.30	5.07	0.00
19.20	5.32	5.08	0.00
19.40	5.34	5.10	0.00
19.60	5.35	5.11	0.00
19.80	5.37	5.13	0.00
20.00	**5.38**	**5.14**	0.00

Summary for Subcatchment 9S: to Inlet 6

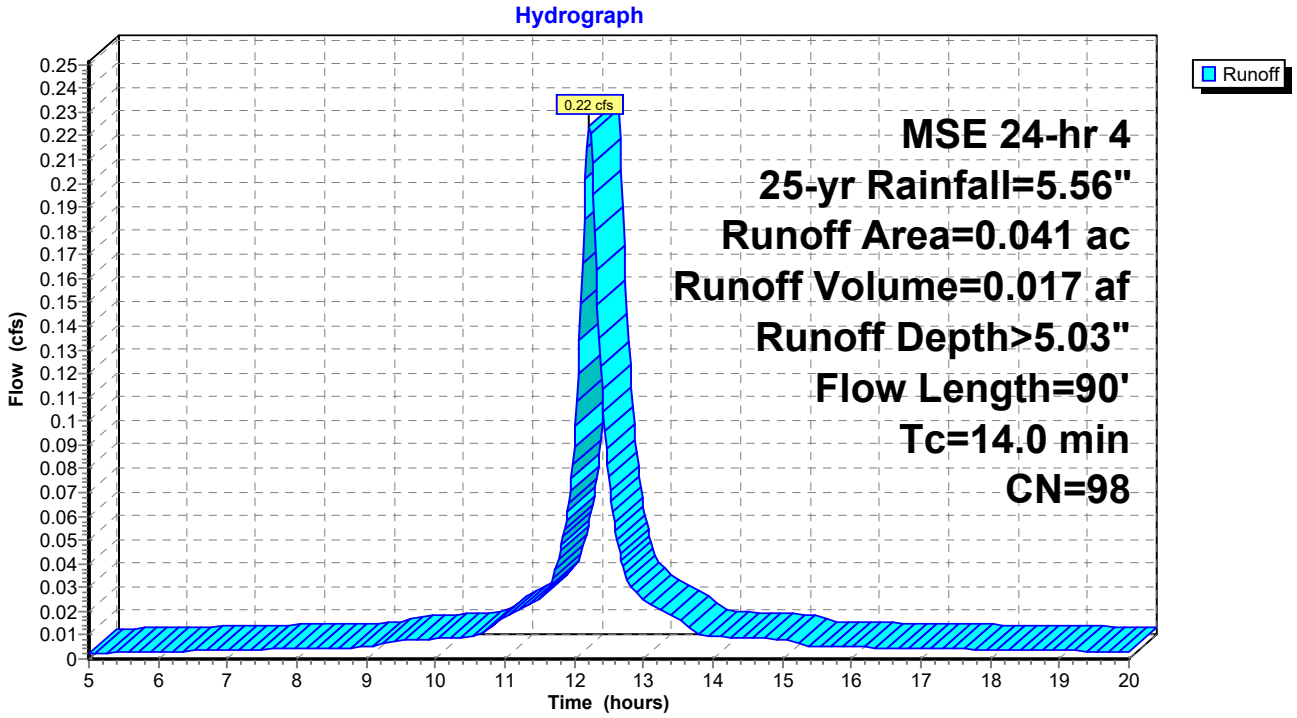
Runoff = 0.22 cfs @ 12.21 hrs, Volume= 0.017 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.032	98	pavement
*	0.009	98	SW
	0.041	98	Weighted Average
	0.041		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	45		0.11		**Direct Entry, pavement**
7.0	45		0.11		**Direct Entry, SW**
14.0	90	Total			

Subcatchment 9S: to Inlet 6



Hydrograph for Subcatchment 9S: to Inlet 6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.00
5.20	0.27	0.12	0.00
5.40	0.29	0.14	0.00
5.60	0.31	0.15	0.00
5.80	0.32	0.16	0.00
6.00	0.34	0.18	0.00
6.20	0.36	0.20	0.00
6.40	0.38	0.21	0.00
6.60	0.40	0.23	0.00
6.80	0.42	0.25	0.00
7.00	0.44	0.26	0.00
7.20	0.46	0.28	0.00
7.40	0.48	0.30	0.00
7.60	0.51	0.32	0.00
7.80	0.53	0.34	0.00
8.00	0.55	0.36	0.00
8.20	0.57	0.39	0.00
8.40	0.60	0.41	0.00
8.60	0.62	0.43	0.00
8.80	0.65	0.45	0.00
9.00	0.67	0.48	0.00
9.20	0.71	0.52	0.01
9.40	0.75	0.55	0.01
9.60	0.79	0.59	0.01
9.80	0.84	0.63	0.01
10.00	0.88	0.68	0.01
10.20	0.93	0.72	0.01
10.40	0.97	0.76	0.01
10.60	1.03	0.82	0.01
10.80	1.11	0.90	0.01
11.00	1.20	0.99	0.02
11.20	1.31	1.10	0.02
11.40	1.44	1.22	0.02
11.60	1.61	1.38	0.03
11.80	1.91	1.69	0.05
12.00	2.61	2.38	0.09
12.20	3.65	3.42	**0.22**
12.40	3.95	3.72	**0.11**
12.60	4.12	3.88	0.05
12.80	4.25	4.01	0.03
13.00	4.36	4.12	0.03
13.20	4.45	4.22	0.02
13.40	4.53	4.30	0.02
13.60	4.59	4.35	0.01
13.80	4.63	4.40	0.01
14.00	4.68	4.44	0.01
14.20	4.72	4.49	0.01
14.40	4.77	4.53	0.01
14.60	4.81	4.57	0.01
14.80	4.85	4.61	0.01
15.00	4.89	4.65	0.01
15.20	4.91	4.68	0.01
15.40	4.94	4.70	0.01
15.60	4.96	4.73	0.01
15.80	4.99	4.75	0.00
16.00	5.01	4.77	0.00
16.20	5.03	4.80	0.00
16.40	5.05	4.82	0.00
16.60	5.08	4.84	0.00
16.80	5.10	4.86	0.00
17.00	5.12	4.88	0.00
17.20	5.14	4.90	0.00
17.40	5.16	4.92	0.00
17.60	5.18	4.94	0.00
17.80	5.20	4.96	0.00
18.00	5.22	4.98	0.00
18.20	5.24	5.00	0.00
18.40	5.25	5.02	0.00
18.60	5.27	5.03	0.00
18.80	5.29	5.05	0.00
19.00	5.30	5.07	0.00
19.20	5.32	5.08	0.00
19.40	5.34	5.10	0.00
19.60	5.35	5.11	0.00
19.80	5.37	5.13	0.00
20.00	**5.38**	**5.14**	0.00

Summary for Subcatchment 10S: to Inlet 5

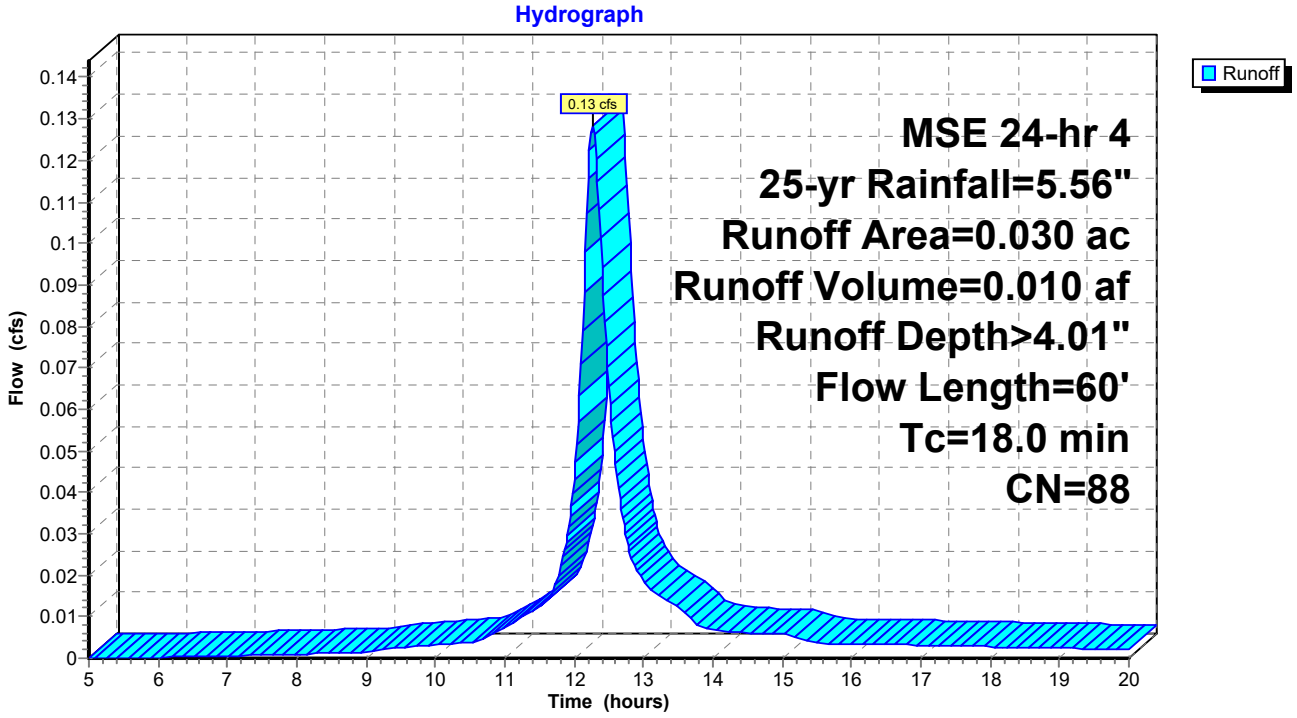
Runoff = 0.13 cfs @ 12.26 hrs, Volume= 0.010 af, Depth> 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.005	39	LS
	0.030	88	Weighted Average
	0.005		16.67% Pervious Area
	0.025		83.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40		0.11		**Direct Entry, pavement**
12.0	20		0.03		**Direct Entry, LS**
18.0	60	Total			

Subcatchment 10S: to Inlet 5



Hydrograph for Subcatchment 10S: to Inlet 5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.01	0.00
6.40	0.38	0.01	0.00
6.60	0.40	0.01	0.00
6.80	0.42	0.01	0.00
7.00	0.44	0.02	0.00
7.20	0.46	0.02	0.00
7.40	0.48	0.03	0.00
7.60	0.51	0.03	0.00
7.80	0.53	0.04	0.00
8.00	0.55	0.05	0.00
8.20	0.57	0.05	0.00
8.40	0.60	0.06	0.00
8.60	0.62	0.07	0.00
8.80	0.65	0.08	0.00
9.00	0.67	0.09	0.00
9.20	0.71	0.11	0.00
9.40	0.75	0.13	0.00
9.60	0.79	0.14	0.00
9.80	0.84	0.17	0.00
10.00	0.88	0.19	0.00
10.20	0.93	0.21	0.00
10.40	0.97	0.24	0.00
10.60	1.03	0.27	0.00
10.80	1.11	0.32	0.01
11.00	1.20	0.38	0.01
11.20	1.31	0.45	0.01
11.40	1.44	0.54	0.01
11.60	1.61	0.66	0.01
11.80	1.91	0.89	0.02
12.00	2.61	1.47	0.04
12.20	3.65	2.41	**0.12**
12.40	3.95	2.69	**0.09**
12.60	4.12	2.84	0.05
12.80	4.25	2.96	0.03
13.00	4.36	3.06	0.02
13.20	4.45	3.15	0.02
13.40	4.53	3.23	0.01
13.60	4.59	3.28	0.01
13.80	4.63	3.32	0.01
14.00	4.68	3.37	0.01
14.20	4.72	3.41	0.01
14.40	4.77	3.45	0.01
14.60	4.81	3.49	0.01
14.80	4.85	3.52	0.01
15.00	4.89	3.56	0.01
15.20	4.91	3.59	0.01
15.40	4.94	3.61	0.00
15.60	4.96	3.63	0.00
15.80	4.99	3.66	0.00
16.00	5.01	3.68	0.00
16.20	5.03	3.70	0.00
16.40	5.05	3.72	0.00
16.60	5.08	3.74	0.00
16.80	5.10	3.76	0.00
17.00	5.12	3.78	0.00
17.20	5.14	3.80	0.00
17.40	5.16	3.82	0.00
17.60	5.18	3.84	0.00
17.80	5.20	3.86	0.00
18.00	5.22	3.88	0.00
18.20	5.24	3.89	0.00
18.40	5.25	3.91	0.00
18.60	5.27	3.93	0.00
18.80	5.29	3.94	0.00
19.00	5.30	3.96	0.00
19.20	5.32	3.97	0.00
19.40	5.34	3.99	0.00
19.60	5.35	4.00	0.00
19.80	5.37	4.02	0.00
20.00	**5.38**	**4.03**	0.00

Summary for Subcatchment 11S: to Inlet 4

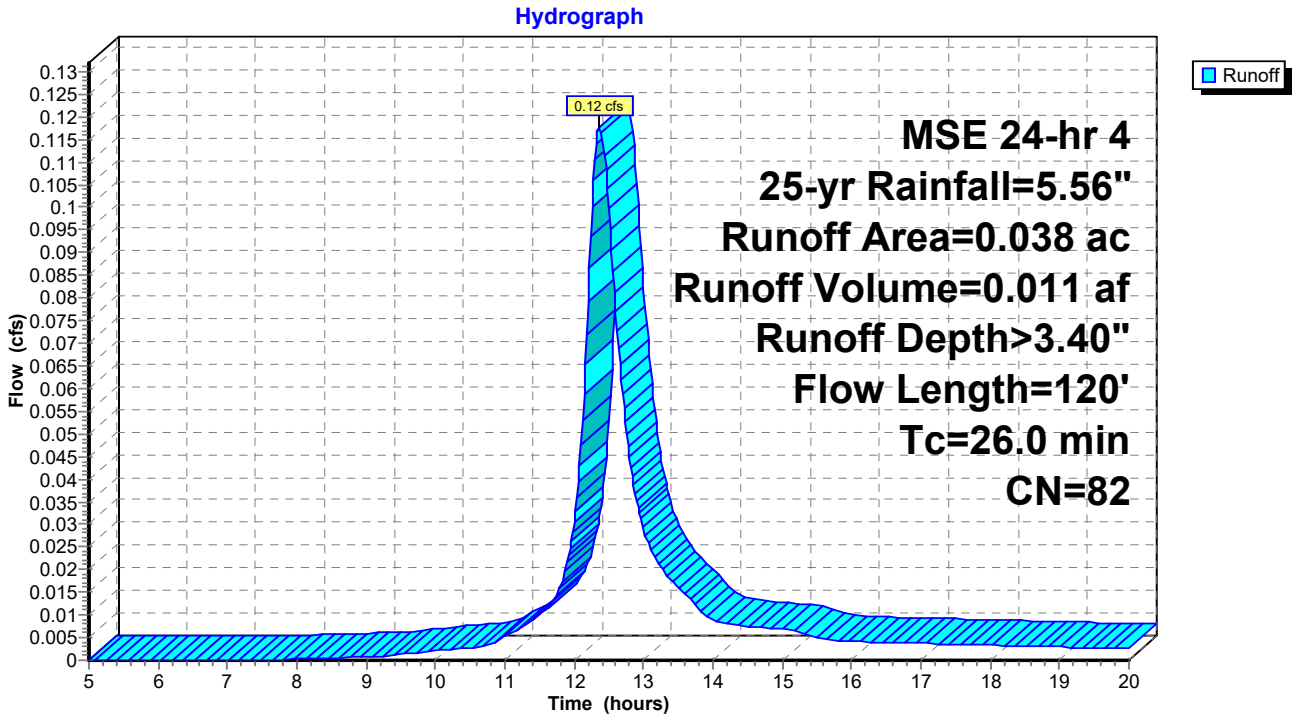
Runoff = 0.12 cfs @ 12.37 hrs, Volume= 0.011 af, Depth> 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.003	98	SW
*	0.010	39	LS
	0.038	82	Weighted Average
	0.010		26.32% Pervious Area
	0.028		73.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	40		0.10		**Direct Entry, pavement**
7.0	40		0.10		**Direct Entry, SW**
12.0	40		0.06		**Direct Entry, LS**
26.0	120	Total			

Subcatchment 11S: to Inlet 4



Hydrograph for Subcatchment 11S: to Inlet 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.00	0.00
7.40	0.48	0.00	0.00
7.60	0.51	0.00	0.00
7.80	0.53	0.00	0.00
8.00	0.55	0.01	0.00
8.20	0.57	0.01	0.00
8.40	0.60	0.01	0.00
8.60	0.62	0.01	0.00
8.80	0.65	0.02	0.00
9.00	0.67	0.02	0.00
9.20	0.71	0.03	0.00
9.40	0.75	0.04	0.00
9.60	0.79	0.05	0.00
9.80	0.84	0.06	0.00
10.00	0.88	0.07	0.00
10.20	0.93	0.09	0.00
10.40	0.97	0.10	0.00
10.60	1.03	0.12	0.00
10.80	1.11	0.16	0.00
11.00	1.20	0.20	0.01
11.20	1.31	0.25	0.01
11.40	1.44	0.31	0.01
11.60	1.61	0.41	0.01
11.80	1.91	0.59	0.02
12.00	2.61	1.08	0.03
12.20	3.65	1.91	**0.08**
12.40	3.95	2.16	**0.12**
12.60	4.12	2.31	0.08
12.80	4.25	2.42	0.04
13.00	4.36	2.51	0.03
13.20	4.45	2.59	0.02
13.40	4.53	2.66	0.02
13.60	4.59	2.71	0.01
13.80	4.63	2.75	0.01
14.00	4.68	2.79	0.01
14.20	4.72	2.83	0.01
14.40	4.77	2.87	0.01
14.60	4.81	2.91	0.01
14.80	4.85	2.94	0.01
15.00	4.89	2.98	0.01
15.20	4.91	3.00	0.01
15.40	4.94	3.02	0.01
15.60	4.96	3.04	0.00
15.80	4.99	3.07	0.00
16.00	5.01	3.09	0.00
16.20	5.03	3.11	0.00
16.40	5.05	3.13	0.00
16.60	5.08	3.15	0.00
16.80	5.10	3.17	0.00
17.00	5.12	3.19	0.00
17.20	5.14	3.20	0.00
17.40	5.16	3.22	0.00
17.60	5.18	3.24	0.00
17.80	5.20	3.26	0.00
18.00	5.22	3.27	0.00
18.20	5.24	3.29	0.00
18.40	5.25	3.31	0.00
18.60	5.27	3.32	0.00
18.80	5.29	3.34	0.00
19.00	5.30	3.35	0.00
19.20	5.32	3.37	0.00
19.40	5.34	3.38	0.00
19.60	5.35	3.39	0.00
19.80	5.37	3.41	0.00
20.00	**5.38**	**3.42**	0.00

Summary for Subcatchment 12S: to inlet 3

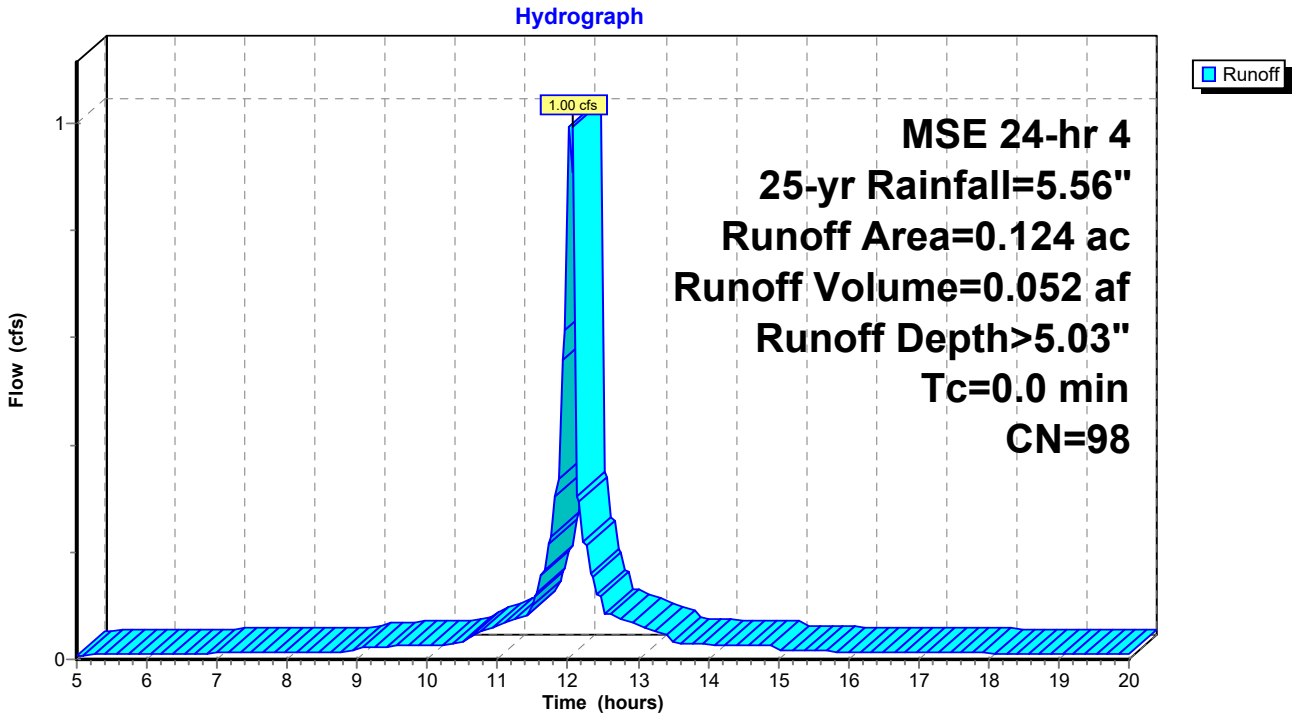
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 1.00 cfs @ 12.08 hrs, Volume= 0.052 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.009	98	open shelter
*	0.059	98	SW
*	0.034	98	parking AC pavement
*	0.022	98	PIP play surface
	0.124	98	Weighted Average
	0.124		100.00% Impervious Area

Subcatchment 12S: to inlet 3



Hydrograph for Subcatchment 12S: to inlet 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.01
5.20	0.27	0.12	0.01
5.40	0.29	0.14	0.01
5.60	0.31	0.15	0.01
5.80	0.32	0.16	0.01
6.00	0.34	0.18	0.01
6.20	0.36	0.20	0.01
6.40	0.38	0.21	0.01
6.60	0.40	0.23	0.01
6.80	0.42	0.25	0.01
7.00	0.44	0.26	0.01
7.20	0.46	0.28	0.01
7.40	0.48	0.30	0.01
7.60	0.51	0.32	0.01
7.80	0.53	0.34	0.01
8.00	0.55	0.36	0.01
8.20	0.57	0.39	0.01
8.40	0.60	0.41	0.01
8.60	0.62	0.43	0.01
8.80	0.65	0.45	0.01
9.00	0.67	0.48	0.02
9.20	0.71	0.52	0.02
9.40	0.75	0.55	0.02
9.60	0.79	0.59	0.03
9.80	0.84	0.63	0.03
10.00	0.88	0.68	0.03
10.20	0.93	0.72	0.03
10.40	0.97	0.76	0.03
10.60	1.03	0.82	0.04
10.80	1.11	0.90	0.05
11.00	1.20	0.99	0.06
11.20	1.31	1.10	0.07
11.40	1.44	1.22	0.08
11.60	1.61	1.38	0.14
11.80	1.91	1.69	0.26
12.00	2.61	2.38	**0.78**
12.20	3.65	3.42	**0.26**
12.40	3.95	3.72	0.14
12.60	4.12	3.88	0.08
12.80	4.25	4.01	0.07
13.00	4.36	4.12	0.06
13.20	4.45	4.22	0.05
13.40	4.53	4.30	0.04
13.60	4.59	4.35	0.03
13.80	4.63	4.40	0.03
14.00	4.68	4.44	0.03
14.20	4.72	4.49	0.03
14.40	4.77	4.53	0.03
14.60	4.81	4.57	0.03
14.80	4.85	4.61	0.02
15.00	4.89	4.65	0.02
15.20	4.91	4.68	0.02
15.40	4.94	4.70	0.02
15.60	4.96	4.73	0.02
15.80	4.99	4.75	0.01
16.00	5.01	4.77	0.01
16.20	5.03	4.80	0.01
16.40	5.05	4.82	0.01
16.60	5.08	4.84	0.01
16.80	5.10	4.86	0.01
17.00	5.12	4.88	0.01
17.20	5.14	4.90	0.01
17.40	5.16	4.92	0.01
17.60	5.18	4.94	0.01
17.80	5.20	4.96	0.01
18.00	5.22	4.98	0.01
18.20	5.24	5.00	0.01
18.40	5.25	5.02	0.01
18.60	5.27	5.03	0.01
18.80	5.29	5.05	0.01
19.00	5.30	5.07	0.01
19.20	5.32	5.08	0.01
19.40	5.34	5.10	0.01
19.60	5.35	5.11	0.01
19.80	5.37	5.13	0.01
20.00	**5.38**	**5.14**	0.01

Summary for Subcatchment 13S: to NDS 2

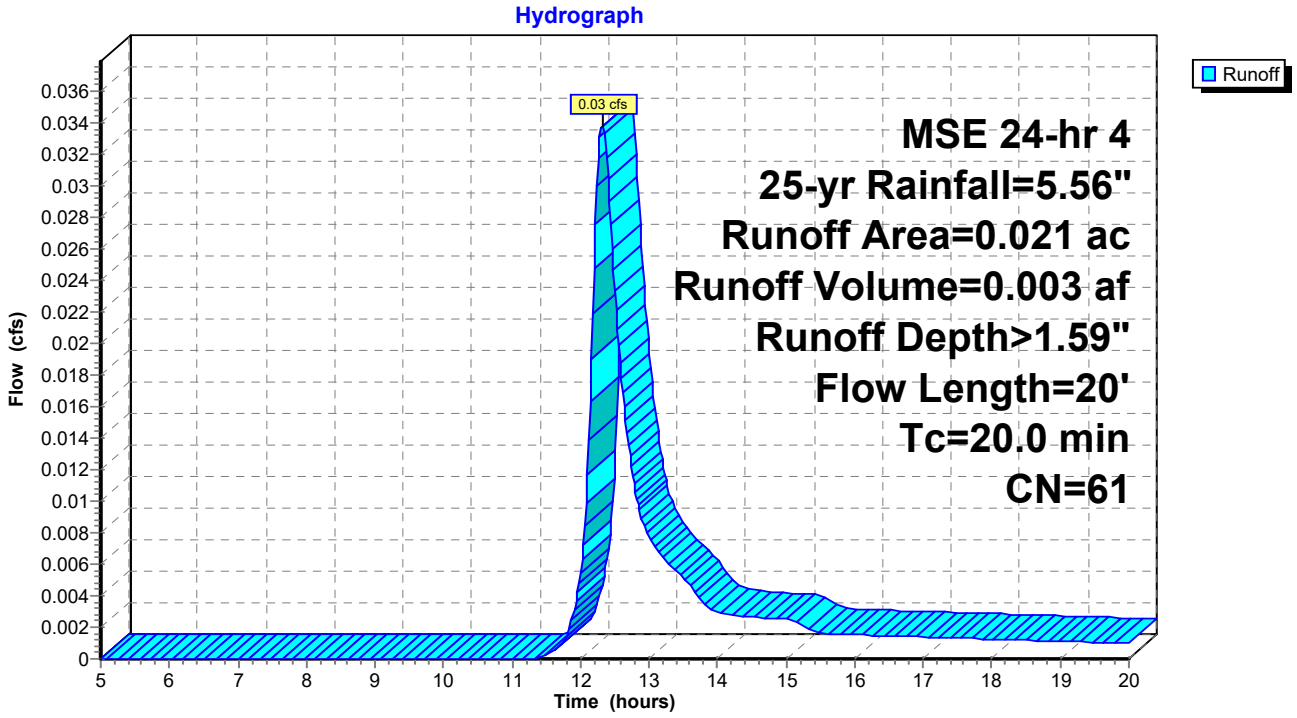
Runoff = 0.03 cfs @ 12.32 hrs, Volume= 0.003 af, Depth> 1.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.021	61	lawn, HSG B
	0.021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	20		0.02		**Direct Entry, lawn**

Subcatchment 13S: to NDS 2



Hydrograph for Subcatchment 13S: to NDS 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.00	0.00
7.40	0.48	0.00	0.00
7.60	0.51	0.00	0.00
7.80	0.53	0.00	0.00
8.00	0.55	0.00	0.00
8.20	0.57	0.00	0.00
8.40	0.60	0.00	0.00
8.60	0.62	0.00	0.00
8.80	0.65	0.00	0.00
9.00	0.67	0.00	0.00
9.20	0.71	0.00	0.00
9.40	0.75	0.00	0.00
9.60	0.79	0.00	0.00
9.80	0.84	0.00	0.00
10.00	0.88	0.00	0.00
10.20	0.93	0.00	0.00
10.40	0.97	0.00	0.00
10.60	1.03	0.00	0.00
10.80	1.11	0.00	0.00
11.00	1.20	0.00	0.00
11.20	1.31	0.00	0.00
11.40	1.44	0.00	0.00
11.60	1.61	0.02	0.00
11.80	1.91	0.06	0.00
12.00	2.61	0.23	0.01
12.20	3.65	0.64	**0.02**
12.40	3.95	0.79	**0.03**
12.60	4.12	0.87	0.02
12.80	4.25	0.94	0.01
13.00	4.36	1.00	0.01
13.20	4.45	1.05	0.01
13.40	4.53	1.10	0.01
13.60	4.59	1.13	0.00
13.80	4.63	1.16	0.00
14.00	4.68	1.18	0.00
14.20	4.72	1.21	0.00
14.40	4.77	1.23	0.00
14.60	4.81	1.25	0.00
14.80	4.85	1.28	0.00
15.00	4.89	1.30	0.00
15.20	4.91	1.32	0.00
15.40	4.94	1.33	0.00
15.60	4.96	1.35	0.00
15.80	4.99	1.36	0.00
16.00	5.01	1.37	0.00
16.20	5.03	1.39	0.00
16.40	5.05	1.40	0.00
16.60	5.08	1.42	0.00
16.80	5.10	1.43	0.00
17.00	5.12	1.44	0.00
17.20	5.14	1.45	0.00
17.40	5.16	1.47	0.00
17.60	5.18	1.48	0.00
17.80	5.20	1.49	0.00
18.00	5.22	1.50	0.00
18.20	5.24	1.51	0.00
18.40	5.25	1.52	0.00
18.60	5.27	1.53	0.00
18.80	5.29	1.55	0.00
19.00	5.30	1.56	0.00
19.20	5.32	1.57	0.00
19.40	5.34	1.58	0.00
19.60	5.35	1.58	0.00
19.80	5.37	1.59	0.00
20.00	**5.38**	**1.60**	0.00

Summary for Subcatchment 14S: to NDS 3-5

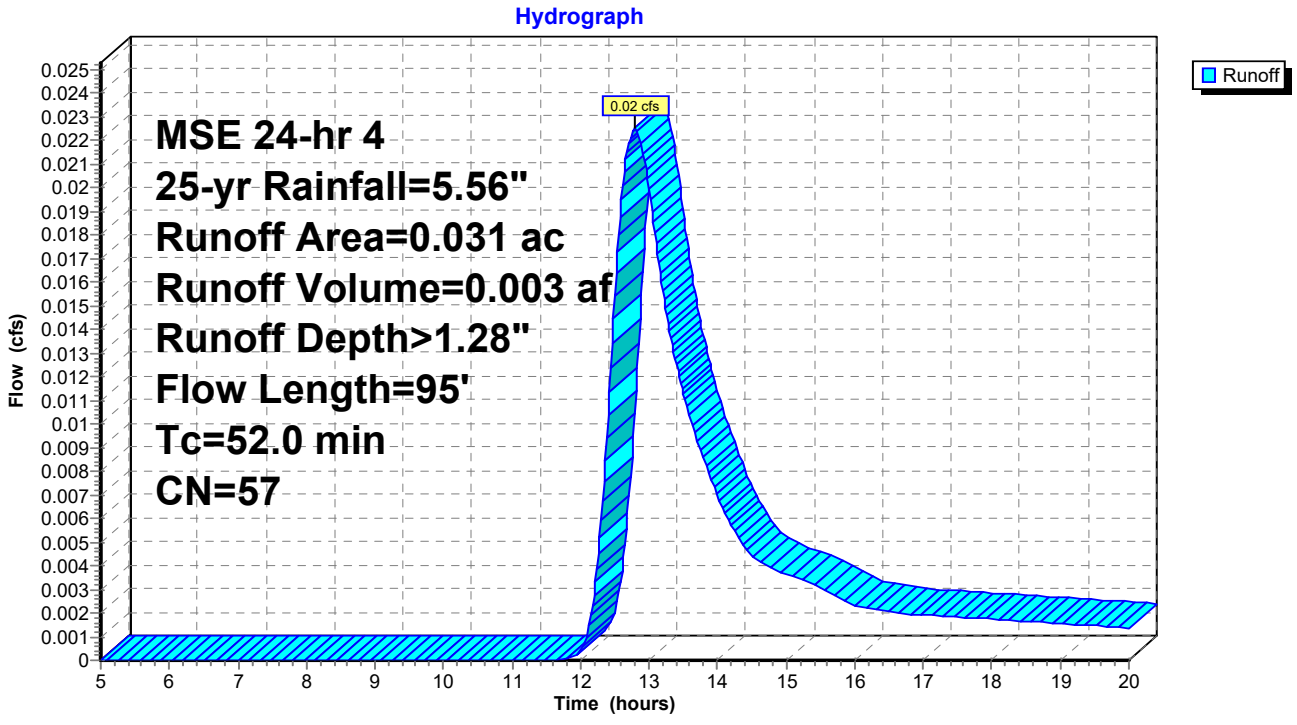
Runoff = 0.02 cfs @ 12.78 hrs, Volume= 0.003 af, Depth> 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.022	61	lawn, HSG B
*	0.008	39	LS
*	0.001	98	SW via LS
	0.031	57	Weighted Average
	0.030		96.77% Pervious Area
	0.001		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	75		0.10		**Direct Entry, lawn**
20.0	10		0.01		**Direct Entry, LS**
20.0	10		0.01		**Direct Entry, SW via LS**
52.0	95	Total			

Subcatchment 14S: to NDS 3-5



Hydrograph for Subcatchment 14S: to NDS 3-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.00	0.00
7.40	0.48	0.00	0.00
7.60	0.51	0.00	0.00
7.80	0.53	0.00	0.00
8.00	0.55	0.00	0.00
8.20	0.57	0.00	0.00
8.40	0.60	0.00	0.00
8.60	0.62	0.00	0.00
8.80	0.65	0.00	0.00
9.00	0.67	0.00	0.00
9.20	0.71	0.00	0.00
9.40	0.75	0.00	0.00
9.60	0.79	0.00	0.00
9.80	0.84	0.00	0.00
10.00	0.88	0.00	0.00
10.20	0.93	0.00	0.00
10.40	0.97	0.00	0.00
10.60	1.03	0.00	0.00
10.80	1.11	0.00	0.00
11.00	1.20	0.00	0.00
11.20	1.31	0.00	0.00
11.40	1.44	0.00	0.00
11.60	1.61	0.00	0.00
11.80	1.91	0.02	0.00
12.00	2.61	0.14	0.00
12.20	3.65	0.47	0.00
12.40	3.95	0.60	0.01
12.60	4.12	0.67	**0.02**
12.80	4.25	0.73	**0.02**
13.00	4.36	0.78	0.02
13.20	4.45	0.83	0.02
13.40	4.53	0.86	0.01
13.60	4.59	0.89	0.01
13.80	4.63	0.92	0.01
14.00	4.68	0.94	0.01
14.20	4.72	0.96	0.01
14.40	4.77	0.98	0.00
14.60	4.81	1.00	0.00
14.80	4.85	1.02	0.00
15.00	4.89	1.04	0.00
15.20	4.91	1.06	0.00
15.40	4.94	1.07	0.00
15.60	4.96	1.08	0.00
15.80	4.99	1.10	0.00
16.00	5.01	1.11	0.00
16.20	5.03	1.12	0.00
16.40	5.05	1.13	0.00
16.60	5.08	1.15	0.00
16.80	5.10	1.16	0.00
17.00	5.12	1.17	0.00
17.20	5.14	1.18	0.00
17.40	5.16	1.19	0.00
17.60	5.18	1.20	0.00
17.80	5.20	1.21	0.00
18.00	5.22	1.22	0.00
18.20	5.24	1.23	0.00
18.40	5.25	1.24	0.00
18.60	5.27	1.25	0.00
18.80	5.29	1.26	0.00
19.00	5.30	1.27	0.00
19.20	5.32	1.28	0.00
19.40	5.34	1.29	0.00
19.60	5.35	1.30	0.00
19.80	5.37	1.30	0.00
20.00	**5.38**	**1.31**	0.00

Summary for Subcatchment 16S: to NDS11-6

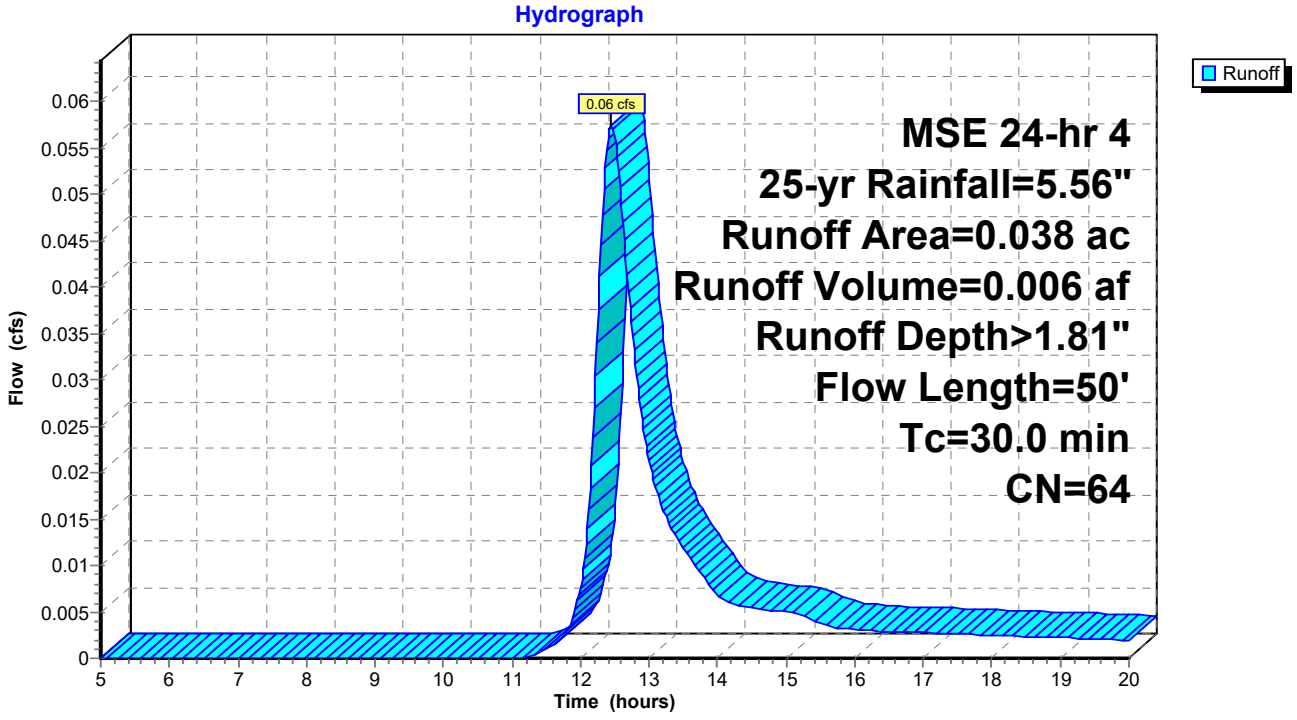
Runoff = 0.06 cfs @ 12.45 hrs, Volume= 0.006 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.022	39	LS
*	0.016	98	SW
	0.038	64	Weighted Average
	0.022		57.89% Pervious Area
	0.016		42.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	40		0.04		**Direct Entry, LS**
15.0	10		0.01		**Direct Entry, SW via LS**
30.0	50	Total			

Subcatchment 16S: to NDS11-6



Hydrograph for Subcatchment 16S: to NDS11-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.20	0.27	0.00	0.00
5.40	0.29	0.00	0.00
5.60	0.31	0.00	0.00
5.80	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.20	0.36	0.00	0.00
6.40	0.38	0.00	0.00
6.60	0.40	0.00	0.00
6.80	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.20	0.46	0.00	0.00
7.40	0.48	0.00	0.00
7.60	0.51	0.00	0.00
7.80	0.53	0.00	0.00
8.00	0.55	0.00	0.00
8.20	0.57	0.00	0.00
8.40	0.60	0.00	0.00
8.60	0.62	0.00	0.00
8.80	0.65	0.00	0.00
9.00	0.67	0.00	0.00
9.20	0.71	0.00	0.00
9.40	0.75	0.00	0.00
9.60	0.79	0.00	0.00
9.80	0.84	0.00	0.00
10.00	0.88	0.00	0.00
10.20	0.93	0.00	0.00
10.40	0.97	0.00	0.00
10.60	1.03	0.00	0.00
10.80	1.11	0.00	0.00
11.00	1.20	0.00	0.00
11.20	1.31	0.01	0.00
11.40	1.44	0.02	0.00
11.60	1.61	0.04	0.00
11.80	1.91	0.10	0.00
12.00	2.61	0.31	0.01
12.20	3.65	0.78	0.03
12.40	3.95	0.95	**0.06**
12.60	4.12	1.04	**0.05**
12.80	4.25	1.11	0.03
13.00	4.36	1.18	0.02
13.20	4.45	1.24	0.02
13.40	4.53	1.29	0.01
13.60	4.59	1.32	0.01
13.80	4.63	1.35	0.01
14.00	4.68	1.38	0.01
14.20	4.72	1.40	0.01
14.40	4.77	1.43	0.01
14.60	4.81	1.46	0.01
14.80	4.85	1.48	0.01
15.00	4.89	1.51	0.01
15.20	4.91	1.52	0.00
15.40	4.94	1.54	0.00
15.60	4.96	1.56	0.00
15.80	4.99	1.57	0.00
16.00	5.01	1.59	0.00
16.20	5.03	1.60	0.00
16.40	5.05	1.62	0.00
16.60	5.08	1.63	0.00
16.80	5.10	1.64	0.00
17.00	5.12	1.66	0.00
17.20	5.14	1.67	0.00
17.40	5.16	1.69	0.00
17.60	5.18	1.70	0.00
17.80	5.20	1.71	0.00
18.00	5.22	1.72	0.00
18.20	5.24	1.74	0.00
18.40	5.25	1.75	0.00
18.60	5.27	1.76	0.00
18.80	5.29	1.77	0.00
19.00	5.30	1.78	0.00
19.20	5.32	1.79	0.00
19.40	5.34	1.80	0.00
19.60	5.35	1.81	0.00
19.80	5.37	1.82	0.00
20.00	**5.38**	**1.83**	0.00

Summary for Subcatchment 17S: untreated alley to inlet 2

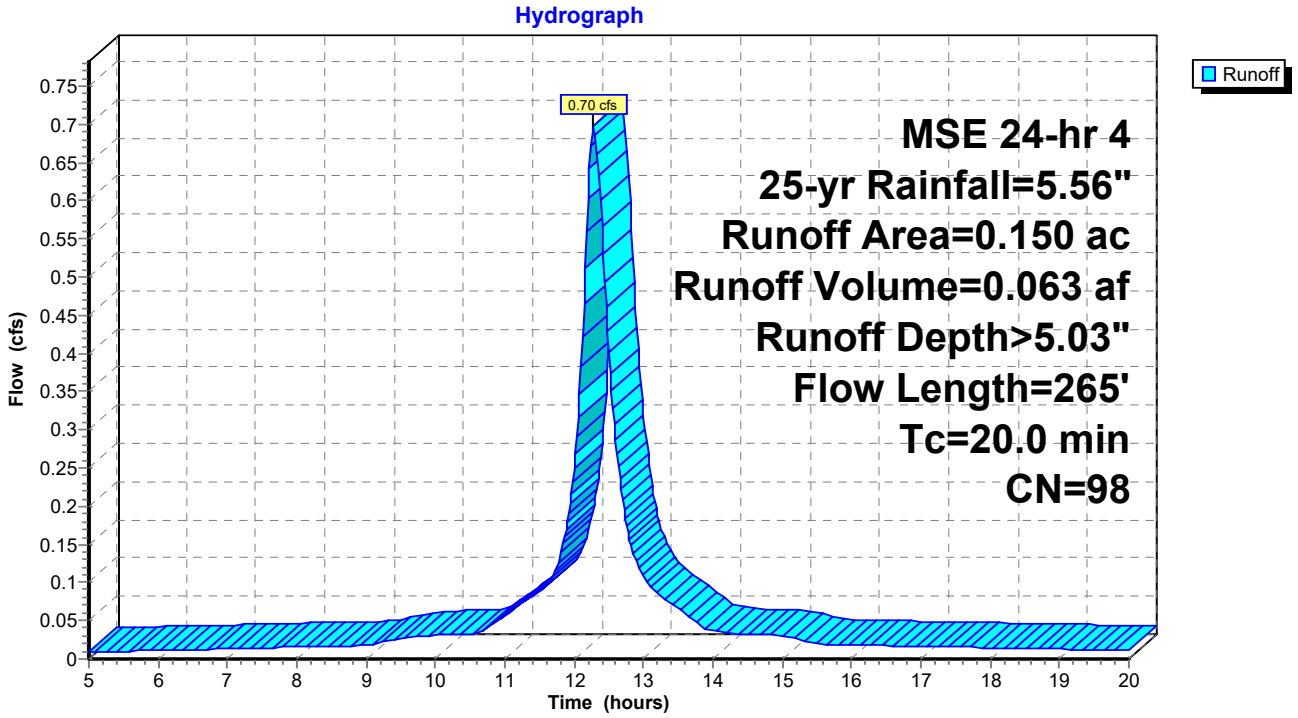
Runoff = 0.70 cfs @ 12.28 hrs, Volume= 0.063 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.042	98	conc alley
*	0.108	98	roof + alley run-on
	0.150	98	Weighted Average
	0.150		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	80		0.17		**Direct Entry, conc alley**
12.0	185		0.26		**Direct Entry, roof + alley run-on**
20.0	265	Total			

Subcatchment 17S: untreated alley to inlet 2



Hydrograph for Subcatchment 17S: untreated alley to inlet 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.01
5.20	0.27	0.12	0.01
5.40	0.29	0.14	0.01
5.60	0.31	0.15	0.01
5.80	0.32	0.16	0.01
6.00	0.34	0.18	0.01
6.20	0.36	0.20	0.01
6.40	0.38	0.21	0.01
6.60	0.40	0.23	0.01
6.80	0.42	0.25	0.01
7.00	0.44	0.26	0.01
7.20	0.46	0.28	0.01
7.40	0.48	0.30	0.01
7.60	0.51	0.32	0.01
7.80	0.53	0.34	0.02
8.00	0.55	0.36	0.02
8.20	0.57	0.39	0.02
8.40	0.60	0.41	0.02
8.60	0.62	0.43	0.02
8.80	0.65	0.45	0.02
9.00	0.67	0.48	0.02
9.20	0.71	0.52	0.02
9.40	0.75	0.55	0.03
9.60	0.79	0.59	0.03
9.80	0.84	0.63	0.03
10.00	0.88	0.68	0.03
10.20	0.93	0.72	0.03
10.40	0.97	0.76	0.03
10.60	1.03	0.82	0.03
10.80	1.11	0.90	0.04
11.00	1.20	0.99	0.06
11.20	1.31	1.10	0.07
11.40	1.44	1.22	0.08
11.60	1.61	1.38	0.09
11.80	1.91	1.69	0.14
12.00	2.61	2.38	0.25
12.20	3.65	3.42	**0.60**
12.40	3.95	3.72	**0.57**
12.60	4.12	3.88	0.29
12.80	4.25	4.01	0.16
13.00	4.36	4.12	0.11
13.20	4.45	4.22	0.09
13.40	4.53	4.30	0.07
13.60	4.59	4.35	0.06
13.80	4.63	4.40	0.04
14.00	4.68	4.44	0.04
14.20	4.72	4.49	0.03
14.40	4.77	4.53	0.03
14.60	4.81	4.57	0.03
14.80	4.85	4.61	0.03
15.00	4.89	4.65	0.03
15.20	4.91	4.68	0.03
15.40	4.94	4.70	0.02
15.60	4.96	4.73	0.02
15.80	4.99	4.75	0.02
16.00	5.01	4.77	0.02
16.20	5.03	4.80	0.02
16.40	5.05	4.82	0.02
16.60	5.08	4.84	0.02
16.80	5.10	4.86	0.02
17.00	5.12	4.88	0.02
17.20	5.14	4.90	0.02
17.40	5.16	4.92	0.02
17.60	5.18	4.94	0.02
17.80	5.20	4.96	0.01
18.00	5.22	4.98	0.01
18.20	5.24	5.00	0.01
18.40	5.25	5.02	0.01
18.60	5.27	5.03	0.01
18.80	5.29	5.05	0.01
19.00	5.30	5.07	0.01
19.20	5.32	5.08	0.01
19.40	5.34	5.10	0.01
19.60	5.35	5.11	0.01
19.80	5.37	5.13	0.01
20.00	**5.38**	**5.14**	0.01

Summary for Subcatchment 18S: untreated alley to inlet 1

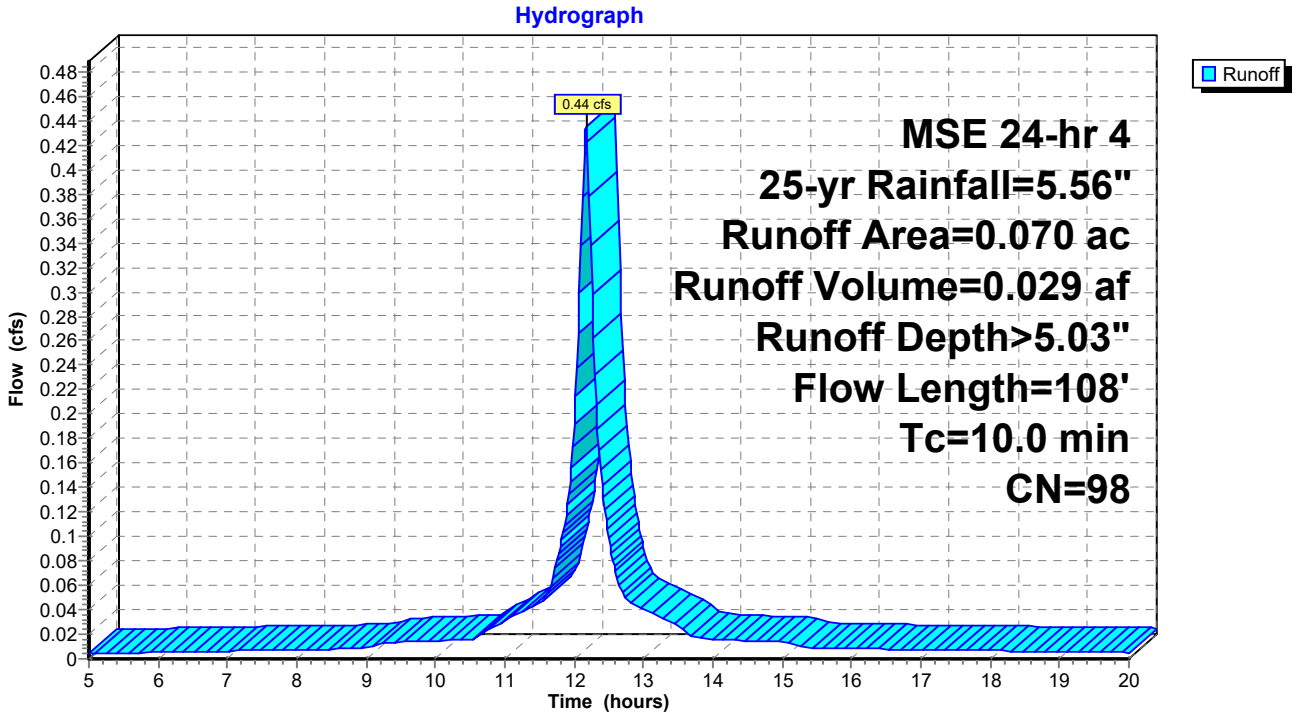
Runoff = 0.44 cfs @ 12.17 hrs, Volume= 0.029 af, Depth> 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 25-yr Rainfall=5.56"

	Area (ac)	CN	Description
*	0.070	98	concrete alley
	0.070		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	108		0.18		**Direct Entry, concrete alley**

Subcatchment 18S: untreated alley to inlet 1



Hydrograph for Subcatchment 18S: untreated alley to inlet 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.11	0.00
5.20	0.27	0.12	0.00
5.40	0.29	0.14	0.00
5.60	0.31	0.15	0.00
5.80	0.32	0.16	0.01
6.00	0.34	0.18	0.01
6.20	0.36	0.20	0.01
6.40	0.38	0.21	0.01
6.60	0.40	0.23	0.01
6.80	0.42	0.25	0.01
7.00	0.44	0.26	0.01
7.20	0.46	0.28	0.01
7.40	0.48	0.30	0.01
7.60	0.51	0.32	0.01
7.80	0.53	0.34	0.01
8.00	0.55	0.36	0.01
8.20	0.57	0.39	0.01
8.40	0.60	0.41	0.01
8.60	0.62	0.43	0.01
8.80	0.65	0.45	0.01
9.00	0.67	0.48	0.01
9.20	0.71	0.52	0.01
9.40	0.75	0.55	0.01
9.60	0.79	0.59	0.01
9.80	0.84	0.63	0.01
10.00	0.88	0.68	0.01
10.20	0.93	0.72	0.02
10.40	0.97	0.76	0.02
10.60	1.03	0.82	0.02
10.80	1.11	0.90	0.03
11.00	1.20	0.99	0.03
11.20	1.31	1.10	0.04
11.40	1.44	1.22	0.04
11.60	1.61	1.38	0.05
11.80	1.91	1.69	0.09
12.00	2.61	2.38	**0.19**
12.20	3.65	3.42	**0.41**
12.40	3.95	3.72	0.14
12.60	4.12	3.88	0.07
12.80	4.25	4.01	0.05
13.00	4.36	4.12	0.04
13.20	4.45	4.22	0.04
13.40	4.53	4.30	0.03
13.60	4.59	4.35	0.02
13.80	4.63	4.40	0.02
14.00	4.68	4.44	0.02
14.20	4.72	4.49	0.02
14.40	4.77	4.53	0.02
14.60	4.81	4.57	0.01
14.80	4.85	4.61	0.01
15.00	4.89	4.65	0.01
15.20	4.91	4.68	0.01
15.40	4.94	4.70	0.01
15.60	4.96	4.73	0.01
15.80	4.99	4.75	0.01
16.00	5.01	4.77	0.01
16.20	5.03	4.80	0.01
16.40	5.05	4.82	0.01
16.60	5.08	4.84	0.01
16.80	5.10	4.86	0.01
17.00	5.12	4.88	0.01
17.20	5.14	4.90	0.01
17.40	5.16	4.92	0.01
17.60	5.18	4.94	0.01
17.80	5.20	4.96	0.01
18.00	5.22	4.98	0.01
18.20	5.24	5.00	0.01
18.40	5.25	5.02	0.01
18.60	5.27	5.03	0.01
18.80	5.29	5.05	0.01
19.00	5.30	5.07	0.01
19.20	5.32	5.08	0.01
19.40	5.34	5.10	0.01
19.60	5.35	5.11	0.01
19.80	5.37	5.13	0.01
20.00	**5.38**	**5.14**	0.00

Summary for Reach 6R: 10" roof

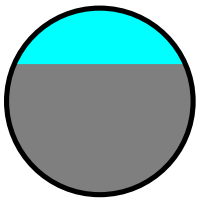
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 652% of Manning's capacity
[76] Warning: Detained 0.041 af (Pond w/culvert advised)

Inflow Area = 0.305 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 1.78 cfs @ 12.19 hrs, Volume= 0.128 af
Outflow = 0.29 cfs @ 11.72 hrs, Volume= 0.128 af, Atten= 84%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.40 fps, Avg. Travel Time= 0.3 min

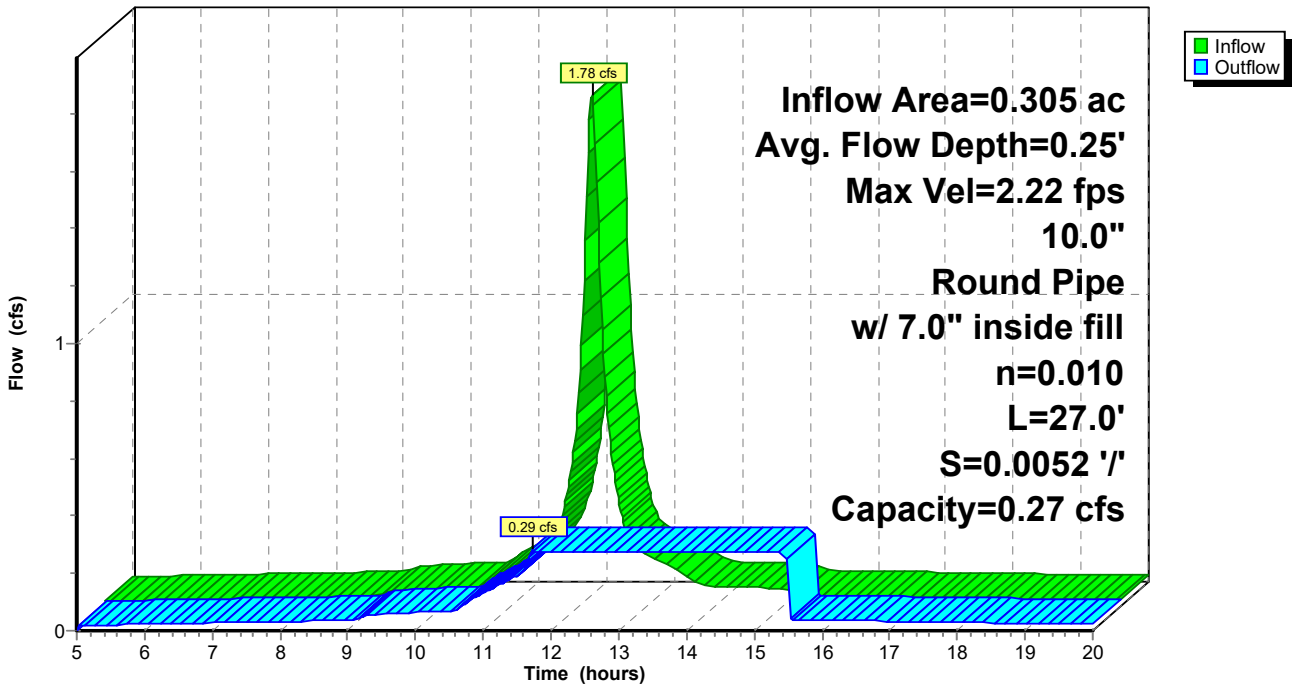
Peak Storage= 4 cf @ 11.74 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 27.0' Slope= 0.0052 '/'
Inlet Invert= 665.72', Outlet Invert= 665.58'



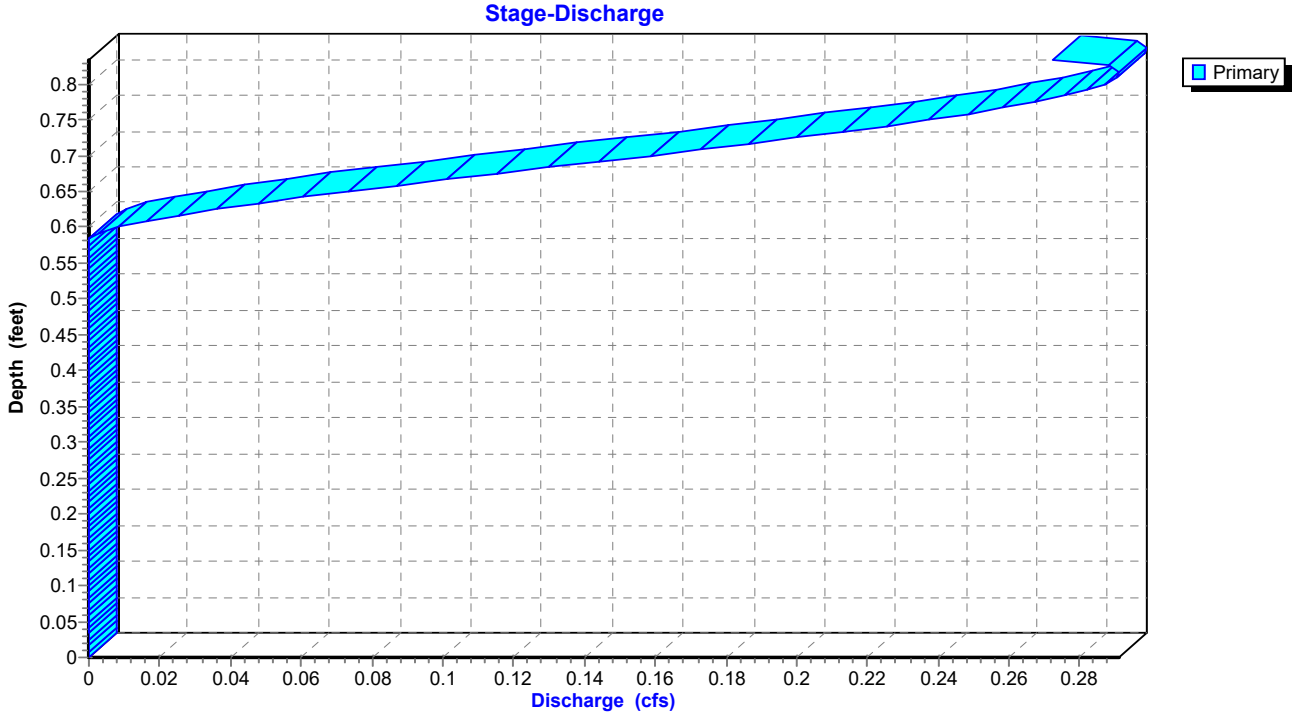
Reach 6R: 10" roof

Hydrograph

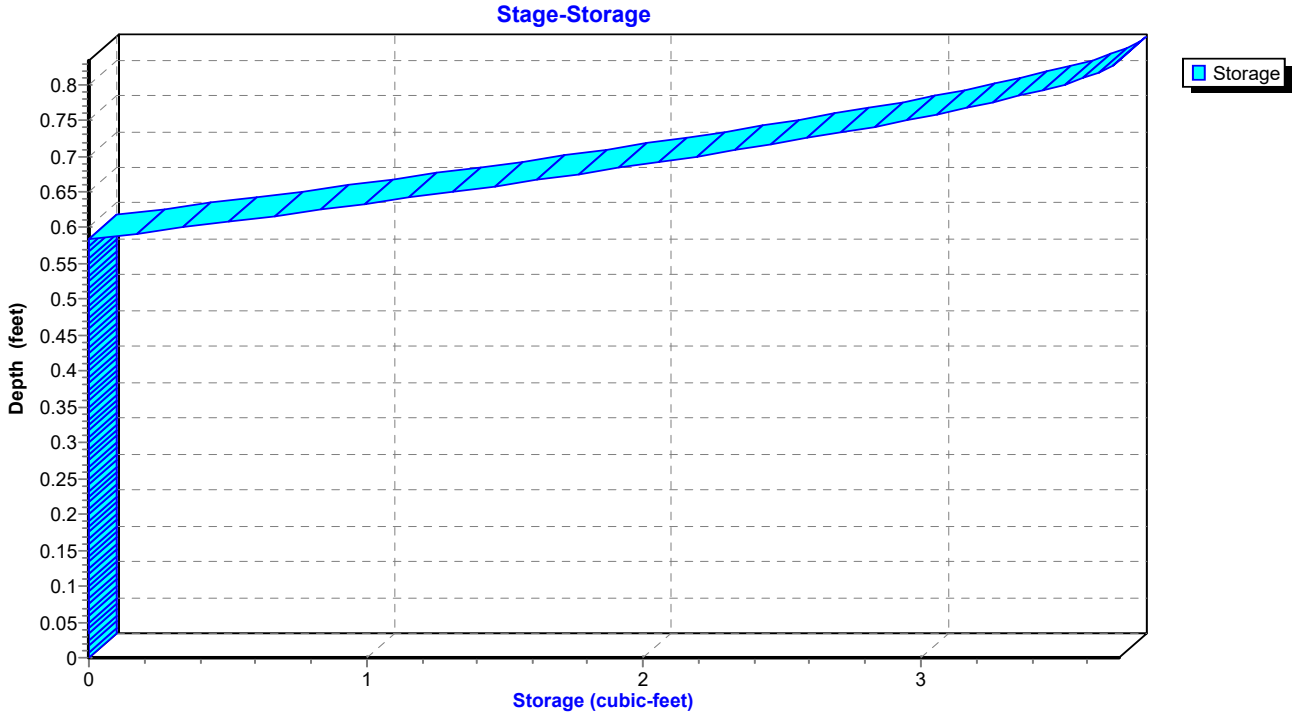


Reach 6R: 10" roof

Stage-Discharge



Reach 6R: 10" roof



Hydrograph for Reach 6R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.02	0	666.30	0.00
5.40	0.02	1	666.33	0.02
5.80	0.02	1	666.33	0.02
6.20	0.02	1	666.34	0.02
6.60	0.03	1	666.34	0.03
7.00	0.03	1	666.34	0.03
7.40	0.03	1	666.34	0.03
7.80	0.03	1	666.34	0.03
8.20	0.03	1	666.34	0.03
8.60	0.03	1	666.34	0.03
9.00	0.04	1	666.35	0.04
9.40	0.06	1	666.36	0.06
9.80	0.06	1	666.36	0.06
10.20	0.07	1	666.36	0.07
10.60	0.07	1	666.37	0.07
11.00	0.13	2	666.40	0.13
11.40	0.18	**2**	**666.43**	**0.18**
11.80	0.37	**4**	**666.55**	**0.27**
12.20	**1.77**	4	666.55	0.27
12.60	0.35	4	666.55	0.27
13.00	0.18	4	666.55	0.27
13.40	0.13	4	666.55	0.27
13.80	0.07	4	666.55	0.27
14.20	0.07	4	666.55	0.27
14.60	0.06	4	666.55	0.27
15.00	0.06	4	666.55	0.27
15.40	0.04	4	666.55	0.27
15.80	0.04	1	666.35	0.04
16.20	0.04	1	666.34	0.04
16.60	0.03	1	666.34	0.03
17.00	0.03	1	666.34	0.03
17.40	0.03	1	666.34	0.03
17.80	0.03	1	666.34	0.03
18.20	0.03	1	666.34	0.03
18.60	0.03	1	666.34	0.03
19.00	0.03	1	666.34	0.03
19.40	0.02	1	666.34	0.02
19.80	0.02	1	666.33	0.02

Stage-Discharge for Reach 6R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.35	0.00
666.32	0.67	0.01
666.33	0.90	0.02
666.34	1.08	0.03
666.35	1.25	0.04
666.36	1.39	0.06
666.37	1.51	0.07
666.38	1.62	0.09
666.39	1.72	0.11
666.40	1.81	0.12
666.41	1.88	0.14
666.42	1.95	0.16
666.43	2.01	0.18
666.44	2.06	0.19
666.45	2.11	0.21
666.46	2.14	0.22
666.47	2.17	0.24
666.48	2.19	0.25
666.49	2.21	0.26
666.50	**2.22**	0.27
666.51	2.21	0.28
666.52	2.20	0.29
666.53	2.18	**0.29**
666.54	2.14	0.29
666.55	2.03	0.28

Stage-Area-Storage for Reach 6R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	0
665.77	0.0	0	666.28	0.0	0
665.78	0.0	0	666.29	0.0	0
665.79	0.0	0	666.30	0.0	0
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	1
665.83	0.0	0	666.34	0.0	1
665.84	0.0	0	666.35	0.0	1
665.85	0.0	0	666.36	0.0	1
665.86	0.0	0	666.37	0.0	1
665.87	0.0	0	666.38	0.1	1
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	2
665.92	0.0	0	666.43	0.1	2
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	3
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	**0.1**	**4**
666.05	0.0	0			
666.06	0.0	0			
666.07	0.0	0			
666.08	0.0	0			
666.09	0.0	0			
666.10	0.0	0			
666.11	0.0	0			
666.12	0.0	0			
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			

Summary for Reach 7R: MH8 12"

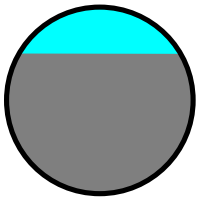
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 203% of Manning's capacity
[76] Warning: Detained 0.093 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 6R INLET depth by 0.15' @ 19.98 hrs
[63] Warning: Exceeded Reach 8R INLET depth by 0.06' @ 19.98 hrs

Inflow Area = 0.644 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 0.56 cfs @ 11.72 hrs, Volume= 0.270 af
Outflow = 0.29 cfs @ 11.04 hrs, Volume= 0.248 af, Atten= 48%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.63 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 11.06 hrs
Average Depth at Peak Storage= 1.00' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.28 cfs

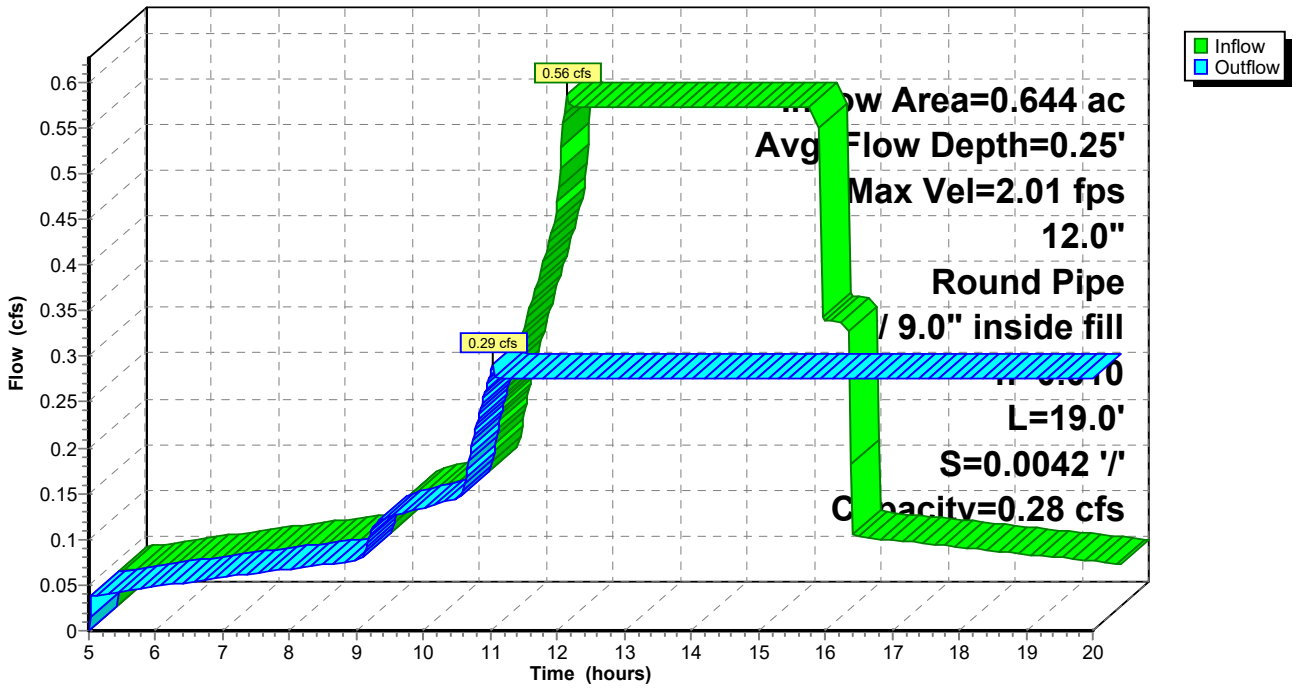
12.0" Round Pipe w/ 9.0" inside fill
n= 0.010
Length= 19.0' Slope= 0.0042 '/'
Inlet Invert= 665.48', Outlet Invert= 665.40'



SC310 system with run-on + alleys
Prepared by Paragon Associates

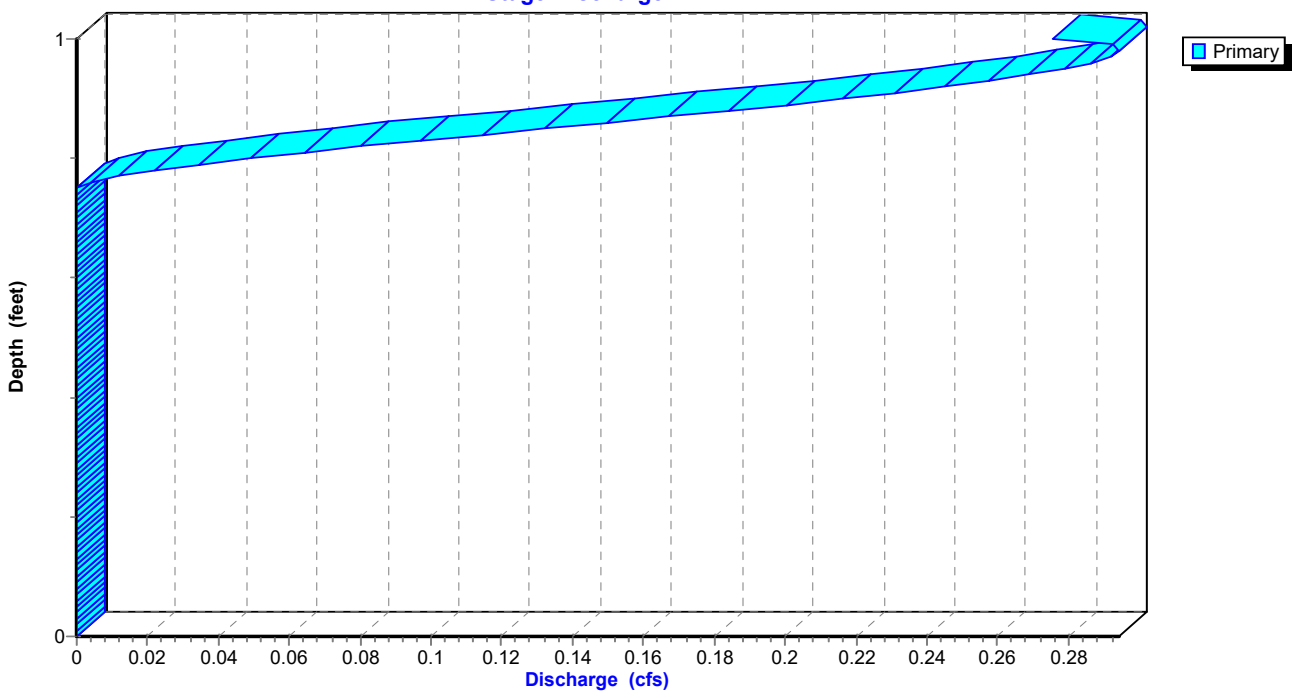
Reach 7R: MH8 12"

Hydrograph

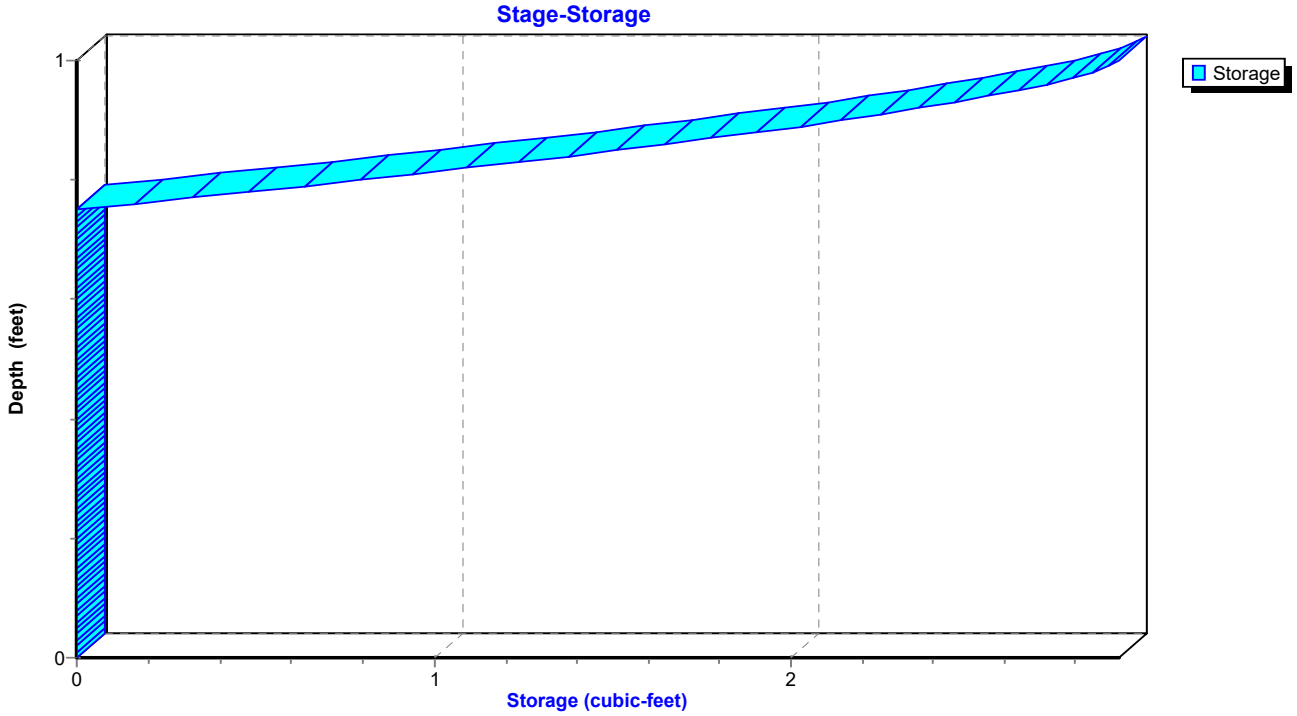


Reach 7R: MH8 12"

Stage-Discharge



Reach 7R: MH8 12"



Hydrograph for Reach 7R: MH8 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.23	0.00
5.40	0.04	1	666.28	0.04
5.80	0.05	1	666.28	0.05
6.20	0.05	1	666.28	0.05
6.60	0.05	1	666.28	0.05
7.00	0.06	1	666.29	0.06
7.40	0.06	1	666.29	0.06
7.80	0.07	1	666.29	0.07
8.20	0.07	1	666.29	0.07
8.60	0.07	1	666.30	0.07
9.00	0.08	1	666.30	0.08
9.40	0.12	1	666.32	0.12
9.80	0.13	2	666.33	0.13
10.20	0.14	2	666.33	0.14
10.60	0.16	2	666.34	0.15
11.00	0.28	**3**	**666.43**	**0.28**
11.40	**0.38**	**3**	**666.48**	**0.28**
11.80	**0.55**	3	666.48	0.28
12.20	0.55	3	666.48	0.28
12.60	0.55	3	666.48	0.28
13.00	0.55	3	666.48	0.28
13.40	0.55	3	666.48	0.28
13.80	0.55	3	666.48	0.28
14.20	0.55	3	666.48	0.28
14.60	0.55	3	666.48	0.28
15.00	0.55	3	666.48	0.28
15.40	0.55	3	666.48	0.28
15.80	0.31	3	666.48	0.28
16.20	0.08	3	666.48	0.28
16.60	0.07	3	666.48	0.28
17.00	0.07	3	666.48	0.28
17.40	0.07	3	666.48	0.28
17.80	0.06	3	666.48	0.28
18.20	0.06	3	666.48	0.28
18.60	0.06	3	666.48	0.28
19.00	0.05	3	666.48	0.28
19.40	0.05	3	666.48	0.28
19.80	0.05	3	666.48	0.28

Stage-Discharge for Reach 7R: MH8 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.44	0.00
666.25	0.68	0.01
666.26	0.87	0.02
666.27	1.03	0.03
666.28	1.17	0.05
666.29	1.29	0.06
666.30	1.40	0.08
666.31	1.50	0.10
666.32	1.58	0.11
666.33	1.66	0.13
666.34	1.72	0.15
666.35	1.78	0.17
666.36	1.84	0.18
666.37	1.88	0.20
666.38	1.92	0.22
666.39	1.95	0.23
666.40	1.97	0.25
666.41	1.99	0.26
666.42	2.00	0.27
666.43	**2.01**	0.28
666.44	2.00	0.29
666.45	1.99	0.29
666.46	1.96	**0.29**
666.47	1.92	0.29
666.48	1.79	0.28

Stage-Area-Storage for Reach 7R: MH8 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.48	0.0	0	665.99	0.0	0
665.49	0.0	0	666.00	0.0	0
665.50	0.0	0	666.01	0.0	0
665.51	0.0	0	666.02	0.0	0
665.52	0.0	0	666.03	0.0	0
665.53	0.0	0	666.04	0.0	0
665.54	0.0	0	666.05	0.0	0
665.55	0.0	0	666.06	0.0	0
665.56	0.0	0	666.07	0.0	0
665.57	0.0	0	666.08	0.0	0
665.58	0.0	0	666.09	0.0	0
665.59	0.0	0	666.10	0.0	0
665.60	0.0	0	666.11	0.0	0
665.61	0.0	0	666.12	0.0	0
665.62	0.0	0	666.13	0.0	0
665.63	0.0	0	666.14	0.0	0
665.64	0.0	0	666.15	0.0	0
665.65	0.0	0	666.16	0.0	0
665.66	0.0	0	666.17	0.0	0
665.67	0.0	0	666.18	0.0	0
665.68	0.0	0	666.19	0.0	0
665.69	0.0	0	666.20	0.0	0
665.70	0.0	0	666.21	0.0	0
665.71	0.0	0	666.22	0.0	0
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	1
665.77	0.0	0	666.28	0.0	1
665.78	0.0	0	666.29	0.0	1
665.79	0.0	0	666.30	0.1	1
665.80	0.0	0	666.31	0.1	1
665.81	0.0	0	666.32	0.1	1
665.82	0.0	0	666.33	0.1	2
665.83	0.0	0	666.34	0.1	2
665.84	0.0	0	666.35	0.1	2
665.85	0.0	0	666.36	0.1	2
665.86	0.0	0	666.37	0.1	2
665.87	0.0	0	666.38	0.1	2
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	3
665.92	0.0	0	666.43	0.1	3
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.2	3
665.97	0.0	0	666.48	**0.2**	**3**
665.98	0.0	0			

Summary for Reach 8R: 10" roof

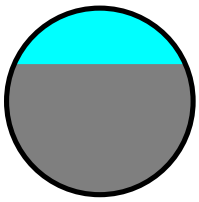
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 771% of Manning's capacity
[76] Warning: Detained 0.048 af (Pond w/culvert advised)

Inflow Area = 0.339 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 2.11 cfs @ 12.17 hrs, Volume= 0.142 af
Outflow = 0.28 cfs @ 11.66 hrs, Volume= 0.142 af, Atten= 87%, Lag= 0.0 min

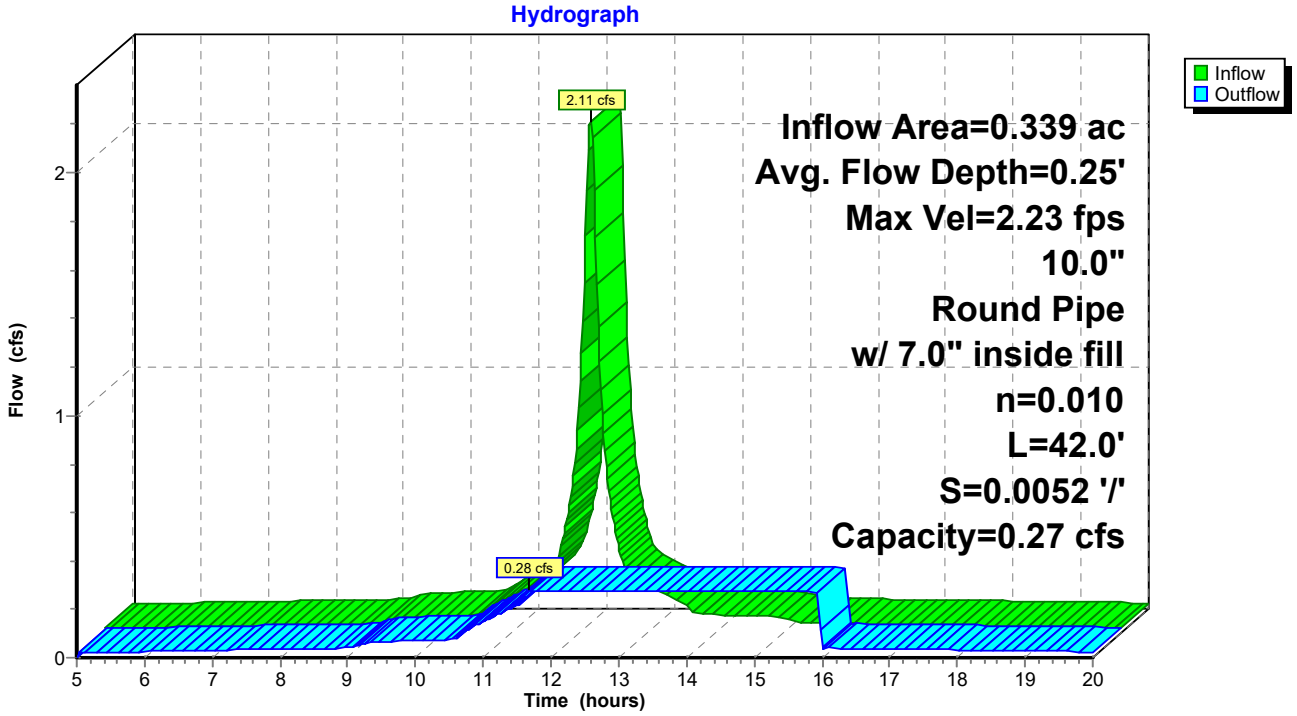
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.46 fps, Avg. Travel Time= 0.5 min

Peak Storage= 6 cf @ 11.68 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

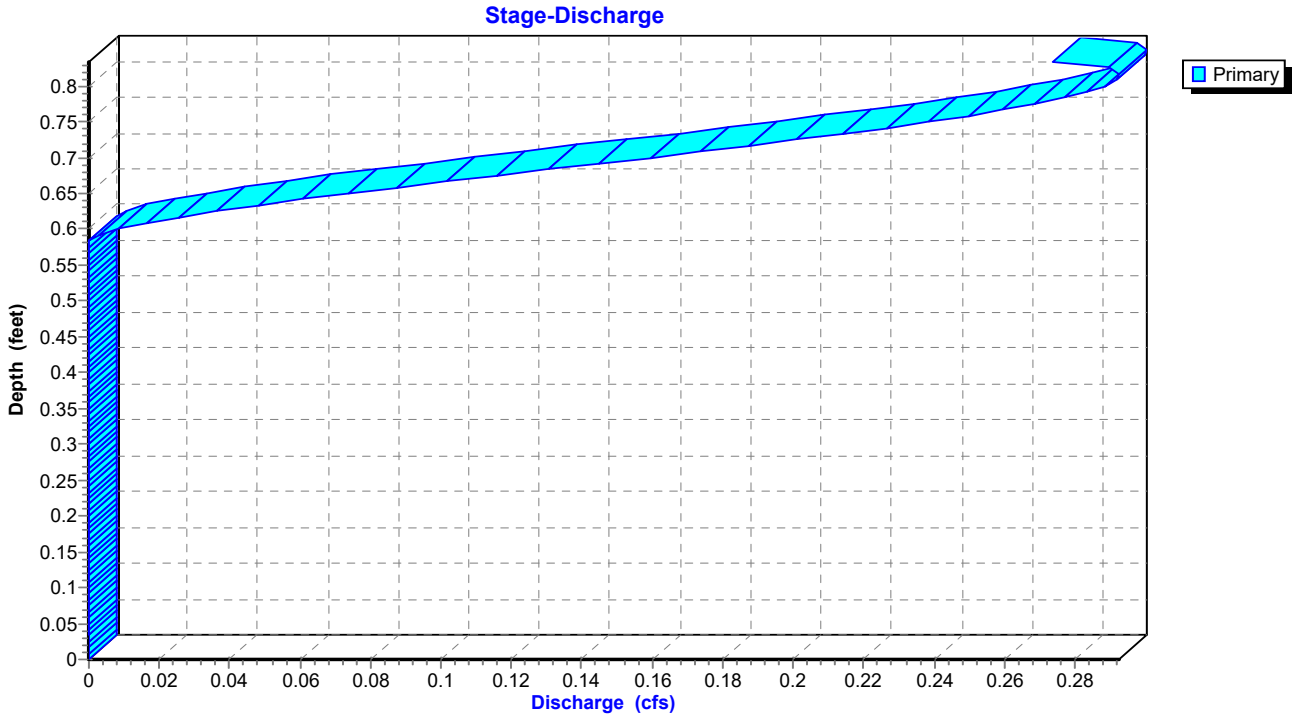
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 42.0' Slope= 0.0052 '/'
Inlet Invert= 665.80', Outlet Invert= 665.58'



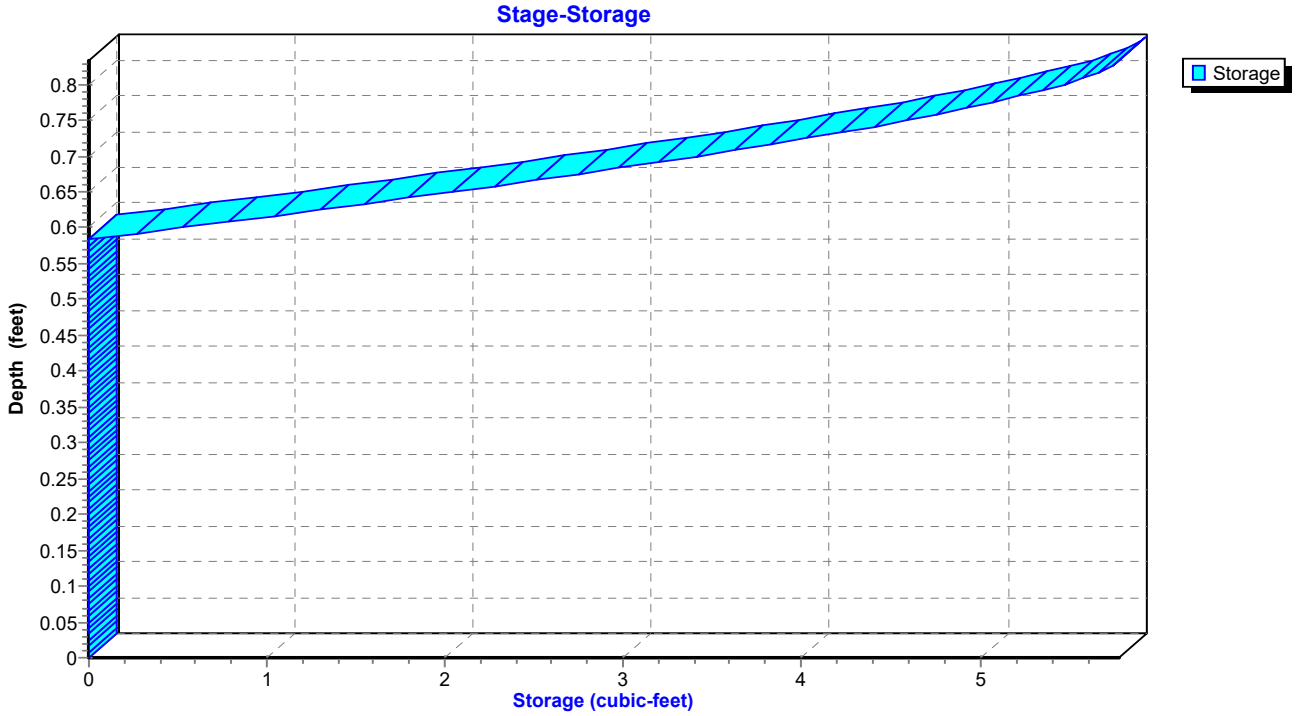
Reach 8R: 10" roof



Reach 8R: 10" roof



Reach 8R: 10" roof



Hydrograph for Reach 8R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.02	0	666.38	0.00
5.40	0.02	1	666.41	0.02
5.80	0.02	1	666.42	0.02
6.20	0.03	1	666.42	0.03
6.60	0.03	1	666.42	0.03
7.00	0.03	1	666.42	0.03
7.40	0.03	1	666.42	0.03
7.80	0.03	1	666.42	0.03
8.20	0.04	1	666.43	0.04
8.60	0.04	1	666.43	0.04
9.00	0.04	1	666.43	0.04
9.40	0.06	2	666.44	0.06
9.80	0.07	2	666.45	0.07
10.20	0.07	2	666.45	0.07
10.60	0.08	2	666.46	0.08
11.00	0.15	3	666.50	0.15
11.40	0.21	**4**	**666.53**	**0.20**
11.80	**0.44**	**6**	**666.63**	**0.27**
12.20	**2.00**	6	666.63	0.27
12.60	0.34	6	666.63	0.27
13.00	0.20	6	666.63	0.27
13.40	0.14	6	666.63	0.27
13.80	0.08	6	666.63	0.27
14.20	0.08	6	666.63	0.27
14.60	0.07	6	666.63	0.27
15.00	0.07	6	666.63	0.27
15.40	0.04	6	666.63	0.27
15.80	0.04	6	666.63	0.27
16.20	0.04	1	666.43	0.04
16.60	0.04	1	666.43	0.04
17.00	0.04	1	666.42	0.04
17.40	0.03	1	666.42	0.03
17.80	0.03	1	666.42	0.03
18.20	0.03	1	666.42	0.03
18.60	0.03	1	666.42	0.03
19.00	0.03	1	666.42	0.03
19.40	0.03	1	666.42	0.03
19.80	0.02	1	666.42	0.03

