STORM DRAINAGE ANALYSIS

For

High Ridge Village
Phase 9

LOCATED IN

Alabaster, Alabama

August 06, 2024

PREPARED BY:

EDG

ENGINEERING DESIGN GROUP, LLC

CIVIL ENGINEERING • LAND SURVEYING

(205) 403-9158

120 Bishop Circle, Suite 300
Pelham, Alabama 35124
Phone 205-403-9158
Fax 205-403-9175

Project No. DRHO0062

GENERAL

This report is the summary explanation of the existing and proposed storm water runoff conditions for a proposed 7 lot addition to High Ridge Village Subdivision. The existing subdivision is located in the City of Pelham, AL but the addition is a remnant of land which is located across the city limit line in the City of Alabaster, AL. This report includes an analysis of the site's existing drainage patterns as well as design calculations for the proposed improvements.

Existing Conditions

The property encompasses approximately 5.7 acres. The proposed disturbed area is approx. 2.8 acres. The majority of the site drains to the south into the Shelby County Highway 68 R.O.W. However, it appears that the west portion of the site was intended to drain to a ditch which runs north to a detention pond serving the rest of the subdivision. There is a small area in the northwest corner that does drain to this ditch currently. There is also a sloped area on the east side of the site which will remain basically unchanged.

Proposed Improvements

The proposed development is a new phase of a well established subdivision. The 7 lot phase will build out the remnant of land left over from the previous development. Two small detention ponds will be used to mitigate the post-developed peak flows to less than or equal to the pre-developed flows. In addition, a large portion of the west side of the project will be directed from the west pond to the ditch that was intended to receive it which will result in a reduction of flow to the County R.O.W.

Methodology

The NRCS Method is used to determine runoff volumes and rates for the comparison of Pre and Post conditions. Rainfall data is taken from NOAA's Precipitation Frequency Data Server. Hydrology Studio 2024 is used for hydrograph development and detention pond design. The 2yr, 5yr, 10yr, 25yr, 50yr, and 100yr 24 hour design storms are considered.

All calculations are based on the "High Ridge Village Phase 9" civil design plans as prepared by Engineering Design Group, LLC. for D. R. Horton Home Builders.

Pre-developed vs Post-developed Peak Flow Analysis for Detention Pond

The detention ponds will restrict the flow for the 2 year, 5 year, 10 year, 25 year, 50 year and 100 year design storms to less than or equal to pre-developed flows. The ponds will safely pass the 100 year design storm without overtopping the ponds' emergency spillways.

Table 1: The following table shows Pre vs Post peak flows exiting the **North & R.O.W.**:

Rainfall Event	Pre-Developed Peak Flow (cfs)	Post-Developed Peak Flow (cfs)
2 Year	1.9	1.9
5 Year	4.2	3.3
10 Year	6.7	4.7
25 Year	11.2	7.1
50 Year	15.5	9.3
100 Year	20.6	12.1

Table 2: The following table shows Pre vs Post peak flows exiting to the **R.O.W. only**:

Rainfall Event	Pre-Developed Peak Flow (cfs)	Post-Developed Peak Flow (cfs)
2 Year	1.9	1.5
5 Year	4.1	2.5
10 Year	6.5	3.6
25 Year	10.9	5.4
50 Year	15.2	7.2
100 Year	20.1	9.2

Table 3: The following table shows Pre vs Post peak flows exiting to the **North** & **East**:

Rainfall Event	Pre-Developed Peak Flow North (cfs)	Post-Developed Peak Flow North (cfs)	Pre-Developed Peak Flow East (cfs)	Post-Developed Peak Flow East (cfs)
2 Year	0.03	0.56	0.4	0.4
5 Year	0.09	0.93	1.1	1.0
10 Year	0.16	1.3	2.0	1.8
25 Year	0.28	1.7	3.5	3.3
50 Year	0.40	2.5	5.1	4.7
100 Year	0.55	3.1	6.9	6.3

WEST POND ELEVATION INFORMATION

The pond invert elevation = 588.90
The pond berm elevation = 592.00
The pond berm emergency spillway elevation = 590.50
The 100yr maximum water surface elevation = 590.26
The pond will pass the mitigated 100 year storm without the berm's spillway becoming active.

EAST POND ELEVATION INFORMATION

The pond invert elevation = 584.50
The pond berm elevation = 591.00
The pond berm emergency spillway elevation = 589.50
The 100yr maximum water surface elevation = 589.09
The pond will pass the mitigated 100 year storm without the berm's spillway becoming active.

Summary:

The proposed design overall will restrict the post developed peak flows for the 2yr, 5yr, 10yr, 25yr, 50yr, and 100yr / 24hr storms to less than or equal to the pre-developed peak flow rates.

The peak flows to the R.O.W. are reduced from the existing flows, especially for the larger storm events.

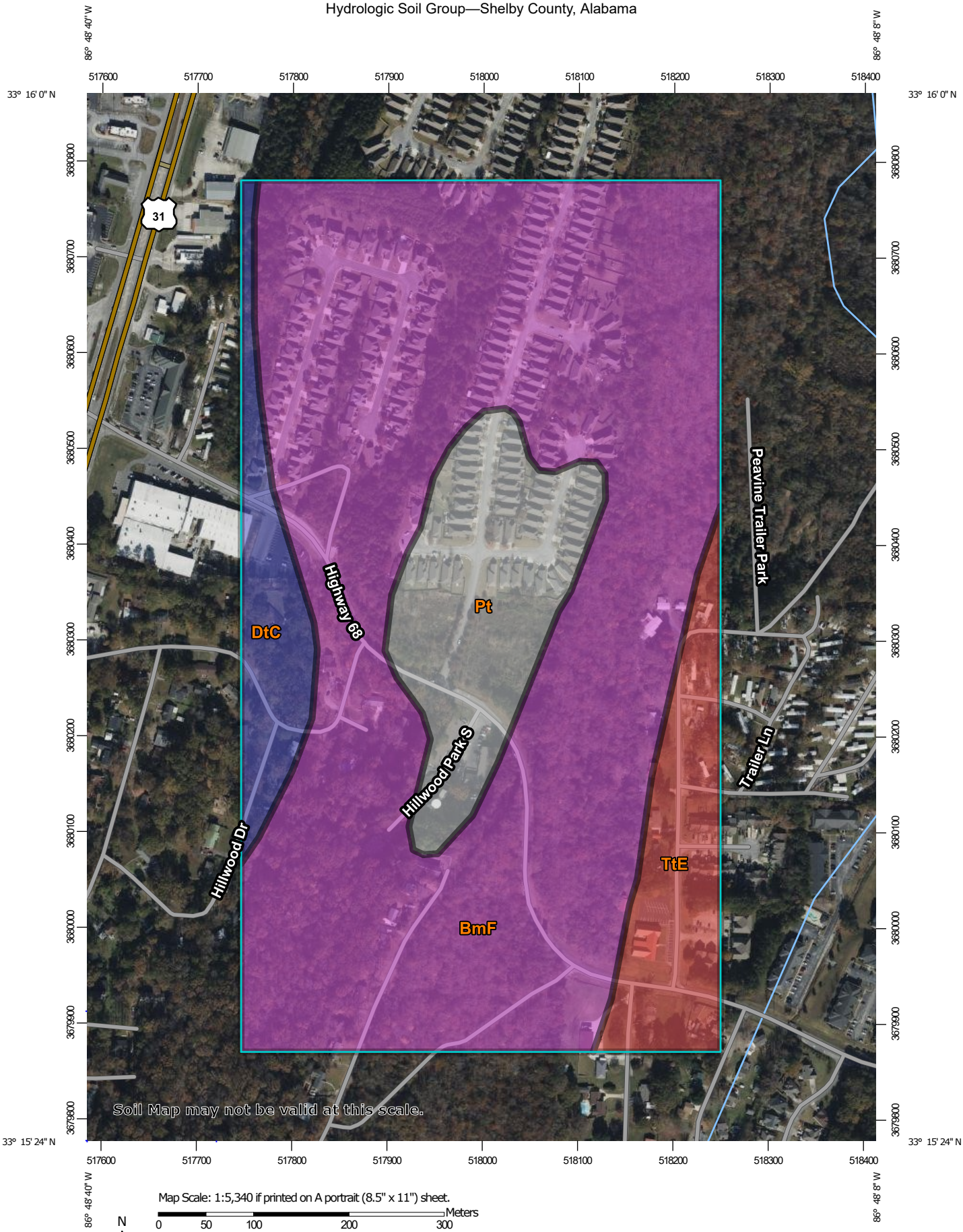
The peak flows to the North are slightly increased. However, these flows discharge to a larger existing regional detention pond which appears to have been intended to accept flows from this area.

Post Construction Detention Pond Maintenance Requirements:

Maintenance of the detention system pond and outlet control structure is critical to the system's functionality. After each rainfall event, the detention pond, outlet control pipe should be inspected. Trash or other debris that accumulates after a rainfall event around the outlet control structure should be removed to ensure proper function. At a minimum, the outlet pipe should be cleaned and inspected on a monthly basis to ensure it is not clogged with trash, sediment, yard clippings or other debris. Any visible defect or problem related to the detention system should be reported to the home owners' association or other governing body immediately. Vegetative growth within the pond should be kept to a minimum. Grass should be mowed/trimmed and sapling trees/weeds should be removed. Left unchecked, vegetative growth will hinder the performance of the detention pond.

Appendix

- Hydrologic Soil Group Map
- Basin Maps
- NRCS Curve Numbers Used
- NOAA PFDS Rainfall Depths
- Pond Reports
- NRCS Pre and Post Hydrographs



Map Scale: 1:5,340 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N 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 1:24,000.

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: Shelby County, Alabama
Survey Area Data: Version 16, Sep 12, 2023

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

Date(s) aerial images were photographed: Oct 26, 2021—Dec 22, 2021

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
BmF	Bodine-Minvale complex, 25 to 45 percent slopes	A	82.6	72.7%
DtC	Dewey-Tupelo-Urban land complex, 0 to 8 percent slopes	B	6.9	6.0%
Pt	Pits		14.4	12.6%
TtE	Townley-Urban land complex, 4 to 25 percent slopes	D	9.7	8.6%
Totals for Area of Interest			**113.6**	**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

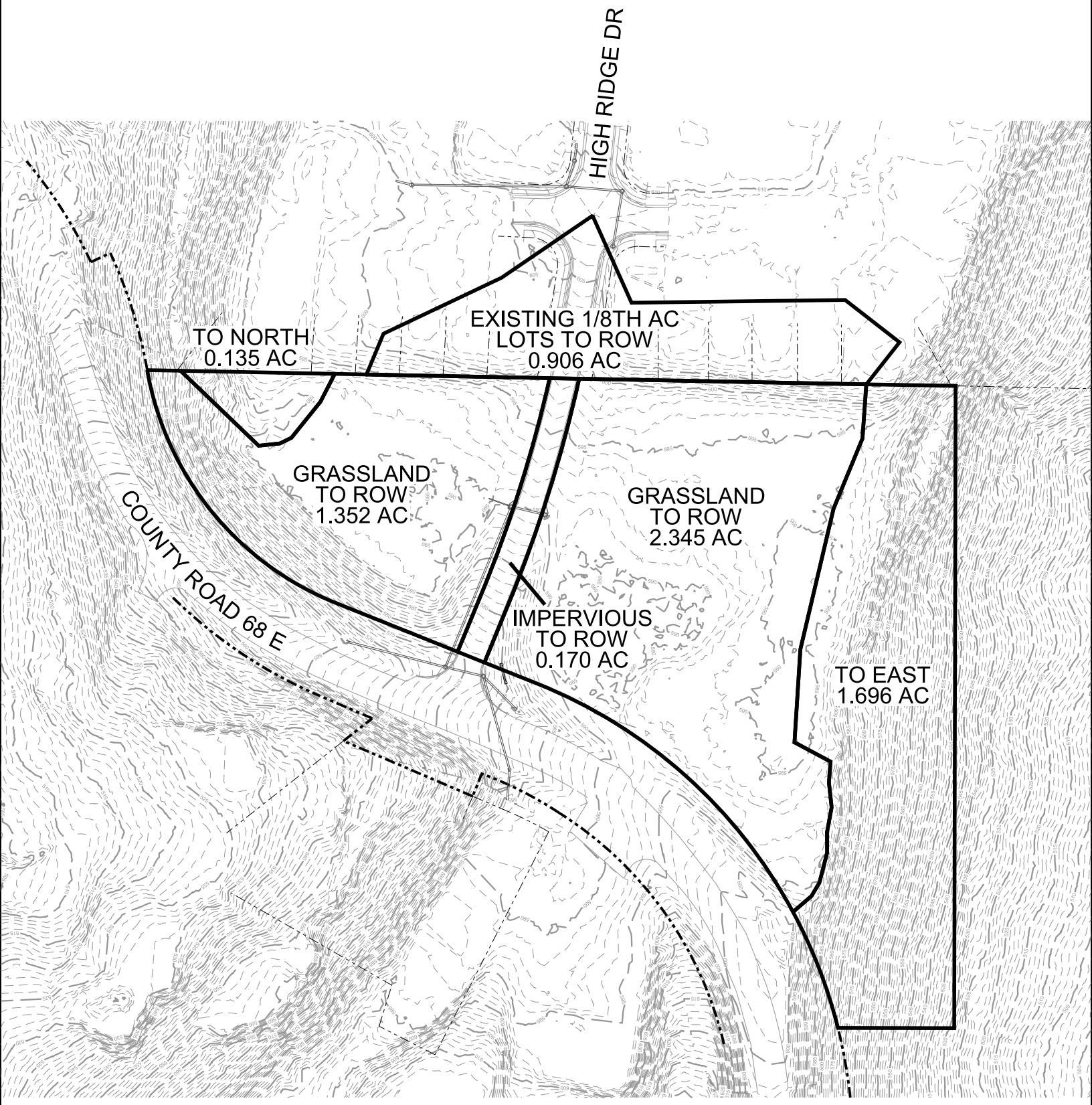
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

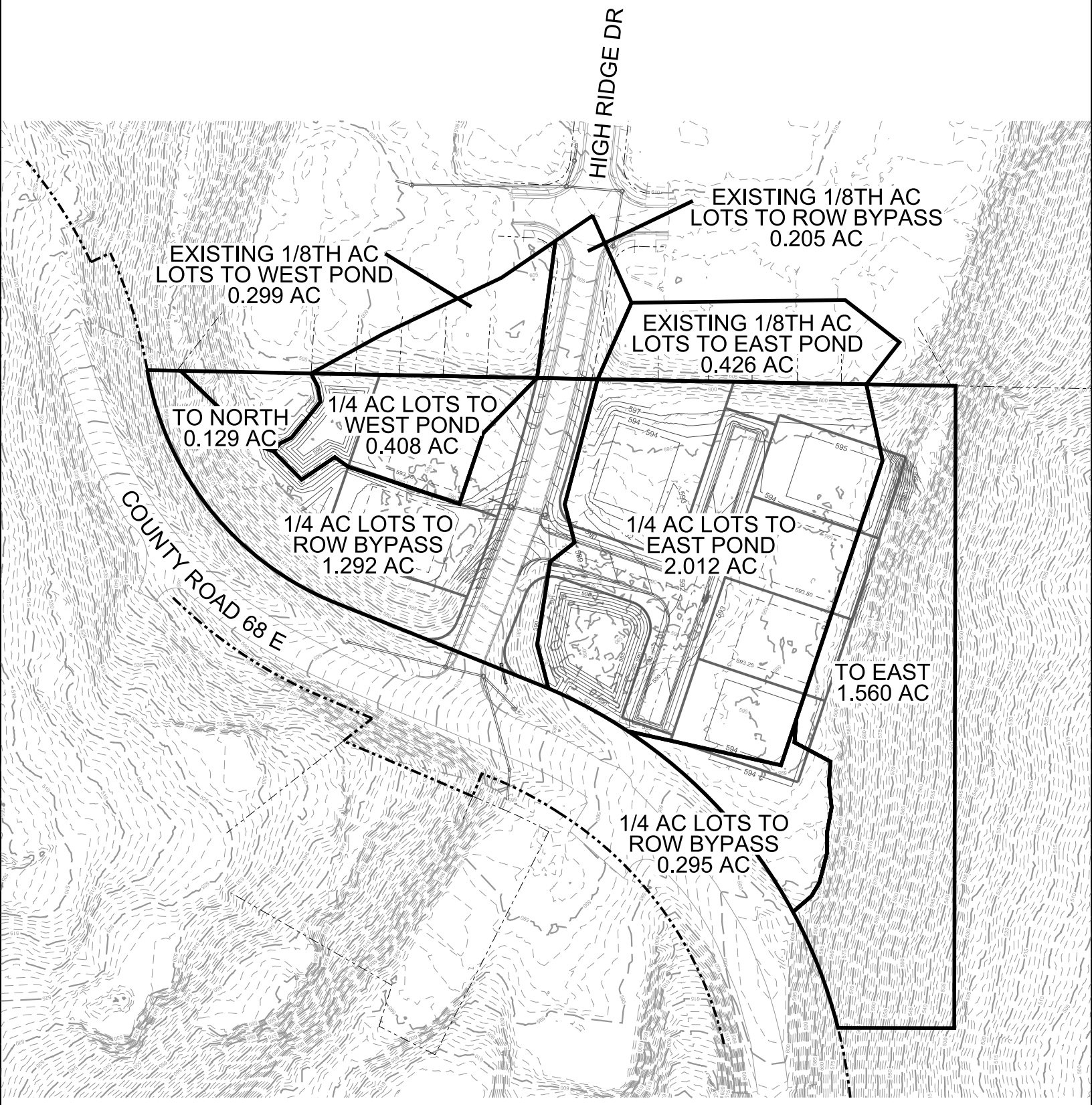
EXISTING CONDITIONS
BASIN MAP

1" = 120'



PROPOSED CONDITIONS BASIN MAP

1" = 120'



CURVE NUMBERS USED

EXISTING

Grassland (A)	52
Existing 1/8th Acre Lots (A)	77
Impervious	98

PROPOSED

¼ Acre Lots (A)	61
Existing 1/8th Acre Lots (A)	77

NOAA Atlas 14, Volume 9, Version 2
Location name: Pelham, Alabama, USA*
Latitude: 33.2617°, Longitude: -86.8069°
Elevation: 591 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

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

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.436 (0.342-0.558)	0.501 (0.392-0.640)	0.607 (0.473-0.777)	0.695 (0.539-0.893)	0.818 (0.613-1.07)	0.913 (0.668-1.21)	1.01 (0.713-1.36)	1.11 (0.749-1.52)	1.24 (0.804-1.73)	1.34 (0.846-1.89)
10-min	0.639 (0.501-0.816)	0.733 (0.574-0.938)	0.889 (0.693-1.14)	1.02 (0.790-1.31)	1.20 (0.897-1.57)	1.34 (0.978-1.77)	1.48 (1.04-1.99)	1.62 (1.10-2.23)	1.81 (1.18-2.54)	1.96 (1.24-2.77)
15-min	0.779 (0.610-0.996)	0.894 (0.700-1.14)	1.08 (0.845-1.39)	1.24 (0.963-1.60)	1.46 (1.09-1.92)	1.63 (1.19-2.16)	1.80 (1.27-2.43)	1.98 (1.34-2.71)	2.21 (1.44-3.09)	2.39 (1.51-3.38)
30-min	1.13 (0.888-1.45)	1.30 (1.02-1.67)	1.58 (1.24-2.03)	1.82 (1.41-2.34)	2.15 (1.61-2.82)	2.40 (1.76-3.19)	2.66 (1.88-3.59)	2.93 (1.98-4.02)	3.28 (2.13-4.59)	3.55 (2.25-5.03)
60-min	1.49 (1.17-1.91)	1.71 (1.34-2.19)	2.08 (1.62-2.66)	2.39 (1.85-3.07)	2.84 (2.13-3.74)	3.20 (2.34-4.25)	3.56 (2.52-4.82)	3.95 (2.68-5.44)	4.47 (2.91-6.28)	4.88 (3.09-6.92)
2-hr	1.85 (1.47-2.34)	2.12 (1.67-2.68)	2.57 (2.02-3.26)	2.96 (2.32-3.76)	3.53 (2.68-4.62)	3.99 (2.95-5.26)	4.46 (3.19-6.00)	4.97 (3.41-6.81)	5.67 (3.73-7.92)	6.22 (3.98-8.76)
3-hr	2.09 (1.66-2.62)	2.37 (1.88-2.98)	2.87 (2.27-3.62)	3.31 (2.61-4.19)	3.97 (3.04-5.19)	4.52 (3.37-5.95)	5.09 (3.67-6.83)	5.71 (3.94-7.80)	6.58 (4.36-9.17)	7.27 (4.68-10.2)
6-hr	2.54 (2.04-3.16)	2.86 (2.30-3.57)	3.46 (2.77-4.32)	4.01 (3.19-5.03)	4.86 (3.78-6.34)	5.58 (4.22-7.32)	6.36 (4.65-8.50)	7.22 (5.05-9.83)	8.44 (5.67-11.7)	9.44 (6.14-13.1)
12-hr	3.06 (2.49-3.78)	3.45 (2.80-4.26)	4.18 (3.38-5.17)	4.87 (3.92-6.05)	5.96 (4.70-7.73)	6.90 (5.29-9.00)	7.94 (5.86-10.5)	9.08 (6.42-12.3)	10.7 (7.29-14.8)	12.1 (7.95-16.7)
24-hr	3.63 (2.98-4.43)	4.11 (3.37-5.03)	5.03 (4.11-6.16)	5.90 (4.79-7.25)	7.27 (5.79-9.35)	8.46 (6.54-10.9)	9.76 (7.28-12.9)	11.2 (8.01-15.1)	13.3 (9.12-18.2)	15.0 (9.96-20.6)
2-day	4.21 (3.49-5.09)	4.83 (4.00-5.84)	5.97 (4.93-7.24)	7.04 (5.77-8.56)	8.69 (6.98-11.1)	10.1 (7.89-12.9)	11.6 (8.77-15.2)	13.3 (9.62-17.8)	15.8 (10.9-21.4)	17.7 (11.9-24.2)
3-day	4.62 (3.86-5.56)	5.29 (4.41-6.36)	6.51 (5.41-7.85)	7.66 (6.32-9.26)	9.42 (7.61-11.9)	10.9 (8.58-13.9)	12.6 (9.52-16.3)	14.4 (10.4-19.0)	16.9 (11.8-22.9)	19.0 (12.9-25.9)
4-day	4.99 (4.18-5.97)	5.68 (4.76-6.81)	6.94 (5.79-8.34)	8.12 (6.74-9.78)	9.93 (8.05-12.5)	11.5 (9.05-14.5)	13.1 (10.0-17.0)	15.0 (10.9-19.8)	17.6 (12.3-23.7)	19.7 (13.4-26.7)
7-day	5.99 (5.07-7.12)	6.74 (5.69-8.00)	8.06 (6.78-9.60)	9.27 (7.76-11.1)	11.1 (9.06-13.8)	12.6 (10.0-15.9)	14.3 (11.0-18.3)	16.1 (11.8-21.1)	18.6 (13.2-25.0)	20.7 (14.2-27.9)
10-day	6.85 (5.82-8.09)	7.65 (6.49-9.04)	9.05 (7.66-10.7)	10.3 (8.67-12.3)	12.2 (9.96-15.0)	13.7 (10.9-17.1)	15.3 (11.8-19.5)	17.1 (12.6-22.2)	19.6 (13.9-26.1)	21.5 (14.8-28.9)
20-day	9.17 (7.88-10.7)	10.2 (8.74-11.9)	11.9 (10.2-14.0)	13.4 (11.4-15.7)	15.4 (12.7-18.7)	17.1 (13.7-21.0)	18.8 (14.6-23.5)	20.5 (15.3-26.4)	22.9 (16.4-30.2)	24.8 (17.3-33.1)
30-day	11.2 (9.66-13.0)	12.4 (10.7-14.4)	14.4 (12.4-16.8)	16.0 (13.7-18.8)	18.3 (15.2-22.0)	20.1 (16.2-24.4)	21.8 (17.0-27.1)	23.6 (17.7-30.1)	25.9 (18.7-33.9)	27.7 (19.4-36.8)
45-day	13.9 (12.1-16.0)	15.3 (13.3-17.7)	17.7 (15.3-20.5)	19.6 (16.9-22.8)	22.1 (18.3-26.2)	23.9 (19.4-28.8)	25.7 (20.2-31.7)	27.5 (20.7-34.7)	29.7 (21.5-38.5)	31.3 (22.1-41.4)
60-day	16.3 (14.2-18.7)	18.0 (15.7-20.7)	20.6 (18.0-23.8)	22.7 (19.6-26.3)	25.4 (21.1-29.9)	27.3 (22.2-32.7)	29.1 (22.9-35.6)	30.8 (23.2-38.7)	32.8 (23.8-42.4)	34.2 (24.3-45.1)

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

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

Please refer to NOAA Atlas 14 document for more information.

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PF graphical

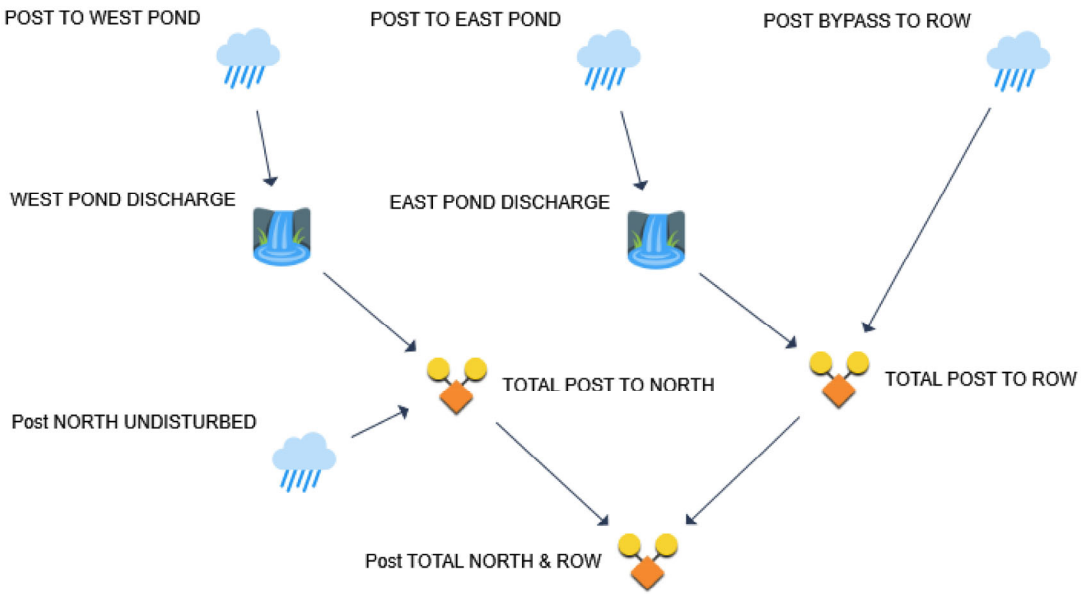
DETENTION POND DESIGN

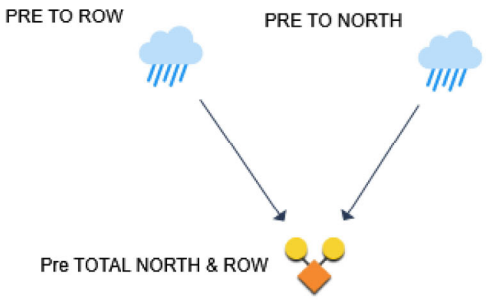
Basin Model

Hydrology Studio v 3.0.0.32

Project Name:

08-06-2024





Hydrograph by Return Period

Project Name:

08-06-2024

Hydrology Studio v 3.0.0.32

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Outflow (cfs)							
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
1	NRCS Runoff	POST TO WEST POND		0.891		1.383	1.884	2.720	3.475	4.320
2	Pond Route	WEST POND DISCHARGE		0.535		0.872	1.206	1.567	2.292	2.861
3	NRCS Runoff	Post NORTH UNDISTURBED		0.031		0.086	0.149	0.269	0.385	0.522
4	Junction	TOTAL POST TO NORTH		0.561		0.926	1.293	1.725	2.486	3.119
5	NRCS Runoff	POST TO EAST POND		2.371		3.878	5.484	8.212	10.72	13.55
6	Pond Route	EAST POND DISCHARGE		0.295		0.506	0.752	1.179	1.581	3.155
7	NRCS Runoff	POST BYPASS TO ROW		1.372		2.274	3.242	4.897	6.420	8.145
8	Junction	TOTAL POST TO ROW		1.482		2.491	3.578	5.441	7.224	9.239
9	Junction	Post TOTAL NORTH & ROW		1.907		3.267	4.718	7.117	9.339	12.10
11	NRCS Runoff	PRE TO ROW		1.861		4.070	6.519	10.88	15.16	20.14
12	NRCS Runoff	PRE TO NORTH		0.033		0.090	0.156	0.282	0.403	0.547
13	Junction	Pre TOTAL NORTH & ROW		1.891		4.150	6.651	11.15	15.54	20.65
15	NRCS Runoff	POST TO EAST		0.377		1.038	1.801	3.253	4.661	6.316
16	NRCS Runoff	PRE TO EAST		0.410		1.128	1.959	3.537	5.067	6.867

Pond Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

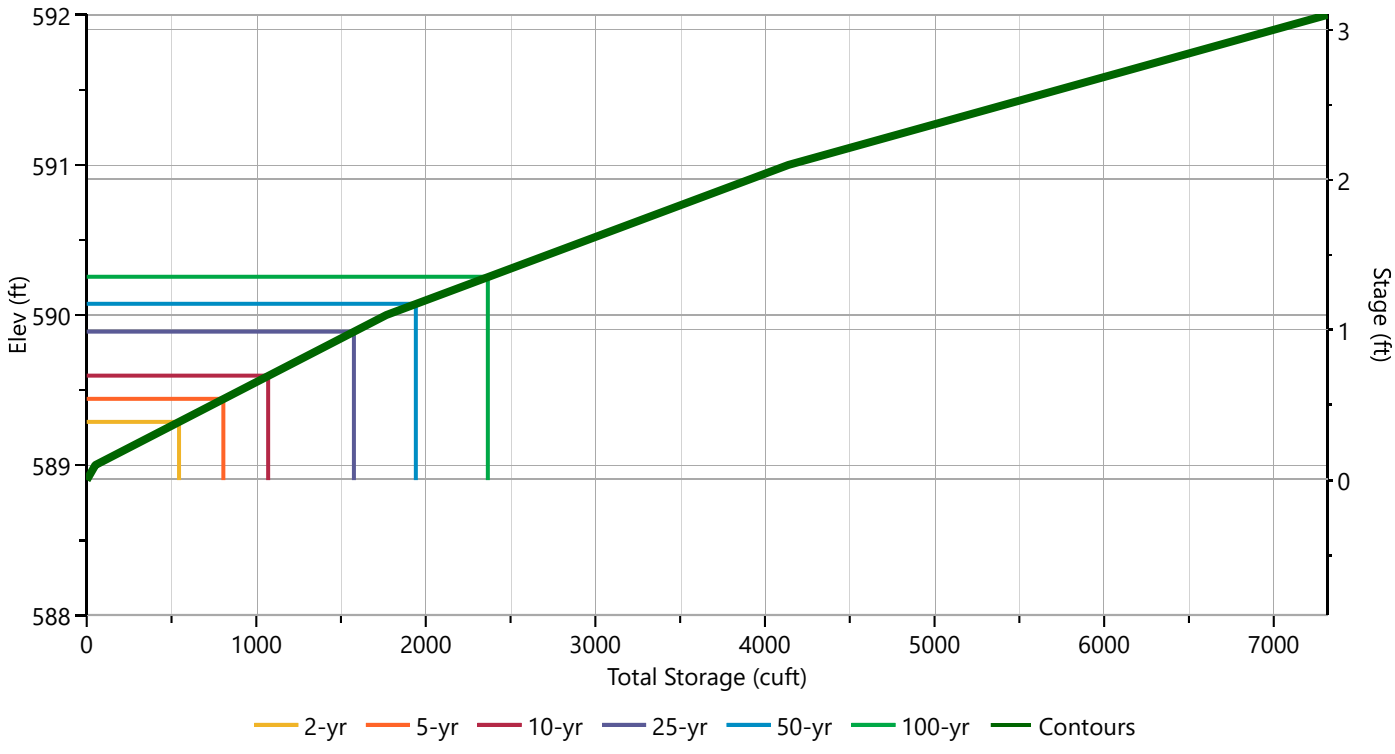
WEST POND

Stage-Storage

User Defined Contours	
Description	**Input**
Bottom Elevation, ft	588.90
Voids (%)	100.00
Volume Calc	Conic

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour Area (sqft)	Incr. Storage (cuft)	Total Storage (cuft)
0.00	588.90	10	0.000	0.000
0.10	589.00	1,420	51.6	51.6
1.10	590.00	2,031	1,716	1,768
2.10	591.00	2,727	2,370	4,138
3.10	592.00	3,654	3,179	7,317



Pond Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

WEST POND

Stage-Discharge

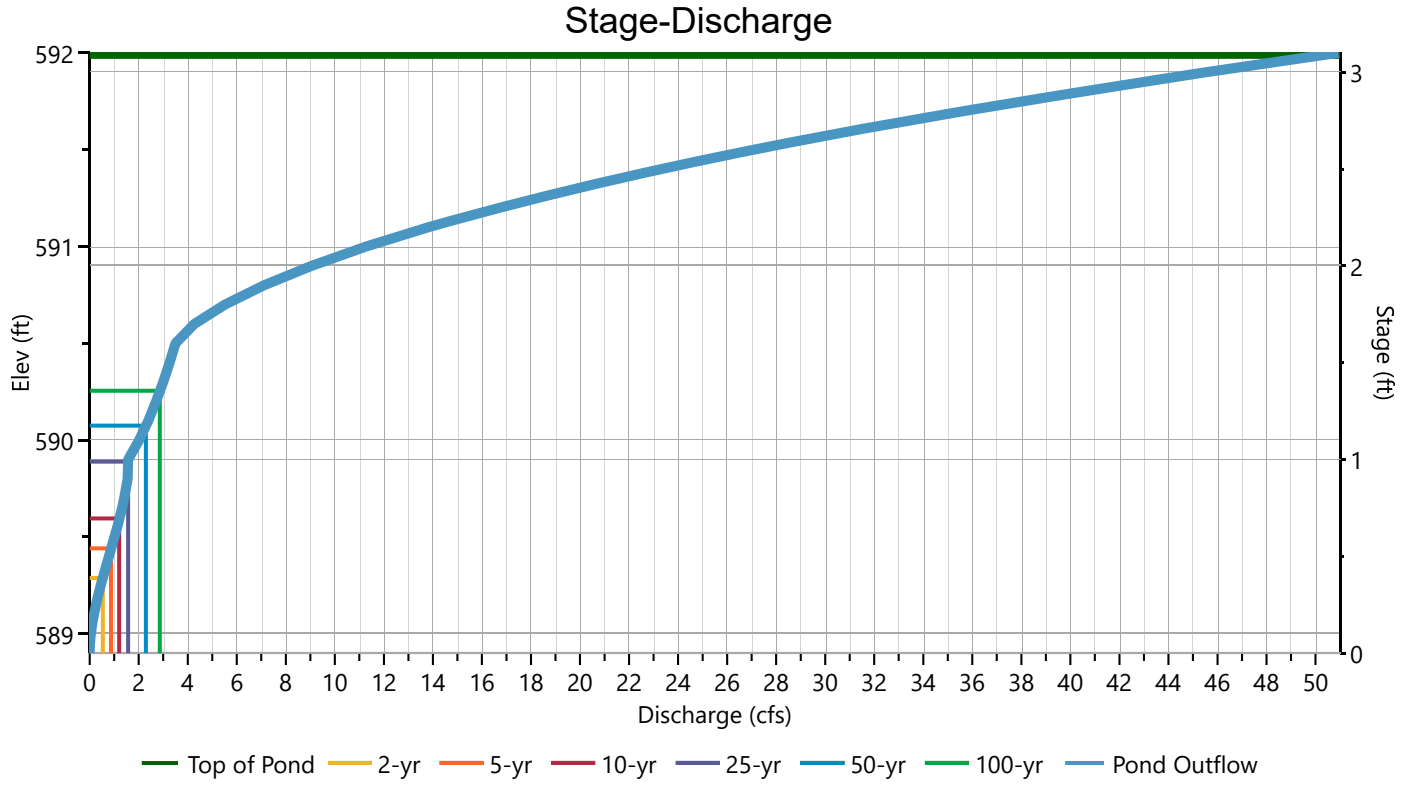
Culvert / Orifices	Culvert	Orifice		
		1	2	3
Rise, in	12			
Span, in	12			
No. Barrels	1			
Invert Elevation, ft	588.90			
Orifice Coefficient, Co	0.60			
Length, ft	30			
Barrel Slope, %	.5			
N-Value, n	0.013			

Perforated Riser	
Hole Diameter, in	
No. holes	
Invert Elevation, ft	
Height, ft	
Orifice Coefficient, Co	

Weirs	Riser	Weir		
		1 (i)	2	3
Shape / Type		Broad Crested		
Crest Elevation, ft		590.5		
Crest Length, ft		5		
Angle, deg		26.6 (2:1)		
Weir Coefficient, Cw		3.3		

Ancillary	
Exfiltration, in/hr	

m = Flows through Culvert, i = Independent



Pond Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

WEST POND

Stage-Storage-Discharge Summary

Stage (ft)	Elev. (ft)	Storage (cuft)	Culvert (cfs)	Orifices, cfs			Riser (cfs)	Weirs, cfs			Pf Riser (cfs)	Exfil (cfs)	User (cfs)	Total (cfs)
				1	2	3		1	2	3				
0.00	588.90	0.000	0.000					0.000						0.000
0.10	589.00	51.6	0.044 ic					0.000						0.044
1.10	590.00	1,768	2.022 oc					0.000						2.022
2.10	591.00	4,138	4.520 oc					6.767						11.29
3.10	592.00	7,317	6.065 oc					44.86						50.93

