

STORMWATER MANAGEMENT REPORT

Prepared for:

GROVE STREET DEVELOPERS LLC

Proposed Townhouse Development

**251 Grove Avenue
Block 1201, Lot 12
Township of Verona
Essex County, NJ**

Prepared by:



**245 Main Street, Suite 110
Chester, NJ 07930
(908) 879-9229**



Daniel T. Sehnal, PE
NJ Professional Engineer License #53572

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I. INTRODUCTION

The intention of this study is to analyze the stormwater drainage conditions that will occur as a result of the proposed redevelopment of the subject site, located at 251 Grove Avenue in the Township of Verona, Essex County, New Jersey and identified as Block 1201, Lot 12 in the Township of Verona Tax Maps. Stormwater runoff generated within the subject site drains to two separate points of analysis via overland flow; the Grove Avenue right-of-way (identified as POA-1) and the Peckman River (identified as POA-2). Under existing conditions, the subject site is presently developed consisting of an industrial outdoor storage yard, and five (5) one-story buildings. The parcel is approximately 241,164 SF (5.54 Acres) in area.

Under proposed conditions, the existing improvements will be demolished for the construction of 84 townhouse units with associated site improvements including parking areas, utilities, stormwater management facilities, and landscaping as shown on the accompanying site plans.

The scope of this study focuses on the on-site drainage conditions, which will include a decrease of approximately 94,484 SF (2.17 acres) of impervious surface coverage.

The on-site limit of disturbance for the project is greater than one acre and therefore the proposed redevelopment meets the definition of a “major development” under N.J.A.C. 7:8. The primary design constraints for this project are based on requirements established in N.J.A.C. 7:8, the New Jersey Soil Erosion and Sediment Control Standards, the 251 ½ Grove Avenue Redevelopment Plan, the Township of Verona Zoning Code, and Essex County requirements. More specifically, the stormwater management design will serve to maintain existing drainage patterns, post-development runoff hydrographs will not exceed the pre-construction runoff hydrographs at any point in time, and the improvements will not have a negative impact on downstream facilities.

II. EXISTING SITE CONDITIONS

The subject site consists of 5.54 acres and is fully developed with five (5) existing structures with associated parking and industrial outdoor storage. The site consists of approximately 224,605 SF of impervious surface coverage, including building, asphalt parking and storage areas, & compacted gravel that acts as an impervious surface. This study will consider the entire area within the on-site limit of disturbance of the proposed development.

The study area is comprised of two (2) drainage areas, identified as Existing Drainage Area 1 (EX-DA-1) and Existing Drainage Area 2 (EX-DA-2), detailed below. An Existing Drainage Area Map depicting this study area is included within the Appendix of this report.

Study Area EX-DA-1:

This area consists of the northernmost area of the subject site, including the existing access driveway, asphalt pavement area, compacted gravel areas acting as impervious coverage, associated sidewalks, and landscape area within the public right-of-way along the site's street frontage. Under existing conditions, stormwater runoff generated within this study area flows overland and/or is collected by the existing on-site conveyance system and ultimately conveyed to the existing stormwater conveyance network within the Grove Avenue right-of-way, identified as Point of Analysis 1 (POA-1).

Based on existing ground cover conditions, a runoff curve number of 74 was utilized for the pervious surfaces within this study area. Furthermore, times of concentration for pervious areas of 4.4 minutes and 4.2 minutes were calculated for current and future storm events, respectively. For impervious areas, times of concentration of 3.5 minutes and 3.4 minutes were calculated for current and future storm events, respectively.

Study Area EX-DA-2:

This area consists of the remainder of Lot 12 including the remaining on-site structures and industrial storage areas which contain compacted gravel acting as impervious coverage. Under existing conditions, stormwater runoff generated within this study area is conveyed to the Peckman River via overland flow and the existing on-site conveyance network. The Peckman River is further identified as Point of Analysis 2 (POA-2).

Based on existing ground cover conditions, a runoff curve number of 74 was utilized for the pervious surfaces within this study area. Furthermore, times of concentration for pervious areas of 9.5 minutes and 8.9 minutes were calculated for current and future storm events, respectively. For impervious areas, times of concentration of 5.3 minutes and 5.2 minutes were calculated for current and future storm events, respectively.

III. **PROPOSED SITE CONDITIONS**

The proposed site redevelopment includes the demolition of the existing structures and construction of six townhouse clusters consisting of 84 total units with associated site improvements including parking areas, utilities, stormwater management facilities, and landscaping as shown on the accompanying site plans. The proposed development will result in a decrease in impervious coverage of approximately 94,484 SF when comparing the existing site to the proposed site.

The overall design of the proposed development has maintained existing on-site drainage patterns, with two (2) proposed drainage areas, identified as Drainage Area 1 (PR-DA-1) and Drainage Area 2 (PR-DA-2) detailed below. A Proposed Drainage Area Map depicting this study area is included within the Appendix of this report.

Study Area PR-DA-1:

This area consists of 0.49 acres within the northern area of the subject site, including the proposed access driveway, sidewalks, landscape areas and the parking area located in the northeast corner of the site. Under proposed conditions, stormwater runoff generated within this study area is conveyed to the existing stormwater conveyance network within the Grove Avenue right-of-way previously identified as Point of Analysis 1 (POA-1)

Based on proposed ground cover conditions, a runoff curve number of 74 was utilized for the pervious surfaces within this study area. Furthermore, times of concentration for pervious areas of 5.0 minutes and 4.7 minutes were calculated for current and future storm events, respectively. For impervious areas, times of concentration of 2.4 minutes and 2.3 minutes were calculated for current and future storm events, respectively.

Study Area PR-DA-2:

This area consists of the remaining 4.90 acres within the proposed limits of disturbance, including the proposed townhouses, driveways, drive aisles, patio areas, sidewalks, landscape areas and parking areas. Under proposed conditions, stormwater runoff generated within this study area is conveyed to the Peckman River, previously identified as Point of Analysis 2 (POA-2), via overland flow and the proposed stormwater conveyance network.

Based on proposed ground cover conditions, a runoff curve number of 74 was utilized for the pervious surfaces within this study area. Furthermore, times of concentration for pervious areas of 6.9 minutes and 6.5 minutes were calculated for current and future storm events, respectively. For impervious areas, times of concentration of 3.8 minutes and 3.8 minutes were calculated for current and future storm events, respectively.

IV. DESIGN METHODOLOGY

The intent of the design for the proposed stormwater management facilities for this project is to provide measures as required to address applicable aspects of N.J.A.C. 7:8, the New Jersey Soil Erosion and Sediment Control Standards, the 251 ½ Grove Avenue Redevelopment Plan, the Township of Verona Zoning Code, and Essex County requirements.

Based on our review of the existing site conditions and the Boundary, Location, & Topographic Survey prepared by Dynamic Survey, LLC, the Existing Drainage Area Map for current site conditions as defined within this summary was established. A Grading Plan was developed for the proposed site improvements with consideration to the existing drainage patterns and used in preparation of the proposed drainage area map. The Drainage Plan was designed to direct stormwater runoff from the proposed development to the existing points of analysis while providing compliance with the requirements mentioned above.

Runoff rates for the site were modeled utilizing the HydroCAD computer software, using the Urban Hydrology for Small Watershed TR55 method for the applicable design storms. The 2-, 10-, and 100-year design storms are based upon the Essex County 24 Hours Rainfall Frequency Data as published within the NOAA Atlas 14 with respective change factors applied for the current and projected storm events. All storm events utilize a Type D rainfall distribution.

The Runoff Curve Numbers were chosen to most appropriately reflect the existing and proposed site conditions as outlined in the USDA's "Urban Hydrology for Small Watersheds: TR-55".

V. NON-STRUCTURAL STORMWATER MANAGEMENT STRATEGIES

The site design has been prepared to implement non-structural stormwater management strategies in accordance with N.J.A.C. 7:8-2.4g. Some of the strategies implemented at this site location include the following:

Minimize impervious surface coverage: The proposed site shown on the accompanying engineering drawings has been designed to decrease impervious coverage when compared to existing conditions.

Minimize the decrease in the “time of concentration” from pre-construction to post-construction: The proposed stormwater management conveyance system has been designed such that the proposed time of concentration is not significantly decreased from pre-construction to post-construction.

Minimize soil compaction: The proposed development includes the creation of pervious coverage in areas on-site that are impervious under existing conditions, and an overall reduction in impervious coverage, thus decreasing the amount of compacted area on-site when compared to existing conditions.

Provide low maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawn fertilizers and pesticides: The proposed landscaping design has been prepared to provide an aesthetic improvement to the interior and perimeter of the site through the use of native species.

The New Jersey Best Management Practices (BMP) Manual was utilized in preparation of the design of this development.

VI. WATER QUANTITY STANDARDS

Due to the proposed reduction in impervious surface coverage and close alignment in the time of concentration for each drainage area between existing and proposed conditions, the post construction runoff hydrographs do not exceed the pre-construction runoff hydrographs at any point in time. This can be observed graphically and numerically via the Hydrograph Comparison Reports included within the Appendix of this Report, which shows compliance with the stormwater runoff quantity standards set forth in N.J.A.C. 7:8.

VII. WATER QUALITY STANDARDS

The proposed development does not propose an increase of more than one-quarter (1/4) acre of motor vehicle surface (40,603 SF decrease). Refer to the tables below for a comparison between the on-site regulated motor vehicle surface areas under existing and proposed conditions. The regulated motor vehicle surface in each drainage area is further detailed in the Existing and Proposed Drainage Area Maps included within the Appendix of this report.

Regulated Motor Vehicle Surface Coverage	
Existing	213,233 (4.90 Ac.)
Proposed	73,416 SF (1.69 Ac.)
TOTAL DECREASE	139,817 SF (3.21 Ac.)

As a result, the stormwater runoff quality standards set forth by N.J.A.C. 7:8 are not applicable.

VIII. GROUNDWATER RECHARGE STANDARDS

The subject site is a previously developed area within the Metropolitan Planning Area (PA1) of the State Plan Policy Map (SPPM). As such, it is classified as an “urban redevelopment area” per N.J.A.C. 7:8, and the groundwater recharge requirements therein are not applicable.

IX. TOWNSHIP OF VERONA RETENTION STORM

Section 150-25.2 defines the “retention storm” as one-half of the existing two-year rainfall for Essex County, multiplied by the projected two-year storm change factor. Per NOAA Atlas 14, the existing two-year rainfall is 3.44 inches. After applying the projected change factor of 1.19 and dividing by 2, depth of the retention storm is equal to 2.05 inches. In accordance with Section 150-25.4.S.2, the proposed redevelopment has been designed to manage the retention storm through on-site retention via the proposed green infrastructure bio-retention basin.

In compliance with green infrastructure guidelines outlined within Chapter 9.7 of the NJ Stormwater Best Management Practices Manual, the lowest orifice of the outlet control structure within the proposed basin has been set at the elevation of the water quality design storm (WQDS). A 3” orifice has been selected to allow for further retention of the retention storm above the WQDS

elevation. The peak water elevation in the basin during the retention storm is 320.30. The overflow grate and emergency spillway for the basin are set at elevation 320.30. This allows the entirety of the retention storm to be retained and temporarily stored within the proposed green infrastructure bio-retention basin before being discharged at a controlled rate via the proposed underdrain system to POA-2.

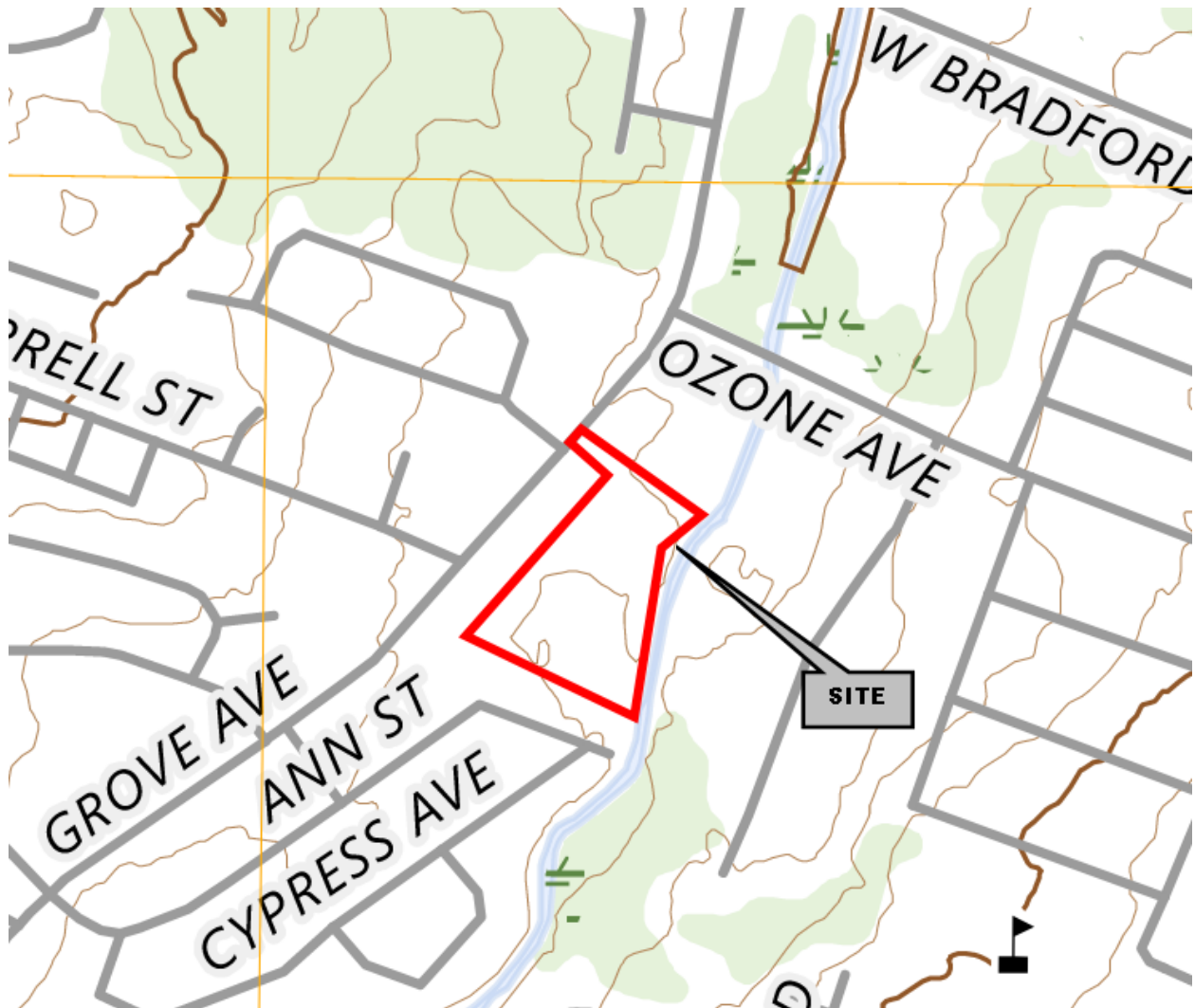
X. CONCLUSION

The proposed redevelopment of the subject site has been designed in a manner that will not adversely impact the existing drainage patterns, adjacent roadways or adjacent parcels. Per N.J.A.C. 7:8, the project is considered a “major development” and meets the requirements for stormwater runoff quantity therein. Due to the reduction of regulated motor vehicle surface, and the “urban redevelopment area” designation, the stormwater runoff quality and groundwater recharge standards, respectively, are not applicable. Therefore, the proposed development meets the regulatory requirements and will not have a negative impact on the existing stormwater management system on-site or within the vicinity of the subject parcel.

APPENDIX

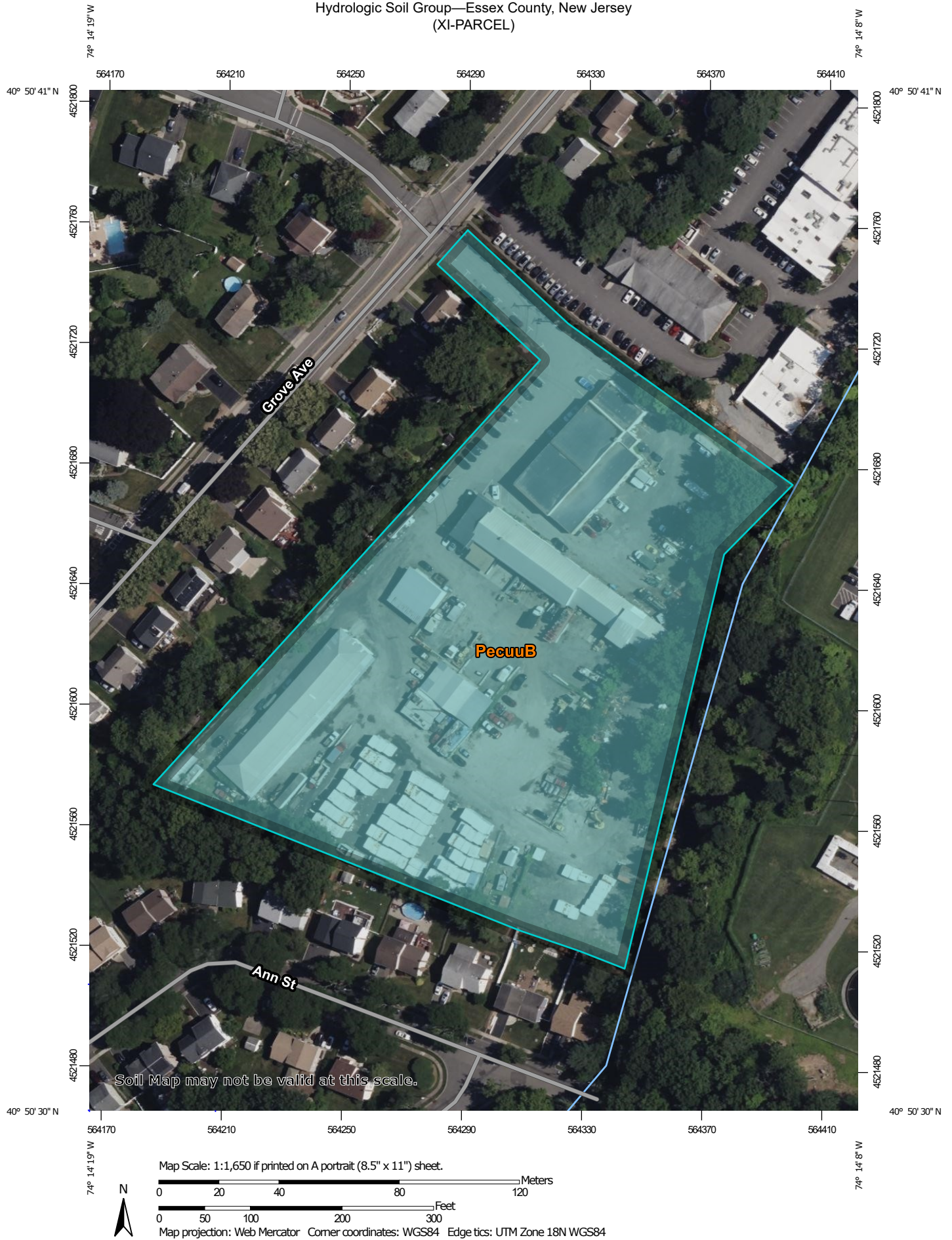
USGS MAP

USGS Map
Orange Quad



NRCS WEB SOIL SURVEY

Hydrologic Soil Group—Essex County, New Jersey
(XI-PARCEL)



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

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

Soil Rating Lines

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

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Essex County, New Jersey
Survey Area Data: Version 18, Aug 29, 2022

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

Date(s) aerial images were photographed: Jun 4, 2022—Jul 22, 2022

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
PecuuB	Peckmantown - Urban land, Peckmantown substratum complex, 0 to 8 percent slopes	C	5.8	100.0%
Totals for Area of Interest			5.8	100.0%

Description

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

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

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

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

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

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

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

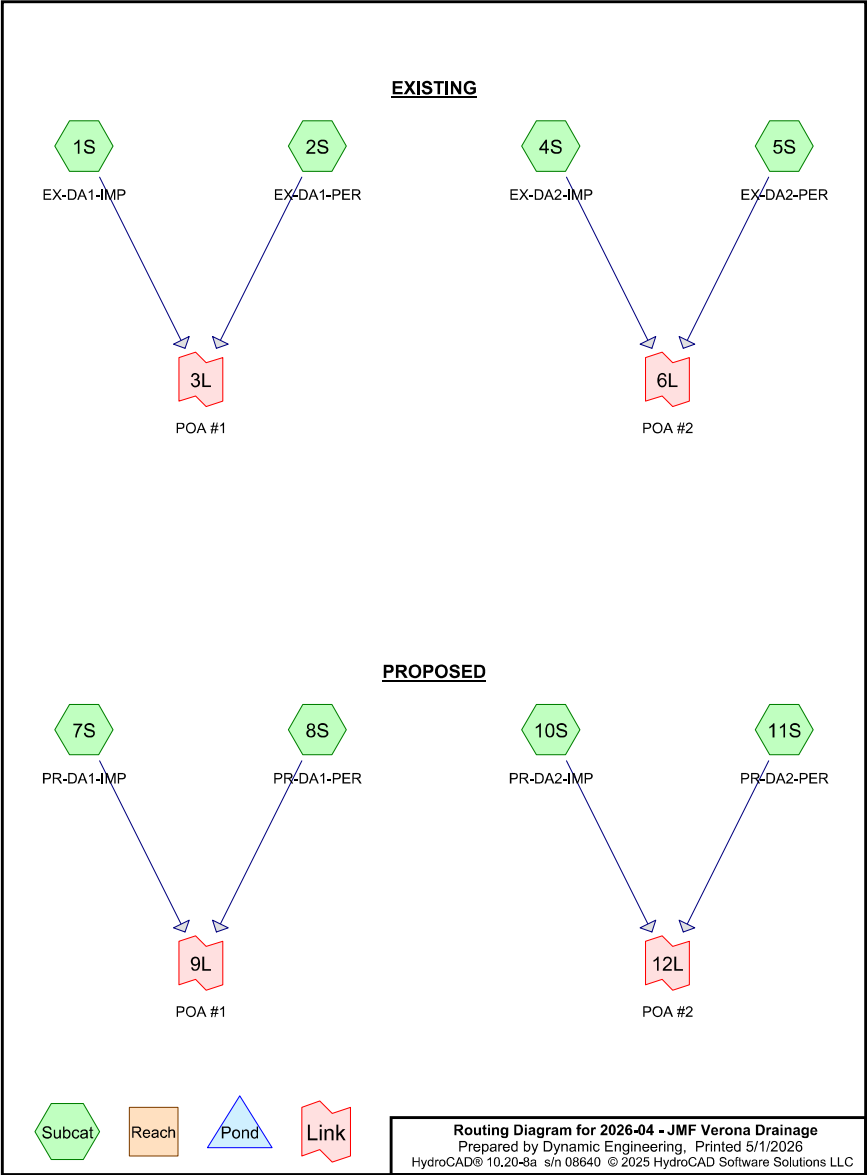
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

HYDROGRAPH COMPARISON REPORTS: 2-YR, 10-YR & 100-YR DESIGN STORMS



Rainfall Events Listing (selected events)									
Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC	P2 (inches)
1	2-Year-Current	NOAA 24-hr	D	Default	24.00	1	3.47	2	3.47
2	2-Year-Projected	NOAA 24-hr	D	Default	24.00	1	4.09	2	4.09
3	10-Year-Current	NOAA 24-hr	D	Default	24.00	1	5.38	2	3.47
4	10-Year-Projected	NOAA 24-hr	D	Default	24.00	1	6.37	2	4.09
5	100-Year-Current	NOAA 24-hr	D	Default	24.00	1	9.18	2	3.47
6	100-Year-Projected	NOAA 24-hr	D	Default	24.00	1	11.52	2	4.09

Summary for Subcatchment 1S: EX-DA1-IMP

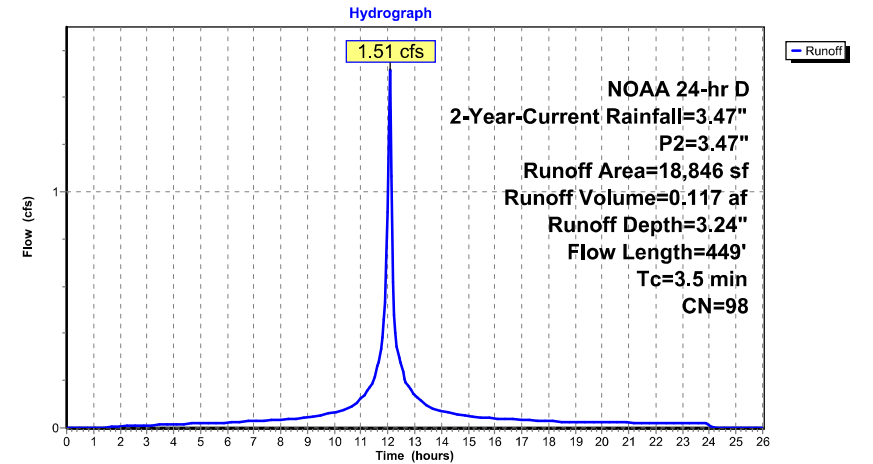
Runoff = 1.51 cfs @ 12.09 hrs, Volume= 0.117 af, Depth= 3.24"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Current Rainfall=3.47", P2=3.47"

Area (sf)	CN	Description
* 18,142	98	IMPERVIOUS
* 704	98	BUILDINGS
18,846	98	Weighted Average
18,846		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0216	1.48		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
2.4	349	0.0139	2.39		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
3.5	449				Total

Subcatchment 1S: EX-DA1-IMP



Summary for Subcatchment 2S: EX-DA1-PER

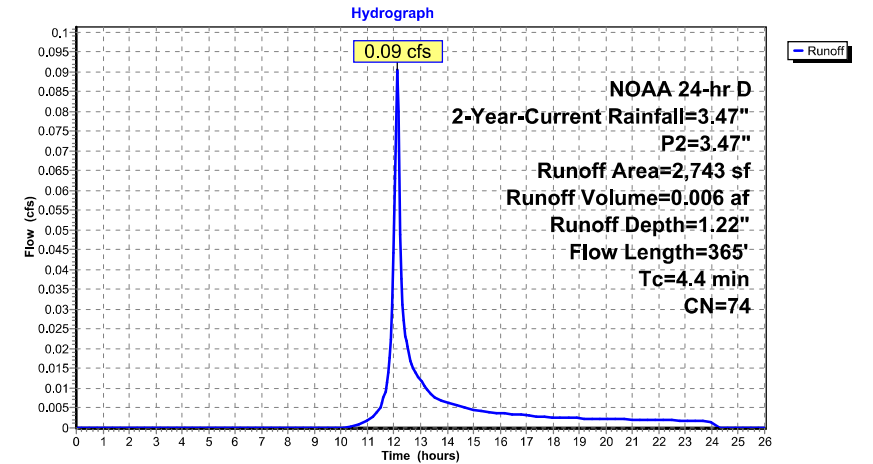
Runoff = 0.09 cfs @ 12.11 hrs, Volume= 0.006 af, Depth= 1.22"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Current Rainfall=3.47", P2=3.47"

Area (sf)	CN	Description
2,743	74	>75% Grass cover, Good, HSG C
2,743		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	7	0.0364	0.09		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
1.3	93	0.0130	1.19		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 3.47"
1.8	265	0.0139	2.39		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
4.4	365				Total

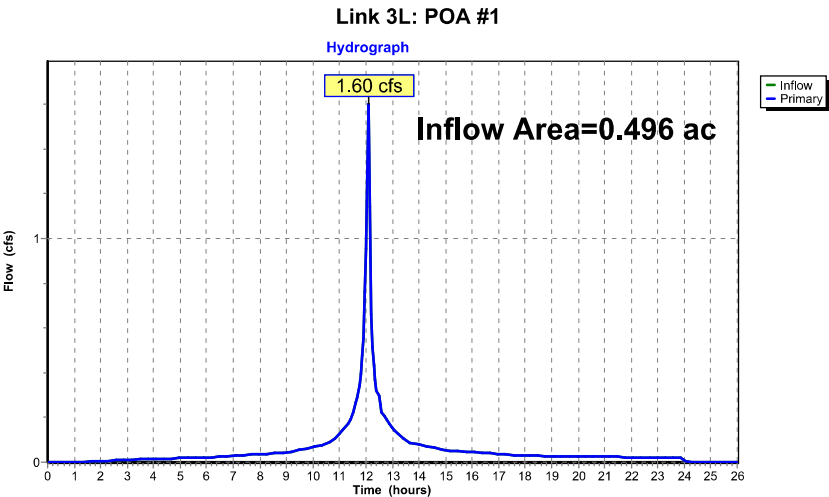
Subcatchment 2S: EX-DA1-PER



Summary for Link 3L: POA #1

Inflow Area = 0.496 ac, 87.29% Impervious, Inflow Depth = 2.98" for 2-Year-Current event
Inflow = 1.60 cfs @ 12.09 hrs, Volume= 0.123 af
Primary = 1.60 cfs @ 12.09 hrs, Volume= 0.123 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



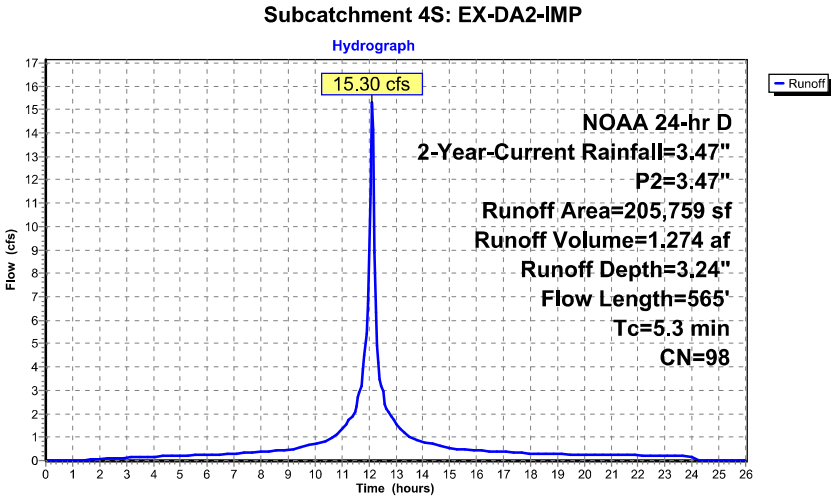
Summary for Subcatchment 4S: EX-DA2-IMP

Runoff = 15.30 cfs @ 12.11 hrs, Volume= 1.274 af, Depth= 3.24"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Current Rainfall=3.47", P2=3.47"

	Area (sf)	CN	Description
*	195,091	98	IMPERVIOUS
*	10,668	98	BUILDING
	205,759	98	Weighted Average
	205,759		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0135	1.22		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
2.2	230	0.0075	1.76		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
1.7	235	0.0130	2.31		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
5.3	565	Total			



Summary for Subcatchment 5S: EX-DA2-PER

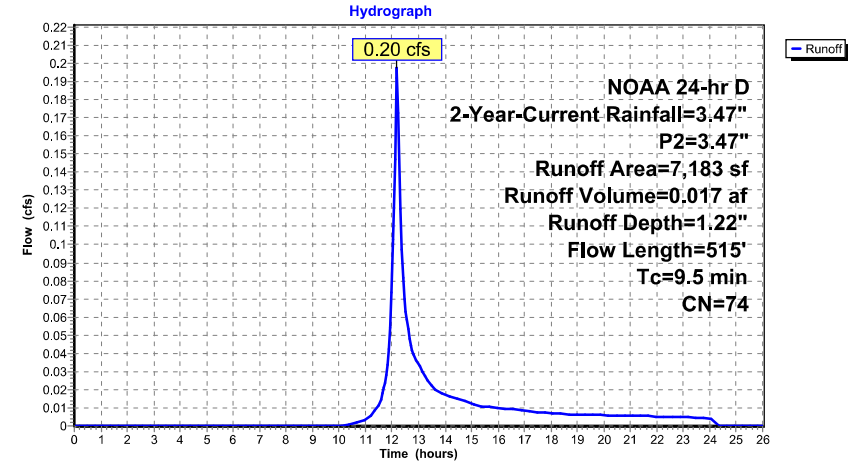
Runoff = 0.20 cfs @ 12.17 hrs, Volume= 0.017 af, Depth= 1.22"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Current Rainfall=3.47", P2=3.47"

Area (sf)	CN	Description
7,183	74	>75% Grass cover, Good, HSG C
7,183		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	55	0.0500	0.16		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
0.8	45	0.0100	0.93		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 3.47"
2.8	415	0.0150	2.49		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
9.5	515				Total

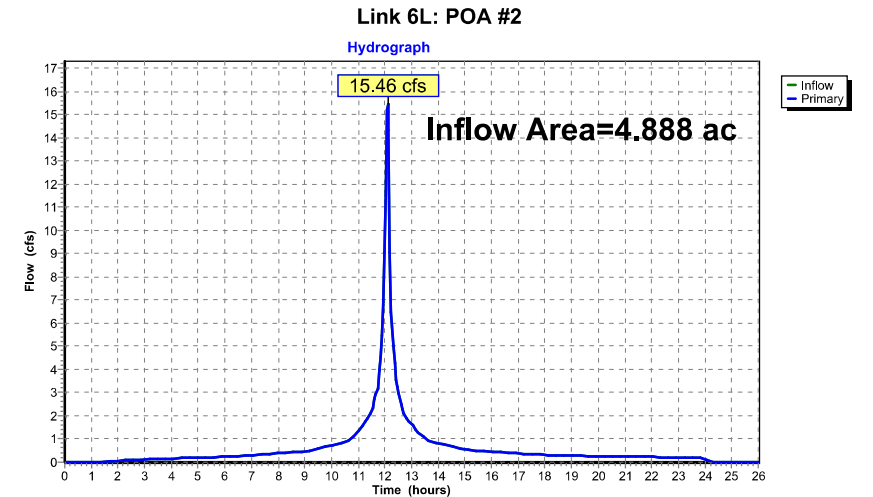
Subcatchment 5S: EX-DA2-PER



Summary for Link 6L: POA #2

Inflow Area = 4.888 ac, 96.63% Impervious, Inflow Depth = 3.17" for 2-Year-Current event
Inflow = 15.46 cfs @ 12.12 hrs, Volume= 1.291 af
Primary = 15.46 cfs @ 12.12 hrs, Volume= 1.291 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 7S: PR-DA1-IMP

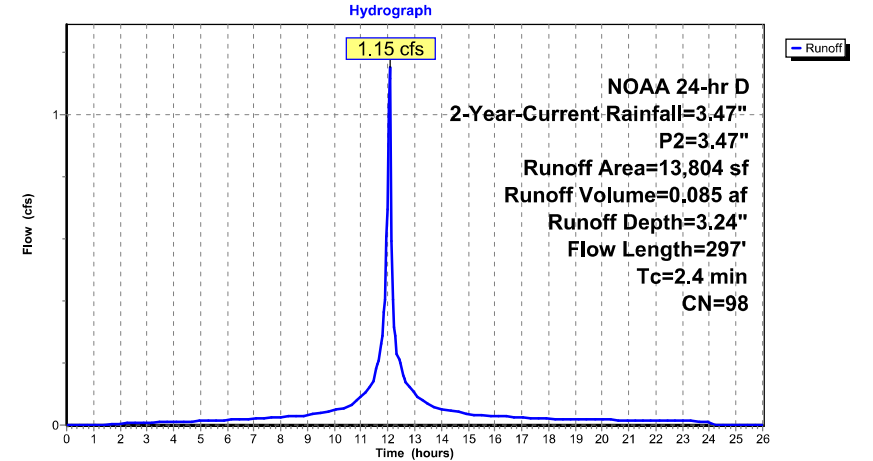
Runoff = 1.15 cfs @ 12.08 hrs, Volume= 0.085 af, Depth= 3.24"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Current Rainfall=3.47", P2=3.47"

Area (sf)	CN	Description
* 13,804	98	IMPERVIOUS
13,804		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0150	1.28		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
1.0	174	0.0196	2.84		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
0.1	23	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
2.4	297	Total			

Subcatchment 7S: PR-DA1-IMP



Summary for Subcatchment 8S: PR-DA1-PER

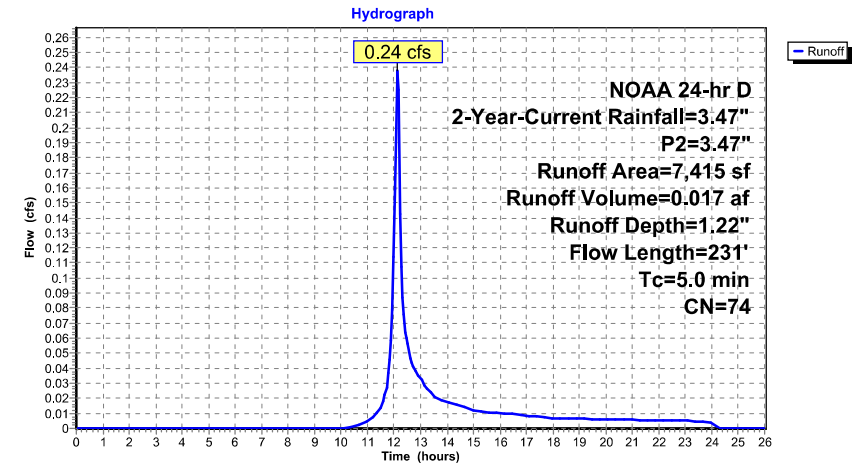
Runoff = 0.24 cfs @ 12.12 hrs, Volume= 0.017 af, Depth= 1.22"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Current Rainfall=3.47", P2=3.47"

Area (sf)	CN	Description
7,415	74	>75% Grass cover, Good, HSG C
7,415		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	33	0.0692	0.16		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
0.1	8	0.0518	1.26		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 3.47"
0.8	59	0.0180	1.24		Sheet Flow, TC-CD Smooth surfaces n= 0.011 P2= 3.47"
0.5	80	0.0180	2.72		Shallow Concentrated Flow, TC-DE Paved Kv= 20.3 fps
0.1	29	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	22	0.0104	5.82	7.14	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
5.0	231	Total			

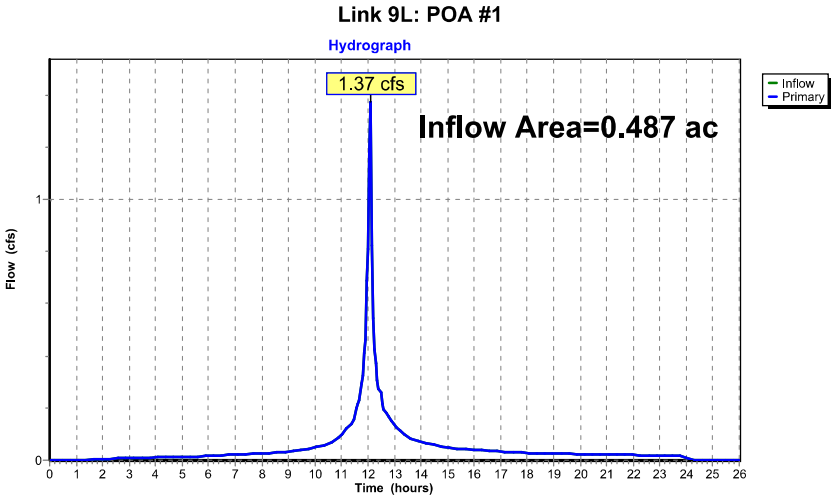
Subcatchment 8S: PR-DA1-PER



Summary for Link 9L: POA #1

Inflow Area = 0.487 ac, 65.05% Impervious, Inflow Depth = 2.53" for 2-Year-Current event
Inflow = 1.37 cfs @ 12.09 hrs, Volume= 0.103 af
Primary = 1.37 cfs @ 12.09 hrs, Volume= 0.103 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 10S: PR-DA2-IMP

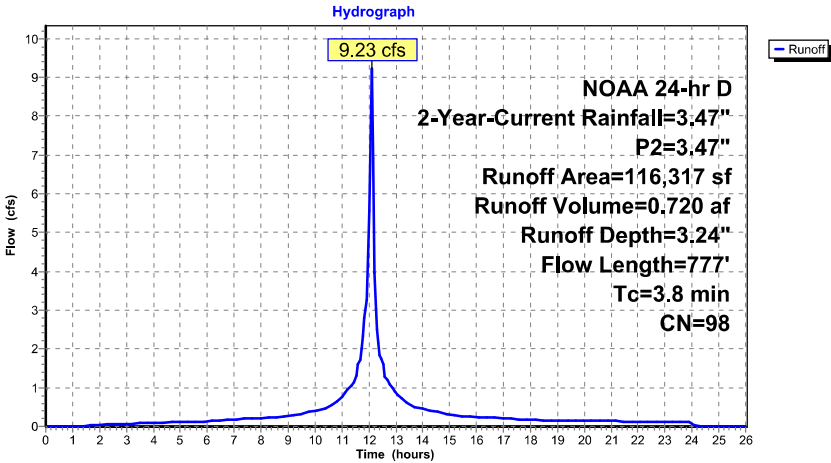
Runoff = 9.23 cfs @ 12.10 hrs, Volume= 0.720 af, Depth= 3.24"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Current Rainfall=3.47", P2=3.47"

Area (sf)		CN	Description			
116,317		98	IMPERVIOUS			
116,317			100.00% Impervious Area			

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	41	0.0150	1.07		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
0.2	55	0.0100	5.70	7.00	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	68	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	87	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	153	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.5	94	0.0030	3.12	3.83	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	63	0.0032	3.23	3.96	Pipe Channel, TC-GH 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	31	0.0050	4.03	4.95	Pipe Channel, TC-HI 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
1.1	156	0.0200	2.28		Shallow Concentrated Flow, TC-IJ Unpaved Kv= 16.1 fps
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-JK Unpaved Kv= 16.1 fps
3.8	777		Total		

Subcatchment 10S: PR-DA2-IMP



Summary for Subcatchment 11S: PR-DA2-PER

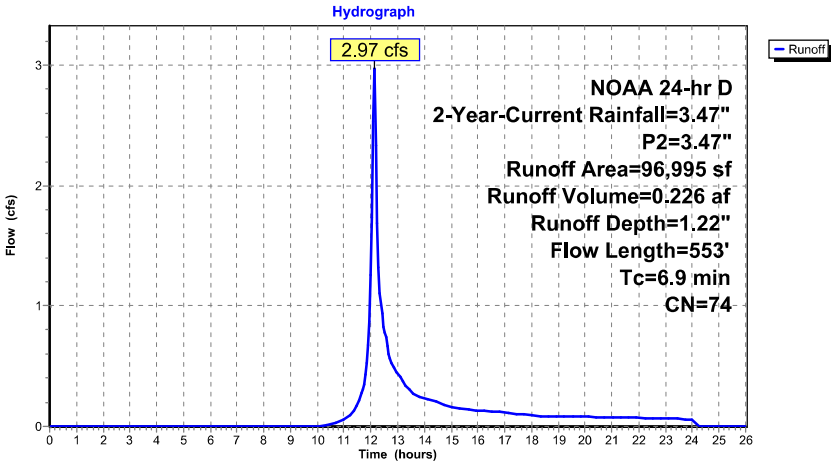
Runoff = 2.97 cfs @ 12.15 hrs, Volume= 0.226 af, Depth= 1.22"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Current Rainfall=3.47", P2=3.47"

Area (sf)		CN	Description			
96,995		74	>75% Grass cover, Good, HSG C			
96,995			100.00% Pervious Area			

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	22	0.0120	0.07		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
0.4	182	0.0200	8.06	9.90	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	55	0.0050	4.03	4.95	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	40	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	43	0.0096	5.59	6.86	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.6	106	0.0030	3.12	3.83	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	76	0.0325	2.90		Shallow Concentrated Flow, TC-GH Unpaved Kv= 16.1 fps
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-HI Unpaved Kv= 16.1 fps
6.9	553	Total			

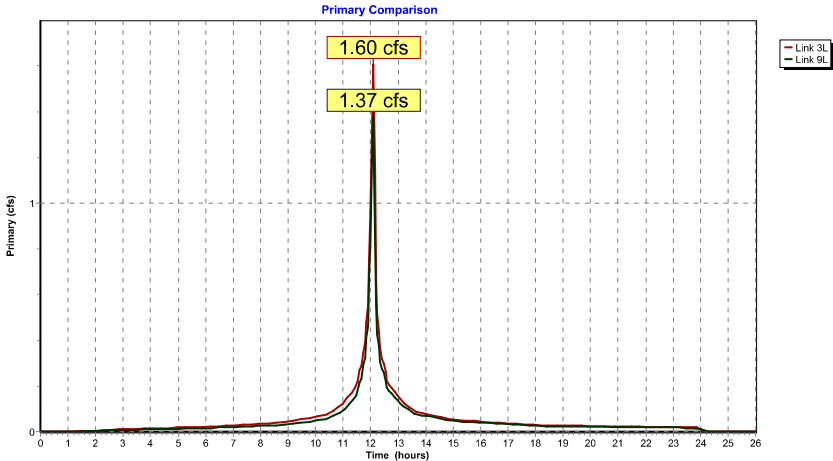
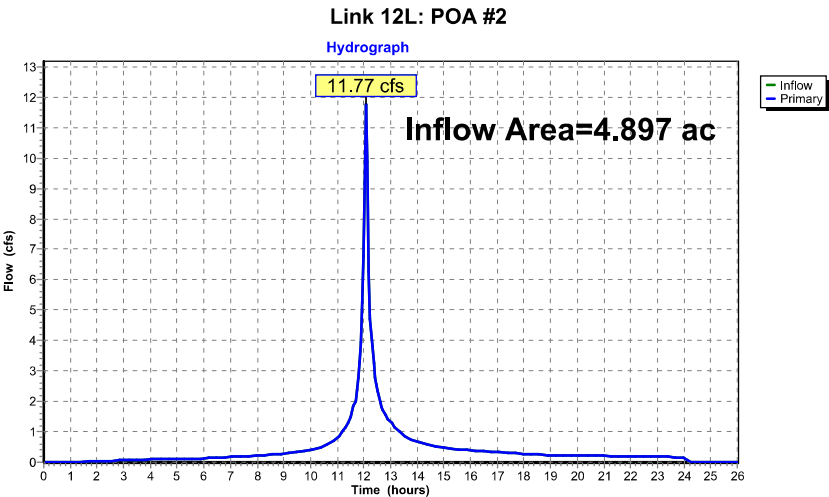
Subcatchment 11S: PR-DA2-PER



Summary for Link 12L: POA #2

Inflow Area = 4.897 ac, 54.53% Impervious, Inflow Depth = 2.32" for 2-Year-Current event
Inflow = 11.77 cfs @ 12.10 hrs, Volume= 0.946 af
Primary = 11.77 cfs @ 12.10 hrs, Volume= 0.946 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Primary Comparison

Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
0.00	0.00	0.00	2.60	0.01	0.01	5.20	0.02	0.01
0.05	0.00	0.00	2.65	0.01	0.01	5.25	0.02	0.01
0.10	0.00	0.00	2.70	0.01	0.01	5.30	0.02	0.01
0.15	0.00	0.00	2.75	0.01	0.01	5.35	0.02	0.01
0.20	0.00	0.00	2.80	0.01	0.01	5.40	0.02	0.01
0.25	0.00	0.00	2.85	0.01	0.01	5.45	0.02	0.01
0.30	0.00	0.00	2.90	0.01	0.01	5.50	0.02	0.01
0.35	0.00	0.00	2.95	0.01	0.01	5.55	0.02	0.01
0.40	0.00	0.00	3.00	0.01	0.01	5.60	0.02	0.01
0.45	0.00	0.00	3.05	0.01	0.01	5.65	0.02	0.01
0.50	0.00	0.00	3.10	0.01	0.01	5.70	0.02	0.01
0.55	0.00	0.00	3.15	0.01	0.01	5.75	0.02	0.02
0.60	0.00	0.00	3.20	0.01	0.01	5.80	0.02	0.02
0.65	0.00	0.00	3.25	0.01	0.01	5.85	0.02	0.02
0.70	0.00	0.00	3.30	0.01	0.01	5.90	0.02	0.02
0.75	0.00	0.00	3.35	0.01	0.01	5.95	0.02	0.02
0.80	0.00	0.00	3.40	0.01	0.01	6.00	0.02	0.02
0.85	0.00	0.00	3.45	0.01	0.01	6.05	0.02	0.02
0.90	0.00	0.00	3.50	0.01	0.01	6.10	0.02	0.02
0.95	0.00	0.00	3.55	0.01	0.01	6.15	0.02	0.02
1.00	0.00	0.00	3.60	0.01	0.01	6.20	0.02	0.02
1.05	0.00	0.00	3.65	0.01	0.01	6.25	0.02	0.02
1.10	0.00	0.00	3.70	0.01	0.01	6.30	0.02	0.02
1.15	0.00	0.00	3.75	0.01	0.01	6.35	0.02	0.02
1.20	0.00	0.00	3.80	0.01	0.01	6.40	0.02	0.02
1.25	0.00	0.00	3.85	0.01	0.01	6.45	0.02	0.02
1.30	0.00	0.00	3.90	0.01	0.01	6.50	0.02	0.02
1.35	0.00	0.00	3.95	0.01	0.01	6.55	0.02	0.02
1.40	0.00	0.00	4.00	0.01	0.01	6.60	0.03	0.02
1.45	0.00	0.00	4.05	0.02	0.01	6.65	0.03	0.02
1.50	0.00	0.00	4.10	0.02	0.01	6.70	0.03	0.02
1.55	0.00	0.00	4.15	0.02	0.01	6.75	0.03	0.02
1.60	0.00	0.00	4.20	0.02	0.01	6.80	0.03	0.02
1.65	0.00	0.00	4.25	0.02	0.01	6.85	0.03	0.02
1.70	0.00	0.00	4.30	0.02	0.01	6.90	0.03	0.02
1.75	0.00	0.00	4.35	0.02	0.01	6.95	0.03	0.02
1.80	0.00	0.00	4.40	0.02	0.01	7.00	0.03	0.02
1.85	0.01	0.00	4.45	0.02	0.01	7.05	0.03	0.02
1.90	0.01	0.00	4.50	0.02	0.01	7.10	0.03	0.02
1.95	0.01	0.00	4.55	0.02	0.01	7.15	0.03	0.02
2.00	0.01	0.00	4.60	0.02	0.01	7.20	0.03	0.02
2.05	0.01	0.00	4.65	0.02	0.01	7.25	0.03	0.02
2.10	0.01	0.00	4.70	0.02	0.01	7.30	0.03	0.02
2.15	0.01	0.01	4.75	0.02	0.01	7.35	0.03	0.02
2.20	0.01	0.01	4.80	0.02	0.01	7.40	0.03	0.02
2.25	0.01	0.01	4.85	0.02	0.01	7.45	0.03	0.02
2.30	0.01	0.01	4.90	0.02	0.01	7.50	0.03	0.02
2.35	0.01	0.01	4.95	0.02	0.01	7.55	0.03	0.02
2.40	0.01	0.01	5.00	0.02	0.01	7.60	0.03	0.02
2.45	0.01	0.01	5.05	0.02	0.01	7.65	0.03	0.02
2.50	0.01	0.01	5.10	0.02	0.01	7.70	0.03	0.02
2.55	0.01	0.01	5.15	0.02	0.01	7.75	0.03	0.02

Primary Comparison (continued)