Stage-Discharge for Reach 8R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.35	0.00
666.40	0.68	0.01
666.41	0.90	0.02
666.42	1.09	0.03
666.43	1.25	0.04
666.44	1.39	0.06
666.45	1.52	0.07
666.46	1.63	0.09
666.47	1.73	0.11
666.48	1.81	0.12
666.49	1.89	0.14
666.50	1.96	0.16
666.51	2.02	0.18
666.52	2.07	0.19
666.53	2.12	0.21
666.54	2.15	0.22
666.55	2.18	0.24
666.56	2.21	0.25
666.57	2.22	0.26
666.58	**2.23**	0.27
666.59	2.23	0.28
666.60	2.21	0.29
666.61	2.19	**0.29**
666.62	2.15	0.29
666.63	2.04	0.28

Stage-Area-Storage for Reach 8R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	0
665.83	0.0	0	666.34	0.0	0
665.84	0.0	0	666.35	0.0	0
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	1
665.90	0.0	0	666.41	0.0	1
665.91	0.0	0	666.42	0.0	1
665.92	0.0	0	666.43	0.0	1
665.93	0.0	0	666.44	0.0	2
665.94	0.0	0	666.45	0.0	2
665.95	0.0	0	666.46	0.1	2
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	4
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	0.1	5
666.05	0.0	0	666.56	0.1	5
666.06	0.0	0	666.57	0.1	5
666.07	0.0	0	666.58	0.1	5
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	5
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	6
666.12	0.0	0	666.63	**0.1**	**6**
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			
666.23	0.0	0			
666.24	0.0	0			
666.25	0.0	0			
666.26	0.0	0			
666.27	0.0	0			
666.28	0.0	0			
666.29	0.0	0			
666.30	0.0	0			

Summary for Reach 9R: inlet 3 18"

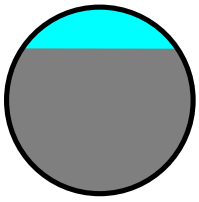
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 145% of Manning's capacity
[76] Warning: Detained 0.003 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 7R INLET depth by 0.32' @ 12.00 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 4.69" for 25-yr event
Inflow = 1.27 cfs @ 12.08 hrs, Volume= 0.300 af
Outflow = 0.88 cfs @ 12.02 hrs, Volume= 0.300 af, Atten= 31%, Lag= 0.0 min

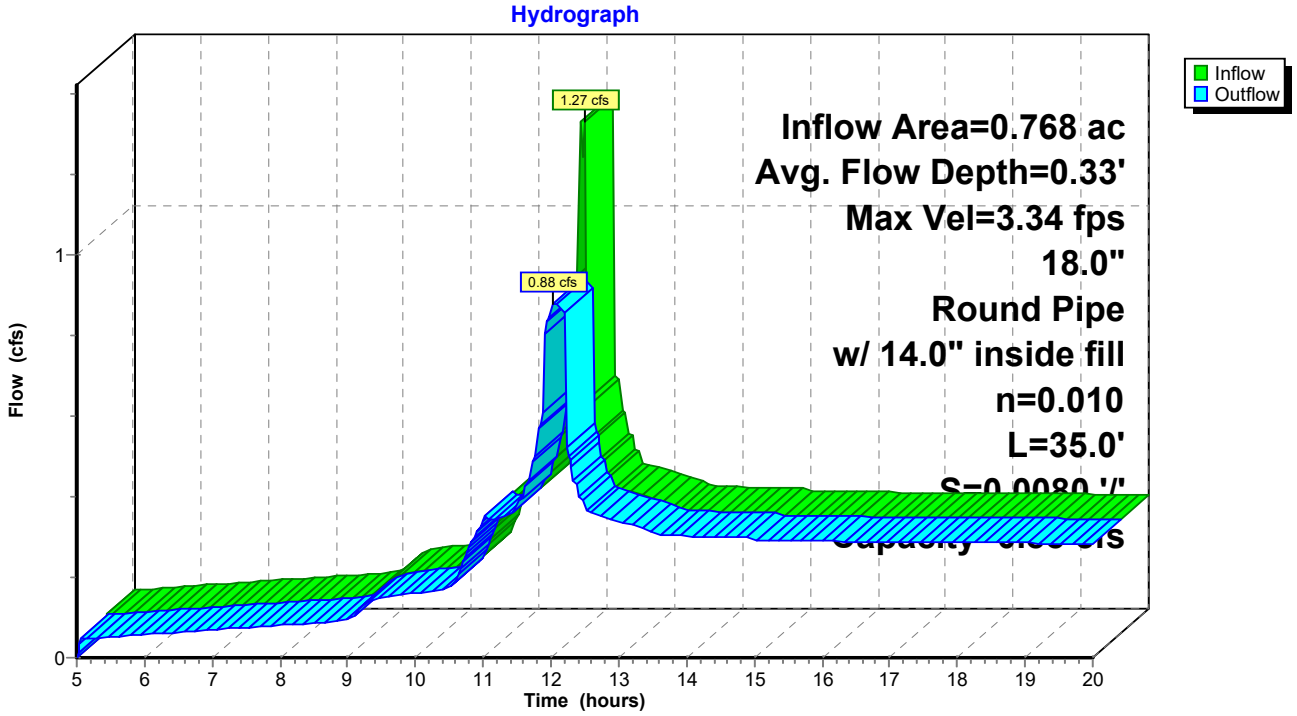
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.34 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.17 fps, Avg. Travel Time= 0.3 min

Peak Storage= 10 cf @ 12.00 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.88 cfs

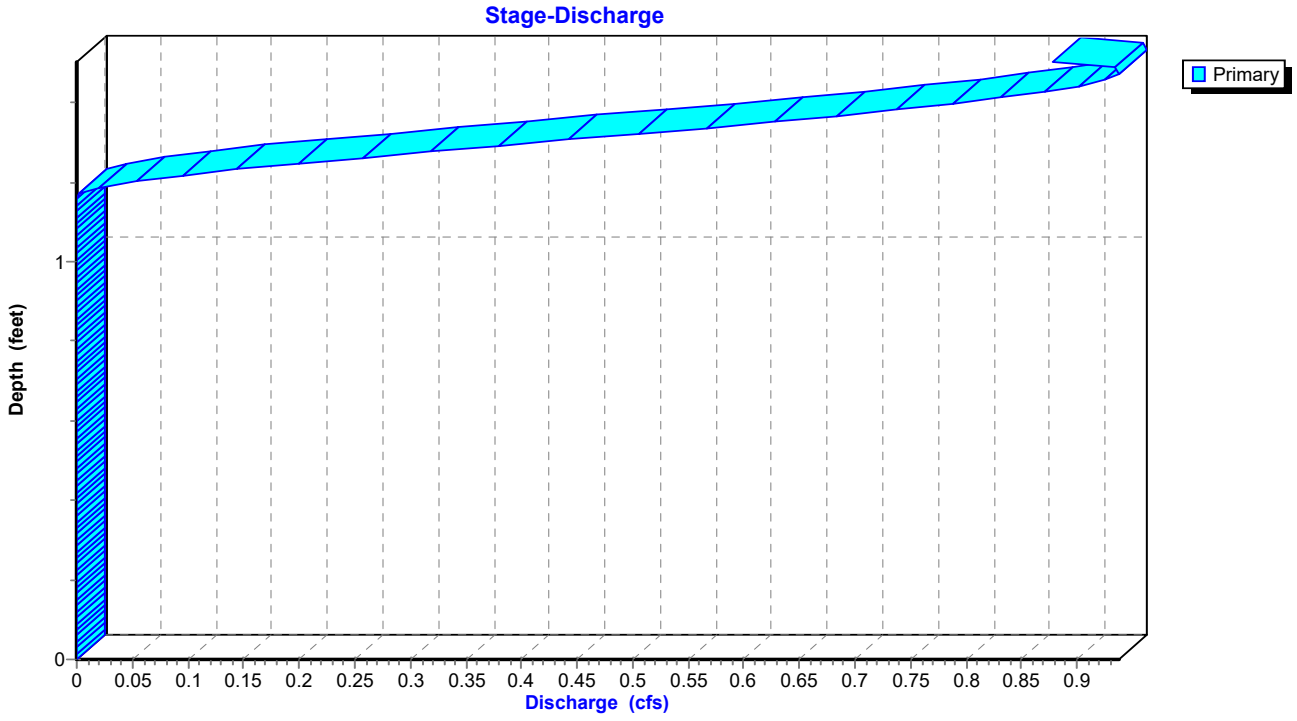
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 35.0' Slope= 0.0080 '/'
Inlet Invert= 665.30', Outlet Invert= 665.02'



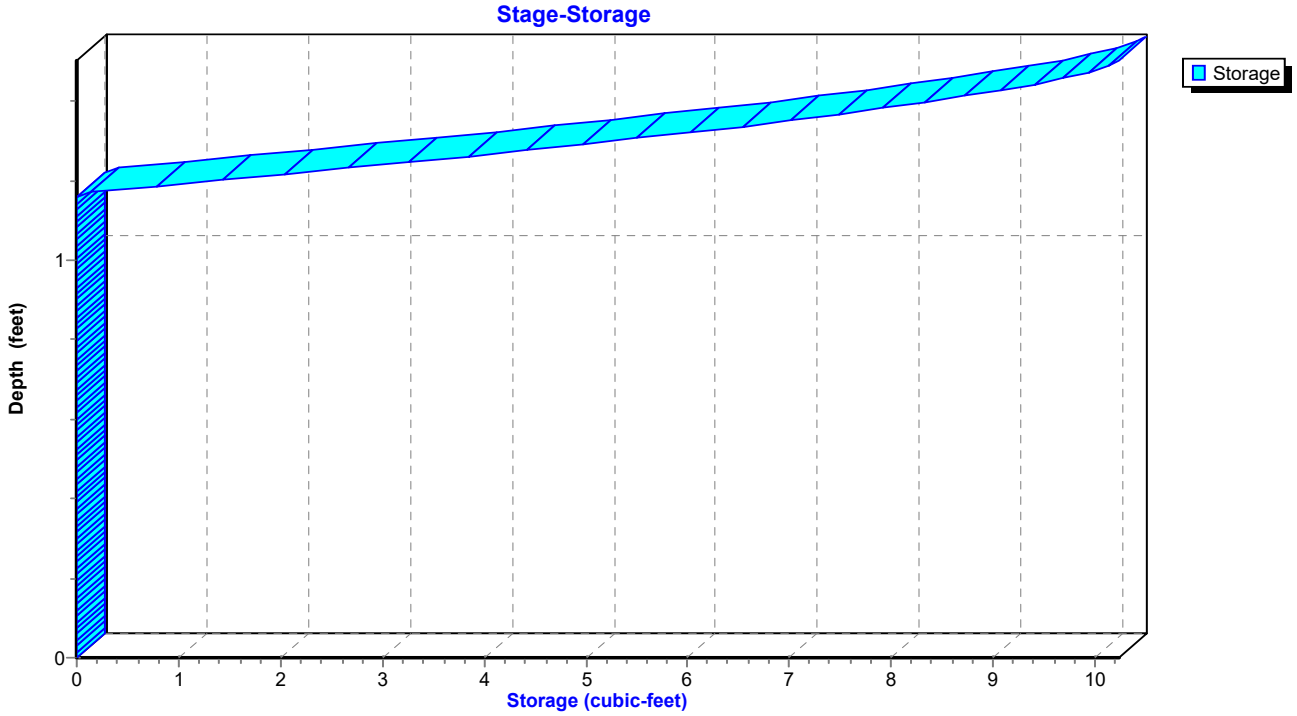
Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Hydrograph for Reach 9R: inlet 3 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.47	0.00
5.40	0.05	1	666.50	0.05
5.80	0.06	1	666.50	0.06
6.20	0.06	2	666.50	0.06
6.60	0.07	2	666.50	0.07
7.00	0.07	2	666.51	0.07
7.40	0.07	2	666.51	0.07
7.80	0.08	2	666.51	0.08
8.20	0.08	2	666.51	0.08
8.60	0.09	2	666.51	0.09
9.00	0.10	2	666.51	0.09
9.40	0.15	3	666.53	0.15
9.80	0.16	3	666.53	0.16
10.20	0.17	3	666.54	0.17
10.60	0.20	3	666.54	0.20
11.00	0.34	5	666.58	0.34
11.40	0.36	5	666.58	0.36
11.80	**0.54**	**6**	**666.63**	**0.52**
12.20	**0.54**	**10**	**666.80**	**0.88**
12.60	0.36	5	666.59	0.36
13.00	0.34	5	666.58	0.34
13.40	0.32	4	666.58	0.32
13.80	0.30	4	666.57	0.30
14.20	0.30	4	666.57	0.30
14.60	0.30	4	666.57	0.30
15.00	0.30	4	666.57	0.30
15.40	0.29	4	666.57	0.29
15.80	0.29	4	666.57	0.29
16.20	0.29	4	666.57	0.29
16.60	0.29	4	666.57	0.29
17.00	0.29	4	666.57	0.29
17.40	0.29	4	666.57	0.29
17.80	0.29	4	666.57	0.29
18.20	0.29	4	666.57	0.29
18.60	0.29	4	666.57	0.29
19.00	0.29	4	666.57	0.29
19.40	0.28	4	666.57	0.28
19.80	0.28	4	666.57	0.28

Stage-Discharge for Reach 9R: inlet 3 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.10	0.00
666.47	0.29	0.00
666.48	0.70	0.01
666.49	1.03	0.03
666.50	1.30	0.05
666.51	1.52	0.08
666.52	1.72	0.11
666.53	1.90	0.14
666.54	2.06	0.18
666.55	2.21	0.22
666.56	2.34	0.26
666.57	2.46	0.30
666.58	2.57	0.34
666.59	2.68	0.38
666.60	2.77	0.42
666.61	2.86	0.46
666.62	2.94	0.51
666.63	3.01	0.55
666.64	3.07	0.59
666.65	3.13	0.63
666.66	3.18	0.67
666.67	3.22	0.70
666.68	3.26	0.74
666.69	3.29	0.77
666.70	3.32	0.80
666.71	3.34	0.83
666.72	3.35	0.86
666.73	3.36	0.88
666.74	**3.36**	0.90
666.75	3.35	0.92
666.76	3.33	0.93
666.77	3.30	**0.94**
666.78	3.25	0.94
666.79	3.15	0.92
666.80	3.01	0.88

Stage-Area-Storage for Reach 9R: inlet 3 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	1
666.50	0.0	1
666.52	0.1	2
666.54	0.1	3
666.56	0.1	4
666.58	0.1	5
666.60	0.2	5
666.62	0.2	6
666.64	0.2	7
666.66	0.2	7
666.68	0.2	8
666.70	0.2	8
666.72	0.3	9
666.74	0.3	9
666.76	0.3	10
666.78	0.3	10
666.80	**0.3**	**10**

Summary for Reach 10R: MH7 18"

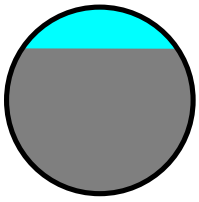
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 126% of Manning's capacity
[76] Warning: Detained 0.004 af (Pond w/culvert advised)
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=6)
[62] Hint: Exceeded Reach 9R OUTLET depth by 0.21' @ 12.42 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 4.69" for 25-yr event
Inflow = 0.88 cfs @ 12.02 hrs, Volume= 0.300 af
Outflow = 0.69 cfs @ 11.94 hrs, Volume= 0.300 af, Atten= 21%, Lag= 0.0 min

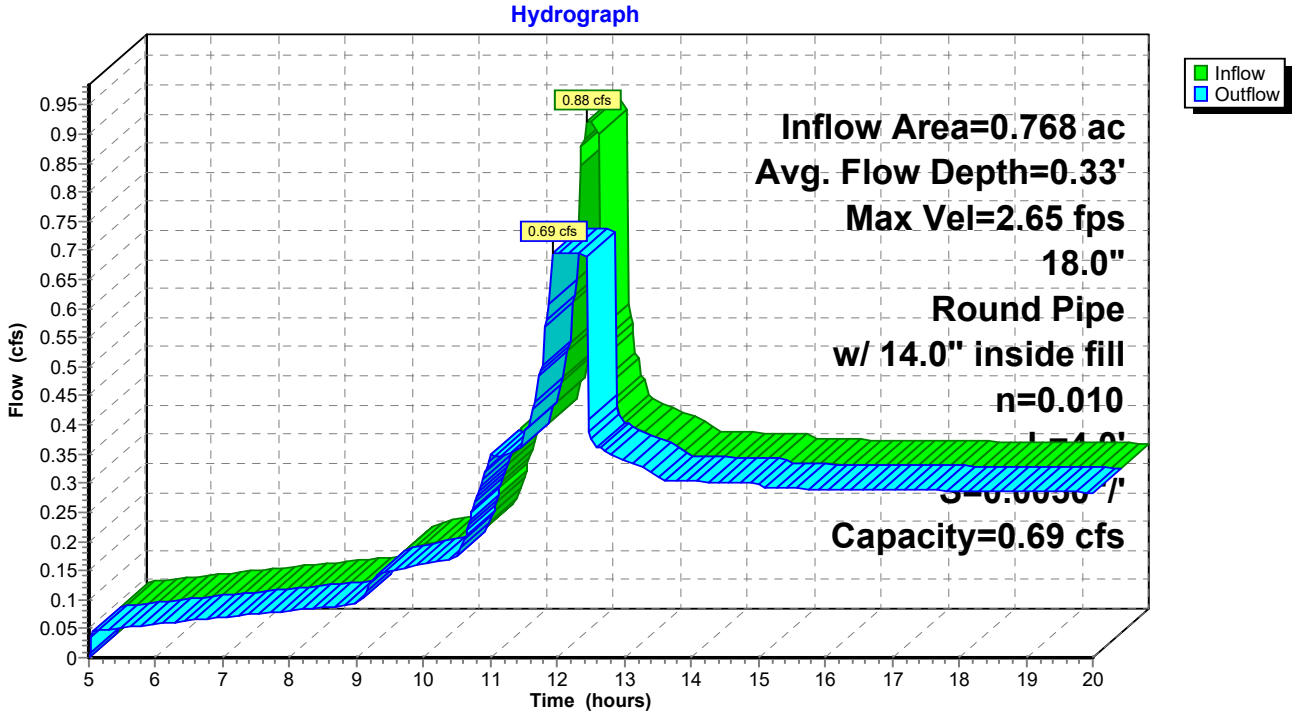
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.65 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.85 fps, Avg. Travel Time= 0.0 min

Peak Storage= 1 cf @ 11.92 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

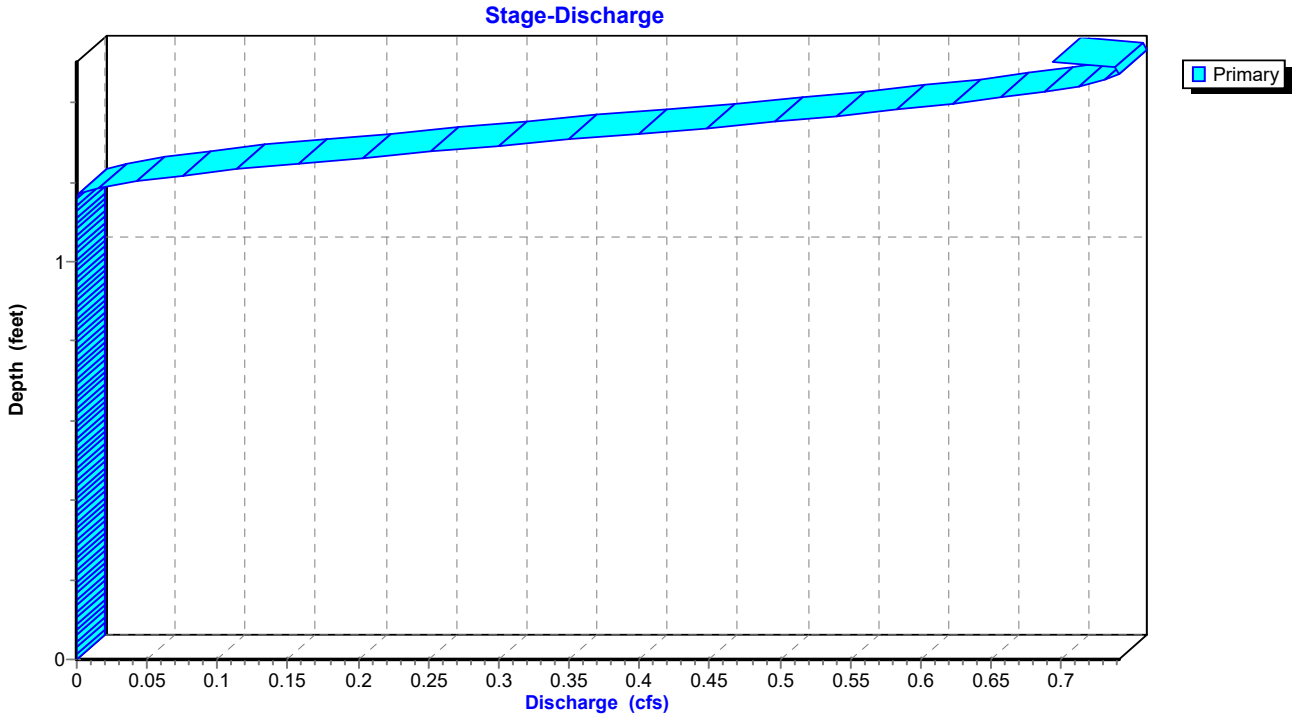
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 4.0' Slope= 0.0050 '/'
Inlet Invert= 665.02', Outlet Invert= 665.00'



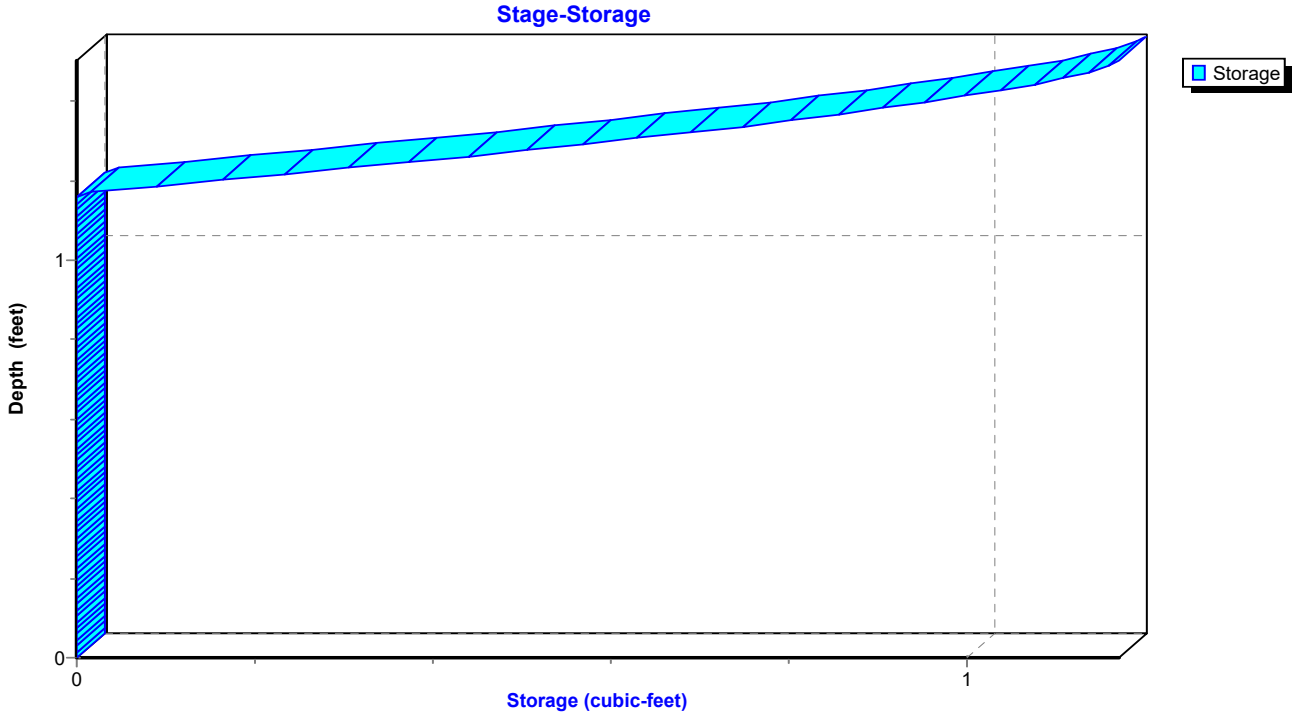
Reach 10R: MH7 18"



Reach 10R: MH7 18"



Reach 10R: MH7 18"



Hydrograph for Reach 10R: MH7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.19	0.00
5.40	0.05	0	666.22	0.05
5.80	0.06	0	666.23	0.06
6.20	0.06	0	666.23	0.06
6.60	0.07	0	666.23	0.07
7.00	0.07	0	666.23	0.07
7.40	0.07	0	666.23	0.07
7.80	0.08	0	666.24	0.08
8.20	0.08	0	666.24	0.08
8.60	0.09	0	666.24	0.09
9.00	0.09	0	666.24	0.09
9.40	0.15	0	666.26	0.15
9.80	0.16	0	666.26	0.16
10.20	0.17	0	666.27	0.17
10.60	0.20	0	666.28	0.19
11.00	0.34	1	666.32	0.34
11.40	0.36	1	666.33	0.36
11.80	**0.52**	**1**	**666.38**	**0.52**
12.20	**0.88**	**1**	**666.52**	**0.69**
12.60	0.36	1	666.33	0.36
13.00	0.34	1	666.32	0.34
13.40	0.32	1	666.32	0.32
13.80	0.30	1	666.31	0.30
14.20	0.30	1	666.31	0.30
14.60	0.30	1	666.31	0.30
15.00	0.30	1	666.31	0.30
15.40	0.29	1	666.31	0.29
15.80	0.29	1	666.31	0.29
16.20	0.29	1	666.31	0.29
16.60	0.29	1	666.31	0.29
17.00	0.29	1	666.31	0.29
17.40	0.29	1	666.31	0.29
17.80	0.29	1	666.31	0.29
18.20	0.29	1	666.31	0.29
18.60	0.29	1	666.31	0.29
19.00	0.29	1	666.31	0.29
19.40	0.28	1	666.31	0.28
19.80	0.28	1	666.30	0.28

Stage-Discharge for Reach 10R: MH7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.02	0.00	0.00	665.53	0.00	0.00	666.04	0.00	0.00
665.03	0.00	0.00	665.54	0.00	0.00	666.05	0.00	0.00
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.08	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.23	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.55	0.01
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.82	0.02
665.20	0.00	0.00	665.71	0.00	0.00	666.22	1.03	0.04
665.21	0.00	0.00	665.72	0.00	0.00	666.23	1.20	0.06
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.36	0.09
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.50	0.11
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.63	0.14
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.74	0.17
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.85	0.20
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.95	0.24
665.28	0.00	0.00	665.79	0.00	0.00	666.30	2.04	0.27
665.29	0.00	0.00	665.80	0.00	0.00	666.31	2.12	0.30
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.19	0.33
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.26	0.37
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.32	0.40
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.38	0.43
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.43	0.46
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.47	0.50
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.51	0.53
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.55	0.56
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.58	0.58
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.60	0.61
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.62	0.63
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.64	0.66
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.65	0.68
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.65	0.70
665.44	0.00	0.00	665.95	0.00	0.00	666.46	**2.65**	0.71
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.73
665.46	0.00	0.00	665.97	0.00	0.00	666.48	2.63	0.73
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.61	**0.74**
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.57	0.74
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.49	0.72
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.38	0.69
665.51	0.00	0.00	666.02	0.00	0.00			
665.52	0.00	0.00	666.03	0.00	0.00			

Stage-Area-Storage for Reach 10R: MH7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.02	0.0	0
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.1	0
666.26	0.1	0
666.28	0.1	0
666.30	0.1	1
666.32	0.2	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	1
666.40	0.2	1
666.42	0.2	1
666.44	0.3	1
666.46	0.3	1
666.48	0.3	1
666.50	0.3	1
666.52	**0.3**	**1**

Summary for Reach 11R: inlet 7 18"

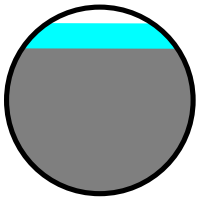
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 0.56 cfs @ 12.15 hrs, Volume= 0.042 af
Outflow = 0.56 cfs @ 12.16 hrs, Volume= 0.041 af, Atten= 1%, Lag= 0.7 min

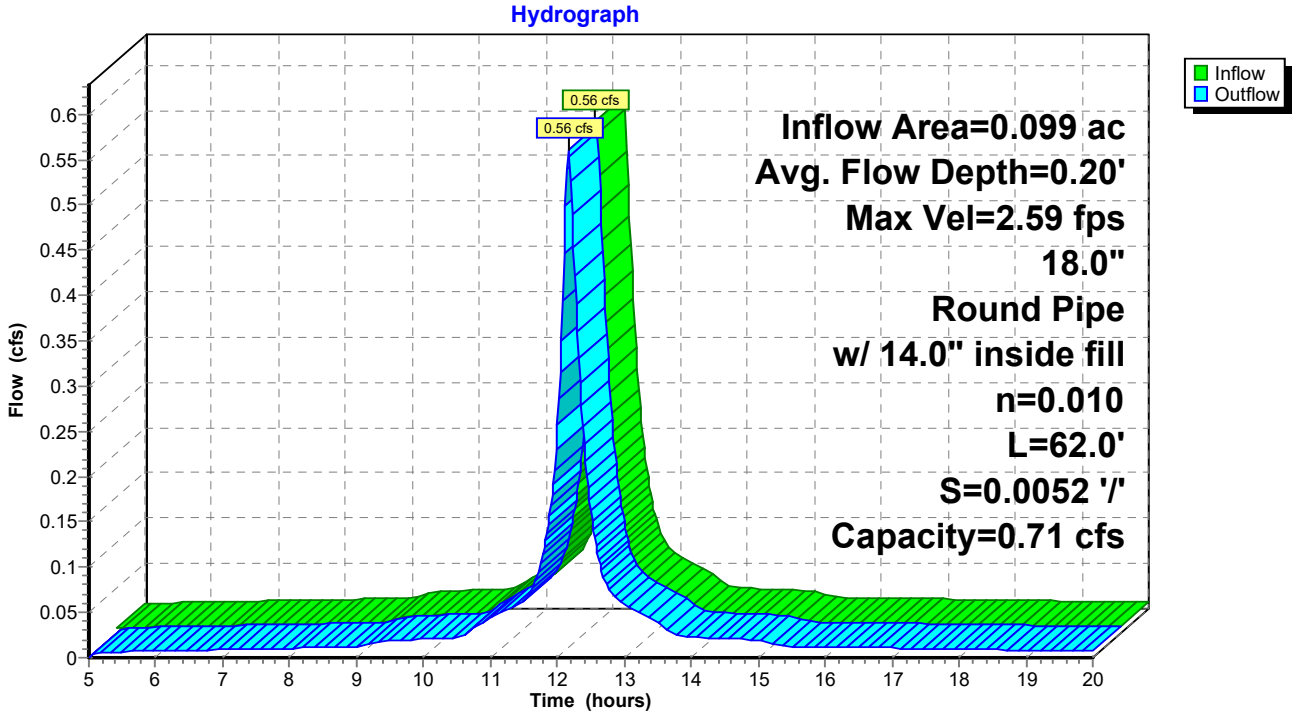
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.59 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.83 fps, Avg. Travel Time= 1.2 min

Peak Storage= 14 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.37' above invert (0.20' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.71 cfs

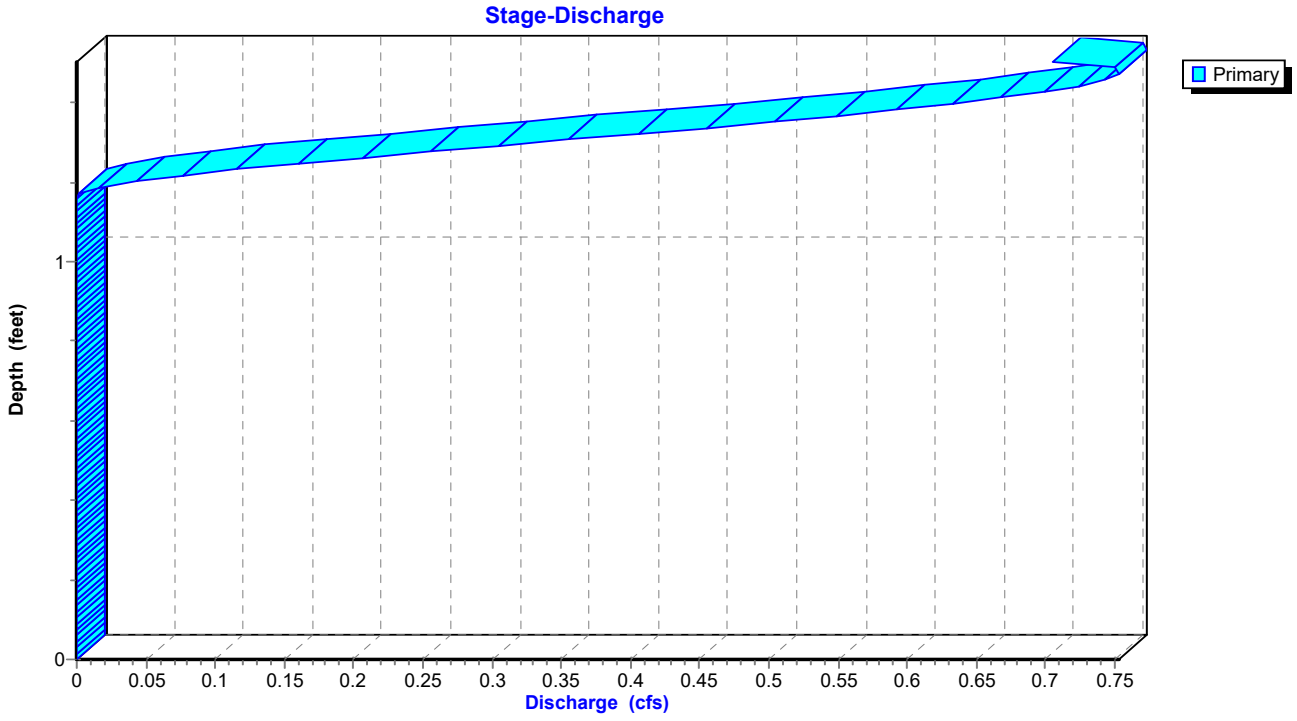
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0052 '/'
Inlet Invert= 665.36', Outlet Invert= 665.04'



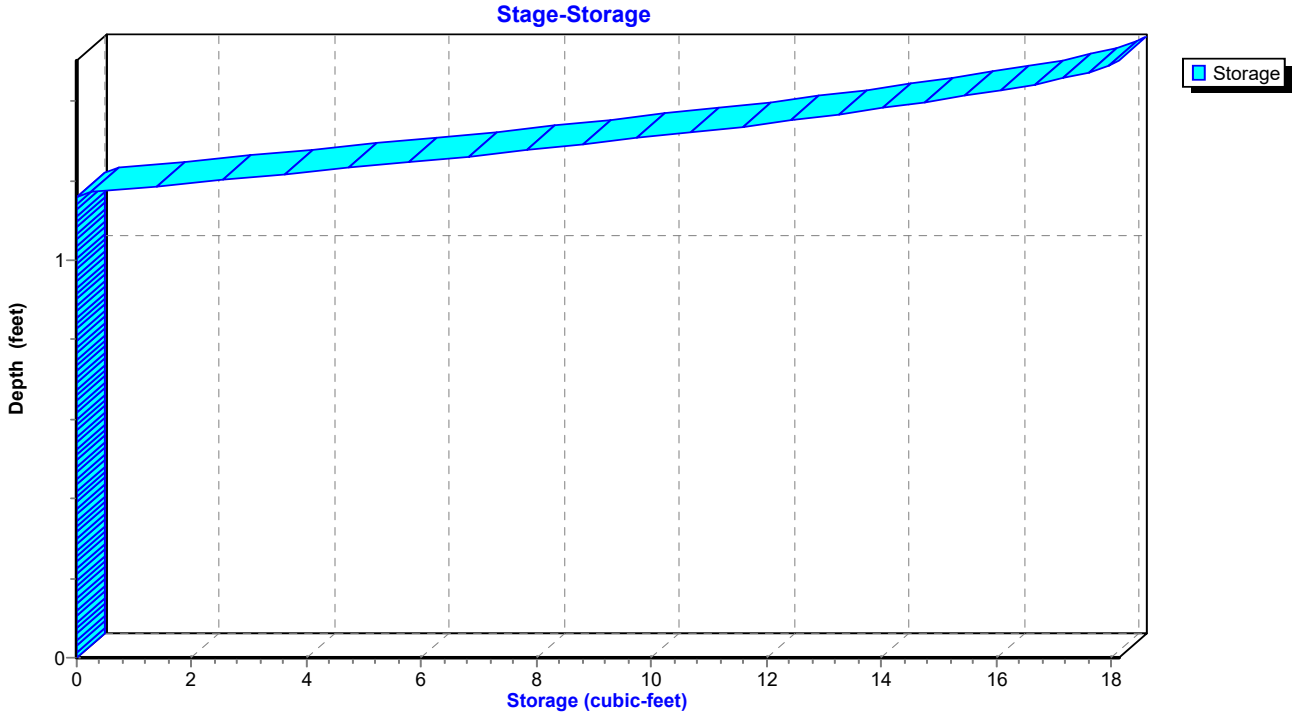
Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Hydrograph for Reach 11R: inlet 7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.53	0.00
5.40	0.01	1	666.54	0.01
5.80	0.01	1	666.54	0.01
6.20	0.01	1	666.54	0.01
6.60	0.01	1	666.54	0.01
7.00	0.01	1	666.54	0.01
7.40	0.01	1	666.54	0.01
7.80	0.01	1	666.54	0.01
8.20	0.01	1	666.54	0.01
8.60	0.01	1	666.54	0.01
9.00	0.01	1	666.54	0.01
9.40	0.02	2	666.55	0.02
9.80	0.02	2	666.55	0.02
10.20	0.02	2	666.55	0.02
10.60	0.03	2	666.55	0.02
11.00	0.04	3	666.56	0.04
11.40	0.06	3	666.57	0.06
11.80	**0.13**	**5**	**666.59**	**0.12**
12.20	**0.50**	**13**	**666.71**	**0.53**
12.60	0.11	5	666.59	0.12
13.00	0.06	3	666.57	0.06
13.40	0.04	3	666.56	0.04
13.80	0.02	2	666.55	0.02
14.20	0.02	2	666.55	0.02
14.60	0.02	2	666.55	0.02
15.00	0.02	2	666.55	0.02
15.40	0.01	1	666.54	0.01
15.80	0.01	1	666.54	0.01
16.20	0.01	1	666.54	0.01
16.60	0.01	1	666.54	0.01
17.00	0.01	1	666.54	0.01
17.40	0.01	1	666.54	0.01
17.80	0.01	1	666.54	0.01
18.20	0.01	1	666.54	0.01
18.60	0.01	1	666.54	0.01
19.00	0.01	1	666.54	0.01
19.40	0.01	1	666.54	0.01
19.80	0.01	1	666.54	0.01

Stage-Discharge for Reach 11R: inlet 7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.08	0.00
666.53	0.24	0.00
666.54	0.56	0.01
666.55	0.83	0.03
666.56	1.05	0.04
666.57	1.22	0.07
666.58	1.38	0.09
666.59	1.53	0.12
666.60	1.65	0.15
666.61	1.77	0.18
666.62	1.88	0.21
666.63	1.98	0.24
666.64	2.07	0.27
666.65	2.15	0.31
666.66	2.23	0.34
666.67	2.29	0.37
666.68	2.36	0.41
666.69	2.41	0.44
666.70	2.47	0.47
666.71	2.51	0.50
666.72	2.55	0.53
666.73	2.59	0.56
666.74	2.62	0.59
666.75	2.65	0.62
666.76	2.67	0.64
666.77	2.68	0.67
666.78	2.69	0.69
666.79	2.70	0.71
666.80	**2.70**	0.72
666.81	2.69	0.74
666.82	2.67	0.75
666.83	2.65	**0.75**
666.84	2.61	0.75
666.85	2.53	0.74
666.86	2.41	0.71

Stage-Area-Storage for Reach 11R: inlet 7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	0
666.50	0.0	0
666.52	0.0	0
666.54	0.0	1
666.56	0.0	3
666.58	0.1	4
666.60	0.1	5
666.62	0.1	7
666.64	0.1	8
666.66	0.2	9
666.68	0.2	11
666.70	0.2	12
666.72	0.2	13
666.74	0.2	14
666.76	0.2	15
666.78	0.3	16
666.80	0.3	17
666.82	0.3	17
666.84	0.3	18
666.86	**0.3**	**18**

Summary for Reach 12R: MH6 18"

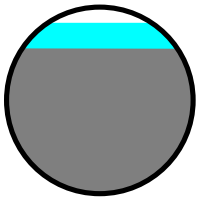
[52] Hint: Inlet/Outlet conditions not evaluated
[62] Hint: Exceeded Reach 11R OUTLET depth by 0.01' @ 12.20 hrs

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 0.56 cfs @ 12.16 hrs, Volume= 0.041 af
Outflow = 0.56 cfs @ 12.17 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.1 min

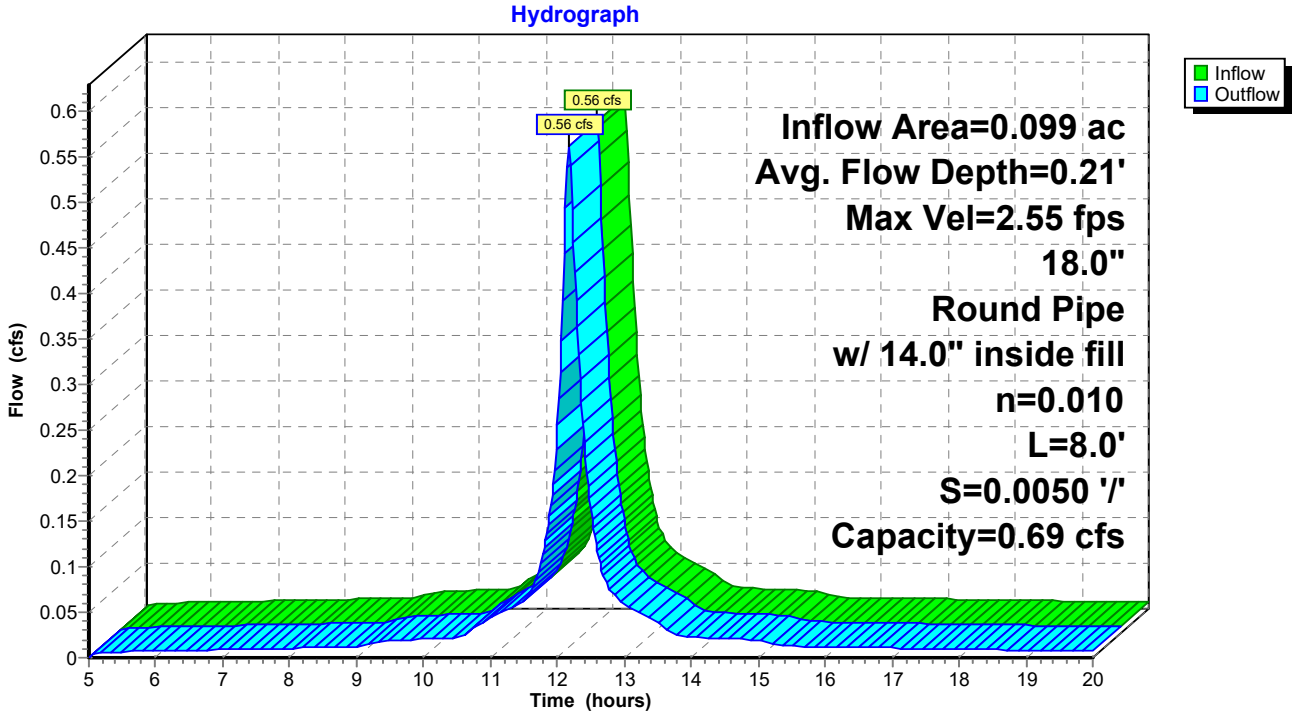
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.55 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.82 fps, Avg. Travel Time= 0.2 min

Peak Storage= 2 cf @ 12.17 hrs
Average Depth at Peak Storage= 1.37' above invert (0.21' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

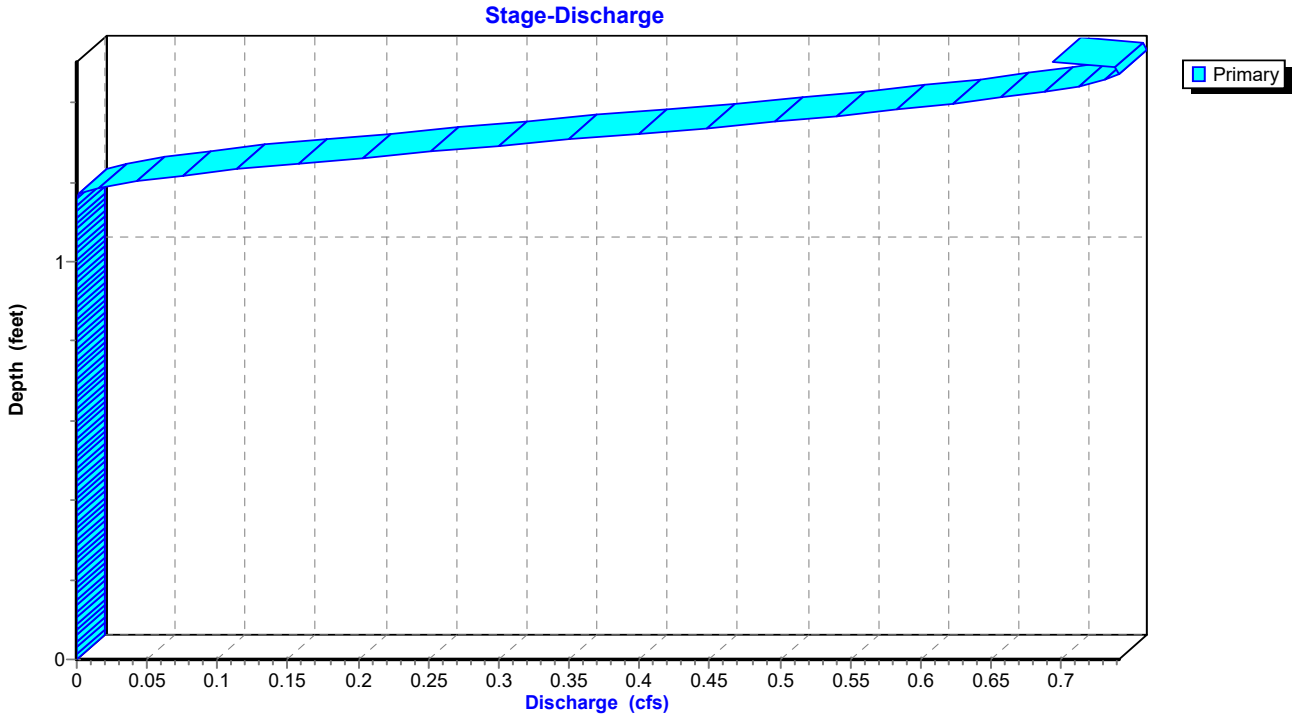
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 8.0' Slope= 0.0050 '/'
Inlet Invert= 665.04', Outlet Invert= 665.00'



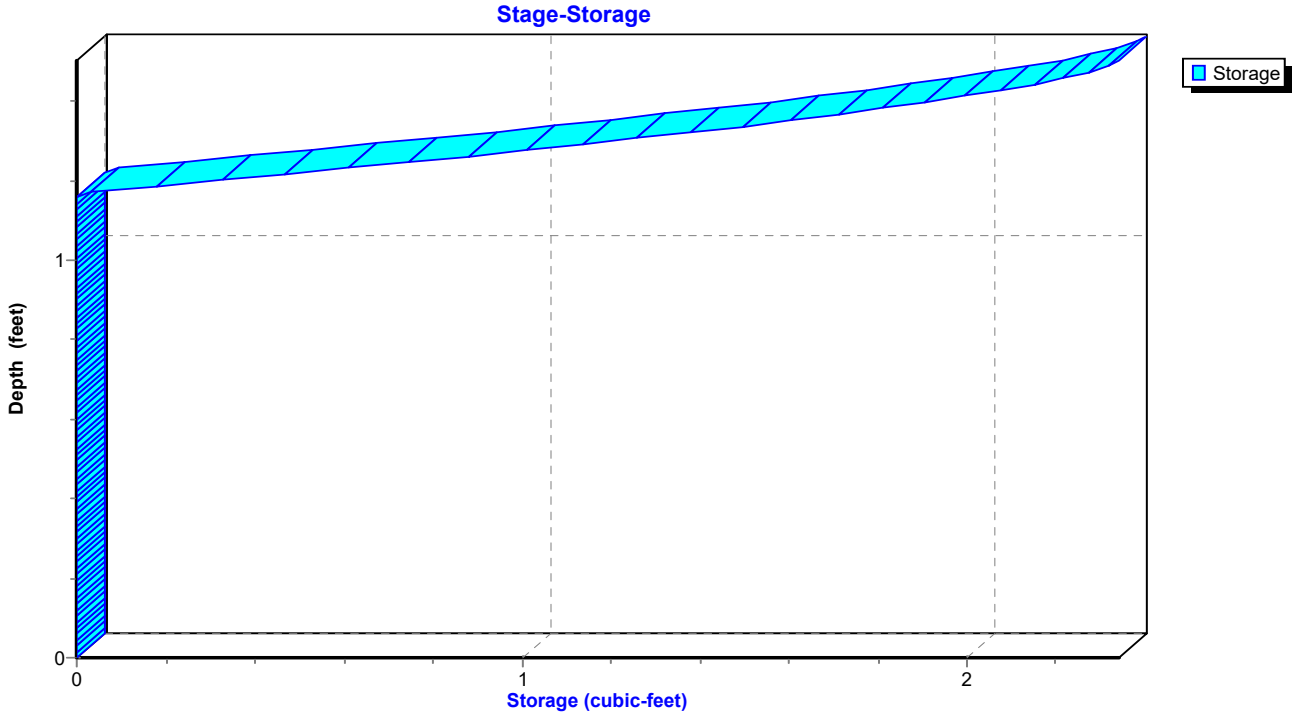
Reach 12R: MH6 18"



Reach 12R: MH6 18"



Reach 12R: MH6 18"



Hydrograph for Reach 12R: MH6 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.21	0.00
5.40	0.01	0	666.22	0.01
5.80	0.01	0	666.22	0.01
6.20	0.01	0	666.22	0.01
6.60	0.01	0	666.22	0.01
7.00	0.01	0	666.22	0.01
7.40	0.01	0	666.22	0.01
7.80	0.01	0	666.22	0.01
8.20	0.01	0	666.22	0.01
8.60	0.01	0	666.22	0.01
9.00	0.01	0	666.22	0.01
9.40	0.02	0	666.23	0.02
9.80	0.02	0	666.23	0.02
10.20	0.02	0	666.23	0.02
10.60	0.02	0	666.23	0.02
11.00	0.04	0	666.24	0.04
11.40	0.06	0	666.25	0.06
11.80	**0.12**	**1**	**666.27**	**0.12**
12.20	**0.53**	**2**	**666.40**	**0.53**
12.60	0.12	1	666.27	0.12
13.00	0.06	0	666.25	0.06
13.40	0.04	0	666.24	0.04
13.80	0.02	0	666.23	0.02
14.20	0.02	0	666.23	0.02
14.60	0.02	0	666.23	0.02
15.00	0.02	0	666.23	0.02
15.40	0.01	0	666.22	0.01
15.80	0.01	0	666.22	0.01
16.20	0.01	0	666.22	0.01
16.60	0.01	0	666.22	0.01
17.00	0.01	0	666.22	0.01
17.40	0.01	0	666.22	0.01
17.80	0.01	0	666.22	0.01
18.20	0.01	0	666.22	0.01
18.60	0.01	0	666.22	0.01
19.00	0.01	0	666.22	0.01
19.40	0.01	0	666.22	0.01
19.80	0.01	0	666.22	0.01

Stage-Discharge for Reach 12R: MH6 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.04	0.00	0.00
665.05	0.00	0.00
665.06	0.00	0.00
665.07	0.00	0.00
665.08	0.00	0.00
665.09	0.00	0.00
665.10	0.00	0.00
665.11	0.00	0.00
665.12	0.00	0.00
665.13	0.00	0.00
665.14	0.00	0.00
665.15	0.00	0.00
665.16	0.00	0.00
665.17	0.00	0.00
665.18	0.00	0.00
665.19	0.00	0.00
665.20	0.00	0.00
665.21	0.00	0.00
665.22	0.00	0.00
665.23	0.00	0.00
665.24	0.00	0.00
665.25	0.00	0.00
665.26	0.00	0.00
665.27	0.00	0.00
665.28	0.00	0.00
665.29	0.00	0.00
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.08	0.00
666.21	0.23	0.00
666.22	0.55	0.01
666.23	0.82	0.02
666.24	1.03	0.04
666.25	1.20	0.06
666.26	1.36	0.09
666.27	1.50	0.11
666.28	1.63	0.14
666.29	1.74	0.17
666.30	1.85	0.20
666.31	1.95	0.24
666.32	2.04	0.27
666.33	2.12	0.30
666.34	2.19	0.33
666.35	2.26	0.37
666.36	2.32	0.40
666.37	2.38	0.43
666.38	2.43	0.46
666.39	2.47	0.50
666.40	2.51	0.53
666.41	2.55	0.56
666.42	2.58	0.58
666.43	2.60	0.61
666.44	2.62	0.63
666.45	2.64	0.66
666.46	2.65	0.68
666.47	2.65	0.70
666.48	**2.65**	0.71
666.49	2.65	0.73
666.50	2.63	0.73
666.51	2.61	**0.74**
666.52	2.57	0.74
666.53	2.49	0.72
666.54	2.38	0.69

Stage-Area-Storage for Reach 12R: MH6 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.1	1
666.28	0.1	1
666.30	0.1	1
666.32	0.1	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	2
666.40	0.2	2
666.42	0.2	2
666.44	0.2	2
666.46	0.3	2
666.48	0.3	2
666.50	0.3	2
666.52	0.3	2
666.54	**0.3**	**2**

Summary for Reach 13R: to isolator 6"

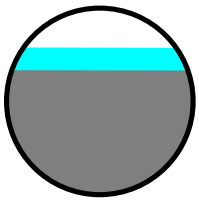
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 0.22 cfs @ 12.21 hrs, Volume= 0.017 af
Outflow = 0.22 cfs @ 12.21 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min

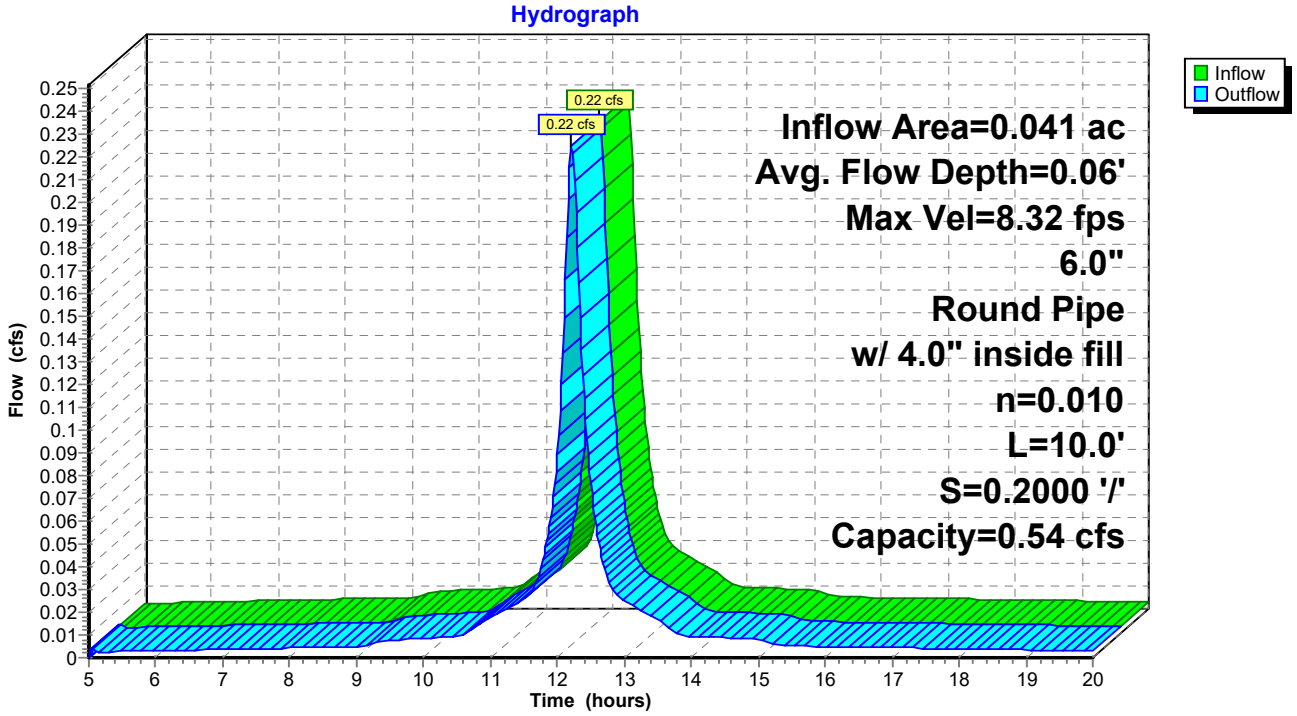
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 8.32 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.58 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.39' above invert (0.06' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

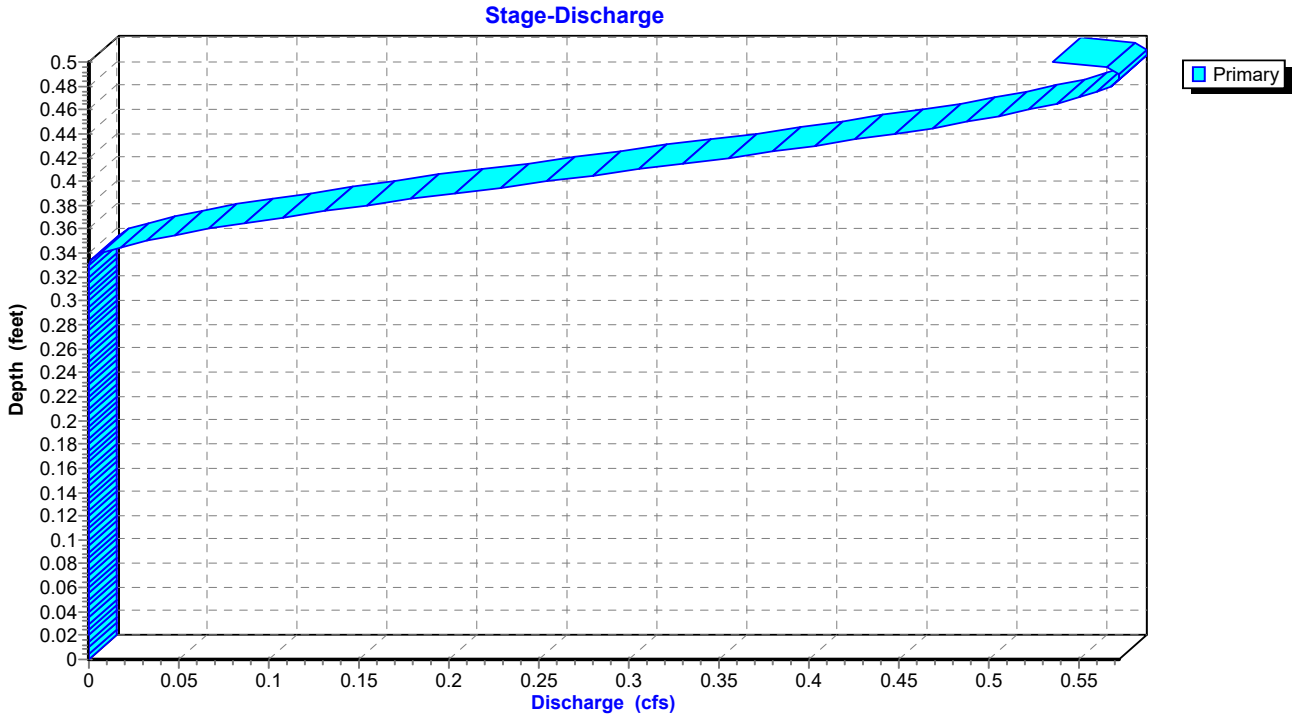
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



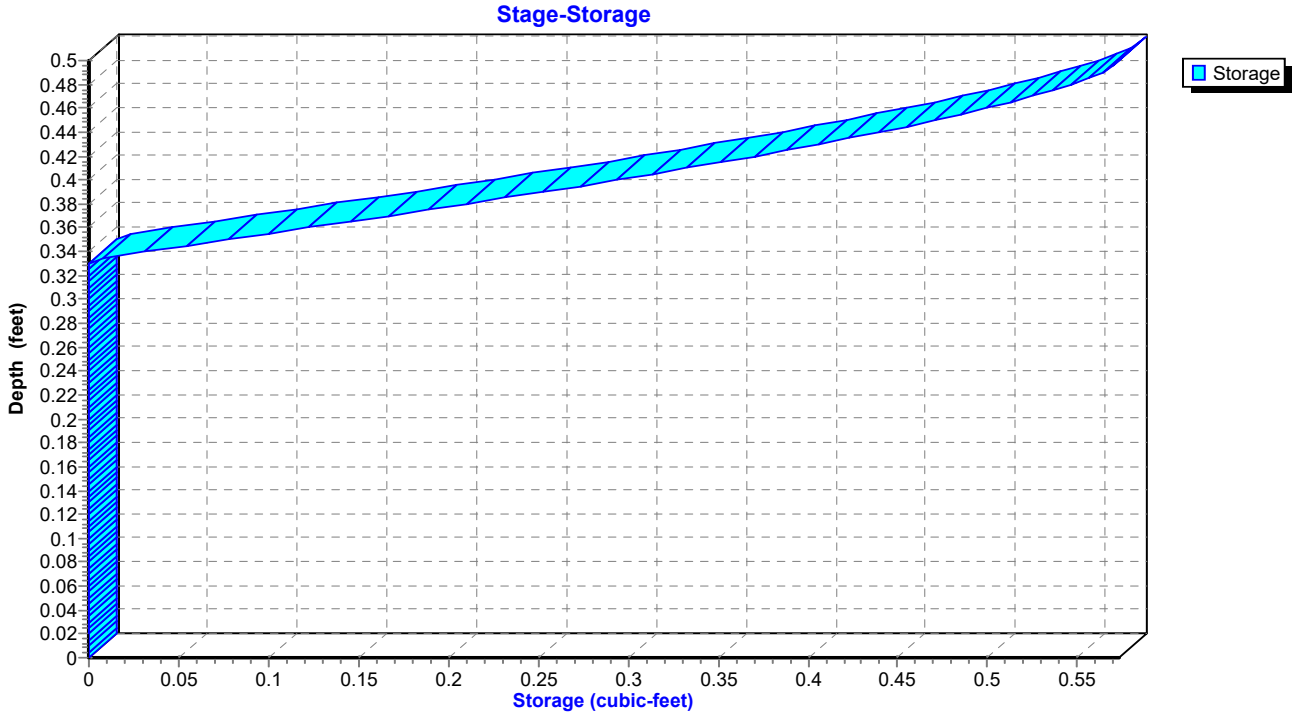
Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Hydrograph for Reach 13R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.34	0.00
5.80	0.00	0	668.34	0.00
6.20	0.00	0	668.34	0.00
6.60	0.00	0	668.34	0.00
7.00	0.00	0	668.34	0.00
7.40	0.00	0	668.34	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.01	0	668.34	0.01
9.80	0.01	0	668.34	0.01
10.20	0.01	0	668.34	0.01
10.60	0.01	0	668.34	0.01
11.00	0.02	0	668.34	0.02
11.40	0.02	0	668.35	0.02
11.80	0.05	0	668.35	0.05
12.20	**0.22**	**0**	**668.39**	**0.22**
12.60	**0.05**	**0**	**668.36**	**0.05**
13.00	0.03	0	668.35	0.03
13.40	0.02	0	668.35	0.02
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.01	0	668.34	0.01
15.80	0.00	0	668.34	0.01
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 13R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 13R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 14R: to isolator 6"

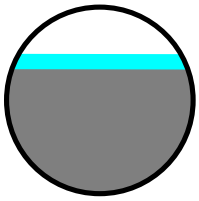
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.030 ac, 83.33% Impervious, Inflow Depth > 4.01" for 25-yr event
Inflow = 0.13 cfs @ 12.26 hrs, Volume= 0.010 af
Outflow = 0.13 cfs @ 12.26 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

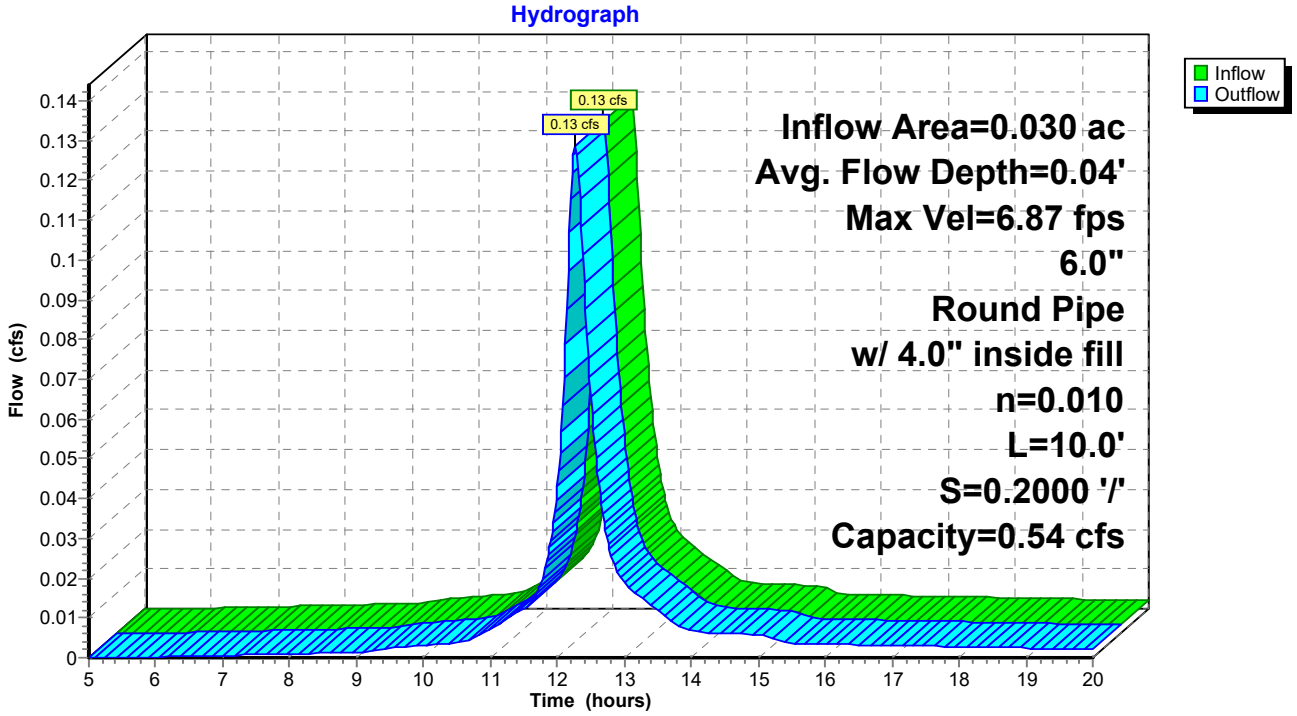
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 6.87 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.08 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.26 hrs
Average Depth at Peak Storage= 0.37' above invert (0.04' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

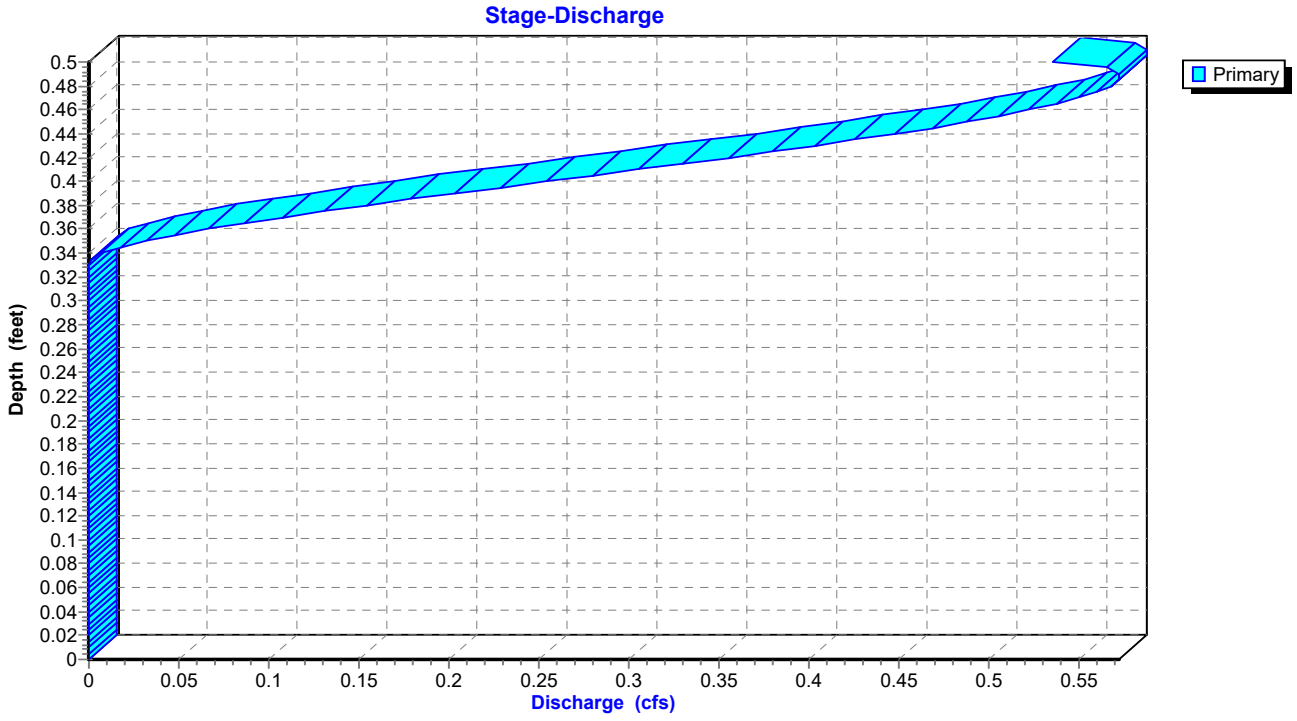
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



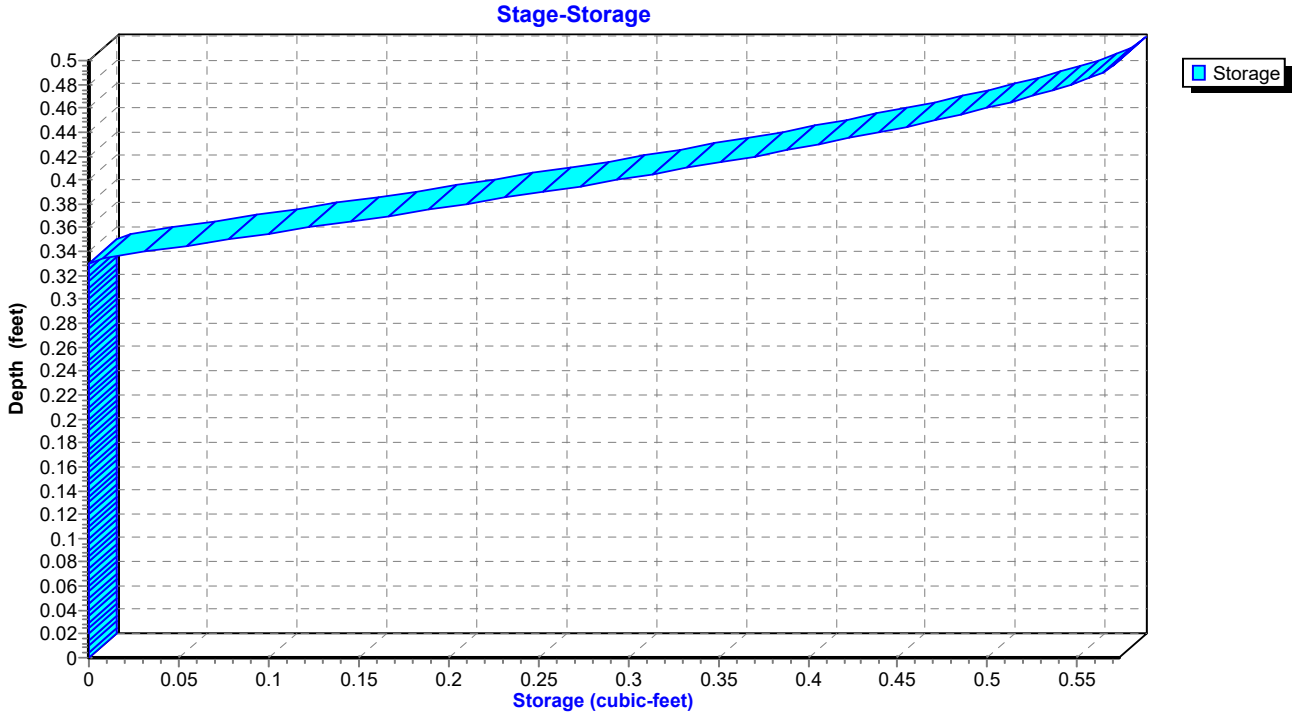
Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Hydrograph for Reach 14R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.01	0	668.34	0.01
11.40	0.01	0	668.34	0.01
11.80	0.02	0	668.35	0.02
12.20	**0.12**	**0**	**668.37**	**0.12**
12.60	**0.05**	**0**	**668.35**	**0.05**
13.00	0.02	0	668.35	0.02
13.40	0.01	0	668.34	0.01
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.00	0	668.34	0.00
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 14R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 14R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 15R: to isolator 6"

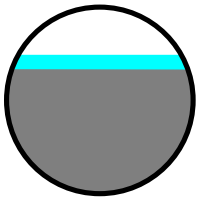
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 73.68% Impervious, Inflow Depth > 3.40" for 25-yr event
Inflow = 0.12 cfs @ 12.37 hrs, Volume= 0.011 af
Outflow = 0.12 cfs @ 12.37 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min

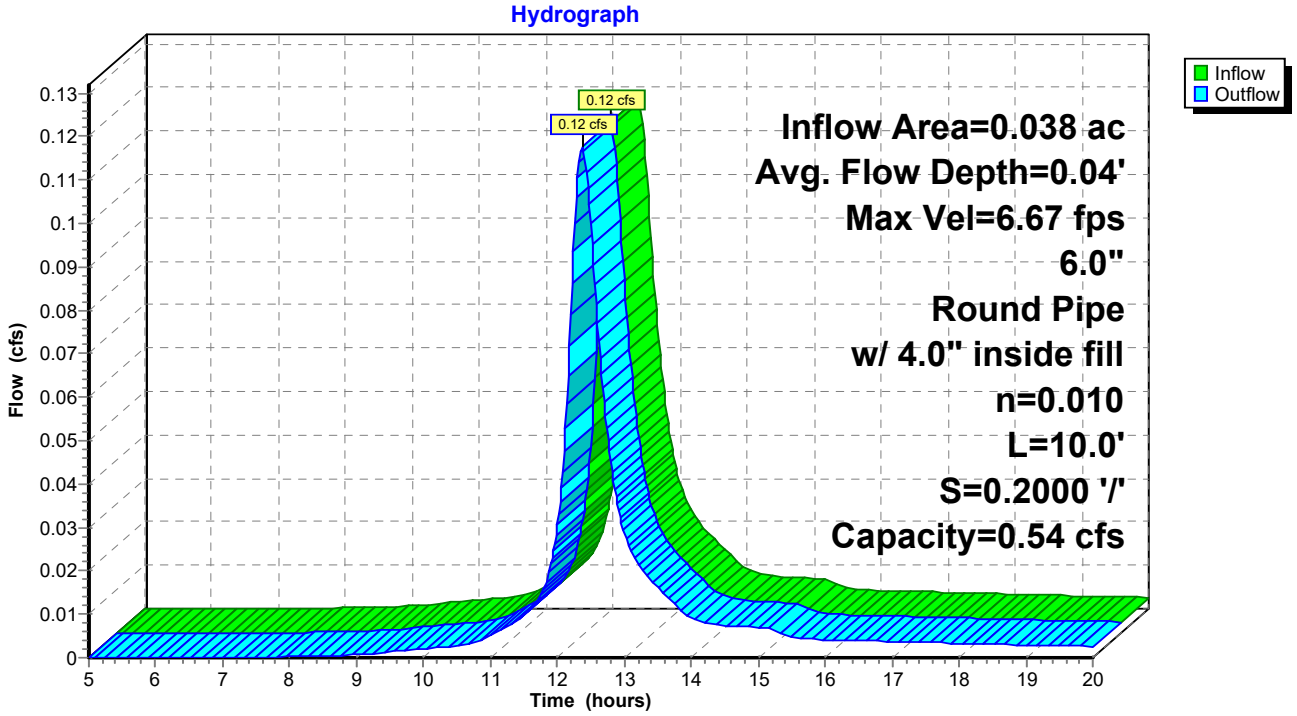
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 6.67 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.26 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.37 hrs
Average Depth at Peak Storage= 0.37' above invert (0.04' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

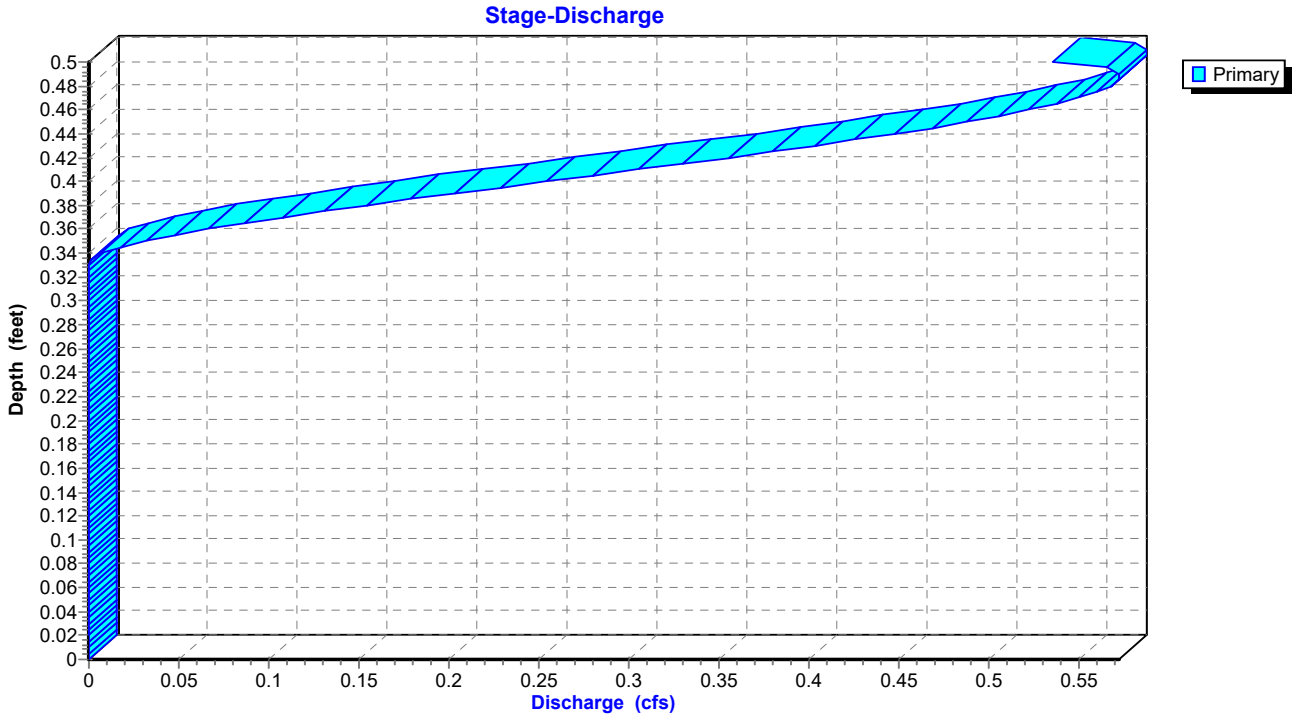
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



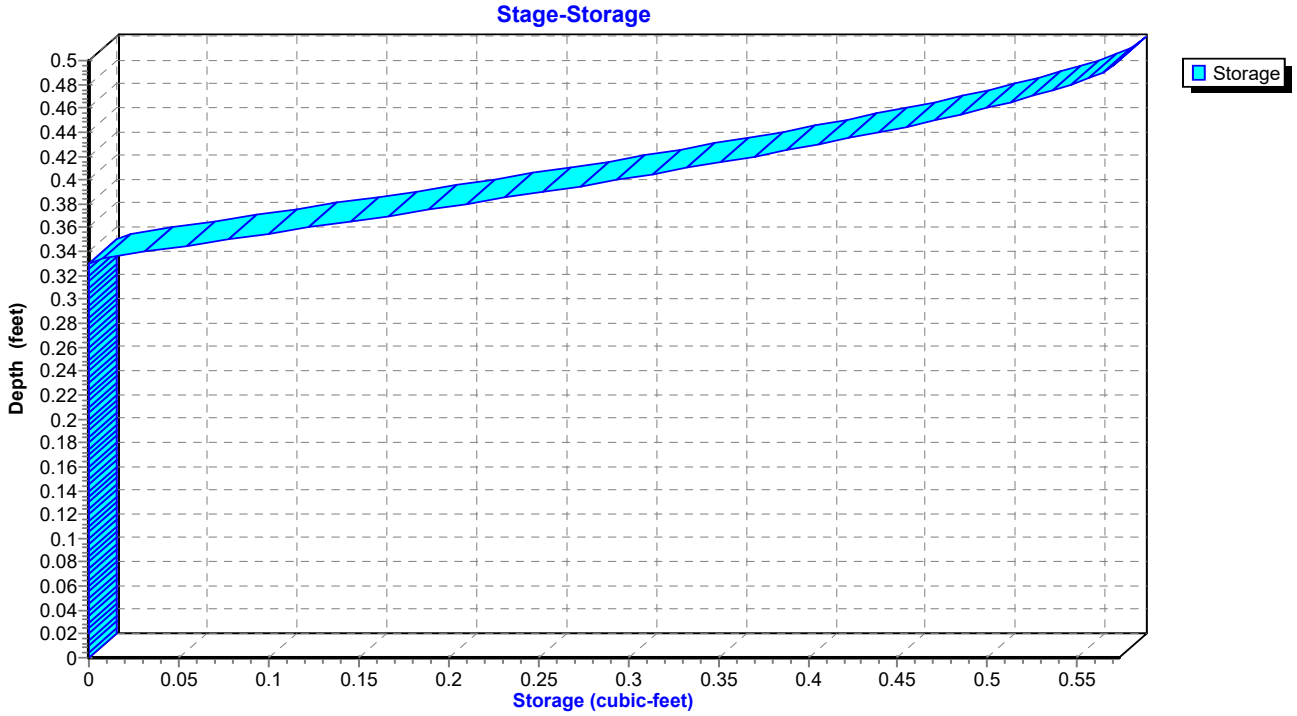
Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Hydrograph for Reach 15R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.33	0.00
8.20	0.00	0	668.33	0.00
8.60	0.00	0	668.33	0.00
9.00	0.00	0	668.33	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.00	0	668.34	0.00
11.00	0.01	0	668.34	0.01
11.40	0.01	0	668.34	0.01
11.80	0.02	0	668.34	0.02
12.20	**0.08**	**0**	**668.36**	**0.08**
12.60	**0.08**	**0**	**668.36**	**0.08**
13.00	0.03	0	668.35	0.03
13.40	0.02	0	668.34	0.02
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.01	0	668.34	0.01
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 15R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 15R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 16R: inlet 2 12"

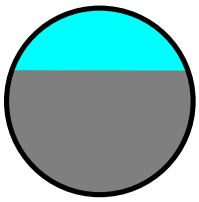
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 127% of Manning's capacity
[76] Warning: Detained 0.002 af (Pond w/culvert advised)

Inflow Area = 0.150 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 0.70 cfs @ 12.28 hrs, Volume= 0.063 af
Outflow = 0.58 cfs @ 12.20 hrs, Volume= 0.063 af, Atten= 17%, Lag= 0.0 min

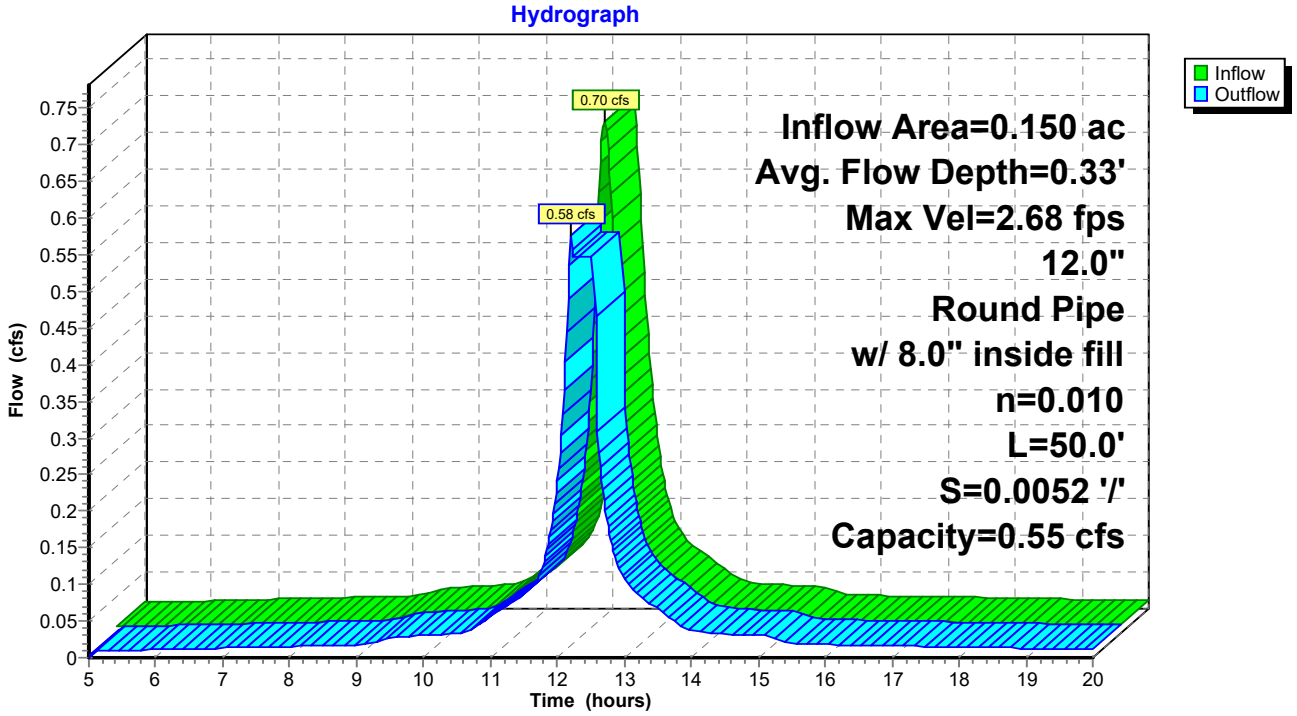
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.68 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.02 fps, Avg. Travel Time= 0.8 min

Peak Storage= 11 cf @ 12.22 hrs
Average Depth at Peak Storage= 1.00' above invert (0.33' above fill)
Bank-Full Depth= 1.00' above invert (0.33' above fill) Flow Area= 0.2 sf, Capacity= 0.55 cfs

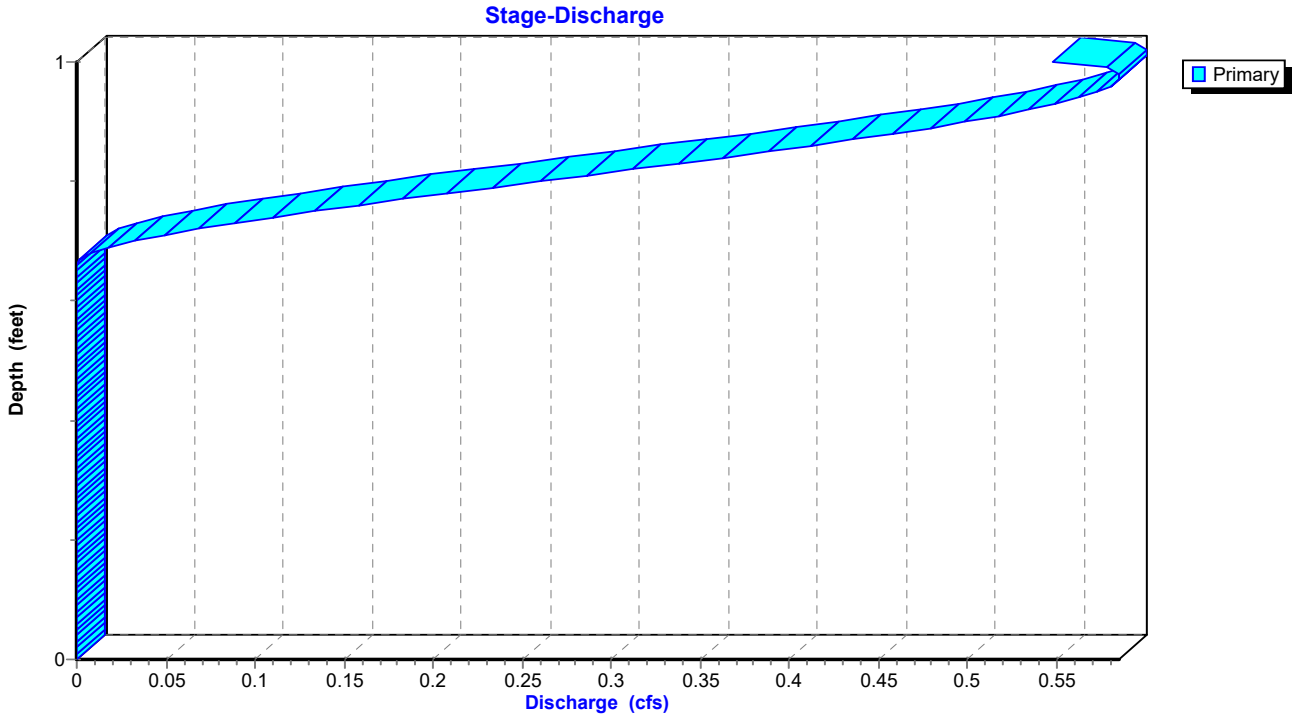
12.0" Round Pipe w/ 8.0" inside fill
n= 0.010
Length= 50.0' Slope= 0.0052 '/'
Inlet Invert= 666.21', Outlet Invert= 665.95'