Suffix key: ic = inlet control, oc = outlet control, s = submerged weir

Pond Report

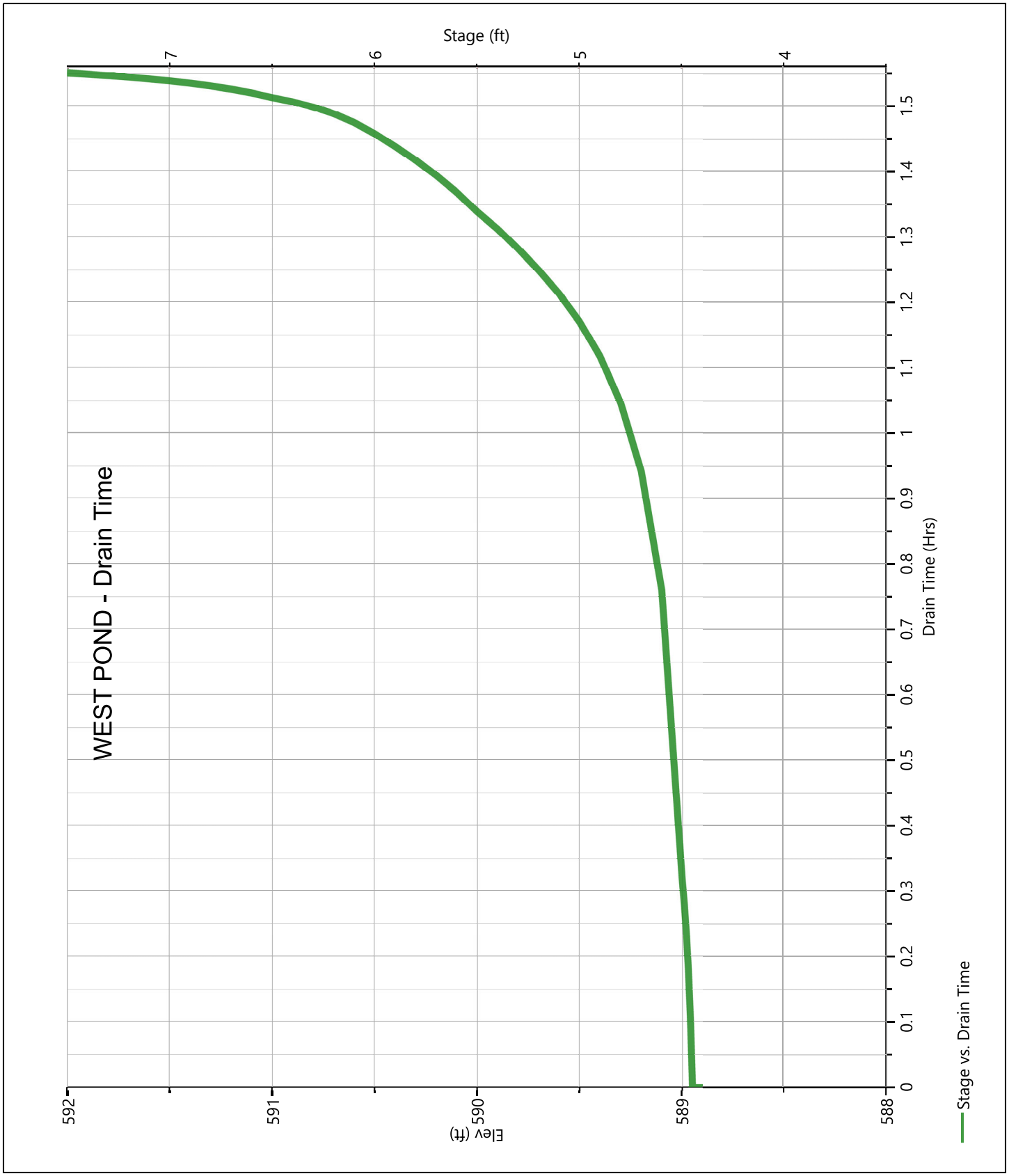
Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

WEST POND

Pond Drawdown



Pond Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

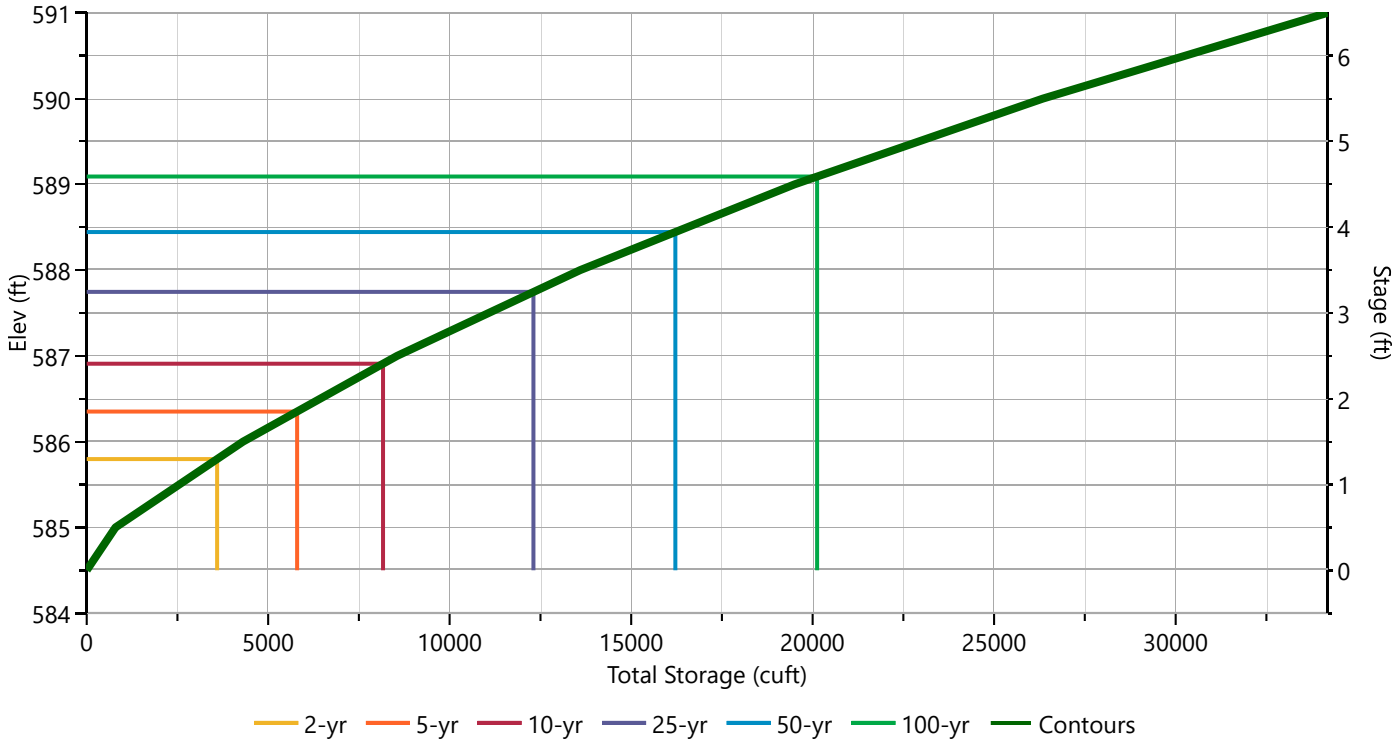
EAST POND

Stage-Storage

User Defined Contours	
Description	**Input**
Bottom Elevation, ft	584.50
Voids (%)	100.00
Volume Calc	None

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour Area (sqft)	Incr. Storage (cuft)	Total Storage (cuft)
0.00	584.50	10	0.000	0.000
0.50	585.00	3,165	794	794
1.50	586.00	3,862	3,514	4,307
2.50	587.00	4,626	4,244	8,551
3.50	588.00	5,458	5,042	13,593
4.50	589.00	6,358	5,908	19,501
5.50	590.00	7,324	6,841	26,342
6.50	591.00	8,358	7,841	34,183



Pond Report

Project Name:

Hydrology Studio v 3.0.0.32

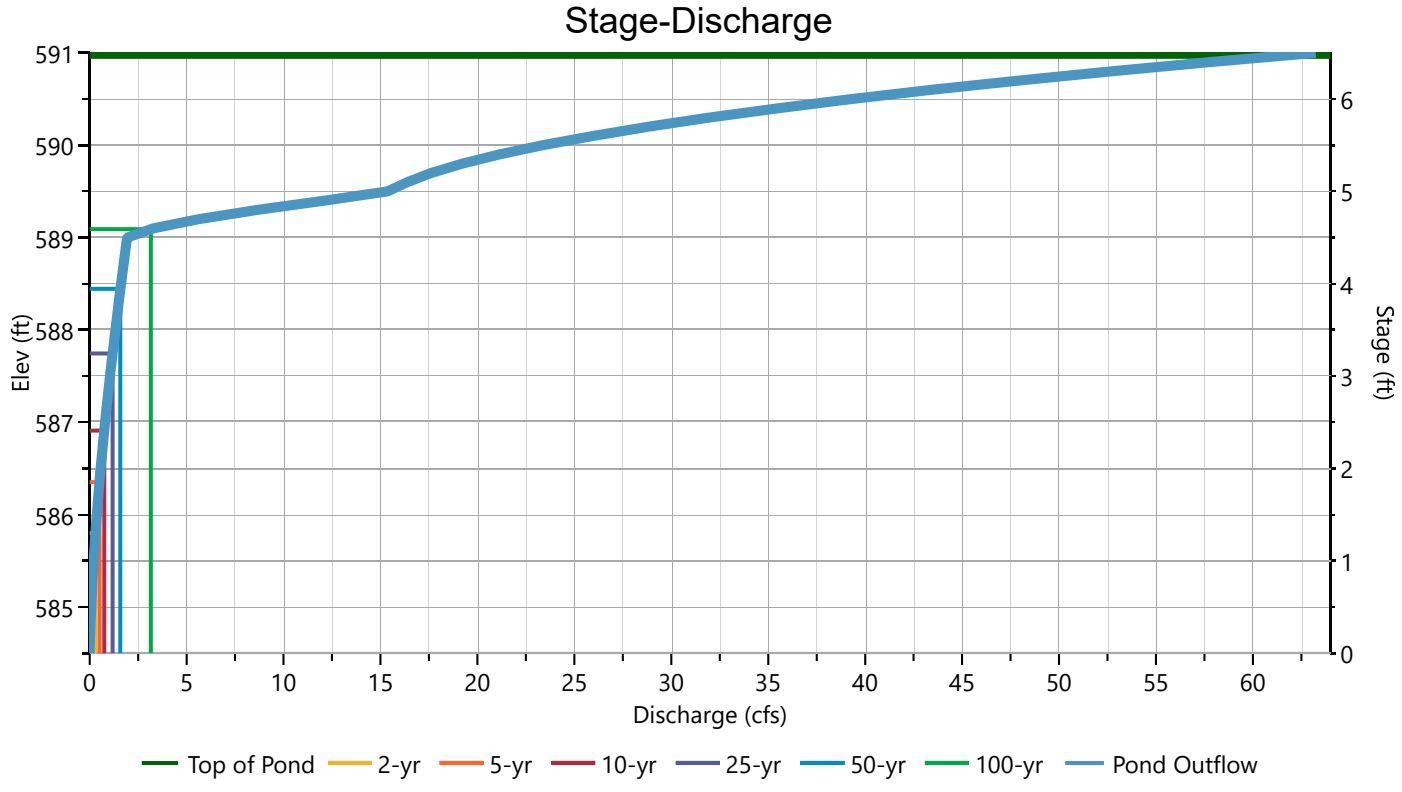
08-06-2024

EAST POND

Stage-Discharge

Culvert / Orifices	Culvert	Orifice			Orifice Plate	
		1	2	3		
Rise, in	18				Orifice Dia, in	
Span, in	18				No. Orifices	
No. Barrels	1				Invert Elevation, ft	
Invert Elevation, ft	584.50				Height, ft	
Orifice Coefficient, Co	0.60				Orifice Coefficient, Co	
Length, ft	98					
Barrel Slope, %	.5					
N-Value, n	0.013					
Weirs	**Riser**	**Weir**			**Ancillary**	
		1 (m)	2 (i)	3		
Shape / Type	Circular	Rectangular	Broad Crested		Exfiltration, in/hr	
Crest Elevation, ft	589	584.5	589.5			
Crest Length, ft	12.57	.06	5			
Angle, deg			26.6 (2:1)			
Weir Coefficient, Cw	3.3	3.3	3.3			

m = Flows through Culvert, i = Independent



Pond Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

EAST POND

Stage-Storage-Discharge Summary

Stage (ft)	Elev. (ft)	Storage (cuft)	Culvert (cfs)	Orifices, cfs			Riser (cfs)	Weirs, cfs			Pf Riser (cfs)	Exfil (cfs)	User (cfs)	Total (cfs)
				1	2	3		1	2	3				
0.00	584.50	0.000	0.000				0.000	0.000	0.000					0.000
0.50	585.00	794	0.070 ic				0.000	0.070 s	0.000					0.070
1.50	586.00	4,307	0.368 ic				0.000	0.368 s	0.000					0.368
2.50	587.00	8,551	0.796 ic				0.000	0.796 s	0.000					0.796
3.50	588.00	13,593	1.321 ic				0.000	1.321 s	0.000					1.321
4.50	589.00	19,501	1.928 ic				0.000	1.928 s	0.000					1.928
5.50	590.00	26,342	16.61 oc				0.000	0.000	6.767					23.38
6.50	591.00	34,183	18.37 oc				0.000	0.000	44.86					63.23

Suffix key: ic = inlet control, oc = outlet control, s = submerged weir

Pond Report

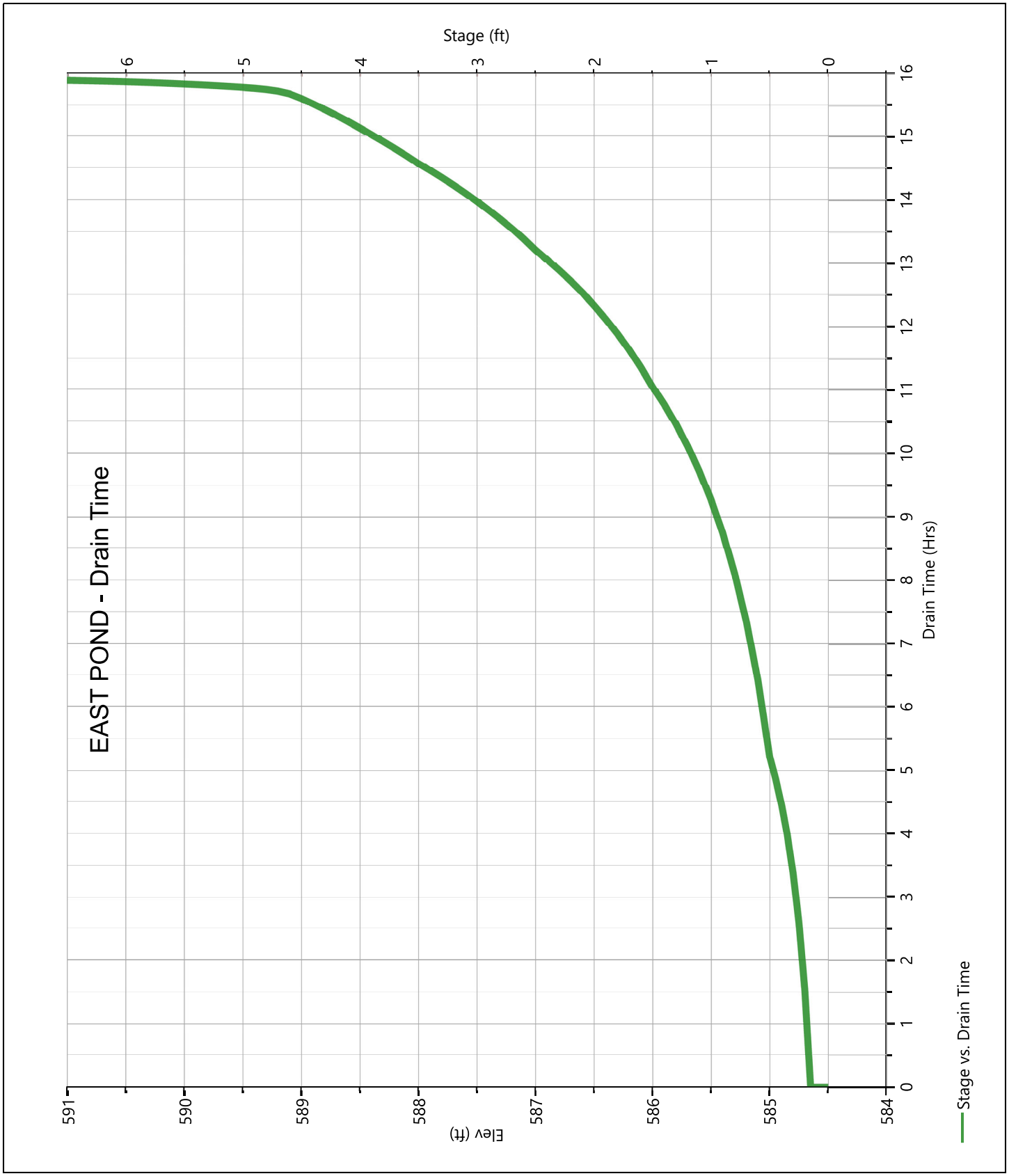
Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

EAST POND

Pond Drawdown



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

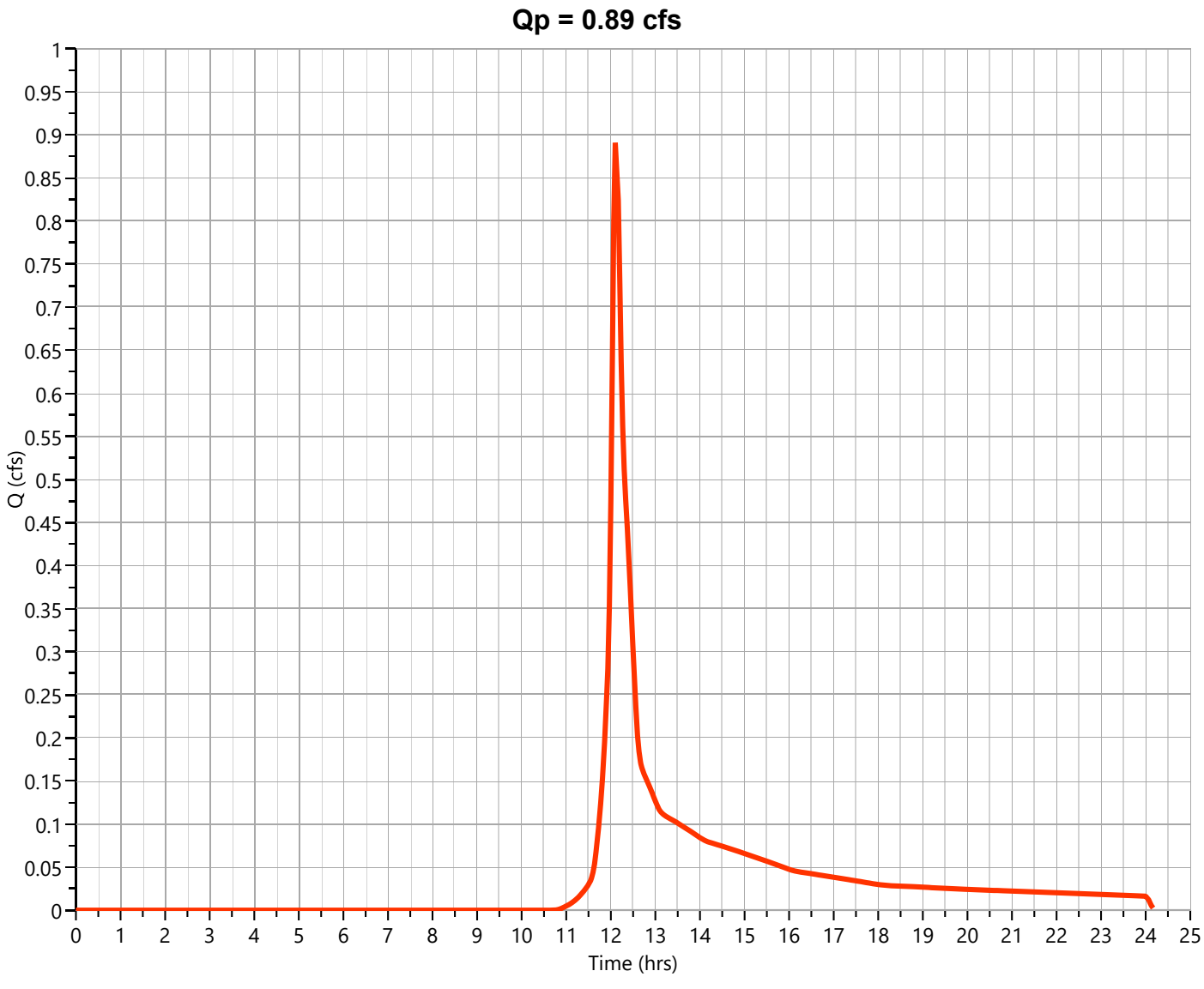
POST TO WEST POND

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.891 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 3,273 cuft
Drainage Area	= 0.707 ac	Curve Number	= 68*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 4.11 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.408	61	1/4 Acre Lots (A)
0.299	77	1/8th Acre Lots (exist)(A)
0.707	**68**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

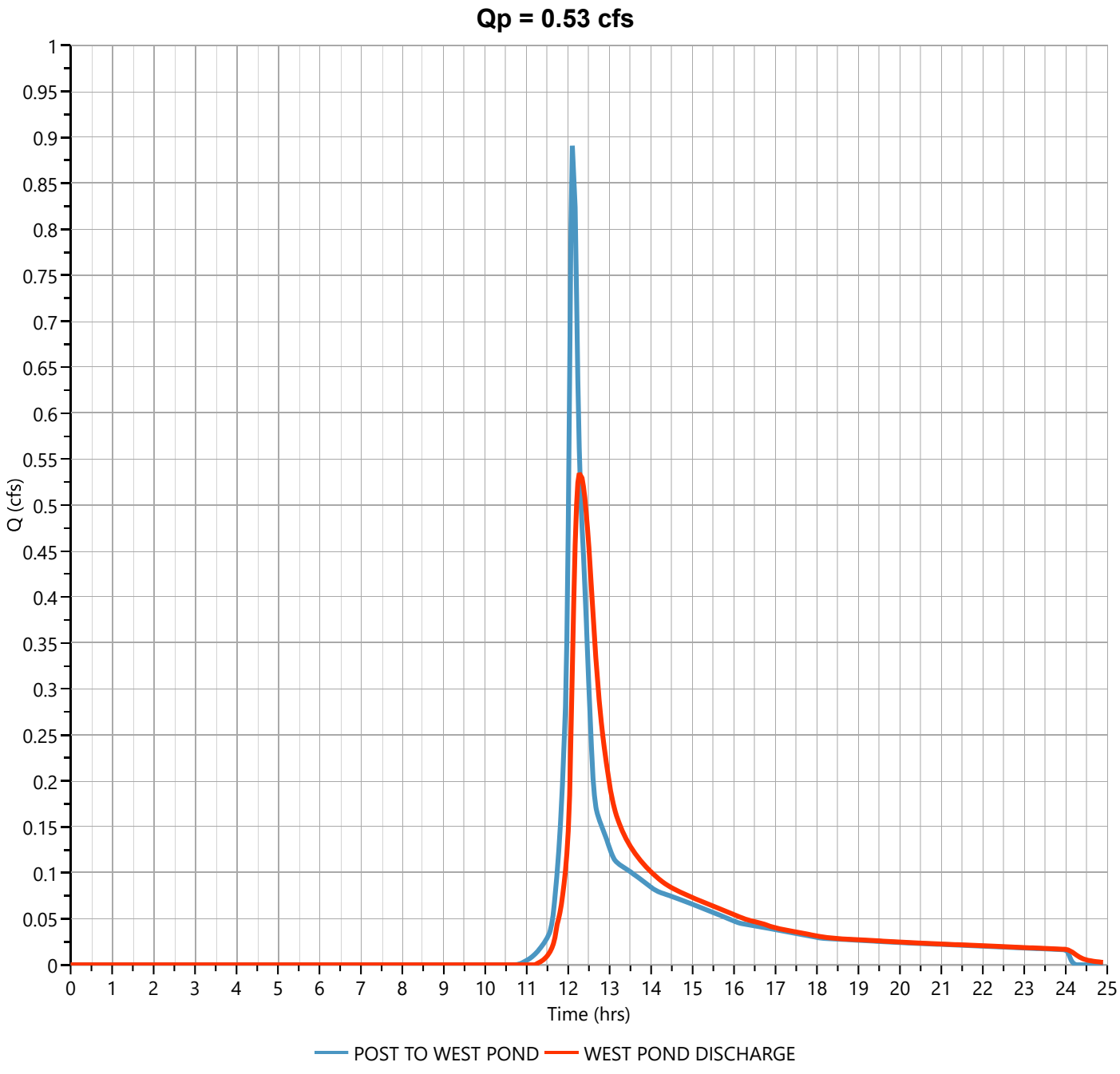
WEST POND DISCHARGE

Hyd. No. 2

Hydrograph Type	= Pond Route	Peak Flow	= 0.535 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.30 hrs
Time Interval	= 2 min	Hydrograph Volume	= 3,265 cuft
Inflow Hydrograph	= 1 - POST TO WEST POND	Max. Elevation	= 589.29 ft
Pond Name	= WEST POND	Max. Storage	= 544 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 18 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

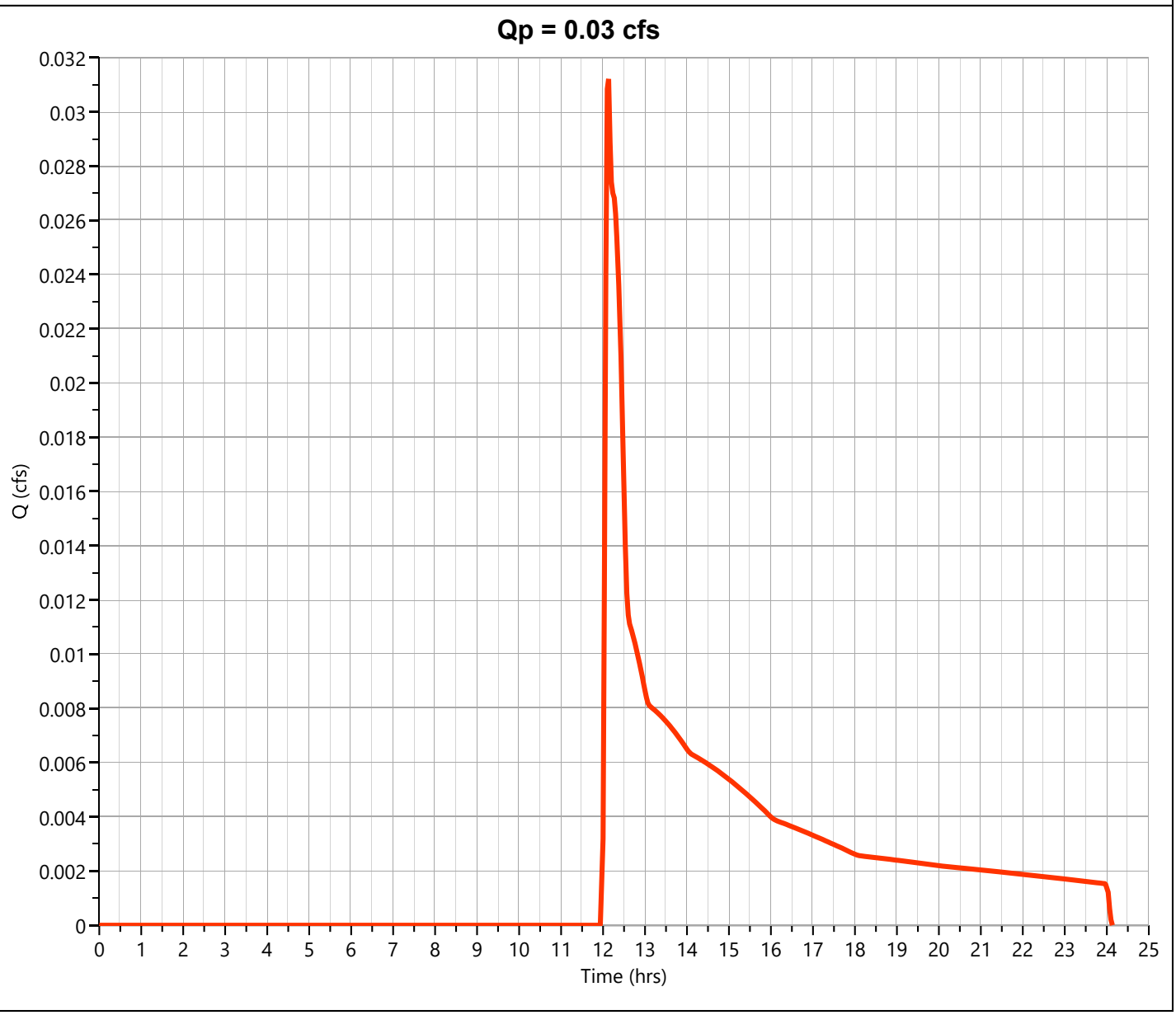
Post NORTH UNDISTURBED

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.031 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Runoff Volume	= 196 cuft
Drainage Area	= 0.129 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.11 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.129	52	Grassland (A)
0.129	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

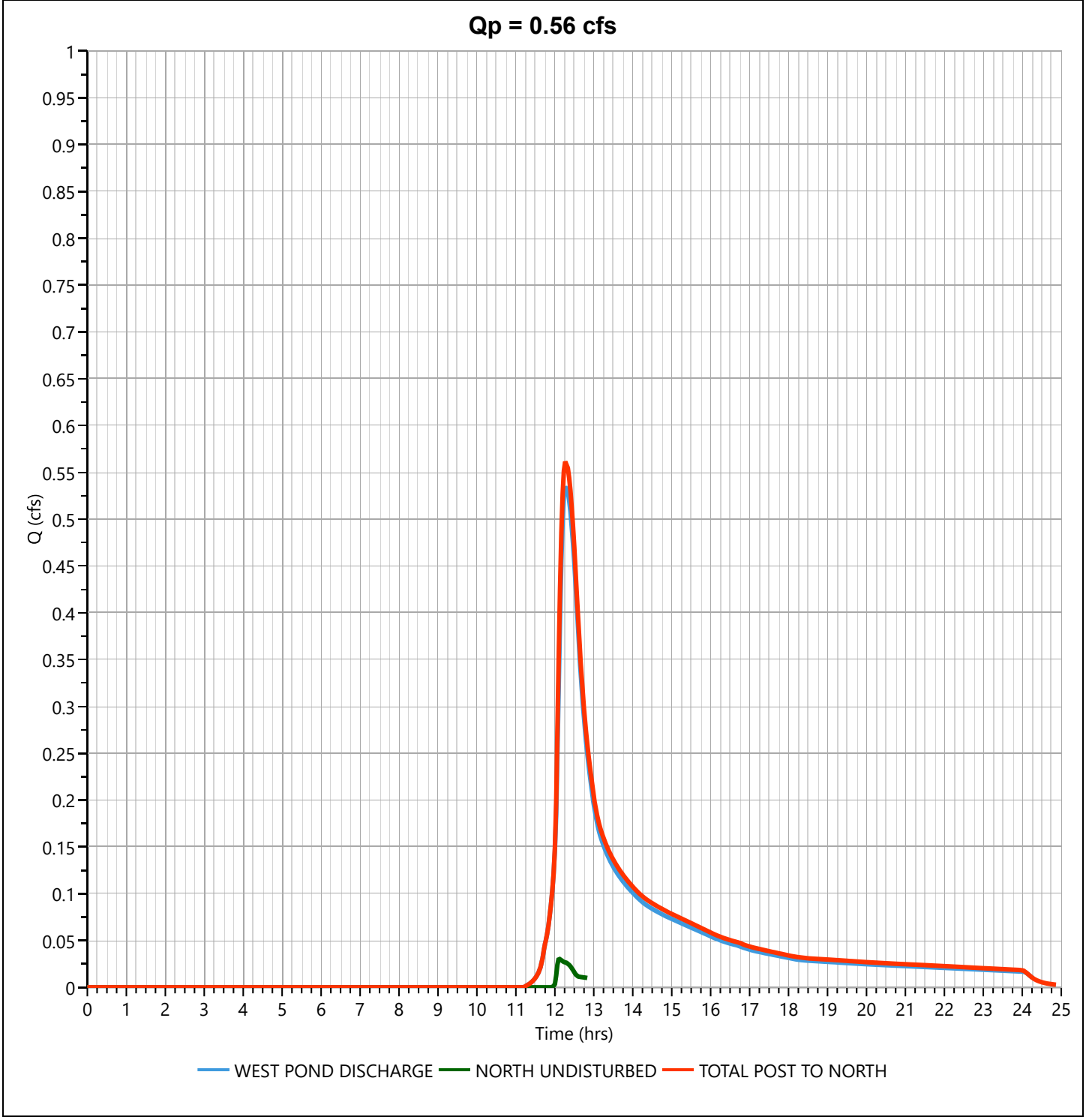
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO NORTH

Hyd. No. 4

Hydrograph Type	= Junction	Peak Flow	= 0.561 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.27 hrs
Time Interval	= 2 min	Hydrograph Volume	= 3,461 cuft
Inflow Hydrographs	= 2, 3	Total Contrib. Area	= 0.129 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

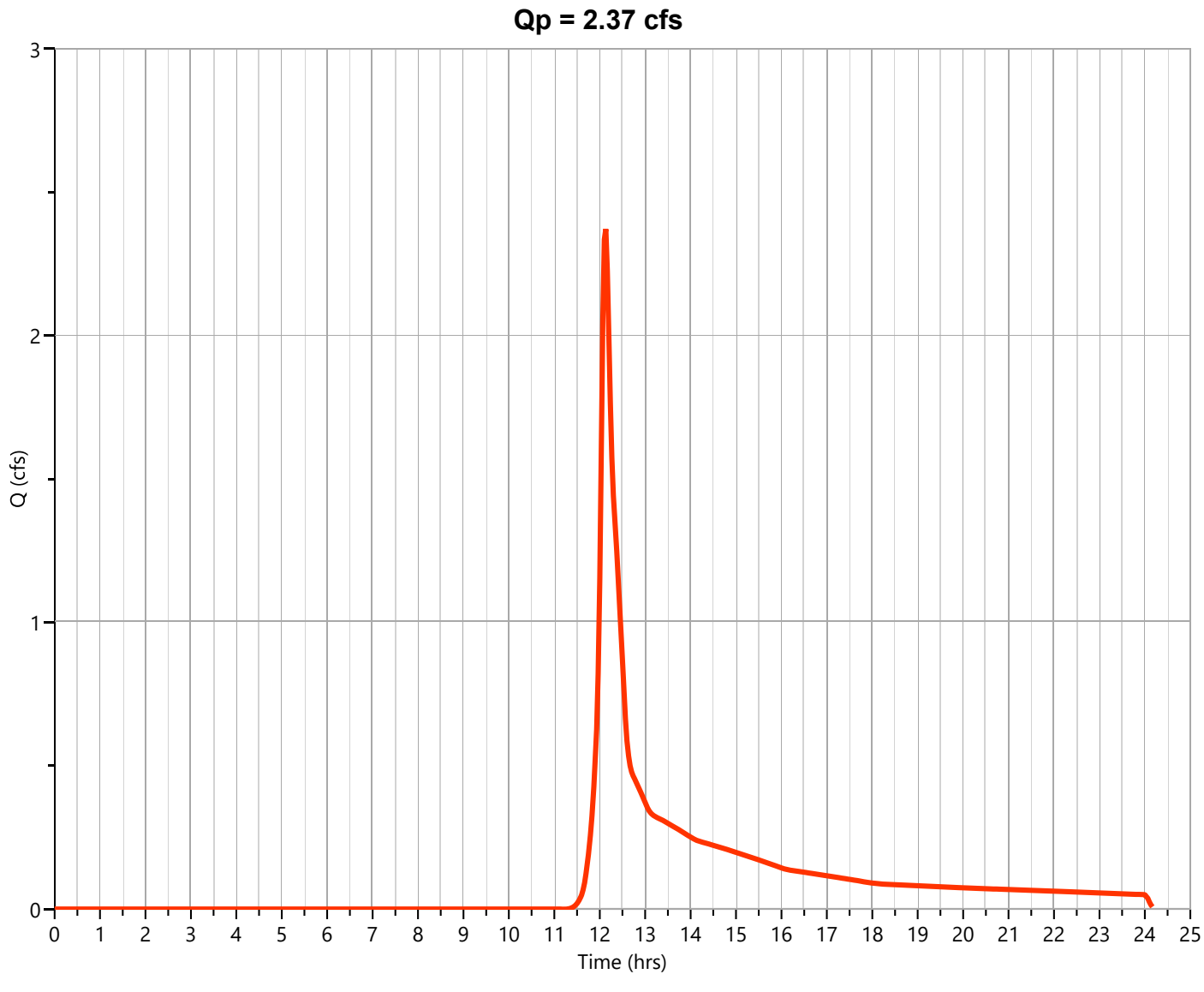
POST TO EAST POND

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 2.371 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Runoff Volume	= 9,159 cuft
Drainage Area	= 2.438 ac	Curve Number	= 64*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 4.11 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
2.012	61	1/4 Acre Lots (A)
0.426	77	1/8th Acre Lots (exist)(A)
2.438	**64**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

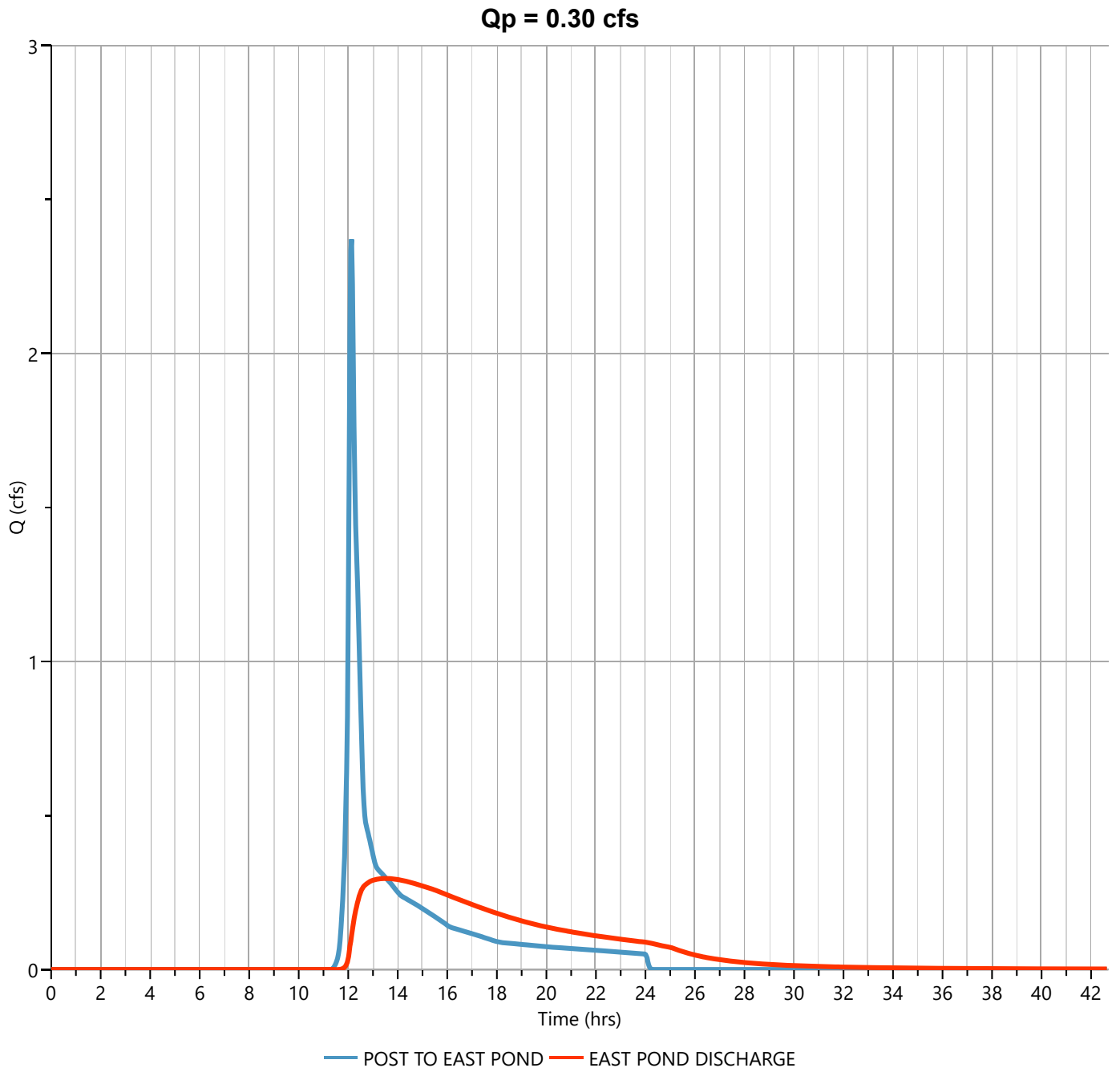
EAST POND DISCHARGE

Hyd. No. 6

Hydrograph Type	= Pond Route	Peak Flow	= 0.295 cfs
Storm Frequency	= 2-yr	Time to Peak	= 13.53 hrs
Time Interval	= 2 min	Hydrograph Volume	= 9,121 cuft
Inflow Hydrograph	= 5 - POST TO EAST POND	Max. Elevation	= 585.80 ft
Pond Name	= EAST POND	Max. Storage	= 3,594 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 3.34 hrs



