Stormwater Management Report

Prepared for:

The Edgemarth Hill Road Association, Inc.

Edgemarth Hill Road

Westport, Connecticut

August 13, 2025

LANDTECH

Civil / Site Engineering · Site Planning
Environmental Science & Engineering
Landscape Architecture · Land Surveying
Permit Coordination & Management
Construction Management & Financing

Contents

Appendices:

Executive Summary

The Edgemarth Hill Road Association proposes to re-pave the existing private road, install portions of curbing, and install stormwater infrastructure. No widening or expansion of the footprint of the travel way is proposed. Edgemarth Hill Road is a private road that currently services (18) single-family residential lots. The road is approx. 1,200 lf in length, on average 18-20' wide, and has a varied slope ranging from 1-2% in the flatter sections and 18% in its steepest section. There is no stormwater infrastructure or curbing of any kind associated with the existing paved roadway. Years of freezing and thawing periods have begun to break down the asphalt in many sections of the road. There are also many sections of the road that do not have a consistent slope across the pavement section resulting in periodic standing water post rainfall events. In addition to the slope issues, between stations 5+00 and 6+50 (refer to Sheet C-2.0) there is a significant slope upgradient and adjacent to the road (16 Edgemarth Hill Road property) that during periods of high groundwater throughout the year has a groundwater seep that flows into the road. In the colder months the confluence of these factors has created a safety issue with icing occurring on the steepest section of the road.

The Association has retained this office to analyze the existing drainage patterns of the road and provide recommendations and design for improvements to the road that will provide relief of the safety and drainage issues the residents have been experiencing. For the purposes of our study, we have analyzed three points of concern. The majority of the road currently discharges untreated into the existing wetland corridor located on 1 & 9 Edgemarth Hill Road. The remaining portions of the road (sta. 0+00 – 4+00) currently discharge onto adjacent properties on the western side of Edgemarth Hill Road.

Although, there is no proposed increase in impervious areas for this project, all runoff that will be collected by the proposed stormwater infrastructure will be routed to a proposed bio-swale to provide water quality treatment of the stormwater runoff.

Project Site Description:

As previously described, Edgemarth Hill Road is privately owned by the home owner's association and is accessed off Greens Farm Road (Town of Westport owned). We have identified three points of discharge of stormwater runoff from Edgemarth Hill Road onto neighboring properties. The total contributing watershed area to Edgemarth Hill Road is approx. 15 acres. The single-family residential lots in this area are generally 1 acre in size.

Scope of Study:

For the purposes of this study, we evaluated the entire contributing watershed area to Edgemarth Hill Road to accurately understand the existing flow patterns of stormwater runoff in this area and ensure that the proposed improvements do not alter the existing flow patterns. We feel that this approach is reasonable in that potential changes in the rate of discharge at any of the three identified points of concern could be detrimental to downstream property owners.

The soils in the vicinity of Edgemarth Hill Road were defined as Canton and Charlton fine sandy loams, Charlton-Chatfield complex, and Udorthents-Urban land complex, all soils are in Hydrologic Soil Group (HSG) B utilizing the NRCS online Web Soil Survey utility. Please refer to the NRCS Soils Report (Appendix A) for additional information.

Methodology:

As previously described, Edgemarth Hill Road discharges to three points along the western side of the road. Under existing conditions, the site is divided into three subareas (EX-1, EX-2, and EX-3), which encompasses the entire approx. 15-acre watershed. Subarea EX-1 comprises a total of approx. 3.3 acres and consists of typical residential development and portions of Edgemarth Hill Road to approx. sta. 2+00. The runoff that enters this section of the road discharges via sheet flow onto the 17 Edgemarth Hill Road property. Subarea EX-2 comprises a total of approx. 0.9 acres and consists of typical residential development and portions of Edgemarth Hill Road to approx. sta. 4+00. The runoff that enters this section of the road discharges via sheet flow onto the 15 Edgemarth Hill Road property. Subarea EX-3 comprises the remaining approx. 10.8 acres and consists of typical residential development and the remaining portions of Edgemarth Hill Road from sta. 4+00 – 11+85. Portions of the runoff that enters this section of the road discharges via sheet flow onto the 1 & 9 Edgemarth Hill Road properties and the remaining portion is collected by an existing catch basin located at the lowest point on the road (sta. 10+40). The catch basin also collects runoff from two small existing watercourses that runs along the 4 Edgemarth Hill Road property. The existing catch basin and all associated piping shall remain unaltered as a part of this project.

Under proposed conditions, the flow patterns will remain unchanged and there is no proposed increase in impervious areas thus there will be no increase to the peak discharge rate for any point of concern. Subareas 1 & 2 will remain unaltered in the proposed conditions, only minor re-paving and grading is proposed for these areas. Subarea 3 has been subdivided into two subareas, runoff that is captured in the new stormwater infrastructure and the remaining uncaptured areas. As previously mentioned, there have been drainage issues resulting from the groundwater seep and poor grading of the road starting at sta. 4+00. To mitigate the groundwater seep and to provide a more practical control of the stormwater runoff entering Edgemarth Hill Road in the steepest section, an approx. 209 lf gravel interceptor drain will be installed along the northern edge of the road adjacent to the 16 Edgemarth Hill Road property and new curbing, catch basins and collection piping will be installed. The runoff collected by the interceptor drain and catch basins will discharge to rip rap apron, sized for the 100-yr storm event

discharge, to dissipate the velocity of the runoff and prevent erosion then flow into a proposed bio-filtration swale, sized in accordance with the CT Stormwater Quality Manual, to provide water quality treatment for the runoff. This will be a substantial benefit to the wetland corridor located on the 1 & 9 Edgemarth Hill Road properties. As previously mentioned, there is currently no treatment of stormwater runoff flowing off of Edgemarth Hill Road into the wetlands.

The runoff computations were performed using the HydroCAD® stormwater modelling program, which uses the SCS TR-20 methodology provided in Appendix E. Soil type, rainfall characteristics, topography, surface cover conditions, runoff curve number, and time of concentration are all inputs into this program. Rainfall is modelled as a 25-yr, Type III, 24-hour storm event. Rainfall amounts were obtained from the Town of Westport Stormwater Drainage Design Standards. Watershed maps for the existing and proposed conditions are provided in Appendix B.

Stormwater Quality:

A combination of structural and nonstructural water quality measures was used in the design. All proposed catch basins will be provided with 24" deep sumps to provide sediment capture and then will flow through biofiltration media in the bio-filtration swale. We have included sizing calculations for the bio-filtration swale in Appendix C.

Results of Study:

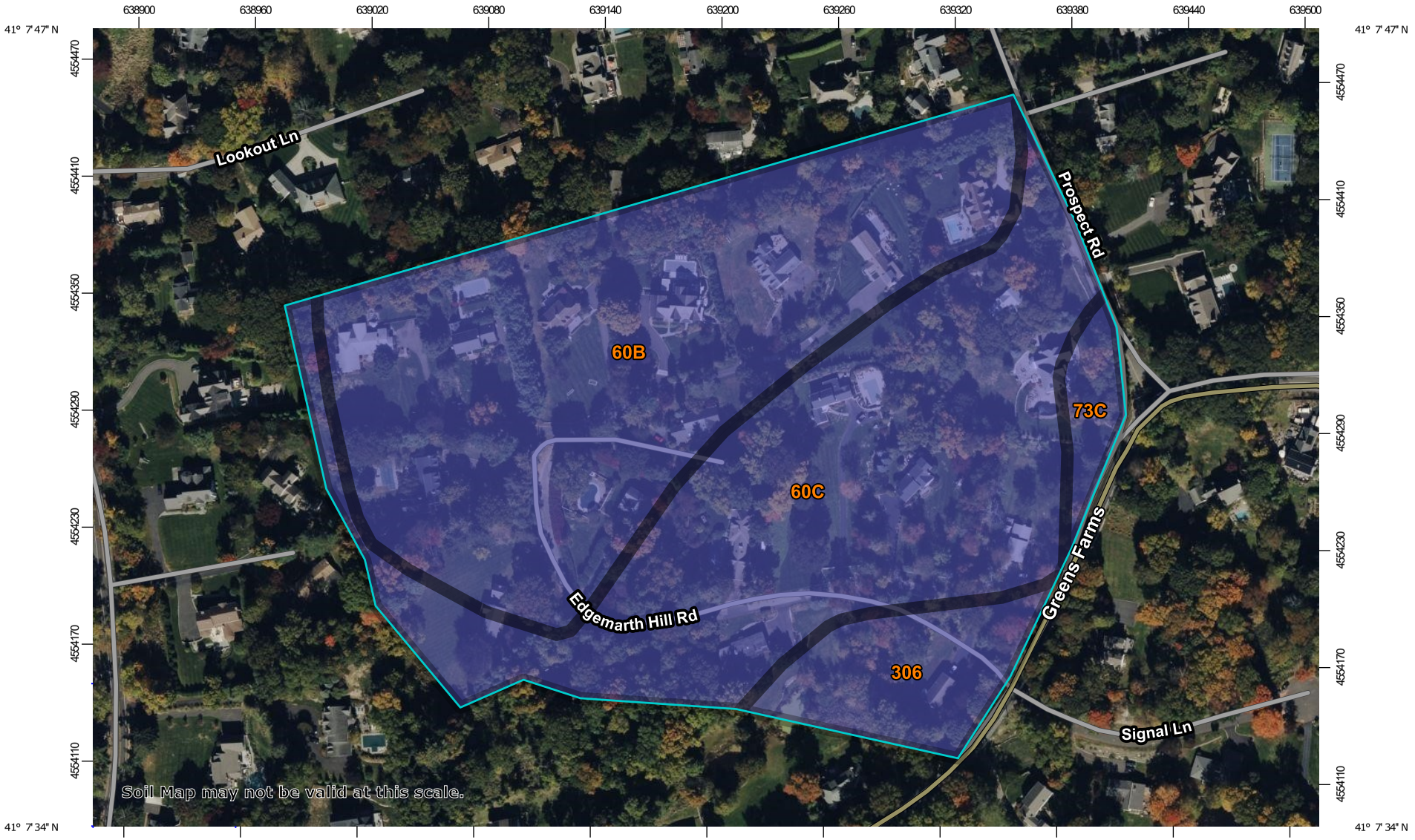
Based on our calculations, the peak discharge rates from Points of Concern 1, 2, and 3 for the 25-year storm event under existing conditions are 9.13 cfs, 2.30 cfs, and 22.27 cfs respectively. Under the proposed conditions, the peak discharge rates from Points of Concern 1, 2, and 3 for the 25-year storm event are 9.13 cfs, 2.30 cfs, and 21.90 cfs respectively. The proposed improvements will provide a better functioning road for the residents on Edgemarth Hill Road from both a safety and stormwater perspective.

Based on the results of our investigation, it is our professional opinion that upon construction of the proposed improvements, stormwater discharge from the site will comply with the applicable rules and regulations of the Town of Westport and will not result in any adverse impacts to downstream drainage systems or adjacent properties.

Appendix A

NRCS Soils Report

Hydrologic Soil Group—State of Connecticut, Western Part
(Edgemarth Hill Road, Westport)



Map Scale: 1:2,880 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 40 80 160 240

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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: State of Connecticut, Western Part
Survey Area Data: Version 2, Aug 30, 2024

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

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 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
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	B	12.0	47.6%
60C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes	B	10.6	42.0%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	B	0.7	2.6%
306	Udorthents-Urban land complex	B	2.0	7.8%
Totals for Area of Interest			**25.2**	**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

Appendix B

Watershed Maps

Appendix C

Bio-Swale Sizing Calculations

Project:	**Edgemarth Hill Road**	By:	**MC**	Date:	**8/13/2025**
	Westport, CT	Checked:	**CL**	Revised:	

1. Bio-Swale Sizing

a. Compute volumetric runoff coefficient, R

R = 0.05+0.009(*I*)

	Proposed	
Total Drainage Area, *A*	0.353	acres
Total Impervious Area	0.353	acres
Percentage of Impervious Area, *I*	100.0%	
Runoff Coefficient, *R*	0.950	

b. Compute water quality volume, WQV

WQV = [(1")(*R*)(*A*)]/12

Total Project Area, *A*	0.353	acres	
Runoff Coefficient, *R*	0.950		
Water Quality Volume, *WQV*	0.028	acre-foot	
Water Quality Volume, *WQV*	**1,217.32**	**cf**	***Required***

c. Compute minimum required surface area of swale

V =	1217.321	ft^3
K =	1	days
D_{soil} =	0.5	ft
D_{stone} =	0	ft
$D_{ponding}$ =	0	**ft**
T =	2	days

Dry Water Quality Swale
(when designed for infiltration)
Provides temporary surface ponding storage of runoff in an open vegetated channel through permeable check dams and filtering through an engineered soil media (bioretention soil) below the bottom of the swale. After runoff has passed through the engineered soil media, some of it is infiltrated into the underlying soils and some is collected by an underdrain system for discharge.

$$A_{required} = \frac{V * D_{soil}}{[(K)(D_{ponding} + D_{soil} + D_{stone})(T)]}$$

$A_{required}$ = minimum required surface area of swale (square feet)
V = design infiltration volume (cubic feet)
K = design infiltration rate (ft/day) (50% of the slowest observed field infiltration rate or 1.0 ft/day for the engineered soil media, whichever value is lower)
D_{soil} = depth of bioretention soil layer (feet)
D_{stone} = depth of underdrain stone/gravel layer (feet)
$D_{ponding}$ = depth of ponding above swale surface (feet)
T = maximum filter bed drain time (days), use 2 days (48 hours)

Surface Area Required =	608.7	ft^2
Surface Area Provided =	645	ft^2

Appendix D

Rip Rap Apron Sizing Calculations

Project:	**Edgemarth Hill Road**	By:	**MC**	Date:	**8/13/2025**
	Westport, CT	Checked:	**CL**	Revised:	

Outlet Protection Calculations

Assume: Q= 4.78 cfs (100 year discharge)
Sp=1.0'
TW depth = 1.0'
V=6.09 fps (Q/A = 4.78 cfs / 0.785 SF)

Rip Rap Required: Modified (per Table 11.11 - CTDOT Drainage Manual)

Length: $La = \frac{3.0\,(Q-5) + 10}{Sp^{1.5}} = \frac{3.0(4.78 - 5) + 10}{1.0^{1.5}} = 9.3'$

9.3' < 10'± (10' provided)

Width: $W_1 = 3 \times Sp = 3 \times 1.0' = 3.0'$

3.0'=3.0'± Provided

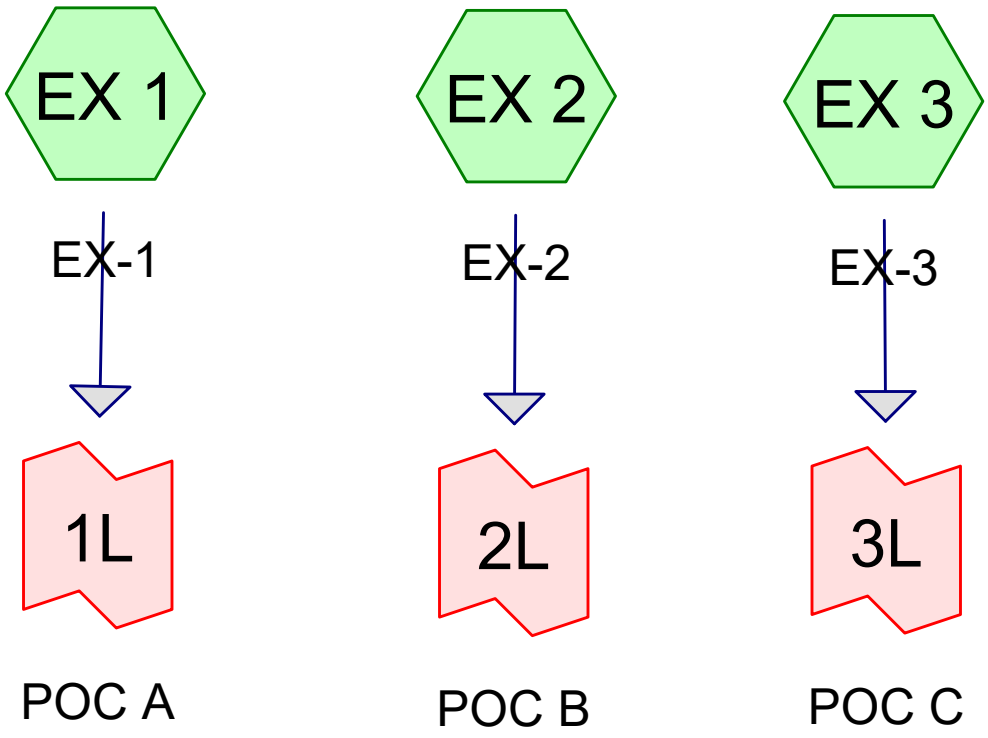
$W_2 = 3 \times Sp + 0.4 \times La = 3 \times 1.0' + 0.4 \times 10' = 7.0'$