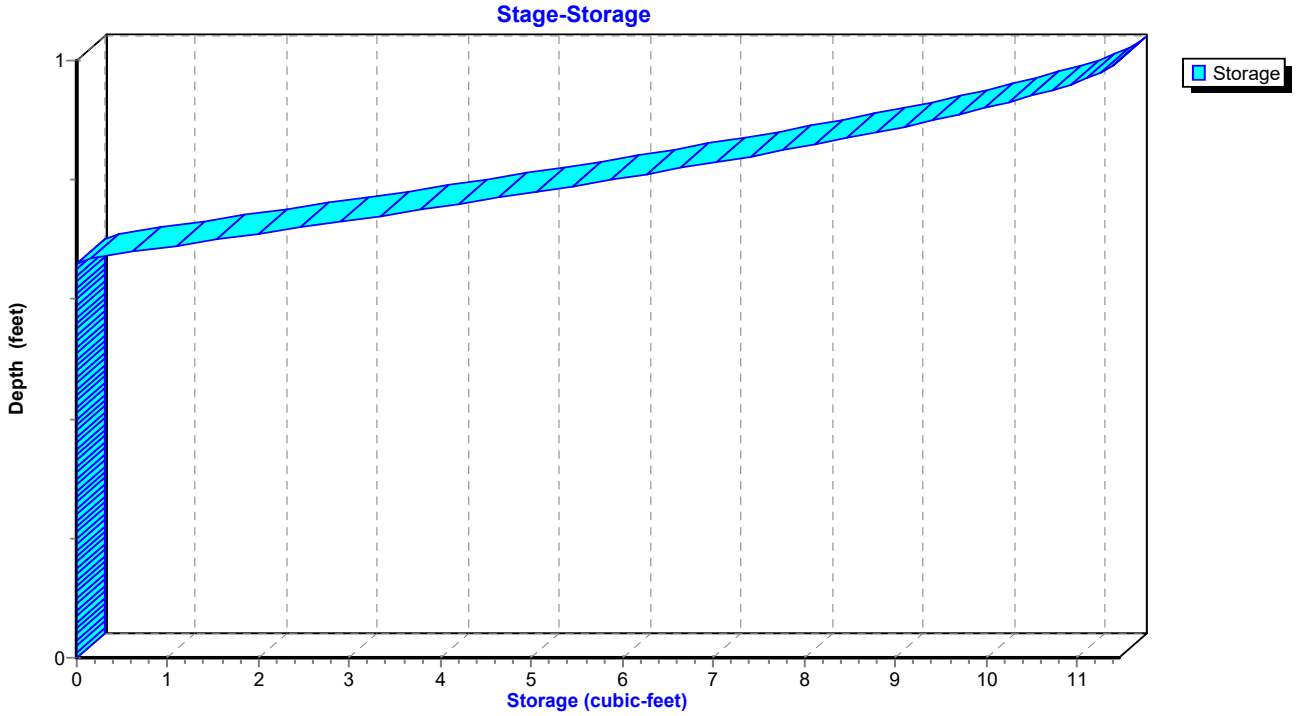
Reach 16R: inlet 2 12"



Reach 16R: inlet 2 12"



Reach 16R: inlet 2 12"



Hydrograph for Reach 16R: inlet 2 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.88	0.00
5.40	0.01	1	666.89	0.01
5.80	0.01	1	666.89	0.01
6.20	0.01	1	666.89	0.01
6.60	0.01	1	666.89	0.01
7.00	0.01	1	666.90	0.01
7.40	0.01	1	666.90	0.01
7.80	0.02	1	666.90	0.02
8.20	0.02	1	666.90	0.02
8.60	0.02	1	666.90	0.02
9.00	0.02	1	666.90	0.02
9.40	0.03	1	666.91	0.03
9.80	0.03	1	666.91	0.03
10.20	0.03	2	666.91	0.03
10.60	0.03	2	666.91	0.03
11.00	0.06	2	666.92	0.06
11.40	0.08	3	666.94	0.08
11.80	0.14	4	666.96	0.13
12.20	**0.60**	**11**	**667.19**	**0.58**
12.60	**0.29**	**6**	**667.01**	0.31
13.00	0.11	3	666.95	0.11
13.40	0.07	3	666.93	0.07
13.80	0.04	2	666.92	0.05
14.20	0.03	2	666.91	0.03
14.60	0.03	2	666.91	0.03
15.00	0.03	1	666.91	0.03
15.40	0.02	1	666.90	0.02
15.80	0.02	1	666.90	0.02
16.20	0.02	1	666.90	0.02
16.60	0.02	1	666.90	0.02
17.00	0.02	1	666.90	0.02
17.40	0.02	1	666.90	0.02
17.80	0.01	1	666.90	0.01
18.20	0.01	1	666.90	0.01
18.60	0.01	1	666.90	0.01
19.00	0.01	1	666.89	0.01
19.40	0.01	1	666.89	0.01
19.80	0.01	1	666.89	0.01

Stage-Discharge for Reach 16R: inlet 2 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.00	0.00
666.53	0.00	0.00
666.54	0.00	0.00
666.55	0.00	0.00
666.56	0.00	0.00
666.57	0.00	0.00
666.58	0.00	0.00
666.59	0.00	0.00
666.60	0.00	0.00
666.61	0.00	0.00
666.62	0.00	0.00
666.63	0.00	0.00
666.64	0.00	0.00
666.65	0.00	0.00
666.66	0.00	0.00
666.67	0.00	0.00
666.68	0.00	0.00
666.69	0.00	0.00
666.70	0.00	0.00
666.71	0.00	0.00
666.72	0.00	0.00
666.73	0.00	0.00
666.74	0.00	0.00
666.75	0.00	0.00
666.76	0.00	0.00
666.77	0.00	0.00
666.78	0.00	0.00
666.79	0.00	0.00
666.80	0.00	0.00
666.81	0.00	0.00
666.82	0.00	0.00
666.83	0.00	0.00
666.84	0.00	0.00
666.85	0.00	0.00
666.86	0.00	0.00
666.87	0.00	0.00
666.88	0.24	0.00
666.89	0.59	0.01
666.90	0.84	0.02
666.91	1.05	0.03
666.92	1.23	0.05
666.93	1.38	0.07
666.94	1.53	0.09
666.95	1.65	0.11
666.96	1.77	0.13
666.97	1.88	0.16
666.98	1.97	0.18
666.99	2.06	0.21
667.00	2.14	0.23
667.01	2.22	0.26
667.02	2.29	0.29
667.03	2.35	0.31
667.04	2.40	0.34
667.05	2.45	0.36
667.06	2.50	0.39
667.07	2.54	0.41
667.08	2.58	0.44
667.09	2.61	0.46
667.10	2.63	0.48
667.11	2.65	0.50
667.12	2.67	0.52
667.13	2.68	0.53
667.14	**2.68**	0.55
667.15	2.68	0.56
667.16	2.67	0.57
667.17	2.66	0.58
667.18	2.63	0.59
667.19	2.60	**0.59**
667.20	2.54	0.58
667.21	2.39	0.55

Stage-Area-Storage for Reach 16R: inlet 2 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
666.21	0.0	0	666.72	0.0	0
666.22	0.0	0	666.73	0.0	0
666.23	0.0	0	666.74	0.0	0
666.24	0.0	0	666.75	0.0	0
666.25	0.0	0	666.76	0.0	0
666.26	0.0	0	666.77	0.0	0
666.27	0.0	0	666.78	0.0	0
666.28	0.0	0	666.79	0.0	0
666.29	0.0	0	666.80	0.0	0
666.30	0.0	0	666.81	0.0	0
666.31	0.0	0	666.82	0.0	0
666.32	0.0	0	666.83	0.0	0
666.33	0.0	0	666.84	0.0	0
666.34	0.0	0	666.85	0.0	0
666.35	0.0	0	666.86	0.0	0
666.36	0.0	0	666.87	0.0	0
666.37	0.0	0	666.88	0.0	0
666.38	0.0	0	666.89	0.0	1
666.39	0.0	0	666.90	0.0	1
666.40	0.0	0	666.91	0.0	2
666.41	0.0	0	666.92	0.0	2
666.42	0.0	0	666.93	0.0	2
666.43	0.0	0	666.94	0.1	3
666.44	0.0	0	666.95	0.1	3
666.45	0.0	0	666.96	0.1	4
666.46	0.0	0	666.97	0.1	4
666.47	0.0	0	666.98	0.1	5
666.48	0.0	0	666.99	0.1	5
666.49	0.0	0	667.00	0.1	5
666.50	0.0	0	667.01	0.1	6
666.51	0.0	0	667.02	0.1	6
666.52	0.0	0	667.03	0.1	7
666.53	0.0	0	667.04	0.1	7
666.54	0.0	0	667.05	0.1	7
666.55	0.0	0	667.06	0.2	8
666.56	0.0	0	667.07	0.2	8
666.57	0.0	0	667.08	0.2	8
666.58	0.0	0	667.09	0.2	9
666.59	0.0	0	667.10	0.2	9
666.60	0.0	0	667.11	0.2	9
666.61	0.0	0	667.12	0.2	10
666.62	0.0	0	667.13	0.2	10
666.63	0.0	0	667.14	0.2	10
666.64	0.0	0	667.15	0.2	10
666.65	0.0	0	667.16	0.2	11
666.66	0.0	0	667.17	0.2	11
666.67	0.0	0	667.18	0.2	11
666.68	0.0	0	667.19	0.2	11
666.69	0.0	0	667.20	0.2	11
666.70	0.0	0	667.21	**0.2**	**11**
666.71	0.0	0			

Summary for Reach 17R: NDS2 6"

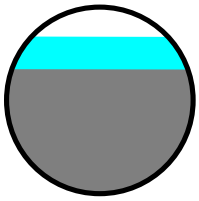
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 42.11% Impervious, Inflow Depth > 1.81" for 25-yr event
Inflow = 0.06 cfs @ 12.45 hrs, Volume= 0.006 af
Outflow = 0.06 cfs @ 12.49 hrs, Volume= 0.006 af, Atten= 0%, Lag= 2.6 min

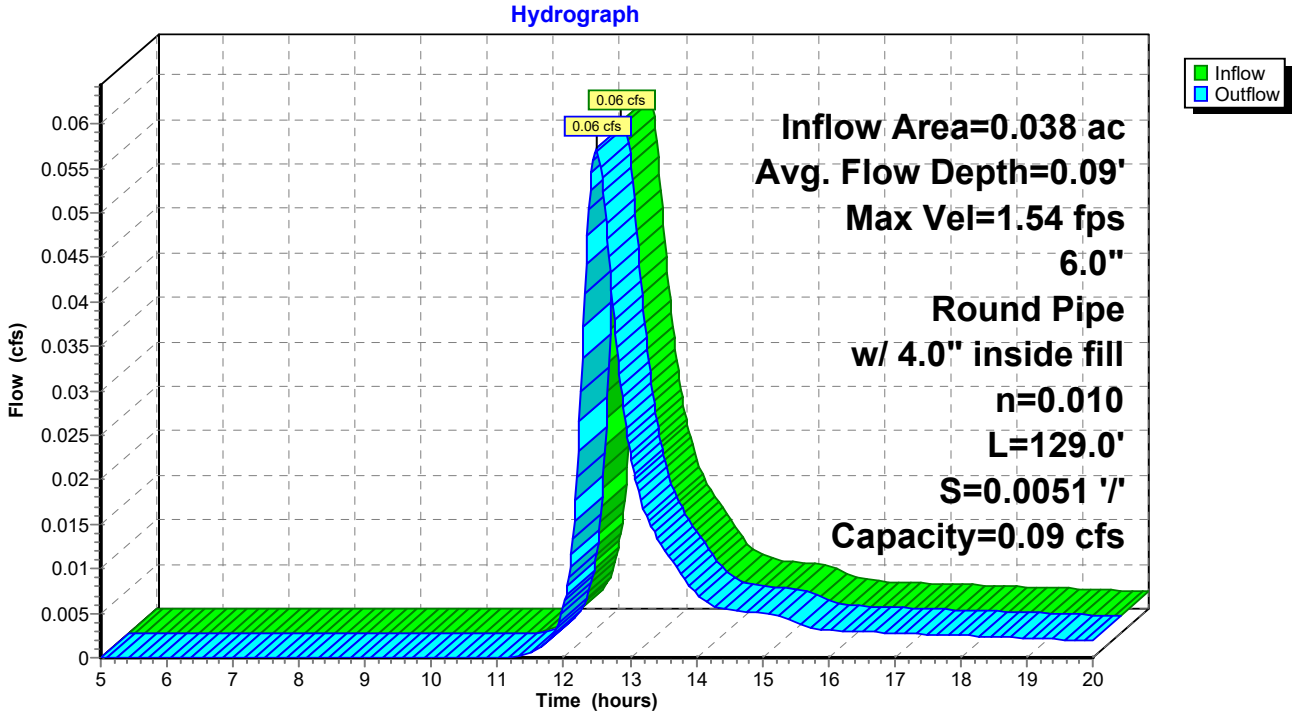
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.54 fps, Min. Travel Time= 1.4 min
Avg. Velocity = 0.65 fps, Avg. Travel Time= 3.3 min

Peak Storage= 5 cf @ 12.47 hrs
Average Depth at Peak Storage= 0.42' above invert (0.09' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

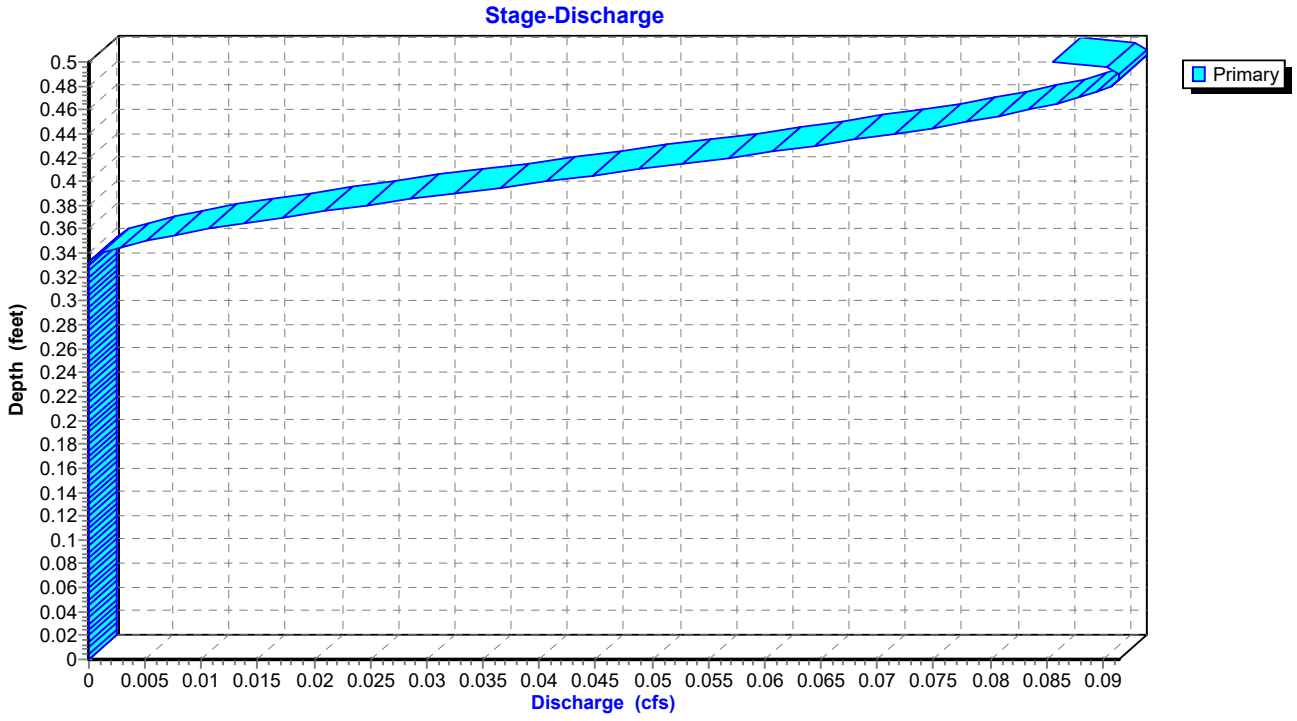
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0051 '/'
Inlet Invert= 668.84', Outlet Invert= 668.18'



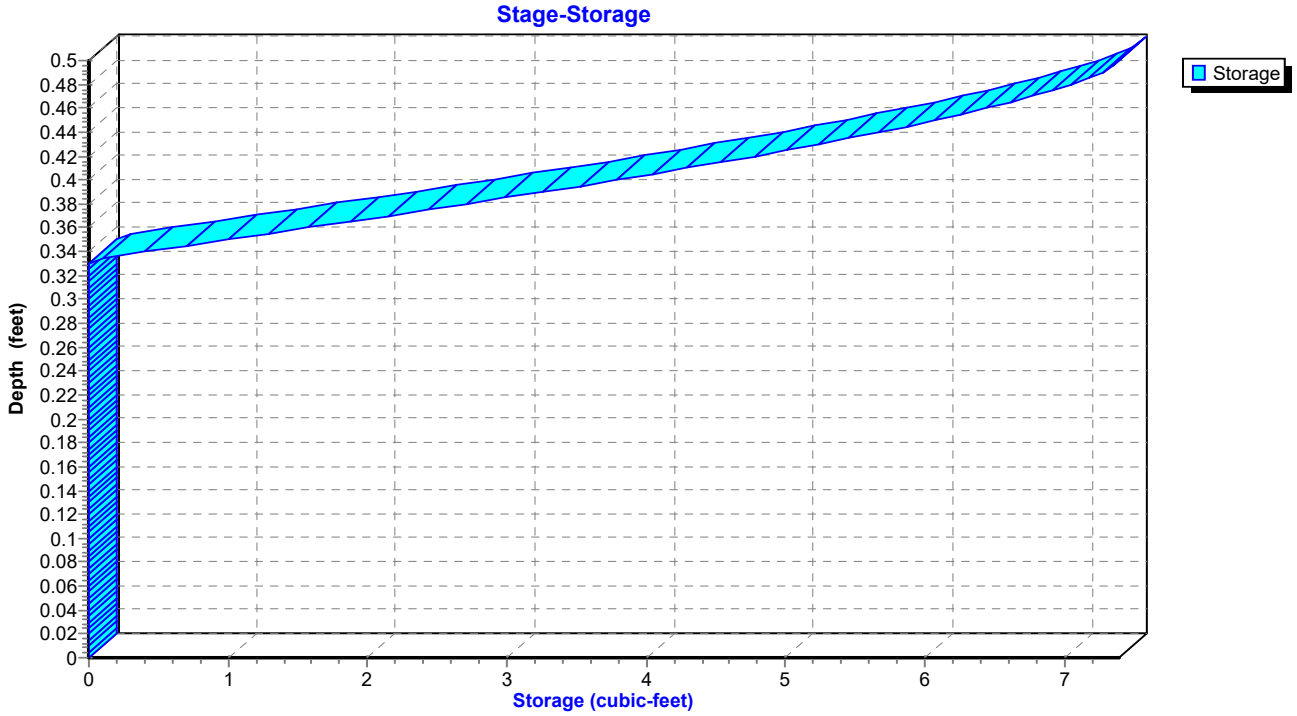
Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Hydrograph for Reach 17R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.17	0.00
5.40	0.00	0	669.17	0.00
5.80	0.00	0	669.17	0.00
6.20	0.00	0	669.17	0.00
6.60	0.00	0	669.17	0.00
7.00	0.00	0	669.17	0.00
7.40	0.00	0	669.17	0.00
7.80	0.00	0	669.17	0.00
8.20	0.00	0	669.17	0.00
8.60	0.00	0	669.17	0.00
9.00	0.00	0	669.17	0.00
9.40	0.00	0	669.17	0.00
9.80	0.00	0	669.17	0.00
10.20	0.00	0	669.17	0.00
10.60	0.00	0	669.17	0.00
11.00	0.00	0	669.17	0.00
11.40	0.00	0	669.18	0.00
11.80	0.00	1	669.18	0.00
12.20	**0.03**	**3**	**669.22**	**0.02**
12.60	**0.05**	**4**	**669.25**	**0.05**
13.00	0.02	3	669.22	0.02
13.40	0.01	2	669.20	0.01
13.80	0.01	1	669.20	0.01
14.20	0.01	1	669.19	0.01
14.60	0.01	1	669.19	0.01
15.00	0.01	1	669.19	0.01
15.40	0.00	1	669.19	0.00
15.80	0.00	1	669.19	0.00
16.20	0.00	1	669.19	0.00
16.60	0.00	1	669.19	0.00
17.00	0.00	1	669.18	0.00
17.40	0.00	1	669.18	0.00
17.80	0.00	1	669.18	0.00
18.20	0.00	1	669.18	0.00
18.60	0.00	1	669.18	0.00
19.00	0.00	1	669.18	0.00
19.40	0.00	1	669.18	0.00
19.80	0.00	1	669.18	0.00

Stage-Discharge for Reach 17R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.84	0.00	0.00
668.85	0.00	0.00
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.37	0.00
669.19	0.65	0.01
669.20	0.87	0.01
669.21	1.03	0.02
669.22	1.17	0.02
669.23	1.29	0.03
669.24	1.39	0.04
669.25	1.47	0.05
669.26	1.53	0.06
669.27	1.59	0.06
669.28	1.63	0.07
669.29	1.66	0.08
669.30	1.67	0.08
669.31	**1.67**	0.09
669.32	1.66	0.09
669.33	1.62	**0.09**
669.34	1.49	0.09

Stage-Area-Storage for Reach 17R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.84	0.0	0
668.85	0.0	0
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	1
669.20	0.0	2
669.21	0.0	2
669.22	0.0	3
669.23	0.0	3
669.24	0.0	4
669.25	0.0	4
669.26	0.0	5
669.27	0.0	5
669.28	0.0	6
669.29	0.0	6
669.30	0.0	6
669.31	0.1	7
669.32	0.1	7
669.33	0.1	7
669.34	**0.1**	**7**

Summary for Reach 18R: inlet 3 6"

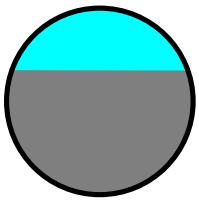
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 112% of Manning's capacity
[62] Hint: Exceeded Reach 17R OUTLET depth by 0.11' @ 12.80 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.14' @ 12.42 hrs

Inflow Area = 0.090 ac, 18.89% Impervious, Inflow Depth > 1.57" for 25-yr event
Inflow = 0.09 cfs @ 12.47 hrs, Volume= 0.012 af
Outflow = 0.09 cfs @ 12.40 hrs, Volume= 0.012 af, Atten= 6%, Lag= 0.0 min

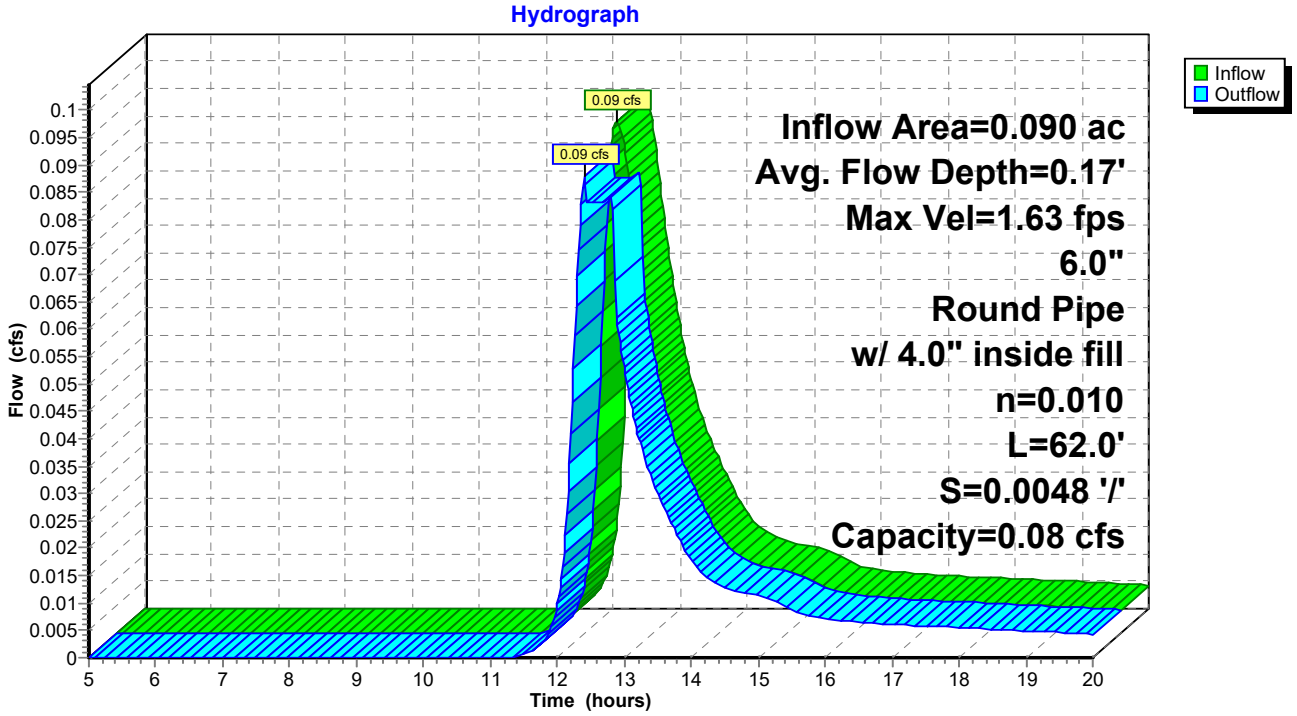
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.63 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 1.2 min

Peak Storage= 4 cf @ 12.42 hrs
Average Depth at Peak Storage= 0.50' above invert (0.17' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.08 cfs

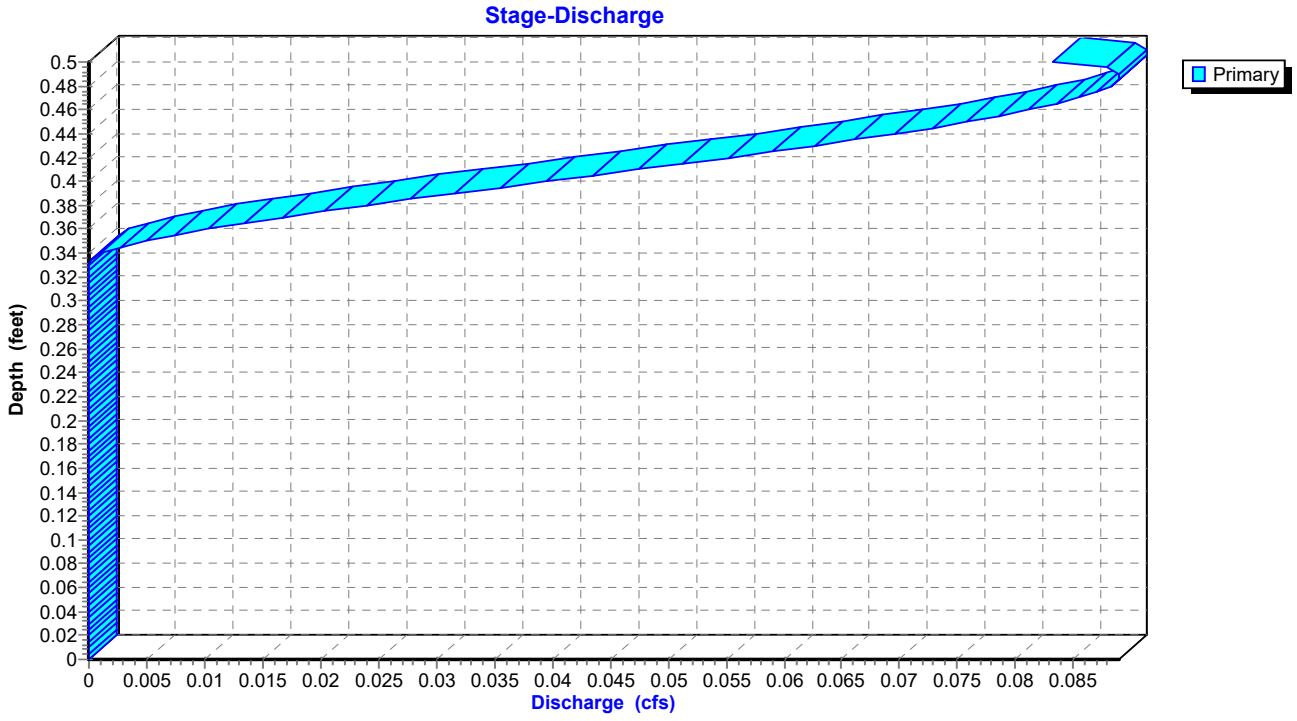
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0048 '/'
Inlet Invert= 668.18', Outlet Invert= 667.88'



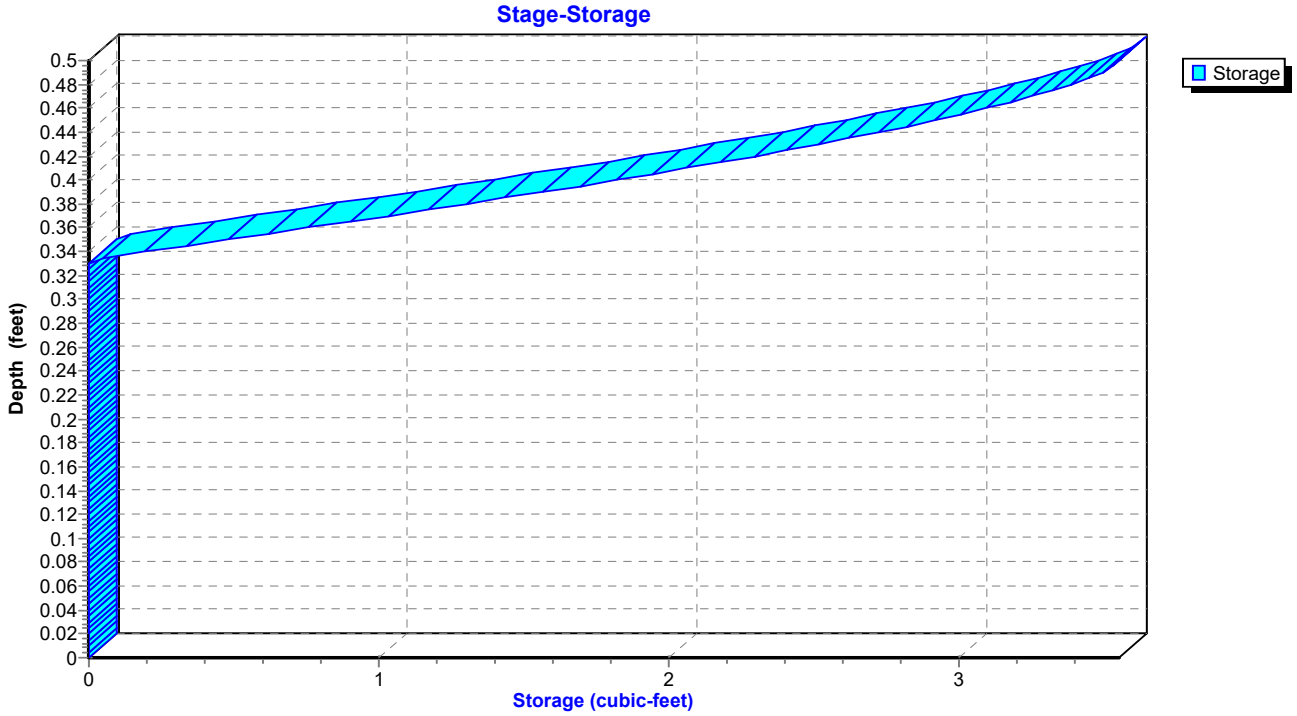
Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Hydrograph for Reach 18R: inlet 3 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.51	0.00
5.40	0.00	0	668.51	0.00
5.80	0.00	0	668.51	0.00
6.20	0.00	0	668.51	0.00
6.60	0.00	0	668.51	0.00
7.00	0.00	0	668.51	0.00
7.40	0.00	0	668.51	0.00
7.80	0.00	0	668.51	0.00
8.20	0.00	0	668.51	0.00
8.60	0.00	0	668.51	0.00
9.00	0.00	0	668.51	0.00
9.40	0.00	0	668.51	0.00
9.80	0.00	0	668.51	0.00
10.20	0.00	0	668.51	0.00
10.60	0.00	0	668.51	0.00
11.00	0.00	0	668.51	0.00
11.40	0.00	0	668.52	0.00
11.80	0.00	0	668.53	0.00
12.20	**0.05**	**2**	**668.59**	**0.04**
12.60	**0.09**	**4**	**668.68**	**0.08**
13.00	0.05	2	668.60	0.05
13.40	0.03	2	668.57	0.03
13.80	0.02	1	668.56	0.02
14.20	0.01	1	668.55	0.02
14.60	0.01	1	668.54	0.01
15.00	0.01	1	668.54	0.01
15.40	0.01	1	668.54	0.01
15.80	0.01	1	668.54	0.01
16.20	0.01	1	668.53	0.01
16.60	0.01	1	668.53	0.01
17.00	0.01	1	668.53	0.01
17.40	0.01	1	668.53	0.01
17.80	0.01	1	668.53	0.01
18.20	0.01	1	668.53	0.01
18.60	0.01	0	668.53	0.01
19.00	0.00	0	668.53	0.00
19.40	0.00	0	668.53	0.00
19.80	0.00	0	668.53	0.00

Stage-Discharge for Reach 18R: inlet 3 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	0.00	0.00
668.35	0.00	0.00
668.36	0.00	0.00
668.37	0.00	0.00
668.38	0.00	0.00
668.39	0.00	0.00
668.40	0.00	0.00
668.41	0.00	0.00
668.42	0.00	0.00
668.43	0.00	0.00
668.44	0.00	0.00
668.45	0.00	0.00
668.46	0.00	0.00
668.47	0.00	0.00
668.48	0.00	0.00
668.49	0.00	0.00
668.50	0.00	0.00
668.51	0.00	0.00
668.52	0.36	0.00
668.53	0.64	0.00
668.54	0.84	0.01
668.55	1.00	0.02
668.56	1.14	0.02
668.57	1.25	0.03
668.58	1.35	0.04
668.59	1.43	0.05
668.60	1.49	0.06
668.61	1.54	0.06
668.62	1.58	0.07
668.63	1.61	0.08
668.64	1.63	0.08
668.65	**1.63**	0.09
668.66	1.61	0.09
668.67	1.58	**0.09**
668.68	1.45	0.08

Stage-Area-Storage for Reach 18R: inlet 3 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.0	0
668.48	0.0	0
668.49	0.0	0
668.50	0.0	0
668.51	0.0	0
668.52	0.0	0
668.53	0.0	0
668.54	0.0	1
668.55	0.0	1
668.56	0.0	1
668.57	0.0	2
668.58	0.0	2
668.59	0.0	2
668.60	0.0	2
668.61	0.0	3
668.62	0.0	3
668.63	0.0	3
668.64	0.0	3
668.65	0.1	3
668.66	0.1	3
668.67	0.1	3
668.68	**0.1**	**4**

Summary for Reach 19R: inlet 1 12"

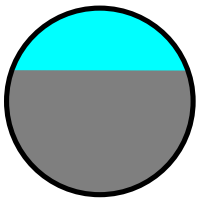
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 181% of Manning's capacity
[76] Warning: Detained 0.009 af (Pond w/culvert advised)
[62] Hint: Exceeded Reach 16R OUTLET depth by 0.15' @ 12.90 hrs

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 0.99 cfs @ 12.20 hrs, Volume= 0.092 af
Outflow = 0.56 cfs @ 12.92 hrs, Volume= 0.092 af, Atten= 43%, Lag= 43.5 min

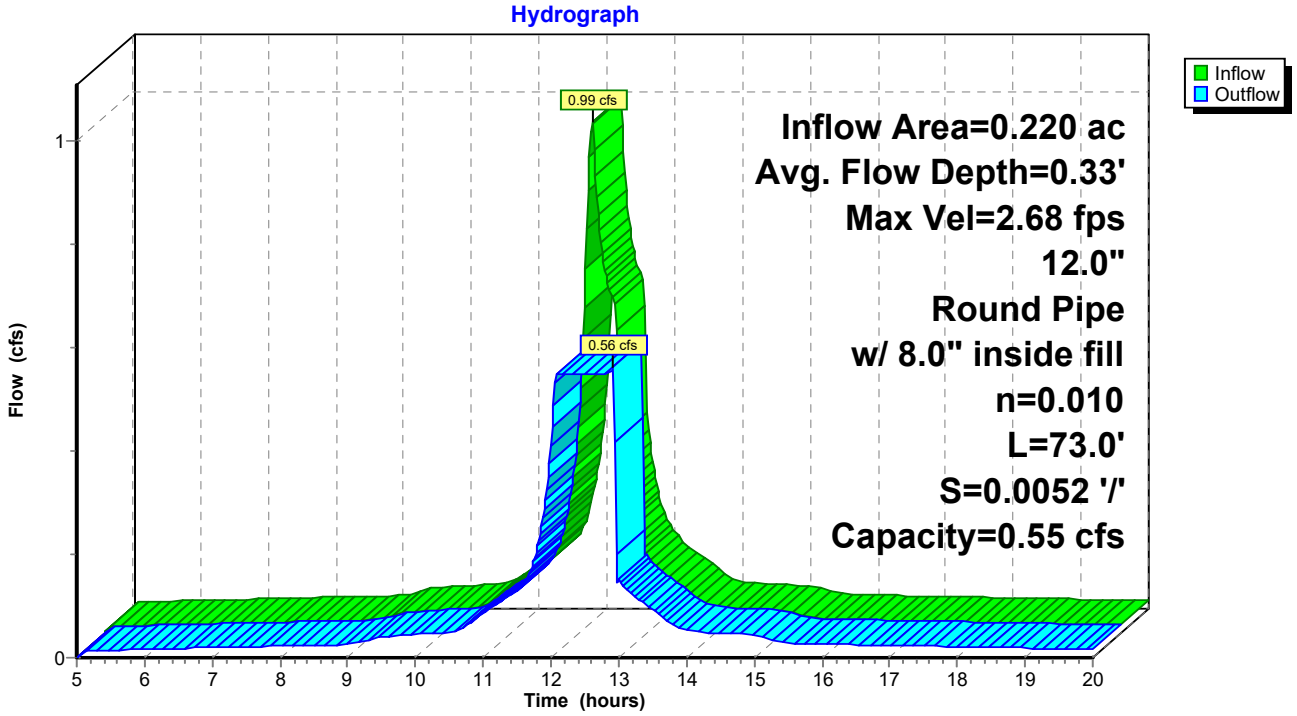
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.68 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.16 fps, Avg. Travel Time= 1.0 min

Peak Storage= 17 cf @ 12.08 hrs
Average Depth at Peak Storage= 1.00' above invert (0.33' above fill)
Bank-Full Depth= 1.00' above invert (0.33' above fill) Flow Area= 0.2 sf, Capacity= 0.55 cfs

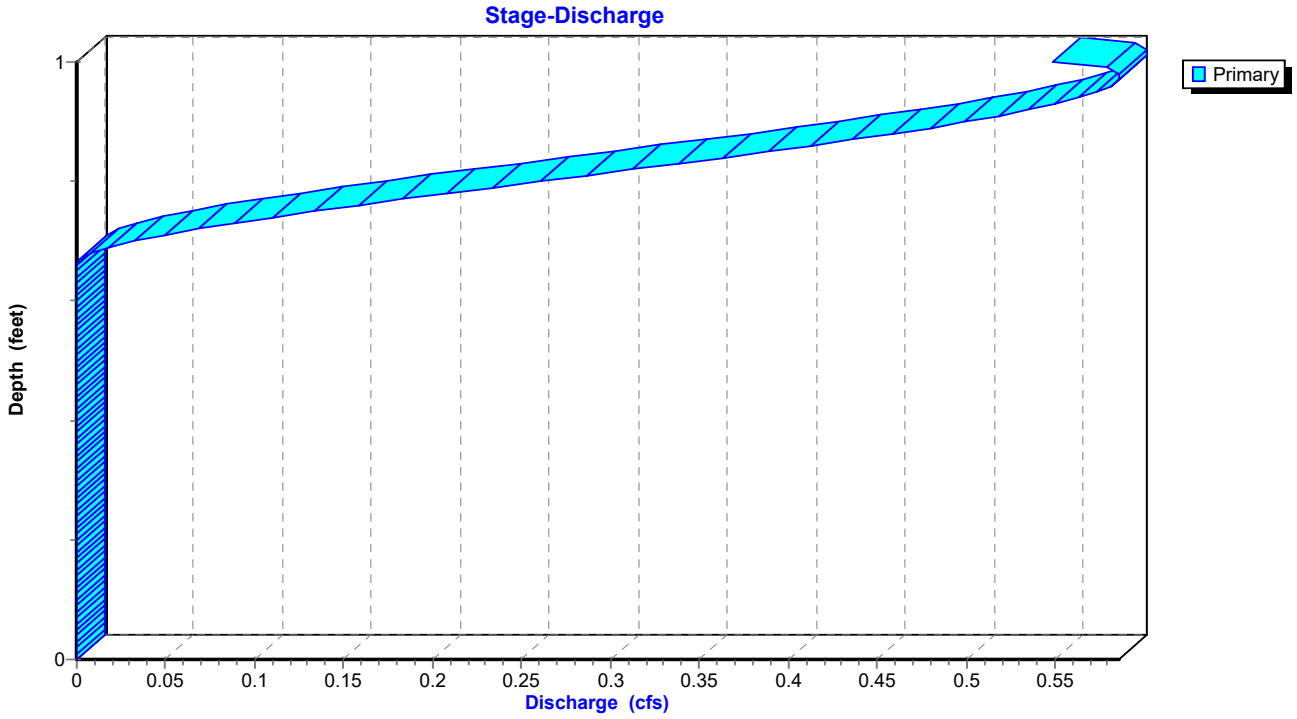
12.0" Round Pipe w/ 8.0" inside fill
n= 0.010
Length= 73.0' Slope= 0.0052 '/'
Inlet Invert= 665.85', Outlet Invert= 665.47'



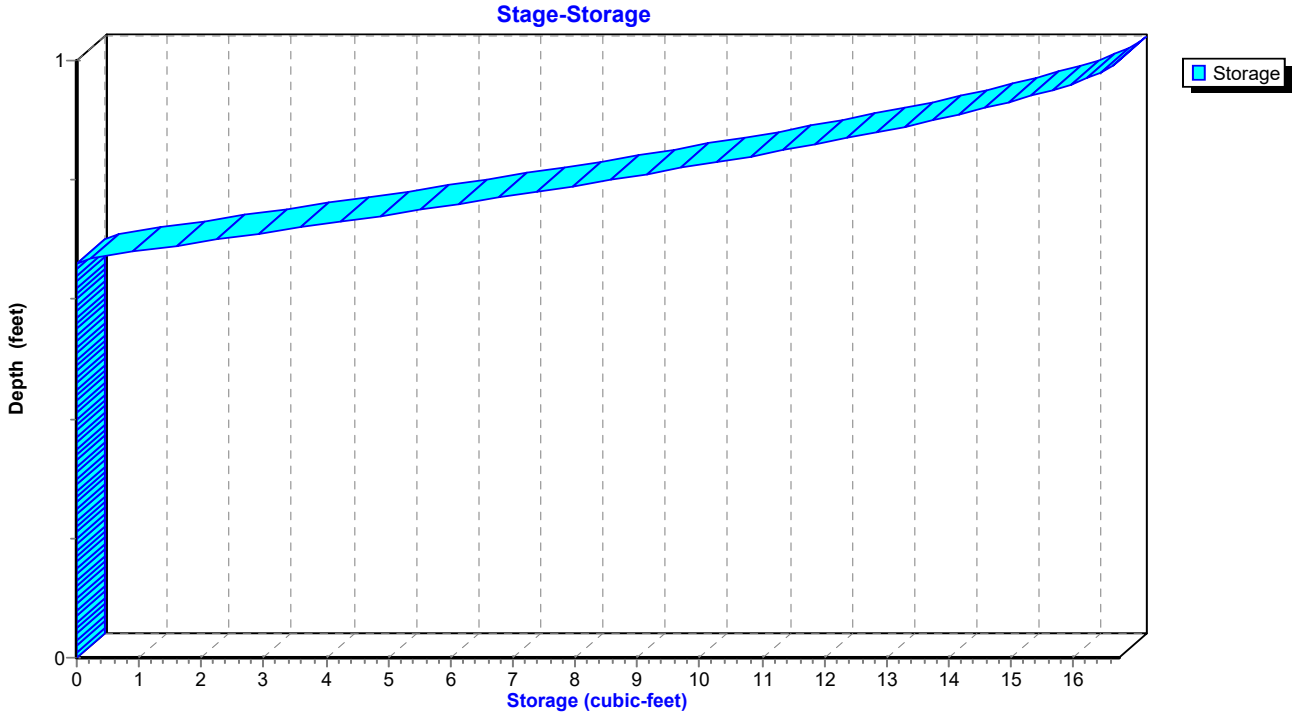
Reach 19R: inlet 1 12"



Reach 19R: inlet 1 12"



Reach 19R: inlet 1 12"



Hydrograph for Reach 19R: inlet 1 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.52	0.00
5.40	0.01	1	666.54	0.01
5.80	0.02	1	666.54	0.02
6.20	0.02	2	666.54	0.02
6.60	0.02	2	666.54	0.02
7.00	0.02	2	666.54	0.02
7.40	0.02	2	666.54	0.02
7.80	0.02	2	666.54	0.02
8.20	0.02	2	666.54	0.02
8.60	0.02	2	666.54	0.02
9.00	0.03	2	666.55	0.03
9.40	0.04	3	666.55	0.04
9.80	0.04	3	666.56	0.04
10.20	0.05	3	666.56	0.05
10.60	0.05	3	666.56	0.05
11.00	0.09	4	666.58	0.09
11.40	0.12	5	666.60	0.12
11.80	0.22	**8**	**666.63**	0.22
12.20	**0.99**	**17**	**666.85**	0.55
12.60	0.38	17	666.85	**0.55**
13.00	0.15	6	666.61	**0.15**
13.40	0.10	5	666.59	0.10
13.80	0.06	3	666.57	0.06
14.20	0.05	3	666.56	0.05
14.60	0.05	3	666.56	0.05
15.00	0.04	3	666.56	0.04
15.40	0.03	2	666.55	0.03
15.80	0.03	2	666.55	0.03
16.20	0.03	2	666.55	0.03
16.60	0.02	2	666.54	0.02
17.00	0.02	2	666.54	0.02
17.40	0.02	2	666.54	0.02
17.80	0.02	2	666.54	0.02
18.20	0.02	2	666.54	0.02
18.60	0.02	2	666.54	0.02
19.00	0.02	2	666.54	0.02
19.40	0.02	2	666.54	0.02
19.80	0.02	1	666.54	0.02

Stage-Discharge for Reach 19R: inlet 1 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.85	0.00	0.00	666.36	0.00	0.00
665.86	0.00	0.00	666.37	0.00	0.00
665.87	0.00	0.00	666.38	0.00	0.00
665.88	0.00	0.00	666.39	0.00	0.00
665.89	0.00	0.00	666.40	0.00	0.00
665.90	0.00	0.00	666.41	0.00	0.00
665.91	0.00	0.00	666.42	0.00	0.00
665.92	0.00	0.00	666.43	0.00	0.00
665.93	0.00	0.00	666.44	0.00	0.00
665.94	0.00	0.00	666.45	0.00	0.00
665.95	0.00	0.00	666.46	0.00	0.00
665.96	0.00	0.00	666.47	0.00	0.00
665.97	0.00	0.00	666.48	0.00	0.00
665.98	0.00	0.00	666.49	0.00	0.00
665.99	0.00	0.00	666.50	0.00	0.00
666.00	0.00	0.00	666.51	0.00	0.00
666.01	0.00	0.00	666.52	0.24	0.00
666.02	0.00	0.00	666.53	0.59	0.01
666.03	0.00	0.00	666.54	0.84	0.02
666.04	0.00	0.00	666.55	1.05	0.03
666.05	0.00	0.00	666.56	1.23	0.05
666.06	0.00	0.00	666.57	1.39	0.07
666.07	0.00	0.00	666.58	1.53	0.09
666.08	0.00	0.00	666.59	1.65	0.11
666.09	0.00	0.00	666.60	1.77	0.13
666.10	0.00	0.00	666.61	1.88	0.16
666.11	0.00	0.00	666.62	1.97	0.18
666.12	0.00	0.00	666.63	2.06	0.21
666.13	0.00	0.00	666.64	2.14	0.23
666.14	0.00	0.00	666.65	2.22	0.26
666.15	0.00	0.00	666.66	2.29	0.29
666.16	0.00	0.00	666.67	2.35	0.31
666.17	0.00	0.00	666.68	2.40	0.34
666.18	0.00	0.00	666.69	2.46	0.36
666.19	0.00	0.00	666.70	2.50	0.39
666.20	0.00	0.00	666.71	2.54	0.41
666.21	0.00	0.00	666.72	2.58	0.44
666.22	0.00	0.00	666.73	2.61	0.46
666.23	0.00	0.00	666.74	2.63	0.48
666.24	0.00	0.00	666.75	2.65	0.50
666.25	0.00	0.00	666.76	2.67	0.52
666.26	0.00	0.00	666.77	2.68	0.53
666.27	0.00	0.00	666.78	**2.68**	0.55
666.28	0.00	0.00	666.79	2.68	0.56
666.29	0.00	0.00	666.80	2.67	0.57
666.30	0.00	0.00	666.81	2.66	0.58
666.31	0.00	0.00	666.82	2.63	0.59
666.32	0.00	0.00	666.83	2.60	**0.59**
666.33	0.00	0.00	666.84	2.54	0.58
666.34	0.00	0.00	666.85	2.39	0.55
666.35	0.00	0.00			

Stage-Area-Storage for Reach 19R: inlet 1 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	0
665.90	0.0	0	666.41	0.0	0
665.91	0.0	0	666.42	0.0	0
665.92	0.0	0	666.43	0.0	0
665.93	0.0	0	666.44	0.0	0
665.94	0.0	0	666.45	0.0	0
665.95	0.0	0	666.46	0.0	0
665.96	0.0	0	666.47	0.0	0
665.97	0.0	0	666.48	0.0	0
665.98	0.0	0	666.49	0.0	0
665.99	0.0	0	666.50	0.0	0
666.00	0.0	0	666.51	0.0	0
666.01	0.0	0	666.52	0.0	0
666.02	0.0	0	666.53	0.0	1
666.03	0.0	0	666.54	0.0	2
666.04	0.0	0	666.55	0.0	2
666.05	0.0	0	666.56	0.0	3
666.06	0.0	0	666.57	0.0	4
666.07	0.0	0	666.58	0.1	4
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	6
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	7
666.12	0.0	0	666.63	0.1	7
666.13	0.0	0	666.64	0.1	8
666.14	0.0	0	666.65	0.1	9
666.15	0.0	0	666.66	0.1	9
666.16	0.0	0	666.67	0.1	10
666.17	0.0	0	666.68	0.1	10
666.18	0.0	0	666.69	0.1	11
666.19	0.0	0	666.70	0.2	11
666.20	0.0	0	666.71	0.2	12
666.21	0.0	0	666.72	0.2	12
666.22	0.0	0	666.73	0.2	13
666.23	0.0	0	666.74	0.2	13
666.24	0.0	0	666.75	0.2	14
666.25	0.0	0	666.76	0.2	14
666.26	0.0	0	666.77	0.2	15
666.27	0.0	0	666.78	0.2	15
666.28	0.0	0	666.79	0.2	15
666.29	0.0	0	666.80	0.2	16
666.30	0.0	0	666.81	0.2	16
666.31	0.0	0	666.82	0.2	16
666.32	0.0	0	666.83	0.2	16
666.33	0.0	0	666.84	0.2	17
666.34	0.0	0	666.85	**0.2**	**17**
666.35	0.0	0			

Summary for Reach 20R: MH3 15"

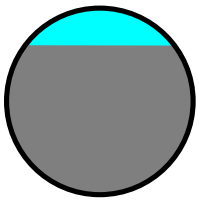
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 160% of Manning's capacity
[76] Warning: Detained 0.015 af (Pond w/culvert advised)

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 5.03" for 25-yr event
Inflow = 0.56 cfs @ 12.92 hrs, Volume= 0.092 af
Outflow = 0.36 cfs @ 11.99 hrs, Volume= 0.092 af, Atten= 36%, Lag= 0.0 min

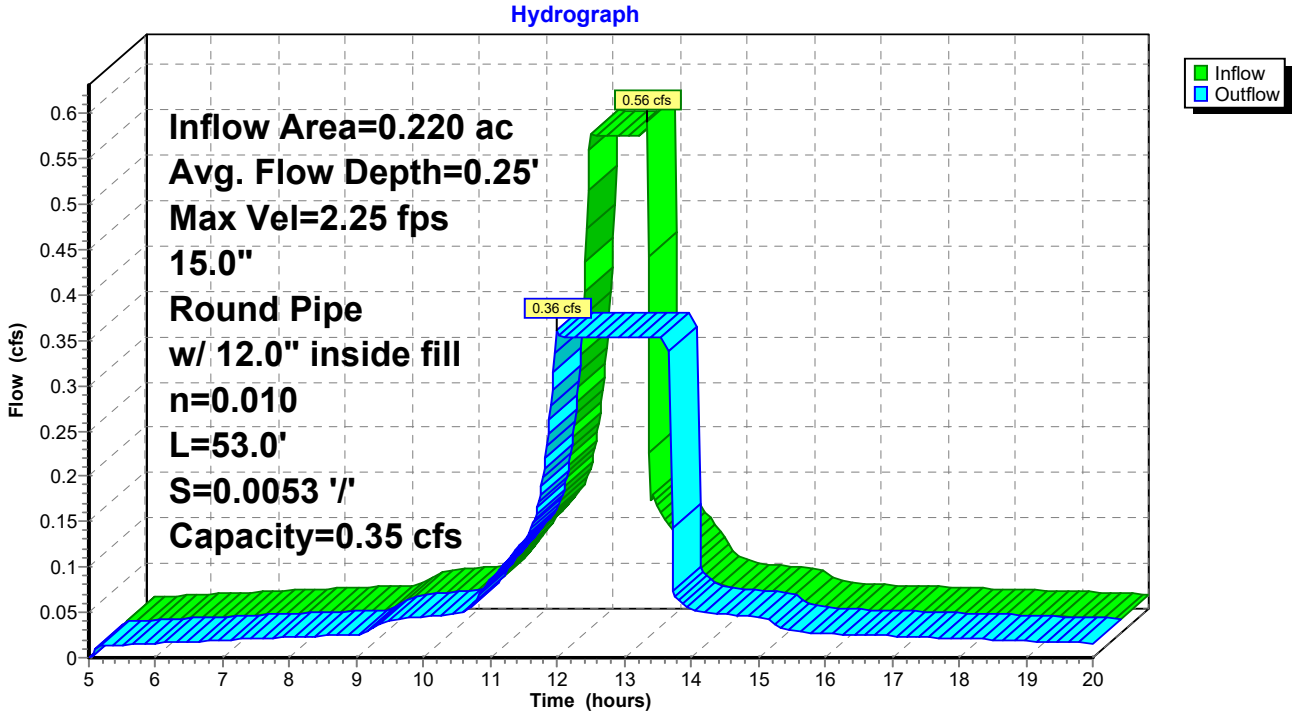
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.25 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.14 fps, Avg. Travel Time= 0.8 min

Peak Storage= 9 cf @ 12.00 hrs
Average Depth at Peak Storage= 1.25' above invert (0.25' above fill)
Bank-Full Depth= 1.25' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.35 cfs

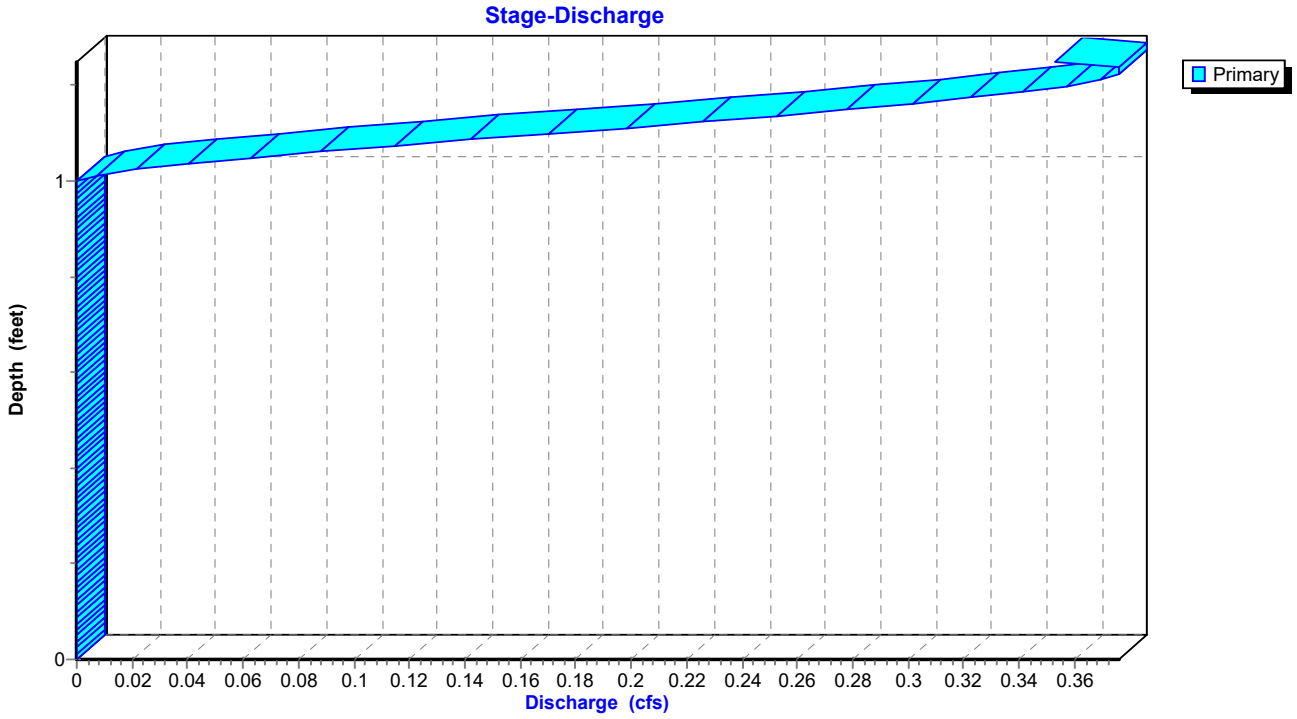
15.0" Round Pipe w/ 12.0" inside fill
n= 0.010
Length= 53.0' Slope= 0.0053 '/'
Inlet Invert= 663.47', Outlet Invert= 663.19'



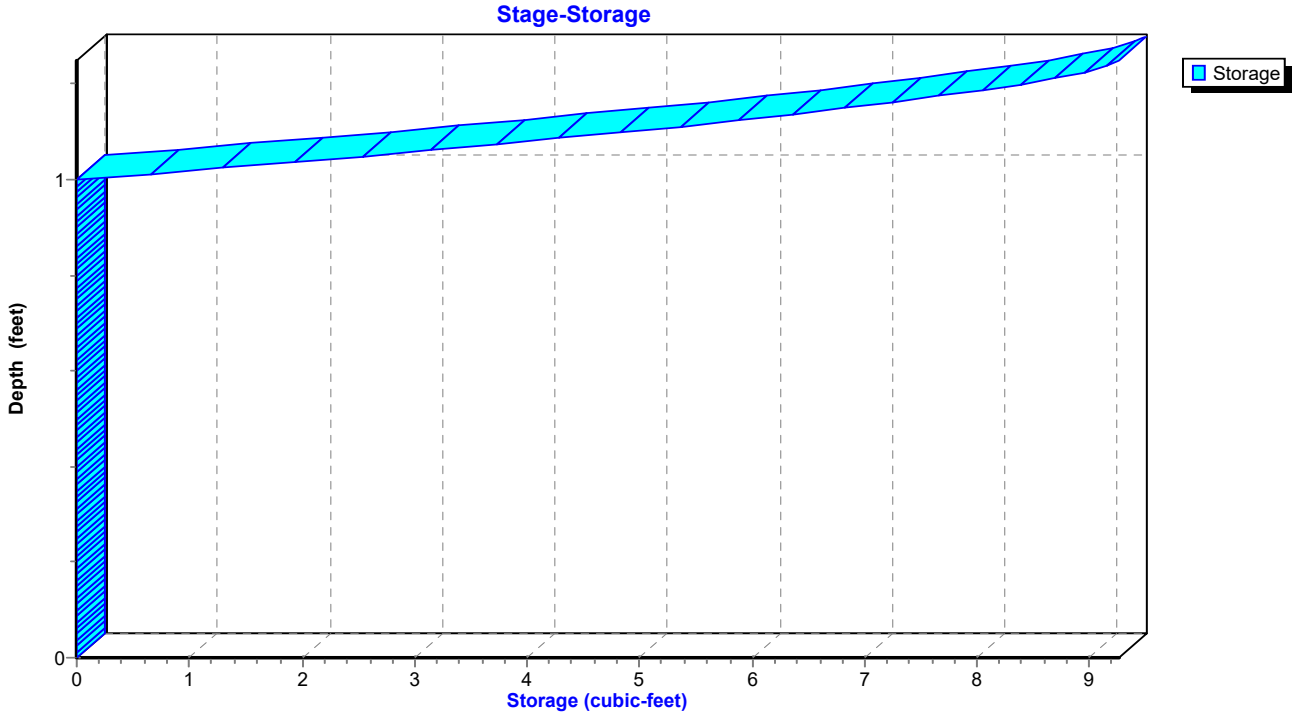
Reach 20R: MH3 15"



Reach 20R: MH3 15"



Reach 20R: MH3 15"



Hydrograph for Reach 20R: MH3 15"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	664.47	0.00
5.40	0.01	1	664.49	0.01
5.80	0.02	1	664.49	0.02
6.20	0.02	1	664.49	0.02
6.60	0.02	1	664.49	0.02
7.00	0.02	1	664.49	0.02
7.40	0.02	1	664.49	0.02
7.80	0.02	1	664.50	0.02
8.20	0.02	1	664.50	0.02
8.60	0.02	1	664.50	0.02
9.00	0.03	1	664.50	0.03
9.40	0.04	2	664.51	0.04
9.80	0.04	2	664.51	0.04
10.20	0.05	2	664.51	0.05
10.60	0.05	2	664.51	0.05
11.00	0.09	3	664.53	0.09
11.40	0.12	4	664.55	0.12
11.80	0.22	**6**	**664.59**	**0.21**
12.20	0.55	**9**	**664.72**	**0.35**
12.60	**0.55**	9	664.72	0.35
13.00	**0.15**	9	664.72	0.35
13.40	0.10	9	664.72	0.35
13.80	0.06	3	664.52	0.06
14.20	0.05	2	664.51	0.05
14.60	0.05	2	664.51	0.05
15.00	0.04	2	664.51	0.04
15.40	0.03	2	664.50	0.03
15.80	0.03	1	664.50	0.03
16.20	0.03	1	664.50	0.03
16.60	0.02	1	664.50	0.02
17.00	0.02	1	664.50	0.02
17.40	0.02	1	664.50	0.02
17.80	0.02	1	664.50	0.02
18.20	0.02	1	664.49	0.02
18.60	0.02	1	664.49	0.02
19.00	0.02	1	664.49	0.02
19.40	0.02	1	664.49	0.02
19.80	0.02	1	664.49	0.02

Stage-Discharge for Reach 20R: MH3 15"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
663.47	0.00	0.00
663.48	0.00	0.00
663.49	0.00	0.00
663.50	0.00	0.00
663.51	0.00	0.00
663.52	0.00	0.00
663.53	0.00	0.00
663.54	0.00	0.00
663.55	0.00	0.00
663.56	0.00	0.00
663.57	0.00	0.00
663.58	0.00	0.00
663.59	0.00	0.00
663.60	0.00	0.00
663.61	0.00	0.00
663.62	0.00	0.00
663.63	0.00	0.00
663.64	0.00	0.00
663.65	0.00	0.00
663.66	0.00	0.00
663.67	0.00	0.00
663.68	0.00	0.00
663.69	0.00	0.00
663.70	0.00	0.00
663.71	0.00	0.00
663.72	0.00	0.00
663.73	0.00	0.00
663.74	0.00	0.00
663.75	0.00	0.00
663.76	0.00	0.00
663.77	0.00	0.00
663.78	0.00	0.00
663.79	0.00	0.00
663.80	0.00	0.00
663.81	0.00	0.00
663.82	0.00	0.00
663.83	0.00	0.00
663.84	0.00	0.00
663.85	0.00	0.00
663.86	0.00	0.00
663.87	0.00	0.00
663.88	0.00	0.00
663.89	0.00	0.00
663.90	0.00	0.00
663.91	0.00	0.00
663.92	0.00	0.00
663.93	0.00	0.00
663.94	0.00	0.00
663.95	0.00	0.00
663.96	0.00	0.00
663.97	0.00	0.00
663.98	0.00	0.00
663.99	0.00	0.00
664.00	0.00	0.00
664.01	0.00	0.00
664.02	0.00	0.00
664.03	0.00	0.00
664.04	0.00	0.00
664.05	0.00	0.00
664.06	0.00	0.00
664.07	0.00	0.00
664.08	0.00	0.00
664.09	0.00	0.00
664.10	0.00	0.00
664.11	0.00	0.00
664.12	0.00	0.00
664.13	0.00	0.00
664.14	0.00	0.00
664.15	0.00	0.00
664.16	0.00	0.00
664.17	0.00	0.00
664.18	0.00	0.00
664.19	0.00	0.00
664.20	0.00	0.00
664.21	0.00	0.00
664.22	0.00	0.00
664.23	0.00	0.00
664.24	0.00	0.00
664.25	0.00	0.00
664.26	0.00	0.00
664.27	0.00	0.00
664.28	0.00	0.00
664.29	0.00	0.00
664.30	0.00	0.00
664.31	0.00	0.00
664.32	0.00	0.00
664.33	0.00	0.00
664.34	0.00	0.00
664.35	0.00	0.00
664.36	0.00	0.00
664.37	0.00	0.00
664.38	0.00	0.00
664.39	0.00	0.00
664.40	0.00	0.00
664.41	0.00	0.00
664.42	0.00	0.00
664.43	0.00	0.00
664.44	0.00	0.00
664.45	0.00	0.00
664.46	0.00	0.00
664.47	0.00	0.00
664.48	0.45	0.01
664.49	0.75	0.02
664.50	0.97	0.03
664.51	1.16	0.05
664.52	1.31	0.06
664.53	1.45	0.08
664.54	1.57	0.10
664.55	1.68	0.13
664.56	1.78	0.15
664.57	1.86	0.17
664.58	1.94	0.19
664.59	2.00	0.21
664.60	2.06	0.24
664.61	2.11	0.26
664.62	2.16	0.28
664.63	2.19	0.30
664.64	2.22	0.31
664.65	2.24	0.33
664.66	2.25	0.34
664.67	**2.26**	0.36
664.68	2.25	0.37
664.69	2.24	0.37
664.70	2.21	**0.38**
664.71	2.15	0.37
664.72	2.02	0.35

Stage-Area-Storage for Reach 20R: MH3 15"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
663.47	0.0	0
663.49	0.0	0
663.51	0.0	0
663.53	0.0	0
663.55	0.0	0
663.57	0.0	0
663.59	0.0	0
663.61	0.0	0
663.63	0.0	0
663.65	0.0	0
663.67	0.0	0
663.69	0.0	0
663.71	0.0	0
663.73	0.0	0
663.75	0.0	0
663.77	0.0	0
663.79	0.0	0
663.81	0.0	0
663.83	0.0	0
663.85	0.0	0
663.87	0.0	0
663.89	0.0	0
663.91	0.0	0
663.93	0.0	0
663.95	0.0	0
663.97	0.0	0
663.99	0.0	0
664.01	0.0	0
664.03	0.0	0
664.05	0.0	0
664.07	0.0	0
664.09	0.0	0
664.11	0.0	0
664.13	0.0	0
664.15	0.0	0
664.17	0.0	0
664.19	0.0	0
664.21	0.0	0
664.23	0.0	0
664.25	0.0	0
664.27	0.0	0
664.29	0.0	0
664.31	0.0	0
664.33	0.0	0
664.35	0.0	0
664.37	0.0	0
664.39	0.0	0
664.41	0.0	0
664.43	0.0	0
664.45	0.0	0
664.47	0.0	0
664.49	0.0	1
664.51	0.0	2
664.53	0.1	3
664.55	0.1	4
664.57	0.1	5
664.59	0.1	6
664.61	0.1	6
664.63	0.1	7
664.65	0.1	8
664.67	0.2	8
664.69	0.2	9
664.71	**0.2**	**9**

Summary for Reach 21R: MH2 15"

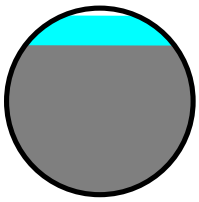
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 103% of Manning's capacity
[61] Hint: Exceeded Reach 20R outlet invert by 1.10' @ 12.02 hrs

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 5.02" for 25-yr event
Inflow = 0.36 cfs @ 11.99 hrs, Volume= 0.092 af
Outflow = 0.35 cfs @ 12.04 hrs, Volume= 0.092 af, Atten= 2%, Lag= 2.9 min

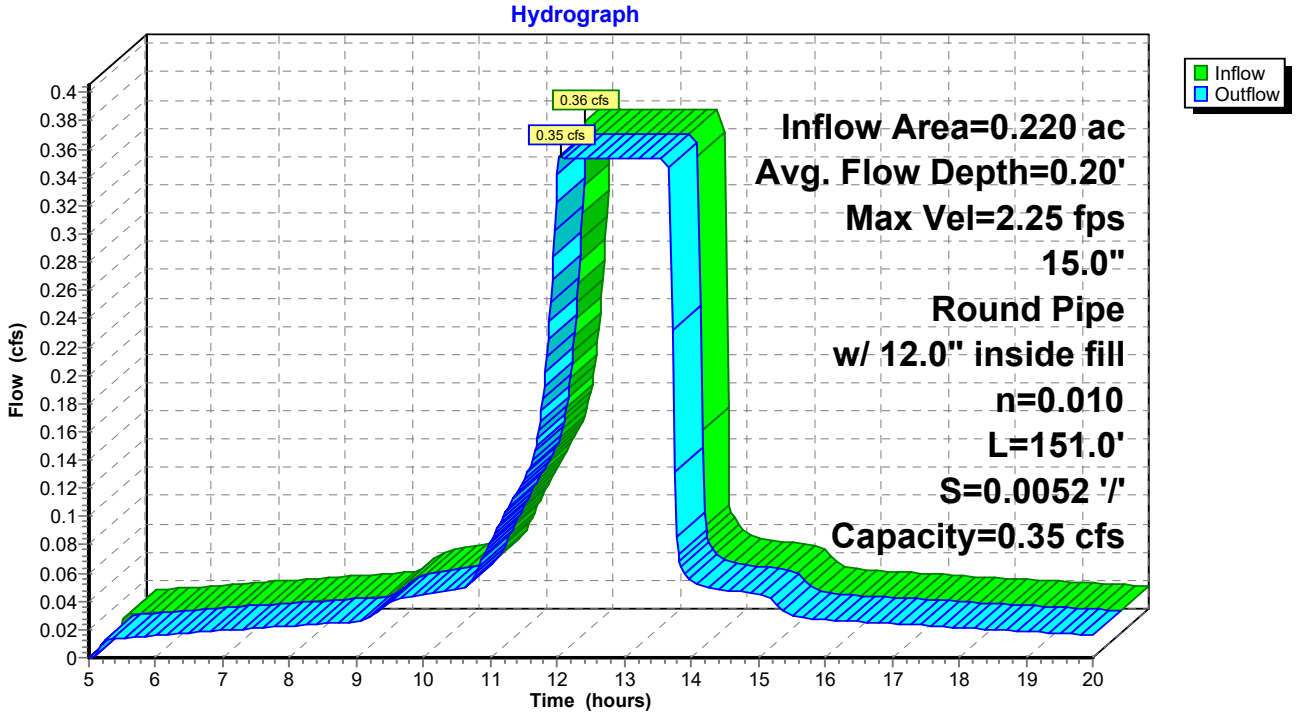
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.25 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 1.16 fps, Avg. Travel Time= 2.2 min

Peak Storage= 24 cf @ 12.02 hrs
Average Depth at Peak Storage= 1.20' above invert (0.20' above fill)
Bank-Full Depth= 1.25' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.35 cfs

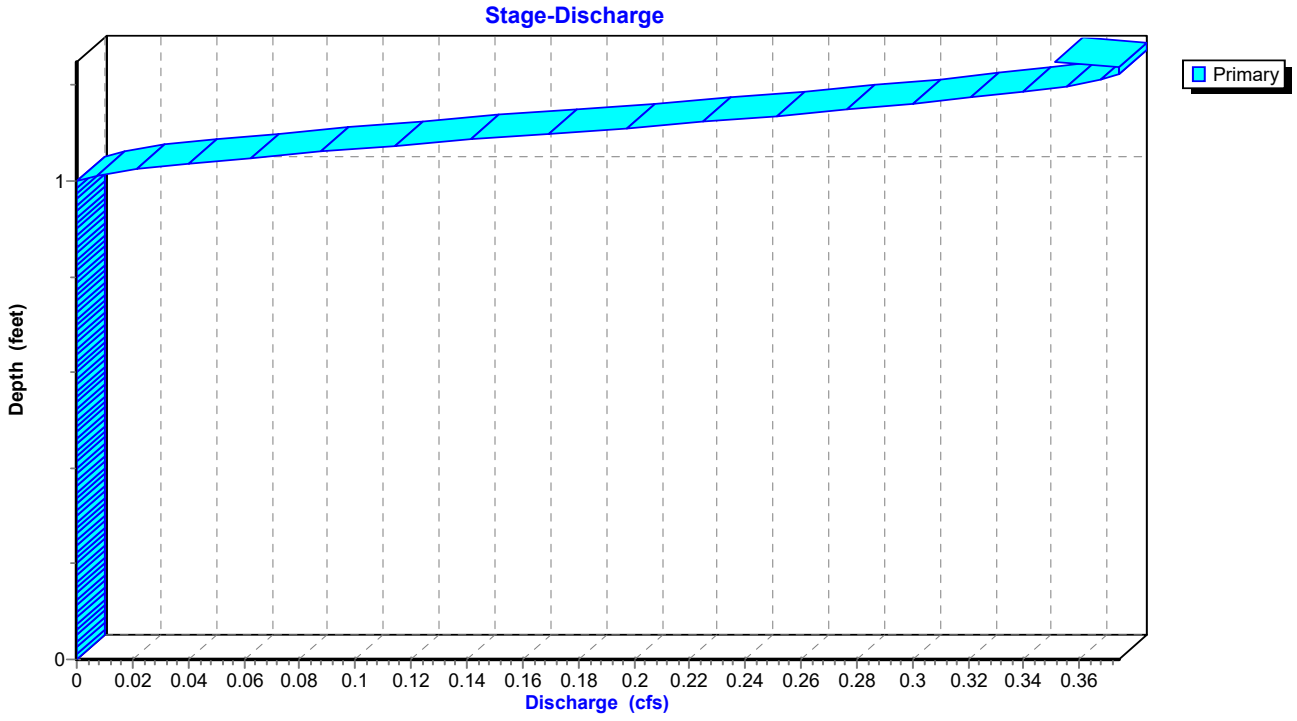
15.0" Round Pipe w/ 12.0" inside fill
n= 0.010
Length= 151.0' Slope= 0.0052 '/'
Inlet Invert= 663.09', Outlet Invert= 662.30'



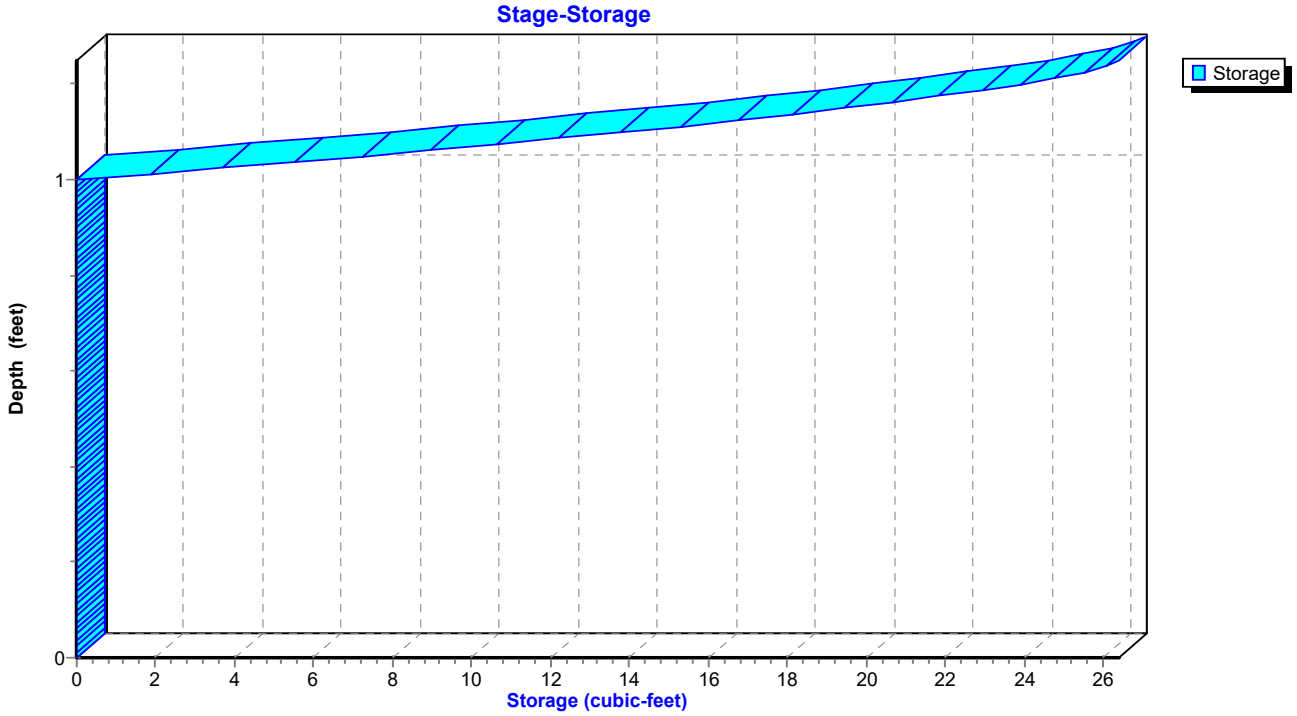
Reach 21R: MH2 15"



Reach 21R: MH2 15"



Reach 21R: MH2 15"



Hydrograph for Reach 21R: MH2 15"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	664.09	0.00
5.40	0.01	3	664.11	0.01
5.80	0.02	3	664.11	0.02
6.20	0.02	3	664.11	0.02
6.60	0.02	3	664.11	0.02
7.00	0.02	3	664.11	0.02
7.40	0.02	4	664.11	0.02
7.80	0.02	4	664.12	0.02
8.20	0.02	4	664.12	0.02
8.60	0.02	4	664.12	0.02
9.00	0.03	4	664.12	0.03
9.40	0.04	5	664.13	0.04
9.80	0.04	6	664.13	0.04
10.20	0.05	6	664.13	0.05
10.60	0.05	6	664.13	0.05
11.00	0.09	9	664.15	0.08
11.40	0.12	11	664.17	0.12
11.80	**0.21**	**16**	**664.20**	**0.19**
12.20	**0.35**	**24**	**664.29**	**0.35**
12.60	0.35	24	664.29	0.35
13.00	0.35	24	664.29	0.35
13.40	0.35	24	664.29	0.35
13.80	0.06	8	664.14	0.07
14.20	0.05	6	664.13	0.05
14.60	0.05	6	664.13	0.05
15.00	0.04	6	664.13	0.05
15.40	0.03	5	664.12	0.03
15.80	0.03	4	664.12	0.03
16.20	0.03	4	664.12	0.03
16.60	0.02	4	664.12	0.03
17.00	0.02	4	664.12	0.02
17.40	0.02	4	664.12	0.02
17.80	0.02	4	664.12	0.02
18.20	0.02	4	664.11	0.02
18.60	0.02	4	664.11	0.02
19.00	0.02	3	664.11	0.02
19.40	0.02	3	664.11	0.02
19.80	0.02	3	664.11	0.02

Stage-Discharge for Reach 21R: MH2 15"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
663.09	0.00	0.00
663.10	0.00	0.00
663.11	0.00	0.00
663.12	0.00	0.00
663.13	0.00	0.00
663.14	0.00	0.00
663.15	0.00	0.00
663.16	0.00	0.00
663.17	0.00	0.00
663.18	0.00	0.00
663.19	0.00	0.00
663.20	0.00	0.00
663.21	0.00	0.00
663.22	0.00	0.00
663.23	0.00	0.00
663.24	0.00	0.00
663.25	0.00	0.00
663.26	0.00	0.00
663.27	0.00	0.00
663.28	0.00	0.00
663.29	0.00	0.00
663.30	0.00	0.00
663.31	0.00	0.00
663.32	0.00	0.00
663.33	0.00	0.00
663.34	0.00	0.00
663.35	0.00	0.00
663.36	0.00	0.00
663.37	0.00	0.00
663.38	0.00	0.00
663.39	0.00	0.00
663.40	0.00	0.00
663.41	0.00	0.00
663.42	0.00	0.00
663.43	0.00	0.00
663.44	0.00	0.00
663.45	0.00	0.00
663.46	0.00	0.00
663.47	0.00	0.00
663.48	0.00	0.00
663.49	0.00	0.00
663.50	0.00	0.00
663.51	0.00	0.00
663.52	0.00	0.00
663.53	0.00	0.00
663.54	0.00	0.00
663.55	0.00	0.00
663.56	0.00	0.00
663.57	0.00	0.00
663.58	0.00	0.00
663.59	0.00	0.00
663.60	0.00	0.00
663.61	0.00	0.00
663.62	0.00	0.00
663.63	0.00	0.00
663.64	0.00	0.00
663.65	0.00	0.00
663.66	0.00	0.00
663.67	0.00	0.00
663.68	0.00	0.00
663.69	0.00	0.00
663.70	0.00	0.00
663.71	0.00	0.00
663.72	0.00	0.00
663.73	0.00	0.00
663.74	0.00	0.00
663.75	0.00	0.00
663.76	0.00	0.00
663.77	0.00	0.00
663.78	0.00	0.00
663.79	0.00	0.00
663.80	0.00	0.00
663.81	0.00	0.00
663.82	0.00	0.00
663.83	0.00	0.00
663.84	0.00	0.00
663.85	0.00	0.00
663.86	0.00	0.00
663.87	0.00	0.00
663.88	0.00	0.00
663.89	0.00	0.00
663.90	0.00	0.00
663.91	0.00	0.00
663.92	0.00	0.00
663.93	0.00	0.00
663.94	0.00	0.00
663.95	0.00	0.00
663.96	0.00	0.00
663.97	0.00	0.00
663.98	0.00	0.00
663.99	0.00	0.00
664.00	0.00	0.00
664.01	0.00	0.00
664.02	0.00	0.00
664.03	0.00	0.00
664.04	0.00	0.00
664.05	0.00	0.00
664.06	0.00	0.00
664.07	0.00	0.00
664.08	0.00	0.00
664.09	0.00	0.00
664.10	0.45	0.01
664.11	0.75	0.02
664.12	0.97	0.03
664.13	1.15	0.04
664.14	1.31	0.06
664.15	1.44	0.08
664.16	1.56	0.10
664.17	1.67	0.12
664.18	1.77	0.15
664.19	1.85	0.17
664.20	1.93	0.19
664.21	1.99	0.21
664.22	2.05	0.24
664.23	2.10	0.26
664.24	2.15	0.28
664.25	2.18	0.30
664.26	2.21	0.31
664.27	2.23	0.33
664.28	2.24	0.34
664.29	**2.25**	0.36
664.30	2.24	0.36
664.31	2.23	0.37
664.32	2.20	**0.37**
664.33	2.13	0.37
664.34	2.01	0.35

Stage-Area-Storage for Reach 21R: MH2 15"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
663.09	0.0	0
663.11	0.0	0
663.13	0.0	0
663.15	0.0	0
663.17	0.0	0
663.19	0.0	0
663.21	0.0	0
663.23	0.0	0
663.25	0.0	0
663.27	0.0	0
663.29	0.0	0
663.31	0.0	0
663.33	0.0	0
663.35	0.0	0
663.37	0.0	0
663.39	0.0	0
663.41	0.0	0
663.43	0.0	0
663.45	0.0	0
663.47	0.0	0
663.49	0.0	0
663.51	0.0	0
663.53	0.0	0
663.55	0.0	0
663.57	0.0	0
663.59	0.0	0
663.61	0.0	0
663.63	0.0	0
663.65	0.0	0
663.67	0.0	0
663.69	0.0	0
663.71	0.0	0
663.73	0.0	0
663.75	0.0	0
663.77	0.0	0
663.79	0.0	0
663.81	0.0	0
663.83	0.0	0
663.85	0.0	0
663.87	0.0	0
663.89	0.0	0
663.91	0.0	0
663.93	0.0	0
663.95	0.0	0
663.97	0.0	0
663.99	0.0	0
664.01	0.0	0
664.03	0.0	0
664.05	0.0	0
664.07	0.0	0
664.09	0.0	0
664.11	0.0	3
664.13	0.0	6
664.15	0.1	9
664.17	0.1	11
664.19	0.1	14
664.21	0.1	16
664.23	0.1	18
664.25	0.1	20
664.27	0.1	22
664.29	0.2	24
664.31	0.2	25
664.33	**0.2**	**26**

Summary for Reach 22R: NDS2 6"

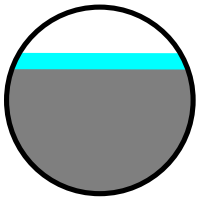
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.031 ac, 3.23% Impervious, Inflow Depth > 1.28" for 25-yr event
Inflow = 0.02 cfs @ 12.78 hrs, Volume= 0.003 af
Outflow = 0.02 cfs @ 12.84 hrs, Volume= 0.003 af, Atten= 0%, Lag= 3.5 min

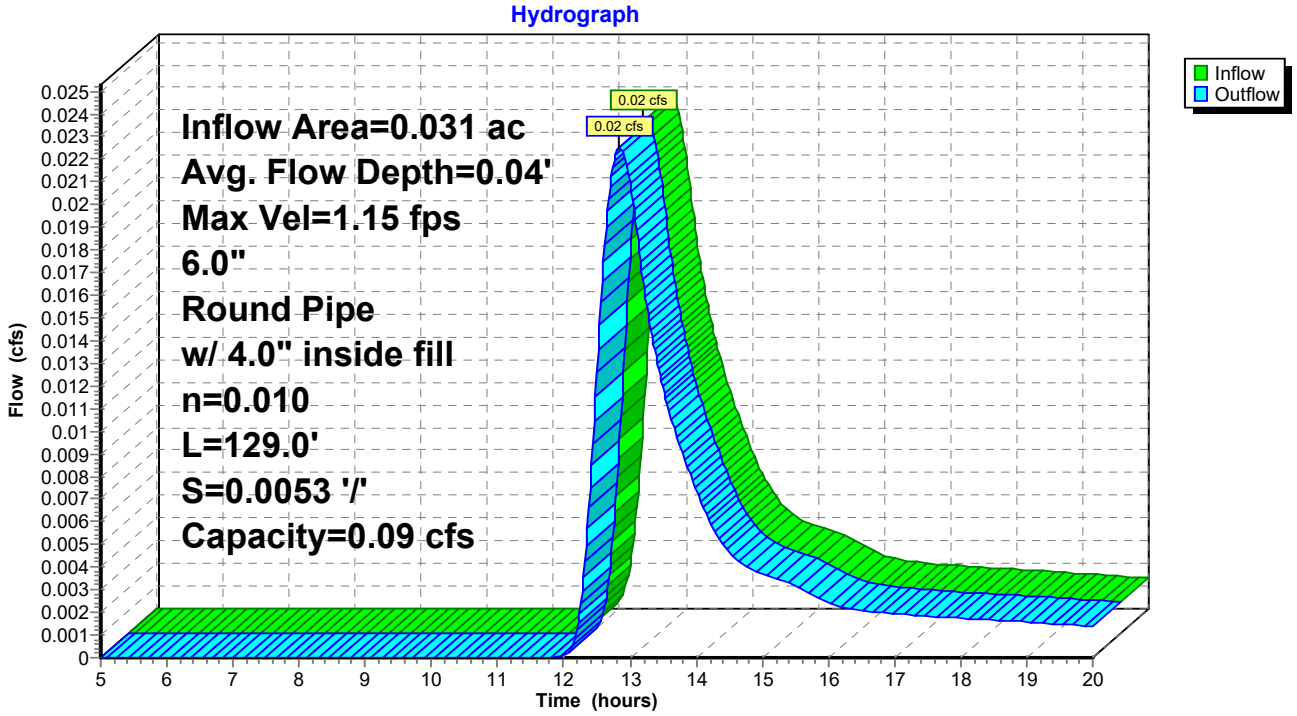
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.15 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 0.58 fps, Avg. Travel Time= 3.7 min

Peak Storage= 3 cf @ 12.81 hrs
Average Depth at Peak Storage= 0.38' above invert (0.04' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

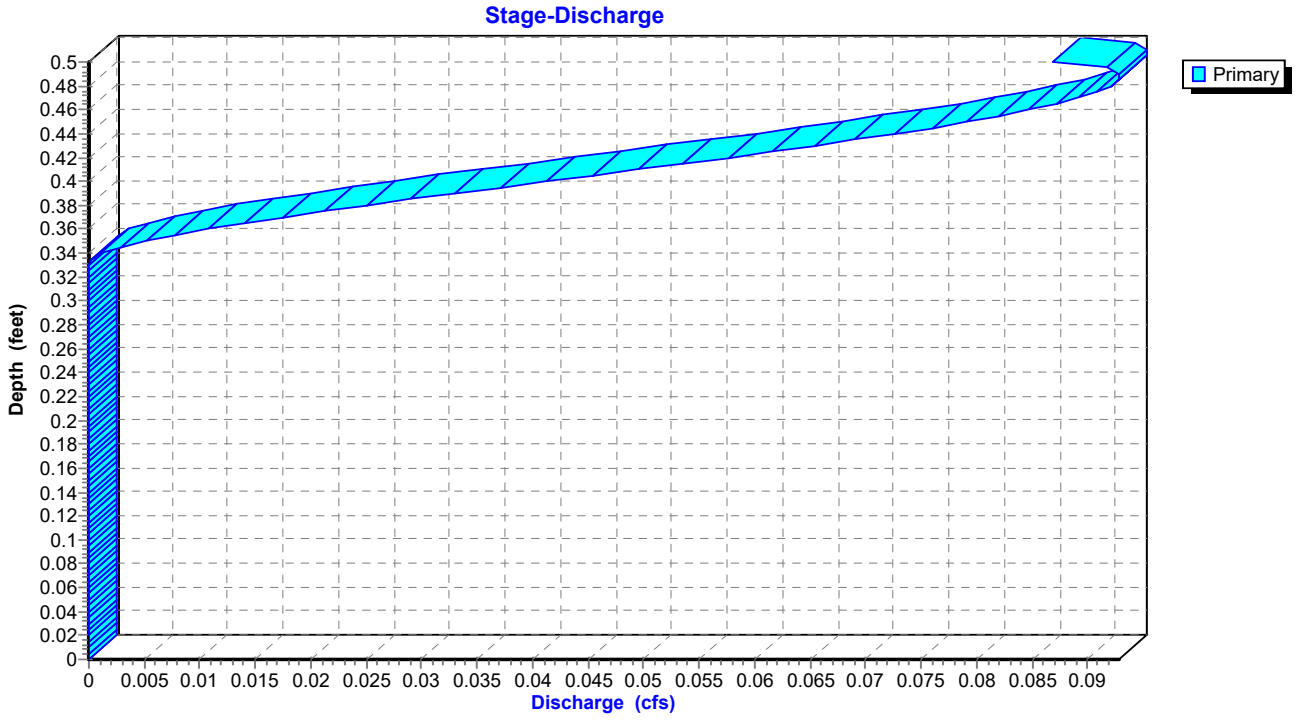
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0053 '/'
Inlet Invert= 668.86', Outlet Invert= 668.18'