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

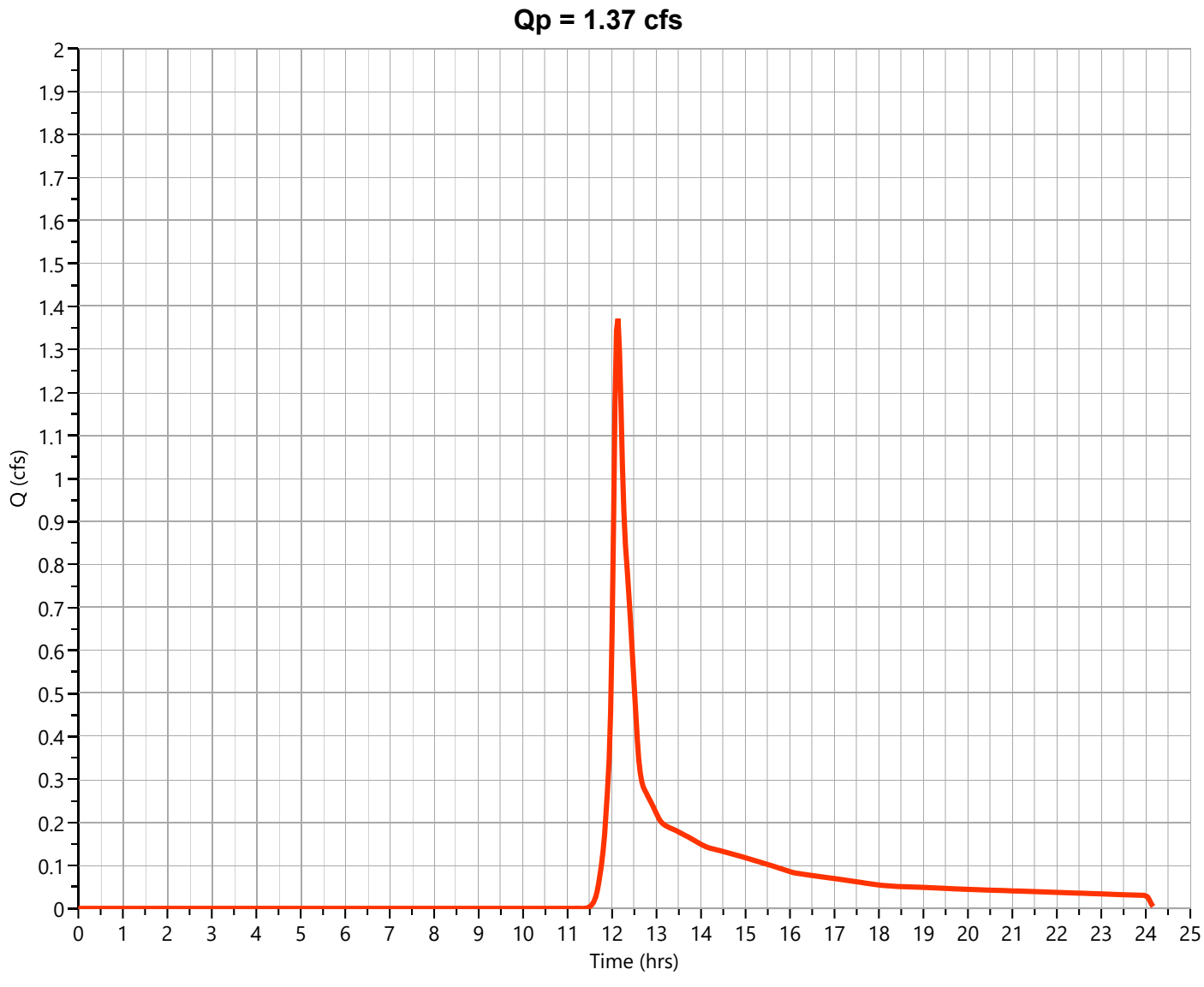
POST BYPASS TO ROW

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.372 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Runoff Volume	= 5,374 cuft
Drainage Area	= 1.497 ac	Curve Number	= 63.19*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 4.11 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.292	61	1/4 Ac Lots (A)(includes Drive)
0.205	77	1/8th Acre Lots (exist)(A)
1.497	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

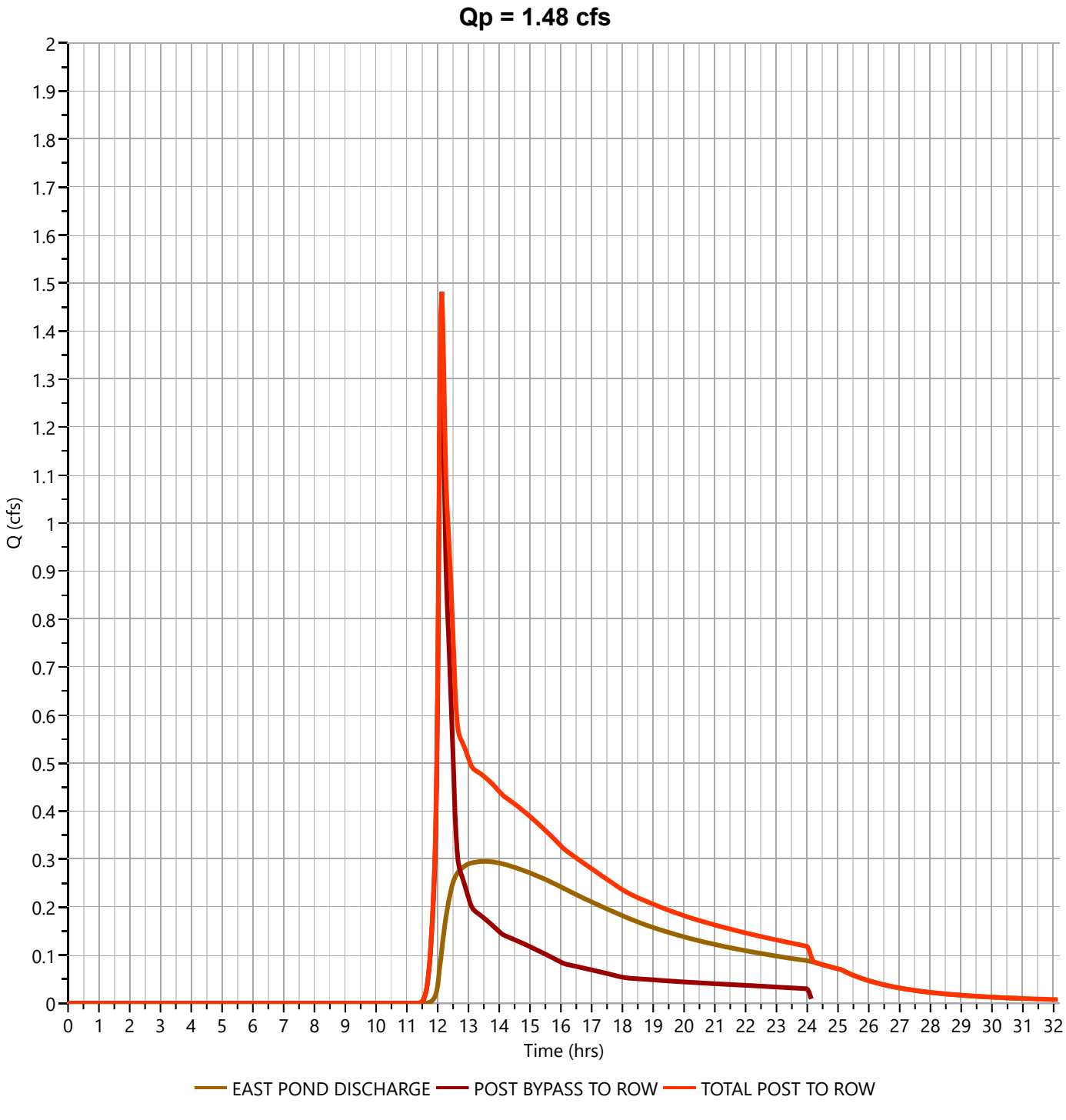
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO ROW

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 1.482 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 14,494 cuft
Inflow Hydrographs	= 6, 7	Total Contrib. Area	= 1.497 ac



Hydrograph Report

Project Name:

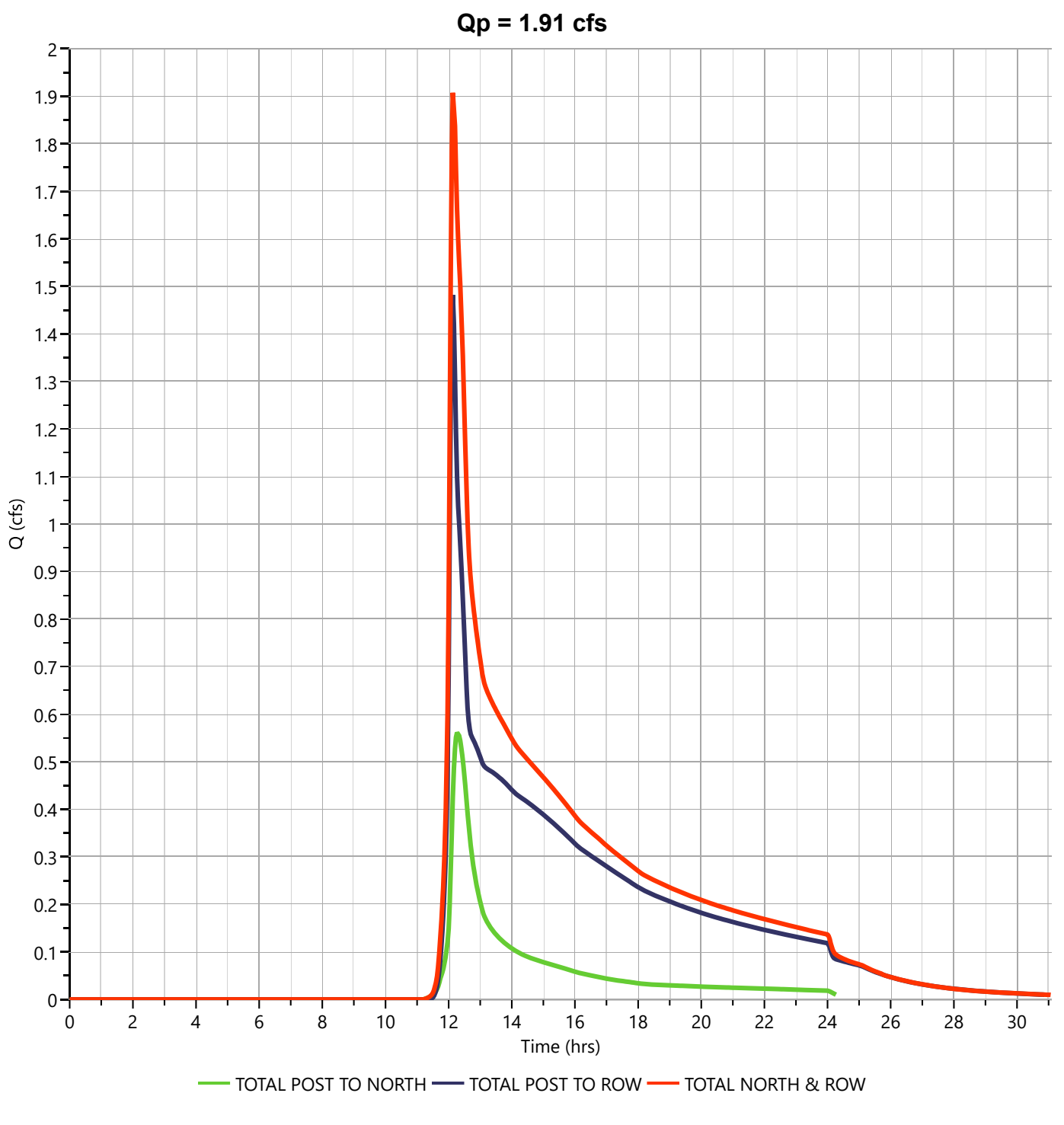
Hydrology Studio v 3.0.0.32

08-06-2024

Post TOTAL NORTH & ROW

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 1.907 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 17,955 cuft
Inflow Hydrographs	= 4, 8	Total Contrib. Area	= 1.626 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

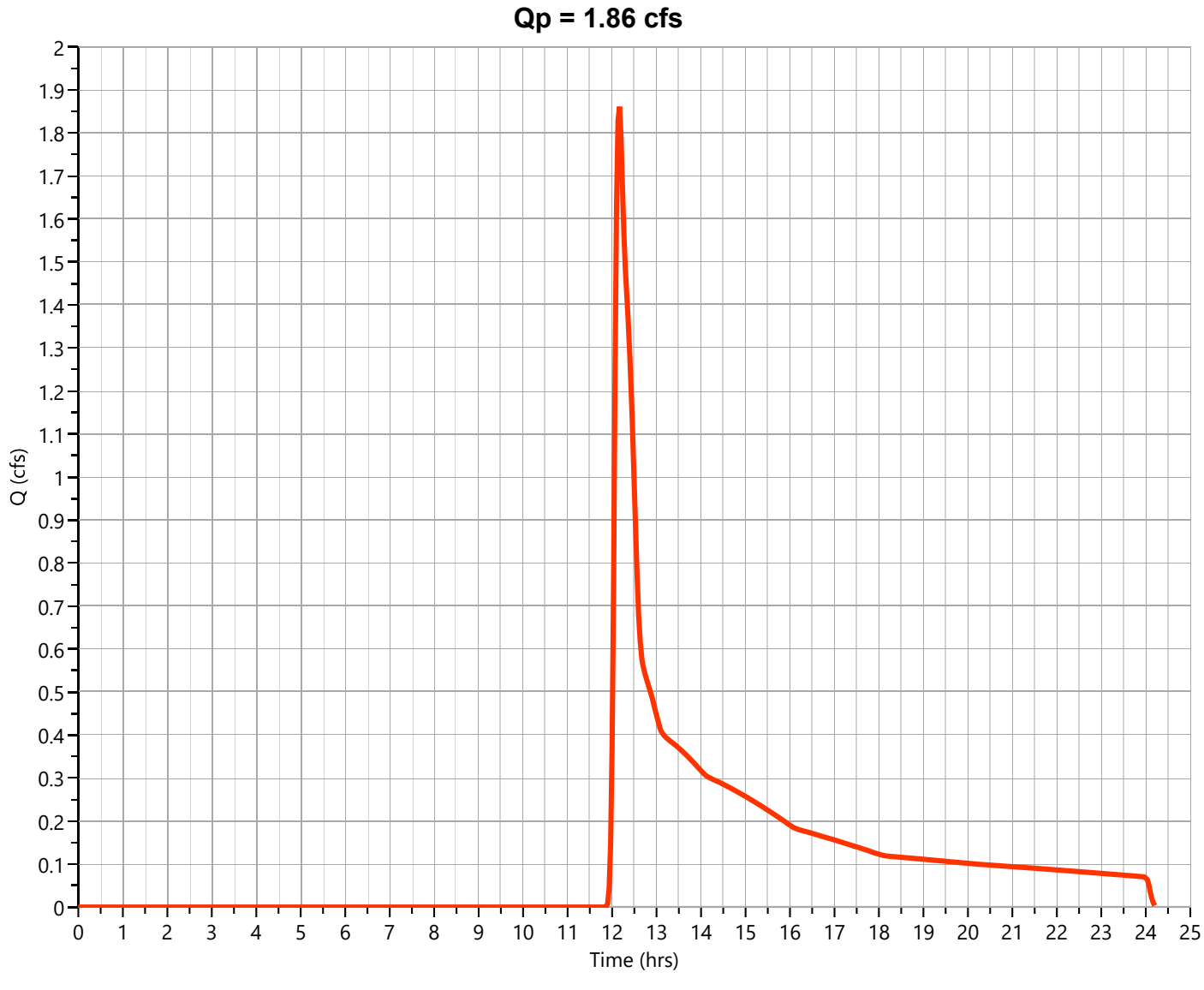
PRE TO ROW

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.861 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.17 hrs
Time Interval	= 2 min	Runoff Volume	= 9,949 cuft
Drainage Area	= 4.773 ac	Curve Number	= 55*
Tc Method	= User	Time of Conc. (Tc)	= 9.55 min
Total Rainfall	= 4.11 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.697	52	Grassland (A)
0.906	77	1/8th Acre Lots (exist)(A)
0.17	98	Impervious
4.773	**55**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

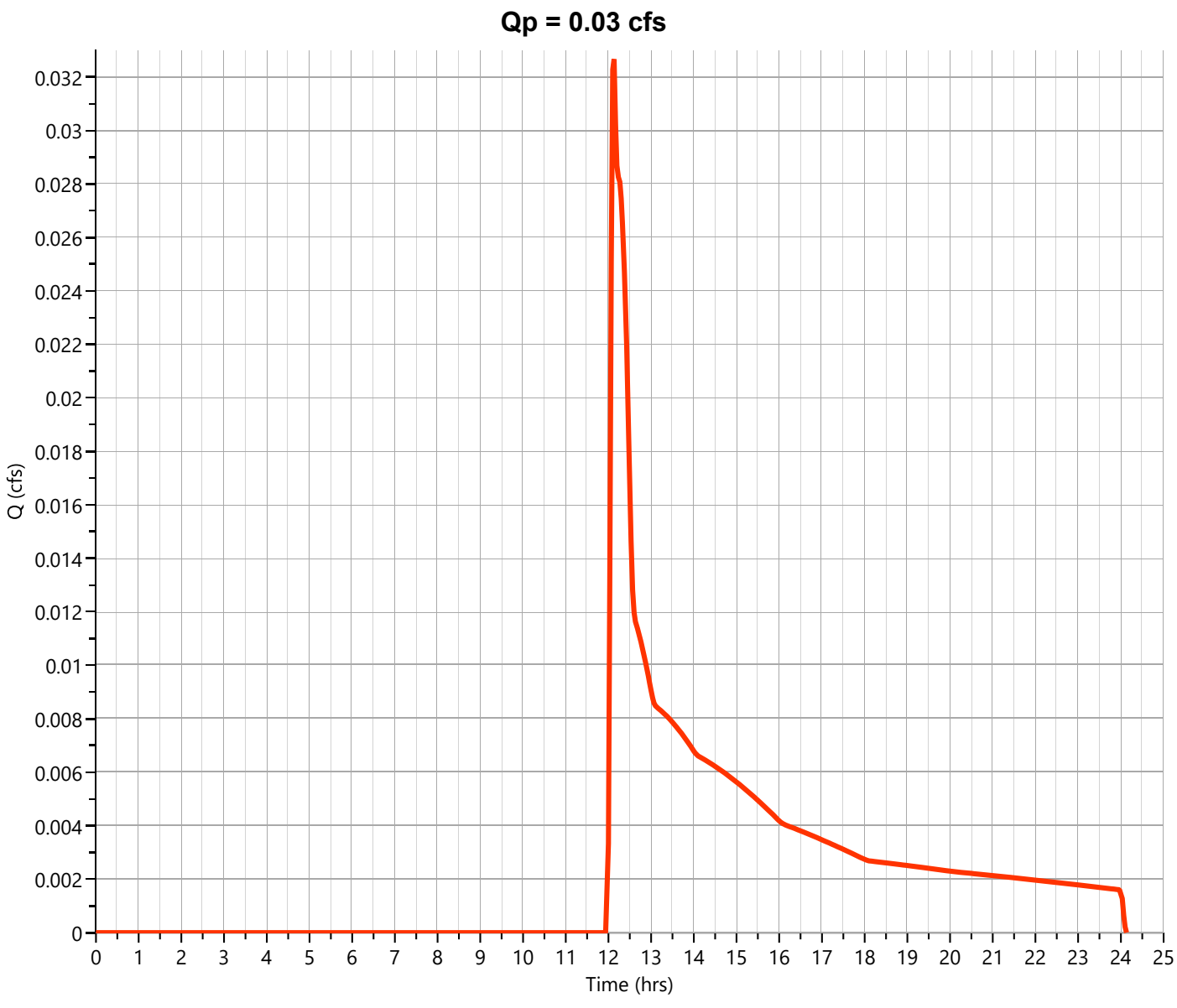
PRE TO NORTH

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.033 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Runoff Volume	= 205 cuft
Drainage Area	= 0.135 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.11 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.135	52	Grassland (A)
0.135	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

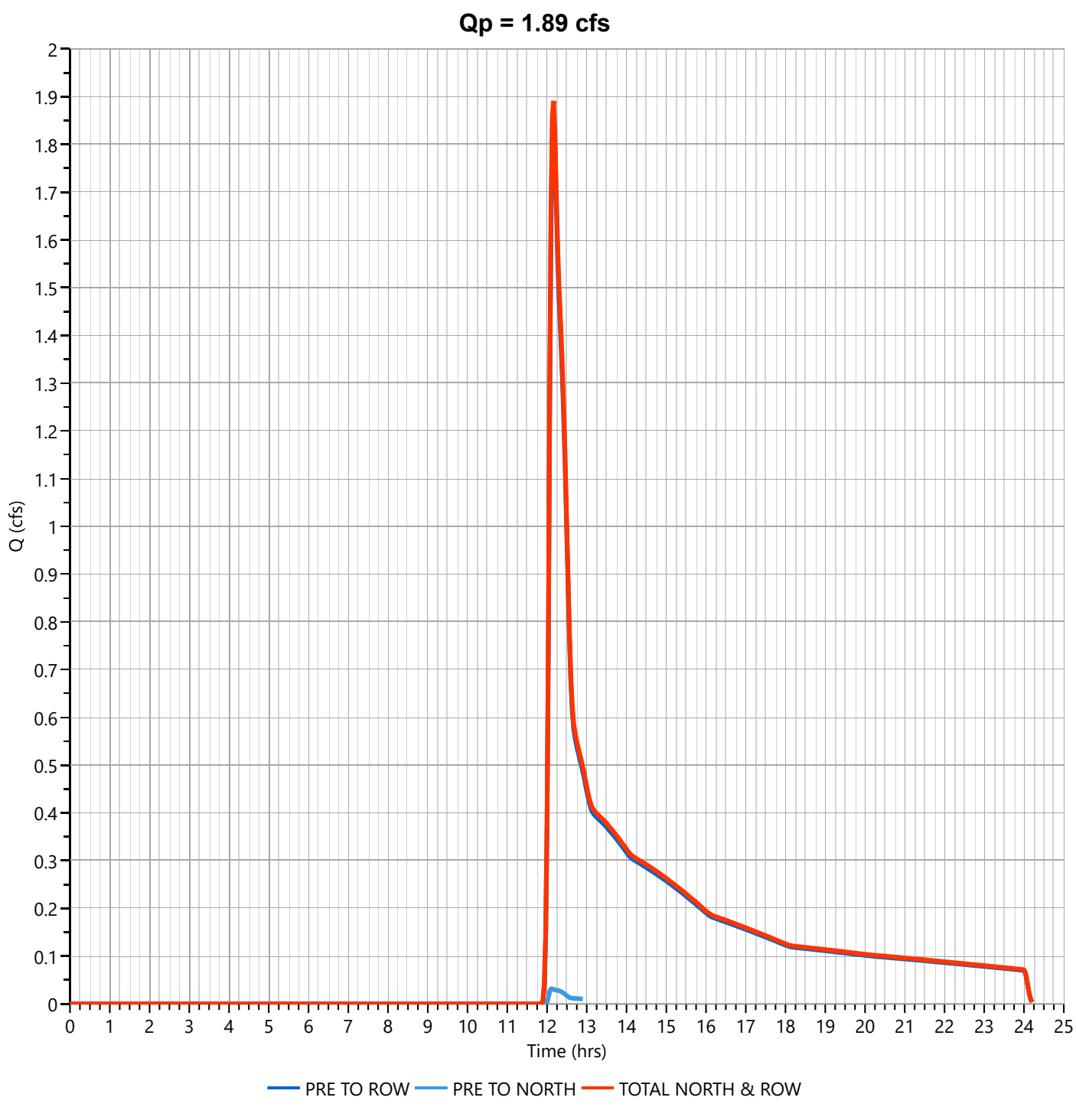
Hydrology Studio v 3.0.0.32

08-06-2024

Pre TOTAL NORTH & ROW

Hyd. No. 13

Hydrograph Type	= Junction	Peak Flow	= 1.891 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.17 hrs
Time Interval	= 2 min	Hydrograph Volume	= 10,154 cuft
Inflow Hydrographs	= 11, 12	Total Contrib. Area	= 4.908 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

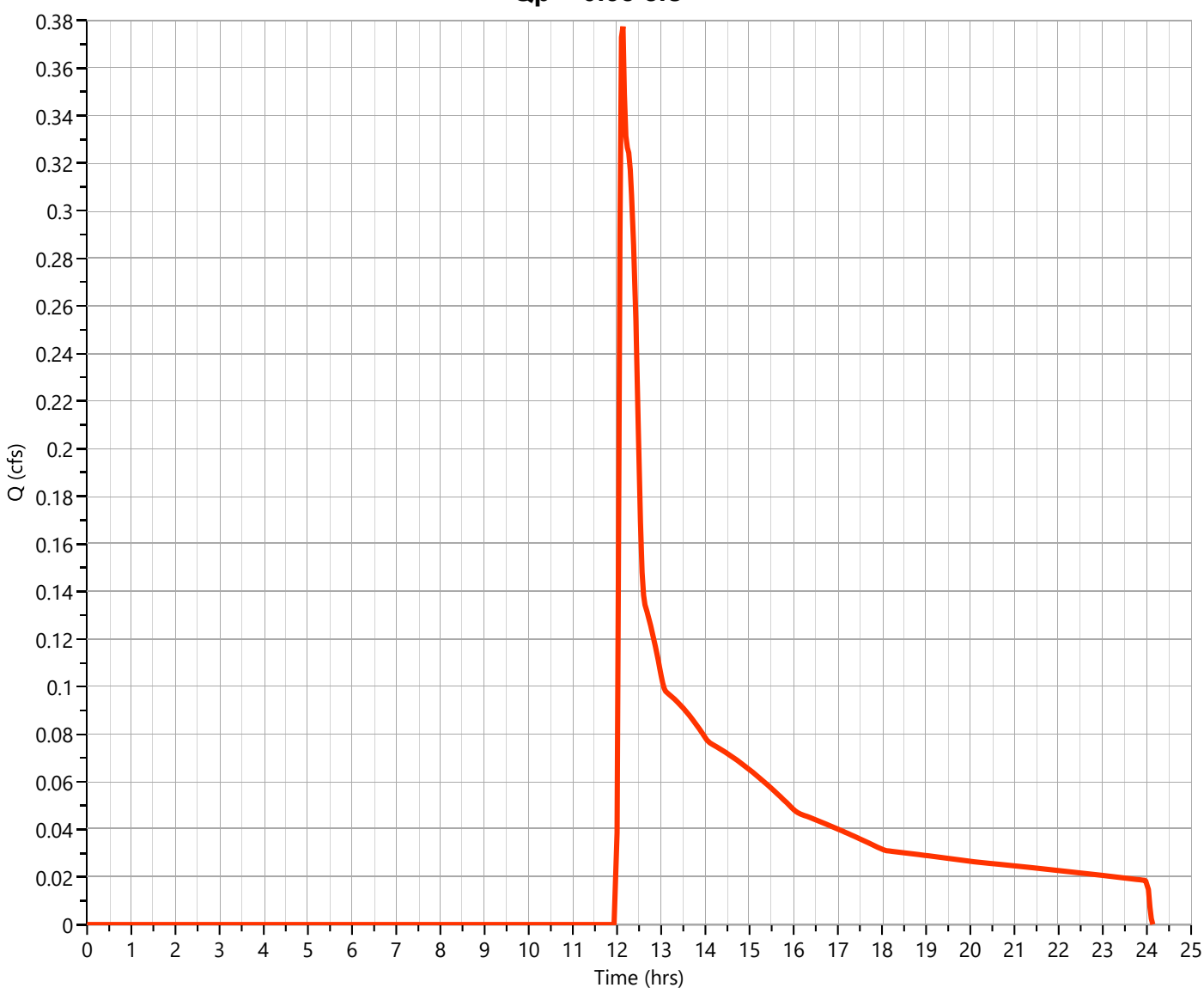
POST TO EAST

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.377 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Runoff Volume	= 2,365 cuft
Drainage Area	= 1.56 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.11 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.56	52	Grassland (A)
1.56	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

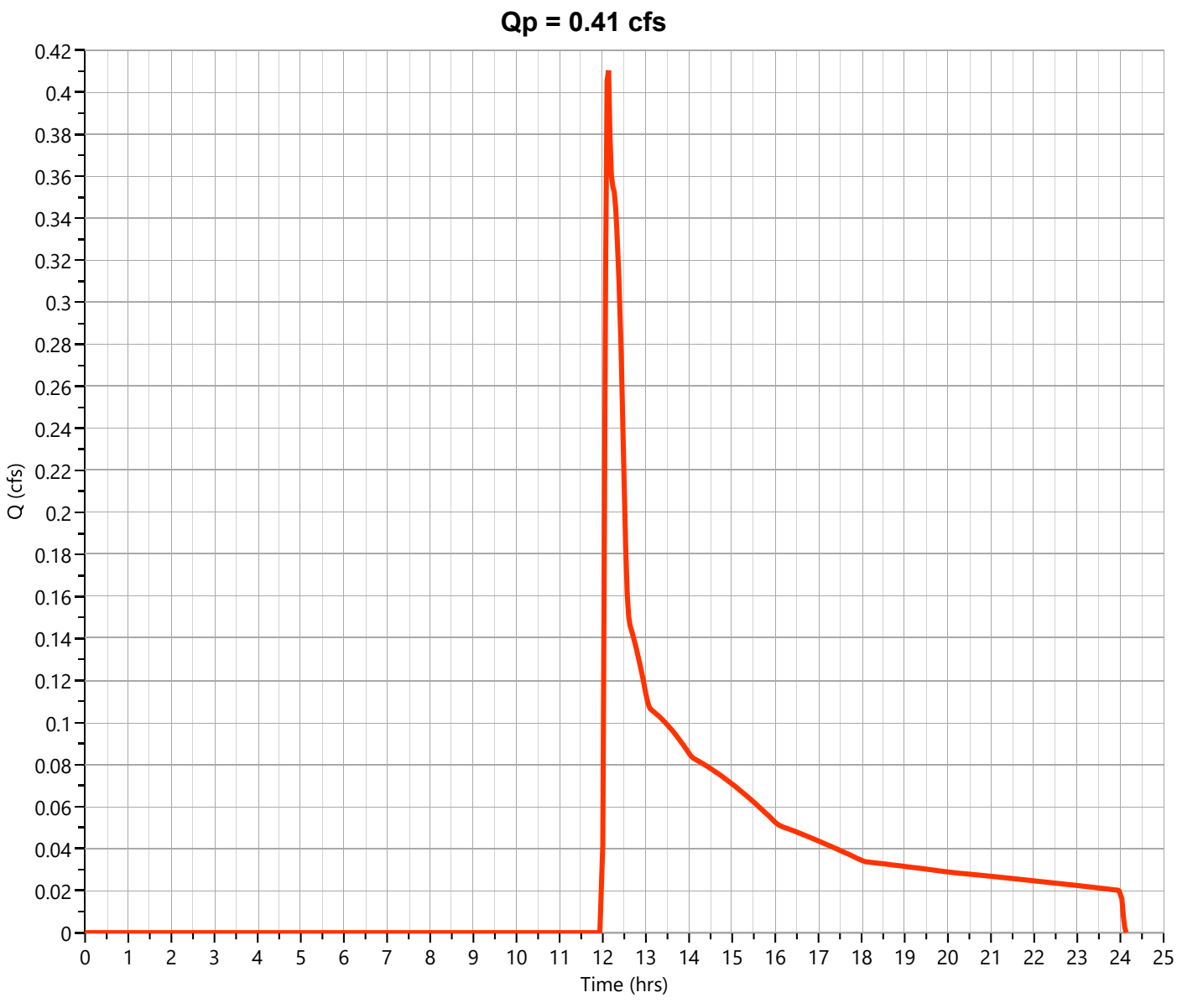
PRE TO EAST

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.410 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Runoff Volume	= 2,571 cuft
Drainage Area	= 1.696 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.11 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.696	52	Grassland (A)
1.696	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

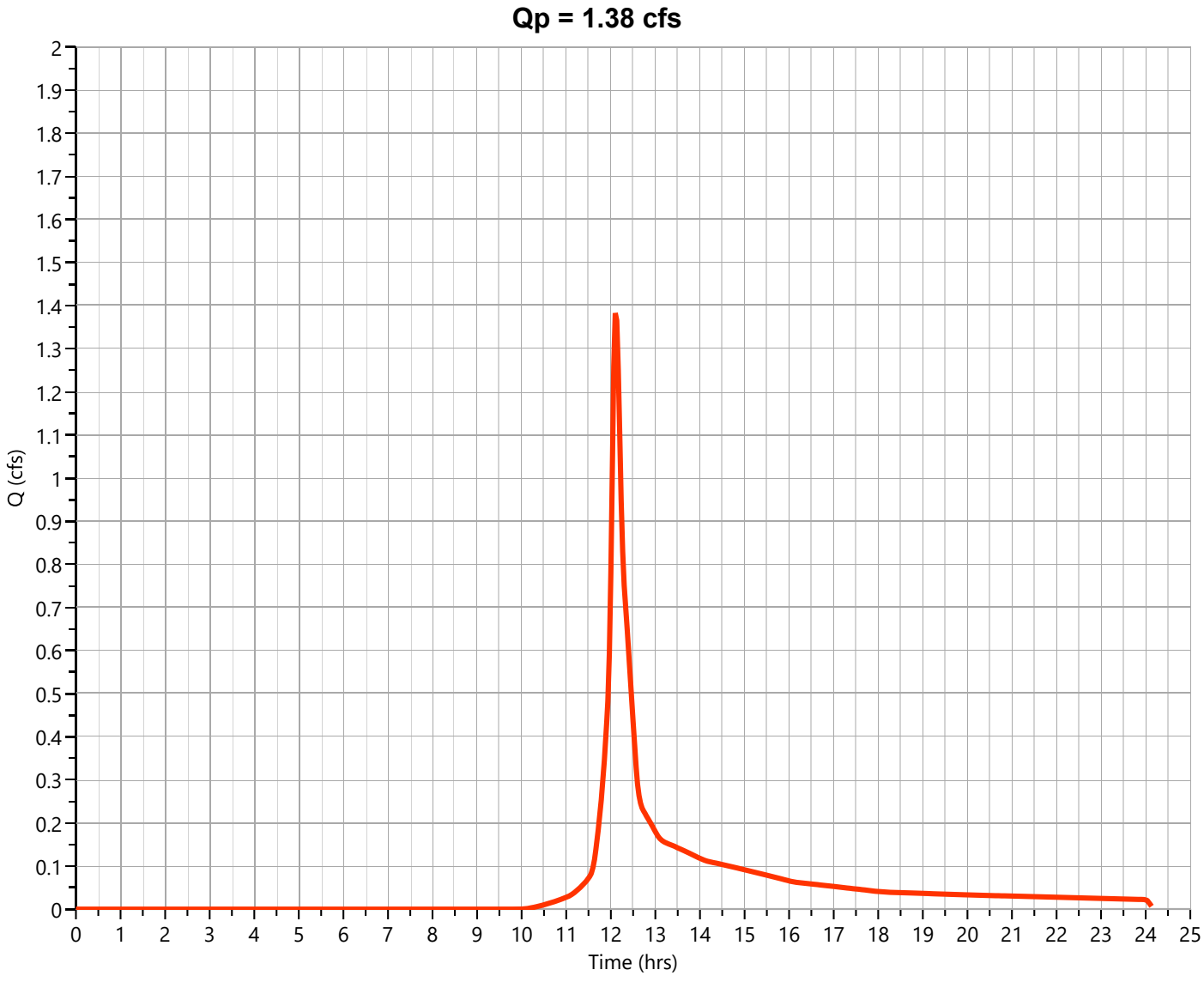
POST TO WEST POND

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.383 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 4,879 cuft
Drainage Area	= 0.707 ac	Curve Number	= 68*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 5.03 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.408	61	1/4 Acre Lots (A)
0.299	77	1/8th Acre Lots (exist)(A)
0.707	**68**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