7.0'=7.0'± Provided

Appendix E

HydroCAD Stormwater Runoff Computation Summaries

Existing Conditions



Subcat Reach Pond Link

Routing Diagram for Existing_Conditions_Watershed
Prepared by Land-Tech Consultant, Printed 8/14/2025
HydroCAD® 10.20-7a s/n 01168 © 2025 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
604,110	68	1 acre lots, 20% imp, HSG B (EX 1, EX 2, EX 3)
23,895	61	>75% Grass cover, Good, HSG B (EX 1, EX 2, EX 3)
23,731	98	Paved roads (EX 1, EX 2, EX 3)

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Su Nu
0	604,110	0	0	0	604,110	1 acre lots, 20% imp	
0	23,895	0	0	0	23,895	>75% Grass cover, Good	
0	0	0	0	23,731	23,731	Paved roads	

Summary for Subcatchment EX 1: EX-1

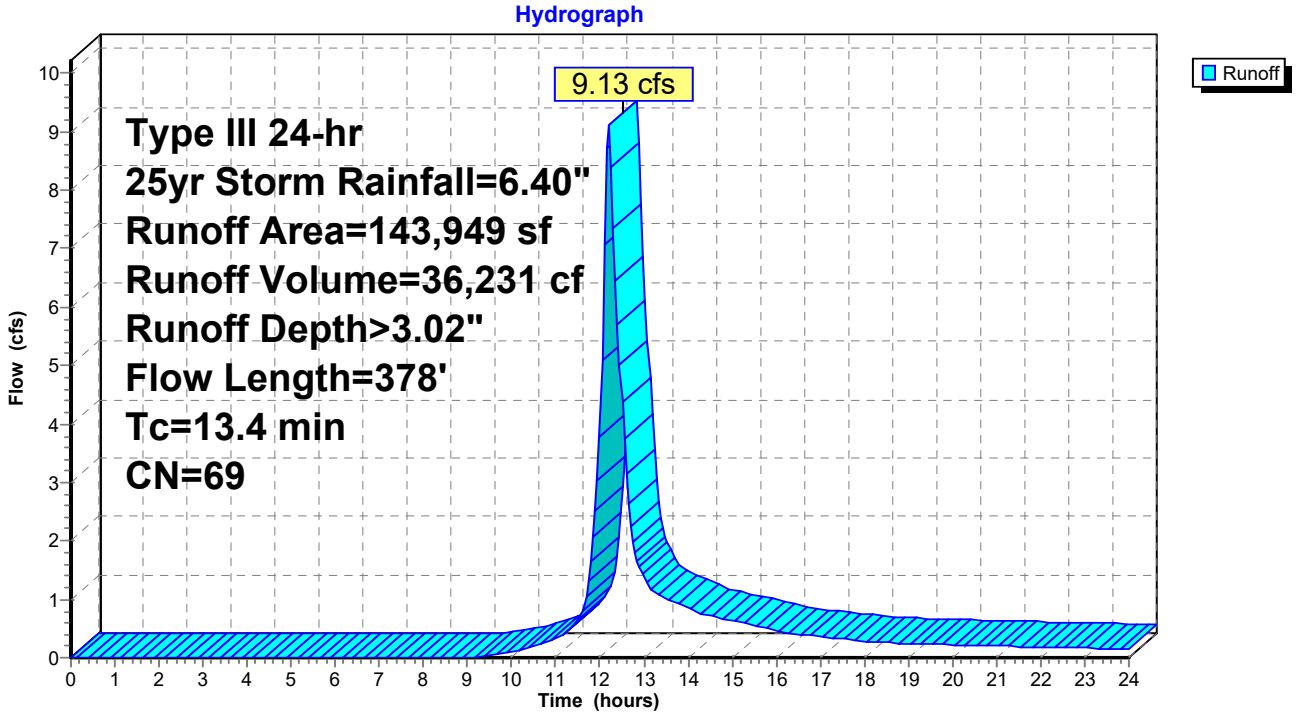
Runoff = 9.13 cfs @ 12.19 hrs, Volume= 36,231 cf, Depth> 3.02"
Routed to Link 1L : POC A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr Storm Rainfall=6.40"

	Area (sf)	CN	Description
	136,349	68	1 acre lots, 20% imp, HSG B
*	3,893	98	Paved roads
	3,707	61	>75% Grass cover, Good, HSG B
	143,949	69	Weighted Average
	112,786		78.35% Pervious Area
	31,163		21.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	150	0.0600	0.21		**Sheet Flow, Sheet Flow (Lawn)** Grass: Dense n= 0.240 P2= 3.50"
1.2	228	0.0440	3.15		**Shallow Concentrated Flow, SCF (Lawn)** Grassed Waterway Kv= 15.0 fps
13.4	378	Total			

Subcatchment EX 1: EX-1



Summary for Subcatchment EX 2: EX-2

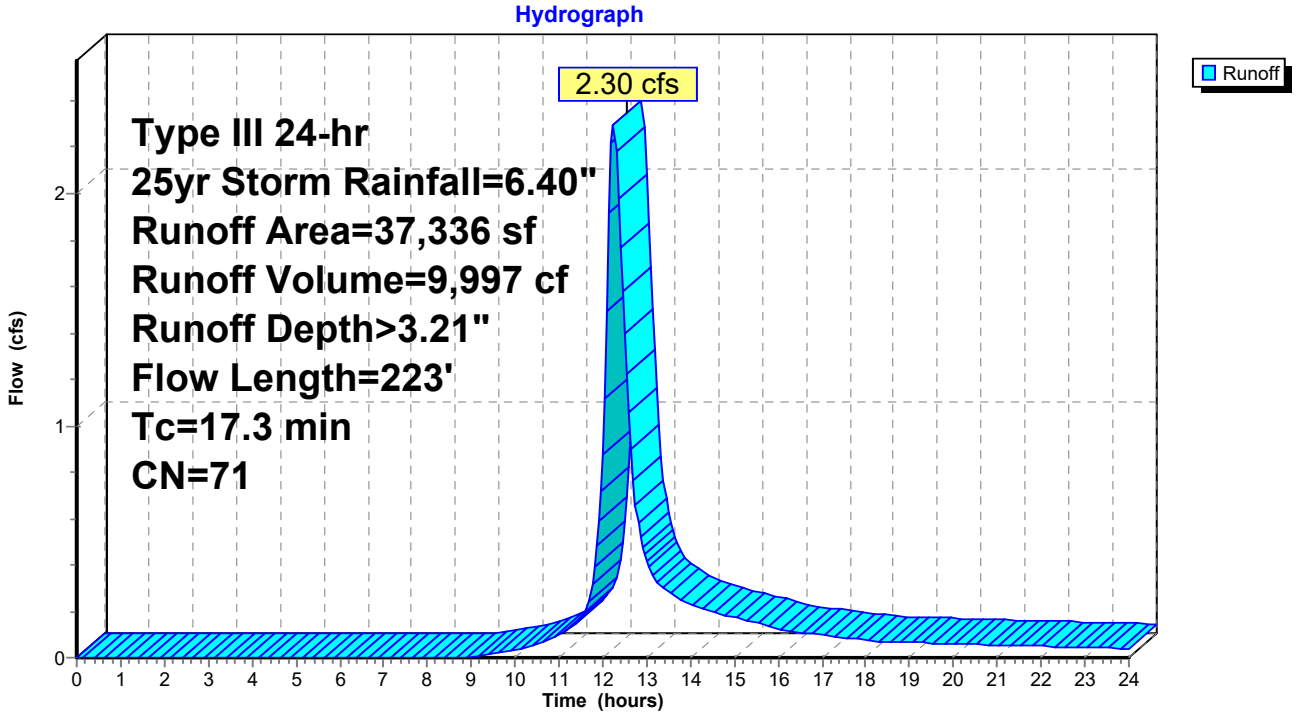
Runoff = 2.30 cfs @ 12.24 hrs, Volume= 9,997 cf, Depth> 3.21"
Routed to Link 2L : POC B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr Storm Rainfall=6.40"

