February 13, 2025 SEI-2401

STORMWATER MANAGEMENT REPORT

FOR

288 BEACHWAY AVENUE
BLOCK 10, LOTS 1, 8 & 9
BOROUGH OF KEANSBURG
MONMOUTH COUNTY, NEW JERSEY

PREPARED FOR:
BEACHWAY ENTERPRISES, LLC

Prepared by:

MidAtlantic Engineering Partners, LLC
1971 HIGHWAY 34, SUITE 201
WALL, NEW JERSEY 07719

Ian A. Burton, P.E.
Licensed Professional Engineer
New Jersey License No. 54136

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1.0 INTRODUCTION

A. PROJECT DESCRIPTION AND LOCATION

The site is located in Keansburg along Highland Avenue. The site is known as Block 10, Lots 1, 8-9 and currently contains 20,000 SF (0.46 acres) of land. The proposed project outlined in this report consists of the construction of a 5-story residential building containing 42 units and associated parking. Parking is provided on the first floor of the building, under the building. The first floor also provides storage, bicycle parking, trash and package rooms. Stormwater management measures have been designed to accommodate flows during the 2, 10 and 100 year storms.

B. EXISTING SITE CONDITIONS

The project area is currently vacant and used as construction storage for a nearby site. Historically, there have been two buildings and a shed on the site from 1995 until the mid 2010's, per NJ GeoWeb and Google Earth historical imagery. Site coverage is a mix between concrete, stone and existing pervious area. The site is within the Carr Avenue Corridor Redevelopment Plan. The site is bound to the north by Beachway Avenue, Highland Avenue to the west, Bay Avenue to the South and a condominium building to the east. Utility mains are located within adjacent city rights-of-way.

Existing drainage patterns on the site typically drain toward the center of the site and then out south toward Bay Avenue. Any runoff that falls onto the sidewalk drains toward the adjacent streets, Beachway Avenue and Highland Avenue. Stormwater flows overland and is eventually collected by the existing inlets located at intersection of Highland Avenue and Bay Avenue. Ultimately, the Borough stormwater collection system discharges into the Atlantic Ocean. The south side of the site is at approximately elevation 6.0 and the elevation of the Bay Side of the site is approximately 4.5. The site topography is generally flat and consistent with typical urban environment conditions.

2.0 STORMWATER MANAGEMENT

A. STORMWATER MANAGEMENT DESCRIPTION

In accordance with NJDEP rules regarding stormwater management, N.J.A.C. 7:8-5.2(a), the criteria to handle stormwater for major developments is to design acceptable systems that effectively manage the stormwater with respect to applicable regulations regarding water quality, runoff quantity and groundwater recharge. N.J.A.C. 7:8-1.2 defines a major development as any development that results in:

1. The disturbance of one or more acres of land since February 2, 2004;
2. The creation of ¼ acre or more of regulated impervious surface since February 2, 2004;
3. The creation of ¼ acre or more of regulated motor vehicle surface since March 2, 2021; or
4. A combination of Subsection 2 and 3 above that totals an area of ¼ acre or more. The same surface shall not be counted twice when determining if the combination area equals ¼ acre or more.

The project area contains 20,000 SF (0.46 acres), 8,347 SF (0.19 acres) of which are historically existing impervious area. The proposed improvements consist of a total of 18,842 SF (0.43 acres) of impervious (including vehicular surface), which is a net increase of impervious area by 10,495 SF (0.24 acres). The project area contains an existing 0 SF (0.00 acres) of vehicular surface, while the proposed improvements consist of a total of 1,170 SF (0.03 acres) of vehicular surface, which results in a net increase of vehicular surface by 1,170 SF (0.03 acres).

According to the Borough of Keansburg ordinance, §27-3, the Stormwater Management rules only apply to a Major Development which is the same definition set forth by the NJDEP above. The subject project contains 0.46 acres, all of which are being disturbed but remain under one acre of land. The total increase in regulated impervious surface and regulated motor vehicle surface is less than a quarter acre. Therefore, Borough of Keansburg stormwater management rules for a Major Development regarding reduction of stormwater quantity and stormwater quality do not apply.

The runoff from the existing project area is conveyed to the existing stormwater collection system within the Keansburg right-of-way. The proposed improvements will maintain the same drainage patterns that currently exist on site, discharging ultimately to the stormwater collection system within the right-of-way. The pre and post development runoff was calculated for the 2, 10,

25 and 100-year storm events. The table below provides a summary of the pre and post-development peak runoff rates for the project area:

B. PRE-DEVELOPMENT STORMWATER MANAGEMENT SUMMARY

To determine the peak runoff rate from the site for the 2-, 10-, and 100-year storm event prior to development, the site was modeled as one drainage area that discharges to existing stormwater infrastructure located in the surrounding rights-of-way. Based on existing structures and topography, the site was modeled, and a time of concentration was determined. As outlined in Chapter 5 of the New Jersey BMP Manual, N.J.A.C. 7:8-5.7(d), Table 5-5, the current NOAA Rainfall frequency data must be adjusted by a "Current Precipitation Change Factor." Similarly, as outlined in Table 5-6 of the same section, the NOAA Rainfall data must be adjusted by a "Future Precipitation Change Factor." Table 1 in this section details the current rainfall frequency based on NOAA Atlus 14 data, the adjusted current rainfall frequency, and the projected rainfall frequency for the year 2100.

	2-Year Storm	10-Year Storm	100-Year Storm
NOAA Data	3.32 in	5.10 in	8.61 in
Current	3.32 in	5.15 in	8.78 in.
Projected (Year 2100)	3.95 in	6.07 in	10.85 in

Table 1: Summary of Intensity Changes per N.J.A.C 7:8-5.7(c&d)

	2-Year Storm	10-Year Storm	100-Year Storm
NOAA Data	0.66 cfs	1.15 cfs	2.16 cfs
Current	0.66 cfs	1.15 cfs	2.21 cfs
Projected (Year 2100)	0.83 cfs	1.43 cfs	2.80 cfs

Table 2: Pre-Development Runoff Rate Summary

C. POST-DEVELOPMENT STORMWATER MANAGEMENT SUMMARY

The peak rates of runoff from the post-development hydrographs were created using SCS method for the 2-, 10-, and 100-year storm events. The calculations are provided in Appendix D of this report and summarized in Table 3 below.

	2-Year Storm	10-Year Storm	100-Year Storm
NOAA Data	1.30 cfs	2.02 cfs	3.46 cfs
Current	1.29 cfs	2.02 cfs	3.53 cfs
Projected (Year 2100)	1.55 cfs	2.42 cfs	4.37 cfs

Table 3: Post-Development Runoff Rate Summary

Offsite Stability

Pursuant to the Standards for Soil Erosion and Sediment Control in New Jersey, the site is required to maintain the stability and integrity of natural resources on downstream property. The site generally flat and even and the proposed grading maintains that condition. Proposed grading on site does not have well defined channel or vegetation that would concentrate flows to the storm system in Highland Avenue. All off-site flows will disperse evenly across pavement, sidewalk, and stone. With low run-off rates and no discharge over vegetation, the risk for soil erosion and unstable conditions are at a minimum. Additionally, stormwater discharged into the stormwater system within Highland Avenue is directly discharged into Raritan Bay.

Conclusion

The proposed improvements will maintain the existing drainage patterns in the post-developed condition. Runoff rates are increased in the post-development, however, by an amount that would not have any negative impact to downstream drainage systems. The erosion control methods used will ensure the proposed project will not have a negative impact to the surrounding area or downstream drainage system. By creating less than one acre of new disturbance and not increasing total impervious surfaces by more than ¼ acre, the project does not meet the definition of Major Development as defined in the Borough of Keansburg stormwater management rules and therefore the standards for stormwater quantity reduction and stormwater quality do not apply.

APPENDIX A

USGS QUAD MAP

MidAtlantic Engineering Partners

USGS QUAD MAP

BLOCK 10; LOTS 1, 8, & 9
288 BEACHWAY AVENUE

SITUATED IN

BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

DRAWN BY:	CHECKED BY:	DATE:
IRD	MS	01/27/25
HORIZONTAL SCALE:	VERTICAL SCALE:	PROJECT No.:
1"=10'	AS SHOWN	SEI-2401

2026B Briggs Rd, Suite 300
Mt. Laurel Twp, NJ 08054
609-910-4450

1971 Highway 34, Suite 201
Wall Township, NJ 07719
732-722-5899

321 W. State Street
Media, PA 19063
610-565-0020

26 Washington St, 3rd Floor
Morristown, NJ 07960
973-715-8652

Certificate of Authorization No. 24GA28184000

Name: G:\Sackman Enterprises Inc\JOBS\SEI-2401 - 288 Beachway Avenue\CIVIL\DWG\C001 COVER.dwg
Plot time: Jan 31, 2025 - 2:31pm

APPENDIX B

NOAA RAINFALL DATA

NOAA Atlas 14, Volume 2, Version 3
Location name: Keansburg, New Jersey, USA*
Latitude: 40.455°, Longitude: -74.1364°
Elevation: 6 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.337 (0.305-0.373)	0.402 (0.365-0.445)	0.477 (0.431-0.528)	0.532 (0.480-0.589)	0.600 (0.538-0.664)	0.648 (0.578-0.717)	0.697 (0.619-0.772)	0.742 (0.654-0.824)	0.799 (0.696-0.892)	0.842 (0.728-0.945)
10-min	0.538 (0.487-0.595)	0.643 (0.582-0.711)	0.763 (0.689-0.844)	0.849 (0.766-0.940)	0.954 (0.857-1.06)	1.03 (0.920-1.14)	1.11 (0.981-1.22)	1.18 (1.04-1.30)	1.26 (1.10-1.41)	1.32 (1.14-1.48)
15-min	0.672 (0.609-0.744)	0.807 (0.732-0.894)	0.965 (0.871-1.07)	1.07 (0.969-1.19)	1.21 (1.08-1.34)	1.30 (1.16-1.44)	1.40 (1.24-1.55)	1.48 (1.30-1.64)	1.59 (1.39-1.78)	1.66 (1.44-1.87)
30-min	0.921 (0.834-1.02)	1.12 (1.01-1.23)	1.37 (1.24-1.52)	1.56 (1.40-1.72)	1.79 (1.61-1.98)	1.96 (1.75-2.17)	2.14 (1.90-2.37)	2.30 (2.03-2.56)	2.52 (2.20-2.82)	2.69 (2.32-3.01)
60-min	1.15 (1.04-1.27)	1.40 (1.27-1.55)	1.75 (1.58-1.94)	2.02 (1.82-2.24)	2.38 (2.14-2.63)	2.66 (2.37-2.94)	2.94 (2.61-3.26)	3.23 (2.84-3.58)	3.62 (3.15-4.04)	3.92 (3.38-4.39)
2-hr	1.41 (1.27-1.57)	1.72 (1.55-1.91)	2.18 (1.96-2.42)	2.53 (2.28-2.81)	3.02 (2.70-3.35)	3.42 (3.04-3.80)	3.84 (3.38-4.26)	4.27 (3.73-4.75)	4.87 (4.21-5.44)	5.35 (4.58-6.00)
3-hr	1.56 (1.41-1.73)	1.90 (1.72-2.11)	2.41 (2.18-2.68)	2.81 (2.53-3.12)	3.36 (3.01-3.73)	3.82 (3.40-4.24)	4.29 (3.78-4.76)	4.79 (4.18-5.32)	5.48 (4.73-6.12)	6.05 (5.15-6.77)
6-hr	2.00 (1.80-2.22)	2.42 (2.18-2.70)	3.06 (2.75-3.40)	3.57 (3.20-3.96)	4.31 (3.83-4.78)	4.92 (4.35-5.45)	5.58 (4.87-6.18)	6.28 (5.43-6.96)	7.28 (6.20-8.11)	8.10 (6.82-9.06)
12-hr	2.42 (2.19-2.70)	2.94 (2.65-3.27)	3.73 (3.36-4.14)	4.39 (3.94-4.87)	5.37 (4.77-5.93)	6.20 (5.47-6.84)	7.10 (6.19-7.85)	8.10 (6.96-8.96)	9.56 (8.07-10.6)	10.8 (8.97-12.0)
24-hr	2.74 (2.50-3.02)	3.32 (3.04-3.66)	4.28 (3.90-4.71)	5.10 (4.64-5.60)	6.33 (5.72-6.93)	7.41 (6.64-8.09)	8.61 (7.66-9.40)	9.96 (8.76-10.9)	12.0 (10.4-13.1)	13.8 (11.7-15.0)
2-day	3.23 (2.94-3.58)	3.91 (3.56-4.34)	5.02 (4.56-5.56)	5.95 (5.39-6.58)	7.34 (6.61-8.11)	8.53 (7.63-9.42)	9.84 (8.73-10.9)	11.3 (9.90-12.5)	13.4 (11.6-14.9)	15.3 (13.0-17.0)
3-day	3.43 (3.14-3.77)	4.16 (3.81-4.57)	5.31 (4.85-5.83)	6.27 (5.71-6.88)	7.69 (6.97-8.43)	8.90 (8.02-9.75)	10.2 (9.13-11.2)	11.7 (10.3-12.8)	13.8 (12.0-15.2)	15.6 (13.4-17.2)
4-day	3.63 (3.34-3.96)	4.40 (4.05-4.80)	5.60 (5.14-6.10)	6.59 (6.04-7.18)	8.05 (7.34-8.75)	9.27 (8.40-10.1)	10.6 (9.54-11.5)	12.1 (10.7-13.1)	14.2 (12.5-15.5)	16.0 (13.9-17.5)
7-day	4.22 (3.92-4.56)	5.08 (4.71-5.49)	6.34 (5.87-6.86)	7.39 (6.83-7.99)	8.91 (8.19-9.62)	10.2 (9.30-11.0)	11.5 (10.5-12.5)	13.0 (11.7-14.1)	15.1 (13.4-16.5)	16.9 (14.8-18.5)
10-day	4.76 (4.44-5.12)	5.70 (5.32-6.12)	7.01 (6.54-7.53)	8.09 (7.52-8.69)	9.63 (8.91-10.3)	10.9 (10.0-11.7)	12.2 (11.2-13.2)	13.7 (12.4-14.7)	15.7 (14.1-17.0)	17.4 (15.4-18.9)
20-day	6.38 (6.01-6.79)	7.58 (7.13-8.07)	9.08 (8.53-9.65)	10.3 (9.63-10.9)	11.9 (11.1-12.6)	13.1 (12.2-14.0)	14.4 (13.4-15.3)	15.7 (14.5-16.8)	17.5 (16.0-18.7)	18.9 (17.1-20.3)
30-day	7.95 (7.54-8.40)	9.40 (8.92-9.92)	11.0 (10.5-11.6)	12.3 (11.7-13.0)	14.0 (13.2-14.7)	15.2 (14.4-16.1)	16.5 (15.5-17.4)	17.7 (16.6-18.7)	19.3 (17.9-20.5)	20.5 (19.0-21.9)
45-day	10.1 (9.60-10.6)	11.9 (11.3-12.5)	13.8 (13.1-14.5)	15.2 (14.4-16.0)	17.0 (16.1-17.9)	18.4 (17.4-19.4)	19.7 (18.6-20.8)	21.0 (19.7-22.2)	22.6 (21.1-23.9)	23.8 (22.2-25.3)
60-day	12.1 (11.5-12.7)	14.2 (13.5-14.9)	16.2 (15.5-17.0)	17.8 (16.9-18.6)	19.7 (18.7-20.6)	21.1 (20.0-22.1)	22.4 (21.2-23.5)	23.7 (22.3-24.9)	25.2 (23.7-26.6)	26.3 (24.6-27.8)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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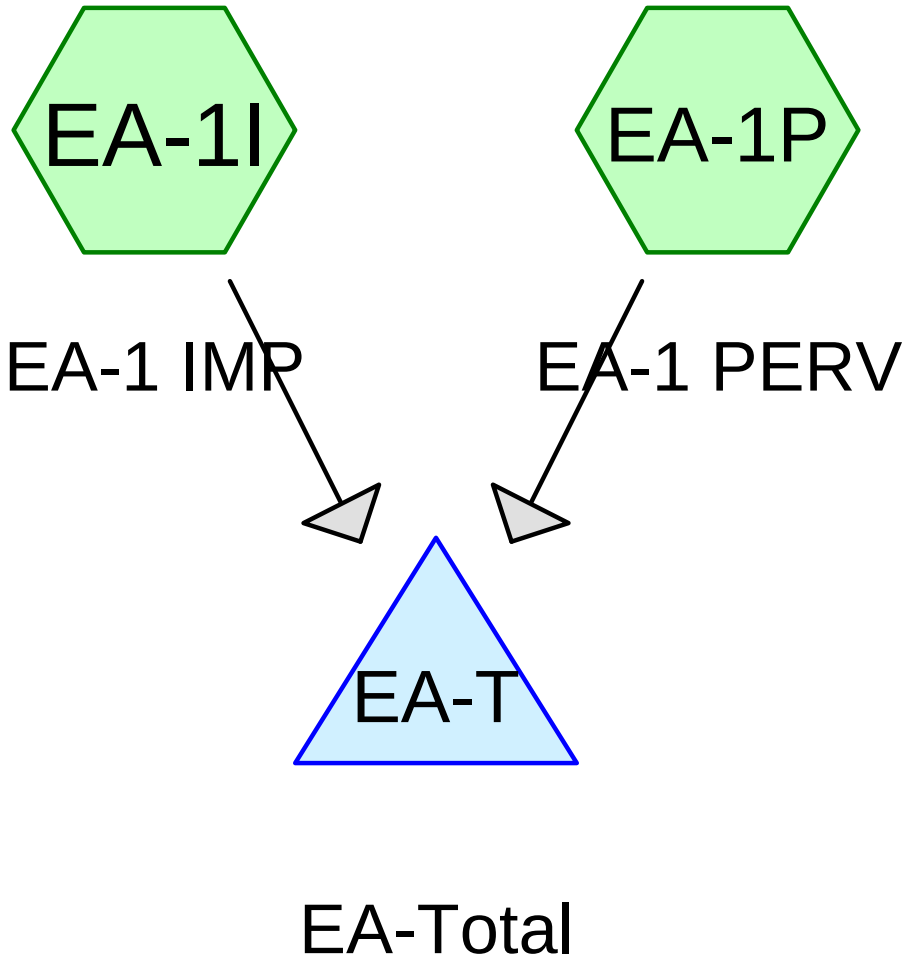
PF graphical

APPENDIX C

PRE-DEVELOPMENT DRAINAGE ANALYSIS



Subcat Reach Pond Link

Routing Diagram for 2025-01-24 Pre Development
Prepared by {enter your company name here}, Printed 2/13/2025