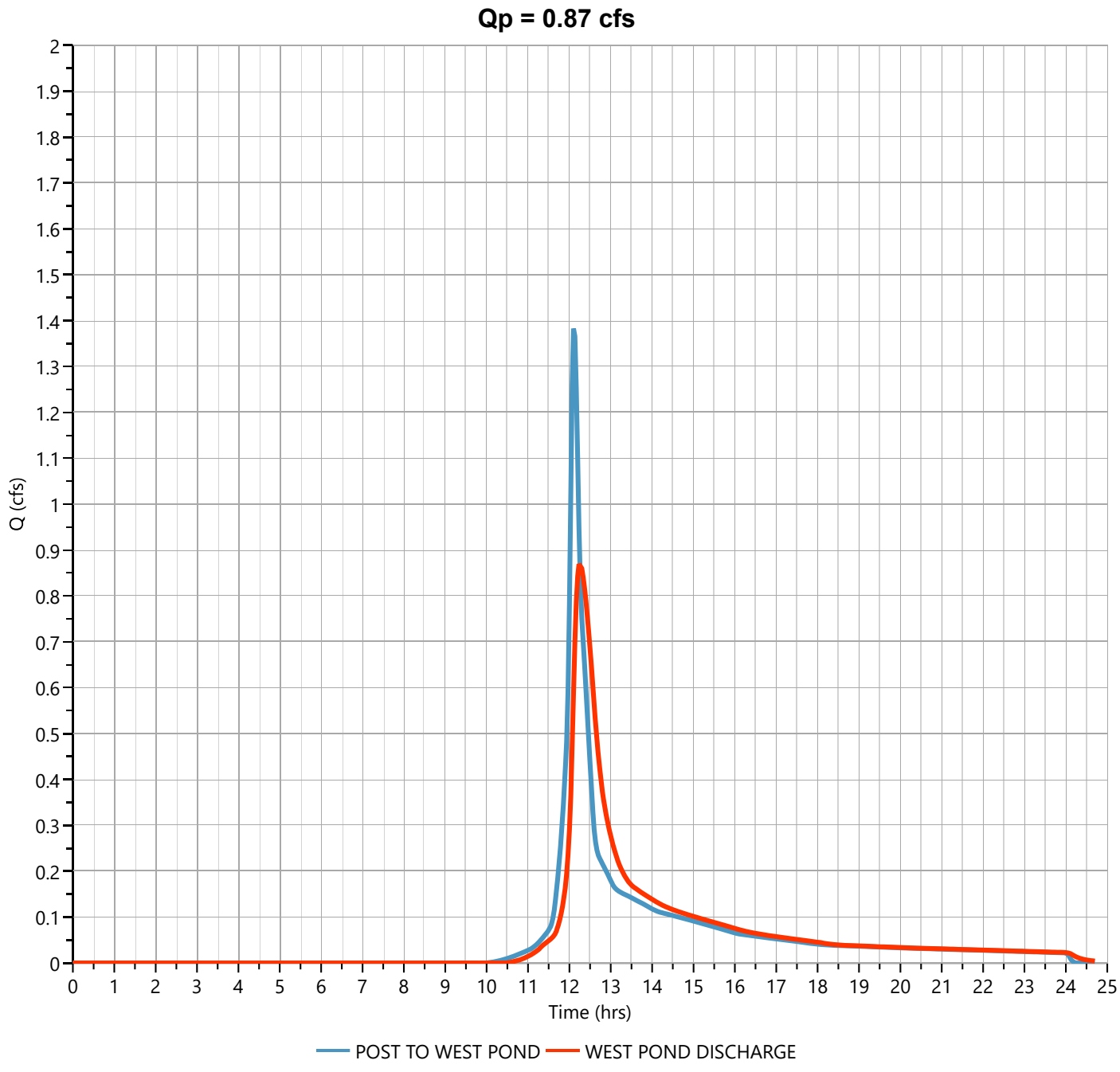
WEST POND DISCHARGE

Hyd. No. 2

Hydrograph Type	= Pond Route	Peak Flow	= 0.872 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.27 hrs
Time Interval	= 2 min	Hydrograph Volume	= 4,871 cuft
Inflow Hydrograph	= 1 - POST TO WEST POND	Max. Elevation	= 589.44 ft
Pond Name	= WEST POND	Max. Storage	= 806 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 17 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

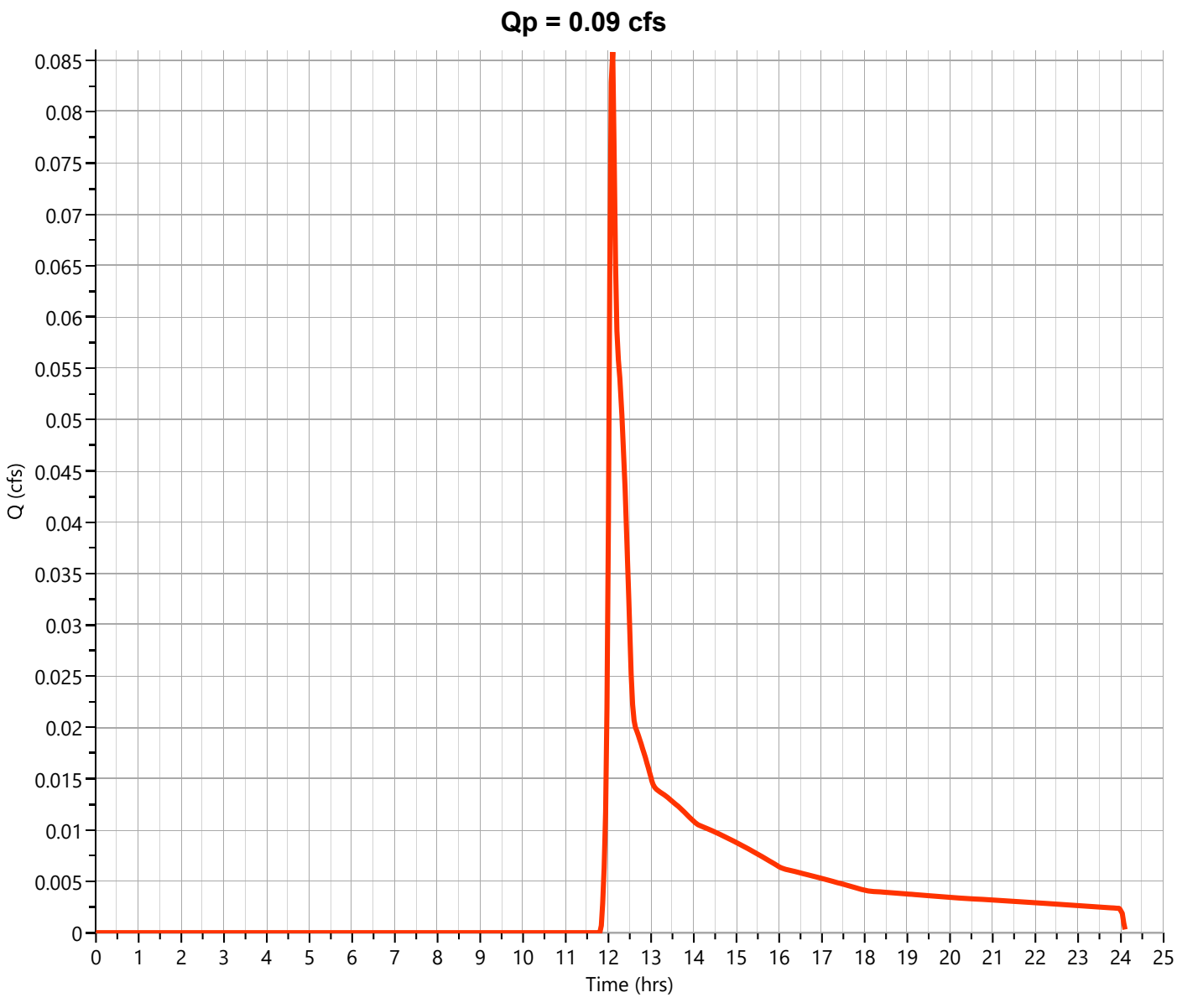
Post NORTH UNDISTURBED

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.086 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 358 cuft
Drainage Area	= 0.129 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.03 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.129	52	Grassland (A)
0.129	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

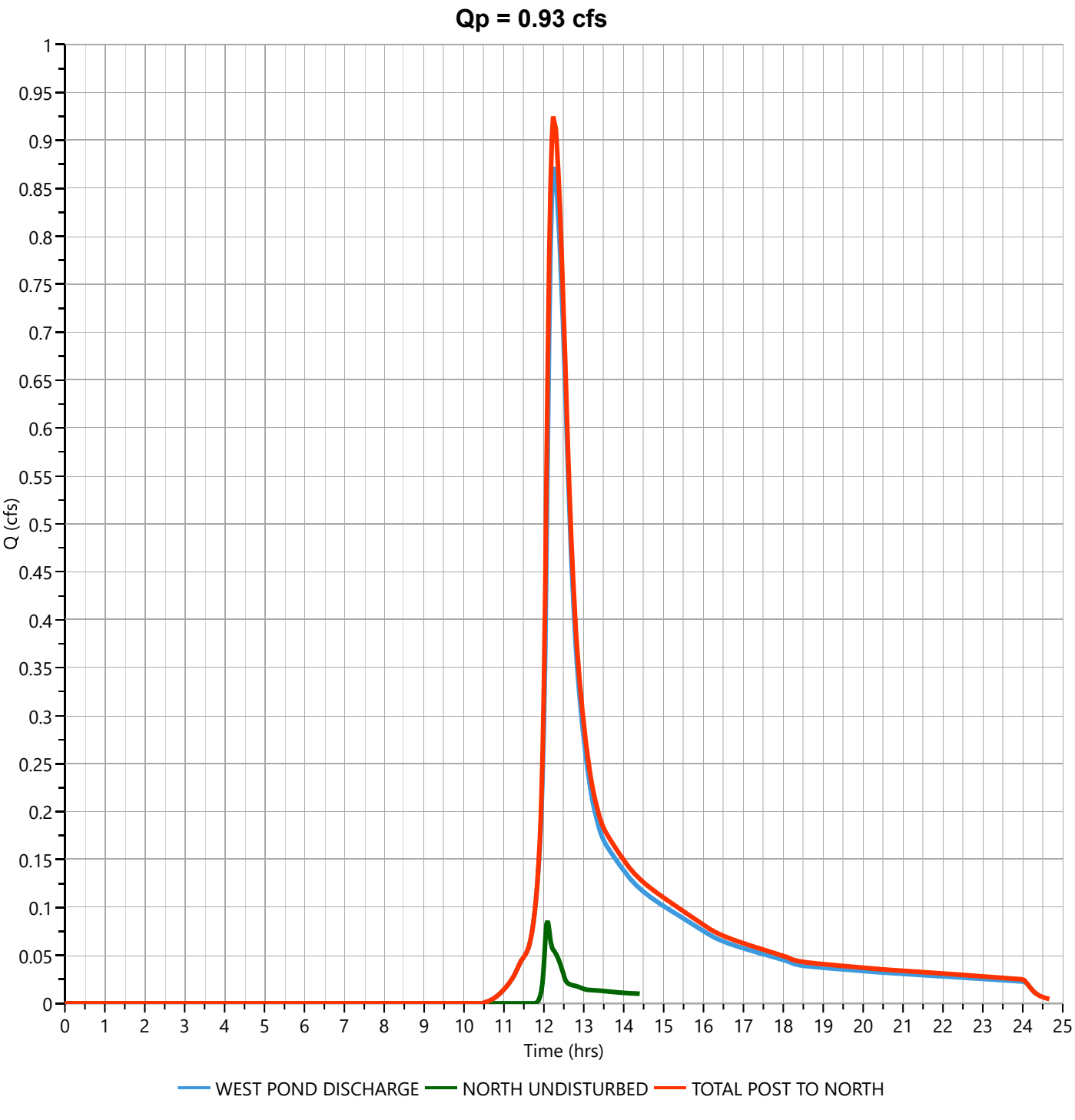
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO NORTH

Hyd. No. 4

Hydrograph Type	= Junction	Peak Flow	= 0.926 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.27 hrs
Time Interval	= 2 min	Hydrograph Volume	= 5,229 cuft
Inflow Hydrographs	= 2, 3	Total Contrib. Area	= 0.129 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

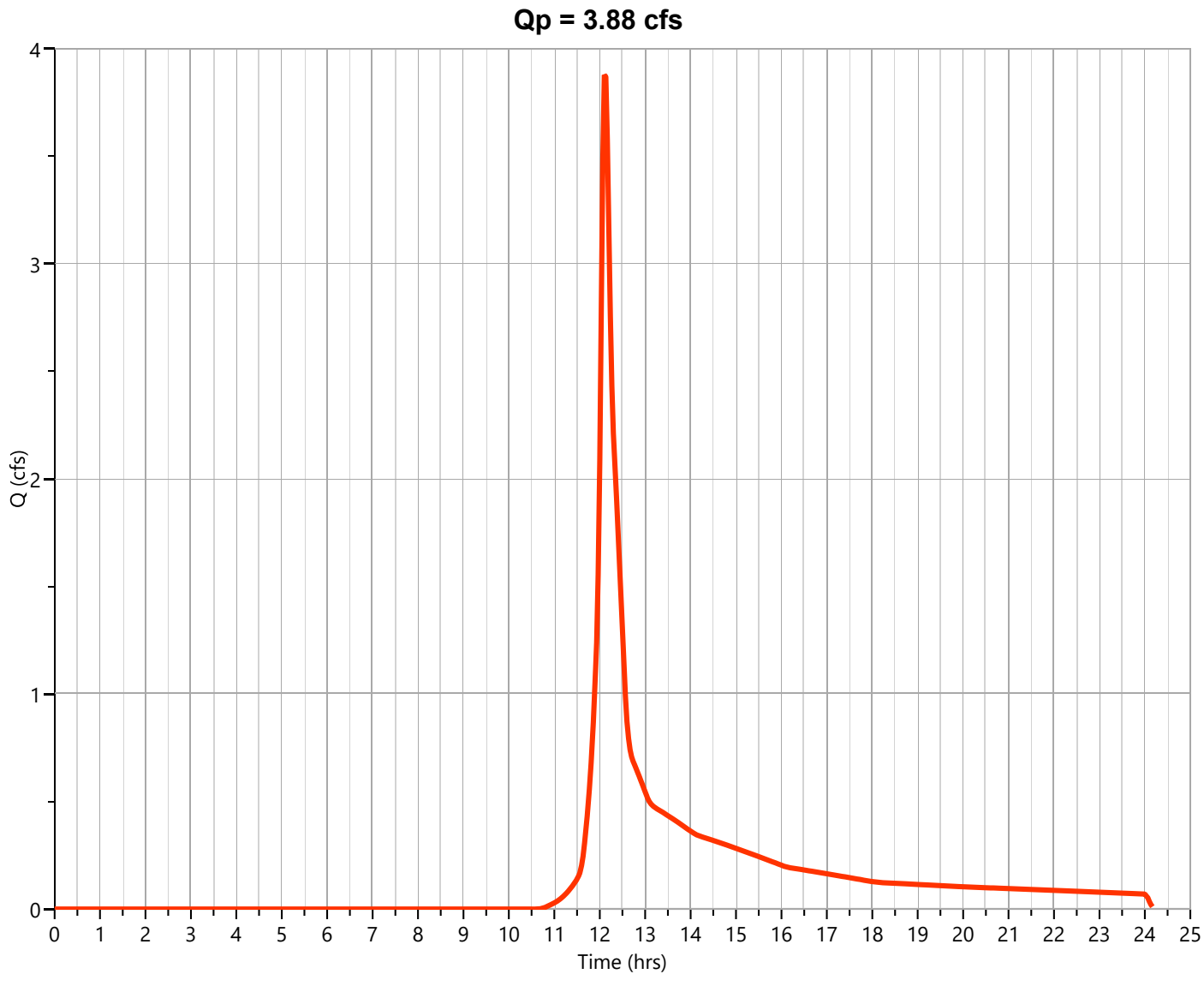
POST TO EAST POND

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.878 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 14,161 cuft
Drainage Area	= 2.438 ac	Curve Number	= 64*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 5.03 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
2.012	61	1/4 Acre Lots (A)
0.426	77	1/8th Acre Lots (exist)(A)
2.438	**64**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

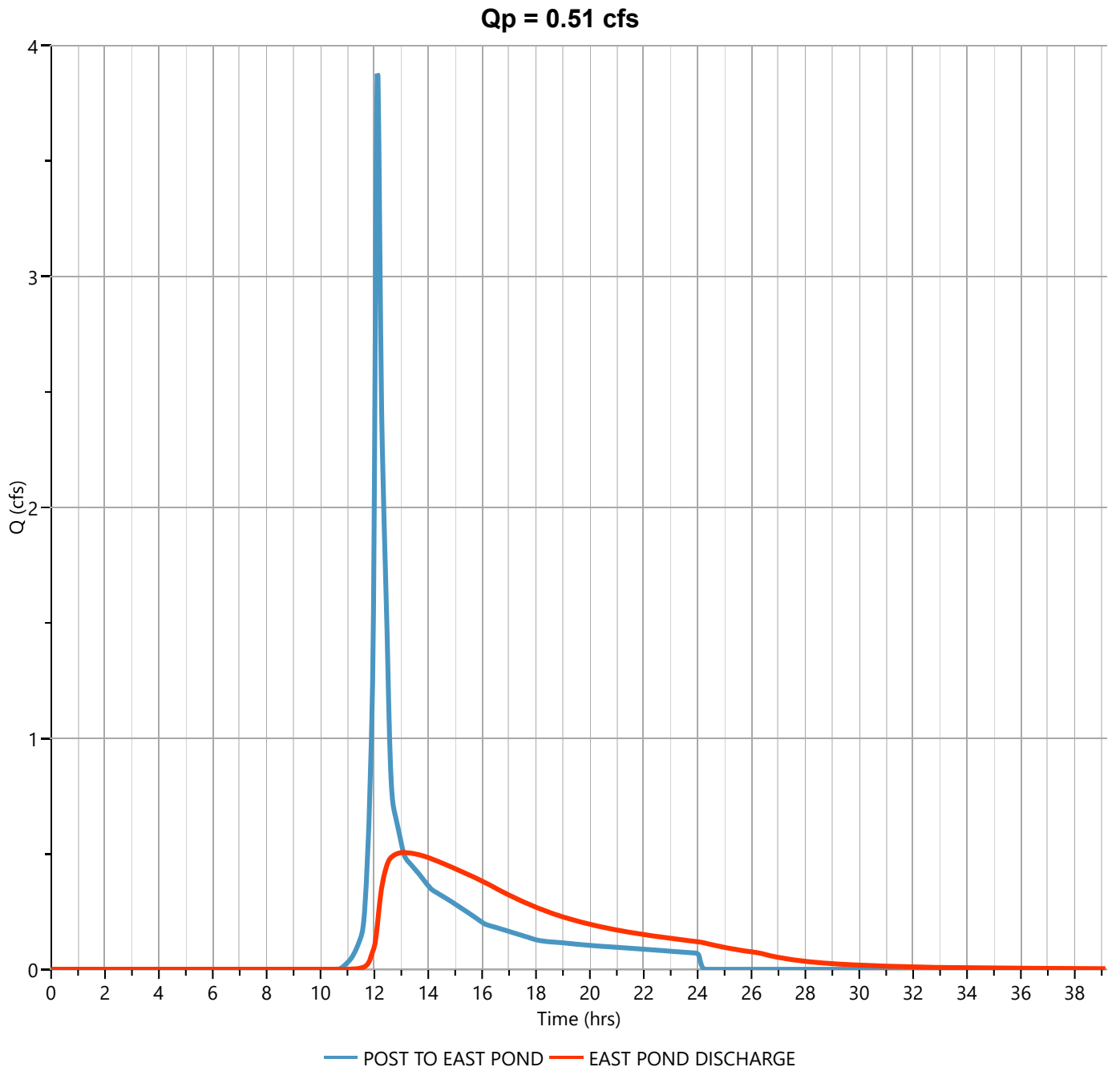
EAST POND DISCHARGE

Hyd. No. 6

Hydrograph Type	= Pond Route	Peak Flow	= 0.506 cfs
Storm Frequency	= 5-yr	Time to Peak	= 13.07 hrs
Time Interval	= 2 min	Hydrograph Volume	= 14,123 cuft
Inflow Hydrograph	= 5 - POST TO EAST POND	Max. Elevation	= 586.35 ft
Pond Name	= EAST POND	Max. Storage	= 5,797 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 3.20 hrs



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

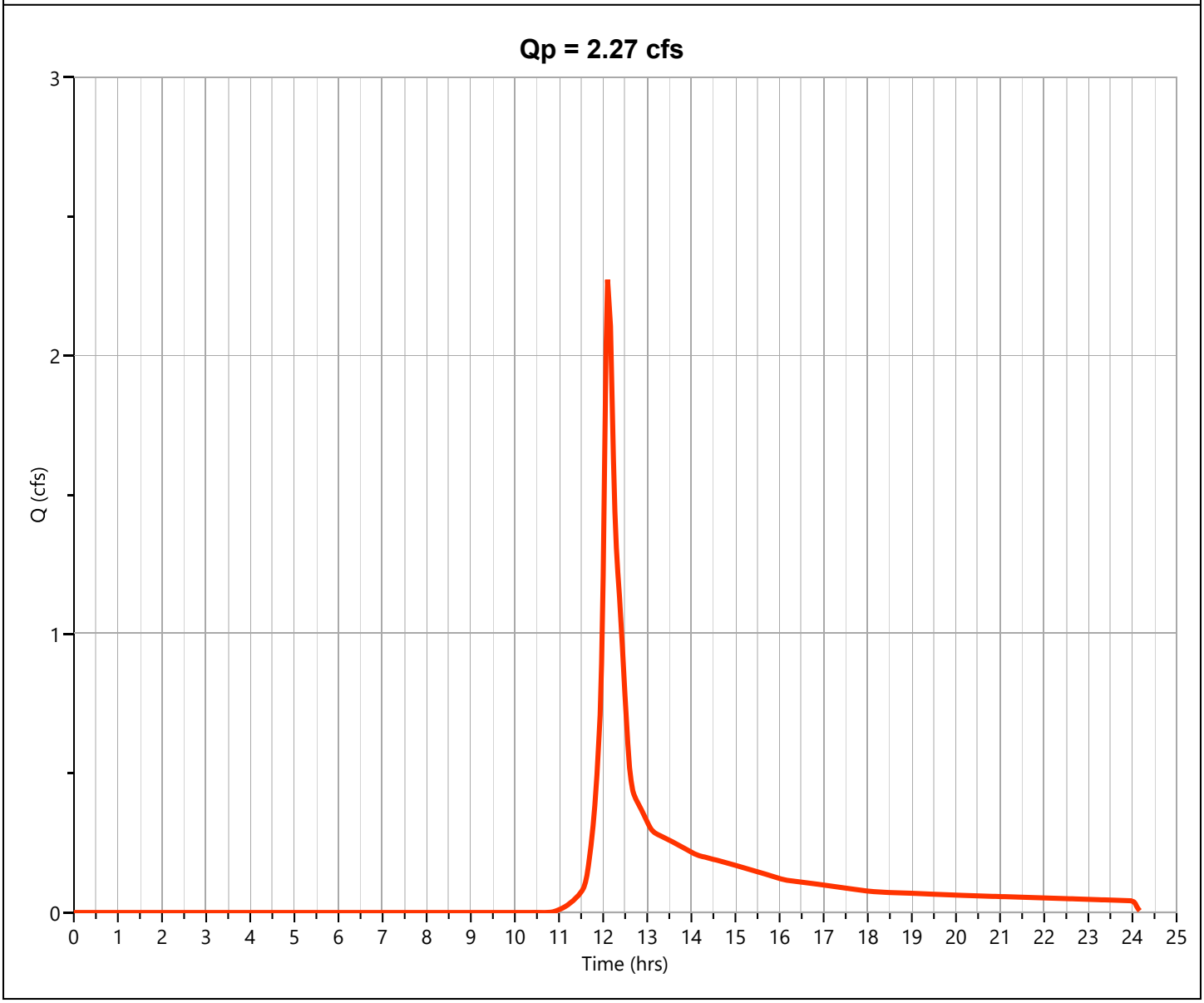
POST BYPASS TO ROW

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 2.274 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Runoff Volume	= 8,377 cuft
Drainage Area	= 1.497 ac	Curve Number	= 63.19*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 5.03 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.292	61	1/4 Ac Lots (A)(includes Drive)
0.205	77	1/8th Acre Lots (exist)(A)
1.497	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

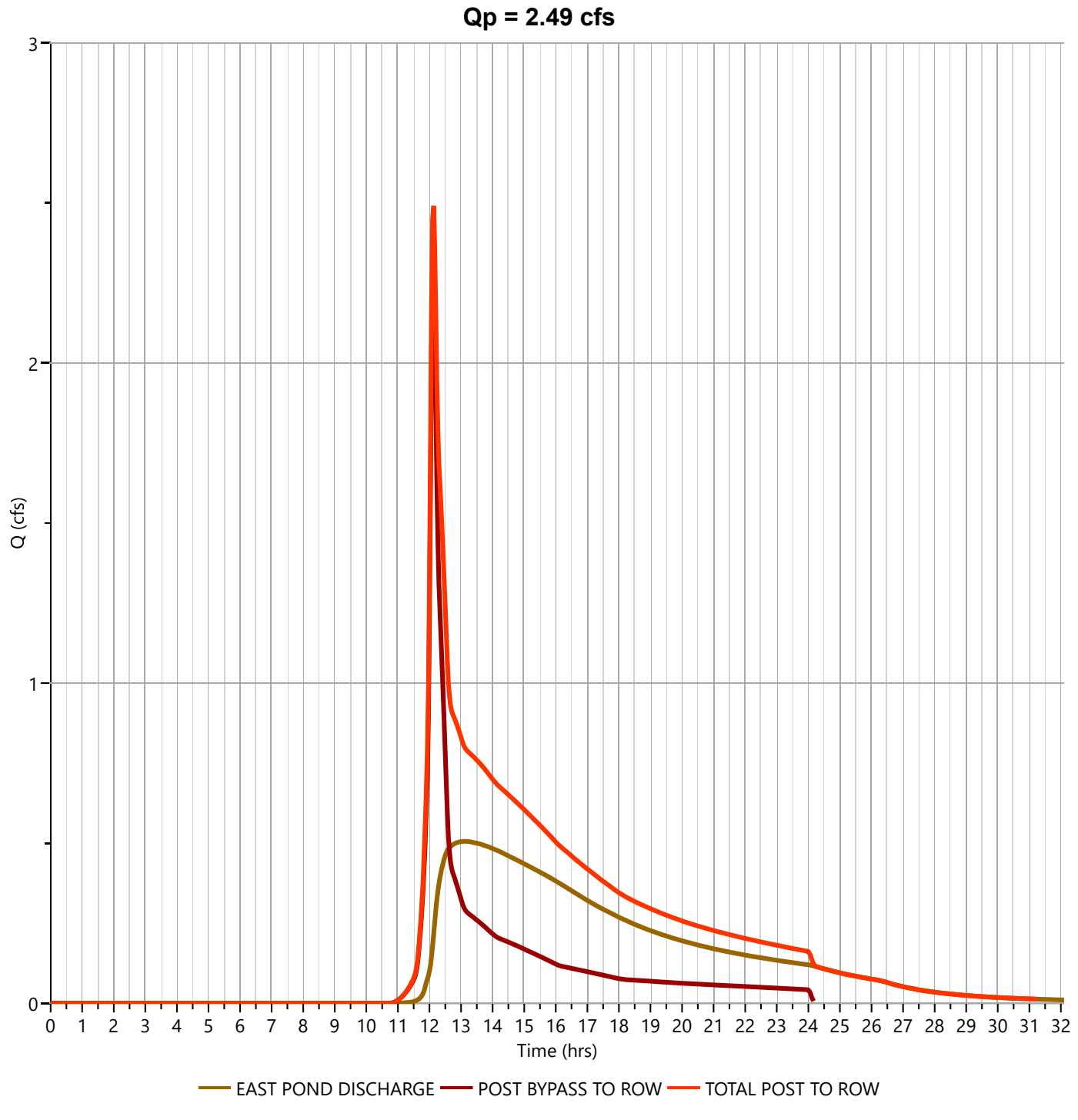
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO ROW

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 2.491 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 22,500 cuft
Inflow Hydrographs	= 6, 7	Total Contrib. Area	= 1.497 ac



Hydrograph Report

Project Name:

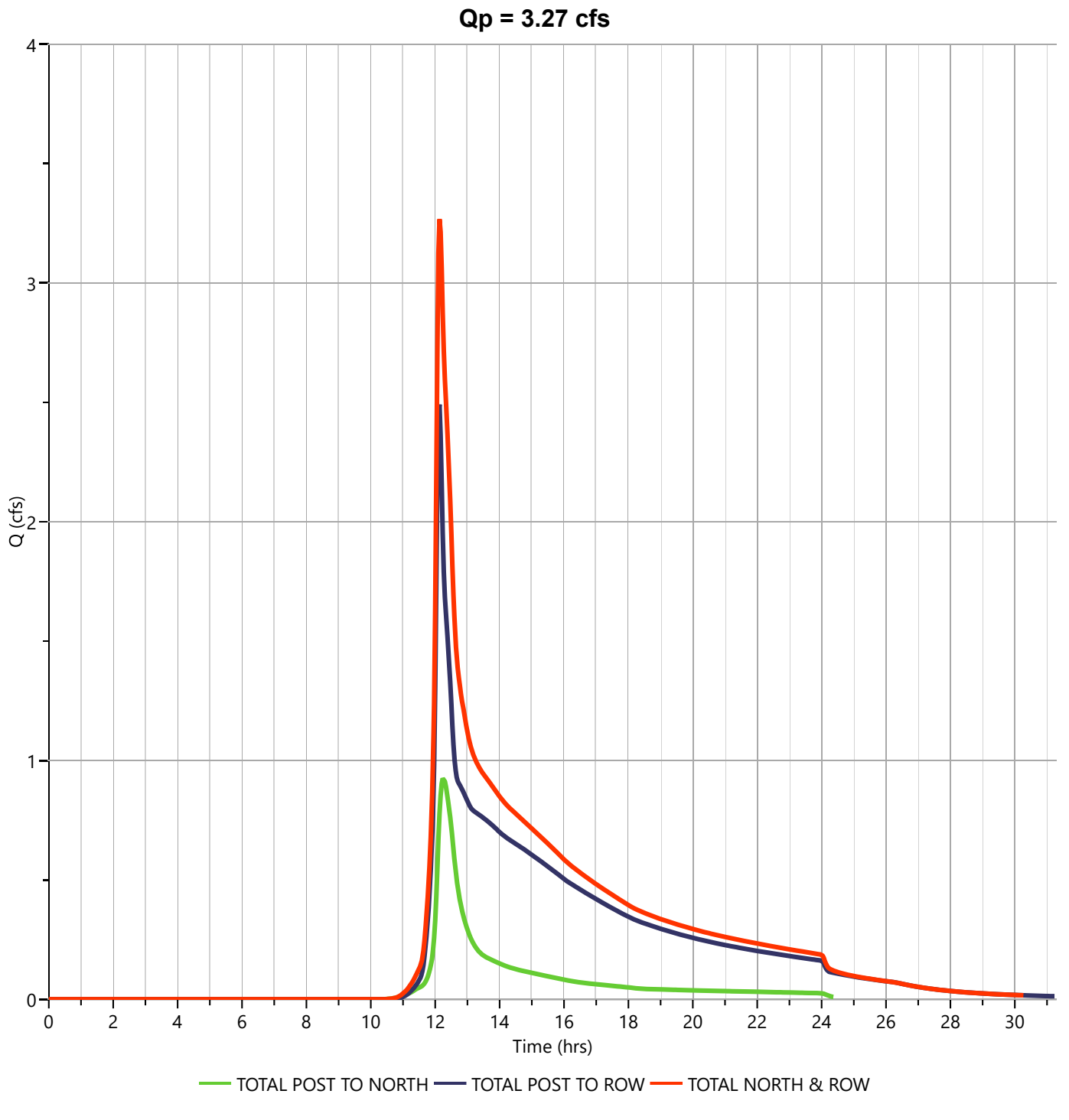
Hydrology Studio v 3.0.0.32

08-06-2024

Post TOTAL NORTH & ROW

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 3.267 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 27,729 cuft
Inflow Hydrographs	= 4, 8	Total Contrib. Area	= 1.626 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

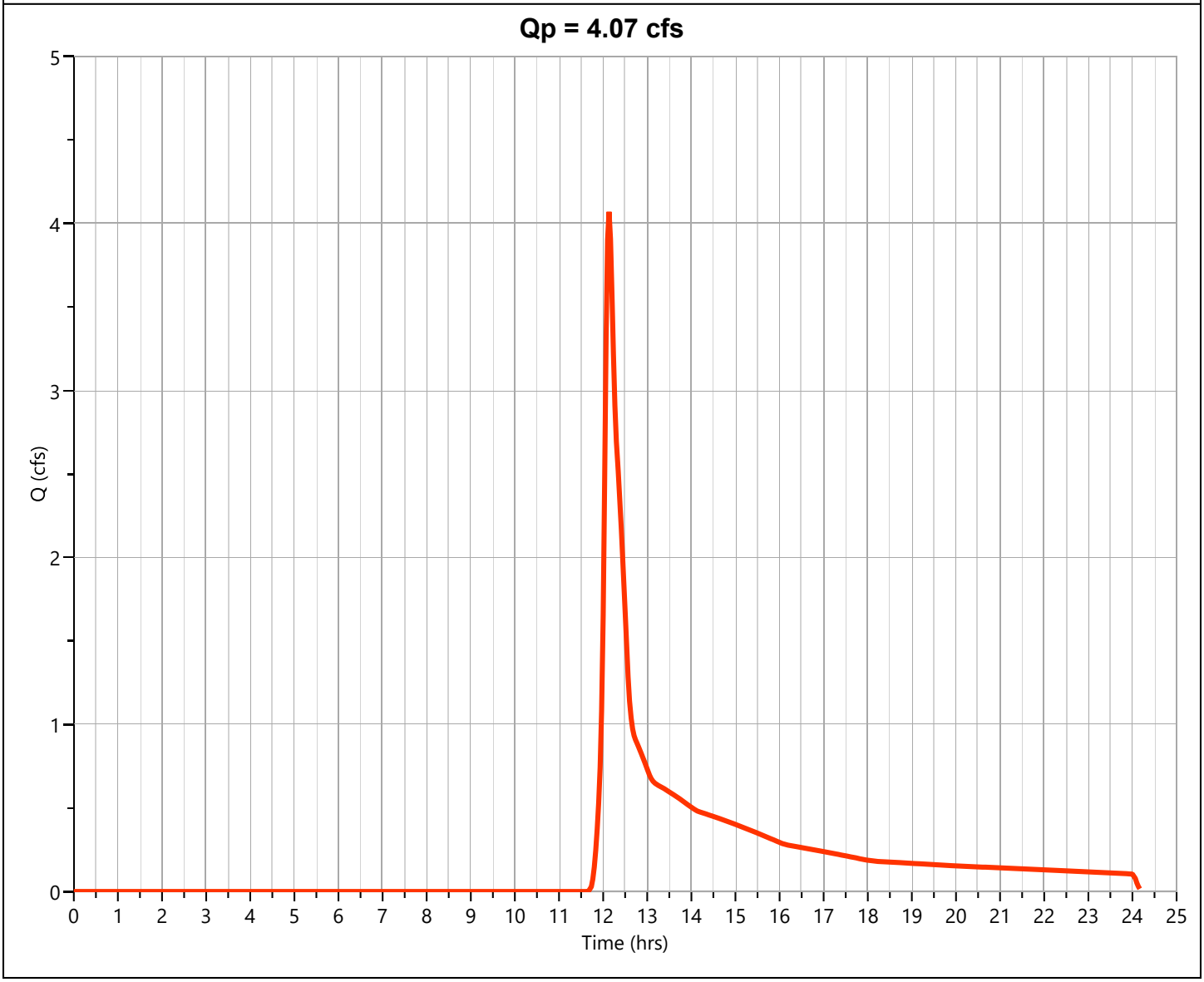
PRE TO ROW

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 4.070 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Runoff Volume	= 17,237 cuft
Drainage Area	= 4.773 ac	Curve Number	= 55*
Tc Method	= User	Time of Conc. (Tc)	= 9.55 min
Total Rainfall	= 5.03 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.697	52	Grassland (A)
0.906	77	1/8th Acre Lots (exist)(A)
0.17	98	Impervious
4.773	**55**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

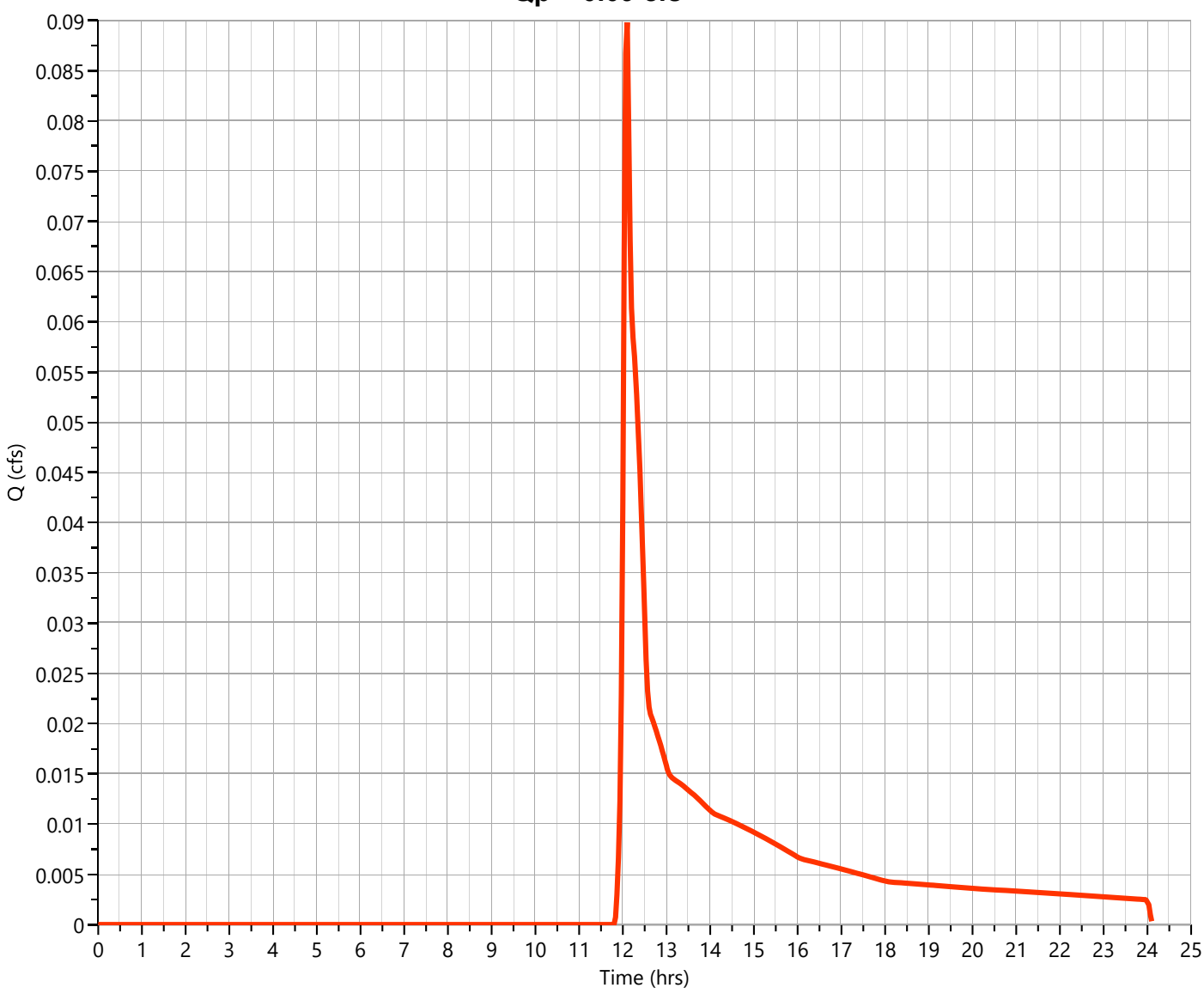
PRE TO NORTH

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.090 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 375 cuft
Drainage Area	= 0.135 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.03 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.135	52	Grassland (A)
0.135	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

