



Major Stormwater Plan Form SW-002 Review Process

Contact Information

Currituck County
Planning and Inspections Department
153 Courthouse Road, Suite 110
Currituck, NC 27929

Phone: 252-232-3055

Website: <http://www.currituckcountync.gov/planning-zoning/>

Email: ccpz@currituckcountync.gov

General

Major stormwater plan approval is required for:

- Major subdivisions.
- Major site plans - development or expansion on a nonresidential, multi-family, or mixed use lot by 5,000 square feet or more of impervious coverage or resulting in 10% or more total impervious coverage.

Step 1: Application Submittal

The applicant must submit a complete application packet consisting of the following:

Submitted on a USB flash drive or a compact disc (CD):

- Completed Currituck County Major Stormwater Plan Form SW-002.
- Completed Rational Method Form SW-003 or NRCS Method Form SW-004.
- Stormwater management plan drawn to scale. The plan shall include the items listed in the major stormwater plan design standards checklist.
- Alternative stormwater runoff storage analysis and/or downstream drainage capacity analysis, if applicable.
- NCDENR permit applications, if applicable.
- Stormwater Review Fee (see fee schedule)

On receiving an application, staff shall determine whether the application is complete or incomplete. A complete application contains all the information and materials listed above and is in sufficient detail to evaluate and determine whether it complies with appropriate review standards. An application for major stormwater plan must be submitted and approved prior altering an existing drainage system, performing any land disturbing activity or, before construction documents are approved.

Step 2: Staff Review and Action

Once an application is determined complete staff shall approve, approve subject to conditions or disapprove the application.



Major Stormwater Plan Form SW-002

OFFICIAL USE ONLY:

Permit Number: _____
Date Filed: _____
Date Approved: _____

Contact Information

APPLICANT:

Name: Jeremy Yee, c/o Kimley-Horn
Address: 4525 Main Street, Suite 1000
Virginia Beach, VA 23462
Telephone: 757-548-7306
E-Mail Address: jeremy.yee@kimley-horn.com

PROPERTY OWNER: *CONTRACT PURCHASER:*

Name: James Leach, Frontier Development LLC
Address: 2950 SW 27th Ave, Suite 300
Miami, FL 33133
Telephone: 305-682-0295
E-Mail Address: jleach@fdllc.com

Property Information

Physical Street Address: 468 & 472 Caratoke Highway, Moyock, NC 27958
Parcel Identification Number(s): 009A00000660000 & 009A00000670000
FEMA Flood Zone Designation: Zone X

Request

Project Description: Convenience Store and Fuel Station

Total land disturbance activity: 122,405 sf Calculated volume of BMPs: 12,637 sf
Maximum lot coverage: 72,232 sf Proposed lot coverage: 70,302 sf

TYPE OF REQUEST

- ☒ Major subdivision (10-year, 24-hour rate)
☐ Major site plan (5-year, 24-hour rate)

METHOD USED TO CALCULATE PEAK DISCHARGE

- ☐ Rational Method
☒ NRCS Method (TR-55 and TR-20)
☐ Simple volume calculation for small sites (less than 10 acres)
☐ Alternative stormwater runoff storage analysis
☐ Downstream drainage capacity analysis

I hereby authorize county officials to enter my property for the purpose of determining compliance. All information submitted and required as part of this process shall become public record.

Applicant *Contract Purchaser*

5/2/25
Date

Property Owner(s)

Date

*NOTE: Form must be signed by the owner(s) of record, contract purchaser(s), or other person(s) having a recognized property interest. If there are multiple property owners/applicants a signature is required for each.

Major Stormwater Plan Design Standards Checklist

The table below depicts the design standards of the major stormwater plan application. Please make sure to include all applicable listed items to ensure all appropriate standards are reviewed.

Major Stormwater Plan Design Standards Checklist

Date Received: _____

Project Name: Wawa Moyock Mills Road

Applicant/Property Owner: Jeremy Yee, c/o Kimley-Horn

Minor Stormwater Plan Design Standards Checklist		
General		
1	Property owner name and address.	☒
2	Site address and parcel identification number.	☒
3	North arrow and scale to be 1" = 100' or larger.	☒
Site Features		
4	Scaled drawing showing existing and proposed site features: Property lines with dimensions, acreage, streets, easements, structures (dimensions and square footage), fences, bulkheads, septic area (active and repair), utilities, vehicular use areas, driveways, and sidewalks.	☒
5	Approximate location of all designated Areas of Environmental Concern (AEC) or other such areas which are environmentally sensitive on the property, such as Maritime Forest, CAMA, 404, or 401 wetlands as defined by the appropriate agency.	☐
6	Existing and proposed ground elevations shown in one foot intervals. All elevation changes within the past six months shall be shown on the plan.	☒
8	Limits of all proposed fill, including the toe of fill slope and purpose of fill.	☒
9	Square footage of all existing and proposed impervious areas (structures, sidewalks, walkways, vehicular use areas regardless of surface material), including a description of surface materials.	☒
10	Existing and proposed drainage patterns, including direction of flow.	☒
11	Location, capacity, design plans (detention, retention, infiltration), and design discharge of existing and proposed stormwater management features.	☒
12	Elevation of the seasonal high water level as determined by a licensed soil scientist.	☒
13	Plant selection.	☒
Permits and Other Documentation		
14	NCDENR stormwater permit application (if 10,000sf or more of built upon area).	☒
15	NCDENR erosion and sedimentation control permit application (if one acre or more of land disturbance).	☒
16	NCDENR coastal area management act permit application, if applicable.	☒
17	Stormwater management narrative with supporting calculations.	☒
18	Rational Method Form SW-003 or NRCS Method Form SW-004	☒
19	Alternative stormwater runoff storage analysis and/or downstream drainage capacity analysis, if applicable	☒
20	Design spreadsheets for all BMPs (Appendix F – Currituck County Stormwater Manual).	☒
21	Detailed maintenance plan for all proposed BMPs.	☒

Certificate	
22	The major stormwater plan shall contain the following certificate: I, _____, owner/agent hereby certify the information included on this and attached pages is true and correct to the best of my knowledge. On the plan entitled _____, stormwater drainage improvements shall be installed according to these plans and specifications and approved by Currituck County. Yearly inspections are required as part of the stormwater plan. The owner is responsible for all maintenance required. Currituck County assumes no responsibility for the design, maintenance, or performance of the stormwater improvements. Date: _____ Owner/Agent: _____

Major Stormwater Plan Submittal Checklist

Staff will use the following checklist to determine the completeness of your application. Please make sure all the listed items are included. Staff shall not process an application for further review until it is determined to be complete.

Major Stormwater Plan Form SW-002 Submittal Checklist

Date Received: _____

Project Name: _____

Applicant/Property Owner: _____

Major Stormwater Plan Form SW-002 Submittal Checklist – Documents provided on USB flash drive or CD		
1	Completed Major Stormwater Plan Form SW-002	☐
2	Completed Rational Method Form SW-003 or NRCS Method Form SW-004	☐
3	Stormwater plan	☐
4	NCDENR permit applications, if applicable	☐

Comments

Time of Concentration (T_c)

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments

Sheet flow

(Applicable to T_c only)

Segment ID		Pre		Post	
1.	Surface description	Asphalt			
2.	Manning's roughness coeff., n (Table 2-9)	0.035			
3.	Flow Length, L (total $L \leq 300$ ft)	75	ft		
4.	24-hr rainfall, P	4.0	in	6.0	
5.	Land Slope, s	0.01	ft / ft		
6.	$T_1 = 0.42(nL)^{0.8} / P^{2.05} s^{0.4}$	2.87	min		
				+	
				=	2.87

Shallow concentrated flow

Segment ID					
7.	Surface Description: paved (P) or unpaved (U)?				
8.	Flow Length, L		ft		
9.	Watercourse slope, s		ft / ft		
10.	Average velocity, V (Table 2-8)		ft / sec		
11.	$T_1 = L / V$		min		
				+	
				=	

Channel flow

Segment ID					
	Pipe (P) or Channel (C)?	C			
	If pipe, enter D (in):				
	If channel, enter bottom width:	2			
	If channel, enter side slopes ($2:1$):	2:1			
12.	Cross sectional flow area, a	4	sq ft		
13.	Wetted perimeter, w_p	6.47	ft		
14.	Hydraulic radius, $r = a / w_p$	0.62	ft		
15.	Channel slope, s	0.01	ft / ft		
16.	Manning's roughness coeff., n	0.035			
17.	$V = 1.49 r^{0.67} s^{0.5} / n$	3.09	ft / sec		
18.	Flow length, L	450	ft		
19.	$T_1 = L / 60V$	2.43	min		
				+	
				=	2.43
20.	Watershed or subarea T_c or T_1 (add T_1 in steps 6, 11, 19)			min	5.30

Graphical Peak Discharge

1. Data:

Drainage Area, A_m = _____ sq mi (acres/640)
 Runoff Curve Number, CN = _____ (From Runoff Curve Number Worksheet)
 Time of Concentration, T_c = _____ hr (From Time of Concentration Worksheet)
 Rainfall Distribution = Type III

Pond and swamp areas spread throughout watershed = _____ % of A_m (_____ acres covered)

2. Frequency yr

3. Rainfall, P (24-hour) in

4. Initial abstraction, I_a in
 (Use CN)

5. Compute I_a/P

6. Unit peak discharge, q_u csm/in
 (use T_c and I_a/P with Figure 2-9)

7. Runoff, Q in
 (From Runoff Curve Number Worksheet)

8. Pond and swamp adjustment factor, F_p
 (Use Table 2-10)

9. Peak discharge, Q_p cfs
 (Where $Q_p = q_u A_m Q F_p$)

Storm #1	Storm #2	Storm #3

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Applicant _____

Date _____

Time of Concentration (Tc)

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments

Sheet flow (Applicable to T_c only)

Segment ID	Pre		Post	
1. Surface description	Grass			
2. Manning's roughness coeff., n (Table 2-9)	0.035			
3. Flow Length, L (total L ≤ 300 ft)	60			
4. 24-hr rainfall, P	4.0		6.0	
5. Land Slope, s	0.01			
6. $T_1 = 0.42(nL)^{0.8} / P_2^{0.5} s^{0.4}$	2.40	+		= 2.40

Shallow concentrated flow

Segment ID				
7. Surface Description: paved (P) or unpaved (U)?				
8. Flow Length, L	ft			
9. Watercourse slope, s	ft / ft			
10. Average velocity, V (Table 2-8)	ft / sec			
11. $T_1 = L / V$	min	+		=

Channel flow

Segment ID				
Pipe (P) or Channel (C)?	C			
If pipe, enter D (in):				
If channel, enter bottom width:	2			
If channel, enter side slopes (2:1):	2:1			
12. Cross sectional flow area, a	sq ft	4		
13. Wetted perimeter, w _p	ft	6.47		
14. Hydraulic radius, r = a / w _p	ft	0.62		
15. Channel slope, s	ft / ft	0.01		
16. Manning's roughness coeff., n		0.035		
17. $V = 1.49 r^{0.67} s^{0.5} / n$	ft / sec	3.09		
18. Flow length, L	ft	115		
19. $T_1 = L / 60V$	min	0.62	+	
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, 19)				= 0.62
				min 3.02

3.02 < 5 mins
Rounded to 5 min T_c

Graphical Peak Discharge

1. Data:

Drainage Area, A_m = _____ sq mi (acres/640)
 Runoff Curve Number, CN = _____ (From Runoff Curve Number Worksheet)
 Time of Concentration, T_c = _____ hr (From Time of Concentration Worksheet)
 Rainfall Distribution = Type III

Pond and swamp areas spread throughout watershed = _____ % of A_m (_____ acres covered)

2. Frequency yr

3. Rainfall, P (24-hour) in

4. Initial abstraction, I_a in
 (Use CN)

5. Compute I_a/P

6. Unit peak discharge, q_u csm/in
 (use T_c and I_a/P with Figure 2-9)

7. Runoff, Q in
 (From Runoff Curve Number Worksheet)

8. Pond and swamp adjustment factor, F_p
 (Use Table 2-10)

9. Peak discharge, Q_p cfs
 (Where $Q_p = q_u A_m Q F_p$)

Storm #1	Storm #2	Storm #3

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Applicant _____

Date _____

Time of Concentration (Tc)

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments

Sheet flow

(Applicable to T_c only)

	Segment ID	Pre		Post	
1.	Surface description			Asphalt	
2.	Manning's roughness coeff., n (Table 2-9)			0.013	
3.	Flow Length, L (total L ≤ 300 ft)		ft	300	
4.	24-hr rainfall, P		in	4.0	
5.	Land Slope, s		ft / ft	0.01	
6.	$T_1 = 0.42(nL)^{0.8} / P_2^{0.5} s^{0.4}$		min	3.94	= 3.94

Shallow concentrated flow

	Segment ID				
7.	Surface Description: paved (P) or unpaved (U)?				
8.	Flow Length, L		ft		
9.	Watercourse slope, s		ft / ft		
10.	Average velocity, V (Table 2-8)		ft / sec		
11.	$T_1 = L / V$		min		=

Channel flow

	Segment ID				
	Pipe (P) or Channel (C)?		C		
	If pipe, enter D (in):				
	If channel, enter bottom width:		2		
	If channel, enter side slopes (2:1):		2:1		
12.	Cross sectional flow area, a		sq ft	4	
13.	Wetted perimeter, w _p		ft	6.47	
14.	Hydraulic radius, r = a / w _p		ft	0.62	
15.	Channel slope, s		ft / ft	0.01	
16.	Manning's roughness coeff., n			0.035	
17.	$V = 1.49 r^{0.67} s^{0.5} / n$		ft / sec	3.09	
18.	Flow length, L		ft	450	
19.	$T_1 = L / 60V$		min	2.43	=
20.	Watershed or subarea T _c or T ₁ (add T ₁ in steps 6, 11, 19)				min 3.94

3.94 < 5 mins
Rounded to 5 min T_c

Graphical Peak Discharge

1. Data:

Drainage Area, A_m = _____ sq mi (acres/640)
 Runoff Curve Number, CN = _____ (From Runoff Curve Number Worksheet)
 Time of Concentration, T_c = _____ hr (From Time of Concentration Worksheet)
 Rainfall Distribution = Type III

Pond and swamp areas spread throughout watershed = _____ % of A_m (_____ acres covered)

2. Frequency yr

3. Rainfall, P (24-hour) in

4. Initial abstraction, I_a in
 (Use CN)

5. Compute I_a/P

6. Unit peak discharge, q_u csm/in
 (use T_c and I_a/P with Figure 2-9)

7. Runoff, Q in
 (From Runoff Curve Number Worksheet)

8. Pond and swamp adjustment factor, F_p
 (Use Table 2-10)

9. Peak discharge, Q_p cfs
 (Where $Q_p = q_u A_m Q F_p$)

Storm #1	Storm #2	Storm #3

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Applicant _____

Date _____

Time of Concentration (Tc)

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments

Sheet flow (Applicable to T_c only)

Segment ID		Pre		Post	
1. Surface description				Grass	
2. Manning's roughness coeff., n (Table 2-9)				0.035	
3. Flow Length, L (total L ≤ 300 ft)	ft			27	
4. 24-hr rainfall, P	in	4.0		6.0	
5. Land Slope, s	ft / ft			0.33	
6. $T_1 = 0.42(nL)^{0.8} / P_2^{0.5} s^{0.4}$	min		+	0.26	= 0.26

Shallow concentrated flow

Segment ID					
7. Surface Description: paved (P) or unpaved (U)?					
8. Flow Length, L	ft				
9. Watercourse slope, s	ft / ft				
10. Average velocity, V (Table 2-8)	ft / sec				
11. $T_1 = L / V$	min		+		=