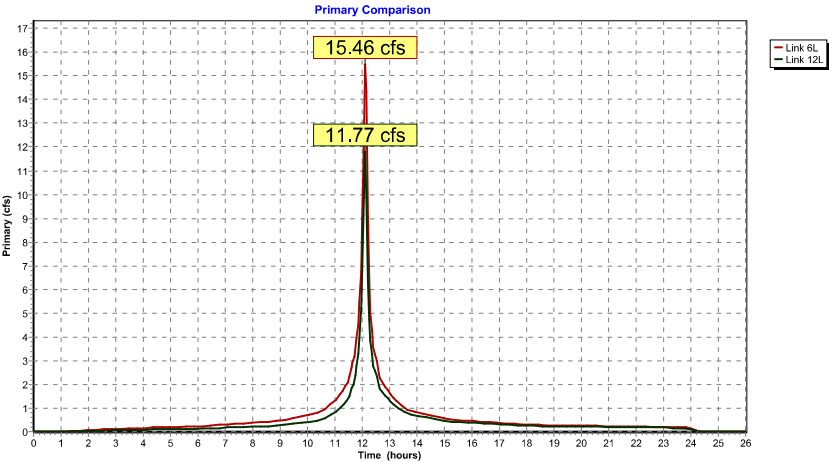
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
7.80	0.03	0.03	10.40	0.08	0.06	13.00	0.15	0.14
7.85	0.03	0.03	10.45	0.08	0.06	13.05	0.15	0.13
7.90	0.03	0.03	10.50	0.08	0.06	13.10	0.14	0.12
7.95	0.04	0.03	10.55	0.08	0.06	13.15	0.13	0.12
8.00	0.04	0.03	10.60	0.09	0.07	13.20	0.13	0.11
8.05	0.04	0.03	10.65	0.09	0.07	13.25	0.12	0.11
8.10	0.04	0.03	10.70	0.10	0.07	13.30	0.12	0.10
8.15	0.04	0.03	10.75	0.10	0.08	13.35	0.11	0.10
8.20	0.04	0.03	10.80	0.10	0.08	13.40	0.11	0.10
8.25	0.04	0.03	10.85	0.11	0.08	13.45	0.10	0.09
8.30	0.04	0.03	10.90	0.11	0.09	13.50	0.10	0.09
8.35	0.04	0.03	10.95	0.12	0.09	13.55	0.09	0.08
8.40	0.04	0.03	11.00	0.12	0.09	13.60	0.09	0.08
8.45	0.04	0.03	11.05	0.13	0.10	13.65	0.09	0.08
8.50	0.04	0.03	11.10	0.14	0.11	13.70	0.09	0.08
8.55	0.04	0.03	11.15	0.15	0.12	13.75	0.09	0.08
8.60	0.04	0.03	11.20	0.15	0.12	13.80	0.08	0.08
8.65	0.04	0.03	11.25	0.16	0.13	13.85	0.08	0.07
8.70	0.04	0.03	11.30	0.17	0.13	13.90	0.08	0.07
8.75	0.04	0.03	11.35	0.18	0.14	13.95	0.08	0.07
8.80	0.04	0.03	11.40	0.19	0.15	14.00	0.08	0.07
8.85	0.04	0.03	11.45	0.19	0.15	14.05	0.08	0.07
8.90	0.04	0.03	11.50	0.20	0.16	14.10	0.08	0.07
8.95	0.04	0.03	11.55	0.24	0.20	14.15	0.08	0.07
9.00	0.04	0.03	11.60	0.27	0.22	14.20	0.07	0.07
9.05	0.04	0.03	11.65	0.28	0.23	14.25	0.07	0.06
9.10	0.05	0.03	11.70	0.29	0.23	14.30	0.07	0.06
9.15	0.05	0.03	11.75	0.34	0.29	14.35	0.07	0.06
9.20	0.05	0.03	11.80	0.40	0.32	14.40	0.07	0.06
9.25	0.05	0.04	11.85	0.48	0.41	14.45	0.07	0.06
9.30	0.05	0.04	11.90	0.55	0.46	14.50	0.07	0.06
9.35	0.05	0.04	11.95	0.76	0.69	14.55	0.07	0.06
9.40	0.05	0.04	12.00	0.96	0.81	14.60	0.06	0.06
9.45	0.05	0.04	12.05	1.30	1.18	14.65	0.06	0.06
9.50	0.05	0.04	12.10	1.60	1.35	14.70	0.06	0.05
9.55	0.06	0.04	12.15	1.14	0.82	14.75	0.06	0.05
9.60	0.06	0.04	12.20	0.66	0.55	14.80	0.06	0.05
9.65	0.06	0.04	12.25	0.52	0.42	14.85	0.06	0.05
9.70	0.06	0.04	12.30	0.43	0.37	14.90	0.06	0.05
9.75	0.06	0.04	12.35	0.37	0.31	14.95	0.05	0.05
9.80	0.06	0.05	12.40	0.32	0.27	15.00	0.05	0.05
9.85	0.06	0.05	12.45	0.30	0.26	15.05	0.05	0.05
9.90	0.06	0.05	12.50	0.29	0.26	15.10	0.05	0.05
9.95	0.07	0.05	12.55	0.26	0.22	15.15	0.05	0.05
10.00	0.07	0.05	12.60	0.22	0.20	15.20	0.05	0.04
10.05	0.07	0.05	12.65	0.21	0.18	15.25	0.05	0.04
10.10	0.07	0.05	12.70	0.20	0.18	15.30	0.05	0.04
10.15	0.07	0.05	12.75	0.19	0.17	15.35	0.05	0.04
10.20	0.07	0.05	12.80	0.19	0.16	15.40	0.05	0.04
10.25	0.07	0.05	12.85	0.18	0.15	15.45	0.05	0.04
10.30	0.07	0.05	12.90	0.17	0.15	15.50	0.05	0.04
10.35	0.08	0.06	12.95	0.16	0.14	15.55	0.05	0.04

Primary Comparison (continued)

Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
15.60	0.05	0.04	18.20	0.03	0.03
15.65	0.05	0.04	18.25	0.03	0.03
15.70	0.05	0.04	18.30	0.03	0.03
15.75	0.05	0.04	18.35	0.03	0.03
15.80	0.05	0.04	18.40	0.03	0.03
15.85	0.05	0.04	18.45	0.03	0.03
15.90	0.05	0.04	18.50	0.03	0.03
15.95	0.04	0.04	18.55	0.03	0.03
16.00	0.04	0.04	18.60	0.03	0.03
16.05	0.04	0.04	18.65	0.03	0.03
16.10	0.04	0.04	18.70	0.03	0.03
16.15	0.04	0.04	18.75	0.03	0.03
16.20	0.04	0.04	18.80	0.03	0.03
16.25	0.04	0.04	18.85	0.03	0.02
16.30	0.04	0.04	18.90	0.03	0.02
16.35	0.04	0.04	18.95	0.03	0.02
16.40	0.04	0.04	19.00	0.03	0.02
16.45	0.04	0.04	19.05	0.03	0.02
16.50	0.04	0.04	19.10	0.03	0.02
16.55	0.04	0.04	19.15	0.03	0.02
16.60	0.04	0.04	19.20	0.03	0.02
16.65	0.04	0.04	19.25	0.03	0.02
16.70	0.04	0.04	19.30	0.03	0.02
16.75	0.04	0.03	19.35	0.03	0.02
16.80	0.04	0.03	19.40	0.03	0.02
16.85	0.04	0.03	19.45	0.03	0.02
16.90	0.04	0.03	19.50	0.03	0.02
16.95	0.04	0.03	19.55	0.03	0.02
17.00	0.04	0.03	19.60	0.03	0.02
17.05	0.04	0.03	19.65	0.03	0.02
17.10	0.04	0.03	19.70	0.03	0.02
17.15	0.04	0.03	19.75	0.03	0.02
17.20	0.04	0.03	19.80	0.03	0.02
17.25	0.04	0.03	19.85	0.03	0.02
17.30	0.03	0.03	19.90	0.03	0.02
17.35	0.03	0.03	19.95	0.03	0.02
17.40	0.03	0.03	20.00	0.03	0.02
17.45	0.03	0.03	20.05	0.03	0.02
17.50	0.03	0.03	20.10	0.03	0.02
17.55	0.03	0.03	20.15	0.03	0.02
17.60	0.03	0.03	20.20	0.03	0.02
17.65	0.03	0.03	20.25	0.03	0.02
17.70	0.03	0.03	20.30	0.02	0.02
17.75	0.03	0.03	20.35	0.02	0.02
17.80	0.03	0.03	20.40	0.02	0.02
17.85	0.03	0.03	20.45	0.02	0.02
17.90	0.03	0.03	20.50	0.02	0.02
17.95	0.03	0.03	20.55	0.02	0.02
18.00	0.03	0.03	20.60	0.02	0.02
18.05	0.03	0.03	20.65	0.02	0.02
18.10	0.03	0.03	20.70	0.02	0.02
18.15	0.03	0.03	20.75	0.02	0.02

Primary Comparison (continued)

Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
23.40	0.02	0.02	26.00	0.00	0.00
23.45	0.02	0.02			
23.50	0.02	0.02			
23.55	0.02	0.02			
23.60	0.02	0.02			
23.65	0.02	0.02			
23.70	0.02	0.02			
23.75	0.02	0.02			
23.80	0.02	0.02			
23.85	0.02	0.02			
23.90	0.02	0.02			
23.95	0.02	0.02			
24.00	0.02	0.02			
24.05	0.01	0.01			
24.10	0.00	0.00			
24.15	0.00	0.00			
24.20	0.00	0.00			
24.25	0.00	0.00			
24.30	0.00	0.00			
24.35	0.00	0.00			
24.40	0.00	0.00			
24.45	0.00	0.00			
24.50	0.00	0.00			
24.55	0.00	0.00			
24.60	0.00	0.00			
24.65	0.00	0.00			
24.70	0.00	0.00			
24.75	0.00	0.00			
24.80	0.00	0.00			
24.85	0.00	0.00			
24.90	0.00	0.00			
24.95	0.00	0.00			
25.00	0.00	0.00			
25.05	0.00	0.00			
25.10	0.00	0.00			
25.15	0.00	0.00			
25.20	0.00	0.00			
25.25	0.00	0.00			
25.30	0.00	0.00			
25.35	0.00	0.00			
25.40	0.00	0.00			
25.45	0.00	0.00			
25.50	0.00	0.00			
25.55	0.00	0.00			
25.60	0.00	0.00			
25.65	0.00	0.00			
25.70	0.00	0.00			
25.75	0.00	0.00			
25.80	0.00	0.00			
25.85	0.00	0.00			
25.90	0.00	0.00			
25.95	0.00	0.00			



Primary Comparison

Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
0.00	0.00	0.00	2.60	0.10	0.06	5.20	0.21	0.12
0.05	0.00	0.00	2.65	0.10	0.06	5.25	0.21	0.12
0.10	0.00	0.00	2.70	0.10	0.06	5.30	0.21	0.12
0.15	0.00	0.00	2.75	0.11	0.06	5.35	0.21	0.12
0.20	0.00	0.00	2.80	0.11	0.06	5.40	0.21	0.12
0.25	0.00	0.00	2.85	0.11	0.06	5.45	0.21	0.12
0.30	0.00	0.00	2.90	0.11	0.06	5.50	0.22	0.12
0.35	0.00	0.00	2.95	0.12	0.07	5.55	0.22	0.12
0.40	0.00	0.00	3.00	0.12	0.07	5.60	0.22	0.12
0.45	0.00	0.00	3.05	0.12	0.07	5.65	0.22	0.12
0.50	0.00	0.00	3.10	0.12	0.07	5.70	0.22	0.13
0.55	0.00	0.00	3.15	0.13	0.07	5.75	0.22	0.13
0.60	0.00	0.00	3.20	0.13	0.07	5.80	0.22	0.13
0.65	0.00	0.00	3.25	0.13	0.07	5.85	0.23	0.13
0.70	0.00	0.00	3.30	0.13	0.08	5.90	0.23	0.13
0.75	0.00	0.00	3.35	0.13	0.08	5.95	0.23	0.13
0.80	0.00	0.00	3.40	0.14	0.08	6.00	0.23	0.13
0.85	0.00	0.00	3.45	0.14	0.08	6.05	0.23	0.13
0.90	0.00	0.00	3.50	0.14	0.08	6.10	0.24	0.14
0.95	0.00	0.00	3.55	0.14	0.08	6.15	0.24	0.14
1.00	0.00	0.00	3.60	0.15	0.08	6.20	0.24	0.14
1.05	0.00	0.00	3.65	0.15	0.08	6.25	0.25	0.14
1.10	0.00	0.00	3.70	0.15	0.09	6.30	0.25	0.14
1.15	0.00	0.00	3.75	0.15	0.09	6.35	0.26	0.15
1.20	0.01	0.01	3.80	0.15	0.09	6.40	0.26	0.15
1.25	0.01	0.01	3.85	0.16	0.09	6.45	0.26	0.15
1.30	0.02	0.01	3.90	0.16	0.09	6.50	0.27	0.15
1.35	0.02	0.01	3.95	0.16	0.09	6.55	0.27	0.15
1.40	0.02	0.01	4.00	0.16	0.09	6.60	0.27	0.16
1.45	0.03	0.02	4.05	0.16	0.09	6.65	0.28	0.16
1.50	0.03	0.02	4.10	0.17	0.09	6.70	0.28	0.16
1.55	0.03	0.02	4.15	0.17	0.10	6.75	0.29	0.16
1.60	0.04	0.02	4.20	0.17	0.10	6.80	0.29	0.17
1.65	0.04	0.02	4.25	0.17	0.10	6.85	0.29	0.17
1.70	0.04	0.03	4.30	0.17	0.10	6.90	0.30	0.17
1.75	0.05	0.03	4.35	0.18	0.10	6.95	0.30	0.17
1.80	0.05	0.03	4.40	0.18	0.10	7.00	0.31	0.17
1.85	0.05	0.03	4.45	0.18	0.10	7.05	0.31	0.18
1.90	0.06	0.03	4.50	0.18	0.10	7.10	0.31	0.18
1.95	0.06	0.03	4.55	0.18	0.10	7.15	0.32	0.18
2.00	0.06	0.04	4.60	0.18	0.11	7.20	0.32	0.18
2.05	0.07	0.04	4.65	0.19	0.11	7.25	0.33	0.19
2.10	0.07	0.04	4.70	0.19	0.11	7.30	0.33	0.19
2.15	0.07	0.04	4.75	0.19	0.11	7.35	0.33	0.19
2.20	0.08	0.04	4.80	0.19	0.11	7.40	0.34	0.19
2.25	0.08	0.05	4.85	0.19	0.11	7.45	0.34	0.19
2.30	0.08	0.05	4.90	0.20	0.11	7.50	0.35	0.20
2.35	0.08	0.05	4.95	0.20	0.11	7.55	0.35	0.20
2.40	0.09	0.05	5.00	0.20	0.11	7.60	0.35	0.20
2.45	0.09	0.05	5.05	0.20	0.11	7.65	0.36	0.20
2.50	0.09	0.05	5.10	0.20	0.11	7.70	0.36	0.21
2.55	0.09	0.05	5.15	0.20	0.12	7.75	0.37	0.21

Primary Comparison (continued)

Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
7.80	0.37	0.21	10.40	0.83	0.48	13.00	1.62	1.32
7.85	0.37	0.21	10.45	0.84	0.49	13.05	1.55	1.25
7.90	0.38	0.21	10.50	0.85	0.50	13.10	1.45	1.18
7.95	0.38	0.22	10.55	0.88	0.52	13.15	1.39	1.13
8.00	0.39	0.22	10.60	0.93	0.55	13.20	1.33	1.09
8.05	0.39	0.22	10.65	0.97	0.58	13.25	1.29	1.05
8.10	0.39	0.22	10.70	1.02	0.61	13.30	1.24	1.01
8.15	0.40	0.23	10.75	1.06	0.64	13.35	1.19	0.98
8.20	0.40	0.23	10.80	1.12	0.67	13.40	1.14	0.94
8.25	0.40	0.23	10.85	1.16	0.71	13.45	1.10	0.90
8.30	0.41	0.23	10.90	1.21	0.74	13.50	1.04	0.86
8.35	0.41	0.23	10.95	1.25	0.77	13.55	1.00	0.82
8.40	0.42	0.24	11.00	1.30	0.80	13.60	0.95	0.78
8.45	0.42	0.24	11.05	1.36	0.85	13.65	0.92	0.76
8.50	0.43	0.24	11.10	1.45	0.91	13.70	0.90	0.75
8.55	0.43	0.24	11.15	1.53	0.96	13.75	0.89	0.73
8.60	0.43	0.25	11.20	1.62	1.02	13.80	0.87	0.72
8.65	0.44	0.25	11.25	1.69	1.08	13.85	0.86	0.71
8.70	0.44	0.25	11.30	1.79	1.14	13.90	0.84	0.70
8.75	0.45	0.25	11.35	1.86	1.20	13.95	0.83	0.69
8.80	0.45	0.26	11.40	1.96	1.26	14.00	0.82	0.68
8.85	0.45	0.26	11.45	2.03	1.32	14.05	0.81	0.67
8.90	0.46	0.26	11.50	2.13	1.39	14.10	0.79	0.66
8.95	0.46	0.26	11.55	2.33	1.60	14.15	0.78	0.65
9.00	0.47	0.26	11.60	2.72	1.85	14.20	0.77	0.64
9.05	0.47	0.27	11.65	2.92	1.96	14.25	0.75	0.63
9.10	0.49	0.28	11.70	3.05	2.05	14.30	0.74	0.62
9.15	0.50	0.28	11.75	3.34	2.37	14.35	0.73	0.61
9.20	0.51	0.29	11.80	3.94	2.77	14.40	0.71	0.60
9.25	0.52	0.30	11.85	4.55	3.31	14.45	0.70	0.58
9.30	0.54	0.31	11.90	5.47	3.93	14.50	0.69	0.57
9.35	0.55	0.31	11.95	6.77	5.23	14.55	0.68	0.56
9.40	0.56	0.32	12.00	9.08	6.80	14.60	0.66	0.55
9.45	0.57	0.33	12.05	11.49	9.13	14.65	0.65	0.54
9.50	0.59	0.34	12.10	15.24	11.75	14.70	0.63	0.53
9.55	0.60	0.34	12.15	14.35	9.87	14.75	0.62	0.52
9.60	0.61	0.35	12.20	9.07	6.29	14.80	0.61	0.51
9.65	0.63	0.36	12.25	6.47	4.72	14.85	0.60	0.50
9.70	0.64	0.36	12.30	5.03	3.83	14.90	0.58	0.49
9.75	0.65	0.37	12.35	4.28	3.26	14.95	0.57	0.48
9.80	0.67	0.38	12.40	3.55	2.77	15.00	0.55	0.47
9.85	0.68	0.39	12.45	3.25	2.57	15.05	0.54	0.45
9.90	0.69	0.39	12.50	3.09	2.47	15.10	0.53	0.44
9.95	0.70	0.40	12.55	2.88	2.24	15.15	0.52	0.44
10.00	0.72	0.41	12.60	2.47	1.95	15.20	0.51	0.43
10.05	0.73	0.42	12.65	2.27	1.81	15.25	0.51	0.43
10.10	0.75	0.42	12.70	2.14	1.73	15.30	0.51	0.43
10.15	0.76	0.43	12.75	2.06	1.66	15.35	0.50	0.42
10.20	0.77	0.44	12.80	1.96	1.59	15.40	0.50	0.42
10.25	0.78	0.45	12.85	1.89	1.52	15.45	0.50	0.42
10.30	0.80	0.46	12.90	1.79	1.45	15.50	0.49	0.42
10.35	0.81	0.47	12.95	1.72	1.39	15.55	0.49	0.41

Primary Comparison (continued)

Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
15.60	0.48	0.41	18.20	0.29	0.25	20.80	0.24	0.21
15.65	0.48	0.41	18.25	0.29	0.25	20.85	0.24	0.21
15.70	0.48	0.40	18.30	0.29	0.25	20.90	0.24	0.21
15.75	0.47	0.40	18.35	0.29	0.25	20.95	0.24	0.21
15.80	0.47	0.40	18.40	0.29	0.25	21.00	0.24	0.21
15.85	0.47	0.39	18.45	0.29	0.25	21.05	0.24	0.21
15.90	0.46	0.39	18.50	0.29	0.25	21.10	0.24	0.21
15.95	0.46	0.39	18.55	0.29	0.25	21.15	0.24	0.21
16.00	0.45	0.38	18.60	0.29	0.25	21.20	0.24	0.21
16.05	0.45	0.38	18.65	0.29	0.24	21.25	0.24	0.20
16.10	0.45	0.38	18.70	0.28	0.24	21.30	0.24	0.20
16.15	0.44	0.38	18.75	0.28	0.24	21.35	0.23	0.20
16.20	0.44	0.37	18.80	0.28	0.24	21.40	0.23	0.20
16.25	0.44	0.37	18.85	0.28	0.24	21.45	0.23	0.20
16.30	0.43	0.37	18.90	0.28	0.24	21.50	0.23	0.20
16.35	0.43	0.36	18.95	0.28	0.24	21.55	0.23	0.20
16.40	0.42	0.36	19.00	0.28	0.24	21.60	0.23	0.20
16.45	0.42	0.36	19.05	0.28	0.24	21.65	0.23	0.20
16.50	0.42	0.35	19.10	0.28	0.24	21.70	0.23	0.20
16.55	0.41	0.35	19.15	0.28	0.24	21.75	0.23	0.20
16.60	0.41	0.35	19.20	0.28	0.24	21.80	0.23	0.20
16.65	0.41	0.35	19.25	0.27	0.24	21.85	0.23	0.20
16.70	0.40	0.34	19.30	0.27	0.23	21.90	0.22	0.19
16.75	0.40	0.34	19.35	0.27	0.23	21.95	0.22	0.19
16.80	0.39	0.34	19.40	0.27	0.23	22.00	0.22	0.19
16.85	0.39	0.33	19.45	0.27	0.23	22.05	0.22	0.19
16.90	0.39	0.33	19.50	0.27	0.23	22.10	0.22	0.19
16.95	0.38	0.33	19.55	0.27	0.23	22.15	0.22	0.19
17.00	0.38	0.32	19.60	0.27	0.23	22.20	0.22	0.19
17.05	0.38	0.32	19.65	0.27	0.23	22.25	0.22	0.19
17.10	0.37	0.32	19.70	0.27	0.23	22.30	0.22	0.19
17.15	0.37	0.31	19.75	0.27	0.23	22.35	0.22	0.19
17.20	0.36	0.31	19.80	0.26	0.23	22.40	0.21	0.19
17.25	0.36	0.31	19.85	0.26	0.23	22.45	0.21	0.19
17.30	0.36	0.30	19.90	0.26	0.23	22.50	0.21	0.18
17.35	0.35	0.30	19.95	0.26	0.22	22.55	0.21	0.18
17.40	0.35	0.30	20.00	0.26	0.22	22.60	0.21	0.18
17.45	0.35	0.29	20.05	0.26	0.22	22.65	0.21	0.18
17.50	0.34	0.29	20.10	0.26	0.22	22.70	0.21	0.18
17.55	0.34	0.29	20.15	0.26	0.22	22.75	0.21	0.18
17.60	0.33	0.29	20.20	0.26	0.22	22.80	0.21	0.18
17.65	0.33	0.28	20.25	0.26	0.22	22.85	0.21	0.18
17.70	0.33	0.28	20.30	0.25	0.22	22.90	0.21	0.18
17.75	0.32	0.28	20.35	0.25	0.22	22.95	0.21	0.18
17.80	0.32	0.27	20.40	0.25	0.22	23.00	0.20	0.18
17.85	0.32	0.27	20.45	0.25	0.22	23.05	0.20	0.18
17.90	0.31	0.27	20.50	0.25	0.22	23.10	0.20	0.18
17.95	0.31	0.26	20.55	0.25	0.22	23.15	0.20	0.17
18.00	0.31	0.26	20.60	0.25	0.22	23.20	0.20	0.17
18.05	0.30	0.26	20.65	0.25	0.21	23.25	0.20	0.17
18.10	0.30	0.25	20.70	0.25	0.21	23.30	0.20	0.17
18.15	0.30	0.25	20.75	0.25	0.21	23.35	0.20	0.17

Primary Comparison (continued)

Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
23.40	0.20	0.17	26.00	0.00	0.00
23.45	0.20	0.17			
23.50	0.19	0.17			
23.55	0.19	0.17			
23.60	0.19	0.17			
23.65	0.19	0.17			
23.70	0.19	0.17			
23.75	0.19	0.16			
23.80	0.19	0.16			
23.85	0.19	0.16			
23.90	0.19	0.16			
23.95	0.19	0.16			
24.00	0.19	0.16			
24.05	0.15	0.11			
24.10	0.05	0.04			
24.15	0.01	0.01			
24.20	0.00	0.00			
24.25	0.00	0.00			
24.30	0.00	0.00			
24.35	0.00	0.00			
24.40	0.00	0.00			
24.45	0.00	0.00			
24.50	0.00	0.00			
24.55	0.00	0.00			
24.60	0.00	0.00			
24.65	0.00	0.00			
24.70	0.00	0.00			
24.75	0.00	0.00			
24.80	0.00	0.00			
24.85	0.00	0.00			
24.90	0.00	0.00			
24.95	0.00	0.00			
25.00	0.00	0.00			
25.05	0.00	0.00			
25.10	0.00	0.00			
25.15	0.00	0.00			
25.20	0.00	0.00			
25.25	0.00	0.00			
25.30	0.00	0.00			
25.35	0.00	0.00			
25.40	0.00	0.00			
25.45	0.00	0.00			
25.50	0.00	0.00			
25.55	0.00	0.00			
25.60	0.00	0.00			
25.65	0.00	0.00			
25.70	0.00	0.00			
25.75	0.00	0.00			
25.80	0.00	0.00			
25.85	0.00	0.00			
25.90	0.00	0.00			
25.95	0.00	0.00			

Summary for Subcatchment 1S: EX-DA1-IMP

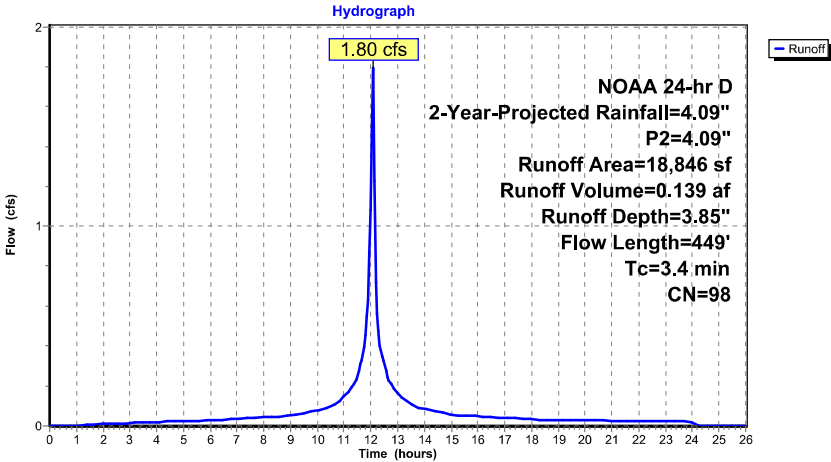
Runoff = 1.80 cfs @ 12.09 hrs, Volume= 0.139 af, Depth= 3.85"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Projected Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description
* 18,142	98	IMPERVIOUS
* 704	98	BUILDINGS
18,846	98	Weighted Average
18,846		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	100	0.0216	1.60		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
2.4	349	0.0139	2.39		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
3.4	449	Total			

Subcatchment 1S: EX-DA1-IMP



Summary for Subcatchment 2S: EX-DA1-PER

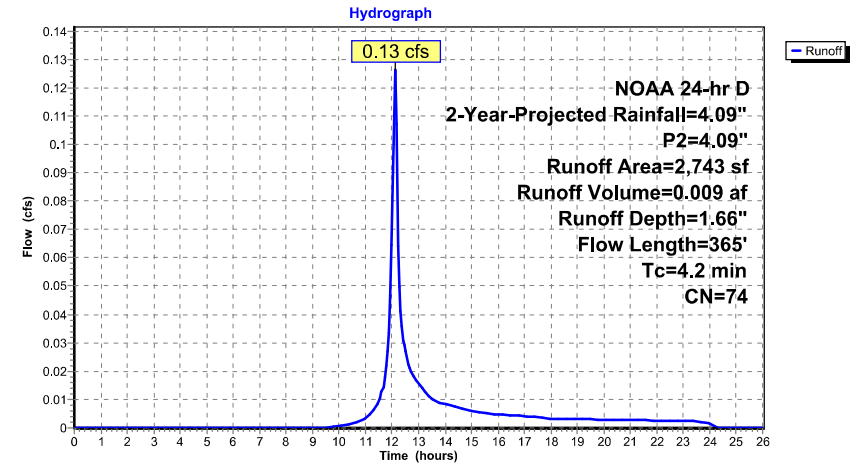
Runoff = 0.13 cfs @ 12.11 hrs, Volume= 0.009 af, Depth= 1.66"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Projected Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description
2,743	74	>75% Grass cover, Good, HSG C
2,743		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0364	0.10		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
1.2	93	0.0130	1.29		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 4.09"
1.8	265	0.0139	2.39		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
4.2	365				Total

Subcatchment 2S: EX-DA1-PER

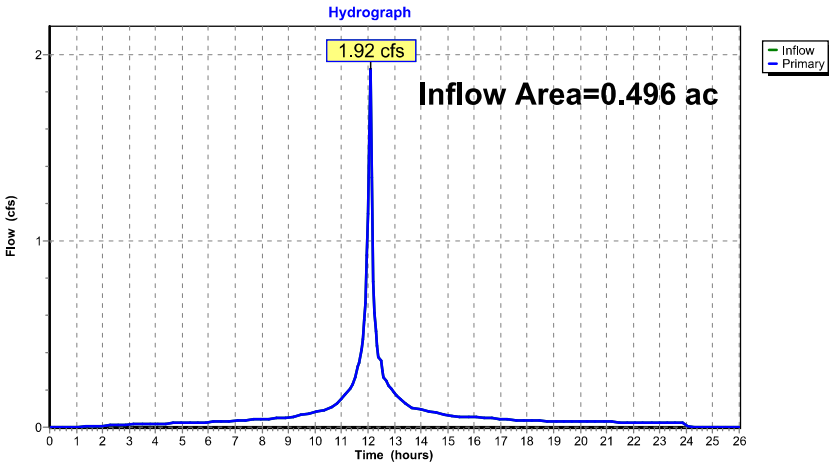


Summary for Link 3L: POA #1

Inflow Area = 0.496 ac, 87.29% Impervious, Inflow Depth = 3.58" for 2-Year-Projected event
Inflow = 1.92 cfs @ 12.09 hrs, Volume= 0.148 af
Primary = 1.92 cfs @ 12.09 hrs, Volume= 0.148 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Link 3L: POA #1



Summary for Subcatchment 4S: EX-DA2-IMP

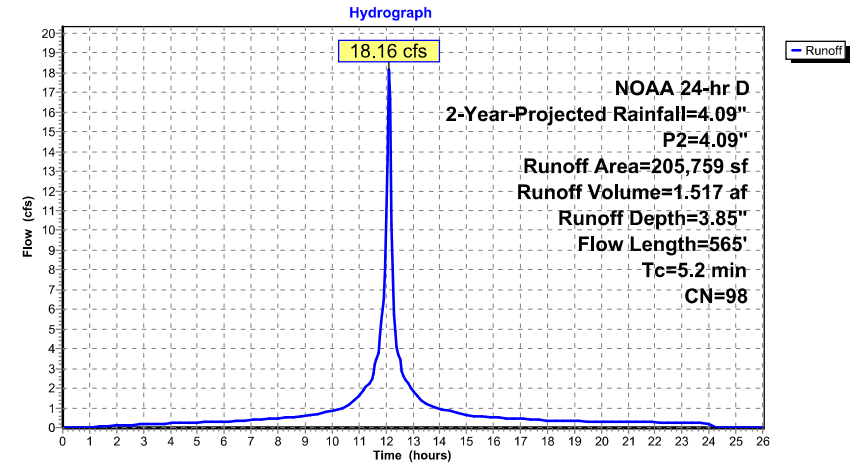
Runoff = 18.16 cfs @ 12.11 hrs, Volume= 1.517 af, Depth= 3.85"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Projected Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description
* 195,091	98	IMPERVIOUS
* 10,668	98	BUILDING
205,759	98	Weighted Average
205,759		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0135	1.33		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
2.2	230	0.0075	1.76		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
1.7	235	0.0130	2.31		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
5.2	565				Total

Subcatchment 4S: EX-DA2-IMP



Summary for Subcatchment 5S: EX-DA2-PER

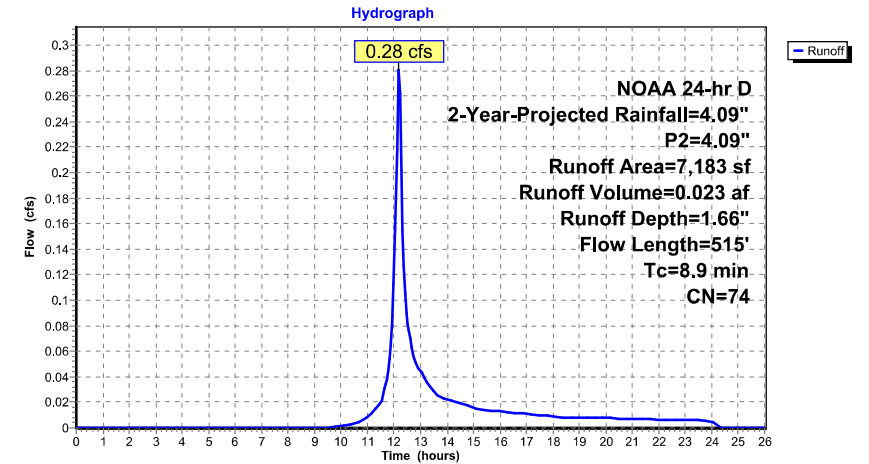
Runoff = 0.28 cfs @ 12.16 hrs, Volume= 0.023 af, Depth= 1.66"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Projected Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description
7,183	74	>75% Grass cover, Good, HSG C
7,183		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	55	0.0500	0.17		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
0.7	45	0.0100	1.00		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 4.09"
2.8	415	0.0150	2.49		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
8.9	515				Total

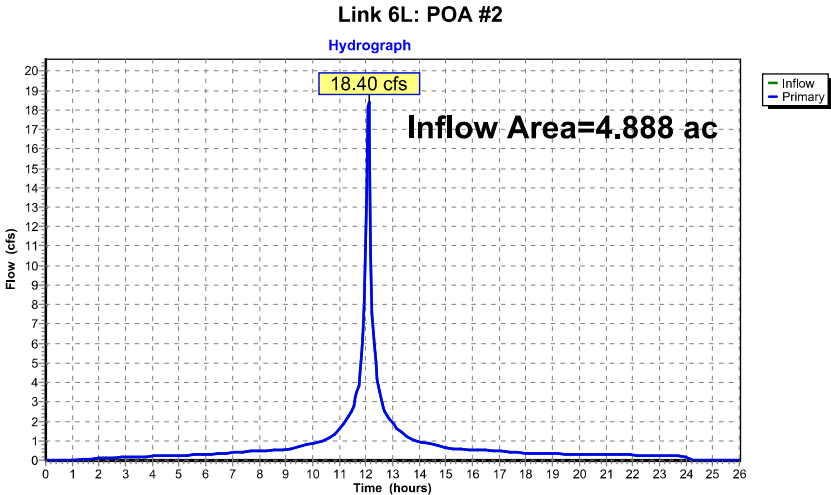
Subcatchment 5S: EX-DA2-PER



Summary for Link 6L: POA #2

Inflow Area = 4.888 ac, 96.63% Impervious, Inflow Depth = 3.78" for 2-Year-Projected event
Inflow = 18.40 cfs @ 12.11 hrs, Volume= 1.540 af
Primary = 18.40 cfs @ 12.11 hrs, Volume= 1.540 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



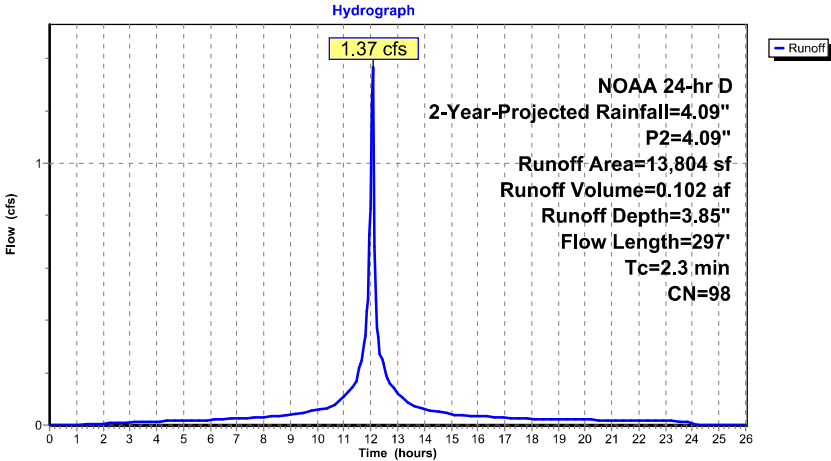
Summary for Subcatchment 7S: PR-DA1-IMP

Runoff = 1.37 cfs @ 12.08 hrs, Volume= 0.102 af, Depth= 3.85"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Projected Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description			
* 13,804	98	IMPERVIOUS			
13,804		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0150	1.39		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
1.0	174	0.0196	2.84		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
0.1	23	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
2.3	297	Total			

Subcatchment 7S: PR-DA1-IMP



Summary for Subcatchment 8S: PR-DA1-PER

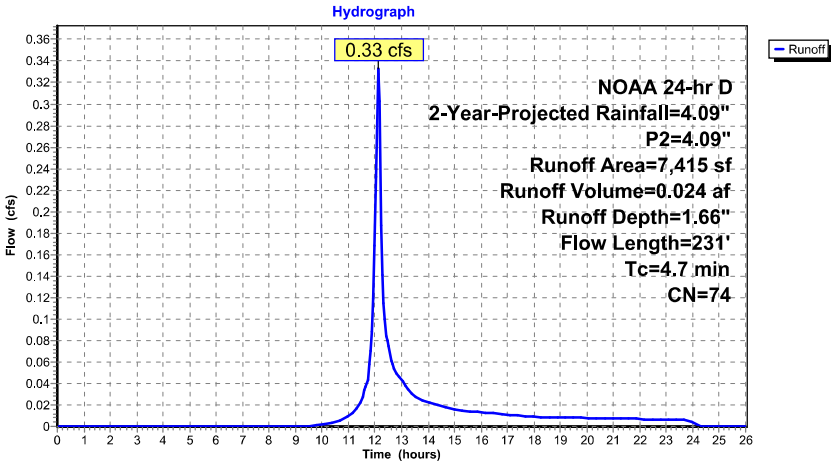
Runoff = 0.33 cfs @ 12.11 hrs, Volume= 0.024 af, Depth= 1.66"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Projected Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description
7,415	74	>75% Grass cover, Good, HSG C
7,415		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	33	0.0692	0.17		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
0.1	8	0.0518	1.37		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 4.09"
0.7	59	0.0180	1.34		Sheet Flow, TC-CD Smooth surfaces n= 0.011 P2= 4.09"
0.5	80	0.0180	2.72		Shallow Concentrated Flow, TC-DE Paved Kv= 20.3 fps
0.1	29	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	22	0.0104	5.82	7.14	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
4.7	231				Total

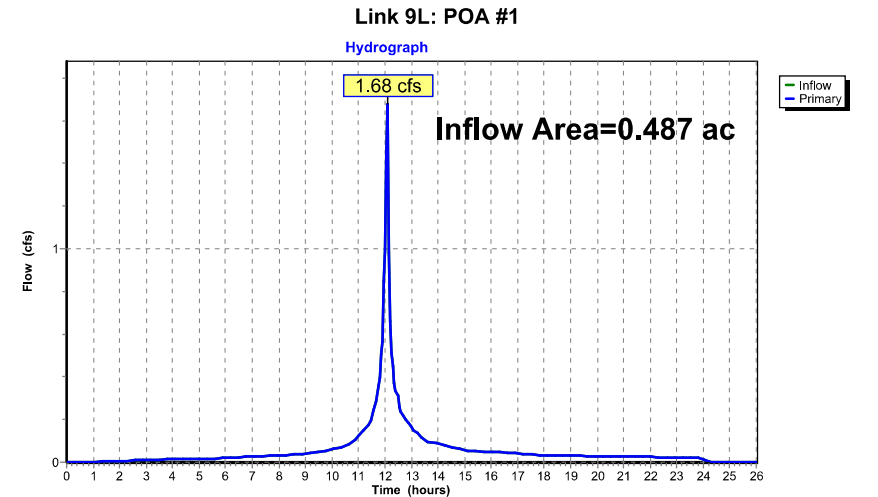
Subcatchment 8S: PR-DA1-PER



Summary for Link 9L: POA #1

Inflow Area = 0.487 ac, 65.05% Impervious, Inflow Depth = 3.09" for 2-Year-Projected event
Inflow = 1.68 cfs @ 12.09 hrs, Volume= 0.125 af
Primary = 1.68 cfs @ 12.09 hrs, Volume= 0.125 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 10S: PR-DA2-IMP

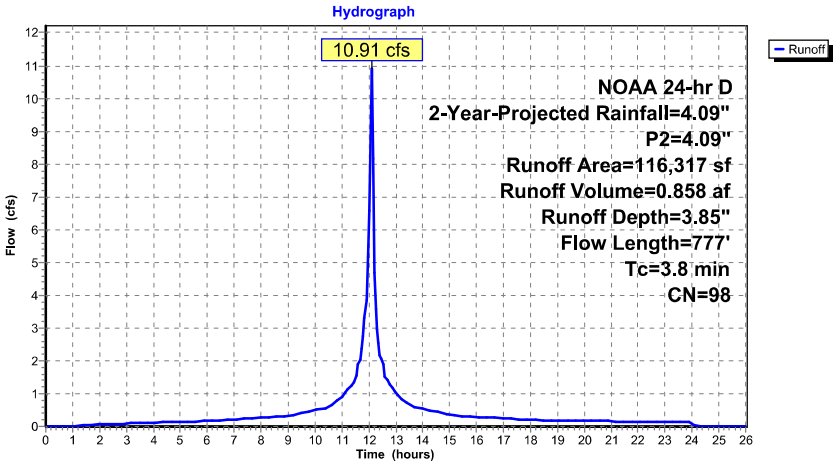
Runoff = 10.91 cfs @ 12.10 hrs, Volume= 0.858 af, Depth= 3.85"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Projected Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description
* 116,317	98	IMPERVIOUS
116,317		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	41	0.0150	1.16		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
0.2	55	0.0100	5.70	7.00	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	68	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	87	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	153	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.5	94	0.0030	3.12	3.83	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	63	0.0032	3.23	3.96	Pipe Channel, TC-GH 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	31	0.0050	4.03	4.95	Pipe Channel, TC-HI 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
1.1	156	0.0200	2.28		Shallow Concentrated Flow, TC-IJ Unpaved Kv= 16.1 fps
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-JK Unpaved Kv= 16.1 fps
3.8	777	Total			

Subcatchment 10S: PR-DA2-IMP



Summary for Subcatchment 11S: PR-DA2-PER

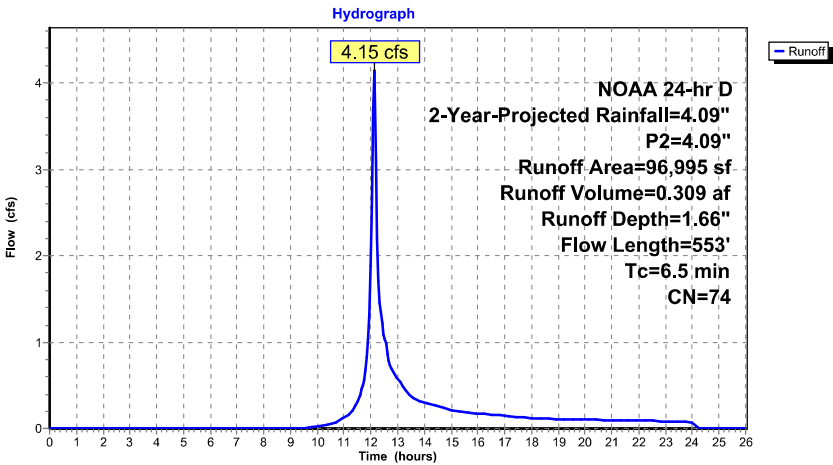
Runoff = 4.15 cfs @ 12.14 hrs, Volume= 0.309 af, Depth= 1.66"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year-Projected Rainfall=4.09", P2=4.09"

Area (sf)	CN	Description
96,995	74	>75% Grass cover, Good, HSG C
96,995		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	22	0.0120	0.08		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
0.4	182	0.0200	8.06	9.90	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	55	0.0050	4.03	4.95	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	40	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	43	0.0096	5.59	6.86	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.6	106	0.0030	3.12	3.83	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	76	0.0325	2.90		Shallow Concentrated Flow, TC-GH Unpaved Kv= 16.1 fps
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-HI Unpaved Kv= 16.1 fps
6.5	553	Total			

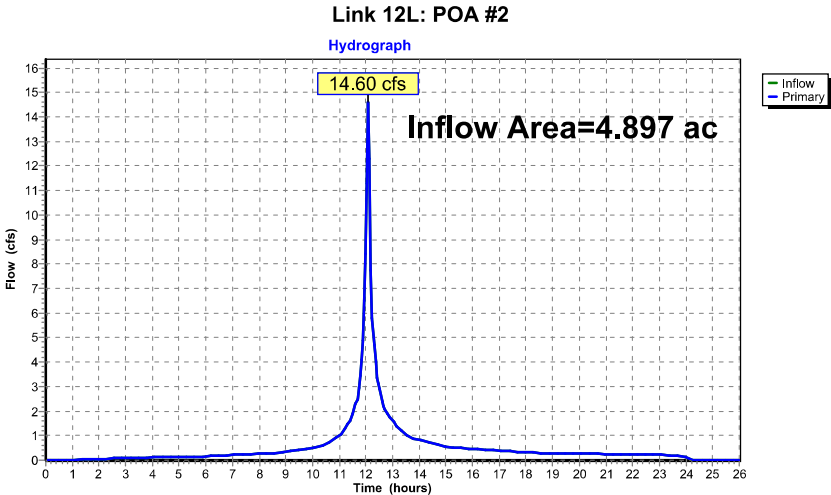
Subcatchment 11S: PR-DA2-PER

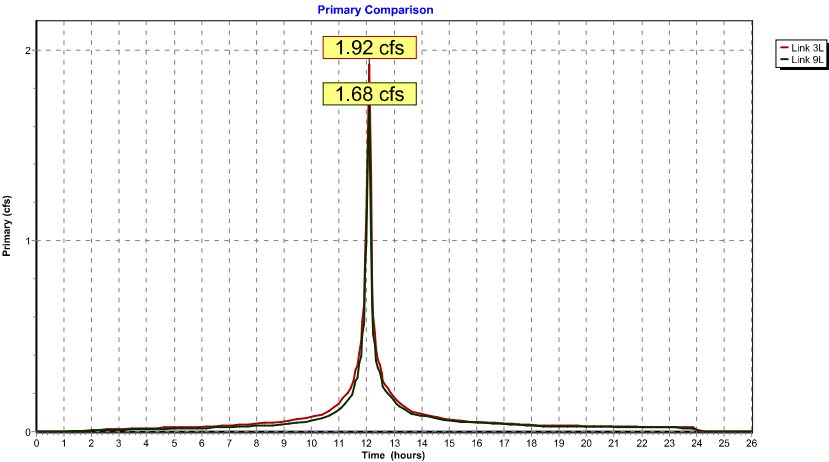


Summary for Link 12L: POA #2

Inflow Area = 4.897 ac, 54.53% Impervious, Inflow Depth = 2.86" for 2-Year-Projected event
Inflow = 14.60 cfs @ 12.10 hrs, Volume= 1.166 af
Primary = 14.60 cfs @ 12.10 hrs, Volume= 1.166 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs





Primary Comparison

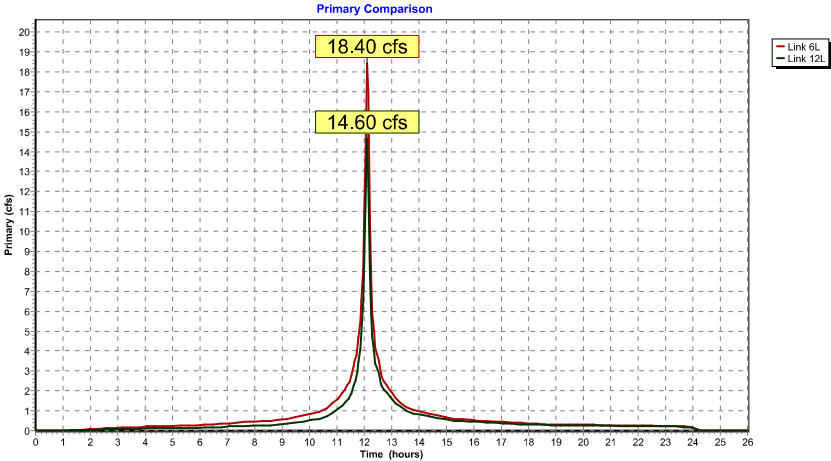
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
2.60	0.01	0.01	5.20	0.02	0.02	7.75	0.04	0.03
2.65	0.01	0.01	5.25	0.02	0.02			
2.70	0.01	0.01	5.30	0.02	0.02			
2.75	0.01	0.01	5.35	0.02	0.02			
2.80	0.01	0.01	5.40	0.02	0.02			
2.85	0.01	0.01	5.45	0.02	0.02			
2.90	0.01	0.01	5.50	0.02	0.02			
2.95	0.01	0.01	5.55	0.02	0.02			
3.00	0.01	0.01	5.60	0.02	0.02			
3.05	0.01	0.01	5.65	0.03	0.02			
3.10	0.02	0.01	5.70	0.03	0.02			
3.15	0.02	0.01	5.75	0.03	0.02			
3.20	0.02	0.01	5.80	0.03	0.02			
3.25	0.02	0.01	5.85	0.03	0.02			
3.30	0.02	0.01	5.90	0.03	0.02			
3.35	0.02	0.01	5.95	0.03	0.02			
3.40	0.02	0.01	6.00	0.03	0.02			
3.45	0.02	0.01	6.05	0.03	0.02			
3.50	0.02	0.01	6.10	0.03	0.02			
3.55	0.02	0.01	6.15	0.03	0.02			
3.60	0.02	0.01	6.20	0.03	0.02			
3.65	0.02	0.01	6.25	0.03	0.02			
3.70	0.02	0.01	6.30	0.03	0.02			
3.75	0.02	0.01	6.35	0.03	0.02			
3.80	0.02	0.01	6.40	0.03	0.02			
3.85	0.02	0.01	6.45	0.03	0.02			
3.90	0.02	0.01	6.50	0.03	0.02			
3.95	0.02	0.01	6.55	0.03	0.02			
4.00	0.02	0.01	6.60	0.03	0.02			
4.05	0.02	0.01	6.65	0.03	0.02			
4.10	0.02	0.01	6.70	0.03	0.02			
4.15	0.02	0.01	6.75	0.03	0.02			
4.20	0.02	0.01	6.80	0.03	0.02			
4.25	0.02	0.01	6.85	0.03	0.02			
4.30	0.02	0.01	6.90	0.03	0.02			
4.35	0.02	0.02	6.95	0.03	0.03			
4.40	0.02	0.02	7.00	0.03	0.03			
4.45	0.02	0.02	7.05	0.03	0.03			
4.50	0.02	0.02	7.10	0.04	0.03			
4.55	0.02	0.02	7.15	0.04	0.03			
4.60	0.02	0.02	7.20	0.04	0.03			
4.65	0.02	0.02	7.25	0.04	0.03			
4.70	0.02	0.02	7.30	0.04	0.03			
4.75	0.02	0.02	7.35	0.04	0.03			
4.80	0.02	0.02	7.40	0.04	0.03			
4.85	0.02	0.02	7.45	0.04	0.03			
4.90	0.02	0.02	7.50	0.04	0.03			
4.95	0.02	0.02	7.55	0.04	0.03			
5.00	0.02	0.02	7.60	0.04	0.03			
5.05	0.02	0.02	7.65	0.04	0.03			
5.10	0.02	0.02	7.70	0.04	0.03			
5.15	0.02	0.02						