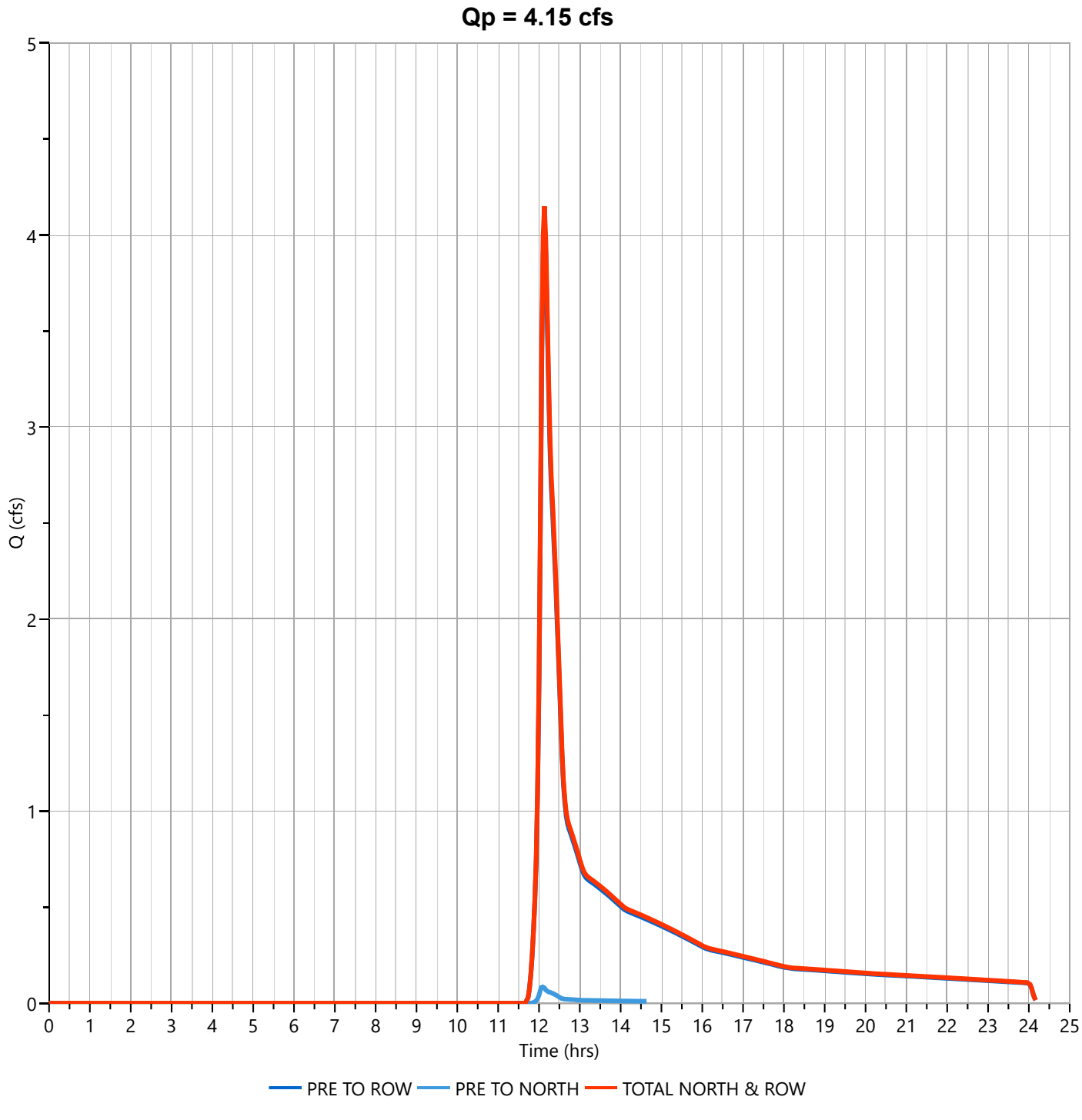
Hydrology Studio v 3.0.0.32

08-06-2024

Pre TOTAL NORTH & ROW

Hyd. No. 13

Hydrograph Type	= Junction	Peak Flow	= 4.150 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 17,613 cuft
Inflow Hydrographs	= 11, 12	Total Contrib. Area	= 4.908 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

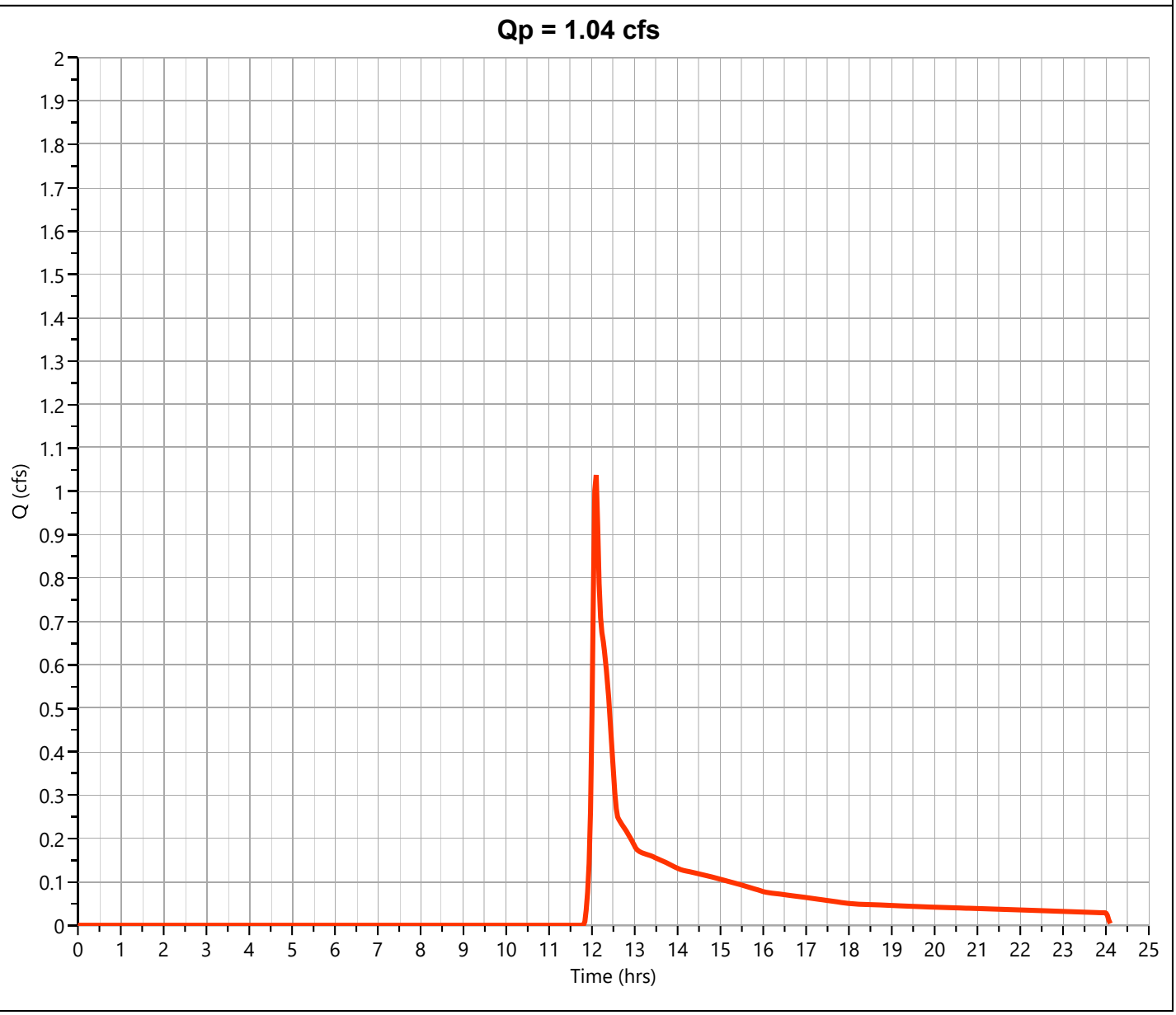
POST TO EAST

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.038 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 4,334 cuft
Drainage Area	= 1.56 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.03 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.56	52	Grassland (A)
1.56	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

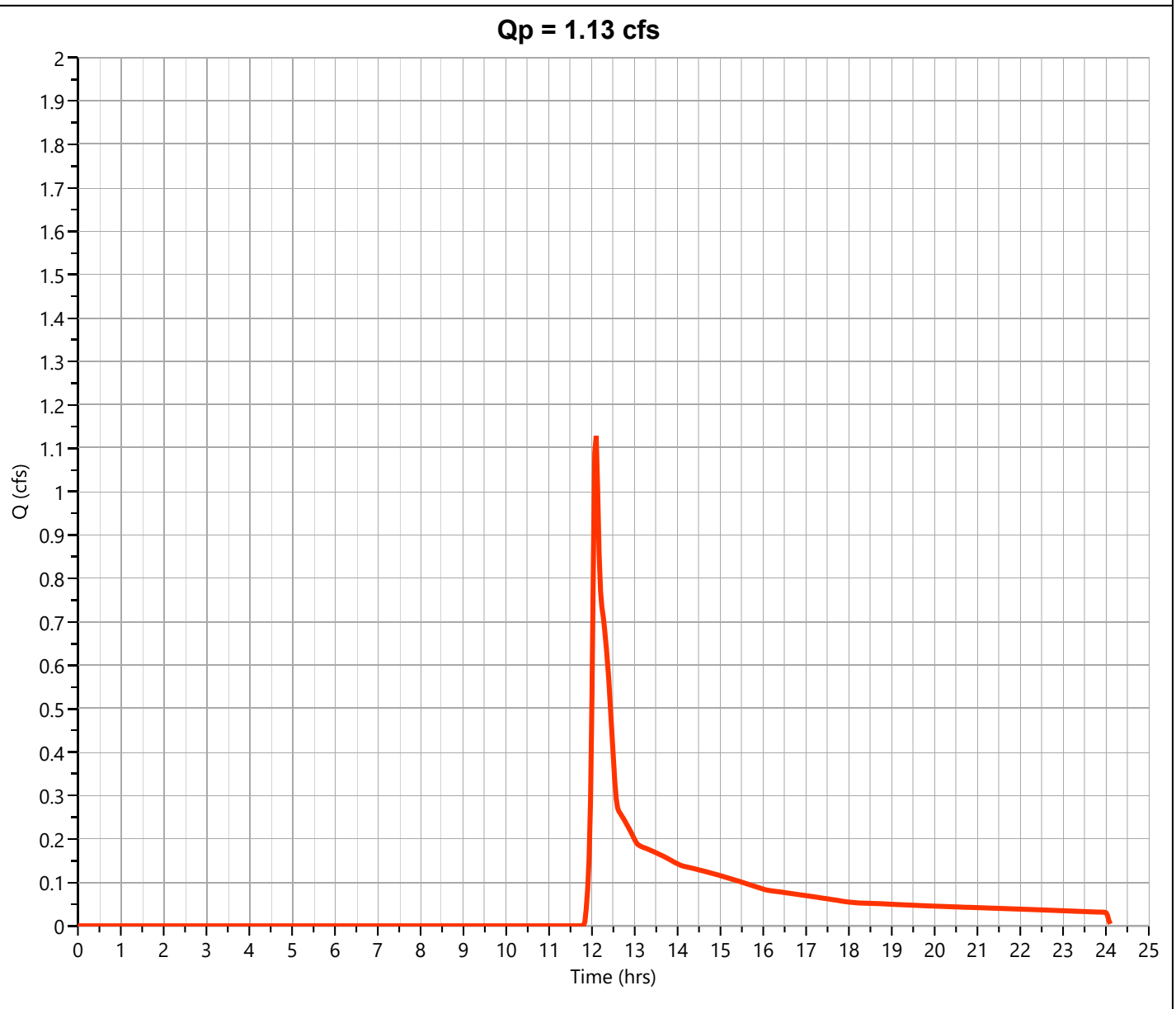
PRE TO EAST

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.128 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 4,712 cuft
Drainage Area	= 1.696 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.03 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.696	52	Grassland (A)
1.696	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

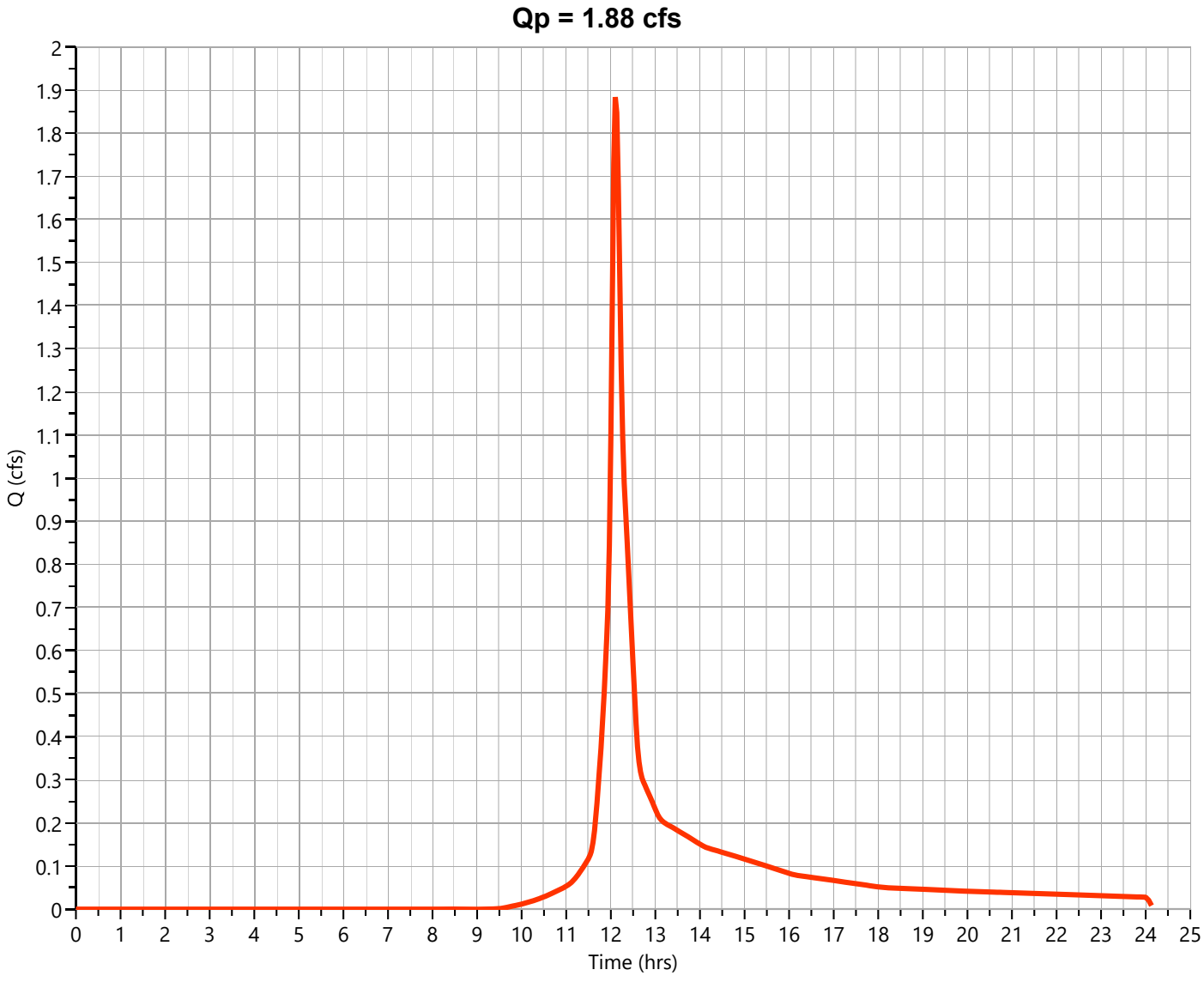
POST TO WEST POND

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.884 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 6,530 cuft
Drainage Area	= 0.707 ac	Curve Number	= 68*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 5.90 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.408	61	1/4 Acre Lots (A)
0.299	77	1/8th Acre Lots (exist)(A)
0.707	**68**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

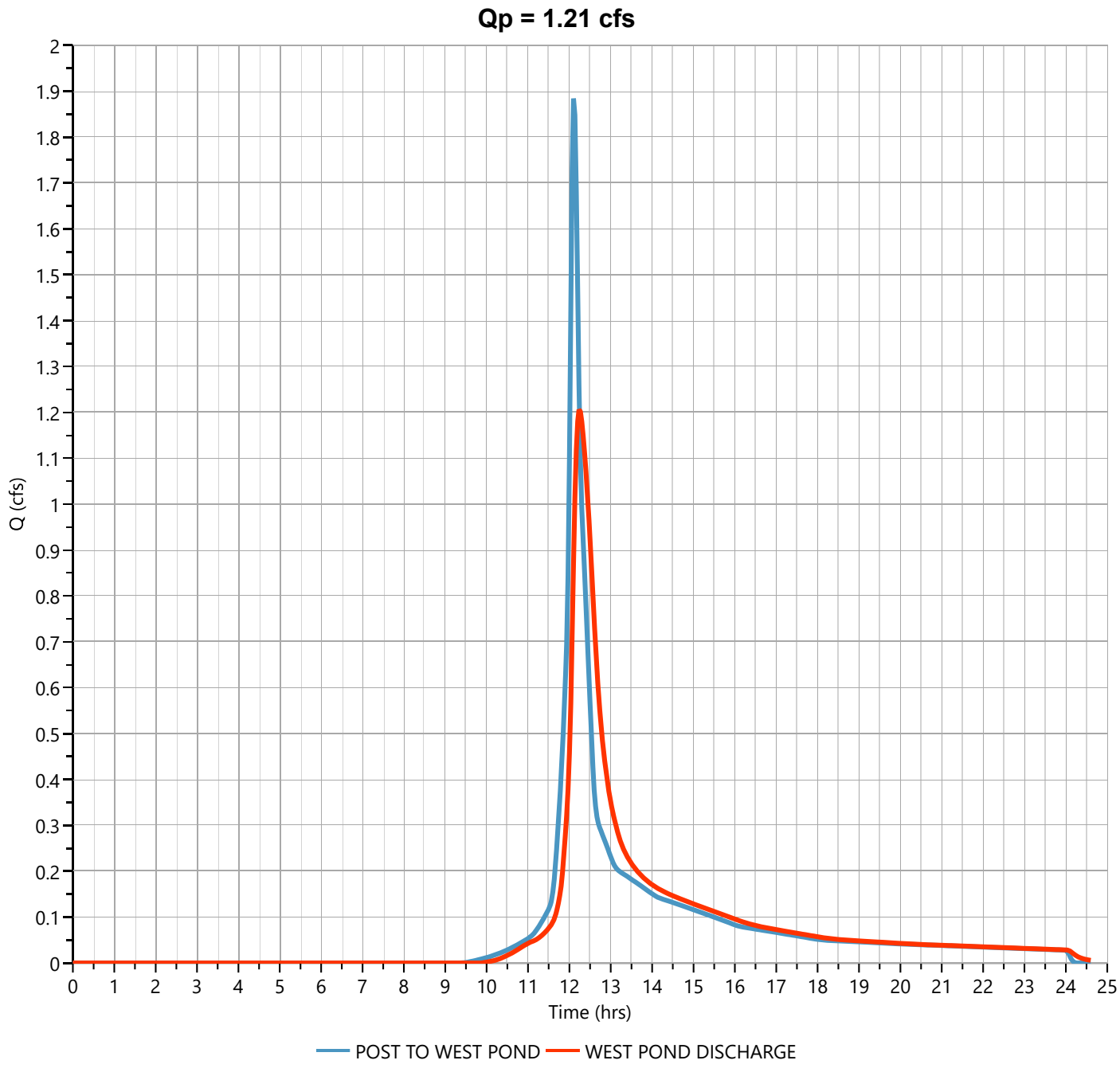
WEST POND DISCHARGE

Hyd. No. 2

Hydrograph Type	= Pond Route	Peak Flow	= 1.206 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.23 hrs
Time Interval	= 2 min	Hydrograph Volume	= 6,522 cuft
Inflow Hydrograph	= 1 - POST TO WEST POND	Max. Elevation	= 589.60 ft
Pond Name	= WEST POND	Max. Storage	= 1,071 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 16 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

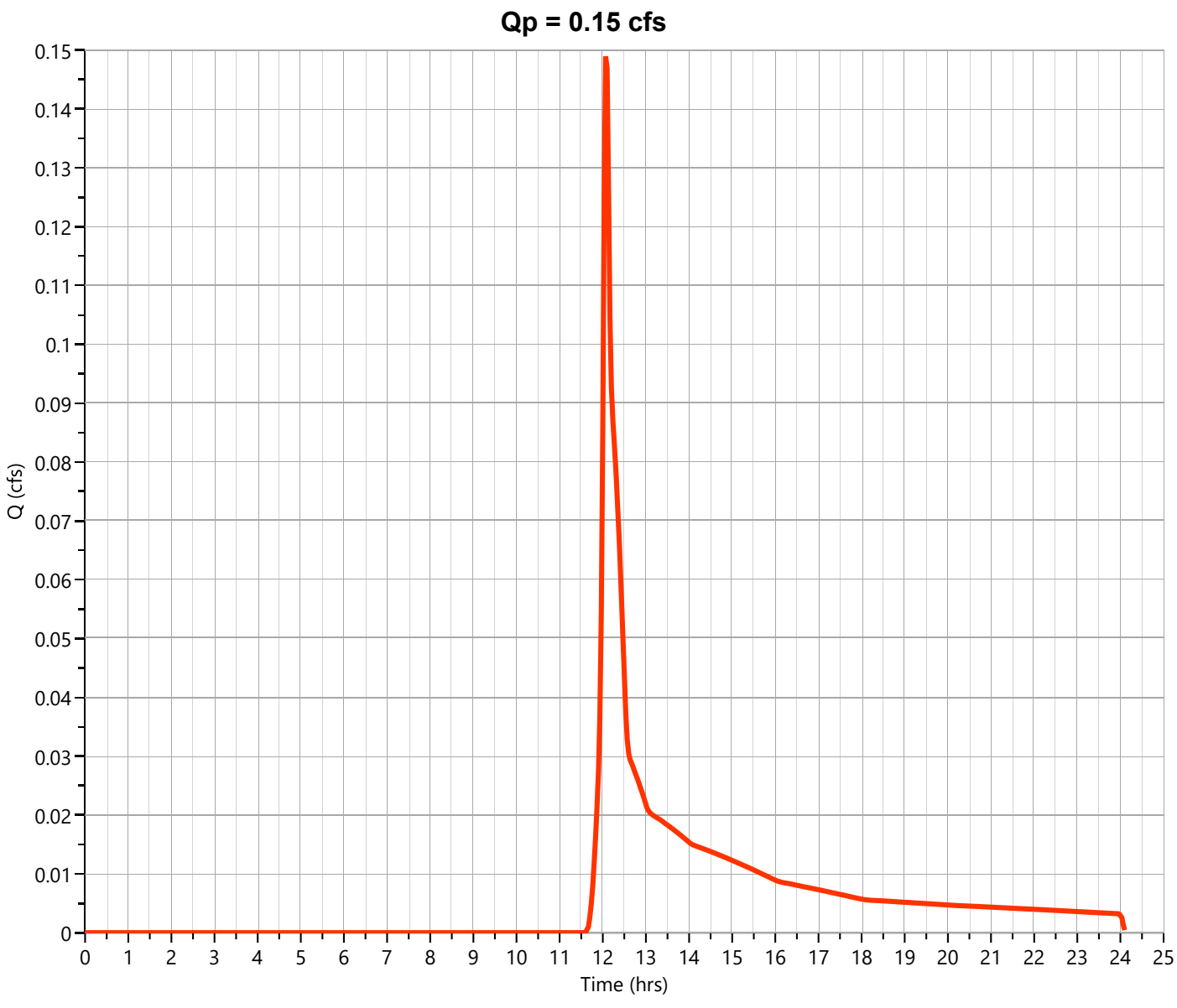
Post NORTH UNDISTURBED

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.149 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 543 cuft
Drainage Area	= 0.129 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.90 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.129	52	Grassland (A)
0.129	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

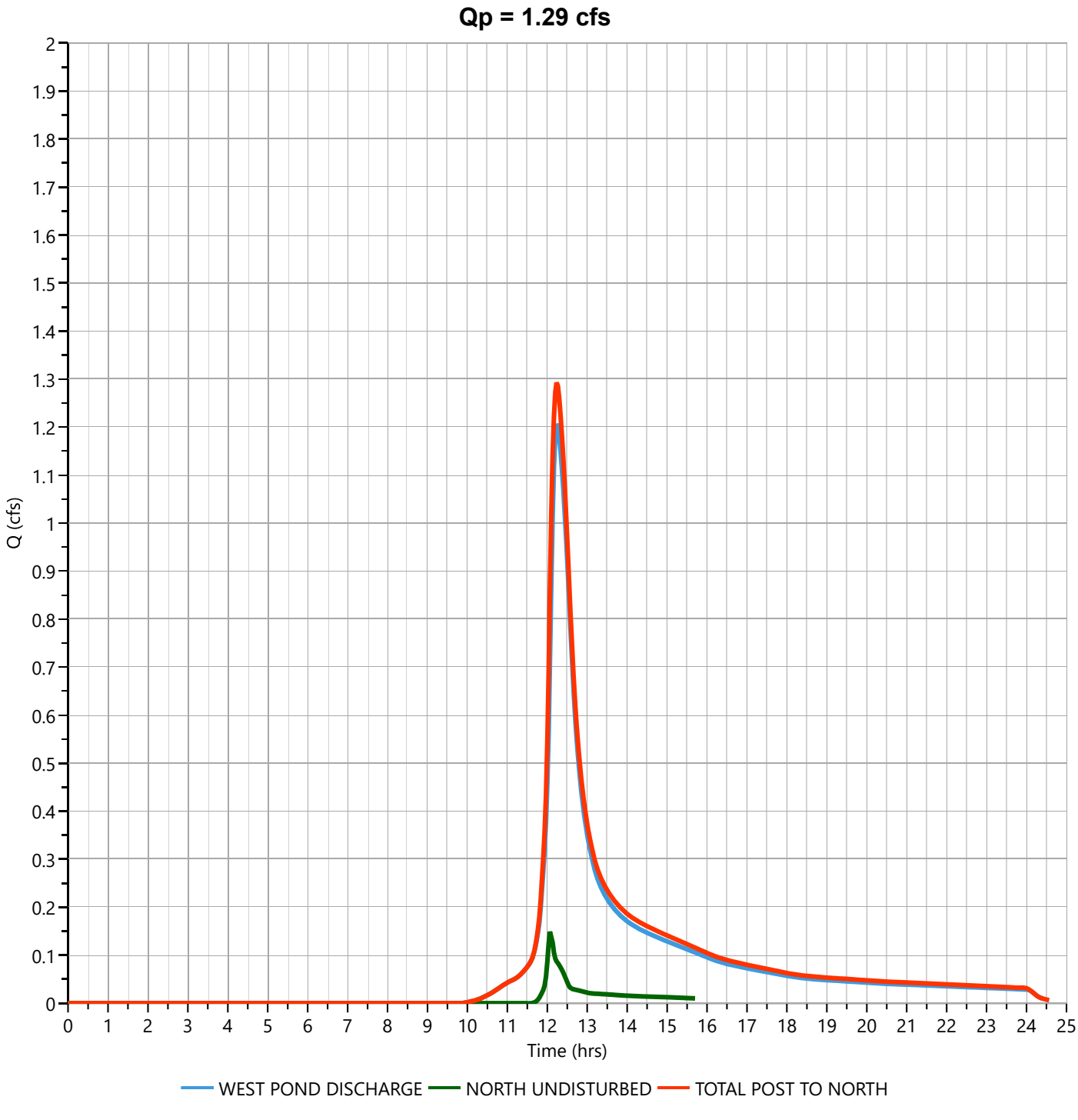
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO NORTH

Hyd. No. 4

Hydrograph Type	= Junction	Peak Flow	= 1.293 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.23 hrs
Time Interval	= 2 min	Hydrograph Volume	= 7,065 cuft
Inflow Hydrographs	= 2, 3	Total Contrib. Area	= 0.129 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

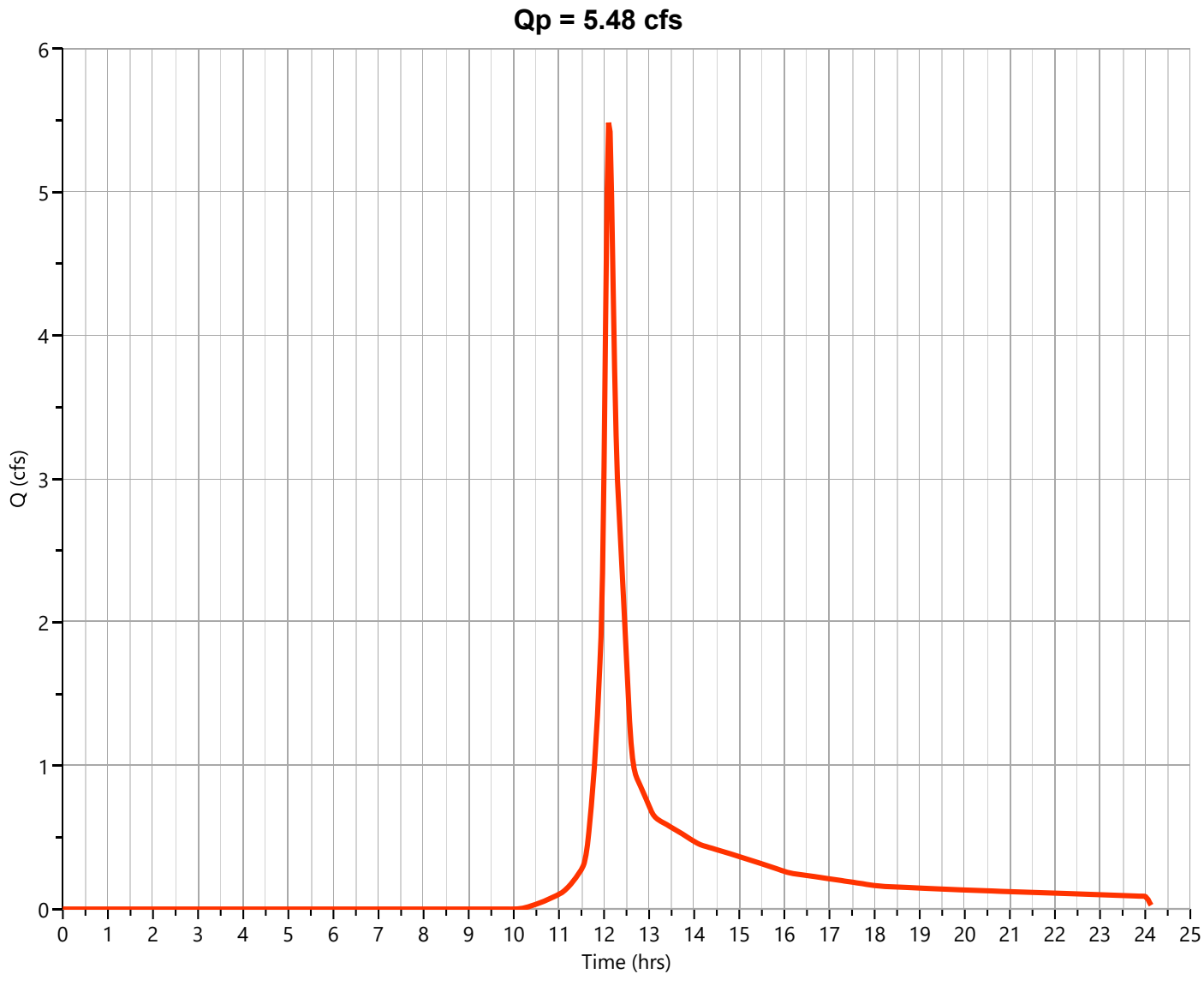
POST TO EAST POND

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 5.484 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 19,402 cuft
Drainage Area	= 2.438 ac	Curve Number	= 64*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 5.90 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
2.012	61	1/4 Acre Lots (A)
0.426	77	1/8th Acre Lots (exist)(A)
2.438	**64**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

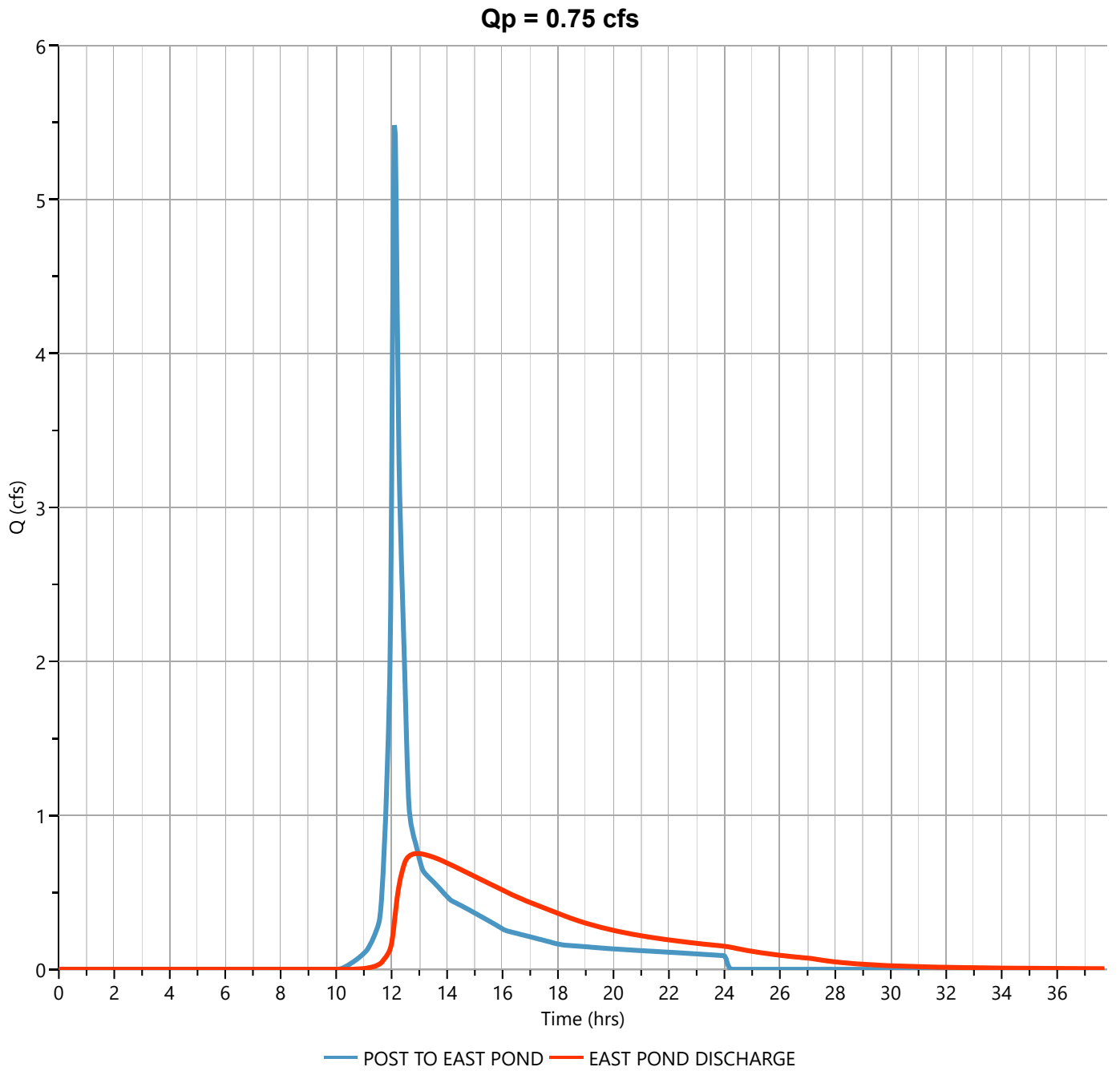
EAST POND DISCHARGE

Hyd. No. 6

Hydrograph Type	= Pond Route	Peak Flow	= 0.752 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.97 hrs
Time Interval	= 2 min	Hydrograph Volume	= 19,364 cuft
Inflow Hydrograph	= 5 - POST TO EAST POND	Max. Elevation	= 586.91 ft
Pond Name	= EAST POND	Max. Storage	= 8,165 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 3.09 hrs



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

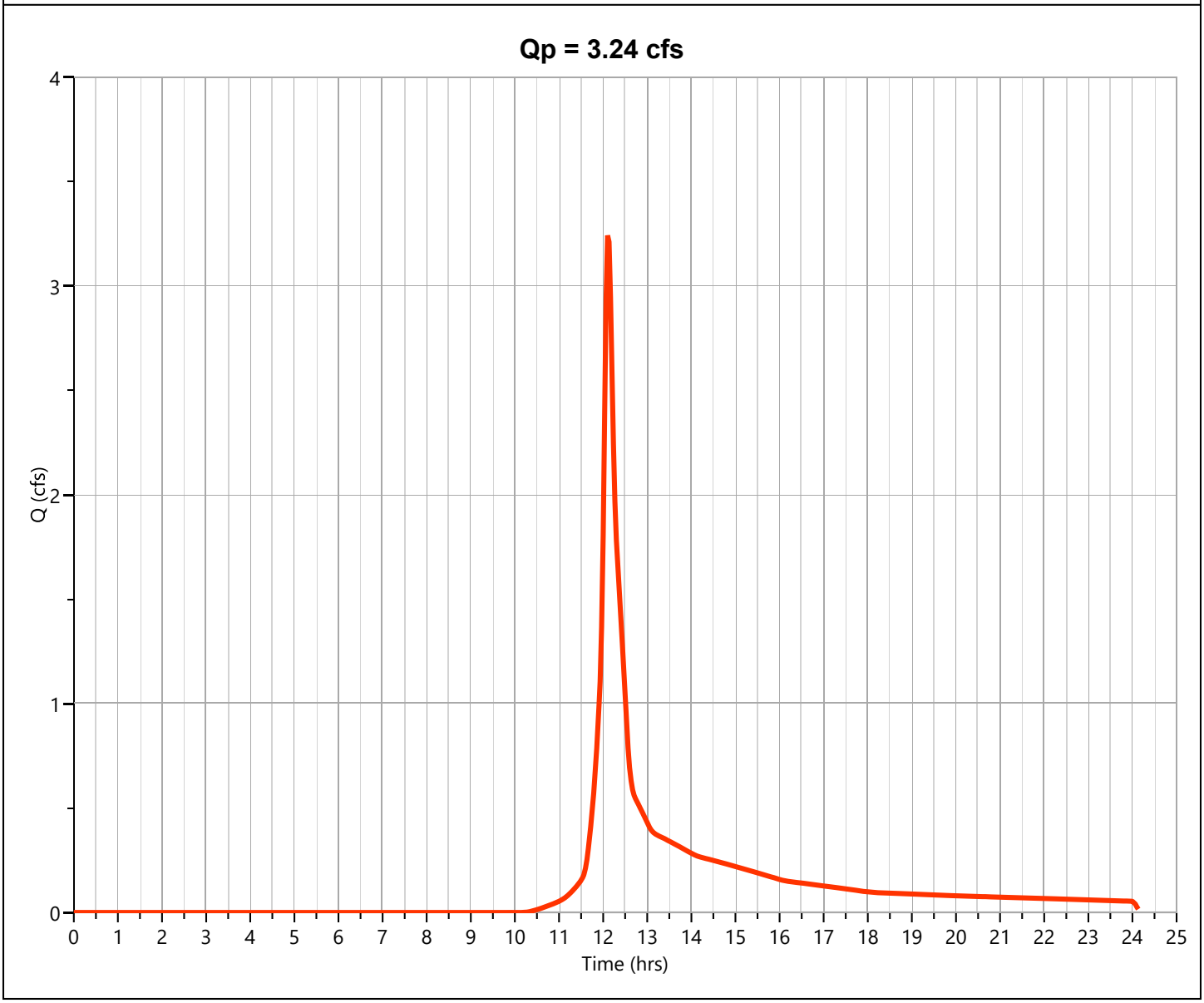
POST BYPASS TO ROW

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.242 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 11,537 cuft
Drainage Area	= 1.497 ac	Curve Number	= 63.19*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 5.90 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.292	61	1/4 Ac Lots (A)(includes Drive)
0.205	77	1/8th Acre Lots (exist)(A)
1.497	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