Summary for Subcatchment EA-1I: EA-1 IMP

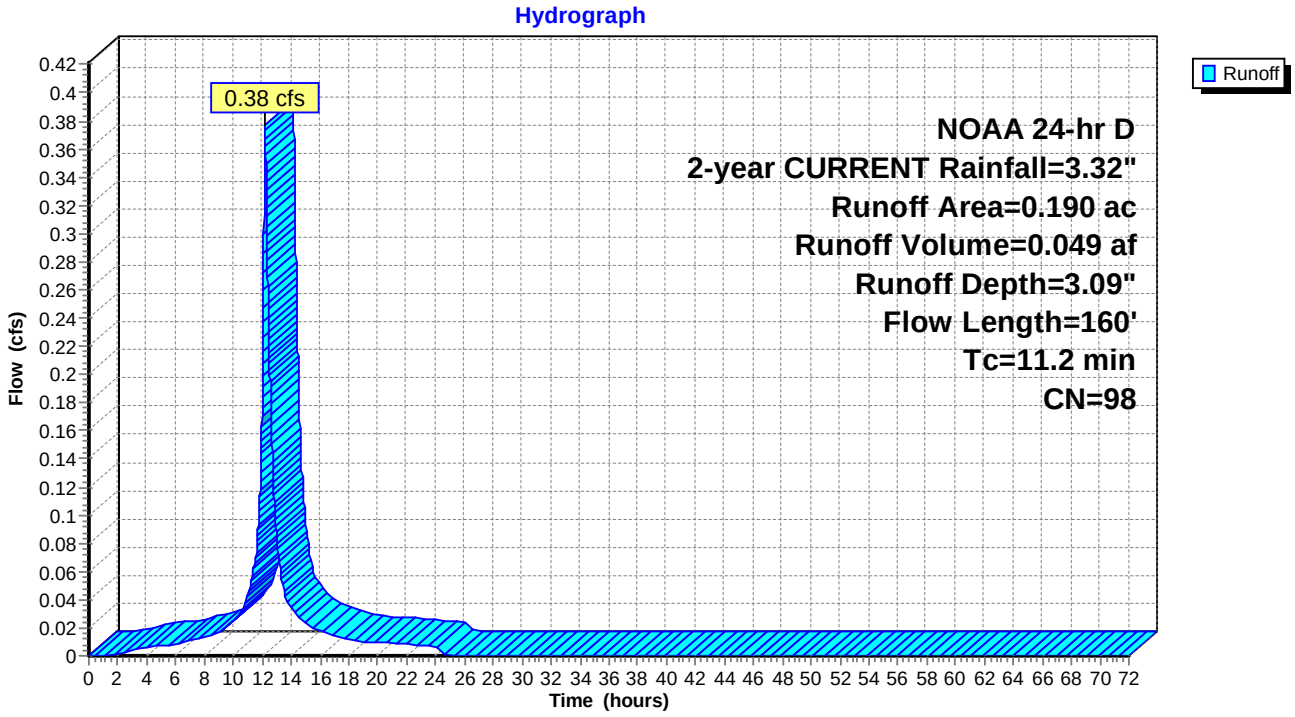
Runoff = 0.38 cfs @ 12.20 hrs, Volume= 0.049 af, Depth= 3.09"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-year CURRENT Rainfall=3.32"

Area (ac)	CN	Description
0.190	98	Paved parking, HSG D
0.190		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	67	0.0110	0.13		**Sheet Flow, grass sheet** Grass: Short n= 0.150 P2= 3.32"
2.3	93	0.0090	0.66		**Shallow Concentrated Flow, grass shallow** Short Grass Pasture Kv= 7.0 fps
11.2	160	Total			

Subcatchment EA-1I: EA-1 IMP



Summary for Subcatchment EA-1P: EA-1 PERV

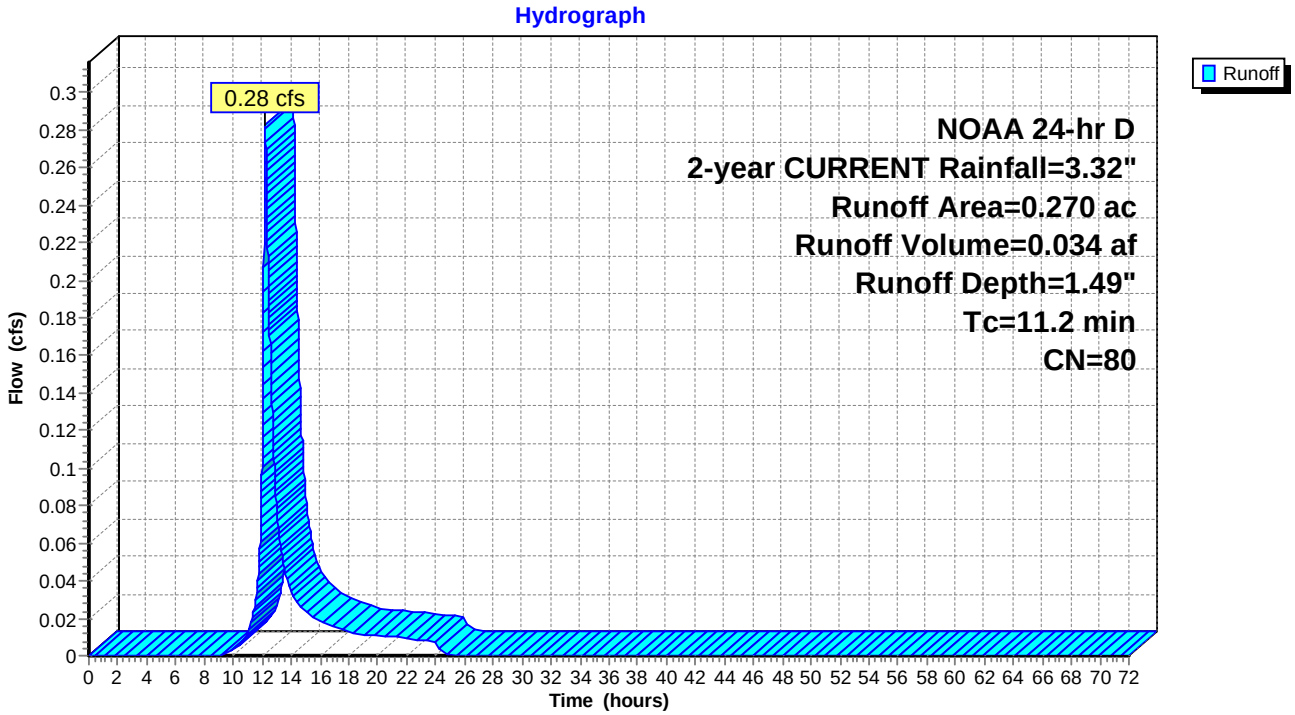
Runoff = 0.28 cfs @ 12.21 hrs, Volume= 0.034 af, Depth= 1.49"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-year CURRENT Rainfall=3.32"

Area (ac)	CN	Description
0.270	80	>75% Grass cover, Good, HSG D
0.270		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2					**Direct Entry, copied from EA-1 IMP**

Subcatchment EA-1P: EA-1 PERV

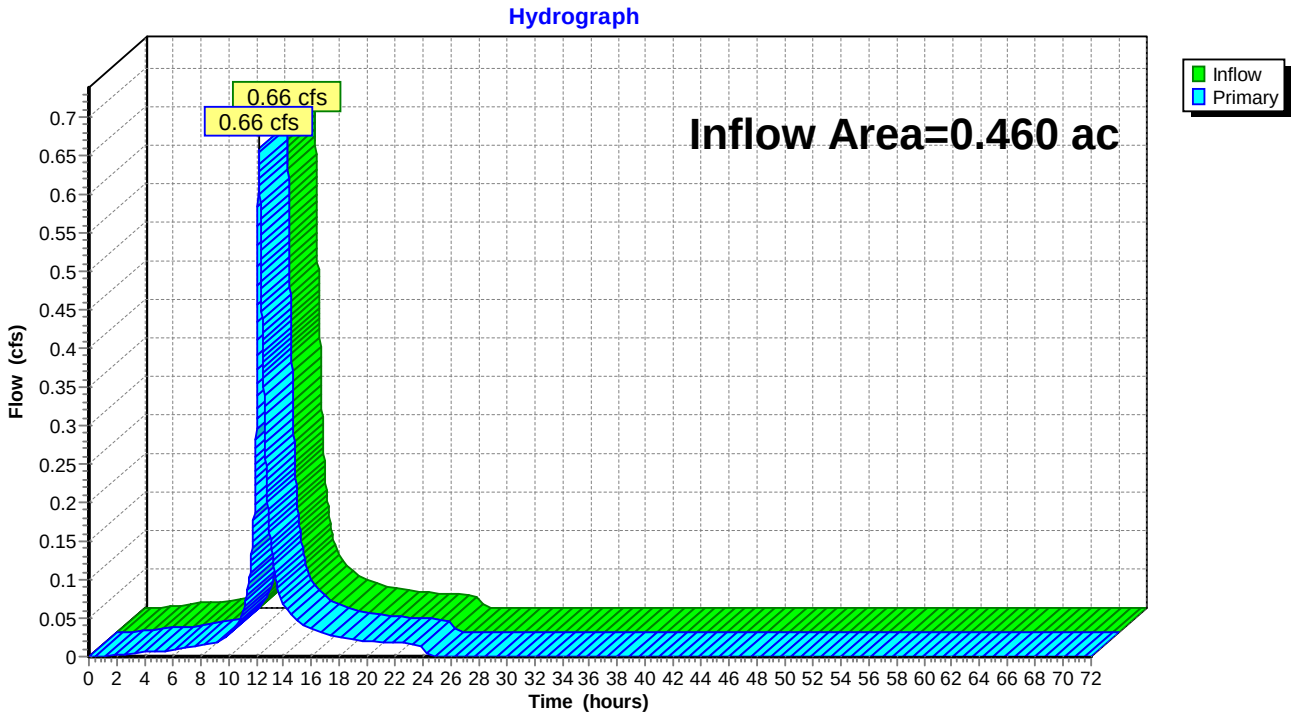


Summary for Pond EA-T: EA-Total

Inflow Area = 0.460 ac, 41.30% Impervious, Inflow Depth = 2.15" for 2-year CURRENT event
Inflow = 0.66 cfs @ 12.20 hrs, Volume= 0.083 af
Primary = 0.66 cfs @ 12.20 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min

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

Pond EA-T: EA-Total



Summary for Subcatchment EA-1I: EA-1 IMP

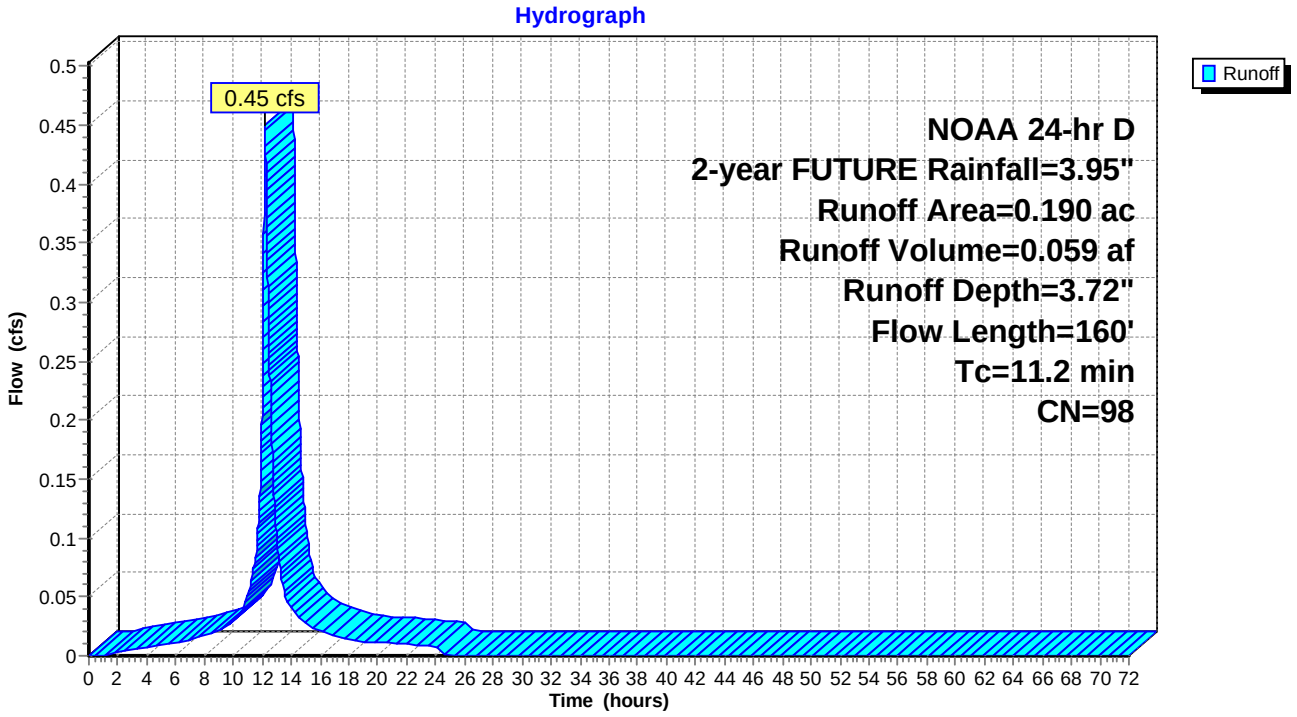
Runoff = 0.45 cfs @ 12.20 hrs, Volume= 0.059 af, Depth= 3.72"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-year FUTURE Rainfall=3.95"

Area (ac)	CN	Description
0.190	98	Paved parking, HSG D
0.190		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	67	0.0110	0.13		**Sheet Flow, grass sheet** Grass: Short n= 0.150 P2= 3.32"
2.3	93	0.0090	0.66		**Shallow Concentrated Flow, grass shallow** Short Grass Pasture Kv= 7.0 fps
11.2	160	Total			

Subcatchment EA-1I: EA-1 IMP



Summary for Subcatchment EA-1P: EA-1 PERV

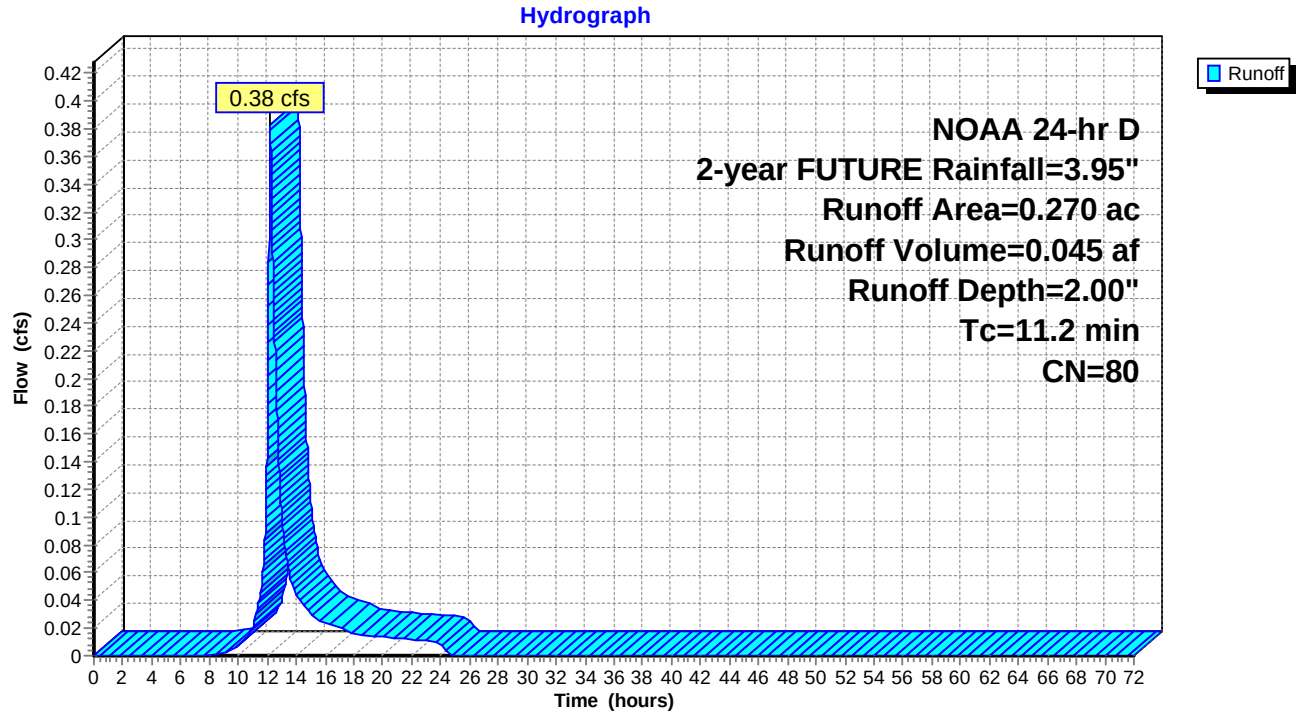
Runoff = 0.38 cfs @ 12.20 hrs, Volume= 0.045 af, Depth= 2.00"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-year FUTURE Rainfall=3.95"

Area (ac)	CN	Description
0.270	80	>75% Grass cover, Good, HSG D
0.270		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2					**Direct Entry, copied from EA-1 IMP**

Subcatchment EA-1P: EA-1 PERV

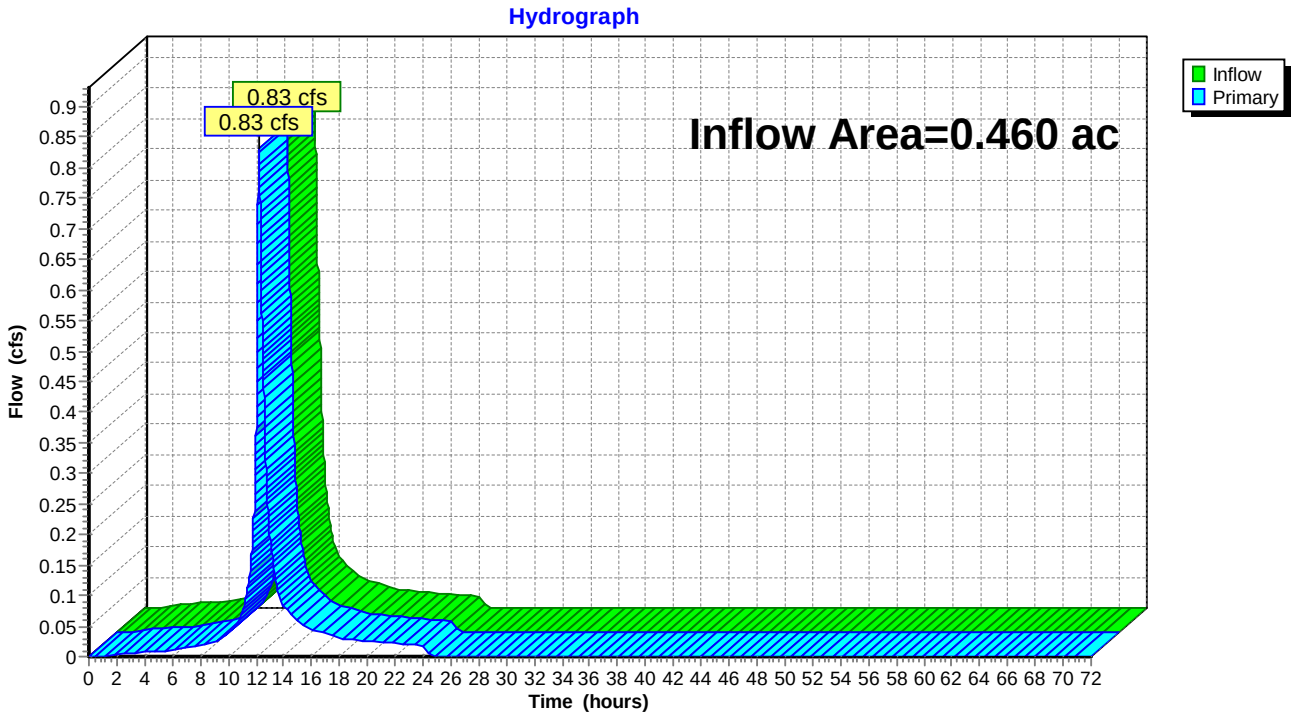


Summary for Pond EA-T: EA-Total

Inflow Area = 0.460 ac, 41.30% Impervious, Inflow Depth = 2.71" for 2-year FUTURE event
Inflow = 0.83 cfs @ 12.20 hrs, Volume= 0.104 af
Primary = 0.83 cfs @ 12.20 hrs, Volume= 0.104 af, Atten= 0%, Lag= 0.0 min