Primary Comparison (continued)								
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
7.80	0.04	0.03	10.40	0.09	0.07	13.00	0.18	0.16
7.85	0.04	0.03	10.45	0.09	0.07	13.05	0.17	0.15
7.90	0.04	0.03	10.50	0.10	0.07	13.10	0.16	0.15
7.95	0.04	0.03	10.55	0.10	0.08	13.15	0.16	0.14
8.00	0.04	0.03	10.60	0.11	0.08	13.20	0.15	0.14
8.05	0.04	0.03	10.65	0.11	0.09	13.25	0.15	0.13
8.10	0.04	0.03	10.70	0.12	0.09	13.30	0.14	0.13
8.15	0.04	0.03	10.75	0.12	0.10	13.35	0.13	0.12
8.20	0.04	0.03	10.80	0.13	0.10	13.40	0.13	0.12
8.25	0.05	0.03	10.85	0.13	0.10	13.45	0.12	0.11
8.30	0.05	0.03	10.90	0.14	0.11	13.50	0.12	0.11
8.35	0.05	0.03	10.95	0.14	0.11	13.55	0.11	0.10
8.40	0.05	0.03	11.00	0.15	0.12	13.60	0.11	0.10
8.45	0.05	0.03	11.05	0.16	0.13	13.65	0.10	0.09
8.50	0.05	0.03	11.10	0.17	0.13	13.70	0.10	0.09
8.55	0.05	0.04	11.15	0.18	0.14	13.75	0.10	0.09
8.60	0.05	0.04	11.20	0.19	0.15	13.80	0.10	0.09
8.65	0.05	0.04	11.25	0.20	0.16	13.85	0.10	0.09
8.70	0.05	0.04	11.30	0.20	0.16	13.90	0.10	0.09
8.75	0.05	0.04	11.35	0.21	0.17	13.95	0.10	0.09
8.80	0.05	0.04	11.40	0.22	0.18	14.00	0.09	0.09
8.85	0.05	0.04	11.45	0.23	0.19	14.05	0.09	0.08
8.90	0.05	0.04	11.50	0.24	0.20	14.10	0.09	0.08
8.95	0.05	0.04	11.55	0.29	0.25	14.15	0.09	0.08
9.00	0.05	0.04	11.60	0.32	0.27	14.20	0.09	0.08
9.05	0.05	0.04	11.65	0.34	0.28	14.25	0.09	0.08
9.10	0.05	0.04	11.70	0.35	0.29	14.30	0.09	0.08
9.15	0.06	0.04	11.75	0.42	0.36	14.35	0.08	0.08
9.20	0.06	0.04	11.80	0.47	0.40	14.40	0.08	0.07
9.25	0.06	0.04	11.85	0.58	0.51	14.45	0.08	0.07
9.30	0.06	0.04	11.90	0.67	0.57	14.50	0.08	0.07
9.35	0.06	0.05	11.95	0.92	0.85	14.55	0.08	0.07
9.40	0.06	0.05	12.00	1.15	0.99	14.60	0.08	0.07
9.45	0.06	0.05	12.05	1.57	1.46	14.65	0.07	0.07
9.50	0.07	0.05	12.10	1.91	1.64	14.70	0.07	0.07
9.55	0.07	0.05	12.15	1.34	0.98	14.75	0.07	0.06
9.60	0.07	0.05	12.20	0.78	0.66	14.80	0.07	0.06
9.65	0.07	0.05	12.25	0.61	0.51	14.85	0.07	0.06
9.70	0.07	0.05	12.30	0.52	0.45	14.90	0.07	0.06
9.75	0.07	0.05	12.35	0.44	0.37	14.95	0.07	0.06
9.80	0.07	0.06	12.40	0.38	0.33	15.00	0.06	0.06
9.85	0.08	0.06	12.45	0.36	0.32	15.05	0.06	0.06
9.90	0.08	0.06	12.50	0.35	0.31	15.10	0.06	0.06
9.95	0.08	0.06	12.55	0.31	0.26	15.15	0.06	0.05
10.00	0.08	0.06	12.60	0.27	0.24	15.20	0.06	0.05
10.05	0.08	0.06	12.65	0.25	0.22	15.25	0.06	0.05
10.10	0.08	0.06	12.70	0.24	0.22	15.30	0.06	0.05
10.15	0.08	0.06	12.75	0.23	0.20	15.35	0.06	0.05
10.20	0.09	0.06	12.80	0.22	0.20	15.40	0.06	0.05
10.25	0.09	0.07	12.85	0.21	0.19	15.45	0.06	0.05
10.30	0.09	0.07	12.90	0.20	0.18	15.50	0.06	0.05
10.35	0.09	0.07	12.95	0.19	0.17	15.55	0.06	0.05

Primary Comparison (continued)								
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
15.60	0.06	0.05	18.20	0.03	0.03	20.80	0.03	0.03
15.65	0.06	0.05	18.25	0.03	0.03	20.85	0.03	0.03
15.70	0.06	0.05	18.30	0.03	0.03	20.90	0.03	0.03
15.75	0.05	0.05	18.35	0.03	0.03	20.95	0.03	0.03
15.80	0.05	0.05	18.40	0.03	0.03	21.00	0.03	0.03
15.85	0.05	0.05	18.45	0.03	0.03	21.05	0.03	0.03
15.90	0.05	0.05	18.50	0.03	0.03	21.10	0.03	0.03
15.95	0.05	0.05	18.55	0.03	0.03	21.15	0.03	0.03
16.00	0.05	0.05	18.60	0.03	0.03	21.20	0.03	0.03
16.05	0.05	0.05	18.65	0.03	0.03	21.25	0.03	0.03
16.10	0.05	0.05	18.70	0.03	0.03	21.30	0.03	0.03
16.15	0.05	0.05	18.75	0.03	0.03	21.35	0.03	0.03
16.20	0.05	0.05	18.80	0.03	0.03	21.40	0.03	0.03
16.25	0.05	0.05	18.85	0.03	0.03	21.45	0.03	0.03
16.30	0.05	0.05	18.90	0.03	0.03	21.50	0.03	0.02
16.35	0.05	0.05	18.95	0.03	0.03	21.55	0.03	0.02
16.40	0.05	0.05	19.00	0.03	0.03	21.60	0.03	0.02
16.45	0.05	0.04	19.05	0.03	0.03	21.65	0.03	0.02
16.50	0.05	0.04	19.10	0.03	0.03	21.70	0.03	0.02
16.55	0.05	0.04	19.15	0.03	0.03	21.75	0.03	0.02
16.60	0.05	0.04	19.20	0.03	0.03	21.80	0.03	0.02
16.65	0.05	0.04	19.25	0.03	0.03	21.85	0.03	0.02
16.70	0.05	0.04	19.30	0.03	0.03	21.90	0.03	0.02
16.75	0.05	0.04	19.35	0.03	0.03	21.95	0.03	0.02
16.80	0.05	0.04	19.40	0.03	0.03	22.00	0.03	0.02
16.85	0.05	0.04	19.45	0.03	0.03	22.05	0.03	0.02
16.90	0.04	0.04	19.50	0.03	0.03	22.10	0.03	0.02
16.95	0.04	0.04	19.55	0.03	0.03	22.15	0.03	0.02
17.00	0.04	0.04	19.60	0.03	0.03	22.20	0.03	0.02
17.05	0.04	0.04	19.65	0.03	0.03	22.25	0.03	0.02
17.10	0.04	0.04	19.70	0.03	0.03	22.30	0.03	0.02
17.15	0.04	0.04	19.75	0.03	0.03	22.35	0.03	0.02
17.20	0.04	0.04	19.80	0.03	0.03	22.40	0.03	0.02
17.25	0.04	0.04	19.85	0.03	0.03	22.45	0.02	0.02
17.30	0.04	0.04	19.90	0.03	0.03	22.50	0.02	0.02
17.35	0.04	0.04	19.95	0.03	0.03	22.55	0.02	0.02
17.40	0.04	0.04	20.00	0.03	0.03	22.60	0.02	0.02
17.45	0.04	0.04	20.05	0.03	0.03	22.65	0.02	0.02
17.50	0.04	0.04	20.10	0.03	0.03	22.70	0.02	0.02
17.55	0.04	0.04	20.15	0.03	0.03	22.75	0.02	0.02
17.60	0.04	0.04	20.20	0.03	0.03	22.80	0.02	0.02
17.65	0.04	0.04	20.25	0.03	0.03	22.85	0.02	0.02
17.70	0.04	0.03	20.30	0.03	0.03	22.90	0.02	0.02
17.75	0.04	0.03	20.35	0.03	0.03	22.95	0.02	0.02
17.80	0.04	0.03	20.40	0.03	0.03	23.00	0.02	0.02
17.85	0.04	0.03	20.45	0.03	0.03	23.05	0.02	0.02
17.90	0.04	0.03	20.50	0.03	0.03	23.10	0.02	0.02
17.95	0.04	0.03	20.55	0.03	0.03	23.15	0.02	0.02
18.00	0.04	0.03	20.60	0.03	0.03	23.20	0.02	0.02
18.05	0.03	0.03	20.65	0.03	0.03	23.25	0.02	0.02
18.10	0.03	0.03	20.70	0.03	0.03	23.30	0.02	0.02
18.15	0.03	0.03	20.75	0.03	0.03	23.35	0.02	0.02

Primary Comparison (continued)

Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
23.40	0.02	0.02	26.00	0.00	0.00
23.45	0.02	0.02			
23.50	0.02	0.02			
23.55	0.02	0.02			
23.60	0.02	0.02			
23.65	0.02	0.02			
23.70	0.02	0.02			
23.75	0.02	0.02			
23.80	0.02	0.02			
23.85	0.02	0.02			
23.90	0.02	0.02			
23.95	0.02	0.02			
24.00	0.02	0.02			
24.05	0.01	0.01			
24.10	0.00	0.00			
24.15	0.00	0.00			
24.20	0.00	0.00			
24.25	0.00	0.00			
24.30	0.00	0.00			
24.35	0.00	0.00			
24.40	0.00	0.00			
24.45	0.00	0.00			
24.50	0.00	0.00			
24.55	0.00	0.00			
24.60	0.00	0.00			
24.65	0.00	0.00			
24.70	0.00	0.00			
24.75	0.00	0.00			
24.80	0.00	0.00			
24.85	0.00	0.00			
24.90	0.00	0.00			
24.95	0.00	0.00			
25.00	0.00	0.00			
25.05	0.00	0.00			
25.10	0.00	0.00			
25.15	0.00	0.00			
25.20	0.00	0.00			
25.25	0.00	0.00			
25.30	0.00	0.00			
25.35	0.00	0.00			
25.40	0.00	0.00			
25.45	0.00	0.00			
25.50	0.00	0.00			
25.55	0.00	0.00			
25.60	0.00	0.00			
25.65	0.00	0.00			
25.70	0.00	0.00			
25.75	0.00	0.00			
25.80	0.00	0.00			
25.85	0.00	0.00			
25.90	0.00	0.00			
25.95	0.00	0.00			



Primary Comparison								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
0.00	0.00	0.00	2.60	0.13	0.08	5.20	0.26	0.15
0.05	0.00	0.00	2.65	0.14	0.08	5.25	0.26	0.15
0.10	0.00	0.00	2.70	0.14	0.08	5.30	0.26	0.15
0.15	0.00	0.00	2.75	0.14	0.08	5.35	0.26	0.15
0.20	0.00	0.00	2.80	0.15	0.08	5.40	0.26	0.15
0.25	0.00	0.00	2.85	0.15	0.09	5.45	0.27	0.15
0.30	0.00	0.00	2.90	0.15	0.09	5.50	0.27	0.15
0.35	0.00	0.00	2.95	0.16	0.09	5.55	0.27	0.15
0.40	0.00	0.00	3.00	0.16	0.09	5.60	0.27	0.15
0.45	0.00	0.00	3.05	0.16	0.09	5.65	0.27	0.15
0.50	0.00	0.00	3.10	0.16	0.09	5.70	0.28	0.16
0.55	0.00	0.00	3.15	0.17	0.09	5.75	0.28	0.16
0.60	0.00	0.00	3.20	0.17	0.10	5.80	0.28	0.16
0.65	0.00	0.00	3.25	0.17	0.10	5.85	0.28	0.16
0.70	0.00	0.00	3.30	0.17	0.10	5.90	0.28	0.16
0.75	0.00	0.00	3.35	0.18	0.10	5.95	0.28	0.16
0.80	0.00	0.00	3.40	0.18	0.10	6.00	0.29	0.16
0.85	0.00	0.00	3.45	0.18	0.10	6.05	0.29	0.16
0.90	0.00	0.00	3.50	0.19	0.11	6.10	0.29	0.17
0.95	0.00	0.00	3.55	0.19	0.11	6.15	0.30	0.17
1.00	0.01	0.00	3.60	0.19	0.11	6.20	0.30	0.17
1.05	0.01	0.01	3.65	0.19	0.11	6.25	0.31	0.17
1.10	0.02	0.01	3.70	0.19	0.11	6.30	0.31	0.18
1.15	0.02	0.01	3.75	0.20	0.11	6.35	0.32	0.18
1.20	0.03	0.02	3.80	0.20	0.11	6.40	0.32	0.18
1.25	0.03	0.02	3.85	0.20	0.11	6.45	0.32	0.18
1.30	0.04	0.02	3.90	0.20	0.12	6.50	0.33	0.19
1.35	0.04	0.02	3.95	0.21	0.12	6.55	0.33	0.19
1.40	0.04	0.03	4.00	0.21	0.12	6.60	0.34	0.19
1.45	0.05	0.03	4.05	0.21	0.12	6.65	0.34	0.19
1.50	0.05	0.03	4.10	0.21	0.12	6.70	0.35	0.20
1.55	0.06	0.03	4.15	0.21	0.12	6.75	0.35	0.20
1.60	0.06	0.04	4.20	0.22	0.12	6.80	0.36	0.20
1.65	0.07	0.04	4.25	0.22	0.12	6.85	0.36	0.20
1.70	0.07	0.04	4.30	0.22	0.13	6.90	0.36	0.21
1.75	0.07	0.04	4.35	0.22	0.13	6.95	0.37	0.21
1.80	0.08	0.05	4.40	0.23	0.13	7.00	0.37	0.21
1.85	0.08	0.05	4.45	0.23	0.13	7.05	0.38	0.22
1.90	0.09	0.05	4.50	0.23	0.13	7.10	0.38	0.22
1.95	0.09	0.05	4.55	0.23	0.13	7.15	0.39	0.22
2.00	0.09	0.05	4.60	0.23	0.13	7.20	0.39	0.22
2.05	0.10	0.06	4.65	0.24	0.13	7.25	0.40	0.23
2.10	0.10	0.06	4.70	0.24	0.13	7.30	0.40	0.23
2.15	0.10	0.06	4.75	0.24	0.14	7.35	0.41	0.23
2.20	0.11	0.06	4.80	0.24	0.14	7.40	0.41	0.23
2.25	0.11	0.06	4.85	0.24	0.14	7.45	0.42	0.24
2.30	0.12	0.07	4.90	0.25	0.14	7.50	0.42	0.24
2.35	0.12	0.07	4.95	0.25	0.14	7.55	0.42	0.24
2.40	0.12	0.07	5.00	0.25	0.14	7.60	0.43	0.24
2.45	0.12	0.07	5.05	0.25	0.14	7.65	0.43	0.25
2.50	0.13	0.07	5.10	0.25	0.14	7.70	0.44	0.25
2.55	0.13	0.07	5.15	0.25	0.14	7.75	0.44	0.25

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
7.80	0.45	0.26	10.40	0.99	0.60	13.00	1.92	1.61
7.85	0.45	0.26	10.45	1.00	0.62	13.05	1.83	1.53
7.90	0.46	0.26	10.50	1.02	0.63	13.10	1.71	1.44
7.95	0.46	0.26	10.55	1.05	0.66	13.15	1.65	1.39
8.00	0.47	0.27	10.60	1.11	0.70	13.20	1.58	1.34
8.05	0.47	0.27	10.65	1.16	0.73	13.25	1.53	1.29
8.10	0.48	0.27	10.70	1.22	0.77	13.30	1.46	1.24
8.15	0.48	0.27	10.75	1.27	0.81	13.35	1.41	1.19
8.20	0.49	0.28	10.80	1.33	0.85	13.40	1.35	1.14
8.25	0.49	0.28	10.85	1.38	0.89	13.45	1.30	1.10
8.30	0.49	0.28	10.90	1.45	0.93	13.50	1.23	1.05
8.35	0.50	0.28	10.95	1.50	0.97	13.55	1.18	1.00
8.40	0.51	0.29	11.00	1.56	1.01	13.60	1.12	0.95
8.45	0.51	0.29	11.05	1.63	1.07	13.65	1.09	0.93
8.50	0.51	0.29	11.10	1.74	1.14	13.70	1.06	0.91
8.55	0.52	0.29	11.15	1.82	1.21	13.75	1.05	0.90
8.60	0.52	0.30	11.20	1.93	1.28	13.80	1.03	0.88
8.65	0.53	0.30	11.25	2.02	1.35	13.85	1.02	0.87
8.70	0.53	0.30	11.30	2.13	1.43	13.90	1.00	0.86
8.75	0.54	0.30	11.35	2.22	1.50	13.95	0.98	0.84
8.80	0.54	0.31	11.40	2.33	1.58	14.00	0.97	0.83
8.85	0.55	0.31	11.45	2.42	1.66	14.05	0.95	0.82
8.90	0.55	0.31	11.50	2.53	1.74	14.10	0.94	0.80
8.95	0.55	0.32	11.55	2.78	2.00	14.15	0.92	0.79
9.00	0.56	0.32	11.60	3.25	2.31	14.20	0.91	0.78
9.05	0.57	0.33	11.65	3.48	2.45	14.25	0.89	0.77
9.10	0.59	0.33	11.70	3.63	2.56	14.30	0.87	0.75
9.15	0.60	0.34	11.75	3.99	2.95	14.35	0.86	0.74
9.20	0.61	0.35	11.80	4.70	3.45	14.40	0.84	0.73
9.25	0.63	0.36	11.85	5.43	4.12	14.45	0.83	0.71
9.30	0.65	0.37	11.90	6.52	4.89	14.50	0.81	0.70
9.35	0.66	0.38	11.95	8.09	6.48	14.55	0.80	0.69
9.40	0.68	0.39	12.00	10.85	8.45	14.60	0.78	0.67
9.45	0.69	0.39	12.05	13.75	11.31	14.65	0.77	0.66
9.50	0.71	0.40	12.10	18.17	14.58	14.70	0.75	0.65
9.55	0.72	0.41	12.15	16.94	12.28	14.75	0.74	0.63
9.60	0.74	0.42	12.20	10.57	7.75	14.80	0.72	0.62
9.65	0.75	0.43	12.25	7.57	5.79	14.85	0.70	0.61
9.70	0.77	0.44	12.30	5.91	4.69	14.90	0.69	0.59
9.75	0.78	0.46	12.35	5.03	3.99	14.95	0.67	0.58
9.80	0.80	0.47	12.40	4.18	3.38	15.00	0.65	0.57
9.85	0.81	0.48	12.45	3.83	3.14	15.05	0.64	0.55
9.90	0.83	0.49	12.50	3.65	3.02	15.10	0.62	0.54
9.95	0.84	0.50	12.55	3.39	2.74	15.15	0.61	0.53
10.00	0.86	0.51	12.60	2.91	2.39	15.20	0.61	0.53
10.05	0.88	0.52	12.65	2.68	2.22	15.25	0.60	0.52
10.10	0.89	0.53	12.70	2.53	2.11	15.30	0.60	0.52
10.15	0.91	0.54	12.75	2.43	2.03	15.35	0.60	0.52
10.20	0.92	0.56	12.80	2.32	1.94	15.40	0.59	0.51
10.25	0.94	0.57	12.85	2.23	1.86	15.45	0.59	0.51
10.30	0.96	0.58	12.90	2.12	1.78	15.50	0.58	0.51
10.35	0.97	0.59	12.95	2.03	1.70	15.55	0.58	0.50

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
15.60	0.57	0.50	18.20	0.35	0.31	20.80	0.29	0.26
15.65	0.57	0.49	18.25	0.35	0.30	20.85	0.29	0.26
15.70	0.56	0.49	18.30	0.35	0.30	20.90	0.29	0.25
15.75	0.56	0.49	18.35	0.34	0.30	20.95	0.29	0.25
15.80	0.55	0.48	18.40	0.34	0.30	21.00	0.29	0.25
15.85	0.55	0.48	18.45	0.34	0.30	21.05	0.28	0.25
15.90	0.55	0.48	18.50	0.34	0.30	21.10	0.28	0.25
15.95	0.54	0.47	18.55	0.34	0.30	21.15	0.28	0.25
16.00	0.54	0.47	18.60	0.34	0.30	21.20	0.28	0.25
16.05	0.53	0.47	18.65	0.34	0.30	21.25	0.28	0.25
16.10	0.53	0.46	18.70	0.34	0.30	21.30	0.28	0.25
16.15	0.53	0.46	18.75	0.33	0.30	21.35	0.28	0.25
16.20	0.52	0.45	18.80	0.33	0.30	21.40	0.28	0.25
16.25	0.51	0.45	18.85	0.33	0.29	21.45	0.28	0.24
16.30	0.51	0.45	18.90	0.33	0.29	21.50	0.27	0.24
16.35	0.51	0.44	18.95	0.33	0.29	21.55	0.27	0.24
16.40	0.50	0.44	19.00	0.33	0.29	21.60	0.27	0.24
16.45	0.50	0.43	19.05	0.33	0.29	21.65	0.27	0.24
16.50	0.49	0.43	19.10	0.33	0.29	21.70	0.27	0.24
16.55	0.49	0.43	19.15	0.33	0.29	21.75	0.27	0.24
16.60	0.48	0.42	19.20	0.33	0.29	21.80	0.27	0.24
16.65	0.48	0.42	19.25	0.32	0.29	21.85	0.27	0.24
16.70	0.48	0.42	19.30	0.32	0.29	21.90	0.27	0.24
16.75	0.47	0.41	19.35	0.32	0.28	21.95	0.26	0.24
16.80	0.47	0.41	19.40	0.32	0.28	22.00	0.26	0.23
16.85	0.46	0.40	19.45	0.32	0.28	22.05	0.26	0.23
16.90	0.46	0.40	19.50	0.32	0.28	22.10	0.26	0.23
16.95	0.45	0.40	19.55	0.32	0.28	22.15	0.26	0.23
17.00	0.45	0.39	19.60	0.32	0.28	22.20	0.26	0.23
17.05	0.44	0.39	19.65	0.32	0.28	22.25	0.26	0.23
17.10	0.44	0.39	19.70	0.31	0.28	22.30	0.26	0.23
17.15	0.44	0.38	19.75	0.31	0.28	22.35	0.25	0.23
17.20	0.43	0.38	19.80	0.31	0.28	22.40	0.25	0.23
17.25	0.43	0.37	19.85	0.31	0.27	22.45	0.25	0.22
17.30	0.42	0.37	19.90	0.31	0.27	22.50	0.25	0.22
17.35	0.42	0.37	19.95	0.31	0.27	22.55	0.25	0.22
17.40	0.41	0.36	20.00	0.31	0.27	22.60	0.25	0.22
17.45	0.41	0.36	20.05	0.31	0.27	22.65	0.25	0.22
17.50	0.40	0.35	20.10	0.31	0.27	22.70	0.25	0.22
17.55	0.40	0.35	20.15	0.30	0.27	22.75	0.25	0.22
17.60	0.40	0.35	20.20	0.30	0.27	22.80	0.25	0.22
17.65	0.39	0.34	20.25	0.30	0.27	22.85	0.24	0.22
17.70	0.39	0.34	20.30	0.30	0.27	22.90	0.24	0.22
17.75	0.38	0.34	20.35	0.30	0.26	22.95	0.24	0.22
17.80	0.38	0.33	20.40	0.30	0.26	23.00	0.24	0.21
17.85	0.37	0.33	20.45	0.30	0.26	23.05	0.24	0.21
17.90	0.37	0.32	20.50	0.30	0.26	23.10	0.24	0.21
17.95	0.37	0.32	20.55	0.30	0.26	23.15	0.24	0.21
18.00	0.36	0.32	20.60	0.29	0.26	23.20	0.24	0.21
18.05	0.36	0.31	20.65	0.29	0.26	23.25	0.24	0.21
18.10	0.35	0.31	20.70	0.29	0.26	23.30	0.23	0.21
18.15	0.35	0.31	20.75	0.29	0.26	23.35	0.23	0.21

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
23.40	0.23	0.21	26.00	0.00	0.00			
23.45	0.23	0.21						
23.50	0.23	0.20						
23.55	0.23	0.20						
23.60	0.23	0.20						
23.65	0.23	0.20						
23.70	0.23	0.20						
23.75	0.22	0.20						
23.80	0.22	0.20						
23.85	0.22	0.20						
23.90	0.22	0.20						
23.95	0.22	0.20						
24.00	0.22	0.20						
24.05	0.17	0.13						
24.10	0.06	0.04						
24.15	0.02	0.01						
24.20	0.00	0.00						
24.25	0.00	0.00						
24.30	0.00	0.00						
24.35	0.00	0.00						
24.40	0.00	0.00						
24.45	0.00	0.00						
24.50	0.00	0.00						
24.55	0.00	0.00						
24.60	0.00	0.00						
24.65	0.00	0.00						
24.70	0.00	0.00						
24.75	0.00	0.00						
24.80	0.00	0.00						
24.85	0.00	0.00						
24.90	0.00	0.00						
24.95	0.00	0.00						
25.00	0.00	0.00						
25.05	0.00	0.00						
25.10	0.00	0.00						
25.15	0.00	0.00						
25.20	0.00	0.00						
25.25	0.00	0.00						
25.30	0.00	0.00						
25.35	0.00	0.00						
25.40	0.00	0.00						
25.45	0.00	0.00						
25.50	0.00	0.00						
25.55	0.00	0.00						
25.60	0.00	0.00						
25.65	0.00	0.00						
25.70	0.00	0.00						
25.75	0.00	0.00						
25.80	0.00	0.00						
25.85	0.00	0.00						
25.90	0.00	0.00						
25.95	0.00	0.00						

Summary for Subcatchment 1S: EX-DA1-IMP

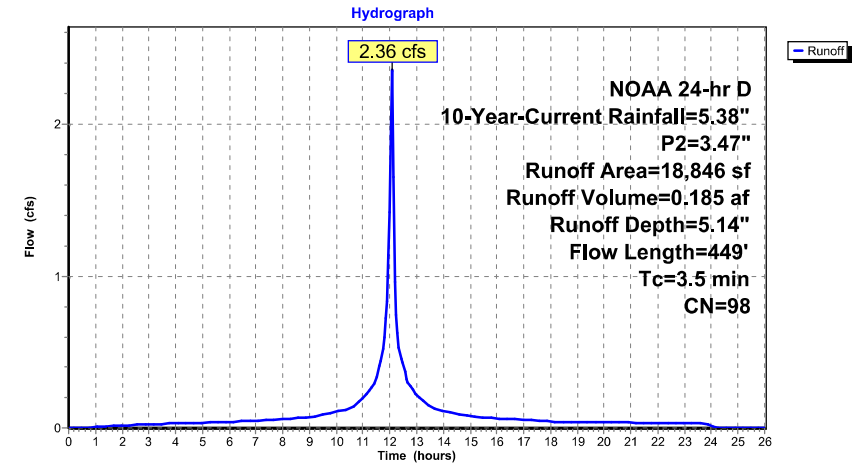
Runoff = 2.36 cfs @ 12.09 hrs, Volume= 0.185 af, Depth= 5.14"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Current Rainfall=5.38", P2=3.47"

Area (sf)	CN	Description
* 18,142	98	IMPERVIOUS
* 704	98	BUILDINGS
18,846	98	Weighted Average
18,846		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0216	1.48		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
2.4	349	0.0139	2.39		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
3.5	449				Total

Subcatchment 1S: EX-DA1-IMP



Summary for Subcatchment 2S: EX-DA1-PER

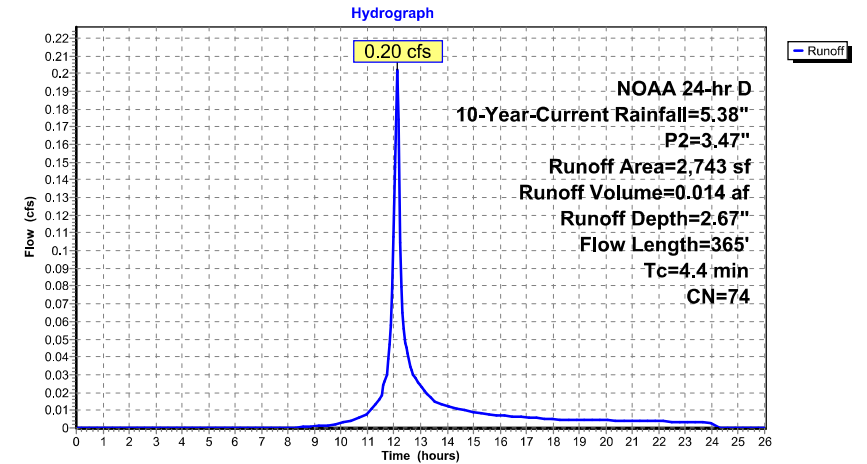
Runoff = 0.20 cfs @ 12.11 hrs, Volume= 0.014 af, Depth= 2.67"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Current Rainfall=5.38", P2=3.47"

Area (sf)	CN	Description
2,743	74	>75% Grass cover, Good, HSG C
2,743		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	7	0.0364	0.09		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
1.3	93	0.0130	1.19		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 3.47"
1.8	265	0.0139	2.39		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
4.4	365				Total

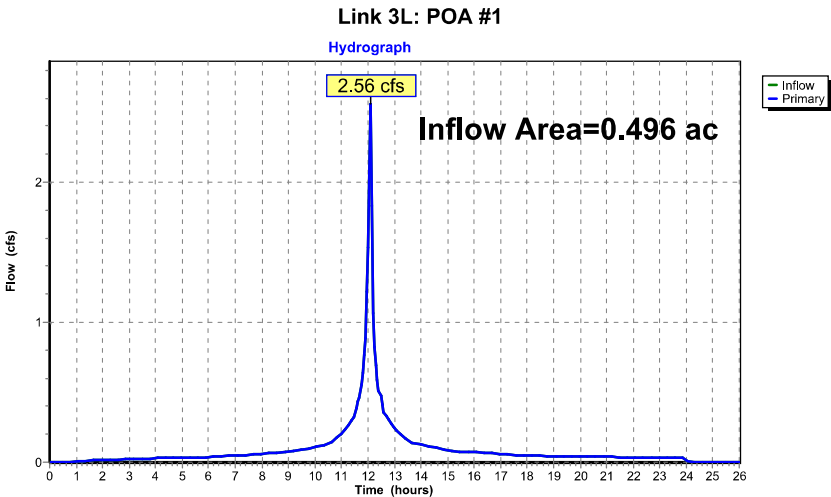
Subcatchment 2S: EX-DA1-PER



Summary for Link 3L: POA #1

Inflow Area = 0.496 ac, 87.29% Impervious, Inflow Depth = 4.83" for 10-Year-Current event
Inflow = 2.56 cfs @ 12.09 hrs, Volume= 0.199 af
Primary = 2.56 cfs @ 12.09 hrs, Volume= 0.199 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



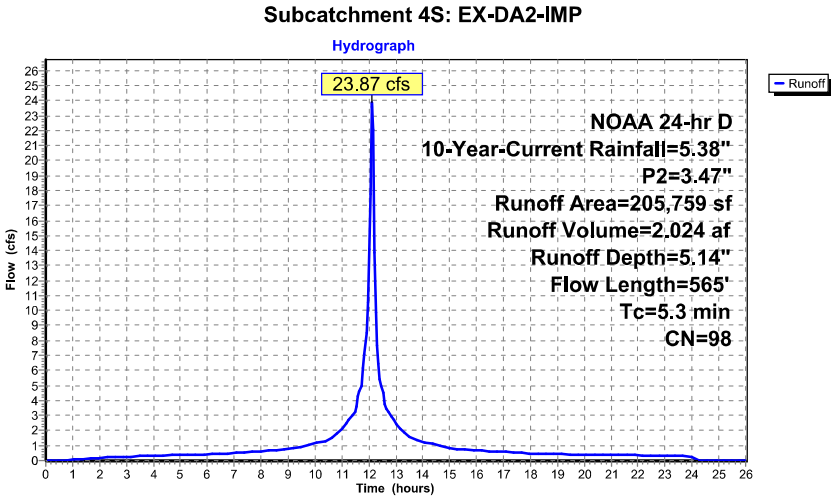
Summary for Subcatchment 4S: EX-DA2-IMP

Runoff = 23.87 cfs @ 12.11 hrs, Volume= 2.024 af, Depth= 5.14"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Current Rainfall=5.38", P2=3.47"

	Area (sf)	CN	Description
*	195,091	98	IMPERVIOUS
*	10,668	98	BUILDING
	205,759	98	Weighted Average
	205,759		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0135	1.22		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
2.2	230	0.0075	1.76		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
1.7	235	0.0130	2.31		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
5.3	565	Total			



Summary for Subcatchment 5S: EX-DA2-PER

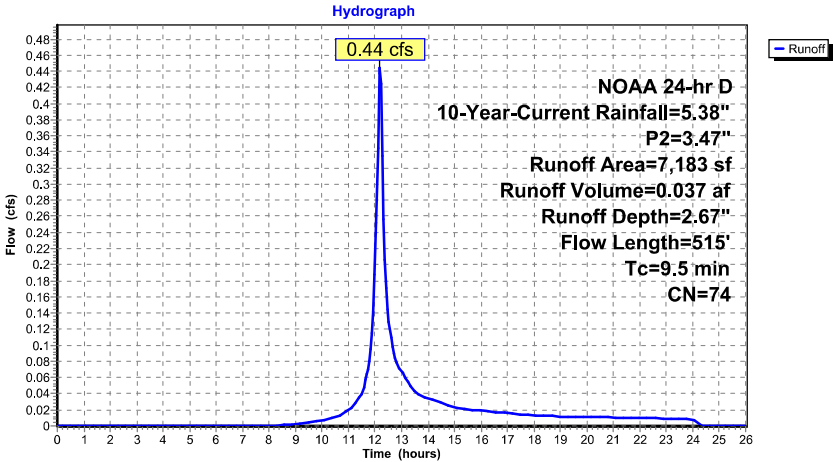
Runoff = 0.44 cfs @ 12.17 hrs, Volume= 0.037 af, Depth= 2.67"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Current Rainfall=5.38", P2=3.47"

Area (sf)	CN	Description
7,183	74	>75% Grass cover, Good, HSG C
7,183		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	55	0.0500	0.16		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
0.8	45	0.0100	0.93		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 3.47"
2.8	415	0.0150	2.49		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
9.5	515				Total

Subcatchment 5S: EX-DA2-PER

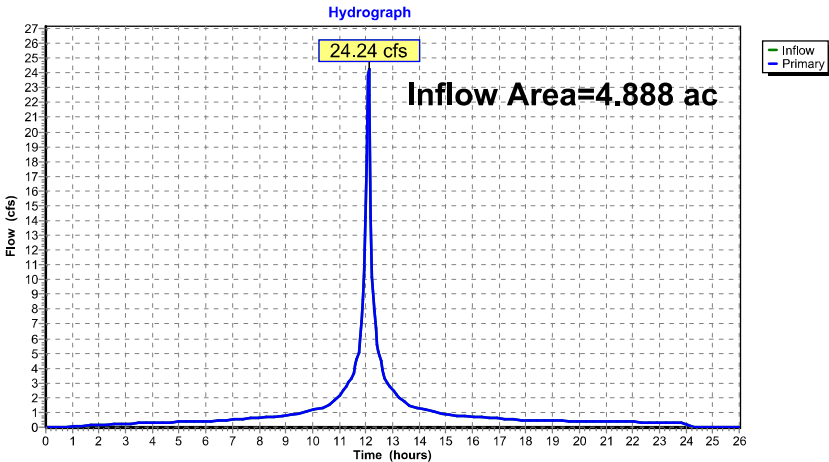


Summary for Link 6L: POA #2

Inflow Area = 4.888 ac, 96.63% Impervious, Inflow Depth = 5.06" for 10-Year-Current event
Inflow = 24.24 cfs @ 12.12 hrs, Volume= 2.061 af
Primary = 24.24 cfs @ 12.12 hrs, Volume= 2.061 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Link 6L: POA #2



Summary for Subcatchment 7S: PR-DA1-IMP

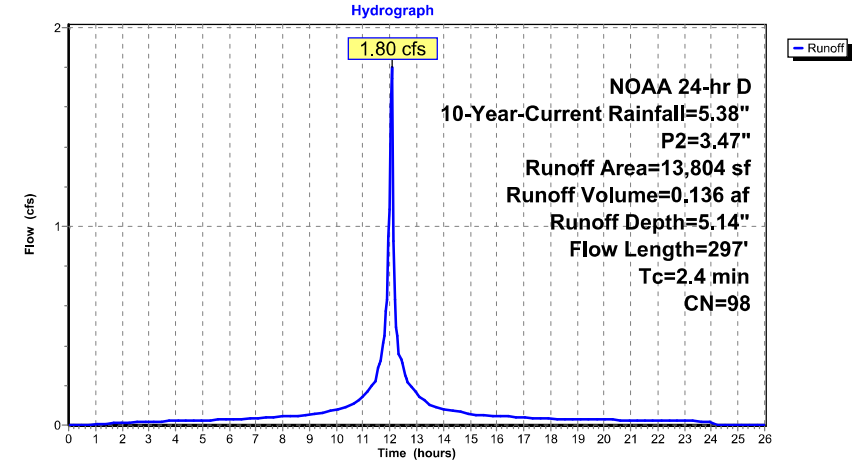
Runoff = 1.80 cfs @ 12.08 hrs, Volume= 0.136 af, Depth= 5.14"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Current Rainfall=5.38", P2=3.47"

Area (sf)	CN	Description
* 13,804	98	IMPERVIOUS
13,804		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0150	1.28		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
1.0	174	0.0196	2.84		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
0.1	23	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
2.4	297	Total			

Subcatchment 7S: PR-DA1-IMP



Summary for Subcatchment 8S: PR-DA1-PER

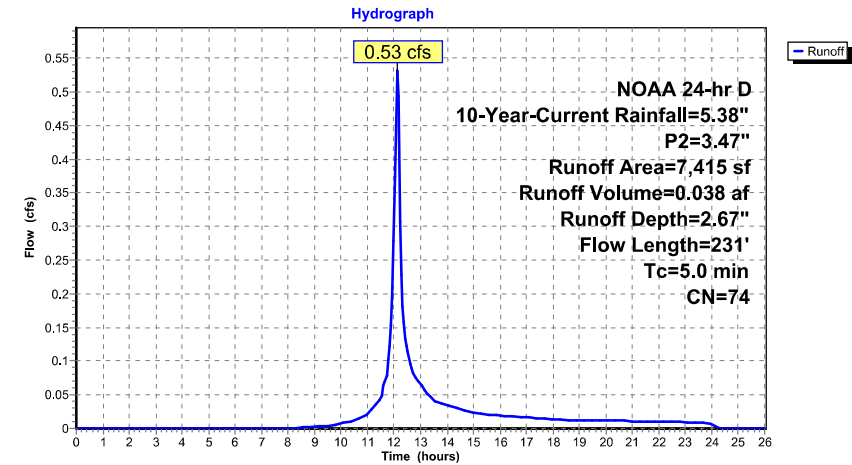
Runoff = 0.53 cfs @ 12.12 hrs, Volume= 0.038 af, Depth= 2.67"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Current Rainfall=5.38", P2=3.47"

Area (sf)	CN	Description
7,415	74	>75% Grass cover, Good, HSG C
7,415		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	33	0.0692	0.16		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
0.1	8	0.0518	1.26		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 3.47"
0.8	59	0.0180	1.24		Sheet Flow, TC-CD Smooth surfaces n= 0.011 P2= 3.47"
0.5	80	0.0180	2.72		Shallow Concentrated Flow, TC-DE Paved Kv= 20.3 fps
0.1	29	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	22	0.0104	5.82	7.14	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
5.0	231	Total			

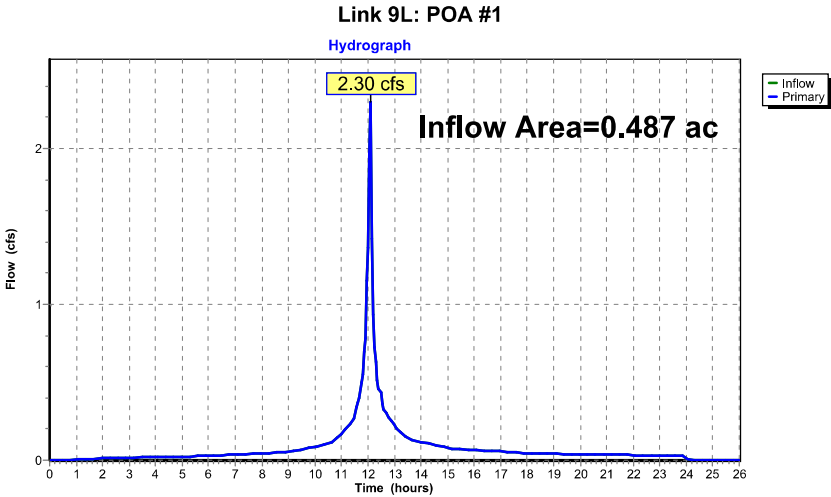
Subcatchment 8S: PR-DA1-PER



Summary for Link 9L: POA #1

Inflow Area = 0.487 ac, 65.05% Impervious, Inflow Depth = 4.28" for 10-Year-Current event
Inflow = 2.30 cfs @ 12.09 hrs, Volume= 0.174 af
Primary = 2.30 cfs @ 12.09 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 10S: PR-DA2-IMP

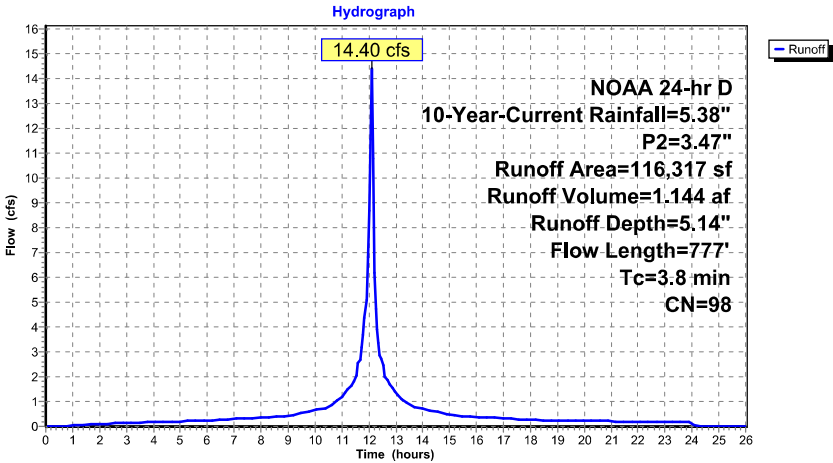
Runoff = 14.40 cfs @ 12.10 hrs, Volume= 1.144 af, Depth= 5.14"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Current Rainfall=5.38", P2=3.47"

Area (sf)		CN	Description			
116,317		98	IMPERVIOUS			
116,317			100.00% Impervious Area			

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	41	0.0150	1.07		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
0.2	55	0.0100	5.70	7.00	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	68	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	87	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	153	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.5	94	0.0030	3.12	3.83	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	63	0.0032	3.23	3.96	Pipe Channel, TC-GH 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	31	0.0050	4.03	4.95	Pipe Channel, TC-HI 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
1.1	156	0.0200	2.28		Shallow Concentrated Flow, TC-IJ Unpaved Kv= 16.1 fps
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-JK Unpaved Kv= 16.1 fps
3.8	777	Total			

Subcatchment 10S: PR-DA2-IMP



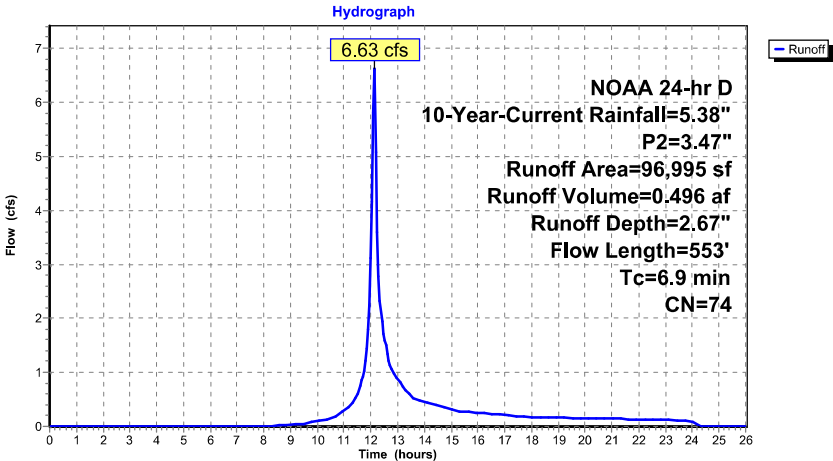
Summary for Subcatchment 11S: PR-DA2-PER

Runoff = 6.63 cfs @ 12.14 hrs, Volume= 0.496 af, Depth= 2.67"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Current Rainfall=5.38", P2=3.47"

Area (sf)		CN	Description			
96,995		74	>75% Grass cover, Good, HSG C			
96,995			100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
5.0	22	0.0120	0.07		Sheet Flow, TC-AB	
					Grass: Dense n= 0.240 P2= 3.47"	
0.4	182	0.0200	8.06	9.90	Pipe Channel, TC-BC	
					15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'	
					n= 0.012	
0.2	55	0.0050	4.03	4.95	Pipe Channel, TC-CD	
					15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'	
					n= 0.012	
0.1	40	0.0100	5.70	7.00	Pipe Channel, TC-DE	
					15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'	
					n= 0.012	
0.1	43	0.0096	5.59	6.86	Pipe Channel, TC-EF	
					15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'	
					n= 0.012	
0.6	106	0.0030	3.12	3.83	Pipe Channel, TC-FG	
					15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31'	
					n= 0.012	
0.4	76	0.0325	2.90		Shallow Concentrated Flow, TC-GH	
					Unpaved Kv= 16.1 fps	
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-HI	
					Unpaved Kv= 16.1 fps	
6.9	553	Total				

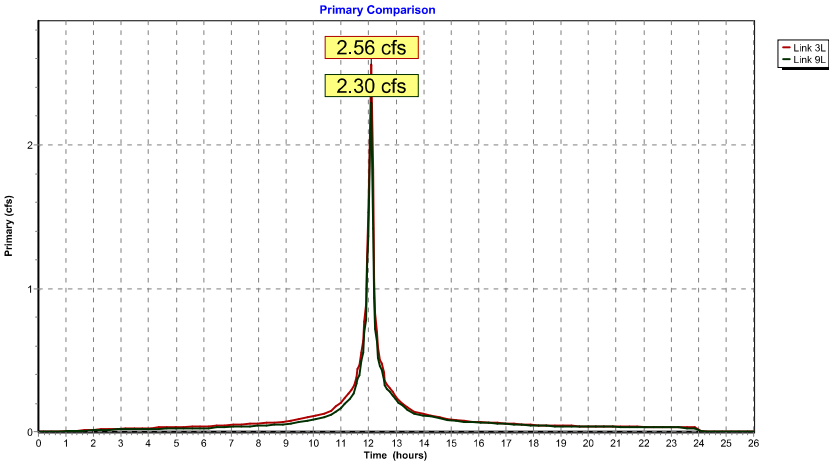
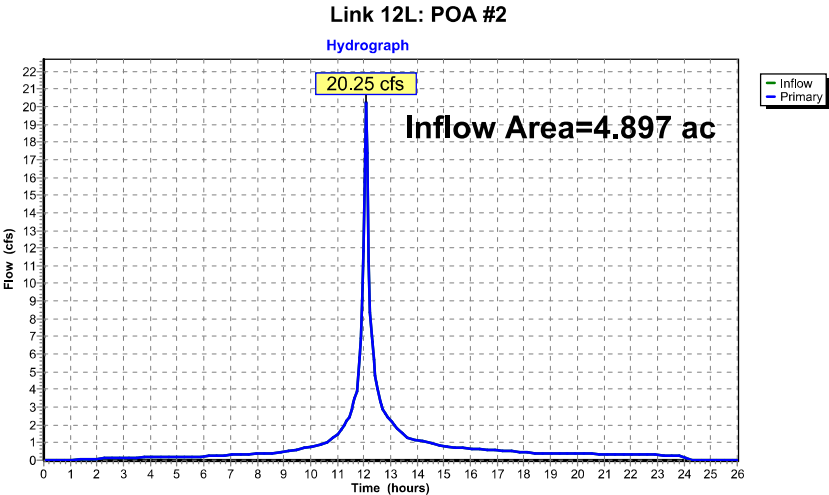
Subcatchment 11S: PR-DA2-PER