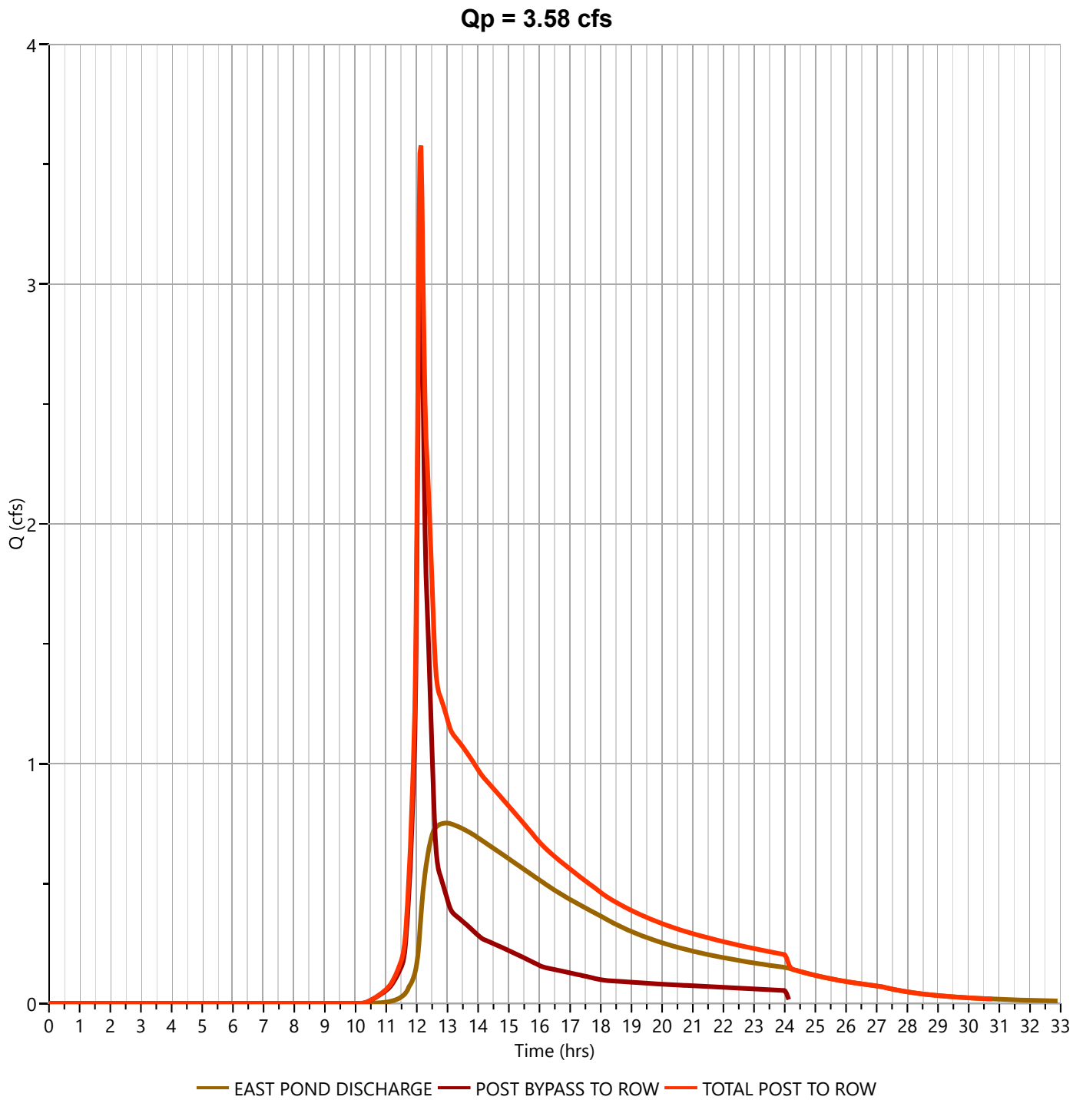
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO ROW

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 3.578 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 30,901 cuft
Inflow Hydrographs	= 6, 7	Total Contrib. Area	= 1.497 ac



Hydrograph Report

Project Name:

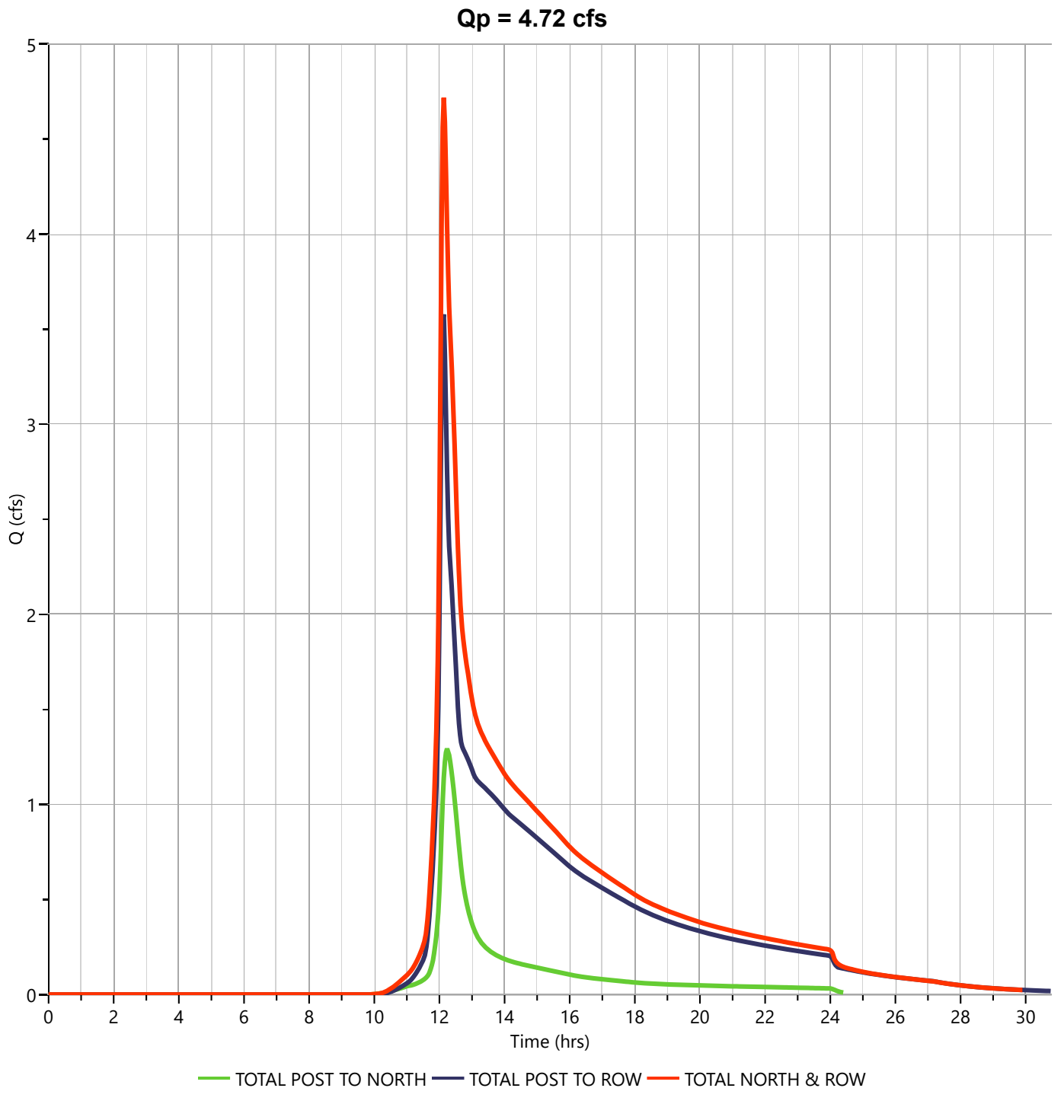
Hydrology Studio v 3.0.0.32

08-06-2024

Post TOTAL NORTH & ROW

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 4.718 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 37,966 cuft
Inflow Hydrographs	= 4, 8	Total Contrib. Area	= 1.626 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

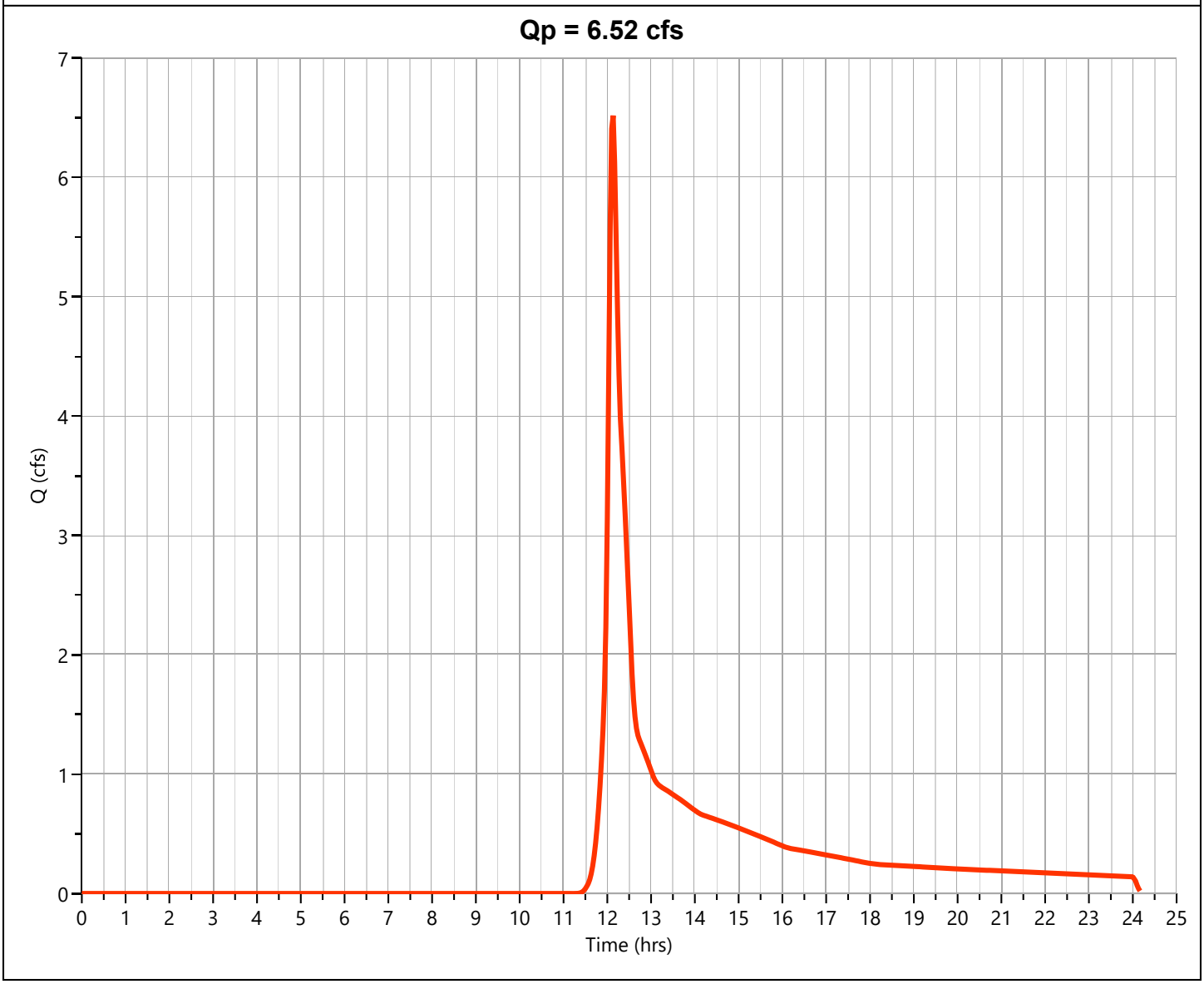
PRE TO ROW

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 6.519 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Runoff Volume	= 25,307 cuft
Drainage Area	= 4.773 ac	Curve Number	= 55*
Tc Method	= User	Time of Conc. (Tc)	= 9.55 min
Total Rainfall	= 5.90 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.697	52	Grassland (A)
0.906	77	1/8th Acre Lots (exist)(A)
0.17	98	Impervious
4.773	**55**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

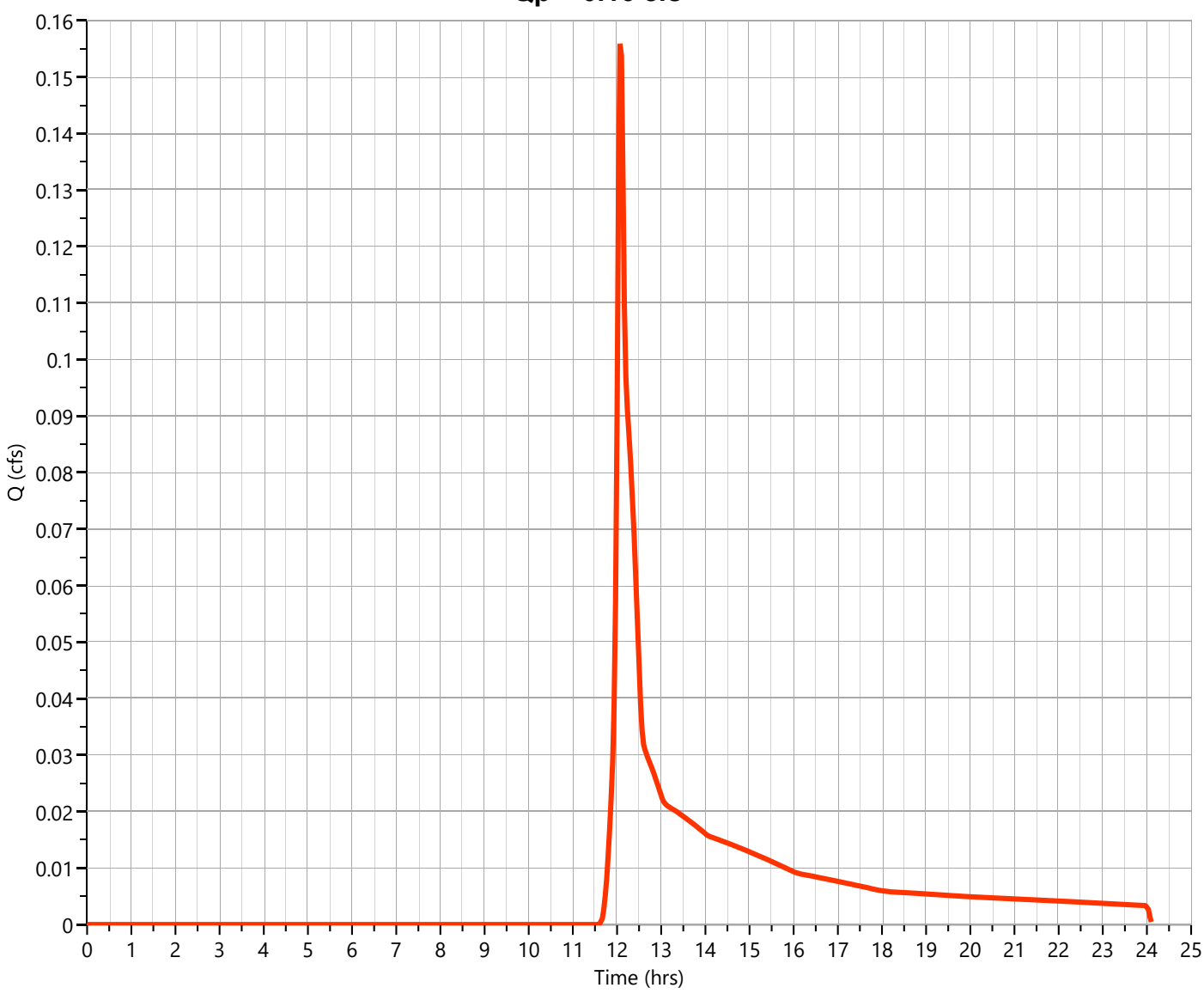
PRE TO NORTH

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.156 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 568 cuft
Drainage Area	= 0.135 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.90 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.135	52	Grassland (A)
0.135	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

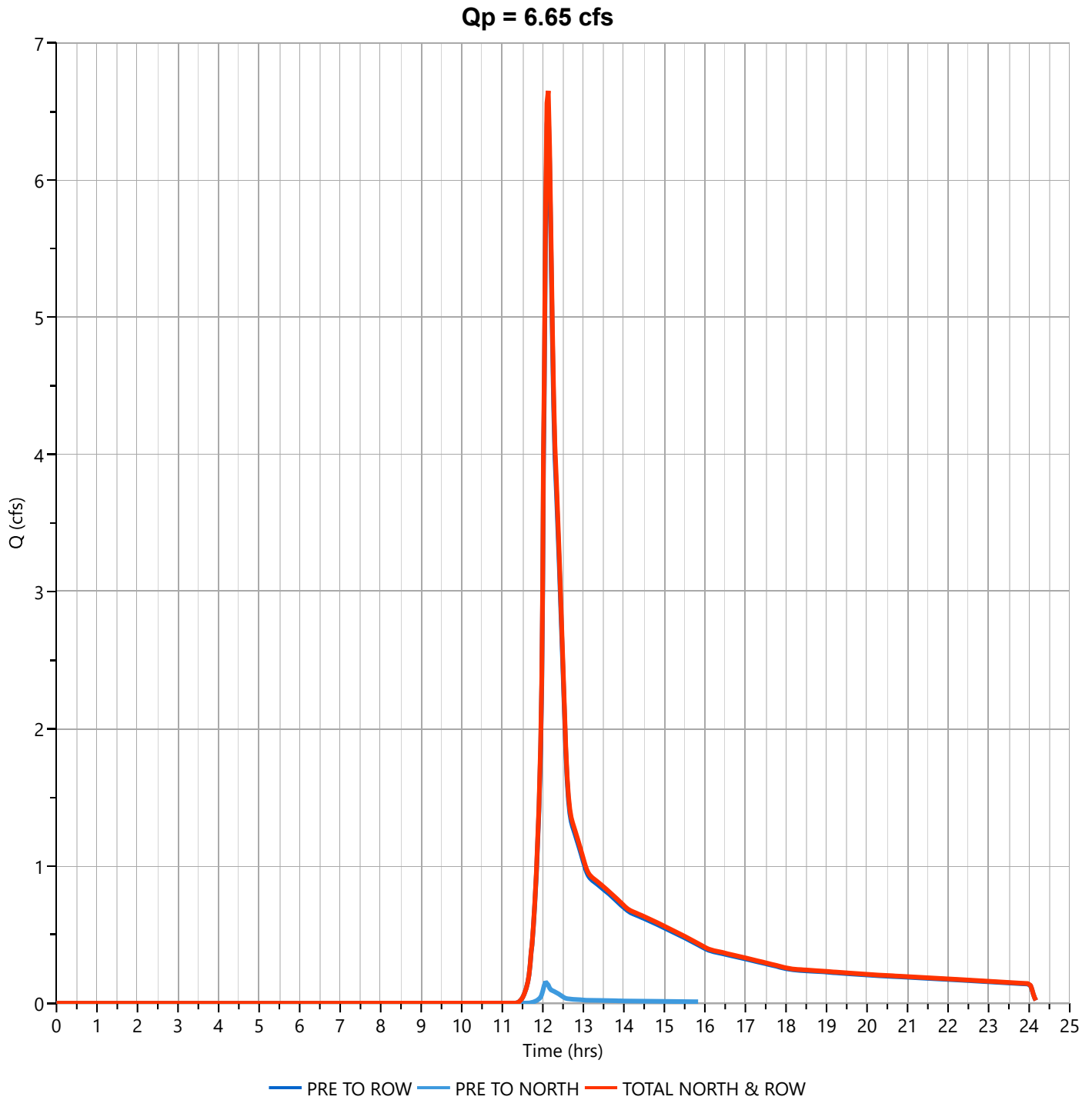
Hydrology Studio v 3.0.0.32

08-06-2024

Pre TOTAL NORTH & ROW

Hyd. No. 13

Hydrograph Type	= Junction	Peak Flow	= 6.651 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 25,876 cuft
Inflow Hydrographs	= 11, 12	Total Contrib. Area	= 4.908 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

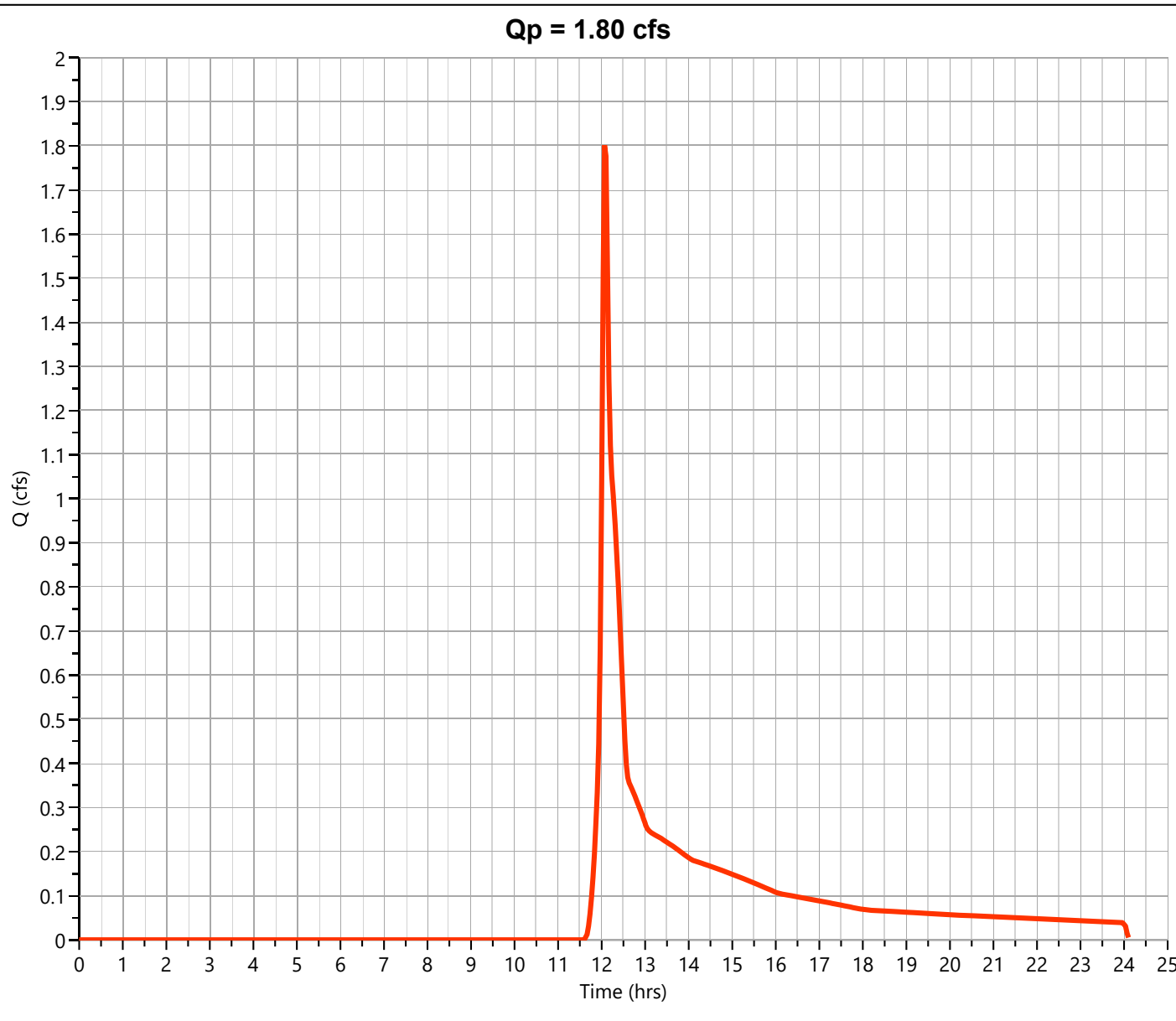
POST TO EAST

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.801 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 6,567 cuft
Drainage Area	= 1.56 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.90 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.56	52	Grassland (A)
1.56	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

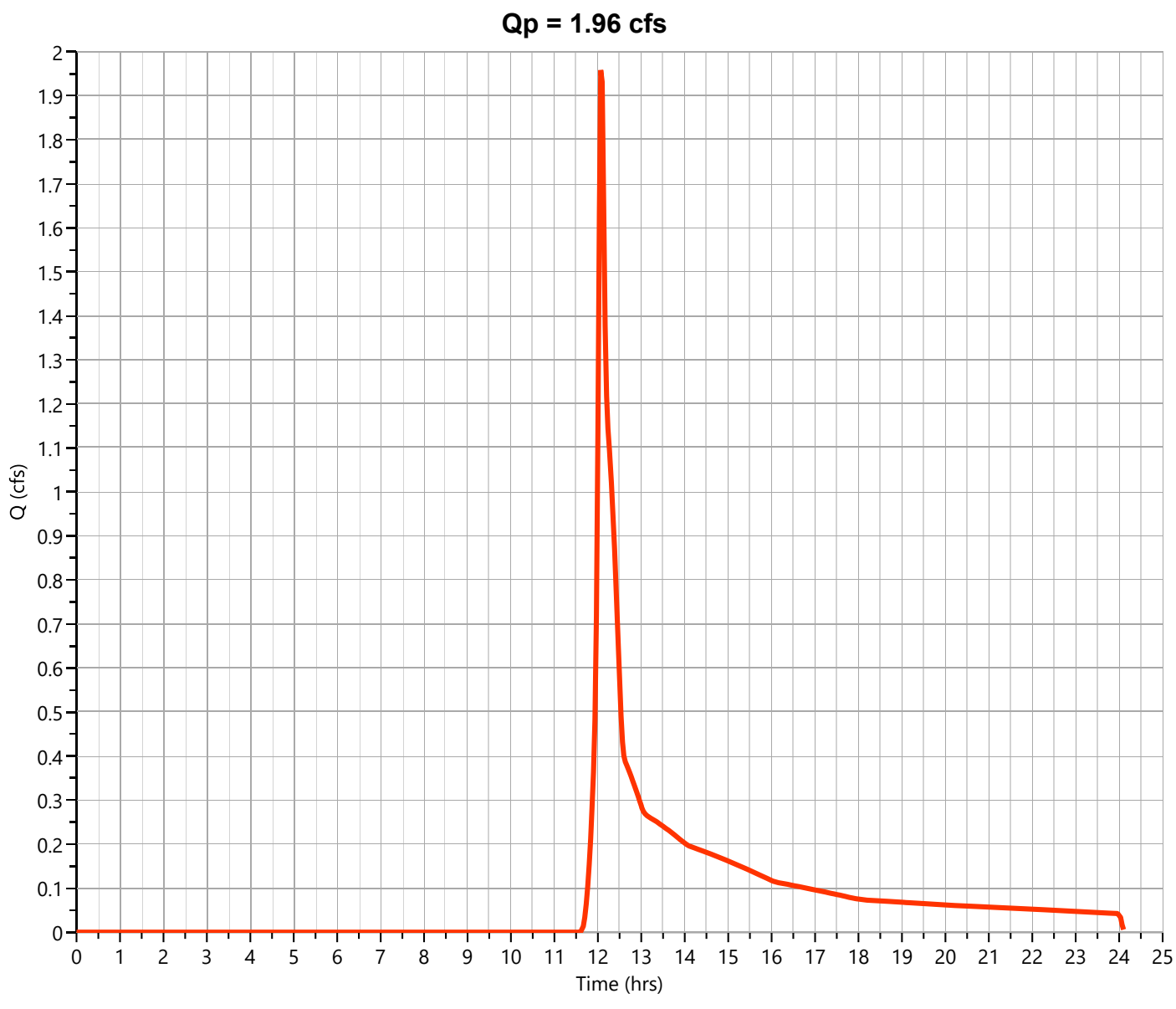
PRE TO EAST

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.959 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 7,140 cuft
Drainage Area	= 1.696 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.90 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.696	52	Grassland (A)
1.696	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

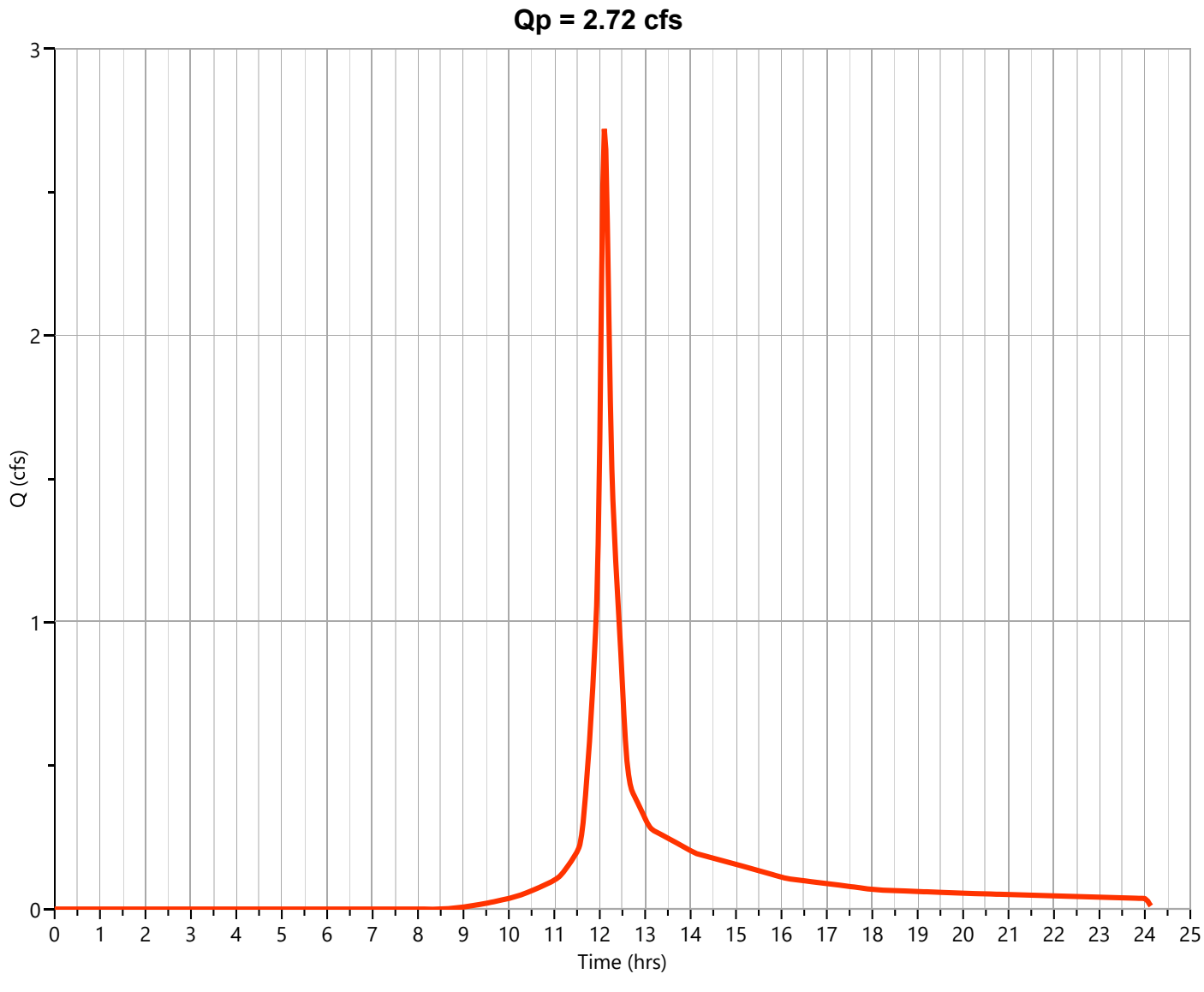
POST TO WEST POND

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 2.720 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 9,316 cuft
Drainage Area	= 0.707 ac	Curve Number	= 68*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 7.27 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.408	61	1/4 Acre Lots (A)
0.299	77	1/8th Acre Lots (exist)(A)
0.707	**68**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

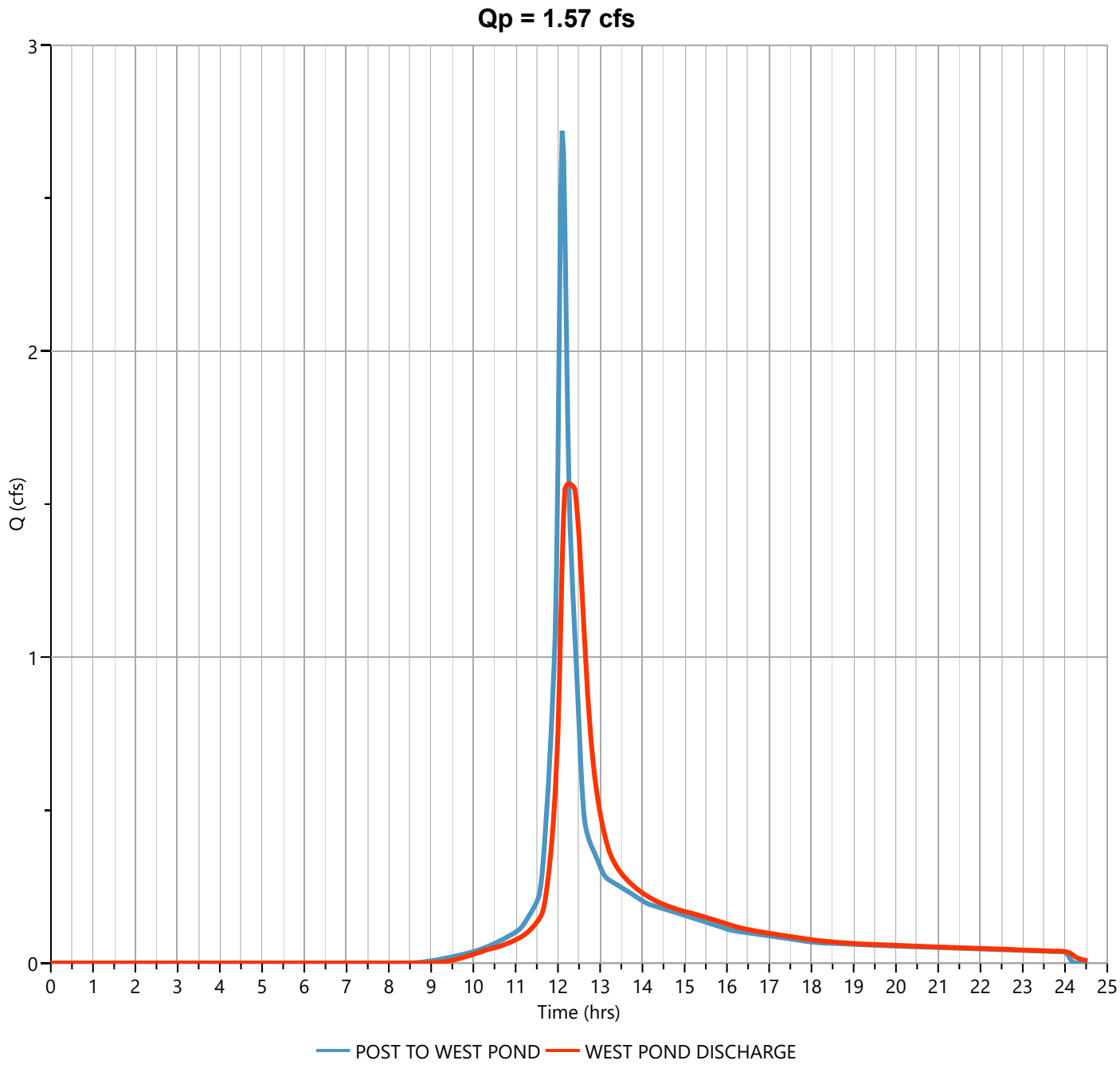
WEST POND DISCHARGE

Hyd. No. 2

Hydrograph Type	= Pond Route	Peak Flow	= 1.567 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.27 hrs
Time Interval	= 2 min	Hydrograph Volume	= 9,308 cuft
Inflow Hydrograph	= 1 - POST TO WEST POND	Max. Elevation	= 589.89 ft
Pond Name	= WEST POND	Max. Storage	= 1,576 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 17 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

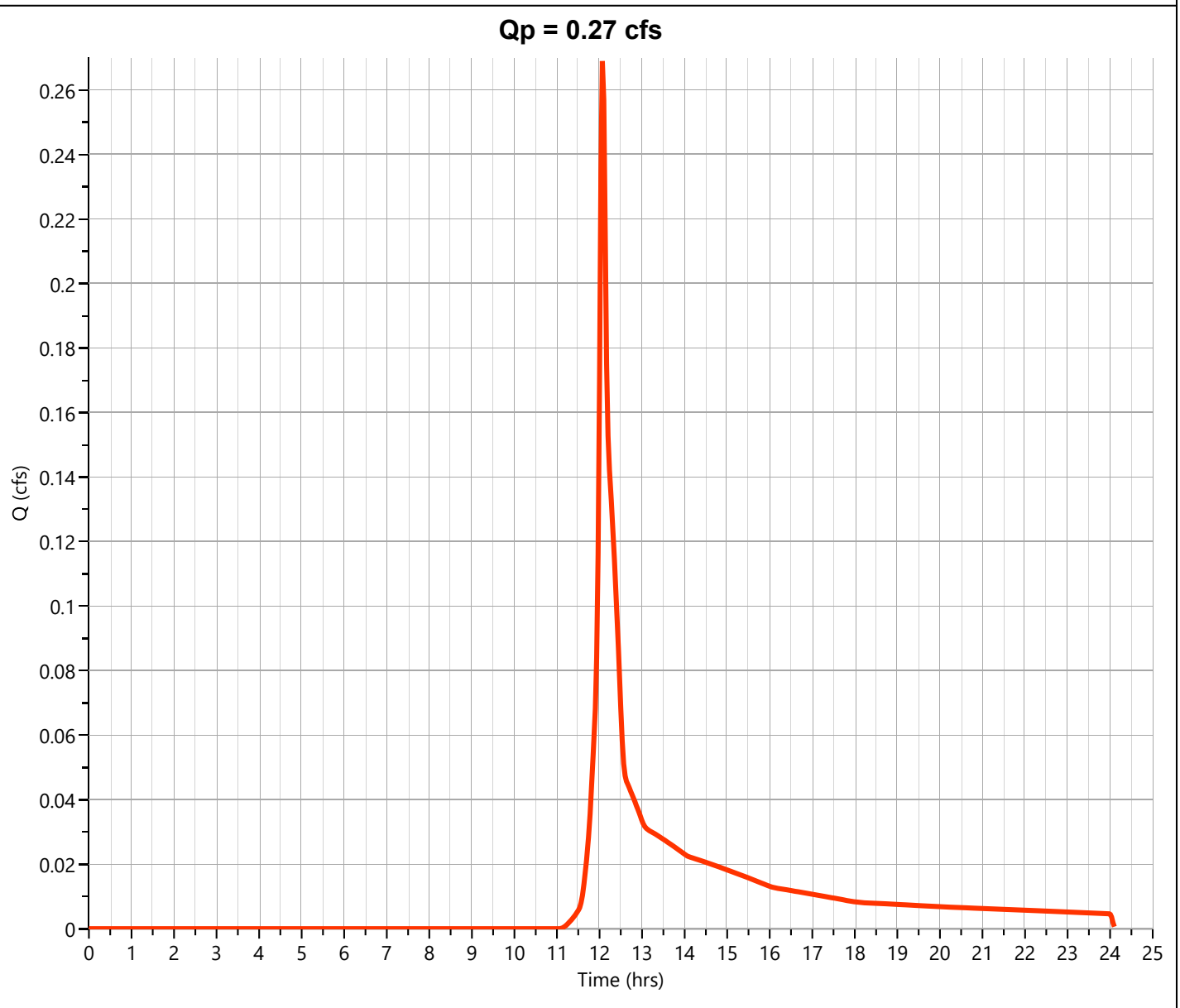
Post NORTH UNDISTURBED

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.269 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 881 cuft
Drainage Area	= 0.129 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.27 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.129	52	Grassland (A)
0.129	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