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

Pond EA-T: EA-Total



Summary for Subcatchment EA-1I: EA-1 IMP

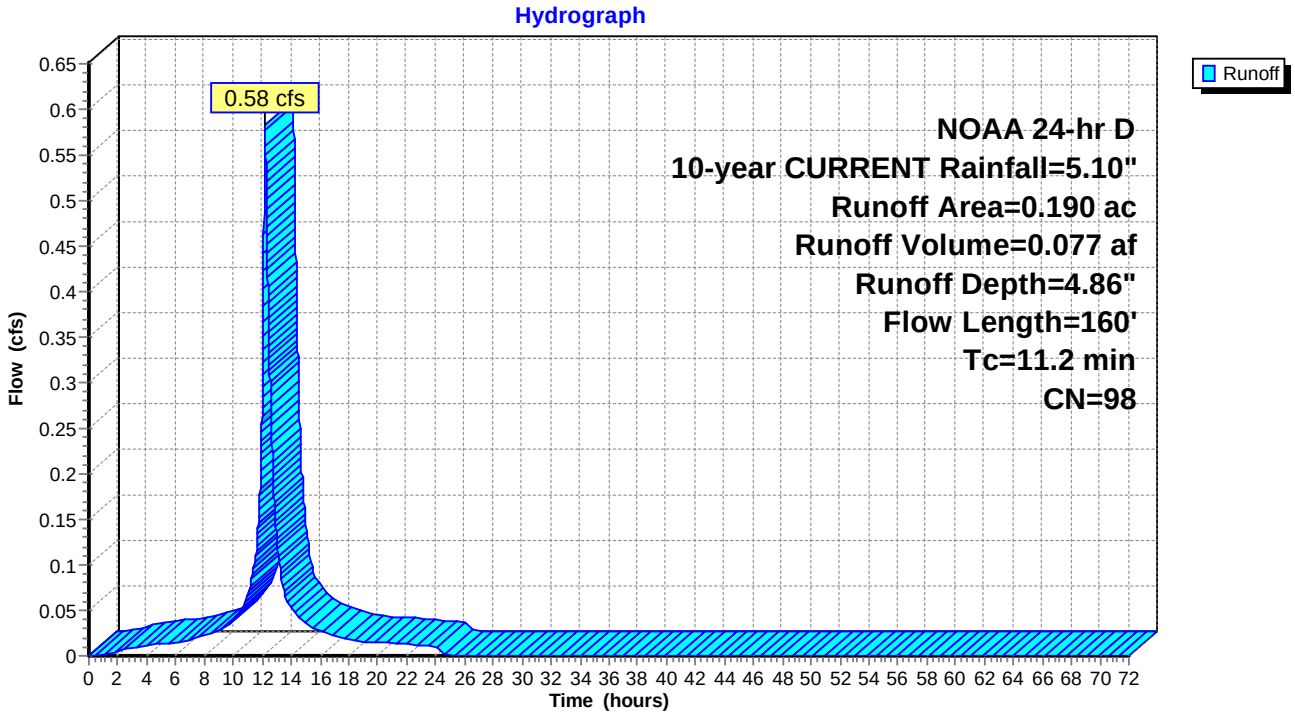
Runoff = 0.58 cfs @ 12.20 hrs, Volume= 0.077 af, Depth= 4.86"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-year CURRENT Rainfall=5.10"

Area (ac)	CN	Description
0.190	98	Paved parking, HSG D
0.190		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	67	0.0110	0.13		**Sheet Flow, grass sheet** Grass: Short n= 0.150 P2= 3.32"
2.3	93	0.0090	0.66		**Shallow Concentrated Flow, grass shallow** Short Grass Pasture Kv= 7.0 fps
11.2	160	Total			

Subcatchment EA-1I: EA-1 IMP



Summary for Subcatchment EA-1P: EA-1 PERV

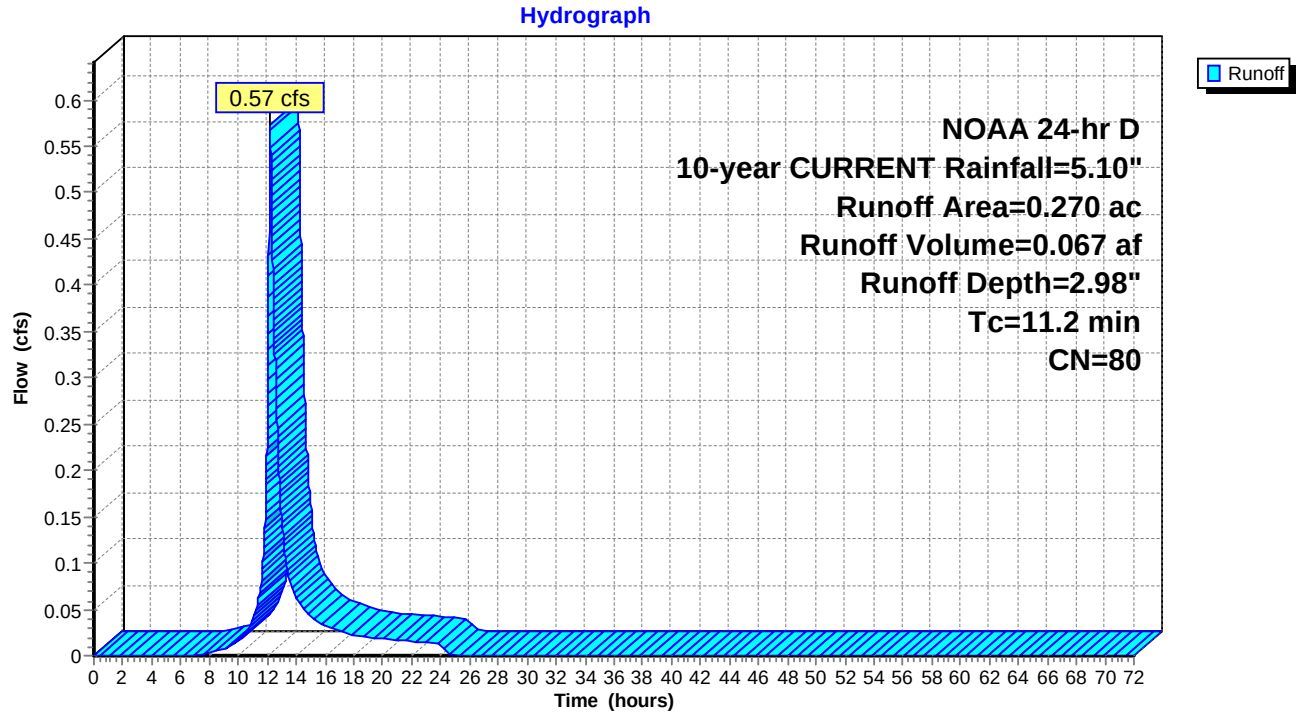
Runoff = 0.57 cfs @ 12.20 hrs, Volume= 0.067 af, Depth= 2.98"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-year CURRENT Rainfall=5.10"

Area (ac)	CN	Description
0.270	80	>75% Grass cover, Good, HSG D
0.270		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2					**Direct Entry, copied from EA-1 IMP**

Subcatchment EA-1P: EA-1 PERV

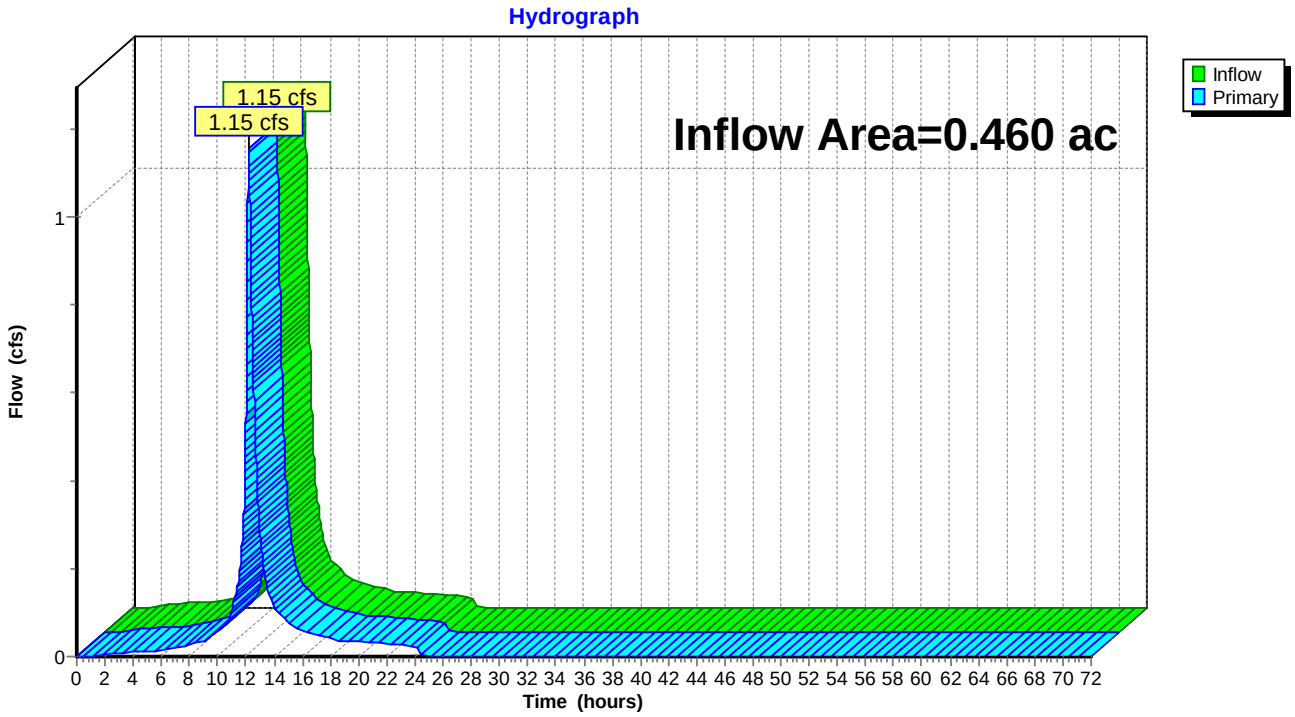


Summary for Pond EA-T: EA-Total

Inflow Area = 0.460 ac, 41.30% Impervious, Inflow Depth = 3.76" for 10-year CURRENT event
Inflow = 1.15 cfs @ 12.20 hrs, Volume= 0.144 af
Primary = 1.15 cfs @ 12.20 hrs, Volume= 0.144 af, Atten= 0%, Lag= 0.0 min

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

Pond EA-T: EA-Total



Summary for Subcatchment EA-1I: EA-1 IMP

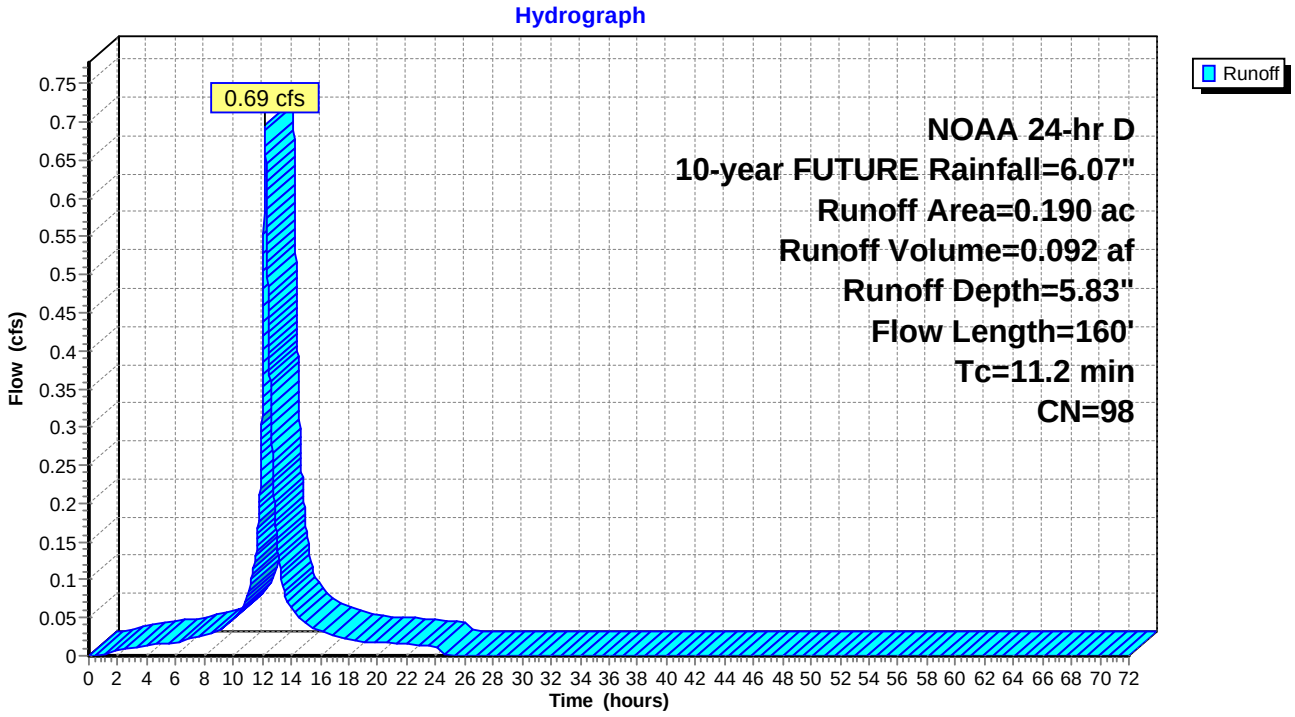
Runoff = 0.69 cfs @ 12.20 hrs, Volume= 0.092 af, Depth= 5.83"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-year FUTURE Rainfall=6.07"

Area (ac)	CN	Description
0.190	98	Paved parking, HSG D
0.190		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	67	0.0110	0.13		**Sheet Flow, grass sheet** Grass: Short n= 0.150 P2= 3.32"
2.3	93	0.0090	0.66		**Shallow Concentrated Flow, grass shallow** Short Grass Pasture Kv= 7.0 fps
11.2	160	Total			

Subcatchment EA-1I: EA-1 IMP



Summary for Subcatchment EA-1P: EA-1 PERV

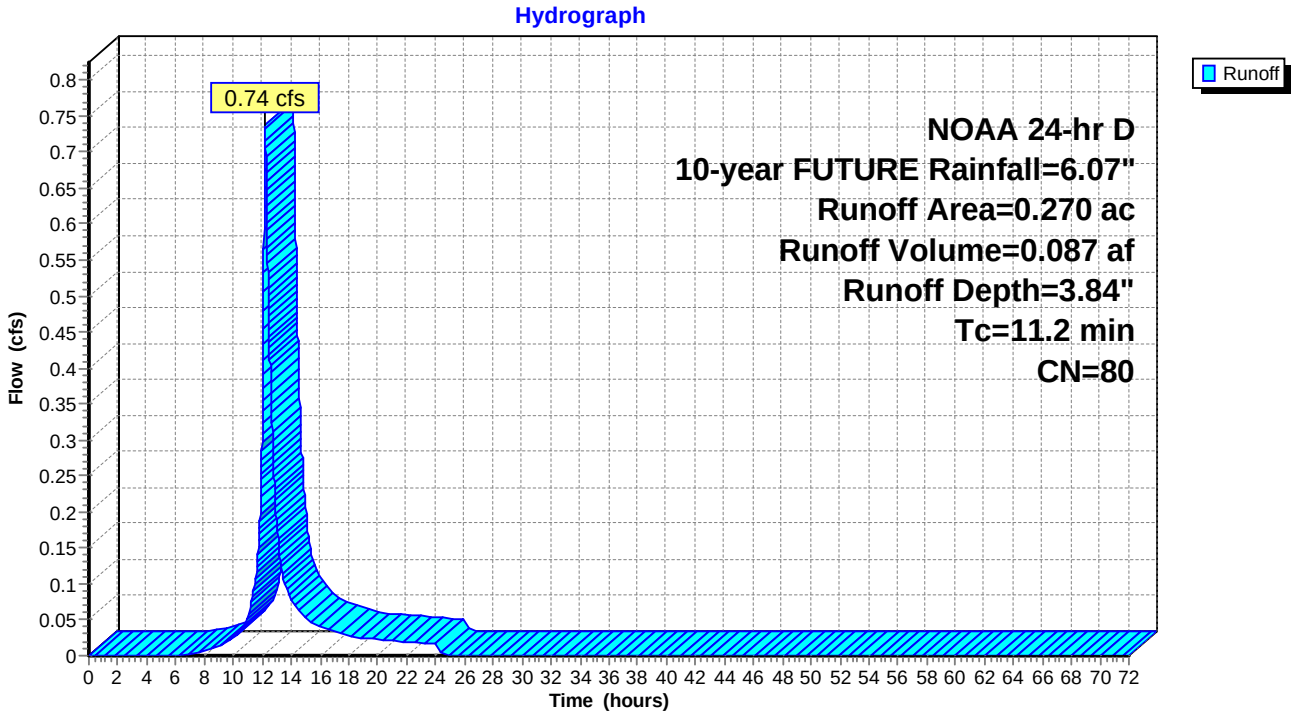
Runoff = 0.74 cfs @ 12.20 hrs, Volume= 0.087 af, Depth= 3.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-year FUTURE Rainfall=6.07"

Area (ac)	CN	Description
0.270	80	>75% Grass cover, Good, HSG D
0.270		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2					**Direct Entry, copied from EA-1 IMP**