Summary for Link 12L: POA #2

Inflow Area = 4.897 ac, 54.53% Impervious, Inflow Depth = 4.02" for 10-Year-Current event
Inflow = 20.25 cfs @ 12.11 hrs, Volume= 1.640 af
Primary = 20.25 cfs @ 12.11 hrs, Volume= 1.640 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Primary Comparison								
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
0.00	0.00	0.00	2.60	0.02	0.01	5.20	0.03	0.02
0.05	0.00	0.00	2.65	0.02	0.02	5.25	0.03	0.02
0.10	0.00	0.00	2.70	0.02	0.02	5.30	0.03	0.02
0.15	0.00	0.00	2.75	0.02	0.02	5.35	0.03	0.03
0.20	0.00	0.00	2.80	0.02	0.02	5.40	0.03	0.03
0.25	0.00	0.00	2.85	0.02	0.02	5.45	0.03	0.03
0.30	0.00	0.00	2.90	0.02	0.02	5.50	0.03	0.03
0.35	0.00	0.00	2.95	0.02	0.02	5.55	0.03	0.03
0.40	0.00	0.00	3.00	0.02	0.02	5.60	0.03	0.03
0.45	0.00	0.00	3.05	0.02	0.02	5.65	0.04	0.03
0.50	0.00	0.00	3.10	0.02	0.02	5.70	0.04	0.03
0.55	0.00	0.00	3.15	0.02	0.02	5.75	0.04	0.03
0.60	0.00	0.00	3.20	0.02	0.02	5.80	0.04	0.03
0.65	0.00	0.00	3.25	0.02	0.02	5.85	0.04	0.03
0.70	0.00	0.00	3.30	0.02	0.02	5.90	0.04	0.03
0.75	0.00	0.00	3.35	0.02	0.02	5.95	0.04	0.03
0.80	0.00	0.00	3.40	0.03	0.02	6.00	0.04	0.03
0.85	0.00	0.00	3.45	0.03	0.02	6.05	0.04	0.03
0.90	0.00	0.00	3.50	0.03	0.02	6.10	0.04	0.03
0.95	0.00	0.00	3.55	0.03	0.02	6.15	0.04	0.03
1.00	0.00	0.00	3.60	0.03	0.02	6.20	0.04	0.03
1.05	0.00	0.00	3.65	0.03	0.02	6.25	0.04	0.03
1.10	0.01	0.00	3.70	0.03	0.02	6.30	0.04	0.03
1.15	0.01	0.00	3.75	0.03	0.02	6.35	0.04	0.03
1.20	0.01	0.01	3.80	0.03	0.02	6.40	0.04	0.03
1.25	0.01	0.01	3.85	0.03	0.02	6.45	0.04	0.03
1.30	0.01	0.01	3.90	0.03	0.02	6.50	0.04	0.03
1.35	0.01	0.01	3.95	0.03	0.02	6.55	0.04	0.03
1.40	0.01	0.01	4.00	0.03	0.02	6.60	0.04	0.03
1.45	0.01	0.01	4.05	0.03	0.02	6.65	0.04	0.03
1.50	0.01	0.01	4.10	0.03	0.02	6.70	0.04	0.03
1.55	0.01	0.01	4.15	0.03	0.02	6.75	0.04	0.03
1.60	0.01	0.01	4.20	0.03	0.02	6.80	0.05	0.03
1.65	0.01	0.01	4.25	0.03	0.02	6.85	0.05	0.03
1.70	0.01	0.01	4.30	0.03	0.02	6.90	0.05	0.03
1.75	0.01	0.01	4.35	0.03	0.02	6.95	0.05	0.03
1.80	0.01	0.01	4.40	0.03	0.02	7.00	0.05	0.03
1.85	0.01	0.01	4.45	0.03	0.02	7.05	0.05	0.04
1.90	0.01	0.01	4.50	0.03	0.02	7.10	0.05	0.04
1.95	0.01	0.01	4.55	0.03	0.02	7.15	0.05	0.04
2.00	0.02	0.01	4.60	0.03	0.02	7.20	0.05	0.04
2.05	0.02	0.01	4.65	0.03	0.02	7.25	0.05	0.04
2.10	0.02	0.01	4.70	0.03	0.02	7.30	0.05	0.04
2.15	0.02	0.01	4.75	0.03	0.02	7.35	0.05	0.04
2.20	0.02	0.01	4.80	0.03	0.02	7.40	0.05	0.04
2.25	0.02	0.01	4.85	0.03	0.02	7.45	0.05	0.04
2.30	0.02	0.01	4.90	0.03	0.02	7.50	0.05	0.04
2.35	0.02	0.01	4.95	0.03	0.02	7.55	0.05	0.04
2.40	0.02	0.01	5.00	0.03	0.02	7.60	0.05	0.04
2.45	0.02	0.01	5.05	0.03	0.02	7.65	0.05	0.04
2.50	0.02	0.01	5.10	0.03	0.02	7.70	0.06	0.04
2.55	0.02	0.01	5.15	0.03	0.02	7.75	0.06	0.04

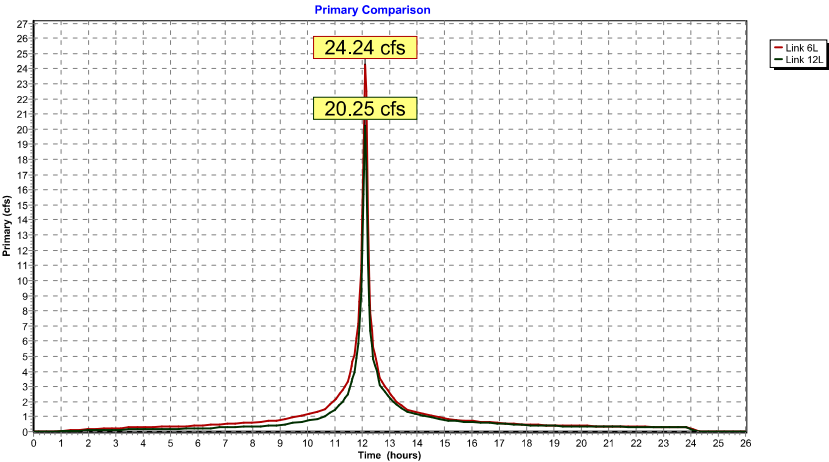
Primary Comparison (continued)								
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
7.80	0.06	0.04	10.40	0.13	0.10	13.00	0.24	0.23
7.85	0.06	0.04	10.45	0.13	0.10	13.05	0.23	0.21
7.90	0.06	0.04	10.50	0.13	0.10	13.10	0.22	0.20
7.95	0.06	0.04	10.55	0.14	0.11	13.15	0.21	0.19
8.00	0.06	0.04	10.60	0.14	0.11	13.20	0.20	0.19
8.05	0.06	0.04	10.65	0.15	0.12	13.25	0.19	0.18
8.10	0.06	0.04	10.70	0.16	0.13	13.30	0.19	0.17
8.15	0.06	0.04	10.75	0.16	0.13	13.35	0.18	0.16
8.20	0.06	0.04	10.80	0.17	0.14	13.40	0.17	0.16
8.25	0.06	0.05	10.85	0.18	0.15	13.45	0.16	0.15
8.30	0.06	0.05	10.90	0.19	0.15	13.50	0.16	0.15
8.35	0.06	0.05	10.95	0.19	0.16	13.55	0.15	0.14
8.40	0.06	0.05	11.00	0.20	0.16	13.60	0.14	0.13
8.45	0.06	0.05	11.05	0.21	0.18	13.65	0.14	0.13
8.50	0.06	0.05	11.10	0.22	0.18	13.70	0.14	0.13
8.55	0.06	0.05	11.15	0.24	0.20	13.75	0.14	0.13
8.60	0.07	0.05	11.20	0.25	0.21	13.80	0.13	0.12
8.65	0.07	0.05	11.25	0.26	0.22	13.85	0.13	0.12
8.70	0.07	0.05	11.30	0.28	0.23	13.90	0.13	0.12
8.75	0.07	0.05	11.35	0.29	0.24	13.95	0.13	0.12
8.80	0.07	0.05	11.40	0.30	0.25	14.00	0.13	0.12
8.85	0.07	0.05	11.45	0.32	0.27	14.05	0.12	0.11
8.90	0.07	0.05	11.50	0.33	0.28	14.10	0.12	0.11
8.95	0.07	0.05	11.55	0.38	0.34	14.15	0.12	0.11
9.00	0.07	0.05	11.60	0.44	0.37	14.20	0.12	0.11
9.05	0.07	0.06	11.65	0.46	0.39	14.25	0.12	0.11
9.10	0.07	0.06	11.70	0.47	0.40	14.30	0.11	0.11
9.15	0.08	0.06	11.75	0.56	0.50	14.35	0.11	0.10
9.20	0.08	0.06	11.80	0.64	0.55	14.40	0.11	0.10
9.25	0.08	0.06	11.85	0.77	0.70	14.45	0.11	0.10
9.30	0.08	0.06	11.90	0.89	0.78	14.50	0.11	0.10
9.35	0.08	0.06	11.95	1.22	1.15	14.55	0.10	0.10
9.40	0.09	0.07	12.00	1.53	1.36	14.60	0.10	0.09
9.45	0.09	0.07	12.05	2.08	1.97	14.65	0.10	0.09
9.50	0.09	0.07	12.10	2.55	2.26	14.70	0.10	0.09
9.55	0.09	0.07	12.15	1.83	1.42	14.75	0.10	0.09
9.60	0.09	0.07	12.20	1.06	0.94	14.80	0.09	0.09
9.65	0.10	0.07	12.25	0.82	0.72	14.85	0.09	0.08
9.70	0.10	0.08	12.30	0.69	0.63	14.90	0.09	0.08
9.75	0.10	0.08	12.35	0.59	0.52	14.95	0.09	0.08
9.80	0.10	0.08	12.40	0.51	0.46	15.00	0.08	0.08
9.85	0.10	0.08	12.45	0.48	0.44	15.05	0.08	0.08
9.90	0.11	0.08	12.50	0.47	0.43	15.10	0.08	0.08
9.95	0.11	0.08	12.55	0.41	0.36	15.15	0.08	0.07
10.00	0.11	0.09	12.60	0.36	0.33	15.20	0.08	0.07
10.05	0.11	0.09	12.65	0.34	0.31	15.25	0.08	0.07
10.10	0.11	0.09	12.70	0.32	0.30	15.30	0.08	0.07
10.15	0.12	0.09	12.75	0.31	0.28	15.35	0.08	0.07
10.20	0.12	0.09	12.80	0.30	0.27	15.40	0.08	0.07
10.25	0.12	0.09	12.85	0.28	0.26	15.45	0.08	0.07
10.30	0.12	0.10	12.90	0.27	0.25	15.50	0.08	0.07
10.35	0.12	0.10	12.95	0.26	0.23	15.55	0.08	0.07

Primary Comparison (continued)

Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
15.60	0.07	0.07	18.20	0.05	0.04
15.65	0.07	0.07	18.25	0.05	0.04
15.70	0.07	0.07	18.30	0.05	0.04
15.75	0.07	0.07	18.35	0.05	0.04
15.80	0.07	0.07	18.40	0.04	0.04
15.85	0.07	0.07	18.45	0.04	0.04
15.90	0.07	0.07	18.50	0.04	0.04
15.95	0.07	0.07	18.55	0.04	0.04
16.00	0.07	0.07	18.60	0.04	0.04
16.05	0.07	0.06	18.65	0.04	0.04
16.10	0.07	0.06	18.70	0.04	0.04
16.15	0.07	0.06	18.75	0.04	0.04
16.20	0.07	0.06	18.80	0.04	0.04
16.25	0.07	0.06	18.85	0.04	0.04
16.30	0.07	0.06	18.90	0.04	0.04
16.35	0.07	0.06	18.95	0.04	0.04
16.40	0.07	0.06	19.00	0.04	0.04
16.45	0.06	0.06	19.05	0.04	0.04
16.50	0.06	0.06	19.10	0.04	0.04
16.55	0.06	0.06	19.15	0.04	0.04
16.60	0.06	0.06	19.20	0.04	0.04
16.65	0.06	0.06	19.25	0.04	0.04
16.70	0.06	0.06	19.30	0.04	0.04
16.75	0.06	0.06	19.35	0.04	0.04
16.80	0.06	0.06	19.40	0.04	0.04
16.85	0.06	0.06	19.45	0.04	0.04
16.90	0.06	0.06	19.50	0.04	0.04
16.95	0.06	0.06	19.55	0.04	0.04
17.00	0.06	0.05	19.60	0.04	0.04
17.05	0.06	0.05	19.65	0.04	0.04
17.10	0.06	0.05	19.70	0.04	0.04
17.15	0.06	0.05	19.75	0.04	0.04
17.20	0.06	0.05	19.80	0.04	0.04
17.25	0.06	0.05	19.85	0.04	0.04
17.30	0.06	0.05	19.90	0.04	0.04
17.35	0.05	0.05	19.95	0.04	0.04
17.40	0.05	0.05	20.00	0.04	0.04
17.45	0.05	0.05	20.05	0.04	0.04
17.50	0.05	0.05	20.10	0.04	0.04
17.55	0.05	0.05	20.15	0.04	0.04
17.60	0.05	0.05	20.20	0.04	0.04
17.65	0.05	0.05	20.25	0.04	0.04
17.70	0.05	0.05	20.30	0.04	0.04
17.75	0.05	0.05	20.35	0.04	0.04
17.80	0.05	0.05	20.40	0.04	0.04
17.85	0.05	0.05	20.45	0.04	0.04
17.90	0.05	0.05	20.50	0.04	0.04
17.95	0.05	0.04	20.55	0.04	0.04
18.00	0.05	0.04	20.60	0.04	0.04
18.05	0.05	0.04	20.65	0.04	0.04
18.10	0.05	0.04	20.70	0.04	0.04
18.15	0.05	0.04	20.75	0.04	0.04

Primary Comparison (continued)

Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
23.40	0.03	0.03	26.00	0.00	0.00
23.45	0.03	0.03			
23.50	0.03	0.03			
23.55	0.03	0.03			
23.60	0.03	0.03			
23.65	0.03	0.03			
23.70	0.03	0.03			
23.75	0.03	0.03			
23.80	0.03	0.03			
23.85	0.03	0.03			
23.90	0.03	0.03			
23.95	0.03	0.03			
24.00	0.03	0.03			
24.05	0.02	0.01			
24.10	0.00	0.00			
24.15	0.00	0.00			
24.20	0.00	0.00			
24.25	0.00	0.00			
24.30	0.00	0.00			
24.35	0.00	0.00			
24.40	0.00	0.00			
24.45	0.00	0.00			
24.50	0.00	0.00			
24.55	0.00	0.00			
24.60	0.00	0.00			
24.65	0.00	0.00			
24.70	0.00	0.00			
24.75	0.00	0.00			
24.80	0.00	0.00			
24.85	0.00	0.00			
24.90	0.00	0.00			
24.95	0.00	0.00			
25.00	0.00	0.00			
25.05	0.00	0.00			
25.10	0.00	0.00			
25.15	0.00	0.00			
25.20	0.00	0.00			
25.25	0.00	0.00			
25.30	0.00	0.00			
25.35	0.00	0.00			
25.40	0.00	0.00			
25.45	0.00	0.00			
25.50	0.00	0.00			
25.55	0.00	0.00			
25.60	0.00	0.00			
25.65	0.00	0.00			
25.70	0.00	0.00			
25.75	0.00	0.00			
25.80	0.00	0.00			
25.85	0.00	0.00			
25.90	0.00	0.00			
25.95	0.00	0.00			



Primary Comparison

Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
0.00	0.00	0.00	2.60	0.22	0.12	5.20	0.36	0.21
0.05	0.00	0.00	2.65	0.22	0.13	5.25	0.37	0.21
0.10	0.00	0.00	2.70	0.22	0.13	5.30	0.37	0.21
0.15	0.00	0.00	2.75	0.23	0.13	5.35	0.37	0.21
0.20	0.00	0.00	2.80	0.23	0.13	5.40	0.37	0.21
0.25	0.00	0.00	2.85	0.23	0.13	5.45	0.38	0.21
0.30	0.00	0.00	2.90	0.24	0.14	5.50	0.38	0.21
0.35	0.00	0.00	2.95	0.24	0.14	5.55	0.38	0.22
0.40	0.00	0.00	3.00	0.24	0.14	5.60	0.38	0.22
0.45	0.00	0.00	3.05	0.25	0.14	5.65	0.38	0.22
0.50	0.00	0.00	3.10	0.25	0.14	5.70	0.39	0.22
0.55	0.00	0.00	3.15	0.26	0.15	5.75	0.39	0.22
0.60	0.00	0.00	3.20	0.26	0.15	5.80	0.39	0.22
0.65	0.00	0.00	3.25	0.26	0.15	5.85	0.39	0.22
0.70	0.00	0.00	3.30	0.27	0.15	5.90	0.39	0.22
0.75	0.00	0.00	3.35	0.27	0.15	5.95	0.40	0.22
0.80	0.01	0.01	3.40	0.27	0.15	6.00	0.40	0.23
0.85	0.02	0.01	3.45	0.27	0.16	6.05	0.40	0.23
0.90	0.03	0.02	3.50	0.28	0.16	6.10	0.41	0.23
0.95	0.03	0.02	3.55	0.28	0.16	6.15	0.41	0.24
1.00	0.04	0.03	3.60	0.28	0.16	6.20	0.42	0.24
1.05	0.05	0.03	3.65	0.29	0.16	6.25	0.43	0.24
1.10	0.06	0.03	3.70	0.29	0.16	6.30	0.43	0.25
1.15	0.06	0.04	3.75	0.29	0.17	6.35	0.44	0.25
1.20	0.07	0.04	3.80	0.29	0.17	6.40	0.44	0.25
1.25	0.08	0.05	3.85	0.30	0.17	6.45	0.45	0.26
1.30	0.09	0.05	3.90	0.30	0.17	6.50	0.45	0.26
1.35	0.09	0.05	3.95	0.30	0.17	6.55	0.46	0.26
1.40	0.10	0.06	4.00	0.31	0.17	6.60	0.47	0.27
1.45	0.10	0.06	4.05	0.31	0.18	6.65	0.47	0.27
1.50	0.11	0.06	4.10	0.31	0.18	6.70	0.48	0.27
1.55	0.12	0.07	4.15	0.31	0.18	6.75	0.48	0.28
1.60	0.12	0.07	4.20	0.32	0.18	6.80	0.49	0.28
1.65	0.13	0.07	4.25	0.32	0.18	6.85	0.50	0.28
1.70	0.13	0.08	4.30	0.32	0.18	6.90	0.50	0.29
1.75	0.14	0.08	4.35	0.32	0.18	6.95	0.51	0.29
1.80	0.14	0.08	4.40	0.33	0.19	7.00	0.52	0.29
1.85	0.15	0.09	4.45	0.33	0.19	7.05	0.52	0.30
1.90	0.16	0.09	4.50	0.33	0.19	7.10	0.53	0.30
1.95	0.16	0.09	4.55	0.33	0.19	7.15	0.53	0.30
2.00	0.16	0.09	4.60	0.34	0.19	7.20	0.54	0.31
2.05	0.17	0.10	4.65	0.34	0.19	7.25	0.54	0.31
2.10	0.17	0.10	4.70	0.34	0.19	7.30	0.55	0.31
2.15	0.18	0.10	4.75	0.34	0.19	7.35	0.56	0.32
2.20	0.18	0.10	4.80	0.35	0.20	7.40	0.56	0.32
2.25	0.19	0.11	4.85	0.35	0.20	7.45	0.57	0.32
2.30	0.19	0.11	4.90	0.35	0.20	7.50	0.58	0.33
2.35	0.20	0.11	4.95	0.35	0.20	7.55	0.58	0.33
2.40	0.20	0.11	5.00	0.36	0.20	7.60	0.59	0.33
2.45	0.20	0.12	5.05	0.36	0.20	7.65	0.59	0.34
2.50	0.21	0.12	5.10	0.36	0.20	7.70	0.60	0.34
2.55	0.21	0.12	5.15	0.36	0.21	7.75	0.60	0.34

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
7.80	0.61	0.35	10.40	1.32	0.88	13.00	2.54	2.24
7.85	0.62	0.35	10.45	1.34	0.90	13.05	2.42	2.13
7.90	0.62	0.35	10.50	1.37	0.92	13.10	2.27	2.01
7.95	0.63	0.36	10.55	1.41	0.96	13.15	2.18	1.93
8.00	0.64	0.36	10.60	1.48	1.01	13.20	2.09	1.85
8.05	0.64	0.36	10.65	1.55	1.06	13.25	2.02	1.79
8.10	0.65	0.37	10.70	1.63	1.12	13.30	1.93	1.72
8.15	0.65	0.37	10.75	1.70	1.17	13.35	1.87	1.65
8.20	0.66	0.38	10.80	1.78	1.23	13.40	1.78	1.59
8.25	0.66	0.38	10.85	1.85	1.29	13.45	1.72	1.52
8.30	0.67	0.38	10.90	1.93	1.34	13.50	1.63	1.45
8.35	0.68	0.39	10.95	2.00	1.40	13.55	1.56	1.39
8.40	0.68	0.40	11.00	2.08	1.46	13.60	1.48	1.32
8.45	0.69	0.40	11.05	2.17	1.55	13.65	1.44	1.28
8.50	0.70	0.40	11.10	2.31	1.65	13.70	1.41	1.26
8.55	0.70	0.41	11.15	2.43	1.75	13.75	1.39	1.24
8.60	0.71	0.41	11.20	2.57	1.85	13.80	1.36	1.22
8.65	0.71	0.42	11.25	2.69	1.95	13.85	1.35	1.20
8.70	0.72	0.43	11.30	2.84	2.06	13.90	1.32	1.18
8.75	0.73	0.43	11.35	2.95	2.16	13.95	1.30	1.17
8.80	0.73	0.43	11.40	3.10	2.27	14.00	1.28	1.15
8.85	0.74	0.44	11.45	3.22	2.38	14.05	1.26	1.13
8.90	0.74	0.44	11.50	3.37	2.50	14.10	1.24	1.11
8.95	0.75	0.45	11.55	3.69	2.85	14.15	1.22	1.09
9.00	0.76	0.46	11.60	4.31	3.28	14.20	1.20	1.08
9.05	0.77	0.47	11.65	4.62	3.50	14.25	1.18	1.06
9.10	0.79	0.48	11.70	4.81	3.65	14.30	1.16	1.04
9.15	0.81	0.49	11.75	5.28	4.19	14.35	1.14	1.02
9.20	0.83	0.51	11.80	6.22	4.88	14.40	1.11	1.00
9.25	0.85	0.52	11.85	7.17	5.81	14.45	1.10	0.98
9.30	0.87	0.54	11.90	8.62	6.89	14.50	1.07	0.97
9.35	0.89	0.55	11.95	10.65	9.06	14.55	1.06	0.95
9.40	0.91	0.56	12.00	14.26	11.79	14.60	1.03	0.93
9.45	0.93	0.58	12.05	18.04	15.70	14.65	1.01	0.91
9.50	0.95	0.59	12.10	23.90	20.20	14.70	0.99	0.89
9.55	0.97	0.61	12.15	22.51	17.37	14.75	0.97	0.87
9.60	0.99	0.62	12.20	14.26	11.25	14.80	0.95	0.86
9.65	1.01	0.64	12.25	10.17	8.34	14.85	0.93	0.84
9.70	1.03	0.65	12.30	7.91	6.70	14.90	0.91	0.82
9.75	1.05	0.67	12.35	6.71	5.67	14.95	0.89	0.80
9.80	1.08	0.69	12.40	5.57	4.79	15.00	0.87	0.78
9.85	1.09	0.70	12.45	5.09	4.41	15.05	0.85	0.76
9.90	1.12	0.72	12.50	4.85	4.22	15.10	0.82	0.74
9.95	1.13	0.73	12.55	4.51	3.84	15.15	0.81	0.73
10.00	1.16	0.75	12.60	3.87	3.35	15.20	0.80	0.73
10.05	1.18	0.76	12.65	3.56	3.10	15.25	0.80	0.72
10.10	1.20	0.78	12.70	3.35	2.94	15.30	0.79	0.72
10.15	1.22	0.80	12.75	3.22	2.82	15.35	0.79	0.71
10.20	1.24	0.81	12.80	3.07	2.70	15.40	0.78	0.71
10.25	1.26	0.83	12.85	2.95	2.59	15.45	0.78	0.70
10.30	1.28	0.85	12.90	2.80	2.47	15.50	0.77	0.70
10.35	1.30	0.86	12.95	2.69	2.36	15.55	0.76	0.69

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
15.60	0.76	0.68	18.20	0.46	0.42	20.80	0.38	0.35
15.65	0.75	0.68	18.25	0.46	0.42	20.85	0.38	0.35
15.70	0.75	0.68	18.30	0.46	0.42	20.90	0.38	0.35
15.75	0.74	0.67	18.35	0.45	0.42	20.95	0.38	0.35
15.80	0.73	0.66	18.40	0.45	0.41	21.00	0.38	0.35
15.85	0.73	0.66	18.45	0.45	0.41	21.05	0.38	0.34
15.90	0.72	0.65	18.50	0.45	0.41	21.10	0.37	0.34
15.95	0.72	0.65	18.55	0.45	0.41	21.15	0.37	0.34
16.00	0.71	0.64	18.60	0.45	0.41	21.20	0.37	0.34
16.05	0.71	0.64	18.65	0.45	0.41	21.25	0.37	0.34
16.10	0.70	0.64	18.70	0.44	0.41	21.30	0.37	0.34
16.15	0.69	0.63	18.75	0.44	0.41	21.35	0.37	0.34
16.20	0.69	0.62	18.80	0.44	0.40	21.40	0.37	0.34
16.25	0.68	0.62	18.85	0.44	0.40	21.45	0.36	0.34
16.30	0.68	0.61	18.90	0.44	0.40	21.50	0.36	0.33
16.35	0.67	0.61	18.95	0.44	0.40	21.55	0.36	0.33
16.40	0.66	0.60	19.00	0.43	0.40	21.60	0.36	0.33
16.45	0.66	0.60	19.05	0.43	0.40	21.65	0.36	0.33
16.50	0.65	0.59	19.10	0.43	0.40	21.70	0.36	0.33
16.55	0.65	0.59	19.15	0.43	0.39	21.75	0.35	0.33
16.60	0.64	0.58	19.20	0.43	0.39	21.80	0.35	0.33
16.65	0.63	0.58	19.25	0.43	0.39	21.85	0.35	0.32
16.70	0.63	0.57	19.30	0.43	0.39	21.90	0.35	0.32
16.75	0.62	0.57	19.35	0.43	0.39	21.95	0.35	0.32
16.80	0.62	0.56	19.40	0.42	0.39	22.00	0.35	0.32
16.85	0.61	0.56	19.45	0.42	0.39	22.05	0.35	0.32
16.90	0.61	0.55	19.50	0.42	0.39	22.10	0.34	0.32
16.95	0.60	0.55	19.55	0.42	0.38	22.15	0.34	0.32
17.00	0.59	0.54	19.60	0.42	0.38	22.20	0.34	0.32
17.05	0.59	0.54	19.65	0.42	0.38	22.25	0.34	0.31
17.10	0.58	0.53	19.70	0.42	0.38	22.30	0.34	0.31
17.15	0.58	0.52	19.75	0.41	0.38	22.35	0.34	0.31
17.20	0.57	0.52	19.80	0.41	0.38	22.40	0.34	0.31
17.25	0.56	0.51	19.85	0.41	0.38	22.45	0.33	0.31
17.30	0.56	0.51	19.90	0.41	0.38	22.50	0.33	0.31
17.35	0.55	0.50	19.95	0.41	0.37	22.55	0.33	0.31
17.40	0.55	0.50	20.00	0.41	0.37	22.60	0.33	0.30
17.45	0.54	0.49	20.05	0.40	0.37	22.65	0.33	0.30
17.50	0.53	0.49	20.10	0.40	0.37	22.70	0.33	0.30
17.55	0.53	0.48	20.15	0.40	0.37	22.75	0.33	0.30
17.60	0.52	0.48	20.20	0.40	0.37	22.80	0.32	0.30
17.65	0.52	0.47	20.25	0.40	0.37	22.85	0.32	0.30
17.70	0.51	0.47	20.30	0.40	0.36	22.90	0.32	0.30
17.75	0.51	0.46	20.35	0.39	0.36	22.95	0.32	0.30
17.80	0.50	0.46	20.40	0.39	0.36	23.00	0.32	0.29
17.85	0.49	0.45	20.45	0.39	0.36	23.05	0.32	0.29
17.90	0.49	0.45	20.50	0.39	0.36	23.10	0.32	0.29
17.95	0.48	0.44	20.55	0.39	0.36	23.15	0.31	0.29
18.00	0.48	0.44	20.60	0.39	0.36	23.20	0.31	0.29
18.05	0.47	0.43	20.65	0.39	0.36	23.25	0.31	0.29
18.10	0.46	0.42	20.70	0.39	0.35	23.30	0.31	0.28
18.15	0.46	0.42	20.75	0.38	0.35	23.35	0.31	0.28

Primary Comparison (continued)

Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
23.40	0.31	0.28	26.00	0.00	0.00
23.45	0.30	0.28			
23.50	0.30	0.28			
23.55	0.30	0.28			
23.60	0.30	0.28			
23.65	0.30	0.28			
23.70	0.30	0.28			
23.75	0.30	0.27			
23.80	0.29	0.27			
23.85	0.29	0.27			
23.90	0.29	0.27			
23.95	0.29	0.27			
24.00	0.29	0.27			
24.05	0.23	0.19			
24.10	0.08	0.07			
24.15	0.02	0.02			
24.20	0.01	0.01			
24.25	0.00	0.00			
24.30	0.00	0.00			
24.35	0.00	0.00			
24.40	0.00	0.00			
24.45	0.00	0.00			
24.50	0.00	0.00			
24.55	0.00	0.00			
24.60	0.00	0.00			
24.65	0.00	0.00			
24.70	0.00	0.00			
24.75	0.00	0.00			
24.80	0.00	0.00			
24.85	0.00	0.00			
24.90	0.00	0.00			
24.95	0.00	0.00			
25.00	0.00	0.00			
25.05	0.00	0.00			
25.10	0.00	0.00			
25.15	0.00	0.00			
25.20	0.00	0.00			
25.25	0.00	0.00			
25.30	0.00	0.00			
25.35	0.00	0.00			
25.40	0.00	0.00			
25.45	0.00	0.00			
25.50	0.00	0.00			
25.55	0.00	0.00			
25.60	0.00	0.00			
25.65	0.00	0.00			
25.70	0.00	0.00			
25.75	0.00	0.00			
25.80	0.00	0.00			
25.85	0.00	0.00			
25.90	0.00	0.00			
25.95	0.00	0.00			

Summary for Subcatchment 1S: EX-DA1-IMP

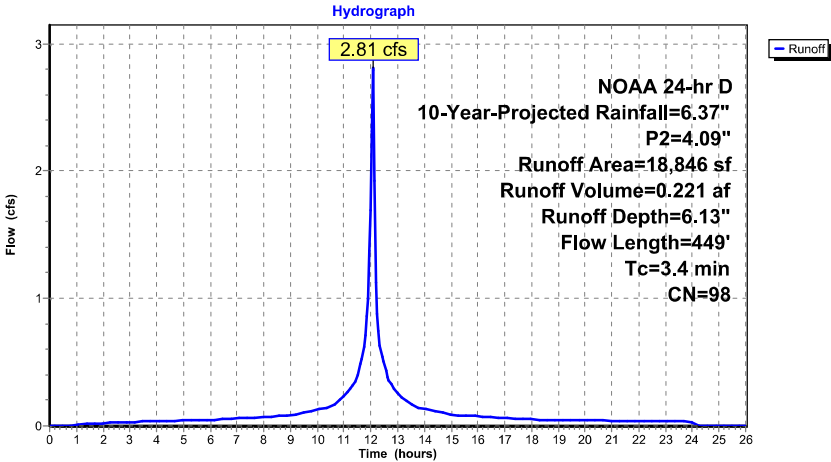
Runoff = 2.81 cfs @ 12.09 hrs, Volume= 0.221 af, Depth= 6.13"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Projected Rainfall=6.37", P2=4.09"

Area (sf)	CN	Description
* 18,142	98	IMPERVIOUS
* 704	98	BUILDINGS
18,846	98	Weighted Average
18,846		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	100	0.0216	1.60		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
2.4	349	0.0139	2.39		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
3.4	449				Total

Subcatchment 1S: EX-DA1-IMP



Summary for Subcatchment 2S: EX-DA1-PER

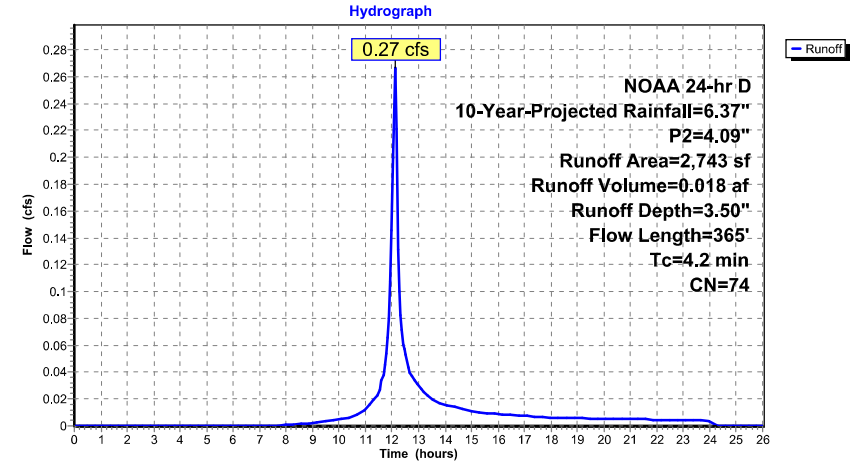
Runoff = 0.27 cfs @ 12.11 hrs, Volume= 0.018 af, Depth= 3.50"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Projected Rainfall=6.37", P2=4.09"

Area (sf)	CN	Description
2,743	74	>75% Grass cover, Good, HSG C
2,743		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0364	0.10		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
1.2	93	0.0130	1.29		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 4.09"
1.8	265	0.0139	2.39		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
4.2	365				Total

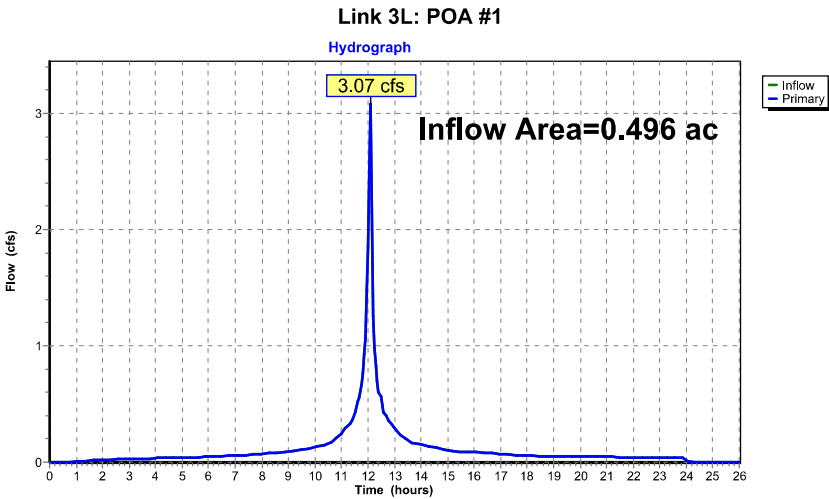
Subcatchment 2S: EX-DA1-PER



Summary for Link 3L: POA #1

Inflow Area = 0.496 ac, 87.29% Impervious, Inflow Depth = 5.80" for 10-Year-Projected event
Inflow = 3.07 cfs @ 12.09 hrs, Volume= 0.239 af
Primary = 3.07 cfs @ 12.09 hrs, Volume= 0.239 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 4S: EX-DA2-IMP

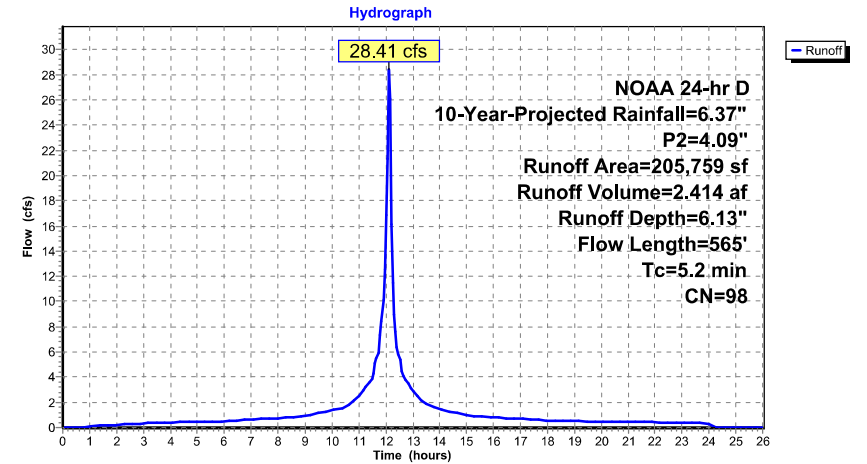
Runoff = 28.41 cfs @ 12.11 hrs, Volume= 2.414 af, Depth= 6.13"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Projected Rainfall=6.37", P2=4.09"

Area (sf)	CN	Description
* 195,091	98	IMPERVIOUS
* 10,668	98	BUILDING
205,759	98	Weighted Average
205,759		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0135	1.33		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
2.2	230	0.0075	1.76		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
1.7	235	0.0130	2.31		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
5.2	565				Total

Subcatchment 4S: EX-DA2-IMP



Summary for Subcatchment 5S: EX-DA2-PER

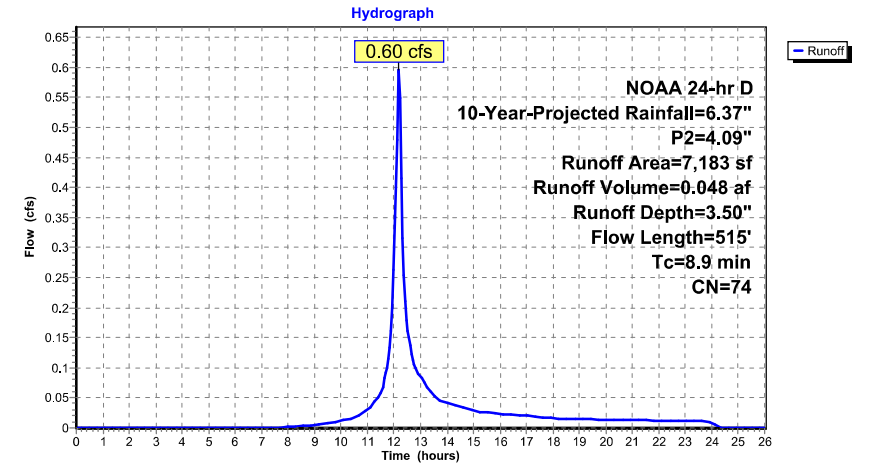
Runoff = 0.60 cfs @ 12.16 hrs, Volume= 0.048 af, Depth= 3.50"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Projected Rainfall=6.37", P2=4.09"

Area (sf)	CN	Description
7,183	74	>75% Grass cover, Good, HSG C
7,183		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	55	0.0500	0.17		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
0.7	45	0.0100	1.00		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 4.09"
2.8	415	0.0150	2.49		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
8.9	515				Total

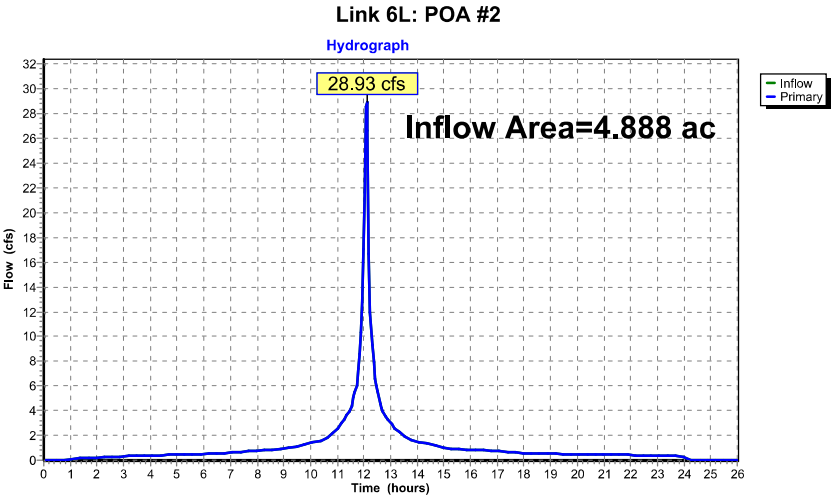
Subcatchment 5S: EX-DA2-PER



Summary for Link 6L: POA #2

Inflow Area = 4.888 ac, 96.63% Impervious, Inflow Depth = 6.04" for 10-Year-Projected event
Inflow = 28.93 cfs @ 12.11 hrs, Volume= 2.462 af
Primary = 28.93 cfs @ 12.11 hrs, Volume= 2.462 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



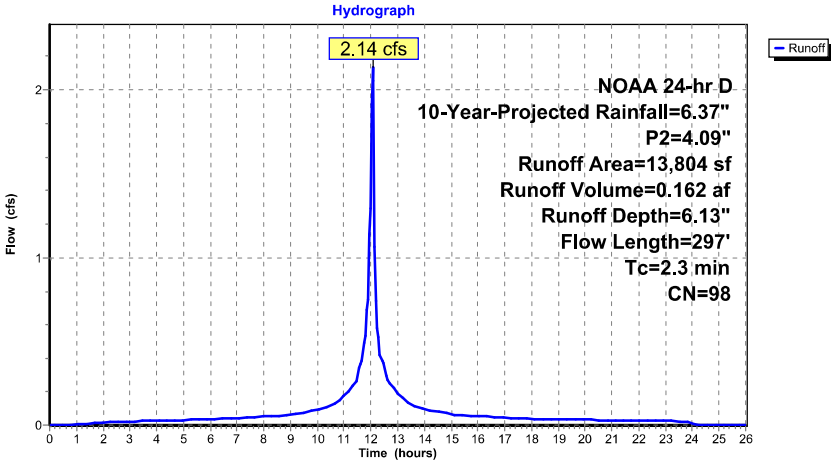
Summary for Subcatchment 7S: PR-DA1-IMP

Runoff = 2.14 cfs @ 12.08 hrs, Volume= 0.162 af, Depth= 6.13"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Projected Rainfall=6.37", P2=4.09"

Area (sf)	CN	Description			
* 13,804	98	IMPERVIOUS			
13,804		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0150	1.39		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
1.0	174	0.0196	2.84		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
0.1	23	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
2.3	297	Total			

Subcatchment 7S: PR-DA1-IMP



Summary for Subcatchment 8S: PR-DA1-PER

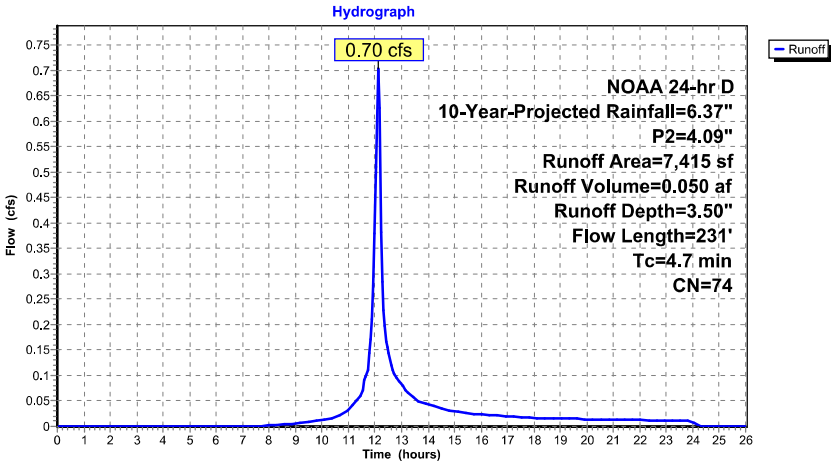
Runoff = 0.70 cfs @ 12.11 hrs, Volume= 0.050 af, Depth= 3.50"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Projected Rainfall=6.37", P2=4.09"

Area (sf)		CN	Description		
7,415		74	>75% Grass cover, Good, HSG C		
7,415			100.00% Pervious Area		

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	33	0.0692	0.17		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
0.1	8	0.0518	1.37		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 4.09"
0.7	59	0.0180	1.34		Sheet Flow, TC-CD Smooth surfaces n= 0.011 P2= 4.09"
0.5	80	0.0180	2.72		Shallow Concentrated Flow, TC-DE Paved Kv= 20.3 fps
0.1	29	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	22	0.0104	5.82	7.14	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
4.7	231	Total			

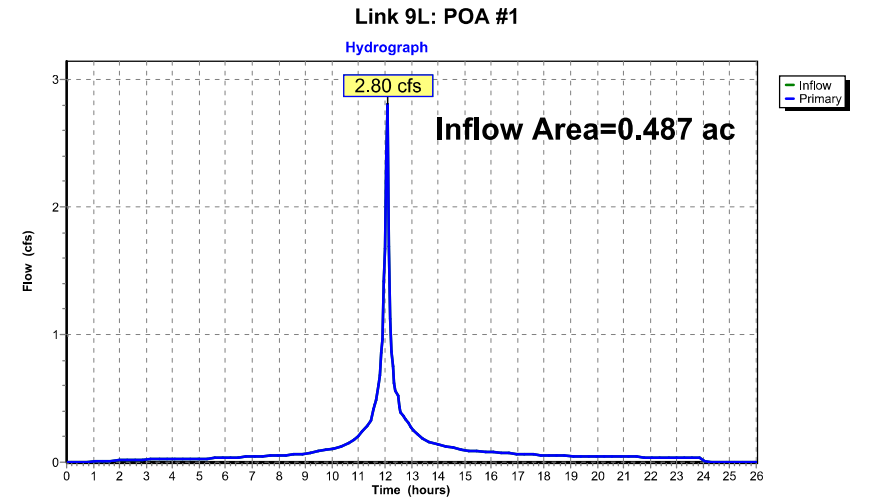
Subcatchment 8S: PR-DA1-PER



Summary for Link 9L: POA #1

Inflow Area = 0.487 ac, 65.05% Impervious, Inflow Depth = 5.21" for 10-Year-Projected event
Inflow = 2.80 cfs @ 12.09 hrs, Volume= 0.212 af
Primary = 2.80 cfs @ 12.09 hrs, Volume= 0.212 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 10S: PR-DA2-IMP

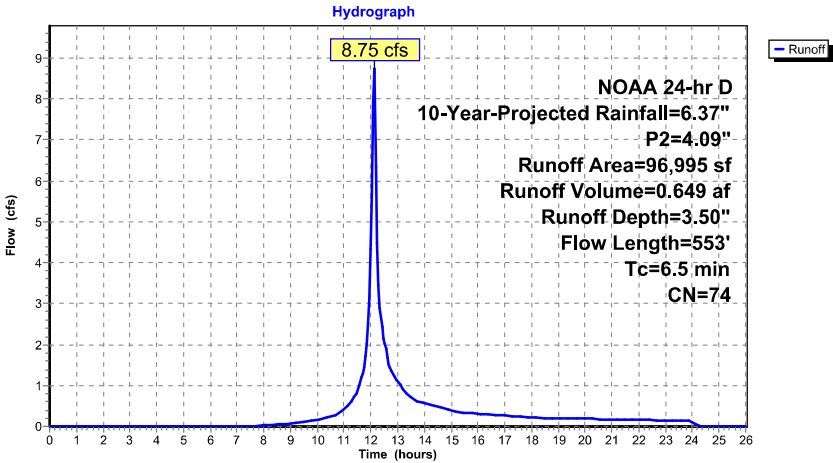
Runoff = 17.07 cfs @ 12.10 hrs, Volume= 1.364 af, Depth= 6.13"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year-Projected Rainfall=6.37", P2=4.09"

Area (sf)	CN	Description
* 116,317	98	IMPERVIOUS
116,317		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	41	0.0150	1.16		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
0.2	55	0.0100	5.70	7.00	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	68	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	87	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	153	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.5	94	0.0030	3.12	3.83	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	63	0.0032	3.23	3.96	Pipe Channel, TC-GH 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	31	0.0050	4.03	4.95	Pipe Channel, TC-HI 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
1.1	156	0.0200	2.28		Shallow Concentrated Flow, TC-IJ Unpaved Kv= 16.1 fps
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-JK Unpaved Kv= 16.1 fps
3.8	777	Total			

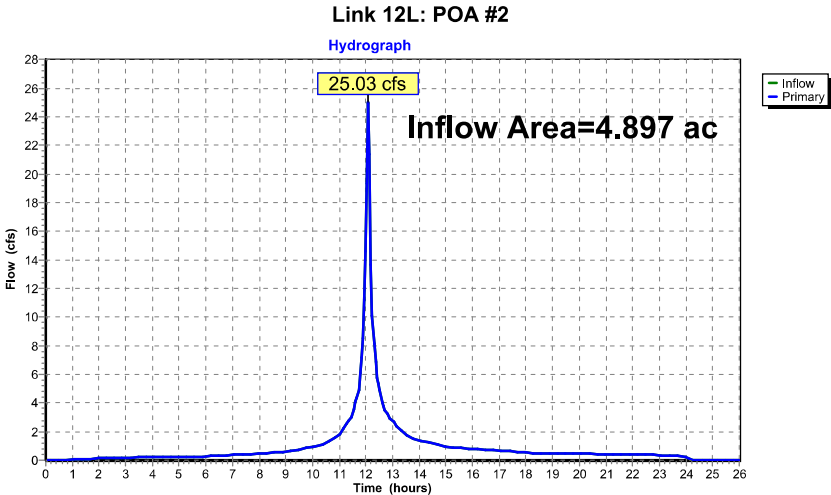
Subcatchment 11S: PR-DA2-PER

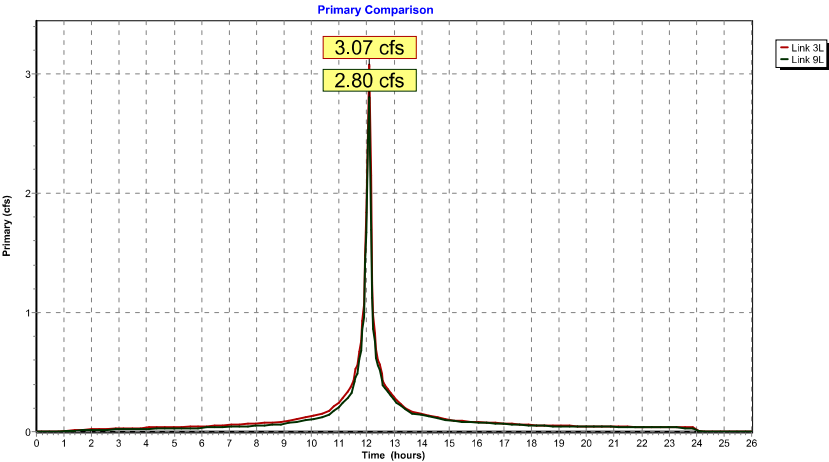


Summary for Link 12L: POA #2

Inflow Area = 4.897 ac, 54.53% Impervious, Inflow Depth = 4.93" for 10-Year-Projected event
Inflow = 25.03 cfs @ 12.11 hrs, Volume= 2.014 af
Primary = 25.03 cfs @ 12.11 hrs, Volume= 2.014 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs