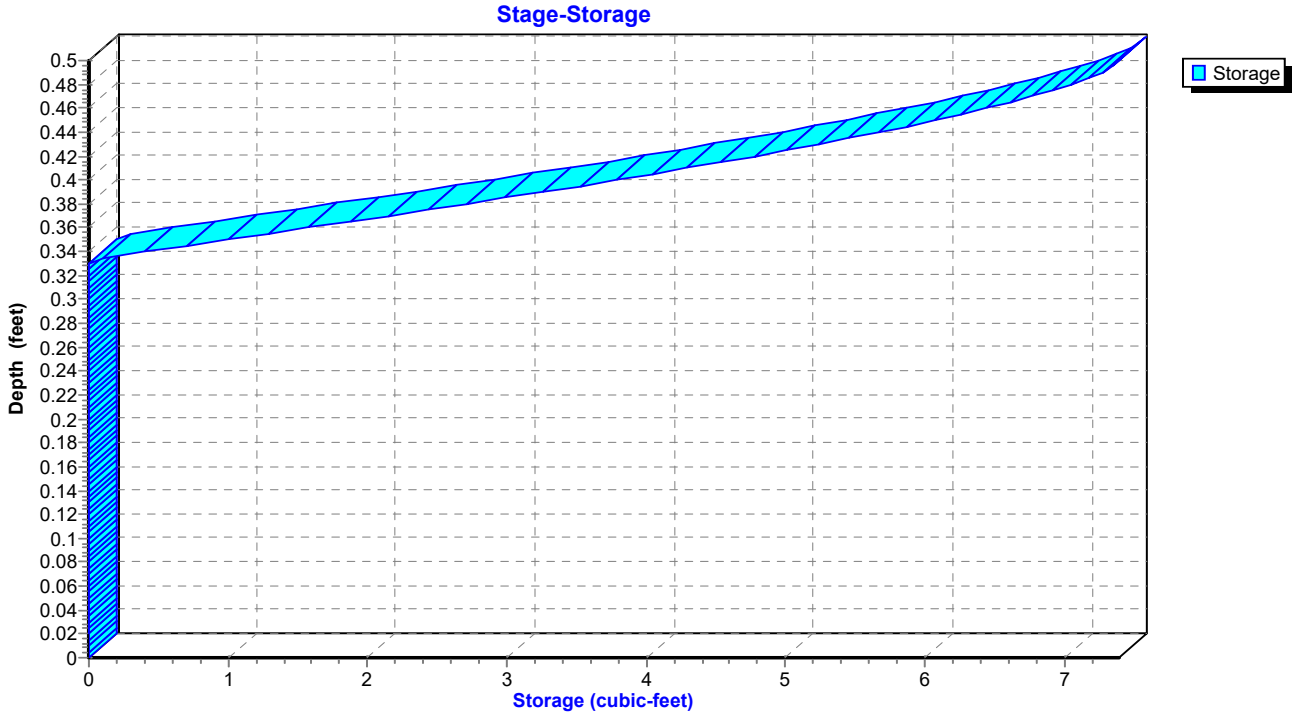
Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Hydrograph for Reach 22R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.19	0.00
5.40	0.00	0	669.19	0.00
5.80	0.00	0	669.19	0.00
6.20	0.00	0	669.19	0.00
6.60	0.00	0	669.19	0.00
7.00	0.00	0	669.19	0.00
7.40	0.00	0	669.19	0.00
7.80	0.00	0	669.19	0.00
8.20	0.00	0	669.19	0.00
8.60	0.00	0	669.19	0.00
9.00	0.00	0	669.19	0.00
9.40	0.00	0	669.19	0.00
9.80	0.00	0	669.19	0.00
10.20	0.00	0	669.19	0.00
10.60	0.00	0	669.19	0.00
11.00	0.00	0	669.19	0.00
11.40	0.00	0	669.19	0.00
11.80	0.00	0	669.19	0.00
12.20	0.00	1	669.20	0.00
12.60	**0.02**	**2**	**669.23**	**0.02**
13.00	**0.02**	**2**	**669.23**	**0.02**
13.40	0.01	2	669.22	0.01
13.80	0.01	1	669.22	0.01
14.20	0.01	1	669.21	0.01
14.60	0.00	1	669.21	0.00
15.00	0.00	1	669.21	0.00
15.40	0.00	1	669.21	0.00
15.80	0.00	1	669.20	0.00
16.20	0.00	1	669.20	0.00
16.60	0.00	1	669.20	0.00
17.00	0.00	1	669.20	0.00
17.40	0.00	1	669.20	0.00
17.80	0.00	1	669.20	0.00
18.20	0.00	0	669.20	0.00
18.60	0.00	0	669.20	0.00
19.00	0.00	0	669.20	0.00
19.40	0.00	0	669.20	0.00
19.80	0.00	0	669.20	0.00

Stage-Discharge for Reach 22R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.00	0.00
669.19	0.00	0.00
669.20	0.37	0.00
669.21	0.66	0.01
669.22	0.88	0.01
669.23	1.05	0.02
669.24	1.19	0.03
669.25	1.31	0.03
669.26	1.41	0.04
669.27	1.49	0.05
669.28	1.56	0.06
669.29	1.61	0.07
669.30	1.65	0.07
669.31	1.68	0.08
669.32	1.70	0.08
669.33	**1.70**	0.09
669.34	1.69	0.09
669.35	1.65	**0.09**
669.36	1.52	0.09

Stage-Area-Storage for Reach 22R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	0
669.20	0.0	0
669.21	0.0	1
669.22	0.0	2
669.23	0.0	2
669.24	0.0	3
669.25	0.0	3
669.26	0.0	4
669.27	0.0	4
669.28	0.0	5
669.29	0.0	5
669.30	0.0	6
669.31	0.0	6
669.32	0.0	6
669.33	0.1	7
669.34	0.1	7
669.35	0.1	7
669.36	**0.1**	**7**

Summary for Pond 4P: stormtech SC310 16"x34" chambers

[44] Hint: Outlet device #2 is below defined storage
[63] Warning: Exceeded Reach 10R INLET depth by 0.22' @ 12.52 hrs
[63] Warning: Exceeded Reach 12R INLET depth by 0.26' @ 12.52 hrs
[62] Hint: Exceeded Reach 13R OUTLET depth by 0.19' @ 12.48 hrs
[62] Hint: Exceeded Reach 14R OUTLET depth by 0.19' @ 12.48 hrs
[62] Hint: Exceeded Reach 15R OUTLET depth by 0.18' @ 12.48 hrs

Inflow Area = 1.066 ac, 91.74% Impervious, Inflow Depth > 4.41" for 25-yr event
Inflow = 1.68 cfs @ 12.19 hrs, Volume= 0.391 af
Outflow = 0.93 cfs @ 12.47 hrs, Volume= 0.342 af, Atten= 45%, Lag= 16.6 min
Primary = 0.61 cfs @ 12.47 hrs, Volume= 0.102 af
Secondary = 0.32 cfs @ 12.47 hrs, Volume= 0.240 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 666.55' @ 12.47 hrs Surf.Area= 0.107 ac Storage= 0.081 af

Plug-Flow detention time= 84.6 min calculated for 0.342 af (87% of inflow)
Center-of-Mass det. time= 38.0 min (859.1 - 821.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	664.40'	0.076 af	**36.00'W x 120.45'L x 2.33'H Field A Z=0.5** 0.242 af Overall - 0.011 af Embedded = 0.231 af x 33.0% Voids
#2A	664.90'	0.011 af	**ADS_StormTech RC-310 +Cap** x 32 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 2 Rows
#3	665.00'	0.001 af	**8.0" Round Pipe Storage** L= 87.0' S= 0.5200 '/'
#4	664.90'	0.001 af	**12.0" Round Pipe Storage** L= 45.0' S= 0.7300 '/'
#5	665.40'	0.000 af	**12.0" Round Pipe Storage** L= 23.0' S= 0.5200 '/'
#6	665.58'	0.001 af	**10.0" Round Pipe Storage** L= 69.0' S= 0.5200 '/'
		0.090 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	665.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.75 0.75 2.10 2.10 3.00 Width (feet) 0.00 0.17 0.17 4.00 4.00
#2	Secondary	664.00'	**Tube/Siphon/Float Valve** 4.000" Diameter, C= 0.600 136.0' Long Tube, Hazen-Williams C= 130 Inlet / Outlet Elev. = 664.00' / 664.00'

Primary OutFlow Max=0.60 cfs @ 12.47 hrs HW=666.55' (Free Discharge)
↑—**1=Custom Weir/Orifice** (Weir Controls 0.60 cfs @ 3.36 fps)

Secondary OutFlow Max=0.32 cfs @ 12.47 hrs HW=666.55' (Free Discharge)
↑—**2=Tube/Siphon/Float Valve** (Tube Controls 0.32 cfs @ 3.65 fps)

Pond 4P: stormtech SC310 16"x34" chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-310 +Cap (ADS StormTech®RC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 48.0" Spacing = 82.0" C-C Row Spacing

16 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 115.12' Row Length +32.0" End Stone x 2 = 120.45' Base Length
2 Rows x 34.0" Wide + 48.0" Spacing x 1 + 158.0" Side Stone x 2 = 36.00' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

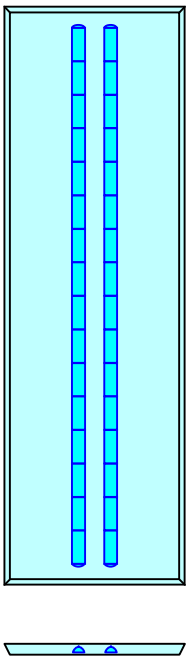
0.5 '/' Side-Z x Height = 14.0" Flare/Side
Base Length + Flare x 2 = 122.79' Top Length
Base Width + Flare x 2 = 38.33' Top Width

32 Chambers x 14.7 cf = 471.7 cf Chamber Storage

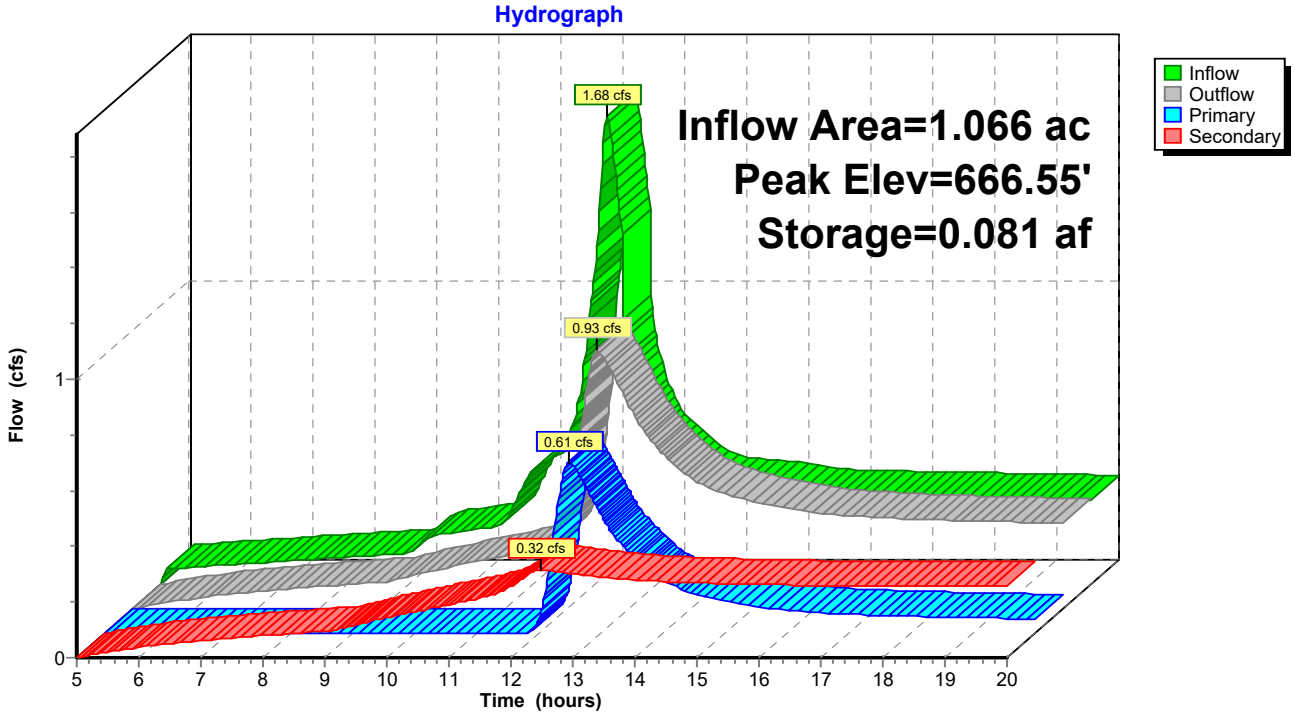
10,548.2 cf Field - 471.7 cf Chambers = 10,076.5 cf Stone x 33.0% Voids = 3,325.2 cf Stone Storage

Chamber Storage + Stone Storage = 3,797.0 cf = 0.087 af
Overall Storage Efficiency = 36.0%
Overall System Size = 120.45' x 36.00' x 2.33'

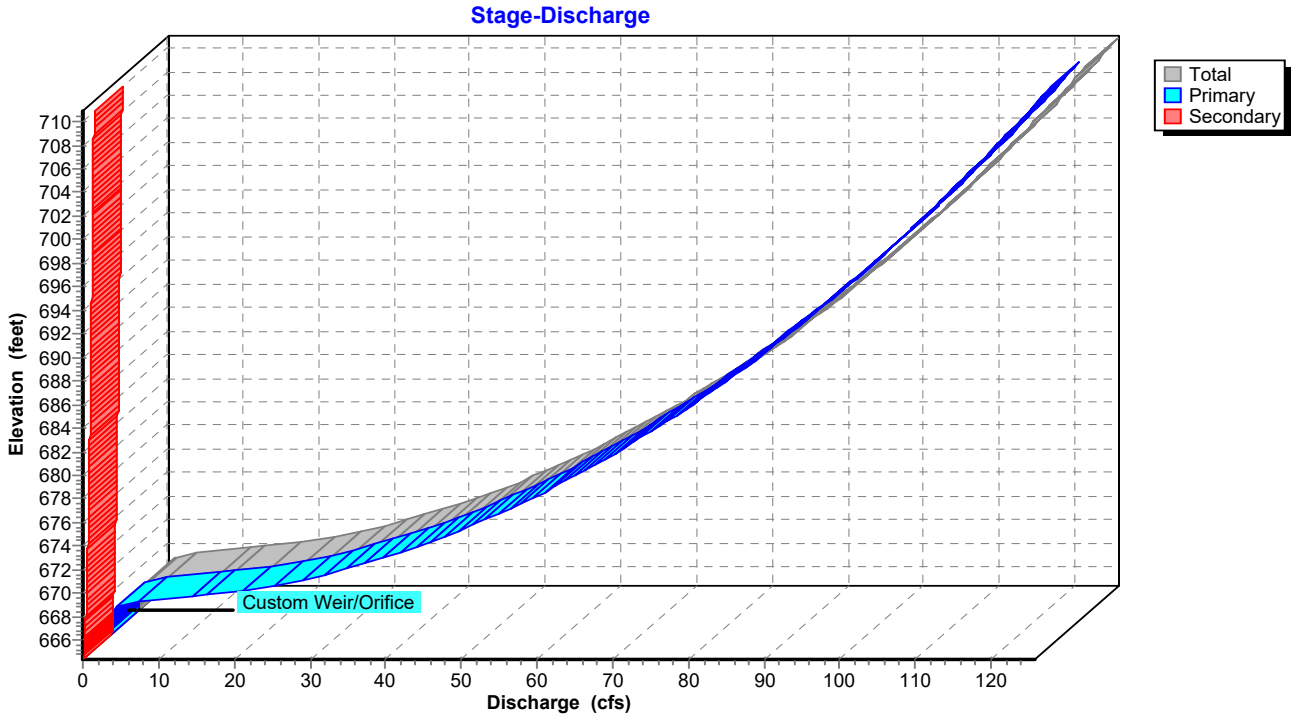
32 Chambers
390.7 cy Field
373.2 cy Stone



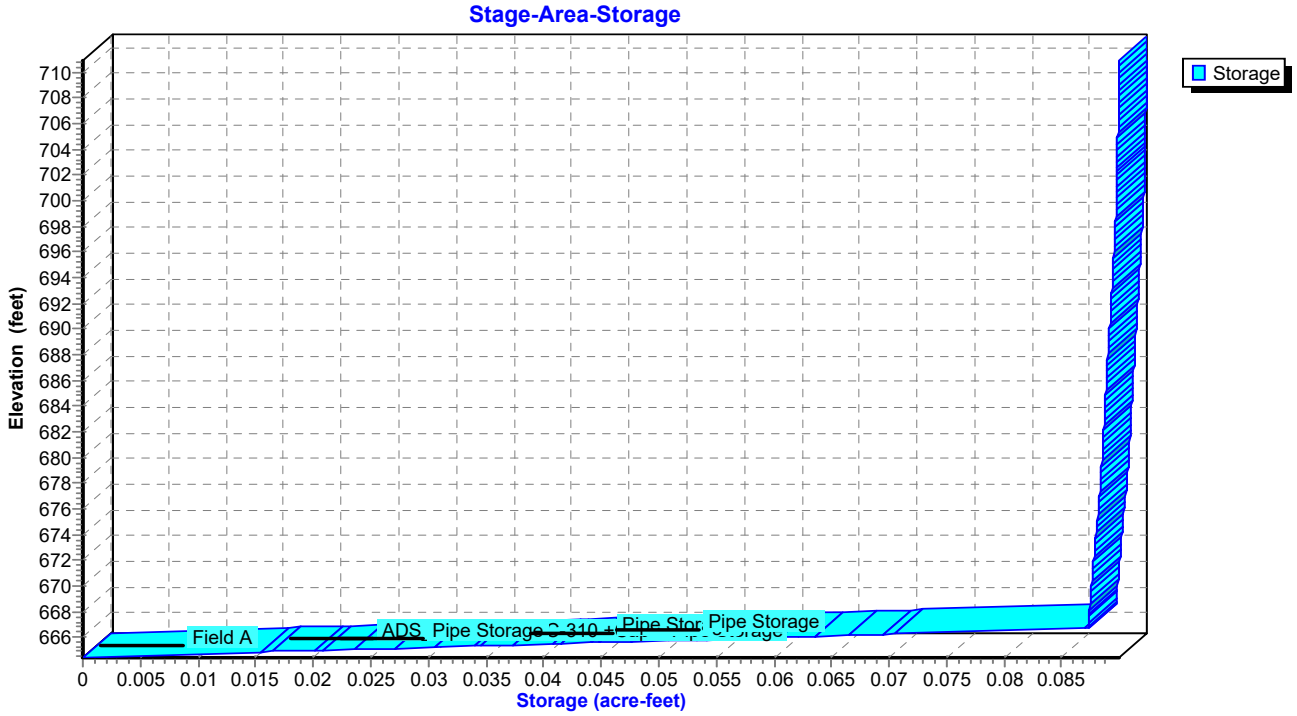
Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Hydrograph for Pond 4P: stormtech SC310 16"x34" chambers

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0.000	664.40	0.00	0.00	0.00
5.40	0.06	0.001	664.44	0.02	0.00	0.02
5.80	0.07	0.003	664.48	0.03	0.00	0.03
6.20	0.07	0.004	664.51	0.04	0.00	0.04
6.60	0.08	0.005	664.54	0.05	0.00	0.05
7.00	0.08	0.005	664.56	0.06	0.00	0.06
7.40	0.09	0.006	664.58	0.07	0.00	0.07
7.80	0.09	0.007	664.60	0.08	0.00	0.08
8.20	0.10	0.007	664.62	0.08	0.00	0.08
8.60	0.10	0.008	664.63	0.09	0.00	0.09
9.00	0.11	0.008	664.65	0.10	0.00	0.10
9.40	0.18	0.010	664.69	0.11	0.00	0.11
9.80	0.19	0.012	664.75	0.14	0.00	0.14
10.20	0.20	0.013	664.80	0.15	0.00	0.15
10.60	0.24	0.015	664.85	0.17	0.00	0.17
11.00	0.41	0.020	664.98	0.19	0.00	0.19
11.40	0.46	0.028	665.16	0.21	0.00	0.21
11.80	0.73	0.039	665.43	0.23	0.00	0.23
12.20	**1.68**	**0.066**	**666.14**	**0.58**	**0.29**	**0.29**
12.60	0.73	**0.080**	**666.52**	**0.90**	**0.59**	**0.32**
13.00	0.52	0.073	666.33	0.73	0.43	0.30
13.40	0.45	0.067	666.17	0.60	0.30	0.29
13.80	0.38	0.063	666.04	0.50	0.22	0.28
14.20	0.36	0.059	665.95	0.44	0.17	0.28
14.60	0.36	0.057	665.89	0.41	0.14	0.27
15.00	0.35	0.056	665.86	0.39	0.12	0.27
15.40	0.33	0.054	665.82	0.37	0.10	0.27
15.80	0.32	0.053	665.79	0.35	0.09	0.26
16.20	0.32	0.052	665.77	0.34	0.08	0.26
16.60	0.32	0.052	665.76	0.33	0.07	0.26
17.00	0.32	0.051	665.75	0.33	0.07	0.26
17.40	0.31	0.051	665.74	0.32	0.06	0.26
17.80	0.31	0.051	665.73	0.32	0.06	0.26
18.20	0.31	0.051	665.72	0.32	0.06	0.26
18.60	0.31	0.050	665.72	0.32	0.06	0.26
19.00	0.31	0.050	665.71	0.31	0.06	0.26
19.40	0.31	0.050	665.71	0.31	0.05	0.26
19.80	0.30	0.050	665.70	0.31	0.05	0.26

Stage-Discharge for Pond 4P: stormtech SC310 16"x34" chambers

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
664.40	0.00	0.00	0.00
664.90	0.18	0.00	0.18
665.40	0.23	0.00	0.23
665.90	0.41	0.14	0.27
666.40	0.78	0.48	0.31
666.90	1.40	1.06	0.34
667.40	6.94	6.57	0.37
667.90	15.20	14.80	0.40
668.40	20.51	20.09	0.42
668.90	24.60	24.15	0.45
669.40	28.07	27.60	0.47
669.90	31.15	30.65	0.50
670.40	33.94	33.43	0.52
670.90	36.52	35.98	0.54
671.40	38.93	38.37	0.56
671.90	41.19	40.61	0.58
672.40	43.34	42.74	0.60
672.90	45.38	44.76	0.62
673.40	47.33	46.70	0.64
673.90	49.21	48.56	0.65
674.40	51.02	50.35	0.67
674.90	52.76	52.08	0.69
675.40	54.45	53.75	0.70
675.90	56.09	55.37	0.72
676.40	57.68	56.95	0.74
676.90	59.23	58.48	0.75
677.40	60.74	59.98	0.77
677.90	62.22	61.43	0.78
678.40	63.65	62.86	0.80
678.90	65.06	64.25	0.81
679.40	66.44	65.61	0.82
679.90	67.79	66.95	0.84
680.40	69.11	68.26	0.85
680.90	70.41	69.54	0.87
681.40	71.68	70.80	0.88
681.90	72.94	72.04	0.89
682.40	74.17	73.26	0.91
682.90	75.38	74.46	0.92
683.40	76.57	75.64	0.93
683.90	77.74	76.80	0.94
684.40	78.90	77.94	0.96
684.90	80.04	79.07	0.97
685.40	81.16	80.18	0.98
685.90	82.27	81.28	0.99
686.40	83.36	82.36	1.01
686.90	84.44	83.43	1.02
687.40	85.51	84.48	1.03
687.90	86.56	85.52	1.04
688.40	87.60	86.55	1.05
688.90	88.63	87.57	1.06
689.40	89.65	88.57	1.08
689.90	90.65	89.56	1.09
690.40	91.64	90.55	1.10
690.90	92.63	91.52	1.11
691.40	93.60	92.48	1.12
691.90	94.56	93.43	1.13
692.40	95.51	94.37	1.14
692.90	96.46	95.31	1.15
693.40	97.39	96.23	1.16
693.90	98.32	97.15	1.17
694.40	99.23	98.05	1.18
694.90	100.14	98.95	1.19
695.40	101.04	99.84	1.20
695.90	101.94	100.72	1.21
696.40	102.82	101.60	1.22
696.90	103.70	102.47	1.23
697.40	104.57	103.32	1.24
697.90	105.43	104.18	1.25
698.40	106.29	105.02	1.26
698.90	107.13	105.86	1.27
699.40	107.98	106.70	1.28
699.90	108.81	107.52	1.29
700.40	109.64	108.34	1.30
700.90	110.46	109.15	1.31
701.40	111.28	109.96	1.32
701.90	112.09	110.76	1.33
702.40	112.90	111.56	1.34
702.90	113.70	112.35	1.35
703.40	114.49	113.14	1.36
703.90	115.28	113.91	1.37
704.40	116.06	114.69	1.37
704.90	116.84	115.46	1.38
705.40	117.61	116.22	1.39
705.90	118.38	116.98	1.40
706.40	119.14	117.73	1.41
706.90	119.90	118.48	1.42
707.40	120.65	119.23	1.43
707.90	121.40	119.97	1.44
708.40	122.15	120.70	1.44
708.90	122.89	121.43	1.45
709.40	123.62	122.16	1.46
709.90	124.35	122.88	1.47
710.40	125.08	123.60	1.48
710.90	**125.80**	**124.31**	**1.49**

Stage-Area-Storage for Pond 4P: stormtech SC310 16"x34" chambers

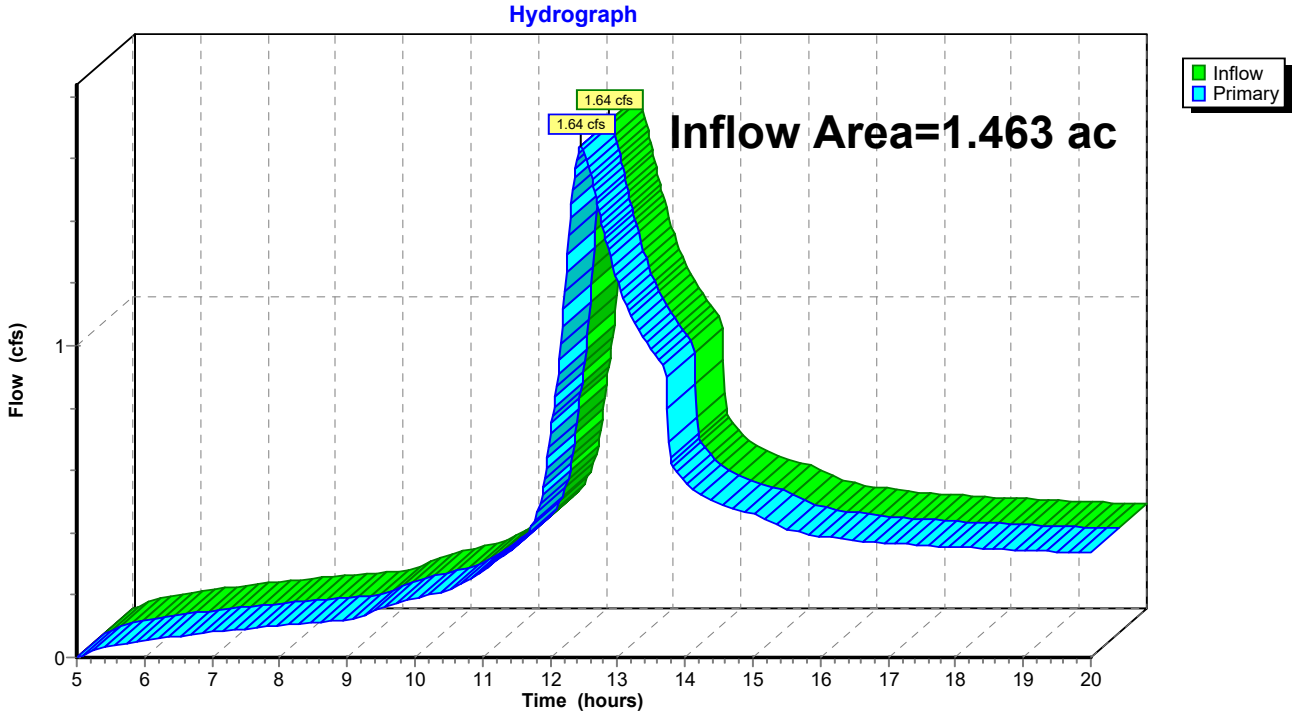
Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
664.40	0.000	689.90	0.089
664.90	0.017	690.40	0.089
665.40	0.037	690.90	0.089
665.90	0.057	691.40	0.089
666.40	0.075	691.90	0.089
666.90	0.087	692.40	0.089
667.40	0.087	692.90	0.089
667.90	0.087	693.40	0.089
668.40	0.087	693.90	0.089
668.90	0.087	694.40	0.089
669.40	0.088	694.90	0.089
669.90	0.088	695.40	0.089
670.40	0.088	695.90	0.090
670.90	0.088	696.40	0.090
671.40	0.088	696.90	0.090
671.90	0.088	697.40	0.090
672.40	0.088	697.90	0.090
672.90	0.088	698.40	0.090
673.40	0.088	698.90	0.090
673.90	0.088	699.40	0.090
674.40	0.088	699.90	0.090
674.90	0.088	700.40	0.090
675.40	0.088	700.90	0.090
675.90	0.088	701.40	0.090
676.40	0.088	701.90	0.090
676.90	0.088	702.40	0.090
677.40	0.088	702.90	0.090
677.90	0.088	703.40	0.090
678.40	0.088	703.90	0.090
678.90	0.088	704.40	0.090
679.40	0.088	704.90	0.090
679.90	0.088	705.40	0.090
680.40	0.089	705.90	0.090
680.90	0.089	706.40	0.090
681.40	0.089	706.90	0.090
681.90	0.089	707.40	0.090
682.40	0.089	707.90	0.090
682.90	0.089	708.40	0.090
683.40	0.089	708.90	0.090
683.90	0.089	709.40	0.090
684.40	0.089	709.90	0.090
684.90	0.089	710.40	0.090
685.40	0.089	710.90	**0.090**
685.90	0.089		
686.40	0.089		
686.90	0.089		
687.40	0.089		
687.90	0.089		
688.40	0.089		
688.90	0.089		
689.40	0.089		

Summary for Link 5L: HOM property run-off

Inflow Area = 1.463 ac, 87.83% Impervious, Inflow Depth > 3.85" for 25-yr event
Inflow = 1.64 cfs @ 12.46 hrs, Volume= 0.469 af
Primary = 1.64 cfs @ 12.46 hrs, Volume= 0.469 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Link 5L: HOM property run-off



Hydrograph for Link 5L: HOM property run-off

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00	15.20	0.45	0.00	0.45
5.20	0.02	0.00	0.02	15.40	0.42	0.00	0.42
5.40	0.03	0.00	0.03	15.60	0.41	0.00	0.41
5.60	0.04	0.00	0.04	15.80	0.40	0.00	0.40
5.80	0.05	0.00	0.05	16.00	0.39	0.00	0.39
6.00	0.05	0.00	0.05	16.20	0.38	0.00	0.38
6.20	0.06	0.00	0.06	16.40	0.38	0.00	0.38
6.40	0.07	0.00	0.07	16.60	0.37	0.00	0.37
6.60	0.07	0.00	0.07	16.80	0.37	0.00	0.37
6.80	0.08	0.00	0.08	17.00	0.37	0.00	0.37
7.00	0.08	0.00	0.08	17.20	0.36	0.00	0.36
7.20	0.09	0.00	0.09	17.40	0.36	0.00	0.36
7.40	0.09	0.00	0.09	17.60	0.36	0.00	0.36
7.60	0.09	0.00	0.09	17.80	0.36	0.00	0.36
7.80	0.10	0.00	0.10	18.00	0.35	0.00	0.35
8.00	0.10	0.00	0.10	18.20	0.35	0.00	0.35
8.20	0.11	0.00	0.11	18.40	0.35	0.00	0.35
8.40	0.11	0.00	0.11	18.60	0.35	0.00	0.35
8.60	0.11	0.00	0.11	18.80	0.35	0.00	0.35
8.80	0.12	0.00	0.12	19.00	0.34	0.00	0.34
9.00	0.12	0.00	0.12	19.20	0.34	0.00	0.34
9.20	0.13	0.00	0.13	19.40	0.34	0.00	0.34
9.40	0.15	0.00	0.15	19.60	0.34	0.00	0.34
9.60	0.17	0.00	0.17	19.80	0.34	0.00	0.34
9.80	0.18	0.00	0.18	20.00	0.33	0.00	0.33
10.00	0.19	0.00	0.19				
10.20	0.20	0.00	0.20				
10.40	0.21	0.00	0.21				
10.60	0.22	0.00	0.22				
10.80	0.25	0.00	0.25				
11.00	0.28	0.00	0.28				
11.20	0.31	0.00	0.31				
11.40	0.34	0.00	0.34				
11.60	0.38	0.00	0.38				
11.80	0.46	0.00	0.46				
12.00	0.72	0.00	0.72				
12.20	1.12	0.00	1.12				
12.40	**1.60**	0.00	**1.60**				
12.60	**1.55**	0.00	**1.55**				
12.80	1.36	0.00	1.36				
13.00	1.21	0.00	1.21				
13.20	1.10	0.00	1.10				
13.40	1.02	0.00	1.02				
13.60	0.96	0.00	0.96				
13.80	0.62	0.00	0.62				
14.00	0.56	0.00	0.56				
14.20	0.53	0.00	0.53				
14.40	0.50	0.00	0.50				
14.60	0.49	0.00	0.49				
14.80	0.47	0.00	0.47				
15.00	0.46	0.00	0.46				

Time span=5.00-20.00 hrs, dt=0.02 hrs, 751 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SE roof to MH8 Runoff Area=0.339 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=130' Tc=10.0 min CN=98 Runoff=2.87 cfs 0.194 af

Subcatchment3S: untreated to streets Runoff Area=0.177 ac 49.15% Impervious Runoff Depth>3.94"
Flow Length=110' Tc=30.0 min CN=71 Runoff=0.60 cfs 0.058 af

Subcatchment6S: S roof to MH8 Runoff Area=0.305 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=170' Tc=12.0 min CN=98 Runoff=2.42 cfs 0.175 af

Subcatchment7S: to Inlets 8 & 9 Runoff Area=0.048 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=105' Tc=15.0 min CN=98 Runoff=0.35 cfs 0.028 af

Subcatchment8S: to Inlet 7 Runoff Area=0.051 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=50' Tc=7.0 min CN=98 Runoff=0.48 cfs 0.029 af

Subcatchment9S: to Inlet 6 Runoff Area=0.041 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=90' Tc=14.0 min CN=98 Runoff=0.31 cfs 0.024 af

Subcatchment10S: to Inlet 5 Runoff Area=0.030 ac 83.33% Impervious Runoff Depth>5.86"
Flow Length=60' Tc=18.0 min CN=88 Runoff=0.18 cfs 0.015 af

Subcatchment11S: to Inlet 4 Runoff Area=0.038 ac 73.68% Impervious Runoff Depth>5.17"
Flow Length=120' Tc=26.0 min CN=82 Runoff=0.18 cfs 0.016 af

Subcatchment12S: to inlet 3 Runoff Area=0.124 ac 100.00% Impervious Runoff Depth>6.88"
Tc=0.0 min CN=98 Runoff=1.36 cfs 0.071 af

Subcatchment13S: to NDS 2 Runoff Area=0.021 ac 0.00% Impervious Runoff Depth>2.90"
Flow Length=20' Tc=20.0 min CN=61 Runoff=0.06 cfs 0.005 af

Subcatchment14S: to NDS 3-5 Runoff Area=0.031 ac 3.23% Impervious Runoff Depth>2.46"
Flow Length=95' Tc=52.0 min CN=57 Runoff=0.05 cfs 0.006 af

Subcatchment16S: to NDS11-6 Runoff Area=0.038 ac 42.11% Impervious Runoff Depth>3.20"
Flow Length=50' Tc=30.0 min CN=64 Runoff=0.10 cfs 0.010 af

Subcatchment17S: untreated alley to Runoff Area=0.150 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=265' Tc=20.0 min CN=98 Runoff=0.95 cfs 0.086 af

Subcatchment18S: untreated alley to Runoff Area=0.070 ac 100.00% Impervious Runoff Depth>6.88"
Flow Length=108' Tc=10.0 min CN=98 Runoff=0.59 cfs 0.040 af

Reach 6R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.22 fps Inflow=2.42 cfs 0.175 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=27.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.175 af

Reach 7R: MH8 12" Avg. Flow Depth=0.25' Max Vel=2.01 fps Inflow=0.56 cfs 0.369 af
12.0" Round Pipe w/ 9.0" inside fill n=0.010 L=19.0' S=0.0042 '/' Capacity=0.28 cfs Outflow=0.29 cfs 0.264 af

Reach 8R: 10" roof Avg. Flow Depth=0.25' Max Vel=2.23 fps Inflow=2.87 cfs 0.194 af
10.0" Round Pipe w/ 7.0" inside fill n=0.010 L=42.0' S=0.0052 '/' Capacity=0.27 cfs Outflow=0.29 cfs 0.194 af

Reach 9R: inlet 3 18" Avg. Flow Depth=0.33' Max Vel=3.34 fps Inflow=1.63 cfs 0.335 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=35.0' S=0.0080 '/' Capacity=0.88 cfs Outflow=0.88 cfs 0.335 af

Reach 10R: MH7 18" Avg. Flow Depth=0.33' Max Vel=2.65 fps Inflow=0.88 cfs 0.335 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=4.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.76 cfs 0.335 af

Reach 11R: inlet 7 18" Avg. Flow Depth=0.33' Max Vel=2.70 fps Inflow=0.77 cfs 0.057 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=62.0' S=0.0052 '/' Capacity=0.71 cfs Outflow=0.73 cfs 0.057 af

Reach 12R: MH6 18" Avg. Flow Depth=0.29' Max Vel=2.65 fps Inflow=0.73 cfs 0.057 af
18.0" Round Pipe w/ 14.0" inside fill n=0.010 L=8.0' S=0.0050 '/' Capacity=0.69 cfs Outflow=0.73 cfs 0.057 af

Reach 13R: to isolator 6" Avg. Flow Depth=0.08' Max Vel=9.17 fps Inflow=0.31 cfs 0.024 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.31 cfs 0.024 af

Reach 14R: to isolator 6" Avg. Flow Depth=0.05' Max Vel=7.79 fps Inflow=0.18 cfs 0.015 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.18 cfs 0.015 af

Reach 15R: to isolator 6" Avg. Flow Depth=0.05' Max Vel=7.67 fps Inflow=0.18 cfs 0.016 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=10.0' S=0.2000 '/' Capacity=0.54 cfs Outflow=0.18 cfs 0.016 af

Reach 16R: inlet 2 12" Avg. Flow Depth=0.33' Max Vel=2.68 fps Inflow=0.95 cfs 0.086 af
12.0" Round Pipe w/ 8.0" inside fill n=0.010 L=50.0' S=0.0052 '/' Capacity=0.55 cfs Outflow=0.55 cfs 0.086 af

Reach 17R: NDS2 6" Avg. Flow Depth=0.17' Max Vel=1.67 fps Inflow=0.10 cfs 0.010 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0051 '/' Capacity=0.09 cfs Outflow=0.09 cfs 0.010 af

Reach 18R: inlet 3 6" Avg. Flow Depth=0.17' Max Vel=1.63 fps Inflow=0.17 cfs 0.022 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=62.0' S=0.0048 '/' Capacity=0.08 cfs Outflow=0.08 cfs 0.022 af

Reach 19R: inlet 1 12" Avg. Flow Depth=0.33' Max Vel=2.67 fps Inflow=1.14 cfs 0.126 af
12.0" Round Pipe w/ 8.0" inside fill n=0.010 L=73.0' S=0.0052 '/' Capacity=0.55 cfs Outflow=0.58 cfs 0.126 af

Reach 20R: MH3 15" Avg. Flow Depth=0.25' Max Vel=2.26 fps Inflow=0.58 cfs 0.126 af
15.0" Round Pipe w/ 12.0" inside fill n=0.010 L=53.0' S=0.0053 '/' Capacity=0.35 cfs Outflow=0.36 cfs 0.126 af

Reach 21R: MH2 15" Avg. Flow Depth=0.20' Max Vel=2.25 fps Inflow=0.36 cfs 0.126 af
15.0" Round Pipe w/ 12.0" inside fill n=0.010 L=151.0' S=0.0052 '/' Capacity=0.35 cfs Outflow=0.35 cfs 0.126 af

Reach 22R: NDS2 6" Avg. Flow Depth=0.07' Max Vel=1.46 fps Inflow=0.05 cfs 0.006 af
6.0" Round Pipe w/ 4.0" inside fill n=0.010 L=129.0' S=0.0053 '/' Capacity=0.09 cfs Outflow=0.05 cfs 0.006 af

Pond 4P: stormtech SC310 16"x34" Peak Elev=667.02' Storage=0.087 af Inflow=2.11 cfs 0.468 af
Primary=2.26 cfs 0.156 af Secondary=0.35 cfs 0.261 af Outflow=2.61 cfs 0.417 af

Link 5L: HOM property run-off Inflow=3.46 cfs 0.601 af
Primary=3.46 cfs 0.601 af

Total Runoff Area = 1.463 ac Runoff Volume = 0.758 af Average Runoff Depth = 6.22"
12.17% Pervious = 0.178 ac 87.83% Impervious = 1.285 ac

Summary for Subcatchment 1S: SE roof to MH8

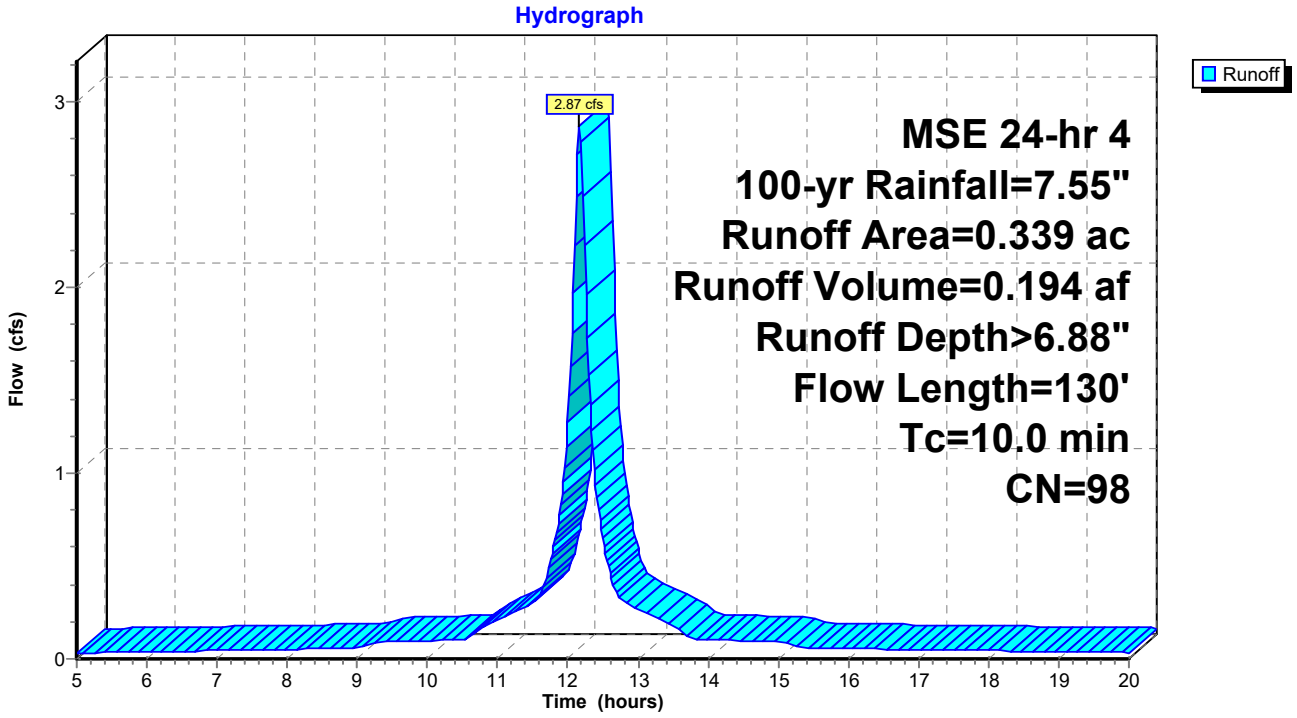
Runoff = 2.87 cfs @ 12.17 hrs, Volume= 0.194 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.339	98	fronting Main St
	0.339		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	130		0.22		**Direct Entry, S Bldg roof**

Subcatchment 1S: SE roof to MH8



Hydrograph for Subcatchment 1S: SE roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.03
5.20	0.37	0.20	0.03
5.40	0.39	0.22	0.03
5.60	0.42	0.24	0.03
5.80	0.44	0.26	0.04
6.00	0.46	0.29	0.04
6.20	0.49	0.31	0.04
6.40	0.52	0.33	0.04
6.60	0.54	0.36	0.04
6.80	0.57	0.38	0.04
7.00	0.60	0.41	0.04
7.20	0.63	0.43	0.05
7.40	0.66	0.46	0.05
7.60	0.69	0.49	0.05
7.80	0.72	0.52	0.05
8.00	0.75	0.55	0.05
8.20	0.78	0.58	0.05
8.40	0.81	0.61	0.05
8.60	0.85	0.64	0.05
8.80	0.88	0.67	0.06
9.00	0.91	0.71	0.06
9.20	0.97	0.76	0.08
9.40	1.02	0.81	0.09
9.60	1.08	0.87	0.09
9.80	1.14	0.92	0.10
10.00	1.20	0.98	0.10
10.20	1.26	1.04	0.10
10.40	1.32	1.10	0.10
10.60	1.40	1.18	0.12
10.80	1.50	1.28	0.17
11.00	1.63	1.41	0.21
11.20	1.78	1.56	0.24
11.40	1.96	1.73	0.28
11.60	2.18	1.95	0.34
11.80	2.59	2.36	0.60
12.00	3.54	3.30	**1.27**
12.20	4.96	4.72	**2.72**
12.40	5.37	5.13	0.94
12.60	5.59	5.36	0.47
12.80	5.77	5.53	0.31
13.00	5.92	5.68	0.27
13.20	6.05	5.81	0.23
13.40	6.15	5.92	0.19
13.60	6.23	5.99	0.15
13.80	6.29	6.06	0.11
14.00	6.35	6.12	0.10
14.20	6.41	6.17	0.10
14.40	6.47	6.23	0.10
14.60	6.53	6.29	0.10
14.80	6.58	6.34	0.09
15.00	6.64	6.40	0.09
15.20	6.67	6.43	0.07
15.40	6.70	6.47	0.06
15.60	6.74	6.50	0.06
15.80	6.77	6.53	0.06
16.00	6.80	6.56	0.05
16.20	6.83	6.59	0.05
16.40	6.86	6.63	0.05
16.60	6.89	6.66	0.05
16.80	6.92	6.68	0.05
17.00	6.95	6.71	0.05
17.20	6.98	6.74	0.05
17.40	7.01	6.77	0.05
17.60	7.03	6.80	0.05
17.80	7.06	6.82	0.04
18.00	7.09	6.85	0.04
18.20	7.11	6.87	0.04
18.40	7.13	6.90	0.04
18.60	7.16	6.92	0.04
18.80	7.18	6.94	0.04
19.00	7.20	6.96	0.04
19.20	7.23	6.99	0.04
19.40	7.25	7.01	0.04
19.60	7.27	7.03	0.03
19.80	7.29	7.05	0.03
20.00	**7.31**	**7.07**	0.03

Summary for Subcatchment 3S: untreated to streets

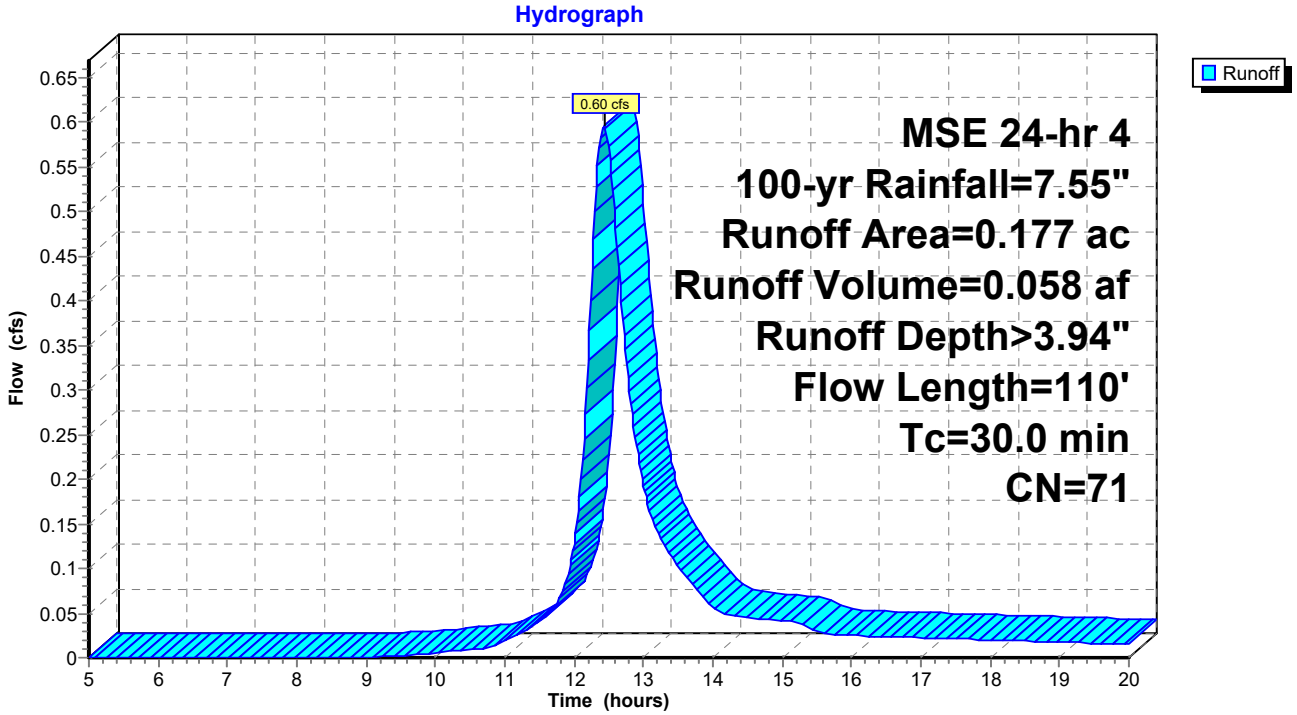
Runoff = 0.60 cfs @ 12.43 hrs, Volume= 0.058 af, Depth> 3.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.069	98	canopy
*	0.063	39	LS
*	0.027	61	lawn, HSG B
*	0.018	98	SW
	0.177	71	Weighted Average
	0.090		50.85% Pervious Area
	0.087		49.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	70		0.19		**Direct Entry, canopy**
12.0	20		0.03		**Direct Entry, LS**
12.0	20		0.03		**Direct Entry, lawn**
30.0	110	Total			

Subcatchment 3S: untreated to streets



Hydrograph for Subcatchment 3S: untreated to streets

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.00	0.00
6.20	0.49	0.00	0.00
6.40	0.52	0.00	0.00
6.60	0.54	0.00	0.00
6.80	0.57	0.00	0.00
7.00	0.60	0.00	0.00
7.20	0.63	0.00	0.00
7.40	0.66	0.00	0.00
7.60	0.69	0.00	0.00
7.80	0.72	0.00	0.00
8.00	0.75	0.00	0.00
8.20	0.78	0.00	0.00
8.40	0.81	0.00	0.00
8.60	0.85	0.00	0.00
8.80	0.88	0.00	0.00
9.00	0.91	0.00	0.00
9.20	0.97	0.01	0.00
9.40	1.02	0.01	0.00
9.60	1.08	0.02	0.00
9.80	1.14	0.02	0.00
10.00	1.20	0.03	0.01
10.20	1.26	0.04	0.01
10.40	1.32	0.05	0.01
10.60	1.40	0.07	0.01
10.80	1.50	0.10	0.01
11.00	1.63	0.14	0.02
11.20	1.78	0.19	0.03
11.40	1.96	0.25	0.04
11.60	2.18	0.34	0.05
11.80	2.59	0.54	0.07
12.00	3.54	1.09	0.13
12.20	4.96	2.08	0.33
12.40	5.37	2.40	**0.59**
12.60	5.59	2.58	**0.48**
12.80	5.77	2.71	0.30
13.00	5.92	2.83	0.19
13.20	6.05	2.94	0.14
13.40	6.15	3.02	0.11
13.60	6.23	3.09	0.09
13.80	6.29	3.14	0.07
14.00	6.35	3.19	0.06
14.20	6.41	3.24	0.05
14.40	6.47	3.28	0.05
14.60	6.53	3.33	0.04
14.80	6.58	3.37	0.04
15.00	6.64	3.42	0.04
15.20	6.67	3.45	0.04
15.40	6.70	3.48	0.03
15.60	6.74	3.50	0.03
15.80	6.77	3.53	0.03
16.00	6.80	3.56	0.02
16.20	6.83	3.58	0.02
16.40	6.86	3.61	0.02
16.60	6.89	3.63	0.02
16.80	6.92	3.66	0.02
17.00	6.95	3.68	0.02
17.20	6.98	3.71	0.02
17.40	7.01	3.73	0.02
17.60	7.03	3.75	0.02
17.80	7.06	3.77	0.02
18.00	7.09	3.80	0.02
18.20	7.11	3.82	0.02
18.40	7.13	3.84	0.02
18.60	7.16	3.86	0.02
18.80	7.18	3.88	0.02
19.00	7.20	3.90	0.02
19.20	7.23	3.91	0.02
19.40	7.25	3.93	0.02
19.60	7.27	3.95	0.02
19.80	7.29	3.97	0.02
20.00	**7.31**	**3.98**	0.02

Summary for Subcatchment 6S: S roof to MH8

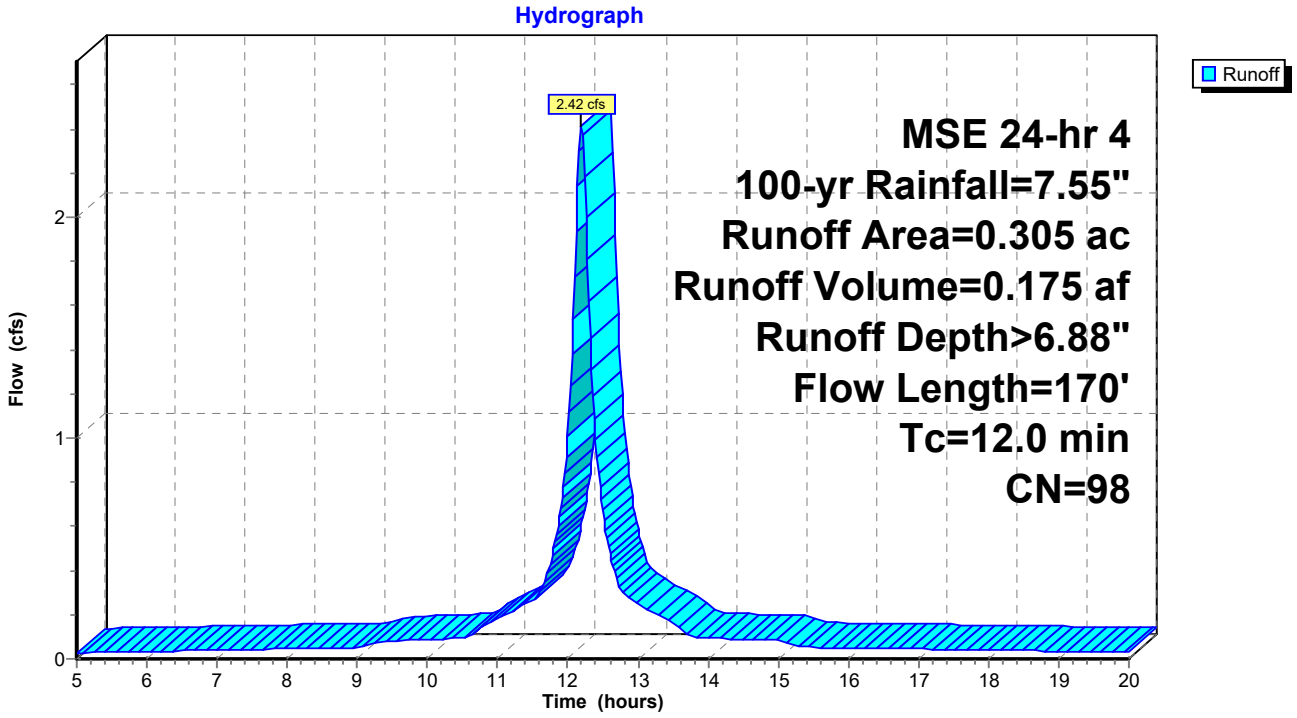
Runoff = 2.42 cfs @ 12.19 hrs, Volume= 0.175 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.305	98	fronting 10th
	0.305		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	170		0.24		**Direct Entry, NE Bldg Roof**

Subcatchment 6S: S roof to MH8



Hydrograph for Subcatchment 6S: S roof to MH8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.03
5.20	0.37	0.20	0.03
5.40	0.39	0.22	0.03
5.60	0.42	0.24	0.03
5.80	0.44	0.26	0.03
6.00	0.46	0.29	0.03
6.20	0.49	0.31	0.03
6.40	0.52	0.33	0.04
6.60	0.54	0.36	0.04
6.80	0.57	0.38	0.04
7.00	0.60	0.41	0.04
7.20	0.63	0.43	0.04
7.40	0.66	0.46	0.04
7.60	0.69	0.49	0.04
7.80	0.72	0.52	0.04
8.00	0.75	0.55	0.05
8.20	0.78	0.58	0.05
8.40	0.81	0.61	0.05
8.60	0.85	0.64	0.05
8.80	0.88	0.67	0.05
9.00	0.91	0.71	0.05
9.20	0.97	0.76	0.07
9.40	1.02	0.81	0.08
9.60	1.08	0.87	0.08
9.80	1.14	0.92	0.09
10.00	1.20	0.98	0.09
10.20	1.26	1.04	0.09
10.40	1.32	1.10	0.09
10.60	1.40	1.18	0.10
10.80	1.50	1.28	0.15
11.00	1.63	1.41	0.18
11.20	1.78	1.56	0.21
11.40	1.96	1.73	0.25
11.60	2.18	1.95	0.29
11.80	2.59	2.36	0.50
12.00	3.54	3.30	1.01
12.20	4.96	4.72	**2.41**
12.40	5.37	5.13	0.99
12.60	5.59	5.36	0.48
12.80	5.77	5.53	0.29
13.00	5.92	5.68	0.25
13.20	6.05	5.81	0.21
13.40	6.15	5.92	0.18
13.60	6.23	5.99	0.14
13.80	6.29	6.06	0.10
14.00	6.35	6.12	0.09
14.20	6.41	6.17	0.09
14.40	6.47	6.23	0.09
14.60	6.53	6.29	0.09
14.80	6.58	6.34	0.09
15.00	6.64	6.40	0.08
15.20	6.67	6.43	0.06
15.40	6.70	6.47	0.05
15.60	6.74	6.50	0.05
15.80	6.77	6.53	0.05
16.00	6.80	6.56	0.05
16.20	6.83	6.59	0.05
16.40	6.86	6.63	0.05
16.60	6.89	6.66	0.05
16.80	6.92	6.68	0.05
17.00	6.95	6.71	0.04
17.20	6.98	6.74	0.04
17.40	7.01	6.77	0.04
17.60	7.03	6.80	0.04
17.80	7.06	6.82	0.04
18.00	7.09	6.85	0.04
18.20	7.11	6.87	0.04
18.40	7.13	6.90	0.04
18.60	7.16	6.92	0.04
18.80	7.18	6.94	0.04
19.00	7.20	6.96	0.03
19.20	7.23	6.99	0.03
19.40	7.25	7.01	0.03
19.60	7.27	7.03	0.03
19.80	7.29	7.05	0.03
20.00	**7.31**	**7.07**	0.03

Summary for Subcatchment 7S: to Inlets 8 & 9

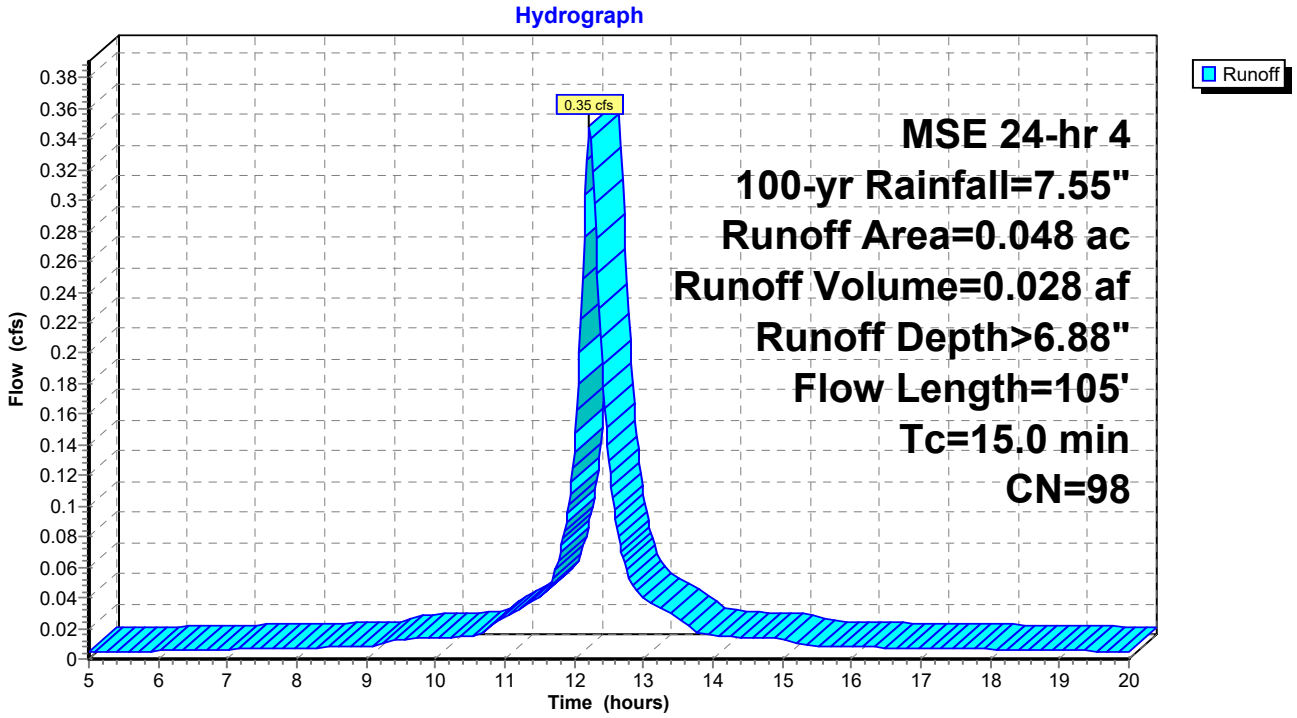
Runoff = 0.35 cfs @ 12.22 hrs, Volume= 0.028 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.046	98	pavement
*	0.002	98	SW
	0.048	98	Weighted Average
	0.048		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	55		0.13		**Direct Entry, pavement**
8.0	50		0.10		**Direct Entry, SW**
15.0	105	Total			

Subcatchment 7S: to Inlets 8 & 9



Hydrograph for Subcatchment 7S: to Inlets 8 & 9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.00
5.20	0.37	0.20	0.00
5.40	0.39	0.22	0.00
5.60	0.42	0.24	0.00
5.80	0.44	0.26	0.01
6.00	0.46	0.29	0.01
6.20	0.49	0.31	0.01
6.40	0.52	0.33	0.01
6.60	0.54	0.36	0.01
6.80	0.57	0.38	0.01
7.00	0.60	0.41	0.01
7.20	0.63	0.43	0.01
7.40	0.66	0.46	0.01
7.60	0.69	0.49	0.01
7.80	0.72	0.52	0.01
8.00	0.75	0.55	0.01
8.20	0.78	0.58	0.01
8.40	0.81	0.61	0.01
8.60	0.85	0.64	0.01
8.80	0.88	0.67	0.01
9.00	0.91	0.71	0.01
9.20	0.97	0.76	0.01
9.40	1.02	0.81	0.01
9.60	1.08	0.87	0.01
9.80	1.14	0.92	0.01
10.00	1.20	0.98	0.01
10.20	1.26	1.04	0.01
10.40	1.32	1.10	0.01
10.60	1.40	1.18	0.02
10.80	1.50	1.28	0.02
11.00	1.63	1.41	0.03
11.20	1.78	1.56	0.03
11.40	1.96	1.73	0.04
11.60	2.18	1.95	0.04
11.80	2.59	2.36	0.07
12.00	3.54	3.30	0.13
12.20	4.96	4.72	**0.34**
12.40	5.37	5.13	**0.19**
12.60	5.59	5.36	0.09
12.80	5.77	5.53	0.05
13.00	5.92	5.68	0.04
13.20	6.05	5.81	0.03
13.40	6.15	5.92	0.03
13.60	6.23	5.99	0.02
13.80	6.29	6.06	0.02
14.00	6.35	6.12	0.02
14.20	6.41	6.17	0.01
14.40	6.47	6.23	0.01
14.60	6.53	6.29	0.01
14.80	6.58	6.34	0.01
15.00	6.64	6.40	0.01
15.20	6.67	6.43	0.01
15.40	6.70	6.47	0.01
15.60	6.74	6.50	0.01
15.80	6.77	6.53	0.01
16.00	6.80	6.56	0.01
16.20	6.83	6.59	0.01
16.40	6.86	6.63	0.01
16.60	6.89	6.66	0.01
16.80	6.92	6.68	0.01
17.00	6.95	6.71	0.01
17.20	6.98	6.74	0.01
17.40	7.01	6.77	0.01
17.60	7.03	6.80	0.01
17.80	7.06	6.82	0.01
18.00	7.09	6.85	0.01
18.20	7.11	6.87	0.01
18.40	7.13	6.90	0.01
18.60	7.16	6.92	0.01
18.80	7.18	6.94	0.01
19.00	7.20	6.96	0.01
19.20	7.23	6.99	0.01
19.40	7.25	7.01	0.01
19.60	7.27	7.03	0.01
19.80	7.29	7.05	0.00
20.00	**7.31**	**7.07**	0.00

Summary for Subcatchment 8S: to Inlet 7

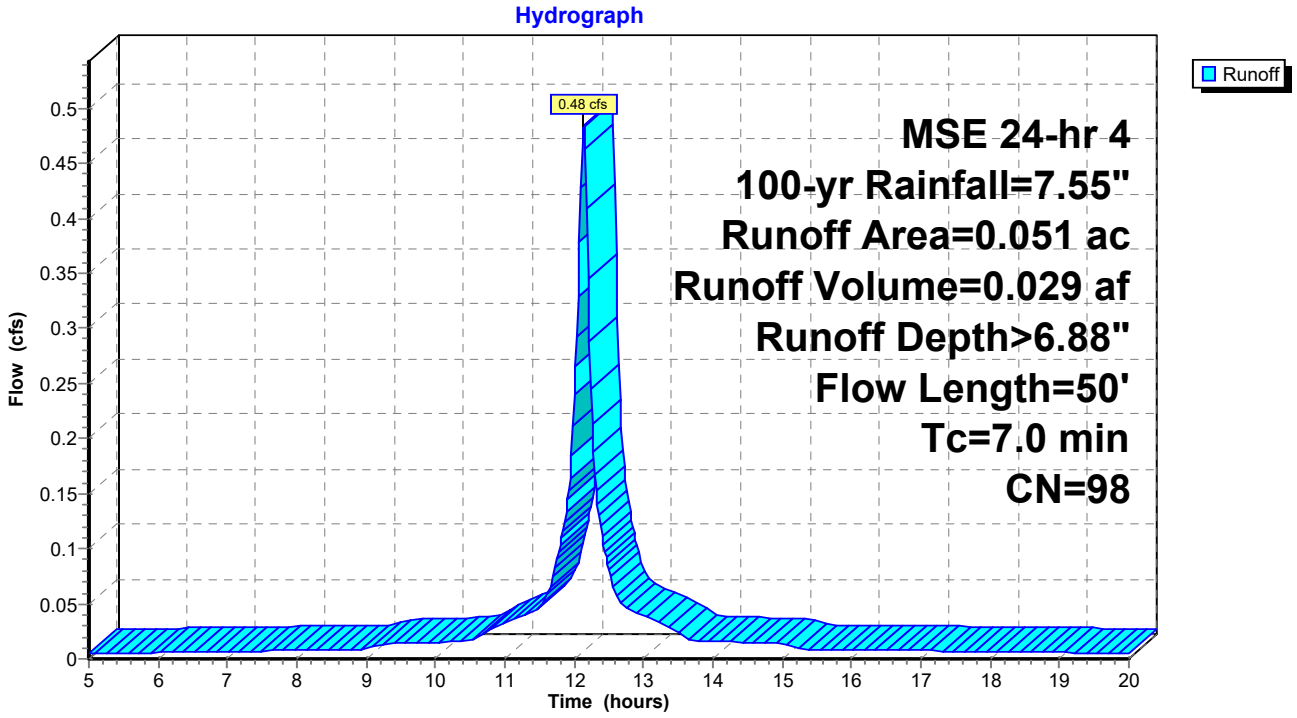
Runoff = 0.48 cfs @ 12.14 hrs, Volume= 0.029 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.051	98	pavement
	0.051		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	50		0.12		**Direct Entry, pavement**

Subcatchment 8S: to Inlet 7



Hydrograph for Subcatchment 8S: to Inlet 7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.00
5.20	0.37	0.20	0.00
5.40	0.39	0.22	0.01
5.60	0.42	0.24	0.01
5.80	0.44	0.26	0.01
6.00	0.46	0.29	0.01
6.20	0.49	0.31	0.01
6.40	0.52	0.33	0.01
6.60	0.54	0.36	0.01
6.80	0.57	0.38	0.01
7.00	0.60	0.41	0.01
7.20	0.63	0.43	0.01
7.40	0.66	0.46	0.01
7.60	0.69	0.49	0.01
7.80	0.72	0.52	0.01
8.00	0.75	0.55	0.01
8.20	0.78	0.58	0.01
8.40	0.81	0.61	0.01
8.60	0.85	0.64	0.01
8.80	0.88	0.67	0.01
9.00	0.91	0.71	0.01
9.20	0.97	0.76	0.01
9.40	1.02	0.81	0.01
9.60	1.08	0.87	0.01
9.80	1.14	0.92	0.01
10.00	1.20	0.98	0.01
10.20	1.26	1.04	0.02
10.40	1.32	1.10	0.02
10.60	1.40	1.18	0.02
10.80	1.50	1.28	0.03
11.00	1.63	1.41	0.03
11.20	1.78	1.56	0.04
11.40	1.96	1.73	0.04
11.60	2.18	1.95	0.06
11.80	2.59	2.36	0.10
12.00	3.54	3.30	**0.24**
12.20	4.96	4.72	**0.34**
12.40	5.37	5.13	0.11
12.60	5.59	5.36	0.06
12.80	5.77	5.53	0.04
13.00	5.92	5.68	0.04
13.20	6.05	5.81	0.03
13.40	6.15	5.92	0.03
13.60	6.23	5.99	0.02
13.80	6.29	6.06	0.02
14.00	6.35	6.12	0.02
14.20	6.41	6.17	0.02
14.40	6.47	6.23	0.01
14.60	6.53	6.29	0.01
14.80	6.58	6.34	0.01
15.00	6.64	6.40	0.01
15.20	6.67	6.43	0.01
15.40	6.70	6.47	0.01
15.60	6.74	6.50	0.01
15.80	6.77	6.53	0.01
16.00	6.80	6.56	0.01
16.20	6.83	6.59	0.01
16.40	6.86	6.63	0.01
16.60	6.89	6.66	0.01
16.80	6.92	6.68	0.01
17.00	6.95	6.71	0.01
17.20	6.98	6.74	0.01
17.40	7.01	6.77	0.01
17.60	7.03	6.80	0.01
17.80	7.06	6.82	0.01
18.00	7.09	6.85	0.01
18.20	7.11	6.87	0.01
18.40	7.13	6.90	0.01
18.60	7.16	6.92	0.01
18.80	7.18	6.94	0.01
19.00	7.20	6.96	0.01
19.20	7.23	6.99	0.01
19.40	7.25	7.01	0.01
19.60	7.27	7.03	0.01
19.80	7.29	7.05	0.01
20.00	**7.31**	**7.07**	0.00

Summary for Subcatchment 9S: to Inlet 6

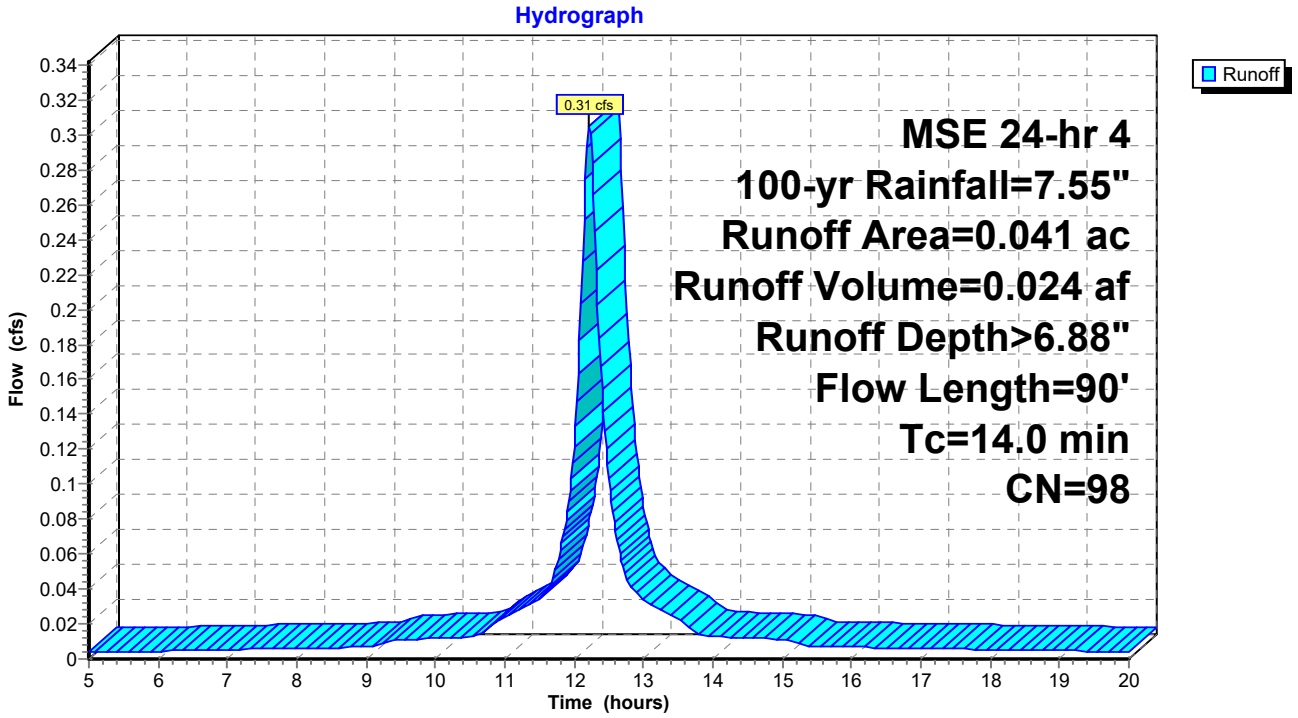
Runoff = 0.31 cfs @ 12.21 hrs, Volume= 0.024 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.032	98	pavement
*	0.009	98	SW
	0.041	98	Weighted Average
	0.041		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	45		0.11		**Direct Entry, pavement**
7.0	45		0.11		**Direct Entry, SW**
14.0	90	Total			

Subcatchment 9S: to Inlet 6



Hydrograph for Subcatchment 9S: to Inlet 6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.00
5.20	0.37	0.20	0.00
5.40	0.39	0.22	0.00
5.60	0.42	0.24	0.00
5.80	0.44	0.26	0.00
6.00	0.46	0.29	0.00
6.20	0.49	0.31	0.00
6.40	0.52	0.33	0.00
6.60	0.54	0.36	0.00
6.80	0.57	0.38	0.01
7.00	0.60	0.41	0.01
7.20	0.63	0.43	0.01
7.40	0.66	0.46	0.01
7.60	0.69	0.49	0.01
7.80	0.72	0.52	0.01
8.00	0.75	0.55	0.01
8.20	0.78	0.58	0.01
8.40	0.81	0.61	0.01
8.60	0.85	0.64	0.01
8.80	0.88	0.67	0.01
9.00	0.91	0.71	0.01
9.20	0.97	0.76	0.01
9.40	1.02	0.81	0.01
9.60	1.08	0.87	0.01
9.80	1.14	0.92	0.01
10.00	1.20	0.98	0.01
10.20	1.26	1.04	0.01
10.40	1.32	1.10	0.01
10.60	1.40	1.18	0.01
10.80	1.50	1.28	0.02
11.00	1.63	1.41	0.02
11.20	1.78	1.56	0.03
11.40	1.96	1.73	0.03
11.60	2.18	1.95	0.04
11.80	2.59	2.36	0.06
12.00	3.54	3.30	0.12
12.20	4.96	4.72	**0.30**
12.40	5.37	5.13	**0.15**
12.60	5.59	5.36	0.07
12.80	5.77	5.53	0.04
13.00	5.92	5.68	0.03
13.20	6.05	5.81	0.03
13.40	6.15	5.92	0.02
13.60	6.23	5.99	0.02
13.80	6.29	6.06	0.01
14.00	6.35	6.12	0.01
14.20	6.41	6.17	0.01
14.40	6.47	6.23	0.01
14.60	6.53	6.29	0.01
14.80	6.58	6.34	0.01
15.00	6.64	6.40	0.01
15.20	6.67	6.43	0.01
15.40	6.70	6.47	0.01
15.60	6.74	6.50	0.01
15.80	6.77	6.53	0.01
16.00	6.80	6.56	0.01
16.20	6.83	6.59	0.01
16.40	6.86	6.63	0.01
16.60	6.89	6.66	0.01
16.80	6.92	6.68	0.01
17.00	6.95	6.71	0.01
17.20	6.98	6.74	0.01
17.40	7.01	6.77	0.01
17.60	7.03	6.80	0.01
17.80	7.06	6.82	0.01
18.00	7.09	6.85	0.01
18.20	7.11	6.87	0.01
18.40	7.13	6.90	0.01
18.60	7.16	6.92	0.00
18.80	7.18	6.94	0.00
19.00	7.20	6.96	0.00
19.20	7.23	6.99	0.00
19.40	7.25	7.01	0.00
19.60	7.27	7.03	0.00
19.80	7.29	7.05	0.00
20.00	**7.31**	**7.07**	0.00

Summary for Subcatchment 10S: to Inlet 5

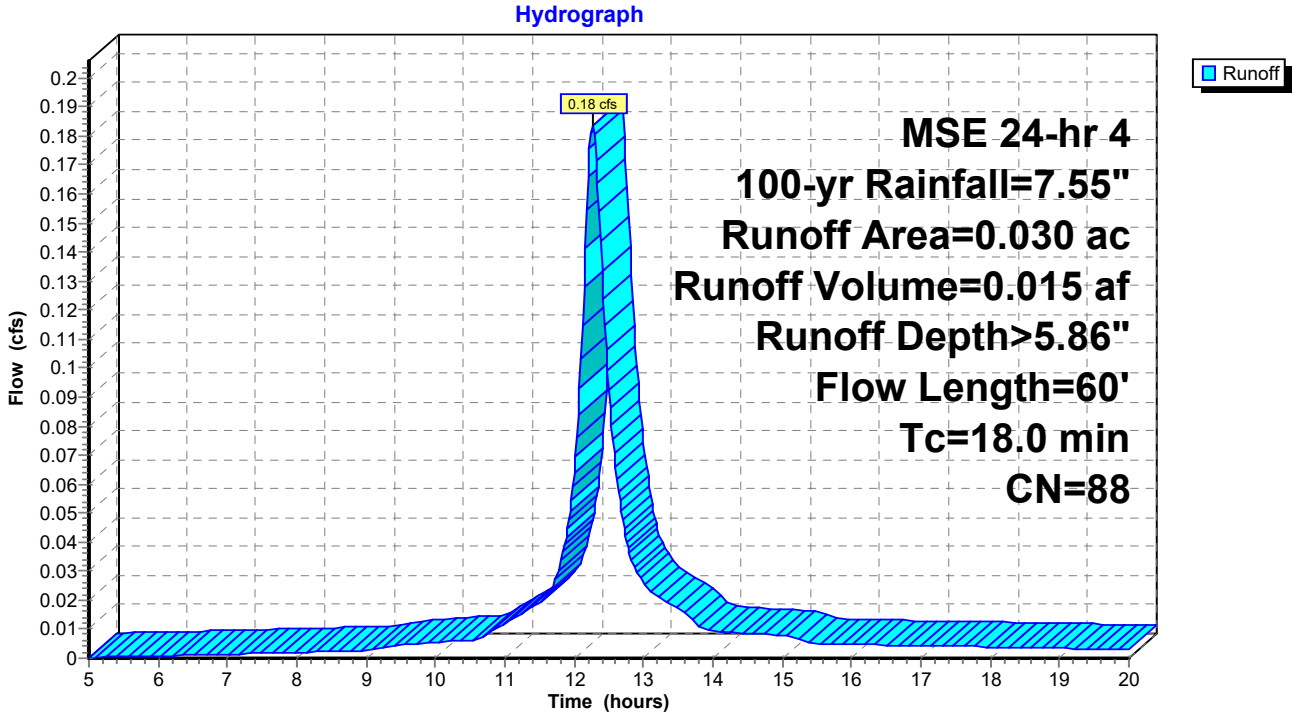
Runoff = 0.18 cfs @ 12.26 hrs, Volume= 0.015 af, Depth> 5.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.005	39	LS
	0.030	88	Weighted Average
	0.005		16.67% Pervious Area
	0.025		83.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	40		0.11		**Direct Entry, pavement**
12.0	20		0.03		**Direct Entry, LS**
18.0	60	Total			

Subcatchment 10S: to Inlet 5



Hydrograph for Subcatchment 10S: to Inlet 5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.01	0.00
5.40	0.39	0.01	0.00
5.60	0.42	0.01	0.00
5.80	0.44	0.02	0.00
6.00	0.46	0.02	0.00
6.20	0.49	0.03	0.00
6.40	0.52	0.04	0.00
6.60	0.54	0.04	0.00
6.80	0.57	0.05	0.00
7.00	0.60	0.06	0.00
7.20	0.63	0.07	0.00
7.40	0.66	0.08	0.00
7.60	0.69	0.10	0.00
7.80	0.72	0.11	0.00
8.00	0.75	0.12	0.00
8.20	0.78	0.14	0.00
8.40	0.81	0.15	0.00
8.60	0.85	0.17	0.00
8.80	0.88	0.19	0.00
9.00	0.91	0.20	0.00
9.20	0.97	0.23	0.00
9.40	1.02	0.27	0.00
9.60	1.08	0.30	0.00
9.80	1.14	0.33	0.01
10.00	1.20	0.37	0.01
10.20	1.26	0.41	0.01
10.40	1.32	0.45	0.01
10.60	1.40	0.51	0.01
10.80	1.50	0.58	0.01
11.00	1.63	0.68	0.01
11.20	1.78	0.79	0.01
11.40	1.96	0.93	0.02
11.60	2.18	1.11	0.02
11.80	2.59	1.46	0.03
12.00	3.54	2.30	0.06
12.20	4.96	3.63	**0.17**
12.40	5.37	4.02	**0.13**
12.60	5.59	4.24	0.07
12.80	5.77	4.40	0.04
13.00	5.92	4.55	0.03
13.20	6.05	4.67	0.02
13.40	6.15	4.77	0.02
13.60	6.23	4.85	0.02
13.80	6.29	4.91	0.01
14.00	6.35	4.97	0.01
14.20	6.41	5.02	0.01
14.40	6.47	5.08	0.01
14.60	6.53	5.14	0.01
14.80	6.58	5.19	0.01
15.00	6.64	5.24	0.01
15.20	6.67	5.27	0.01
15.40	6.70	5.31	0.01
15.60	6.74	5.34	0.01
15.80	6.77	5.37	0.00
16.00	6.80	5.40	0.00
16.20	6.83	5.43	0.00
16.40	6.86	5.46	0.00
16.60	6.89	5.49	0.00
16.80	6.92	5.52	0.00
17.00	6.95	5.55	0.00
17.20	6.98	5.57	0.00
17.40	7.01	5.60	0.00
17.60	7.03	5.63	0.00
17.80	7.06	5.65	0.00
18.00	7.09	5.68	0.00
18.20	7.11	5.70	0.00
18.40	7.13	5.72	0.00
18.60	7.16	5.75	0.00
18.80	7.18	5.77	0.00
19.00	7.20	5.79	0.00
19.20	7.23	5.81	0.00
19.40	7.25	5.83	0.00
19.60	7.27	5.85	0.00
19.80	7.29	5.87	0.00
20.00	**7.31**	**5.89**	0.00

Summary for Subcatchment 11S: to Inlet 4

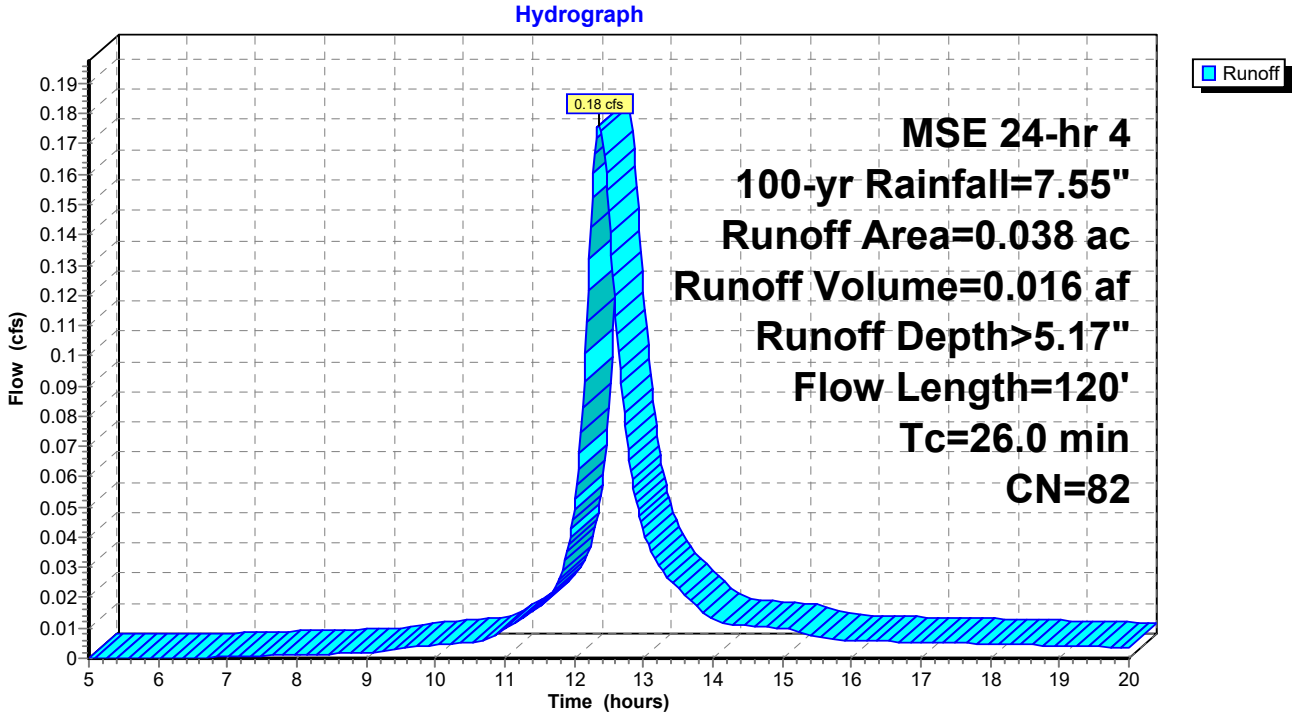
Runoff = 0.18 cfs @ 12.36 hrs, Volume= 0.016 af, Depth> 5.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.025	98	pavement
*	0.003	98	SW
*	0.010	39	LS
	0.038	82	Weighted Average
	0.010		26.32% Pervious Area
	0.028		73.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	40		0.10		**Direct Entry, pavement**
7.0	40		0.10		**Direct Entry, SW**
12.0	40		0.06		**Direct Entry, LS**
26.0	120	Total			

Subcatchment 11S: to Inlet 4



Hydrograph for Subcatchment 11S: to Inlet 4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.00	0.00
6.20	0.49	0.00	0.00
6.40	0.52	0.00	0.00
6.60	0.54	0.00	0.00
6.80	0.57	0.01	0.00
7.00	0.60	0.01	0.00
7.20	0.63	0.01	0.00
7.40	0.66	0.02	0.00
7.60	0.69	0.02	0.00
7.80	0.72	0.03	0.00
8.00	0.75	0.04	0.00
8.20	0.78	0.05	0.00
8.40	0.81	0.05	0.00
8.60	0.85	0.06	0.00
8.80	0.88	0.07	0.00
9.00	0.91	0.08	0.00
9.20	0.97	0.10	0.00
9.40	1.02	0.12	0.00
9.60	1.08	0.14	0.00
9.80	1.14	0.17	0.00
10.00	1.20	0.19	0.00
10.20	1.26	0.22	0.00
10.40	1.32	0.25	0.01
10.60	1.40	0.29	0.01
10.80	1.50	0.35	0.01
11.00	1.63	0.42	0.01
11.20	1.78	0.51	0.01
11.40	1.96	0.62	0.02
11.60	2.18	0.77	0.02
11.80	2.59	1.07	0.03
12.00	3.54	1.81	0.05
12.20	4.96	3.04	**0.12**
12.40	5.37	3.41	**0.17**
12.60	5.59	3.62	0.11
12.80	5.77	3.77	0.07
13.00	5.92	3.91	0.04
13.20	6.05	4.03	0.03
13.40	6.15	4.13	0.03
13.60	6.23	4.20	0.02
13.80	6.29	4.26	0.02
14.00	6.35	4.31	0.01
14.20	6.41	4.37	0.01
14.40	6.47	4.42	0.01
14.60	6.53	4.48	0.01
14.80	6.58	4.53	0.01
15.00	6.64	4.58	0.01
15.20	6.67	4.61	0.01
15.40	6.70	4.64	0.01
15.60	6.74	4.67	0.01
15.80	6.77	4.70	0.01
16.00	6.80	4.73	0.01
16.20	6.83	4.76	0.01
16.40	6.86	4.79	0.01
16.60	6.89	4.82	0.01
16.80	6.92	4.84	0.01
17.00	6.95	4.87	0.01
17.20	6.98	4.90	0.01
17.40	7.01	4.92	0.01
17.60	7.03	4.95	0.00
17.80	7.06	4.97	0.00
18.00	7.09	5.00	0.00
18.20	7.11	5.02	0.00
18.40	7.13	5.04	0.00
18.60	7.16	5.06	0.00
18.80	7.18	5.09	0.00
19.00	7.20	5.11	0.00
19.20	7.23	5.13	0.00
19.40	7.25	5.15	0.00
19.60	7.27	5.17	0.00
19.80	7.29	5.18	0.00
20.00	**7.31**	**5.20**	0.00

Summary for Subcatchment 12S: to inlet 3

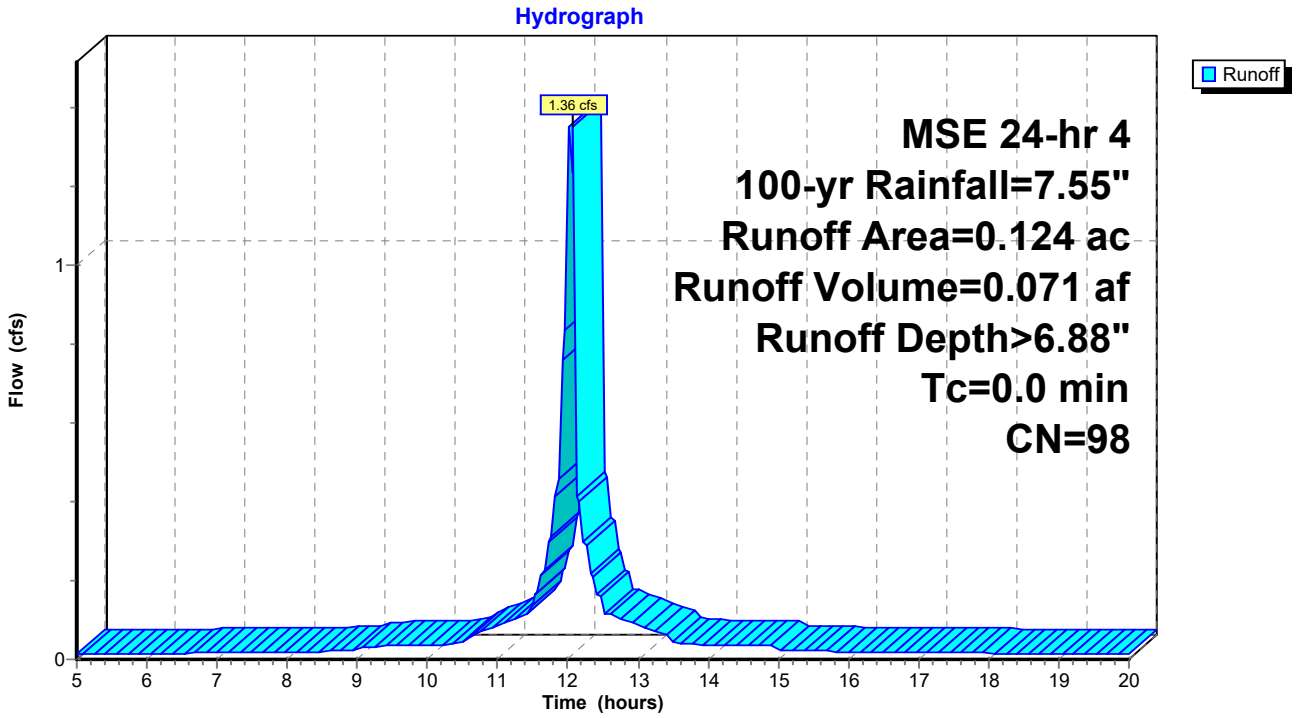
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 1.36 cfs @ 12.08 hrs, Volume= 0.071 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.009	98	open shelter
*	0.059	98	SW
*	0.034	98	parking AC pavement
*	0.022	98	PIP play surface
	0.124	98	Weighted Average
	0.124		100.00% Impervious Area