Subcatchment EA-1P: EA-1 PERV

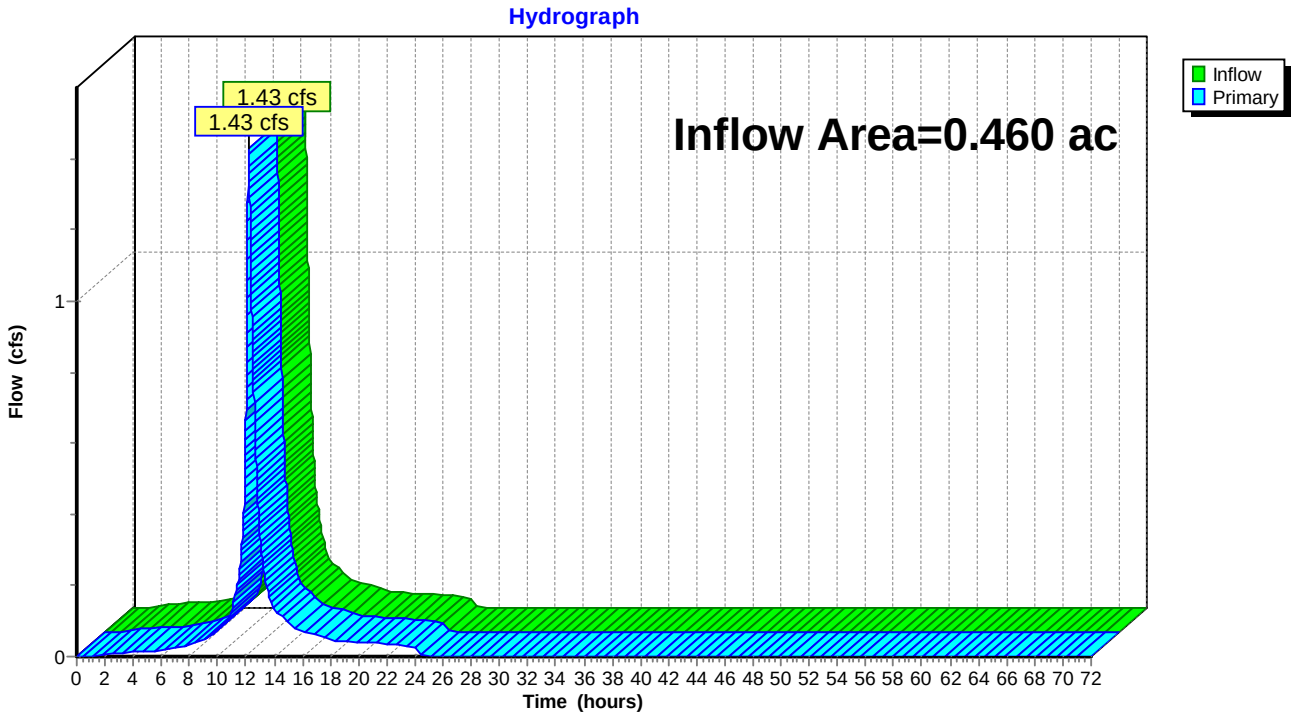


Summary for Pond EA-T: EA-Total

Inflow Area = 0.460 ac, 41.30% Impervious, Inflow Depth = 4.67" for 10-year FUTURE event
Inflow = 1.43 cfs @ 12.20 hrs, Volume= 0.179 af
Primary = 1.43 cfs @ 12.20 hrs, Volume= 0.179 af, Atten= 0%, Lag= 0.0 min

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

Pond EA-T: EA-Total



Summary for Subcatchment EA-1I: EA-1 IMP

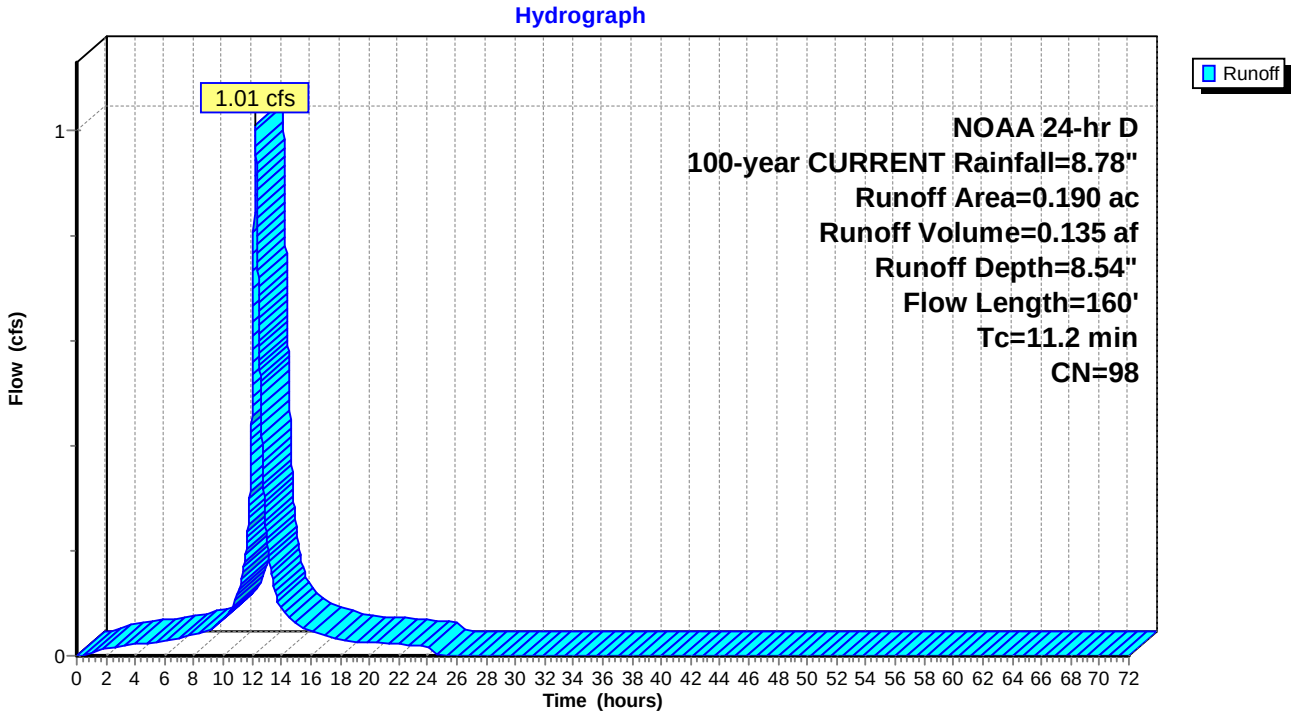
Runoff = 1.01 cfs @ 12.20 hrs, Volume= 0.135 af, Depth= 8.54"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-year CURRENT Rainfall=8.78"

Area (ac)	CN	Description
0.190	98	Paved parking, HSG D
0.190		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	67	0.0110	0.13		**Sheet Flow, grass sheet** Grass: Short n= 0.150 P2= 3.32"
2.3	93	0.0090	0.66		**Shallow Concentrated Flow, grass shallow** Short Grass Pasture Kv= 7.0 fps
11.2	160	Total			

Subcatchment EA-1I: EA-1 IMP



Summary for Subcatchment EA-1P: EA-1 PERV

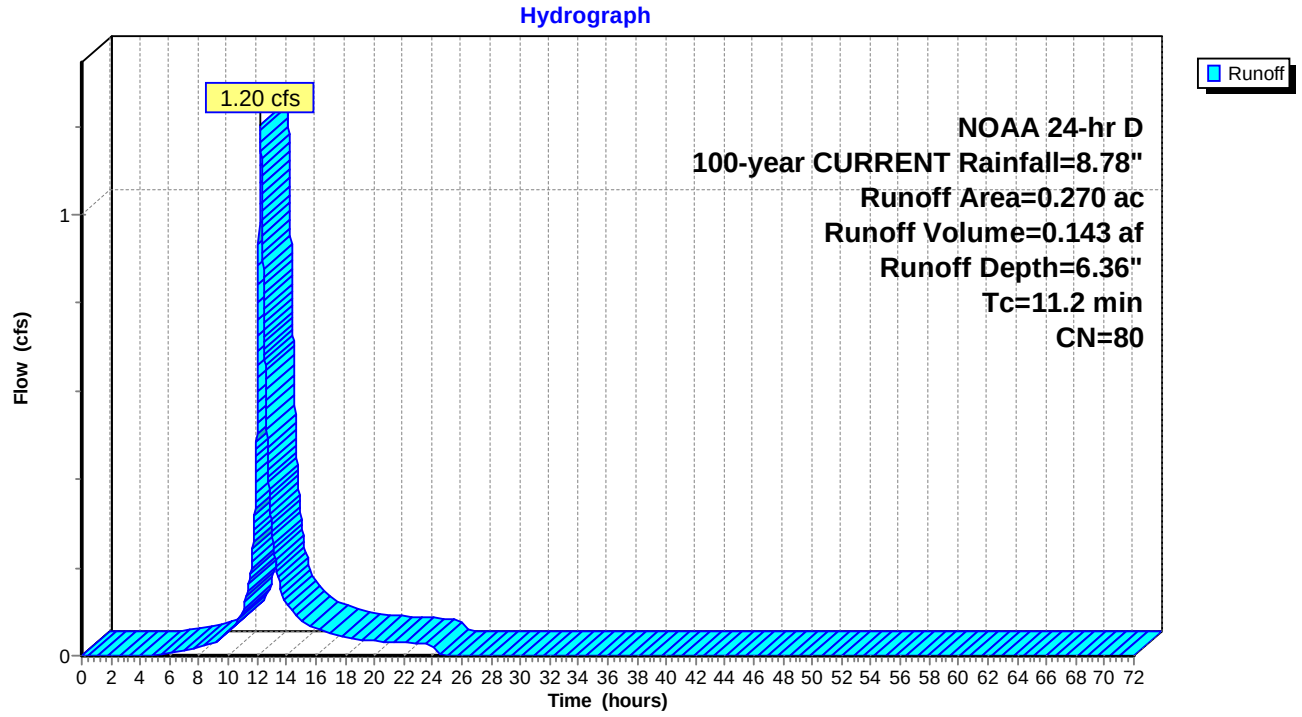
Runoff = 1.20 cfs @ 12.20 hrs, Volume= 0.143 af, Depth= 6.36"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-year CURRENT Rainfall=8.78"

Area (ac)	CN	Description
0.270	80	>75% Grass cover, Good, HSG D
0.270		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2					**Direct Entry, copied from EA-1 IMP**

Subcatchment EA-1P: EA-1 PERV

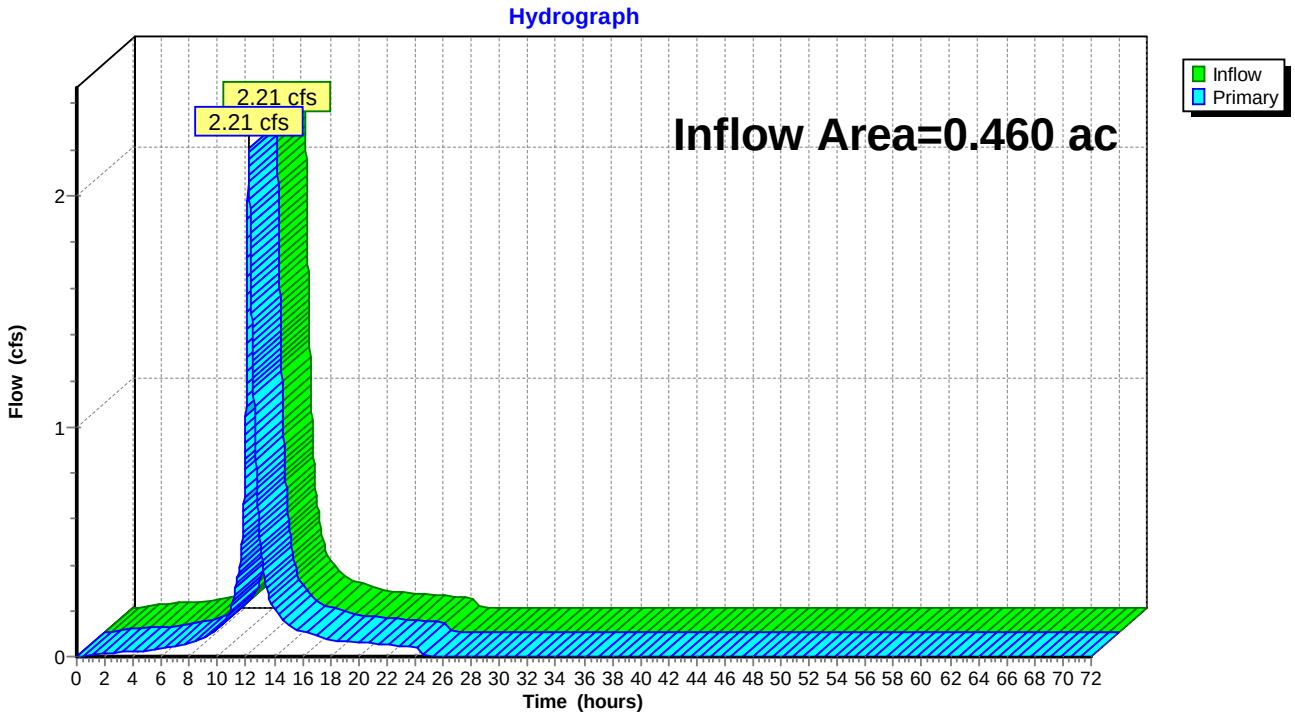


Summary for Pond EA-T: EA-Total

Inflow Area = 0.460 ac, 41.30% Impervious, Inflow Depth = 7.26" for 100-year CURRENT event
Inflow = 2.21 cfs @ 12.20 hrs, Volume= 0.278 af
Primary = 2.21 cfs @ 12.20 hrs, Volume= 0.278 af, Atten= 0%, Lag= 0.0 min

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

Pond EA-T: EA-Total



Summary for Subcatchment EA-1I: EA-1 IMP

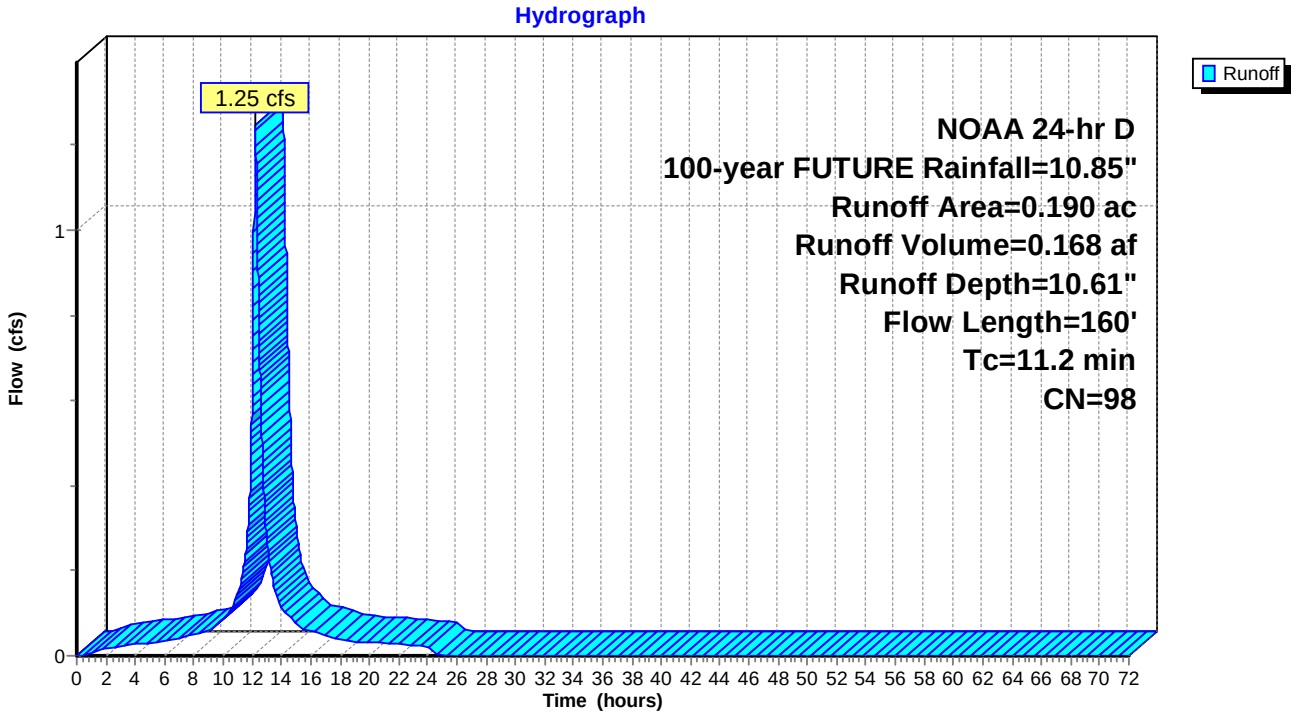
Runoff = 1.25 cfs @ 12.20 hrs, Volume= 0.168 af, Depth=10.61"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-year FUTURE Rainfall=10.85"

Area (ac)	CN	Description
0.190	98	Paved parking, HSG D
0.190		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	67	0.0110	0.13		**Sheet Flow, grass sheet** Grass: Short n= 0.150 P2= 3.32"
2.3	93	0.0090	0.66		**Shallow Concentrated Flow, grass shallow** Short Grass Pasture Kv= 7.0 fps
11.2	160	Total			

Subcatchment EA-1I: EA-1 IMP



Summary for Subcatchment EA-1P: EA-1 PERV

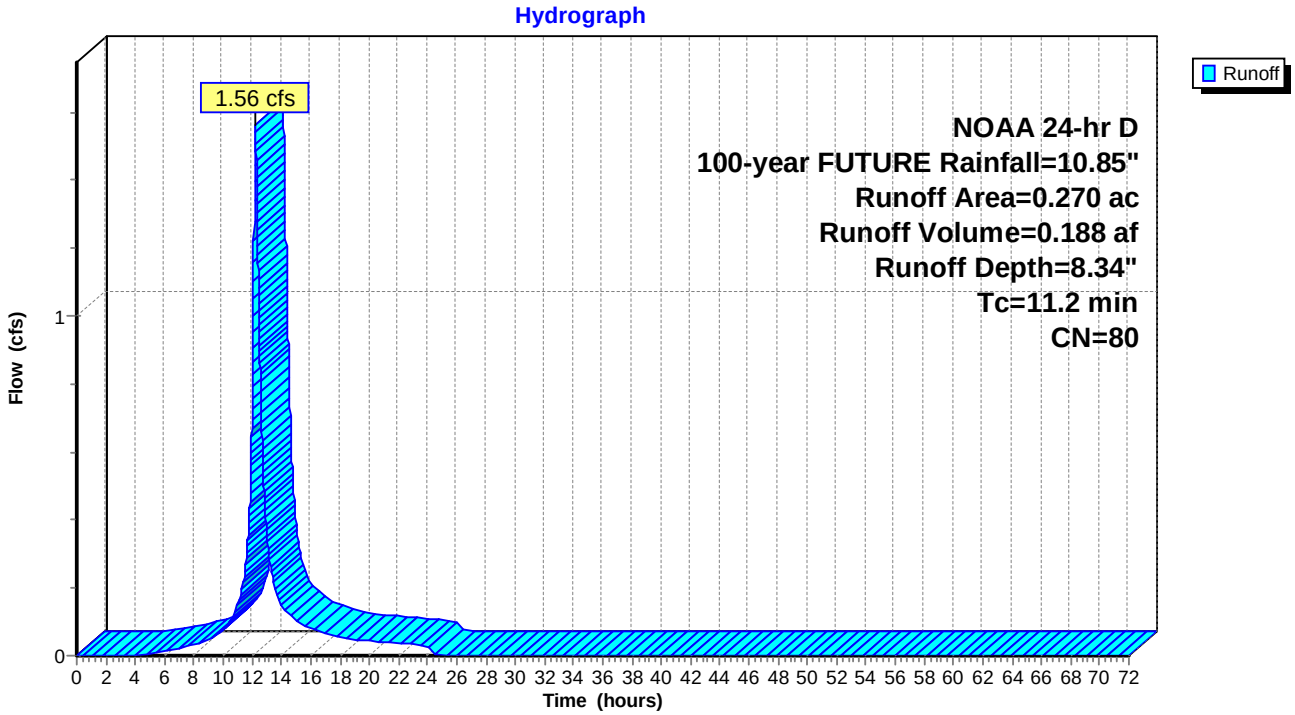
Runoff = 1.56 cfs @ 12.20 hrs, Volume= 0.188 af, Depth= 8.34"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-year FUTURE Rainfall=10.85"