Primary Comparison

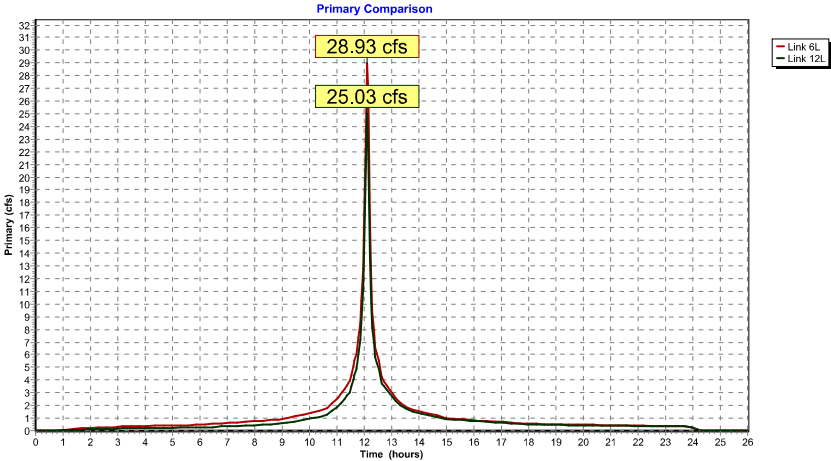
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
0.00	0.00	0.00	2.60	0.03	0.02	5.20	0.04	0.03
0.05	0.00	0.00	2.65	0.03	0.02	5.25	0.04	0.03
0.10	0.00	0.00	2.70	0.03	0.02	5.30	0.04	0.03
0.15	0.00	0.00	2.75	0.03	0.02	5.35	0.04	0.03
0.20	0.00	0.00	2.80	0.03	0.02	5.40	0.04	0.03
0.25	0.00	0.00	2.85	0.03	0.02	5.45	0.04	0.03
0.30	0.00	0.00	2.90	0.03	0.02	5.50	0.04	0.03
0.35	0.00	0.00	2.95	0.03	0.02	5.55	0.04	0.03
0.40	0.00	0.00	3.00	0.03	0.02	5.60	0.04	0.03
0.45	0.00	0.00	3.05	0.03	0.02	5.65	0.04	0.03
0.50	0.00	0.00	3.10	0.03	0.02	5.70	0.04	0.03
0.55	0.00	0.00	3.15	0.03	0.02	5.75	0.04	0.03
0.60	0.00	0.00	3.20	0.03	0.02	5.80	0.04	0.03
0.65	0.00	0.00	3.25	0.03	0.02	5.85	0.04	0.03
0.70	0.00	0.00	3.30	0.03	0.02	5.90	0.04	0.03
0.75	0.00	0.00	3.35	0.03	0.02	5.95	0.04	0.03
0.80	0.00	0.00	3.40	0.03	0.02	6.00	0.04	0.03
0.85	0.00	0.00	3.45	0.03	0.02	6.05	0.05	0.03
0.90	0.01	0.00	3.50	0.03	0.02	6.10	0.05	0.03
0.95	0.01	0.01	3.55	0.03	0.02	6.15	0.05	0.03
1.00	0.01	0.01	3.60	0.03	0.02	6.20	0.05	0.03
1.05	0.01	0.01	3.65	0.03	0.02	6.25	0.05	0.04
1.10	0.01	0.01	3.70	0.03	0.02	6.30	0.05	0.04
1.15	0.01	0.01	3.75	0.03	0.02	6.35	0.05	0.04
1.20	0.01	0.01	3.80	0.03	0.02	6.40	0.05	0.04
1.25	0.01	0.01	3.85	0.03	0.03	6.45	0.05	0.04
1.30	0.01	0.01	3.90	0.03	0.03	6.50	0.05	0.04
1.35	0.01	0.01	3.95	0.03	0.03	6.55	0.05	0.04
1.40	0.01	0.01	4.00	0.04	0.03	6.60	0.05	0.04
1.45	0.01	0.01	4.05	0.04	0.03	6.65	0.05	0.04
1.50	0.02	0.01	4.10	0.04	0.03	6.70	0.05	0.04
1.55	0.02	0.01	4.15	0.04	0.03	6.75	0.05	0.04
1.60	0.02	0.01	4.20	0.04	0.03	6.80	0.05	0.04
1.65	0.02	0.01	4.25	0.04	0.03	6.85	0.06	0.04
1.70	0.02	0.01	4.30	0.04	0.03	6.90	0.06	0.04
1.75	0.02	0.01	4.35	0.04	0.03	6.95	0.06	0.04
1.80	0.02	0.01	4.40	0.04	0.03	7.00	0.06	0.04
1.85	0.02	0.01	4.45	0.04	0.03	7.05	0.06	0.04
1.90	0.02	0.01	4.50	0.04	0.03	7.10	0.06	0.04
1.95	0.02	0.01	4.55	0.04	0.03	7.15	0.06	0.04
2.00	0.02	0.02	4.60	0.04	0.03	7.20	0.06	0.04
2.05	0.02	0.02	4.65	0.04	0.03	7.25	0.06	0.04
2.10	0.02	0.02	4.70	0.04	0.03	7.30	0.06	0.04
2.15	0.02	0.02	4.75	0.04	0.03	7.35	0.06	0.05
2.20	0.02	0.02	4.80	0.04	0.03	7.40	0.06	0.05
2.25	0.02	0.02	4.85	0.04	0.03	7.45	0.06	0.05
2.30	0.02	0.02	4.90	0.04	0.03	7.50	0.06	0.05
2.35	0.02	0.02	4.95	0.04	0.03	7.55	0.06	0.05
2.40	0.02	0.02	5.00	0.04	0.03	7.60	0.07	0.05
2.45	0.02	0.02	5.05	0.04	0.03	7.65	0.07	0.05
2.50	0.03	0.02	5.10	0.04	0.03	7.70	0.07	0.05
2.55	0.03	0.02	5.15	0.04	0.03	7.75	0.07	0.05

Primary Comparison (continued)								
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
7.80	0.07	0.05	10.40	0.15	0.12	13.00	0.29	0.27
7.85	0.07	0.05	10.45	0.15	0.13	13.05	0.27	0.25
7.90	0.07	0.05	10.50	0.16	0.13	13.10	0.26	0.24
7.95	0.07	0.05	10.55	0.16	0.14	13.15	0.25	0.23
8.00	0.07	0.05	10.60	0.17	0.14	13.20	0.24	0.23
8.05	0.07	0.05	10.65	0.18	0.15	13.25	0.23	0.21
8.10	0.07	0.05	10.70	0.19	0.16	13.30	0.22	0.21
8.15	0.07	0.06	10.75	0.20	0.17	13.35	0.21	0.20
8.20	0.07	0.06	10.80	0.21	0.17	13.40	0.21	0.19
8.25	0.07	0.06	10.85	0.22	0.18	13.45	0.20	0.18
8.30	0.07	0.06	10.90	0.22	0.19	13.50	0.19	0.18
8.35	0.08	0.06	10.95	0.23	0.20	13.55	0.18	0.16
8.40	0.08	0.06	11.00	0.24	0.20	13.60	0.17	0.16
8.45	0.08	0.06	11.05	0.26	0.22	13.65	0.17	0.16
8.50	0.08	0.06	11.10	0.27	0.23	13.70	0.16	0.15
8.55	0.08	0.06	11.15	0.29	0.25	13.75	0.16	0.15
8.60	0.08	0.06	11.20	0.30	0.25	13.80	0.16	0.15
8.65	0.08	0.06	11.25	0.32	0.27	13.85	0.16	0.15
8.70	0.08	0.06	11.30	0.33	0.28	13.90	0.15	0.15
8.75	0.08	0.06	11.35	0.35	0.30	13.95	0.15	0.14
8.80	0.08	0.06	11.40	0.36	0.31	14.00	0.15	0.14
8.85	0.08	0.06	11.45	0.38	0.33	14.05	0.15	0.14
8.90	0.08	0.06	11.50	0.39	0.34	14.10	0.15	0.14
8.95	0.08	0.07	11.55	0.46	0.42	14.15	0.14	0.13
9.00	0.09	0.07	11.60	0.52	0.46	14.20	0.14	0.13
9.05	0.09	0.07	11.65	0.55	0.48	14.25	0.14	0.13
9.10	0.09	0.07	11.70	0.56	0.49	14.30	0.14	0.13
9.15	0.09	0.07	11.75	0.67	0.61	14.35	0.13	0.12
9.20	0.09	0.07	11.80	0.77	0.68	14.40	0.13	0.12
9.25	0.10	0.08	11.85	0.93	0.86	14.45	0.13	0.12
9.30	0.10	0.08	11.90	1.07	0.96	14.50	0.13	0.12
9.35	0.10	0.08	11.95	1.48	1.42	14.55	0.12	0.12
9.40	0.10	0.08	12.00	1.84	1.67	14.60	0.12	0.11
9.45	0.11	0.08	12.05	2.51	2.42	14.65	0.12	0.11
9.50	0.11	0.09	12.10	3.06	2.76	14.70	0.12	0.11
9.55	0.11	0.09	12.15	2.15	1.69	14.75	0.11	0.11
9.60	0.11	0.09	12.20	1.25	1.12	14.80	0.11	0.10
9.65	0.12	0.09	12.25	0.97	0.86	14.85	0.11	0.10
9.70	0.12	0.09	12.30	0.82	0.76	14.90	0.11	0.10
9.75	0.12	0.10	12.35	0.70	0.62	14.95	0.10	0.10
9.80	0.12	0.10	12.40	0.60	0.55	15.00	0.10	0.10
9.85	0.12	0.10	12.45	0.57	0.53	15.05	0.10	0.09
9.90	0.13	0.10	12.50	0.56	0.52	15.10	0.10	0.09
9.95	0.13	0.10	12.55	0.49	0.43	15.15	0.10	0.09
10.00	0.13	0.11	12.60	0.42	0.39	15.20	0.09	0.09
10.05	0.13	0.11	12.65	0.40	0.37	15.25	0.09	0.09
10.10	0.14	0.11	12.70	0.39	0.36	15.30	0.09	0.09
10.15	0.14	0.11	12.75	0.37	0.34	15.35	0.09	0.09
10.20	0.14	0.11	12.80	0.35	0.33	15.40	0.09	0.09
10.25	0.14	0.12	12.85	0.34	0.31	15.45	0.09	0.09
10.30	0.15	0.12	12.90	0.32	0.30	15.50	0.09	0.09
10.35	0.15	0.12	12.95	0.31	0.28	15.55	0.09	0.08

Primary Comparison (continued)								
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
15.60	0.09	0.08	18.20	0.05	0.05	20.80	0.05	0.04
15.65	0.09	0.08	18.25	0.05	0.05	20.85	0.05	0.04
15.70	0.09	0.08	18.30	0.05	0.05	20.90	0.04	0.04
15.75	0.09	0.08	18.35	0.05	0.05	20.95	0.04	0.04
15.80	0.09	0.08	18.40	0.05	0.05	21.00	0.04	0.04
15.85	0.09	0.08	18.45	0.05	0.05	21.05	0.04	0.04
15.90	0.08	0.08	18.50	0.05	0.05	21.10	0.04	0.04
15.95	0.08	0.08	18.55	0.05	0.05	21.15	0.04	0.04
16.00	0.08	0.08	18.60	0.05	0.05	21.20	0.04	0.04
16.05	0.08	0.08	18.65	0.05	0.05	21.25	0.04	0.04
16.10	0.08	0.08	18.70	0.05	0.05	21.30	0.04	0.04
16.15	0.08	0.08	18.75	0.05	0.05	21.35	0.04	0.04
16.20	0.08	0.08	18.80	0.05	0.05	21.40	0.04	0.04
16.25	0.08	0.08	18.85	0.05	0.05	21.45	0.04	0.04
16.30	0.08	0.08	18.90	0.05	0.05	21.50	0.04	0.04
16.35	0.08	0.07	18.95	0.05	0.05	21.55	0.04	0.04
16.40	0.08	0.07	19.00	0.05	0.05	21.60	0.04	0.04
16.45	0.08	0.07	19.05	0.05	0.05	21.65	0.04	0.04
16.50	0.08	0.07	19.10	0.05	0.05	21.70	0.04	0.04
16.55	0.08	0.07	19.15	0.05	0.05	21.75	0.04	0.04
16.60	0.08	0.07	19.20	0.05	0.05	21.80	0.04	0.04
16.65	0.07	0.07	19.25	0.05	0.05	21.85	0.04	0.04
16.70	0.07	0.07	19.30	0.05	0.05	21.90	0.04	0.04
16.75	0.07	0.07	19.35	0.05	0.05	21.95	0.04	0.04
16.80	0.07	0.07	19.40	0.05	0.05	22.00	0.04	0.04
16.85	0.07	0.07	19.45	0.05	0.05	22.05	0.04	0.04
16.90	0.07	0.07	19.50	0.05	0.05	22.10	0.04	0.04
16.95	0.07	0.07	19.55	0.05	0.05	22.15	0.04	0.04
17.00	0.07	0.07	19.60	0.05	0.05	22.20	0.04	0.04
17.05	0.07	0.07	19.65	0.05	0.05	22.25	0.04	0.04
17.10	0.07	0.06	19.70	0.05	0.05	22.30	0.04	0.04
17.15	0.07	0.06	19.75	0.05	0.05	22.35	0.04	0.04
17.20	0.07	0.06	19.80	0.05	0.05	22.40	0.04	0.04
17.25	0.07	0.06	19.85	0.05	0.05	22.45	0.04	0.04
17.30	0.07	0.06	19.90	0.05	0.05	22.50	0.04	0.04
17.35	0.06	0.06	19.95	0.05	0.05	22.55	0.04	0.04
17.40	0.06	0.06	20.00	0.05	0.05	22.60	0.04	0.04
17.45	0.06	0.06	20.05	0.05	0.05	22.65	0.04	0.04
17.50	0.06	0.06	20.10	0.05	0.05	22.70	0.04	0.04
17.55	0.06	0.06	20.15	0.05	0.05	22.75	0.04	0.04
17.60	0.06	0.06	20.20	0.05	0.04	22.80	0.04	0.04
17.65	0.06	0.06	20.25	0.05	0.04	22.85	0.04	0.04
17.70	0.06	0.06	20.30	0.05	0.04	22.90	0.04	0.04
17.75	0.06	0.06	20.35	0.05	0.04	22.95	0.04	0.04
17.80	0.06	0.06	20.40	0.05	0.04	23.00	0.04	0.04
17.85	0.06	0.05	20.45	0.05	0.04	23.05	0.04	0.04
17.90	0.06	0.05	20.50	0.05	0.04	23.10	0.04	0.04
17.95	0.06	0.05	20.55	0.05	0.04	23.15	0.04	0.04
18.00	0.06	0.05	20.60	0.05	0.04	23.20	0.04	0.04
18.05	0.06	0.05	20.65	0.05	0.04	23.25	0.04	0.03
18.10	0.05	0.05	20.70	0.05	0.04	23.30	0.04	0.03
18.15	0.05	0.05	20.75	0.05	0.04	23.35	0.04	0.03

Primary Comparison (continued)

Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
23.40	0.04	0.03	26.00	0.00	0.00
23.45	0.04	0.03			
23.50	0.04	0.03			
23.55	0.04	0.03			
23.60	0.04	0.03			
23.65	0.04	0.03			
23.70	0.04	0.03			
23.75	0.03	0.03			
23.80	0.03	0.03			
23.85	0.03	0.03			
23.90	0.03	0.03			
23.95	0.03	0.03			
24.00	0.03	0.03			
24.05	0.02	0.01			
24.10	0.00	0.00			
24.15	0.00	0.00			
24.20	0.00	0.00			
24.25	0.00	0.00			
24.30	0.00	0.00			
24.35	0.00	0.00			
24.40	0.00	0.00			
24.45	0.00	0.00			
24.50	0.00	0.00			
24.55	0.00	0.00			
24.60	0.00	0.00			
24.65	0.00	0.00			
24.70	0.00	0.00			
24.75	0.00	0.00			
24.80	0.00	0.00			
24.85	0.00	0.00			
24.90	0.00	0.00			
24.95	0.00	0.00			
25.00	0.00	0.00			
25.05	0.00	0.00			
25.10	0.00	0.00			
25.15	0.00	0.00			
25.20	0.00	0.00			
25.25	0.00	0.00			
25.30	0.00	0.00			
25.35	0.00	0.00			
25.40	0.00	0.00			
25.45	0.00	0.00			
25.50	0.00	0.00			
25.55	0.00	0.00			
25.60	0.00	0.00			
25.65	0.00	0.00			
25.70	0.00	0.00			
25.75	0.00	0.00			
25.80	0.00	0.00			
25.85	0.00	0.00			
25.90	0.00	0.00			
25.95	0.00	0.00			



Primary Comparison								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
0.00	0.00	0.00	2.60	0.28	0.16	5.20	0.45	0.25
0.05	0.00	0.00	2.65	0.29	0.16	5.25	0.45	0.26
0.10	0.00	0.00	2.70	0.29	0.17	5.30	0.45	0.26
0.15	0.00	0.00	2.75	0.30	0.17	5.35	0.46	0.26
0.20	0.00	0.00	2.80	0.30	0.17	5.40	0.46	0.26
0.25	0.00	0.00	2.85	0.30	0.17	5.45	0.46	0.26
0.30	0.00	0.00	2.90	0.31	0.18	5.50	0.46	0.26
0.35	0.00	0.00	2.95	0.31	0.18	5.55	0.46	0.26
0.40	0.00	0.00	3.00	0.31	0.18	5.60	0.47	0.26
0.45	0.00	0.00	3.05	0.32	0.18	5.65	0.47	0.27
0.50	0.00	0.00	3.10	0.32	0.18	5.70	0.47	0.27
0.55	0.00	0.00	3.15	0.33	0.19	5.75	0.47	0.27
0.60	0.00	0.00	3.20	0.33	0.19	5.80	0.48	0.27
0.65	0.00	0.00	3.25	0.33	0.19	5.85	0.48	0.27
0.70	0.01	0.01	3.30	0.34	0.19	5.90	0.48	0.27
0.75	0.02	0.02	3.35	0.34	0.19	5.95	0.48	0.27
0.80	0.04	0.02	3.40	0.34	0.20	6.00	0.48	0.27
0.85	0.05	0.03	3.45	0.35	0.20	6.05	0.49	0.28
0.90	0.06	0.03	3.50	0.35	0.20	6.10	0.50	0.28
0.95	0.07	0.04	3.55	0.35	0.20	6.15	0.50	0.29
1.00	0.08	0.05	3.60	0.36	0.20	6.20	0.51	0.29
1.05	0.09	0.05	3.65	0.36	0.20	6.25	0.52	0.29
1.10	0.10	0.06	3.70	0.36	0.21	6.30	0.53	0.30
1.15	0.10	0.06	3.75	0.37	0.21	6.35	0.53	0.30
1.20	0.11	0.07	3.80	0.37	0.21	6.40	0.54	0.31
1.25	0.12	0.07	3.85	0.37	0.21	6.45	0.54	0.31
1.30	0.13	0.08	3.90	0.38	0.21	6.50	0.55	0.31
1.35	0.14	0.08	3.95	0.38	0.22	6.55	0.56	0.32
1.40	0.15	0.08	4.00	0.38	0.22	6.60	0.57	0.32
1.45	0.15	0.09	4.05	0.39	0.22	6.65	0.57	0.33
1.50	0.16	0.09	4.10	0.39	0.22	6.70	0.58	0.33
1.55	0.17	0.10	4.15	0.39	0.22	6.75	0.59	0.33
1.60	0.17	0.10	4.20	0.39	0.22	6.80	0.59	0.34
1.65	0.18	0.10	4.25	0.40	0.22	6.85	0.60	0.34
1.70	0.19	0.11	4.30	0.40	0.23	6.90	0.61	0.34
1.75	0.19	0.11	4.35	0.40	0.23	6.95	0.61	0.35
1.80	0.20	0.11	4.40	0.41	0.23	7.00	0.62	0.35
1.85	0.21	0.12	4.45	0.41	0.23	7.05	0.63	0.36
1.90	0.21	0.12	4.50	0.41	0.23	7.10	0.64	0.36
1.95	0.22	0.12	4.55	0.41	0.23	7.15	0.64	0.37
2.00	0.22	0.13	4.60	0.42	0.24	7.20	0.65	0.37
2.05	0.23	0.13	4.65	0.42	0.24	7.25	0.66	0.37
2.10	0.23	0.13	4.70	0.42	0.24	7.30	0.66	0.38
2.15	0.24	0.14	4.75	0.42	0.24	7.35	0.67	0.38
2.20	0.25	0.14	4.80	0.43	0.24	7.40	0.68	0.39
2.25	0.25	0.14	4.85	0.43	0.24	7.45	0.69	0.39
2.30	0.25	0.15	4.90	0.43	0.25	7.50	0.69	0.40
2.35	0.26	0.15	4.95	0.43	0.25	7.55	0.70	0.40
2.40	0.26	0.15	5.00	0.44	0.25	7.60	0.71	0.41
2.45	0.27	0.15	5.05	0.44	0.25	7.65	0.71	0.41
2.50	0.27	0.16	5.10	0.44	0.25	7.70	0.72	0.42
2.55	0.28	0.16	5.15	0.44	0.25	7.75	0.73	0.43

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
7.80	0.74	0.43	10.40	1.58	1.11	13.00	3.01	2.72
7.85	0.74	0.44	10.45	1.60	1.13	13.05	2.87	2.58
7.90	0.75	0.44	10.50	1.63	1.15	13.10	2.69	2.44
7.95	0.76	0.45	10.55	1.68	1.20	13.15	2.58	2.34
8.00	0.77	0.46	10.60	1.78	1.27	13.20	2.47	2.25
8.05	0.77	0.46	10.65	1.85	1.34	13.25	2.39	2.17
8.10	0.78	0.47	10.70	1.95	1.40	13.30	2.29	2.08
8.15	0.79	0.47	10.75	2.03	1.47	13.35	2.21	2.01
8.20	0.79	0.48	10.80	2.13	1.54	13.40	2.11	1.92
8.25	0.80	0.48	10.85	2.21	1.61	13.45	2.03	1.84
8.30	0.81	0.49	10.90	2.31	1.68	13.50	1.93	1.76
8.35	0.81	0.50	10.95	2.38	1.76	13.55	1.85	1.68
8.40	0.82	0.50	11.00	2.48	1.83	13.60	1.75	1.60
8.45	0.83	0.51	11.05	2.59	1.94	13.65	1.70	1.55
8.50	0.84	0.51	11.10	2.76	2.06	13.70	1.67	1.53
8.55	0.84	0.52	11.15	2.90	2.18	13.75	1.64	1.50
8.60	0.85	0.53	11.20	3.07	2.31	13.80	1.62	1.48
8.65	0.86	0.53	11.25	3.21	2.44	13.85	1.60	1.46
8.70	0.87	0.54	11.30	3.39	2.57	13.90	1.57	1.43
8.75	0.87	0.55	11.35	3.52	2.70	13.95	1.54	1.41
8.80	0.88	0.55	11.40	3.70	2.83	14.00	1.52	1.39
8.85	0.89	0.56	11.45	3.84	2.97	14.05	1.50	1.37
8.90	0.89	0.56	11.50	4.02	3.11	14.10	1.47	1.35
8.95	0.90	0.57	11.55	4.41	3.54	14.15	1.45	1.33
9.00	0.91	0.58	11.60	5.15	4.09	14.20	1.42	1.30
9.05	0.92	0.59	11.65	5.51	4.35	14.25	1.40	1.28
9.10	0.95	0.61	11.70	5.74	4.54	14.30	1.37	1.26
9.15	0.97	0.63	11.75	6.31	5.19	14.35	1.35	1.24
9.20	1.00	0.64	11.80	7.43	6.07	14.40	1.32	1.21
9.25	1.02	0.66	11.85	8.57	7.21	14.45	1.30	1.19
9.30	1.05	0.68	11.90	10.30	8.55	14.50	1.27	1.17
9.35	1.07	0.70	11.95	12.76	11.21	14.55	1.25	1.15
9.40	1.09	0.71	12.00	17.08	14.61	14.60	1.22	1.13
9.45	1.11	0.73	12.05	21.65	19.39	14.65	1.20	1.10
9.50	1.14	0.75	12.10	28.57	24.98	14.70	1.17	1.08
9.55	1.16	0.77	12.15	26.65	21.41	14.75	1.15	1.06
9.60	1.19	0.79	12.20	16.66	13.66	14.80	1.13	1.04
9.65	1.21	0.81	12.25	11.93	10.09	14.85	1.10	1.01
9.70	1.24	0.82	12.30	9.31	8.10	14.90	1.07	0.99
9.75	1.26	0.84	12.35	7.91	6.87	14.95	1.05	0.97
9.80	1.29	0.87	12.40	6.58	5.80	15.00	1.03	0.95
9.85	1.31	0.88	12.45	6.02	5.35	15.05	1.01	0.92
9.90	1.34	0.90	12.50	5.74	5.13	15.10	0.98	0.90
9.95	1.36	0.92	12.55	5.33	4.67	15.15	0.96	0.89
10.00	1.39	0.94	12.60	4.58	4.06	15.20	0.95	0.88
10.05	1.41	0.96	12.65	4.21	3.76	15.25	0.95	0.87
10.10	1.44	0.98	12.70	3.97	3.57	15.30	0.94	0.87
10.15	1.46	1.00	12.75	3.82	3.43	15.35	0.93	0.86
10.20	1.48	1.02	12.80	3.64	3.28	15.40	0.93	0.86
10.25	1.50	1.04	12.85	3.50	3.14	15.45	0.92	0.85
10.30	1.53	1.07	12.90	3.32	3.00	15.50	0.91	0.84
10.35	1.56	1.09	12.95	3.18	2.86	15.55	0.90	0.84

Primary Comparison (continued)

Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
15.60	0.90	0.83	18.20	0.54	0.51	20.80	0.45	0.42
15.65	0.89	0.82	18.25	0.54	0.51	20.85	0.45	0.42
15.70	0.88	0.82	18.30	0.54	0.50	20.90	0.45	0.42
15.75	0.88	0.81	18.35	0.54	0.50	20.95	0.45	0.42
15.80	0.87	0.80	18.40	0.54	0.50	21.00	0.45	0.42
15.85	0.86	0.80	18.45	0.54	0.50	21.05	0.45	0.42
15.90	0.85	0.79	18.50	0.53	0.50	21.10	0.44	0.41
15.95	0.85	0.79	18.55	0.53	0.50	21.15	0.44	0.41
16.00	0.84	0.78	18.60	0.53	0.49	21.20	0.44	0.41
16.05	0.84	0.77	18.65	0.53	0.49	21.25	0.44	0.41
16.10	0.83	0.77	18.70	0.53	0.49	21.30	0.44	0.41
16.15	0.82	0.76	18.75	0.52	0.49	21.35	0.43	0.41
16.20	0.81	0.75	18.80	0.52	0.49	21.40	0.43	0.41
16.25	0.81	0.75	18.85	0.52	0.49	21.45	0.43	0.40
16.30	0.80	0.74	18.90	0.52	0.48	21.50	0.43	0.40
16.35	0.80	0.74	18.95	0.52	0.48	21.55	0.43	0.40
16.40	0.79	0.73	19.00	0.52	0.48	21.60	0.43	0.40
16.45	0.78	0.72	19.05	0.51	0.48	21.65	0.42	0.40
16.50	0.77	0.72	19.10	0.51	0.48	21.70	0.42	0.40
16.55	0.77	0.71	19.15	0.51	0.48	21.75	0.42	0.39
16.60	0.76	0.70	19.20	0.51	0.48	21.80	0.42	0.39
16.65	0.75	0.70	19.25	0.51	0.47	21.85	0.42	0.39
16.70	0.75	0.69	19.30	0.51	0.47	21.90	0.42	0.39
16.75	0.74	0.69	19.35	0.50	0.47	21.95	0.41	0.39
16.80	0.73	0.68	19.40	0.50	0.47	22.00	0.41	0.39
16.85	0.72	0.67	19.45	0.50	0.47	22.05	0.41	0.38
16.90	0.72	0.67	19.50	0.50	0.47	22.10	0.41	0.38
16.95	0.71	0.66	19.55	0.50	0.46	22.15	0.41	0.38
17.00	0.70	0.65	19.60	0.49	0.46	22.20	0.41	0.38
17.05	0.70	0.65	19.65	0.49	0.46	22.25	0.40	0.38
17.10	0.69	0.64	19.70	0.49	0.46	22.30	0.40	0.38
17.15	0.68	0.63	19.75	0.49	0.46	22.35	0.40	0.37
17.20	0.67	0.63	19.80	0.49	0.46	22.40	0.40	0.37
17.25	0.67	0.62	19.85	0.49	0.45	22.45	0.40	0.37
17.30	0.66	0.62	19.90	0.48	0.45	22.50	0.39	0.37
17.35	0.66	0.61	19.95	0.48	0.45	22.55	0.39	0.37
17.40	0.65	0.60	20.00	0.48	0.45	22.60	0.39	0.37
17.45	0.64	0.60	20.05	0.48	0.45	22.65	0.39	0.37
17.50	0.63	0.59	20.10	0.48	0.45	22.70	0.39	0.36
17.55	0.63	0.58	20.15	0.48	0.45	22.75	0.39	0.36
17.60	0.62	0.58	20.20	0.48	0.44	22.80	0.38	0.36
17.65	0.61	0.57	20.25	0.47	0.44	22.85	0.38	0.36
17.70	0.61	0.56	20.30	0.47	0.44	22.90	0.38	0.36
17.75	0.60	0.56	20.35	0.47	0.44	22.95	0.38	0.36
17.80	0.59	0.55	20.40	0.47	0.44	23.00	0.38	0.35
17.85	0.59	0.55	20.45	0.47	0.44	23.05	0.37	0.35
17.90	0.58	0.54	20.50	0.46	0.43	23.10	0.37	0.35
17.95	0.57	0.53	20.55	0.46	0.43	23.15	0.37	0.35
18.00	0.57	0.53	20.60	0.46	0.43	23.20	0.37	0.35
18.05	0.56	0.52	20.65	0.46	0.43	23.25	0.37	0.35
18.10	0.55	0.51	20.70	0.46	0.43	23.30	0.37	0.34
18.15	0.55	0.51	20.75	0.46	0.43	23.35	0.36	0.34

Primary Comparison (continued)

Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
23.40	0.36	0.34	26.00	0.00	0.00
23.45	0.36	0.34			
23.50	0.36	0.34			
23.55	0.36	0.34			
23.60	0.36	0.34			
23.65	0.36	0.33			
23.70	0.35	0.33			
23.75	0.35	0.33			
23.80	0.35	0.33			
23.85	0.35	0.33			
23.90	0.35	0.33			
23.95	0.35	0.32			
24.00	0.34	0.32			
24.05	0.27	0.22			
24.10	0.09	0.08			
24.15	0.02	0.02			
24.20	0.01	0.01			
24.25	0.00	0.00			
24.30	0.00	0.00			
24.35	0.00	0.00			
24.40	0.00	0.00			
24.45	0.00	0.00			
24.50	0.00	0.00			
24.55	0.00	0.00			
24.60	0.00	0.00			
24.65	0.00	0.00			
24.70	0.00	0.00			
24.75	0.00	0.00			
24.80	0.00	0.00			
24.85	0.00	0.00			
24.90	0.00	0.00			
24.95	0.00	0.00			
25.00	0.00	0.00			
25.05	0.00	0.00			
25.10	0.00	0.00			
25.15	0.00	0.00			
25.20	0.00	0.00			
25.25	0.00	0.00			
25.30	0.00	0.00			
25.35	0.00	0.00			
25.40	0.00	0.00			
25.45	0.00	0.00			
25.50	0.00	0.00			
25.55	0.00	0.00			
25.60	0.00	0.00			
25.65	0.00	0.00			
25.70	0.00	0.00			
25.75	0.00	0.00			
25.80	0.00	0.00			
25.85	0.00	0.00			
25.90	0.00	0.00			
25.95	0.00	0.00			

Summary for Subcatchment 1S: EX-DA1-IMP

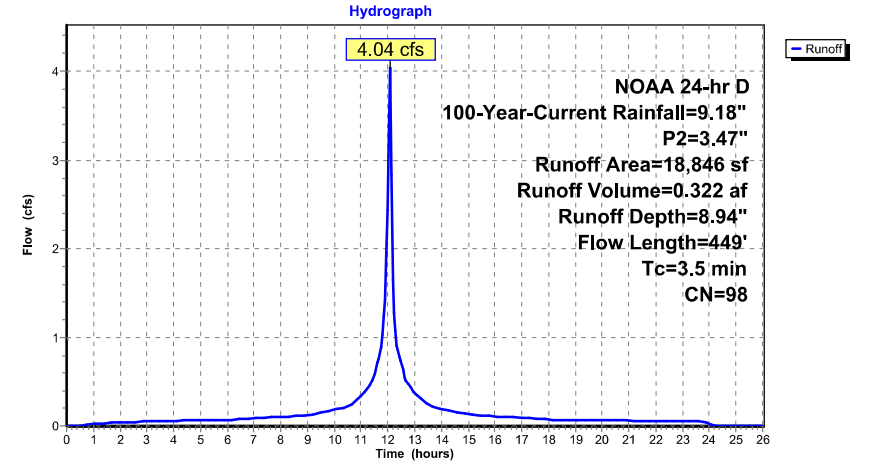
Runoff = 4.04 cfs @ 12.09 hrs, Volume= 0.322 af, Depth= 8.94"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Current Rainfall=9.18", P2=3.47"

Area (sf)	CN	Description
* 18,142	98	IMPERVIOUS
* 704	98	BUILDINGS
18,846	98	Weighted Average
18,846		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0216	1.48		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
2.4	349	0.0139	2.39		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
3.5	449				Total

Subcatchment 1S: EX-DA1-IMP



Summary for Subcatchment 2S: EX-DA1-PER

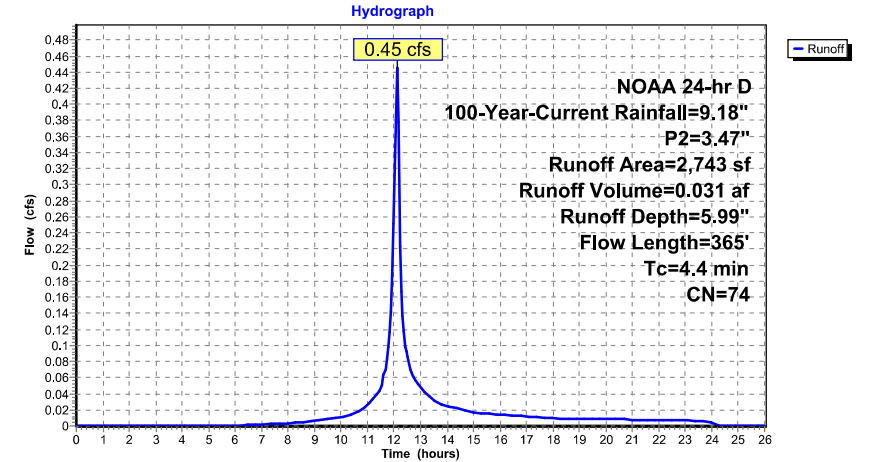
Runoff = 0.45 cfs @ 12.11 hrs, Volume= 0.031 af, Depth= 5.99"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Current Rainfall=9.18", P2=3.47"

Area (sf)	CN	Description
2,743	74	>75% Grass cover, Good, HSG C
2,743		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	7	0.0364	0.09		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
1.3	93	0.0130	1.19		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 3.47"
1.8	265	0.0139	2.39		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
4.4	365				Total

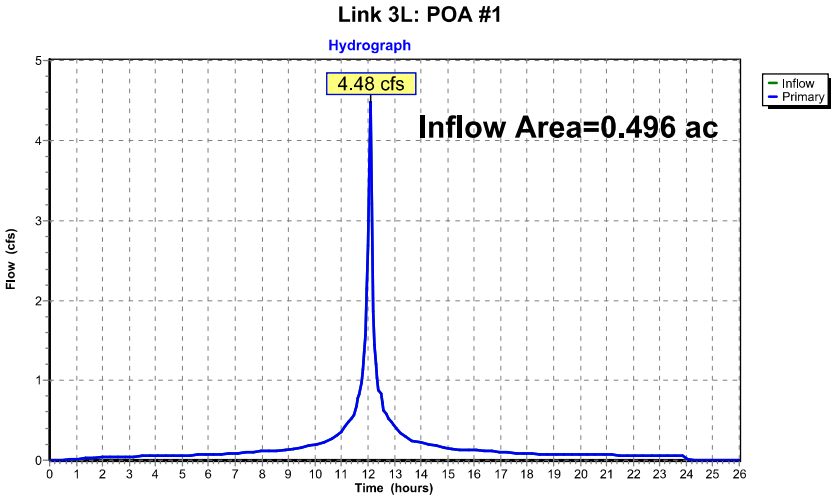
Subcatchment 2S: EX-DA1-PER



Summary for Link 3L: POA #1

Inflow Area = 0.496 ac, 87.29% Impervious, Inflow Depth = 8.57" for 100-Year-Current event
Inflow = 4.48 cfs @ 12.09 hrs, Volume= 0.354 af
Primary = 4.48 cfs @ 12.09 hrs, Volume= 0.354 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 4S: EX-DA2-IMP

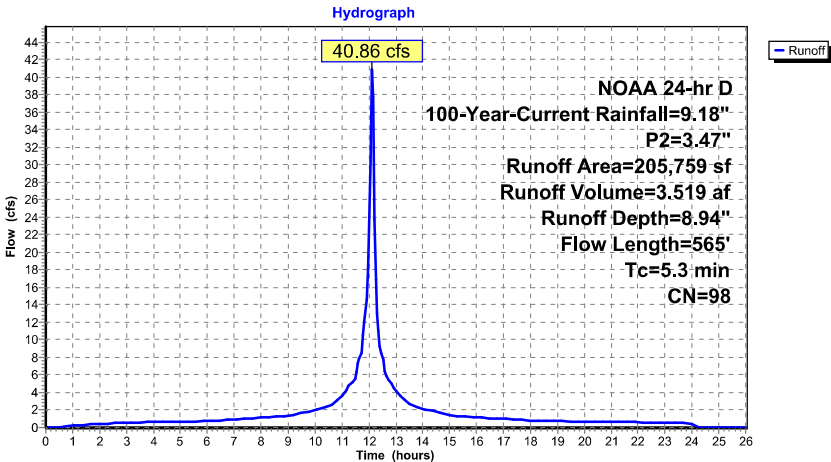
Runoff = 40.86 cfs @ 12.11 hrs, Volume= 3.519 af, Depth= 8.94"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Current Rainfall=9.18", P2=3.47"

	Area (sf)	CN	Description
*	195,091	98	IMPERVIOUS
*	10,668	98	BUILDING
	205,759	98	Weighted Average
	205,759		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0135	1.22		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
2.2	230	0.0075	1.76		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
1.7	235	0.0130	2.31		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
5.3	565	Total			

Subcatchment 4S: EX-DA2-IMP



Summary for Subcatchment 5S: EX-DA2-PER

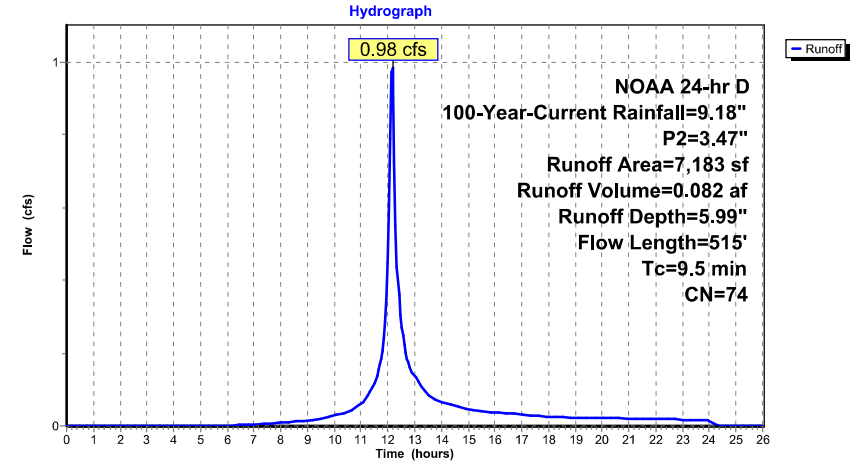
Runoff = 0.98 cfs @ 12.17 hrs, Volume= 0.082 af, Depth= 5.99"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Current Rainfall=9.18", P2=3.47"

Area (sf)	CN	Description
7,183	74	>75% Grass cover, Good, HSG C
7,183		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	55	0.0500	0.16		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
0.8	45	0.0100	0.93		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 3.47"
2.8	415	0.0150	2.49		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
9.5	515				Total

Subcatchment 5S: EX-DA2-PER

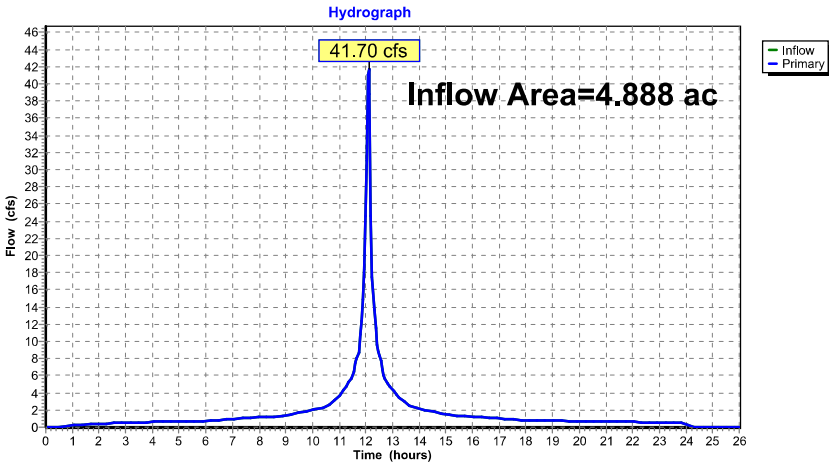


Summary for Link 6L: POA #2

Inflow Area = 4.888 ac, 96.63% Impervious, Inflow Depth = 8.84" for 100-Year-Current event
Inflow = 41.70 cfs @ 12.12 hrs, Volume= 3.601 af
Primary = 41.70 cfs @ 12.12 hrs, Volume= 3.601 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Link 6L: POA #2



Summary for Subcatchment 7S: PR-DA1-IMP

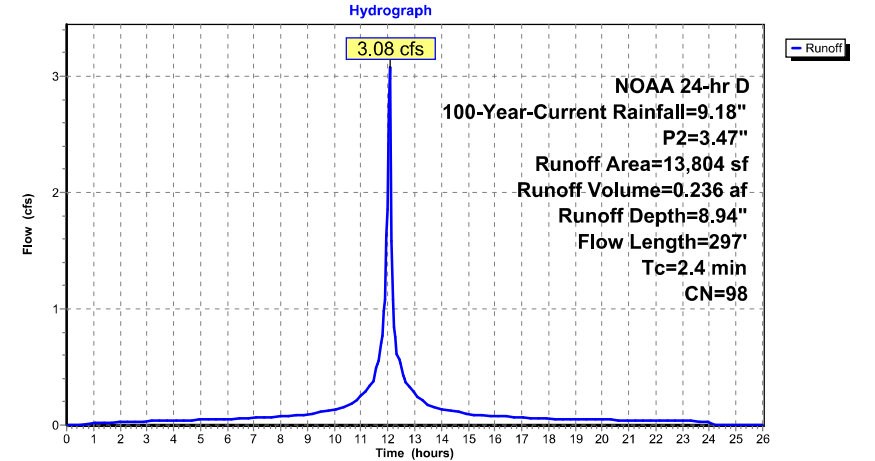
Runoff = 3.08 cfs @ 12.08 hrs, Volume= 0.236 af, Depth= 8.94"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Current Rainfall=9.18", P2=3.47"

Area (sf)	CN	Description
* 13,804	98	IMPERVIOUS
13,804		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0150	1.28		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
1.0	174	0.0196	2.84		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
0.1	23	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
2.4	297	Total			

Subcatchment 7S: PR-DA1-IMP



Summary for Subcatchment 8S: PR-DA1-PER

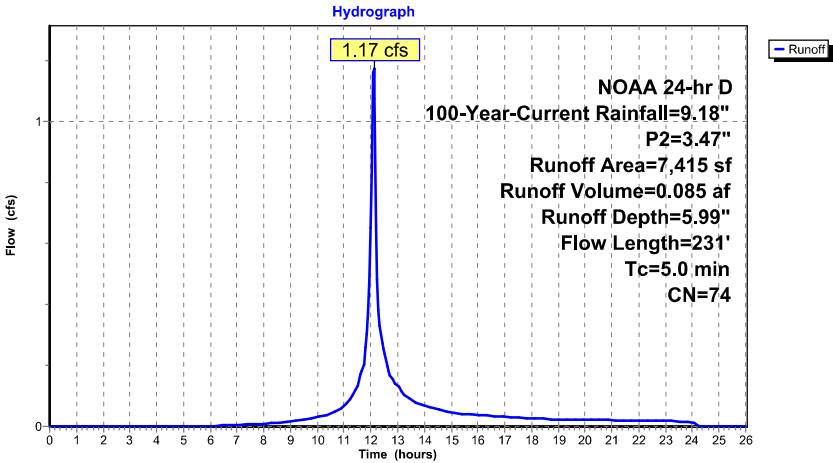
Runoff = 1.17 cfs @ 12.11 hrs, Volume= 0.085 af, Depth= 5.99"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Current Rainfall=9.18", P2=3.47"

Area (sf)	CN	Description
7,415	74	>75% Grass cover, Good, HSG C
7,415		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	33	0.0692	0.16		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
0.1	8	0.0518	1.26		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 3.47"
0.8	59	0.0180	1.24		Sheet Flow, TC-CD Smooth surfaces n= 0.011 P2= 3.47"
0.5	80	0.0180	2.72		Shallow Concentrated Flow, TC-DE Paved Kv= 20.3 fps
0.1	29	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	22	0.0104	5.82	7.14	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
5.0	231	Total			

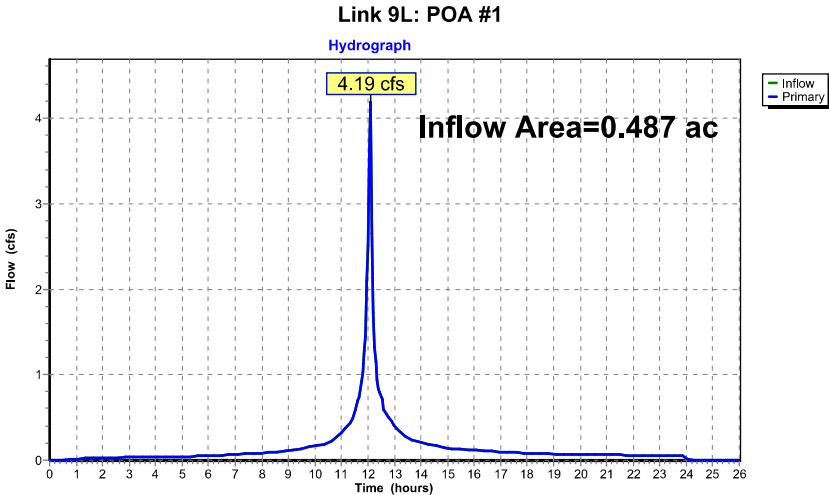
Subcatchment 8S: PR-DA1-PER



Summary for Link 9L: POA #1

Inflow Area = 0.487 ac, 65.05% Impervious, Inflow Depth = 7.91" for 100-Year-Current event
Inflow = 4.19 cfs @ 12.09 hrs, Volume= 0.321 af
Primary = 4.19 cfs @ 12.09 hrs, Volume= 0.321 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 10S: PR-DA2-IMP

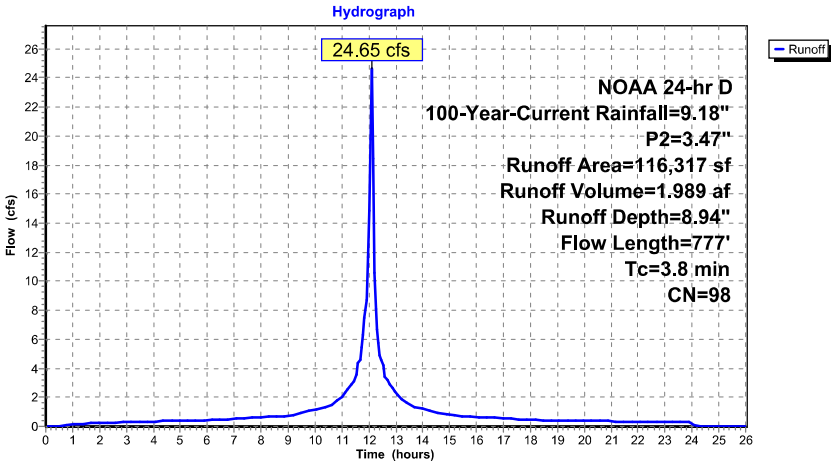
Runoff = 24.65 cfs @ 12.10 hrs, Volume= 1.989 af, Depth= 8.94"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Current Rainfall=9.18", P2=3.47"

Area (sf)	CN	Description
* 116,317	98	IMPERVIOUS
116,317		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	41	0.0150	1.07		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.47"
0.2	55	0.0100	5.70	7.00	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	68	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	87	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	153	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.5	94	0.0030	3.12	3.83	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	63	0.0032	3.23	3.96	Pipe Channel, TC-GH 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	31	0.0050	4.03	4.95	Pipe Channel, TC-HI 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
1.1	156	0.0200	2.28		Shallow Concentrated Flow, TC-IJ Unpaved Kv= 16.1 fps
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-JK Unpaved Kv= 16.1 fps
3.8	777	Total			

Subcatchment 10S: PR-DA2-IMP



Summary for Subcatchment 11S: PR-DA2-PER

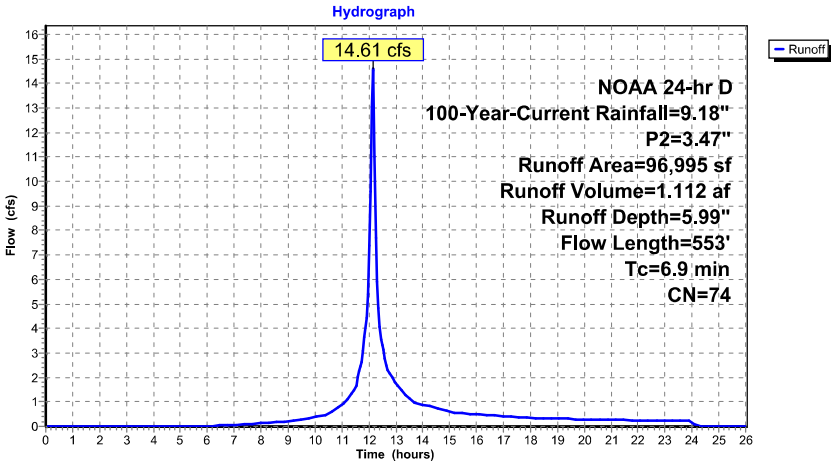
Runoff = 14.61 cfs @ 12.14 hrs, Volume= 1.112 af, Depth= 5.99"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Current Rainfall=9.18", P2=3.47"

Area (sf)		CN	Description		
96,995		74	>75% Grass cover, Good, HSG C		
96,995			100.00% Pervious Area		

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	22	0.0120	0.07		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 3.47"
0.4	182	0.0200	8.06	9.90	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	55	0.0050	4.03	4.95	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	40	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	43	0.0096	5.59	6.86	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.6	106	0.0030	3.12	3.83	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	76	0.0325	2.90		Shallow Concentrated Flow, TC-GH Unpaved Kv= 16.1 fps
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-HI Unpaved Kv= 16.1 fps
6.9	553	Total			

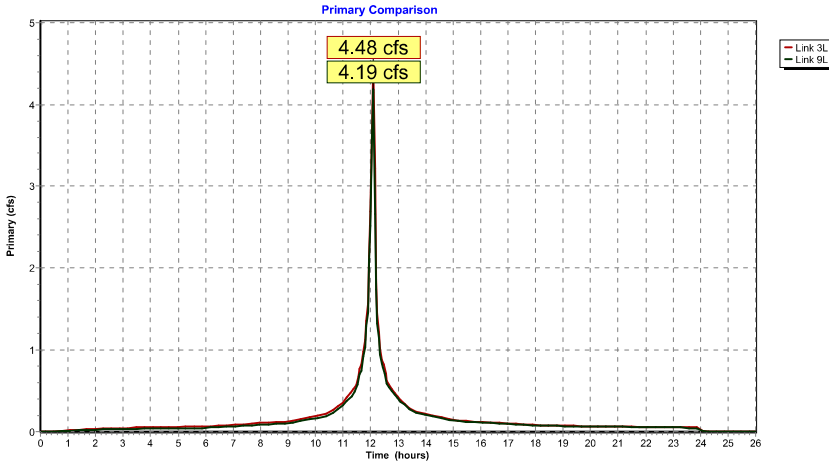
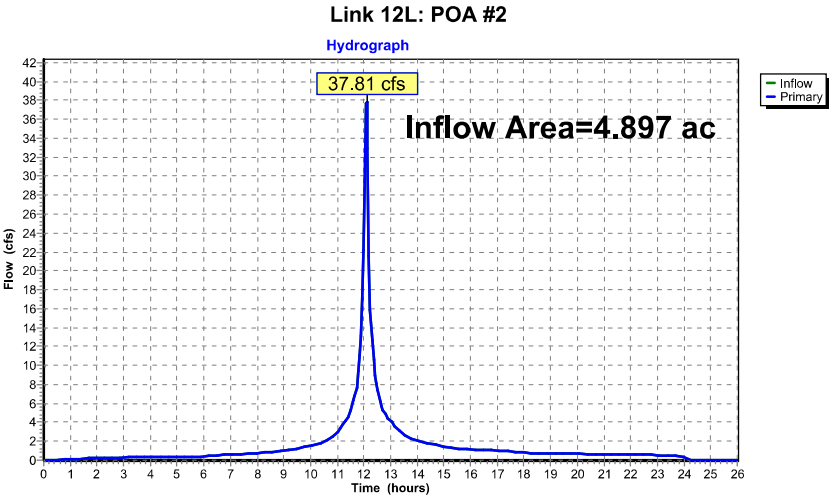
Subcatchment 11S: PR-DA2-PER