Channel flow

Segment ID					
Pipe (P) or Channel (C)?		C			
If pipe, enter D (in):					
If channel, enter bottom width:		2			
If channel, enter side slopes (2:1):		2:1			
12. Cross sectional flow area, a	sq ft	4			
13. Wetted perimeter, w _p	ft	6.47			
14. Hydraulic radius, r = a / w _p	ft	0.62			
15. Channel slope, s	ft / ft	0.01			
16. Manning's roughness coeff., n		0.035			
17. $V = 1.49 r^{0.67} s^{0.5} / n$	ft / sec	3.09			
18. Flow length, L	ft	375			
19. $T_1 = L / 60V$	min	2.02	+		= 2.02
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, 19)					min 2.28

2.28 < 5 mins
Rounded to 5 min T_c

Graphical Peak Discharge

1. Data:

Drainage Area, A_m = _____ sq mi (acres/640)
 Runoff Curve Number, CN = _____ (From Runoff Curve Number Worksheet)
 Time of Concentration, T_c = _____ hr (From Time of Concentration Worksheet)
 Rainfall Distribution = Type III

Pond and swamp areas spread throughout watershed = _____ % of A_m (_____ acres covered)

2. Frequency yr

3. Rainfall, P (24-hour) in

4. Initial abstraction, I_a in
 (Use CN)

5. Compute I_a/P

6. Unit peak discharge, q_u csm/in
 (use T_c and I_a/P with Figure 2-9)

7. Runoff, Q in
 (From Runoff Curve Number Worksheet)

8. Pond and swamp adjustment factor, F_p
 (Use Table 2-10)

9. Peak discharge, Q_p cfs
 (Where $Q_p = q_u A_m Q F_p$)

Storm #1	Storm #2	Storm #3

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Applicant _____

Date _____

Time of Concentration (Tc)

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments

Sheet flow (Applicable to T_c only)

Segment ID	Pre	Post
1. Surface description		Grass
2. Manning's roughness coeff., n (Table 2-9)		0.035
3. Flow Length, L (total L ≤ 300 ft)	ft	20
4. 24-hr rainfall, P	in	4.0
5. Land Slope, s	ft / ft	0.33
6. $T_1 = 0.42(nL)^{0.8} / P_2^{0.5} s^{0.4}$	min	0.20
	+	= 0.20

Shallow concentrated flow

Segment ID		
7. Surface Description: paved (P) or unpaved (U)?		
8. Flow Length, L	ft	
9. Watercourse slope, s	ft / ft	
10. Average velocity, V (Table 2-8)	ft / sec	
11. $T_1 = L / V$	min	
	+	=

Channel flow

Segment ID		
Pipe (P) or Channel (C)?	C	
If pipe, enter D (in):		
If channel, enter bottom width:	2	
If channel, enter side slopes (2:1):	2:1	
12. Cross sectional flow area, a	sq ft	4
13. Wetted perimeter, w _p	ft	6.47
14. Hydraulic radius, r = a / w _p	ft	0.62
15. Channel slope, s	ft / ft	0.01
16. Manning's roughness coeff., n		0.035
17. $V = 1.49 r^{0.67} s^{0.5} / n$	ft / sec	3.09
18. Flow length, L	ft	115
19. $T_1 = L / 60V$	min	
20. Watershed or subarea T _c or T ₁ (add T ₁ in steps 6, 11, 19)		
	+	= 0.62
		min 0.82

0.82 < 5 mins
Rounded to 5 min T_c

Graphical Peak Discharge

1. Data:

Drainage Area, A_m = _____ sq mi (acres/640)
 Runoff Curve Number, CN = _____ (From Runoff Curve Number Worksheet)
 Time of Concentration, T_c = _____ hr (From Time of Concentration Worksheet)
 Rainfall Distribution = Type III

Pond and swamp areas spread throughout watershed = _____ % of A_m (_____ acres covered)

2. Frequency yr

3. Rainfall, P (24-hour) in

4. Initial abstraction, I_a in
 (Use CN)

5. Compute I_a/P

6. Unit peak discharge, q_u csm/in
 (use T_c and I_a/P with Figure 2-9)

7. Runoff, Q in
 (From Runoff Curve Number Worksheet)

8. Pond and swamp adjustment factor, F_p
 (Use Table 2-10)

9. Peak discharge, Q_p cfs
 (Where $Q_p = q_u A_m Q F_p$)

Storm #1	Storm #2	Storm #3

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Applicant _____

Date _____

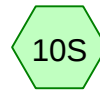
PRE-DEVELOPMENT



Pre DA1



Pre POA 1

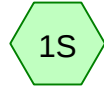


Pre DA2

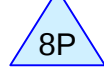


Pre POA 2

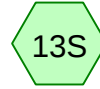
POST-DEVELOPMENT



Post DA 1



Pond



Post DA3



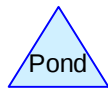
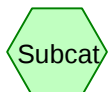
Post POA 2



Post DA2



Post POA 1



Routing Diagram for Moyock_2025.04.26hcp

Prepared by Kimley-Horn & Associates, Printed 5/22/2025
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Moyock_2025.04.26hcp

Prepared by Kimley-Horn & Associates

Printed 5/22/2025

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-yr	Type II 24-hr		Default	24.00	1	4.00	2
2	10-yr	Type II 24-hr		Default	24.00	1	6.00	2
3	100-yr	Type II 24-hr		Default	24.00	1	9.48	2

Moyock_2025.04.26hcp

Prepared by Kimley-Horn & Associates

Printed 5/22/2025

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.150	96	(1S)
0.360	87	(12S)
0.300	86	(13S)
2.820	77	Woods, Good, HSG D (6S, 10S)
5.630	85	TOTAL AREA

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
2.820	HSG D	6S, 10S
2.810	Other	1S, 12S, 13S
5.630		TOTAL AREA

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	2.810	2.810		1S, 12S, 13S
0.000	0.000	0.000	2.820	0.000	2.820	Woods, Good	6S, 10S
0.000	0.000	0.000	2.820	2.810	5.630	TOTAL AREA	

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Post DA 1	Runoff Area=2.150 ac 0.00% Impervious Runoff Depth=3.54" Tc=5.0 min CN=96 Runoff=12.34 cfs 0.634 af
Subcatchment 6S: Pre DA1	Runoff Area=2.130 ac 0.00% Impervious Runoff Depth=1.81" Tc=5.0 min CN=77 Runoff=7.18 cfs 0.322 af
Subcatchment 10S: Pre DA2	Runoff Area=0.690 ac 0.00% Impervious Runoff Depth=1.81" Tc=5.0 min CN=77 Runoff=2.33 cfs 0.104 af
Subcatchment 12S: Post DA2	Runoff Area=0.360 ac 0.00% Impervious Runoff Depth=2.64" Tc=5.0 min CN=87 Runoff=1.70 cfs 0.079 af
Subcatchment 13S: Post DA3	Runoff Area=0.300 ac 0.00% Impervious Runoff Depth=2.55" Tc=5.0 min CN=86 Runoff=1.38 cfs 0.064 af
Pond 8P: Pond	Peak Elev=9.16' Storage=0.328 af Inflow=12.34 cfs 0.634 af Outflow=2.50 cfs 0.602 af
Link 5L: Post POA 1	Inflow=3.54 cfs 0.681 af Primary=3.54 cfs 0.681 af
Link 6L: Pre POA 1	Inflow=7.18 cfs 0.322 af Primary=7.18 cfs 0.322 af
Link 11L: Pre POA 2	Inflow=2.33 cfs 0.104 af Primary=2.33 cfs 0.104 af
Link 15L: Post POA 2	Inflow=1.38 cfs 0.064 af Primary=1.38 cfs 0.064 af

Total Runoff Area = 5.630 ac Runoff Volume = 1.203 af Average Runoff Depth = 2.56"
100.00% Pervious = 5.630 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Post DA 1

Runoff = 12.34 cfs @ 11.96 hrs, Volume= 0.634 af, Depth= 3.54"
 Routed to Pond 8P : Pond

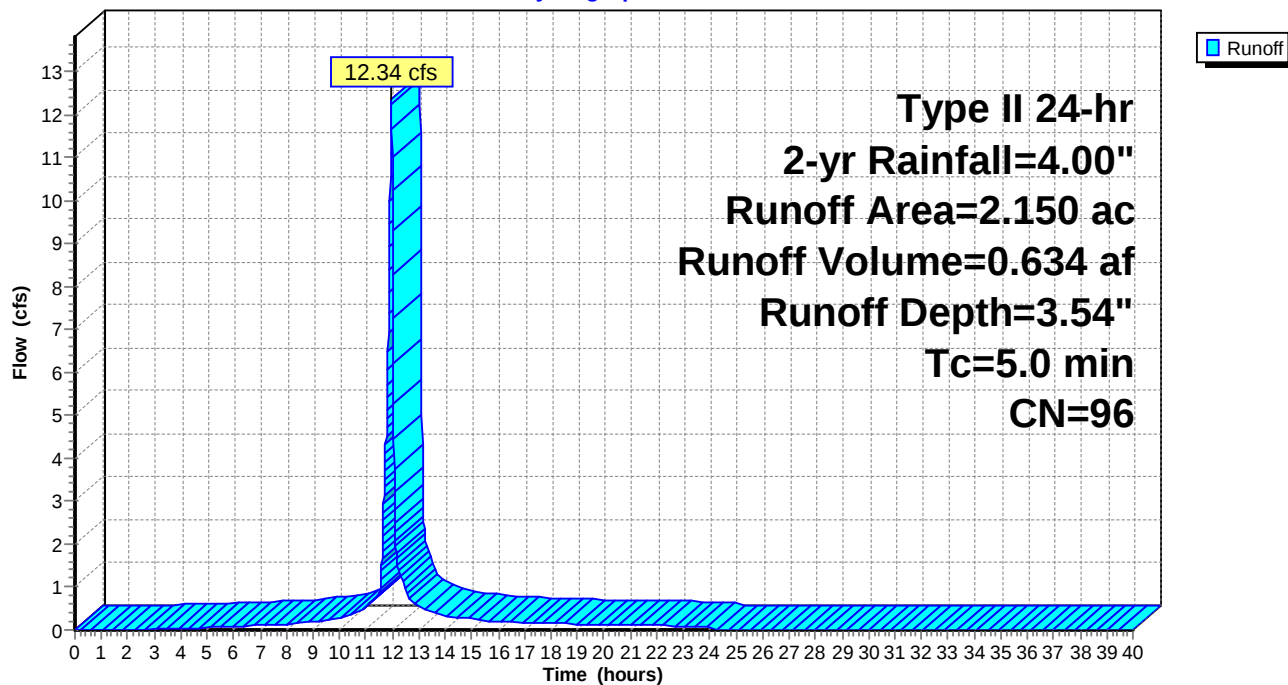
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 2-yr Rainfall=4.00"

Area (ac)	CN	Description
* 2.150	96	
2.150		100.00% Pervious Area

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

Subcatchment 1S: Post DA 1

Hydrograph



Summary for Subcatchment 6S: Pre DA1

Runoff = 7.18 cfs @ 11.96 hrs, Volume= 0.322 af, Depth= 1.81"
 Routed to Link 6L : Pre POA 1

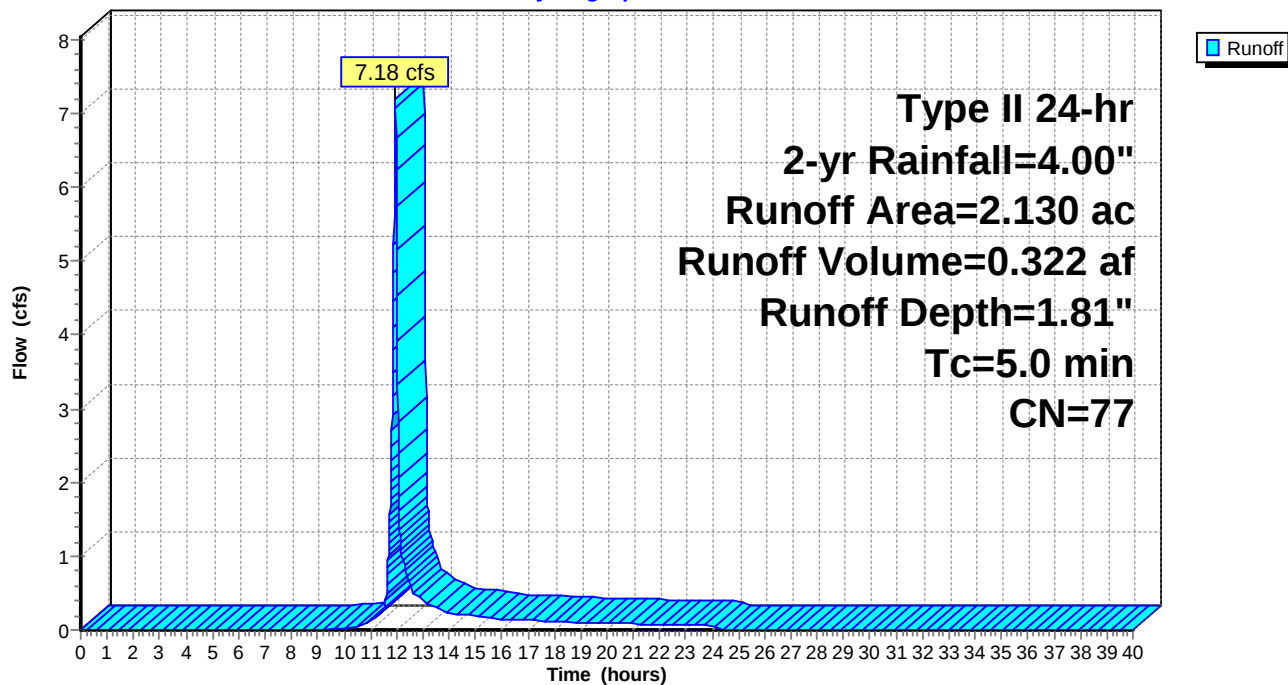
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 2-yr Rainfall=4.00"

Area (ac)	CN	Description
2.130	77	Woods, Good, HSG D
2.130		100.00% Pervious Area

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

Subcatchment 6S: Pre DA1

Hydrograph



Summary for Subcatchment 10S: Pre DA2

Runoff = 2.33 cfs @ 11.96 hrs, Volume= 0.104 af, Depth= 1.81"
 Routed to Link 11L : Pre POA 2

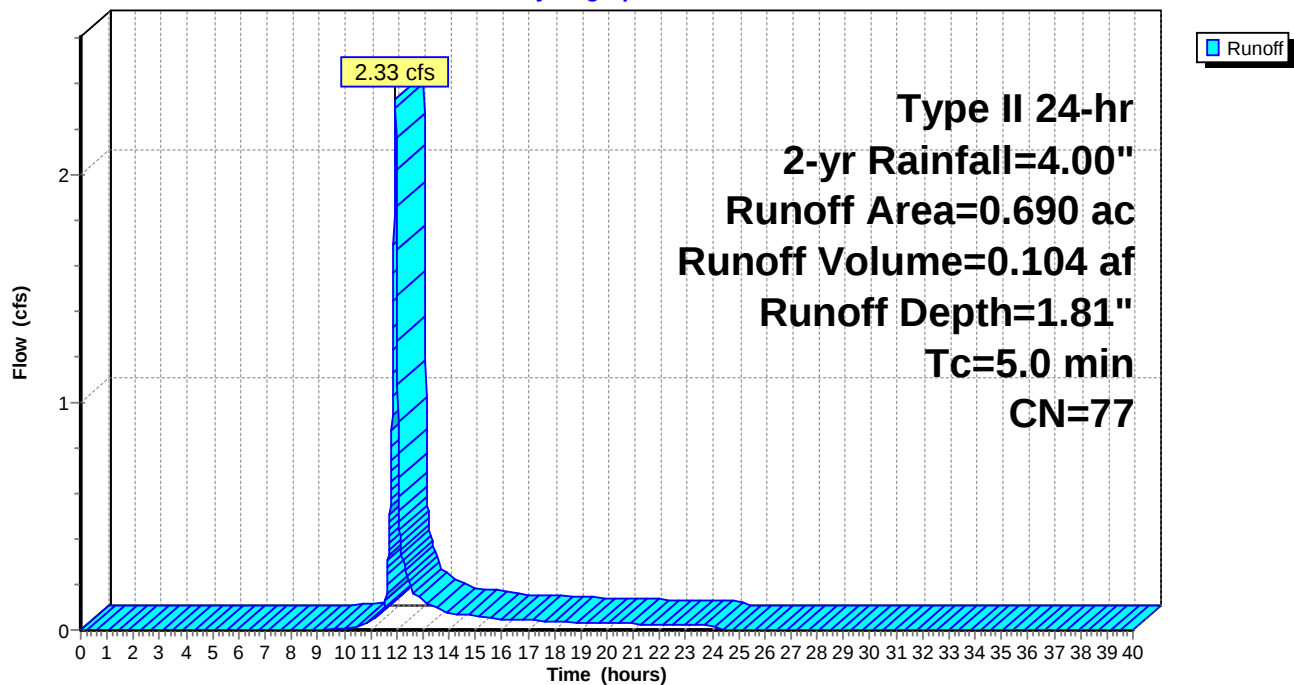
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 2-yr Rainfall=4.00"