Area (ac)	CN	Description
0.270	80	>75% Grass cover, Good, HSG D
0.270		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2					**Direct Entry, copied from EA-1 IMP**

Subcatchment EA-1P: EA-1 PERV

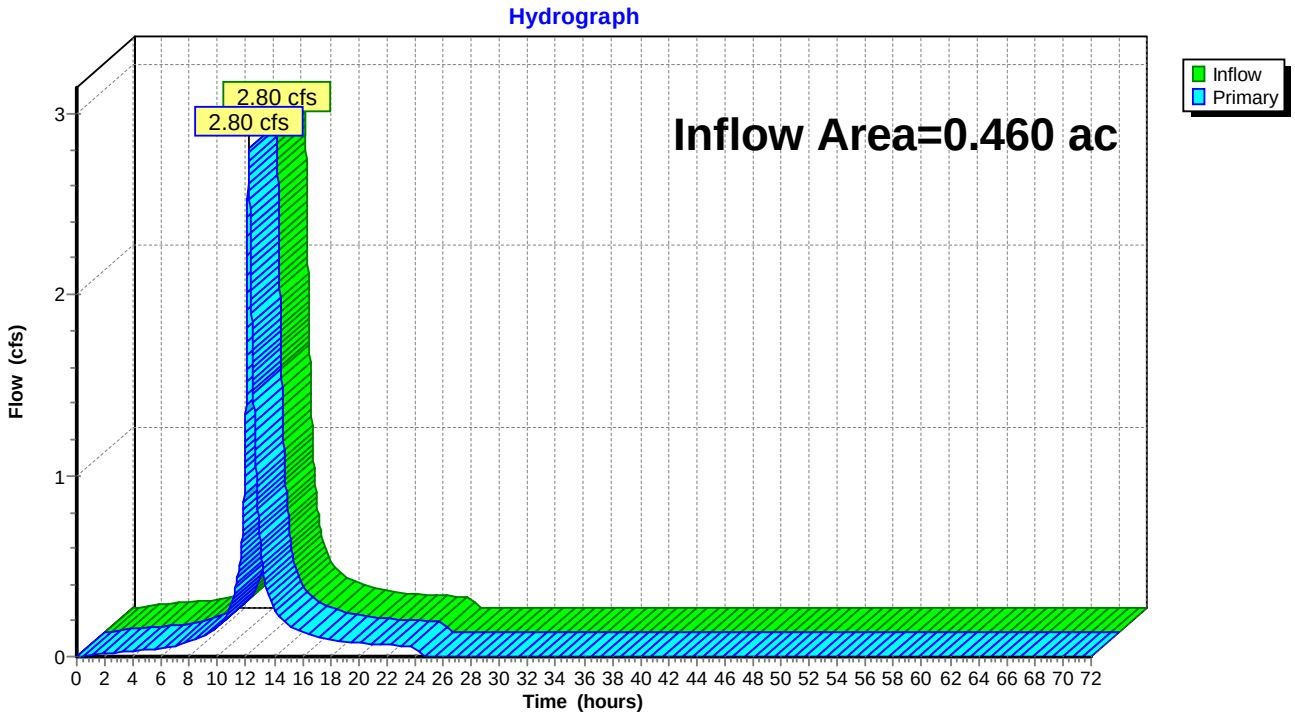


Summary for Pond EA-T: EA-Total

Inflow Area = 0.460 ac, 41.30% Impervious, Inflow Depth = 9.28" for 100-year FUTURE event
Inflow = 2.80 cfs @ 12.20 hrs, Volume= 0.356 af
Primary = 2.80 cfs @ 12.20 hrs, Volume= 0.356 af, Atten= 0%, Lag= 0.0 min

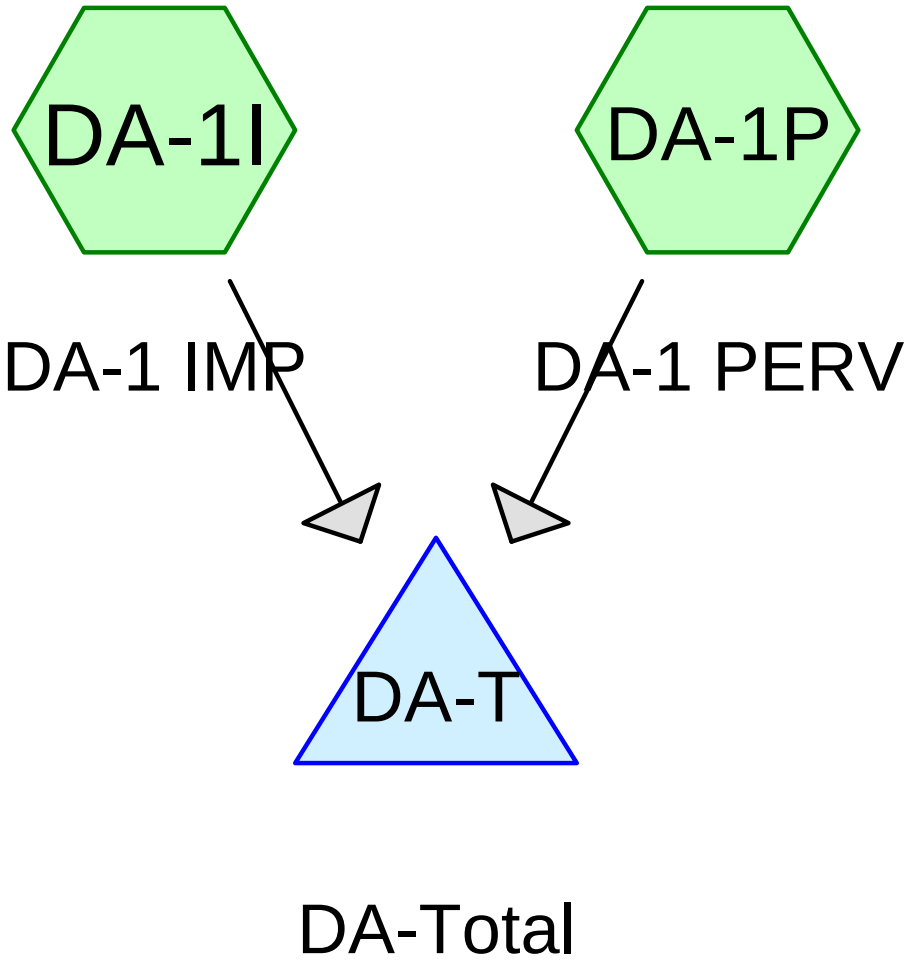
Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Pond EA-T: EA-Total



APPENDIX D

POST-DEVELOPMENT DRAINAGE ANALYSIS



Subcat Reach Pond Link

Routing Diagram for 2025-01-24 Post Development
Prepared by {enter your company name here}, Printed 2/13/2025

Summary for Subcatchment DA-1I: DA-1 IMP

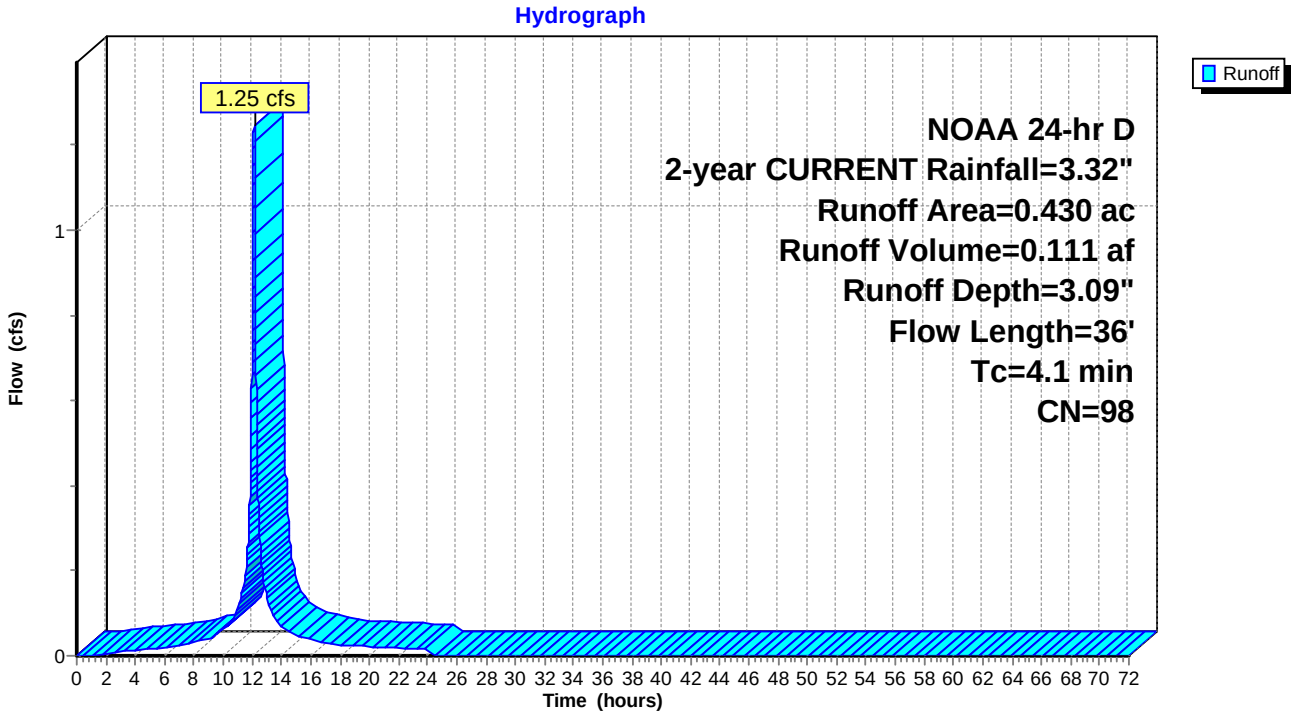
Runoff = 1.25 cfs @ 12.12 hrs, Volume= 0.111 af, Depth= 3.09"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-year CURRENT Rainfall=3.32"

Area (ac)	CN	Description
0.430	98	Paved parking, HSG D
0.430		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1I: DA-1 IMP



Summary for Subcatchment DA-1P: DA-1 PERV

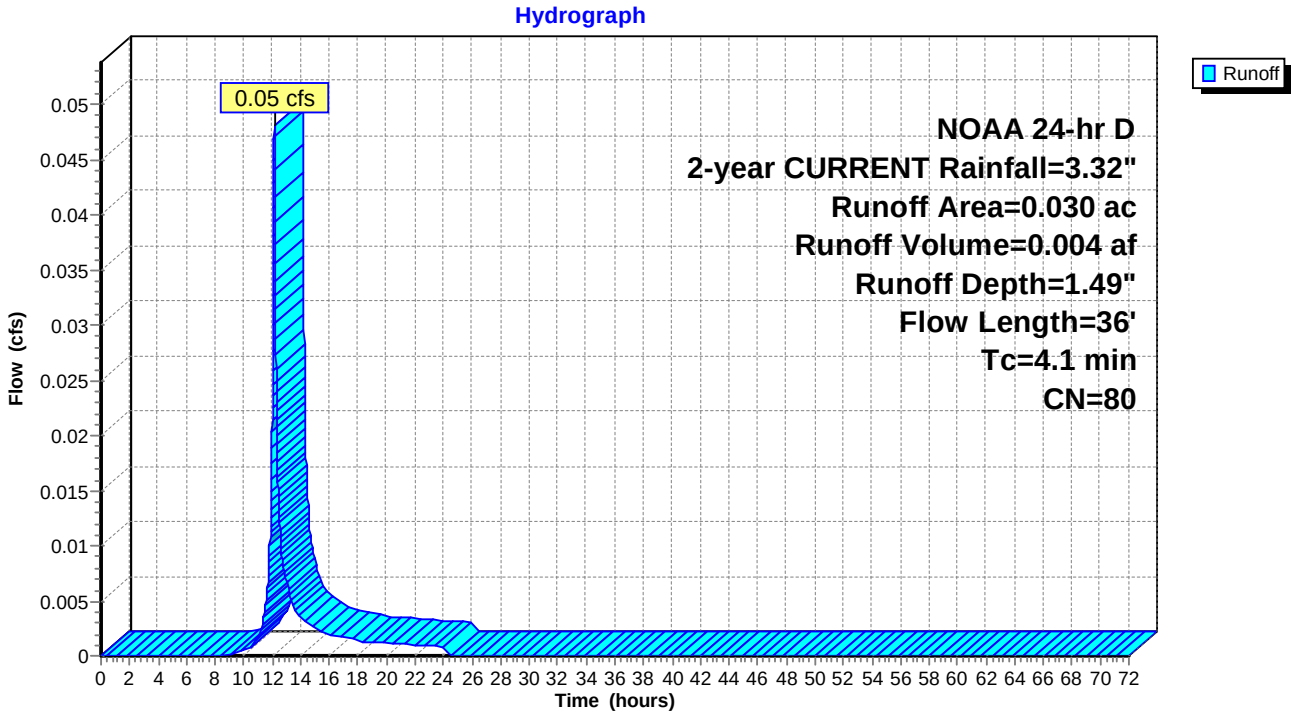
Runoff = 0.05 cfs @ 12.12 hrs, Volume= 0.004 af, Depth= 1.49"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-year CURRENT Rainfall=3.32"

Area (ac)	CN	Description
0.030	80	>75% Grass cover, Good, HSG D
0.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1P: DA-1 PERV

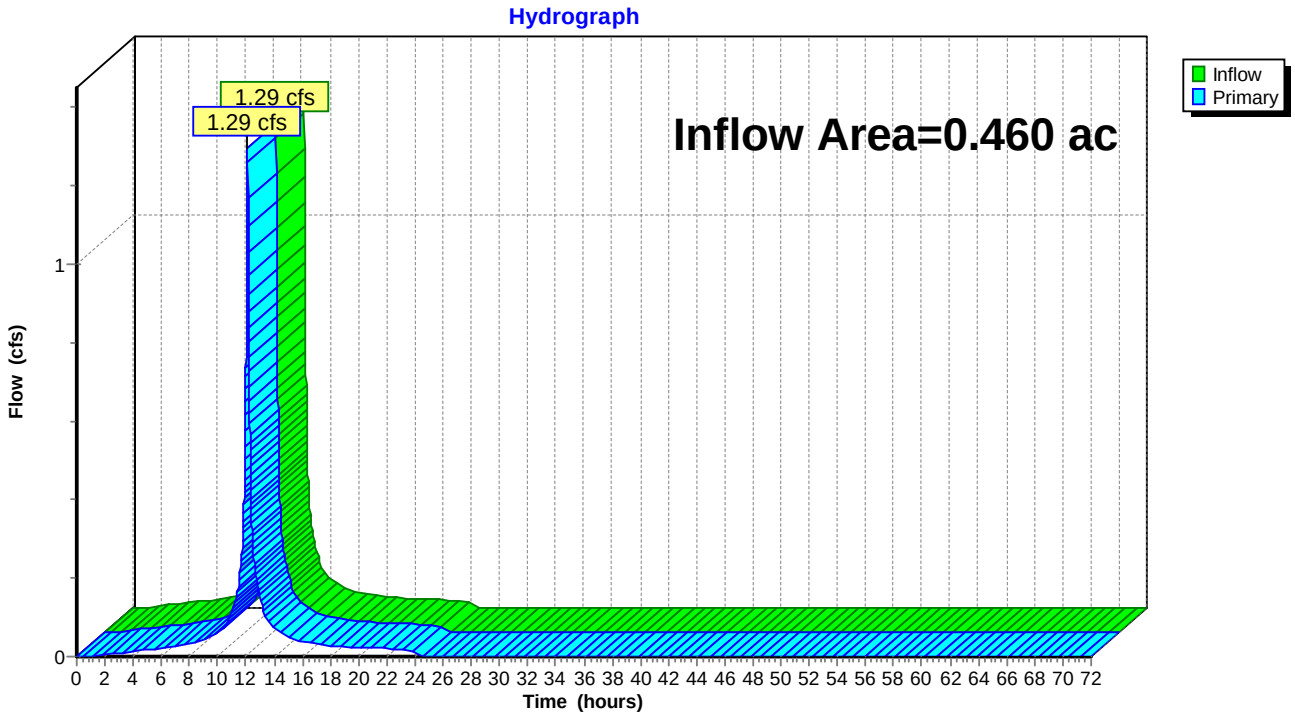


Summary for Pond DA-T: DA-Total

Inflow Area = 0.460 ac, 93.48% Impervious, Inflow Depth = 2.98" for 2-year CURRENT event
Inflow = 1.29 cfs @ 12.12 hrs, Volume= 0.114 af
Primary = 1.29 cfs @ 12.12 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.0 min

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

Pond DA-T: DA-Total



Summary for Subcatchment DA-1I: DA-1 IMP

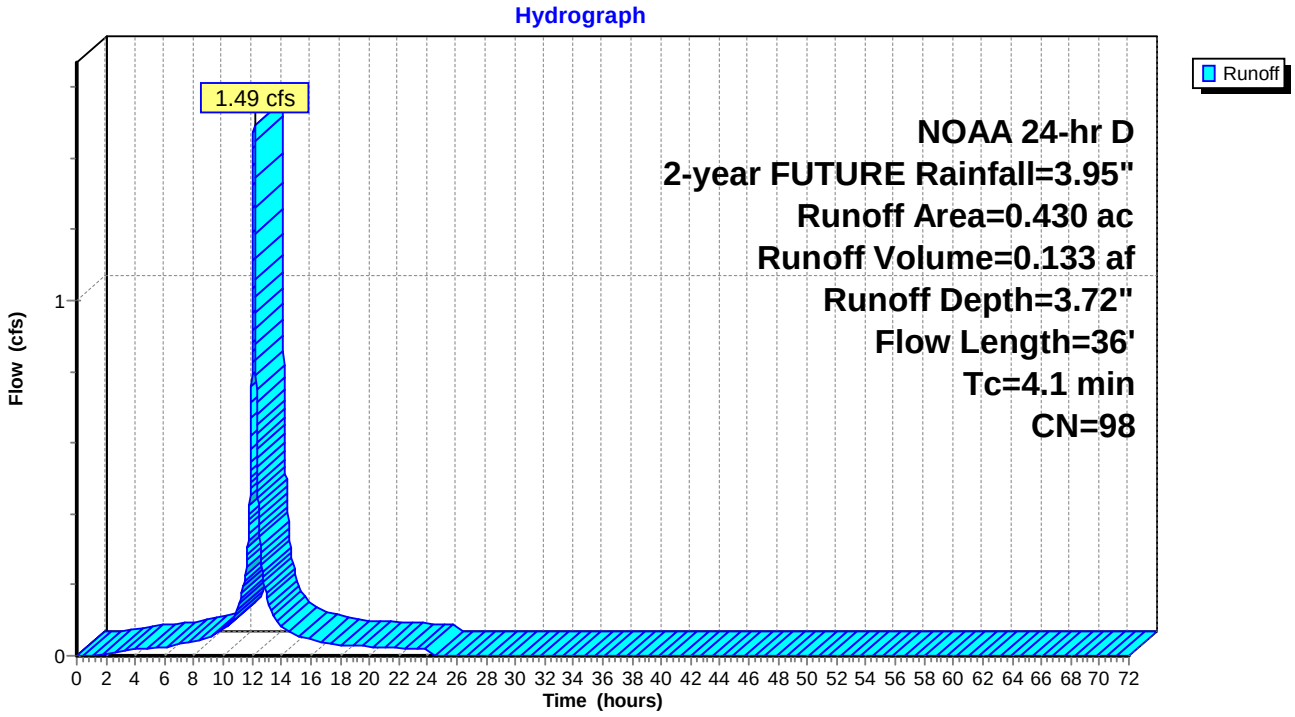
Runoff = 1.49 cfs @ 12.12 hrs, Volume= 0.133 af, Depth= 3.72"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-year FUTURE Rainfall=3.95"