Subcatchment 12S: to inlet 3



Hydrograph for Subcatchment 12S: to inlet 3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.01
5.20	0.37	0.20	0.01
5.40	0.39	0.22	0.01
5.60	0.42	0.24	0.01
5.80	0.44	0.26	0.01
6.00	0.46	0.29	0.01
6.20	0.49	0.31	0.01
6.40	0.52	0.33	0.02
6.60	0.54	0.36	0.02
6.80	0.57	0.38	0.02
7.00	0.60	0.41	0.02
7.20	0.63	0.43	0.02
7.40	0.66	0.46	0.02
7.60	0.69	0.49	0.02
7.80	0.72	0.52	0.02
8.00	0.75	0.55	0.02
8.20	0.78	0.58	0.02
8.40	0.81	0.61	0.02
8.60	0.85	0.64	0.02
8.80	0.88	0.67	0.02
9.00	0.91	0.71	0.03
9.20	0.97	0.76	0.03
9.40	1.02	0.81	0.03
9.60	1.08	0.87	0.03
9.80	1.14	0.92	0.04
10.00	1.20	0.98	0.04
10.20	1.26	1.04	0.04
10.40	1.32	1.10	0.04
10.60	1.40	1.18	0.06
10.80	1.50	1.28	0.07
11.00	1.63	1.41	0.09
11.20	1.78	1.56	0.10
11.40	1.96	1.73	0.11
11.60	2.18	1.95	0.19
11.80	2.59	2.36	0.36
12.00	3.54	3.30	**1.06**
12.20	4.96	4.72	**0.36**
12.40	5.37	5.13	0.19
12.60	5.59	5.36	0.11
12.80	5.77	5.53	0.10
13.00	5.92	5.68	0.09
13.20	6.05	5.81	0.07
13.40	6.15	5.92	0.06
13.60	6.23	5.99	0.04
13.80	6.29	6.06	0.04
14.00	6.35	6.12	0.04
14.20	6.41	6.17	0.04
14.40	6.47	6.23	0.04
14.60	6.53	6.29	0.03
14.80	6.58	6.34	0.03
15.00	6.64	6.40	0.03
15.20	6.67	6.43	0.02
15.40	6.70	6.47	0.02
15.60	6.74	6.50	0.02
15.80	6.77	6.53	0.02
16.00	6.80	6.56	0.02
16.20	6.83	6.59	0.02
16.40	6.86	6.63	0.02
16.60	6.89	6.66	0.02
16.80	6.92	6.68	0.02
17.00	6.95	6.71	0.02
17.20	6.98	6.74	0.02
17.40	7.01	6.77	0.02
17.60	7.03	6.80	0.02
17.80	7.06	6.82	0.02
18.00	7.09	6.85	0.02
18.20	7.11	6.87	0.02
18.40	7.13	6.90	0.01
18.60	7.16	6.92	0.01
18.80	7.18	6.94	0.01
19.00	7.20	6.96	0.01
19.20	7.23	6.99	0.01
19.40	7.25	7.01	0.01
19.60	7.27	7.03	0.01
19.80	7.29	7.05	0.01
20.00	**7.31**	**7.07**	0.01

Summary for Subcatchment 13S: to NDS 2

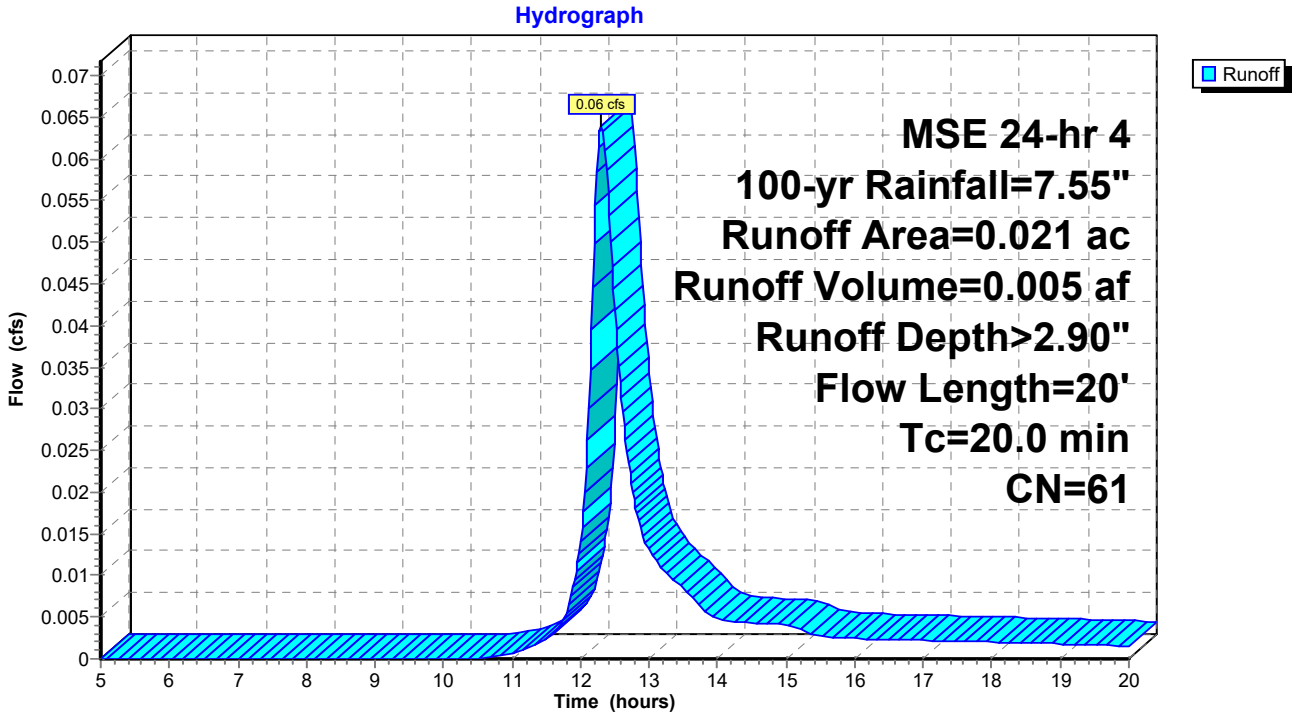
Runoff = 0.06 cfs @ 12.30 hrs, Volume= 0.005 af, Depth> 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.021	61	lawn, HSG B
	0.021		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	20		0.02		**Direct Entry, lawn**

Subcatchment 13S: to NDS 2



Hydrograph for Subcatchment 13S: to NDS 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.00	0.00
6.20	0.49	0.00	0.00
6.40	0.52	0.00	0.00
6.60	0.54	0.00	0.00
6.80	0.57	0.00	0.00
7.00	0.60	0.00	0.00
7.20	0.63	0.00	0.00
7.40	0.66	0.00	0.00
7.60	0.69	0.00	0.00
7.80	0.72	0.00	0.00
8.00	0.75	0.00	0.00
8.20	0.78	0.00	0.00
8.40	0.81	0.00	0.00
8.60	0.85	0.00	0.00
8.80	0.88	0.00	0.00
9.00	0.91	0.00	0.00
9.20	0.97	0.00	0.00
9.40	1.02	0.00	0.00
9.60	1.08	0.00	0.00
9.80	1.14	0.00	0.00
10.00	1.20	0.00	0.00
10.20	1.26	0.00	0.00
10.40	1.32	0.00	0.00
10.60	1.40	0.00	0.00
10.80	1.50	0.01	0.00
11.00	1.63	0.02	0.00
11.20	1.78	0.04	0.00
11.40	1.96	0.06	0.00
11.60	2.18	0.11	0.00
11.80	2.59	0.22	0.01
12.00	3.54	0.59	0.01
12.20	4.96	1.34	**0.05**
12.40	5.37	1.60	**0.06**
12.60	5.59	1.74	0.03
12.80	5.77	1.85	0.02
13.00	5.92	1.95	0.01
13.20	6.05	2.04	0.01
13.40	6.15	2.11	0.01
13.60	6.23	2.16	0.01
13.80	6.29	2.20	0.01
14.00	6.35	2.25	0.00
14.20	6.41	2.29	0.00
14.40	6.47	2.33	0.00
14.60	6.53	2.37	0.00
14.80	6.58	2.41	0.00
15.00	6.64	2.44	0.00
15.20	6.67	2.47	0.00
15.40	6.70	2.49	0.00
15.60	6.74	2.51	0.00
15.80	6.77	2.54	0.00
16.00	6.80	2.56	0.00
16.20	6.83	2.58	0.00
16.40	6.86	2.60	0.00
16.60	6.89	2.63	0.00
16.80	6.92	2.65	0.00
17.00	6.95	2.67	0.00
17.20	6.98	2.69	0.00
17.40	7.01	2.71	0.00
17.60	7.03	2.73	0.00
17.80	7.06	2.75	0.00
18.00	7.09	2.76	0.00
18.20	7.11	2.78	0.00
18.40	7.13	2.80	0.00
18.60	7.16	2.82	0.00
18.80	7.18	2.83	0.00
19.00	7.20	2.85	0.00
19.20	7.23	2.87	0.00
19.40	7.25	2.88	0.00
19.60	7.27	2.90	0.00
19.80	7.29	2.91	0.00
20.00	**7.31**	**2.92**	0.00

Summary for Subcatchment 14S: to NDS 3-5

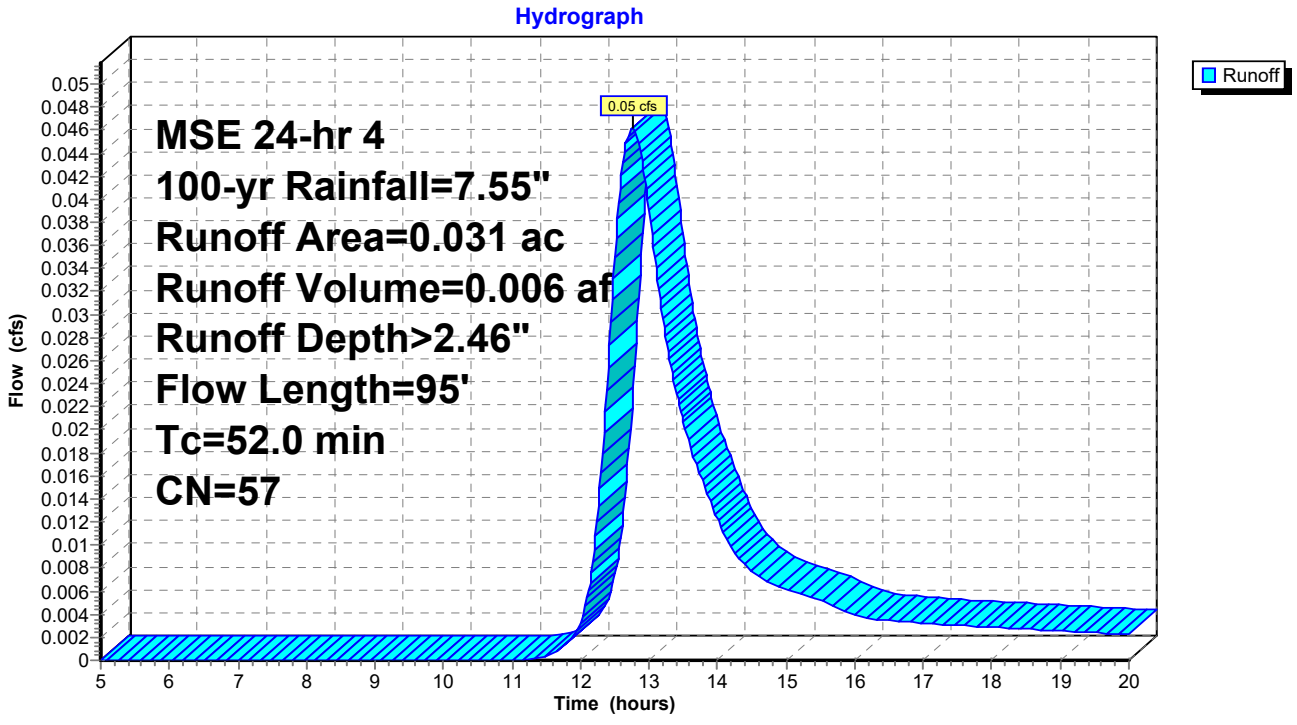
Runoff = 0.05 cfs @ 12.76 hrs, Volume= 0.006 af, Depth> 2.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.022	61	lawn, HSG B
*	0.008	39	LS
*	0.001	98	SW via LS
	0.031	57	Weighted Average
	0.030		96.77% Pervious Area
	0.001		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	75		0.10		**Direct Entry, lawn**
20.0	10		0.01		**Direct Entry, LS**
20.0	10		0.01		**Direct Entry, SW via LS**
52.0	95	Total			

Subcatchment 14S: to NDS 3-5



Hydrograph for Subcatchment 14S: to NDS 3-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.00	0.00
6.20	0.49	0.00	0.00
6.40	0.52	0.00	0.00
6.60	0.54	0.00	0.00
6.80	0.57	0.00	0.00
7.00	0.60	0.00	0.00
7.20	0.63	0.00	0.00
7.40	0.66	0.00	0.00
7.60	0.69	0.00	0.00
7.80	0.72	0.00	0.00
8.00	0.75	0.00	0.00
8.20	0.78	0.00	0.00
8.40	0.81	0.00	0.00
8.60	0.85	0.00	0.00
8.80	0.88	0.00	0.00
9.00	0.91	0.00	0.00
9.20	0.97	0.00	0.00
9.40	1.02	0.00	0.00
9.60	1.08	0.00	0.00
9.80	1.14	0.00	0.00
10.00	1.20	0.00	0.00
10.20	1.26	0.00	0.00
10.40	1.32	0.00	0.00
10.60	1.40	0.00	0.00
10.80	1.50	0.00	0.00
11.00	1.63	0.00	0.00
11.20	1.78	0.01	0.00
11.40	1.96	0.03	0.00
11.60	2.18	0.06	0.00
11.80	2.59	0.14	0.00
12.00	3.54	0.43	0.00
12.20	4.96	1.08	0.01
12.40	5.37	1.31	0.03
12.60	5.59	1.44	**0.04**
12.80	5.77	1.54	**0.05**
13.00	5.92	1.63	0.04
13.20	6.05	1.70	0.03
13.40	6.15	1.77	0.02
13.60	6.23	1.82	0.02
13.80	6.29	1.86	0.02
14.00	6.35	1.90	0.01
14.20	6.41	1.93	0.01
14.40	6.47	1.97	0.01
14.60	6.53	2.01	0.01
14.80	6.58	2.04	0.01
15.00	6.64	2.07	0.01
15.20	6.67	2.10	0.01
15.40	6.70	2.12	0.01
15.60	6.74	2.14	0.00
15.80	6.77	2.16	0.00
16.00	6.80	2.18	0.00
16.20	6.83	2.20	0.00
16.40	6.86	2.22	0.00
16.60	6.89	2.24	0.00
16.80	6.92	2.26	0.00
17.00	6.95	2.28	0.00
17.20	6.98	2.30	0.00
17.40	7.01	2.32	0.00
17.60	7.03	2.34	0.00
17.80	7.06	2.35	0.00
18.00	7.09	2.37	0.00
18.20	7.11	2.39	0.00
18.40	7.13	2.40	0.00
18.60	7.16	2.42	0.00
18.80	7.18	2.43	0.00
19.00	7.20	2.45	0.00
19.20	7.23	2.46	0.00
19.40	7.25	2.48	0.00
19.60	7.27	2.49	0.00
19.80	7.29	2.51	0.00
20.00	**7.31**	**2.52**	0.00

Summary for Subcatchment 16S: to NDS11-6

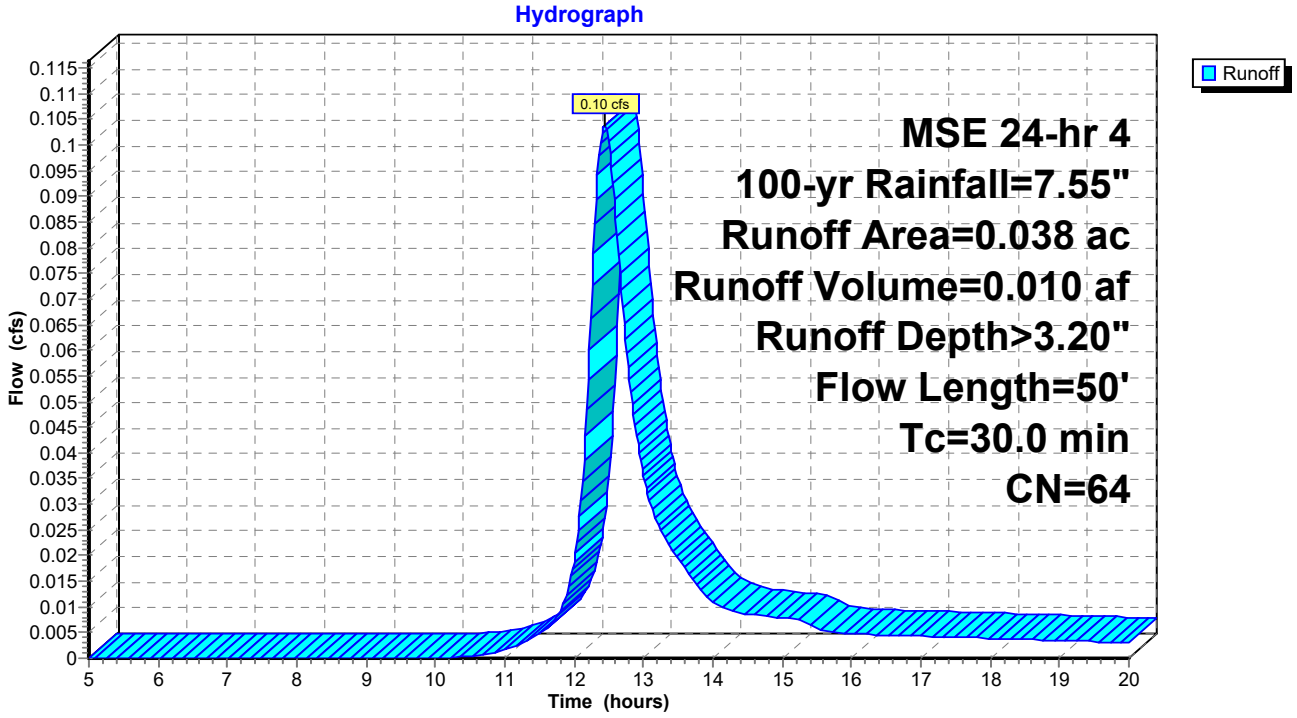
Runoff = 0.10 cfs @ 12.44 hrs, Volume= 0.010 af, Depth> 3.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.022	39	LS
*	0.016	98	SW
	0.038	64	Weighted Average
	0.022		57.89% Pervious Area
	0.016		42.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	40		0.04		**Direct Entry, LS**
15.0	10		0.01		**Direct Entry, SW via LS**
30.0	50	Total			

Subcatchment 16S: to NDS11-6



Hydrograph for Subcatchment 16S: to NDS11-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.00	0.00
5.20	0.37	0.00	0.00
5.40	0.39	0.00	0.00
5.60	0.42	0.00	0.00
5.80	0.44	0.00	0.00
6.00	0.46	0.00	0.00
6.20	0.49	0.00	0.00
6.40	0.52	0.00	0.00
6.60	0.54	0.00	0.00
6.80	0.57	0.00	0.00
7.00	0.60	0.00	0.00
7.20	0.63	0.00	0.00
7.40	0.66	0.00	0.00
7.60	0.69	0.00	0.00
7.80	0.72	0.00	0.00
8.00	0.75	0.00	0.00
8.20	0.78	0.00	0.00
8.40	0.81	0.00	0.00
8.60	0.85	0.00	0.00
8.80	0.88	0.00	0.00
9.00	0.91	0.00	0.00
9.20	0.97	0.00	0.00
9.40	1.02	0.00	0.00
9.60	1.08	0.00	0.00
9.80	1.14	0.00	0.00
10.00	1.20	0.00	0.00
10.20	1.26	0.00	0.00
10.40	1.32	0.01	0.00
10.60	1.40	0.01	0.00
10.80	1.50	0.02	0.00
11.00	1.63	0.04	0.00
11.20	1.78	0.07	0.00
11.40	1.96	0.11	0.00
11.60	2.18	0.17	0.01
11.80	2.59	0.30	0.01
12.00	3.54	0.72	0.02
12.20	4.96	1.55	0.05
12.40	5.37	1.82	**0.10**
12.60	5.59	1.98	**0.09**
12.80	5.77	2.10	0.05
13.00	5.92	2.20	0.04
13.20	6.05	2.30	0.03
13.40	6.15	2.37	0.02
13.60	6.23	2.43	0.02
13.80	6.29	2.47	0.01
14.00	6.35	2.52	0.01
14.20	6.41	2.56	0.01
14.40	6.47	2.61	0.01
14.60	6.53	2.65	0.01
14.80	6.58	2.69	0.01
15.00	6.64	2.73	0.01
15.20	6.67	2.75	0.01
15.40	6.70	2.78	0.01
15.60	6.74	2.80	0.01
15.80	6.77	2.83	0.01
16.00	6.80	2.85	0.00
16.20	6.83	2.88	0.00
16.40	6.86	2.90	0.00
16.60	6.89	2.92	0.00
16.80	6.92	2.94	0.00
17.00	6.95	2.96	0.00
17.20	6.98	2.99	0.00
17.40	7.01	3.01	0.00
17.60	7.03	3.03	0.00
17.80	7.06	3.05	0.00
18.00	7.09	3.07	0.00
18.20	7.11	3.09	0.00
18.40	7.13	3.10	0.00
18.60	7.16	3.12	0.00
18.80	7.18	3.14	0.00
19.00	7.20	3.16	0.00
19.20	7.23	3.17	0.00
19.40	7.25	3.19	0.00
19.60	7.27	3.21	0.00
19.80	7.29	3.22	0.00
20.00	**7.31**	**3.24**	0.00

Summary for Subcatchment 17S: untreated alley to inlet 2

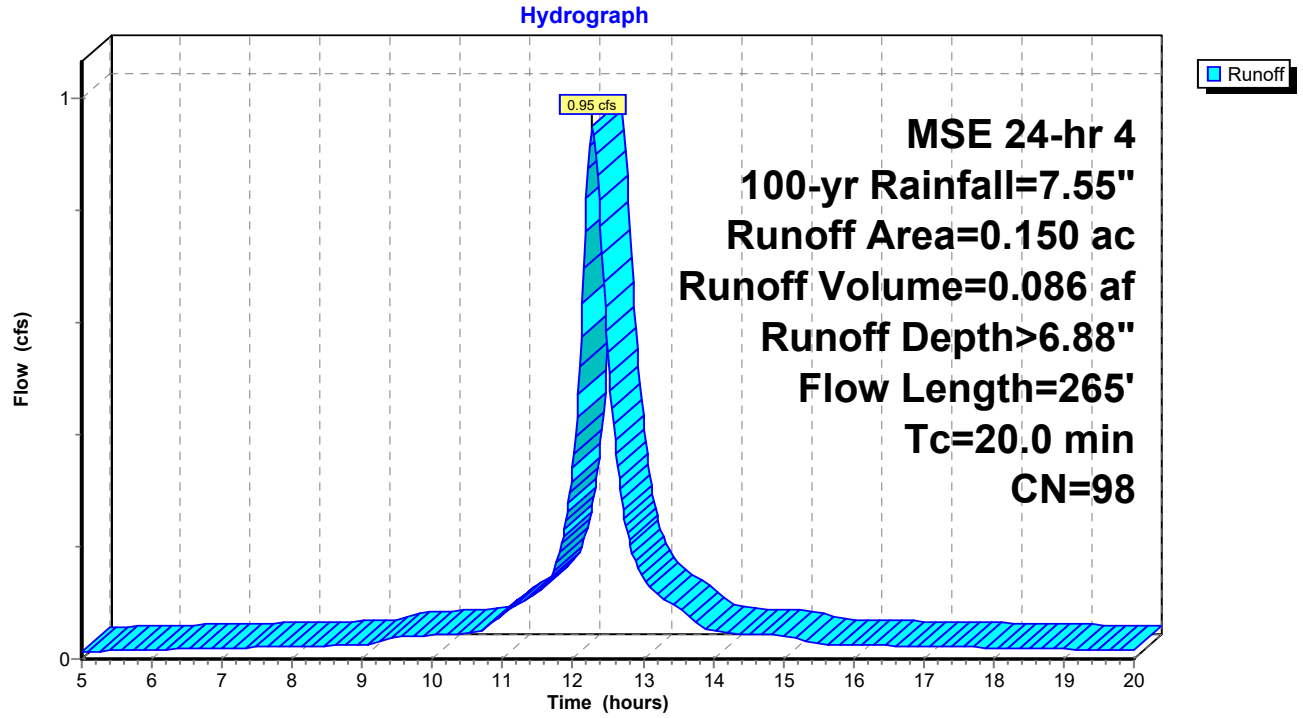
Runoff = 0.95 cfs @ 12.28 hrs, Volume= 0.086 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.042	98	conc alley
*	0.108	98	roof + alley run-on
	0.150	98	Weighted Average
	0.150		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	80		0.17		**Direct Entry, conc alley**
12.0	185		0.26		**Direct Entry, roof + alley run-on**
20.0	265	Total			

Subcatchment 17S: untreated alley to inlet 2



Hydrograph for Subcatchment 17S: untreated alley to inlet 2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.01
5.20	0.37	0.20	0.01
5.40	0.39	0.22	0.01
5.60	0.42	0.24	0.01
5.80	0.44	0.26	0.02
6.00	0.46	0.29	0.02
6.20	0.49	0.31	0.02
6.40	0.52	0.33	0.02
6.60	0.54	0.36	0.02
6.80	0.57	0.38	0.02
7.00	0.60	0.41	0.02
7.20	0.63	0.43	0.02
7.40	0.66	0.46	0.02
7.60	0.69	0.49	0.02
7.80	0.72	0.52	0.02
8.00	0.75	0.55	0.02
8.20	0.78	0.58	0.02
8.40	0.81	0.61	0.02
8.60	0.85	0.64	0.02
8.80	0.88	0.67	0.02
9.00	0.91	0.71	0.02
9.20	0.97	0.76	0.03
9.40	1.02	0.81	0.04
9.60	1.08	0.87	0.04
9.80	1.14	0.92	0.04
10.00	1.20	0.98	0.04
10.20	1.26	1.04	0.04
10.40	1.32	1.10	0.04
10.60	1.40	1.18	0.05
10.80	1.50	1.28	0.06
11.00	1.63	1.41	0.08
11.20	1.78	1.56	0.10
11.40	1.96	1.73	0.11
11.60	2.18	1.95	0.13
11.80	2.59	2.36	0.19
12.00	3.54	3.30	0.34
12.20	4.96	4.72	**0.82**
12.40	5.37	5.13	**0.77**
12.60	5.59	5.36	0.39
12.80	5.77	5.53	0.21
13.00	5.92	5.68	0.15
13.20	6.05	5.81	0.12
13.40	6.15	5.92	0.10
13.60	6.23	5.99	0.08
13.80	6.29	6.06	0.06
14.00	6.35	6.12	0.05
14.20	6.41	6.17	0.05
14.40	6.47	6.23	0.04
14.60	6.53	6.29	0.04
14.80	6.58	6.34	0.04
15.00	6.64	6.40	0.04
15.20	6.67	6.43	0.04
15.40	6.70	6.47	0.03
15.60	6.74	6.50	0.03
15.80	6.77	6.53	0.03
16.00	6.80	6.56	0.02
16.20	6.83	6.59	0.02
16.40	6.86	6.63	0.02
16.60	6.89	6.66	0.02
16.80	6.92	6.68	0.02
17.00	6.95	6.71	0.02
17.20	6.98	6.74	0.02
17.40	7.01	6.77	0.02
17.60	7.03	6.80	0.02
17.80	7.06	6.82	0.02
18.00	7.09	6.85	0.02
18.20	7.11	6.87	0.02
18.40	7.13	6.90	0.02
18.60	7.16	6.92	0.02
18.80	7.18	6.94	0.02
19.00	7.20	6.96	0.02
19.20	7.23	6.99	0.02
19.40	7.25	7.01	0.02
19.60	7.27	7.03	0.02
19.80	7.29	7.05	0.02
20.00	**7.31**	**7.07**	0.01

Summary for Subcatchment 18S: untreated alley to inlet 1

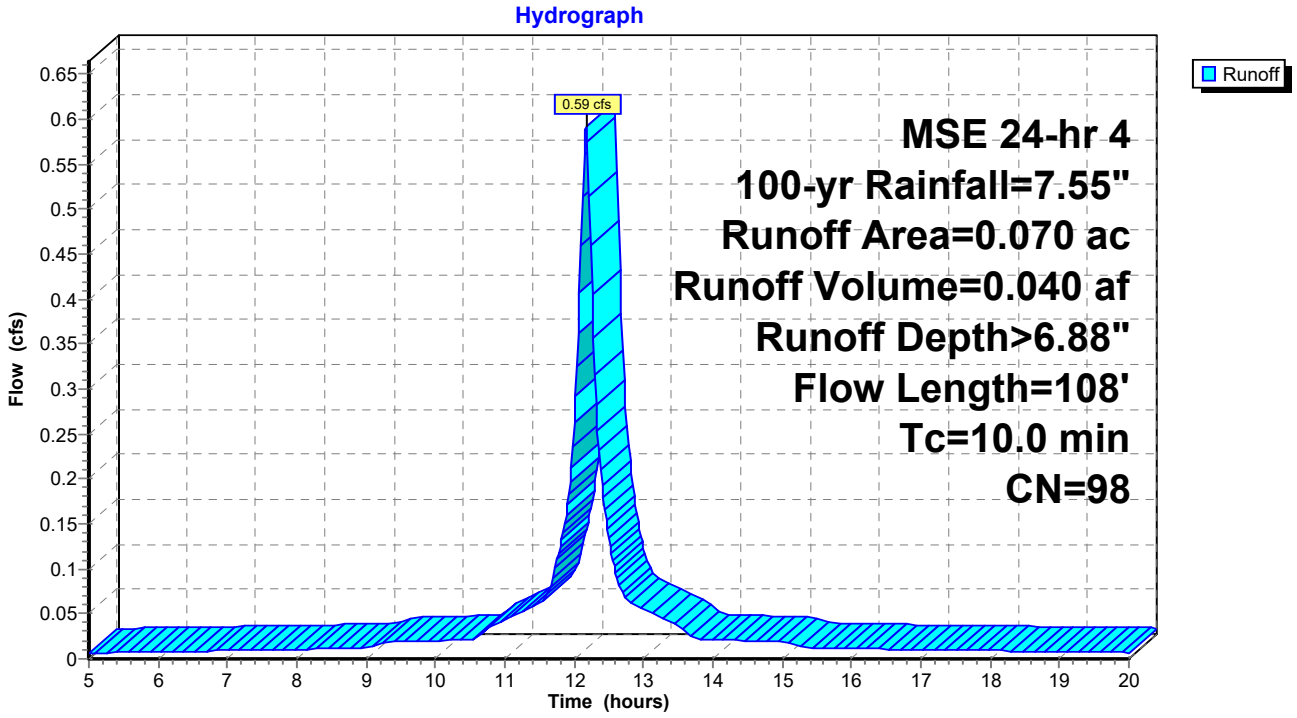
Runoff = 0.59 cfs @ 12.17 hrs, Volume= 0.040 af, Depth> 6.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
MSE 24-hr 4 100-yr Rainfall=7.55"

	Area (ac)	CN	Description
*	0.070	98	concrete alley
	0.070		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	108		0.18		**Direct Entry, concrete alley**

Subcatchment 18S: untreated alley to inlet 1



Hydrograph for Subcatchment 18S: untreated alley to inlet 1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.35	0.18	0.01
5.20	0.37	0.20	0.01
5.40	0.39	0.22	0.01
5.60	0.42	0.24	0.01
5.80	0.44	0.26	0.01
6.00	0.46	0.29	0.01
6.20	0.49	0.31	0.01
6.40	0.52	0.33	0.01
6.60	0.54	0.36	0.01
6.80	0.57	0.38	0.01
7.00	0.60	0.41	0.01
7.20	0.63	0.43	0.01
7.40	0.66	0.46	0.01
7.60	0.69	0.49	0.01
7.80	0.72	0.52	0.01
8.00	0.75	0.55	0.01
8.20	0.78	0.58	0.01
8.40	0.81	0.61	0.01
8.60	0.85	0.64	0.01
8.80	0.88	0.67	0.01
9.00	0.91	0.71	0.01
9.20	0.97	0.76	0.02
9.40	1.02	0.81	0.02
9.60	1.08	0.87	0.02
9.80	1.14	0.92	0.02
10.00	1.20	0.98	0.02
10.20	1.26	1.04	0.02
10.40	1.32	1.10	0.02
10.60	1.40	1.18	0.02
10.80	1.50	1.28	0.04
11.00	1.63	1.41	0.04
11.20	1.78	1.56	0.05
11.40	1.96	1.73	0.06
11.60	2.18	1.95	0.07
11.80	2.59	2.36	0.12
12.00	3.54	3.30	**0.26**
12.20	4.96	4.72	**0.56**
12.40	5.37	5.13	0.19
12.60	5.59	5.36	0.10
12.80	5.77	5.53	0.06
13.00	5.92	5.68	0.06
13.20	6.05	5.81	0.05
13.40	6.15	5.92	0.04
13.60	6.23	5.99	0.03
13.80	6.29	6.06	0.02
14.00	6.35	6.12	0.02
14.20	6.41	6.17	0.02
14.40	6.47	6.23	0.02
14.60	6.53	6.29	0.02
14.80	6.58	6.34	0.02
15.00	6.64	6.40	0.02
15.20	6.67	6.43	0.01
15.40	6.70	6.47	0.01
15.60	6.74	6.50	0.01
15.80	6.77	6.53	0.01
16.00	6.80	6.56	0.01
16.20	6.83	6.59	0.01
16.40	6.86	6.63	0.01
16.60	6.89	6.66	0.01
16.80	6.92	6.68	0.01
17.00	6.95	6.71	0.01
17.20	6.98	6.74	0.01
17.40	7.01	6.77	0.01
17.60	7.03	6.80	0.01
17.80	7.06	6.82	0.01
18.00	7.09	6.85	0.01
18.20	7.11	6.87	0.01
18.40	7.13	6.90	0.01
18.60	7.16	6.92	0.01
18.80	7.18	6.94	0.01
19.00	7.20	6.96	0.01
19.20	7.23	6.99	0.01
19.40	7.25	7.01	0.01
19.60	7.27	7.03	0.01
19.80	7.29	7.05	0.01
20.00	**7.31**	**7.07**	0.01

Summary for Reach 6R: 10" roof

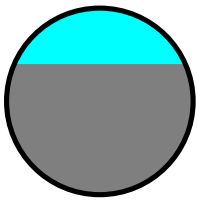
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 887% of Manning's capacity
[76] Warning: Detained 0.065 af (Pond w/culvert advised)

Inflow Area = 0.305 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 2.42 cfs @ 12.19 hrs, Volume= 0.175 af
Outflow = 0.29 cfs @ 11.60 hrs, Volume= 0.175 af, Atten= 88%, Lag= 0.0 min

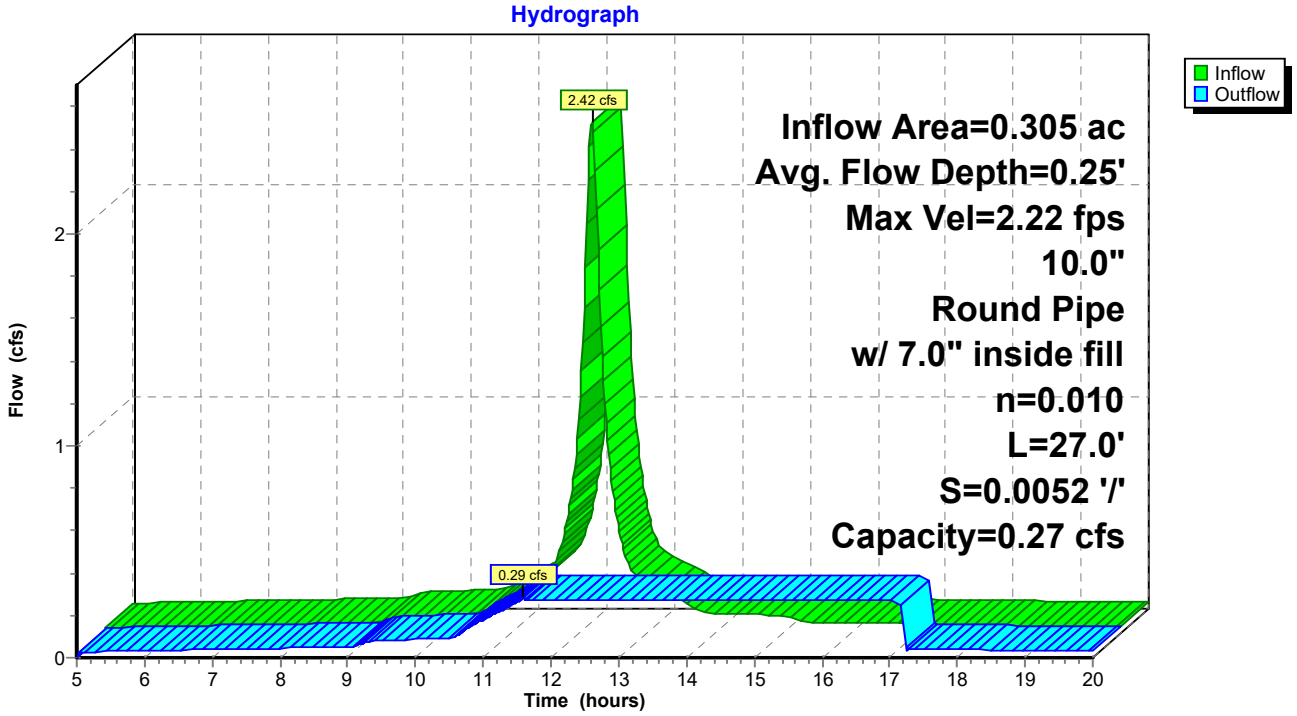
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.22 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.58 fps, Avg. Travel Time= 0.3 min

Peak Storage= 4 cf @ 11.62 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

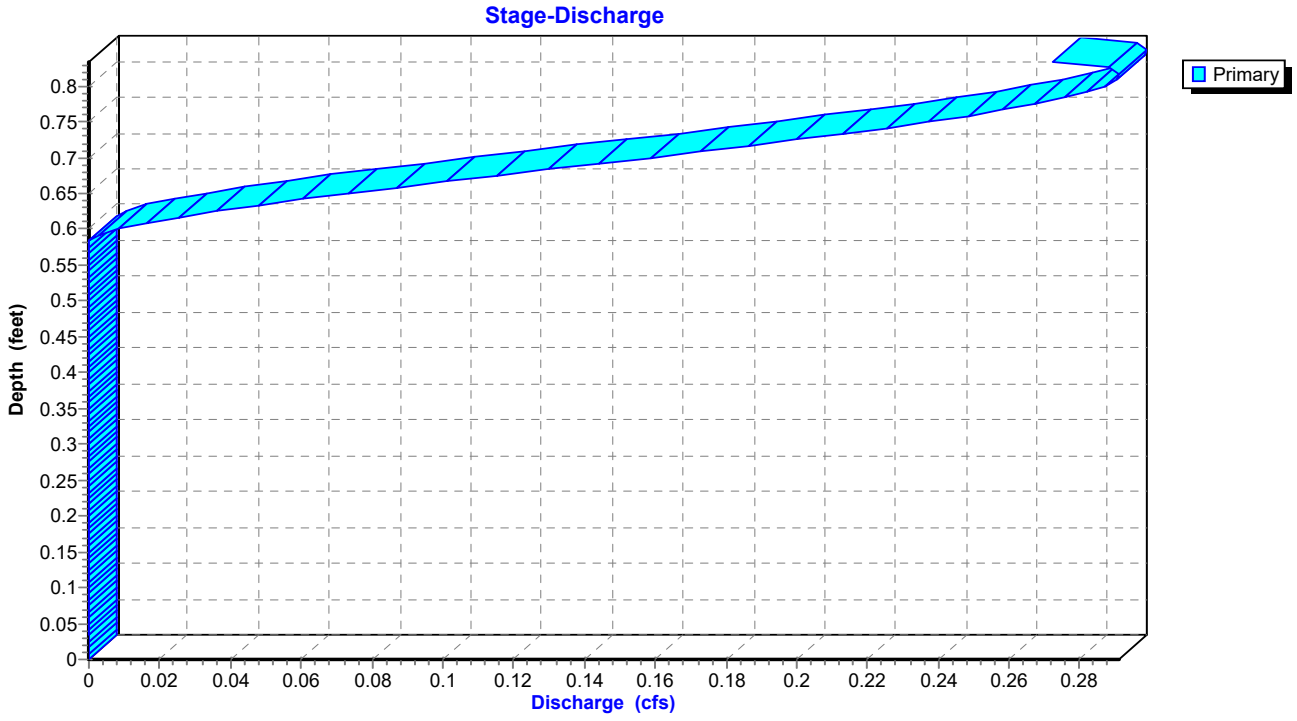
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 27.0' Slope= 0.0052 '/'
Inlet Invert= 665.72', Outlet Invert= 665.58'



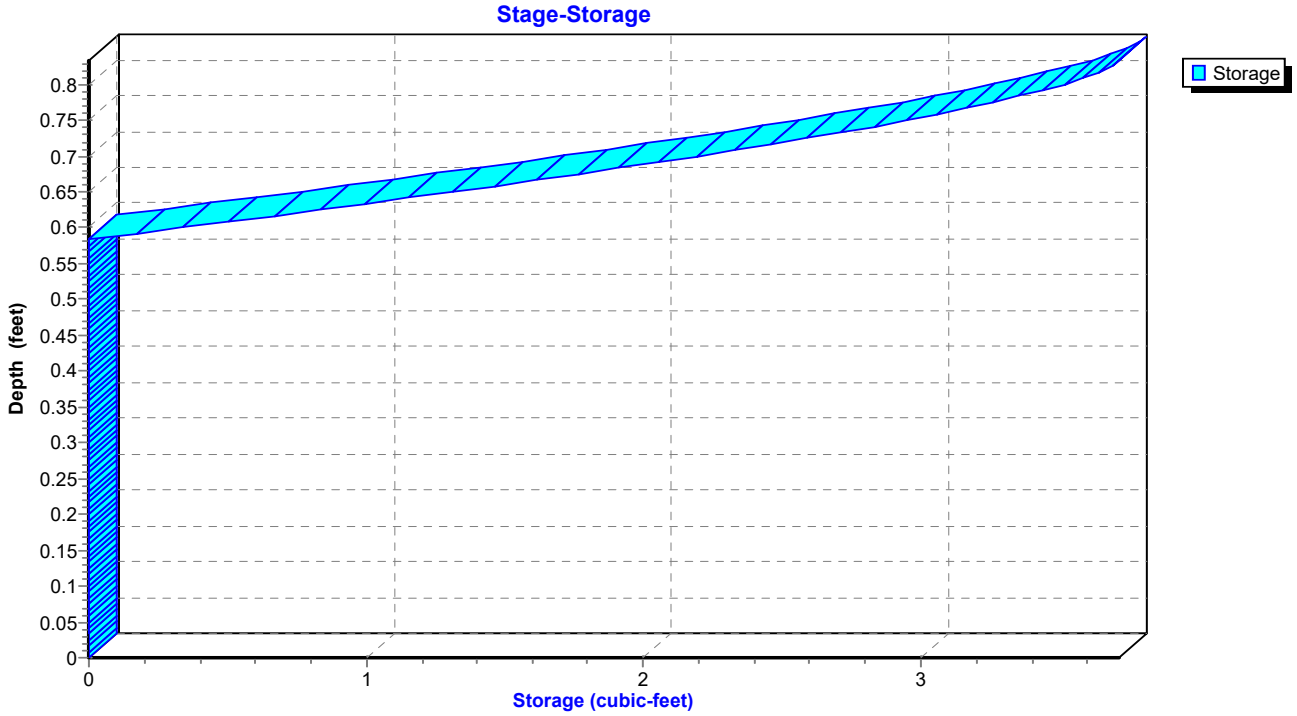
Reach 6R: 10" roof



Reach 6R: 10" roof



Reach 6R: 10" roof



Hydrograph for Reach 6R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.03	0	666.30	0.00
5.40	0.03	1	666.34	0.03
5.80	0.03	1	666.34	0.03
6.20	0.03	1	666.34	0.03
6.60	0.04	1	666.35	0.04
7.00	0.04	1	666.35	0.04
7.40	0.04	1	666.35	0.04
7.80	0.04	1	666.35	0.04
8.20	0.05	1	666.35	0.05
8.60	0.05	1	666.35	0.05
9.00	0.05	1	666.36	0.05
9.40	0.08	1	666.37	0.08
9.80	0.09	1	666.38	0.09
10.20	0.09	2	666.38	0.09
10.60	0.10	2	666.39	0.10
11.00	0.18	2	666.43	0.18
11.40	0.25	**3**	**666.48**	**0.25**
11.80	0.50	**4**	**666.55**	**0.27**
12.20	**2.41**	4	666.55	0.27
12.60	0.48	4	666.55	0.27
13.00	0.25	4	666.55	0.27
13.40	0.18	4	666.55	0.27
13.80	0.10	4	666.55	0.27
14.20	0.09	4	666.55	0.27
14.60	0.09	4	666.55	0.27
15.00	0.08	4	666.55	0.27
15.40	0.05	4	666.55	0.27
15.80	0.05	4	666.55	0.27
16.20	0.05	4	666.55	0.27
16.60	0.05	4	666.55	0.27
17.00	0.04	4	666.55	0.27
17.40	0.04	1	666.35	0.04
17.80	0.04	1	666.35	0.04
18.20	0.04	1	666.35	0.04
18.60	0.04	1	666.35	0.04
19.00	0.03	1	666.34	0.03
19.40	0.03	1	666.34	0.03
19.80	0.03	1	666.34	0.03

Stage-Discharge for Reach 6R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.35	0.00
666.32	0.67	0.01
666.33	0.90	0.02
666.34	1.08	0.03
666.35	1.25	0.04
666.36	1.39	0.06
666.37	1.51	0.07
666.38	1.62	0.09
666.39	1.72	0.11
666.40	1.81	0.12
666.41	1.88	0.14
666.42	1.95	0.16
666.43	2.01	0.18
666.44	2.06	0.19
666.45	2.11	0.21
666.46	2.14	0.22
666.47	2.17	0.24
666.48	2.19	0.25
666.49	2.21	0.26
666.50	**2.22**	0.27
666.51	2.21	0.28
666.52	2.20	0.29
666.53	2.18	**0.29**
666.54	2.14	0.29
666.55	2.03	0.28

Stage-Area-Storage for Reach 6R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	0
665.77	0.0	0	666.28	0.0	0
665.78	0.0	0	666.29	0.0	0
665.79	0.0	0	666.30	0.0	0
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	1
665.83	0.0	0	666.34	0.0	1
665.84	0.0	0	666.35	0.0	1
665.85	0.0	0	666.36	0.0	1
665.86	0.0	0	666.37	0.0	1
665.87	0.0	0	666.38	0.1	1
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	2
665.92	0.0	0	666.43	0.1	2
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	3
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	**0.1**	**4**
666.05	0.0	0			
666.06	0.0	0			
666.07	0.0	0			
666.08	0.0	0			
666.09	0.0	0			
666.10	0.0	0			
666.11	0.0	0			
666.12	0.0	0			
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			

Summary for Reach 7R: MH8 12"

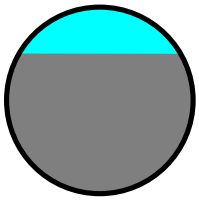
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 205% of Manning's capacity
[76] Warning: Detained 0.140 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 6R INLET depth by 0.15' @ 17.24 hrs
[63] Warning: Exceeded Reach 8R INLET depth by 0.06' @ 17.94 hrs

Inflow Area = 0.644 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 0.56 cfs @ 11.60 hrs, Volume= 0.369 af
Outflow = 0.29 cfs @ 10.74 hrs, Volume= 0.264 af, Atten= 49%, Lag= 0.0 min

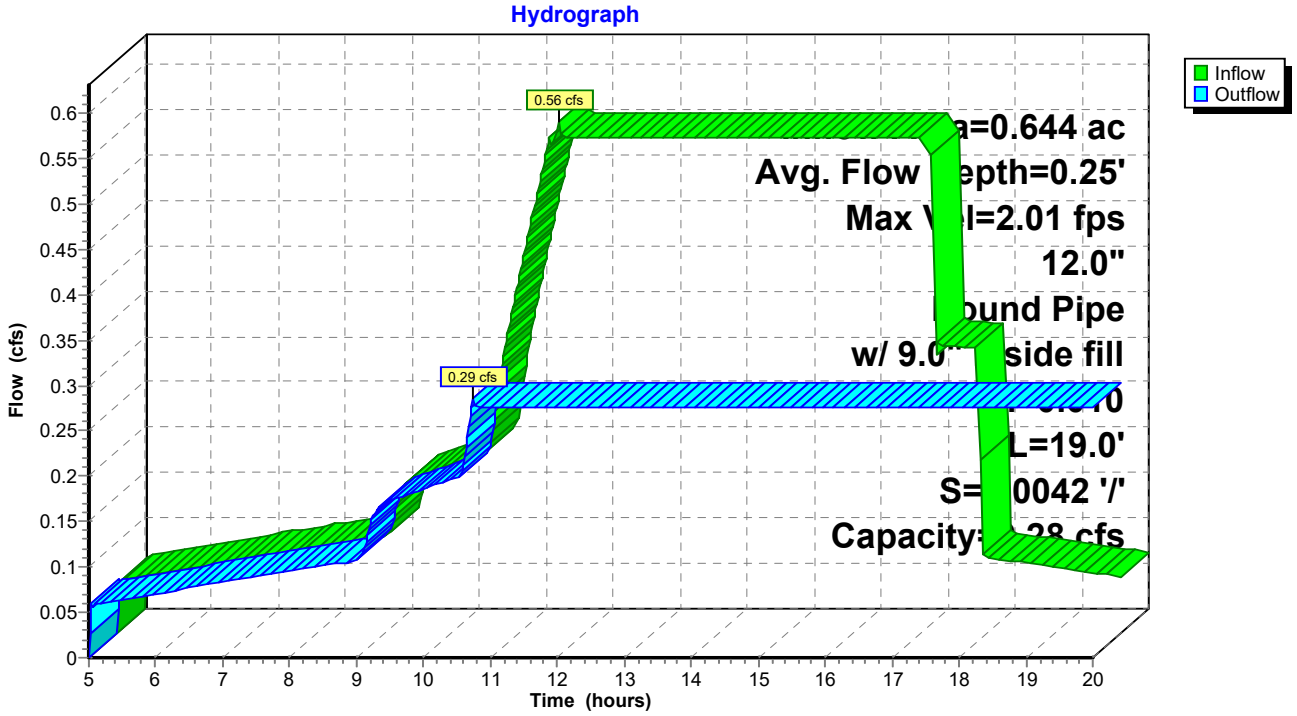
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.01 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.69 fps, Avg. Travel Time= 0.2 min

Peak Storage= 3 cf @ 10.76 hrs
Average Depth at Peak Storage= 1.00' above invert (0.25' above fill)
Bank-Full Depth= 1.00' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.28 cfs

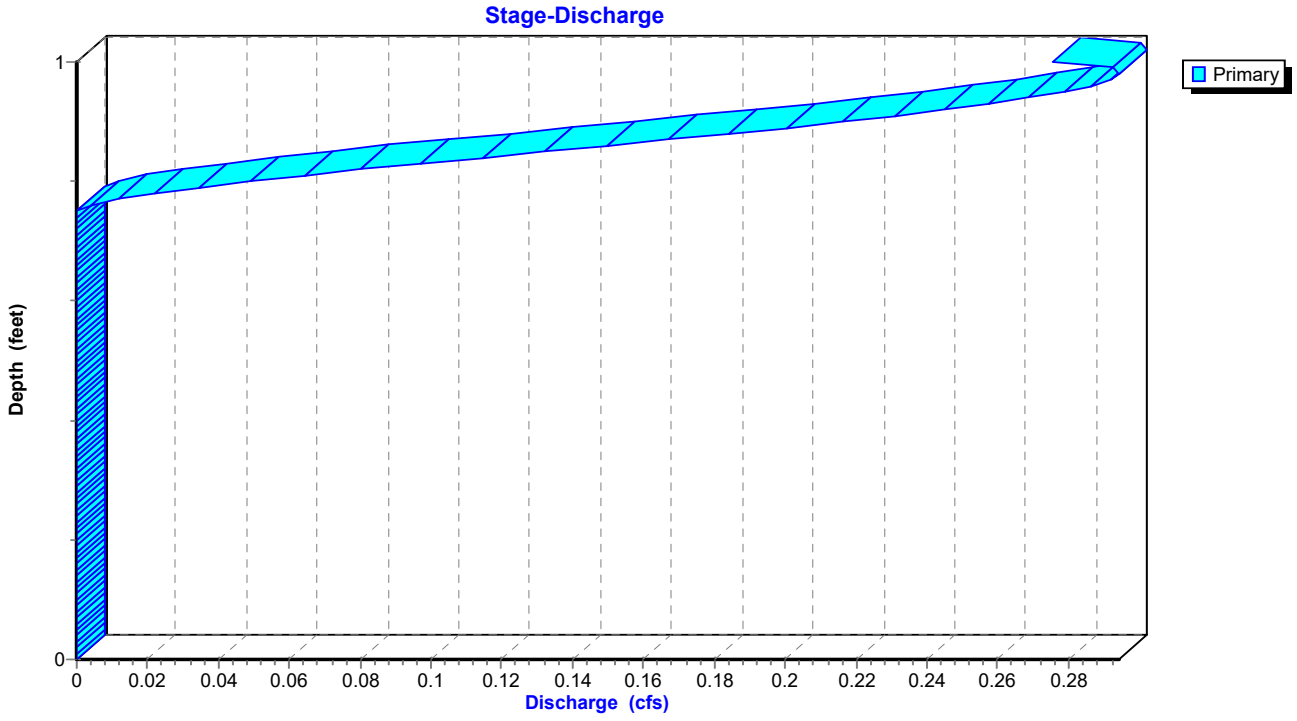
12.0" Round Pipe w/ 9.0" inside fill
n= 0.010
Length= 19.0' Slope= 0.0042 '/'
Inlet Invert= 665.48', Outlet Invert= 665.40'



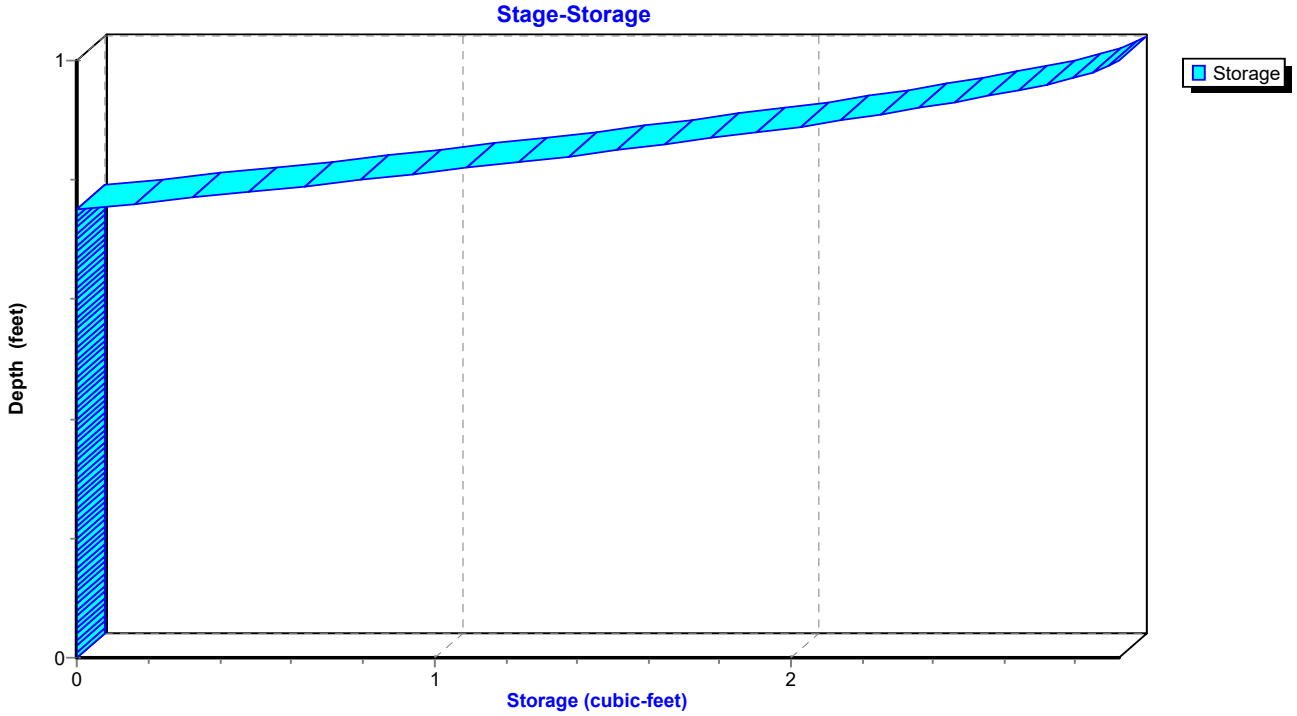
Reach 7R: MH8 12"



Reach 7R: MH8 12"



Reach 7R: MH8 12"



Hydrograph for Reach 7R: MH8 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.23	0.00
5.40	0.06	1	666.29	0.06
5.80	0.07	1	666.29	0.07
6.20	0.07	1	666.30	0.07
6.60	0.08	1	666.30	0.08
7.00	0.08	1	666.30	0.08
7.40	0.09	1	666.30	0.09
7.80	0.09	1	666.31	0.09
8.20	0.10	1	666.31	0.10
8.60	0.10	1	666.31	0.10
9.00	0.11	1	666.32	0.11
9.40	0.17	2	666.35	0.17
9.80	0.18	2	666.36	0.18
10.20	0.19	2	666.36	0.19
10.60	0.21	**2**	**666.38**	**0.21**
11.00	0.39	**3**	**666.48**	**0.28**
11.40	**0.53**	3	666.48	0.28
11.80	**0.55**	3	666.48	0.28
12.20	0.55	3	666.48	0.28
12.60	0.55	3	666.48	0.28
13.00	0.55	3	666.48	0.28
13.40	0.55	3	666.48	0.28
13.80	0.55	3	666.48	0.28
14.20	0.55	3	666.48	0.28
14.60	0.55	3	666.48	0.28
15.00	0.55	3	666.48	0.28
15.40	0.55	3	666.48	0.28
15.80	0.55	3	666.48	0.28
16.20	0.55	3	666.48	0.28
16.60	0.55	3	666.48	0.28
17.00	0.55	3	666.48	0.28
17.40	0.32	3	666.48	0.28
17.80	0.31	3	666.48	0.28
18.20	0.08	3	666.48	0.28
18.60	0.08	3	666.48	0.28
19.00	0.07	3	666.48	0.28
19.40	0.07	3	666.48	0.28
19.80	0.06	3	666.48	0.28

Stage-Discharge for Reach 7R: MH8 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.44	0.00
666.25	0.68	0.01
666.26	0.87	0.02
666.27	1.03	0.03
666.28	1.17	0.05
666.29	1.29	0.06
666.30	1.40	0.08
666.31	1.50	0.10
666.32	1.58	0.11
666.33	1.66	0.13
666.34	1.72	0.15
666.35	1.78	0.17
666.36	1.84	0.18
666.37	1.88	0.20
666.38	1.92	0.22
666.39	1.95	0.23
666.40	1.97	0.25
666.41	1.99	0.26
666.42	2.00	0.27
666.43	**2.01**	0.28
666.44	2.00	0.29
666.45	1.99	0.29
666.46	1.96	**0.29**
666.47	1.92	0.29
666.48	1.79	0.28

Stage-Area-Storage for Reach 7R: MH8 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.48	0.0	0	665.99	0.0	0
665.49	0.0	0	666.00	0.0	0
665.50	0.0	0	666.01	0.0	0
665.51	0.0	0	666.02	0.0	0
665.52	0.0	0	666.03	0.0	0
665.53	0.0	0	666.04	0.0	0
665.54	0.0	0	666.05	0.0	0
665.55	0.0	0	666.06	0.0	0
665.56	0.0	0	666.07	0.0	0
665.57	0.0	0	666.08	0.0	0
665.58	0.0	0	666.09	0.0	0
665.59	0.0	0	666.10	0.0	0
665.60	0.0	0	666.11	0.0	0
665.61	0.0	0	666.12	0.0	0
665.62	0.0	0	666.13	0.0	0
665.63	0.0	0	666.14	0.0	0
665.64	0.0	0	666.15	0.0	0
665.65	0.0	0	666.16	0.0	0
665.66	0.0	0	666.17	0.0	0
665.67	0.0	0	666.18	0.0	0
665.68	0.0	0	666.19	0.0	0
665.69	0.0	0	666.20	0.0	0
665.70	0.0	0	666.21	0.0	0
665.71	0.0	0	666.22	0.0	0
665.72	0.0	0	666.23	0.0	0
665.73	0.0	0	666.24	0.0	0
665.74	0.0	0	666.25	0.0	0
665.75	0.0	0	666.26	0.0	0
665.76	0.0	0	666.27	0.0	1
665.77	0.0	0	666.28	0.0	1
665.78	0.0	0	666.29	0.0	1
665.79	0.0	0	666.30	0.1	1
665.80	0.0	0	666.31	0.1	1
665.81	0.0	0	666.32	0.1	1
665.82	0.0	0	666.33	0.1	2
665.83	0.0	0	666.34	0.1	2
665.84	0.0	0	666.35	0.1	2
665.85	0.0	0	666.36	0.1	2
665.86	0.0	0	666.37	0.1	2
665.87	0.0	0	666.38	0.1	2
665.88	0.0	0	666.39	0.1	2
665.89	0.0	0	666.40	0.1	2
665.90	0.0	0	666.41	0.1	2
665.91	0.0	0	666.42	0.1	3
665.92	0.0	0	666.43	0.1	3
665.93	0.0	0	666.44	0.1	3
665.94	0.0	0	666.45	0.1	3
665.95	0.0	0	666.46	0.1	3
665.96	0.0	0	666.47	0.2	3
665.97	0.0	0	666.48	**0.2**	**3**
665.98	0.0	0			

Summary for Reach 8R: 10" roof

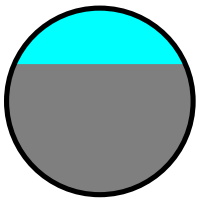
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 1050% of Manning's capacity
[76] Warning: Detained 0.076 af (Pond w/culvert advised)

Inflow Area = 0.339 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 2.87 cfs @ 12.17 hrs, Volume= 0.194 af
Outflow = 0.29 cfs @ 11.45 hrs, Volume= 0.194 af, Atten= 90%, Lag= 0.0 min

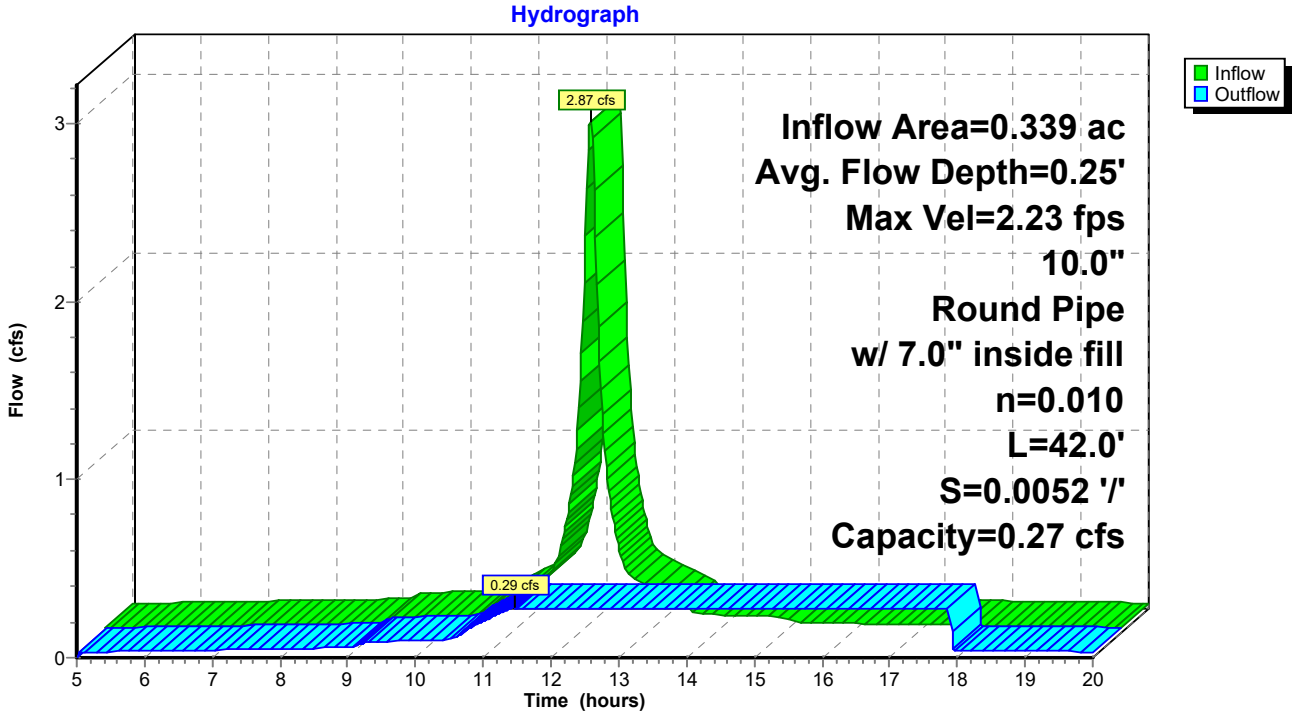
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.23 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.65 fps, Avg. Travel Time= 0.4 min

Peak Storage= 6 cf @ 11.48 hrs
Average Depth at Peak Storage= 0.83' above invert (0.25' above fill)
Bank-Full Depth= 0.83' above invert (0.25' above fill) Flow Area= 0.1 sf, Capacity= 0.27 cfs

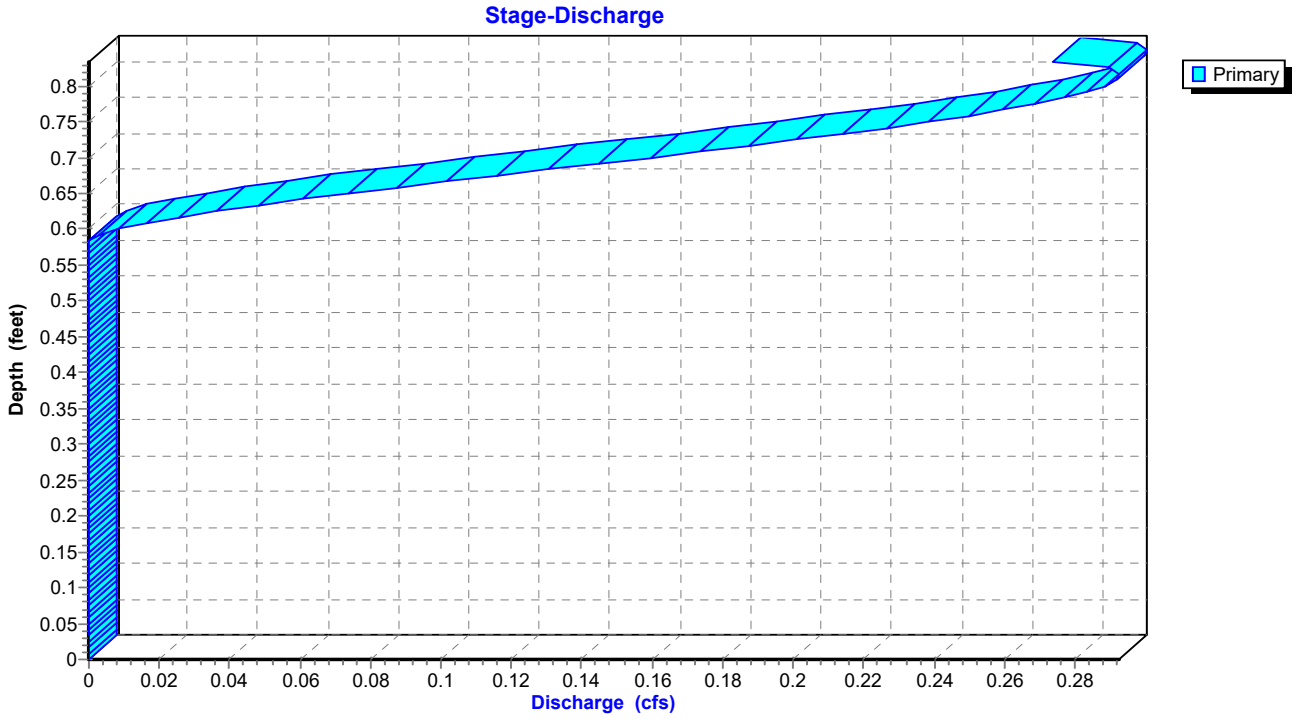
10.0" Round Pipe w/ 7.0" inside fill
n= 0.010
Length= 42.0' Slope= 0.0052 '/'
Inlet Invert= 665.80', Outlet Invert= 665.58'



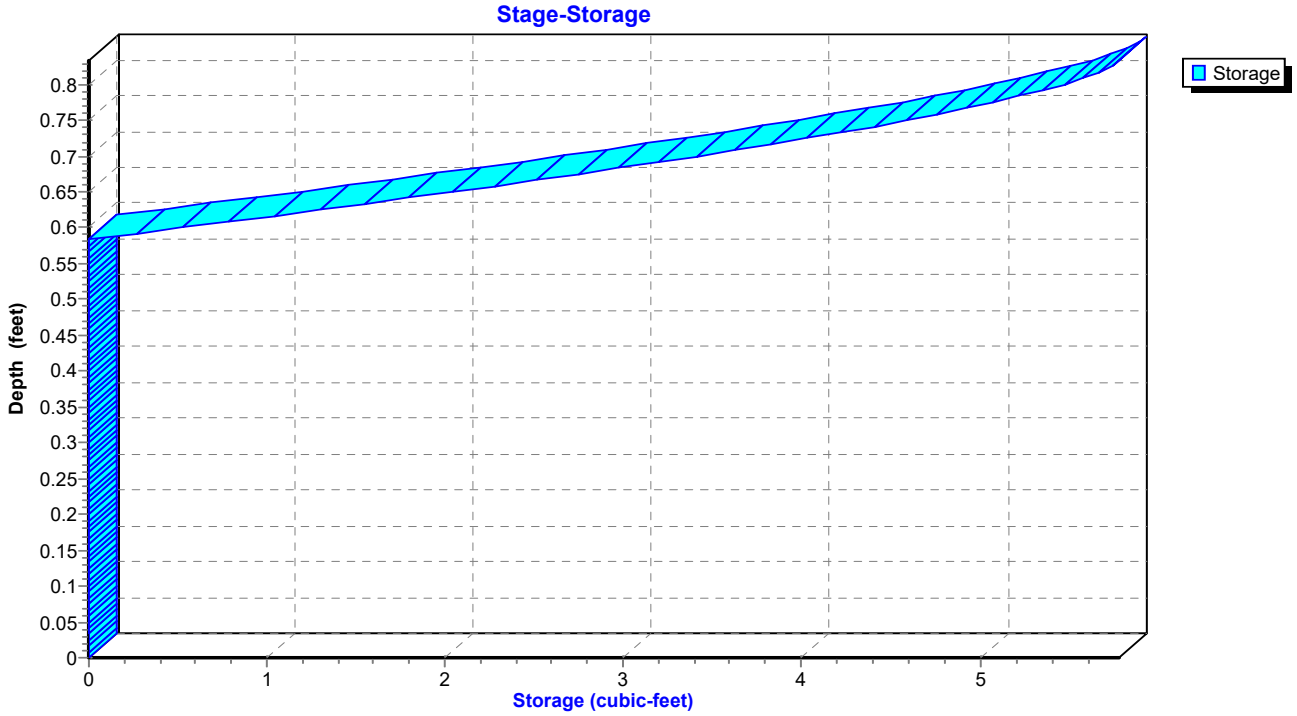
Reach 8R: 10" roof



Reach 8R: 10" roof



Reach 8R: 10" roof



Hydrograph for Reach 8R: 10" roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.03	0	666.38	0.00
5.40	0.03	1	666.42	0.03
5.80	0.04	1	666.42	0.04
6.20	0.04	1	666.43	0.04
6.60	0.04	1	666.43	0.04
7.00	0.04	1	666.43	0.04
7.40	0.05	2	666.43	0.05
7.80	0.05	2	666.43	0.05
8.20	0.05	2	666.44	0.05
8.60	0.05	2	666.44	0.05
9.00	0.06	2	666.44	0.06
9.40	0.09	2	666.46	0.09
9.80	0.10	2	666.46	0.10
10.20	0.10	3	666.47	0.10
10.60	0.12	3	666.47	0.11
11.00	0.21	4	666.53	0.21
11.40	0.28	**5**	**666.59**	**0.28**
11.80	**0.60**	**6**	**666.63**	**0.27**
12.20	**2.72**	6	666.63	0.27
12.60	0.47	6	666.63	0.27
13.00	0.27	6	666.63	0.27
13.40	0.19	6	666.63	0.27
13.80	0.11	6	666.63	0.27
14.20	0.10	6	666.63	0.27
14.60	0.10	6	666.63	0.27
15.00	0.09	6	666.63	0.27
15.40	0.06	6	666.63	0.27
15.80	0.06	6	666.63	0.27
16.20	0.05	6	666.63	0.27
16.60	0.05	6	666.63	0.27
17.00	0.05	6	666.63	0.27
17.40	0.05	6	666.63	0.27
17.80	0.04	6	666.63	0.27
18.20	0.04	1	666.43	0.04
18.60	0.04	1	666.43	0.04
19.00	0.04	1	666.43	0.04
19.40	0.04	1	666.42	0.04
19.80	0.03	1	666.42	0.03

Stage-Discharge for Reach 8R: 10" roof

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.35	0.00
666.40	0.68	0.01
666.41	0.90	0.02
666.42	1.09	0.03
666.43	1.25	0.04
666.44	1.39	0.06
666.45	1.52	0.07
666.46	1.63	0.09
666.47	1.73	0.11
666.48	1.81	0.12
666.49	1.89	0.14
666.50	1.96	0.16
666.51	2.02	0.18
666.52	2.07	0.19
666.53	2.12	0.21
666.54	2.15	0.22
666.55	2.18	0.24
666.56	2.21	0.25
666.57	2.22	0.26
666.58	**2.23**	0.27
666.59	2.23	0.28
666.60	2.21	0.29
666.61	2.19	**0.29**
666.62	2.15	0.29
666.63	2.04	0.28

Stage-Area-Storage for Reach 8R: 10" roof

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.80	0.0	0	666.31	0.0	0
665.81	0.0	0	666.32	0.0	0
665.82	0.0	0	666.33	0.0	0
665.83	0.0	0	666.34	0.0	0
665.84	0.0	0	666.35	0.0	0
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	1
665.90	0.0	0	666.41	0.0	1
665.91	0.0	0	666.42	0.0	1
665.92	0.0	0	666.43	0.0	1
665.93	0.0	0	666.44	0.0	2
665.94	0.0	0	666.45	0.0	2
665.95	0.0	0	666.46	0.1	2
665.96	0.0	0	666.47	0.1	3
665.97	0.0	0	666.48	0.1	3
665.98	0.0	0	666.49	0.1	3
665.99	0.0	0	666.50	0.1	3
666.00	0.0	0	666.51	0.1	4
666.01	0.0	0	666.52	0.1	4
666.02	0.0	0	666.53	0.1	4
666.03	0.0	0	666.54	0.1	4
666.04	0.0	0	666.55	0.1	5
666.05	0.0	0	666.56	0.1	5
666.06	0.0	0	666.57	0.1	5
666.07	0.0	0	666.58	0.1	5
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	5
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	6
666.12	0.0	0	666.63	**0.1**	**6**
666.13	0.0	0			
666.14	0.0	0			
666.15	0.0	0			
666.16	0.0	0			
666.17	0.0	0			
666.18	0.0	0			
666.19	0.0	0			
666.20	0.0	0			
666.21	0.0	0			
666.22	0.0	0			
666.23	0.0	0			
666.24	0.0	0			
666.25	0.0	0			
666.26	0.0	0			
666.27	0.0	0			
666.28	0.0	0			
666.29	0.0	0			
666.30	0.0	0			

Summary for Reach 9R: inlet 3 18"

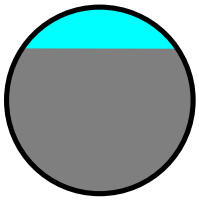
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 186% of Manning's capacity
[76] Warning: Detained 0.007 af (Pond w/culvert advised)
[63] Warning: Exceeded Reach 7R INLET depth by 0.32' @ 11.92 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 5.24" for 100-yr event
Inflow = 1.63 cfs @ 12.08 hrs, Volume= 0.335 af
Outflow = 0.88 cfs @ 11.94 hrs, Volume= 0.335 af, Atten= 46%, Lag= 0.0 min

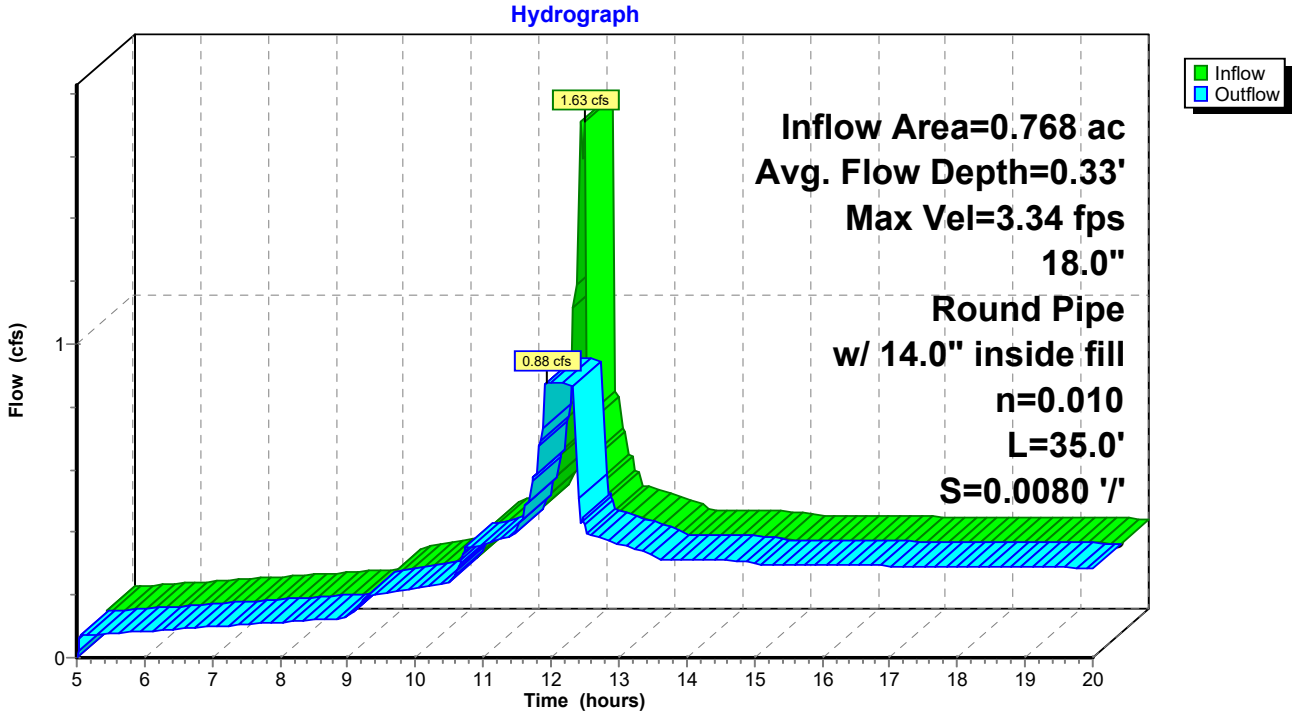
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 3.34 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 2.27 fps, Avg. Travel Time= 0.3 min

Peak Storage= 10 cf @ 11.92 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.88 cfs

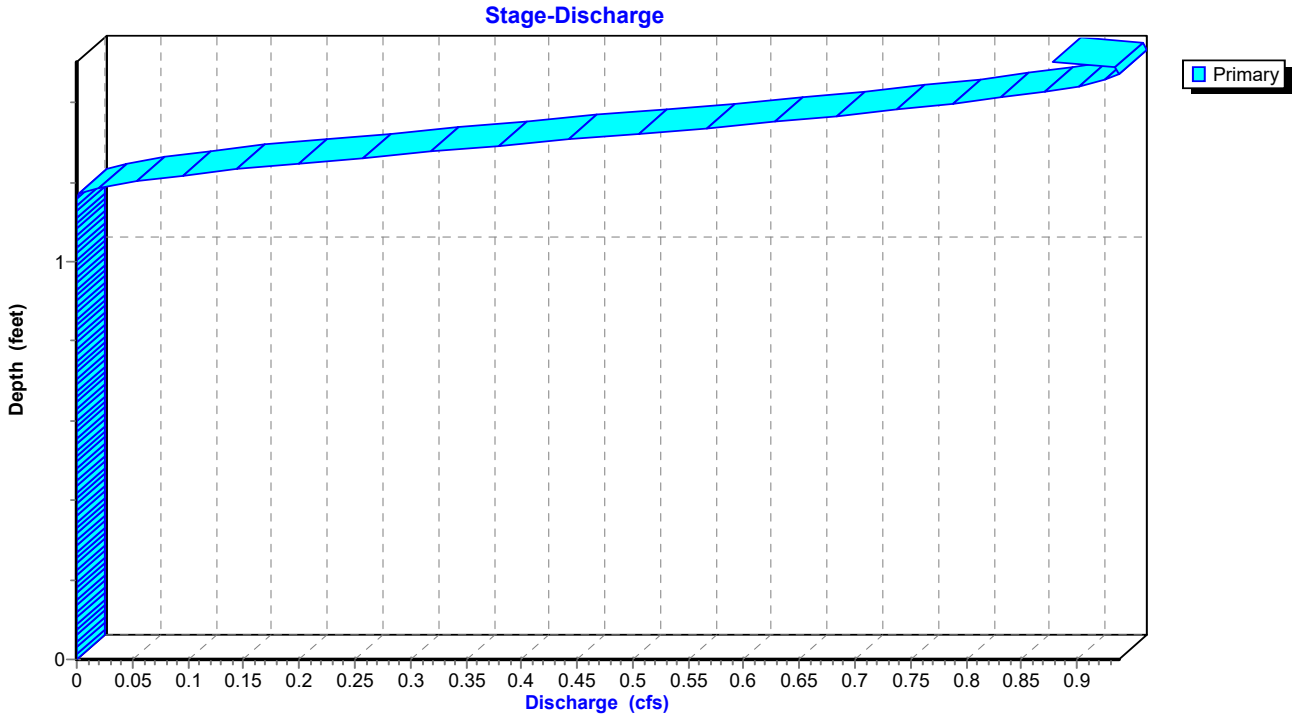
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 35.0' Slope= 0.0080 '/'
Inlet Invert= 665.30', Outlet Invert= 665.02'



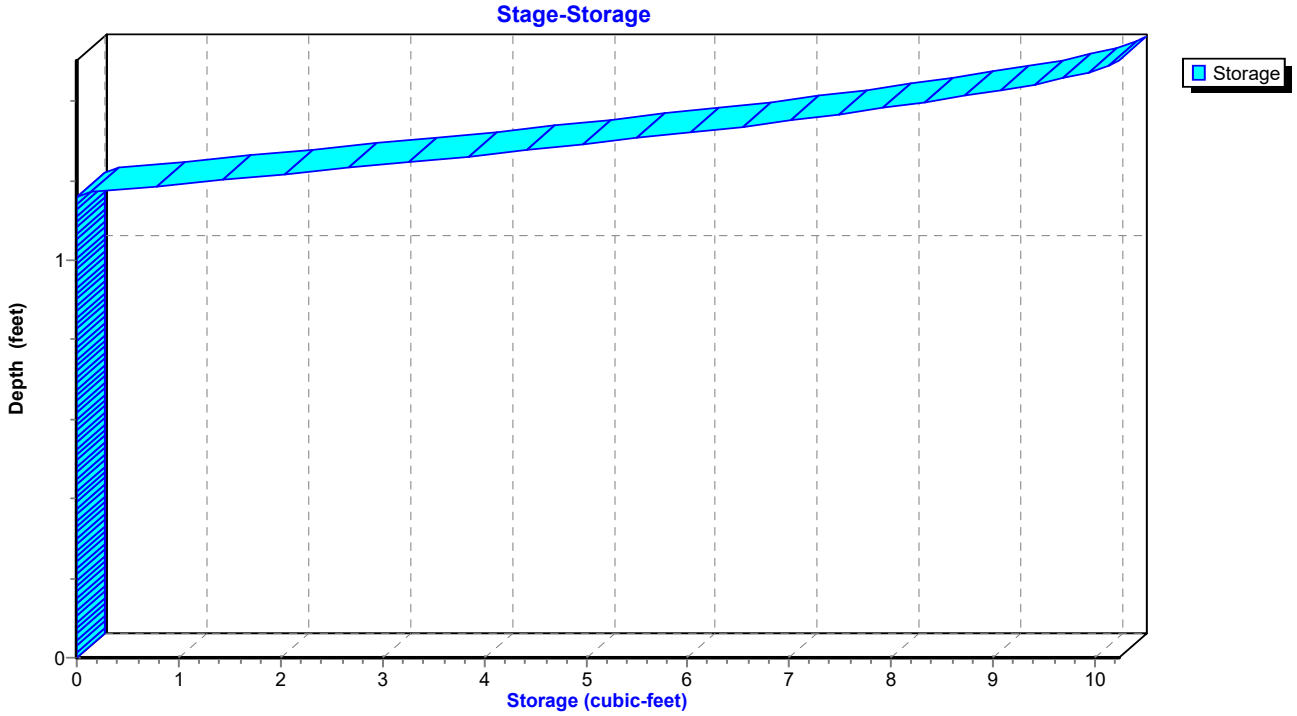
Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Reach 9R: inlet 3 18"



Hydrograph for Reach 9R: inlet 3 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.47	0.00
5.40	0.08	2	666.51	0.08
5.80	0.08	2	666.51	0.08
6.20	0.09	2	666.51	0.09
6.60	0.09	2	666.51	0.09
7.00	0.10	2	666.52	0.10
7.40	0.11	2	666.52	0.11
7.80	0.11	2	666.52	0.11
8.20	0.12	2	666.52	0.12
8.60	0.12	2	666.52	0.12
9.00	0.13	3	666.53	0.13
9.40	0.20	3	666.55	0.20
9.80	0.22	3	666.55	0.22
10.20	0.23	4	666.55	0.23
10.60	0.27	4	666.56	0.27
11.00	0.36	5	666.59	0.36
11.40	0.39	5	666.59	0.39
11.80	**0.63**	**7**	**666.65**	**0.61**
12.20	**0.63**	**10**	**666.80**	**0.88**
12.60	0.39	5	666.59	0.39
13.00	0.36	5	666.59	0.36
13.40	0.34	5	666.58	0.34
13.80	0.31	4	666.57	0.31
14.20	0.31	4	666.57	0.31
14.60	0.31	4	666.57	0.31
15.00	0.30	4	666.57	0.30
15.40	0.30	4	666.57	0.30
15.80	0.30	4	666.57	0.30
16.20	0.29	4	666.57	0.29
16.60	0.29	4	666.57	0.29
17.00	0.29	4	666.57	0.29
17.40	0.29	4	666.57	0.29
17.80	0.29	4	666.57	0.29
18.20	0.29	4	666.57	0.29
18.60	0.29	4	666.57	0.29
19.00	0.29	4	666.57	0.29
19.40	0.29	4	666.57	0.29
19.80	0.29	4	666.57	0.29

Stage-Discharge for Reach 9R: inlet 3 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.10	0.00
666.47	0.29	0.00
666.48	0.70	0.01
666.49	1.03	0.03
666.50	1.30	0.05
666.51	1.52	0.08
666.52	1.72	0.11
666.53	1.90	0.14
666.54	2.06	0.18
666.55	2.21	0.22
666.56	2.34	0.26
666.57	2.46	0.30
666.58	2.57	0.34
666.59	2.68	0.38
666.60	2.77	0.42
666.61	2.86	0.46
666.62	2.94	0.51
666.63	3.01	0.55
666.64	3.07	0.59
666.65	3.13	0.63
666.66	3.18	0.67
666.67	3.22	0.70
666.68	3.26	0.74
666.69	3.29	0.77
666.70	3.32	0.80
666.71	3.34	0.83
666.72	3.35	0.86
666.73	3.36	0.88
666.74	**3.36**	0.90
666.75	3.35	0.92
666.76	3.33	0.93
666.77	3.30	**0.94**
666.78	3.25	0.94
666.79	3.15	0.92
666.80	3.01	0.88

Stage-Area-Storage for Reach 9R: inlet 3 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	1
666.50	0.0	1
666.52	0.1	2
666.54	0.1	3
666.56	0.1	4
666.58	0.1	5
666.60	0.2	5
666.62	0.2	6
666.64	0.2	7
666.66	0.2	7
666.68	0.2	8
666.70	0.2	8
666.72	0.3	9
666.74	0.3	9
666.76	0.3	10
666.78	0.3	10
666.80	**0.3**	**10**

Summary for Reach 10R: MH7 18"

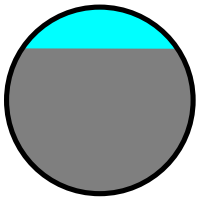
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 126% of Manning's capacity
[76] Warning: Detained 0.008 af (Pond w/culvert advised)
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=4)
[62] Hint: Exceeded Reach 9R OUTLET depth by 0.21' @ 12.70 hrs

Inflow Area = 0.768 ac,100.00% Impervious, Inflow Depth > 5.24" for 100-yr event
Inflow = 0.88 cfs @ 11.94 hrs, Volume= 0.335 af
Outflow = 0.76 cfs @ 12.71 hrs, Volume= 0.335 af, Atten= 14%, Lag= 46.3 min

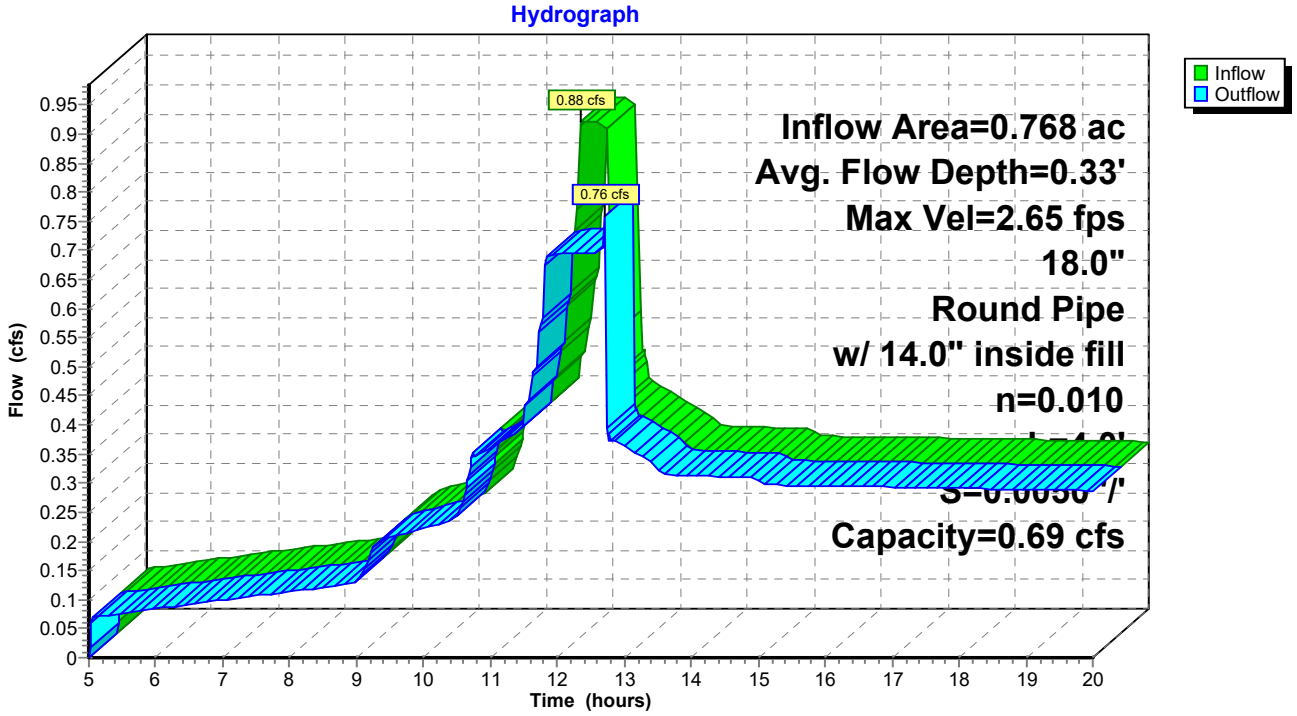
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.65 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 1.94 fps, Avg. Travel Time= 0.0 min