Summary for Link 12L: POA #2

Inflow Area = 4.897 ac, 54.53% Impervious, Inflow Depth = 7.60" for 100-Year-Current event
Inflow = 37.81 cfs @ 12.11 hrs, Volume= 3.101 af
Primary = 37.81 cfs @ 12.11 hrs, Volume= 3.101 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Primary Comparison								
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
0.00	0.00	0.00	2.60	0.04	0.03	5.20	0.06	0.05
0.05	0.00	0.00	2.65	0.04	0.03	5.25	0.06	0.05
0.10	0.00	0.00	2.70	0.04	0.03	5.30	0.06	0.05
0.15	0.00	0.00	2.75	0.05	0.03	5.35	0.06	0.05
0.20	0.00	0.00	2.80	0.05	0.03	5.40	0.06	0.05
0.25	0.00	0.00	2.85	0.05	0.03	5.45	0.06	0.05
0.30	0.00	0.00	2.90	0.05	0.03	5.50	0.06	0.05
0.35	0.00	0.00	2.95	0.05	0.03	5.55	0.06	0.05
0.40	0.00	0.00	3.00	0.05	0.03	5.60	0.06	0.05
0.45	0.00	0.00	3.05	0.05	0.04	5.65	0.06	0.05
0.50	0.00	0.00	3.10	0.05	0.04	5.70	0.07	0.05
0.55	0.00	0.00	3.15	0.05	0.04	5.75	0.07	0.05
0.60	0.01	0.01	3.20	0.05	0.04	5.80	0.07	0.05
0.65	0.01	0.01	3.25	0.05	0.04	5.85	0.07	0.05
0.70	0.01	0.01	3.30	0.05	0.04	5.90	0.07	0.05
0.75	0.01	0.01	3.35	0.05	0.04	5.95	0.07	0.05
0.80	0.01	0.01	3.40	0.05	0.04	6.00	0.07	0.05
0.85	0.01	0.01	3.45	0.05	0.04	6.05	0.07	0.05
0.90	0.02	0.01	3.50	0.05	0.04	6.10	0.07	0.05
0.95	0.02	0.01	3.55	0.05	0.04	6.15	0.07	0.05
1.00	0.02	0.01	3.60	0.05	0.04	6.20	0.07	0.05
1.05	0.02	0.02	3.65	0.05	0.04	6.25	0.07	0.05
1.10	0.02	0.02	3.70	0.05	0.04	6.30	0.07	0.06
1.15	0.02	0.02	3.75	0.05	0.04	6.35	0.07	0.06
1.20	0.02	0.02	3.80	0.05	0.04	6.40	0.07	0.06
1.25	0.02	0.02	3.85	0.05	0.04	6.45	0.08	0.06
1.30	0.03	0.02	3.90	0.05	0.04	6.50	0.08	0.06
1.35	0.03	0.02	3.95	0.05	0.04	6.55	0.08	0.06
1.40	0.03	0.02	4.00	0.05	0.04	6.60	0.08	0.06
1.45	0.03	0.02	4.05	0.06	0.04	6.65	0.08	0.06
1.50	0.03	0.02	4.10	0.06	0.04	6.70	0.08	0.06
1.55	0.03	0.02	4.15	0.06	0.04	6.75	0.08	0.06
1.60	0.03	0.02	4.20	0.06	0.04	6.80	0.08	0.06
1.65	0.03	0.02	4.25	0.06	0.04	6.85	0.08	0.06
1.70	0.03	0.02	4.30	0.06	0.04	6.90	0.08	0.06
1.75	0.03	0.02	4.35	0.06	0.04	6.95	0.09	0.07
1.80	0.03	0.03	4.40	0.06	0.04	7.00	0.09	0.07
1.85	0.03	0.03	4.45	0.06	0.04	7.05	0.09	0.07
1.90	0.04	0.03	4.50	0.06	0.04	7.10	0.09	0.07
1.95	0.04	0.03	4.55	0.06	0.04	7.15	0.09	0.07
2.00	0.04	0.03	4.60	0.06	0.04	7.20	0.09	0.07
2.05	0.04	0.03	4.65	0.06	0.04	7.25	0.09	0.07
2.10	0.04	0.03	4.70	0.06	0.04	7.30	0.09	0.07
2.15	0.04	0.03	4.75	0.06	0.04	7.35	0.09	0.07
2.20	0.04	0.03	4.80	0.06	0.04	7.40	0.09	0.07
2.25	0.04	0.03	4.85	0.06	0.04	7.45	0.10	0.08
2.30	0.04	0.03	4.90	0.06	0.04	7.50	0.10	0.08
2.35	0.04	0.03	4.95	0.06	0.04	7.55	0.10	0.08
2.40	0.04	0.03	5.00	0.06	0.04	7.60	0.10	0.08
2.45	0.04	0.03	5.05	0.06	0.05	7.65	0.10	0.08
2.50	0.04	0.03	5.10	0.06	0.05	7.70	0.10	0.08
2.55	0.04	0.03	5.15	0.06	0.05	7.75	0.10	0.08

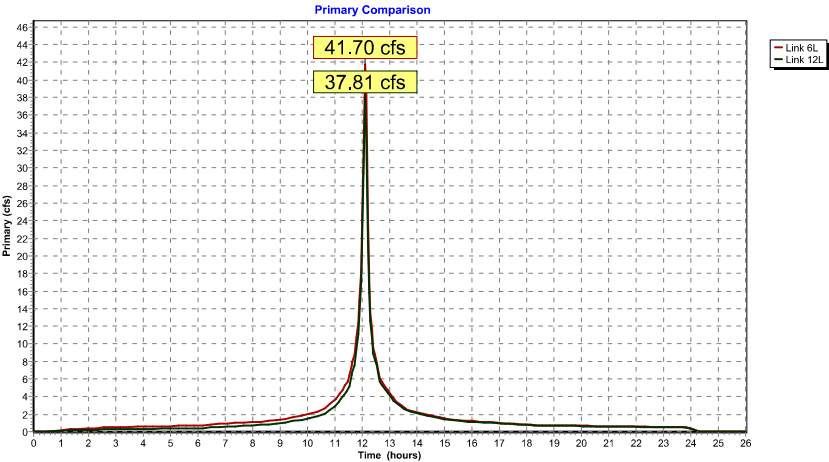
Primary Comparison (continued)								
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
7.80	0.10	0.08	10.40	0.22	0.19	13.00	0.43	0.41
7.85	0.10	0.08	10.45	0.23	0.20	13.05	0.40	0.38
7.90	0.10	0.08	10.50	0.23	0.20	13.10	0.38	0.36
7.95	0.11	0.08	10.55	0.24	0.21	13.15	0.36	0.35
8.00	0.11	0.09	10.60	0.26	0.22	13.20	0.35	0.34
8.05	0.11	0.09	10.65	0.27	0.24	13.25	0.34	0.32
8.10	0.11	0.09	10.70	0.28	0.24	13.30	0.33	0.31
8.15	0.11	0.09	10.75	0.29	0.26	13.35	0.31	0.30
8.20	0.11	0.09	10.80	0.31	0.27	13.40	0.30	0.29
8.25	0.11	0.09	10.85	0.32	0.28	13.45	0.29	0.27
8.30	0.11	0.09	10.90	0.33	0.29	13.50	0.27	0.26
8.35	0.11	0.09	10.95	0.34	0.30	13.55	0.26	0.25
8.40	0.12	0.09	11.00	0.36	0.31	13.60	0.25	0.24
8.45	0.12	0.09	11.05	0.38	0.34	13.65	0.24	0.23
8.50	0.12	0.09	11.10	0.40	0.35	13.70	0.24	0.23
8.55	0.12	0.10	11.15	0.42	0.38	13.75	0.24	0.22
8.60	0.12	0.10	11.20	0.44	0.39	13.80	0.23	0.22
8.65	0.12	0.10	11.25	0.47	0.42	13.85	0.23	0.22
8.70	0.12	0.10	11.30	0.49	0.44	13.90	0.23	0.22
8.75	0.12	0.10	11.35	0.51	0.46	13.95	0.22	0.21
8.80	0.12	0.10	11.40	0.54	0.48	14.00	0.22	0.21
8.85	0.12	0.10	11.45	0.56	0.50	14.05	0.21	0.20
8.90	0.13	0.10	11.50	0.58	0.52	14.10	0.21	0.20
8.95	0.13	0.10	11.55	0.68	0.63	14.15	0.21	0.20
9.00	0.13	0.10	11.60	0.77	0.70	14.20	0.20	0.20
9.05	0.13	0.11	11.65	0.81	0.73	14.25	0.20	0.19
9.10	0.13	0.11	11.70	0.83	0.76	14.30	0.20	0.19
9.15	0.14	0.11	11.75	0.98	0.93	14.35	0.19	0.18
9.20	0.14	0.12	11.80	1.12	1.03	14.40	0.19	0.18
9.25	0.14	0.12	11.85	1.36	1.29	14.45	0.19	0.18
9.30	0.15	0.12	11.90	1.57	1.45	14.50	0.18	0.18
9.35	0.15	0.13	11.95	2.14	2.10	14.55	0.18	0.17
9.40	0.15	0.13	12.00	2.69	2.51	14.60	0.18	0.17
9.45	0.16	0.13	12.05	3.64	3.59	14.65	0.17	0.16
9.50	0.16	0.13	12.10	4.47	4.14	14.70	0.17	0.16
9.55	0.16	0.14	12.15	3.21	2.66	14.75	0.16	0.16
9.60	0.17	0.14	12.20	1.86	1.73	14.80	0.16	0.15
9.65	0.17	0.14	12.25	1.44	1.33	14.85	0.16	0.15
9.70	0.17	0.15	12.30	1.21	1.14	14.90	0.15	0.15
9.75	0.18	0.15	12.35	1.03	0.94	14.95	0.15	0.14
9.80	0.18	0.15	12.40	0.88	0.83	15.00	0.15	0.14
9.85	0.19	0.16	12.45	0.84	0.79	15.05	0.14	0.14
9.90	0.19	0.16	12.50	0.82	0.77	15.10	0.14	0.13
9.95	0.19	0.16	12.55	0.72	0.66	15.15	0.14	0.13
10.00	0.20	0.17	12.60	0.62	0.59	15.20	0.14	0.13
10.05	0.20	0.17	12.65	0.59	0.55	15.25	0.14	0.13
10.10	0.20	0.17	12.70	0.56	0.53	15.30	0.14	0.13
10.15	0.21	0.18	12.75	0.54	0.51	15.35	0.13	0.13
10.20	0.21	0.18	12.80	0.52	0.49	15.40	0.13	0.13
10.25	0.21	0.18	12.85	0.49	0.46	15.45	0.13	0.13
10.30	0.22	0.19	12.90	0.47	0.45	15.50	0.13	0.13
10.35	0.22	0.19	12.95	0.45	0.42	15.55	0.13	0.12

Primary Comparison (continued)

Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
15.60	0.13	0.12	18.20	0.08	0.08
15.65	0.13	0.12	18.25	0.08	0.08
15.70	0.13	0.12	18.30	0.08	0.08
15.75	0.13	0.12	18.35	0.08	0.08
15.80	0.13	0.12	18.40	0.08	0.07
15.85	0.12	0.12	18.45	0.08	0.07
15.90	0.12	0.12	18.50	0.08	0.07
15.95	0.12	0.12	18.55	0.08	0.07
16.00	0.12	0.12	18.60	0.08	0.07
16.05	0.12	0.12	18.65	0.08	0.07
16.10	0.12	0.12	18.70	0.08	0.07
16.15	0.12	0.11	18.75	0.08	0.07
16.20	0.12	0.11	18.80	0.08	0.07
16.25	0.12	0.11	18.85	0.08	0.07
16.30	0.12	0.11	18.90	0.08	0.07
16.35	0.11	0.11	18.95	0.07	0.07
16.40	0.11	0.11	19.00	0.07	0.07
16.45	0.11	0.11	19.05	0.07	0.07
16.50	0.11	0.11	19.10	0.07	0.07
16.55	0.11	0.11	19.15	0.07	0.07
16.60	0.11	0.11	19.20	0.07	0.07
16.65	0.11	0.10	19.25	0.07	0.07
16.70	0.11	0.10	19.30	0.07	0.07
16.75	0.11	0.10	19.35	0.07	0.07
16.80	0.11	0.10	19.40	0.07	0.07
16.85	0.10	0.10	19.45	0.07	0.07
16.90	0.10	0.10	19.50	0.07	0.07
16.95	0.10	0.10	19.55	0.07	0.07
17.00	0.10	0.10	19.60	0.07	0.07
17.05	0.10	0.10	19.65	0.07	0.07
17.10	0.10	0.10	19.70	0.07	0.07
17.15	0.10	0.09	19.75	0.07	0.07
17.20	0.10	0.09	19.80	0.07	0.07
17.25	0.10	0.09	19.85	0.07	0.07
17.30	0.10	0.09	19.90	0.07	0.07
17.35	0.09	0.09	19.95	0.07	0.07
17.40	0.09	0.09	20.00	0.07	0.07
17.45	0.09	0.09	20.05	0.07	0.07
17.50	0.09	0.09	20.10	0.07	0.07
17.55	0.09	0.09	20.15	0.07	0.07
17.60	0.09	0.09	20.20	0.07	0.07
17.65	0.09	0.08	20.25	0.07	0.07
17.70	0.09	0.08	20.30	0.07	0.07
17.75	0.09	0.08	20.35	0.07	0.07
17.80	0.09	0.08	20.40	0.07	0.07
17.85	0.08	0.08	20.45	0.07	0.06
17.90	0.08	0.08	20.50	0.07	0.06
17.95	0.08	0.08	20.55	0.07	0.06
18.00	0.08	0.08	20.60	0.07	0.06
18.05	0.08	0.08	20.65	0.07	0.06
18.10	0.08	0.08	20.70	0.07	0.06
18.15	0.08	0.08	20.75	0.07	0.06

Primary Comparison (continued)

Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
23.40	0.05	0.05	26.00	0.00	0.00
23.45	0.05	0.05			
23.50	0.05	0.05			
23.55	0.05	0.05			
23.60	0.05	0.05			
23.65	0.05	0.05			
23.70	0.05	0.05			
23.75	0.05	0.05			
23.80	0.05	0.05			
23.85	0.05	0.05			
23.90	0.05	0.05			
23.95	0.05	0.05			
24.00	0.05	0.05			
24.05	0.03	0.02			
24.10	0.00	0.00			
24.15	0.00	0.00			
24.20	0.00	0.00			
24.25	0.00	0.00			
24.30	0.00	0.00			
24.35	0.00	0.00			
24.40	0.00	0.00			
24.45	0.00	0.00			
24.50	0.00	0.00			
24.55	0.00	0.00			
24.60	0.00	0.00			
24.65	0.00	0.00			
24.70	0.00	0.00			
24.75	0.00	0.00			
24.80	0.00	0.00			
24.85	0.00	0.00			
24.90	0.00	0.00			
24.95	0.00	0.00			
25.00	0.00	0.00			
25.05	0.00	0.00			
25.10	0.00	0.00			
25.15	0.00	0.00			
25.20	0.00	0.00			
25.25	0.00	0.00			
25.30	0.00	0.00			
25.35	0.00	0.00			
25.40	0.00	0.00			
25.45	0.00	0.00			
25.50	0.00	0.00			
25.55	0.00	0.00			
25.60	0.00	0.00			
25.65	0.00	0.00			
25.70	0.00	0.00			
25.75	0.00	0.00			
25.80	0.00	0.00			
25.85	0.00	0.00			
25.90	0.00	0.00			
25.95	0.00	0.00			



Primary Comparison

Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
0.00	0.00	0.00	2.60	0.47	0.27	5.20	0.68	0.38
0.05	0.00	0.00	2.65	0.48	0.27	5.25	0.68	0.39
0.10	0.00	0.00	2.70	0.49	0.28	5.30	0.69	0.39
0.15	0.00	0.00	2.75	0.49	0.28	5.35	0.69	0.39
0.20	0.00	0.00	2.80	0.49	0.28	5.40	0.69	0.39
0.25	0.00	0.00	2.85	0.50	0.28	5.45	0.69	0.39
0.30	0.00	0.00	2.90	0.51	0.29	5.50	0.70	0.40
0.35	0.00	0.00	2.95	0.51	0.29	5.55	0.70	0.40
0.40	0.00	0.00	3.00	0.51	0.29	5.60	0.70	0.40
0.45	0.00	0.00	3.05	0.52	0.29	5.65	0.71	0.40
0.50	0.01	0.01	3.10	0.52	0.30	5.70	0.71	0.41
0.55	0.03	0.02	3.15	0.53	0.30	5.75	0.71	0.41
0.60	0.06	0.04	3.20	0.53	0.30	5.80	0.72	0.41
0.65	0.08	0.05	3.25	0.54	0.30	5.85	0.72	0.42
0.70	0.10	0.06	3.30	0.54	0.31	5.90	0.72	0.42
0.75	0.12	0.07	3.35	0.55	0.31	5.95	0.73	0.42
0.80	0.13	0.08	3.40	0.55	0.31	6.00	0.73	0.42
0.85	0.15	0.09	3.45	0.55	0.31	6.05	0.73	0.43
0.90	0.17	0.10	3.50	0.56	0.32	6.10	0.75	0.44
0.95	0.18	0.11	3.55	0.56	0.32	6.15	0.75	0.45
1.00	0.20	0.12	3.60	0.57	0.32	6.20	0.77	0.45
1.05	0.21	0.12	3.65	0.57	0.32	6.25	0.77	0.46
1.10	0.23	0.13	3.70	0.58	0.33	6.30	0.79	0.47
1.15	0.24	0.14	3.75	0.58	0.33	6.35	0.80	0.48
1.20	0.25	0.15	3.80	0.58	0.33	6.40	0.81	0.48
1.25	0.26	0.15	3.85	0.58	0.33	6.45	0.81	0.49
1.30	0.28	0.16	3.90	0.59	0.33	6.50	0.82	0.50
1.35	0.29	0.16	3.95	0.59	0.34	6.55	0.83	0.51
1.40	0.30	0.17	4.00	0.60	0.34	6.60	0.85	0.52
1.45	0.31	0.18	4.05	0.60	0.34	6.65	0.85	0.52
1.50	0.32	0.18	4.10	0.61	0.34	6.70	0.87	0.53
1.55	0.33	0.19	4.15	0.61	0.34	6.75	0.87	0.54
1.60	0.34	0.19	4.20	0.61	0.35	6.80	0.89	0.55
1.65	0.34	0.20	4.25	0.62	0.35	6.85	0.90	0.56
1.70	0.35	0.20	4.30	0.62	0.35	6.90	0.91	0.56
1.75	0.36	0.21	4.35	0.62	0.35	6.95	0.92	0.57
1.80	0.37	0.21	4.40	0.63	0.36	7.00	0.93	0.58
1.85	0.38	0.22	4.45	0.63	0.36	7.05	0.94	0.59
1.90	0.39	0.22	4.50	0.63	0.36	7.10	0.95	0.60
1.95	0.39	0.22	4.55	0.64	0.36	7.15	0.96	0.61
2.00	0.40	0.23	4.60	0.64	0.36	7.20	0.97	0.61
2.05	0.41	0.23	4.65	0.64	0.36	7.25	0.98	0.62
2.10	0.41	0.24	4.70	0.65	0.37	7.30	0.99	0.63
2.15	0.42	0.24	4.75	0.65	0.37	7.35	1.00	0.64
2.20	0.43	0.24	4.80	0.65	0.37	7.40	1.01	0.65
2.25	0.43	0.25	4.85	0.66	0.37	7.45	1.02	0.66
2.30	0.44	0.25	4.90	0.66	0.37	7.50	1.03	0.67
2.35	0.45	0.25	4.95	0.66	0.38	7.55	1.04	0.67
2.40	0.45	0.26	5.00	0.67	0.38	7.60	1.05	0.68
2.45	0.46	0.26	5.05	0.67	0.38	7.65	1.06	0.69
2.50	0.46	0.26	5.10	0.67	0.38	7.70	1.07	0.70
2.55	0.47	0.27	5.15	0.68	0.38	7.75	1.08	0.71

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
7.80	1.09	0.72	10.40	2.31	1.79	13.00	4.36	4.11
7.85	1.10	0.73	10.45	2.34	1.82	13.05	4.16	3.90
7.90	1.11	0.74	10.50	2.38	1.85	13.10	3.90	3.68
7.95	1.12	0.75	10.55	2.46	1.93	13.15	3.74	3.52
8.00	1.13	0.76	10.60	2.59	2.03	13.20	3.59	3.39
8.05	1.14	0.77	10.65	2.70	2.14	13.25	3.47	3.27
8.10	1.15	0.77	10.70	2.85	2.25	13.30	3.32	3.14
8.15	1.16	0.78	10.75	2.96	2.36	13.35	3.21	3.02
8.20	1.17	0.79	10.80	3.10	2.47	13.40	3.06	2.89
8.25	1.18	0.80	10.85	3.22	2.58	13.45	2.95	2.78
8.30	1.19	0.81	10.90	3.36	2.69	13.50	2.80	2.65
8.35	1.20	0.82	10.95	3.47	2.80	13.55	2.69	2.53
8.40	1.22	0.83	11.00	3.62	2.91	13.60	2.54	2.40
8.45	1.22	0.84	11.05	3.77	3.08	13.65	2.46	2.34
8.50	1.23	0.85	11.10	4.02	3.27	13.70	2.41	2.29
8.55	1.24	0.86	11.15	4.22	3.46	13.75	2.38	2.26
8.60	1.25	0.87	11.20	4.47	3.66	13.80	2.34	2.22
8.65	1.26	0.88	11.25	4.67	3.86	13.85	2.31	2.19
8.70	1.28	0.89	11.30	4.93	4.06	13.90	2.27	2.15
8.75	1.29	0.90	11.35	5.12	4.27	13.95	2.23	2.12
8.80	1.30	0.91	11.40	5.38	4.48	14.00	2.20	2.09
8.85	1.31	0.92	11.45	5.58	4.68	14.05	2.17	2.05
8.90	1.32	0.93	11.50	5.84	4.90	14.10	2.13	2.02
8.95	1.32	0.94	11.55	6.39	5.53	14.15	2.09	1.99
9.00	1.34	0.95	11.60	7.45	6.37	14.20	2.05	1.95
9.05	1.36	0.97	11.65	7.99	6.81	14.25	2.02	1.92
9.10	1.39	1.00	11.70	8.33	7.11	14.30	1.98	1.89
9.15	1.42	1.02	11.75	9.12	8.07	14.35	1.95	1.85
9.20	1.46	1.05	11.80	10.75	9.39	14.40	1.91	1.82
9.25	1.49	1.08	11.85	12.38	11.12	14.45	1.88	1.79
9.30	1.53	1.11	11.90	14.87	13.15	14.50	1.84	1.75
9.35	1.57	1.14	11.95	18.37	17.10	14.55	1.81	1.72
9.40	1.60	1.17	12.00	24.57	22.22	14.60	1.77	1.69
9.45	1.63	1.19	12.05	31.06	29.36	14.65	1.74	1.65
9.50	1.67	1.22	12.10	41.11	37.69	14.70	1.70	1.62
9.55	1.71	1.25	12.15	38.75	32.92	14.75	1.67	1.59
9.60	1.75	1.28	12.20	24.60	21.55	14.80	1.63	1.55
9.65	1.78	1.31	12.25	17.55	15.81	14.85	1.60	1.52
9.70	1.81	1.34	12.30	13.63	12.59	14.90	1.56	1.48
9.75	1.85	1.37	12.35	11.56	10.59	14.95	1.52	1.45
9.80	1.89	1.41	12.40	9.60	8.92	15.00	1.48	1.42
9.85	1.92	1.44	12.45	8.76	8.17	15.05	1.45	1.38
9.90	1.96	1.47	12.50	8.33	7.80	15.10	1.41	1.35
9.95	1.99	1.50	12.55	7.75	7.10	15.15	1.39	1.33
10.00	2.03	1.53	12.60	6.66	6.19	15.20	1.38	1.32
10.05	2.06	1.56	12.65	6.11	5.71	15.25	1.37	1.31
10.10	2.10	1.59	12.70	5.77	5.42	15.30	1.36	1.30
10.15	2.13	1.62	12.75	5.54	5.18	15.35	1.35	1.29
10.20	2.17	1.65	12.80	5.28	4.96	15.40	1.34	1.28
10.25	2.20	1.69	12.85	5.07	4.75	15.45	1.33	1.27
10.30	2.24	1.72	12.90	4.82	4.53	15.50	1.32	1.26
10.35	2.27	1.75	12.95	4.62	4.32	15.55	1.31	1.25

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
15.60	1.30	1.24	18.20	0.79	0.76	20.80	0.66	0.63
15.65	1.29	1.23	18.25	0.78	0.75	20.85	0.65	0.63
15.70	1.28	1.22	18.30	0.78	0.75	20.90	0.65	0.63
15.75	1.27	1.21	18.35	0.78	0.75	20.95	0.65	0.62
15.80	1.26	1.20	18.40	0.78	0.75	21.00	0.65	0.62
15.85	1.25	1.19	18.45	0.77	0.74	21.05	0.64	0.62
15.90	1.24	1.18	18.50	0.77	0.74	21.10	0.64	0.61
15.95	1.23	1.17	18.55	0.77	0.74	21.15	0.64	0.61
16.00	1.22	1.16	18.60	0.77	0.74	21.20	0.64	0.61
16.05	1.21	1.16	18.65	0.76	0.73	21.25	0.63	0.61
16.10	1.20	1.15	18.70	0.76	0.73	21.30	0.63	0.61
16.15	1.19	1.14	18.75	0.76	0.73	21.35	0.63	0.60
16.20	1.18	1.12	18.80	0.76	0.73	21.40	0.63	0.60
16.25	1.17	1.12	18.85	0.76	0.73	21.45	0.62	0.60
16.30	1.16	1.11	18.90	0.75	0.72	21.50	0.62	0.60
16.35	1.15	1.10	18.95	0.75	0.72	21.55	0.62	0.59
16.40	1.14	1.09	19.00	0.75	0.72	21.60	0.61	0.59
16.45	1.13	1.08	19.05	0.74	0.71	21.65	0.61	0.59
16.50	1.12	1.07	19.10	0.74	0.71	21.70	0.61	0.59
16.55	1.11	1.06	19.15	0.74	0.71	21.75	0.61	0.59
16.60	1.10	1.05	19.20	0.74	0.71	21.80	0.61	0.58
16.65	1.09	1.04	19.25	0.73	0.71	21.85	0.60	0.58
16.70	1.08	1.03	19.30	0.73	0.70	21.90	0.60	0.58
16.75	1.07	1.02	19.35	0.73	0.70	21.95	0.60	0.58
16.80	1.06	1.01	19.40	0.72	0.70	22.00	0.60	0.58
16.85	1.05	1.00	19.45	0.72	0.69	22.05	0.59	0.57
16.90	1.04	0.99	19.50	0.72	0.69	22.10	0.59	0.57
16.95	1.03	0.98	19.55	0.72	0.69	22.15	0.59	0.57
17.00	1.02	0.97	19.60	0.71	0.69	22.20	0.59	0.57
17.05	1.01	0.96	19.65	0.71	0.69	22.25	0.58	0.56
17.10	1.00	0.96	19.70	0.71	0.69	22.30	0.58	0.56
17.15	0.99	0.95	19.75	0.71	0.68	22.35	0.58	0.56
17.20	0.98	0.94	19.80	0.71	0.68	22.40	0.57	0.55
17.25	0.97	0.93	19.85	0.70	0.68	22.45	0.57	0.55
17.30	0.96	0.92	19.90	0.70	0.67	22.50	0.57	0.55
17.35	0.95	0.91	19.95	0.70	0.67	22.55	0.57	0.55
17.40	0.94	0.90	20.00	0.70	0.67	22.60	0.57	0.54
17.45	0.93	0.89	20.05	0.69	0.67	22.65	0.56	0.54
17.50	0.92	0.88	20.10	0.69	0.67	22.70	0.56	0.54
17.55	0.91	0.87	20.15	0.69	0.66	22.75	0.56	0.54
17.60	0.89	0.86	20.20	0.69	0.66	22.80	0.56	0.54
17.65	0.89	0.85	20.25	0.68	0.66	22.85	0.55	0.53
17.70	0.88	0.84	20.30	0.68	0.65	22.90	0.55	0.53
17.75	0.87	0.83	20.35	0.68	0.65	22.95	0.55	0.53
17.80	0.86	0.82	20.40	0.68	0.65	23.00	0.54	0.52
17.85	0.85	0.81	20.45	0.67	0.65	23.05	0.54	0.52
17.90	0.84	0.80	20.50	0.67	0.64	23.10	0.54	0.52
17.95	0.83	0.79	20.55	0.67	0.64	23.15	0.54	0.52
18.00	0.82	0.78	20.60	0.67	0.64	23.20	0.53	0.52
18.05	0.81	0.77	20.65	0.67	0.64	23.25	0.53	0.51
18.10	0.80	0.76	20.70	0.66	0.64	23.30	0.53	0.51
18.15	0.79	0.76	20.75	0.66	0.63	23.35	0.53	0.51

Primary Comparison (continued)

Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
23.40	0.52	0.51	26.00	0.00	0.00
23.45	0.52	0.50			
23.50	0.52	0.50			
23.55	0.52	0.50			
23.60	0.52	0.50			
23.65	0.51	0.50			
23.70	0.51	0.49			
23.75	0.51	0.49			
23.80	0.50	0.49			
23.85	0.50	0.48			
23.90	0.50	0.48			
23.95	0.50	0.48			
24.00	0.50	0.48			
24.05	0.39	0.34			
24.10	0.14	0.13			
24.15	0.04	0.04			
24.20	0.01	0.01			
24.25	0.00	0.00			
24.30	0.00	0.00			
24.35	0.00	0.00			
24.40	0.00	0.00			
24.45	0.00	0.00			
24.50	0.00	0.00			
24.55	0.00	0.00			
24.60	0.00	0.00			
24.65	0.00	0.00			
24.70	0.00	0.00			
24.75	0.00	0.00			
24.80	0.00	0.00			
24.85	0.00	0.00			
24.90	0.00	0.00			
24.95	0.00	0.00			
25.00	0.00	0.00			
25.05	0.00	0.00			
25.10	0.00	0.00			
25.15	0.00	0.00			
25.20	0.00	0.00			
25.25	0.00	0.00			
25.30	0.00	0.00			
25.35	0.00	0.00			
25.40	0.00	0.00			
25.45	0.00	0.00			
25.50	0.00	0.00			
25.55	0.00	0.00			
25.60	0.00	0.00			
25.65	0.00	0.00			
25.70	0.00	0.00			
25.75	0.00	0.00			
25.80	0.00	0.00			
25.85	0.00	0.00			
25.90	0.00	0.00			
25.95	0.00	0.00			

Summary for Subcatchment 1S: EX-DA1-IMP

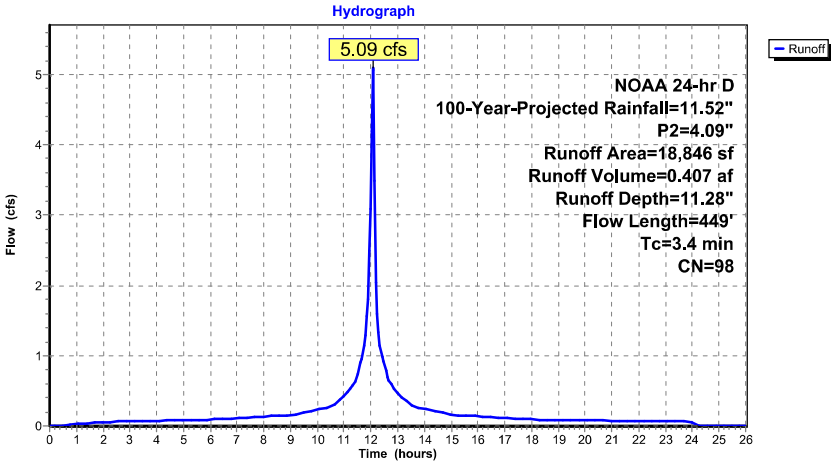
Runoff = 5.09 cfs @ 12.09 hrs, Volume= 0.407 af, Depth=11.28"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Projected Rainfall=11.52", P2=4.09"

Area (sf)	CN	Description
* 18,142	98	IMPERVIOUS
* 704	98	BUILDINGS
18,846	98	Weighted Average
18,846		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	100	0.0216	1.60		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
2.4	349	0.0139	2.39		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
3.4	449				Total

Subcatchment 1S: EX-DA1-IMP



Summary for Subcatchment 2S: EX-DA1-PER

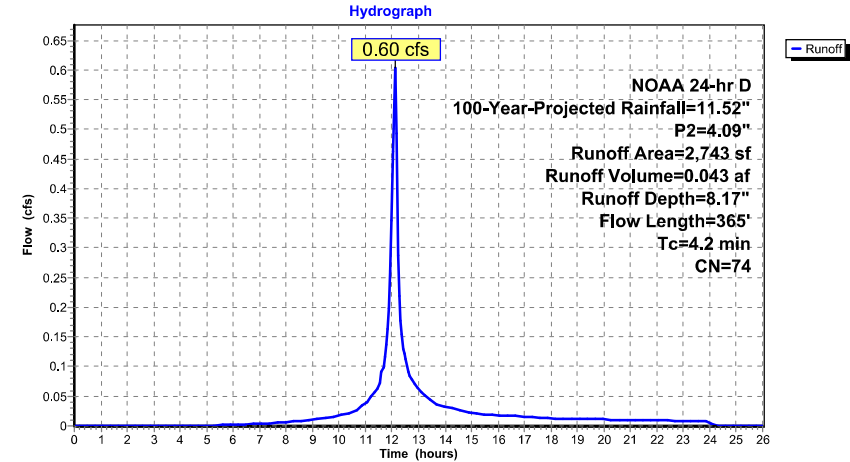
Runoff = 0.60 cfs @ 12.10 hrs, Volume= 0.043 af, Depth= 8.17"
Routed to Link 3L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Projected Rainfall=11.52", P2=4.09"

Area (sf)	CN	Description
2,743	74	>75% Grass cover, Good, HSG C
2,743		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	7	0.0364	0.10		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
1.2	93	0.0130	1.29		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 4.09"
1.8	265	0.0139	2.39		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
4.2	365				Total

Subcatchment 2S: EX-DA1-PER

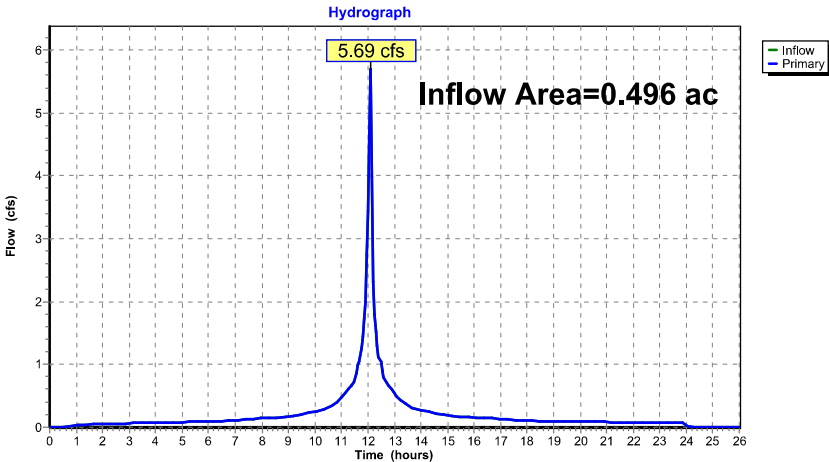


Summary for Link 3L: POA #1

Inflow Area = 0.496 ac, 87.29% Impervious, Inflow Depth = 10.88" for 100-Year-Projected event
Inflow = 5.69 cfs @ 12.09 hrs, Volume= 0.449 af
Primary = 5.69 cfs @ 12.09 hrs, Volume= 0.449 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs

Link 3L: POA #1



Summary for Subcatchment 4S: EX-DA2-IMP

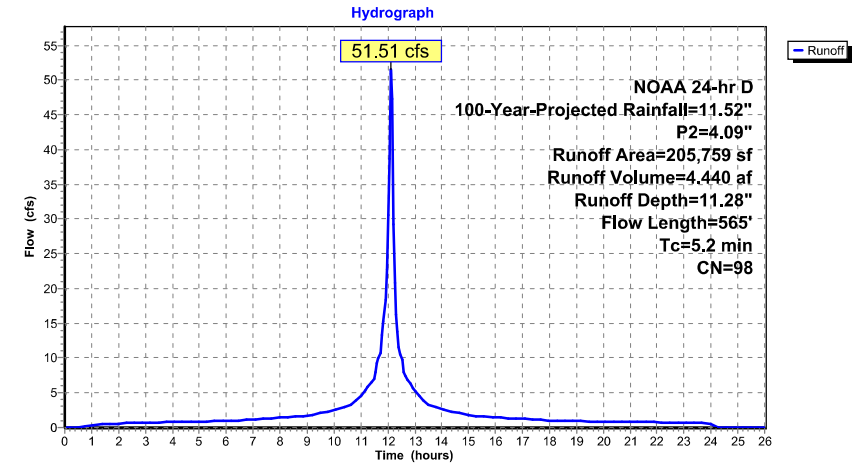
Runoff = 51.51 cfs @ 12.11 hrs, Volume= 4.440 af, Depth=11.28"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Projected Rainfall=11.52", P2=4.09"

Area (sf)		CN	Description		
*	195,091	98	IMPERVIOUS		
*	10,668	98	BUILDING		
205,759		98	Weighted Average		
205,759			100.00% Impervious Area		

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0135	1.33		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
2.2	230	0.0075	1.76		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
1.7	235	0.0130	2.31		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
5.2	565	Total			

Subcatchment 4S: EX-DA2-IMP



Summary for Subcatchment 5S: EX-DA2-PER

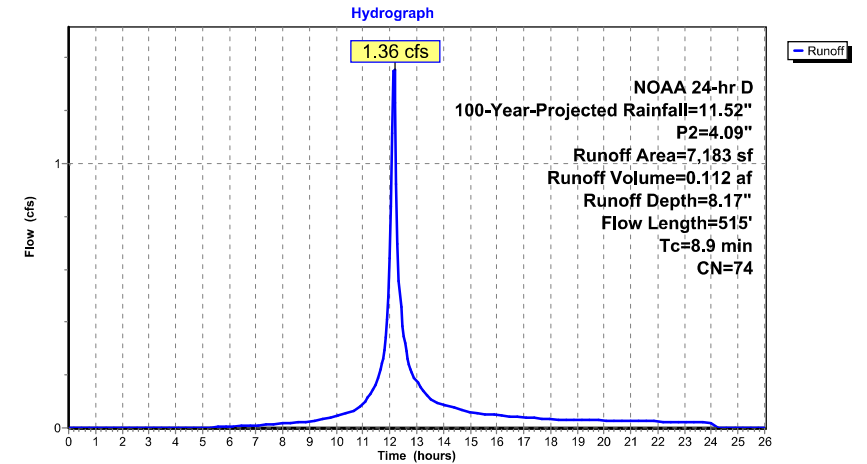
Runoff = 1.36 cfs @ 12.16 hrs, Volume= 0.112 af, Depth= 8.17"
Routed to Link 6L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Projected Rainfall=11.52", P2=4.09"

Area (sf)		CN	Description		
	7,183	74	>75% Grass cover, Good, HSG C		
7,183			100.00% Pervious Area		

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	55	0.0500	0.17		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
0.7	45	0.0100	1.00		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 4.09"
2.8	415	0.0150	2.49		Shallow Concentrated Flow, TC-CD Paved Kv= 20.3 fps
8.9	515	Total			

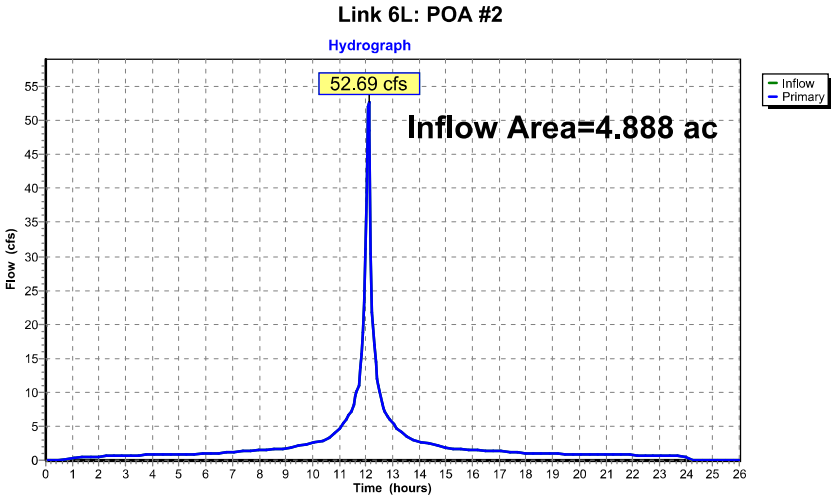
Subcatchment 5S: EX-DA2-PER



Summary for Link 6L: POA #2

Inflow Area = 4.888 ac, 96.63% Impervious, Inflow Depth = 11.17" for 100-Year-Projected event
Inflow = 52.69 cfs @ 12.11 hrs, Volume= 4.552 af
Primary = 52.69 cfs @ 12.11 hrs, Volume= 4.552 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



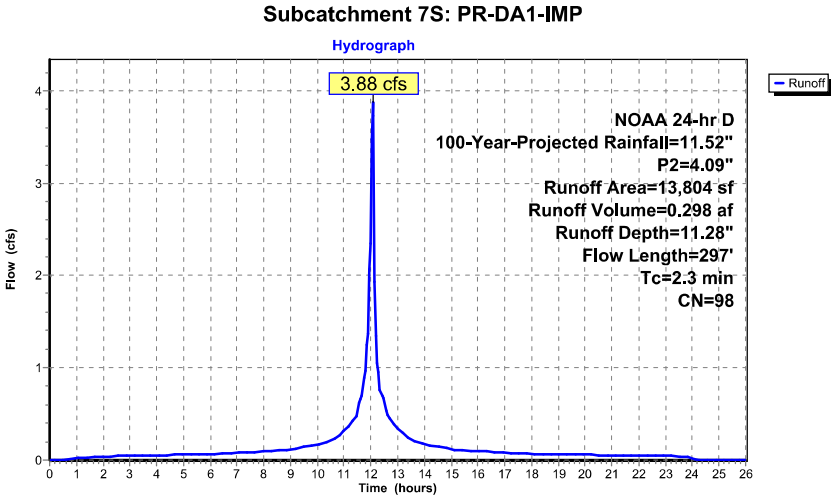
Summary for Subcatchment 7S: PR-DA1-IMP

Runoff = 3.88 cfs @ 12.08 hrs, Volume= 0.298 af, Depth=11.28"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Projected Rainfall=11.52", P2=4.09"

Area (sf)	CN	Description
* 13,804	98	IMPERVIOUS
13,804		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0150	1.39		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
1.0	174	0.0196	2.84		Shallow Concentrated Flow, TC-BC Paved Kv= 20.3 fps
0.1	23	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
2.3	297	Total			



Summary for Subcatchment 8S: PR-DA1-PER

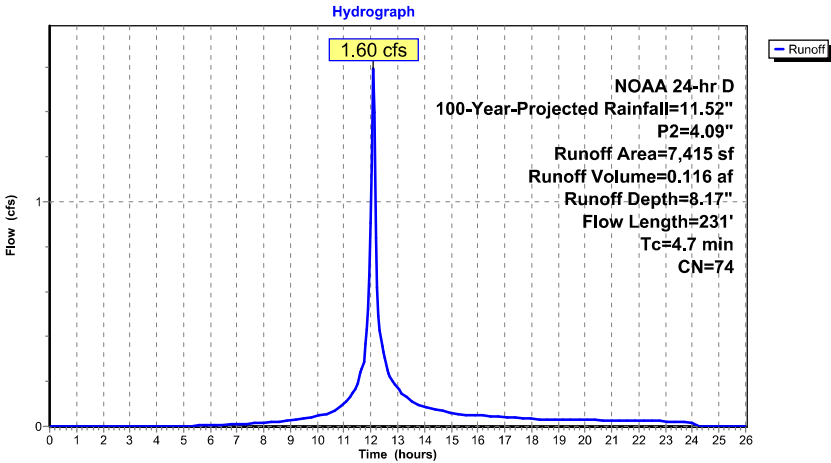
Runoff = 1.60 cfs @ 12.11 hrs, Volume= 0.116 af, Depth= 8.17"
Routed to Link 9L : POA #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Projected Rainfall=11.52", P2=4.09"

Area (sf)		CN	Description		
7,415		74	>75% Grass cover, Good, HSG C		
7,415			100.00% Pervious Area		

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	33	0.0692	0.17		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
0.1	8	0.0518	1.37		Sheet Flow, TC-BC Smooth surfaces n= 0.011 P2= 4.09"
0.7	59	0.0180	1.34		Sheet Flow, TC-CD Smooth surfaces n= 0.011 P2= 4.09"
0.5	80	0.0180	2.72		Shallow Concentrated Flow, TC-DE Paved Kv= 20.3 fps
0.1	29	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	22	0.0104	5.82	7.14	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
4.7	231	Total			

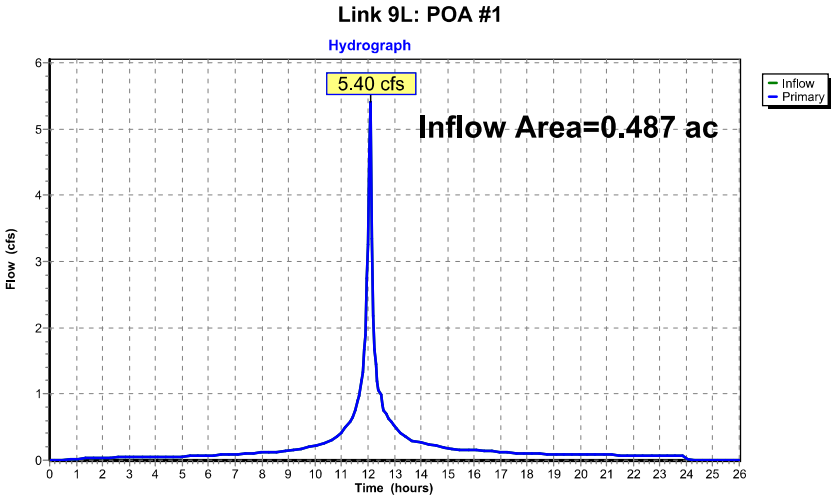
Subcatchment 8S: PR-DA1-PER



Summary for Link 9L: POA #1

Inflow Area = 0.487 ac, 65.05% Impervious, Inflow Depth = 10.19" for 100-Year-Projected event
Inflow = 5.40 cfs @ 12.09 hrs, Volume= 0.414 af
Primary = 5.40 cfs @ 12.09 hrs, Volume= 0.414 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 10S: PR-DA2-IMP

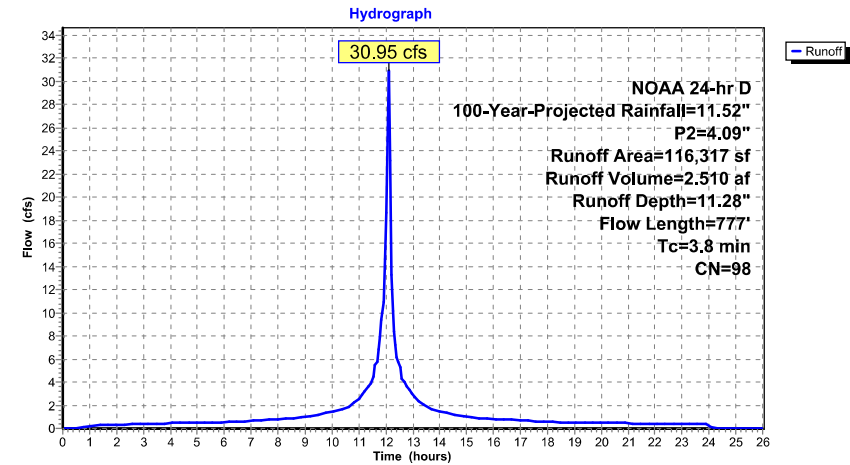
Runoff = 30.95 cfs @ 12.10 hrs, Volume= 2.510 af, Depth=11.28"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Projected Rainfall=11.52", P2=4.09"

Area (sf)	CN	Description
* 116,317	98	IMPERVIOUS
116,317		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	41	0.0150	1.16		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.09"
0.2	55	0.0100	5.70	7.00	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	68	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	87	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	153	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.5	94	0.0030	3.12	3.83	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	63	0.0032	3.23	3.96	Pipe Channel, TC-GH 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	31	0.0050	4.03	4.95	Pipe Channel, TC-HI 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
1.1	156	0.0200	2.28		Shallow Concentrated Flow, TC-IJ Unpaved Kv= 16.1 fps
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-JK Unpaved Kv= 16.1 fps
3.8	777	Total			

Subcatchment 10S: PR-DA2-IMP



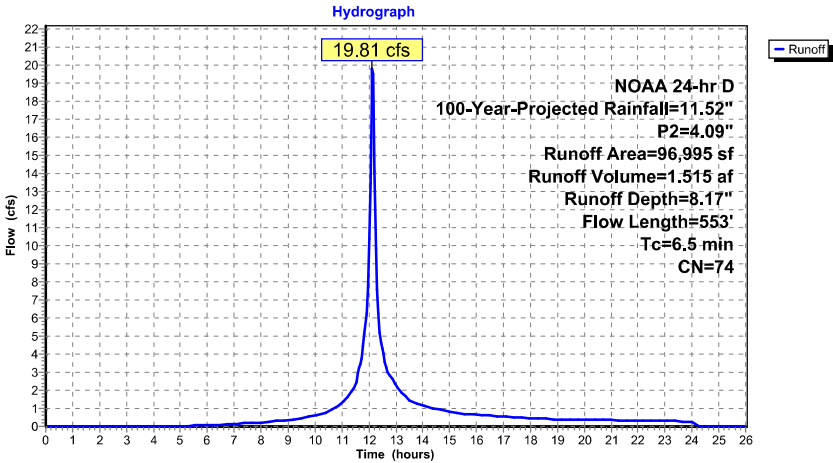
Summary for Subcatchment 11S: PR-DA2-PER

Runoff = 19.81 cfs @ 12.13 hrs, Volume= 1.515 af, Depth= 8.17"
Routed to Link 12L : POA #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year-Projected Rainfall=11.52", P2=4.09"