Area (ac)	CN	Description
0.430	98	Paved parking, HSG D
0.430		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1I: DA-1 IMP



Summary for Subcatchment DA-1P: DA-1 PERV

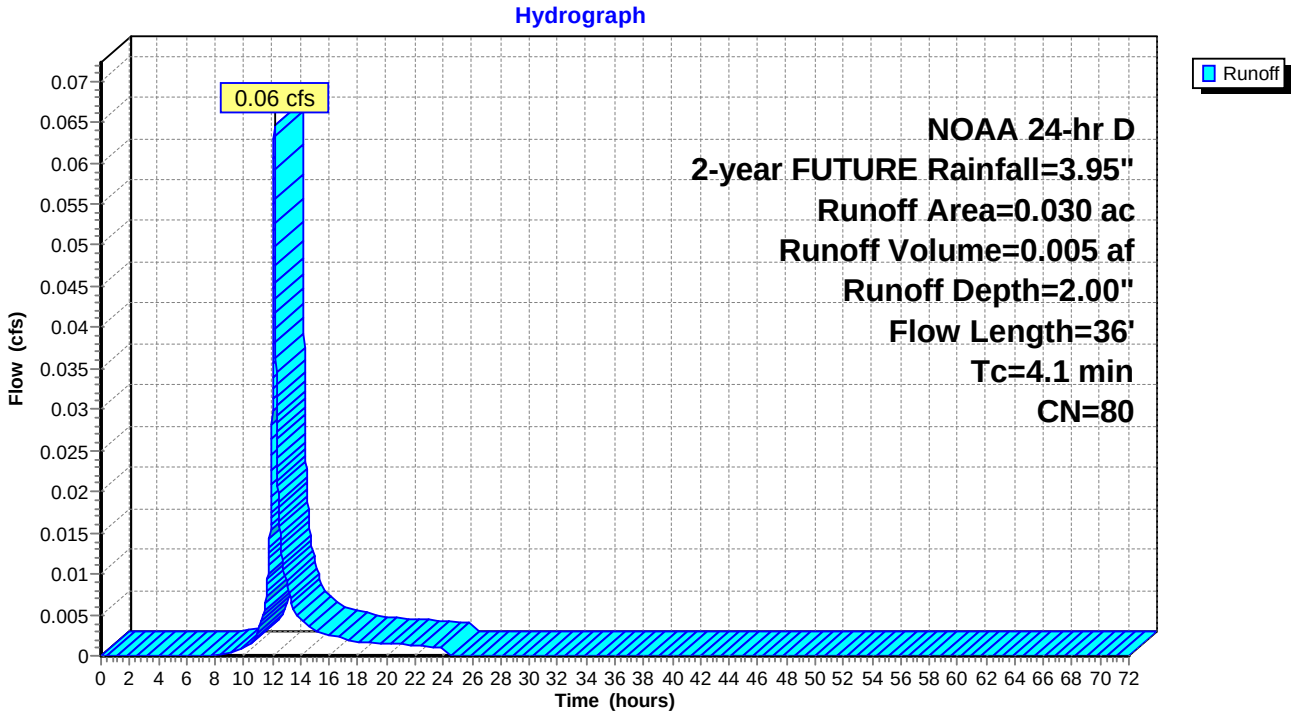
Runoff = 0.06 cfs @ 12.12 hrs, Volume= 0.005 af, Depth= 2.00"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 2-year FUTURE Rainfall=3.95"

Area (ac)	CN	Description
0.030	80	>75% Grass cover, Good, HSG D
0.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1P: DA-1 PERV

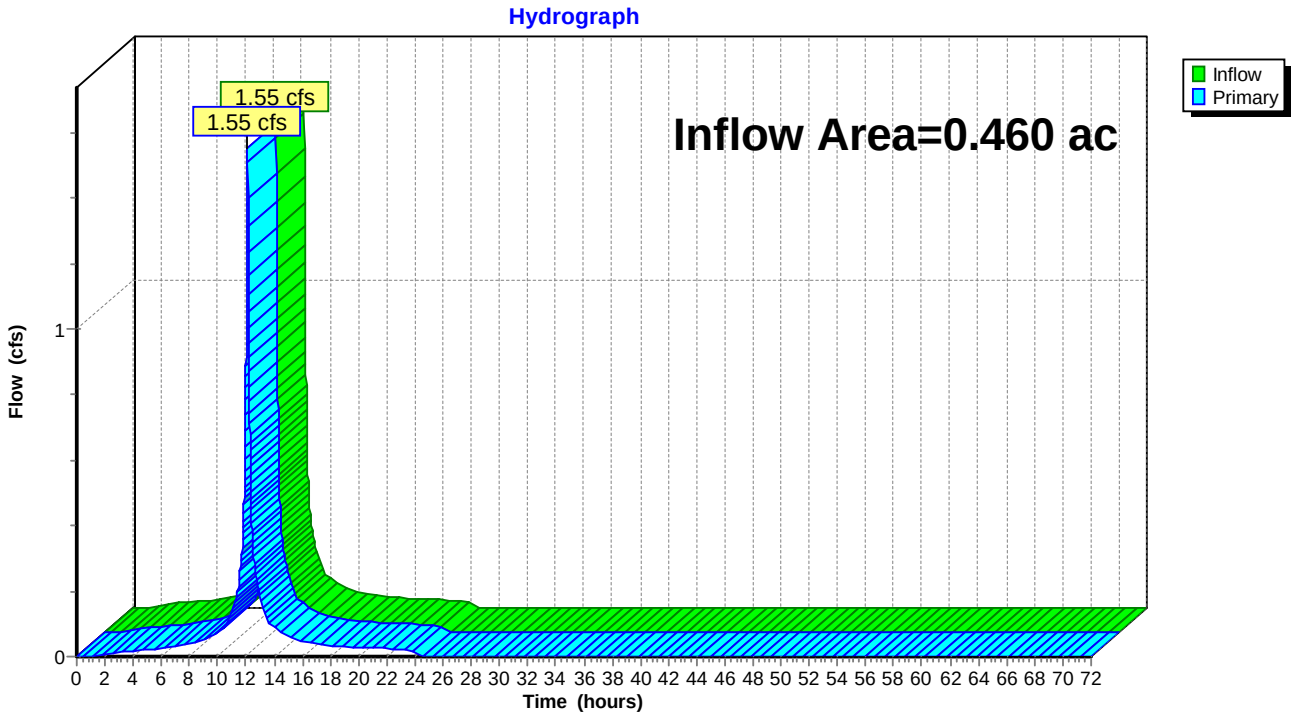


Summary for Pond DA-T: DA-Total

Inflow Area = 0.460 ac, 93.48% Impervious, Inflow Depth = 3.60" for 2-year FUTURE event
Inflow = 1.55 cfs @ 12.12 hrs, Volume= 0.138 af
Primary = 1.55 cfs @ 12.12 hrs, Volume= 0.138 af, Atten= 0%, Lag= 0.0 min

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

Pond DA-T: DA-Total



Summary for Subcatchment DA-1I: DA-1 IMP

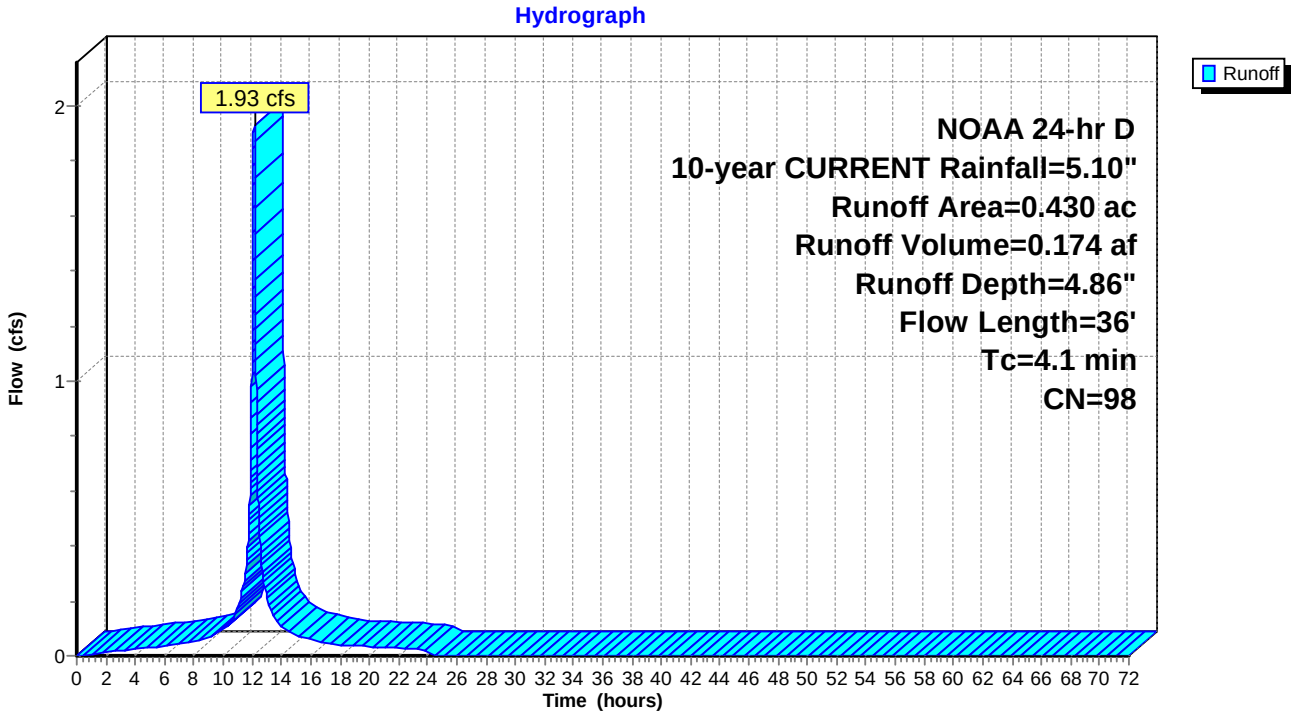
Runoff = 1.93 cfs @ 12.12 hrs, Volume= 0.174 af, Depth= 4.86"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-year CURRENT Rainfall=5.10"

Area (ac)	CN	Description
0.430	98	Paved parking, HSG D
0.430		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1I: DA-1 IMP



Summary for Subcatchment DA-1P: DA-1 PERV

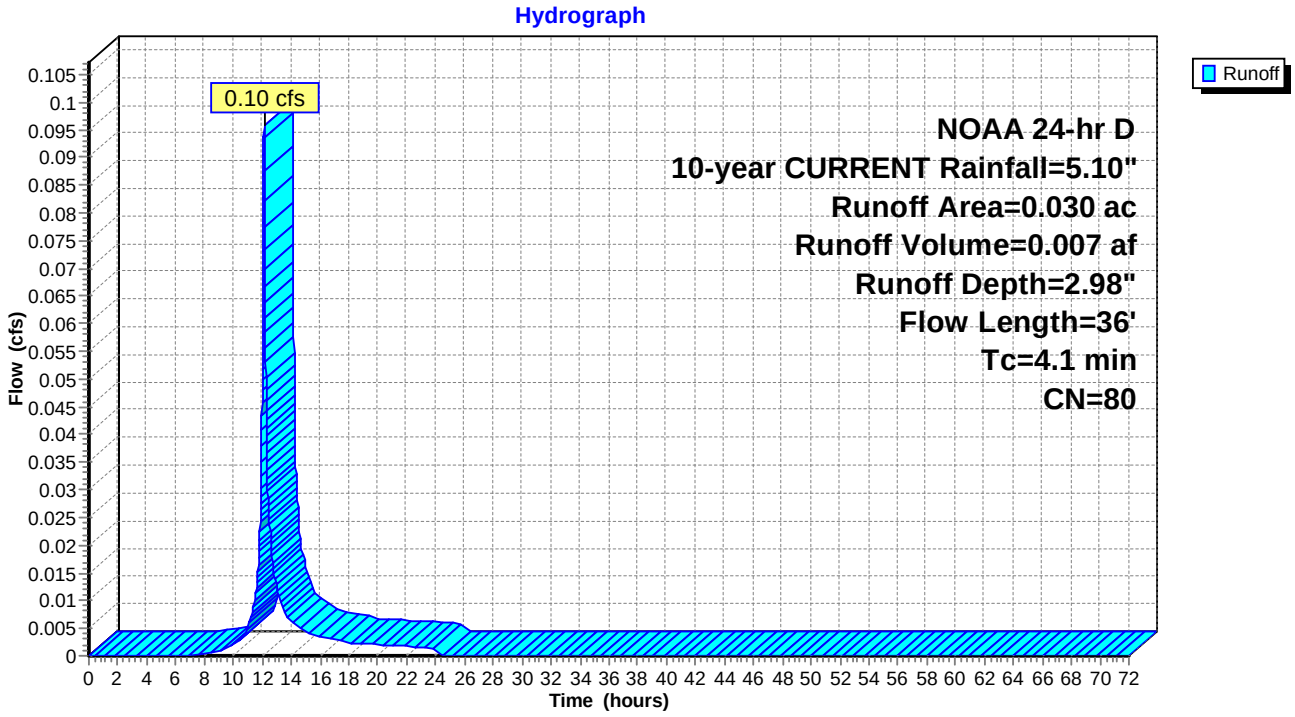
Runoff = 0.10 cfs @ 12.12 hrs, Volume= 0.007 af, Depth= 2.98"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-year CURRENT Rainfall=5.10"

Area (ac)	CN	Description
0.030	80	>75% Grass cover, Good, HSG D
0.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1P: DA-1 PERV

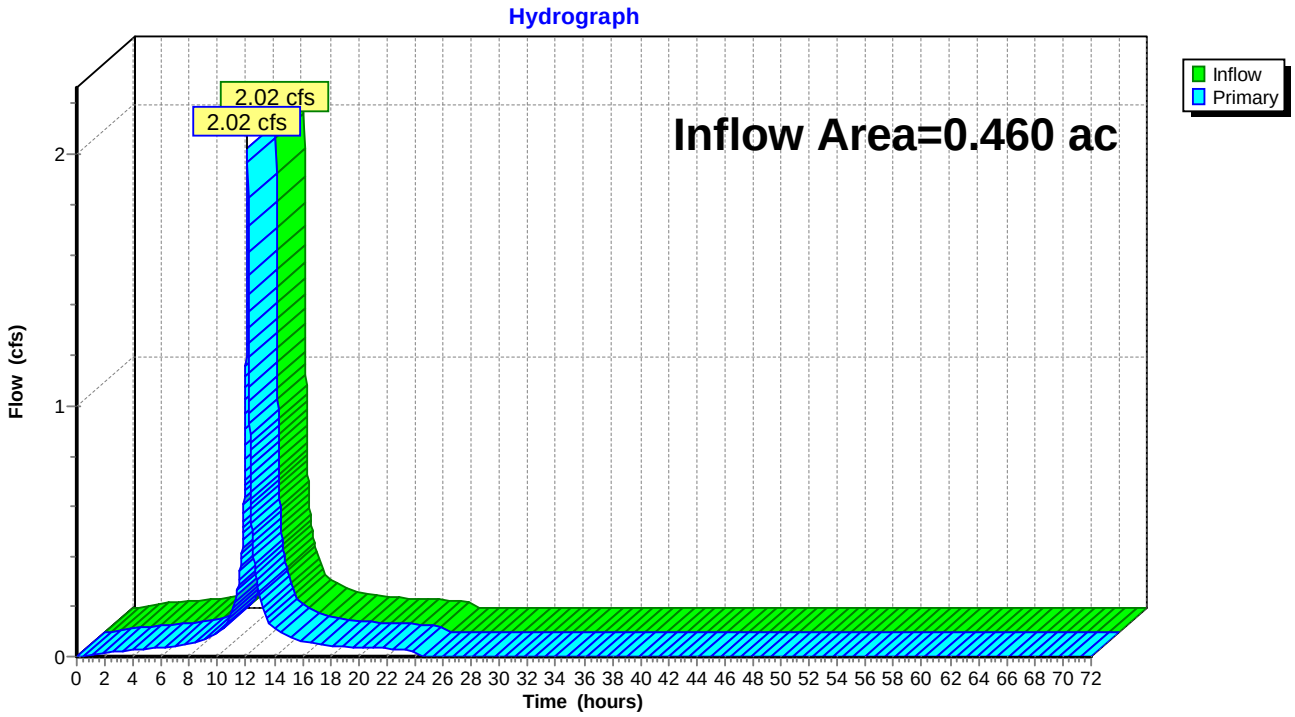


Summary for Pond DA-T: DA-Total

Inflow Area = 0.460 ac, 93.48% Impervious, Inflow Depth = 4.74" for 10-year CURRENT event
Inflow = 2.02 cfs @ 12.12 hrs, Volume= 0.182 af
Primary = 2.02 cfs @ 12.12 hrs, Volume= 0.182 af, Atten= 0%, Lag= 0.0 min