	Area (sf)	CN	Description
	28,747	68	1 acre lots, 20% imp, HSG B
*	4,465	98	Paved roads
	4,124	61	>75% Grass cover, Good, HSG B
	37,336	71	Weighted Average
	27,122		72.64% Pervious Area
	10,214		27.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.0	150	0.0260	0.15		**Sheet Flow, Sheet Flow (Lawn)** Grass: Dense n= 0.240 P2= 3.50"
0.3	73	0.0370	3.90		**Shallow Concentrated Flow, SCF (Roadway)** Paved Kv= 20.3 fps
17.3	223	Total			

Subcatchment EX 2: EX-2



Summary for Subcatchment EX 3: EX-3

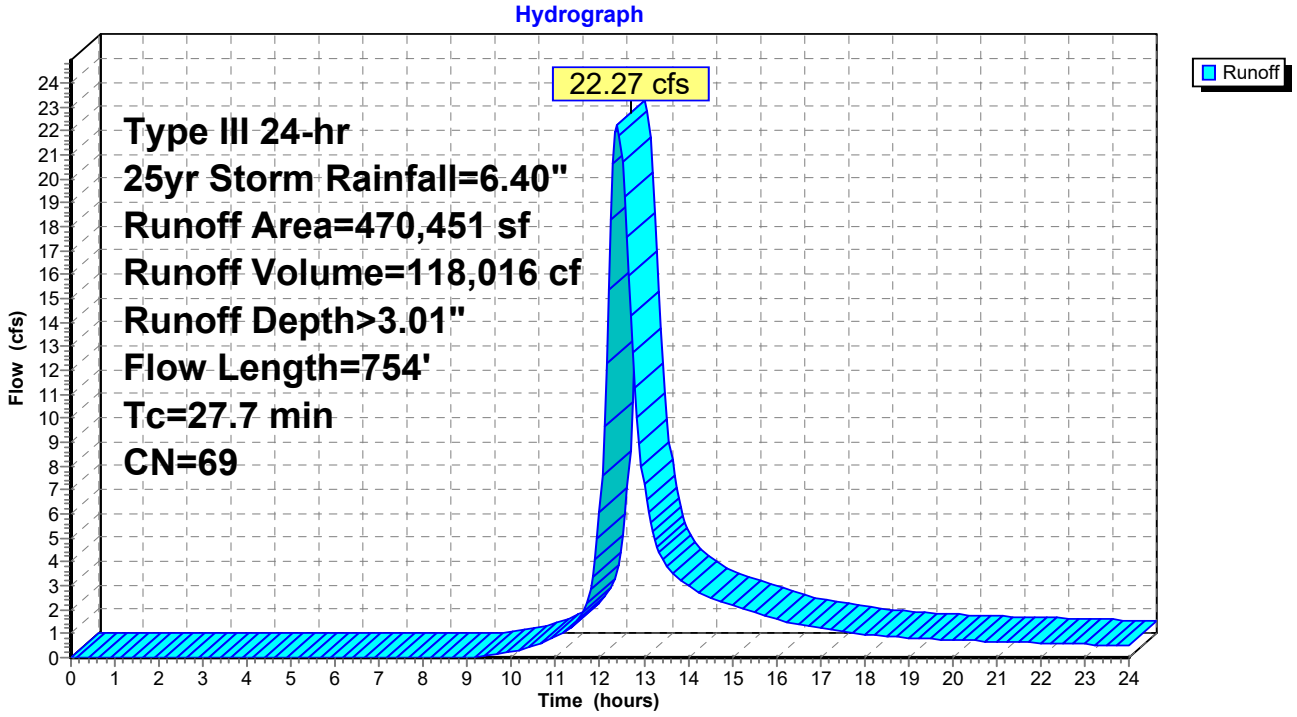
Runoff = 22.27 cfs @ 12.40 hrs, Volume= 118,016 cf, Depth> 3.01"
Routed to Link 3L : POC C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr Storm Rainfall=6.40"

	Area (sf)	CN	Description
	439,014	68	1 acre lots, 20% imp, HSG B
	16,064	61	>75% Grass cover, Good, HSG B
*	15,373	98	Paved roads
	470,451	69	Weighted Average
	367,275		78.07% Pervious Area
	103,176		21.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.9	150	0.0100	0.10		**Sheet Flow, Sheet Flow (Lawn)** Grass: Dense n= 0.240 P2= 3.50"
1.3	384	0.1000	4.74		**Shallow Concentrated Flow, SCF (Lawn)** Grassed Waterway Kv= 15.0 fps
1.5	220	0.0150	2.49		**Shallow Concentrated Flow, SCF (Roadway)** Paved Kv= 20.3 fps
27.7	754	Total			

Subcatchment EX 3: EX-3

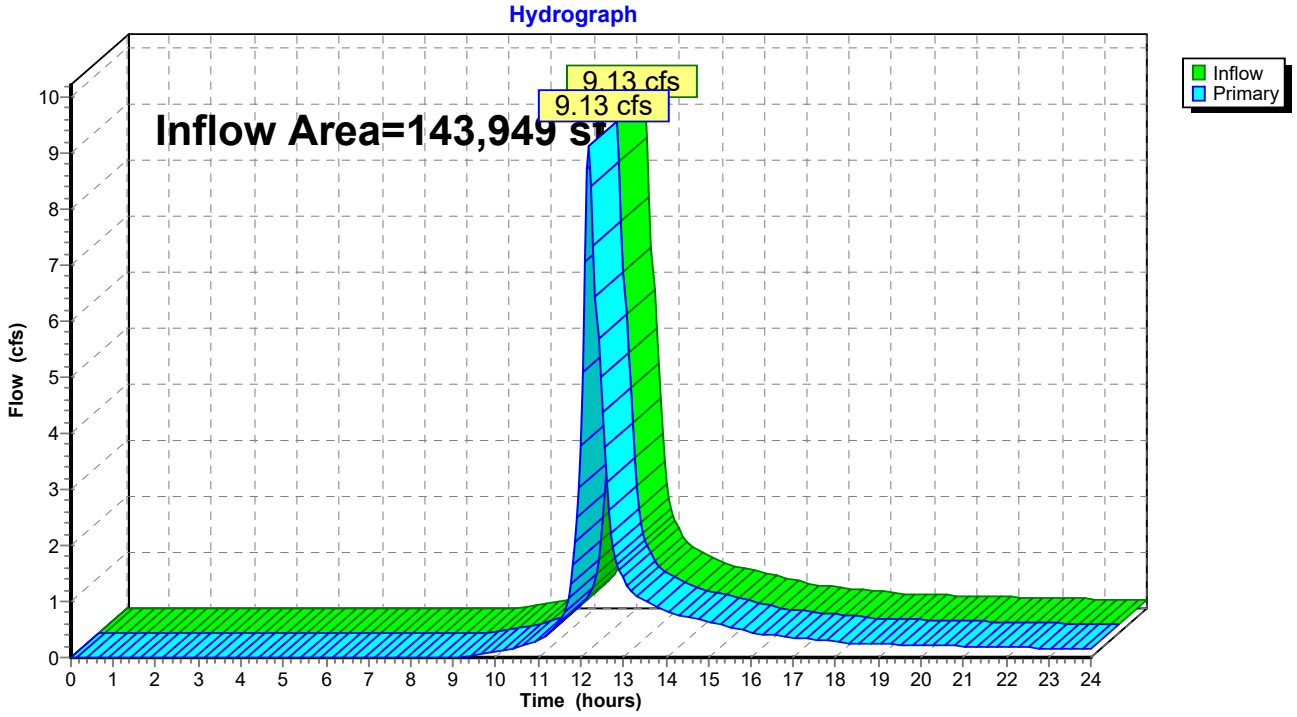


Summary for Link 1L: POC A

Inflow Area = 143,949 sf, 21.65% Impervious, Inflow Depth > 3.02" for 25yr Storm event
Inflow = 9.13 cfs @ 12.19 hrs, Volume= 36,231 cf
Primary = 9.13 cfs @ 12.19 hrs, Volume= 36,231 cf, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node 4L