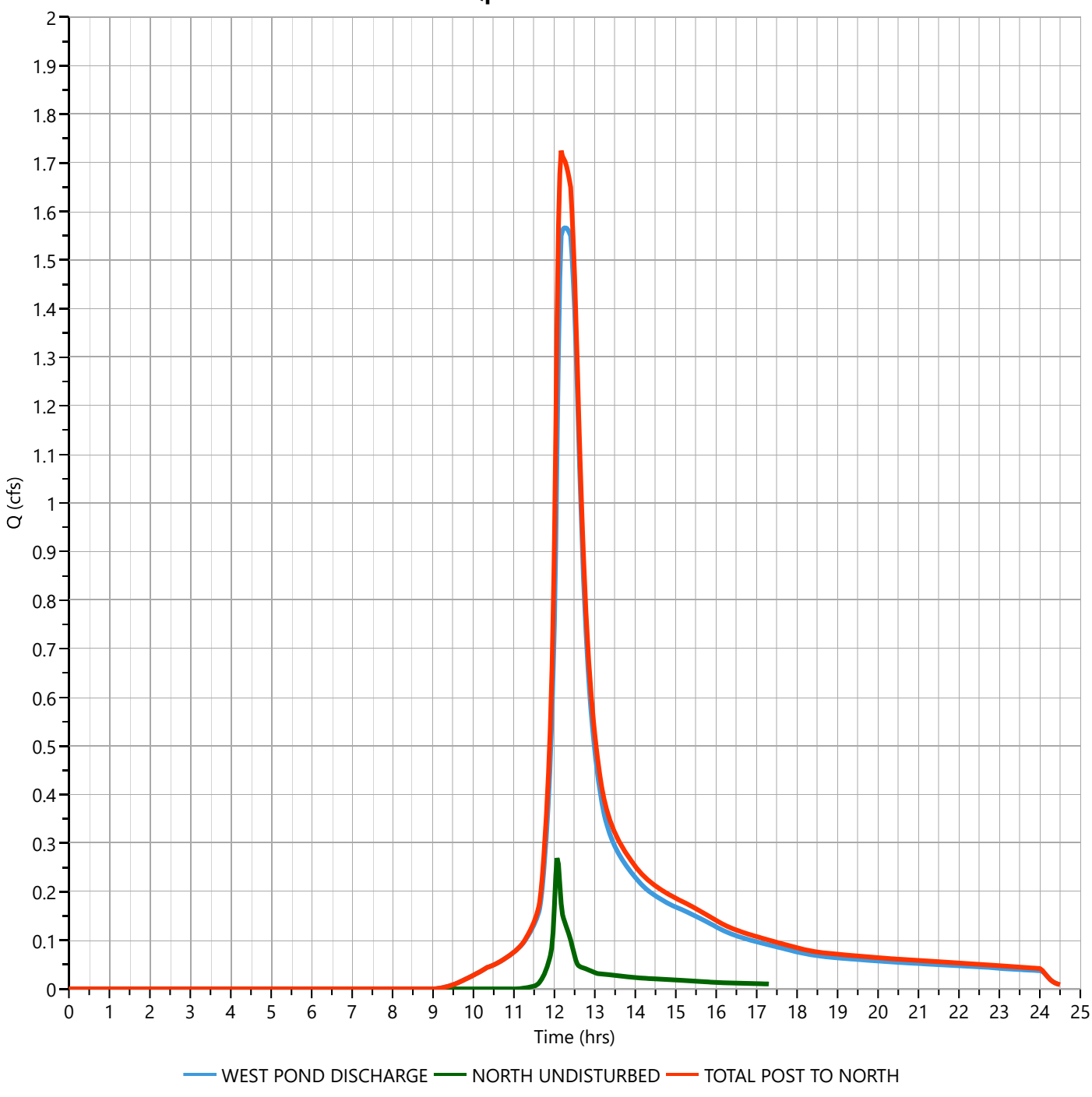
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO NORTH

Hyd. No. 4

Hydrograph Type	= Junction	Peak Flow	= 1.725 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.17 hrs
Time Interval	= 2 min	Hydrograph Volume	= 10,189 cuft
Inflow Hydrographs	= 2, 3	Total Contrib. Area	= 0.129 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

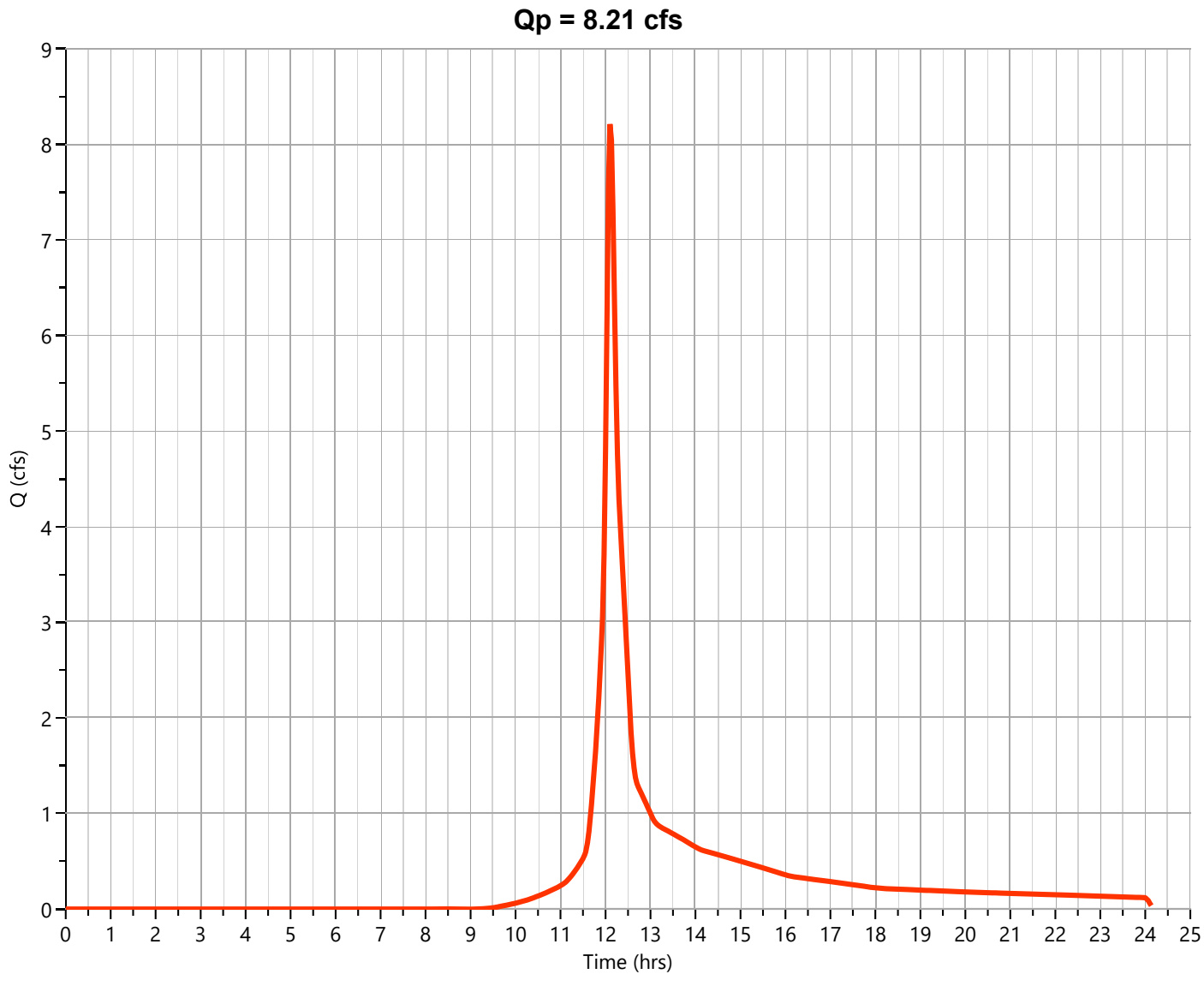
POST TO EAST POND

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 8.212 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 28,393 cuft
Drainage Area	= 2.438 ac	Curve Number	= 64*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 7.27 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
2.012	61	1/4 Acre Lots (A)
0.426	77	1/8th Acre Lots (exist)(A)
2.438	**64**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

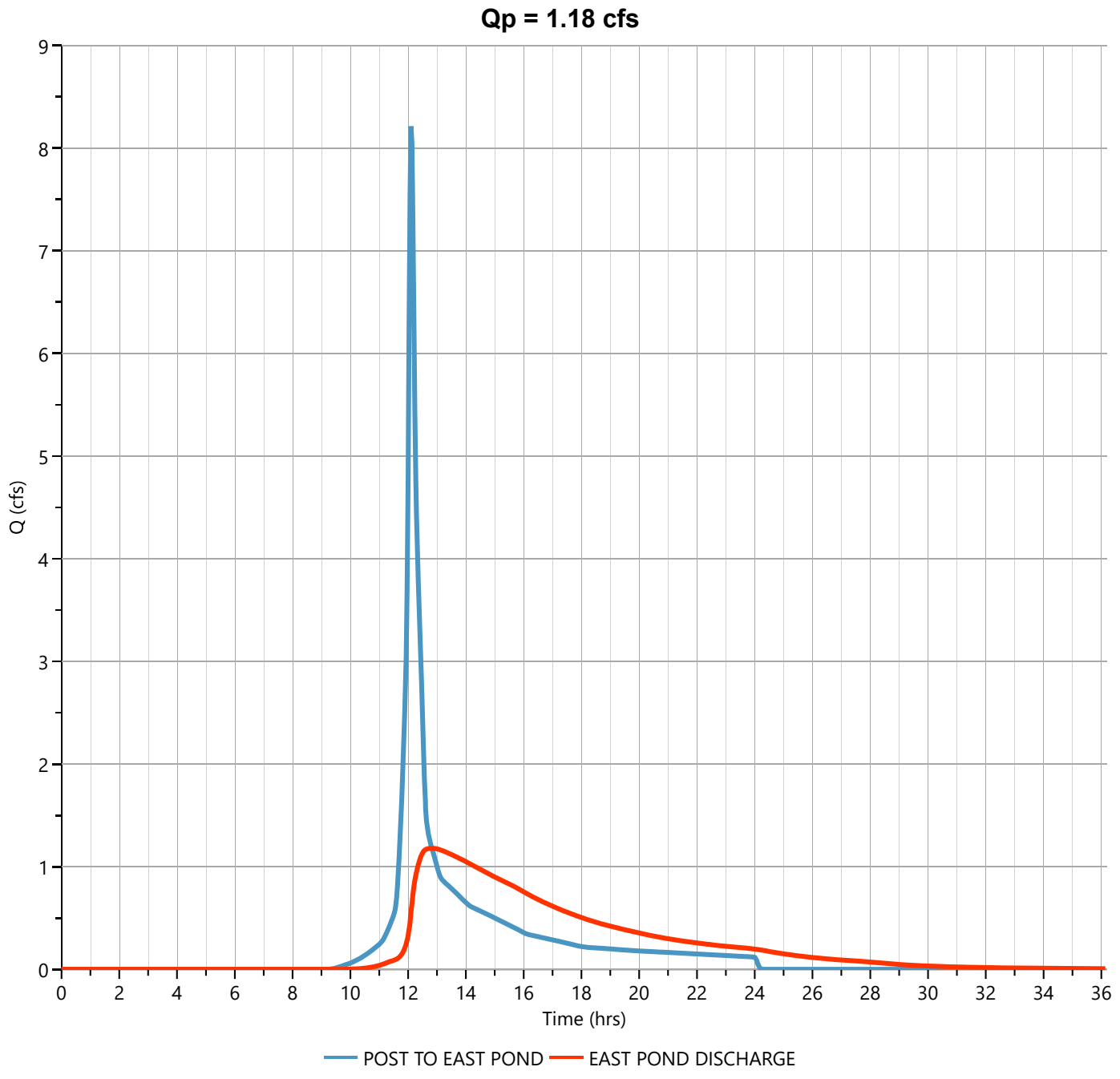
EAST POND DISCHARGE

Hyd. No. 6

Hydrograph Type	= Pond Route	Peak Flow	= 1.179 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.83 hrs
Time Interval	= 2 min	Hydrograph Volume	= 28,355 cuft
Inflow Hydrograph	= 5 - POST TO EAST POND	Max. Elevation	= 587.75 ft
Pond Name	= EAST POND	Max. Storage	= 12,310 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 2.97 hrs



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

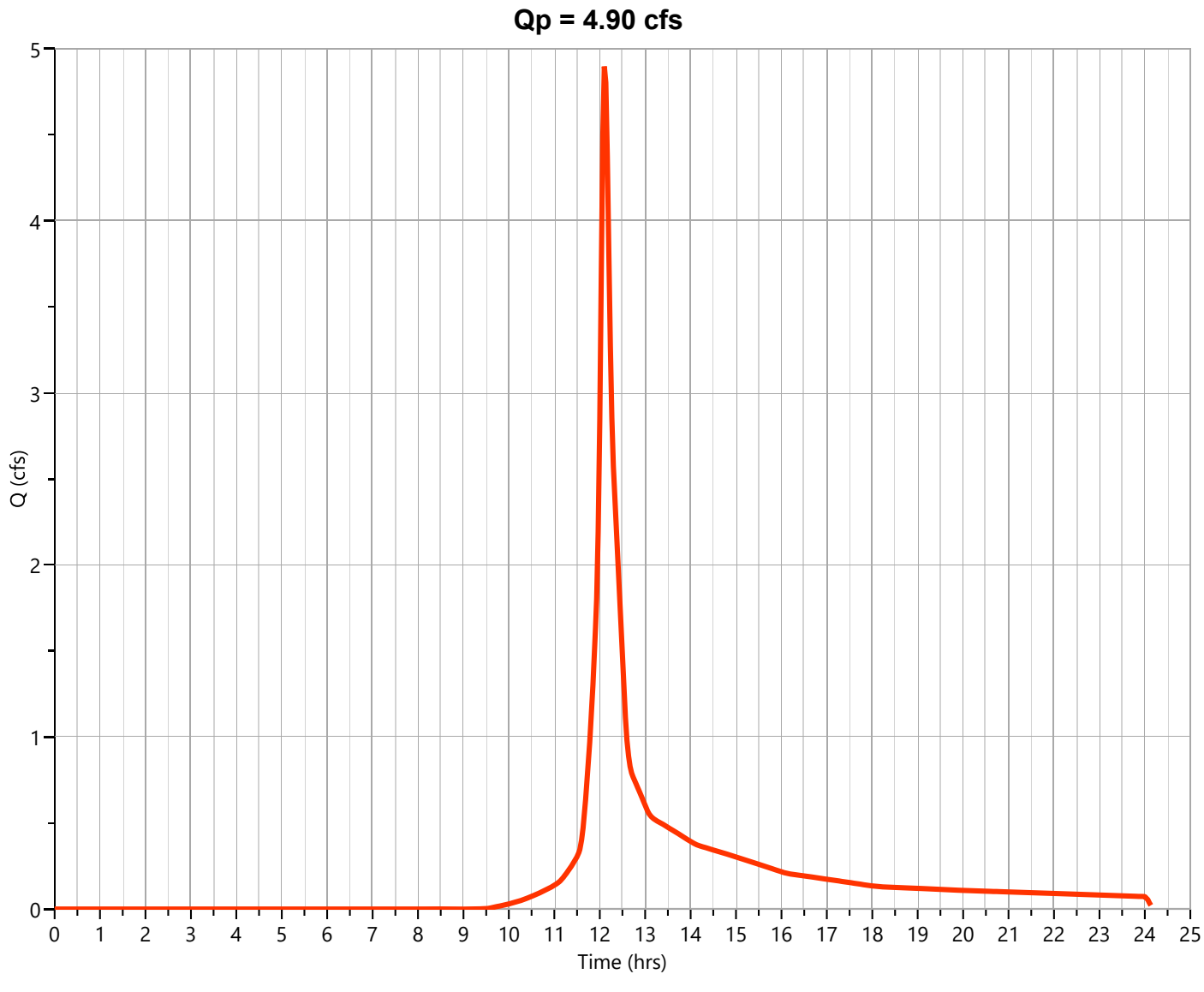
POST BYPASS TO ROW

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 4.897 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 16,976 cuft
Drainage Area	= 1.497 ac	Curve Number	= 63.19*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 7.27 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.292	61	1/4 Ac Lots (A)(includes Drive)
0.205	77	1/8th Acre Lots (exist)(A)
1.497	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

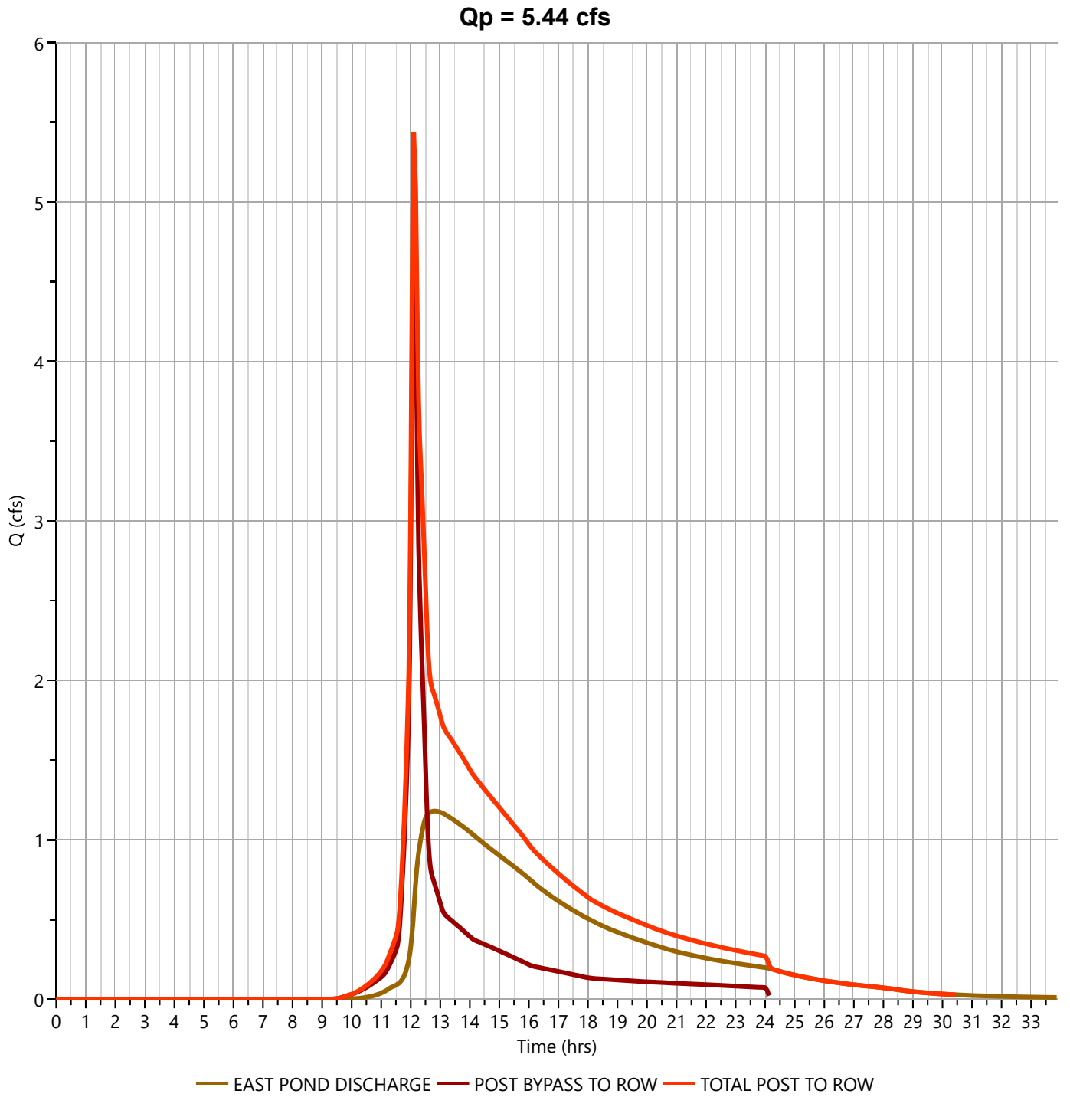
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO ROW

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 5.441 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Hydrograph Volume	= 45,331 cuft
Inflow Hydrographs	= 6, 7	Total Contrib. Area	= 1.497 ac



Hydrograph Report

Project Name:

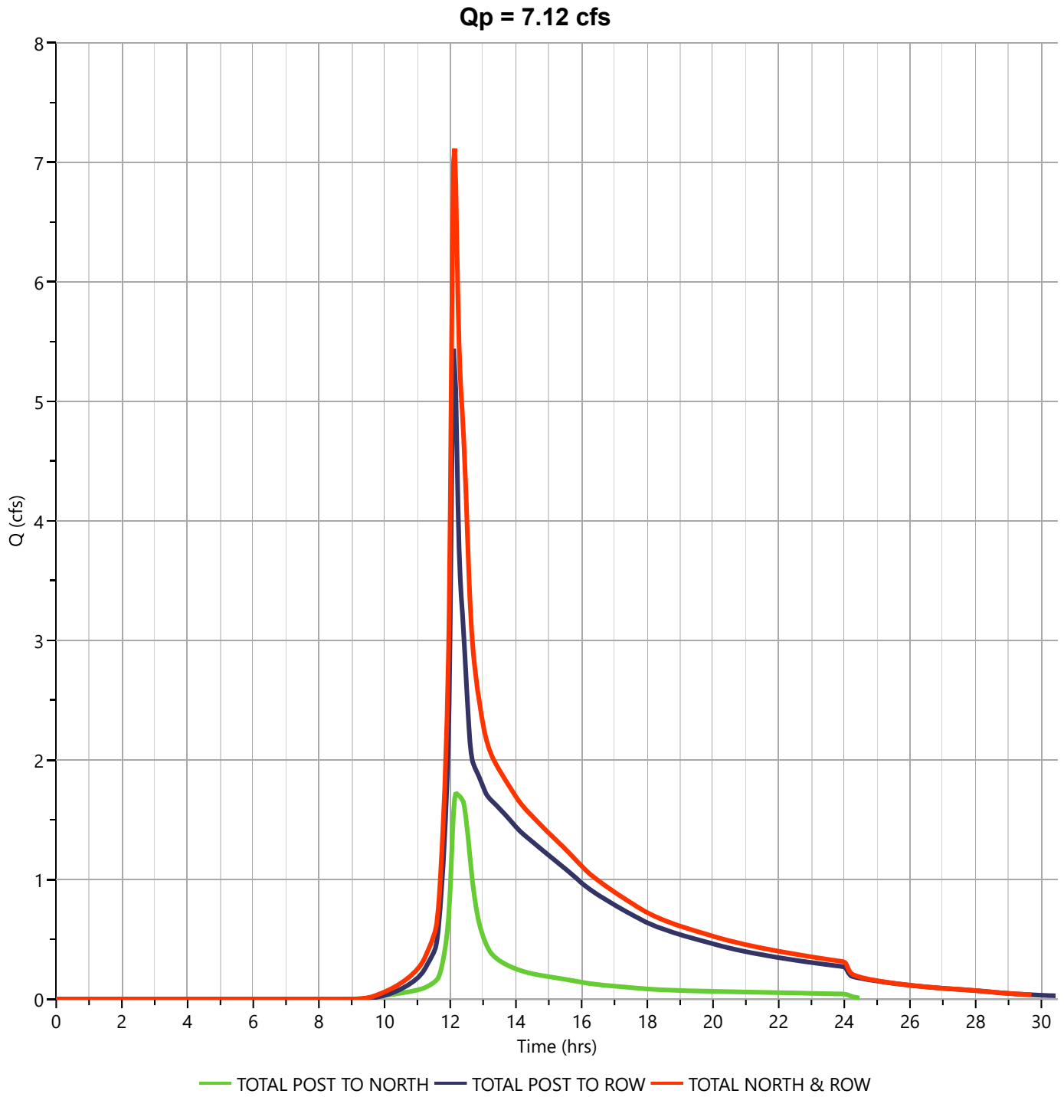
Hydrology Studio v 3.0.0.32

08-06-2024

Post TOTAL NORTH & ROW

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 7.117 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 55,520 cuft
Inflow Hydrographs	= 4, 8	Total Contrib. Area	= 1.626 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

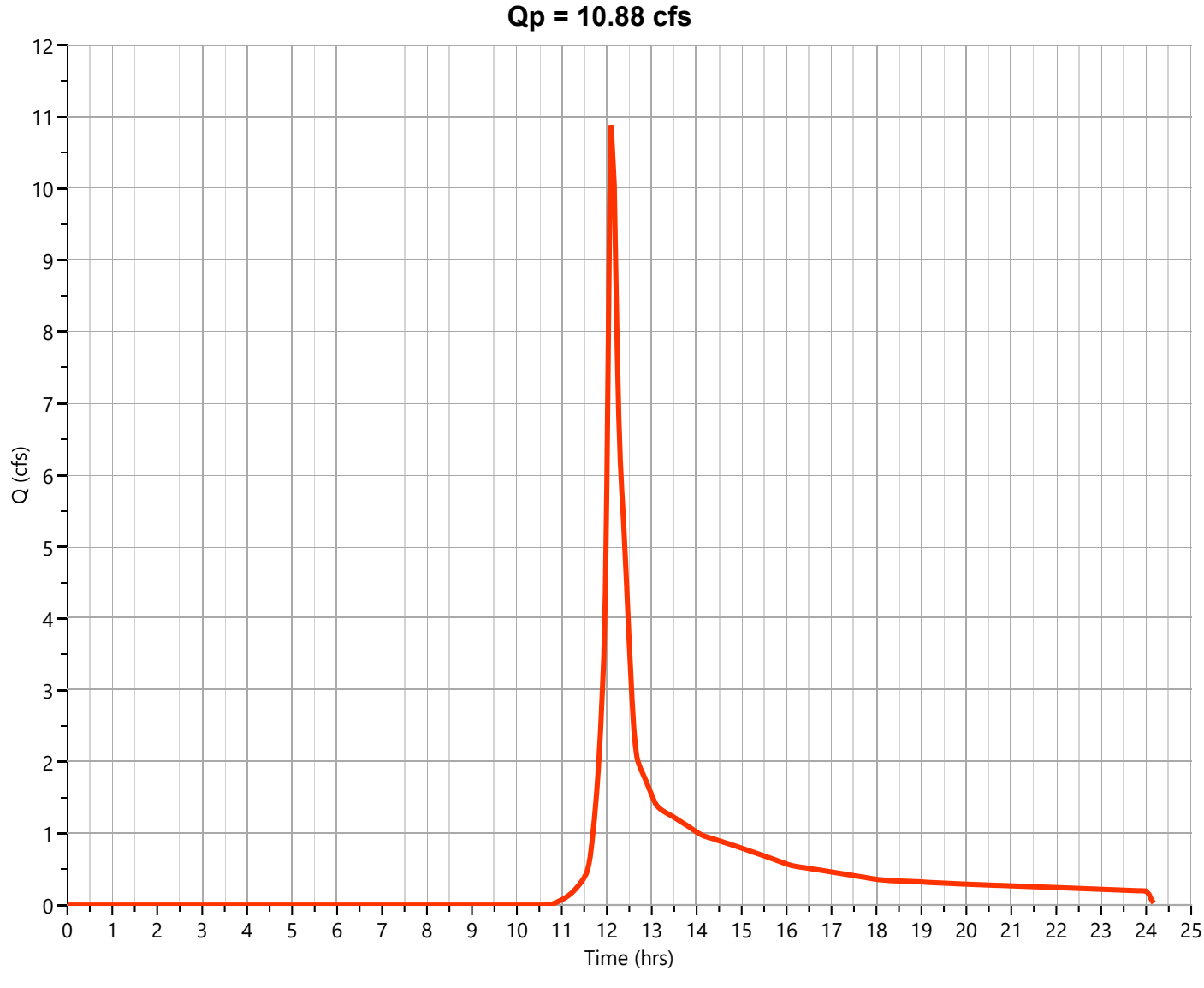
PRE TO ROW

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 10.88 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 39,802 cuft
Drainage Area	= 4.773 ac	Curve Number	= 55*
Tc Method	= User	Time of Conc. (Tc)	= 9.55 min
Total Rainfall	= 7.27 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.697	52	Grassland (A)
0.906	77	1/8th Acre Lots (exist)(A)
0.17	98	Impervious
4.773	**55**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

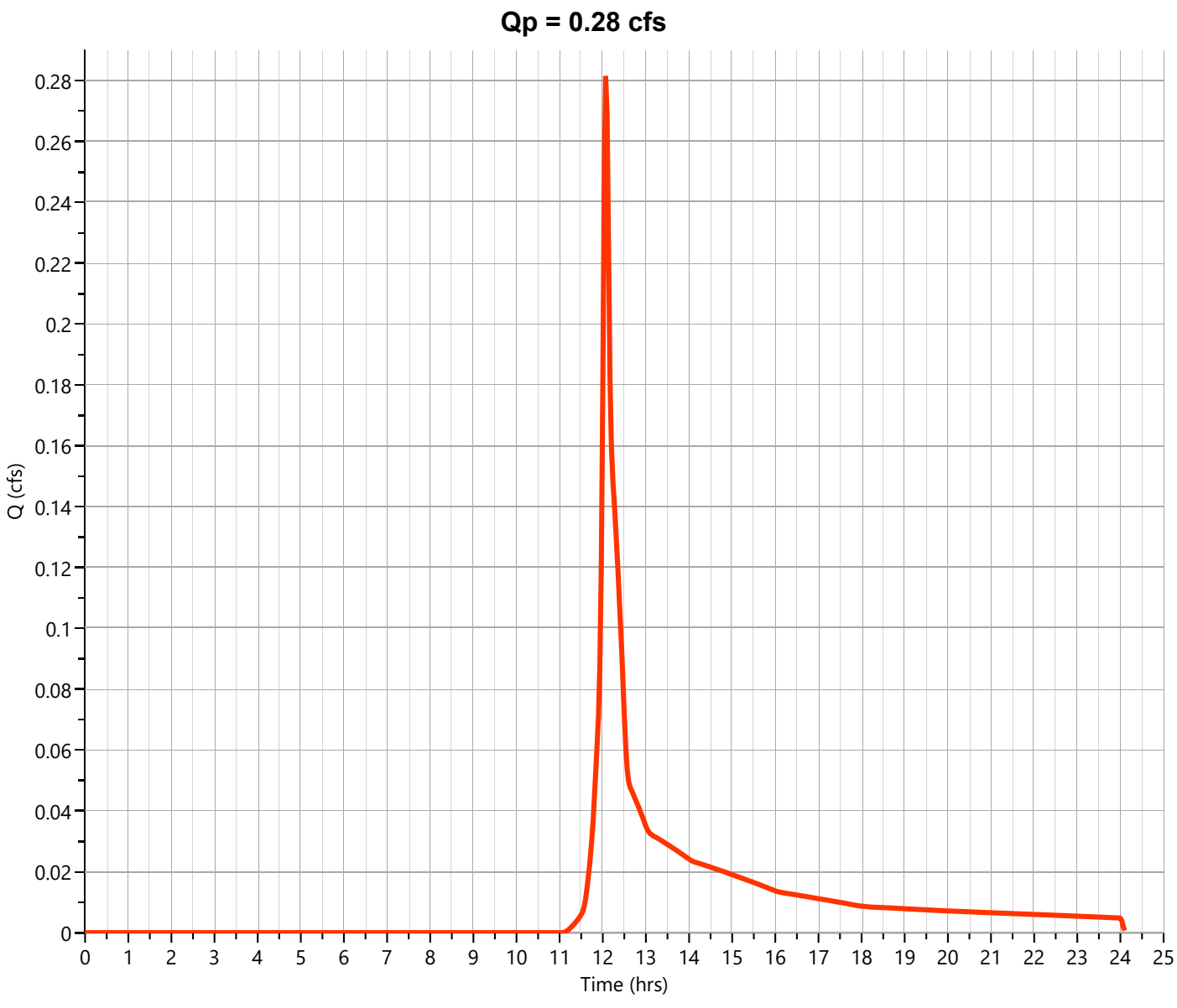
PRE TO NORTH

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.282 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 922 cuft
Drainage Area	= 0.135 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.27 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.135	52	Grassland (A)
0.135	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

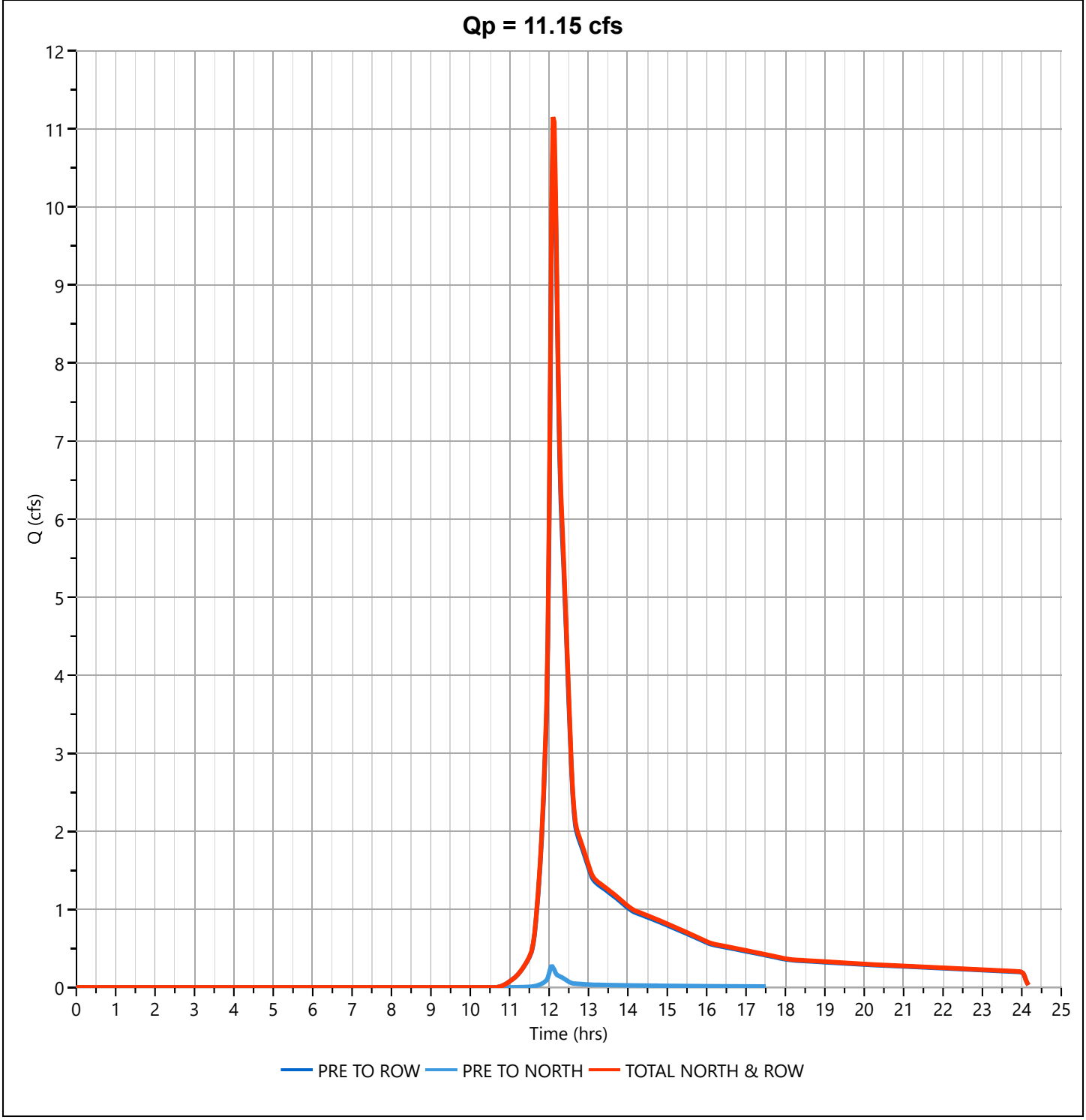
Hydrology Studio v 3.0.0.32

08-06-2024

Pre TOTAL NORTH & ROW

Hyd. No. 13

Hydrograph Type	= Junction	Peak Flow	= 11.15 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Hydrograph Volume	= 40,725 cuft
Inflow Hydrographs	= 11, 12	Total Contrib. Area	= 4.908 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