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

Pond DA-T: DA-Total



Summary for Subcatchment DA-1I: DA-1 IMP

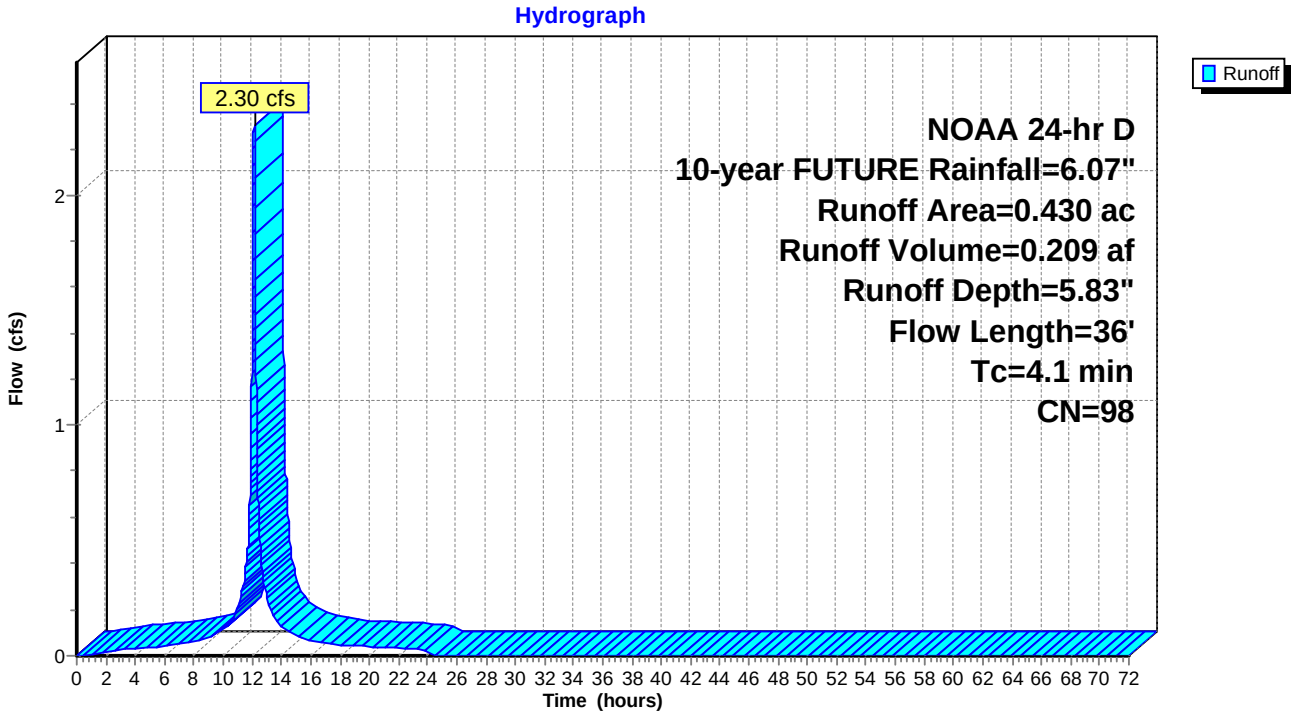
Runoff = 2.30 cfs @ 12.12 hrs, Volume= 0.209 af, Depth= 5.83"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-year FUTURE Rainfall=6.07"

Area (ac)	CN	Description
0.430	98	Paved parking, HSG D
0.430		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1I: DA-1 IMP



Summary for Subcatchment DA-1P: DA-1 PERV

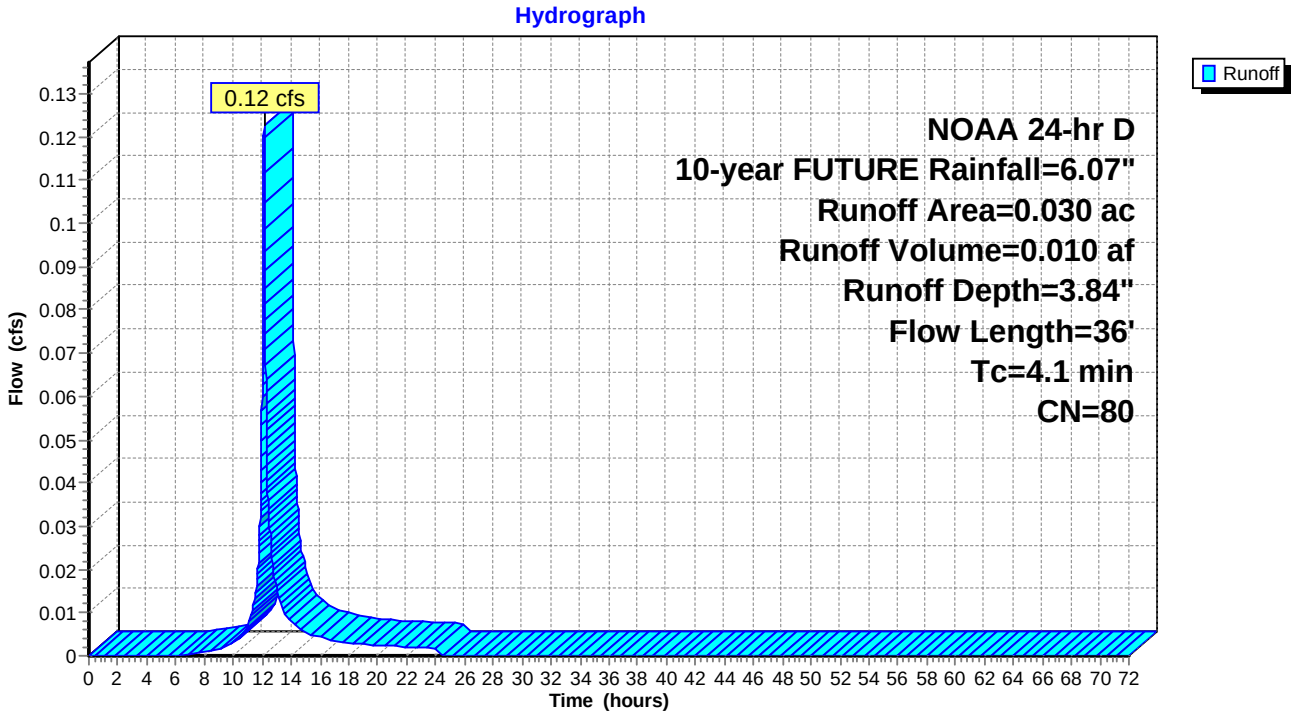
Runoff = 0.12 cfs @ 12.12 hrs, Volume= 0.010 af, Depth= 3.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 10-year FUTURE Rainfall=6.07"

Area (ac)	CN	Description
0.030	80	>75% Grass cover, Good, HSG D
0.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1P: DA-1 PERV

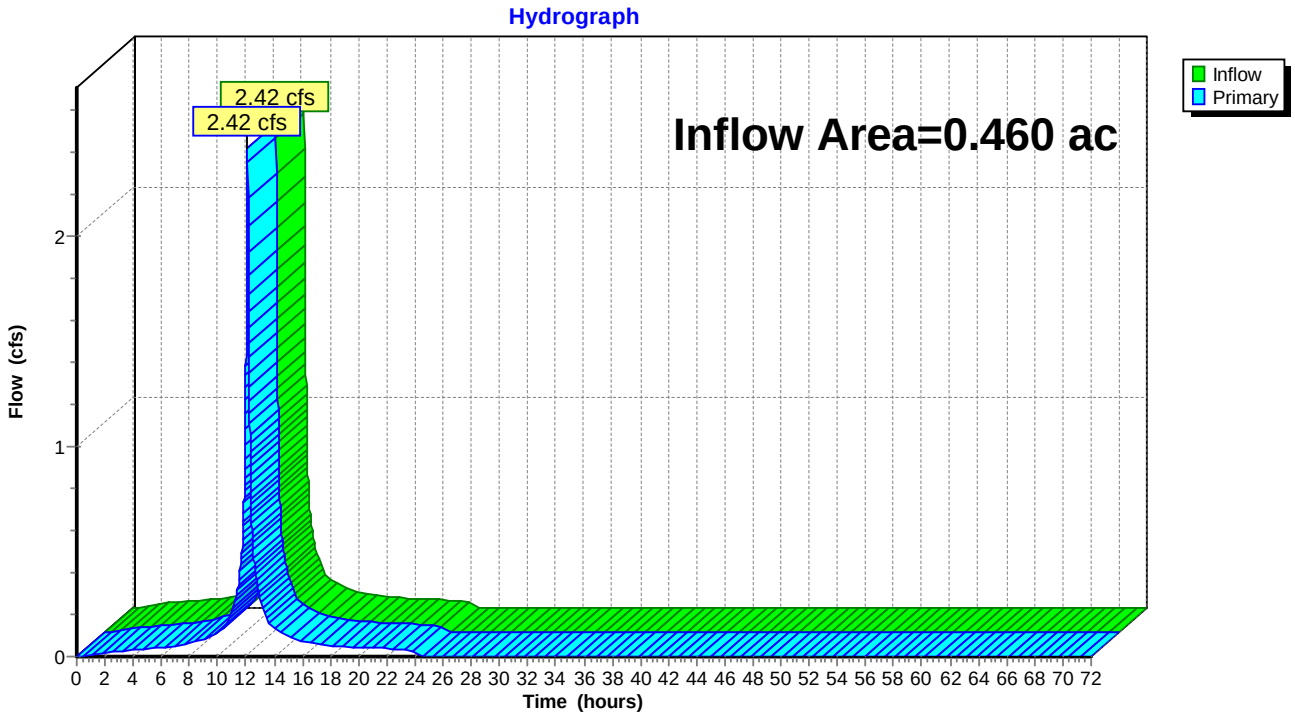


Summary for Pond DA-T: DA-Total

Inflow Area = 0.460 ac, 93.48% Impervious, Inflow Depth = 5.70" for 10-year FUTURE event
Inflow = 2.42 cfs @ 12.12 hrs, Volume= 0.219 af
Primary = 2.42 cfs @ 12.12 hrs, Volume= 0.219 af, Atten= 0%, Lag= 0.0 min

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

Pond DA-T: DA-Total



Summary for Subcatchment DA-1I: DA-1 IMP

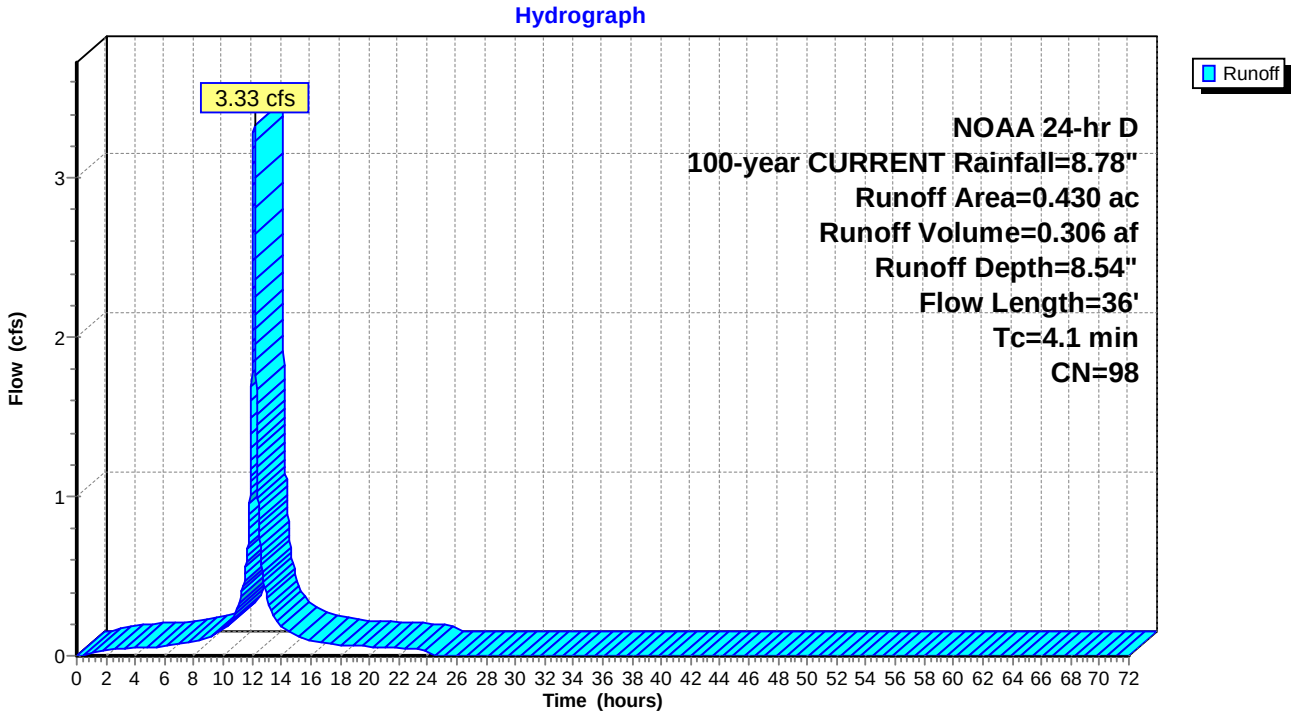
Runoff = 3.33 cfs @ 12.12 hrs, Volume= 0.306 af, Depth= 8.54"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-year CURRENT Rainfall=8.78"

Area (ac)	CN	Description
0.430	98	Paved parking, HSG D
0.430		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1I: DA-1 IMP



Summary for Subcatchment DA-1P: DA-1 PERV

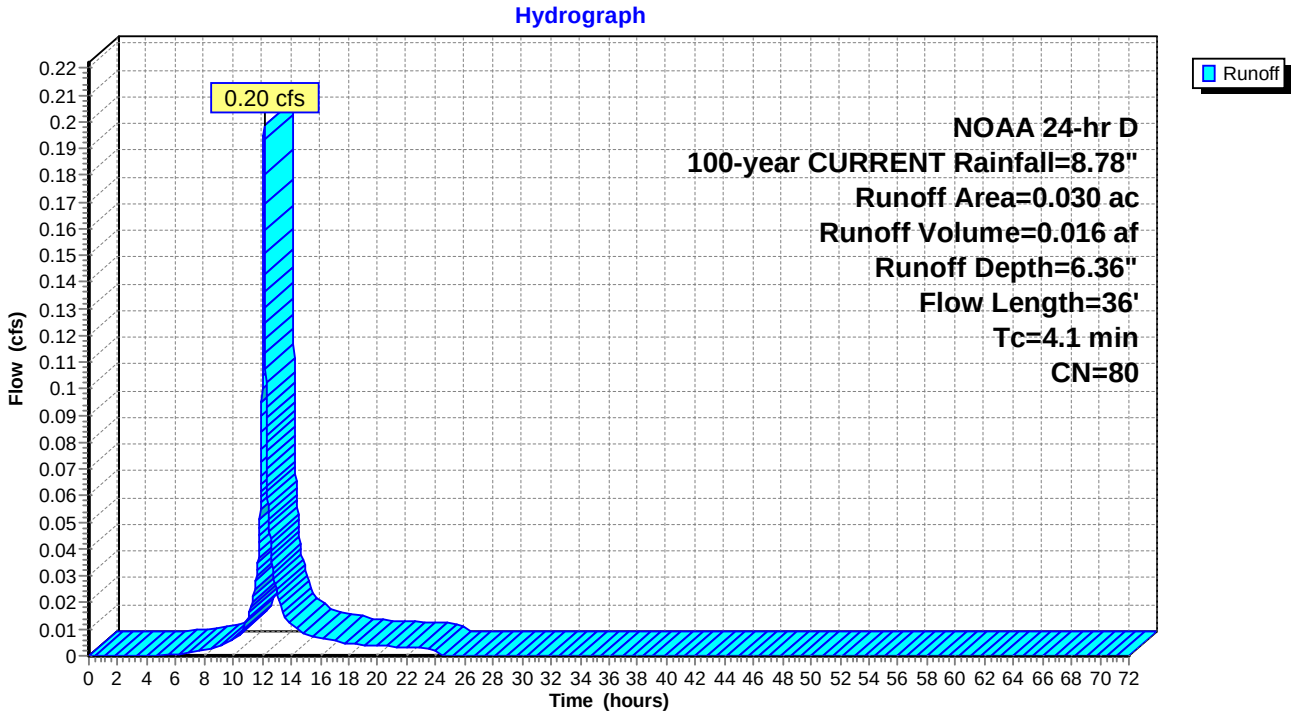
Runoff = 0.20 cfs @ 12.12 hrs, Volume= 0.016 af, Depth= 6.36"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-year CURRENT Rainfall=8.78"

Area (ac)	CN	Description
0.030	80	>75% Grass cover, Good, HSG D
0.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1P: DA-1 PERV

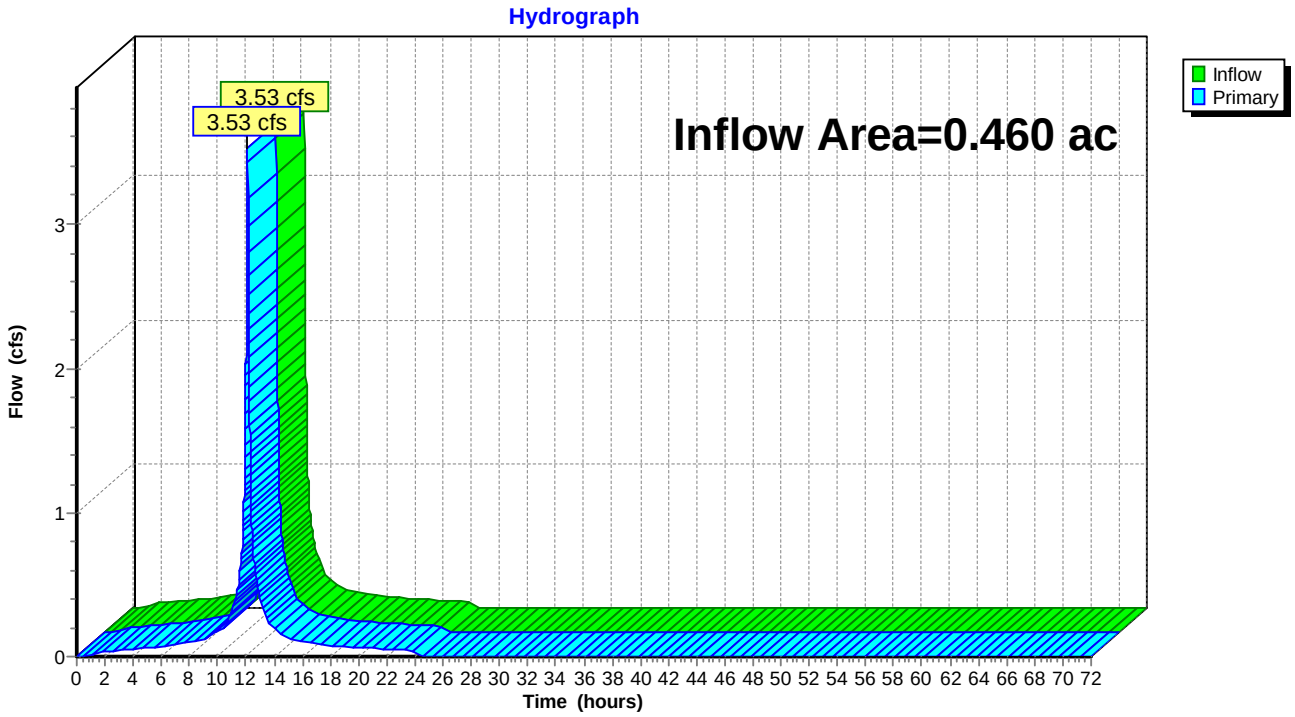


Summary for Pond DA-T: DA-Total

Inflow Area = 0.460 ac, 93.48% Impervious, Inflow Depth = 8.40" for 100-year CURRENT event
Inflow = 3.53 cfs @ 12.12 hrs, Volume= 0.322 af
Primary = 3.53 cfs @ 12.12 hrs, Volume= 0.322 af, Atten= 0%, Lag= 0.0 min