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: POC A

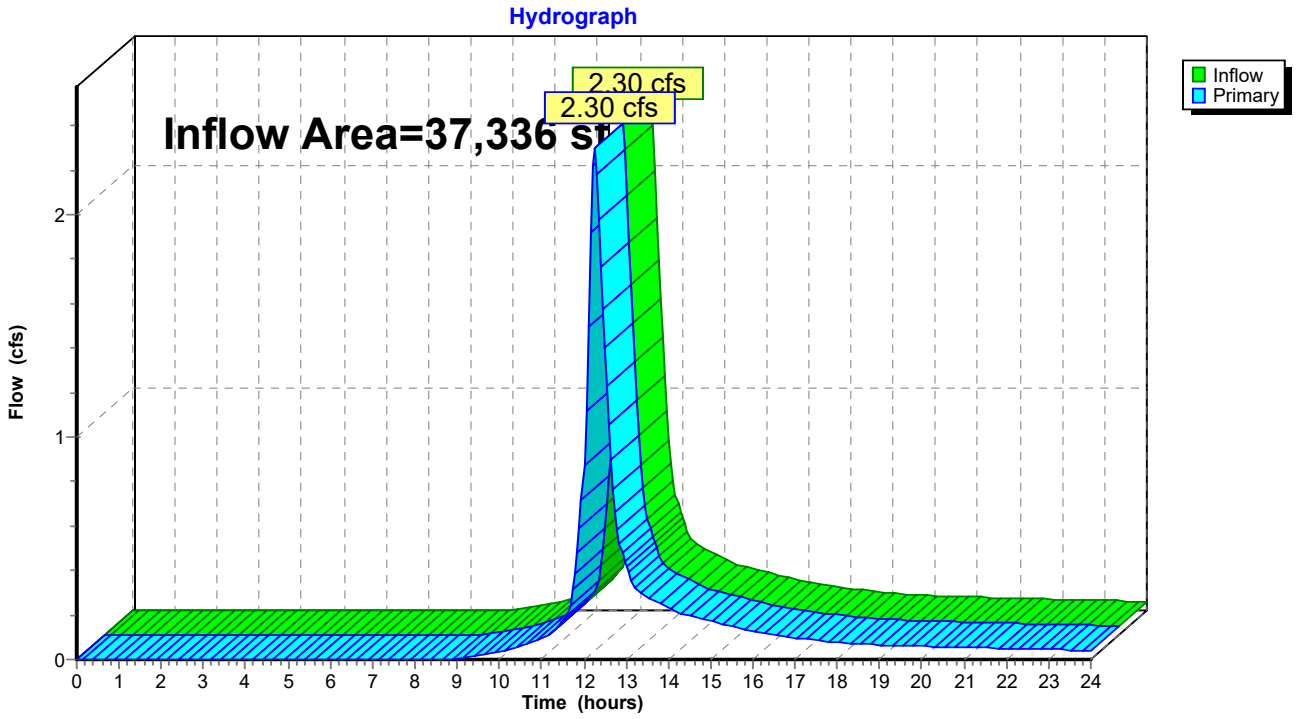


Summary for Link 2L: POC B

Inflow Area = 37,336 sf, 27.36% Impervious, Inflow Depth > 3.21" for 25yr Storm event
Inflow = 2.30 cfs @ 12.24 hrs, Volume= 9,997 cf
Primary = 2.30 cfs @ 12.24 hrs, Volume= 9,997 cf, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node 4L

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: POC B

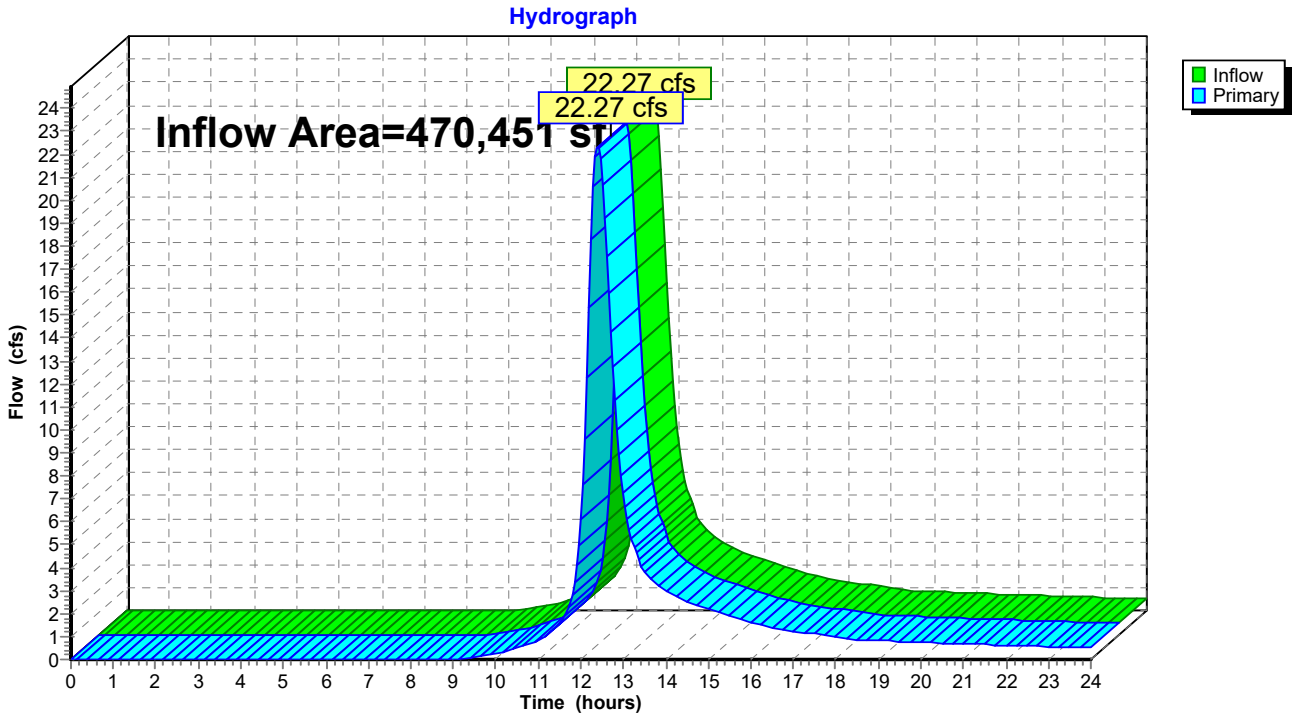


Summary for Link 3L: POC C

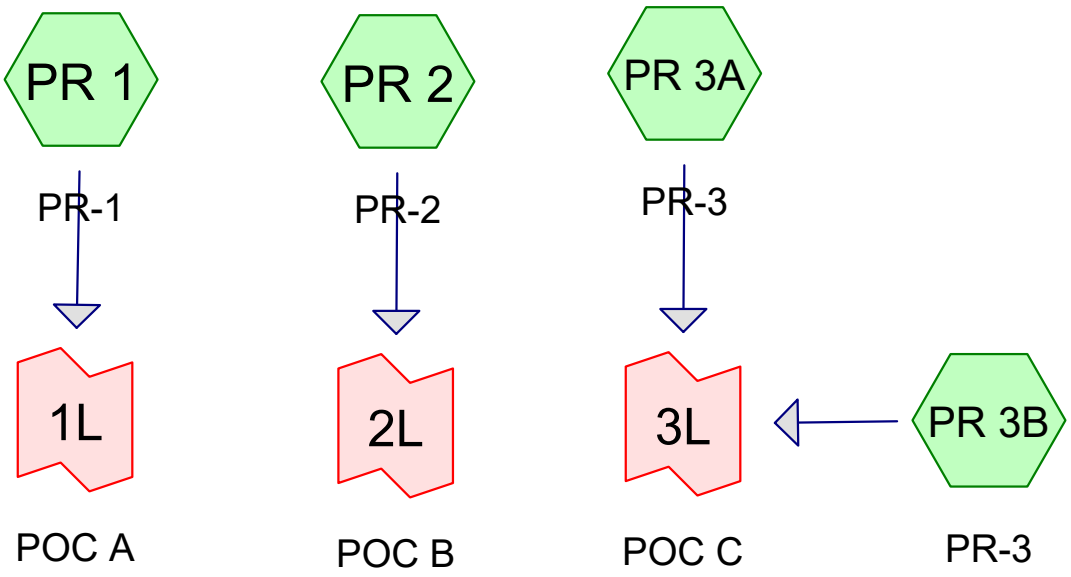
Inflow Area = 470,451 sf, 21.93% Impervious, Inflow Depth > 3.01" for 25yr Storm event
Inflow = 22.27 cfs @ 12.40 hrs, Volume= 118,016 cf
Primary = 22.27 cfs @ 12.40 hrs, Volume= 118,016 cf, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node 4L