Area (ac)	CN	Description
0.690	77	Woods, Good, HSG D
0.690		100.00% Pervious Area

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

Subcatchment 10S: Pre DA2

Hydrograph



Summary for Subcatchment 12S: Post DA2

Runoff = 1.70 cfs @ 11.96 hrs, Volume= 0.079 af, Depth= 2.64"
 Routed to Link 5L : Post POA 1

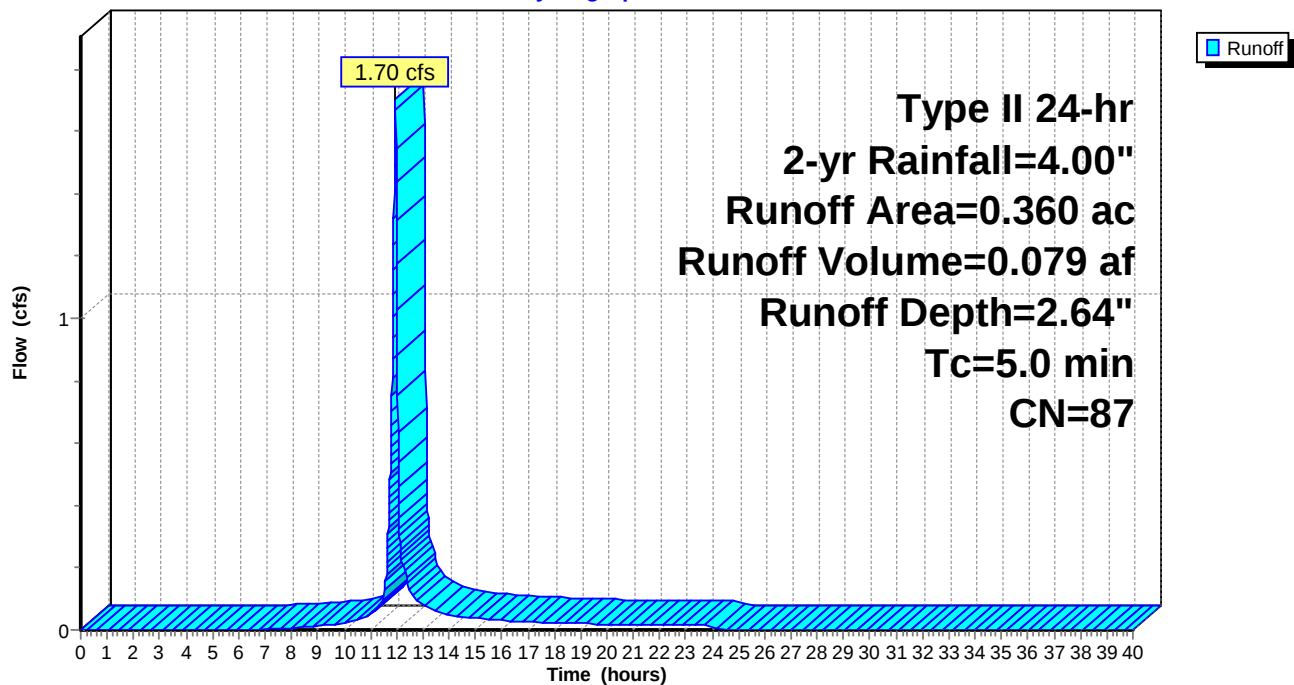
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 2-yr Rainfall=4.00"

Area (ac)	CN	Description
* 0.360	87	
0.360		100.00% Pervious Area

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

Subcatchment 12S: Post DA2

Hydrograph



Summary for Subcatchment 13S: Post DA3

Runoff = 1.38 cfs @ 11.96 hrs, Volume= 0.064 af, Depth= 2.55"
 Routed to Link 15L : Post POA 2

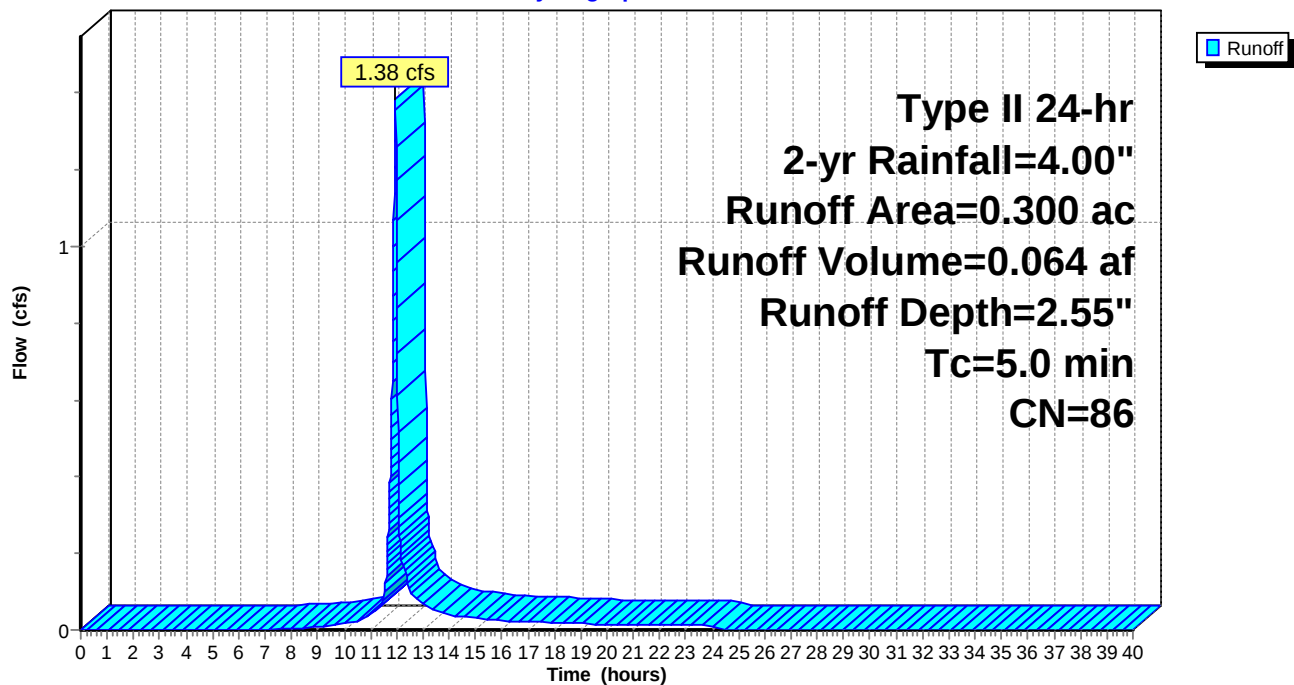
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 2-yr Rainfall=4.00"

Area (ac)	CN	Description
* 0.300	86	
0.300		100.00% Pervious Area

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

Subcatchment 13S: Post DA3

Hydrograph



Summary for Pond 8P: Pond

Inflow Area = 2.150 ac, 0.00% Impervious, Inflow Depth = 3.54" for 2-yr event
 Inflow = 12.34 cfs @ 11.96 hrs, Volume= 0.634 af
 Outflow = 2.50 cfs @ 12.10 hrs, Volume= 0.602 af, Atten= 80%, Lag= 8.7 min
 Primary = 2.50 cfs @ 12.10 hrs, Volume= 0.602 af
 Routed to Link 5L : Post POA 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Peak Elev= 9.16' @ 12.10 hrs Surf.Area= 0.244 ac Storage= 0.328 af

Plug-Flow detention time= 223.9 min calculated for 0.602 af (95% of inflow)
 Center-of-Mass det. time= 194.2 min (957.6 - 763.4)

Volume	Invert	Avail.Storage	Storage Description
#1	7.50'	0.551 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
7.50	0.153	0.000	0.000
8.00	0.179	0.083	0.083
8.50	0.205	0.096	0.179
9.00	0.235	0.110	0.289
10.00	0.290	0.262	0.551

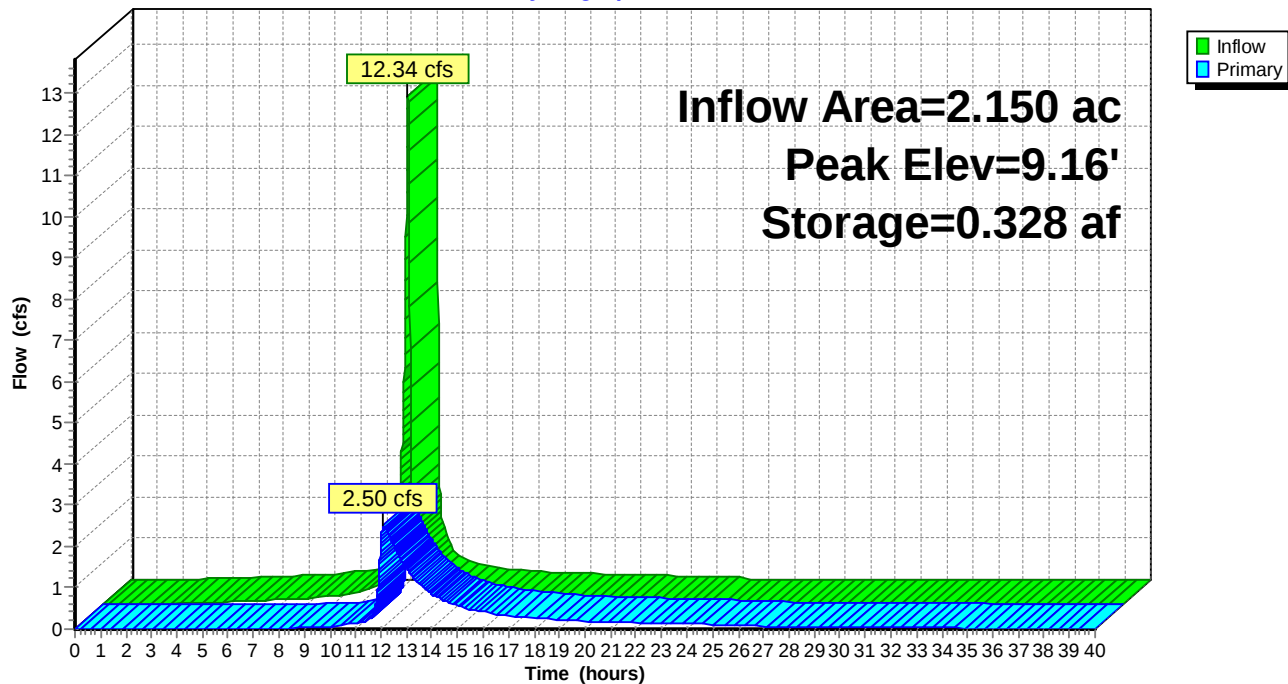
Device	Routing	Invert	Outlet Devices
#1	Primary	9.50'	3.0' long x 22.7' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	7.50'	30.0 deg Sharp-Crested Vee/Trap Weir Cv= 2.61 (C= 3.26)
#3	Primary	9.70'	100.0' long x 32.0' 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) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.50 cfs @ 12.10 hrs HW=9.16' TW=0.00' (Dynamic Tailwater)

- 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
- 2=Sharp-Crested Vee/Trap Weir (Weir Controls 2.50 cfs @ 3.37 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 8P: Pond

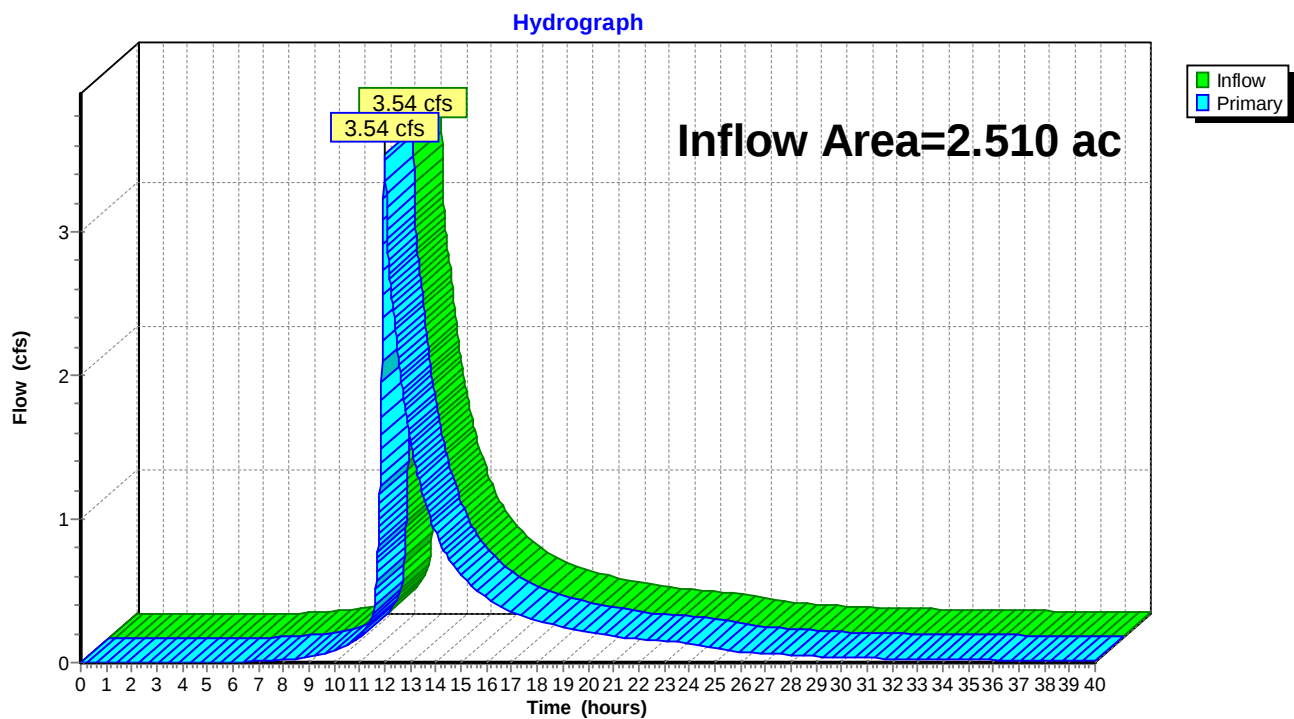
Hydrograph



Summary for Link 5L: Post POA 1

Inflow Area = 2.510 ac, 0.00% Impervious, Inflow Depth > 3.26" for 2-yr event
Inflow = 3.54 cfs @ 11.99 hrs, Volume= 0.681 af
Primary = 3.54 cfs @ 11.99 hrs, Volume= 0.681 af, Atten= 0%, Lag= 0.0 min