Peak Storage= 1 cf @ 11.90 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

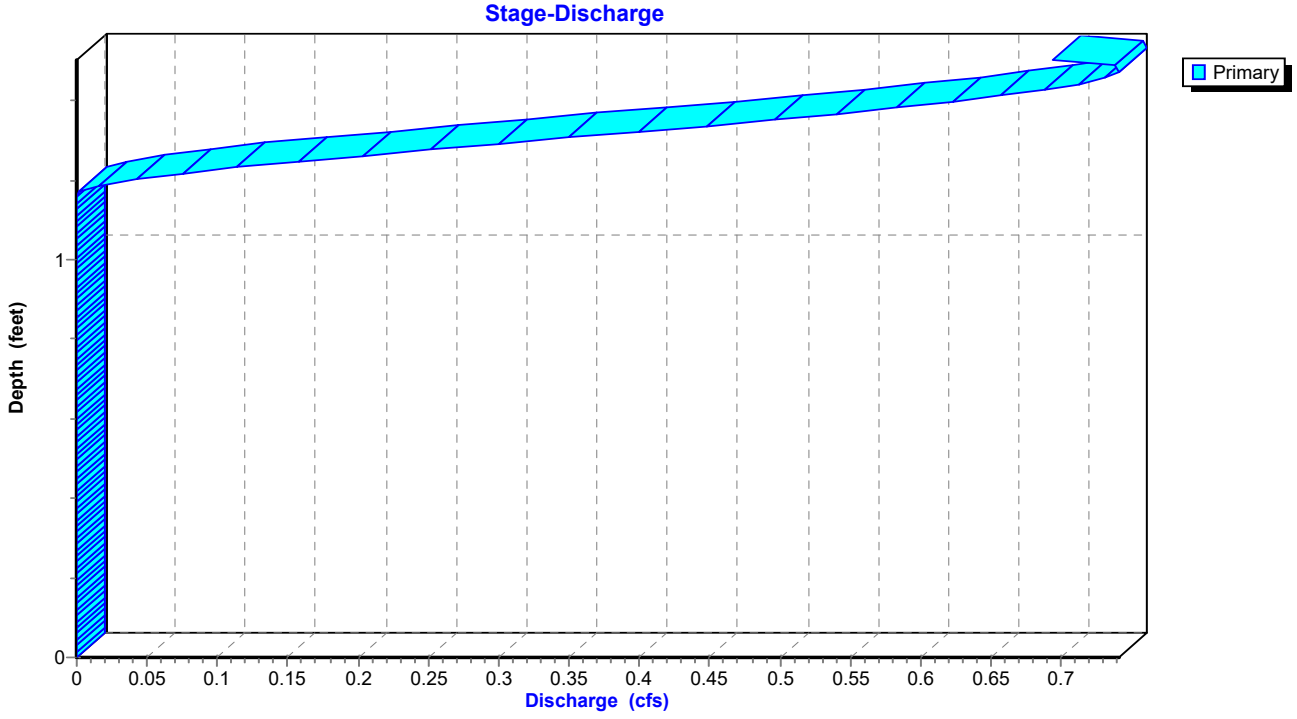
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 4.0' Slope= 0.0050 '/'
Inlet Invert= 665.02', Outlet Invert= 665.00'



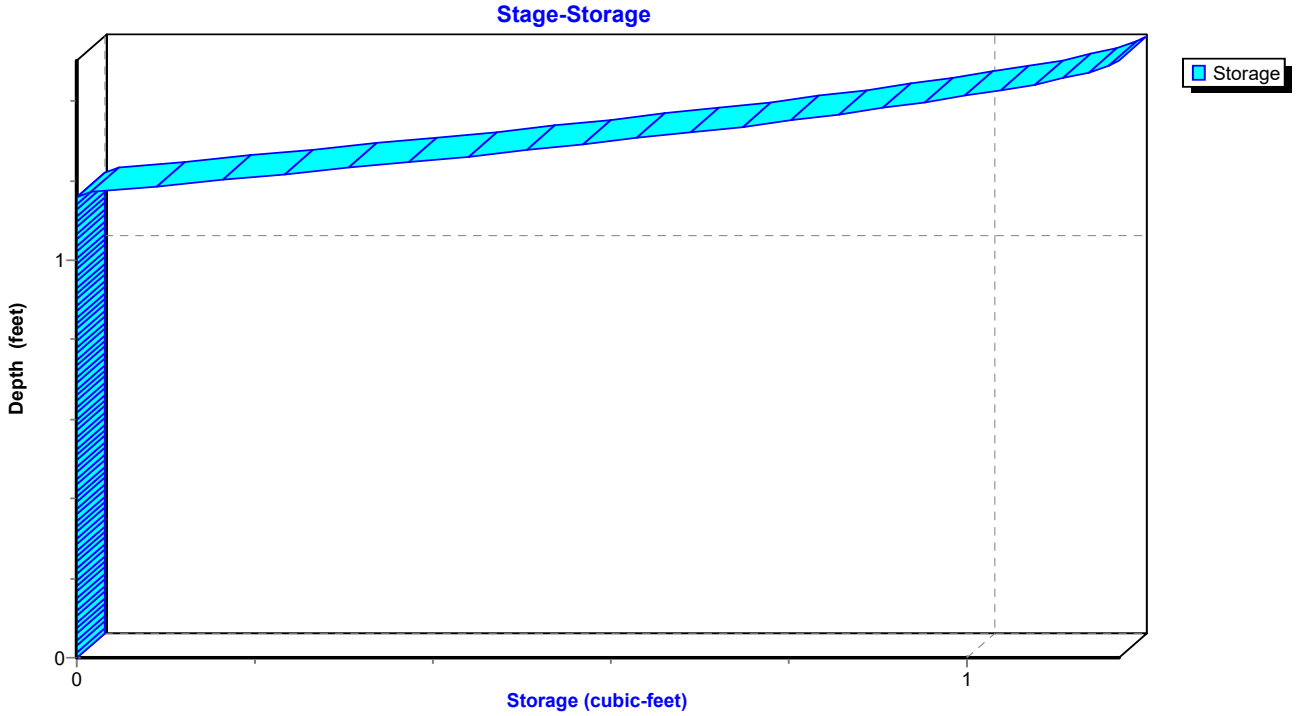
Reach 10R: MH7 18"



Reach 10R: MH7 18"



Reach 10R: MH7 18"



Hydrograph for Reach 10R: MH7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.19	0.00
5.40	0.08	0	666.23	0.08
5.80	0.08	0	666.24	0.08
6.20	0.09	0	666.24	0.09
6.60	0.09	0	666.24	0.09
7.00	0.10	0	666.24	0.10
7.40	0.11	0	666.25	0.11
7.80	0.11	0	666.25	0.11
8.20	0.12	0	666.25	0.12
8.60	0.12	0	666.25	0.12
9.00	0.13	0	666.26	0.13
9.40	0.20	0	666.28	0.20
9.80	0.22	0	666.28	0.22
10.20	0.23	0	666.29	0.23
10.60	0.27	1	666.30	0.27
11.00	0.36	1	666.33	0.36
11.40	0.39	1	666.34	0.39
11.80	**0.61**	**1**	**666.41**	0.61
12.20	**0.88**	**1**	**666.52**	0.69
12.60	0.39	1	666.52	**0.69**
13.00	0.36	1	666.33	**0.36**
13.40	0.34	1	666.32	0.34
13.80	0.31	1	666.31	0.31
14.20	0.31	1	666.31	0.31
14.60	0.31	1	666.31	0.31
15.00	0.30	1	666.31	0.30
15.40	0.30	1	666.31	0.30
15.80	0.30	1	666.31	0.30
16.20	0.29	1	666.31	0.29
16.60	0.29	1	666.31	0.29
17.00	0.29	1	666.31	0.29
17.40	0.29	1	666.31	0.29
17.80	0.29	1	666.31	0.29
18.20	0.29	1	666.31	0.29
18.60	0.29	1	666.31	0.29
19.00	0.29	1	666.31	0.29
19.40	0.29	1	666.31	0.29
19.80	0.29	1	666.31	0.29

Stage-Discharge for Reach 10R: MH7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.02	0.00	0.00	665.53	0.00	0.00	666.04	0.00	0.00
665.03	0.00	0.00	665.54	0.00	0.00	666.05	0.00	0.00
665.04	0.00	0.00	665.55	0.00	0.00	666.06	0.00	0.00
665.05	0.00	0.00	665.56	0.00	0.00	666.07	0.00	0.00
665.06	0.00	0.00	665.57	0.00	0.00	666.08	0.00	0.00
665.07	0.00	0.00	665.58	0.00	0.00	666.09	0.00	0.00
665.08	0.00	0.00	665.59	0.00	0.00	666.10	0.00	0.00
665.09	0.00	0.00	665.60	0.00	0.00	666.11	0.00	0.00
665.10	0.00	0.00	665.61	0.00	0.00	666.12	0.00	0.00
665.11	0.00	0.00	665.62	0.00	0.00	666.13	0.00	0.00
665.12	0.00	0.00	665.63	0.00	0.00	666.14	0.00	0.00
665.13	0.00	0.00	665.64	0.00	0.00	666.15	0.00	0.00
665.14	0.00	0.00	665.65	0.00	0.00	666.16	0.00	0.00
665.15	0.00	0.00	665.66	0.00	0.00	666.17	0.00	0.00
665.16	0.00	0.00	665.67	0.00	0.00	666.18	0.08	0.00
665.17	0.00	0.00	665.68	0.00	0.00	666.19	0.23	0.00
665.18	0.00	0.00	665.69	0.00	0.00	666.20	0.55	0.01
665.19	0.00	0.00	665.70	0.00	0.00	666.21	0.82	0.02
665.20	0.00	0.00	665.71	0.00	0.00	666.22	1.03	0.04
665.21	0.00	0.00	665.72	0.00	0.00	666.23	1.20	0.06
665.22	0.00	0.00	665.73	0.00	0.00	666.24	1.36	0.09
665.23	0.00	0.00	665.74	0.00	0.00	666.25	1.50	0.11
665.24	0.00	0.00	665.75	0.00	0.00	666.26	1.63	0.14
665.25	0.00	0.00	665.76	0.00	0.00	666.27	1.74	0.17
665.26	0.00	0.00	665.77	0.00	0.00	666.28	1.85	0.20
665.27	0.00	0.00	665.78	0.00	0.00	666.29	1.95	0.24
665.28	0.00	0.00	665.79	0.00	0.00	666.30	2.04	0.27
665.29	0.00	0.00	665.80	0.00	0.00	666.31	2.12	0.30
665.30	0.00	0.00	665.81	0.00	0.00	666.32	2.19	0.33
665.31	0.00	0.00	665.82	0.00	0.00	666.33	2.26	0.37
665.32	0.00	0.00	665.83	0.00	0.00	666.34	2.32	0.40
665.33	0.00	0.00	665.84	0.00	0.00	666.35	2.38	0.43
665.34	0.00	0.00	665.85	0.00	0.00	666.36	2.43	0.46
665.35	0.00	0.00	665.86	0.00	0.00	666.37	2.47	0.50
665.36	0.00	0.00	665.87	0.00	0.00	666.38	2.51	0.53
665.37	0.00	0.00	665.88	0.00	0.00	666.39	2.55	0.56
665.38	0.00	0.00	665.89	0.00	0.00	666.40	2.58	0.58
665.39	0.00	0.00	665.90	0.00	0.00	666.41	2.60	0.61
665.40	0.00	0.00	665.91	0.00	0.00	666.42	2.62	0.63
665.41	0.00	0.00	665.92	0.00	0.00	666.43	2.64	0.66
665.42	0.00	0.00	665.93	0.00	0.00	666.44	2.65	0.68
665.43	0.00	0.00	665.94	0.00	0.00	666.45	2.65	0.70
665.44	0.00	0.00	665.95	0.00	0.00	666.46	**2.65**	0.71
665.45	0.00	0.00	665.96	0.00	0.00	666.47	2.65	0.73
665.46	0.00	0.00	665.97	0.00	0.00	666.48	2.63	0.73
665.47	0.00	0.00	665.98	0.00	0.00	666.49	2.61	**0.74**
665.48	0.00	0.00	665.99	0.00	0.00	666.50	2.57	0.74
665.49	0.00	0.00	666.00	0.00	0.00	666.51	2.49	0.72
665.50	0.00	0.00	666.01	0.00	0.00	666.52	2.38	0.69
665.51	0.00	0.00	666.02	0.00	0.00			
665.52	0.00	0.00	666.03	0.00	0.00			

Stage-Area-Storage for Reach 10R: MH7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.02	0.0	0
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.1	0
666.26	0.1	0
666.28	0.1	0
666.30	0.1	1
666.32	0.2	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	1
666.40	0.2	1
666.42	0.2	1
666.44	0.3	1
666.46	0.3	1
666.48	0.3	1
666.50	0.3	1
666.52	**0.3**	**1**

Summary for Reach 11R: inlet 7 18"

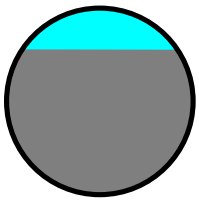
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 109% of Manning's capacity

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 0.77 cfs @ 12.15 hrs, Volume= 0.057 af
Outflow = 0.73 cfs @ 12.15 hrs, Volume= 0.057 af, Atten= 4%, Lag= 0.0 min

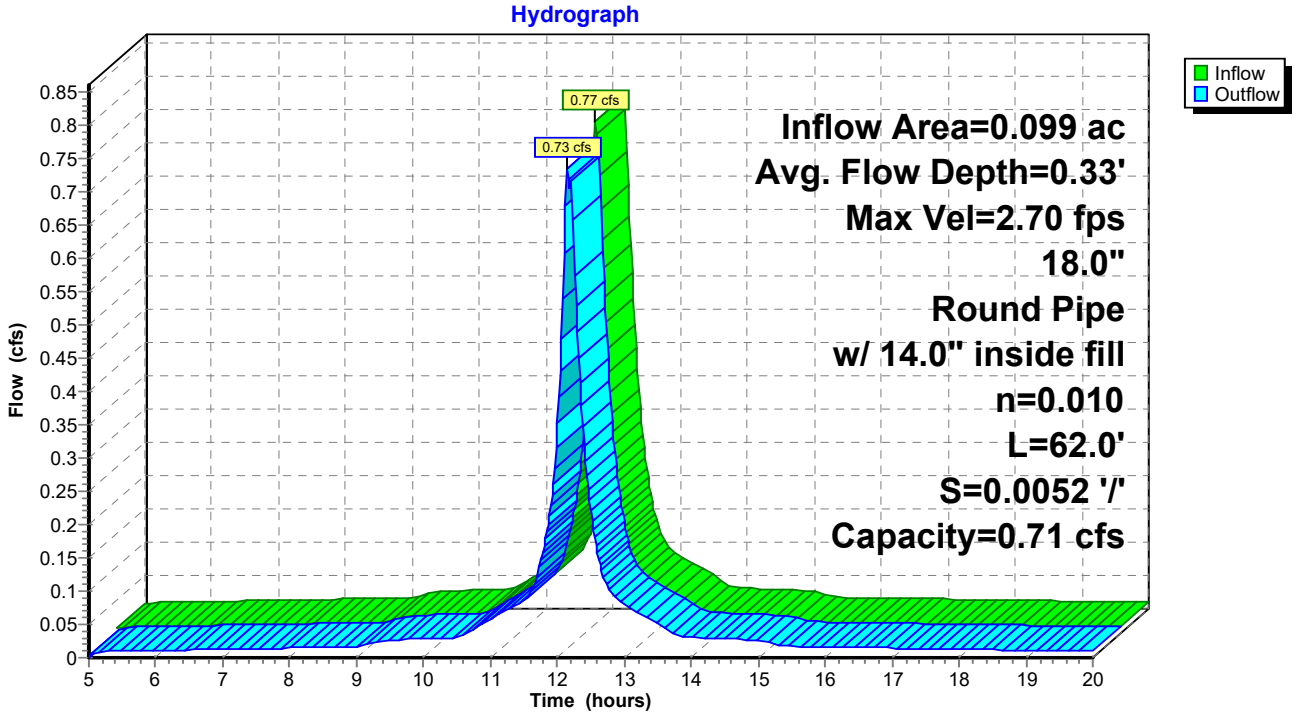
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.70 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 0.91 fps, Avg. Travel Time= 1.1 min

Peak Storage= 18 cf @ 12.16 hrs
Average Depth at Peak Storage= 1.50' above invert (0.33' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.71 cfs

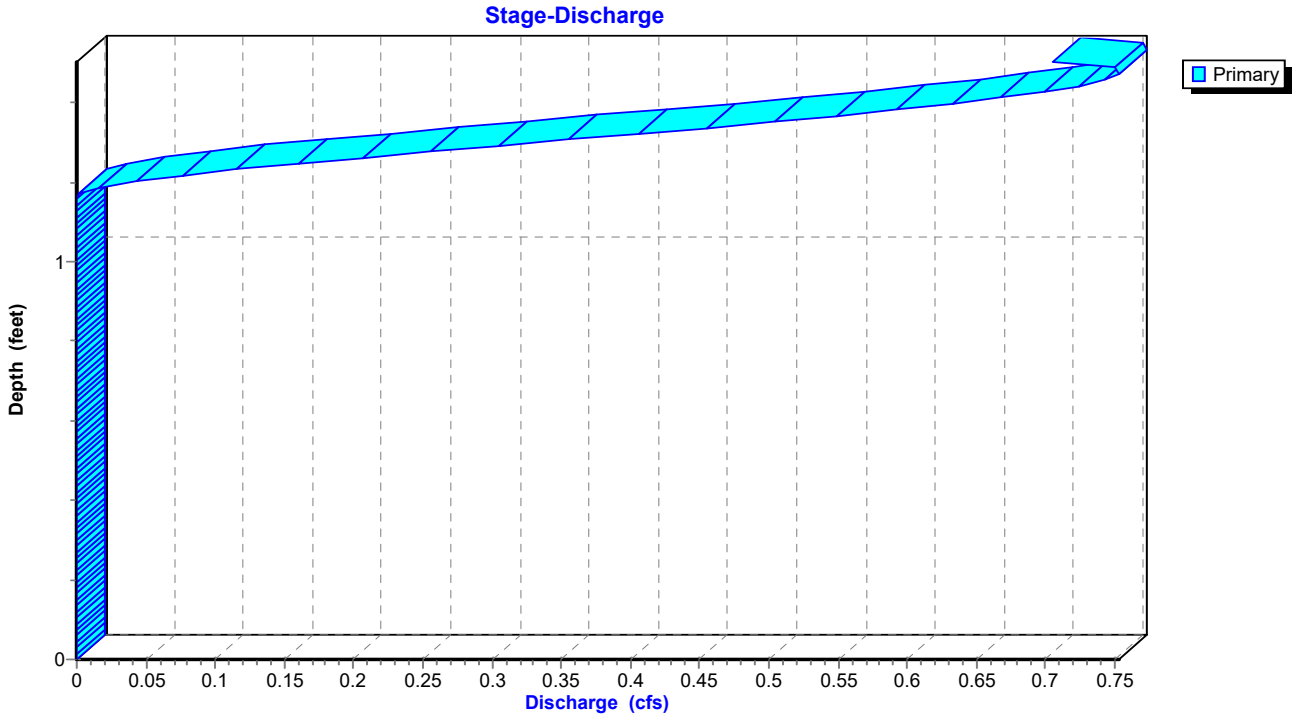
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0052 '/'
Inlet Invert= 665.36', Outlet Invert= 665.04'



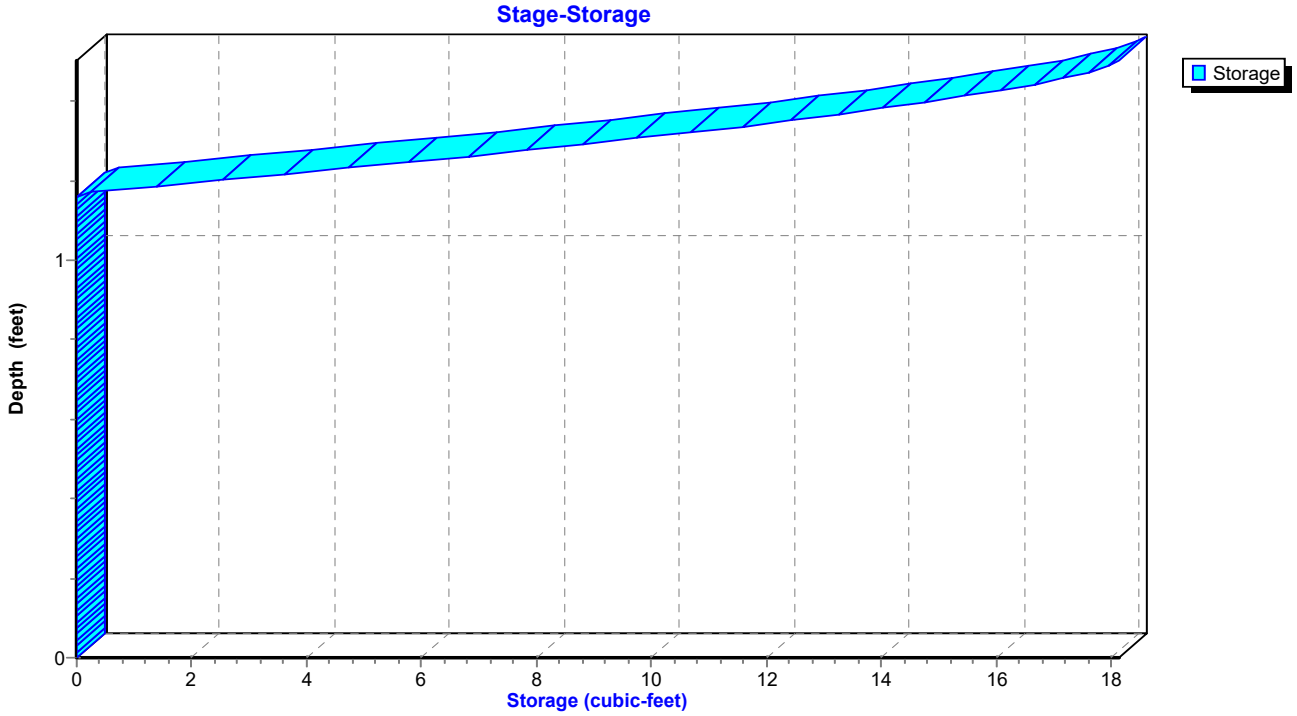
Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Reach 11R: inlet 7 18"



Hydrograph for Reach 11R: inlet 7 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.53	0.00
5.40	0.01	1	666.54	0.01
5.80	0.01	1	666.54	0.01
6.20	0.01	1	666.54	0.01
6.60	0.01	1	666.54	0.01
7.00	0.01	1	666.54	0.01
7.40	0.01	1	666.54	0.01
7.80	0.01	1	666.54	0.01
8.20	0.02	1	666.54	0.01
8.60	0.02	1	666.54	0.02
9.00	0.02	1	666.55	0.02
9.40	0.03	2	666.55	0.03
9.80	0.03	2	666.55	0.03
10.20	0.03	2	666.55	0.03
10.60	0.03	2	666.56	0.03
11.00	0.06	3	666.57	0.06
11.40	0.08	4	666.58	0.08
11.80	**0.17**	**6**	**666.61**	**0.17**
12.20	**0.69**	**18**	**666.86**	**0.71**
12.60	0.15	6	666.60	0.16
13.00	0.08	4	666.58	0.08
13.40	0.06	3	666.57	0.06
13.80	0.03	2	666.55	0.03
14.20	0.03	2	666.55	0.03
14.60	0.03	2	666.55	0.03
15.00	0.03	2	666.55	0.03
15.40	0.02	1	666.55	0.02
15.80	0.02	1	666.55	0.02
16.20	0.02	1	666.54	0.02
16.60	0.02	1	666.54	0.02
17.00	0.01	1	666.54	0.01
17.40	0.01	1	666.54	0.01
17.80	0.01	1	666.54	0.01
18.20	0.01	1	666.54	0.01
18.60	0.01	1	666.54	0.01
19.00	0.01	1	666.54	0.01
19.40	0.01	1	666.54	0.01
19.80	0.01	1	666.54	0.01

Stage-Discharge for Reach 11R: inlet 7 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.00	0.00
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.08	0.00
666.53	0.24	0.00
666.54	0.56	0.01
666.55	0.83	0.03
666.56	1.05	0.04
666.57	1.22	0.07
666.58	1.38	0.09
666.59	1.53	0.12
666.60	1.65	0.15
666.61	1.77	0.18
666.62	1.88	0.21
666.63	1.98	0.24
666.64	2.07	0.27
666.65	2.15	0.31
666.66	2.23	0.34
666.67	2.29	0.37
666.68	2.36	0.41
666.69	2.41	0.44
666.70	2.47	0.47
666.71	2.51	0.50
666.72	2.55	0.53
666.73	2.59	0.56
666.74	2.62	0.59
666.75	2.65	0.62
666.76	2.67	0.64
666.77	2.68	0.67
666.78	2.69	0.69
666.79	2.70	0.71
666.80	**2.70**	0.72
666.81	2.69	0.74
666.82	2.67	0.75
666.83	2.65	**0.75**
666.84	2.61	0.75
666.85	2.53	0.74
666.86	2.41	0.71

Stage-Area-Storage for Reach 11R: inlet 7 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.0	0
666.28	0.0	0
666.30	0.0	0
666.32	0.0	0
666.34	0.0	0
666.36	0.0	0
666.38	0.0	0
666.40	0.0	0
666.42	0.0	0
666.44	0.0	0
666.46	0.0	0
666.48	0.0	0
666.50	0.0	0
666.52	0.0	0
666.54	0.0	1
666.56	0.0	3
666.58	0.1	4
666.60	0.1	5
666.62	0.1	7
666.64	0.1	8
666.66	0.2	9
666.68	0.2	11
666.70	0.2	12
666.72	0.2	13
666.74	0.2	14
666.76	0.2	15
666.78	0.3	16
666.80	0.3	17
666.82	0.3	17
666.84	0.3	18
666.86	**0.3**	**18**

Summary for Reach 12R: MH6 18"

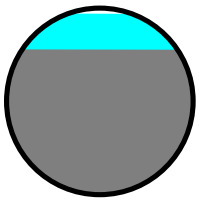
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 106% of Manning's capacity
[62] Hint: Exceeded Reach 11R OUTLET depth by 0.02' @ 12.24 hrs

Inflow Area = 0.099 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 0.73 cfs @ 12.15 hrs, Volume= 0.057 af
Outflow = 0.73 cfs @ 12.15 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.1 min

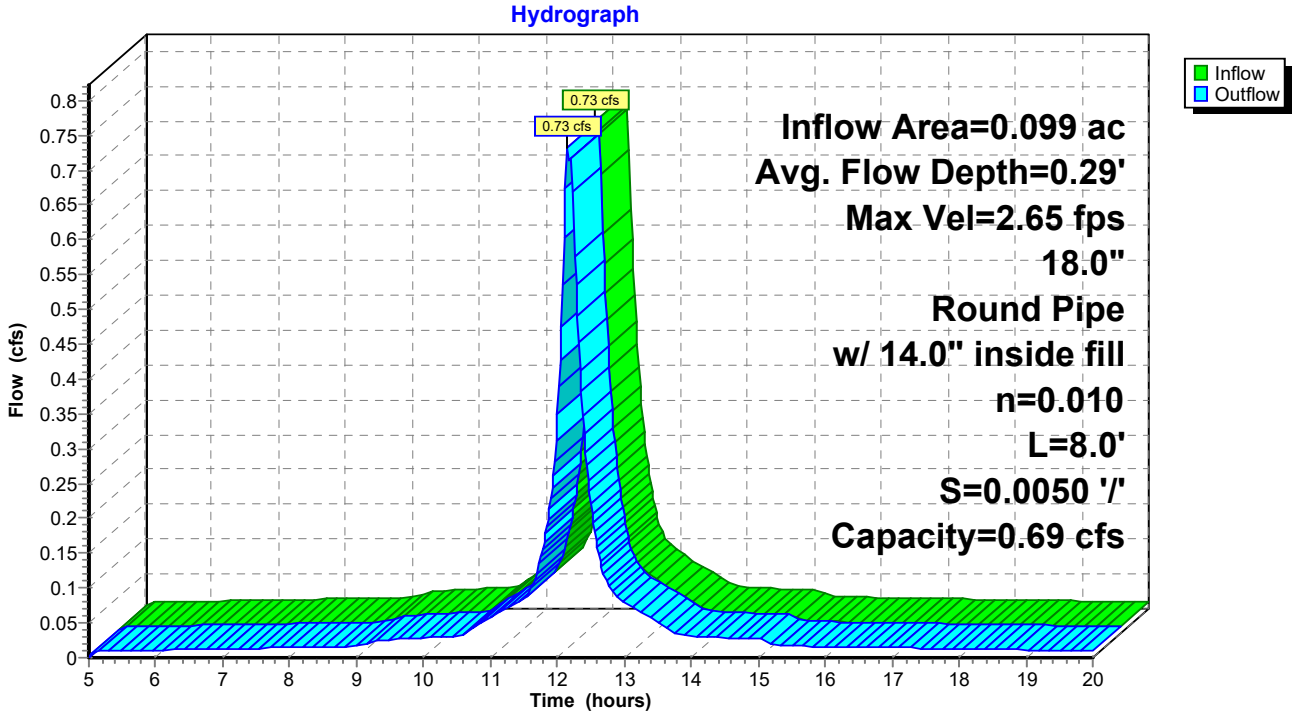
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.65 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 0.90 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 12.15 hrs
Average Depth at Peak Storage= 1.46' above invert (0.29' above fill)
Bank-Full Depth= 1.50' above invert (0.33' above fill) Flow Area= 0.3 sf, Capacity= 0.69 cfs

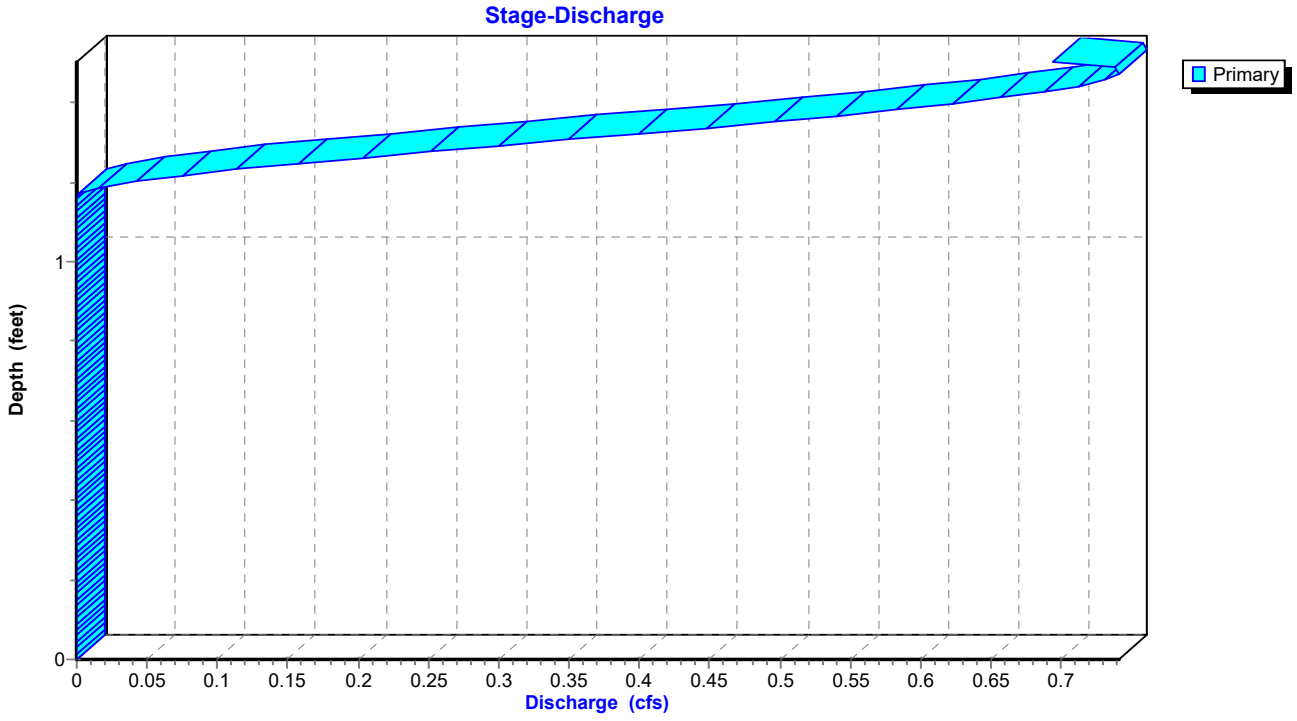
18.0" Round Pipe w/ 14.0" inside fill
n= 0.010
Length= 8.0' Slope= 0.0050 '/'
Inlet Invert= 665.04', Outlet Invert= 665.00'



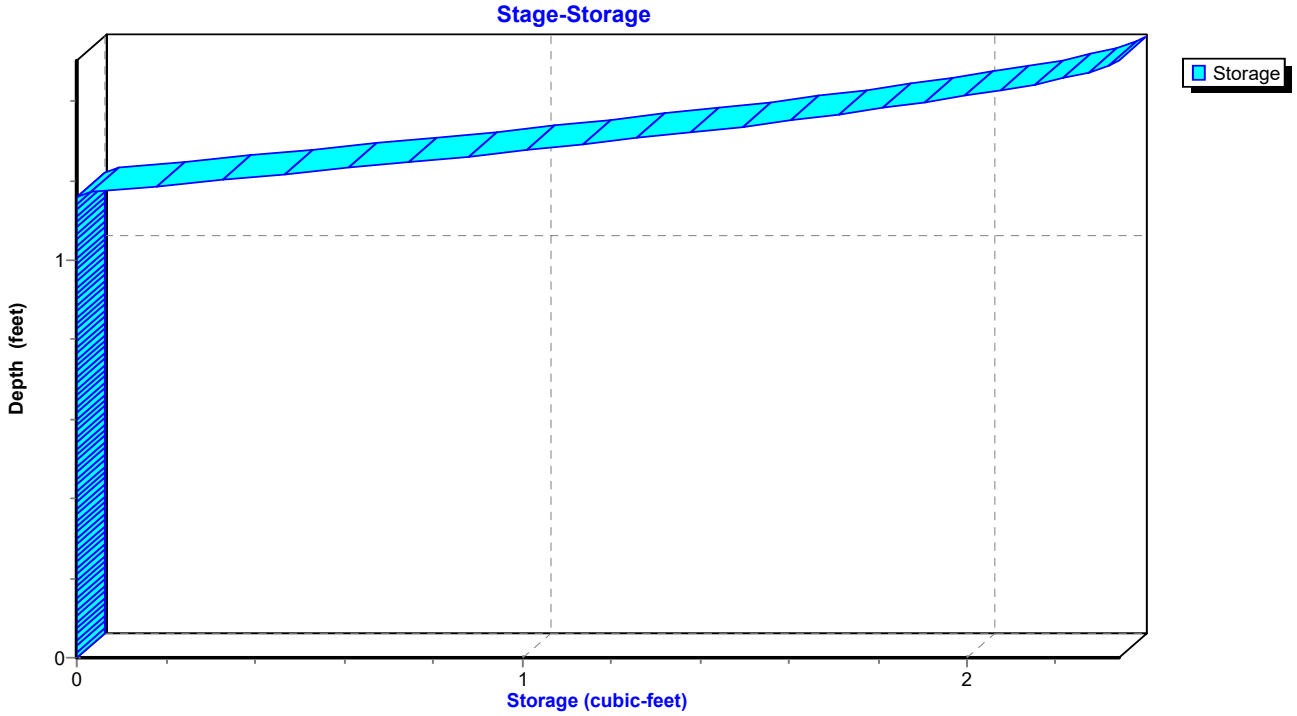
Reach 12R: MH6 18"



Reach 12R: MH6 18"



Reach 12R: MH6 18"



Hydrograph for Reach 12R: MH6 18"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	666.21	0.00
5.40	0.01	0	666.22	0.01
5.80	0.01	0	666.22	0.01
6.20	0.01	0	666.22	0.01
6.60	0.01	0	666.22	0.01
7.00	0.01	0	666.22	0.01
7.40	0.01	0	666.22	0.01
7.80	0.01	0	666.22	0.01
8.20	0.01	0	666.22	0.01
8.60	0.02	0	666.22	0.02
9.00	0.02	0	666.23	0.02
9.40	0.03	0	666.23	0.03
9.80	0.03	0	666.23	0.03
10.20	0.03	0	666.23	0.03
10.60	0.03	0	666.23	0.03
11.00	0.06	0	666.25	0.06
11.40	0.08	0	666.26	0.08
11.80	**0.17**	**1**	**666.29**	**0.17**
12.20	**0.71**	**2**	**666.48**	**0.71**
12.60	0.16	1	666.29	0.16
13.00	0.08	0	666.26	0.08
13.40	0.06	0	666.25	0.06
13.80	0.03	0	666.24	0.03
14.20	0.03	0	666.23	0.03
14.60	0.03	0	666.23	0.03
15.00	0.03	0	666.23	0.03
15.40	0.02	0	666.23	0.02
15.80	0.02	0	666.23	0.02
16.20	0.02	0	666.22	0.02
16.60	0.02	0	666.22	0.02
17.00	0.01	0	666.22	0.01
17.40	0.01	0	666.22	0.01
17.80	0.01	0	666.22	0.01
18.20	0.01	0	666.22	0.01
18.60	0.01	0	666.22	0.01
19.00	0.01	0	666.22	0.01
19.40	0.01	0	666.22	0.01
19.80	0.01	0	666.22	0.01

Stage-Discharge for Reach 12R: MH6 18"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.04	0.00	0.00
665.05	0.00	0.00
665.06	0.00	0.00
665.07	0.00	0.00
665.08	0.00	0.00
665.09	0.00	0.00
665.10	0.00	0.00
665.11	0.00	0.00
665.12	0.00	0.00
665.13	0.00	0.00
665.14	0.00	0.00
665.15	0.00	0.00
665.16	0.00	0.00
665.17	0.00	0.00
665.18	0.00	0.00
665.19	0.00	0.00
665.20	0.00	0.00
665.21	0.00	0.00
665.22	0.00	0.00
665.23	0.00	0.00
665.24	0.00	0.00
665.25	0.00	0.00
665.26	0.00	0.00
665.27	0.00	0.00
665.28	0.00	0.00
665.29	0.00	0.00
665.30	0.00	0.00
665.31	0.00	0.00
665.32	0.00	0.00
665.33	0.00	0.00
665.34	0.00	0.00
665.35	0.00	0.00
665.36	0.00	0.00
665.37	0.00	0.00
665.38	0.00	0.00
665.39	0.00	0.00
665.40	0.00	0.00
665.41	0.00	0.00
665.42	0.00	0.00
665.43	0.00	0.00
665.44	0.00	0.00
665.45	0.00	0.00
665.46	0.00	0.00
665.47	0.00	0.00
665.48	0.00	0.00
665.49	0.00	0.00
665.50	0.00	0.00
665.51	0.00	0.00
665.52	0.00	0.00
665.53	0.00	0.00
665.54	0.00	0.00
665.55	0.00	0.00
665.56	0.00	0.00
665.57	0.00	0.00
665.58	0.00	0.00
665.59	0.00	0.00
665.60	0.00	0.00
665.61	0.00	0.00
665.62	0.00	0.00
665.63	0.00	0.00
665.64	0.00	0.00
665.65	0.00	0.00
665.66	0.00	0.00
665.67	0.00	0.00
665.68	0.00	0.00
665.69	0.00	0.00
665.70	0.00	0.00
665.71	0.00	0.00
665.72	0.00	0.00
665.73	0.00	0.00
665.74	0.00	0.00
665.75	0.00	0.00
665.76	0.00	0.00
665.77	0.00	0.00
665.78	0.00	0.00
665.79	0.00	0.00
665.80	0.00	0.00
665.81	0.00	0.00
665.82	0.00	0.00
665.83	0.00	0.00
665.84	0.00	0.00
665.85	0.00	0.00
665.86	0.00	0.00
665.87	0.00	0.00
665.88	0.00	0.00
665.89	0.00	0.00
665.90	0.00	0.00
665.91	0.00	0.00
665.92	0.00	0.00
665.93	0.00	0.00
665.94	0.00	0.00
665.95	0.00	0.00
665.96	0.00	0.00
665.97	0.00	0.00
665.98	0.00	0.00
665.99	0.00	0.00
666.00	0.00	0.00
666.01	0.00	0.00
666.02	0.00	0.00
666.03	0.00	0.00
666.04	0.00	0.00
666.05	0.00	0.00
666.06	0.00	0.00
666.07	0.00	0.00
666.08	0.00	0.00
666.09	0.00	0.00
666.10	0.00	0.00
666.11	0.00	0.00
666.12	0.00	0.00
666.13	0.00	0.00
666.14	0.00	0.00
666.15	0.00	0.00
666.16	0.00	0.00
666.17	0.00	0.00
666.18	0.00	0.00
666.19	0.00	0.00
666.20	0.08	0.00
666.21	0.23	0.00
666.22	0.55	0.01
666.23	0.82	0.02
666.24	1.03	0.04
666.25	1.20	0.06
666.26	1.36	0.09
666.27	1.50	0.11
666.28	1.63	0.14
666.29	1.74	0.17
666.30	1.85	0.20
666.31	1.95	0.24
666.32	2.04	0.27
666.33	2.12	0.30
666.34	2.19	0.33
666.35	2.26	0.37
666.36	2.32	0.40
666.37	2.38	0.43
666.38	2.43	0.46
666.39	2.47	0.50
666.40	2.51	0.53
666.41	2.55	0.56
666.42	2.58	0.58
666.43	2.60	0.61
666.44	2.62	0.63
666.45	2.64	0.66
666.46	2.65	0.68
666.47	2.65	0.70
666.48	**2.65**	0.71
666.49	2.65	0.73
666.50	2.63	0.73
666.51	2.61	**0.74**
666.52	2.57	0.74
666.53	2.49	0.72
666.54	2.38	0.69

Stage-Area-Storage for Reach 12R: MH6 18"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.04	0.0	0
665.06	0.0	0
665.08	0.0	0
665.10	0.0	0
665.12	0.0	0
665.14	0.0	0
665.16	0.0	0
665.18	0.0	0
665.20	0.0	0
665.22	0.0	0
665.24	0.0	0
665.26	0.0	0
665.28	0.0	0
665.30	0.0	0
665.32	0.0	0
665.34	0.0	0
665.36	0.0	0
665.38	0.0	0
665.40	0.0	0
665.42	0.0	0
665.44	0.0	0
665.46	0.0	0
665.48	0.0	0
665.50	0.0	0
665.52	0.0	0
665.54	0.0	0
665.56	0.0	0
665.58	0.0	0
665.60	0.0	0
665.62	0.0	0
665.64	0.0	0
665.66	0.0	0
665.68	0.0	0
665.70	0.0	0
665.72	0.0	0
665.74	0.0	0
665.76	0.0	0
665.78	0.0	0
665.80	0.0	0
665.82	0.0	0
665.84	0.0	0
665.86	0.0	0
665.88	0.0	0
665.90	0.0	0
665.92	0.0	0
665.94	0.0	0
665.96	0.0	0
665.98	0.0	0
666.00	0.0	0
666.02	0.0	0
666.04	0.0	0
666.06	0.0	0
666.08	0.0	0
666.10	0.0	0
666.12	0.0	0
666.14	0.0	0
666.16	0.0	0
666.18	0.0	0
666.20	0.0	0
666.22	0.0	0
666.24	0.0	0
666.26	0.1	1
666.28	0.1	1
666.30	0.1	1
666.32	0.1	1
666.34	0.2	1
666.36	0.2	1
666.38	0.2	2
666.40	0.2	2
666.42	0.2	2
666.44	0.2	2
666.46	0.3	2
666.48	0.3	2
666.50	0.3	2
666.52	0.3	2
666.54	**0.3**	**2**

Summary for Reach 13R: to isolator 6"

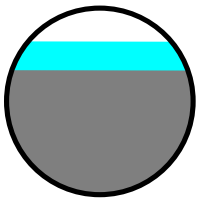
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)

Inflow Area = 0.041 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 0.31 cfs @ 12.21 hrs, Volume= 0.024 af
Outflow = 0.31 cfs @ 12.21 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.0 min

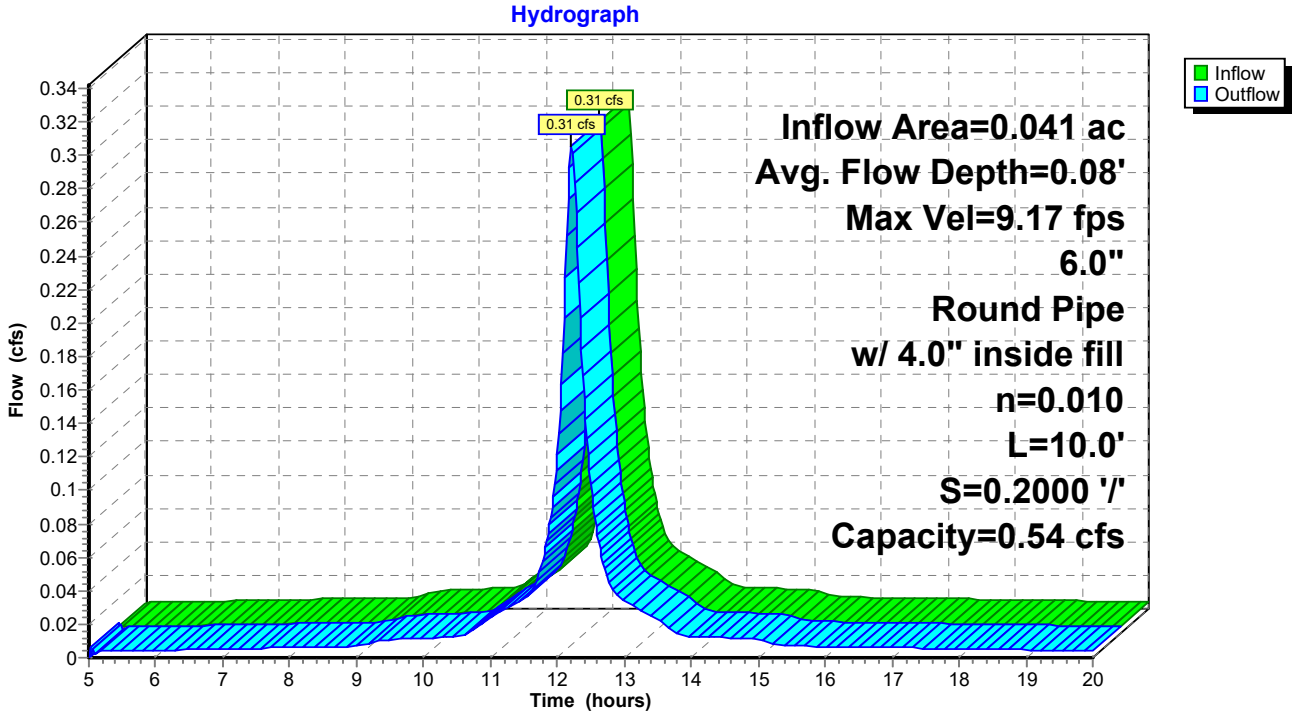
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 9.17 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.86 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.41' above invert (0.08' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

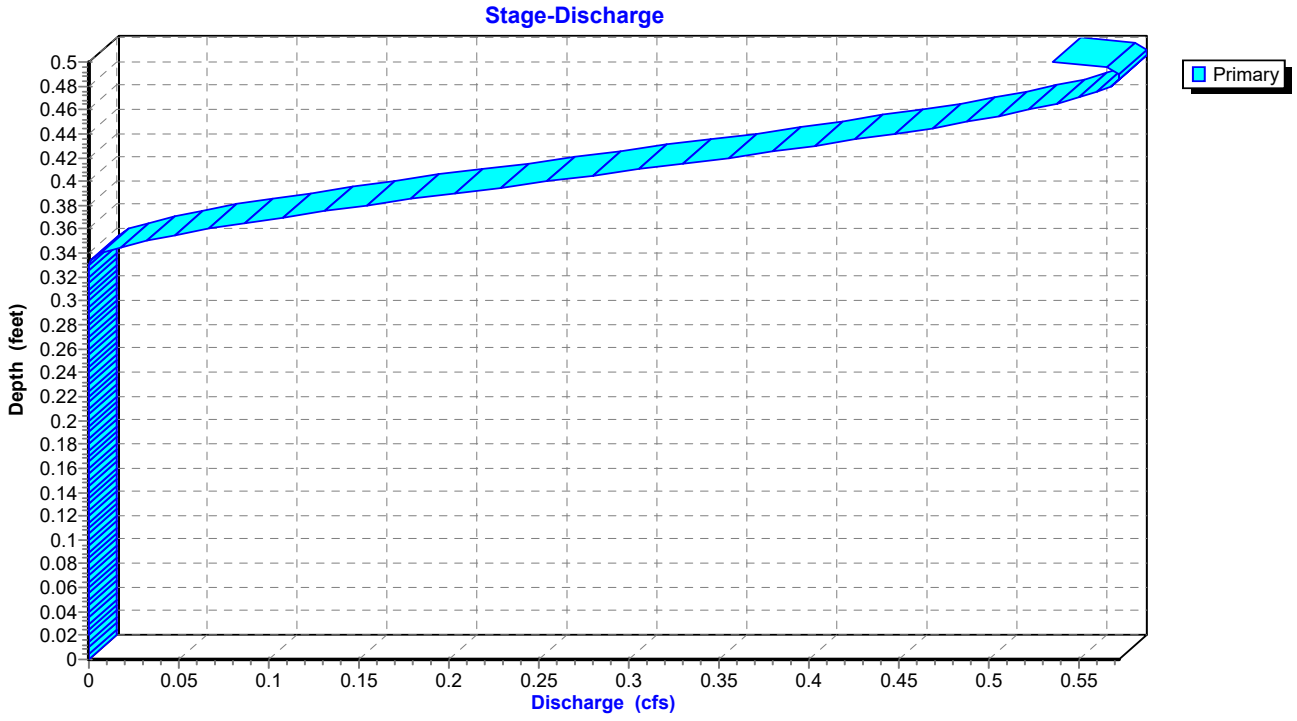
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



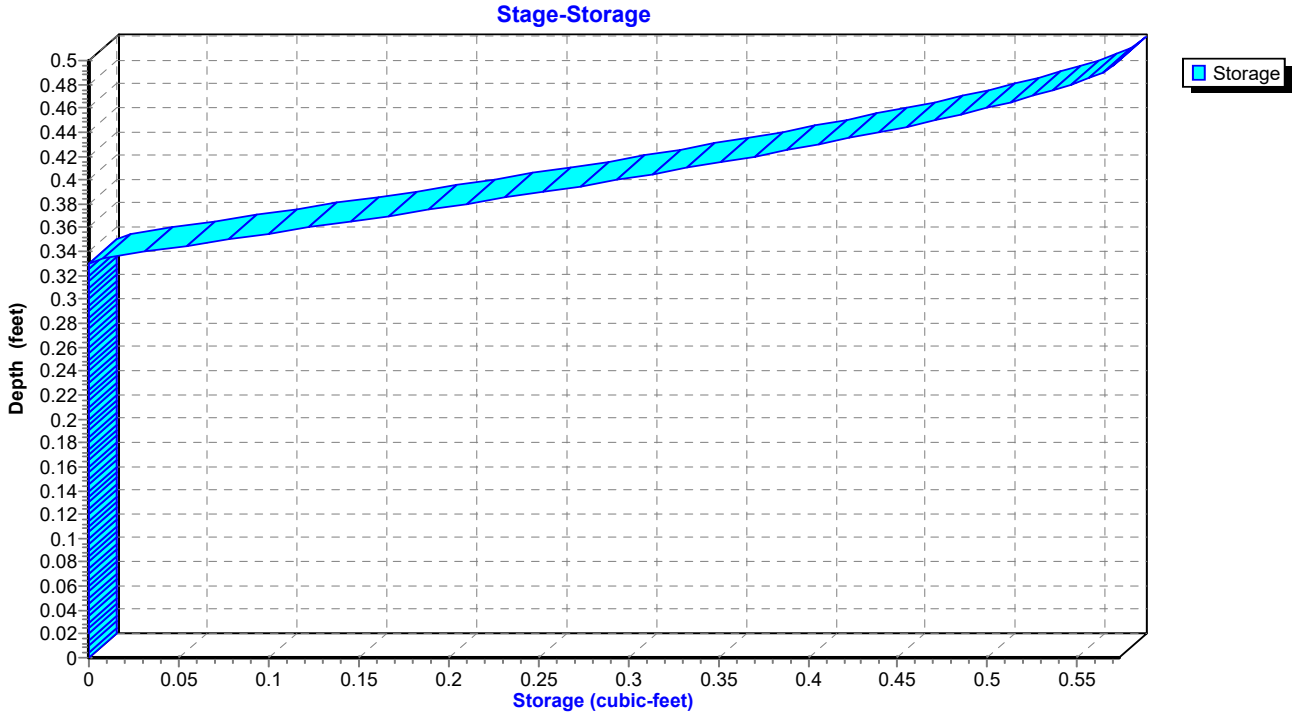
Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Reach 13R: to isolator 6"



Hydrograph for Reach 13R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.34	0.00
5.80	0.00	0	668.34	0.00
6.20	0.00	0	668.34	0.00
6.60	0.00	0	668.34	0.00
7.00	0.01	0	668.34	0.01
7.40	0.01	0	668.34	0.01
7.80	0.01	0	668.34	0.01
8.20	0.01	0	668.34	0.01
8.60	0.01	0	668.34	0.01
9.00	0.01	0	668.34	0.01
9.40	0.01	0	668.34	0.01
9.80	0.01	0	668.34	0.01
10.20	0.01	0	668.34	0.01
10.60	0.01	0	668.34	0.01
11.00	0.02	0	668.35	0.02
11.40	0.03	0	668.35	0.03
11.80	0.06	0	668.36	0.06
12.20	**0.30**	**0**	**668.41**	**0.30**
12.60	**0.07**	**0**	**668.36**	**0.07**
13.00	0.03	0	668.35	0.03
13.40	0.02	0	668.35	0.02
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.01	0	668.34	0.01
15.80	0.01	0	668.34	0.01
16.20	0.01	0	668.34	0.01
16.60	0.01	0	668.34	0.01
17.00	0.01	0	668.34	0.01
17.40	0.01	0	668.34	0.01
17.80	0.01	0	668.34	0.01
18.20	0.01	0	668.34	0.01
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 13R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 13R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 14R: to isolator 6"

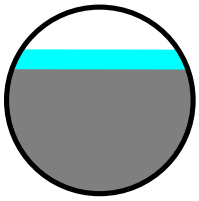
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.030 ac, 83.33% Impervious, Inflow Depth > 5.86" for 100-yr event
Inflow = 0.18 cfs @ 12.26 hrs, Volume= 0.015 af
Outflow = 0.18 cfs @ 12.26 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min

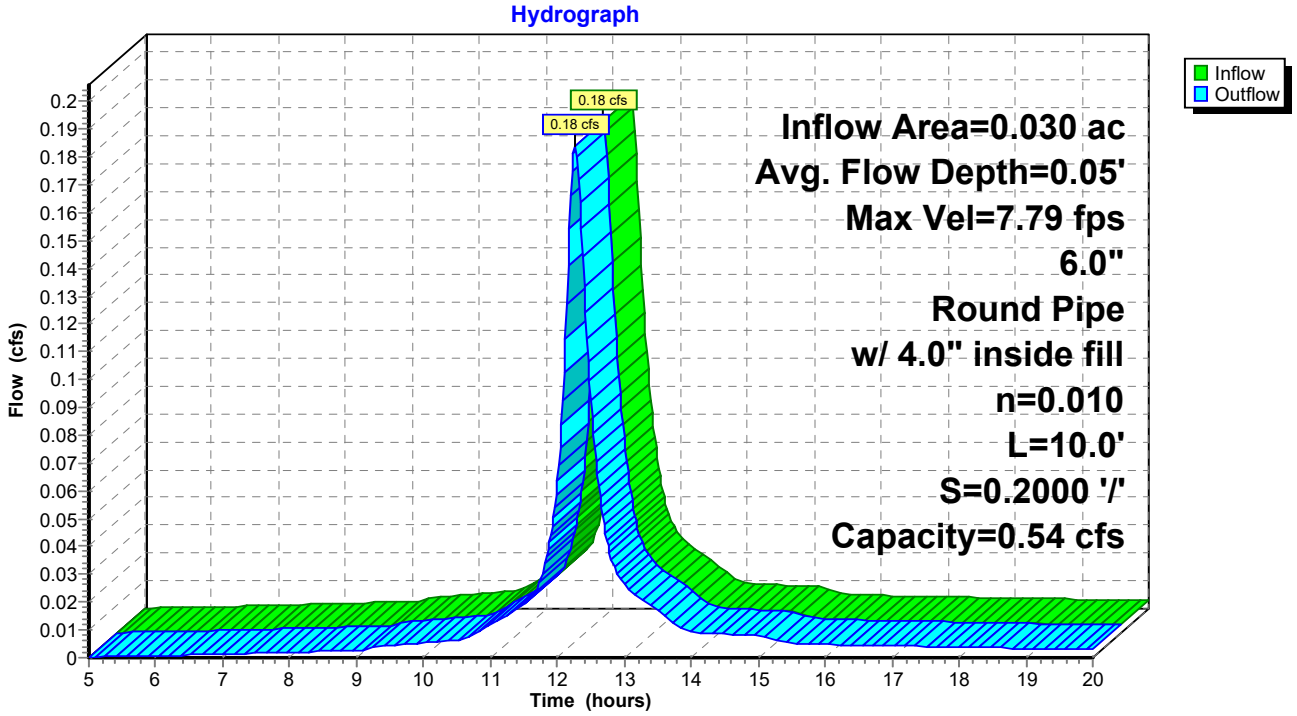
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 7.79 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.33 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.26 hrs
Average Depth at Peak Storage= 0.39' above invert (0.05' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

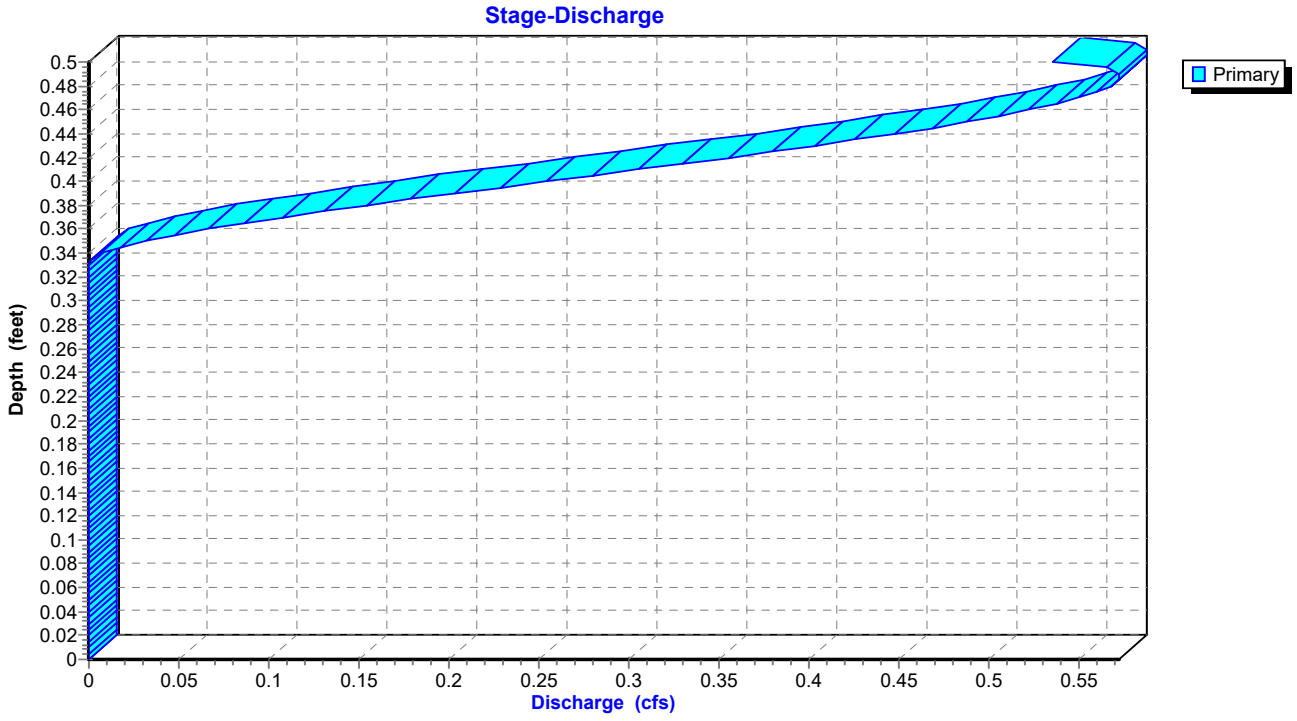
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



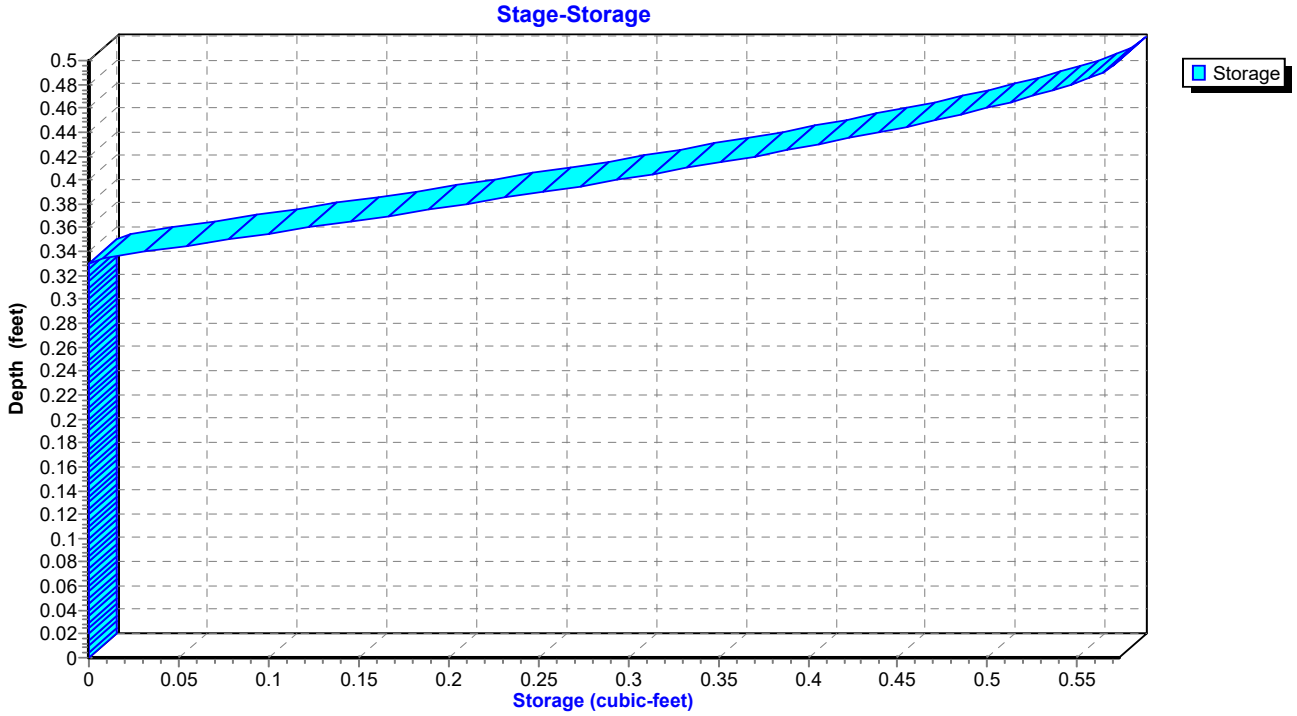
Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Reach 14R: to isolator 6"



Hydrograph for Reach 14R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.34	0.00
6.60	0.00	0	668.34	0.00
7.00	0.00	0	668.34	0.00
7.40	0.00	0	668.34	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.01	0	668.34	0.01
10.20	0.01	0	668.34	0.01
10.60	0.01	0	668.34	0.01
11.00	0.01	0	668.34	0.01
11.40	0.02	0	668.34	0.02
11.80	0.03	0	668.35	0.03
12.20	**0.17**	**0**	**668.38**	**0.17**
12.60	**0.07**	**0**	**668.36**	**0.07**
13.00	0.03	0	668.35	0.03
13.40	0.02	0	668.35	0.02
13.80	0.01	0	668.34	0.01
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.01	0	668.34	0.01
15.80	0.00	0	668.34	0.00
16.20	0.00	0	668.34	0.00
16.60	0.00	0	668.34	0.00
17.00	0.00	0	668.34	0.00
17.40	0.00	0	668.34	0.00
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 14R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 14R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 15R: to isolator 6"

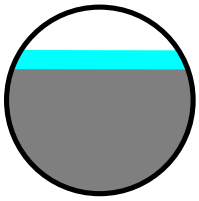
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 73.68% Impervious, Inflow Depth > 5.17" for 100-yr event
Inflow = 0.18 cfs @ 12.36 hrs, Volume= 0.016 af
Outflow = 0.18 cfs @ 12.37 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.0 min

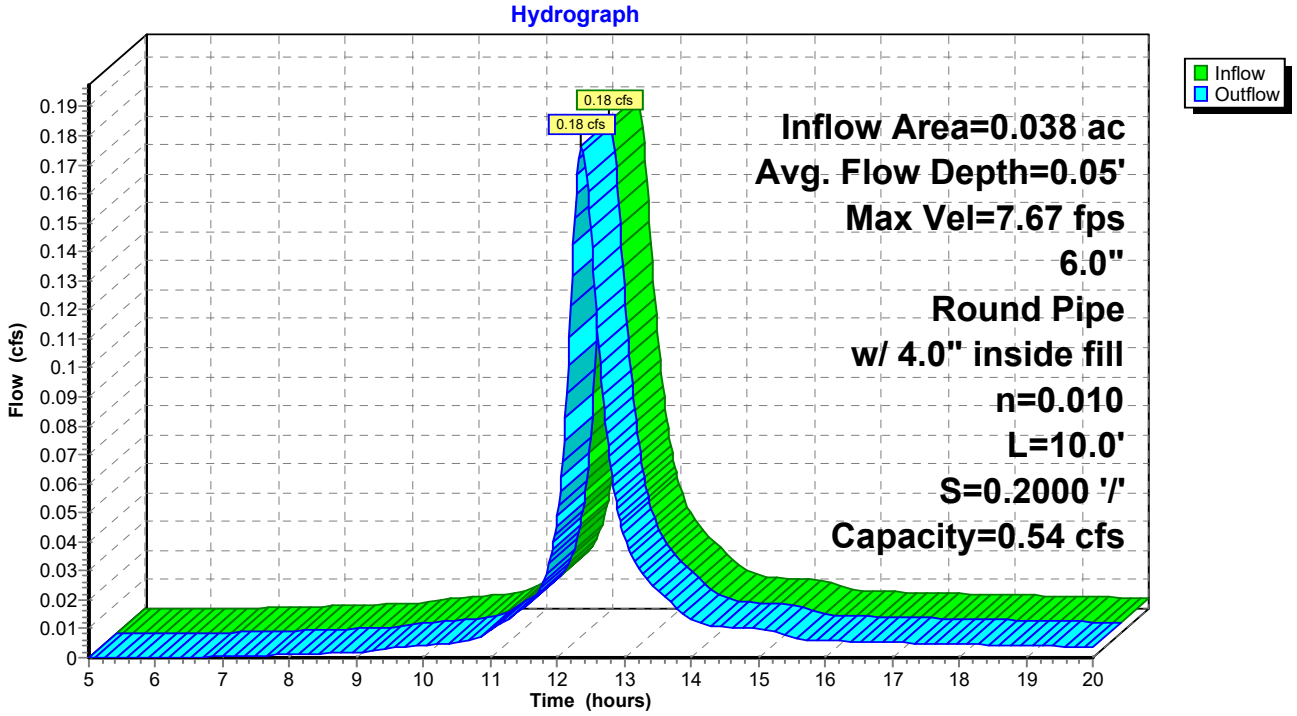
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 7.67 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.49 fps, Avg. Travel Time= 0.1 min

Peak Storage= 0 cf @ 12.37 hrs
Average Depth at Peak Storage= 0.38' above invert (0.05' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.54 cfs

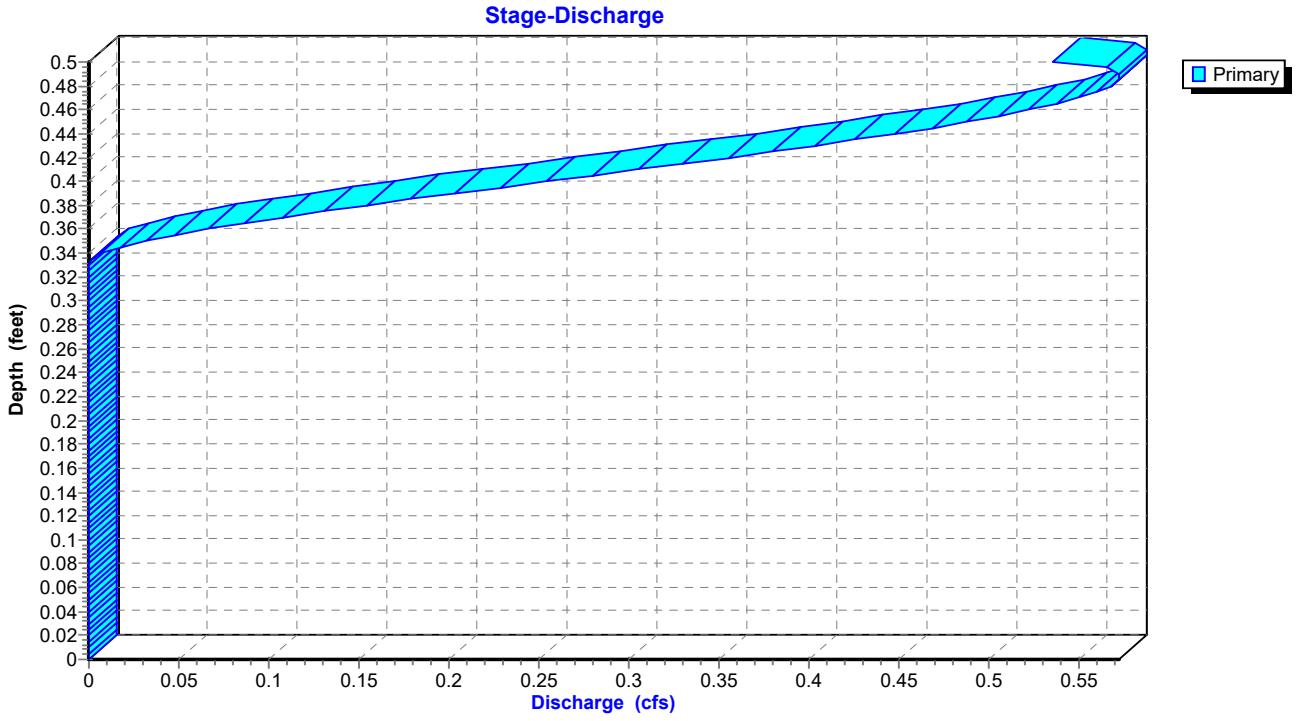
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 10.0' Slope= 0.2000 '/'
Inlet Invert= 668.00', Outlet Invert= 666.00'



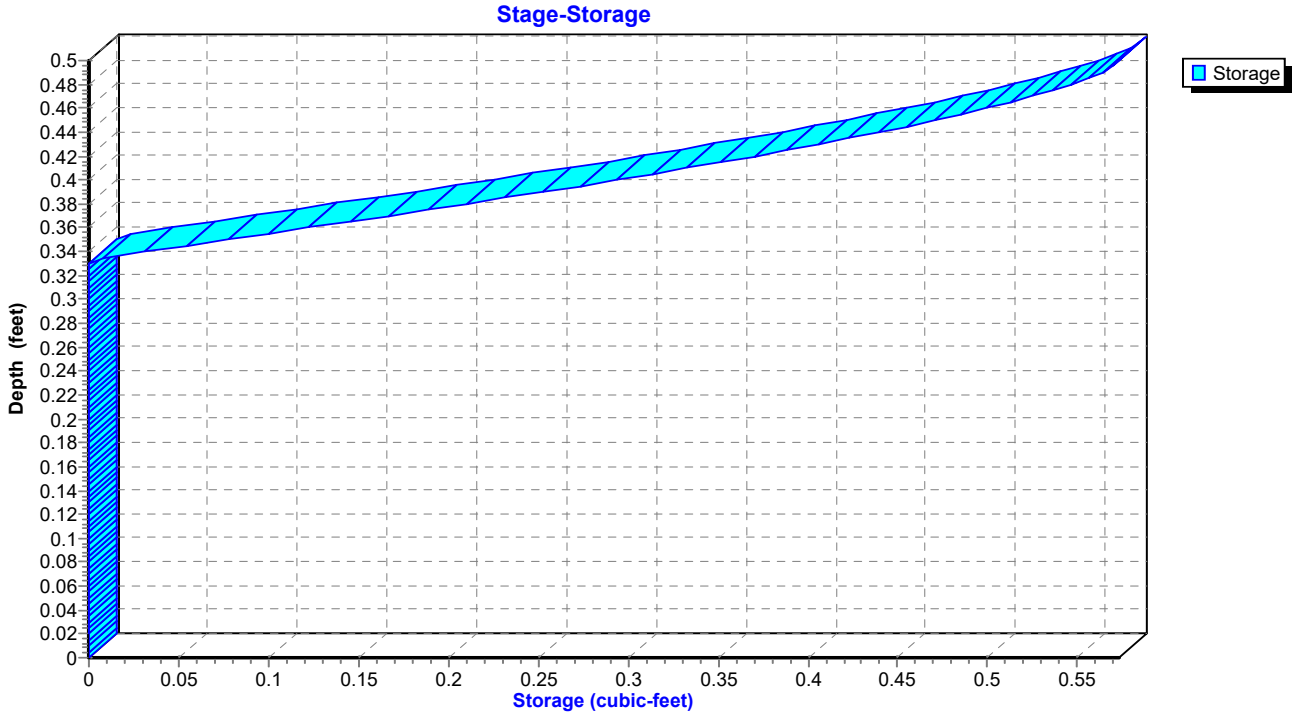
Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Reach 15R: to isolator 6"



Hydrograph for Reach 15R: to isolator 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.33	0.00
5.40	0.00	0	668.33	0.00
5.80	0.00	0	668.33	0.00
6.20	0.00	0	668.33	0.00
6.60	0.00	0	668.33	0.00
7.00	0.00	0	668.33	0.00
7.40	0.00	0	668.33	0.00
7.80	0.00	0	668.34	0.00
8.20	0.00	0	668.34	0.00
8.60	0.00	0	668.34	0.00
9.00	0.00	0	668.34	0.00
9.40	0.00	0	668.34	0.00
9.80	0.00	0	668.34	0.00
10.20	0.00	0	668.34	0.00
10.60	0.01	0	668.34	0.01
11.00	0.01	0	668.34	0.01
11.40	0.02	0	668.34	0.02
11.80	0.03	0	668.35	0.03
12.20	**0.12**	**0**	**668.37**	**0.12**
12.60	**0.11**	**0**	**668.37**	**0.11**
13.00	0.04	0	668.35	0.04
13.40	0.03	0	668.35	0.03
13.80	0.02	0	668.34	0.02
14.20	0.01	0	668.34	0.01
14.60	0.01	0	668.34	0.01
15.00	0.01	0	668.34	0.01
15.40	0.01	0	668.34	0.01
15.80	0.01	0	668.34	0.01
16.20	0.01	0	668.34	0.01
16.60	0.01	0	668.34	0.01
17.00	0.01	0	668.34	0.01
17.40	0.01	0	668.34	0.01
17.80	0.00	0	668.34	0.00
18.20	0.00	0	668.34	0.00
18.60	0.00	0	668.34	0.00
19.00	0.00	0	668.34	0.00
19.40	0.00	0	668.34	0.00
19.80	0.00	0	668.34	0.00

Stage-Discharge for Reach 15R: to isolator 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.00	0.00	0.00
668.01	0.00	0.00
668.02	0.00	0.00
668.03	0.00	0.00
668.04	0.00	0.00
668.05	0.00	0.00
668.06	0.00	0.00
668.07	0.00	0.00
668.08	0.00	0.00
668.09	0.00	0.00
668.10	0.00	0.00
668.11	0.00	0.00
668.12	0.00	0.00
668.13	0.00	0.00
668.14	0.00	0.00
668.15	0.00	0.00
668.16	0.00	0.00
668.17	0.00	0.00
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	2.30	0.01
668.35	4.09	0.03
668.36	5.41	0.07
668.37	6.46	0.11
668.38	7.33	0.15
668.39	8.06	0.20
668.40	8.66	0.25
668.41	9.17	0.31
668.42	9.59	0.35
668.43	9.92	0.40
668.44	10.18	0.45
668.45	10.36	0.49
668.46	10.46	0.52
668.47	**10.47**	0.55
668.48	10.38	0.57
668.49	10.14	**0.57**
668.50	9.34	0.54

Stage-Area-Storage for Reach 15R: to isolator 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.00	0.0	0
668.01	0.0	0
668.02	0.0	0
668.03	0.0	0
668.04	0.0	0
668.05	0.0	0
668.06	0.0	0
668.07	0.0	0
668.08	0.0	0
668.09	0.0	0
668.10	0.0	0
668.11	0.0	0
668.12	0.0	0
668.13	0.0	0
668.14	0.0	0
668.15	0.0	0
668.16	0.0	0
668.17	0.0	0
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.1	1
668.48	0.1	1
668.49	0.1	1
668.50	**0.1**	**1**

Summary for Reach 16R: inlet 2 12"

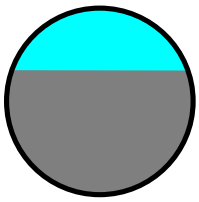
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 173% of Manning's capacity
[76] Warning: Detained 0.008 af (Pond w/culvert advised)

Inflow Area = 0.150 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 0.95 cfs @ 12.28 hrs, Volume= 0.086 af
Outflow = 0.55 cfs @ 12.14 hrs, Volume= 0.086 af, Atten= 42%, Lag= 0.0 min

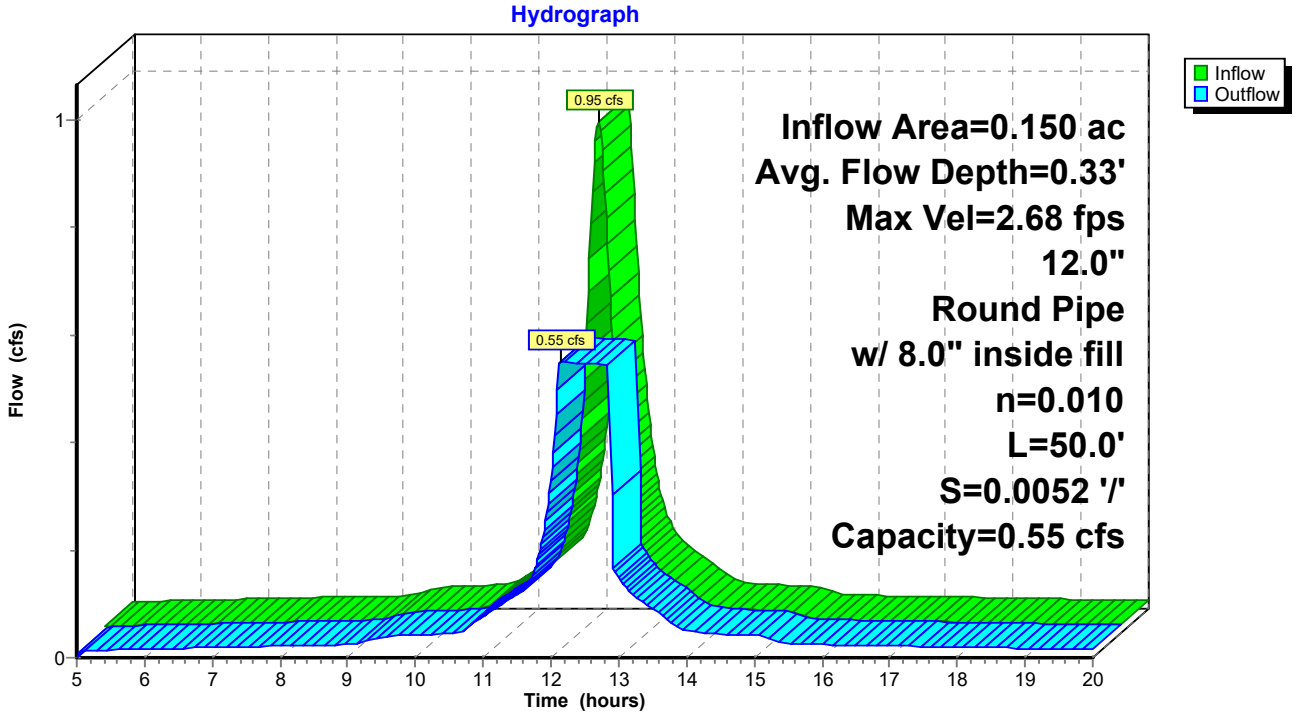
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.68 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.14 fps, Avg. Travel Time= 0.7 min

Peak Storage= 11 cf @ 12.14 hrs
Average Depth at Peak Storage= 1.00' above invert (0.33' above fill)
Bank-Full Depth= 1.00' above invert (0.33' above fill) Flow Area= 0.2 sf, Capacity= 0.55 cfs

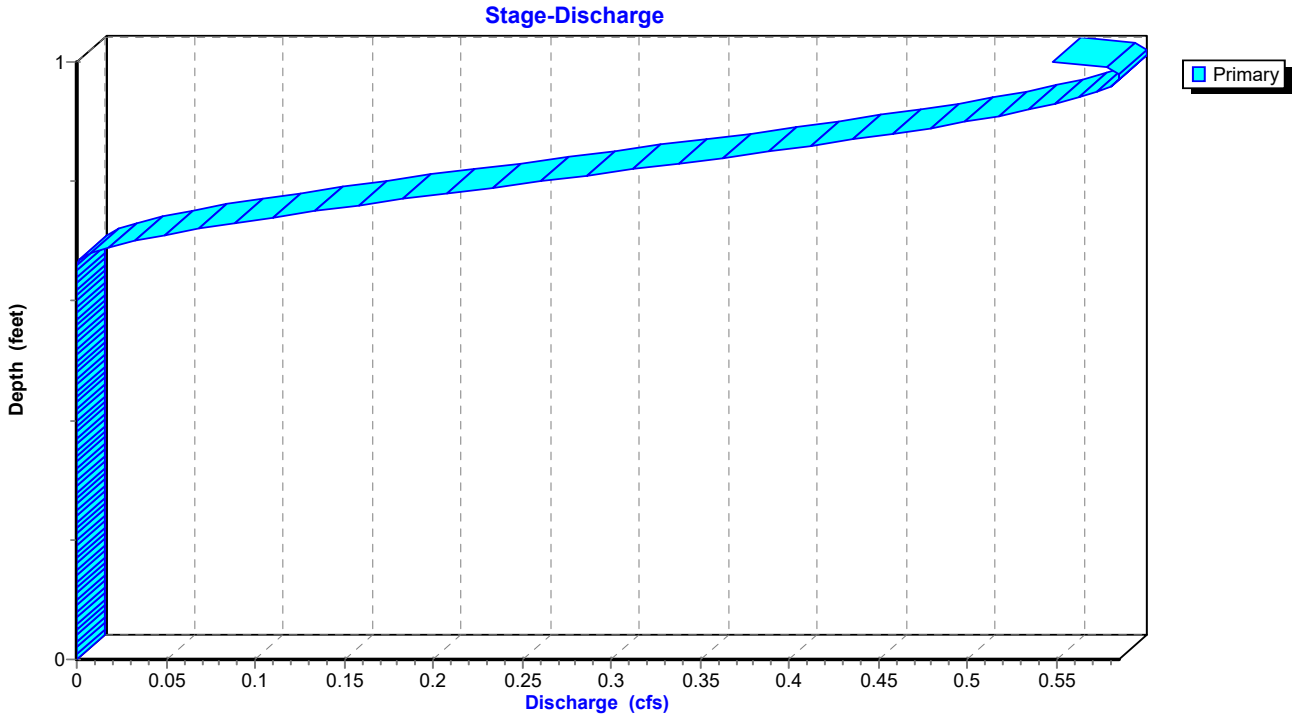
12.0" Round Pipe w/ 8.0" inside fill
n= 0.010
Length= 50.0' Slope= 0.0052 '/'
Inlet Invert= 666.21', Outlet Invert= 665.95'



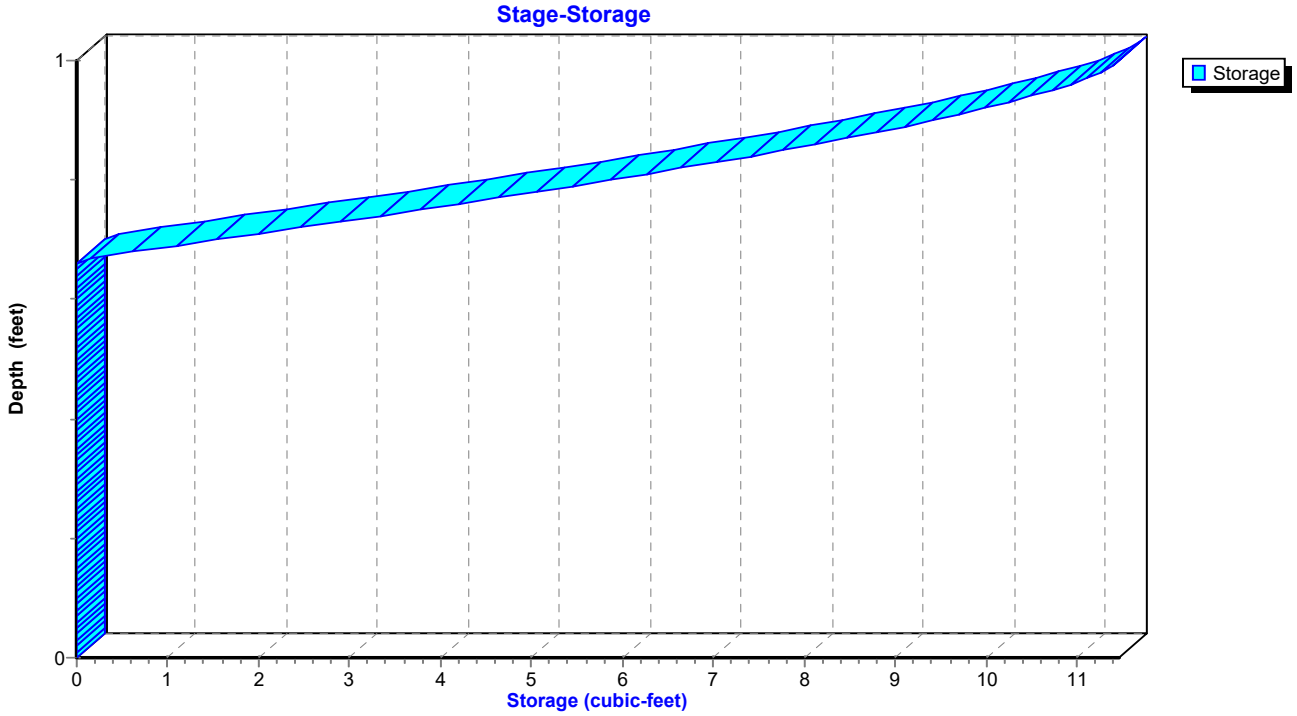
Reach 16R: inlet 2 12"



Reach 16R: inlet 2 12"



Reach 16R: inlet 2 12"



Hydrograph for Reach 16R: inlet 2 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.88	0.00
5.40	0.01	1	666.90	0.01
5.80	0.02	1	666.90	0.02
6.20	0.02	1	666.90	0.02
6.60	0.02	1	666.90	0.02
7.00	0.02	1	666.90	0.02
7.40	0.02	1	666.90	0.02
7.80	0.02	1	666.90	0.02
8.20	0.02	1	666.90	0.02
8.60	0.02	1	666.90	0.02
9.00	0.02	1	666.90	0.02
9.40	0.04	2	666.91	0.04
9.80	0.04	2	666.92	0.04
10.20	0.04	2	666.92	0.04
10.60	0.05	2	666.92	0.05
11.00	0.08	3	666.93	0.08
11.40	0.11	3	666.95	0.11
11.80	0.19	**5**	**666.98**	**0.18**
12.20	**0.82**	**11**	**667.21**	**0.55**
12.60	**0.39**	11	667.21	0.55
13.00	0.15	4	666.97	0.15
13.40	0.10	3	666.94	0.10
13.80	0.06	2	666.93	0.06
14.20	0.05	2	666.92	0.05
14.60	0.04	2	666.92	0.04
15.00	0.04	2	666.92	0.04
15.40	0.03	1	666.91	0.03
15.80	0.03	1	666.90	0.03
16.20	0.02	1	666.90	0.02
16.60	0.02	1	666.90	0.02
17.00	0.02	1	666.90	0.02
17.40	0.02	1	666.90	0.02
17.80	0.02	1	666.90	0.02
18.20	0.02	1	666.90	0.02
18.60	0.02	1	666.90	0.02
19.00	0.02	1	666.90	0.02
19.40	0.02	1	666.90	0.02
19.80	0.02	1	666.90	0.02

Stage-Discharge for Reach 16R: inlet 2 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
666.21	0.00	0.00
666.22	0.00	0.00
666.23	0.00	0.00
666.24	0.00	0.00
666.25	0.00	0.00
666.26	0.00	0.00
666.27	0.00	0.00
666.28	0.00	0.00
666.29	0.00	0.00
666.30	0.00	0.00
666.31	0.00	0.00
666.32	0.00	0.00
666.33	0.00	0.00
666.34	0.00	0.00
666.35	0.00	0.00
666.36	0.00	0.00
666.37	0.00	0.00
666.38	0.00	0.00
666.39	0.00	0.00
666.40	0.00	0.00
666.41	0.00	0.00
666.42	0.00	0.00
666.43	0.00	0.00
666.44	0.00	0.00
666.45	0.00	0.00
666.46	0.00	0.00
666.47	0.00	0.00
666.48	0.00	0.00
666.49	0.00	0.00
666.50	0.00	0.00
666.51	0.00	0.00
666.52	0.00	0.00
666.53	0.00	0.00
666.54	0.00	0.00
666.55	0.00	0.00
666.56	0.00	0.00
666.57	0.00	0.00
666.58	0.00	0.00
666.59	0.00	0.00
666.60	0.00	0.00
666.61	0.00	0.00
666.62	0.00	0.00
666.63	0.00	0.00
666.64	0.00	0.00
666.65	0.00	0.00
666.66	0.00	0.00
666.67	0.00	0.00
666.68	0.00	0.00
666.69	0.00	0.00
666.70	0.00	0.00
666.71	0.00	0.00
666.72	0.00	0.00
666.73	0.00	0.00
666.74	0.00	0.00
666.75	0.00	0.00
666.76	0.00	0.00
666.77	0.00	0.00
666.78	0.00	0.00
666.79	0.00	0.00
666.80	0.00	0.00
666.81	0.00	0.00
666.82	0.00	0.00
666.83	0.00	0.00
666.84	0.00	0.00
666.85	0.00	0.00
666.86	0.00	0.00
666.87	0.00	0.00
666.88	0.24	0.00
666.89	0.59	0.01
666.90	0.84	0.02
666.91	1.05	0.03
666.92	1.23	0.05
666.93	1.38	0.07
666.94	1.53	0.09
666.95	1.65	0.11
666.96	1.77	0.13
666.97	1.88	0.16
666.98	1.97	0.18
666.99	2.06	0.21
667.00	2.14	0.23
667.01	2.22	0.26
667.02	2.29	0.29
667.03	2.35	0.31
667.04	2.40	0.34
667.05	2.45	0.36
667.06	2.50	0.39
667.07	2.54	0.41
667.08	2.58	0.44
667.09	2.61	0.46
667.10	2.63	0.48
667.11	2.65	0.50
667.12	2.67	0.52
667.13	2.68	0.53
667.14	**2.68**	0.55
667.15	2.68	0.56
667.16	2.67	0.57
667.17	2.66	0.58
667.18	2.63	0.59
667.19	2.60	**0.59**
667.20	2.54	0.58
667.21	2.39	0.55