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: POC C



Proposed Conditions



Subcat Reach Pond Link

Routing Diagram for Proposed_Conditions_Watershed
Prepared by Land-Tech Consultant, Printed 8/14/2025
HydroCAD® 10.20-7a s/n 01168 © 2025 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
604,110	68	1 acre lots, 20% imp, HSG B (PR 1, PR 2, PR 3A, PR 3B)
23,895	61	>75% Grass cover, Good, HSG B (PR 1, PR 2, PR 3A, PR 3B)
23,731	98	Paved roads (PR 1, PR 2, PR 3A, PR 3B)

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Su Nu
0	604,110	0	0	0	604,110	1 acre lots, 20% imp	
0	23,895	0	0	0	23,895	>75% Grass cover, Good	
0	0	0	0	23,731	23,731	Paved roads	

Summary for Subcatchment PR 1: PR-1

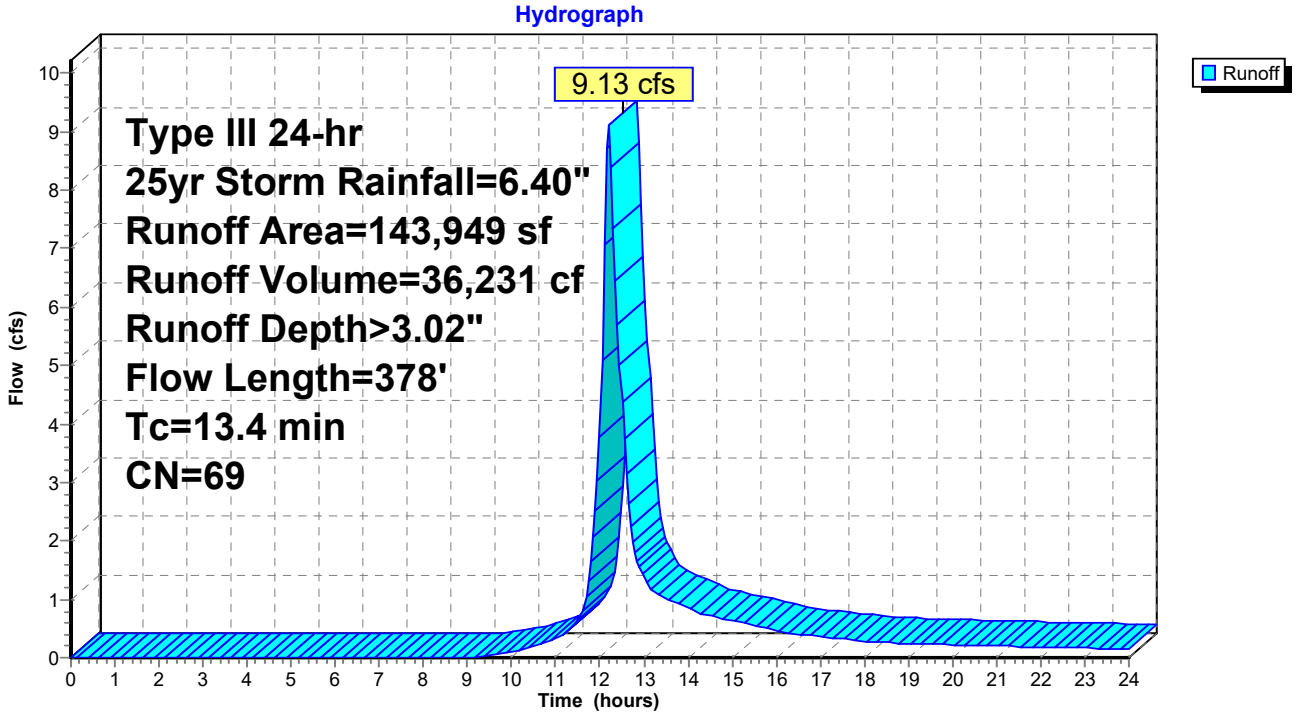
Runoff = 9.13 cfs @ 12.19 hrs, Volume= 36,231 cf, Depth> 3.02"
Routed to Link 1L : POC A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr Storm Rainfall=6.40"

	Area (sf)	CN	Description
	136,349	68	1 acre lots, 20% imp, HSG B
*	3,893	98	Paved roads
	3,707	61	>75% Grass cover, Good, HSG B
	143,949	69	Weighted Average
	112,786		78.35% Pervious Area
	31,163		21.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	150	0.0600	0.21		**Sheet Flow, Sheet Flow (Lawn)** Grass: Dense n= 0.240 P2= 3.50"
1.2	228	0.0440	3.15		**Shallow Concentrated Flow, SCF (Lawn)** Grassed Waterway Kv= 15.0 fps
13.4	378	Total			

Subcatchment PR 1: PR-1



Summary for Subcatchment PR 2: PR-2

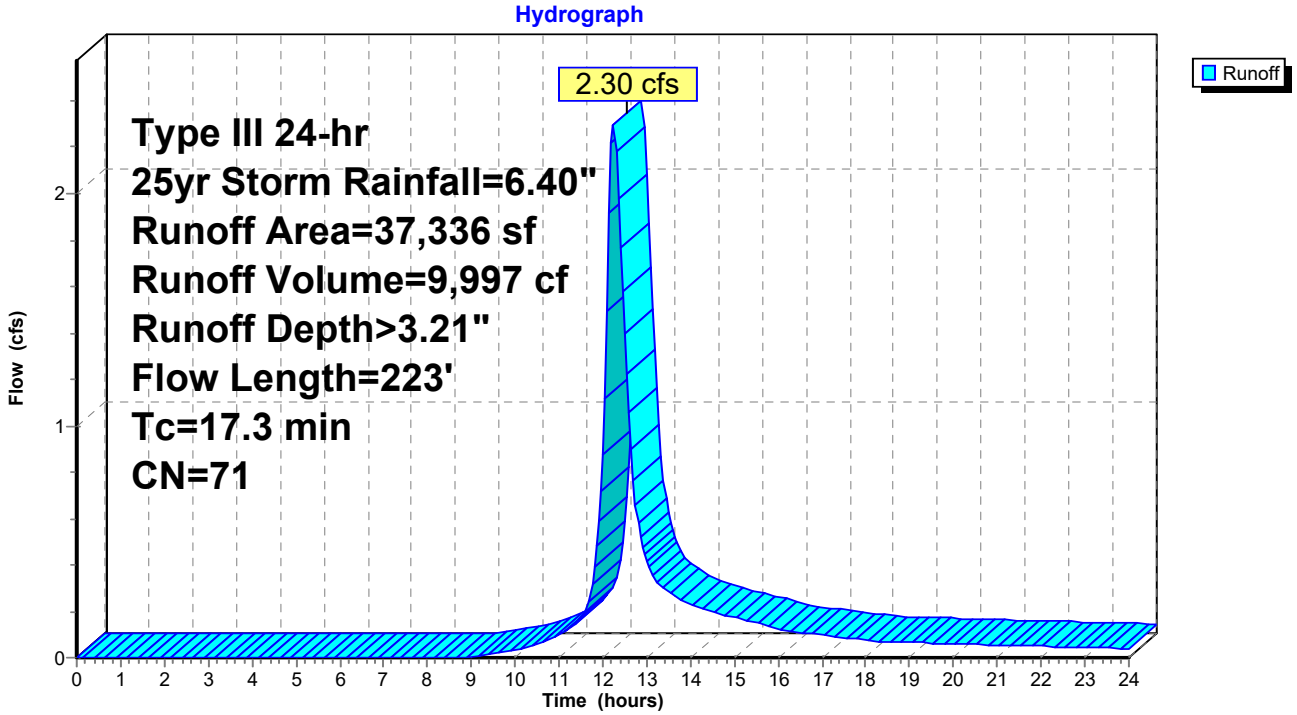
Runoff = 2.30 cfs @ 12.24 hrs, Volume= 9,997 cf, Depth> 3.21"
Routed to Link 2L : POC B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr Storm Rainfall=6.40"