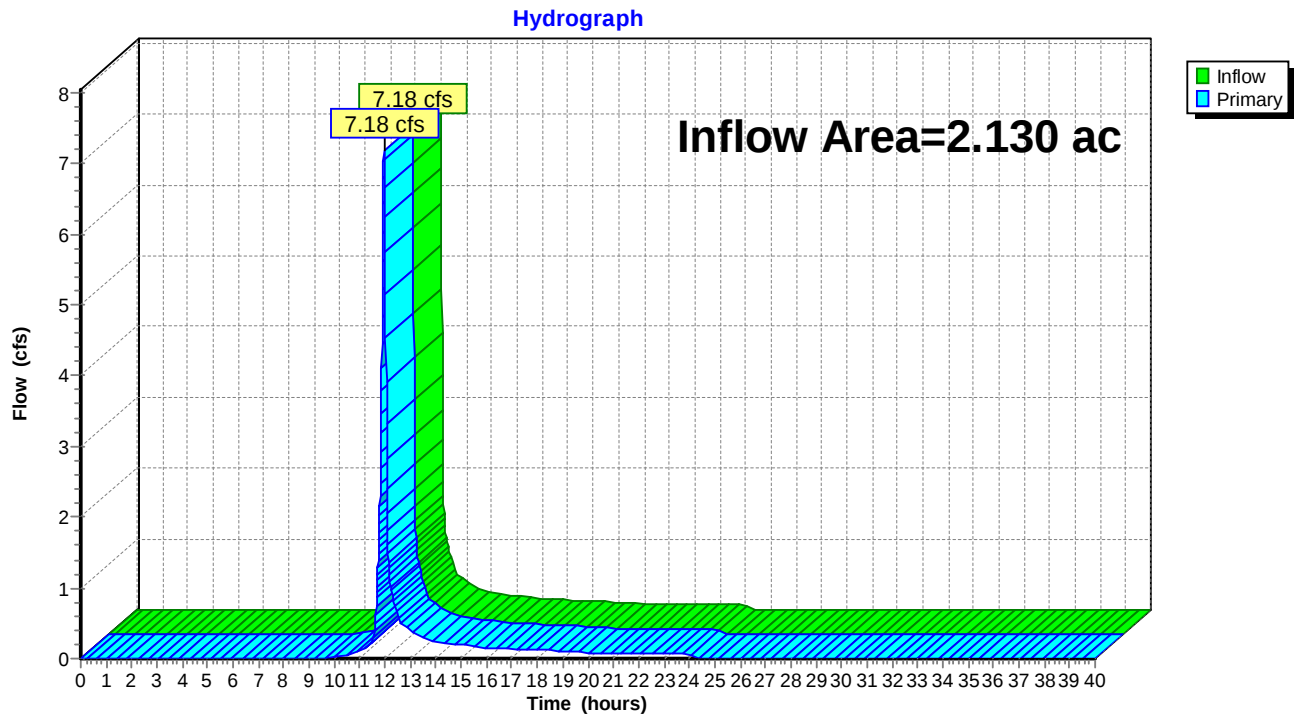
Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 5L: Post POA 1

Summary for Link 6L: Pre POA 1

Inflow Area = 2.130 ac, 0.00% Impervious, Inflow Depth = 1.81" for 2-yr event
Inflow = 7.18 cfs @ 11.96 hrs, Volume= 0.322 af
Primary = 7.18 cfs @ 11.96 hrs, Volume= 0.322 af, Atten= 0%, Lag= 0.0 min

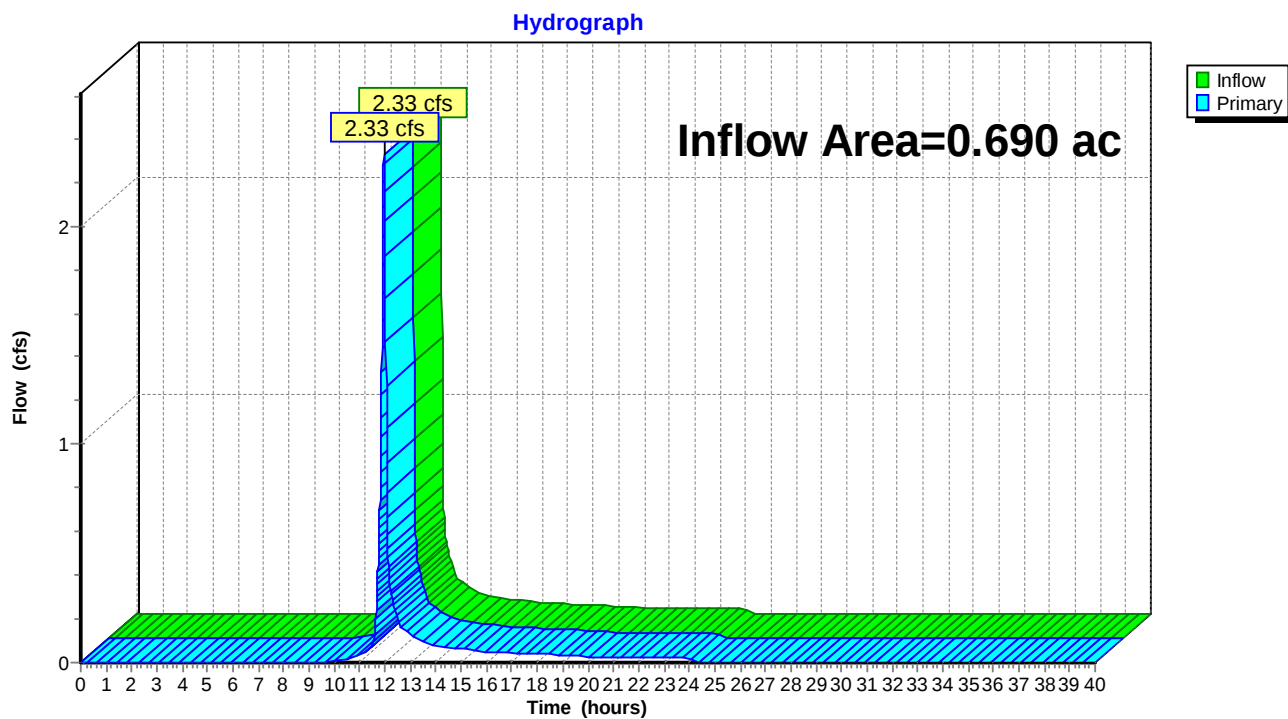
Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 6L: Pre POA 1

Summary for Link 11L: Pre POA 2

Inflow Area = 0.690 ac, 0.00% Impervious, Inflow Depth = 1.81" for 2-yr event
Inflow = 2.33 cfs @ 11.96 hrs, Volume= 0.104 af
Primary = 2.33 cfs @ 11.96 hrs, Volume= 0.104 af, Atten= 0%, Lag= 0.0 min

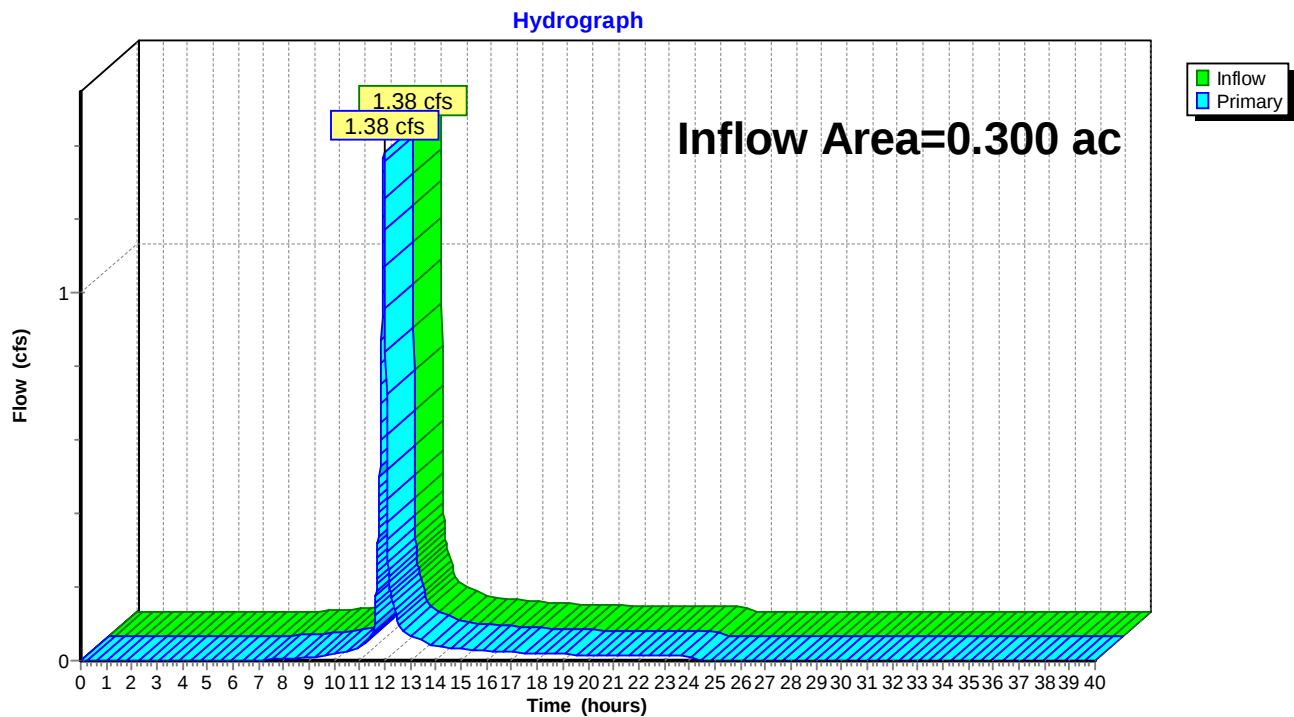
Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 11L: Pre POA 2

Summary for Link 15L: Post POA 2

Inflow Area = 0.300 ac, 0.00% Impervious, Inflow Depth = 2.55" for 2-yr event
Inflow = 1.38 cfs @ 11.96 hrs, Volume= 0.064 af
Primary = 1.38 cfs @ 11.93 hrs, Volume= 0.064 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 15L: Post POA 2

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Post DA 1	Runoff Area=2.150 ac 0.00% Impervious Runoff Depth=5.53" Tc=5.0 min CN=96 Runoff=18.79 cfs 0.990 af
Subcatchment 6S: Pre DA1	Runoff Area=2.130 ac 0.00% Impervious Runoff Depth=3.48" Tc=5.0 min CN=77 Runoff=13.56 cfs 0.618 af
Subcatchment 10S: Pre DA2	Runoff Area=0.690 ac 0.00% Impervious Runoff Depth=3.48" Tc=5.0 min CN=77 Runoff=4.39 cfs 0.200 af
Subcatchment 12S: Post DA2	Runoff Area=0.360 ac 0.00% Impervious Runoff Depth=4.52" Tc=5.0 min CN=87 Runoff=2.83 cfs 0.136 af
Subcatchment 13S: Post DA3	Runoff Area=0.300 ac 0.00% Impervious Runoff Depth=4.41" Tc=5.0 min CN=86 Runoff=2.31 cfs 0.110 af
Pond 8P: Pond	Peak Elev=9.69' Storage=0.465 af Inflow=18.79 cfs 0.990 af Outflow=5.66 cfs 0.957 af
Link 5L: Post POA 1	Inflow=7.05 cfs 1.093 af Primary=7.05 cfs 1.093 af
Link 6L: Pre POA 1	Inflow=13.56 cfs 0.618 af Primary=13.56 cfs 0.618 af
Link 11L: Pre POA 2	Inflow=4.39 cfs 0.200 af Primary=4.39 cfs 0.200 af
Link 15L: Post POA 2	Inflow=2.31 cfs 0.110 af Primary=2.31 cfs 0.110 af

Total Runoff Area = 5.630 ac Runoff Volume = 2.054 af Average Runoff Depth = 4.38"
100.00% Pervious = 5.630 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Post DA 1

Runoff = 18.79 cfs @ 11.96 hrs, Volume= 0.990 af, Depth= 5.53"
 Routed to Pond 8P : Pond

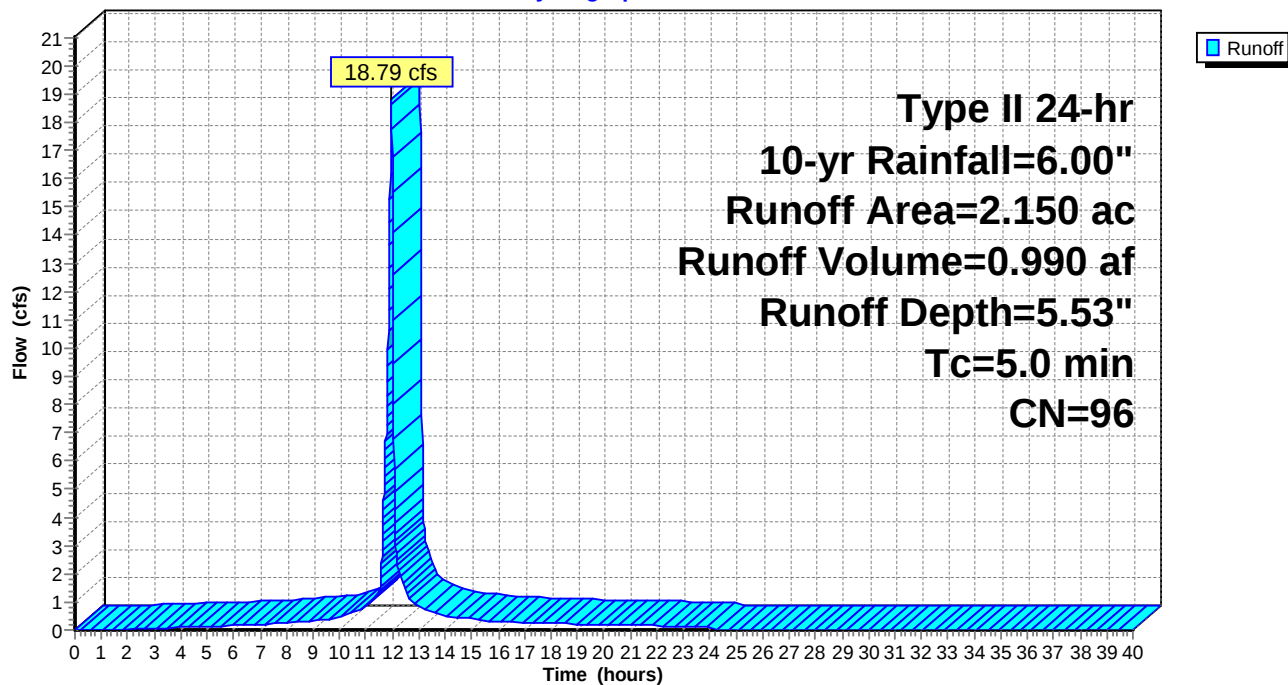
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10-yr Rainfall=6.00"

Area (ac)	CN	Description
* 2.150	96	
2.150		100.00% Pervious Area

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

Subcatchment 1S: Post DA 1

Hydrograph



Summary for Subcatchment 6S: Pre DA1

Runoff = 13.56 cfs @ 11.96 hrs, Volume= 0.618 af, Depth= 3.48"
 Routed to Link 6L : Pre POA 1