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

Pond DA-T: DA-Total



Summary for Subcatchment DA-1I: DA-1 IMP

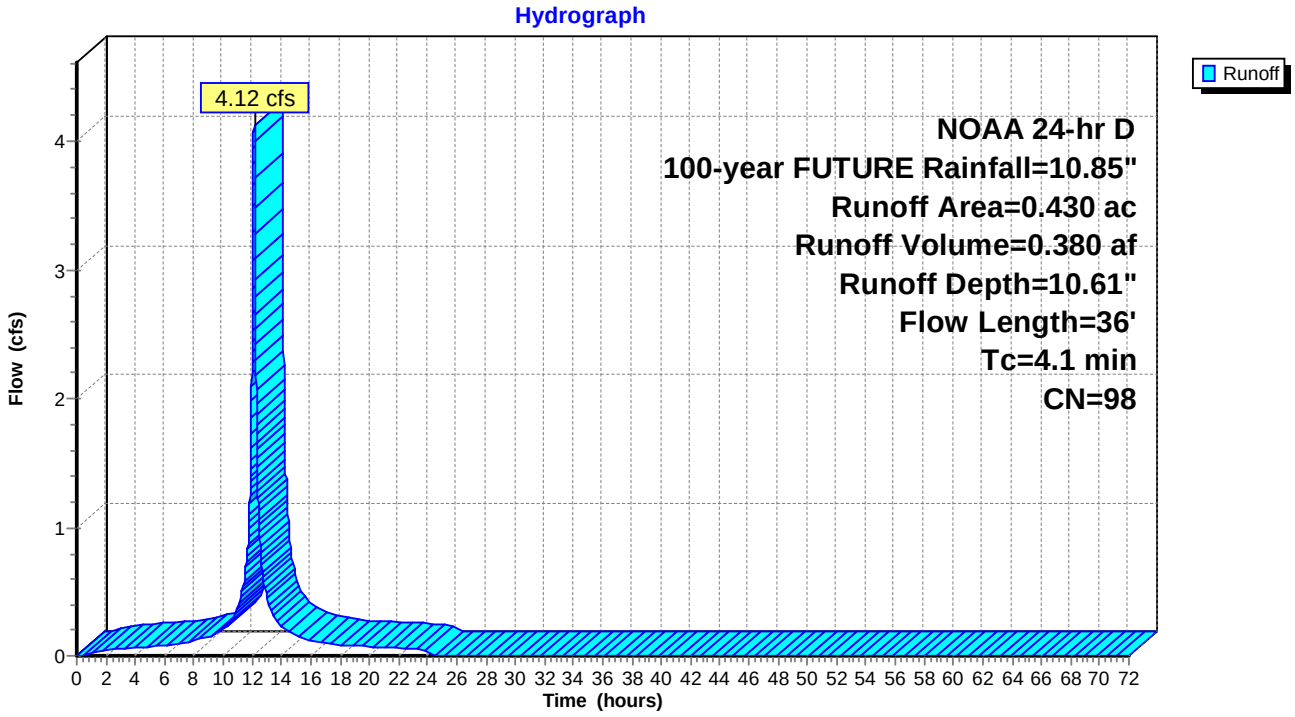
Runoff = 4.12 cfs @ 12.12 hrs, Volume= 0.380 af, Depth=10.61"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-year FUTURE Rainfall=10.85"

Area (ac)	CN	Description
0.430	98	Paved parking, HSG D
0.430		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1I: DA-1 IMP



Summary for Subcatchment DA-1P: DA-1 PERV

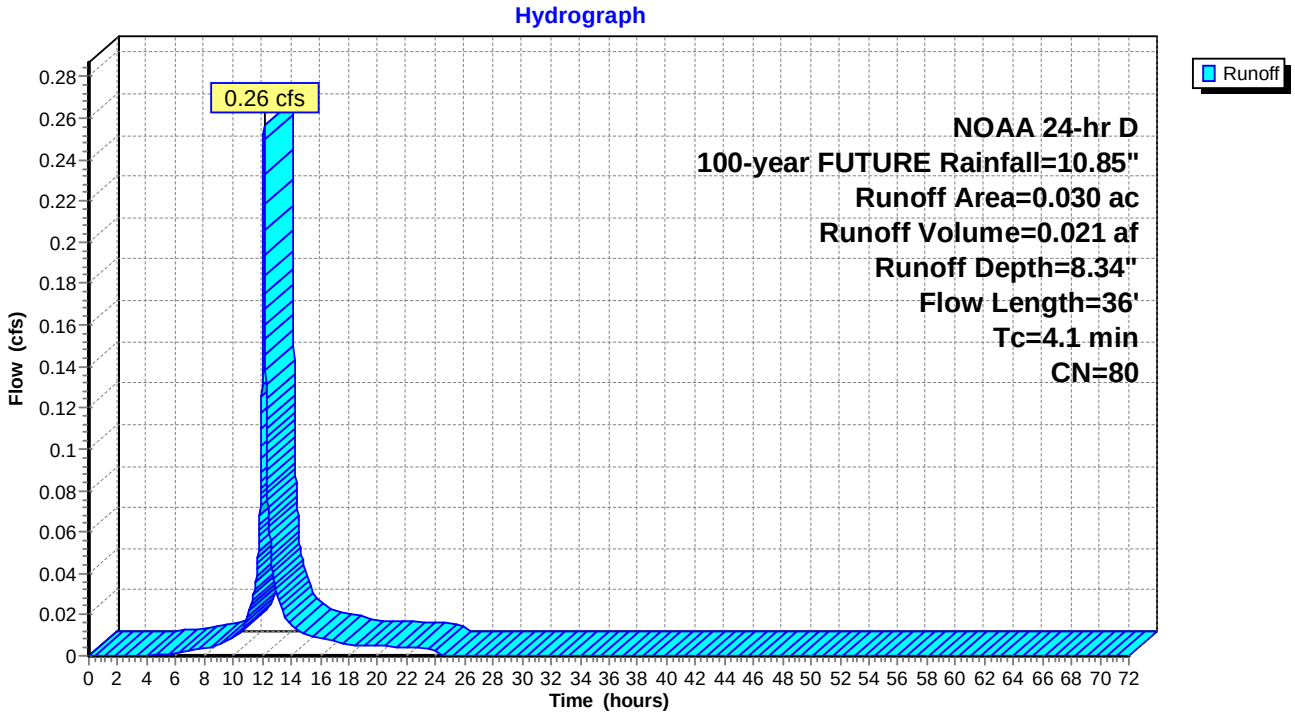
Runoff = 0.26 cfs @ 12.12 hrs, Volume= 0.021 af, Depth= 8.34"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
NOAA 24-hr D 100-year FUTURE Rainfall=10.85"

Area (ac)	CN	Description
0.030	80	>75% Grass cover, Good, HSG D
0.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	4	0.0150	0.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.32"
4.0	32	0.0180	0.13		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.32"
4.1	36	Total			

Subcatchment DA-1P: DA-1 PERV

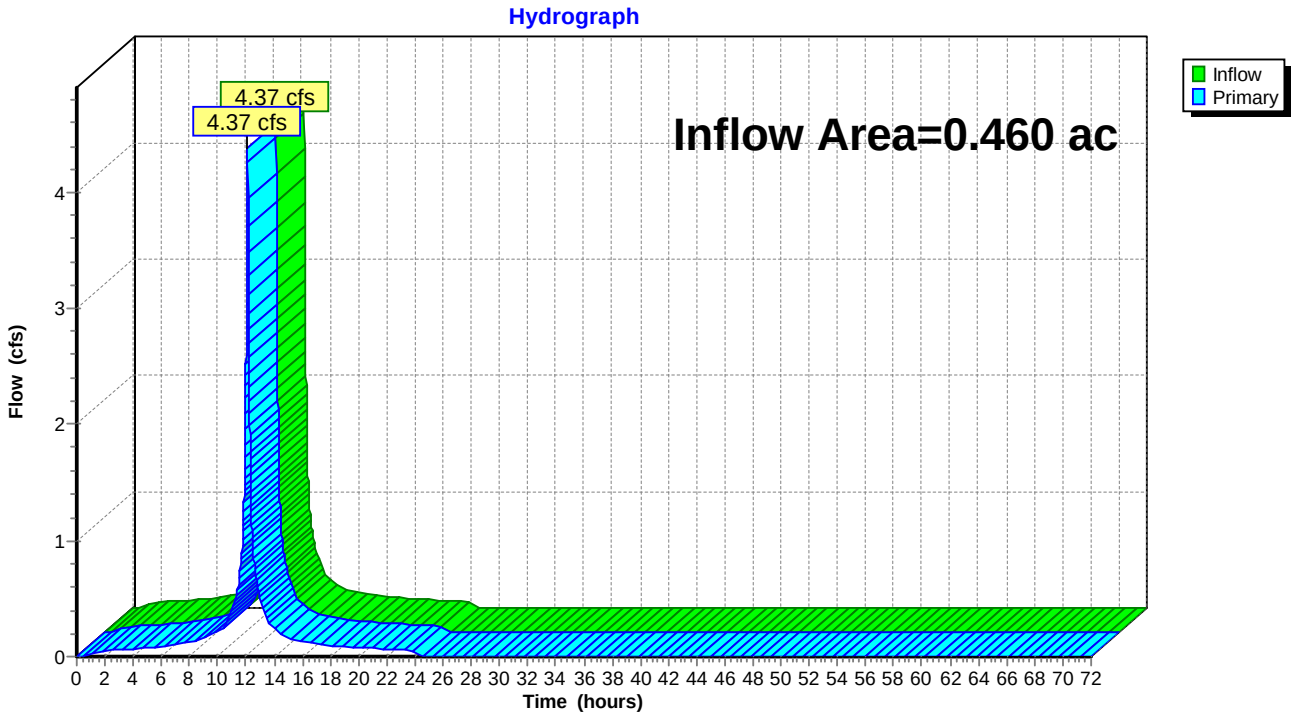


Summary for Pond DA-T: DA-Total

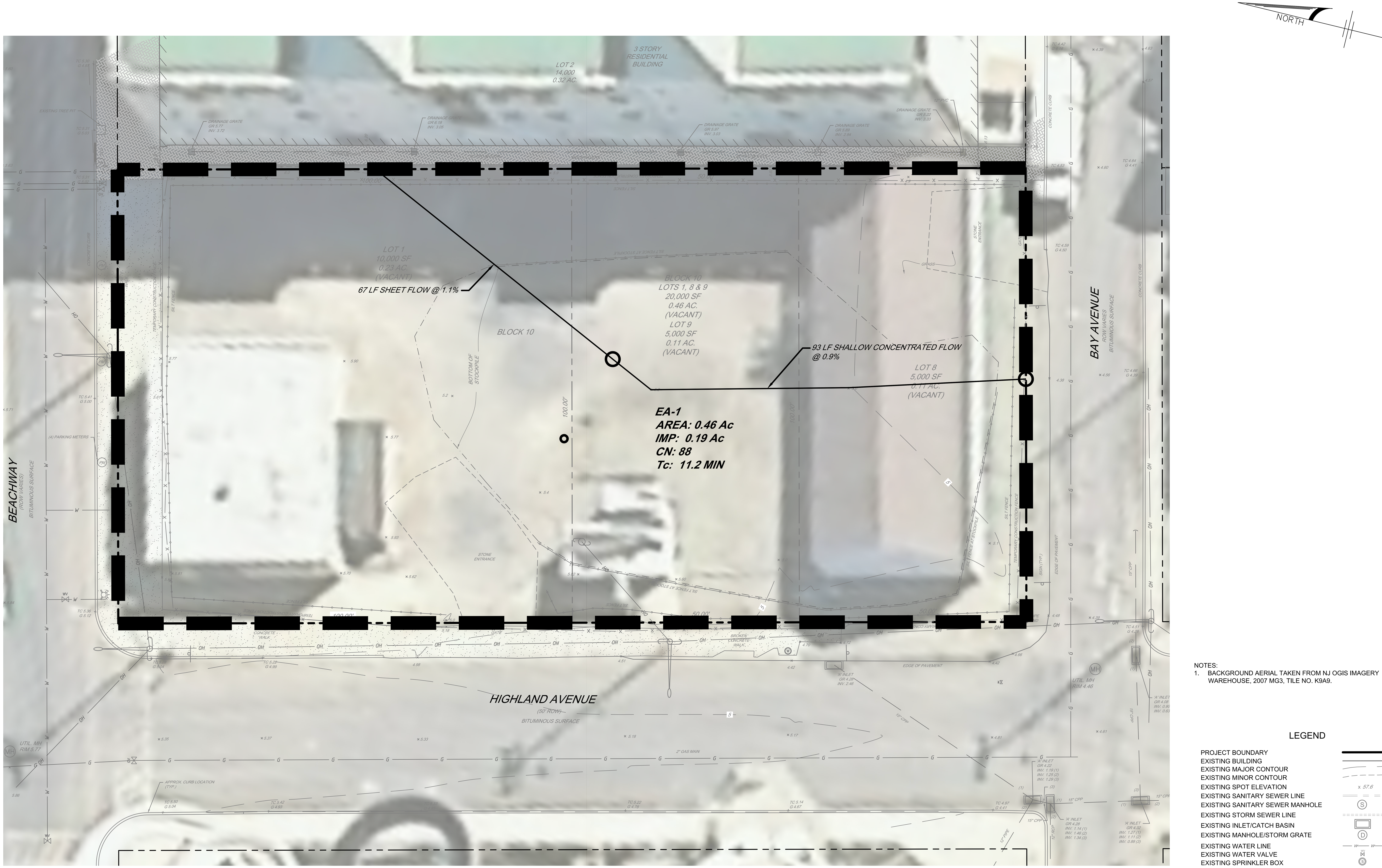
Inflow Area = 0.460 ac, 93.48% Impervious, Inflow Depth = 10.46" for 100-year FUTURE event
Inflow = 4.37 cfs @ 12.12 hrs, Volume= 0.401 af
Primary = 4.37 cfs @ 12.12 hrs, Volume= 0.401 af, Atten= 0%, Lag= 0.0 min

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

Pond DA-T: DA-Total



APPENDIX E
DRAINAGE MAPS



NOTES:

1. BACKGROUND AERIAL TAKEN FROM NJ OGIS IMAGERY WAREHOUSE, 2007 MG3, TILE NO. K9A9.

LEGEND

- PROJECT BOUNDARY
- EXISTING BUILDING
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING SANITARY SEWER LINE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM SEWER LINE
- EXISTING INLET/CATCH BASIN
- EXISTING MANHOLE/STORM GRATE
- EXISTING WATER LINE
- EXISTING WATER VALVE
- EXISTING SPRINKLER BOX
- EXISTING GAS LINE
- EXISTING GAS VALVE
- EXISTING ELECTRIC LINE
- EXISTING UTILITY POLE
- EXISTING FENCELINE
- EXISTING GUIDERAIL
- EXISTING LIGHT POLE
- EXISTING SIGNAGE
- EXISTING HYDRANT
- DRAINAGE AREA BOUNDARY
- FLOW PATH BEGINNING/END
- FLOW PATH

GRAPHIC SCALE
1 inch = 10 feet

DRAWN BY: MS
CHECKED BY: IAB
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: N/A
PROJECT No.: SEI-2401
DATE: 02/13/25

PRELIMINARY/FINAL MAJOR SITE PLAN
288 BEACHWAY
BLOCK 10, LOTS 1, 8-9
EXISTING DRAINAGE AREA MAP
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic
Engineering Partners

Sheet Number
1 OF 2

NORTH

3 STORY RESIDENTIAL BUILDING

LOT 2
14,000
0.32 AC.

S5°00'00"E 200.00'

EXISTING TREE PIT

DRAINAGE GRATE GR 5.77 INV. 3.72

DRAINAGE GRATE GR 6.18 INV. 3.05

DRAINAGE GRATE GR 5.97 INV. 3.03

DRAINAGE GRATE GR 5.89 INV. 2.94

DRAINAGE GRATE GR 5.22 INV. 3.33

12" P/C

CONCRETE CURB

4 LF SHEET FLOW @ 1.5%

32 LF SHEET FLOW @ 1.8%

MECH ROOM

DA-1
AREA: 0.46 Ac
IMP: 0.43 Ac
CN: 90
Tc: 4.1 Min.

BLOCK 10
LOTS 1, 8 & 9
20,000 SF
0.46 AC.
(VACANT)

BAY AVENUE
(ROW VARIES)
BITUMINOUS SURFACE

STAIRS

COMPACT

COMPACT

COMPACT

COMPACT

STAIRS

STORAGE

TRASH/
MECH ROOM

STORAGE
BICYCLE

LOBBY

PACKAGE

N5°00'00"W 200.00'

BEACHWAY
(ROW VARIES)
BITUMINOUS SURFACE

(4) PARKING METERS

POINT OF BEGINNING

HIGHLAND AVENUE
(50' ROW)
BITUMINOUS SURFACE

UTIL. MH
RIM 3.77

UTIL. MH
RIM 4.46

2" GAS MAIN

APPROX. CURB LOCATION (TYP.)

'A' INLET
GR 4.08
INV. 0.80
INV. 0.63

'A' INLET
GR 4.22
INV. 1.19 (1)
INV. 1.25 (2)
INV. 1.29 (3)

'A' INLET
GR 4.28
INV. 1.14 (1)
INV. 1.46 (2)
INV. 1.34 (3)

'A' INLET
GR 4.32
INV. 1.27 (1)
INV. 1.71 (2)
INV. 0.89 (3)

'A' INLET
GR 4.08
INV. 2.46

15" CPP

12" HDPE

LEGEND

PROJECT BOUNDARY	
EXISTING BUILDING	
EXISTING MAJOR CONTOUR	
EXISTING MINOR CONTOUR	
EXISTING SPOT ELEVATION	x 57.6
EXISTING SANITARY SEWER LINE	
EXISTING SANITARY SEWER MANHOLE	S
EXISTING STORM SEWER LINE	
EXISTING INLET/CATCH BASIN	
EXISTING MANHOLE/STORM GRATE	D
EXISTING WATER LINE	W W W
EXISTING WATER VALVE	W
EXISTING SPRINKLER BOX	W
EXISTING GAS LINE	G G G
EXISTING GAS VALVE	
EXISTING ELECTRIC LINE	E E E
EXISTING UTILITY POLE	
EXISTING FENCELINE	X X X
EXISTING GUIDERAIL	
EXISTING LIGHT POLE	
EXISTING SIGNAGE	
EXISTING HYDRANT	
DRAINAGE AREA BOUNDARY	
FLOW PATH BEGINNING/END	
FLOW PATH	

GRAPHIC SCALE
1 inch = ## feet

8 4 0 10 20 30
10 6 2
GRAPHIC SCALE
1 inch = 10 feet

	CHECKED BY
	DRAWN BY
REVISIONS	
DATE	

DRAWN BY: MS
CHECKED BY: IAB
HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: N/A
PROJECT No.: SEI-2401
DATE: 02/13/25

PRELIMINARY/MAJOR FINAL SITE PLAN
288 BEACHWAY
BLOCK 10, LOTS 1, 8-9
PROPOSED DRAINAGE AREA MAP
SITUATED IN
BOROUGH OF KEANSBURG, MONMOUTH COUNTY, NEW JERSEY

MidAtlantic
Engineering Partners
20068 Bridge Rd. Suite 300
Mt. Laurel, NJ 08054
609-910-1450

1971 Highway 34, Suite 201
Wall Township, NJ 07719
732-722-5899

321 W. State Street
Media, PA 19063
610-565-0020

26 Washington St. 3rd Floor
Morristown, NJ 07960
973-715-8620

Sheet Number
2 OF 2

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Plot time: Feb 13, 2025 - 8:38am