	Area (sf)	CN	Description
	28,747	68	1 acre lots, 20% imp, HSG B
*	4,465	98	Paved roads
	4,124	61	>75% Grass cover, Good, HSG B
	37,336	71	Weighted Average
	27,122		72.64% Pervious Area
	10,214		27.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.0	150	0.0260	0.15		**Sheet Flow, Sheet Flow (Lawn)** Grass: Dense n= 0.240 P2= 3.50"
0.3	73	0.0370	3.90		**Shallow Concentrated Flow, SCF (Roadway)** Paved Kv= 20.3 fps
17.3	223	Total			

Subcatchment PR 2: PR-2



Summary for Subcatchment PR 3A: PR-3

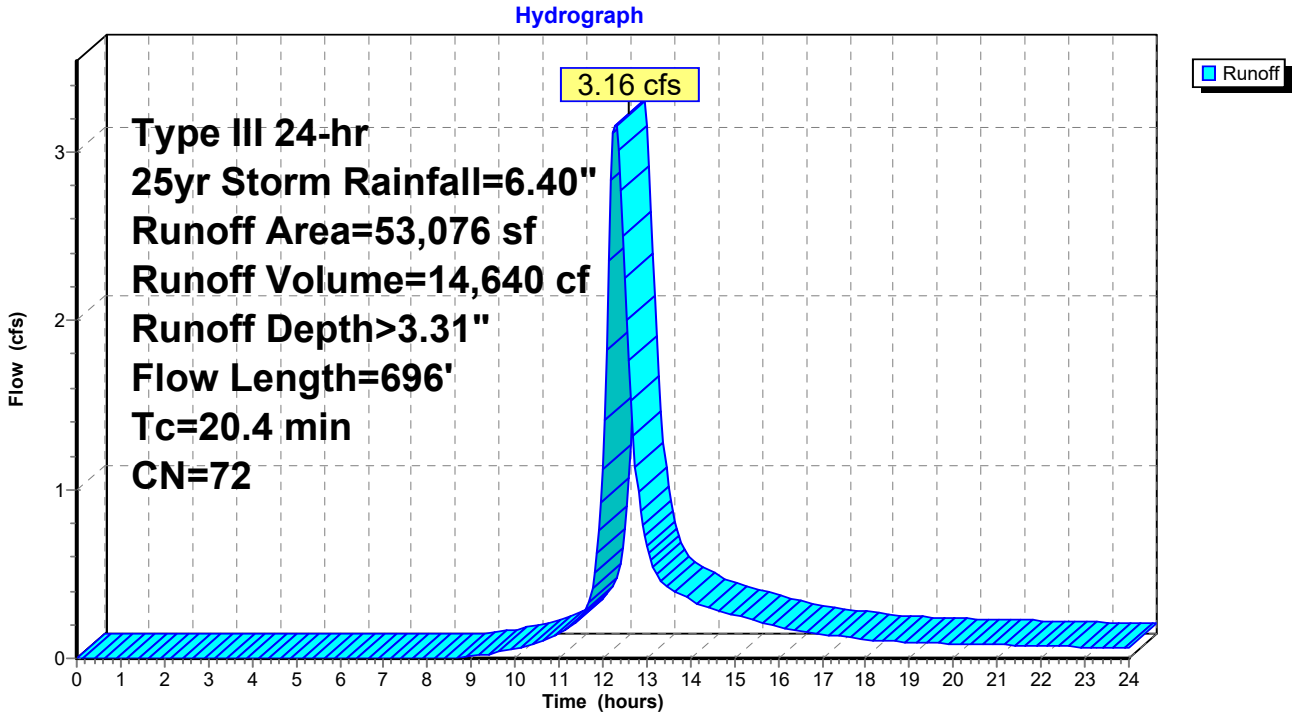
Runoff = 3.16 cfs @ 12.29 hrs, Volume= 14,640 cf, Depth> 3.31"
Routed to Link 3L : POC C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr Storm Rainfall=6.40"

	Area (sf)	CN	Description
	40,870	68	1 acre lots, 20% imp, HSG B
*	8,527	98	Paved roads
	3,679	61	>75% Grass cover, Good, HSG B
	53,076	72	Weighted Average
	36,375		68.53% Pervious Area
	16,701		31.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0	100	0.0100	0.09		**Sheet Flow, Sheet Flow (Lawn)** Grass: Dense n= 0.240 P2= 3.50"
1.4	158	0.0160	1.90		**Shallow Concentrated Flow, SCF (Lawn)** Grassed Waterway Kv= 15.0 fps
0.5	106	0.0320	3.63		**Shallow Concentrated Flow, SCF (Roadway)** Paved Kv= 20.3 fps
0.2	146	0.0740	14.58	11.45	**Pipe Channel, RCP_Round 12"** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 Concrete pipe, straight & clean
0.1	104	0.0870	15.81	12.42	**Pipe Channel, RCP_Round 12"** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 Concrete pipe, straight & clean
0.2	82	0.0170	6.99	5.49	**Pipe Channel, RCP_Round 12"** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 Concrete pipe, straight & clean
20.4	696	Total			

Subcatchment PR 3A: PR-3



Summary for Subcatchment PR 3B: PR-3

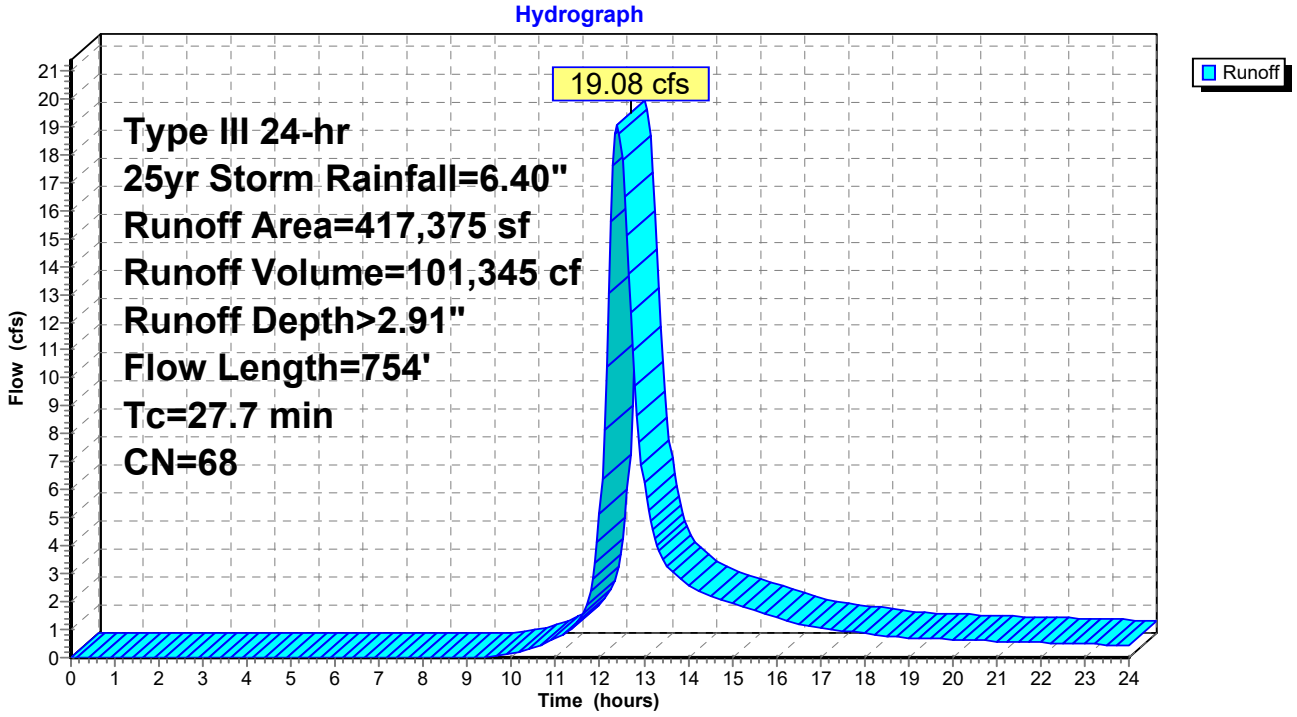
Runoff = 19.08 cfs @ 12.40 hrs, Volume= 101,345 cf, Depth> 2.91"
Routed to Link 3L : POC C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr Storm Rainfall=6.40"