Stage-Area-Storage for Reach 16R: inlet 2 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
666.21	0.0	0	666.72	0.0	0
666.22	0.0	0	666.73	0.0	0
666.23	0.0	0	666.74	0.0	0
666.24	0.0	0	666.75	0.0	0
666.25	0.0	0	666.76	0.0	0
666.26	0.0	0	666.77	0.0	0
666.27	0.0	0	666.78	0.0	0
666.28	0.0	0	666.79	0.0	0
666.29	0.0	0	666.80	0.0	0
666.30	0.0	0	666.81	0.0	0
666.31	0.0	0	666.82	0.0	0
666.32	0.0	0	666.83	0.0	0
666.33	0.0	0	666.84	0.0	0
666.34	0.0	0	666.85	0.0	0
666.35	0.0	0	666.86	0.0	0
666.36	0.0	0	666.87	0.0	0
666.37	0.0	0	666.88	0.0	0
666.38	0.0	0	666.89	0.0	1
666.39	0.0	0	666.90	0.0	1
666.40	0.0	0	666.91	0.0	2
666.41	0.0	0	666.92	0.0	2
666.42	0.0	0	666.93	0.0	2
666.43	0.0	0	666.94	0.1	3
666.44	0.0	0	666.95	0.1	3
666.45	0.0	0	666.96	0.1	4
666.46	0.0	0	666.97	0.1	4
666.47	0.0	0	666.98	0.1	5
666.48	0.0	0	666.99	0.1	5
666.49	0.0	0	667.00	0.1	5
666.50	0.0	0	667.01	0.1	6
666.51	0.0	0	667.02	0.1	6
666.52	0.0	0	667.03	0.1	7
666.53	0.0	0	667.04	0.1	7
666.54	0.0	0	667.05	0.1	7
666.55	0.0	0	667.06	0.2	8
666.56	0.0	0	667.07	0.2	8
666.57	0.0	0	667.08	0.2	8
666.58	0.0	0	667.09	0.2	9
666.59	0.0	0	667.10	0.2	9
666.60	0.0	0	667.11	0.2	9
666.61	0.0	0	667.12	0.2	10
666.62	0.0	0	667.13	0.2	10
666.63	0.0	0	667.14	0.2	10
666.64	0.0	0	667.15	0.2	10
666.65	0.0	0	667.16	0.2	11
666.66	0.0	0	667.17	0.2	11
666.67	0.0	0	667.18	0.2	11
666.68	0.0	0	667.19	0.2	11
666.69	0.0	0	667.20	0.2	11
666.70	0.0	0	667.21	**0.2**	**11**
666.71	0.0	0			

Summary for Reach 17R: NDS2 6"

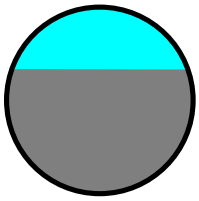
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 121% of Manning's capacity

Inflow Area = 0.038 ac, 42.11% Impervious, Inflow Depth > 3.20" for 100-yr event
Inflow = 0.10 cfs @ 12.44 hrs, Volume= 0.010 af
Outflow = 0.09 cfs @ 12.38 hrs, Volume= 0.010 af, Atten= 13%, Lag= 0.0 min

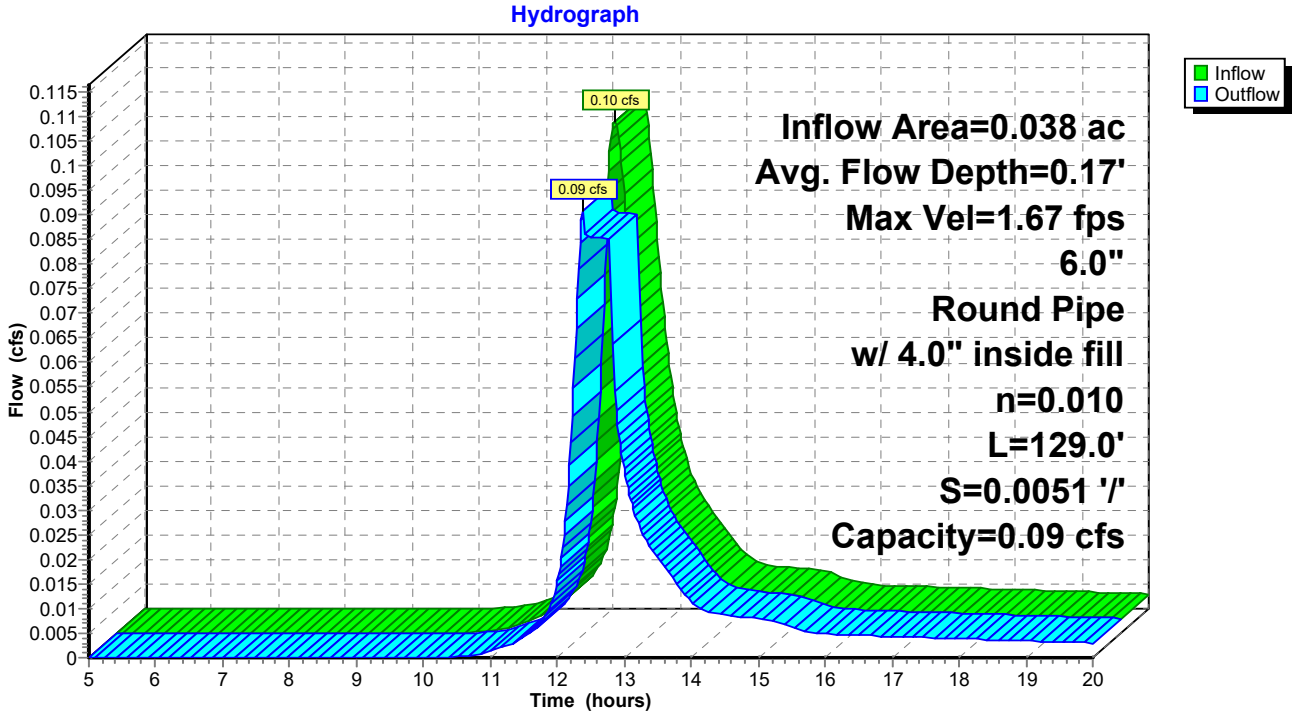
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.67 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 0.74 fps, Avg. Travel Time= 2.9 min

Peak Storage= 7 cf @ 12.38 hrs
Average Depth at Peak Storage= 0.50' above invert (0.17' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

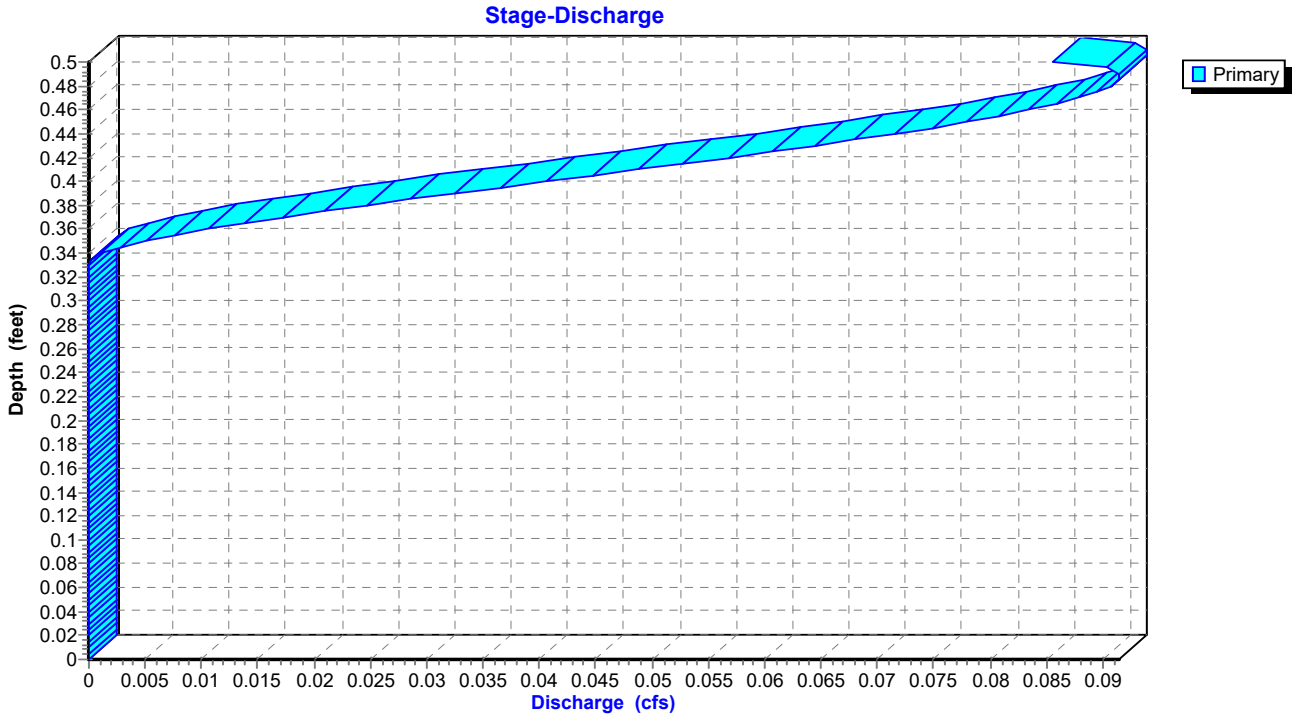
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0051 '/'
Inlet Invert= 668.84', Outlet Invert= 668.18'



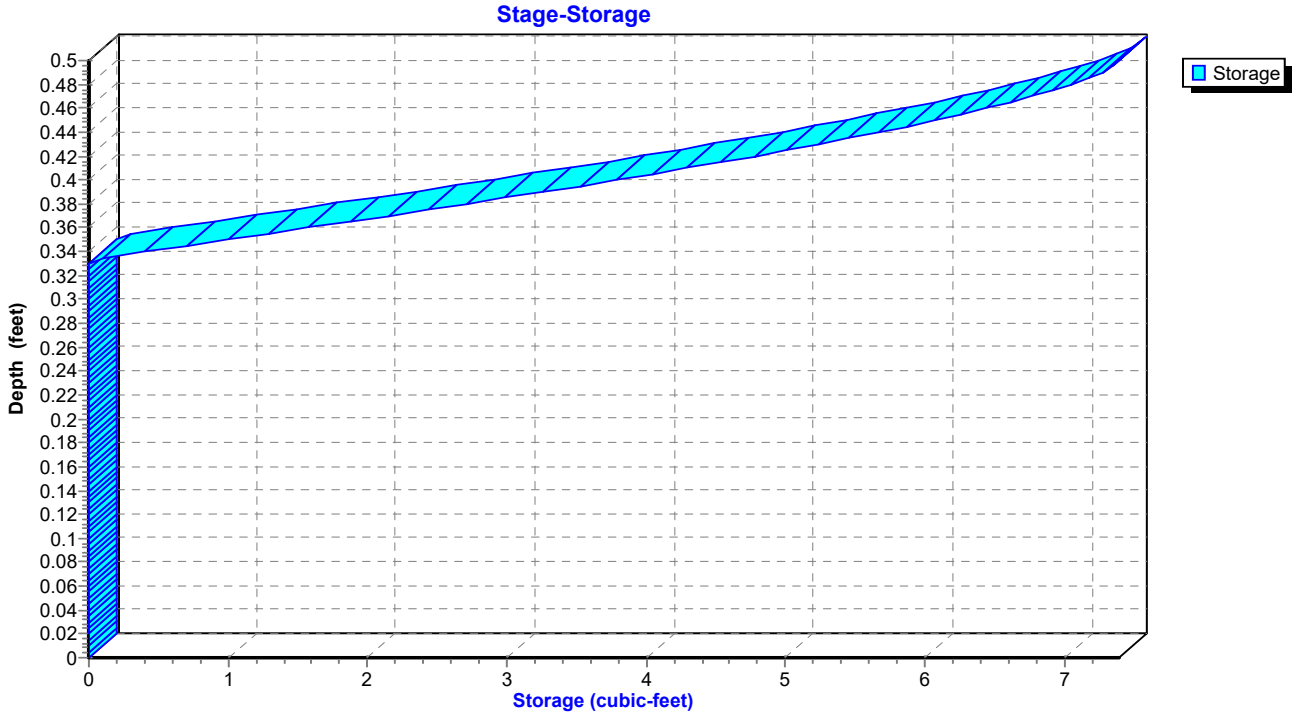
Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Reach 17R: NDS2 6"



Hydrograph for Reach 17R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.17	0.00
5.40	0.00	0	669.17	0.00
5.80	0.00	0	669.17	0.00
6.20	0.00	0	669.17	0.00
6.60	0.00	0	669.17	0.00
7.00	0.00	0	669.17	0.00
7.40	0.00	0	669.17	0.00
7.80	0.00	0	669.17	0.00
8.20	0.00	0	669.17	0.00
8.60	0.00	0	669.17	0.00
9.00	0.00	0	669.17	0.00
9.40	0.00	0	669.17	0.00
9.80	0.00	0	669.17	0.00
10.20	0.00	0	669.17	0.00
10.60	0.00	0	669.18	0.00
11.00	0.00	0	669.18	0.00
11.40	0.00	1	669.19	0.00
11.80	0.01	1	669.20	0.01
12.20	**0.05**	**4**	**669.25**	**0.04**
12.60	**0.09**	**7**	**669.34**	**0.09**
13.00	0.04	4	669.24	0.04
13.40	0.02	3	669.22	0.02
13.80	0.01	2	669.21	0.01
14.20	0.01	1	669.20	0.01
14.60	0.01	1	669.20	0.01
15.00	0.01	1	669.20	0.01
15.40	0.01	1	669.19	0.01
15.80	0.01	1	669.19	0.01
16.20	0.00	1	669.19	0.00
16.60	0.00	1	669.19	0.00
17.00	0.00	1	669.19	0.00
17.40	0.00	1	669.19	0.00
17.80	0.00	1	669.19	0.00
18.20	0.00	1	669.19	0.00
18.60	0.00	1	669.19	0.00
19.00	0.00	1	669.19	0.00
19.40	0.00	1	669.19	0.00
19.80	0.00	1	669.19	0.00

Stage-Discharge for Reach 17R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.84	0.00	0.00
668.85	0.00	0.00
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.37	0.00
669.19	0.65	0.01
669.20	0.87	0.01
669.21	1.03	0.02
669.22	1.17	0.02
669.23	1.29	0.03
669.24	1.39	0.04
669.25	1.47	0.05
669.26	1.53	0.06
669.27	1.59	0.06
669.28	1.63	0.07
669.29	1.66	0.08
669.30	1.67	0.08
669.31	**1.67**	0.09
669.32	1.66	0.09
669.33	1.62	**0.09**
669.34	1.49	0.09

Stage-Area-Storage for Reach 17R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.84	0.0	0
668.85	0.0	0
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	1
669.20	0.0	2
669.21	0.0	2
669.22	0.0	3
669.23	0.0	3
669.24	0.0	4
669.25	0.0	4
669.26	0.0	5
669.27	0.0	5
669.28	0.0	6
669.29	0.0	6
669.30	0.0	6
669.31	0.1	7
669.32	0.1	7
669.33	0.1	7
669.34	**0.1**	**7**

Summary for Reach 18R: inlet 3 6"

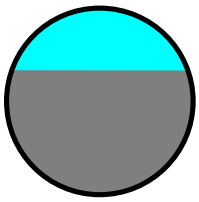
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 203% of Manning's capacity
[76] Warning: Detained 0.004 af (Pond w/culvert advised)
[62] Hint: Exceeded Reach 17R OUTLET depth by 0.14' @ 14.28 hrs
[62] Hint: Exceeded Reach 22R OUTLET depth by 0.14' @ 12.20 hrs

Inflow Area = 0.090 ac, 18.89% Impervious, Inflow Depth > 2.87" for 100-yr event
Inflow = 0.17 cfs @ 12.37 hrs, Volume= 0.022 af
Outflow = 0.08 cfs @ 12.21 hrs, Volume= 0.022 af, Atten= 50%, Lag= 0.0 min

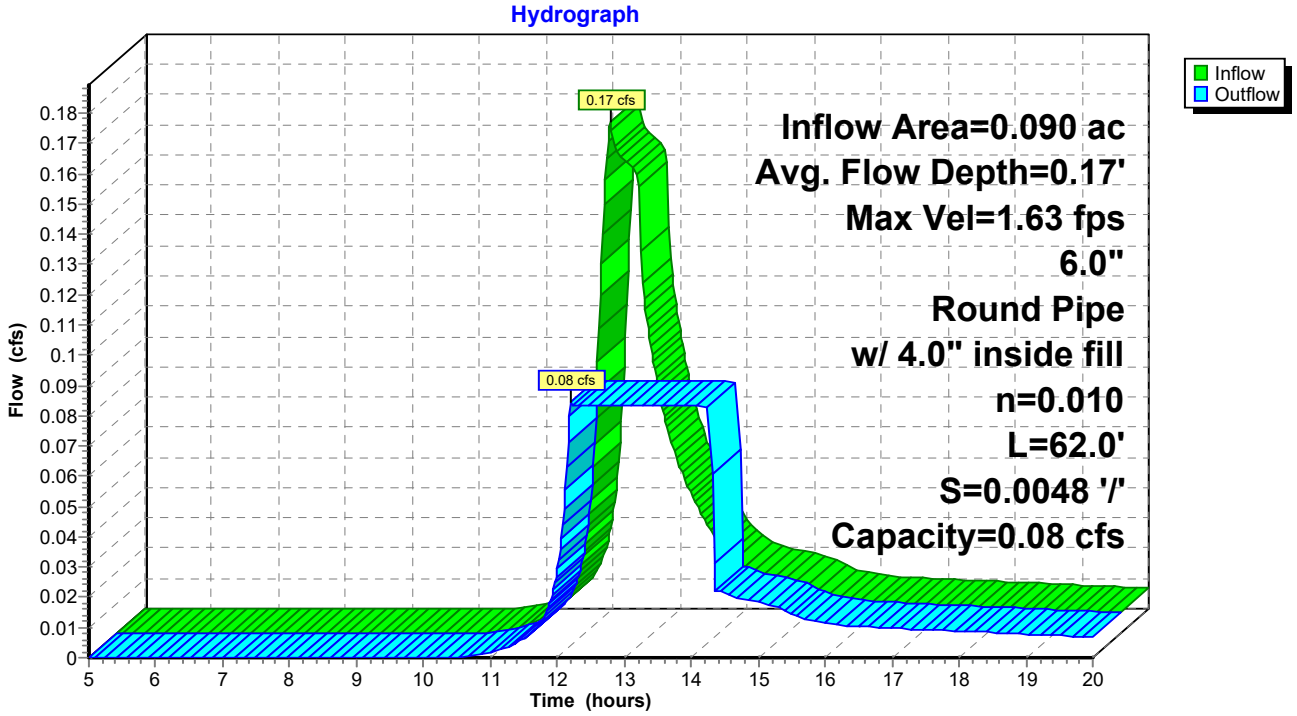
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.63 fps, Min. Travel Time= 0.6 min
Avg. Velocity = 0.94 fps, Avg. Travel Time= 1.1 min

Peak Storage= 4 cf @ 12.20 hrs
Average Depth at Peak Storage= 0.50' above invert (0.17' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.08 cfs

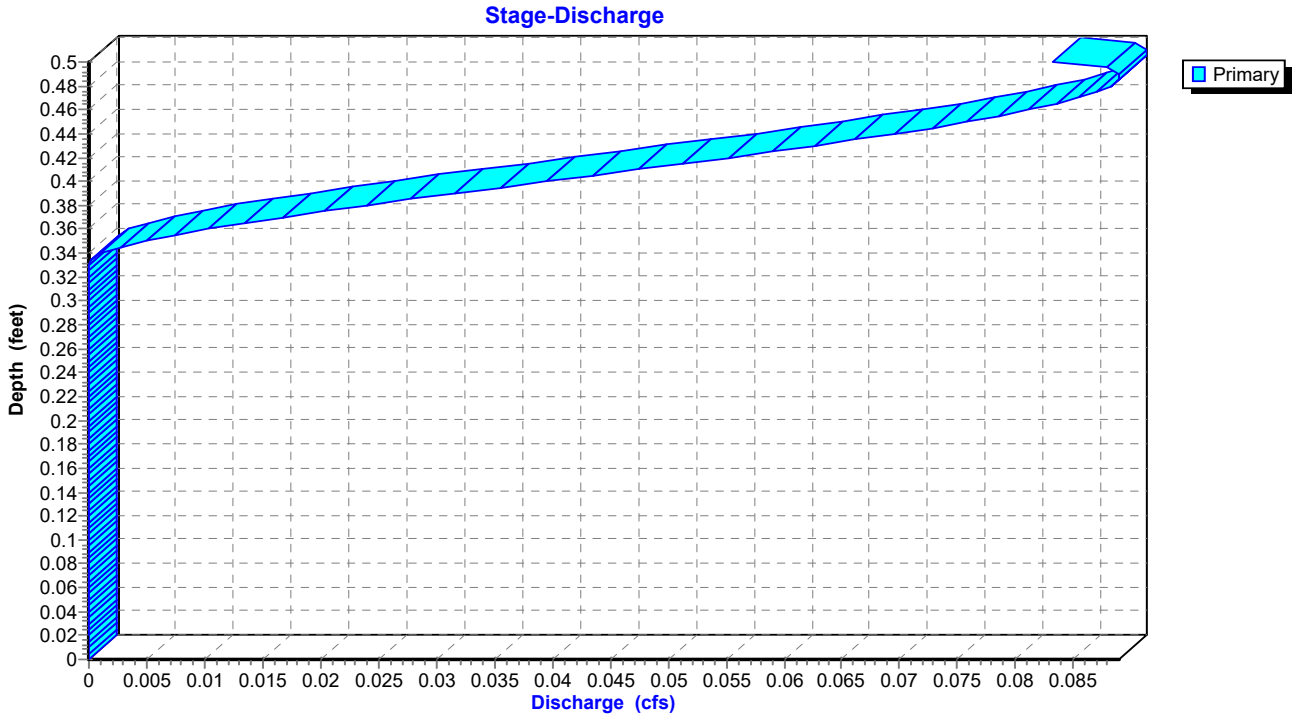
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 62.0' Slope= 0.0048 '/'
Inlet Invert= 668.18', Outlet Invert= 667.88'



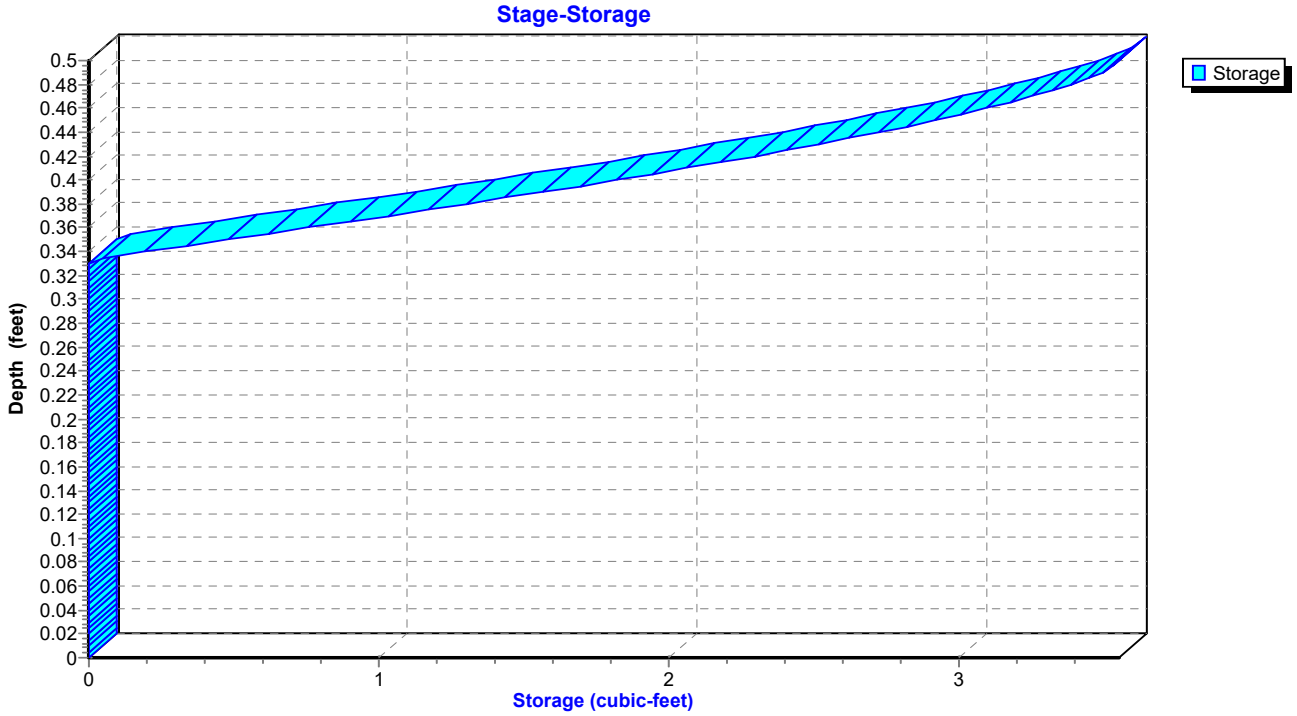
Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Reach 18R: inlet 3 6"



Hydrograph for Reach 18R: inlet 3 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	668.51	0.00
5.40	0.00	0	668.51	0.00
5.80	0.00	0	668.51	0.00
6.20	0.00	0	668.51	0.00
6.60	0.00	0	668.51	0.00
7.00	0.00	0	668.51	0.00
7.40	0.00	0	668.51	0.00
7.80	0.00	0	668.51	0.00
8.20	0.00	0	668.51	0.00
8.60	0.00	0	668.51	0.00
9.00	0.00	0	668.51	0.00
9.40	0.00	0	668.51	0.00
9.80	0.00	0	668.51	0.00
10.20	0.00	0	668.51	0.00
10.60	0.00	0	668.52	0.00
11.00	0.00	0	668.52	0.00
11.40	0.01	1	668.53	0.01
11.80	0.01	1	668.55	0.01
12.20	**0.10**	**4**	**668.68**	**0.08**
12.60	**0.16**	4	668.68	0.08
13.00	0.09	4	668.68	0.08
13.40	0.06	4	668.68	0.08
13.80	0.04	4	668.68	0.08
14.20	0.02	4	668.68	0.08
14.60	0.02	1	668.55	0.02
15.00	0.02	1	668.55	0.02
15.40	0.02	1	668.55	0.02
15.80	0.01	1	668.54	0.01
16.20	0.01	1	668.54	0.01
16.60	0.01	1	668.54	0.01
17.00	0.01	1	668.54	0.01
17.40	0.01	1	668.54	0.01
17.80	0.01	1	668.54	0.01
18.20	0.01	1	668.54	0.01
18.60	0.01	1	668.54	0.01
19.00	0.01	1	668.54	0.01
19.40	0.01	1	668.53	0.01
19.80	0.01	1	668.53	0.01

Stage-Discharge for Reach 18R: inlet 3 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.18	0.00	0.00
668.19	0.00	0.00
668.20	0.00	0.00
668.21	0.00	0.00
668.22	0.00	0.00
668.23	0.00	0.00
668.24	0.00	0.00
668.25	0.00	0.00
668.26	0.00	0.00
668.27	0.00	0.00
668.28	0.00	0.00
668.29	0.00	0.00
668.30	0.00	0.00
668.31	0.00	0.00
668.32	0.00	0.00
668.33	0.00	0.00
668.34	0.00	0.00
668.35	0.00	0.00
668.36	0.00	0.00
668.37	0.00	0.00
668.38	0.00	0.00
668.39	0.00	0.00
668.40	0.00	0.00
668.41	0.00	0.00
668.42	0.00	0.00
668.43	0.00	0.00
668.44	0.00	0.00
668.45	0.00	0.00
668.46	0.00	0.00
668.47	0.00	0.00
668.48	0.00	0.00
668.49	0.00	0.00
668.50	0.00	0.00
668.51	0.00	0.00
668.52	0.36	0.00
668.53	0.64	0.00
668.54	0.84	0.01
668.55	1.00	0.02
668.56	1.14	0.02
668.57	1.25	0.03
668.58	1.35	0.04
668.59	1.43	0.05
668.60	1.49	0.06
668.61	1.54	0.06
668.62	1.58	0.07
668.63	1.61	0.08
668.64	1.63	0.08
668.65	**1.63**	0.09
668.66	1.61	0.09
668.67	1.58	**0.09**
668.68	1.45	0.08

Stage-Area-Storage for Reach 18R: inlet 3 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.18	0.0	0
668.19	0.0	0
668.20	0.0	0
668.21	0.0	0
668.22	0.0	0
668.23	0.0	0
668.24	0.0	0
668.25	0.0	0
668.26	0.0	0
668.27	0.0	0
668.28	0.0	0
668.29	0.0	0
668.30	0.0	0
668.31	0.0	0
668.32	0.0	0
668.33	0.0	0
668.34	0.0	0
668.35	0.0	0
668.36	0.0	0
668.37	0.0	0
668.38	0.0	0
668.39	0.0	0
668.40	0.0	0
668.41	0.0	0
668.42	0.0	0
668.43	0.0	0
668.44	0.0	0
668.45	0.0	0
668.46	0.0	0
668.47	0.0	0
668.48	0.0	0
668.49	0.0	0
668.50	0.0	0
668.51	0.0	0
668.52	0.0	0
668.53	0.0	0
668.54	0.0	1
668.55	0.0	1
668.56	0.0	1
668.57	0.0	2
668.58	0.0	2
668.59	0.0	2
668.60	0.0	2
668.61	0.0	3
668.62	0.0	3
668.63	0.0	3
668.64	0.0	3
668.65	0.1	3
668.66	0.1	3
668.67	0.1	3
668.68	**0.1**	**4**

Summary for Reach 19R: inlet 1 12"

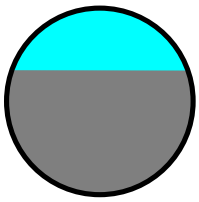
[52] Hint: Inlet/Outlet conditions not evaluated
[82] Warning: Early inflow requires earlier time span
[55] Hint: Peak inflow is 208% of Manning's capacity
[76] Warning: Detained 0.016 af (Pond w/culvert advised)
[62] Hint: Exceeded Reach 16R OUTLET depth by 0.16' @ 13.38 hrs

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 1.14 cfs @ 12.17 hrs, Volume= 0.126 af
Outflow = 0.58 cfs @ 13.39 hrs, Volume= 0.126 af, Atten= 49%, Lag= 73.3 min

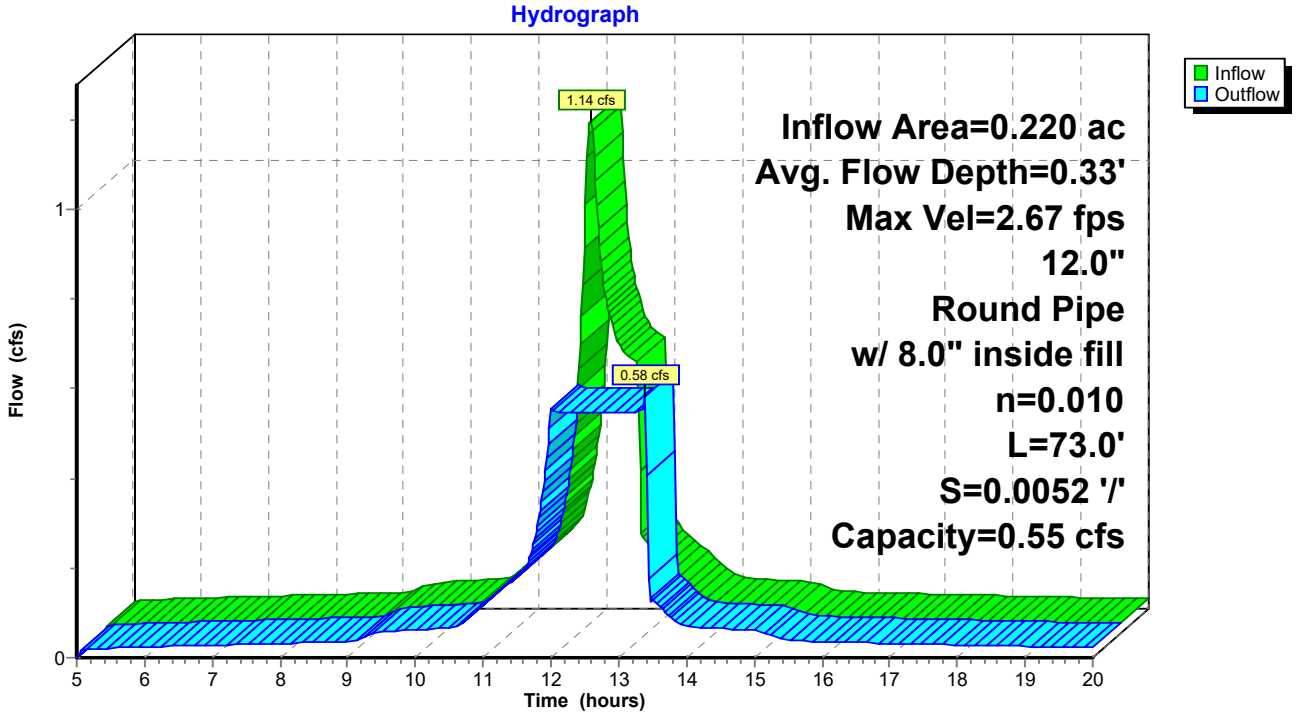
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.67 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.31 fps, Avg. Travel Time= 0.9 min

Peak Storage= 17 cf @ 12.02 hrs
Average Depth at Peak Storage= 1.00' above invert (0.33' above fill)
Bank-Full Depth= 1.00' above invert (0.33' above fill) Flow Area= 0.2 sf, Capacity= 0.55 cfs

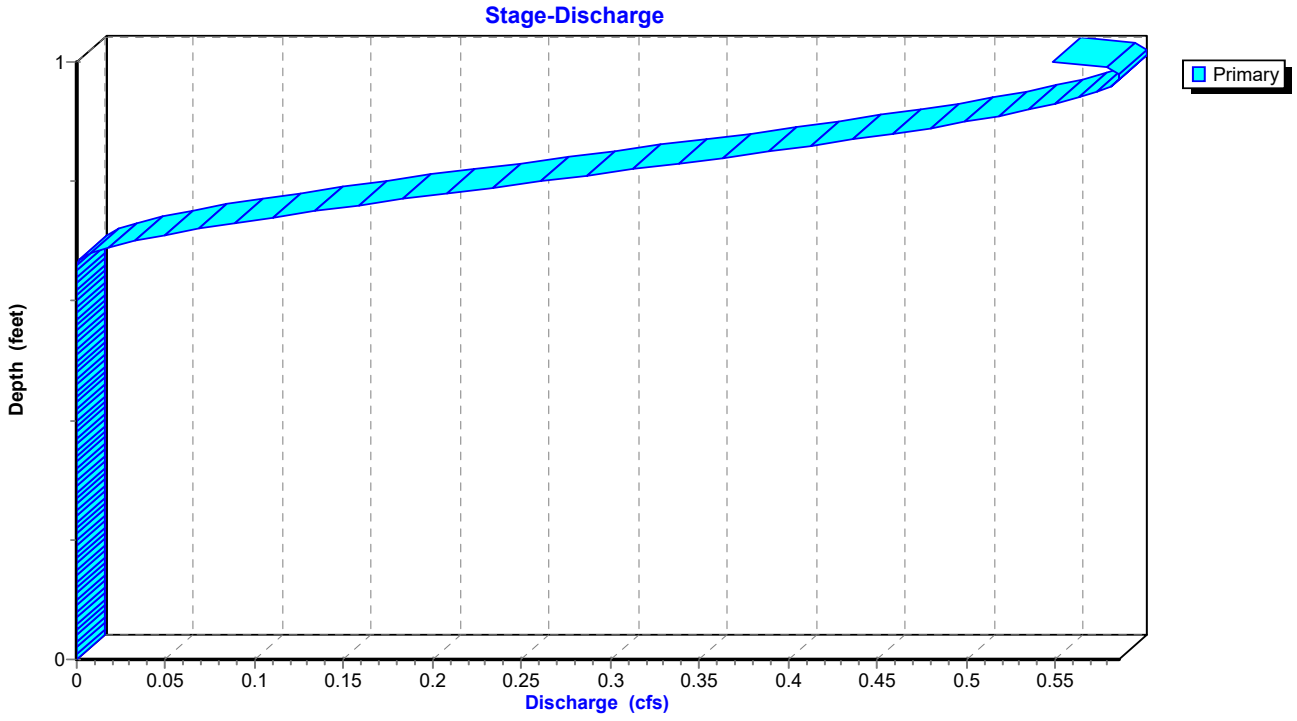
12.0" Round Pipe w/ 8.0" inside fill
n= 0.010
Length= 73.0' Slope= 0.0052 '/'
Inlet Invert= 665.85', Outlet Invert= 665.47'



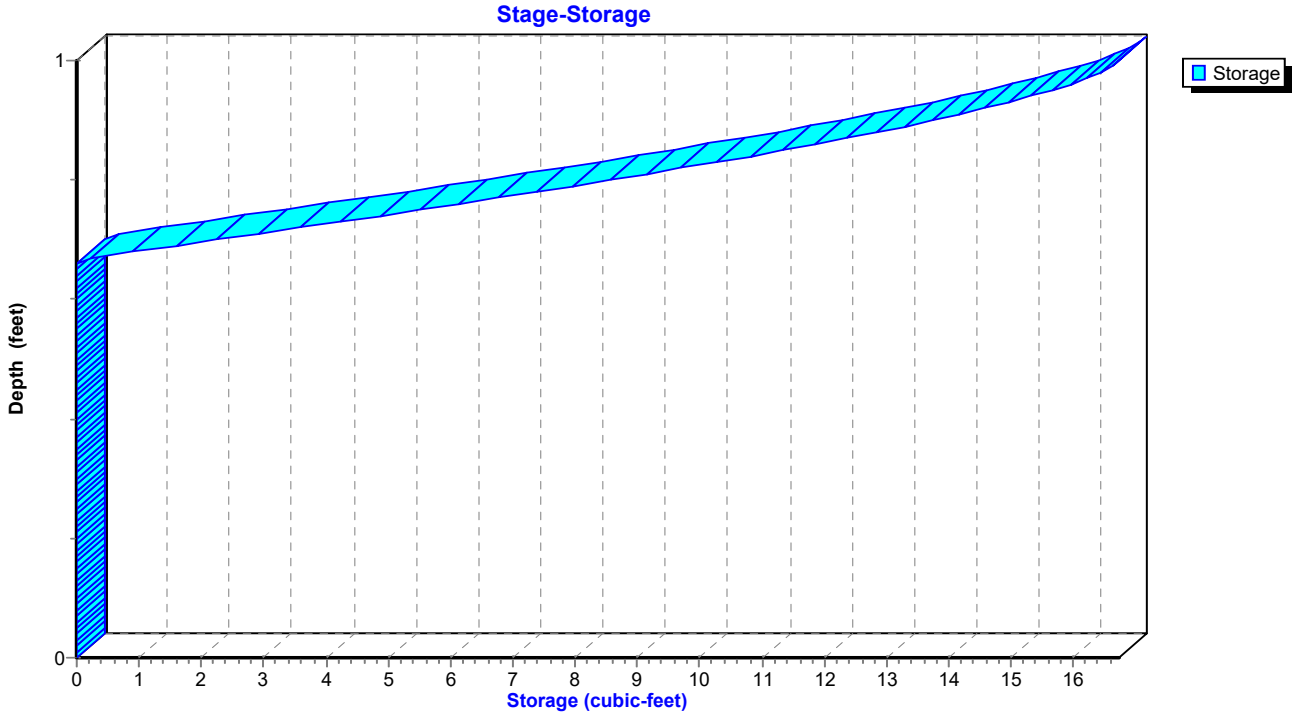
Reach 19R: inlet 1 12"



Reach 19R: inlet 1 12"



Reach 19R: inlet 1 12"



Hydrograph for Reach 19R: inlet 1 12"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.01	0	666.52	0.00
5.40	0.02	2	666.54	0.02
5.80	0.02	2	666.54	0.02
6.20	0.02	2	666.54	0.02
6.60	0.03	2	666.55	0.03
7.00	0.03	2	666.55	0.03
7.40	0.03	2	666.55	0.03
7.80	0.03	2	666.55	0.03
8.20	0.03	2	666.55	0.03
8.60	0.03	2	666.55	0.03
9.00	0.04	2	666.55	0.04
9.40	0.05	3	666.56	0.05
9.80	0.06	3	666.57	0.06
10.20	0.06	3	666.57	0.06
10.60	0.07	4	666.57	0.07
11.00	0.12	5	666.59	0.12
11.40	0.17	6	666.61	0.17
11.80	**0.31**	**9**	**666.67**	0.29
12.20	**1.11**	**17**	**666.85**	0.55
12.60	0.64	17	666.85	0.55
13.00	0.20	17	666.85	0.55
13.40	0.14	16	666.82	**0.57**
13.80	0.08	4	666.58	0.09
14.20	0.07	4	666.57	0.07
14.60	0.06	3	666.57	0.06
15.00	0.06	3	666.57	0.06
15.40	0.04	3	666.56	0.04
15.80	0.04	2	666.55	0.04
16.20	0.04	2	666.55	0.04
16.60	0.03	2	666.55	0.03
17.00	0.03	2	666.55	0.03
17.40	0.03	2	666.55	0.03
17.80	0.03	2	666.55	0.03
18.20	0.03	2	666.55	0.03
18.60	0.03	2	666.55	0.03
19.00	0.03	2	666.54	0.03
19.40	0.02	2	666.54	0.02
19.80	0.02	2	666.54	0.02

Stage-Discharge for Reach 19R: inlet 1 12"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
665.85	0.00	0.00	666.36	0.00	0.00
665.86	0.00	0.00	666.37	0.00	0.00
665.87	0.00	0.00	666.38	0.00	0.00
665.88	0.00	0.00	666.39	0.00	0.00
665.89	0.00	0.00	666.40	0.00	0.00
665.90	0.00	0.00	666.41	0.00	0.00
665.91	0.00	0.00	666.42	0.00	0.00
665.92	0.00	0.00	666.43	0.00	0.00
665.93	0.00	0.00	666.44	0.00	0.00
665.94	0.00	0.00	666.45	0.00	0.00
665.95	0.00	0.00	666.46	0.00	0.00
665.96	0.00	0.00	666.47	0.00	0.00
665.97	0.00	0.00	666.48	0.00	0.00
665.98	0.00	0.00	666.49	0.00	0.00
665.99	0.00	0.00	666.50	0.00	0.00
666.00	0.00	0.00	666.51	0.00	0.00
666.01	0.00	0.00	666.52	0.24	0.00
666.02	0.00	0.00	666.53	0.59	0.01
666.03	0.00	0.00	666.54	0.84	0.02
666.04	0.00	0.00	666.55	1.05	0.03
666.05	0.00	0.00	666.56	1.23	0.05
666.06	0.00	0.00	666.57	1.39	0.07
666.07	0.00	0.00	666.58	1.53	0.09
666.08	0.00	0.00	666.59	1.65	0.11
666.09	0.00	0.00	666.60	1.77	0.13
666.10	0.00	0.00	666.61	1.88	0.16
666.11	0.00	0.00	666.62	1.97	0.18
666.12	0.00	0.00	666.63	2.06	0.21
666.13	0.00	0.00	666.64	2.14	0.23
666.14	0.00	0.00	666.65	2.22	0.26
666.15	0.00	0.00	666.66	2.29	0.29
666.16	0.00	0.00	666.67	2.35	0.31
666.17	0.00	0.00	666.68	2.40	0.34
666.18	0.00	0.00	666.69	2.46	0.36
666.19	0.00	0.00	666.70	2.50	0.39
666.20	0.00	0.00	666.71	2.54	0.41
666.21	0.00	0.00	666.72	2.58	0.44
666.22	0.00	0.00	666.73	2.61	0.46
666.23	0.00	0.00	666.74	2.63	0.48
666.24	0.00	0.00	666.75	2.65	0.50
666.25	0.00	0.00	666.76	2.67	0.52
666.26	0.00	0.00	666.77	2.68	0.53
666.27	0.00	0.00	666.78	**2.68**	0.55
666.28	0.00	0.00	666.79	2.68	0.56
666.29	0.00	0.00	666.80	2.67	0.57
666.30	0.00	0.00	666.81	2.66	0.58
666.31	0.00	0.00	666.82	2.63	0.59
666.32	0.00	0.00	666.83	2.60	**0.59**
666.33	0.00	0.00	666.84	2.54	0.58
666.34	0.00	0.00	666.85	2.39	0.55
666.35	0.00	0.00			

Stage-Area-Storage for Reach 19R: inlet 1 12"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
665.85	0.0	0	666.36	0.0	0
665.86	0.0	0	666.37	0.0	0
665.87	0.0	0	666.38	0.0	0
665.88	0.0	0	666.39	0.0	0
665.89	0.0	0	666.40	0.0	0
665.90	0.0	0	666.41	0.0	0
665.91	0.0	0	666.42	0.0	0
665.92	0.0	0	666.43	0.0	0
665.93	0.0	0	666.44	0.0	0
665.94	0.0	0	666.45	0.0	0
665.95	0.0	0	666.46	0.0	0
665.96	0.0	0	666.47	0.0	0
665.97	0.0	0	666.48	0.0	0
665.98	0.0	0	666.49	0.0	0
665.99	0.0	0	666.50	0.0	0
666.00	0.0	0	666.51	0.0	0
666.01	0.0	0	666.52	0.0	0
666.02	0.0	0	666.53	0.0	1
666.03	0.0	0	666.54	0.0	2
666.04	0.0	0	666.55	0.0	2
666.05	0.0	0	666.56	0.0	3
666.06	0.0	0	666.57	0.0	4
666.07	0.0	0	666.58	0.1	4
666.08	0.0	0	666.59	0.1	5
666.09	0.0	0	666.60	0.1	6
666.10	0.0	0	666.61	0.1	6
666.11	0.0	0	666.62	0.1	7
666.12	0.0	0	666.63	0.1	7
666.13	0.0	0	666.64	0.1	8
666.14	0.0	0	666.65	0.1	9
666.15	0.0	0	666.66	0.1	9
666.16	0.0	0	666.67	0.1	10
666.17	0.0	0	666.68	0.1	10
666.18	0.0	0	666.69	0.1	11
666.19	0.0	0	666.70	0.2	11
666.20	0.0	0	666.71	0.2	12
666.21	0.0	0	666.72	0.2	12
666.22	0.0	0	666.73	0.2	13
666.23	0.0	0	666.74	0.2	13
666.24	0.0	0	666.75	0.2	14
666.25	0.0	0	666.76	0.2	14
666.26	0.0	0	666.77	0.2	15
666.27	0.0	0	666.78	0.2	15
666.28	0.0	0	666.79	0.2	15
666.29	0.0	0	666.80	0.2	16
666.30	0.0	0	666.81	0.2	16
666.31	0.0	0	666.82	0.2	16
666.32	0.0	0	666.83	0.2	16
666.33	0.0	0	666.84	0.2	17
666.34	0.0	0	666.85	**0.2**	**17**
666.35	0.0	0			

Summary for Reach 20R: MH3 15"

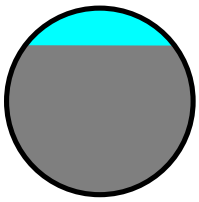
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 165% of Manning's capacity
[76] Warning: Detained 0.024 af (Pond w/culvert advised)

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 6.88" for 100-yr event
Inflow = 0.58 cfs @ 13.39 hrs, Volume= 0.126 af
Outflow = 0.36 cfs @ 11.89 hrs, Volume= 0.126 af, Atten= 39%, Lag= 0.0 min

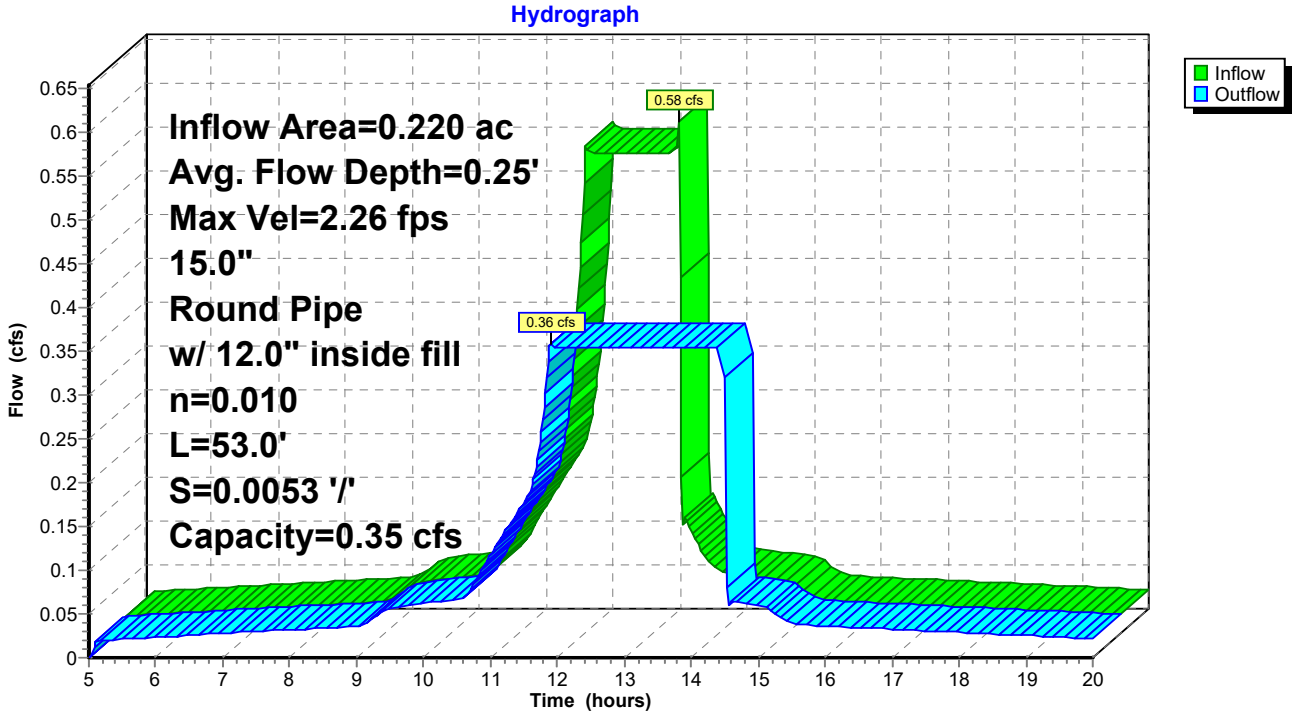
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.26 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.28 fps, Avg. Travel Time= 0.7 min

Peak Storage= 9 cf @ 11.90 hrs
Average Depth at Peak Storage= 1.25' above invert (0.25' above fill)
Bank-Full Depth= 1.25' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.35 cfs

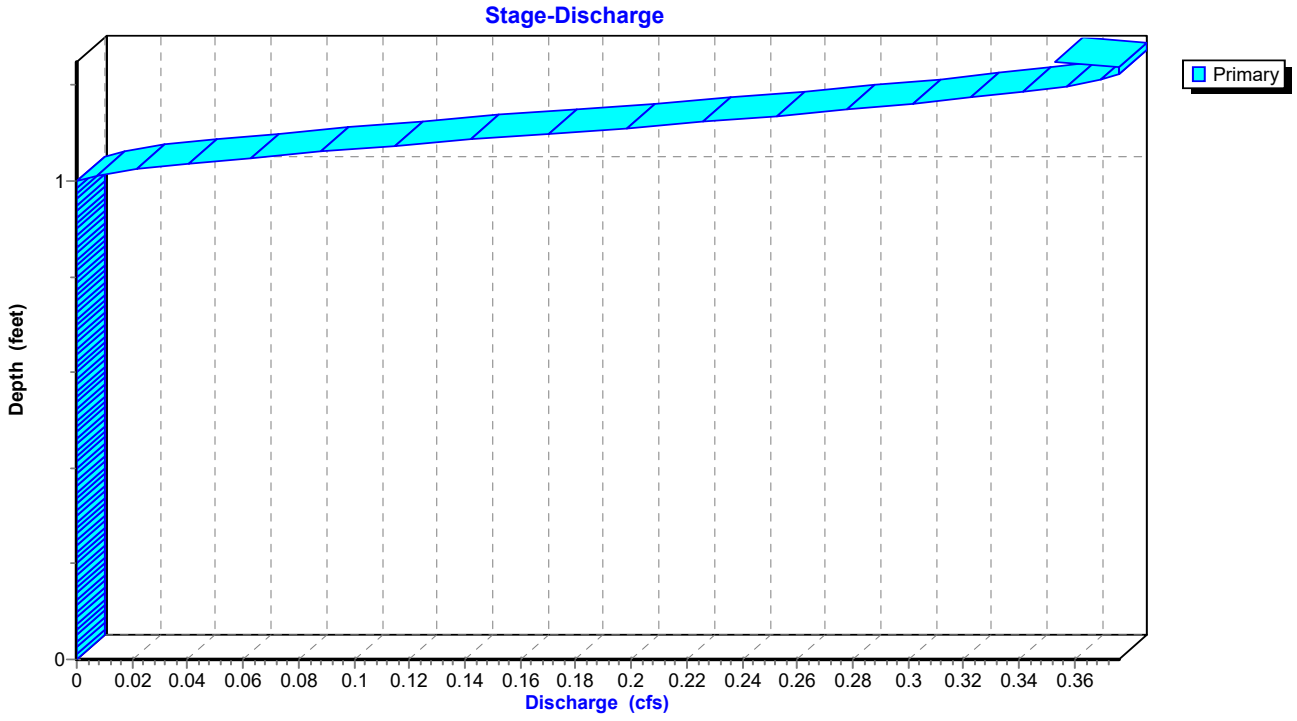
15.0" Round Pipe w/ 12.0" inside fill
n= 0.010
Length= 53.0' Slope= 0.0053 '/'
Inlet Invert= 663.47', Outlet Invert= 663.19'



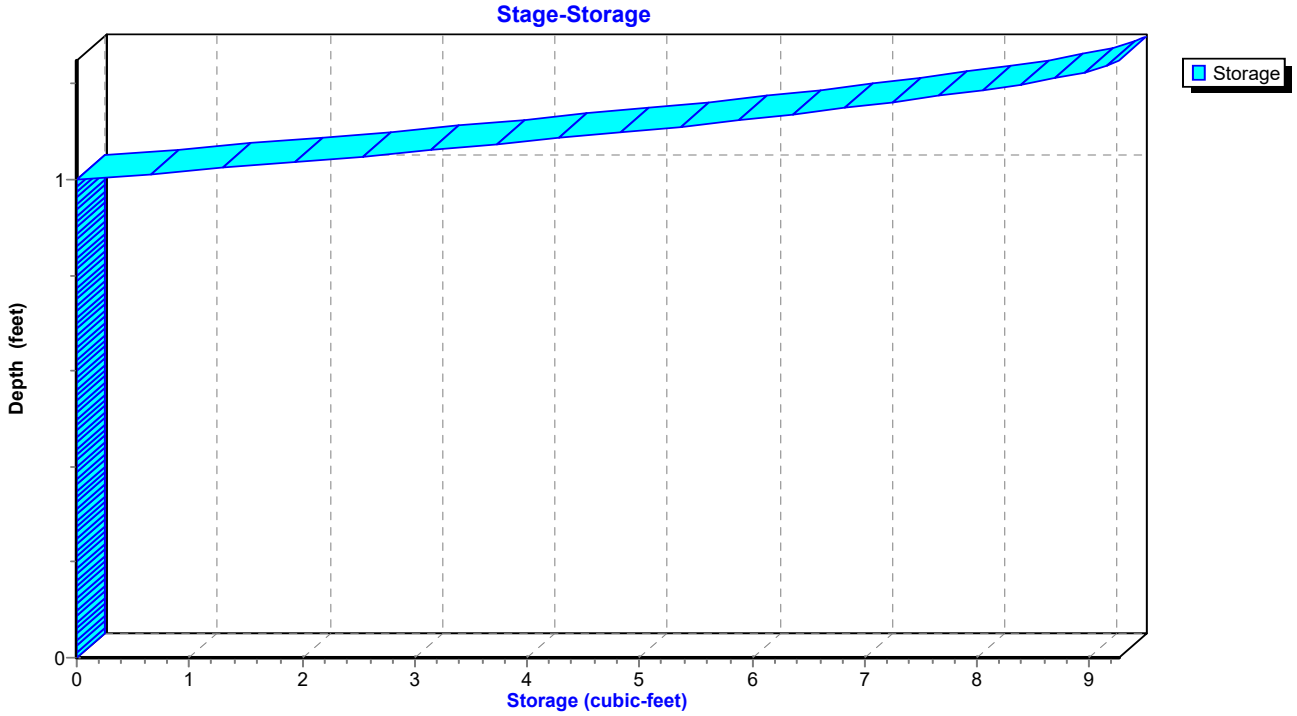
Reach 20R: MH3 15"



Reach 20R: MH3 15"



Reach 20R: MH3 15"



Hydrograph for Reach 20R: MH3 15"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	664.47	0.00
5.40	0.02	1	664.49	0.02
5.80	0.02	1	664.50	0.02
6.20	0.02	1	664.50	0.02
6.60	0.03	1	664.50	0.03
7.00	0.03	2	664.50	0.03
7.40	0.03	2	664.50	0.03
7.80	0.03	2	664.50	0.03
8.20	0.03	2	664.50	0.03
8.60	0.03	2	664.50	0.03
9.00	0.04	2	664.50	0.04
9.40	0.05	2	664.51	0.05
9.80	0.06	2	664.52	0.06
10.20	0.06	3	664.52	0.06
10.60	0.07	3	664.52	0.07
11.00	0.12	4	664.55	0.12
11.40	0.17	5	664.57	0.17
11.80	0.29	**7**	**664.63**	**0.29**
12.20	0.55	**9**	**664.72**	**0.35**
12.60	0.55	9	664.72	0.35
13.00	0.55	9	664.72	0.35
13.40	**0.57**	9	664.72	0.35
13.80	0.09	9	664.72	0.35
14.20	0.07	9	664.72	0.35
14.60	0.06	3	664.52	0.06
15.00	0.06	2	664.52	0.06
15.40	0.04	2	664.51	0.04
15.80	0.04	2	664.51	0.04
16.20	0.04	2	664.50	0.04
16.60	0.03	2	664.50	0.03
17.00	0.03	2	664.50	0.03
17.40	0.03	2	664.50	0.03
17.80	0.03	2	664.50	0.03
18.20	0.03	2	664.50	0.03
18.60	0.03	1	664.50	0.03
19.00	0.03	1	664.50	0.03
19.40	0.02	1	664.50	0.02
19.80	0.02	1	664.50	0.02

Stage-Discharge for Reach 20R: MH3 15"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
663.47	0.00	0.00
663.48	0.00	0.00
663.49	0.00	0.00
663.50	0.00	0.00
663.51	0.00	0.00
663.52	0.00	0.00
663.53	0.00	0.00
663.54	0.00	0.00
663.55	0.00	0.00
663.56	0.00	0.00
663.57	0.00	0.00
663.58	0.00	0.00
663.59	0.00	0.00
663.60	0.00	0.00
663.61	0.00	0.00
663.62	0.00	0.00
663.63	0.00	0.00
663.64	0.00	0.00
663.65	0.00	0.00
663.66	0.00	0.00
663.67	0.00	0.00
663.68	0.00	0.00
663.69	0.00	0.00
663.70	0.00	0.00
663.71	0.00	0.00
663.72	0.00	0.00
663.73	0.00	0.00
663.74	0.00	0.00
663.75	0.00	0.00
663.76	0.00	0.00
663.77	0.00	0.00
663.78	0.00	0.00
663.79	0.00	0.00
663.80	0.00	0.00
663.81	0.00	0.00
663.82	0.00	0.00
663.83	0.00	0.00
663.84	0.00	0.00
663.85	0.00	0.00
663.86	0.00	0.00
663.87	0.00	0.00
663.88	0.00	0.00
663.89	0.00	0.00
663.90	0.00	0.00
663.91	0.00	0.00
663.92	0.00	0.00
663.93	0.00	0.00
663.94	0.00	0.00
663.95	0.00	0.00
663.96	0.00	0.00
663.97	0.00	0.00
663.98	0.00	0.00
663.99	0.00	0.00
664.00	0.00	0.00
664.01	0.00	0.00
664.02	0.00	0.00
664.03	0.00	0.00
664.04	0.00	0.00
664.05	0.00	0.00
664.06	0.00	0.00
664.07	0.00	0.00
664.08	0.00	0.00
664.09	0.00	0.00
664.10	0.00	0.00
664.11	0.00	0.00
664.12	0.00	0.00
664.13	0.00	0.00
664.14	0.00	0.00
664.15	0.00	0.00
664.16	0.00	0.00
664.17	0.00	0.00
664.18	0.00	0.00
664.19	0.00	0.00
664.20	0.00	0.00
664.21	0.00	0.00
664.22	0.00	0.00
664.23	0.00	0.00
664.24	0.00	0.00
664.25	0.00	0.00
664.26	0.00	0.00
664.27	0.00	0.00
664.28	0.00	0.00
664.29	0.00	0.00
664.30	0.00	0.00
664.31	0.00	0.00
664.32	0.00	0.00
664.33	0.00	0.00
664.34	0.00	0.00
664.35	0.00	0.00
664.36	0.00	0.00
664.37	0.00	0.00
664.38	0.00	0.00
664.39	0.00	0.00
664.40	0.00	0.00
664.41	0.00	0.00
664.42	0.00	0.00
664.43	0.00	0.00
664.44	0.00	0.00
664.45	0.00	0.00
664.46	0.00	0.00
664.47	0.00	0.00
664.48	0.45	0.01
664.49	0.75	0.02
664.50	0.97	0.03
664.51	1.16	0.05
664.52	1.31	0.06
664.53	1.45	0.08
664.54	1.57	0.10
664.55	1.68	0.13
664.56	1.78	0.15
664.57	1.86	0.17
664.58	1.94	0.19
664.59	2.00	0.21
664.60	2.06	0.24
664.61	2.11	0.26
664.62	2.16	0.28
664.63	2.19	0.30
664.64	2.22	0.31
664.65	2.24	0.33
664.66	2.25	0.34
664.67	**2.26**	0.36
664.68	2.25	0.37
664.69	2.24	0.37
664.70	2.21	**0.38**
664.71	2.15	0.37
664.72	2.02	0.35

Stage-Area-Storage for Reach 20R: MH3 15"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
663.47	0.0	0
663.49	0.0	0
663.51	0.0	0
663.53	0.0	0
663.55	0.0	0
663.57	0.0	0
663.59	0.0	0
663.61	0.0	0
663.63	0.0	0
663.65	0.0	0
663.67	0.0	0
663.69	0.0	0
663.71	0.0	0
663.73	0.0	0
663.75	0.0	0
663.77	0.0	0
663.79	0.0	0
663.81	0.0	0
663.83	0.0	0
663.85	0.0	0
663.87	0.0	0
663.89	0.0	0
663.91	0.0	0
663.93	0.0	0
663.95	0.0	0
663.97	0.0	0
663.99	0.0	0
664.01	0.0	0
664.03	0.0	0
664.05	0.0	0
664.07	0.0	0
664.09	0.0	0
664.11	0.0	0
664.13	0.0	0
664.15	0.0	0
664.17	0.0	0
664.19	0.0	0
664.21	0.0	0
664.23	0.0	0
664.25	0.0	0
664.27	0.0	0
664.29	0.0	0
664.31	0.0	0
664.33	0.0	0
664.35	0.0	0
664.37	0.0	0
664.39	0.0	0
664.41	0.0	0
664.43	0.0	0
664.45	0.0	0
664.47	0.0	0
664.49	0.0	1
664.51	0.0	2
664.53	0.1	3
664.55	0.1	4
664.57	0.1	5
664.59	0.1	6
664.61	0.1	6
664.63	0.1	7
664.65	0.1	8
664.67	0.2	8
664.69	0.2	9
664.71	**0.2**	**9**

Summary for Reach 21R: MH2 15"

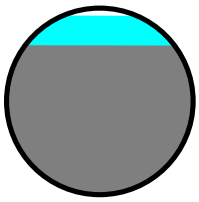
[52] Hint: Inlet/Outlet conditions not evaluated
[55] Hint: Peak inflow is 102% of Manning's capacity
[61] Hint: Exceeded Reach 20R outlet invert by 1.10' @ 11.92 hrs

Inflow Area = 0.220 ac,100.00% Impervious, Inflow Depth > 6.87" for 100-yr event
Inflow = 0.36 cfs @ 11.89 hrs, Volume= 0.126 af
Outflow = 0.35 cfs @ 11.94 hrs, Volume= 0.126 af, Atten= 1%, Lag= 3.2 min

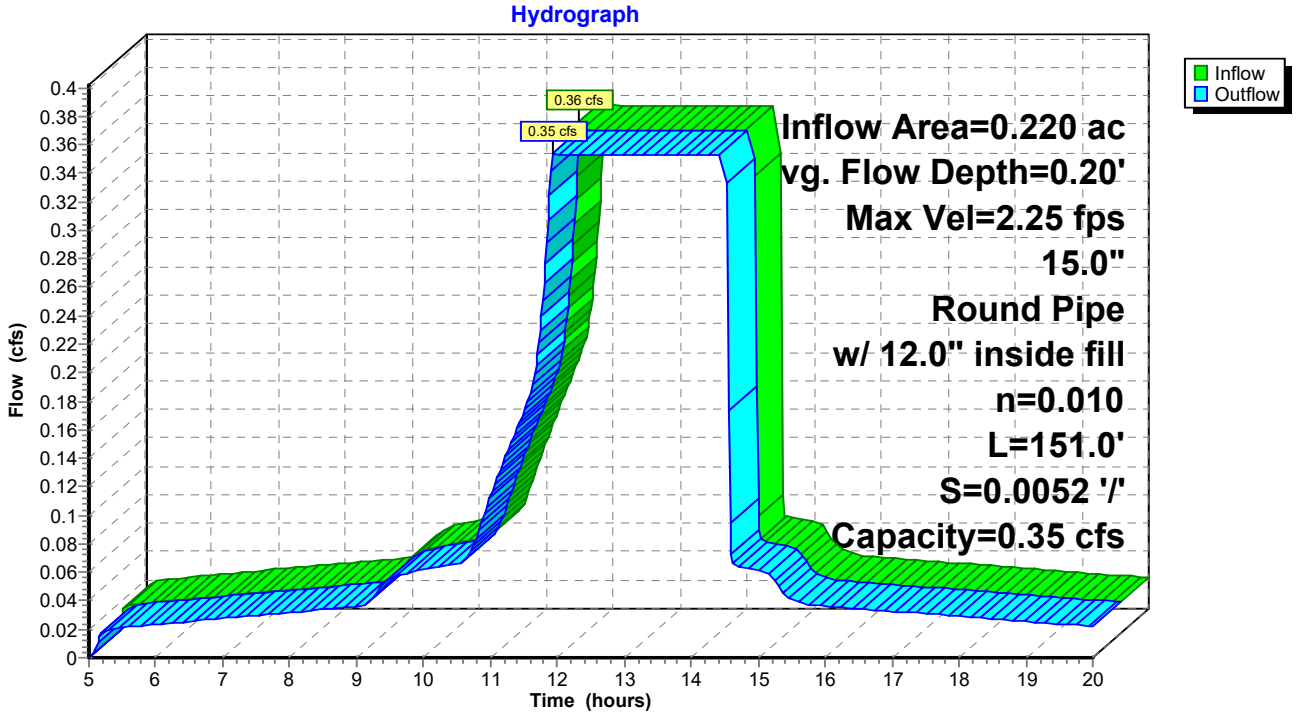
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.25 fps, Min. Travel Time= 1.1 min
Avg. Velocity = 1.32 fps, Avg. Travel Time= 1.9 min

Peak Storage= 24 cf @ 11.92 hrs
Average Depth at Peak Storage= 1.20' above invert (0.20' above fill)
Bank-Full Depth= 1.25' above invert (0.25' above fill) Flow Area= 0.2 sf, Capacity= 0.35 cfs

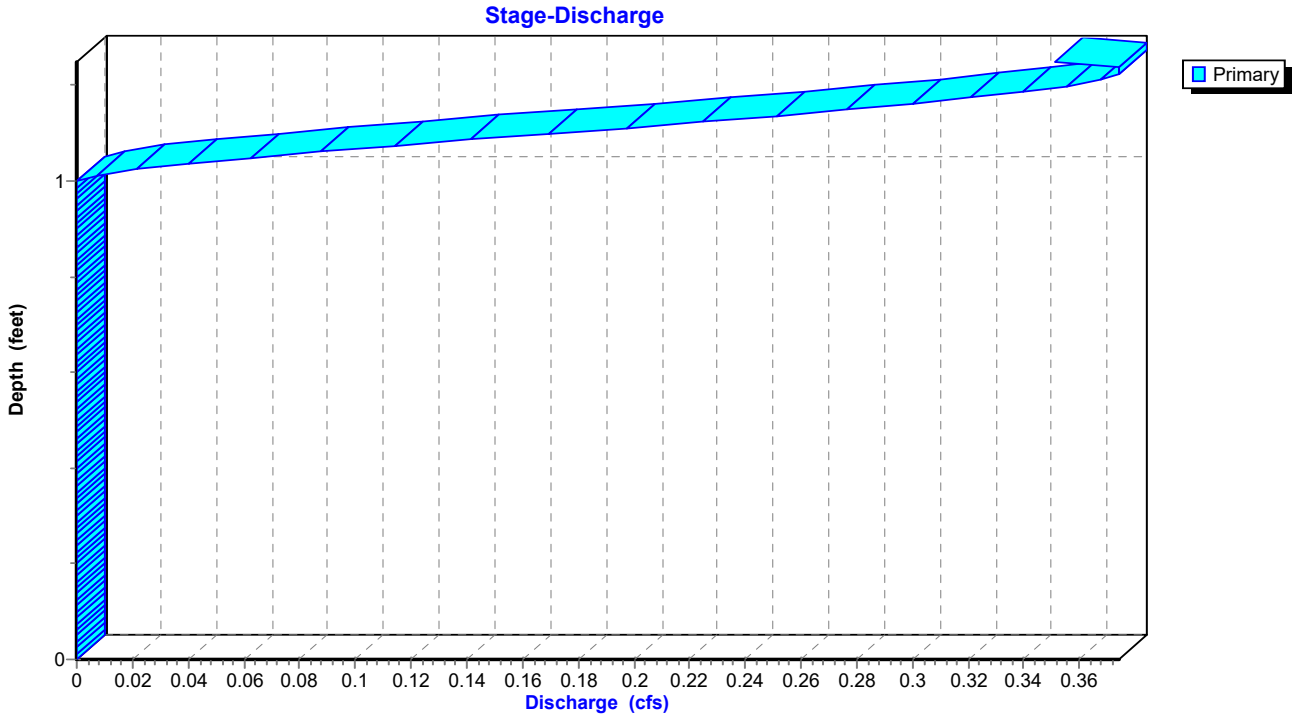
15.0" Round Pipe w/ 12.0" inside fill
n= 0.010
Length= 151.0' Slope= 0.0052 '/'
Inlet Invert= 663.09', Outlet Invert= 662.30'



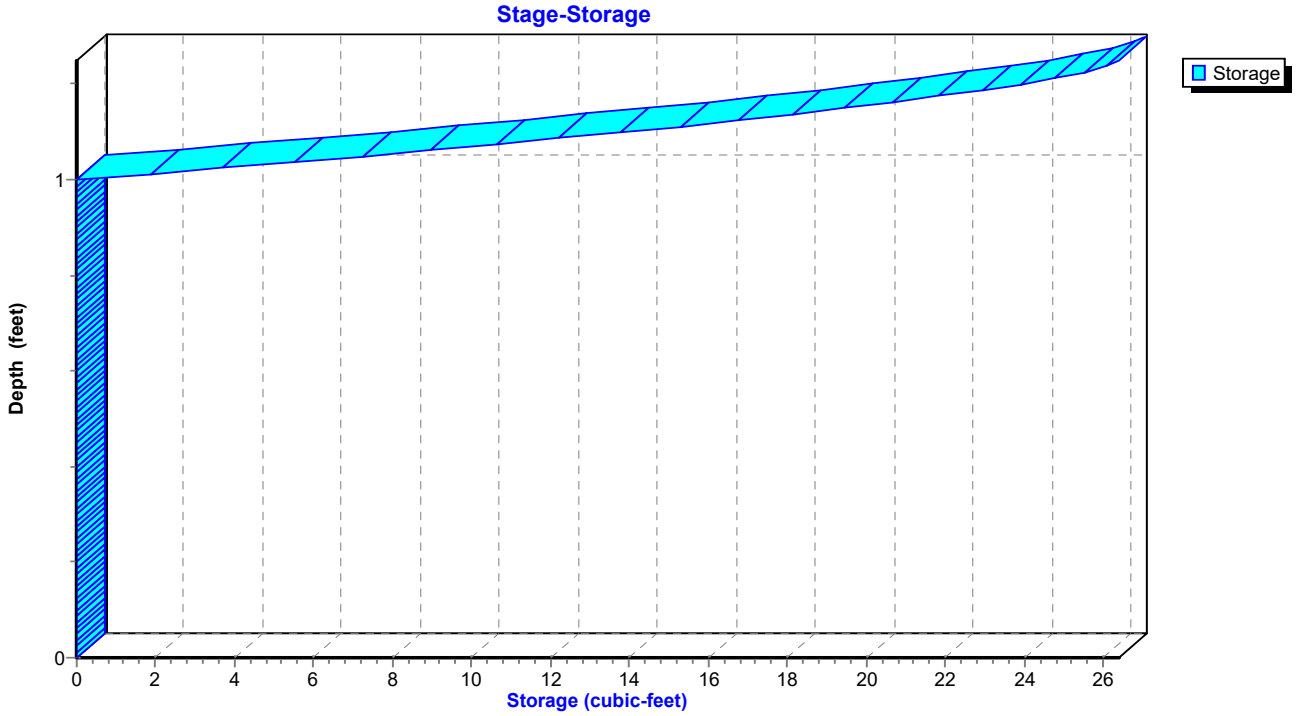
Reach 21R: MH2 15"



Reach 21R: MH2 15"



Reach 21R: MH2 15"



Hydrograph for Reach 21R: MH2 15"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	664.09	0.00
5.40	0.02	4	664.11	0.02
5.80	0.02	4	664.12	0.02
6.20	0.02	4	664.12	0.02
6.60	0.03	4	664.12	0.03
7.00	0.03	4	664.12	0.03
7.40	0.03	4	664.12	0.03
7.80	0.03	5	664.12	0.03
8.20	0.03	5	664.12	0.03
8.60	0.03	5	664.12	0.03
9.00	0.04	5	664.12	0.04
9.40	0.05	6	664.13	0.05
9.80	0.06	7	664.14	0.06
10.20	0.06	7	664.14	0.06
10.60	0.07	8	664.14	0.07
11.00	0.12	11	664.17	0.11
11.40	0.17	13	664.19	0.16
11.80	**0.29**	**19**	**664.24**	**0.26**
12.20	**0.35**	**24**	**664.29**	**0.35**
12.60	0.35	24	664.29	0.35
13.00	0.35	24	664.29	0.35
13.40	0.35	24	664.29	0.35
13.80	0.35	24	664.29	0.35
14.20	0.35	24	664.29	0.35
14.60	0.06	8	664.14	0.07
15.00	0.06	7	664.14	0.06
15.40	0.04	6	664.13	0.04
15.80	0.04	5	664.13	0.04
16.20	0.04	5	664.12	0.04
16.60	0.03	5	664.12	0.03
17.00	0.03	5	664.12	0.03
17.40	0.03	5	664.12	0.03
17.80	0.03	4	664.12	0.03
18.20	0.03	4	664.12	0.03
18.60	0.03	4	664.12	0.03
19.00	0.03	4	664.12	0.03
19.40	0.02	4	664.12	0.02
19.80	0.02	4	664.12	0.02

Stage-Discharge for Reach 21R: MH2 15"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
663.09	0.00	0.00
663.10	0.00	0.00
663.11	0.00	0.00
663.12	0.00	0.00
663.13	0.00	0.00
663.14	0.00	0.00
663.15	0.00	0.00
663.16	0.00	0.00
663.17	0.00	0.00
663.18	0.00	0.00
663.19	0.00	0.00
663.20	0.00	0.00
663.21	0.00	0.00
663.22	0.00	0.00
663.23	0.00	0.00
663.24	0.00	0.00
663.25	0.00	0.00
663.26	0.00	0.00
663.27	0.00	0.00
663.28	0.00	0.00
663.29	0.00	0.00
663.30	0.00	0.00
663.31	0.00	0.00
663.32	0.00	0.00
663.33	0.00	0.00
663.34	0.00	0.00
663.35	0.00	0.00
663.36	0.00	0.00
663.37	0.00	0.00
663.38	0.00	0.00
663.39	0.00	0.00
663.40	0.00	0.00
663.41	0.00	0.00
663.42	0.00	0.00
663.43	0.00	0.00
663.44	0.00	0.00
663.45	0.00	0.00
663.46	0.00	0.00
663.47	0.00	0.00
663.48	0.00	0.00
663.49	0.00	0.00
663.50	0.00	0.00
663.51	0.00	0.00
663.52	0.00	0.00
663.53	0.00	0.00
663.54	0.00	0.00
663.55	0.00	0.00
663.56	0.00	0.00
663.57	0.00	0.00
663.58	0.00	0.00
663.59	0.00	0.00
663.60	0.00	0.00
663.61	0.00	0.00
663.62	0.00	0.00
663.63	0.00	0.00
663.64	0.00	0.00
663.65	0.00	0.00
663.66	0.00	0.00
663.67	0.00	0.00
663.68	0.00	0.00
663.69	0.00	0.00
663.70	0.00	0.00
663.71	0.00	0.00
663.72	0.00	0.00
663.73	0.00	0.00
663.74	0.00	0.00
663.75	0.00	0.00
663.76	0.00	0.00
663.77	0.00	0.00
663.78	0.00	0.00
663.79	0.00	0.00
663.80	0.00	0.00
663.81	0.00	0.00
663.82	0.00	0.00
663.83	0.00	0.00
663.84	0.00	0.00
663.85	0.00	0.00
663.86	0.00	0.00
663.87	0.00	0.00
663.88	0.00	0.00
663.89	0.00	0.00
663.90	0.00	0.00
663.91	0.00	0.00
663.92	0.00	0.00
663.93	0.00	0.00
663.94	0.00	0.00
663.95	0.00	0.00
663.96	0.00	0.00
663.97	0.00	0.00
663.98	0.00	0.00
663.99	0.00	0.00
664.00	0.00	0.00
664.01	0.00	0.00
664.02	0.00	0.00
664.03	0.00	0.00
664.04	0.00	0.00
664.05	0.00	0.00
664.06	0.00	0.00
664.07	0.00	0.00
664.08	0.00	0.00
664.09	0.00	0.00
664.10	0.45	0.01
664.11	0.75	0.02
664.12	0.97	0.03
664.13	1.15	0.04
664.14	1.31	0.06
664.15	1.44	0.08
664.16	1.56	0.10
664.17	1.67	0.12
664.18	1.77	0.15
664.19	1.85	0.17
664.20	1.93	0.19
664.21	1.99	0.21
664.22	2.05	0.24
664.23	2.10	0.26
664.24	2.15	0.28
664.25	2.18	0.30
664.26	2.21	0.31
664.27	2.23	0.33
664.28	2.24	0.34
664.29	**2.25**	0.36
664.30	2.24	0.36
664.31	2.23	0.37
664.32	2.20	**0.37**
664.33	2.13	0.37
664.34	2.01	0.35

Stage-Area-Storage for Reach 21R: MH2 15"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
663.09	0.0	0
663.11	0.0	0
663.13	0.0	0
663.15	0.0	0
663.17	0.0	0
663.19	0.0	0
663.21	0.0	0
663.23	0.0	0
663.25	0.0	0
663.27	0.0	0
663.29	0.0	0
663.31	0.0	0
663.33	0.0	0
663.35	0.0	0
663.37	0.0	0
663.39	0.0	0
663.41	0.0	0
663.43	0.0	0
663.45	0.0	0
663.47	0.0	0
663.49	0.0	0
663.51	0.0	0
663.53	0.0	0
663.55	0.0	0
663.57	0.0	0
663.59	0.0	0
663.61	0.0	0
663.63	0.0	0
663.65	0.0	0
663.67	0.0	0
663.69	0.0	0
663.71	0.0	0
663.73	0.0	0
663.75	0.0	0
663.77	0.0	0
663.79	0.0	0
663.81	0.0	0
663.83	0.0	0
663.85	0.0	0
663.87	0.0	0
663.89	0.0	0
663.91	0.0	0
663.93	0.0	0
663.95	0.0	0
663.97	0.0	0
663.99	0.0	0
664.01	0.0	0
664.03	0.0	0
664.05	0.0	0
664.07	0.0	0
664.09	0.0	0
664.11	0.0	3
664.13	0.0	6
664.15	0.1	9
664.17	0.1	11
664.19	0.1	14
664.21	0.1	16
664.23	0.1	18
664.25	0.1	20
664.27	0.1	22
664.29	0.2	24
664.31	0.2	25
664.33	**0.2**	**26**

Summary for Reach 22R: NDS2 6"

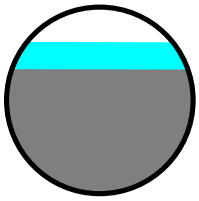
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.031 ac, 3.23% Impervious, Inflow Depth > 2.46" for 100-yr event
Inflow = 0.05 cfs @ 12.76 hrs, Volume= 0.006 af
Outflow = 0.05 cfs @ 12.80 hrs, Volume= 0.006 af, Atten= 0%, Lag= 2.3 min

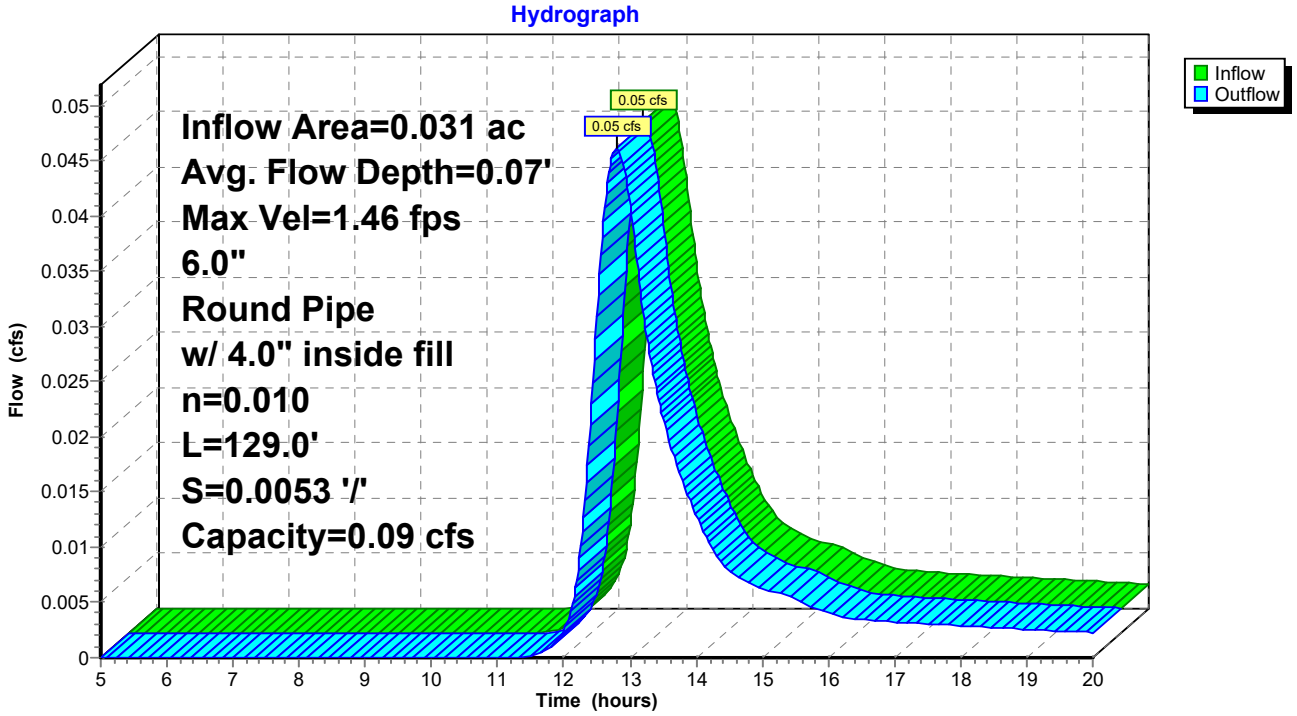
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.46 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 0.70 fps, Avg. Travel Time= 3.1 min

Peak Storage= 4 cf @ 12.78 hrs
Average Depth at Peak Storage= 0.41' above invert (0.07' above fill)
Bank-Full Depth= 0.50' above invert (0.17' above fill) Flow Area= 0.1 sf, Capacity= 0.09 cfs

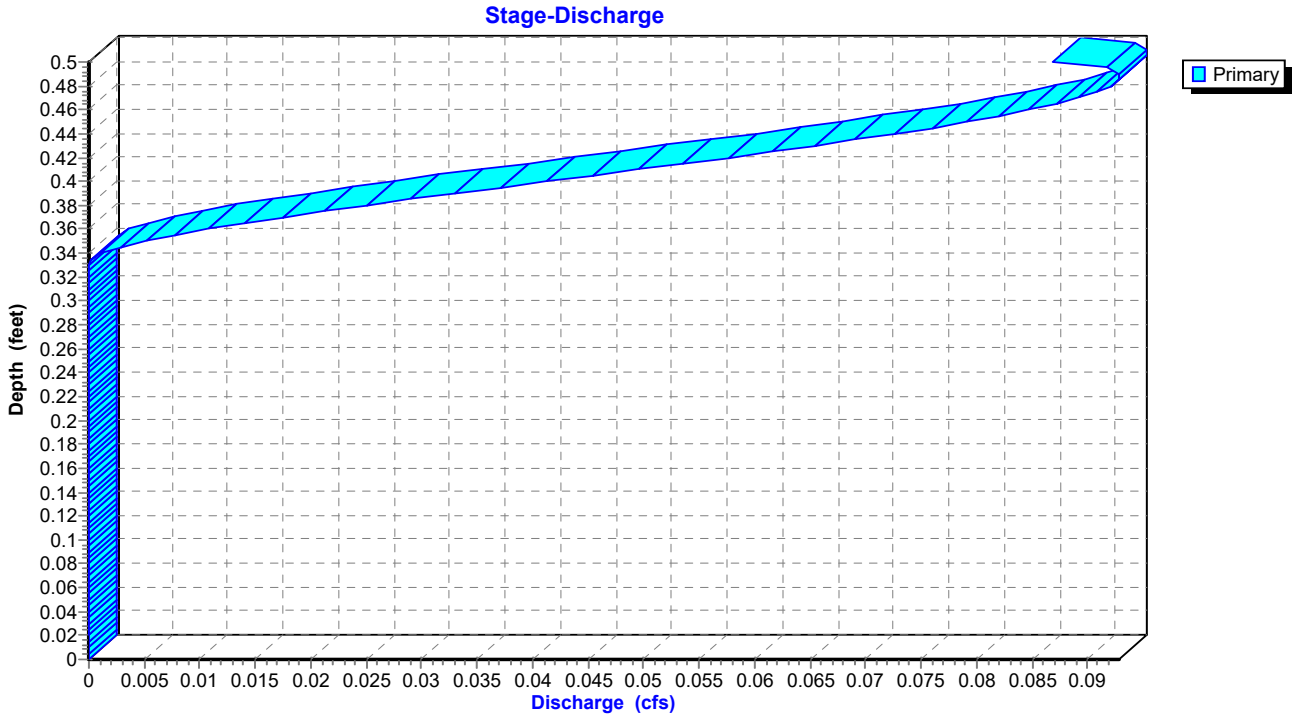
6.0" Round Pipe w/ 4.0" inside fill
n= 0.010
Length= 129.0' Slope= 0.0053 '/'
Inlet Invert= 668.86', Outlet Invert= 668.18'



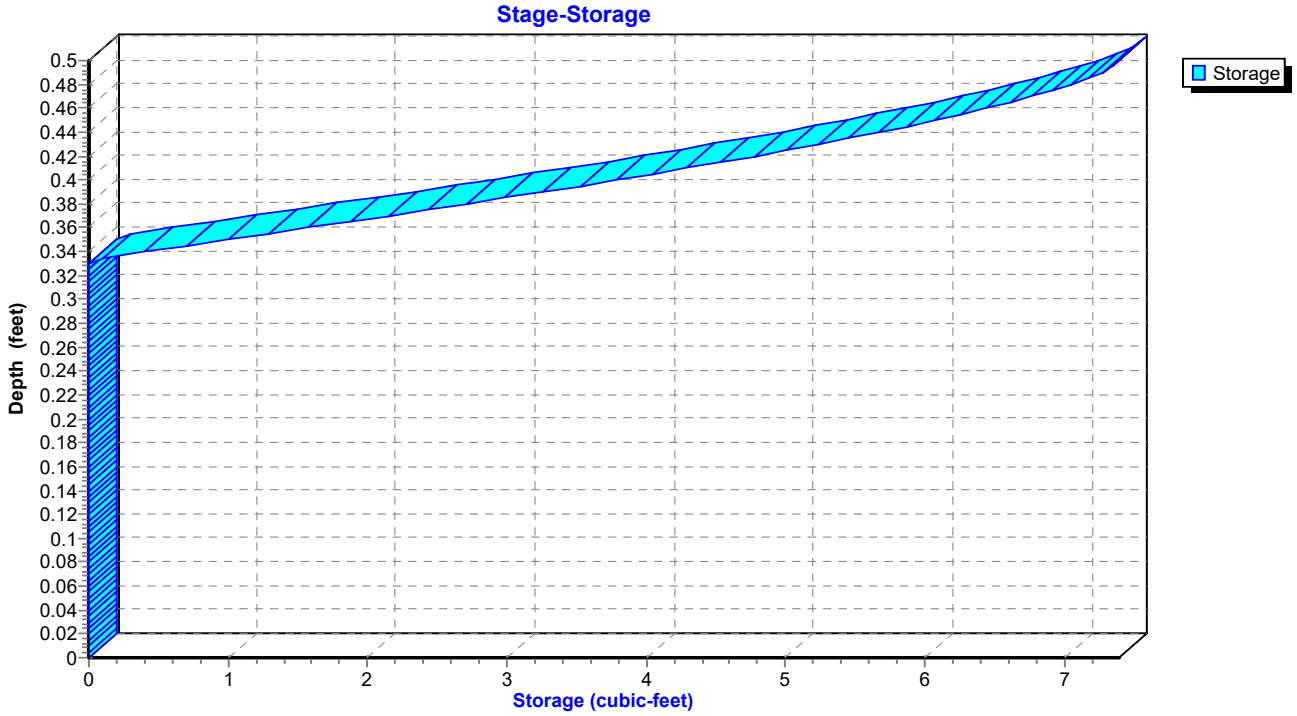
Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Reach 22R: NDS2 6"



Hydrograph for Reach 22R: NDS2 6"

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
5.00	0.00	0	669.19	0.00
5.40	0.00	0	669.19	0.00
5.80	0.00	0	669.19	0.00
6.20	0.00	0	669.19	0.00
6.60	0.00	0	669.19	0.00
7.00	0.00	0	669.19	0.00
7.40	0.00	0	669.19	0.00
7.80	0.00	0	669.19	0.00
8.20	0.00	0	669.19	0.00
8.60	0.00	0	669.19	0.00
9.00	0.00	0	669.19	0.00
9.40	0.00	0	669.19	0.00
9.80	0.00	0	669.19	0.00
10.20	0.00	0	669.19	0.00
10.60	0.00	0	669.19	0.00
11.00	0.00	0	669.19	0.00
11.40	0.00	0	669.19	0.00
11.80	0.00	0	669.20	0.00
12.20	0.01	1	669.22	0.01
12.60	**0.04**	**4**	**669.26**	**0.04**
13.00	**0.04**	**4**	**669.26**	**0.04**
13.40	0.02	3	669.24	0.02
13.80	0.02	2	669.23	0.02
14.20	0.01	2	669.22	0.01
14.60	0.01	1	669.21	0.01
15.00	0.01	1	669.21	0.01
15.40	0.01	1	669.21	0.01
15.80	0.00	1	669.21	0.00
16.20	0.00	1	669.21	0.00
16.60	0.00	1	669.21	0.00
17.00	0.00	1	669.21	0.00
17.40	0.00	1	669.21	0.00
17.80	0.00	1	669.21	0.00
18.20	0.00	1	669.20	0.00
18.60	0.00	1	669.20	0.00
19.00	0.00	1	669.20	0.00
19.40	0.00	1	669.20	0.00
19.80	0.00	1	669.20	0.00