Area (sf)		CN	Description		
96,995		74	>75% Grass cover, Good, HSG C		
96,995			100.00% Pervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	22	0.0120	0.08		Sheet Flow, TC-AB Grass: Dense n= 0.240 P2= 4.09"
0.4	182	0.0200	8.06	9.90	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	55	0.0050	4.03	4.95	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	40	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.1	43	0.0096	5.59	6.86	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.6	106	0.0030	3.12	3.83	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	76	0.0325	2.90		Shallow Concentrated Flow, TC-GH Unpaved Kv= 16.1 fps
0.1	29	0.0464	3.47		Shallow Concentrated Flow, TC-HI Unpaved Kv= 16.1 fps
6.5	553	Total			

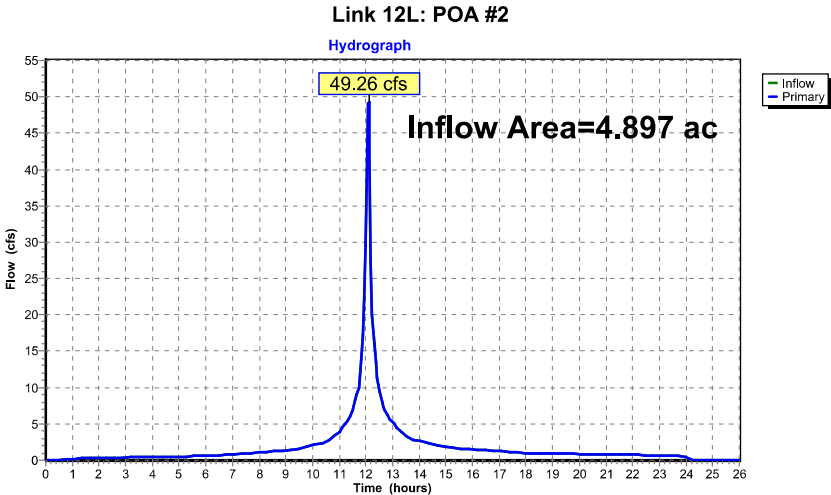
Subcatchment 11S: PR-DA2-PER

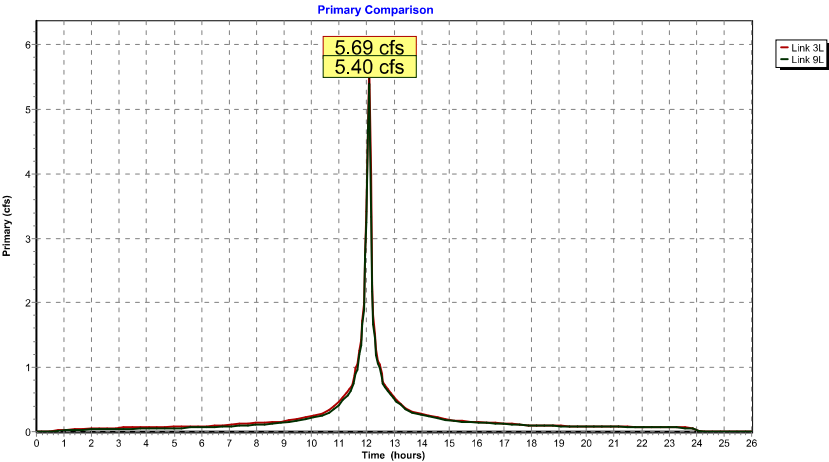


Summary for Link 12L: POA #2

Inflow Area = 4.897 ac, 54.53% Impervious, Inflow Depth = 9.86" for 100-Year-Projected event
Inflow = 49.26 cfs @ 12.11 hrs, Volume= 4.025 af
Primary = 49.26 cfs @ 12.11 hrs, Volume= 4.025 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-26.00 hrs, dt= 0.05 hrs





Primary Comparison

Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
0.00	0.00	0.00	2.60	0.06	0.04	5.20	0.08	0.06
0.05	0.00	0.00	2.65	0.06	0.04	5.25	0.08	0.06
0.10	0.00	0.00	2.70	0.06	0.04	5.30	0.08	0.06
0.15	0.00	0.00	2.75	0.06	0.04	5.35	0.08	0.06
0.20	0.00	0.00	2.80	0.06	0.04	5.40	0.08	0.06
0.25	0.00	0.00	2.85	0.06	0.05	5.45	0.08	0.06
0.30	0.00	0.00	2.90	0.06	0.05	5.50	0.08	0.06
0.35	0.00	0.00	2.95	0.06	0.05	5.55	0.08	0.06
0.40	0.00	0.00	3.00	0.06	0.05	5.60	0.08	0.06
0.45	0.01	0.00	3.05	0.06	0.05	5.65	0.08	0.06
0.50	0.01	0.01	3.10	0.06	0.05	5.70	0.08	0.06
0.55	0.01	0.01	3.15	0.06	0.05	5.75	0.09	0.07
0.60	0.01	0.01	3.20	0.06	0.05	5.80	0.09	0.07
0.65	0.02	0.01	3.25	0.06	0.05	5.85	0.09	0.07
0.70	0.02	0.01	3.30	0.07	0.05	5.90	0.09	0.07
0.75	0.02	0.02	3.35	0.07	0.05	5.95	0.09	0.07
0.80	0.02	0.02	3.40	0.07	0.05	6.00	0.09	0.07
0.85	0.02	0.02	3.45	0.07	0.05	6.05	0.09	0.07
0.90	0.03	0.02	3.50	0.07	0.05	6.10	0.09	0.07
0.95	0.03	0.02	3.55	0.07	0.05	6.15	0.09	0.07
1.00	0.03	0.02	3.60	0.07	0.05	6.20	0.09	0.07
1.05	0.03	0.02	3.65	0.07	0.05	6.25	0.09	0.07
1.10	0.03	0.02	3.70	0.07	0.05	6.30	0.09	0.07
1.15	0.03	0.03	3.75	0.07	0.05	6.35	0.10	0.08
1.20	0.04	0.03	3.80	0.07	0.05	6.40	0.10	0.08
1.25	0.04	0.03	3.85	0.07	0.05	6.45	0.10	0.08
1.30	0.04	0.03	3.90	0.07	0.05	6.50	0.10	0.08
1.35	0.04	0.03	3.95	0.07	0.05	6.55	0.10	0.08
1.40	0.04	0.03	4.00	0.07	0.05	6.60	0.10	0.08
1.45	0.04	0.03	4.05	0.07	0.05	6.65	0.10	0.08
1.50	0.04	0.03	4.10	0.07	0.05	6.70	0.10	0.08
1.55	0.04	0.03	4.15	0.07	0.05	6.75	0.11	0.08
1.60	0.04	0.03	4.20	0.07	0.05	6.80	0.11	0.08
1.65	0.05	0.03	4.25	0.07	0.05	6.85	0.11	0.09
1.70	0.05	0.03	4.30	0.07	0.05	6.90	0.11	0.09
1.75	0.05	0.03	4.35	0.07	0.05	6.95	0.11	0.09
1.80	0.05	0.04	4.40	0.07	0.05	7.00	0.11	0.09
1.85	0.05	0.04	4.45	0.07	0.05	7.05	0.11	0.09
1.90	0.05	0.04	4.50	0.07	0.05	7.10	0.11	0.09
1.95	0.05	0.04	4.55	0.08	0.06	7.15	0.12	0.09
2.00	0.05	0.04	4.60	0.08	0.06	7.20	0.12	0.09
2.05	0.05	0.04	4.65	0.08	0.06	7.25	0.12	0.10
2.10	0.05	0.04	4.70	0.08	0.06	7.30	0.12	0.10
2.15	0.05	0.04	4.75	0.08	0.06	7.35	0.12	0.10
2.20	0.05	0.04	4.80	0.08	0.06	7.40	0.12	0.10
2.25	0.05	0.04	4.85	0.08	0.06	7.45	0.12	0.10
2.30	0.06	0.04	4.90	0.08	0.06	7.50	0.12	0.10
2.35	0.06	0.04	4.95	0.08	0.06	7.55	0.13	0.10
2.40	0.06	0.04	5.00	0.08	0.06	7.60	0.13	0.10
2.45	0.06	0.04	5.05	0.08	0.06	7.65	0.13	0.10
2.50	0.06	0.04	5.10	0.08	0.06	7.70	0.13	0.11
2.55	0.06	0.04	5.15	0.08	0.06	7.75	0.13	0.11

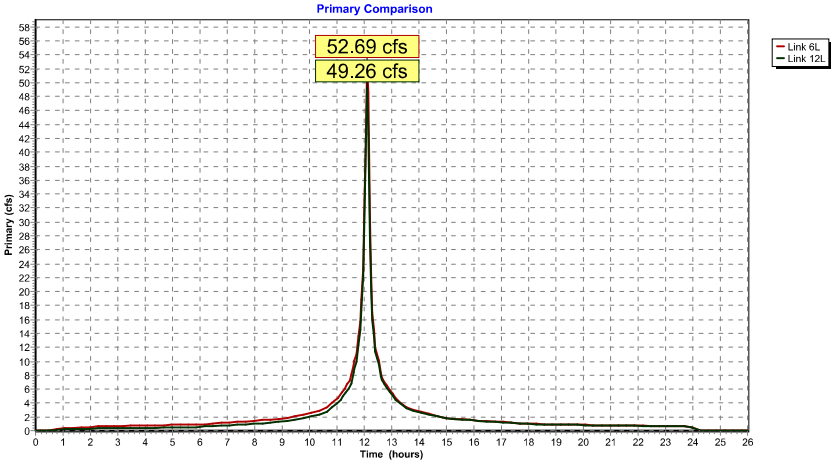
Primary Comparison (continued)								
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
7.80	0.13	0.11	10.40	0.29	0.25	13.00	0.54	0.51
7.85	0.13	0.11	10.45	0.29	0.26	13.05	0.50	0.48
7.90	0.13	0.11	10.50	0.30	0.26	13.10	0.48	0.46
7.95	0.14	0.11	10.55	0.31	0.28	13.15	0.46	0.44
8.00	0.14	0.11	10.60	0.33	0.29	13.20	0.44	0.43
8.05	0.14	0.11	10.65	0.34	0.31	13.25	0.43	0.41
8.10	0.14	0.12	10.70	0.36	0.32	13.30	0.41	0.40
8.15	0.14	0.12	10.75	0.38	0.34	13.35	0.39	0.38
8.20	0.14	0.12	10.80	0.39	0.35	13.40	0.38	0.36
8.25	0.14	0.12	10.85	0.41	0.37	13.45	0.36	0.34
8.30	0.14	0.12	10.90	0.42	0.38	13.50	0.35	0.33
8.35	0.15	0.12	10.95	0.44	0.40	13.55	0.33	0.31
8.40	0.15	0.12	11.00	0.45	0.41	13.60	0.31	0.30
8.45	0.15	0.12	11.05	0.48	0.44	13.65	0.31	0.29
8.50	0.15	0.13	11.10	0.51	0.46	13.70	0.30	0.29
8.55	0.15	0.13	11.15	0.54	0.49	13.75	0.30	0.29
8.60	0.15	0.13	11.20	0.57	0.51	13.80	0.29	0.28
8.65	0.15	0.13	11.25	0.60	0.55	13.85	0.29	0.28
8.70	0.16	0.13	11.30	0.62	0.57	13.90	0.28	0.27
8.75	0.16	0.13	11.35	0.65	0.60	13.95	0.28	0.27
8.80	0.16	0.13	11.40	0.68	0.62	14.00	0.28	0.27
8.85	0.16	0.13	11.45	0.71	0.66	14.05	0.27	0.26
8.90	0.16	0.14	11.50	0.74	0.68	14.10	0.27	0.26
8.95	0.16	0.14	11.55	0.87	0.83	14.15	0.26	0.25
9.00	0.16	0.14	11.60	0.98	0.91	14.20	0.26	0.25
9.05	0.17	0.14	11.65	1.03	0.95	14.25	0.25	0.24
9.10	0.17	0.15	11.70	1.06	0.98	14.30	0.25	0.24
9.15	0.18	0.15	11.75	1.25	1.20	14.35	0.24	0.23
9.20	0.18	0.15	11.80	1.43	1.34	14.40	0.24	0.23
9.25	0.18	0.16	11.85	1.73	1.67	14.45	0.23	0.23
9.30	0.19	0.16	11.90	2.00	1.89	14.50	0.23	0.22
9.35	0.19	0.17	11.95	2.75	2.74	14.55	0.23	0.22
9.40	0.20	0.17	12.00	3.43	3.26	14.60	0.22	0.21
9.45	0.20	0.17	12.05	4.66	4.66	14.65	0.22	0.21
9.50	0.21	0.18	12.10	5.67	5.32	14.70	0.21	0.20
9.55	0.21	0.18	12.15	3.98	3.33	14.75	0.21	0.20
9.60	0.21	0.19	12.20	2.32	2.18	14.80	0.20	0.20
9.65	0.22	0.19	12.25	1.80	1.67	14.85	0.20	0.19
9.70	0.22	0.19	12.30	1.52	1.45	14.90	0.19	0.19
9.75	0.23	0.20	12.35	1.29	1.19	14.95	0.19	0.18
9.80	0.23	0.20	12.40	1.11	1.06	15.00	0.19	0.18
9.85	0.24	0.21	12.45	1.06	1.01	15.05	0.18	0.17
9.90	0.24	0.21	12.50	1.03	0.98	15.10	0.18	0.17
9.95	0.25	0.22	12.55	0.90	0.83	15.15	0.17	0.17
10.00	0.25	0.22	12.60	0.78	0.75	15.20	0.17	0.17
10.05	0.26	0.22	12.65	0.74	0.70	15.25	0.17	0.17
10.10	0.26	0.23	12.70	0.71	0.68	15.30	0.17	0.17
10.15	0.26	0.23	12.75	0.68	0.64	15.35	0.17	0.16
10.20	0.27	0.23	12.80	0.65	0.62	15.40	0.17	0.16
10.25	0.27	0.24	12.85	0.62	0.59	15.45	0.17	0.16
10.30	0.28	0.24	12.90	0.59	0.57	15.50	0.17	0.16
10.35	0.28	0.25	12.95	0.56	0.53	15.55	0.16	0.16

Primary Comparison (continued)								
Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)	Time (hours)	Link 3L (cfs)	Link 9L (cfs)
15.60	0.16	0.16	18.20	0.10	0.10	20.80	0.08	0.08
15.65	0.16	0.16	18.25	0.10	0.10	20.85	0.08	0.08
15.70	0.16	0.16	18.30	0.10	0.10	20.90	0.08	0.08
15.75	0.16	0.15	18.35	0.10	0.10	20.95	0.08	0.08
15.80	0.16	0.15	18.40	0.10	0.09	21.00	0.08	0.08
15.85	0.16	0.15	18.45	0.10	0.09	21.05	0.08	0.08
15.90	0.16	0.15	18.50	0.10	0.09	21.10	0.08	0.08
15.95	0.15	0.15	18.55	0.10	0.09	21.15	0.08	0.08
16.00	0.15	0.15	18.60	0.10	0.09	21.20	0.08	0.08
16.05	0.15	0.15	18.65	0.10	0.09	21.25	0.08	0.08
16.10	0.15	0.15	18.70	0.10	0.09	21.30	0.08	0.08
16.15	0.15	0.14	18.75	0.10	0.09	21.35	0.08	0.08
16.20	0.15	0.14	18.80	0.10	0.09	21.40	0.08	0.08
16.25	0.15	0.14	18.85	0.10	0.09	21.45	0.08	0.08
16.30	0.15	0.14	18.90	0.09	0.09	21.50	0.08	0.08
16.35	0.14	0.14	18.95	0.09	0.09	21.55	0.08	0.08
16.40	0.14	0.14	19.00	0.09	0.09	21.60	0.08	0.08
16.45	0.14	0.14	19.05	0.09	0.09	21.65	0.08	0.07
16.50	0.14	0.14	19.10	0.09	0.09	21.70	0.08	0.07
16.55	0.14	0.13	19.15	0.09	0.09	21.75	0.08	0.07
16.60	0.14	0.13	19.20	0.09	0.09	21.80	0.08	0.07
16.65	0.14	0.13	19.25	0.09	0.09	21.85	0.08	0.07
16.70	0.14	0.13	19.30	0.09	0.09	21.90	0.08	0.07
16.75	0.13	0.13	19.35	0.09	0.09	21.95	0.08	0.07
16.80	0.13	0.13	19.40	0.09	0.09	22.00	0.08	0.07
16.85	0.13	0.13	19.45	0.09	0.09	22.05	0.07	0.07
16.90	0.13	0.13	19.50	0.09	0.09	22.10	0.07	0.07
16.95	0.13	0.12	19.55	0.09	0.09	22.15	0.07	0.07
17.00	0.13	0.12	19.60	0.09	0.09	22.20	0.07	0.07
17.05	0.13	0.12	19.65	0.09	0.09	22.25	0.07	0.07
17.10	0.13	0.12	19.70	0.09	0.09	22.30	0.07	0.07
17.15	0.12	0.12	19.75	0.09	0.09	22.35	0.07	0.07
17.20	0.12	0.12	19.80	0.09	0.09	22.40	0.07	0.07
17.25	0.12	0.12	19.85	0.09	0.09	22.45	0.07	0.07
17.30	0.12	0.12	19.90	0.09	0.09	22.50	0.07	0.07
17.35	0.12	0.11	19.95	0.09	0.09	22.55	0.07	0.07
17.40	0.12	0.11	20.00	0.09	0.09	22.60	0.07	0.07
17.45	0.12	0.11	20.05	0.09	0.08	22.65	0.07	0.07
17.50	0.12	0.11	20.10	0.09	0.08	22.70	0.07	0.07
17.55	0.11	0.11	20.15	0.09	0.08	22.75	0.07	0.07
17.60	0.11	0.11	20.20	0.09	0.08	22.80	0.07	0.07
17.65	0.11	0.11	20.25	0.09	0.08	22.85	0.07	0.07
17.70	0.11	0.11	20.30	0.09	0.08	22.90	0.07	0.07
17.75	0.11	0.11	20.35	0.09	0.08	22.95	0.07	0.07
17.80	0.11	0.10	20.40	0.09	0.08	23.00	0.07	0.07
17.85	0.11	0.10	20.45	0.09	0.08	23.05	0.07	0.07
17.90	0.11	0.10	20.50	0.08	0.08	23.10	0.07	0.07
17.95	0.10	0.10	20.55	0.08	0.08	23.15	0.07	0.07
18.00	0.10	0.10	20.60	0.08	0.08	23.20	0.07	0.07
18.05	0.10	0.10	20.65	0.08	0.08	23.25	0.07	0.07
18.10	0.10	0.10	20.70	0.08	0.08	23.30	0.07	0.06
18.15	0.10	0.10	20.75	0.08	0.08	23.35	0.07	0.06

Primary Comparison (continued)

Time (hours)	Link 3L (cfs)	Link 9L (cfs)
23.40	0.07	0.06
23.45	0.07	0.06
23.50	0.07	0.06
23.55	0.07	0.06
23.60	0.07	0.06
23.65	0.06	0.06
23.70	0.06	0.06
23.75	0.06	0.06
23.80	0.06	0.06
23.85	0.06	0.06
23.90	0.06	0.06
23.95	0.06	0.06
24.00	0.06	0.06
24.05	0.03	0.02
24.10	0.00	0.00
24.15	0.00	0.00
24.20	0.00	0.00
24.25	0.00	0.00
24.30	0.00	0.00
24.35	0.00	0.00
24.40	0.00	0.00
24.45	0.00	0.00
24.50	0.00	0.00
24.55	0.00	0.00
24.60	0.00	0.00
24.65	0.00	0.00
24.70	0.00	0.00
24.75	0.00	0.00
24.80	0.00	0.00
24.85	0.00	0.00
24.90	0.00	0.00
24.95	0.00	0.00
25.00	0.00	0.00
25.05	0.00	0.00
25.10	0.00	0.00
25.15	0.00	0.00
25.20	0.00	0.00
25.25	0.00	0.00
25.30	0.00	0.00
25.35	0.00	0.00
25.40	0.00	0.00
25.45	0.00	0.00
25.50	0.00	0.00
25.55	0.00	0.00
25.60	0.00	0.00
25.65	0.00	0.00
25.70	0.00	0.00
25.75	0.00	0.00
25.80	0.00	0.00
25.85	0.00	0.00
25.90	0.00	0.00
25.95	0.00	0.00

Time (hours)	Link 3L (cfs)	Link 9L (cfs)
26.00	0.00	0.00



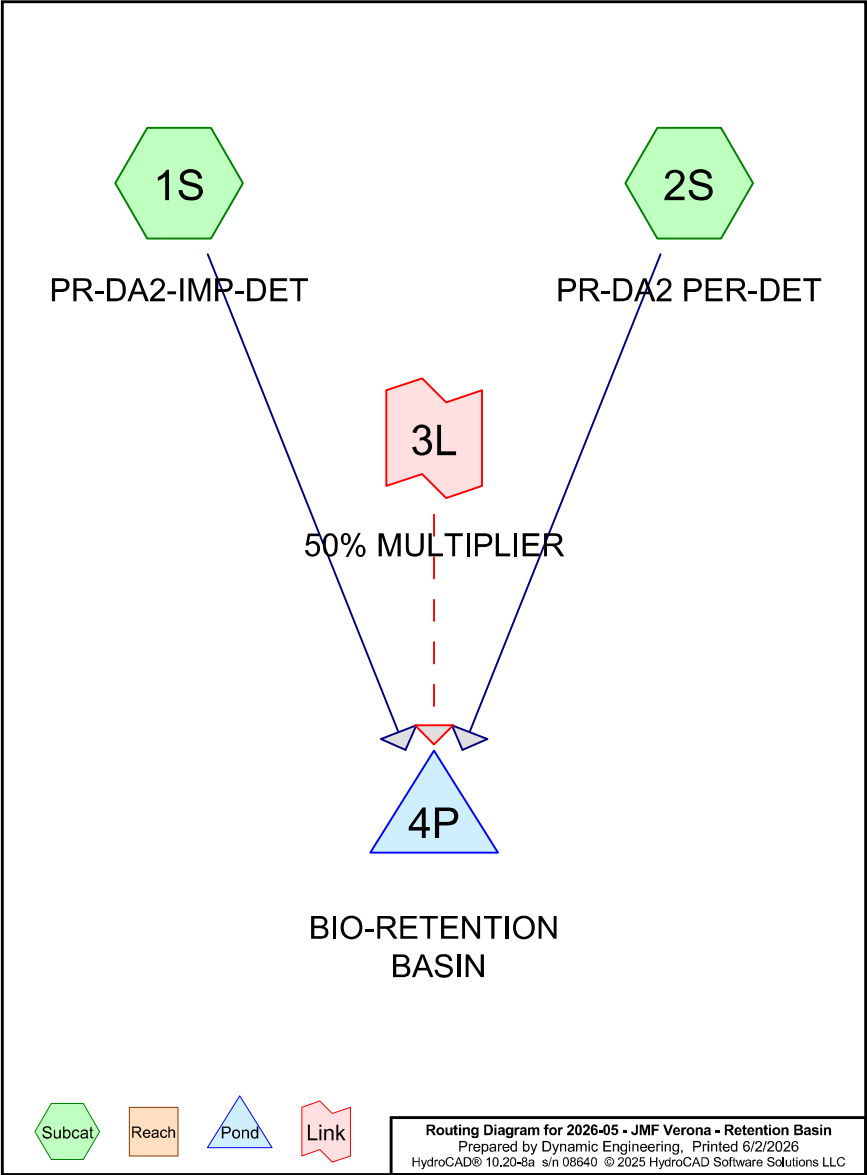
Primary Comparison								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
0.00	0.00	0.00	2.60	0.63	0.36	5.20	0.87	0.52
0.05	0.00	0.00	2.65	0.64	0.36	5.25	0.88	0.52
0.10	0.00	0.00	2.70	0.65	0.37	5.30	0.88	0.53
0.15	0.00	0.00	2.75	0.65	0.37	5.35	0.89	0.53
0.20	0.00	0.00	2.80	0.66	0.37	5.40	0.89	0.53
0.25	0.00	0.00	2.85	0.66	0.38	5.45	0.89	0.54
0.30	0.00	0.00	2.90	0.67	0.38	5.50	0.90	0.54
0.35	0.00	0.00	2.95	0.68	0.38	5.55	0.90	0.55
0.40	0.01	0.01	3.00	0.68	0.38	5.60	0.90	0.55
0.45	0.04	0.03	3.05	0.68	0.39	5.65	0.90	0.55
0.50	0.07	0.05	3.10	0.69	0.39	5.70	0.91	0.56
0.55	0.10	0.07	3.15	0.70	0.40	5.75	0.91	0.56
0.60	0.13	0.08	3.20	0.70	0.40	5.80	0.92	0.57
0.65	0.16	0.10	3.25	0.71	0.40	5.85	0.92	0.57
0.70	0.19	0.11	3.30	0.71	0.40	5.90	0.93	0.58
0.75	0.21	0.13	3.35	0.72	0.41	5.95	0.93	0.58
0.80	0.24	0.14	3.40	0.72	0.41	6.00	0.93	0.59
0.85	0.26	0.15	3.45	0.73	0.41	6.05	0.94	0.59
0.90	0.28	0.16	3.50	0.73	0.42	6.10	0.95	0.61
0.95	0.30	0.17	3.55	0.74	0.42	6.15	0.97	0.61
1.00	0.32	0.18	3.60	0.74	0.42	6.20	0.98	0.62
1.05	0.33	0.19	3.65	0.74	0.42	6.25	0.99	0.63
1.10	0.35	0.20	3.70	0.75	0.43	6.30	1.01	0.65
1.15	0.36	0.21	3.75	0.75	0.43	6.35	1.02	0.66
1.20	0.38	0.22	3.80	0.76	0.43	6.40	1.03	0.67
1.25	0.40	0.23	3.85	0.76	0.43	6.45	1.04	0.67
1.30	0.41	0.23	3.90	0.77	0.44	6.50	1.05	0.68
1.35	0.42	0.24	3.95	0.77	0.44	6.55	1.06	0.70
1.40	0.43	0.25	4.00	0.78	0.44	6.60	1.08	0.71
1.45	0.45	0.25	4.05	0.78	0.44	6.65	1.09	0.72
1.50	0.46	0.26	4.10	0.78	0.44	6.70	1.10	0.73
1.55	0.47	0.27	4.15	0.79	0.45	6.75	1.11	0.74
1.60	0.48	0.27	4.20	0.79	0.45	6.80	1.13	0.75
1.65	0.49	0.28	4.25	0.80	0.45	6.85	1.14	0.76
1.70	0.50	0.28	4.30	0.80	0.45	6.90	1.15	0.77
1.75	0.51	0.29	4.35	0.80	0.46	6.95	1.17	0.78
1.80	0.52	0.29	4.40	0.81	0.46	7.00	1.18	0.79
1.85	0.53	0.30	4.45	0.81	0.46	7.05	1.19	0.80
1.90	0.54	0.31	4.50	0.82	0.46	7.10	1.21	0.82
1.95	0.54	0.31	4.55	0.82	0.46	7.15	1.22	0.83
2.00	0.55	0.31	4.60	0.83	0.47	7.20	1.23	0.84
2.05	0.56	0.32	4.65	0.83	0.47	7.25	1.24	0.85
2.10	0.57	0.32	4.70	0.83	0.47	7.30	1.26	0.86
2.15	0.58	0.33	4.75	0.83	0.48	7.35	1.27	0.87
2.20	0.58	0.33	4.80	0.84	0.48	7.40	1.29	0.89
2.25	0.59	0.34	4.85	0.85	0.49	7.45	1.30	0.90
2.30	0.60	0.34	4.90	0.85	0.49	7.50	1.31	0.91
2.35	0.60	0.34	4.95	0.85	0.50	7.55	1.32	0.92
2.40	0.61	0.35	5.00	0.86	0.50	7.60	1.33	0.93
2.45	0.62	0.35	5.05	0.86	0.50	7.65	1.34	0.94
2.50	0.62	0.35	5.10	0.86	0.51	7.70	1.36	0.95
2.55	0.63	0.36	5.15	0.87	0.51	7.75	1.37	0.97

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
7.80	1.39	0.98	10.40	2.92	2.38	13.00	5.47	5.24
7.85	1.40	0.99	10.45	2.96	2.42	13.05	5.22	4.97
7.90	1.41	1.00	10.50	3.01	2.47	13.10	4.89	4.69
7.95	1.42	1.01	10.55	3.10	2.57	13.15	4.70	4.49
8.00	1.44	1.03	10.60	3.27	2.71	13.20	4.50	4.32
8.05	1.45	1.04	10.65	3.41	2.84	13.25	4.35	4.17
8.10	1.46	1.05	10.70	3.60	2.99	13.30	4.17	4.00
8.15	1.47	1.06	10.75	3.74	3.13	13.35	4.03	3.85
8.20	1.49	1.07	10.80	3.92	3.28	13.40	3.84	3.69
8.25	1.50	1.09	10.85	4.06	3.42	13.45	3.70	3.54
8.30	1.51	1.10	10.90	4.25	3.57	13.50	3.51	3.38
8.35	1.52	1.11	10.95	4.39	3.71	13.55	3.37	3.22
8.40	1.54	1.13	11.00	4.57	3.86	13.60	3.19	3.06
8.45	1.55	1.14	11.05	4.77	4.08	13.65	3.09	2.98
8.50	1.56	1.15	11.10	5.08	4.33	13.70	3.03	2.92
8.55	1.57	1.16	11.15	5.33	4.58	13.75	2.99	2.88
8.60	1.59	1.17	11.20	5.65	4.84	13.80	2.94	2.83
8.65	1.60	1.19	11.25	5.90	5.10	13.85	2.90	2.79
8.70	1.62	1.20	11.30	6.22	5.37	13.90	2.85	2.74
8.75	1.63	1.21	11.35	6.47	5.63	13.95	2.81	2.70
8.80	1.64	1.23	11.40	6.80	5.90	14.00	2.76	2.66
8.85	1.65	1.24	11.45	7.05	6.16	14.05	2.72	2.62
8.90	1.67	1.25	11.50	7.37	6.45	14.10	2.67	2.58
8.95	1.68	1.26	11.55	8.08	7.28	14.15	2.63	2.53
9.00	1.69	1.28	11.60	9.43	8.39	14.20	2.58	2.49
9.05	1.72	1.31	11.65	10.09	8.95	14.25	2.54	2.45
9.10	1.77	1.34	11.70	10.51	9.33	14.30	2.49	2.41
9.15	1.80	1.38	11.75	11.54	10.57	14.35	2.45	2.36
9.20	1.85	1.41	11.80	13.60	12.32	14.40	2.40	2.32
9.25	1.89	1.45	11.85	15.67	14.54	14.45	2.36	2.28
9.30	1.94	1.49	11.90	18.81	17.22	14.50	2.31	2.23
9.35	1.98	1.53	11.95	23.29	22.34	14.55	2.27	2.19
9.40	2.03	1.57	12.00	31.16	29.07	14.60	2.22	2.15
9.45	2.07	1.61	12.05	39.46	38.24	14.65	2.18	2.11
9.50	2.12	1.64	12.10	52.05	49.12	14.70	2.13	2.06
9.55	2.16	1.68	12.15	48.58	42.62	14.75	2.09	2.02
9.60	2.21	1.72	12.20	30.43	27.36	14.80	2.05	1.98
9.65	2.25	1.76	12.25	21.79	20.02	14.85	2.01	1.93
9.70	2.30	1.80	12.30	16.98	15.95	14.90	1.95	1.89
9.75	2.33	1.84	12.35	14.43	13.46	14.95	1.91	1.85
9.80	2.39	1.88	12.40	11.99	11.32	15.00	1.86	1.80
9.85	2.43	1.92	12.45	10.97	10.41	15.05	1.83	1.76
9.90	2.48	1.96	12.50	10.45	9.96	15.10	1.78	1.72
9.95	2.51	2.00	12.55	9.70	9.07	15.15	1.75	1.69
10.00	2.56	2.04	12.60	8.33	7.89	15.20	1.73	1.68
10.05	2.60	2.09	12.65	7.66	7.28	15.25	1.72	1.66
10.10	2.65	2.13	12.70	7.23	6.91	15.30	1.71	1.65
10.15	2.69	2.17	12.75	6.95	6.62	15.35	1.70	1.64
10.20	2.74	2.21	12.80	6.62	6.33	15.40	1.68	1.63
10.25	2.78	2.25	12.85	6.37	6.06	15.45	1.67	1.62
10.30	2.83	2.30	12.90	6.04	5.78	15.50	1.66	1.60
10.35	2.87	2.34	12.95	5.79	5.52	15.55	1.64	1.59

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
15.60	1.63	1.58	18.20	0.99	0.96	20.80	0.82	0.80
15.65	1.62	1.57	18.25	0.98	0.96	20.85	0.82	0.80
15.70	1.61	1.56	18.30	0.98	0.95	20.90	0.82	0.80
15.75	1.60	1.55	18.35	0.98	0.95	20.95	0.81	0.79
15.80	1.58	1.53	18.40	0.98	0.95	21.00	0.81	0.79
15.85	1.57	1.52	18.45	0.97	0.94	21.05	0.81	0.79
15.90	1.55	1.51	18.50	0.97	0.94	21.10	0.80	0.78
15.95	1.54	1.49	18.55	0.96	0.94	21.15	0.80	0.78
16.00	1.53	1.48	18.60	0.96	0.94	21.20	0.80	0.78
16.05	1.52	1.47	18.65	0.96	0.93	21.25	0.80	0.78
16.10	1.51	1.46	18.70	0.95	0.93	21.30	0.79	0.77
16.15	1.49	1.45	18.75	0.95	0.93	21.35	0.79	0.77
16.20	1.48	1.43	18.80	0.95	0.93	21.40	0.79	0.77
16.25	1.47	1.42	18.85	0.95	0.92	21.45	0.78	0.76
16.30	1.45	1.41	18.90	0.94	0.92	21.50	0.78	0.76
16.35	1.44	1.40	18.95	0.94	0.91	21.55	0.78	0.76
16.40	1.43	1.39	19.00	0.94	0.91	21.60	0.77	0.75
16.45	1.42	1.37	19.05	0.93	0.91	21.65	0.77	0.75
16.50	1.40	1.36	19.10	0.93	0.91	21.70	0.77	0.75
16.55	1.39	1.35	19.15	0.93	0.90	21.75	0.76	0.74
16.60	1.38	1.34	19.20	0.92	0.90	21.80	0.76	0.74
16.65	1.37	1.33	19.25	0.92	0.90	21.85	0.76	0.74
16.70	1.35	1.31	19.30	0.92	0.89	21.90	0.76	0.74
16.75	1.34	1.30	19.35	0.92	0.89	21.95	0.75	0.73
16.80	1.33	1.29	19.40	0.91	0.89	22.00	0.75	0.73
16.85	1.32	1.28	19.45	0.91	0.88	22.05	0.75	0.73
16.90	1.30	1.27	19.50	0.91	0.88	22.10	0.74	0.72
16.95	1.29	1.25	19.55	0.90	0.88	22.15	0.74	0.72
17.00	1.28	1.24	19.60	0.90	0.87	22.20	0.74	0.72
17.05	1.27	1.23	19.65	0.90	0.87	22.25	0.73	0.72
17.10	1.25	1.22	19.70	0.90	0.87	22.30	0.73	0.71
17.15	1.24	1.20	19.75	0.89	0.87	22.35	0.72	0.71
17.20	1.23	1.19	19.80	0.89	0.86	22.40	0.72	0.70
17.25	1.21	1.18	19.85	0.88	0.86	22.45	0.72	0.70
17.30	1.20	1.17	19.90	0.88	0.86	22.50	0.72	0.70
17.35	1.19	1.15	19.95	0.88	0.85	22.55	0.71	0.70
17.40	1.17	1.14	20.00	0.87	0.85	22.60	0.71	0.69
17.45	1.16	1.13	20.05	0.87	0.85	22.65	0.71	0.69
17.50	1.15	1.12	20.10	0.87	0.85	22.70	0.70	0.69
17.55	1.14	1.11	20.15	0.87	0.84	22.75	0.70	0.68
17.60	1.12	1.09	20.20	0.86	0.84	22.80	0.70	0.68
17.65	1.11	1.08	20.25	0.86	0.84	22.85	0.70	0.68
17.70	1.10	1.07	20.30	0.85	0.83	22.90	0.69	0.68
17.75	1.09	1.06	20.35	0.85	0.83	22.95	0.69	0.67
17.80	1.08	1.05	20.40	0.85	0.83	23.00	0.68	0.67
17.85	1.07	1.03	20.45	0.85	0.82	23.05	0.68	0.66
17.90	1.05	1.02	20.50	0.84	0.82	23.10	0.68	0.66
17.95	1.04	1.01	20.55	0.84	0.82	23.15	0.68	0.66
18.00	1.03	1.00	20.60	0.84	0.82	23.20	0.67	0.66
18.05	1.01	0.98	20.65	0.84	0.81	23.25	0.67	0.65
18.10	1.00	0.97	20.70	0.83	0.81	23.30	0.66	0.65
18.15	0.99	0.96	20.75	0.83	0.81	23.35	0.66	0.65

Primary Comparison (continued)								
Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)	Time (hours)	Link 6L (cfs)	Link 12L (cfs)
23.40	0.66	0.64	26.00	0.00	0.00			
23.45	0.66	0.64						
23.50	0.65	0.64						
23.55	0.65	0.63						
23.60	0.65	0.63						
23.65	0.65	0.63						
23.70	0.64	0.63						
23.75	0.64	0.62						
23.80	0.63	0.62						
23.85	0.63	0.61						
23.90	0.63	0.61						
23.95	0.63	0.61						
24.00	0.62	0.61						
24.05	0.49	0.43						
24.10	0.17	0.15						
24.15	0.04	0.04						
24.20	0.01	0.01						
24.25	0.00	0.00						
24.30	0.00	0.00						
24.35	0.00	0.00						
24.40	0.00	0.00						
24.45	0.00	0.00						
24.50	0.00	0.00						
24.55	0.00	0.00						
24.60	0.00	0.00						
24.65	0.00	0.00						
24.70	0.00	0.00						
24.75	0.00	0.00						
24.80	0.00	0.00						
24.85	0.00	0.00						
24.90	0.00	0.00						
24.95	0.00	0.00						
25.00	0.00	0.00						
25.05	0.00	0.00						
25.10	0.00	0.00						
25.15	0.00	0.00						
25.20	0.00	0.00						
25.25	0.00	0.00						
25.30	0.00	0.00						
25.35	0.00	0.00						
25.40	0.00	0.00						
25.45	0.00	0.00						
25.50	0.00	0.00						
25.55	0.00	0.00						
25.60	0.00	0.00						
25.65	0.00	0.00						
25.70	0.00	0.00						
25.75	0.00	0.00						
25.80	0.00	0.00						
25.85	0.00	0.00						
25.90	0.00	0.00						
25.95	0.00	0.00						

**HYDROGRAPH REPORTS: WATER QUALITY DESIGN
STORM AND TOWNSHIP OF VERONA RETENTION STORM**



Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC	P2 (inches)
1	WQDS	NJ DEP 2-hr		Default	2.00	1	1.25	2	3.34

Summary for Subcatchment 1S: PR-DA2-IMP-DET

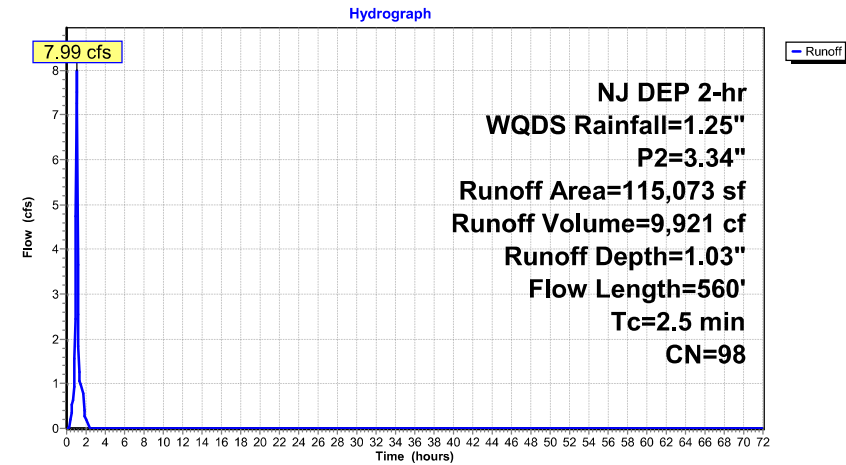
Runoff = 7.99 cfs @ 1.04 hrs, Volume= 9,921 cf, Depth= 1.03"
Routed to Pond 4P : BIO-RETENTION BASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NJ DEP 2-hr WQDS Rainfall=1.25", P2=3.34"

Area (sf)	CN	Description			
* 115,073	98	IMPERVIOUS			
115,073		100.00% Impervious Area			

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	41	0.0150	1.05		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 3.34"
0.2	54	0.0100	5.70	7.00	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	68	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	88	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	153	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	94	0.0050	4.03	4.95	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	62	0.0032	3.23	3.96	Pipe Channel, TC-GH 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
2.5	560	Total			

Subcatchment 1S: PR-DA2-IMP-DET



Summary for Subcatchment 2S: PR-DA2 PER-DET

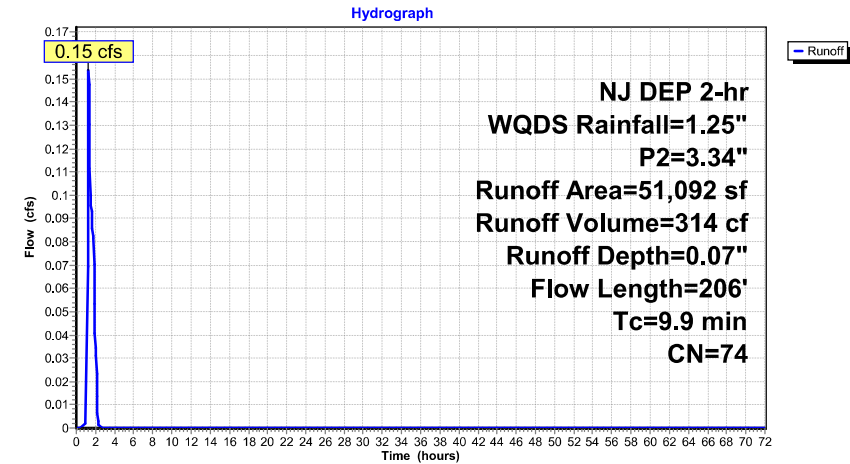
Runoff = 0.15 cfs @ 1.27 hrs, Volume= 314 cf, Depth= 0.07"
Routed to Pond 4P : BIO-RETENTION BASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NJ DEP 2-hr WQDS Rainfall=1.25", P2=3.34"

Area (sf)	CN	Description
51,092	74	>75% Grass cover, Good, HSG C
51,092		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	53	0.0159	0.10		Sheet Flow, Grass: Dense n= 0.240 P2= 3.34" Using McCuen-Spiess flow length
0.2	23	0.0106	1.66		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.5	110	0.0455	3.43		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.0	20	0.2023	7.24		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
9.9	206				Total

Subcatchment 2S: PR-DA2 PER-DET

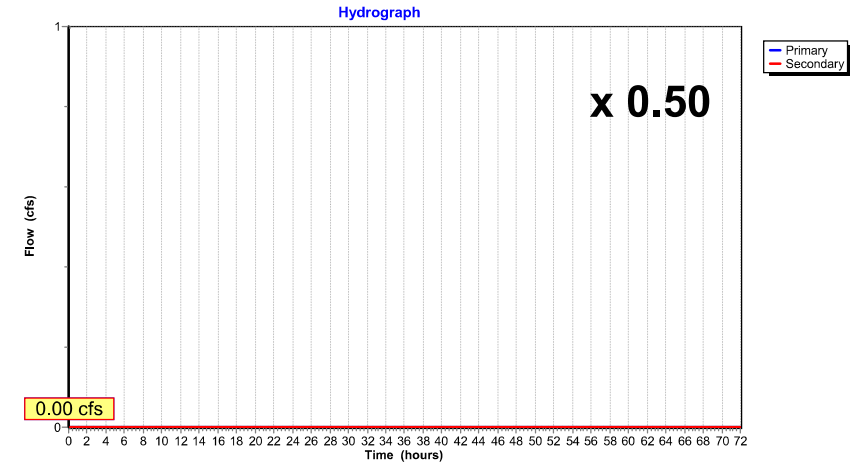


Summary for Link 3L: 50% MULTIPLIER

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Pond 4P : BIO-RETENTION BASIN

Primary outflow = Inflow x 0.50, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Link 3L: 50% MULTIPLIER



Summary for Pond 4P: BIO-RETENTION BASIN

Inflow Area = 166,165 sf, 69.25% Impervious, Inflow Depth = 0.74" for WQDS event
Inflow = 7.99 cfs @ 1.04 hrs, Volume= 10,235 cf
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 319.87' @ 2.60 hrs Surf.Area= 12,755 sf Storage= 10,235 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	319.00'	26,126 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
319.00	10,800	0	0
320.00	13,050	11,925	11,925
321.00	15,352	14,201	26,126

Device	Routing	Invert	Outlet Devices
#1	Primary	316.42'	18.0" Round Culvert L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 316.42' / 316.27' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	319.87'	3.0" Vert. 3" Orifice C= 0.600 Limited to weir flow at low heads
#3	Device 1	320.30'	6.0" x 2.0" Horiz. Orifice/Grate X 7.00 columns X 17 rows C= 0.600 in 48.0" x 48.0" Grate (62% open area) Limited to weir flow at low heads
#4	Primary	320.30'	200.0' long + 3.0 ' SideZ x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

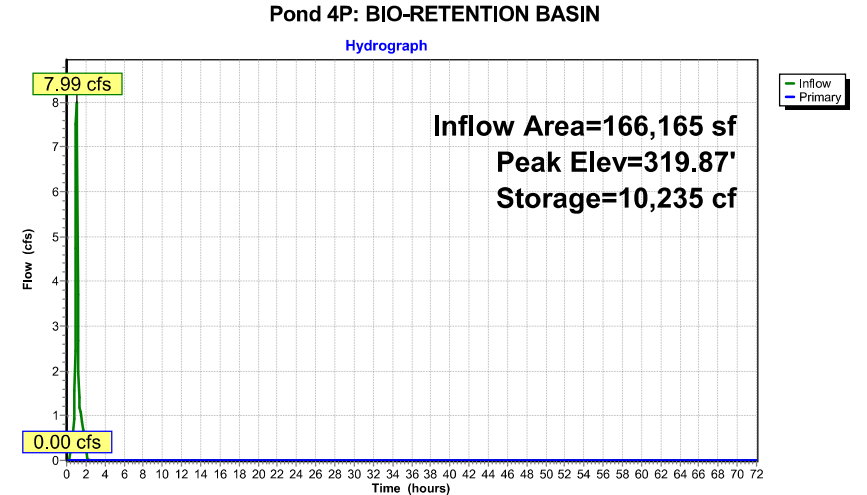
Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=319.00' (Free Discharge)

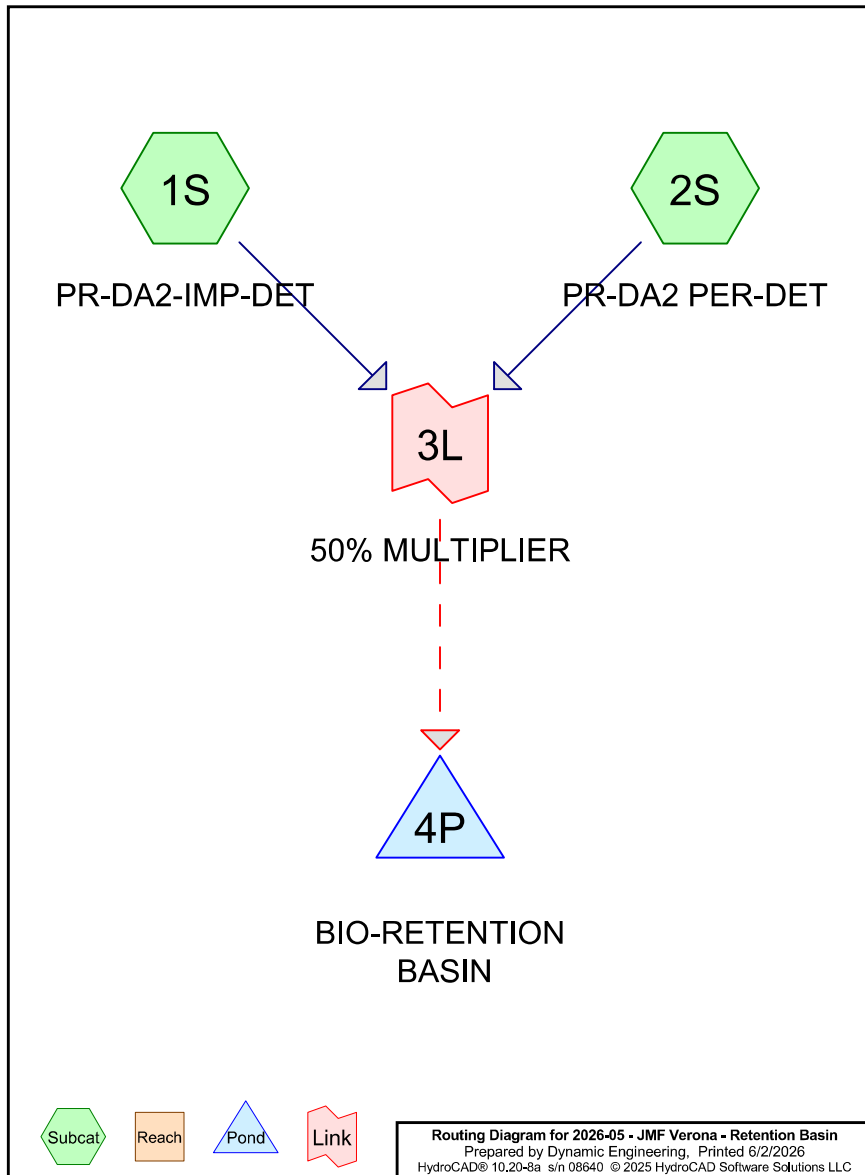
1=Culvert (Passes 0.00 cfs of 11.21 cfs potential flow)

2=3" Orifice (Controls 0.00 cfs)

3=Orifice/Grate (Controls 0.00 cfs)

4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)





2026-05 - JMF Verona - Retention Basin

Prepared by Dynamic Engineering

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Printed 6/2/2026

Page 2

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC	P2 (inches)
1	2-Year-Projected	NOAA 24-hr	C	Default	24.00	1	4.04	2	4.04

Summary for Subcatchment 1S: PR-DA2-IMP-DET

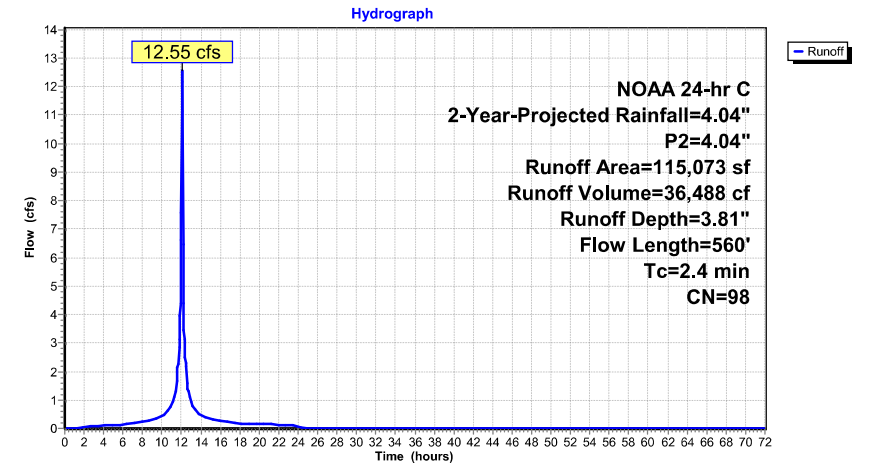
Runoff = 12.55 cfs @ 12.08 hrs, Volume= 36,488 cf, Depth= 3.81"
Routed to Link 3L : 50% MULTIPLIER