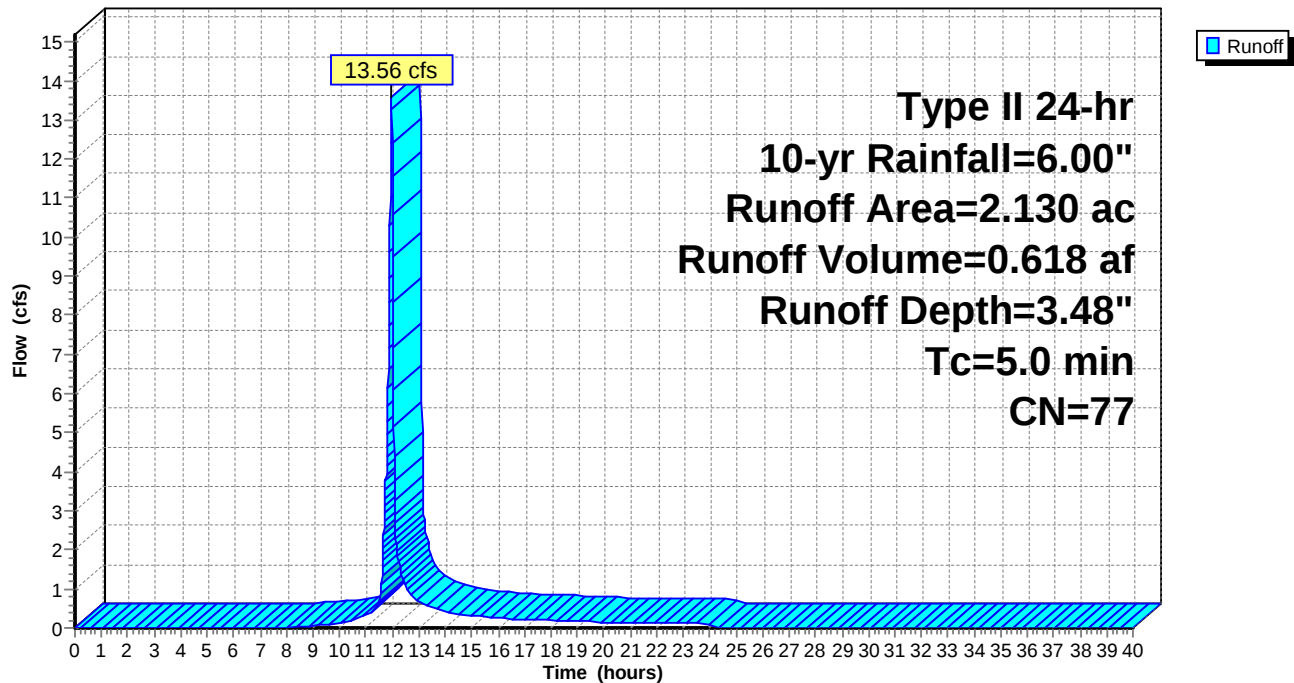
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10-yr Rainfall=6.00"

Area (ac)	CN	Description
2.130	77	Woods, Good, HSG D
2.130		100.00% Pervious Area

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

Subcatchment 6S: Pre DA1

Hydrograph



Summary for Subcatchment 10S: Pre DA2

Runoff = 4.39 cfs @ 11.96 hrs, Volume= 0.200 af, Depth= 3.48"
 Routed to Link 11L : Pre POA 2

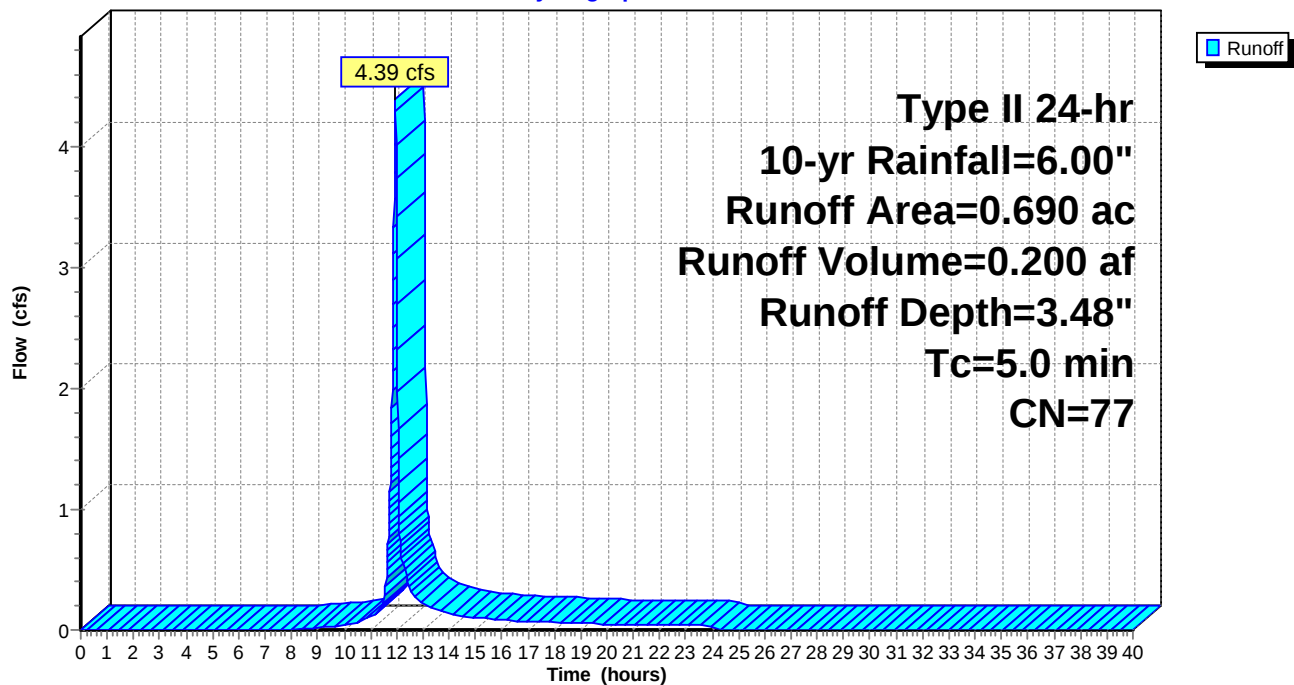
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10-yr Rainfall=6.00"

Area (ac)	CN	Description
0.690	77	Woods, Good, HSG D
0.690		100.00% Pervious Area

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

Subcatchment 10S: Pre DA2

Hydrograph



Summary for Subcatchment 12S: Post DA2

Runoff = 2.83 cfs @ 11.96 hrs, Volume= 0.136 af, Depth= 4.52"
 Routed to Link 5L : Post POA 1

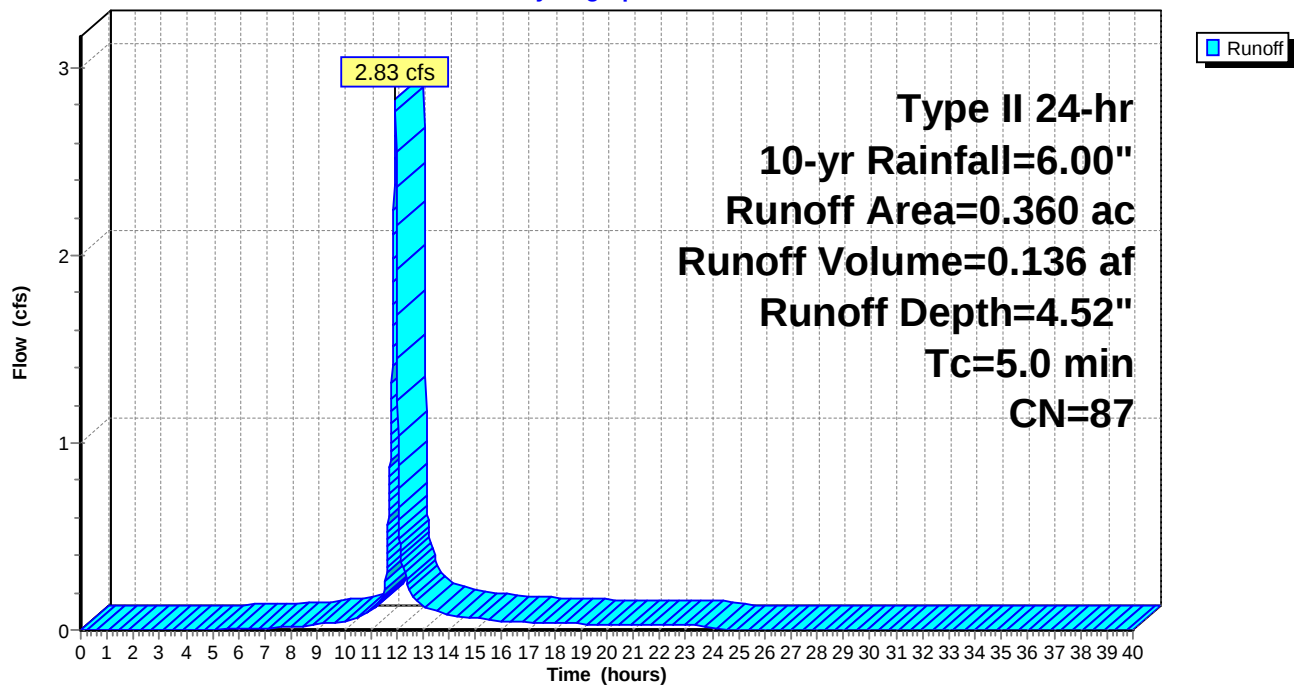
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10-yr Rainfall=6.00"

Area (ac)	CN	Description
* 0.360	87	
0.360		100.00% Pervious Area

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

Subcatchment 12S: Post DA2

Hydrograph



Summary for Subcatchment 13S: Post DA3

Runoff = 2.31 cfs @ 11.96 hrs, Volume= 0.110 af, Depth= 4.41"
 Routed to Link 15L : Post POA 2

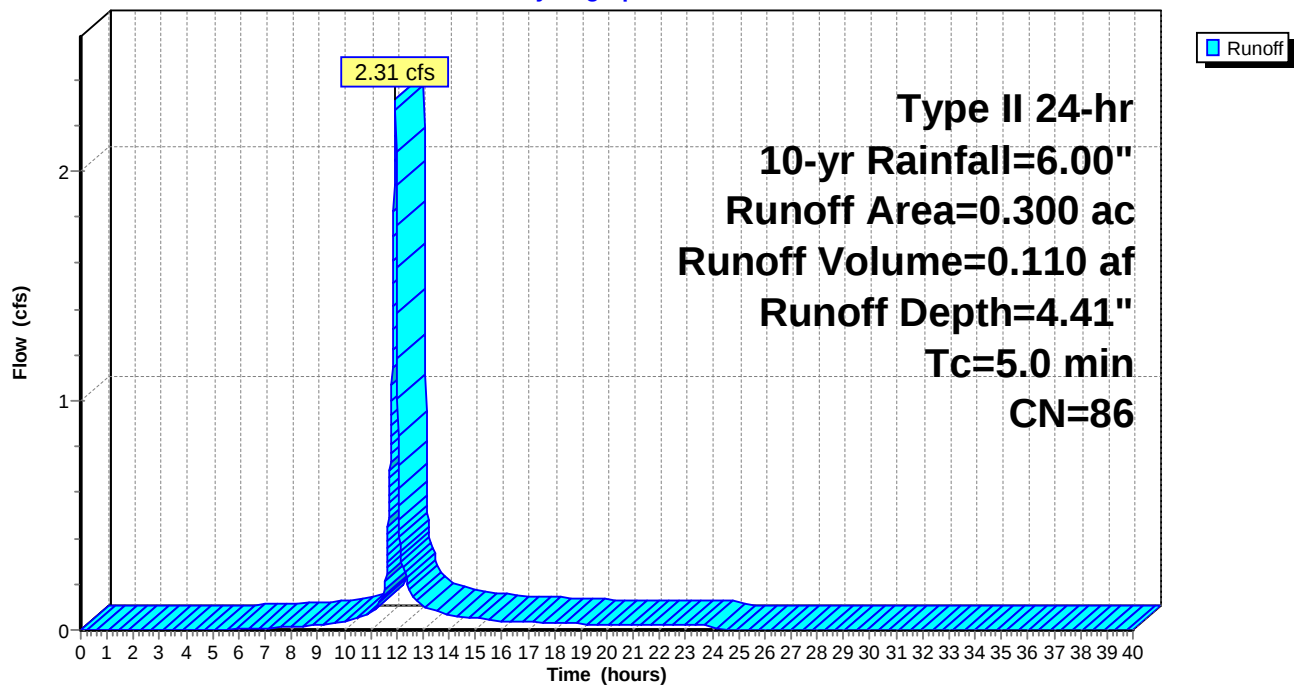
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10-yr Rainfall=6.00"

Area (ac)	CN	Description
* 0.300	86	
0.300		100.00% Pervious Area

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

Subcatchment 13S: Post DA3

Hydrograph



Summary for Pond 8P: Pond

Inflow Area = 2.150 ac, 0.00% Impervious, Inflow Depth = 5.53" for 10-yr event
 Inflow = 18.79 cfs @ 11.96 hrs, Volume= 0.990 af
 Outflow = 5.66 cfs @ 12.07 hrs, Volume= 0.957 af, Atten= 70%, Lag= 6.9 min
 Primary = 5.66 cfs @ 12.07 hrs, Volume= 0.957 af
 Routed to Link 5L : Post POA 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Peak Elev= 9.69' @ 12.07 hrs Surf.Area= 0.273 ac Storage= 0.465 af

Plug-Flow detention time= 179.7 min calculated for 0.957 af (97% of inflow)
 Center-of-Mass det. time= 158.6 min (912.0 - 753.4)

Volume	Invert	Avail.Storage	Storage Description
#1	7.50'	0.551 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
7.50	0.153	0.000	0.000
8.00	0.179	0.083	0.083
8.50	0.205	0.096	0.179
9.00	0.235	0.110	0.289
10.00	0.290	0.262	0.551

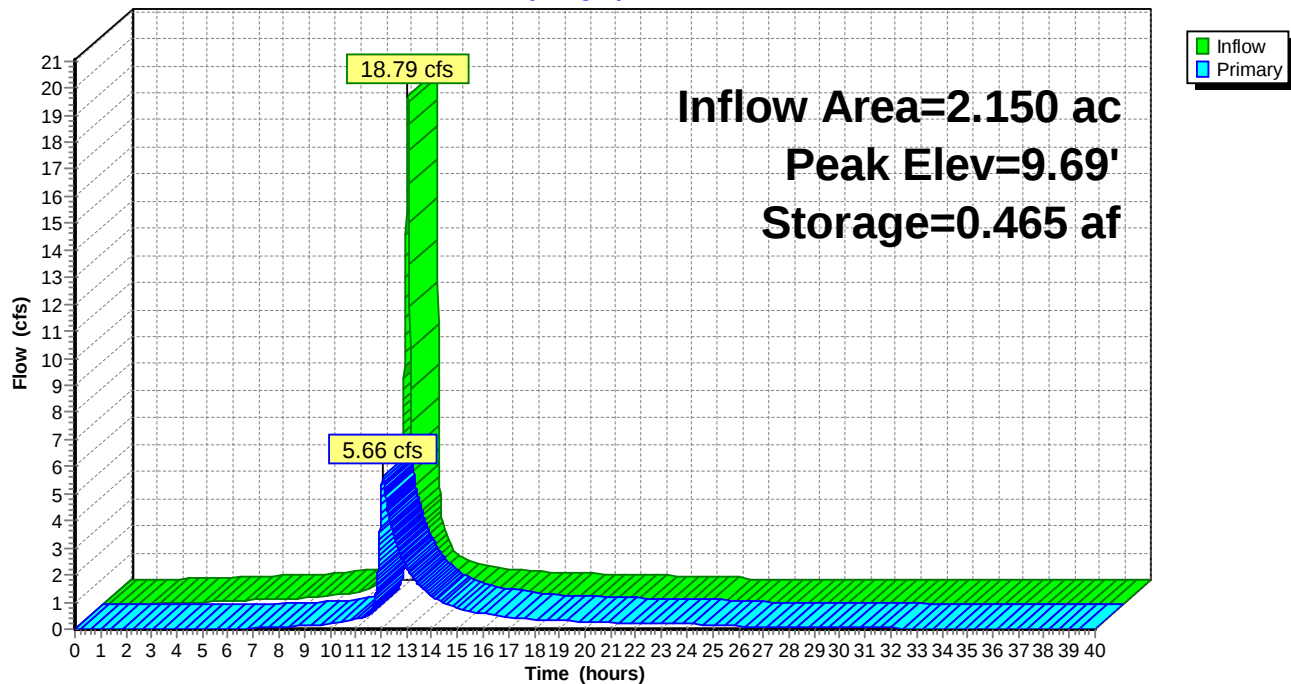
Device	Routing	Invert	Outlet Devices
#1	Primary	9.50'	3.0' long x 22.7' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	7.50'	30.0 deg Sharp-Crested Vee/Trap Weir Cv= 2.61 (C= 3.26)
#3	Primary	9.70'	100.0' long x 32.0' 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) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=5.66 cfs @ 12.07 hrs HW=9.69' TW=0.00' (Dynamic Tailwater)