Stage-Discharge for Reach 22R: NDS2 6"

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
668.86	0.00	0.00
668.87	0.00	0.00
668.88	0.00	0.00
668.89	0.00	0.00
668.90	0.00	0.00
668.91	0.00	0.00
668.92	0.00	0.00
668.93	0.00	0.00
668.94	0.00	0.00
668.95	0.00	0.00
668.96	0.00	0.00
668.97	0.00	0.00
668.98	0.00	0.00
668.99	0.00	0.00
669.00	0.00	0.00
669.01	0.00	0.00
669.02	0.00	0.00
669.03	0.00	0.00
669.04	0.00	0.00
669.05	0.00	0.00
669.06	0.00	0.00
669.07	0.00	0.00
669.08	0.00	0.00
669.09	0.00	0.00
669.10	0.00	0.00
669.11	0.00	0.00
669.12	0.00	0.00
669.13	0.00	0.00
669.14	0.00	0.00
669.15	0.00	0.00
669.16	0.00	0.00
669.17	0.00	0.00
669.18	0.00	0.00
669.19	0.00	0.00
669.20	0.37	0.00
669.21	0.66	0.01
669.22	0.88	0.01
669.23	1.05	0.02
669.24	1.19	0.03
669.25	1.31	0.03
669.26	1.41	0.04
669.27	1.49	0.05
669.28	1.56	0.06
669.29	1.61	0.07
669.30	1.65	0.07
669.31	1.68	0.08
669.32	1.70	0.08
669.33	**1.70**	0.09
669.34	1.69	0.09
669.35	1.65	**0.09**
669.36	1.52	0.09

Stage-Area-Storage for Reach 22R: NDS2 6"

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
668.86	0.0	0
668.87	0.0	0
668.88	0.0	0
668.89	0.0	0
668.90	0.0	0
668.91	0.0	0
668.92	0.0	0
668.93	0.0	0
668.94	0.0	0
668.95	0.0	0
668.96	0.0	0
668.97	0.0	0
668.98	0.0	0
668.99	0.0	0
669.00	0.0	0
669.01	0.0	0
669.02	0.0	0
669.03	0.0	0
669.04	0.0	0
669.05	0.0	0
669.06	0.0	0
669.07	0.0	0
669.08	0.0	0
669.09	0.0	0
669.10	0.0	0
669.11	0.0	0
669.12	0.0	0
669.13	0.0	0
669.14	0.0	0
669.15	0.0	0
669.16	0.0	0
669.17	0.0	0
669.18	0.0	0
669.19	0.0	0
669.20	0.0	0
669.21	0.0	1
669.22	0.0	2
669.23	0.0	2
669.24	0.0	3
669.25	0.0	3
669.26	0.0	4
669.27	0.0	4
669.28	0.0	5
669.29	0.0	5
669.30	0.0	6
669.31	0.0	6
669.32	0.0	6
669.33	0.1	7
669.34	0.1	7
669.35	0.1	7
669.36	**0.1**	**7**

Summary for Pond 4P: stormtech SC310 16"x34" chambers

[44] Hint: Outlet device #2 is below defined storage
[88] Warning: Qout>Qin may require smaller dt or Finer Routing
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=6)
[63] Warning: Exceeded Reach 10R INLET depth by 0.50' @ 12.30 hrs
[63] Warning: Exceeded Reach 12R INLET depth by 0.63' @ 12.30 hrs
[62] Hint: Exceeded Reach 13R OUTLET depth by 0.62' @ 12.30 hrs
[62] Hint: Exceeded Reach 14R OUTLET depth by 0.63' @ 12.30 hrs
[62] Hint: Exceeded Reach 15R OUTLET depth by 0.63' @ 12.30 hrs

Inflow Area = 1.066 ac, 91.74% Impervious, Inflow Depth > 5.27" for 100-yr event
Inflow = 2.11 cfs @ 12.22 hrs, Volume= 0.468 af
Outflow = 2.61 cfs @ 12.30 hrs, Volume= 0.417 af, Atten= 0%, Lag= 4.9 min
Primary = 2.26 cfs @ 12.30 hrs, Volume= 0.156 af
Secondary = 0.35 cfs @ 12.30 hrs, Volume= 0.261 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs
Peak Elev= 667.02' @ 12.30 hrs Surf.Area= 0.108 ac Storage= 0.087 af

Plug-Flow detention time= 77.9 min calculated for 0.417 af (89% of inflow)
Center-of-Mass det. time= 36.5 min (838.8 - 802.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	664.40'	0.076 af	**36.00'W x 120.45'L x 2.33'H Field A Z=0.5** 0.242 af Overall - 0.011 af Embedded = 0.231 af x 33.0% Voids
#2A	664.90'	0.011 af	**ADS_StormTech RC-310 +Cap** x 32 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 32 Chambers in 2 Rows
#3	665.00'	0.001 af	**8.0" Round Pipe Storage** L= 87.0' S= 0.5200 '/'
#4	664.90'	0.001 af	**12.0" Round Pipe Storage** L= 45.0' S= 0.7300 '/'
#5	665.40'	0.000 af	**12.0" Round Pipe Storage** L= 23.0' S= 0.5200 '/'
#6	665.58'	0.001 af	**10.0" Round Pipe Storage** L= 69.0' S= 0.5200 '/'
		0.090 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	665.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.75 0.75 2.10 2.10 3.00 Width (feet) 0.00 0.17 0.17 4.00 4.00
#2	Secondary	664.00'	**Tube/Siphon/Float Valve** 4.000" Diameter, C= 0.600 136.0' Long Tube, Hazen-Williams C= 130 Inlet / Outlet Elev. = 664.00' / 664.00'

Primary OutFlow Max=1.88 cfs @ 12.30 hrs HW=667.01' (Free Discharge)
↑—**1=Custom Weir/Orifice** (Weir Controls 1.88 cfs @ 2.11 fps)

Secondary OutFlow Max=0.35 cfs @ 12.30 hrs HW=667.01' (Free Discharge)
↑—**2=Tube/Siphon/Float Valve** (Tube Controls 0.35 cfs @ 3.98 fps)

Pond 4P: stormtech SC310 16"x34" chambers - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-310 +Cap (ADS StormTech®RC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 48.0" Spacing = 82.0" C-C Row Spacing

16 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 115.12' Row Length +32.0" End Stone x 2 = 120.45' Base Length
2 Rows x 34.0" Wide + 48.0" Spacing x 1 + 158.0" Side Stone x 2 = 36.00' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

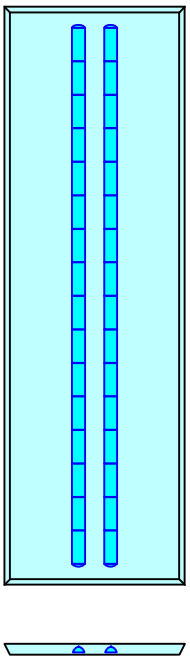
0.5 '/' Side-Z x Height = 14.0" Flare/Side
Base Length + Flare x 2 = 122.79' Top Length
Base Width + Flare x 2 = 38.33' Top Width

32 Chambers x 14.7 cf = 471.7 cf Chamber Storage

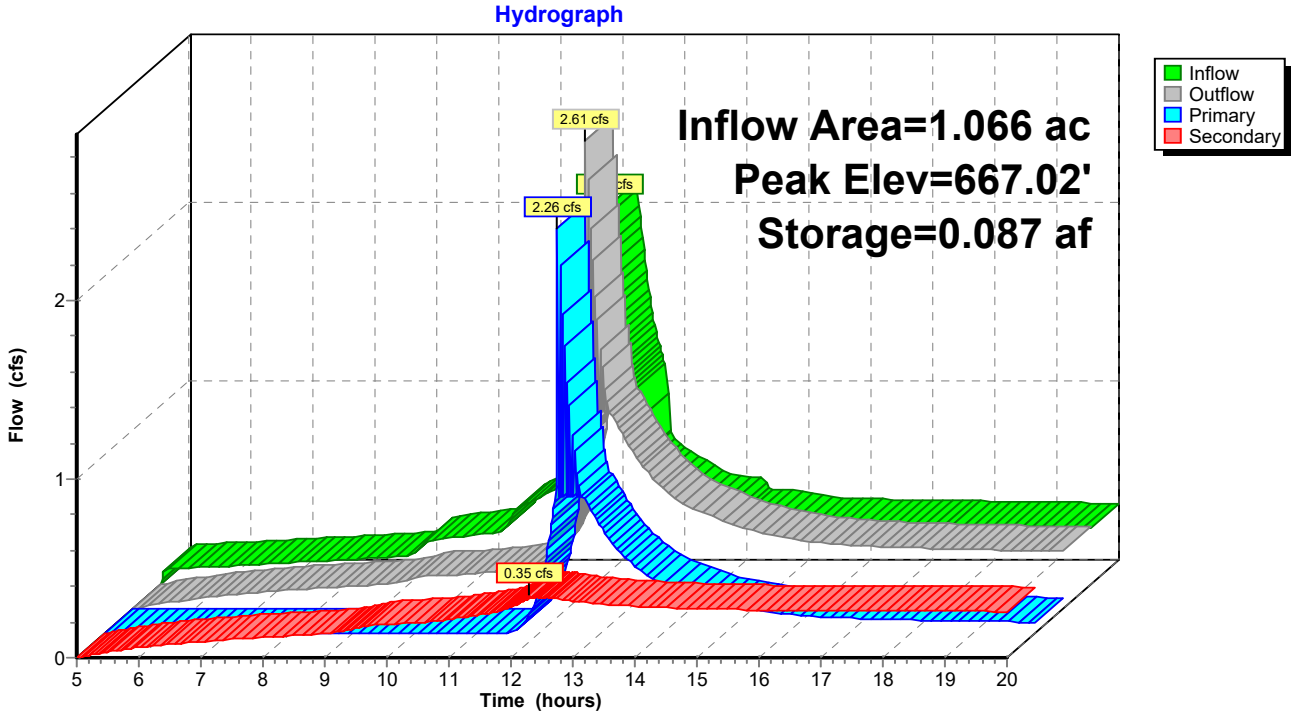
10,548.2 cf Field - 471.7 cf Chambers = 10,076.5 cf Stone x 33.0% Voids = 3,325.2 cf Stone Storage

Chamber Storage + Stone Storage = 3,797.0 cf = 0.087 af
Overall Storage Efficiency = 36.0%
Overall System Size = 120.45' x 36.00' x 2.33'

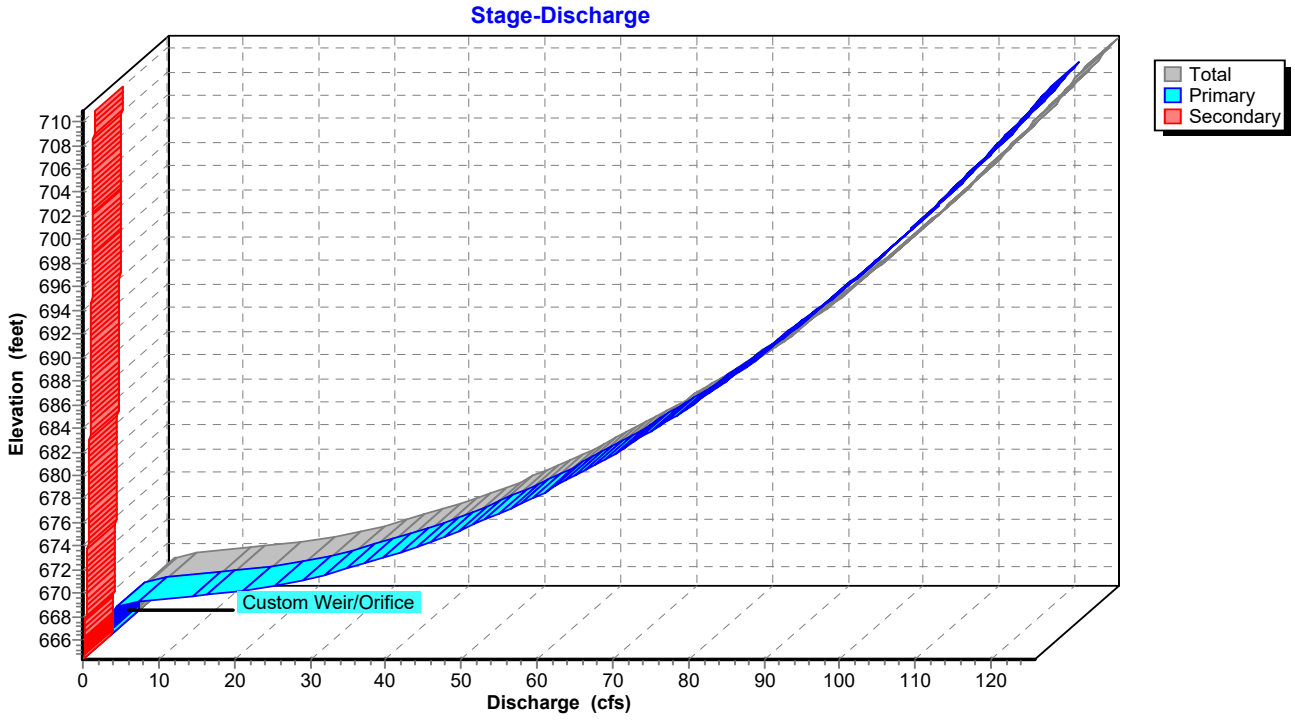
32 Chambers
390.7 cy Field
373.2 cy Stone



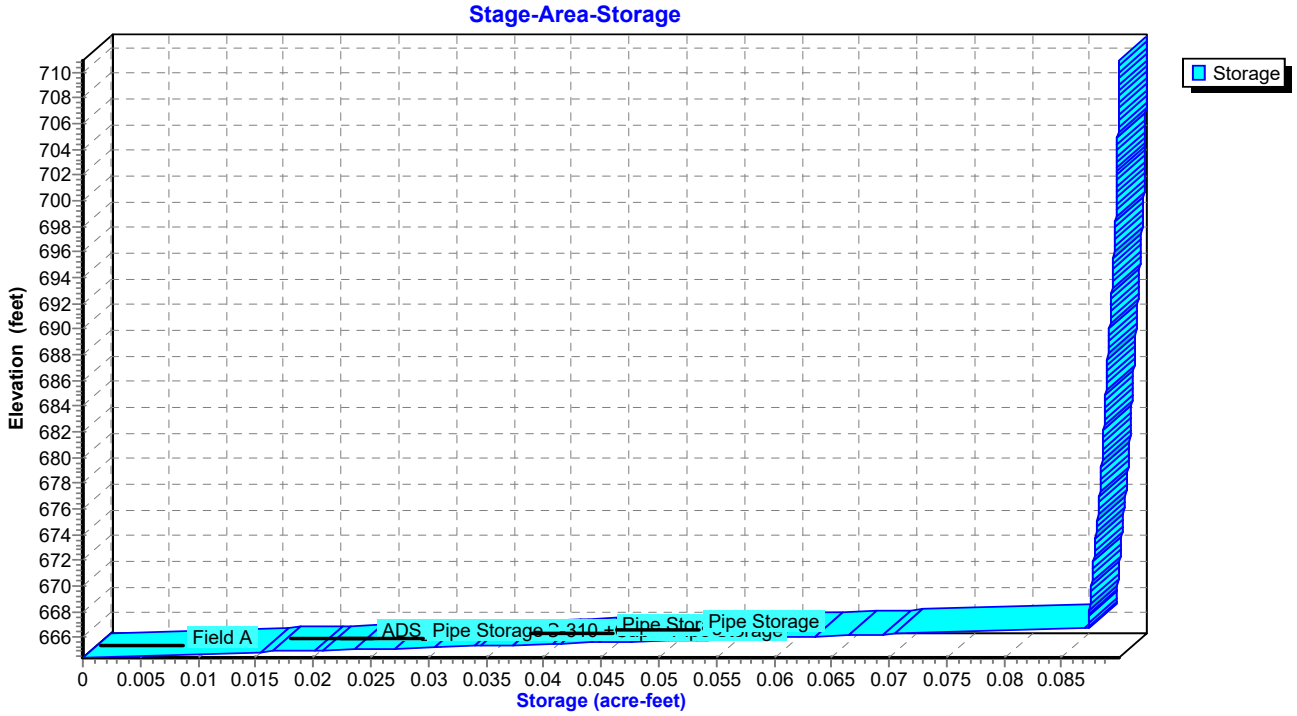
Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Pond 4P: stormtech SC310 16"x34" chambers



Hydrograph for Pond 4P: stormtech SC310 16"x34" chambers

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0.000	664.40	0.00	0.00	0.00
5.40	0.09	0.002	664.47	0.03	0.00	0.03
5.80	0.10	0.004	664.52	0.05	0.00	0.05
6.20	0.10	0.006	664.57	0.06	0.00	0.06
6.60	0.11	0.007	664.60	0.08	0.00	0.08
7.00	0.12	0.008	664.63	0.09	0.00	0.09
7.40	0.13	0.009	664.66	0.10	0.00	0.10
7.80	0.13	0.009	664.69	0.11	0.00	0.11
8.20	0.14	0.010	664.71	0.12	0.00	0.12
8.60	0.15	0.011	664.73	0.13	0.00	0.13
9.00	0.16	0.012	664.75	0.14	0.00	0.14
9.40	0.25	0.014	664.81	0.16	0.00	0.16
9.80	0.26	0.016	664.90	0.18	0.00	0.18
10.20	0.28	0.019	664.97	0.19	0.00	0.19
10.60	0.33	0.023	665.04	0.20	0.00	0.20
11.00	0.47	0.030	665.21	0.21	0.00	0.21
11.40	0.54	0.039	665.44	0.23	0.00	0.23
11.80	0.91	0.052	665.77	0.34	0.08	0.26
12.20	**2.08**	**0.081**	**666.54**	**0.92**	**0.60**	**0.32**
12.60	**1.19**	**0.087**	**666.73**	**1.09**	**0.76**	**0.33**
13.00	0.63	0.080	666.53	0.91	0.59	0.32
13.40	0.55	0.073	666.32	0.72	0.42	0.30
13.80	0.47	0.068	666.18	0.60	0.31	0.29
14.20	0.46	0.064	666.08	0.53	0.25	0.29
14.60	0.39	0.061	666.00	0.48	0.20	0.28
15.00	0.38	0.059	665.94	0.44	0.16	0.28
15.40	0.35	0.057	665.89	0.41	0.13	0.27
15.80	0.34	0.055	665.85	0.38	0.11	0.27
16.20	0.34	0.054	665.82	0.37	0.10	0.27
16.60	0.34	0.053	665.80	0.36	0.09	0.26
17.00	0.33	0.053	665.78	0.35	0.08	0.26
17.40	0.33	0.052	665.77	0.34	0.08	0.26
17.80	0.33	0.052	665.76	0.34	0.08	0.26
18.20	0.33	0.052	665.76	0.33	0.07	0.26
18.60	0.32	0.052	665.75	0.33	0.07	0.26
19.00	0.32	0.051	665.74	0.33	0.07	0.26
19.40	0.32	0.051	665.74	0.32	0.06	0.26
19.80	0.32	0.051	665.73	0.32	0.06	0.26

Stage-Discharge for Pond 4P: stormtech SC310 16"x34" chambers

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
664.40	0.00	0.00	0.00
664.90	0.18	0.00	0.18
665.40	0.23	0.00	0.23
665.90	0.41	0.14	0.27
666.40	0.78	0.48	0.31
666.90	1.40	1.06	0.34
667.40	6.94	6.57	0.37
667.90	15.20	14.80	0.40
668.40	20.51	20.09	0.42
668.90	24.60	24.15	0.45
669.40	28.07	27.60	0.47
669.90	31.15	30.65	0.50
670.40	33.94	33.43	0.52
670.90	36.52	35.98	0.54
671.40	38.93	38.37	0.56
671.90	41.19	40.61	0.58
672.40	43.34	42.74	0.60
672.90	45.38	44.76	0.62
673.40	47.33	46.70	0.64
673.90	49.21	48.56	0.65
674.40	51.02	50.35	0.67
674.90	52.76	52.08	0.69
675.40	54.45	53.75	0.70
675.90	56.09	55.37	0.72
676.40	57.68	56.95	0.74
676.90	59.23	58.48	0.75
677.40	60.74	59.98	0.77
677.90	62.22	61.43	0.78
678.40	63.65	62.86	0.80
678.90	65.06	64.25	0.81
679.40	66.44	65.61	0.82
679.90	67.79	66.95	0.84
680.40	69.11	68.26	0.85
680.90	70.41	69.54	0.87
681.40	71.68	70.80	0.88
681.90	72.94	72.04	0.89
682.40	74.17	73.26	0.91
682.90	75.38	74.46	0.92
683.40	76.57	75.64	0.93
683.90	77.74	76.80	0.94
684.40	78.90	77.94	0.96
684.90	80.04	79.07	0.97
685.40	81.16	80.18	0.98
685.90	82.27	81.28	0.99
686.40	83.36	82.36	1.01
686.90	84.44	83.43	1.02
687.40	85.51	84.48	1.03
687.90	86.56	85.52	1.04
688.40	87.60	86.55	1.05
688.90	88.63	87.57	1.06
689.40	89.65	88.57	1.08
689.90	90.65	89.56	1.09
690.40	91.64	90.55	1.10
690.90	92.63	91.52	1.11
691.40	93.60	92.48	1.12
691.90	94.56	93.43	1.13
692.40	95.51	94.37	1.14
692.90	96.46	95.31	1.15
693.40	97.39	96.23	1.16
693.90	98.32	97.15	1.17
694.40	99.23	98.05	1.18
694.90	100.14	98.95	1.19
695.40	101.04	99.84	1.20
695.90	101.94	100.72	1.21
696.40	102.82	101.60	1.22
696.90	103.70	102.47	1.23
697.40	104.57	103.32	1.24
697.90	105.43	104.18	1.25
698.40	106.29	105.02	1.26
698.90	107.13	105.86	1.27
699.40	107.98	106.70	1.28
699.90	108.81	107.52	1.29
700.40	109.64	108.34	1.30
700.90	110.46	109.15	1.31
701.40	111.28	109.96	1.32
701.90	112.09	110.76	1.33
702.40	112.90	111.56	1.34
702.90	113.70	112.35	1.35
703.40	114.49	113.14	1.36
703.90	115.28	113.91	1.37
704.40	116.06	114.69	1.37
704.90	116.84	115.46	1.38
705.40	117.61	116.22	1.39
705.90	118.38	116.98	1.40
706.40	119.14	117.73	1.41
706.90	119.90	118.48	1.42
707.40	120.65	119.23	1.43
707.90	121.40	119.97	1.44
708.40	122.15	120.70	1.44
708.90	122.89	121.43	1.45
709.40	123.62	122.16	1.46
709.90	124.35	122.88	1.47
710.40	125.08	123.60	1.48
710.90	**125.80**	**124.31**	**1.49**

Stage-Area-Storage for Pond 4P: stormtech SC310 16"x34" chambers

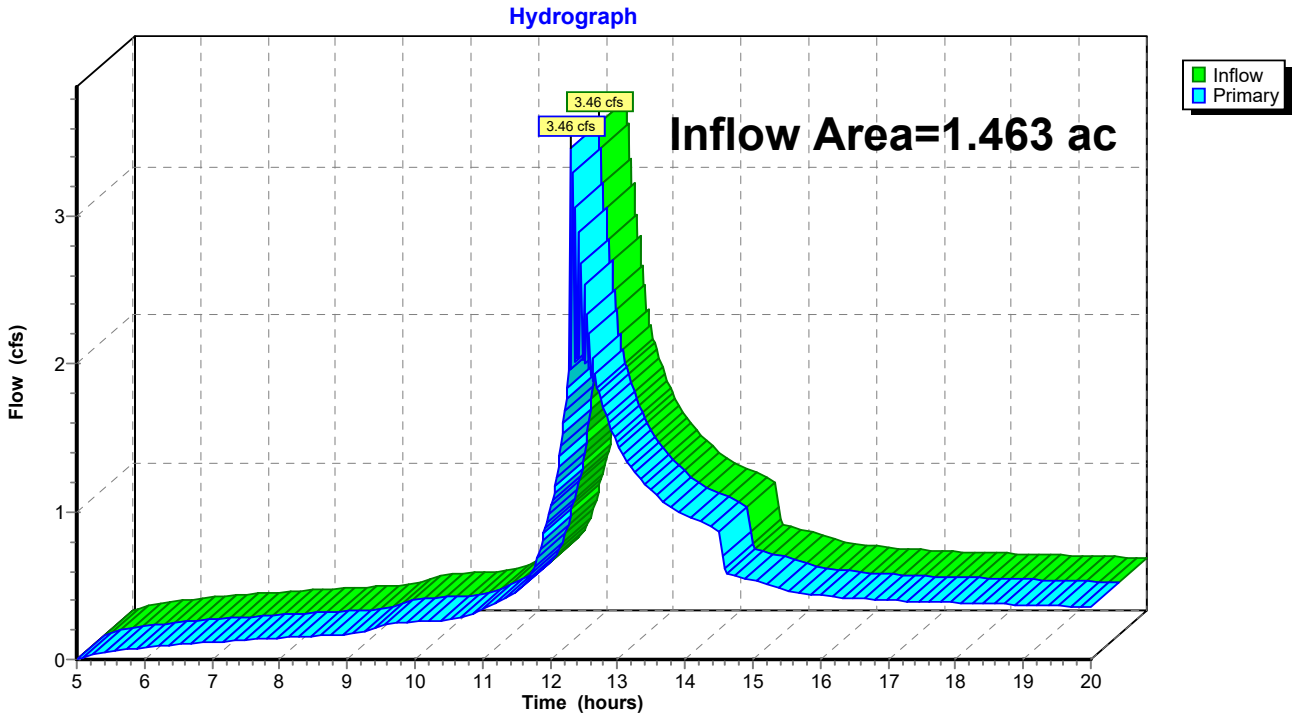
Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
664.40	0.000	689.90	0.089
664.90	0.017	690.40	0.089
665.40	0.037	690.90	0.089
665.90	0.057	691.40	0.089
666.40	0.075	691.90	0.089
666.90	0.087	692.40	0.089
667.40	0.087	692.90	0.089
667.90	0.087	693.40	0.089
668.40	0.087	693.90	0.089
668.90	0.087	694.40	0.089
669.40	0.088	694.90	0.089
669.90	0.088	695.40	0.089
670.40	0.088	695.90	0.090
670.90	0.088	696.40	0.090
671.40	0.088	696.90	0.090
671.90	0.088	697.40	0.090
672.40	0.088	697.90	0.090
672.90	0.088	698.40	0.090
673.40	0.088	698.90	0.090
673.90	0.088	699.40	0.090
674.40	0.088	699.90	0.090
674.90	0.088	700.40	0.090
675.40	0.088	700.90	0.090
675.90	0.088	701.40	0.090
676.40	0.088	701.90	0.090
676.90	0.088	702.40	0.090
677.40	0.088	702.90	0.090
677.90	0.088	703.40	0.090
678.40	0.088	703.90	0.090
678.90	0.088	704.40	0.090
679.40	0.088	704.90	0.090
679.90	0.088	705.40	0.090
680.40	0.089	705.90	0.090
680.90	0.089	706.40	0.090
681.40	0.089	706.90	0.090
681.90	0.089	707.40	0.090
682.40	0.089	707.90	0.090
682.90	0.089	708.40	0.090
683.40	0.089	708.90	0.090
683.90	0.089	709.40	0.090
684.40	0.089	709.90	0.090
684.90	0.089	710.40	0.090
685.40	0.089	710.90	**0.090**
685.90	0.089		
686.40	0.089		
686.90	0.089		
687.40	0.089		
687.90	0.089		
688.40	0.089		
688.90	0.089		
689.40	0.089		

Summary for Link 5L: HOM property run-off

Inflow Area = 1.463 ac, 87.83% Impervious, Inflow Depth > 4.93" for 100-yr event
Inflow = 3.46 cfs @ 12.30 hrs, Volume= 0.601 af
Primary = 3.46 cfs @ 12.30 hrs, Volume= 0.601 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.02 hrs

Link 5L: HOM property run-off



Hydrograph for Link 5L: HOM property run-off

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.20	0.03	0.00	0.03
5.40	0.05	0.00	0.05
5.60	0.06	0.00	0.06
5.80	0.07	0.00	0.07
6.00	0.08	0.00	0.08
6.20	0.09	0.00	0.09
6.40	0.10	0.00	0.10
6.60	0.10	0.00	0.10
6.80	0.11	0.00	0.11
7.00	0.12	0.00	0.12
7.20	0.12	0.00	0.12
7.40	0.13	0.00	0.13
7.60	0.14	0.00	0.14
7.80	0.14	0.00	0.14
8.00	0.15	0.00	0.15
8.20	0.15	0.00	0.15
8.40	0.16	0.00	0.16
8.60	0.16	0.00	0.16
8.80	0.17	0.00	0.17
9.00	0.17	0.00	0.17
9.20	0.18	0.00	0.18
9.40	0.21	0.00	0.21
9.60	0.24	0.00	0.24
9.80	0.25	0.00	0.25
10.00	0.25	0.00	0.25
10.20	0.26	0.00	0.26
10.40	0.27	0.00	0.27
10.60	0.28	0.00	0.28
10.80	0.30	0.00	0.30
11.00	0.35	0.00	0.35
11.20	0.39	0.00	0.39
11.40	0.43	0.00	0.43
11.60	0.49	0.00	0.49
11.80	0.67	0.00	0.67
12.00	1.00	0.00	1.00
12.20	**1.61**	0.00	**1.61**
12.40	**2.04**	0.00	**2.04**
12.60	1.93	0.00	1.93
12.80	1.69	0.00	1.69
13.00	1.46	0.00	1.46
13.20	1.30	0.00	1.30
13.40	1.19	0.00	1.19
13.60	1.10	0.00	1.10
13.80	1.03	0.00	1.03
14.00	0.97	0.00	0.97
14.20	0.94	0.00	0.94
14.40	0.91	0.00	0.91
14.60	0.59	0.00	0.59
14.80	0.56	0.00	0.56
15.00	0.54	0.00	0.54
15.20	0.52	0.00	0.52
15.40	0.48	0.00	0.48
15.60	0.46	0.00	0.46
15.80	0.45	0.00	0.45
16.00	0.43	0.00	0.43
16.20	0.43	0.00	0.43
16.40	0.42	0.00	0.42
16.60	0.41	0.00	0.41
16.80	0.41	0.00	0.41
17.00	0.40	0.00	0.40
17.20	0.40	0.00	0.40
17.40	0.39	0.00	0.39
17.60	0.39	0.00	0.39
17.80	0.39	0.00	0.39
18.00	0.38	0.00	0.38
18.20	0.38	0.00	0.38
18.40	0.38	0.00	0.38
18.60	0.38	0.00	0.38
18.80	0.37	0.00	0.37
19.00	0.37	0.00	0.37
19.20	0.37	0.00	0.37
19.40	0.37	0.00	0.37
19.60	0.36	0.00	0.36
19.80	0.36	0.00	0.36
20.00	0.36	0.00	0.36

Haven On Main Project

Storm Water Management Plan

APPENDIX C – Operation & Maintenance Plan

OPERATION AND MAINTENANCE PLAN

Haven On Main Project
Gerrard Development LLC

The intent of this plan is to set forth maintenance procedures in order to ensure proper operation of storm water facilities on the site. A copy of this plan shall be kept onsite at all times and be available for inspection if requested. Written record of inspection activities and maintenance shall be retained for the life of the facilities discussed in this plan.

UNDERGROUND STORM WATER DETENTION SYSTEM:

1) Accumulated solids or byproduct removal requirements

Attached to this document is the manufacturer's recommended Operations & Maintenance Manual for maintenance of the isolator row of the underground storm water detention system proposed for this project.

2) Identification of safety hazards

Verify the system is operating properly by inspecting after one inch of rain for the first year and then quarterly each succeeding year as clogging may create unsafe ponding areas.

3) Cleaning and inspection schedule

Keep contributing lawn areas in good condition to minimize sediment migration to the system. The attached manufacturer's recommended O & M Manual contains instructions for Inspection procedures and schedule.

4) Inspection and maintenance checklist

a) **Filters** – does not apply to this system
b) **Disinfection units -** does not apply to this system
c) **Sedimentation chambers** – The attached manufacturer's recommended O & M Manual contains instructions for maintenance of the isolator row**.**
d) **Detention devices** – not serviceable.
e) **Infiltration systems** – not serviceable.

5) **Start up and shutdown procedures does not apply to this system**

6) **Vector control requirements – does not apply to this system**

7) **Contingency plan in the event of system failure**

In the event the system no longer appears to intercept and detain runoff, consult engineer to determine best course of action for repairs.

STORM SEWER SYSTEM:

1) **Accumulated solids or byproduct removal requirements**

   Practices shall include removal of excess sediment from within the site's storm water inlets and conveyance piping. Periodic removal of sediment will insure proper operation. Also, remove any litter or debris that may obstruct inflow conditions.

2) **Identification of safety hazards**

   Inspect annually, in the spring, inlet structures to verify they remain installed correctly. This is important for inlets located in pavement areas which may endure heavy traffic and create a hazard if they are not properly seated.

3) **Cleaning and inspection schedule**

   Inspect inlets annually, in the spring. Observe the system components during rain events to verify the system is operating at top capacity. Identify structures and conveyance piping which may need repair or replacement parts. Remove any debris or litter blocking the inlet structures and pipes.

4) **Inspection and maintenance checklist**

   a) **Filters -** does not apply to this site
   b) **Disinfection units -** does not apply to this site
   c) **Sedimentation chambers -** does not apply to this site
   d) **Detention devices -** does not apply to this site
   e) **Infiltration systems –** does not apply to storm sewer

5) Start up and shutdown procedures

Not Applicable.

6) Vector control requirements – does not apply to this system

Isolator® Row Plus
O&M Manual

ADS StormTech™

The Isolator® Row Plus

Introduction

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row Plus is a technique to inexpensively enhance Total Suspended Solids (TSS), Total Phosphorus (TP), Total Petroluem Hydrocarbons (TPH) and Total Nitrogen (TN) removal with easy access for inspection and maintenance.

The Isolator Row Plus

The Isolator Row Plus is a row of StormTech chambers, either SC-160, SC-310, SC-310-3, SC-740, DC-780, SC-800, MC-3500, MC-4500 or MC-7200 models, are lined with filter fabric and connected to a closely located manhole for easy access. The fabric lined chambers provide for sediment settling and filtration as stormwater rises in the Isolator Row Plus and passes through the filter fabric. The open bottom chambers allow stormwater to flow vertically out of the chambers. Sediments are captured in the Isolator Row Plus protecting the adjacent stone and chambers storage areas from sediment accumulation.

ADS Isolator Row and Plus fabric are placed between the stone and the Isolator Row Plus chambers. The woven geotextile provides a media for stormwater filtration, a durable surface for maintenance, prevents scour of the underlying stone and remains intact during high pressure jetting.

The Isolator Row Plus is designed to capture the “first flush” runoff and offers the versatility to be sized on a volume basis or a flow-rate basis. An upstream manhole provides access to the Isolator Row Plus and includes a high/low concept such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row Plus bypass through a manifold to the other chambers. This is achieved with an elevated bypass manifold or a high-flow weir. This creates a differential between the Isolator Row Plus row of chambers and the manifold to the rest of the system, thus allowing for settlement time in the Isolator Row Plus. After Stormwater flows through the Isolator Row Plus and into the rest of the chamber system it is either exfiltrated into the soils below or passed at a controlled rate through an outlet manifold and outlet control structure.

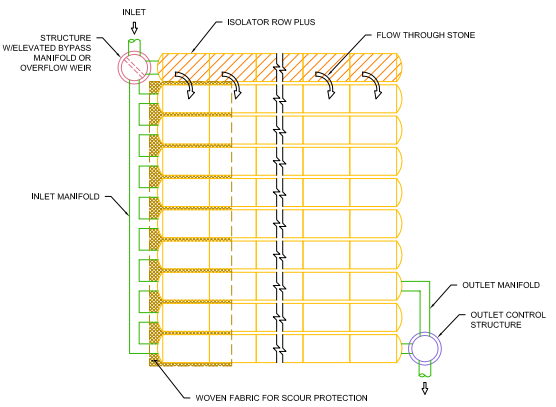
The Isolator Row Plus Flamp™ is a flared end ramp apparatus attached to the inlet pipe on the inside of the chamber end cap. The FLAMP provides a smooth transition from pipe invert to fabric bottom. It is configured to improve chamber function performance by enhancing outflow of solid debris that would otherwise collect at the chamber's end, or more difficult to remove and require confined space entry into the chamber area. It also serves to improve the fluid and solid flow into the access pipe during maintenance and cleaning and to guide cleaning and inspection equipment back into the inlet pipe when complete.

The Isolator Row Plus may be part of a treatment train system. The treatment train design and pretreatment device selection by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, StormTech recommend using the Isolator Row Plus to minimize maintenance requirements and maintenance costs.

Note: *See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row Plus.*

Looking down the Isolator Row Plus from the manhole opening, ADS Plus Fabric is shown between the chamber and stone base.

StormTech Isolator Row Plus with Overflow Structure (not to scale)



Isolator Row Plus Inspection/Maintenance

Inspection

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row Plus should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

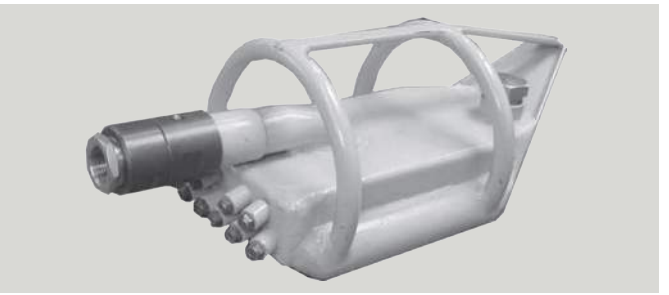
The Isolator Row Plus incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3" (75 mm) throughout the length of the Isolator Row Plus, clean-out should be performed.

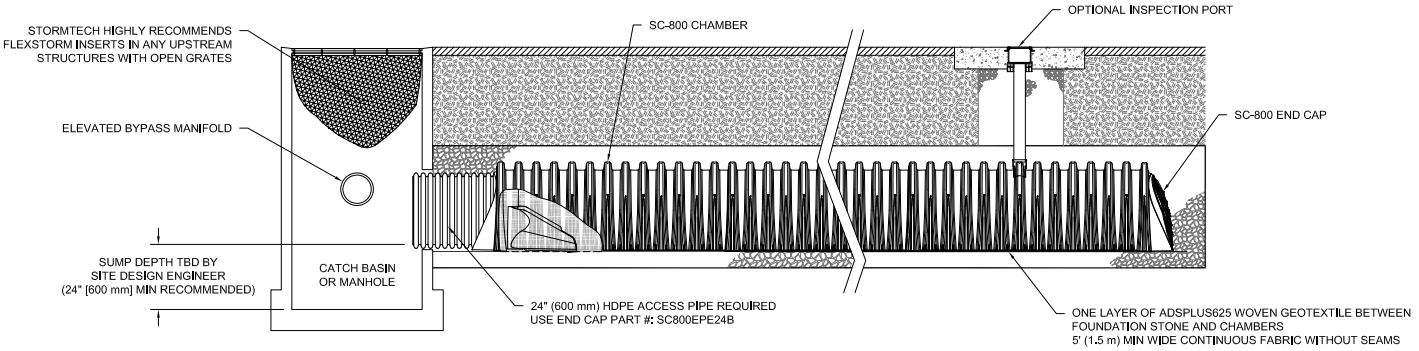
Maintenance

The Isolator Row Plus was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entry.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row Plus while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45” are best. StormTech recommends a maximum nozzle pressure of 2000 psi be utilized during cleaning. JetVac reels can vary in length. For ease of maintenance, ADS recommends Isolator Row Plus lengths up to 200' (61 m). **The JetVac process shall only be performed on StormTech Isolator Row Plus that have ADS Plus Fabric (as specified by StormTech) over their angular base stone.**



StormTech Isolator Row Plus (*not to scale*)



Isolator Row Plus Step By Step Maintenance Procedures

Step 1

Inspect Isolator Row Plus for sediment.

A) Inspection ports (if present)
   i. Remove lid from floor box frame
   ii. Remove cap from inspection riser
   iii. Using a flashlight and stadia rod,measure depth of sediment and record results on maintenance log.
   iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.

B) All Isolator Row Plus
   i. Remove cover from manhole at upstream end of Isolator Row Plus
   ii. Using a flashlight, inspect down Isolator Row Plus through outlet pipe
      1. Mirrors on poles or cameras may be used to avoid a confined space entry
      2. Follow OSHA regulations for confined space entry if entering manhole
   iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2.
   If not, proceed to Step 3.

Step 2

Clean out Isolator Row Plus using the JetVac process.

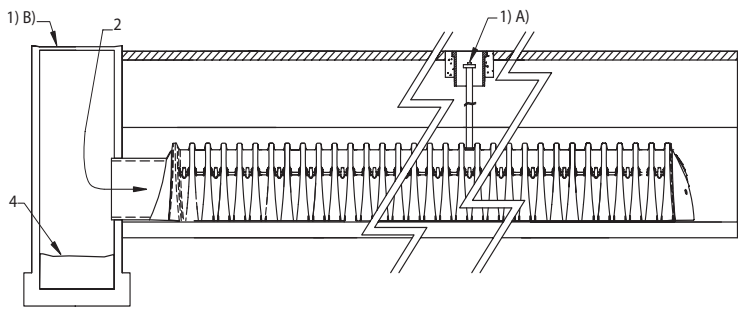
A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
B) Apply multiple passes of JetVac until backflush water is clean
C) Vacuum manhole sump as required

Step 3

Replace all caps, lids and covers, record observations and actions.

Step 4

Inspect & clean catch basins and manholes upstream of the StormTech system.



Sample Maintenance Log

Date	Stadia Rod Readings		Sediment Depth (1)–(2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/11	6.3 ft	none		New installation. Fixed point is CI frame at grade	DJM
9/24/11		6.2	0.1 ft	Some grit felt	SM
6/20/13		5.8	0.5 ft	Mucky feel, debris visible in manhole and in Isolator Row Plus, maintenance due	NV
7/7/13	6.3 ft		0	System jetted and vacuumed	DJM

adspipe.com
800-821-6710

Haven On Main Project

Storm Water Management Plan

APPENDIX D – Long Term Maintenance Agreement

DECLARATION OF CONDITIONS, COVENANTS AND RESTRICTIONS FOR MAINTENANCE OF STORMWATER MANAGEMENT MEASURES

This space is reserved for recording data

Return to:

City of La Crosse
Engineering Department
400 La Crosse Street
La Crosse, Wisconsin 54601

Tax Parcel Nos.: 17-20204-100, -110, -120, -030, -020, -010 and part of alley

RECITALS:

A. Gerrard Development LLC, are the owners of Haven On Main , more particularly described on Exhibit A attached hereto ("Property").

B. Owners desire to construct buildings, parking facilities and stormwater management structures on the Property in accordance with certain plans and specifications approved by the City.

C. The City requires Owners to record this Declaration regarding maintenance of stormwater management measures to be located on the Property. Owners agree to maintain the stormwater management measures and to grant to the City the rights set forth below.

NOW, THEREFORE, in consideration of the declarations herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the owners agree as follows:

1. Maintenance. Owners and their successors and assigns shall be responsible to repair and maintain the stormwater management measures located on the Property in good condition and in working order and such that the measures comply with the approved plans on file with the City Engineer. Said maintenance shall be at the Owner's sole cost and expense. Owners will conduct such maintenance or repair work in accordance with all applicable laws, codes, regulations, and similar requirements, and pursuant to the Maintenance Provisions attached hereto as Exhibit B.

2. Easement to City. If Owners fail to maintain the stormwater management measures as required in Section 1, then City shall have the right, after providing Owners with written notice of the maintenance issue ("Maintenance Notice") and thirty (30) days to comply with the City's maintenance request, to enter the Property in order to conduct the maintenance specified in the Maintenance Notice. City will conduct such maintenance work in accordance with all applicable laws, codes, regulations, and similar requirements and will not unreasonably interfere with Owner's use of the Property. All costs and expenses incurred by the City in conducting such maintenance may be charged to the owner of the Property by placing the amount on the tax roll for the Property as a special charge in accordance with Section 66.0627, Wis. Stats.

3. Term/Termination. The term of this Agreement shall commence on the date that this Agreement is filed of record with the Register of Deeds Office for La Crosse County, Wisconsin, and except as otherwise herein specifically provided, shall continue in perpetuity. Notwithstanding the foregoing, this Agreement may be terminated by recording with the Register of Deeds Office for La Crosse County, Wisconsin, a written instrument of termination signed by the City and all of the then-owners of the Property.

4. Miscellaneous.

(a) Notices. Any notice, request or demand required or permitted under this Agreement shall be in writing and shall be deemed given when personally served or three (3) days after the same has been deposited with the United States Post Office, registered or certified mail, return receipt requested, postage prepaid and addressed as follows:

If to Owners: Gerrard Development LLC
W5947 Woodland Dr.
La Crosse, WI. 54601

If to City: City of La Crosse
Engineering Department
400 La Crosse Street
La Crosse, WI 54601
Attention: City Engineer

Any party may change its address for the receipt of notice by written notice to the other.

(b) Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Wisconsin.

(c) Amendments or Further Agreements to be in Writing. This Agreement may not be modified in whole or in part unless such agreement is in writing and signed by all parties bound hereby.

(d) Covenants Running with the Land. All of the easements, restrictions, covenants and agreements set forth in this Agreement are intended to be and shall be construed as covenants running with the land, binding upon, inuring to the benefit of, and enforceable by the parties hereto and their respective successors and assigns.

(e) Partial Invalidity. If any provisions, or portions thereof, of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Agreement, or the application of such provision, or portion thereof, to any other persons or circumstances shall not be affected thereby and each provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20_____.

_____ _____

STATE OF WISCONSIN)
COUNTY OF LA CROSSE) SS

Personally came before me this _____ day of _____, 20_____, the above named _____, to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

_____
NOTARY PUBLIC

My Commission Expires:_____

Drafted by: City of La Crosse
Engineering Department
400 La Crosse Street
La Crosse, Wisconsin 54601

EXHIBIT A
Legal Description

Haven on Main @ 915-927 Main St.
ABBREVIATED LEGAL DESCRIPTIONS OF EXISTING PARCELS

Parcel 17-20204-010
METZGERS ADDITION LOT 1 EX S 59 FT LOT SZ: 52 x 91

Parcel 17-20204-020
METZGERS ADDITION S 59 FT LOT 1 LOT SZ: 59 x 52

Parcel 17-20204-030
METZGERS ADDITION LOT 2 & E 34 FT LOT 3 LOT SZ: 86 x 150

Parcel 17-20204-100
METZGERS ADDITION E 30.3 FT LOT 8 EX N 56 FT & E 3 FT of N 56 FT LOT 8 & ALL LOTS 9 & 10 LOT SZ: IRR

Parcel 17-20204-110
METZGERS ADDITION N 74 FT LOTS 11 & 12 LOT SZ: 74 x 104

Parcel 17-20204-120
METZGERS ADDITION S 76 FT LOTS 11 & 12 LOT SZ: 104 x 76

Partial alley – no legal description currently exists

EXHIBIT B
Maintenance Provisions

Operation and Maintenance Plan attached
Construction plan sheet C400 attached

OPERATION AND MAINTENANCE PLAN

Haven On Main Project
Gerrard Development LLC

The intent of this plan is to set forth maintenance procedures in order to ensure proper operation of storm water facilities on the site. A copy of this plan shall be kept onsite at all times and be available for inspection if requested. Written record of inspection activities and maintenance shall be retained for the life of the facilities discussed in this plan.

UNDERGROUND STORM WATER DETENTION SYSTEM:

1) Accumulated solids or byproduct removal requirements

Attached to this document is the manufacturer's recommended Operations & Maintenance Manual for maintenance of the isolator row of the underground storm water detention system proposed for this project.

2) Identification of safety hazards

Verify the system is operating properly by inspecting after one inch of rain for the first year and then quarterly each succeeding year as clogging may create unsafe ponding areas.

3) Cleaning and inspection schedule

Keep contributing lawn areas in good condition to minimize sediment migration to the system. The attached manufacturer's recommended O & M Manual contains instructions for Inspection procedures and schedule.

4) Inspection and maintenance checklist

a) **Filters** – does not apply to this system
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d) **Detention devices** – not serviceable.
e) **Infiltration systems** – not serviceable.

5) **Start up and shutdown procedures does not apply to this system**

6) **Vector control requirements – does not apply to this system**

7) **Contingency plan in the event of system failure**

In the event the system no longer appears to intercept and detain runoff, consult engineer to determine best course of action for repairs.

STORM SEWER SYSTEM:

1) **Accumulated solids or byproduct removal requirements**

   Practices shall include removal of excess sediment from within the site's storm water inlets and conveyance piping. Periodic removal of sediment will insure proper operation. Also, remove any litter or debris that may obstruct inflow conditions.

2) **Identification of safety hazards**

   Inspect annually, in the spring, inlet structures to verify they remain installed correctly. This is important for inlets located in pavement areas which may endure heavy traffic and create a hazard if they are not properly seated.

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   Inspect inlets annually, in the spring. Observe the system components during rain events to verify the system is operating at top capacity. Identify structures and conveyance piping which may need repair or replacement parts. Remove any debris or litter blocking the inlet structures and pipes.

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5) Start up and shutdown procedures

Not Applicable.

6) Vector control requirements – does not apply to this system

Isolator® Row Plus
O&M Manual

ADS StormTech™

The Isolator® Row Plus

Introduction

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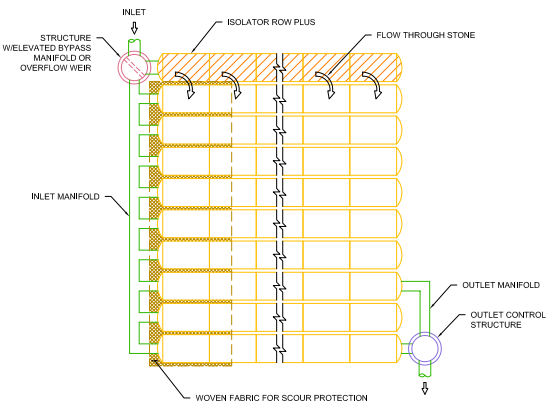

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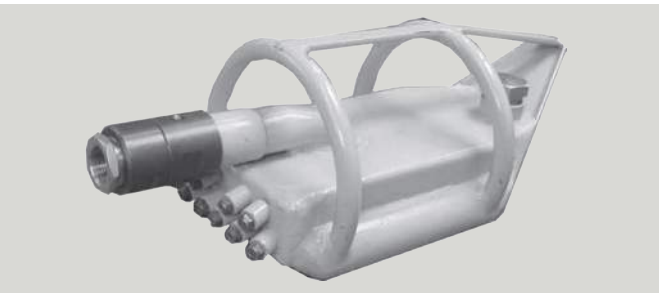
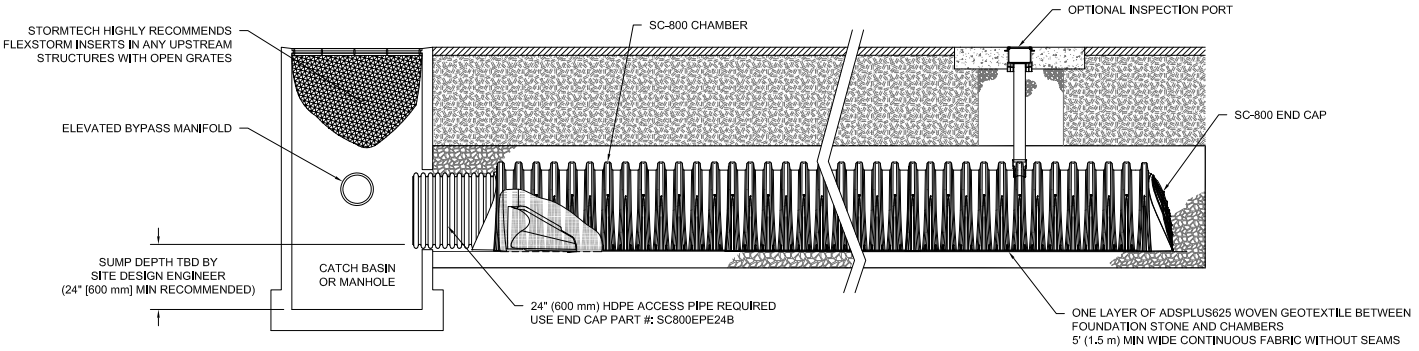


StormTech Isolator Row Plus (*not to scale*)



Isolator Row Plus Step By Step Maintenance Procedures

Step 1

Inspect Isolator Row Plus for sediment.

A) Inspection ports (if present)
   i. Remove lid from floor box frame
   ii. Remove cap from inspection riser
   iii. Using a flashlight and stadia rod,measure depth of sediment and record results on maintenance log.
   iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.

B) All Isolator Row Plus
   i. Remove cover from manhole at upstream end of Isolator Row Plus
   ii. Using a flashlight, inspect down Isolator Row Plus through outlet pipe
      1. Mirrors on poles or cameras may be used to avoid a confined space entry
      2. Follow OSHA regulations for confined space entry if entering manhole
   iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2.
   If not, proceed to Step 3.

Step 2

Clean out Isolator Row Plus using the JetVac process.

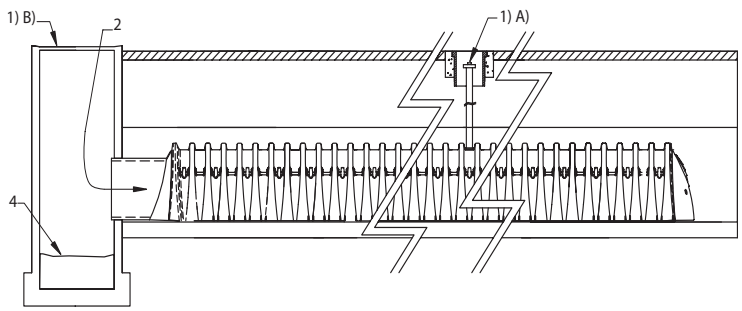
A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
B) Apply multiple passes of JetVac until backflush water is clean
C) Vacuum manhole sump as required

Step 3

Replace all caps, lids and covers, record observations and actions.

Step 4

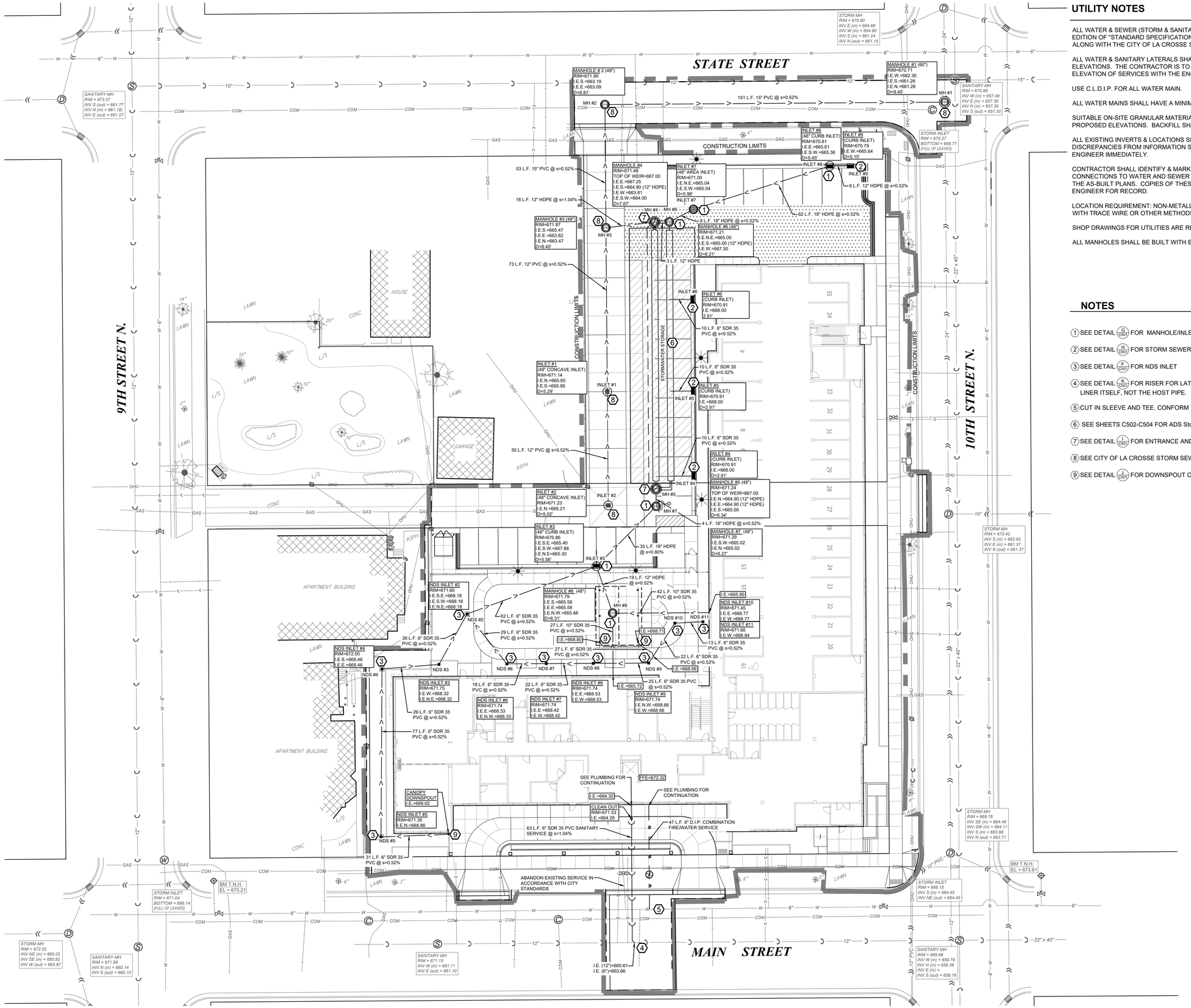
Inspect & clean catch basins and manholes upstream of the StormTech system.



Sample Maintenance Log

Date	Stadia Rod Readings		Sediment Depth (1)–(2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/11	6.3 ft	none		New installation. Fixed point is CI frame at grade	DJM
9/24/11		6.2	0.1 ft	Some grit felt	SM
6/20/13		5.8	0.5 ft	Mucky feel, debris visible in manhole and in Isolator Row Plus, maintenance due	NV
7/7/13	6.3 ft		0	System jetted and vacuumed	DJM

adspipe.com
800-821-6710



UTILITY NOTES

ALL WATER & SEWER (STORM & SANITARY) CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF "STANDARD SPECIFICATIONS FOR SEWER & WATER IN THE STATE OF WISCONSIN," ALONG WITH THE CITY OF LA CROSSE STANDARD SPECIFICATIONS, AS APPROPRIATE.

ALL WATER & SANITARY LATERALS SHALL HAVE A MINIMUM DEPTH 6' BELOW FINISHED FLOOR ELEVATIONS. THE CONTRACTOR IS TO COORDINATE ACTIVITIES & CONFIRM LOCATION & ELEVATION OF SERVICES WITH THE ENGINEER.

USE C.L.D.I.P. FOR ALL WATER MAIN.

ALL WATER MAINS SHALL HAVE A MINIMUM OF 7.5' OF COVER.

SUITABLE ON-SITE GRANULAR MATERIAL SHALL BE USED FOR TRENCH BACKFILL TO PROPOSED ELEVATIONS. BACKFILL SHALL BE COMPACTED AS SPECIFIED.

ALL EXISTING INVERTS & LOCATIONS SHALL BE VERIFIED PRIOR TO CONSTRUCTION. ALL DISCREPANCIES FROM INFORMATION SHOWN ON THE PLANS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

CONTRACTOR SHALL IDENTIFY & MARK THE EXACT LOCATIONS OF ALL UNDERGROUND CONNECTIONS TO WATER AND SEWER MAINS, BENDS, CURB BOXES, CLEAN OUTS, ETC. ON THE AS-BUILT PLANS. COPIES OF THESE DOCUMENTS SHALL BE DELIVERED TO THE ENGINEER FOR RECORD.

LOCATION REQUIREMENT: NON-METALLIC SEWER/MAINS AND SERVICES MUST BE PROVIDED WITH TRACE WIRE OR OTHER METHODS IN ORDER TO BE LOCATED.

SHOP DRAWINGS FOR UTILITIES ARE REQUIRED.

ALL MANHOLES SHALL BE BUILT WITH ECCENTRIC CONES.

NOTES

1. SEE DETAIL G C501 FOR MANHOLE/INLET FOR STORM SEWER
2. SEE DETAIL H C501 FOR STORM SEWER INLET 3' X 2'
3. SEE DETAIL F C501 FOR NDS INLET
4. SEE DETAIL K C501 FOR RISER FOR LATERAL CONNECTION TO MAIN. LATERAL CONNECTION TO LINER ITSELF, NOT THE HOST PIPE.
5. CUT IN SLEEVE AND TEE. CONFORM TO CITY OF LA CROSSE SPECIFICATIONS
6. SEE SHEETS C502-C504 FOR ADS StormTech SYSTEM
7. SEE DETAIL I C501 FOR ENTRANCE AND DISCHARGE WEIR MANHOLE
8. SEE CITY OF LA CROSSE STORM SEWER DETAILS ON SHEET C503
9. SEE DETAIL J C501 FOR DOWNSPOUT CONNECTION

REVISIONS	BY

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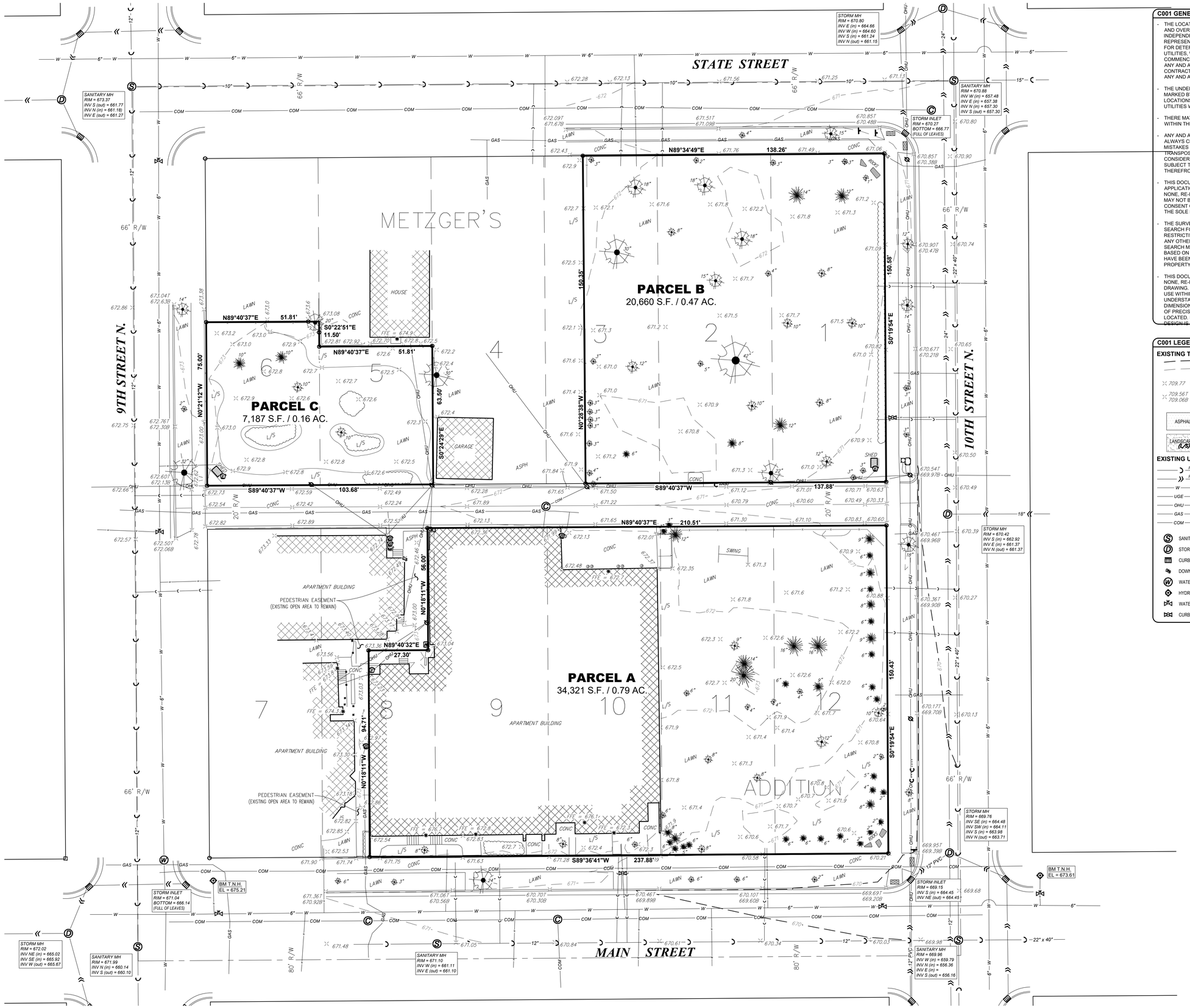
PREPARED FOR:
GERRARD CORP.

HAVEN ON MAIN
915 MAIN STREET
LA CROSSE, WISCONSIN
UTILITY PLAN

DRAWN	C.G.
PROJECT No	23-109
DATE	02/27/2025
SCALE	1"=20'
CAD FILE	23-109 Gerrard HOM 17.DWG
SHEET	C400

PLAN SCALE: 1"=20'



C001 GENERAL NOTES

- THE LOCATION OF EXISTING UTILITIES, BOTH UNDERGROUND AND OVERHEAD ARE APPROXIMATE ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES. **DIAL 811 OR (800) 242-8511**
- THE UNDERGROUND LOCATIONS OF THE PUBLIC UTILITIES WERE MARKED BY REPRESENTATIVES OF THOSE COMPANIES. THE LOCATIONS OF THE PRIVATELY OWNED UNDERGROUND UTILITIES WERE NOT MARKED.
- THERE MAY BE MORE UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- ANY AND ALL PARTIES UTILIZING VERTICAL DATUM SHALL ALWAYS CHECK INTO AT LEAST TWO (2) BENCHMARKS TO AVOID MISTAKES DUE TO HYDRANT ADJUSTMENTS OR TRANSPOSITIONAL ERRORS. FAILURE TO DO SO WILL BE CONSIDERED TANTAMOUNT TO GROSS NEGLIGENCE AND SUBJECT THE OFFENDING PARTY TO ANY DAMAGES RESULTING THEREFROM.
- THIS DOCUMENT HAS BEEN PREPARED FOR A SPECIFIC APPLICATION AND SOLELY FOR THE USE OF ORGANIZATION (IF NONE, RE-ENTER FIRST LAST) AND NOT FOR GENERAL USE. IT MAY NOT BE USED WITHOUT THE EXPRESSED WRITTEN CONSENT OF PARAGON ASSOCIATES, INC. UNAPPROVED USE IS THE SOLE RESPONSIBILITY OF THE UNAUTHORIZED USER.
- THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD OR ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE. EASEMENTS THAT ARE SHOWN ARE BASED ON DOCUMENTS FROM OUR FILES, AND MAY OR MAY NOT HAVE BEEN VACATED. OTHER EASEMENTS MAY EXIST ON THE PROPERTY SURVEYED.
- THIS DOCUMENT IS BEING FURNISHED TO ORGANIZATION (IF NONE, RE-ENTER FIRST LAST) IN THE FORM OF AN AUTOCAD DRAWING. THE PURPOSE OF THE AUTOCAD DRAWING IS FOR USE WITHIN THE AUTOCAD SOFTWARE PROGRAM WITH THE UNDERSTANDING THAT THE CAPABILITY OF AUTOCAD TO DIMENSION AN ELEMENT OF A DRAWING EXCEEDS THE DEGREE OF PRECISION TO WHICH THAT ELEMENT MAY HAVE BEEN LOCATED. FIELD VERIFICATION MAY BE NECESSARY BEFORE DESIGN IS FINALIZED.

C001 LEGEND

EXISTING TOPOGRAPHY

- CONTOUR MAJOR
- CONTOUR MINOR
- SPOT ELEVATION
- SPOT ELEVATION / TOP / BOTTOM CURB OR WALL
- CONIFEROUS TREE, SIZE NOTED
- DECIDUOUS TREE, SIZE NOTED
- ASPHALT
- LANDSCAPING
- FENCE
- BOLLARD
- SINGLE POST SIGN
- TACTILE MAT (ADA)

EXISTING UTILITIES

- SANITARY SEWER (FLOW DIRECTION)
- STORM SEWER (FLOW DIRECTION)
- WATERMAIN / SERVICE
- UNDERGROUND ELECTRIC
- OVERHEAD UTILITIES
- GAS
- UNSPECIFIED COMMUNICATION LINE
- SANITARY MANHOLE
- STORM MANHOLE
- CURB INLET
- DOWNSPOUT
- WATER MANHOLE
- HYDRANT
- WATER VALVE
- CURB STOP
- COMMUNICATIONS MANHOLE
- GAS METER
- ELECTRIC METER
- AIR CONDITIONER
- UTILITY POLE
- GUY ANCHOR
- UNKNOWN PEDESTAL
- UNKNOWN PULLBOX

PLAN SCALE: 1"=20'

REVISIONS	BY

PARAGON ASSOCIATES
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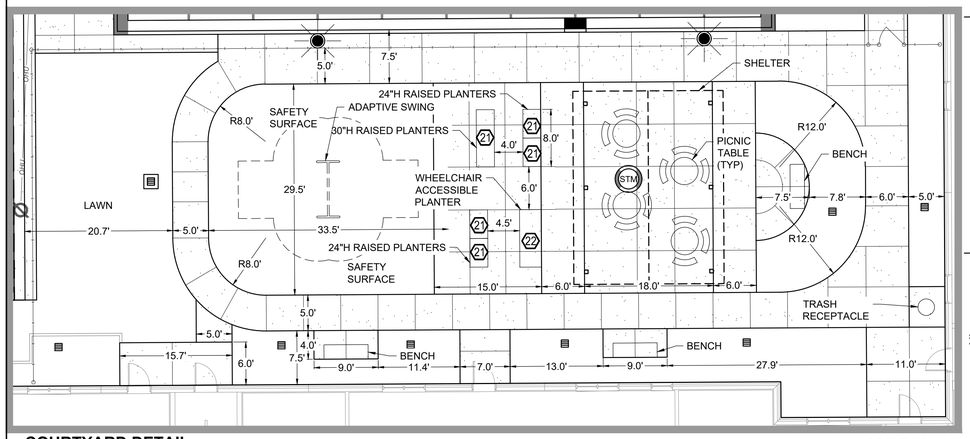
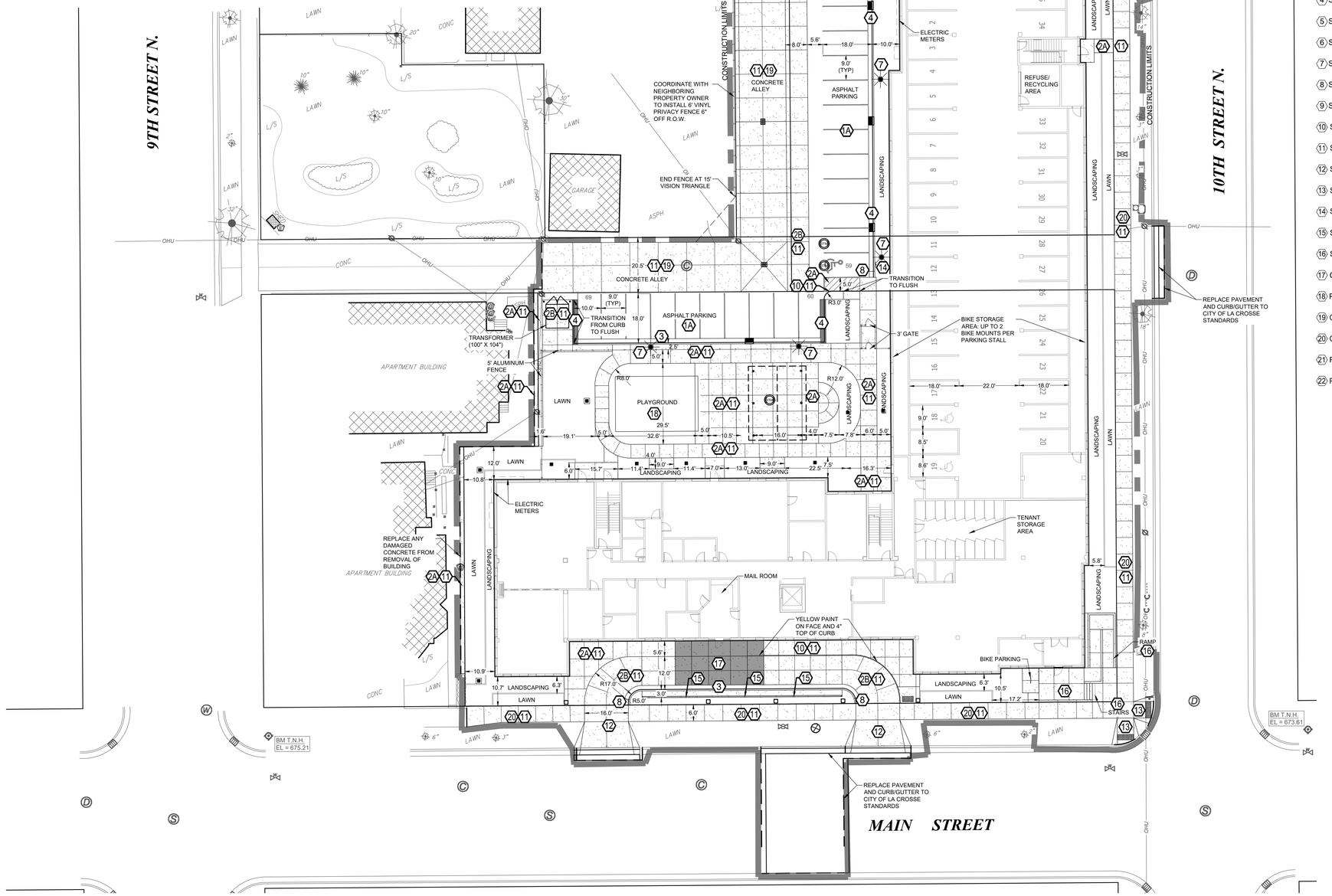
PREPARED FOR:
XXXX

HAVEN ON MAIN
915-927 MAIN STREET
LA CROSSE, WISCONSIN
TOPOGRAPHIC SITE MAP

DRAWN	C.G.
PROJECT No	23-109
DATE	10/02/2024
SCALE	1"=20'
CAD FILE	23-109 Gerrard HOM 07.DWG
SHEET	C001



COURTYARD DETAIL SCALE: 1" = 10'



SITE NOTES

-The location of existing utilities, both underground and overhead are approximate only and have not been independently verified by the owner or its representatives. The contractor shall be responsible for determining the exact location of all existing utilities, whether shown on these plans or not, before commencing work, and shall be fully responsible for any and all damages which might be caused by the contractor's failure to exactly locate and preserve any and all utilities. CALL DIGGERS HOTLINE (800) 242-8511

-The underground locations of the Public Utilities were marked by representatives of those companies. The locations of the privately owned underground utilities were not marked.

-There may be more underground utility installations within the project area that are not shown.

-It shall be the contractors responsibility to arrange for any necessary inspections by local government that may be required.

-Any and all parties utilizing vertical datum shall always check into at least two (2) benchmarks to avoid mistakes due to hydrant adjustments or transpositional errors. failure to do so will be considered tantamount to gross negligence and subject the offending party to any damages resulting therefrom.

-There may be discrepancies between the building exterior as located on the survey and what was provided by the architect. Verify dimensions prior to construction.

SITE NOTES

1A SEE DETAIL A/C500 FOR ASPHALT PAVEMENT - TYPE 1

1B SEE DETAIL A/C500 FOR ASPHALT PAVEMENT - TYPE 2

2A SEE DETAIL B/C500 FOR CONCRETE PAVEMENT - TYPE 1

2B SEE DETAIL B/C500 FOR CONCRETE PAVEMENT - TYPE 2

3 SEE DETAIL C/C500 FOR TYPICAL 24" CURB AND GUTTER SECTION

4 SEE DETAIL D/C500 FOR 24" CURB AND GUTTER SECTION - REVERSE SLOPE

5 SEE DETAIL E/C500 FOR TYPICAL 24" MOUNTABLE CURB & GUTTER

6 SEE DETAIL F/C500 FOR TYPICAL 24" MOUNTABLE CURB & GUTTER - REVERSE SLOPE

7 SEE DETAIL G/C500 FOR CONCRETE LIGHT BASE. MAXIMUM LIGHT POLE HEIGHT OF 18'

8 SEE DETAIL H/C500 FOR END SECTION CURB AND GUTTER

9 SEE DETAIL I/C500 FOR END SECTION CORNER MOUNTABLE CURB

10 SEE DETAIL J/C500 FOR INTEGRAL CURB/SIDEWALK

11 SEE DETAIL K/C500 FOR CONCRETE PAVING AND JOINTING

12 SEE DETAIL L/C500 FOR STANDARD CONCRETE APRON

13 SEE DETAIL M/C500 FOR SIDEWALK RAMP

14 SEE DETAIL N/C500 FOR DISABLED PARKING SIGN

15 SEE DETAIL O/C500 FOR CONCRETE WALL AND RAILING

16 SEE ARCHITECTURAL FOR STAIRS AND RAMP

17 COLORED CONCRETE

18 PLAYGROUND BASE, TURF AND EQUIPMENT BY OTHERS. CONTRACTOR TO COORDINATE WORK.

19 CONCRETE IN ALLEY TO BE CONSTRUCTED TO CITY OF LA CROSSE STANDARDS

20 CONCRETE SIDEWALKS TO BE CONSTRUCTED TO CITY OF LA CROSSE STANDARDS

21 RAISED PLANTERS TO BE WAUSAU TILE (4) 48"X30"X24" AND (1) 72"X30"X30" PLANTERS

22 PLANTER TO BE RUTHERFORD 4 SPACE PLANTER BY WISHBONE SITE FURNISHINGS

COMMERCIAL DESIGN STANDARDS REQUIREMENTS:
SNOW STORAGE: SNOW WILL BE REMOVED FROM SITE
REQUIRED PARKING SPACES (1 STALL/BEDROOM): 118 SPACES
PROPOSED PARKING SPACES: 69 SPACES
REQUIRED BIKE PARKING SPACES (1 SPACE PER 10 PARKING STALLS): 7 SPACES
REQUIRED BIKE PARKING SPACES (1 SPACE PER 20 EMPLOYEES): 1 SPACE
PROPOSED BIKE STORAGE MOUNTS: 7-70 (DEPENDING ON TENANT NEEDS)
PROPOSED EXTERIOR BIKE SPACES: 2 SPACES

REVISIONS	BY

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PREPARED FOR:
GERRARD CORP.

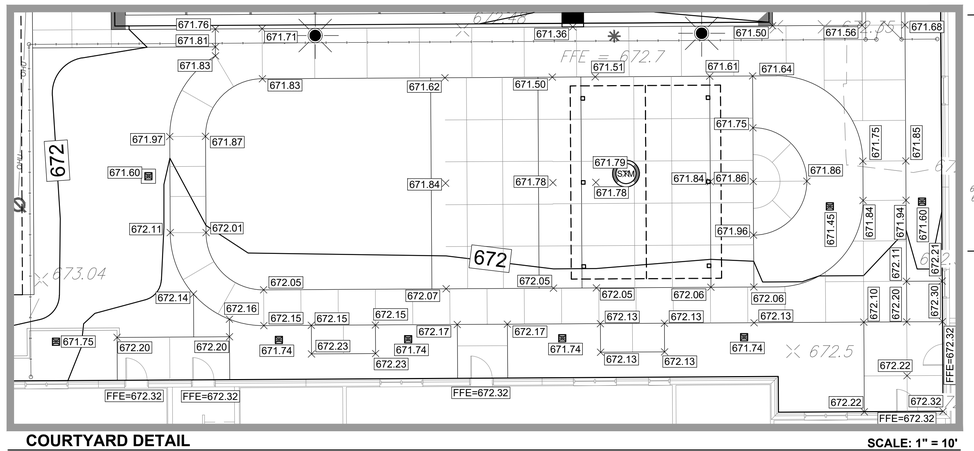
HAVEN ON MAIN
915 MAIN STREET
LA CROSSE, WISCONSIN
SITE PLAN

DRAWN	C.G.
PROJECT No	23-109
DATE	02/27/2025
SCALE	1"=20'
CAD FILE	23-109 Gerrard HOM 17.DWG
SHEET	C100

N

10 0 10 20

PLAN SCALE: 1"=20'



COURTYARD DETAIL SCALE: 1" = 10'

GRADING NOTES

-CONTOURS SHOWN ARE FOR FINISHED SURFACES, ANY ADJUSTMENT TO SUBGRADE IS THE CONTRACTOR'S RESPONSIBILITY.

-ALL DISTURBED AREAS THAT ARE UNPAVED ARE TO BE LANDSCAPED OR HAVE LAWN ESTABLISHED AS INDICATED ON THE EROSION CONTROL AND LANDSCAPE PLANS.

-ALL LANDSCAPED OR LAWN AREAS SHALL HAVE A MINIMUM OF 6" OF TOPSOIL.

-SPOT ELEVATIONS SHALL TAKE PRECEDENCE OVER CONTOURS AND SLOPES SHOWN. HOWEVER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF SPOT ELEVATIONS DO NOT APPEAR TO AGREE WITH THE CONTOURS AND SLOPES LABELED. SPOT ELEVATIONS AND SPECIFIC PROFILE INFORMATION SHALL BE USED FOR ESTABLISHING THE ELEVATION OF CURBS, DRIVEWAYS, AND OTHER UTILITIES.

-ALL FINISHED GRADING SHALL PROVIDE FOR A SMOOTH TRANSITION TO UNGRADED AREAS.

-ALL PVC STORM SEWER PIPING SHALL BE MINIMUM SDR 35

REVISIONS	BY

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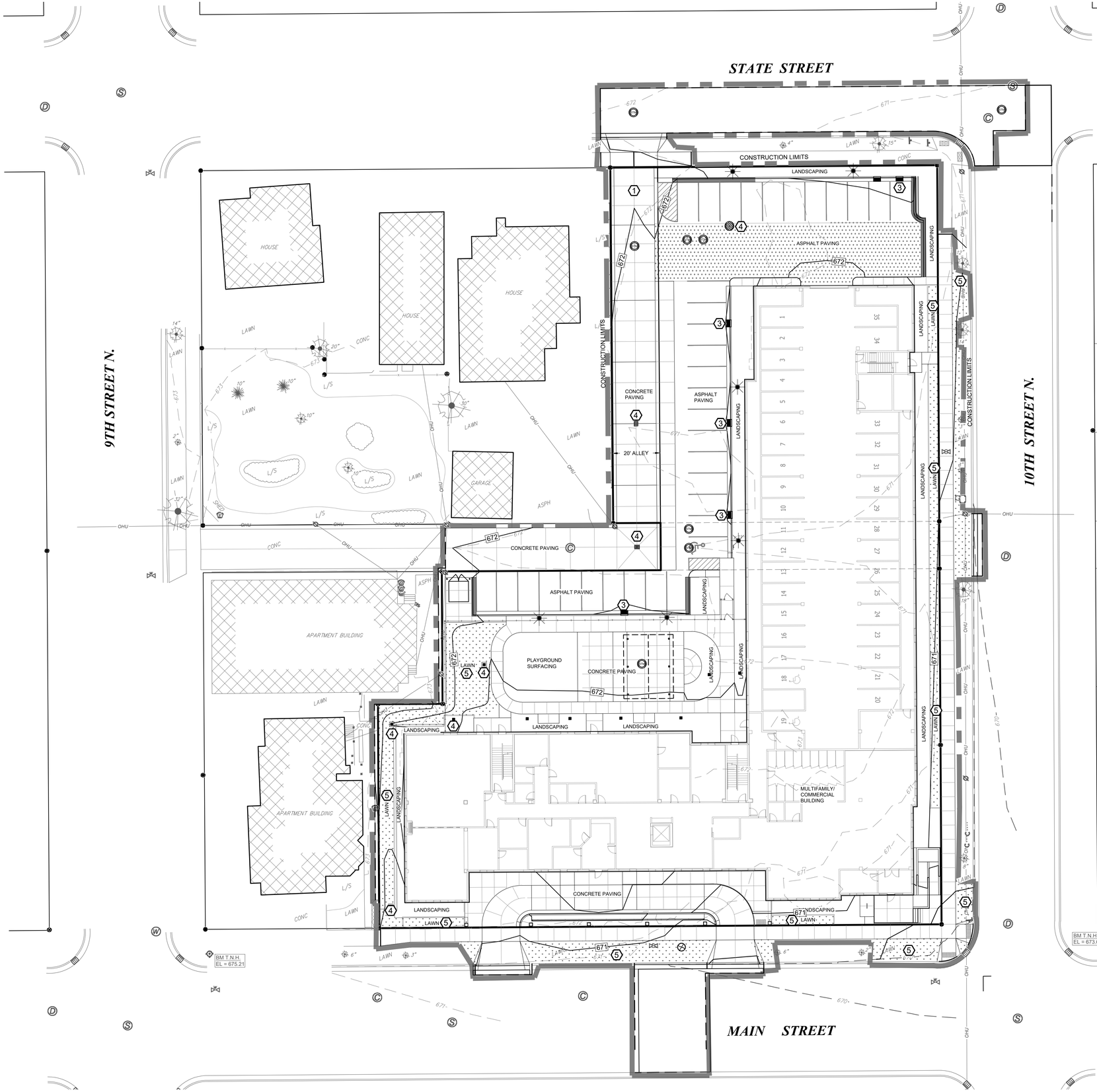
PREPARED FOR:
GERRARD CORP.

HAVEN ON MAIN
915 MAIN STREET
LA CROSSE, WISCONSIN
GRADING PLAN

DRAWN	C.G.
PROJECT No	23-109
DATE	02/27/2025
SCALE	1"=20'
CAD FILE	23-109 Gerrard HOM 17.DWG
SHEET	C200

PLAN SCALE: 1"=20'



STORM WATER CONSTRUCTION POLLUTION PREVENTION NOTES

SITE CLEARING SHALL APPLY TO ALL AREAS INSIDE LIMITS AS SHOWN ON THE PLANS. REMOVE ALL TREES COMPLETELY AS DIRECTED BY THE OWNER. ANY STRIPPED TOPSOIL SHALL BE STOCKPILED INSIDE THE LIMITS OR PLACED IMMEDIATELY ON SLOPES BEING RESTORED.

SEDIMENT CONTROL STRUCTURES BELOW SEEDED AREAS MUST REMAIN IN PLACE UNTIL THE ENTIRE AREA HAS ESTABLISHED A MATURE COVERING OF HEALTHY VEGETATION.

ALL DISTURBED AREAS SCHEDULED FOR PERMANENT COVER SHALL HAVE TOPSOIL APPLIED, AND BE SEEDED AND MULCHED AS SPECIFIED WITHIN 7 DAYS OF FINAL DISTURBANCE.

MAINTENANCE OF ALL INSTALLED EROSION AND SEDIMENT CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REMOVED WHEN NO LONGER NECESSARY.

MINIMUM MAINTENANCE SHALL CONSIST OF, BUT NOT LIMITED TO:

- INSPECTING ALL EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH RAINFALL.
- FINISHED AREAS THAT HAVE BEEN DAMAGED OR ERODED SHALL BE RESTORED WITHIN THREE DAYS OF THE DAMAGE.
- UNFINISHED AREAS THAT HAVE BEEN DAMAGED OR ERODED SHALL HAVE THE PREVIOUS MEASURE REAPPLIED WITHIN SEVEN DAYS.
- VEHICLE TRACKING CONTROL APRON SHALL BE REMOVED AND REPLACED WHEN VOIDS BECOME FILLED WITH SEDIMENT OR IF SURFACE OPENINGS BECOME PLUGGED SO THAT THE APRON DOES NOT FUNCTION.
- SILT FENCES SHALL BE MAINTAINED IN A FUNCTIONING MANNER. FENCES SHALL NOT BE ALLOWED TO SAG, FALL DOWN, OR BECOME FILLED WITH SILT ON THE BACK SIDE. IF SILT BUILDS UP BEHIND A SILT FENCE, IT SHALL BE REMOVED IMMEDIATELY. UNDER NO CIRCUMSTANCES SHALL SILT DEPOSITS BE ALLOWED TO REACH MORE THAN $\frac{1}{3}$ THE HEIGHT OF THE FENCE.

SILT FENCE SHALL BE PLACED DOWN SLOPE OF ALL SOIL STOCK PILES DURING CONSTRUCTION IF LEFT MORE THAN SEVEN DAYS. STOCK PILES SHALL BE SEEDED AND MULCHED IF LEFT FOR MORE THAN 14 DAYS.

ADDITIONAL EROSION CONTROL FACILITIES MAY BE REQUIRED DUE TO UNFORESEEN SITE CIRCUMSTANCES OR SITE OPERATIONS.

SEDIMENT CONTROL STRUCTURES BELOW LAWN AREAS MAY BE REMOVED ONCE LAWN AND FINAL LANDSCAPING IS IN PLACE. SEDIMENT CONTROL STRUCTURES BELOW SEEDED AREAS MUST REMAIN IN PLACE UNTIL THE ENTIRE AREA HAS ESTABLISHED A MATURE COVERING OF HEALTHY VEGETATION. SEDIMENT CONTROL STRUCTURES IN PAVED AREAS SHALL REMAIN IN PLACE UNTIL PAVING IS COMPLETE.

SEDIMENT DEPOSITED IN ROADS OR RIGHT OF WAY DITCHES ADJACENT TO THIS SITE AS A RESULT OF THIS WORK SHALL BE REMOVED. VEGETATION SHALL BE ESTABLISHED WHEN SEDIMENT REMOVAL DESTROYS THE EXISTING VEGETATION. THE ESTABLISHMENT OF VEGETATION SHALL BE IN THE SAME MANNER AS SPECIFIED FOR SEEDING SPECIFIED ELSEWHERE ON THIS PLAN.

NOTES

1. PROVIDE VEHICLE TRACKING CONTROL APRON AT LOCATION WHERE ENTERING AND EXITING THE SITE. SEE DETAIL (A C001)
2. SEE DETAIL (B C001) FOR SILT FENCE INSTALLATION
3. SEE DETAIL (C C001) FOR INLET PROTECTION (WITH CURB BOX)
4. SEE DETAIL (E C001) FOR INLET PROTECTION (WITHOUT CURB BOX)
5. ALL DISTURBED LAWN AREAS SHALL BE SODDED.
6. PROVIDE CONCRETE WASHOUT AREA PER DETAIL (D C001). UNDER NO CIRCUMSTANCES SHALL CONCRETE WASHOUT BE ALLOWED IN ANY OTHER LOCATION ON THE SITE.

REVISIONS	BY

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CIVIL ENGINEERING . LANDSCAPE ARCHITECTURE . SURVEYING
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PREPARED FOR:
GERRARD CORP.

HAVEN ON MAIN
915 MAIN STREET
LA CROSSE, WISCONSIN
EROSION CONTROL PLAN

DRAWN	C.G.
PROJECT No	23-109
DATE	04/18/2025
SCALE	1"=20'
CAD FILE	23-109 Gerrard HOM 17.DWG
SHEET	C300

N

10 0 10 20

PLAN SCALE: 1"=20'

- CONTOURS SHOWN ARE FOR FINISHED SURFACES. ANY ADJUSTMENT TO SUBGRADE IS THE CONTRACTOR'S RESPONSIBILITY.

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- ALL FINISHED GRADING SHALL PROVIDE FOR A SMOOTH TRANSITION TO UNGRADED AREAS.

- ALL PVC STORM SEWER PIPING SHALL BE MINIMUM SDR 35

STATE STREET

9TH STREET N.

10TH STREET N.

MAIN STREET

CONSTRUCTION LIMITS

STORM SEWER PIPES

RUN-ON

RUN ON

PLAY

OPEN SPACE

ROOF DRAIN

ROOF DRAIN

LAWN

LANDSCAPE

SIDEWALK

CANOPY

HOUSE

GARAGE

APARTMENT BUILDING

APARTMENT BUILDING

-N-

10 0 10 20

PLAN SCALE: 1"=20'

REVISIONS BY

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CIVIL ENGINEERING · LANDSCAPE ARCHITECTURE · SURVEYING
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PREPARED FOR:
GERRARD CORP.

V17
4-16-25

HAVEN ON MAIN
915 MAIN STREET
LA CROSSE, WISCONSIN

GRADING PLAN

DRAWN
C.G.
PROJECT No
23-109
DATE
02/27/2025
SCALE
1"=20'
CAD FILE
23-109 Gerrard HOM 17.DWG
SHEET

C200