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year-Projected Rainfall=4.04", P2=4.04"

Area (sf)	CN	Description
* 115,073	98	IMPERVIOUS
115,073		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	41	0.0150	1.15		Sheet Flow, TC-AB Smooth surfaces n= 0.011 P2= 4.04"
0.2	54	0.0100	5.70	7.00	Pipe Channel, TC-BC 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.2	68	0.0100	5.70	7.00	Pipe Channel, TC-CD 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	88	0.0100	5.70	7.00	Pipe Channel, TC-DE 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	153	0.0100	5.70	7.00	Pipe Channel, TC-EF 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.4	94	0.0050	4.03	4.95	Pipe Channel, TC-FG 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
0.3	62	0.0032	3.23	3.96	Pipe Channel, TC-GH 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
2.4	560	Total			

Subcatchment 1S: PR-DA2-IMP-DET



Summary for Subcatchment 2S: PR-DA2 PER-DET

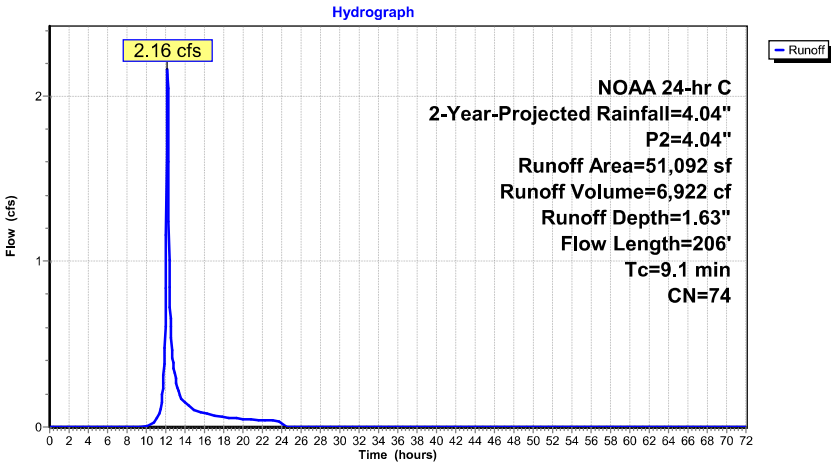
Runoff = 2.16 cfs @ 12.17 hrs, Volume= 6,922 cf, Depth= 1.63"
Routed to Link 3L : 50% MULTIPLIER

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year-Projected Rainfall=4.04", P2=4.04"

Area (sf)	CN	Description
51,092	74	>75% Grass cover, Good, HSG C
51,092		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.4	53	0.0159	0.11		Sheet Flow, Grass: Dense n= 0.240 P2= 4.04" Using McCuen-Spiess flow length
0.2	23	0.0106	1.66		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.5	110	0.0455	3.43		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.0	20	0.2023	7.24		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
9.1	206	Total			

Subcatchment 2S: PR-DA2 PER-DET

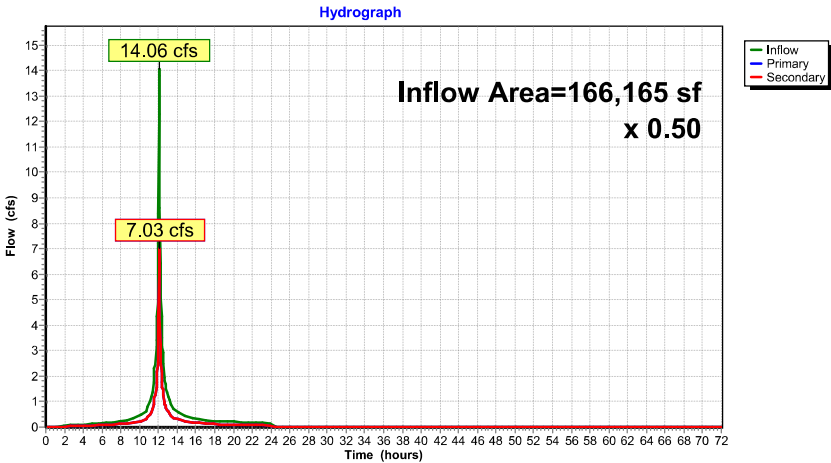


Summary for Link 3L: 50% MULTIPLIER

Inflow Area = 166,165 sf, 69.25% Impervious, Inflow Depth = 3.13" for 2-Year-Projected event
Inflow = 14.06 cfs @ 12.09 hrs, Volume= 43,410 cf
Primary = 7.03 cfs @ 12.09 hrs, Volume= 21,705 cf, Atten= 50%, Lag= 0.0 min
Secondary = 7.03 cfs @ 12.09 hrs, Volume= 21,705 cf
Routed to Pond 4P : BIO-RETENTION BASIN

Primary outflow = Inflow x 0.50, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Link 3L: 50% MULTIPLIER



Summary for Pond 4P: BIO-RETENTION BASIN

Inflow = 7.03 cfs @ 12.09 hrs, Volume= 21,705 cf

Outflow = 0.34 cfs @ 13.72 hrs, Volume= 11,010 cf, Atten= 95%, Lag= 97.9 min

Primary = 0.34 cfs @ 13.72 hrs, Volume= 11,010 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Peak Elev= 320.30' @ 13.72 hrs Surf.Area= 13,747 sf Storage= 15,981 cf

Plug-Flow detention time= 825.3 min calculated for 11,002 cf (51% of inflow)

Center-of-Mass det. time= 698.1 min (1,464.3 - 766.2)

Volume	Invert	Avail.Storage	Storage Description
#1	319.00'	26,126 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
319.00	10,800	0	0
320.00	13,050	11,925	11,925
321.00	15,352	14,201	26,126

Device	Routing	Invert	Outlet Devices
#1	Primary	316.42'	18.0" Round Culvert L= 30.0' Ke= 0.500 Inlet / Outlet Invert= 316.42' / 316.27' S= 0.0050 ' / ' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	319.87'	3.0" Vert. 3" Orifice C= 0.600 Limited to weir flow at low heads
#3	Device 1	320.30'	6.0" x 2.0" Horiz. Orifice/Grate X 7.00 columns X 17 rows C= 0.600 in 48.0" x 48.0" Grate (62% open area) Limited to weir flow at low heads
#4	Primary	320.30'	200.0' long + 3.0 ' / ' SideZ x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

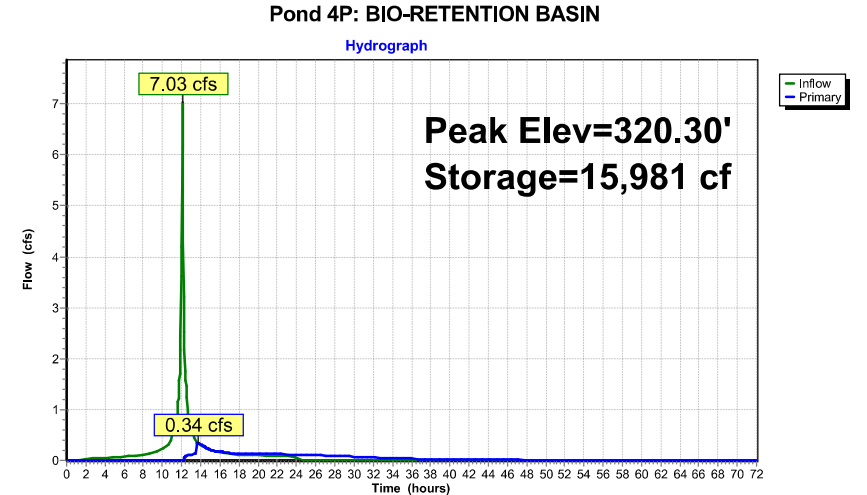
Primary OutFlow Max=0.21 cfs @ 13.72 hrs HW=320.30' (Free Discharge)

1=Culvert (Passes 0.14 cfs of 15.06 cfs potential flow)

2=3" Orifice (Orifice Controls 0.13 cfs @ 2.67 fps)

3=Orifice/Grate (Weir Controls 0.01 cfs @ 0.17 fps)

4=Broad-Crested Rectangular Weir (Weir Controls 0.07 cfs @ 0.13 fps)



PIPE SIZING CALCULATIONS

Report

Line No.	Line ID	Inlet ID	Drng Area	Runoff Coeff	Incr CxA	Total CxA	Inlet Time	Tc	i Sys	Line Size	Line Length	Line Slope	Line Type	Capac Full	Flow Rate	Vel Ave	
			(ac)	(C)			(min)	(min)	(in/hr)	(in)	(ft)	(%)		(cfs)	(cfs)	(ft/s)	
1	183 TO 188	221	0.00	0.00	0.00	1.89	0.0	23.6	4.95	24	62.895	0.32	Cir	13.82	9.36	4.79	
2	171 TO 174	222	0.45	0.98	0.44	1.72	6.0	23.1	4.99	24	94.392	0.31	Cir	13.58	8.56	4.12	
3	156 TO 174	223	0.23	0.91	0.21	0.88	6.0	10.5	6.84	18	76.691	0.30	Cir	6.23	6.05	3.42	
4	133 TO 156	224	0.00	0.00	0.00	0.68	0.0	10.1	6.92	18	67.303	0.30	Cir	6.20	4.67	2.65	
5	150 TO 133	225	0.13	0.77	0.10	0.68	6.0	9.7	7.01	18	71.097	0.30	Cir	6.18	4.74	2.72	
6	113 TO 150 (1)	227	0.08	0.77	0.06	0.34	6.0	8.5	7.27	15	146.437	0.31	Cir	3.86	2.49	2.05	
7	113 TO 150	228	0.05	0.78	0.04	0.28	6.0	7.5	7.52	15	107.000	0.30	Cir	3.81	2.11	2.01	
8	109 TO 113	229	0.00	0.00	0.00	0.24	0.0	7.4	7.56	12	19.774	0.51	Cir	2.84	1.82	3.74	
9	106 TO 109	2005	0.00	0.00	0.00	0.09	0.0	7.1	7.65	8	43.417	0.99	Cir	1.30	0.71	3.54	
10	105 TO 106	2004	0.00	0.00	0.00	0.06	0.0	7.0	7.67	8	4.624	1.08	Cir	1.36	0.49	2.56	
11	102 TO 105	2003	0.00	0.00	0.00	0.03	0.0	6.1	7.92	8	43.382	0.99	Cir	1.30	0.27	2.00	
12	122 TO 102	2026	0.04	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.27	2.76	
13	148 TO 109	2047	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	2.68	
14	141 TO 105	2041	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	2.09	
15	142 TO 106	2042	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.93	
16	15 inch Corrugated HDPE Pipe (115)	230	0.16	0.98	0.15	0.39	6.0	22.1	5.10	15	152.902	1.00	Cir	6.97	1.99	2.68	
17	15 inch Corrugated HDPE Pipe (114)	231	0.15	0.98	0.15	0.24	6.0	21.1	5.21	15	86.565	0.99	Cir	6.95	1.24	3.11	
18	15 inch Corrugated HDPE Pipe (113)	232	0.08	0.97	0.08	0.09	6.0	19.2	5.44	15	67.887	1.00	Cir	6.98	0.49	2.16	
19	15 inch Corrugated HDPE Pipe (116)	233	0.01	0.98	0.01	0.01	6.0	6.0	7.94	15	55.389	1.01	Cir	7.01	0.09	1.20	
20	110 TO 109	2009	0.00	0.00	0.00	0.12	0.0	7.1	7.64	8	4.586	1.09	Cir	1.37	0.90	2.57	
21	114 TO 110	2015	0.00	0.00	0.00	0.09	0.0	6.8	7.73	8	43.417	0.99	Cir	1.30	0.68	2.39	
22	115 TO 114	2016	0.00	0.00	0.00	0.06	0.0	6.7	7.75	8	4.573	1.09	Cir	1.37	0.46	2.13	
23	116 TO 115	2018	0.00	0.00	0.00	0.03	0.0	6.1	7.92	6	43.417	0.99	Cir	0.60	0.23	2.13	

Project File: 2026-05 - Pipe Sizing File.stm

Number of lines: 102

Date: 5/19/2026

NOTES: Intensity = 102.61 / (Inlet time + 16.50) ^ 0.82 -- Return period = 25 Yrs. ; ** Critical depth

Report

Line No.	Line ID	Inlet ID	Drng Area	Runoff Coeff	Incr CxA	Total CxA	Inlet Time	Tc	i Sys	Line Size	Line Length	Line Slope	Line Type	Capac Full	Flow Rate	Vel Ave	
			(ac)	(C)			(min)	(min)	(in/hr)	(in)	(ft)	(%)		(cfs)	(cfs)	(ft/s)	
24	162 TO 116	2063	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	2.47	
25	152 TO 115	2051	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	2.13	
26	157 TO 183	2061	0.00	0.00	0.00	0.18	0.0	7.5	7.53	12	18.018	0.61	Cir	3.12	1.33	1.65	
27	15 inch Corrugated HDPE Pipe (112)	2038	0.00	0.00	0.00	0.15	0.0	7.2	7.62	10	43.416	0.99	Cir	2.30	1.12	3.90	
28	137 TO 136	2039	0.00	0.00	0.00	0.12	0.0	7.1	7.64	10	4.586	1.09	Cir	2.41	0.90	3.06	
29	125 TO 137	2029	0.00	0.00	0.00	0.09	0.0	6.8	7.73	8	43.417	0.99	Cir	1.30	0.68	3.08	
30	127 TO 125	2031	0.00	0.00	0.00	0.06	0.0	6.7	7.75	8	4.623	1.08	Cir	1.36	0.46	2.48	
31	121 TO 127	2023	0.00	0.00	0.00	0.03	0.0	6.1	7.92	6	43.419	0.99	Cir	0.60	0.23	2.13	
32	161 TO 121	2062	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	2.54	
33	153 TO 114	2052	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.19	
34	166 TO 127	2071	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.991	1.00	Cir	0.61	0.23	2.13	
35	147 TO 110	2046	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.19	
36	143 TO 150	226	0.00	0.00	0.00	0.24	0.0	7.8	7.45	12	18.760	1.01	Cir	4.01	1.75	2.18	
37	135 TO 143	2037	0.00	0.00	0.00	0.15	0.0	7.6	7.50	8	43.417	0.99	Cir	1.30	1.10	3.16	
38	134 TO 135	2036	0.00	0.00	0.00	0.12	0.0	7.6	7.51	8	4.586	1.09	Cir	1.37	0.88	2.53	
39	128 TO 134	2032	0.00	0.00	0.00	0.09	0.0	7.2	7.61	8	43.417	0.99	Cir	1.30	0.67	1.92	
40	126 TO 128	2030	0.00	0.00	0.00	0.06	0.0	7.2	7.62	8	4.624	1.08	Cir	1.36	0.45	1.28	
41	118 TO 126	2019	0.00	0.00	0.00	0.03	0.0	6.1	7.92	8	43.382	0.99	Cir	1.30	0.23	0.67	
42	160 TO 118	2060	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.030	1.00	Cir	0.61	0.23	1.19	
43	165 TO 125	2070	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.970	1.00	Cir	0.61	0.23	1.95	
44	169 TO 126	2074	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.19	
45	178 TO 137	2086	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.90	
46	170 TO 128	2075	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.19	

Project File: 2026-05 - Pipe Sizing File.stm

Number of lines: 102

Date: 5/19/2026

NOTES: Intensity = 102.61 / (Inlet time + 16.50) ^ 0.82 -- Return period = 25 Yrs. ; ** Critical depth

Report

Line No.	Line ID	Inlet ID	Drng Area	Runoff Coeff	Incr CxA	Total CxA	Inlet Time	Tc	i Sys	Line Size	Line Length	Line Slope	Line Type	Capac Full	Flow Rate	Vel Ave	
			(ac)	(C)			(min)	(min)	(in/hr)	(in)	(ft)	(%)		(cfs)	(cfs)	(ft/s)	
47	175 TO 136	2082	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.970	1.00	Cir	0.61	0.23	1.84	
48	176 TO 134	2083	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.19	
49	144 TO 143	2045	0.00	0.00	0.00	0.06	0.0	6.7	7.75	8	4.573	0.44	Cir	0.87	0.46	1.31	
50	131 TO 144	2034	0.00	0.00	0.00	0.03	0.0	6.1	7.92	6	43.417	1.80	Cir	0.81	0.23	1.19	
51	172 TO 131	2077	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.19	
52	185 TO 157	2085	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	2.68	
53	177 TO 135	2084	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.19	
54	181 TO 143	2090	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.19	
55	182 TO 144	2091	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.19	
56	101 TO 190	235	0.00	0.00	0.00	0.24	0.0	8.2	7.36	12	58.000	3.60	Cir	7.32	1.73	4.01	
57	15 inch Corrugated HDPE Pipe (111)	2011	0.00	0.00	0.00	0.18	0.0	8.2	7.37	10	4.584	0.87	Cir	2.16	1.30	3.98	
58	15 inch Corrugated HDPE Pipe (110)	2006	0.00	0.00	0.00	0.15	0.0	7.8	7.45	10	43.352	1.01	Cir	2.33	1.10	3.33	
59	15 inch Corrugated HDPE Pipe (109)	2007	0.00	0.00	0.00	0.12	0.0	7.8	7.46	10	4.586	0.87	Cir	2.16	0.88	3.03	
60	15 inch Corrugated HDPE Pipe (108)	2001	0.00	0.00	0.00	0.09	0.0	7.2	7.61	10	43.417	1.01	Cir	2.33	0.67	2.73	
61	15 inch Corrugated HDPE Pipe (107)	2002	0.00	0.00	0.00	0.06	0.0	7.2	7.62	8	4.587	0.87	Cir	1.22	0.45	2.56	
62	15 inch Corrugated HDPE Pipe (106)	2000	0.00	0.00	0.00	0.03	0.0	6.1	7.92	8	43.455	1.01	Cir	1.32	0.23	1.87	
63	129 TO 100	2053	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	2.62	
64	138 TO 104	2056	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.051	0.99	Cir	0.60	0.23	2.14	
65	132 TO 103	2057	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	2.00	
66	140 TO 108	2064	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.91	
67	139 TO 107	2065	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.85	
68	119 TO 112	2020	0.00	0.00	0.00	0.03	0.0	6.1	7.92	6	43.416	0.99	Cir	0.60	0.23	2.67	
69	154 TO 119	2067	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	2.47	

Project File: 2026-05 - Pipe Sizing File.stm

Number of lines: 102

Date: 5/19/2026

NOTES: Intensity = 102.61 / (Inlet time + 16.50) ^ 0.82 -- Return period = 25 Yrs. ; ** Critical depth

Report

Line No.	Line ID	Inlet ID	Drng Area	Runoff Coeff	Incr CxA	Total CxA	Inlet Time	Tc	i Sys	Line Size	Line Length	Line Slope	Line Type	Capac Full	Flow Rate	Vel Ave	
			(ac)	(C)			(min)	(min)	(in/hr)	(in)	(ft)	(%)		(cfs)	(cfs)	(ft/s)	
70	146 TO 111	2078	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	1.22	
71	145 TO 112	2080	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	6.000	1.00	Cir	0.61	0.23	2.68	
72	173 TO 191	210	0.00	0.00	0.00	0.29	0.0	8.7	7.24	15	24.607	1.02	Cir	7.03	2.13	3.81	
73	164 TO 173	211	0.00	0.00	0.00	0.26	0.0	8.4	7.31	12	43.416	0.99	Cir	3.97	1.93	4.00	
74	163 TO 164	212	0.00	0.00	0.00	0.24	0.0	8.4	7.32	12	4.584	1.09	Cir	4.17	1.72	3.67	
75	159 TO 163	213	0.00	0.00	0.00	0.21	0.0	8.0	7.41	12	43.416	0.99	Cir	3.97	1.52	3.51	
76	158 TO 159	214	0.00	0.00	0.00	0.18	0.0	8.0	7.42	12	4.584	1.09	Cir	4.16	1.31	3.30	
77	149 TO 158	215	0.00	0.00	0.00	0.15	0.0	7.6	7.51	10	43.416	0.99	Cir	2.30	1.10	3.46	
78	130 TO 149	216	0.00	0.00	0.00	0.12	0.0	7.1	7.64	10	52.339	0.99	Cir	2.30	0.90	3.07	
79	123 TO 130	217	0.00	0.00	0.00	0.09	0.0	6.7	7.74	8	43.416	1.01	Cir	1.32	0.68	3.08	
80	124 TO 123	218	0.00	0.00	0.00	0.06	0.0	6.7	7.75	8	4.584	0.87	Cir	1.22	0.46	2.48	
81	117 TO 124	219	0.00	0.00	0.00	0.03	0.0	6.1	7.92	6	43.416	1.01	Cir	0.61	0.23	2.13	
82	155 TO 117	2054	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.000	1.00	Cir	0.61	0.23	2.47	
83	168 TO 124	2073	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.000	1.00	Cir	0.61	0.23	2.13	
84	167 TO 123	2072	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.000	1.00	Cir	0.61	0.23	1.95	
85	180 TO 130	2088	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.073	0.99	Cir	0.60	0.23	1.90	
86	184 TO 149	2093	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.000	1.00	Cir	0.61	0.23	1.85	
87	187 TO 158	2095	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.000	1.00	Cir	0.61	0.23	1.84	
88	186 TO 159	2094	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.000	1.00	Cir	0.61	0.23	1.20	
89	193 TO 163	2099	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.000	1.00	Cir	0.61	0.23	1.19	
90	194 TO 164	2100	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.000	1.00	Cir	0.61	0.23	1.19	
91	195 TO 173	2101	0.03	0.98	0.03	0.03	6.0	6.0	7.94	6	5.000	1.00	Cir	0.61	0.23	1.19	
92	179 TO 199	101	0.13	0.87	0.12	0.40	6.0	14.6	6.08	15	22.010	1.04	Cir	7.13	2.44	3.96	

Project File: 2026-05 - Pipe Sizing File.stm

Number of lines: 102

Date: 5/19/2026

NOTES: Intensity = 102.61 / (Inlet time + 16.50) ^ 0.82 -- Return period = 25 Yrs. ; ** Critical depth

Report

Line No.	Line ID	Inlet ID	Drng Area (ac)	Runoff Coeff (C)	Incr CxA	Total CxA	Inlet Time (min)	Tc (min)	i Sys (in/hr)	Line Size (in)	Line Length (ft)	Line Slope (%)	Line Type	Capac Full (cfs)	Flow Rate (cfs)	Vel Ave (ft/s)	
93	15 inch Corrugated HDPE Pipe (98)	102	0.00	0.00	0.00	0.11	0.0	7.4	7.56	15	316.936	1.00	Cir	6.97	0.86	2.34	
94	15 inch Corrugated HDPE Pipe (97)	103	0.12	0.93	0.11	0.11	6.0	6.0	7.94	15	63.000	0.98	Cir	6.92	0.91	3.43	
95	15 inch Corrugated HDPE Pipe (117)	104	0.20	0.87	0.17	0.17	6.0	6.0	7.94	15	29.010	1.00	Cir	6.97	1.36	3.06	
96	200 TO 202	201	0.03	0.78	0.02	0.24	6.0	14.8	6.06	15	106.000	0.30	Cir	3.83	1.47	2.99	
97	198 TO 200	202	0.03	0.79	0.02	0.22	6.0	14.2	6.15	15	43.301	0.95	Cir	6.78	1.35	2.93	
98	196 TO 198	203	0.05	0.77	0.04	0.20	6.0	13.7	6.24	15	40.111	1.02	Cir	7.05	1.22	3.71	
99	192 TO 196	204	0.08	0.75	0.06	0.16	6.0	12.8	6.40	15	54.874	0.49	Cir	4.89	1.01	3.09	
100	151 TO 192	205	0.06	0.76	0.05	0.10	6.0	10.1	6.92	15	98.584	2.00	Cir	9.85	0.67	2.89	
101	15 inch Corrugated HDPE Pipe (118)	206	0.07	0.74	0.05	0.05	6.0	6.0	7.94	15	82.890	1.99	Cir	9.83	0.41	2.59	
102	197 TO 201	208	0.00	0.00	0.00	0.00	0.0	0.0	0.00	18	30.593	0.49	Cir	7.97	5.05	4.63	

Project File: 2026-05 - Pipe Sizing File.stm

Number of lines: 102

Date: 5/19/2026

NOTES: Intensity = 102.61 / (Inlet time + 16.50) ^ 0.82 -- Return period = 25 Yrs. ; ** Critical depth

**CONDUIT OUTLET PROTECTION CALCULATIONS (RIP-
REAPS AND RIP-RAP LINED CHUTES)**

Conduit Outlet Protection Calculations

Rip Rap Pad # **200**

Design Parameters:

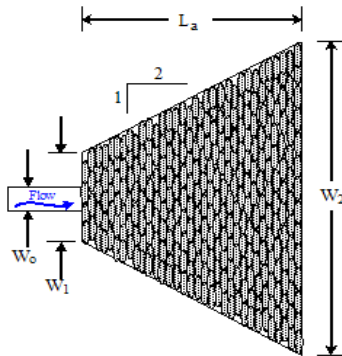
Design Storm Flow for 25 Year, Q	1.47 cfs
Vertical Dimension of Outlet Pipe, D_o	15 in
Horizontal Dimension of Outlet Pipe, W_o	15 in
Tailwater Depth, TW^1 (In Basins: $TW = (2\text{-yr storm elevation}) - (\text{pipe invert})$; For others: $TW = 0.2 \times (\text{pipe diameter})$)	0.25 ft

Apron Dimension Calculations:

Unit Discharge, $q = Q/D_o = 1.18$ cfs per foot

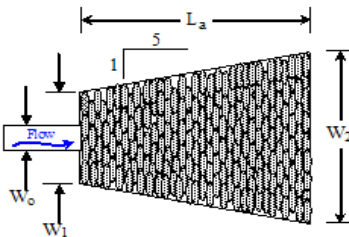
• Case I: $TW < 1/2 D_o$

$$\begin{aligned} \text{Apron Length, } L_a &= \frac{1.8q}{D_o^{1/2}} + 7D_o = 10.64 \text{ ft} & \text{or } L_a &= 11 \text{ ft} \\ \text{Width, } W_1 &= 3W_o = 3.75 \text{ ft} & \text{or } W_1 &= 4 \text{ ft} \\ \text{Width, } W_2 &= 3W_o + L_a = 14.39 \text{ ft} & \text{or } W_2 &= 15 \text{ ft} \end{aligned}$$



• Case II: $TW \geq 1/2 D_o$

$$\begin{aligned} \text{Apron Length, } L_a &= \frac{3q}{D_o^{1/2}} = & L_a &= \\ \text{Width, } W_1 &= 3W_o = & W_1 &= \\ \text{Width, } W_2 &= 3W_o + 0.4L_a = & W_2 &= \end{aligned}$$



Rip Rap Stone Size Calculations:

$$\text{Median Stone, } d_{50} = \frac{0.02q^{1.33}}{TW} = 1.19 \text{ in} \quad d_{50} = 6 \text{ in}$$

Notes:

- Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
- The side slopes shall be 2:1 or flatter.
- The bottom grade shall be 0.0% (level).
- There shall be no overfall at the end of the apron or at the end of the culvert.
- Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50} . The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
- The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
- Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
- No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

- Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
- For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

Conduit Outlet Protection Calculations

Rip Rap Pad # **207**

Design Parameters:

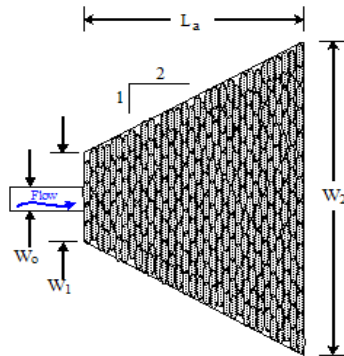
Design Storm Flow for 25 Year, Q	2.35 cfs
Vertical Dimension of Outlet Pipe, D_o	18 in
Horizontal Dimension of Outlet Pipe, W_o	18 in
Tailwater Depth, TW^1 (In Basins: $TW = (2\text{-yr storm elevation}) - (\text{pipe invert})$; For others: $TW = 0.2 \times (\text{pipe diameter})$)	0.30 ft

Apron Dimension Calculations:

Unit Discharge, $q = Q/D_o = 1.57$ cfs per foot

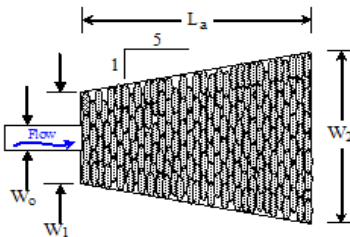
• Case I: $TW < 1/2 D_o$

$$\begin{aligned} \text{Apron Length, } L_a &= \frac{1.8q}{D_o^{1/2}} + 7D_o = 12.8 \text{ ft} & \text{or } L_a &= 13 \text{ ft} \\ \text{Width, } W_1 &= 3W_o = 4.5 \text{ ft} & \text{or } W_1 &= 5 \text{ ft} \\ \text{Width, } W_2 &= 3W_o + L_a = 17.3 \text{ ft} & \text{or } W_2 &= 18 \text{ ft} \end{aligned}$$



• Case II: $TW \geq 1/2 D_o$

$$\begin{aligned} \text{Apron Length, } L_a &= \frac{3q}{D_o^{1/2}} = & L_a &= \\ \text{Width, } W_1 &= 3W_o = & W_1 &= \\ \text{Width, } W_2 &= 3W_o + 0.4L_a = & W_2 &= \end{aligned}$$



Rip Rap Stone Size Calculations:

$$\text{Median Stone, } d_{50} = \frac{0.02q^{1.33}}{TW} = 1.45 \text{ in} \quad d_{50} = 6 \text{ in}$$

Notes:

- Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
- The side slopes shall be 2:1 or flatter.
- The bottom grade shall be 0.0% (level).
- There shall be no overfall at the end of the apron or at the end of the culvert.
- Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50} . The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
- The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
- Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
- No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

- Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
- For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

Conduit Outlet Protection Calculations

Rip Rap Pad # 209

Design Parameters:

Design Storm Flow for 25 Year, Q	2.13 cfs
Vertical Dimension of Outlet Pipe, D_o	15 in
Horizontal Dimension of Outlet Pipe, W_o	15 in
Tailwater Depth, TW^1 (In Basins: $TW = (2\text{-yr storm elevation}) - (\text{pipe invert})$; For others: $TW = 0.2 \times (\text{pipe diameter})$)	1.30 ft

Apron Dimension Calculations:

Unit Discharge, $q = Q/D_o = 1.70$ cfs per foot

• Case I: $TW < 1/2 D_o$

$$\text{Apron Length, } L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o =$$

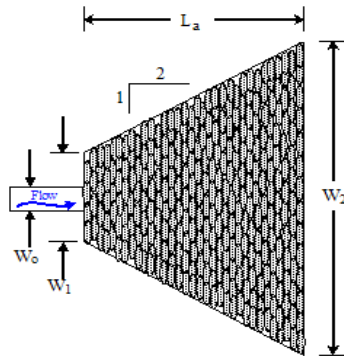
$$\text{Width, } W_1 = 3W_o =$$

$$\text{Width, } W_2 = 3W_o + L_a =$$

$$L_a =$$

$$W_1 =$$

$$W_2 =$$



• Case II: $TW \geq 1/2 D_o$

$$\text{Apron Length, } L_a = \frac{3q}{D_o^{1/2}} = 4.57 \text{ ft}$$

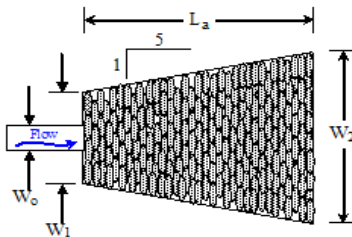
$$\text{Width, } W_1 = 3W_o = 3.75 \text{ ft}$$

$$\text{Width, } W_2 = 3W_o + 0.4L_a = 5.58 \text{ ft}$$

$$\text{or } L_a = 6 \text{ ft}$$

$$\text{or } W_1 = 4 \text{ ft}$$

$$\text{or } W_2 = 6 \text{ ft}$$



Rip Rap Stone Size Calculations:

$$\text{Median Stone, } d_{50} = \frac{0.02q^{1.33}}{TW} = 0.38 \text{ in}$$

$$d_{50} = 6 \text{ in}$$

Notes:

- Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
- The side slopes shall be 2:1 or flatter.
- The bottom grade shall be 0.0% (level).
- There shall be no overfall at the end of the apron or at the end of the culvert.
- Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50} . The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
- The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
- Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
- No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

- Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
- For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

Conduit Outlet Protection Calculations

Rip Rap Pad # 220

Design Parameters:

Design Storm Flow for 25 Year, Q	9.36 cfs
Vertical Dimension of Outlet Pipe, D_o	24 in
Horizontal Dimension of Outlet Pipe, W_o	24 in
Tailwater Depth, TW^1 (In Basins: $TW = (2\text{-yr storm elevation}) - (\text{pipe invert})$; For others: $TW = 0.2 \times (\text{pipe diameter})$)	1.30 ft

Apron Dimension Calculations:

Unit Discharge, $q = Q/D_o = 4.68$ cfs per foot

• Case I: $TW < 1/2 D_o$

$$\text{Apron Length, } L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o =$$

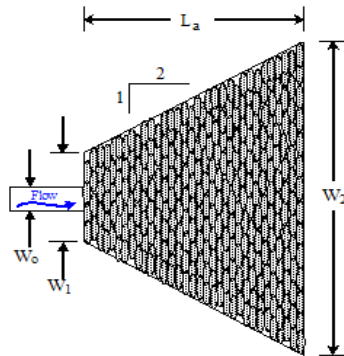
$$\text{Width, } W_1 = 3W_o =$$

$$\text{Width, } W_2 = 3W_o + L_a =$$

$$L_a =$$

$$W_1 =$$

$$W_2 =$$



• Case II: $TW \geq 1/2 D_o$

$$\text{Apron Length, } L_a = \frac{3q}{D_o^{1/2}} = 9.93 \text{ ft}$$

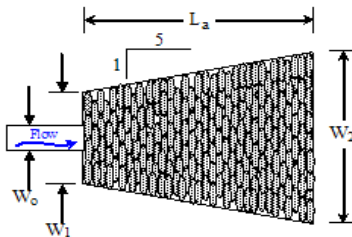
$$\text{Width, } W_1 = 3W_o = 6 \text{ ft}$$

$$\text{Width, } W_2 = 3W_o + 0.4L_a = 9.97 \text{ ft}$$

$$\text{or } L_a = 10 \text{ ft}$$

$$\text{or } W_1 = 6 \text{ ft}$$

$$\text{or } W_2 = 10 \text{ ft}$$



Rip Rap Stone Size Calculations:

$$\text{Median Stone, } d_{50} = \frac{0.02q^{1.33}}{TW} = 1.44 \text{ in}$$

$$d_{50} = 6 \text{ in}$$

Notes:

- Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
- The side slopes shall be 2:1 or flatter.
- The bottom grade shall be 0.0% (level).
- There shall be no overfall at the end of the apron or at the end of the culvert.
- Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50} . The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
- The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
- Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
- No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

- Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
- For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

Conduit Outlet Protection Calculations

Rip Rap Pad # **234**

Design Parameters:

Design Storm Flow for 25 Year, Q **1.73** cfs
 Vertical Dimension of Outlet Pipe, D_o **12** in
 Horizontal Dimension of Outlet Pipe, W_o **12** in
 Tailwater Depth, TW^1 (In Basins: $TW = (2\text{-yr storm elevation}) - (\text{pipe invert})$; For others: $TW = 0.2 \times (\text{pipe diameter})$) **0.40** ft

Apron Dimension Calculations:

Unit Discharge, $q = Q/D_o = 1.73$ cfs per foot

• Case I: $TW < 1/2 D_o$

$$\text{Apron Length, } L_a = \frac{1.8q}{D_o^{1/2}} + 7D_o = 10.11 \text{ ft}$$

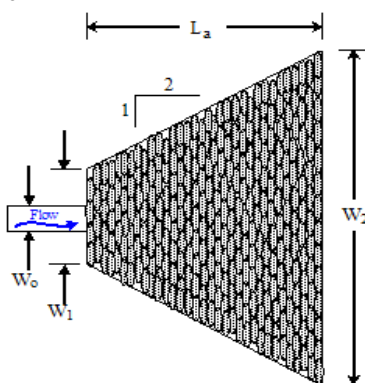
$$\text{Width, } W_1 = 3W_o = 3 \text{ ft}$$

$$\text{Width, } W_2 = 3W_o + L_a = 13.11 \text{ ft}$$

or $L_a = 11 \text{ ft}$

or $W_1 = 3 \text{ ft}$

or $W_2 = 14 \text{ ft}$



• Case II: $TW \geq 1/2 D_o$

$$\text{Apron Length, } L_a = \frac{3q}{D_o^{1/2}} =$$

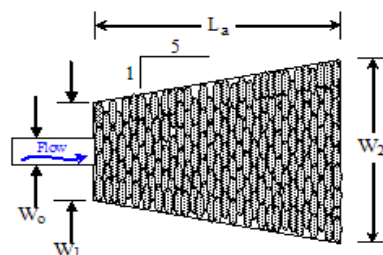
$$\text{Width, } W_1 = 3W_o =$$

$$\text{Width, } W_2 = 3W_o + 0.4L_a =$$

$L_a =$

$W_1 =$

$W_2 =$



Rip Rap Stone Size Calculations:

$$\text{Median Stone, } d_{50} = \frac{0.02q^{1.33}}{TW} = 1.24 \text{ in}$$

$d_{50} = 6 \text{ in}$

Notes:

- Where there is a well-defined channel downstream of the apron, the bottom width of the apron shall be at least equal to the bottom width of the channel and the structural lining shall extend at least one foot above the tailwater elevation, but no lower than two-thirds of the vertical conduit dimension above the conduit invert.
- The side slopes shall be 2:1 or flatter.
- The bottom grade shall be 0.0% (level).
- There shall be no overfall at the end of the apron or at the end of the culvert.
- Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d_{50} . The largest stone size in the mixture shall be 1.5 times the d_{50} size. The rip-rap shall be reasonably well graded.
- The thickness of the rip-rap apron may be two (2) times the median stone diameter provided that the apron is constructed on a bedding of four (4) inches of 3/4 inch clean stone on approved filter fabric material.
- Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
- No bends or curves at the intersection of the conduit and apron will be permitted.

Footnote:

- Tailwater depth shall be the 2-year storm if discharging into a detention basin. For areas where tailwater cannot be computed, use $TW = 0.2D_o$.
- For multiple pipes, increase rip-rap sizes by 25% when pipe spacing is greater than or equal to $1/4W_o$.

Rip-Rap Lined Chute Slope Protection Calculations

Rip-Rap Lined Chute # 1

Design Parameters:

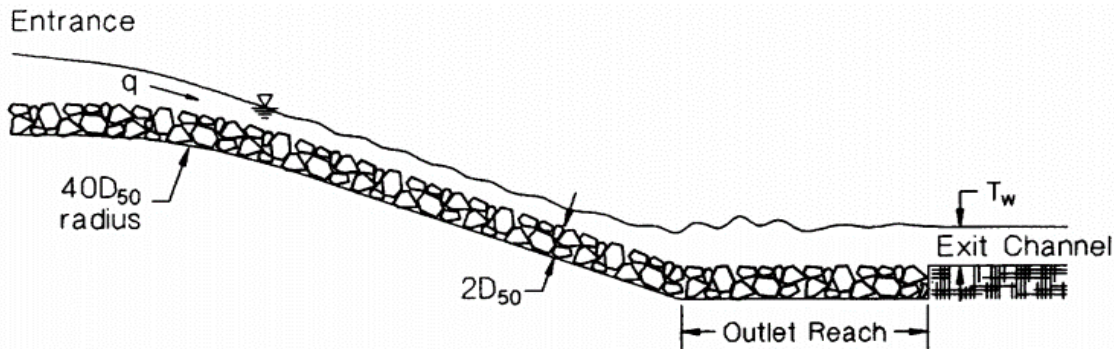
Design Storm Flow for 25-Year Storm, Q	2.77 cfs
Bed Slope, S	0.33 ft/ft
Flow Depth, z	0.178 ft
Bottom Width, b	3.00 ft
Unit discharge, q	0.92 cfs/ft
Median Stone Size, D ₅₀	6.00 in
Radius of Top of Slope Curve, 40D ₅₀	20.00 ft
Rock Layer Thickness, 2D ₅₀	12.00 in
Horizontal Outlet Reach Length, 15D ₅₀	7.50 ft

Chute Dimension Calculations:

Median Stone Size, D₅₀: For bed slopes between 2% and 10%: $D_{50} = [q(S)^{1.5}/4.75(10)^{-3}]^{1/1.89}$
 For bed slopes between 10% and 40%: $D_{50} = [q(S)^{0.58}/3.93(10)^{-2}]^{1/1.89}$

Unit discharge, $q = Q/b$

Flow depth, $z = [n(q)/1.486(S)^{0.50-3/5}]^{3/5}$
 where $n = 0.047(D_{50}S)^{0.147}$

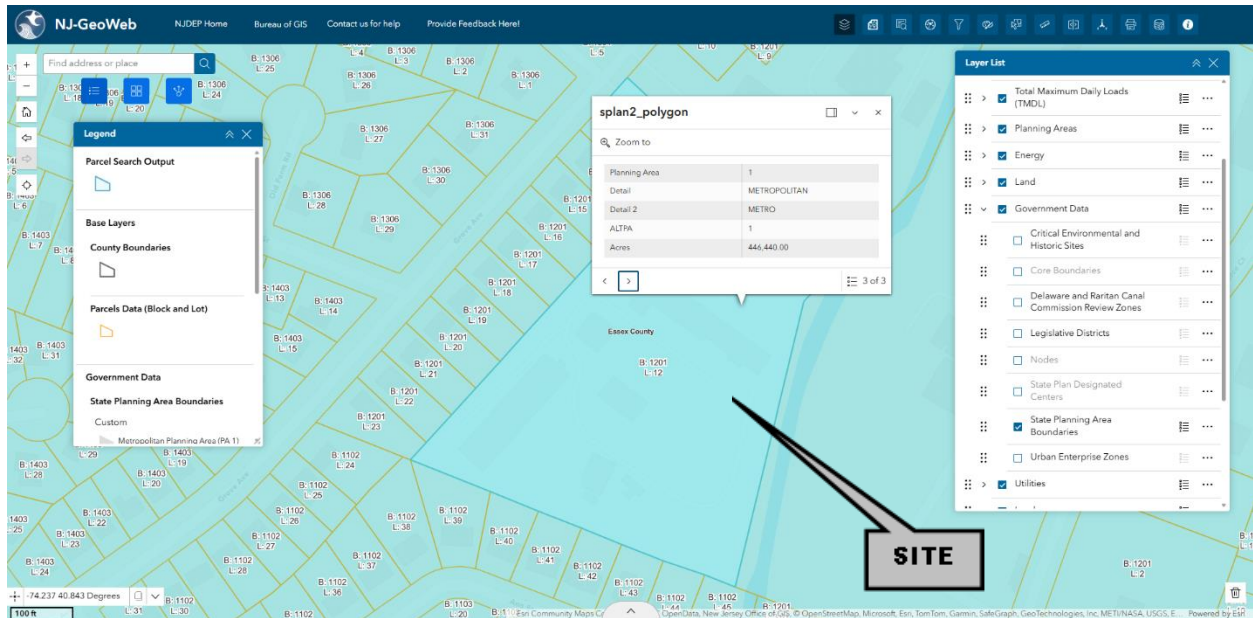


Notes:

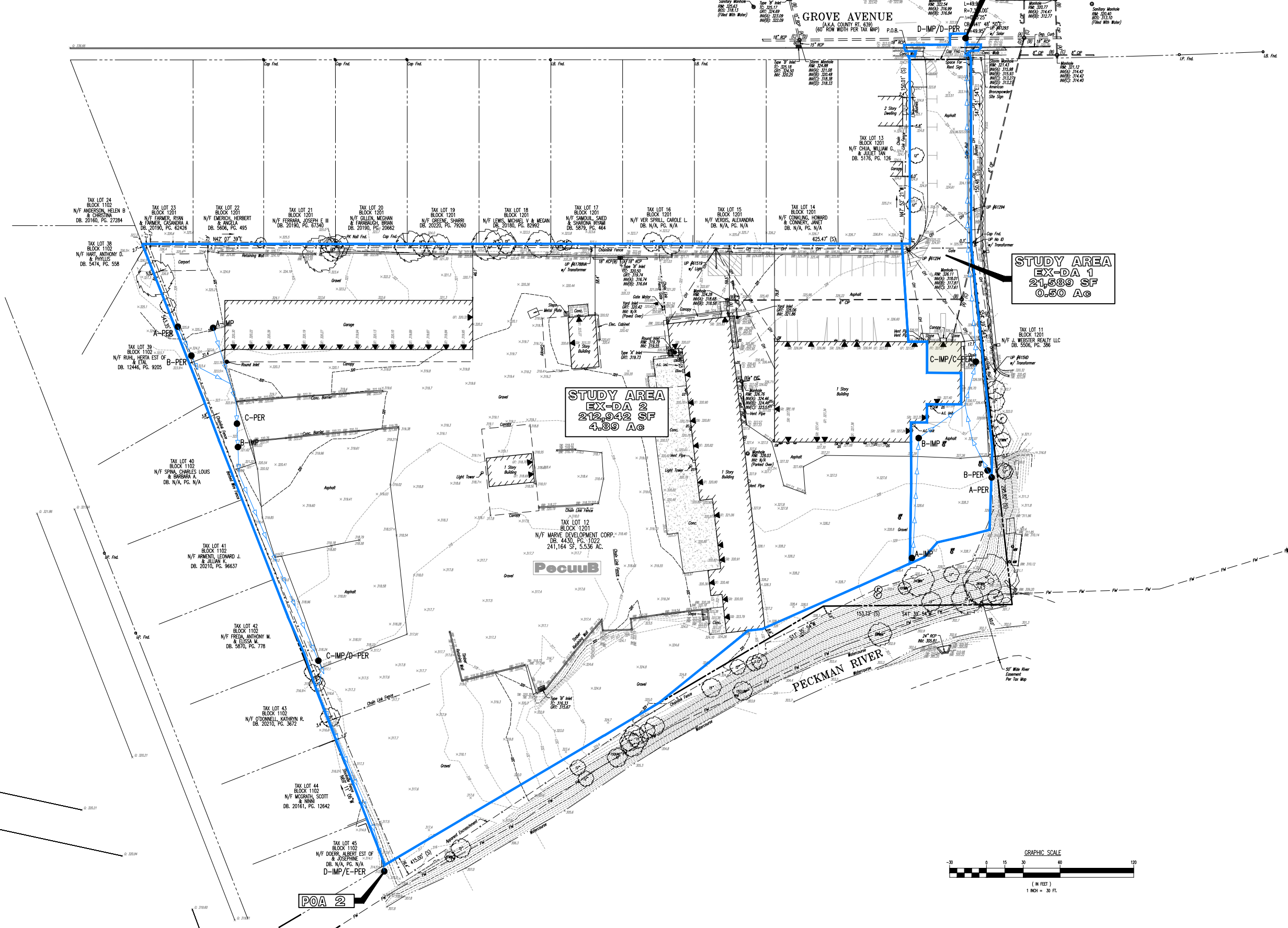
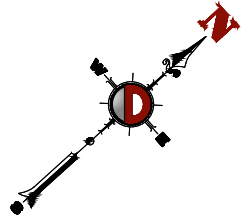
1. Except for short transition sections, flow in the range of 0.7 to 1.3 the critical slope must be avoided unless the channel is straight. Velocities exceeding critical velocity shall be restricted to straight reaches.
2. The side slopes shall be 2:1 or flatter.
3. The bottom grade shall be 0.0% (level).
4. There shall be no overfall at the end of the chute.
5. Fifty (50) percent by weight of the rip-rap mixture shall be smaller than the median size stone designated as d₅₀. The largest stone size in the mixture shall be 1.5 times the d₅₀ size. The rip-rap shall be reasonably well graded.
6. The thickness of the rip-rap chute may be two (2) times the median stone diameter
7. The radius of the curve at the top of the chute may be forty (40) times the median stone diameter.
8. The length of the horizontal outlet reach shall be fifteen (15) times the median stone diameter.
9. Rip-rap and filter fabric shall meet the standards of the governing Soil Conservation District as well as the requirements of the local municipality.
10. This method is suitable for channels having gradients between 2 percent and 40 percent.

NJDEP GEOWEB STATE PLANNING AREA

NJGeoWeb State Planning Area



DRAINAGE AREA MAPS





REV.	DATE	BY	CHK	COMMENTS
1	05/01/2026			REVISED PER MUNICIPAL SUBMISSION

PROJECT: GROVE STREET DEVELOPERS LLC BLOCK 1201, LOT 12 PROPOSED TOWNHOUSE DEVELOPMENT TOWNSHIP OF VERONA, ESSEX COUNTY, NEW JERSEY	DESIGNED BY: [blank] CHECKED BY: [blank] DATE: [blank]	DATE: [blank]
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BRETT W. SKAPINETZ
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 41985

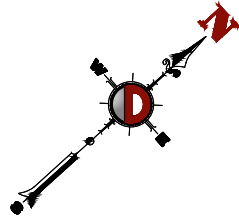
DANIEL T. SEHNAL
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 53072

TITLE: **EXISTING DRAINAGE AREA MAP**

SCALE: 1" = 30'
DATE: 05/01/2026
PROJECT NO: 0922-25-03663

SHEET NO: **1**
OF 2

Project: 05/01/2026 - 11:01 AM By: dchambers - Rev: 01
File: P:\DYNAMIC PROJECTS\0922-25-03663 Verona\Map\0922-25-03663-01-EXISTING DRAINAGE AREA MAP.dwg
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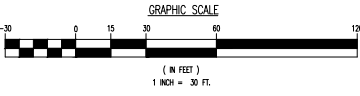


STUDY AREA
EX-DA 1
21,219 SF
0.49 Ac

STUDY AREA
EX-DA2-UNDET
1,170 SF
0.03 Ac

STUDY AREA
EX-DA2-DET
166,165 SF
3.81 Ac

STUDY AREA
EX-DA2-UNDET
45,977 SF
1.06 Ac



REV.	DATE	COMMENTS
1	05/01/2026	REVISED PER MUNICIPAL SUBMISSION

THIS PLANS SET IS FOR PRELIMINARY PURPOSES ONLY AND MAY BE USED FOR INFORMATION ONLY. IT IS NOT TO BE USED FOR CONSTRUCTION.

PROJECT: GROVE STREET DEVELOPERS LLC
BLOCK 1201, LOT 12
PROPOSED TOWNHOUSE DEVELOPMENT
TOWNSHIP OF VERONA, ESSEX COUNTY, NEW JERSEY

FORM NO. 1000-1
FORM NO. 1000-2
FORM NO. 1000-3
FORM NO. 1000-4
FORM NO. 1000-5
FORM NO. 1000-6
FORM NO. 1000-7
FORM NO. 1000-8
FORM NO. 1000-9
FORM NO. 1000-10

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BRETT W. SKAPINETZ
PROFESSIONAL ENGINEER
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NEW JERSEY LICENSE No. 53072

TITLE:
PROPOSED
DRAINAGE AREA
MAP

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SHEET No.:
Rev. #:
2
OF 2