- 1=Broad-Crested Rectangular Weir (Weir Controls 0.68 cfs @ 1.18 fps)
- 2=Sharp-Crested Vee/Trap Weir (Weir Controls 4.98 cfs @ 3.86 fps)
- 3=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 8P: Pond

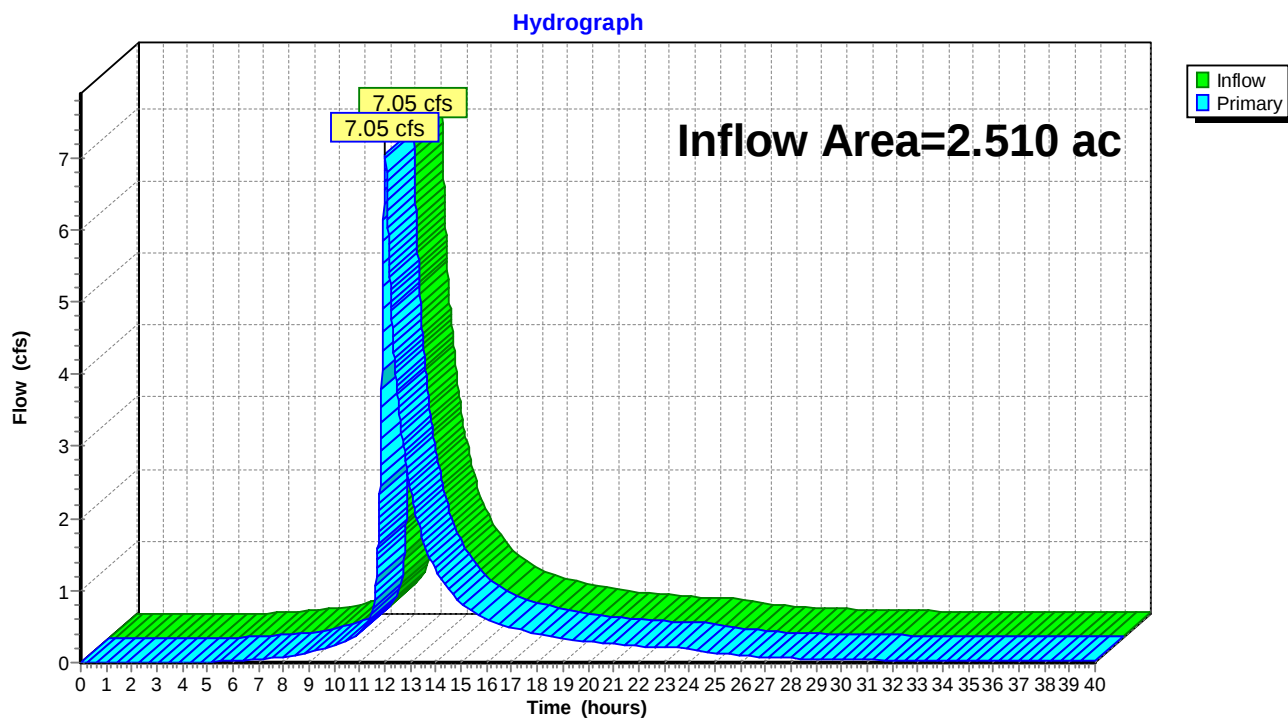
Hydrograph



Summary for Link 5L: Post POA 1

Inflow Area = 2.510 ac, 0.00% Impervious, Inflow Depth > 5.22" for 10-yr event
Inflow = 7.05 cfs @ 12.02 hrs, Volume= 1.093 af
Primary = 7.05 cfs @ 12.02 hrs, Volume= 1.093 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 5L: Post POA 1

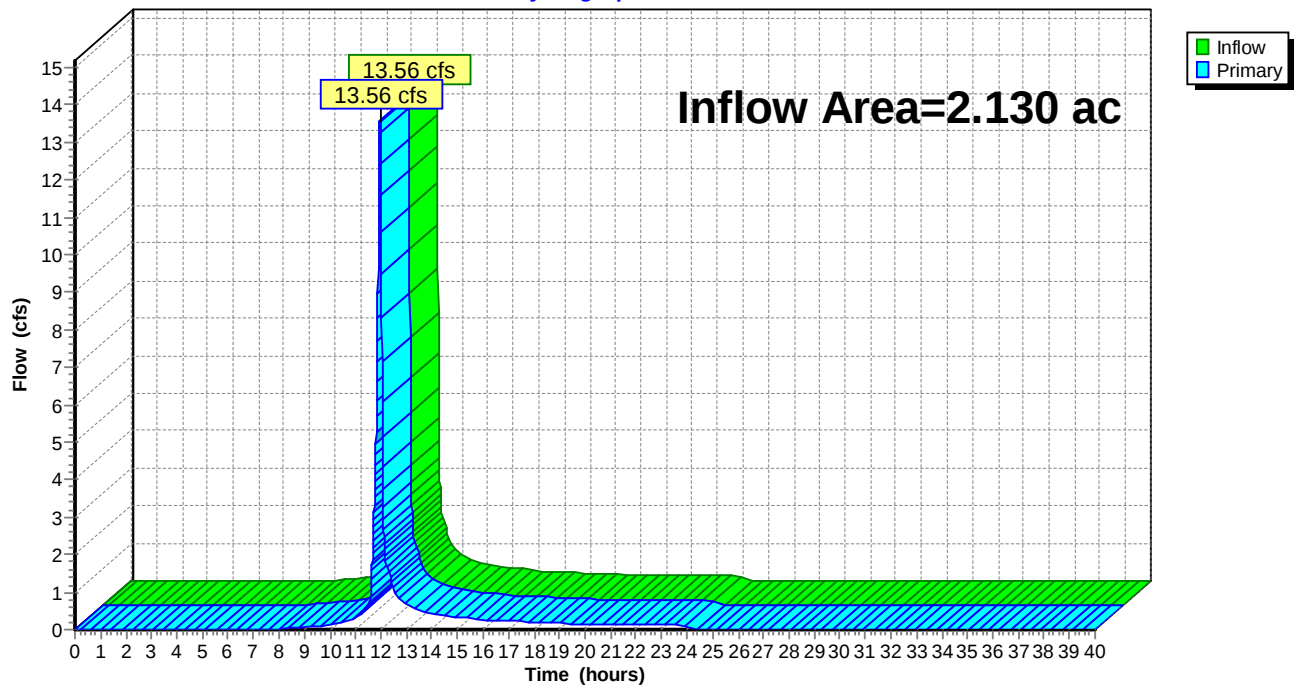
Summary for Link 6L: Pre POA 1

Inflow Area = 2.130 ac, 0.00% Impervious, Inflow Depth = 3.48" for 10-yr event
Inflow = 13.56 cfs @ 11.96 hrs, Volume= 0.618 af
Primary = 13.56 cfs @ 11.93 hrs, Volume= 0.618 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 6L: Pre POA 1

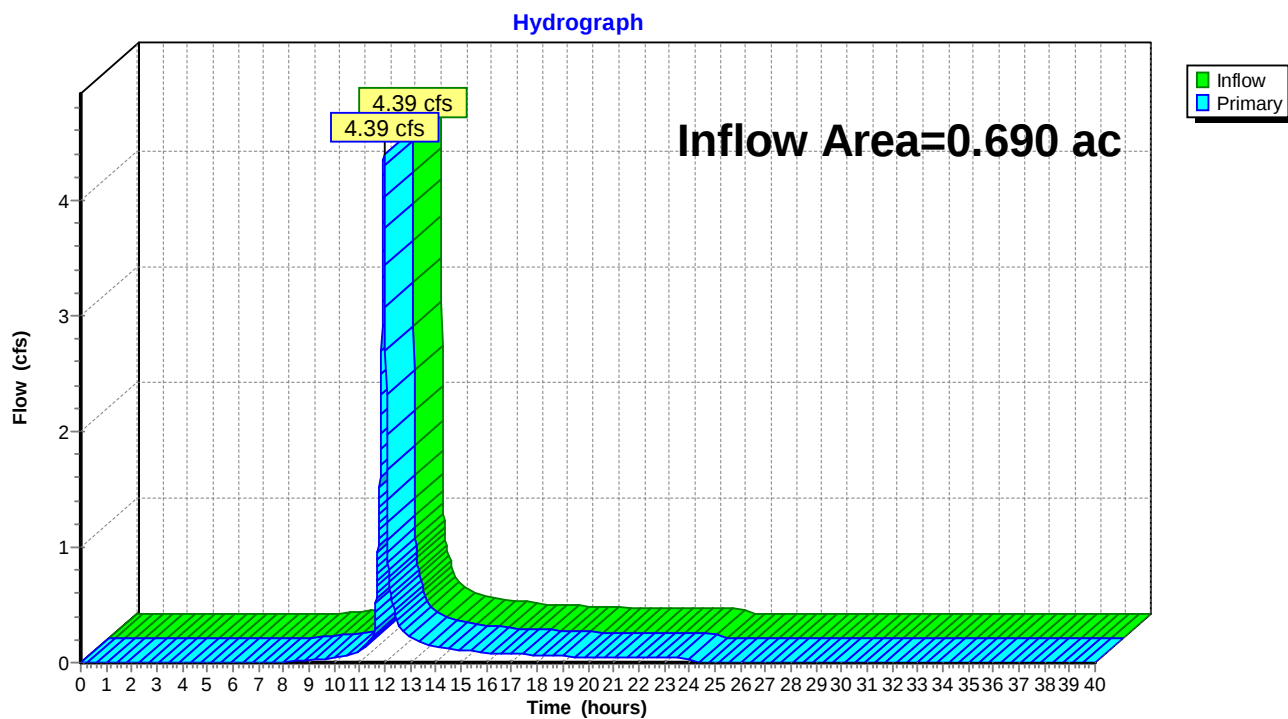
Hydrograph



Summary for Link 11L: Pre POA 2

Inflow Area = 0.690 ac, 0.00% Impervious, Inflow Depth = 3.48" for 10-yr event
Inflow = 4.39 cfs @ 11.96 hrs, Volume= 0.200 af
Primary = 4.39 cfs @ 11.96 hrs, Volume= 0.200 af, Atten= 0%, Lag= 0.0 min

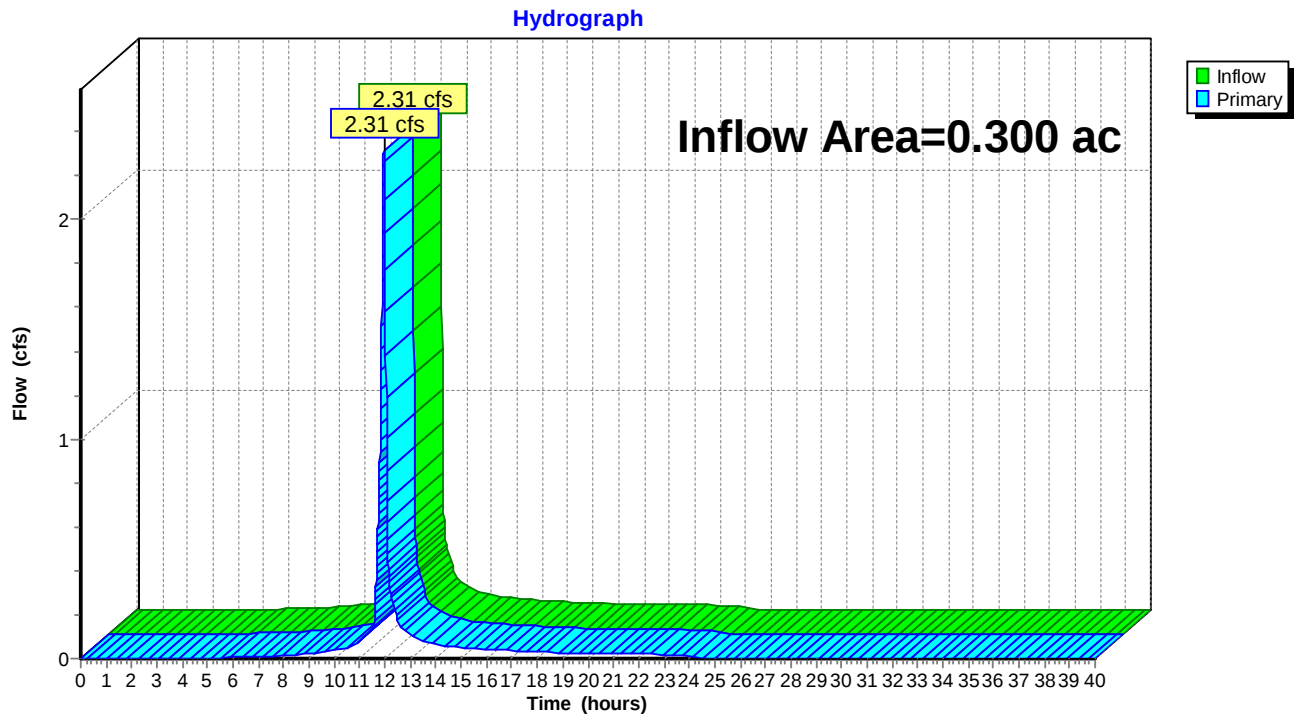
Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 11L: Pre POA 2

Summary for Link 15L: Post POA 2

Inflow Area = 0.300 ac, 0.00% Impervious, Inflow Depth = 4.41" for 10-yr event
Inflow = 2.31 cfs @ 11.96 hrs, Volume= 0.110 af
Primary = 2.31 cfs @ 11.96 hrs, Volume= 0.110 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 15L: Post POA 2

Time span=0.00-40.00 hrs, dt=0.01 hrs, 4001 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Post DA 1	Runoff Area=2.150 ac 0.00% Impervious Runoff Depth=9.00" Tc=5.0 min CN=96 Runoff=29.92 cfs 1.612 af
Subcatchment 6S: Pre DA1	Runoff Area=2.130 ac 0.00% Impervious Runoff Depth=6.65" Tc=5.0 min CN=77 Runoff=25.08 cfs 1.180 af
Subcatchment 10S: Pre DA2	Runoff Area=0.690 ac 0.00% Impervious Runoff Depth=6.65" Tc=5.0 min CN=77 Runoff=8.12 cfs 0.382 af
Subcatchment 12S: Post DA2	Runoff Area=0.360 ac 0.00% Impervious Runoff Depth=7.90" Tc=5.0 min CN=87 Runoff=4.75 cfs 0.237 af
Subcatchment 13S: Post DA3	Runoff Area=0.300 ac 0.00% Impervious Runoff Depth=7.77" Tc=5.0 min CN=86 Runoff=3.93 cfs 0.194 af
Pond 8P: Pond	Peak Elev=9.88' Storage=0.517 af Inflow=29.92 cfs 1.612 af Outflow=28.45 cfs 1.578 af
Link 5L: Post POA 1	Inflow=33.00 cfs 1.815 af Primary=33.00 cfs 1.815 af
Link 6L: Pre POA 1	Inflow=25.08 cfs 1.180 af Primary=25.08 cfs 1.180 af
Link 11L: Pre POA 2	Inflow=8.12 cfs 0.382 af Primary=8.12 cfs 0.382 af
Link 15L: Post POA 2	Inflow=3.93 cfs 0.194 af Primary=3.93 cfs 0.194 af