	Area (sf)	CN	Description
	398,144	68	1 acre lots, 20% imp, HSG B
	12,385	61	>75% Grass cover, Good, HSG B
*	6,846	98	Paved roads
	417,375	68	Weighted Average
	330,900		79.28% Pervious Area
	86,475		20.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.9	150	0.0100	0.10		**Sheet Flow, Sheet Flow (Lawn)** Grass: Dense n= 0.240 P2= 3.50"
1.3	384	0.1000	4.74		**Shallow Concentrated Flow, SCF (Lawn)** Grassed Waterway Kv= 15.0 fps
1.5	220	0.0150	2.49		**Shallow Concentrated Flow, SCF (Roadway)** Paved Kv= 20.3 fps
27.7	754	Total			

Subcatchment PR 3B: PR-3

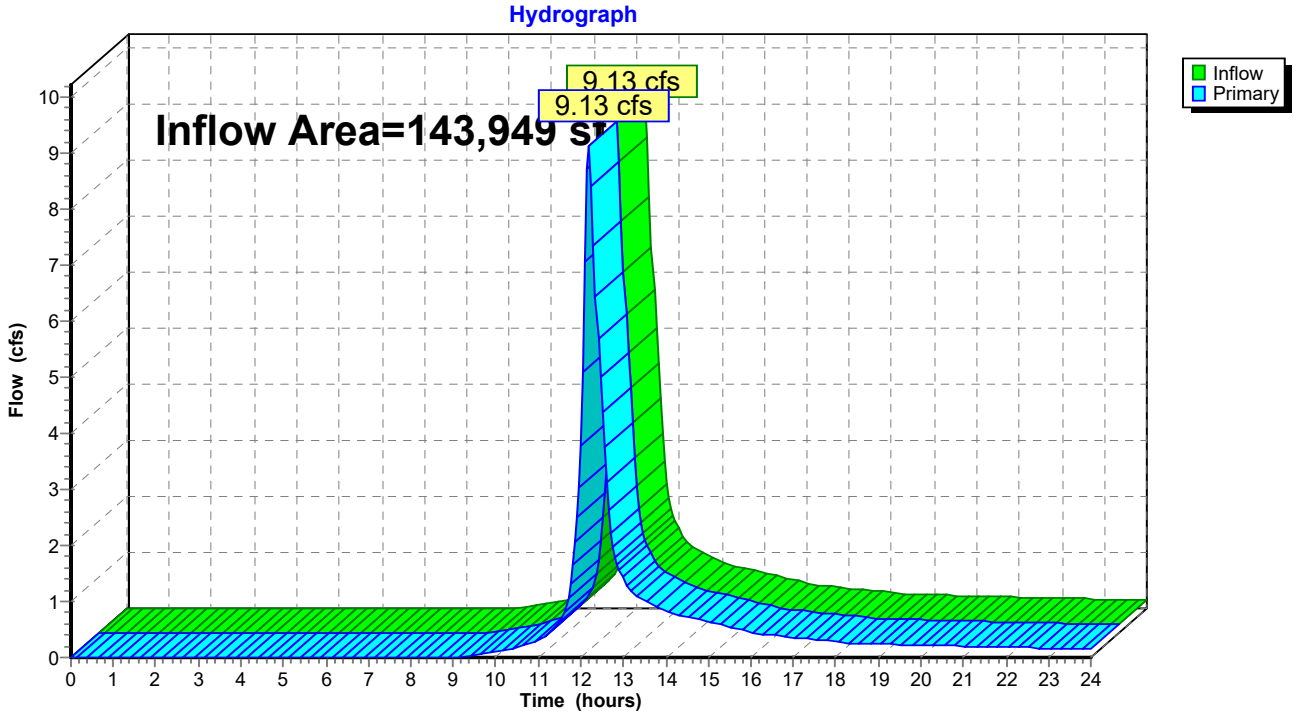


Summary for Link 1L: POC A

Inflow Area = 143,949 sf, 21.65% Impervious, Inflow Depth > 3.02" for 25yr Storm event
Inflow = 9.13 cfs @ 12.19 hrs, Volume= 36,231 cf
Primary = 9.13 cfs @ 12.19 hrs, Volume= 36,231 cf, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node 4L

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: POC A

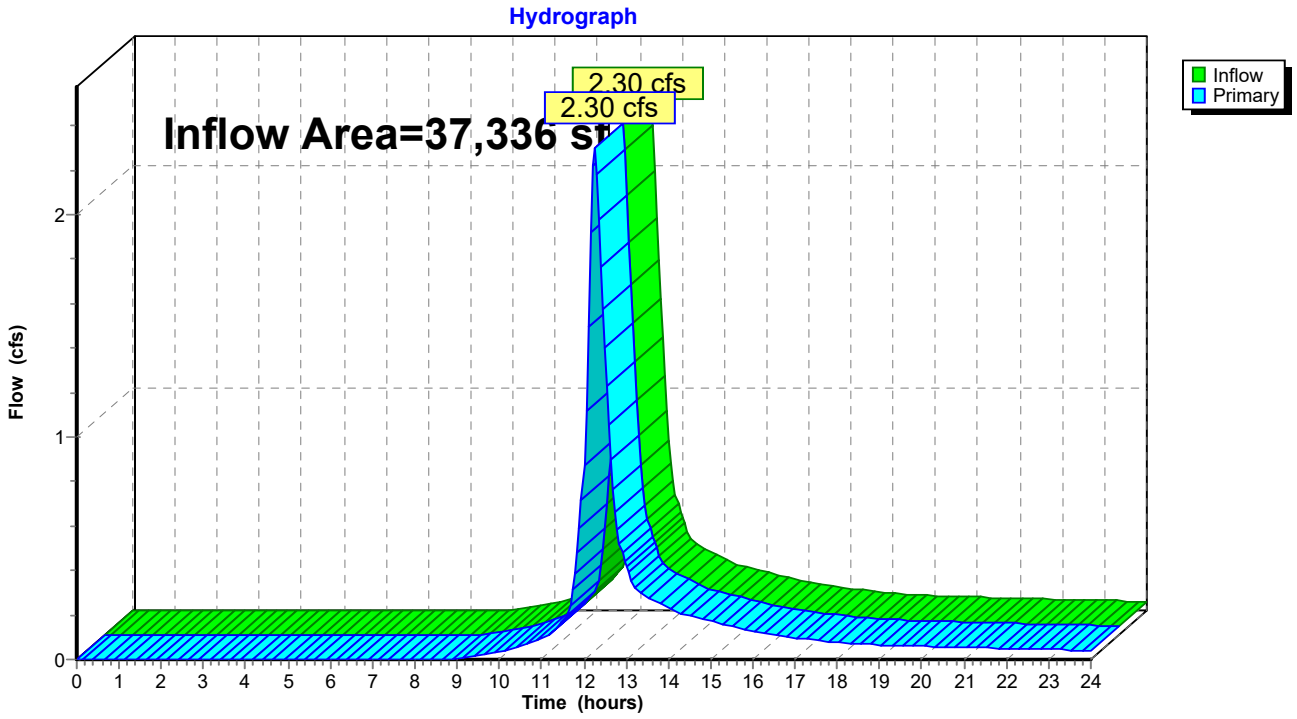


Summary for Link 2L: POC B

Inflow Area = 37,336 sf, 27.36% Impervious, Inflow Depth > 3.21" for 25yr Storm event
Inflow = 2.30 cfs @ 12.24 hrs, Volume= 9,997 cf
Primary = 2.30 cfs @ 12.24 hrs, Volume= 9,997 cf, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node 4L

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: POC B



Summary for Link 3L: POC C

Inflow Area = 470,451 sf, 21.93% Impervious, Inflow Depth > 2.96" for 25yr Storm event
Inflow = 21.90 cfs @ 12.38 hrs, Volume= 115,985 cf
Primary = 21.90 cfs @ 12.38 hrs, Volume= 115,985 cf, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node 4L

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: POC C