Total Runoff Area = 5.630 ac Runoff Volume = 3.605 af Average Runoff Depth = 7.68"
100.00% Pervious = 5.630 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Post DA 1

Runoff = 29.92 cfs @ 11.96 hrs, Volume= 1.612 af, Depth= 9.00"
 Routed to Pond 8P : Pond

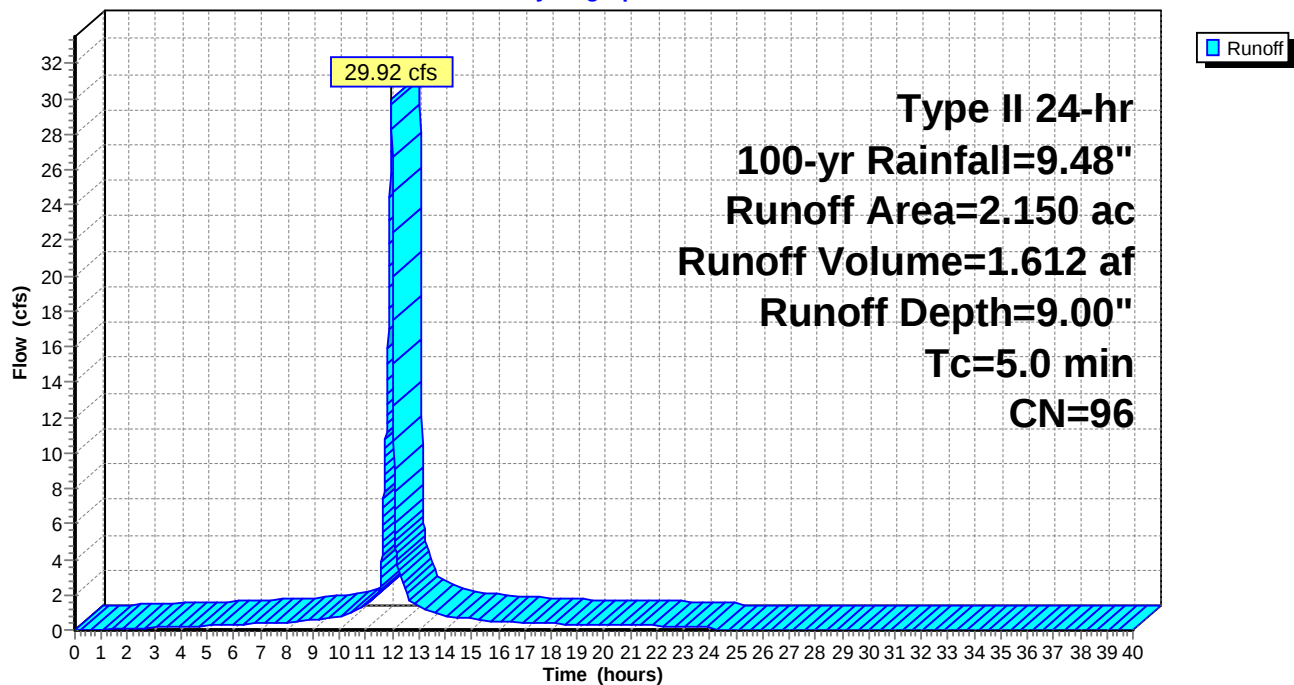
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 100-yr Rainfall=9.48"

Area (ac)	CN	Description
* 2.150	96	
2.150		100.00% Pervious Area

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

Subcatchment 1S: Post DA 1

Hydrograph



Summary for Subcatchment 6S: Pre DA1

Runoff = 25.08 cfs @ 11.96 hrs, Volume= 1.180 af, Depth= 6.65"
 Routed to Link 6L : Pre POA 1

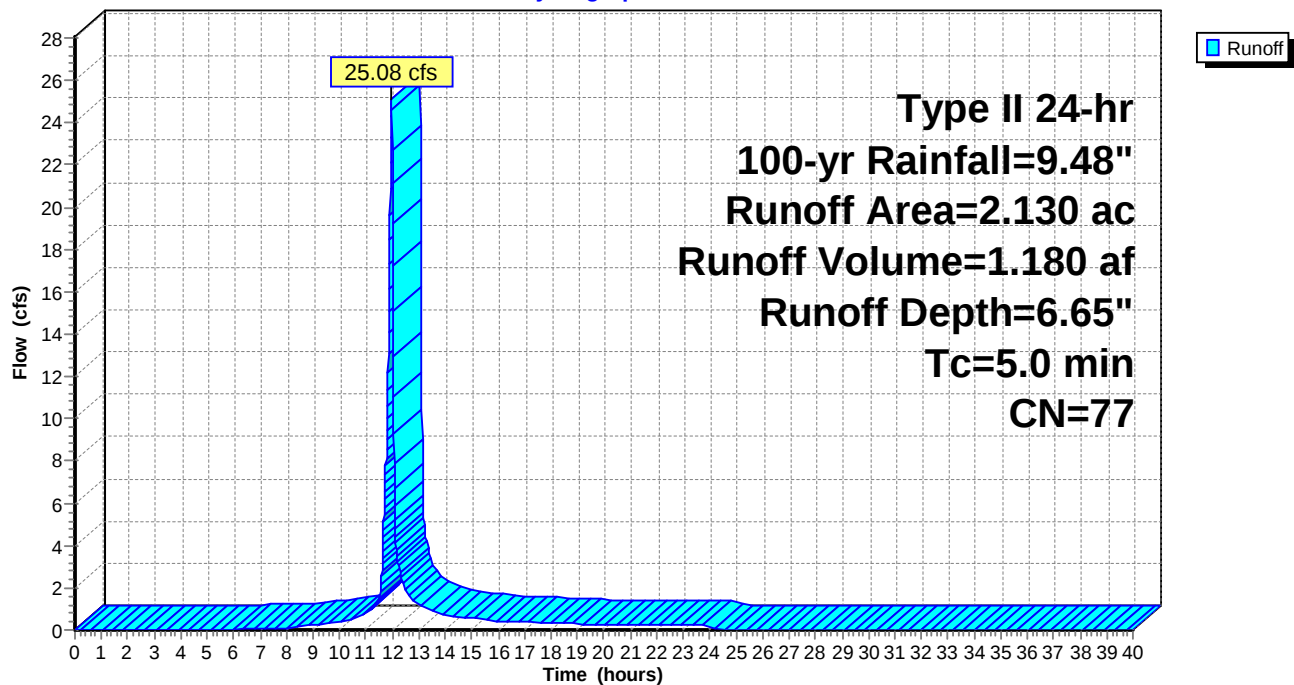
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 100-yr Rainfall=9.48"

Area (ac)	CN	Description
2.130	77	Woods, Good, HSG D
2.130		100.00% Pervious Area

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

Subcatchment 6S: Pre DA1

Hydrograph



Summary for Subcatchment 10S: Pre DA2

Runoff = 8.12 cfs @ 11.96 hrs, Volume= 0.382 af, Depth= 6.65"
 Routed to Link 11L : Pre POA 2

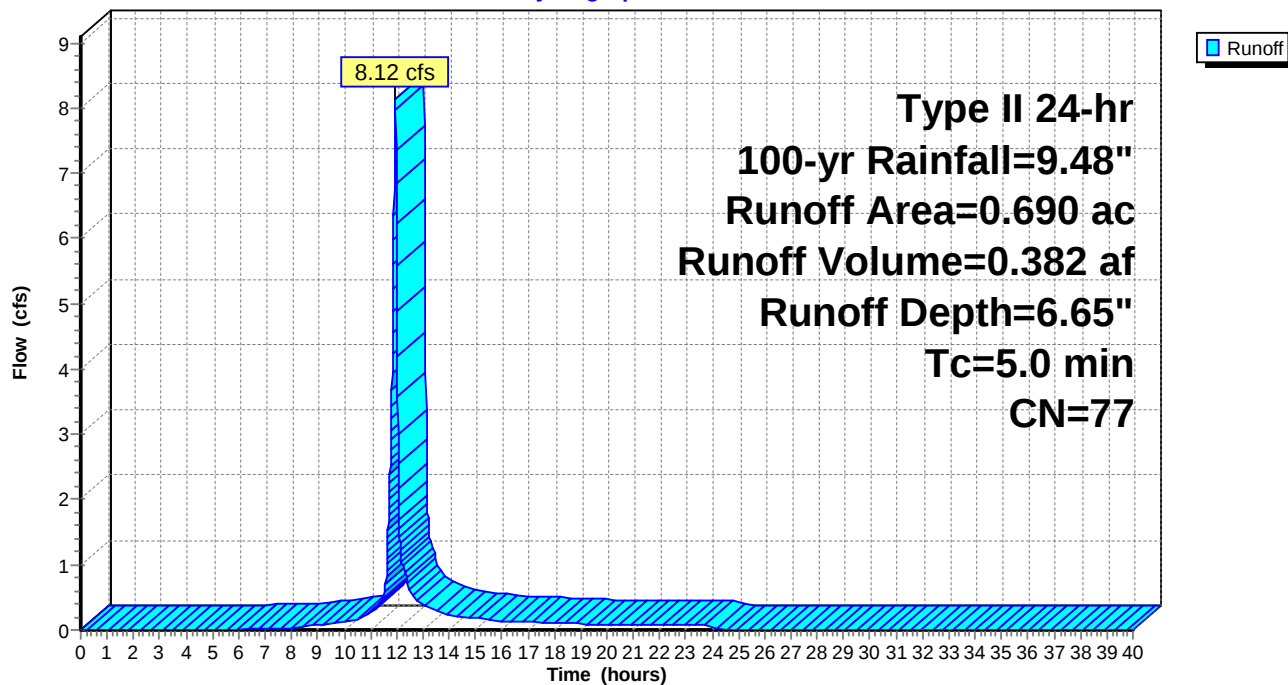
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 100-yr Rainfall=9.48"

Area (ac)	CN	Description
0.690	77	Woods, Good, HSG D
0.690		100.00% Pervious Area

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

Subcatchment 10S: Pre DA2

Hydrograph



Summary for Subcatchment 12S: Post DA2

Runoff = 4.75 cfs @ 11.96 hrs, Volume= 0.237 af, Depth= 7.90"
 Routed to Link 5L : Post POA 1

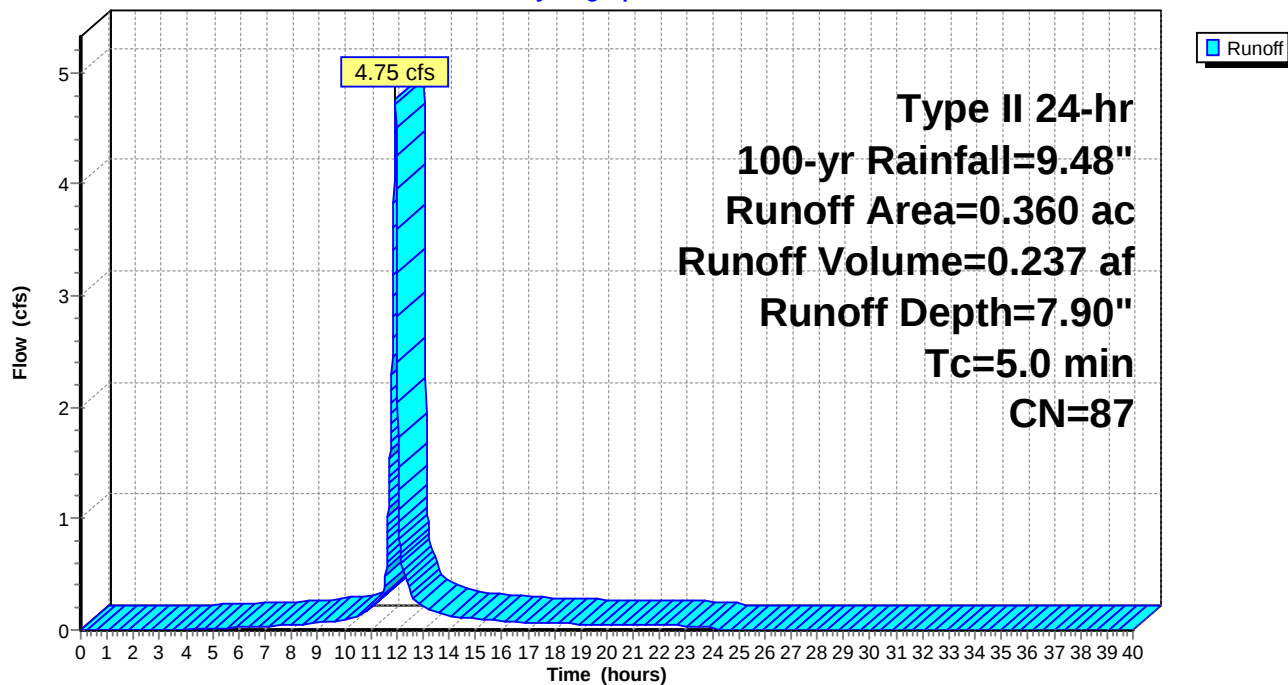
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 100-yr Rainfall=9.48"

Area (ac)	CN	Description
* 0.360	87	
0.360		100.00% Pervious Area

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

Subcatchment 12S: Post DA2

Hydrograph



Summary for Subcatchment 13S: Post DA3

Runoff = 3.93 cfs @ 11.96 hrs, Volume= 0.194 af, Depth= 7.77"
 Routed to Link 15L : Post POA 2

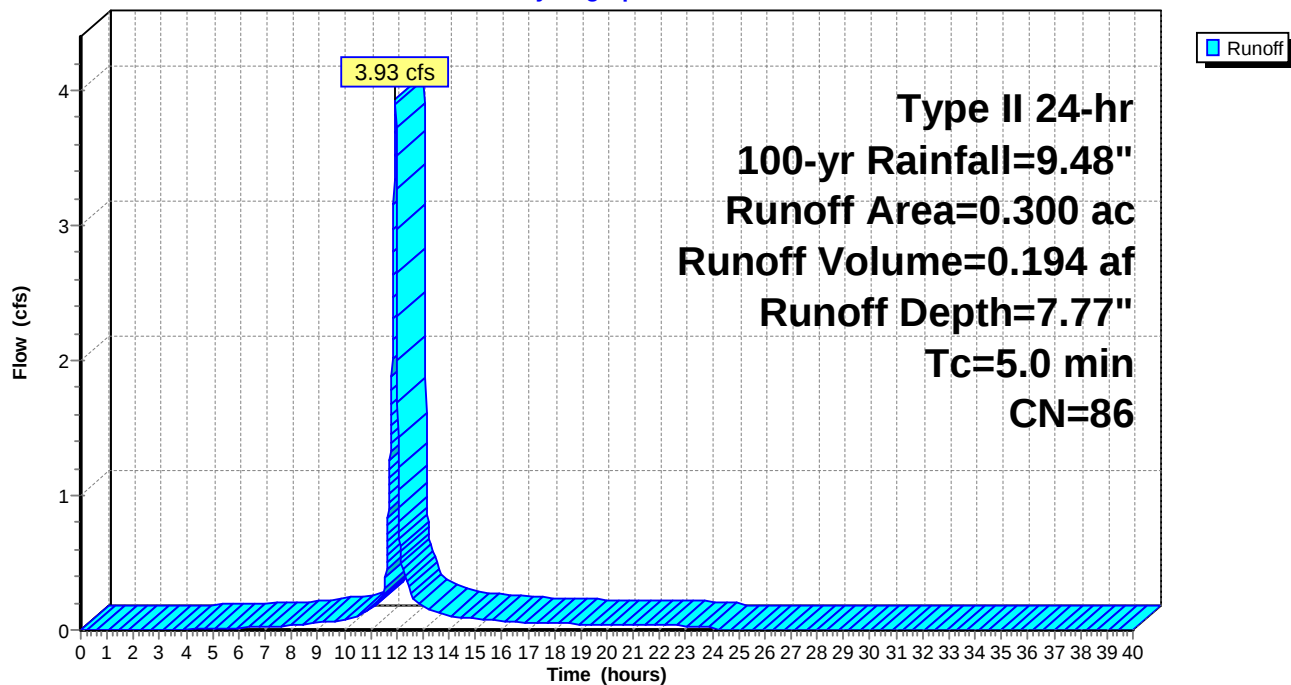
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Type II 24-hr 100-yr Rainfall=9.48"

Area (ac)	CN	Description
* 0.300	86	
0.300		100.00% Pervious Area

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

Subcatchment 13S: Post DA3

Hydrograph



Summary for Pond 8P: Pond

Inflow Area = 2.150 ac, 0.00% Impervious, Inflow Depth = 9.00" for 100-yr event
 Inflow = 29.92 cfs @ 11.96 hrs, Volume= 1.612 af
 Outflow = 28.45 cfs @ 11.98 hrs, Volume= 1.578 af, Atten= 5%, Lag= 1.4 min
 Primary = 28.45 cfs @ 11.98 hrs, Volume= 1.578 af
 Routed to Link 5L : Post POA 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs
 Peak Elev= 9.88' @ 11.98 hrs Surf.Area= 0.283 ac Storage= 0.517 af

Plug-Flow detention time= 136.4 min calculated for 1.578 af (98% of inflow)
 Center-of-Mass det. time= 122.3 min (866.5 - 744.3)

Volume	Invert	Avail.Storage	Storage Description
#1	7.50'	0.551 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
7.50	0.153	0.000	0.000
8.00	0.179	0.083	0.083
8.50	0.205	0.096	0.179
9.00	0.235	0.110	0.289
10.00	0.290	0.262	0.551

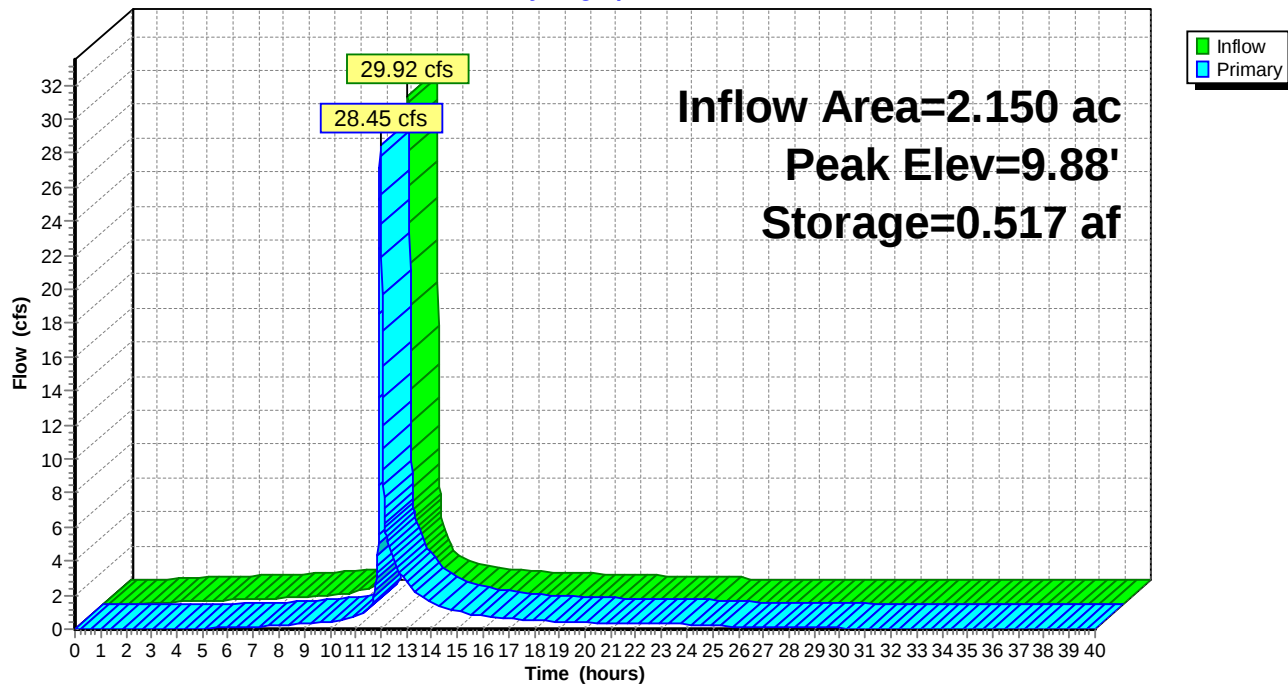
Device	Routing	Invert	Outlet Devices
#1	Primary	9.50'	3.0' long x 22.7' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	7.50'	30.0 deg Sharp-Crested Vee/Trap Weir Cv= 2.61 (C= 3.26)
#3	Primary	9.70'	100.0' long x 32.0' 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) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=28.41 cfs @ 11.98 hrs HW=9.88' TW=0.00' (Dynamic Tailwater)

- 1=Broad-Crested Rectangular Weir (Weir Controls 1.89 cfs @ 1.66 fps)
- 2=Sharp-Crested Vee/Trap Weir (Weir Controls 6.11 cfs @ 4.03 fps)
- 3=Broad-Crested Rectangular Weir (Weir Controls 20.41 cfs @ 1.14 fps)

Pond 8P: Pond

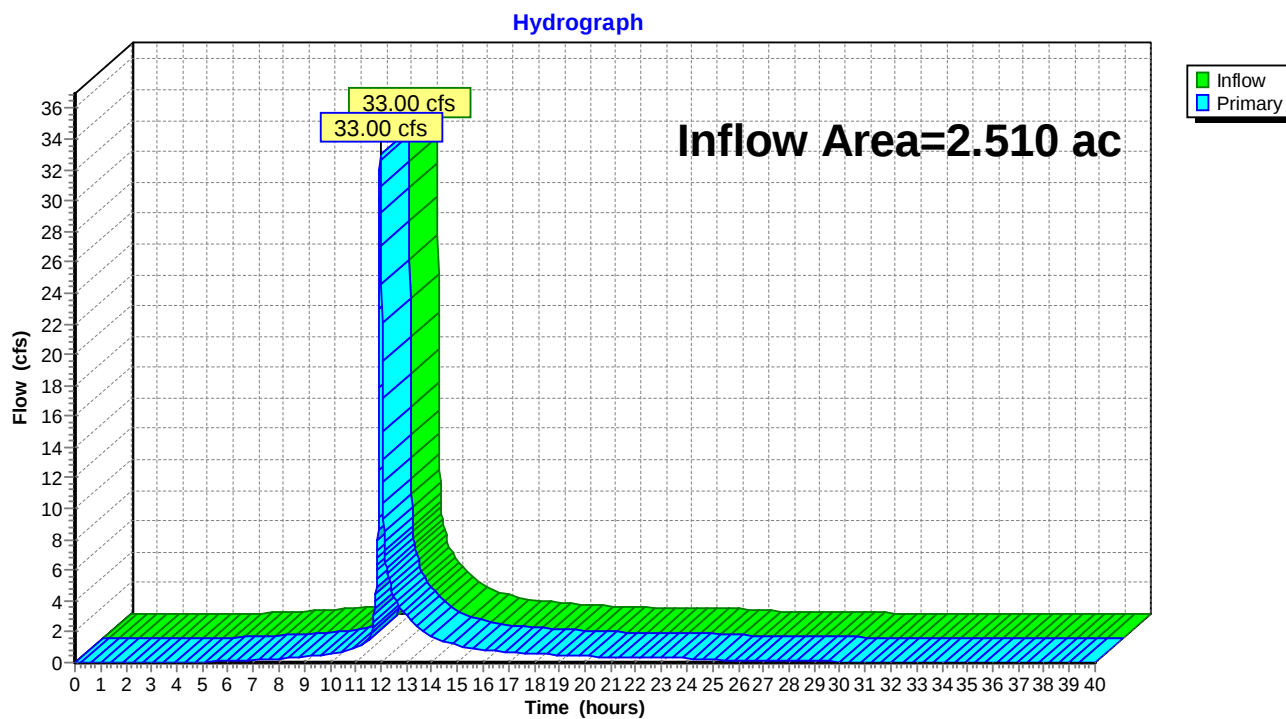
Hydrograph



Summary for Link 5L: Post POA 1

Inflow Area = 2.510 ac, 0.00% Impervious, Inflow Depth > 8.67" for 100-yr event
Inflow = 33.00 cfs @ 11.98 hrs, Volume= 1.815 af
Primary = 33.00 cfs @ 11.98 hrs, Volume= 1.815 af, Atten= 0%, Lag= 0.0 min

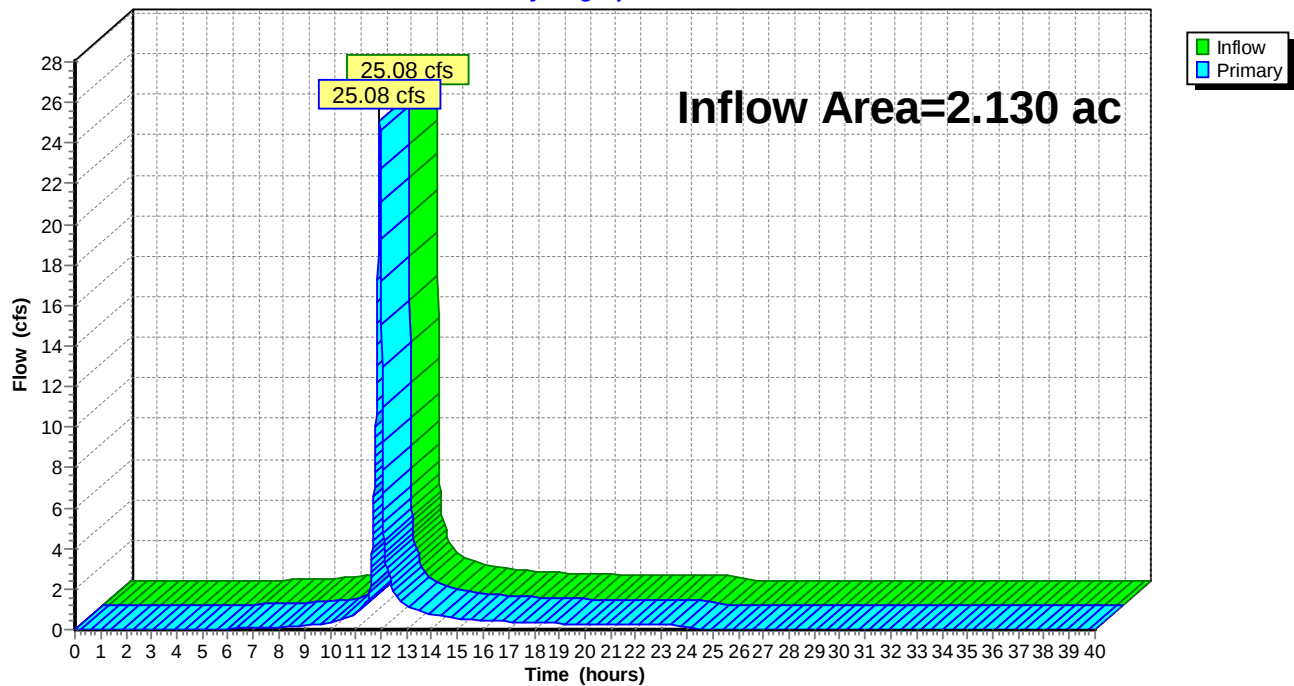
Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 5L: Post POA 1

Summary for Link 6L: Pre POA 1

Inflow Area = 2.130 ac, 0.00% Impervious, Inflow Depth = 6.65" for 100-yr event
Inflow = 25.08 cfs @ 11.96 hrs, Volume= 1.180 af
Primary = 25.08 cfs @ 11.96 hrs, Volume= 1.180 af, Atten= 0%, Lag= 0.0 min

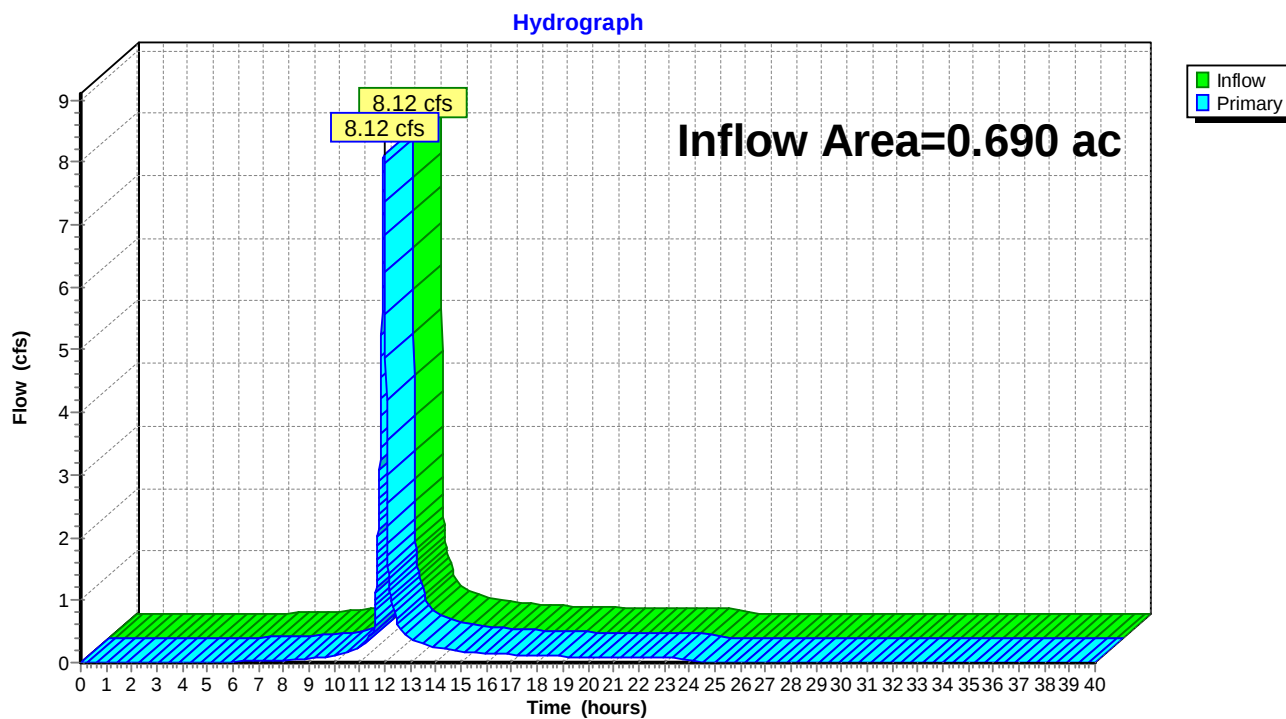
Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 6L: Pre POA 1**Hydrograph**

Summary for Link 11L: Pre POA 2

Inflow Area = 0.690 ac, 0.00% Impervious, Inflow Depth = 6.65" for 100-yr event
Inflow = 8.12 cfs @ 11.96 hrs, Volume= 0.382 af
Primary = 8.12 cfs @ 11.96 hrs, Volume= 0.382 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 11L: Pre POA 2

Summary for Link 15L: Post POA 2

Inflow Area = 0.300 ac, 0.00% Impervious, Inflow Depth = 7.77" for 100-yr event
Inflow = 3.93 cfs @ 11.96 hrs, Volume= 0.194 af
Primary = 3.93 cfs @ 11.96 hrs, Volume= 0.194 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-40.00 hrs, dt= 0.01 hrs

Link 15L: Post POA 2