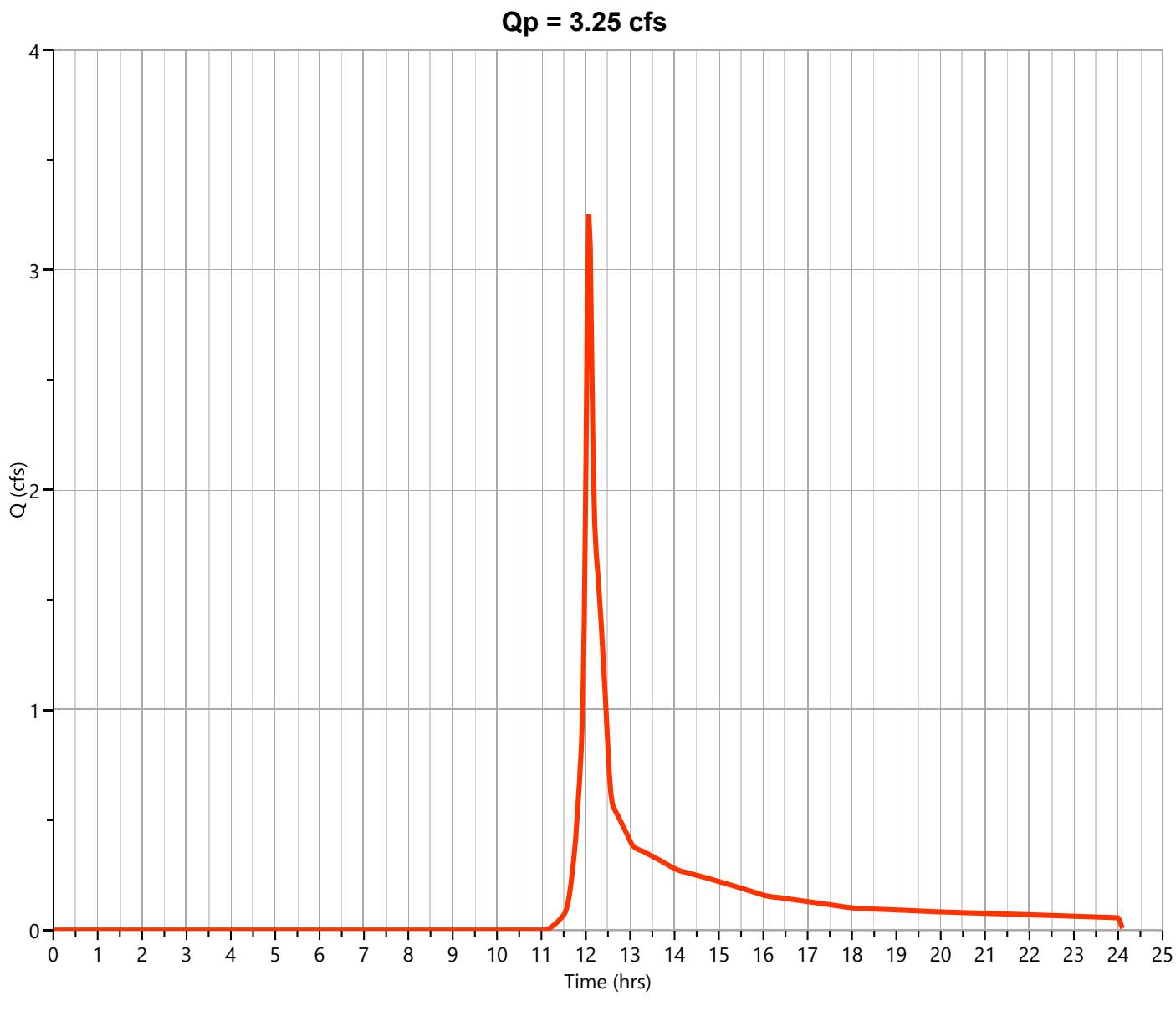
POST TO EAST

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.253 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 10,657 cuft
Drainage Area	= 1.56 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.27 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.56	52	Grassland (A)
1.56	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

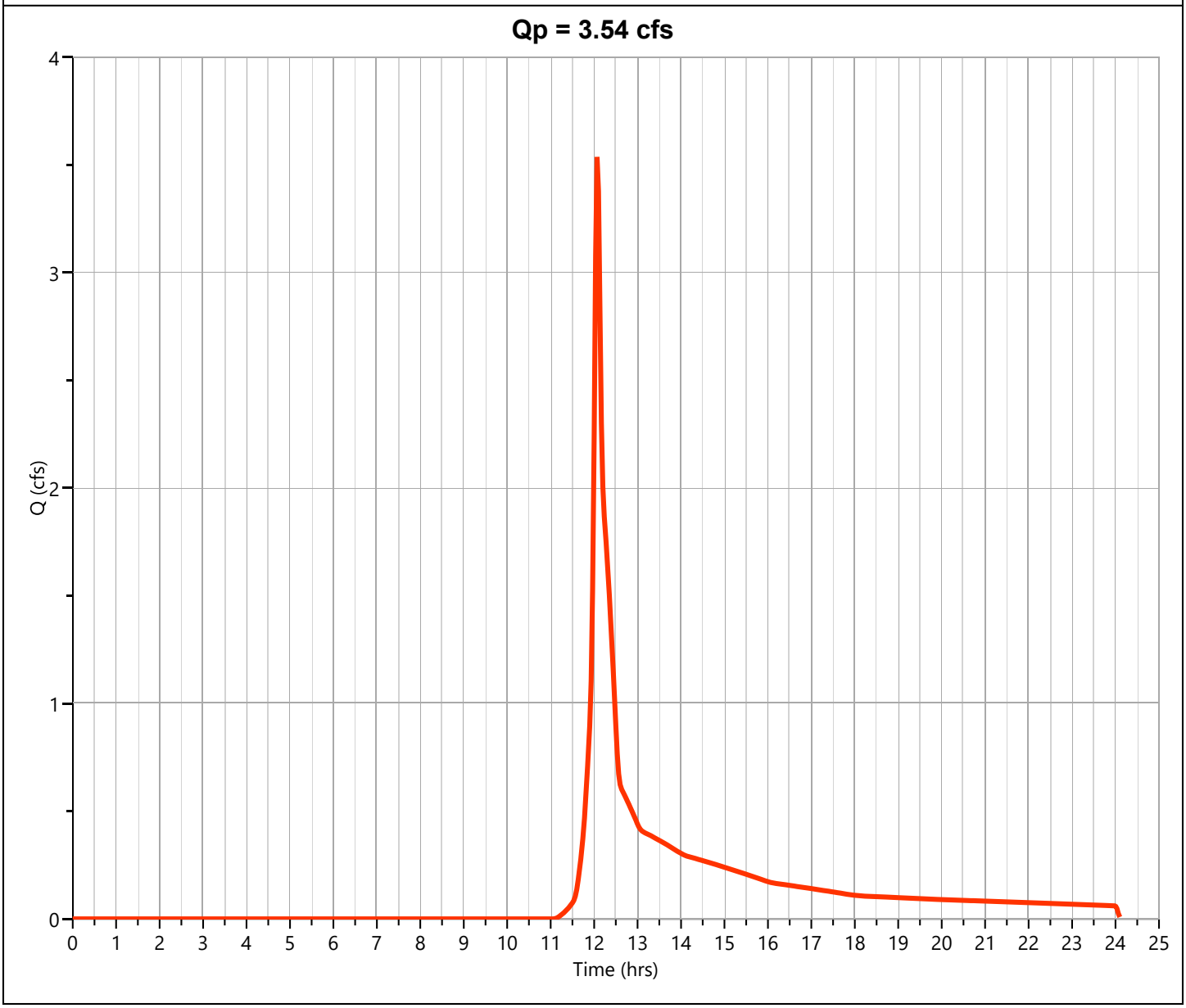
PRE TO EAST

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.537 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 11,586 cuft
Drainage Area	= 1.696 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.27 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.696	52	Grassland (A)
1.696	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

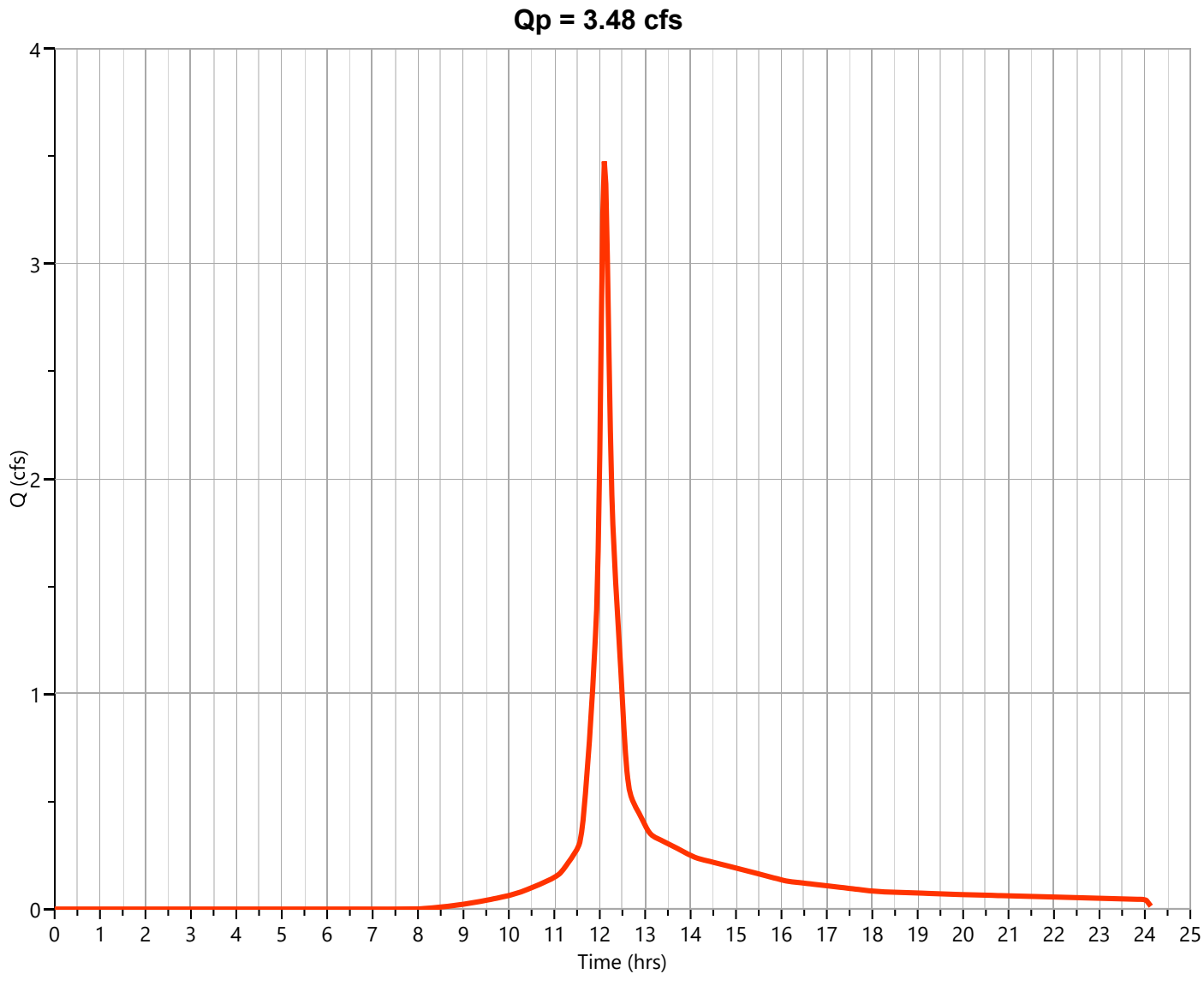
POST TO WEST POND

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.475 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 11,868 cuft
Drainage Area	= 0.707 ac	Curve Number	= 68*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 8.46 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.408	61	1/4 Acre Lots (A)
0.299	77	1/8th Acre Lots (exist)(A)
0.707	**68**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

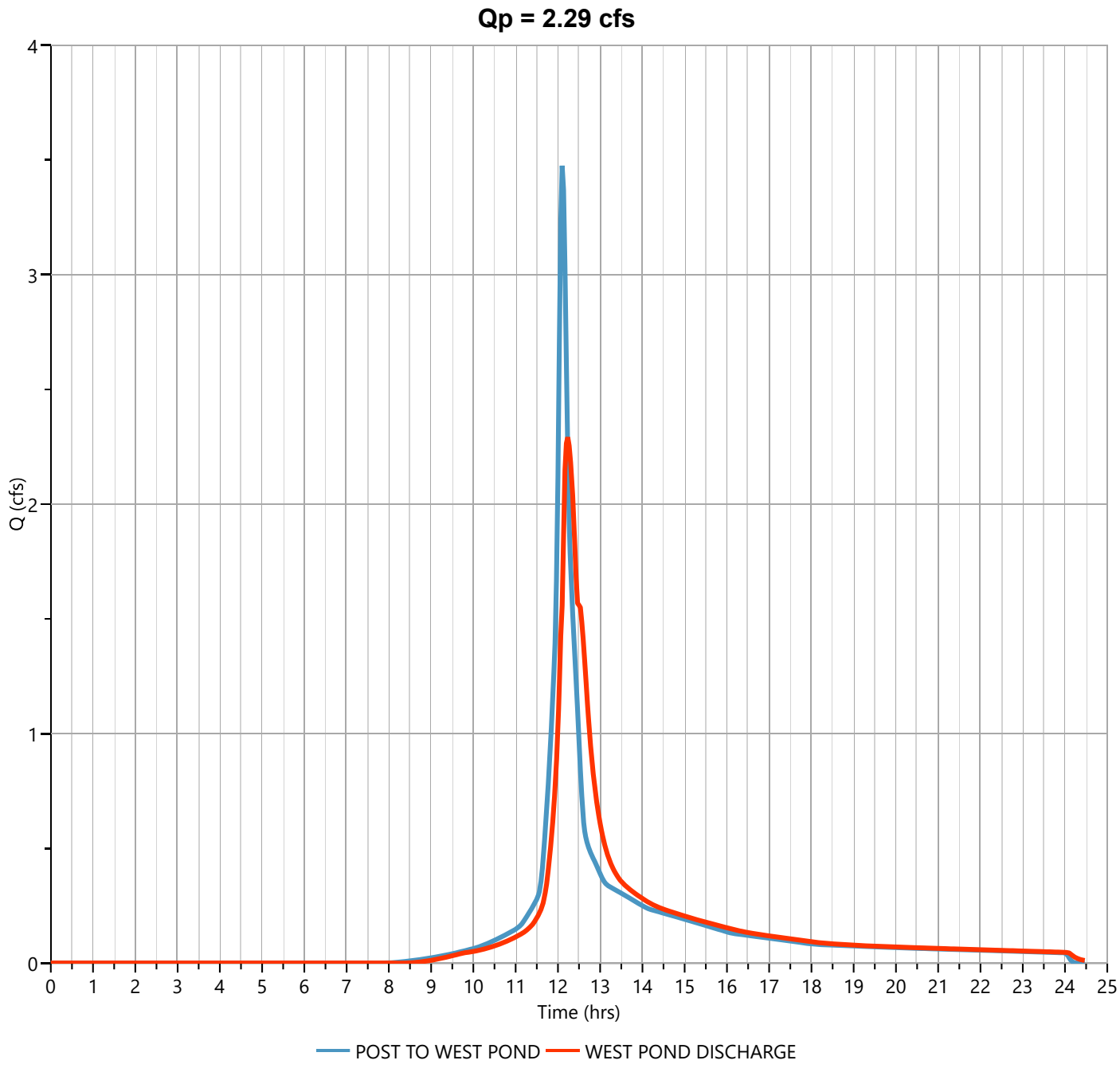
WEST POND DISCHARGE

Hyd. No. 2

Hydrograph Type	= Pond Route	Peak Flow	= 2.292 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.23 hrs
Time Interval	= 2 min	Hydrograph Volume	= 11,861 cuft
Inflow Hydrograph	= 1 - POST TO WEST POND	Max. Elevation	= 590.07 ft
Pond Name	= WEST POND	Max. Storage	= 1,941 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 16 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

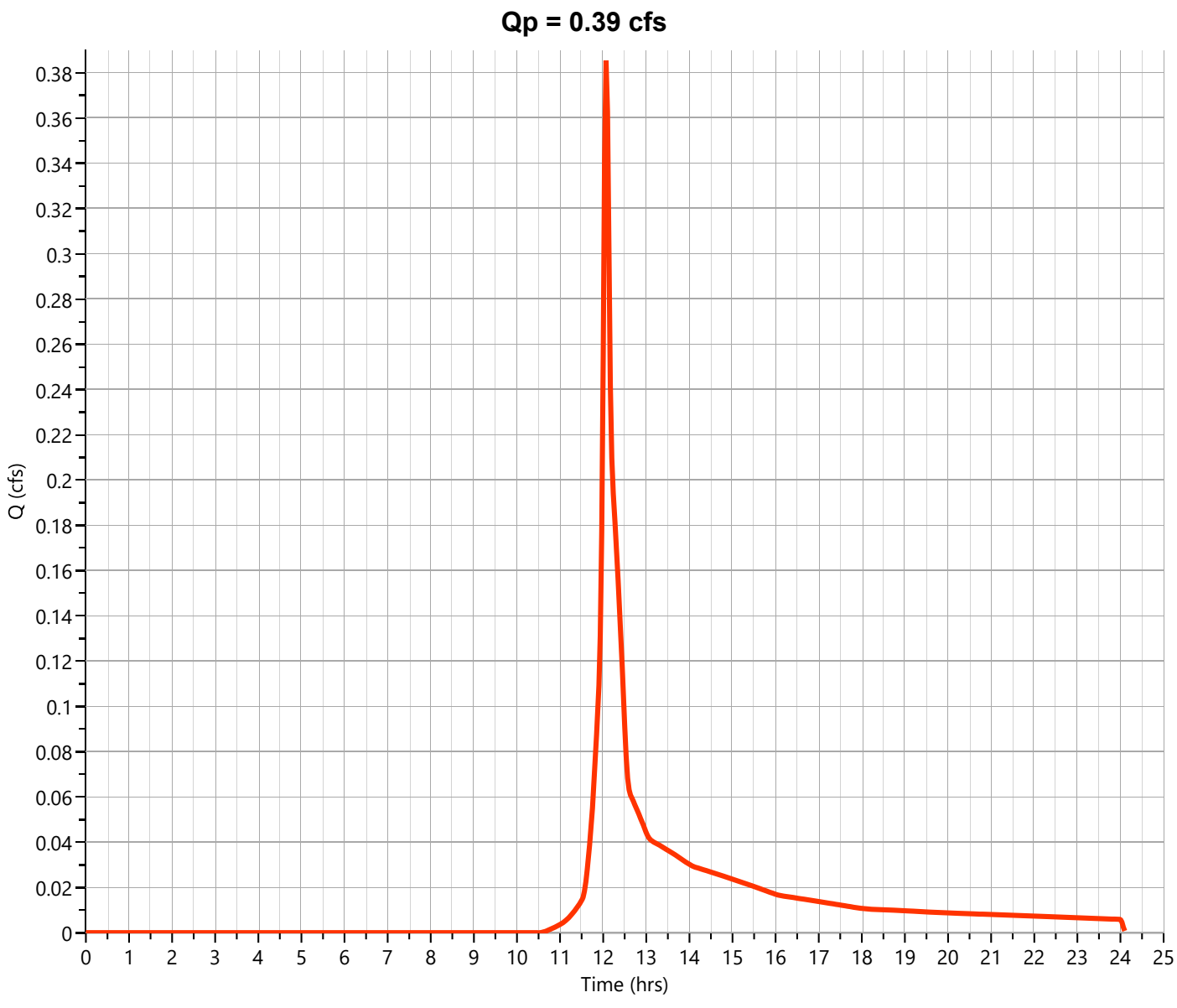
Post NORTH UNDISTURBED

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.385 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 1,212 cuft
Drainage Area	= 0.129 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 8.46 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.129	52	Grassland (A)
0.129	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

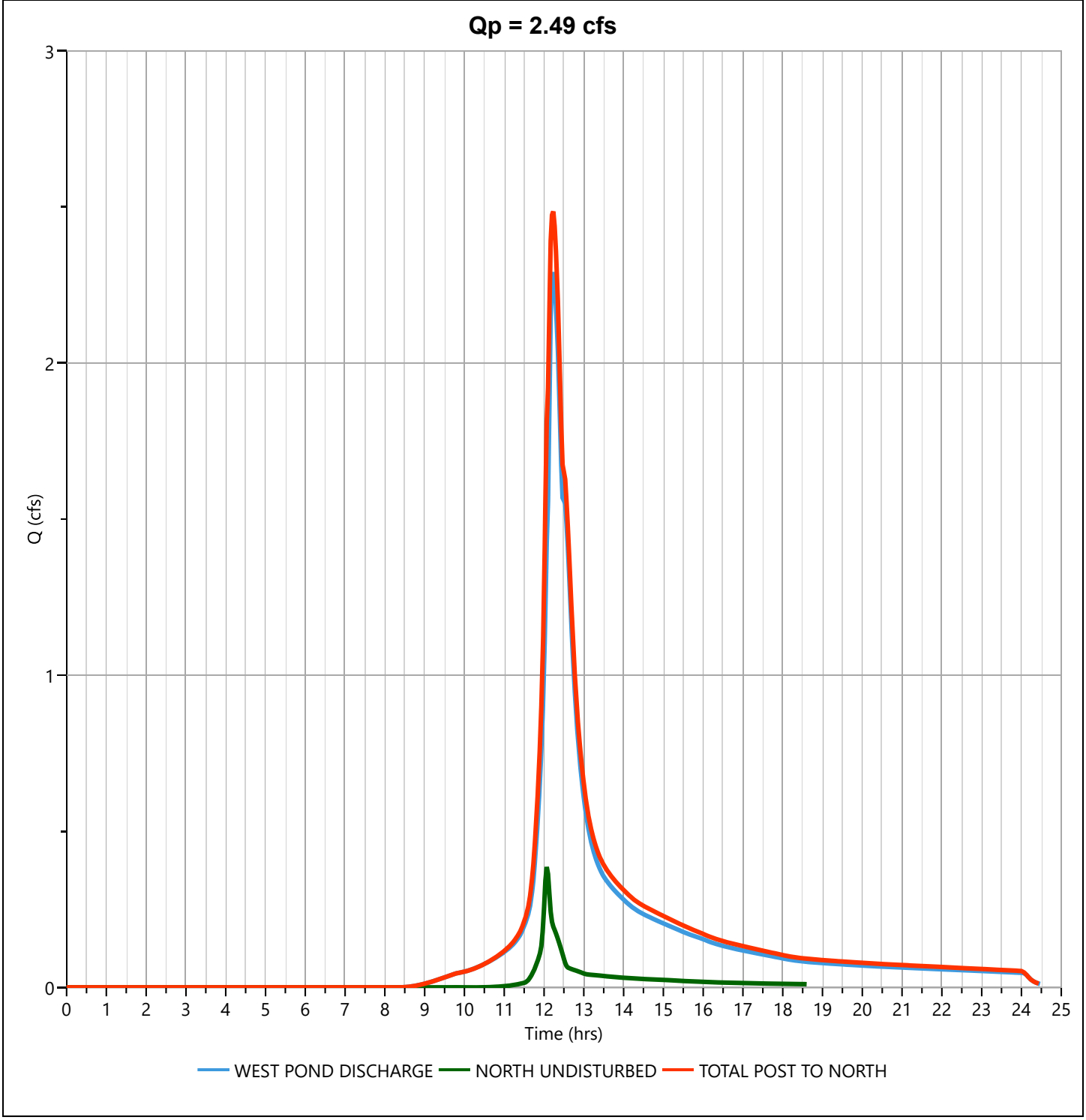
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO NORTH

Hyd. No. 4

Hydrograph Type	= Junction	Peak Flow	= 2.486 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.23 hrs
Time Interval	= 2 min	Hydrograph Volume	= 13,073 cuft
Inflow Hydrographs	= 2, 3	Total Contrib. Area	= 0.129 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

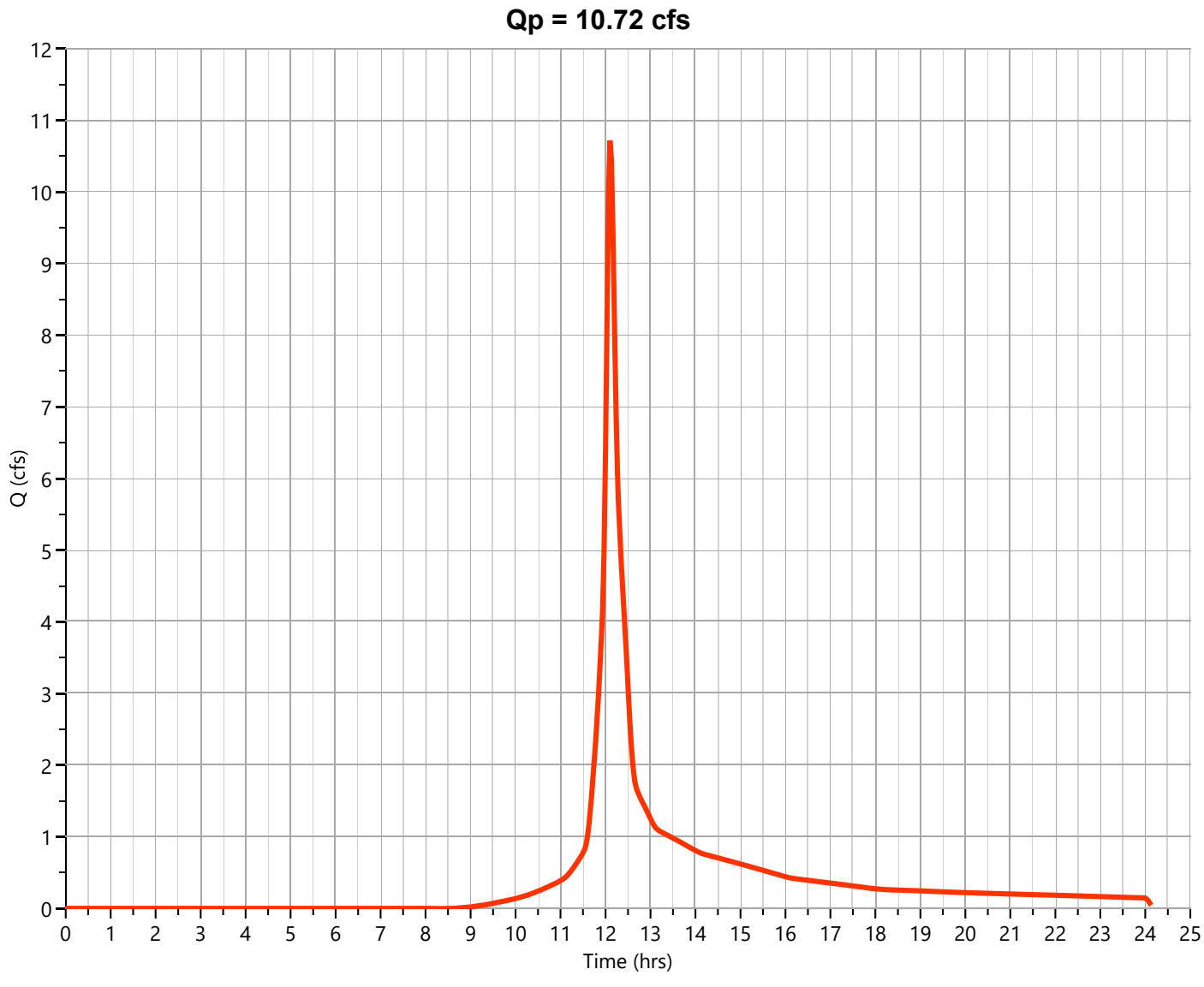
POST TO EAST POND

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 10.72 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 36,740 cuft
Drainage Area	= 2.438 ac	Curve Number	= 64*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 8.46 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
2.012	61	1/4 Acre Lots (A)
0.426	77	1/8th Acre Lots (exist)(A)
2.438	**64**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

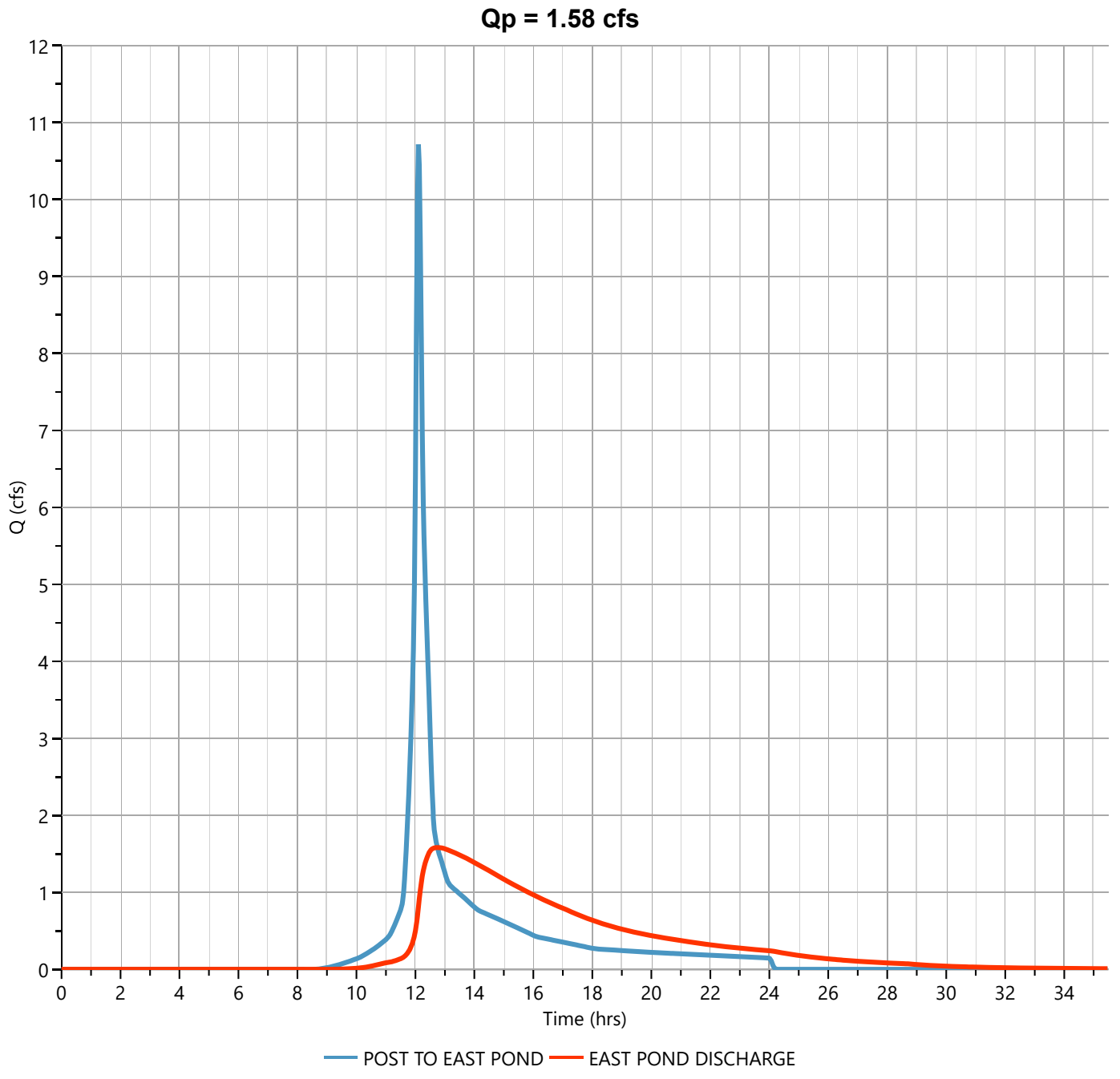
EAST POND DISCHARGE

Hyd. No. 6

Hydrograph Type	= Pond Route	Peak Flow	= 1.581 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.73 hrs
Time Interval	= 2 min	Hydrograph Volume	= 36,702 cuft
Inflow Hydrograph	= 5 - POST TO EAST POND	Max. Elevation	= 588.44 ft
Pond Name	= EAST POND	Max. Storage	= 16,217 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 2.91 hrs



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

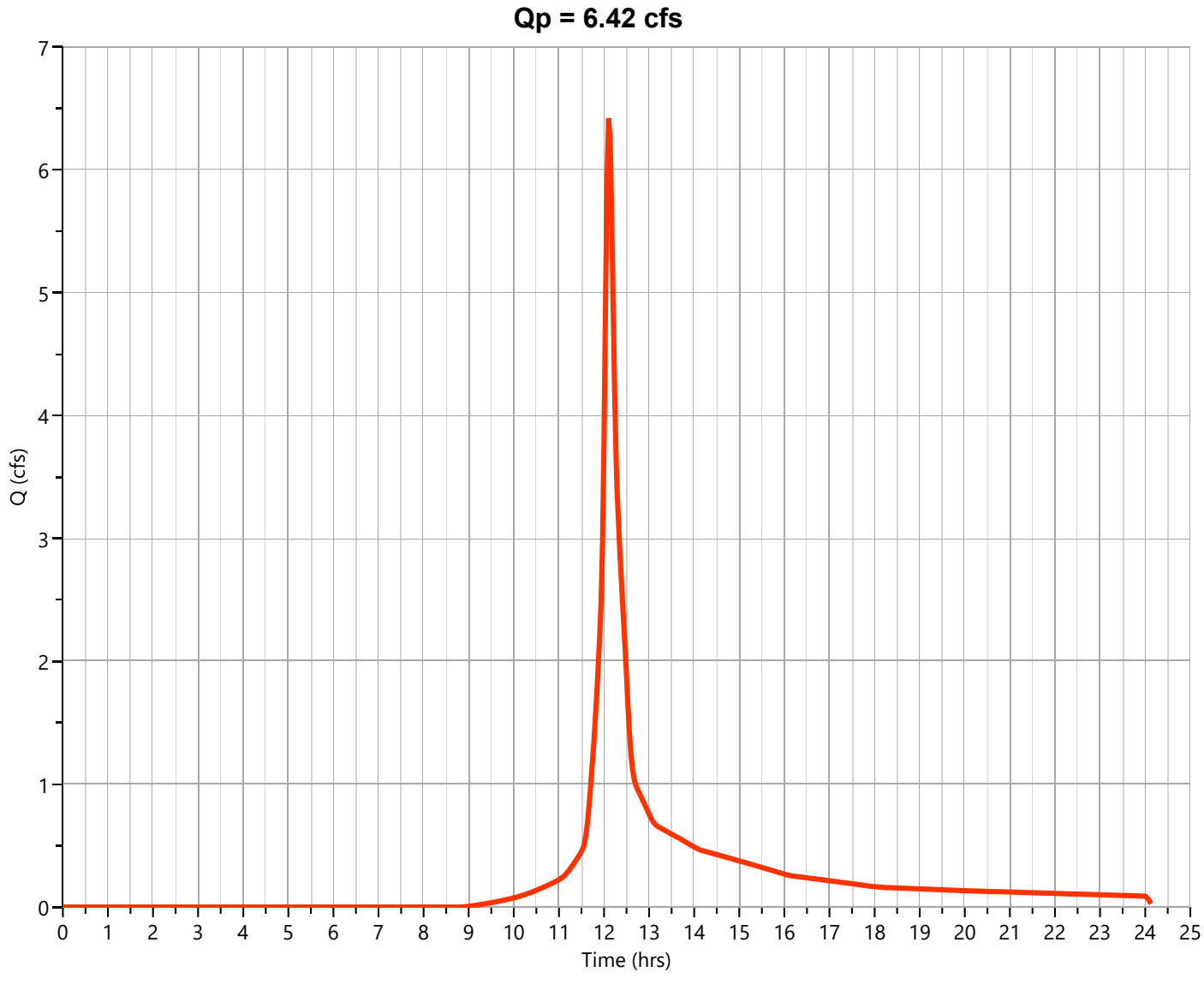
POST BYPASS TO ROW

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 6.420 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 22,041 cuft
Drainage Area	= 1.497 ac	Curve Number	= 63.19*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 8.46 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.292	61	1/4 Ac Lots (A)(includes Drive)
0.205	77	1/8th Acre Lots (exist)(A)
1.497	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

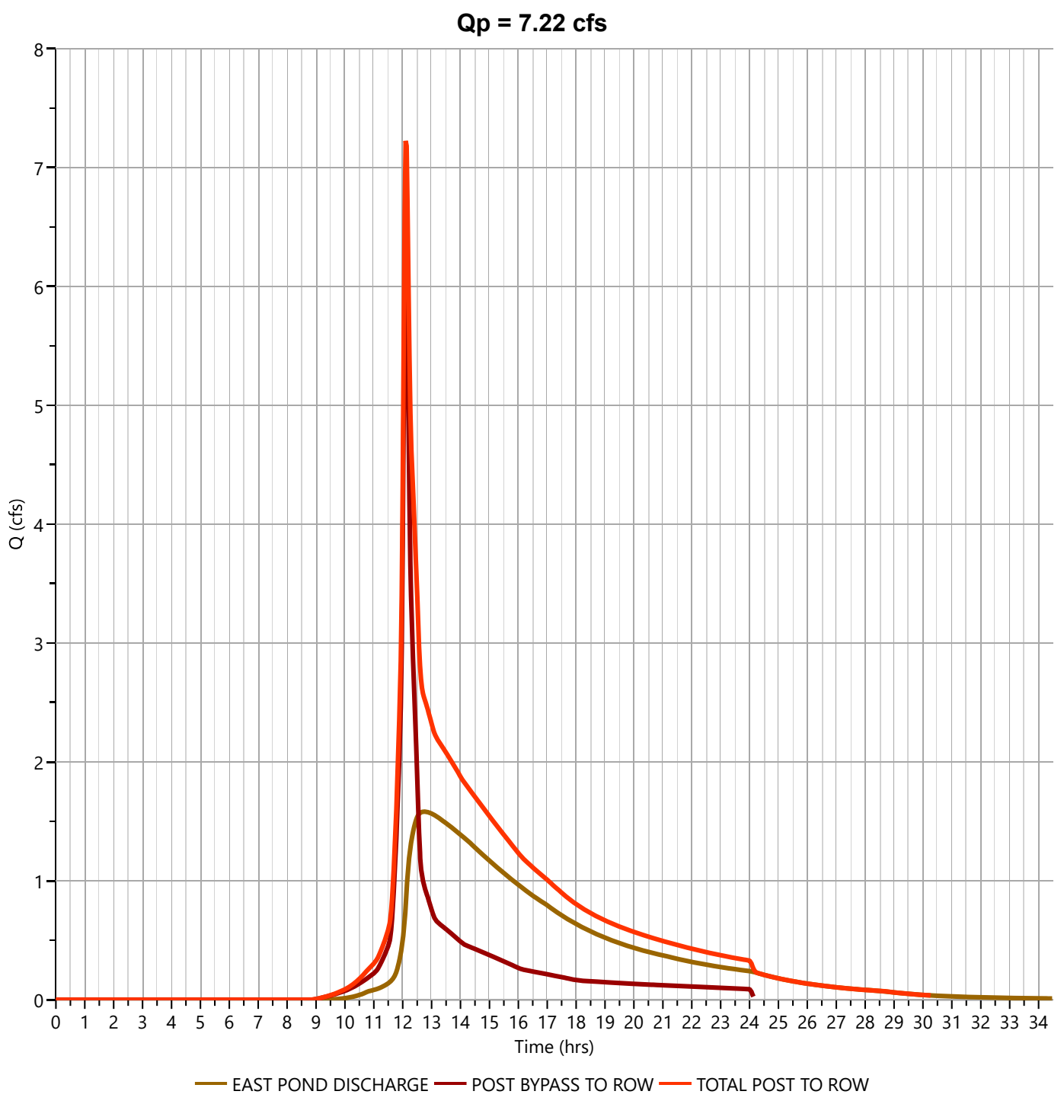
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO ROW

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 7.224 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Hydrograph Volume	= 58,743 cuft
Inflow Hydrographs	= 6, 7	Total Contrib. Area	= 1.497 ac



Hydrograph Report

Project Name:

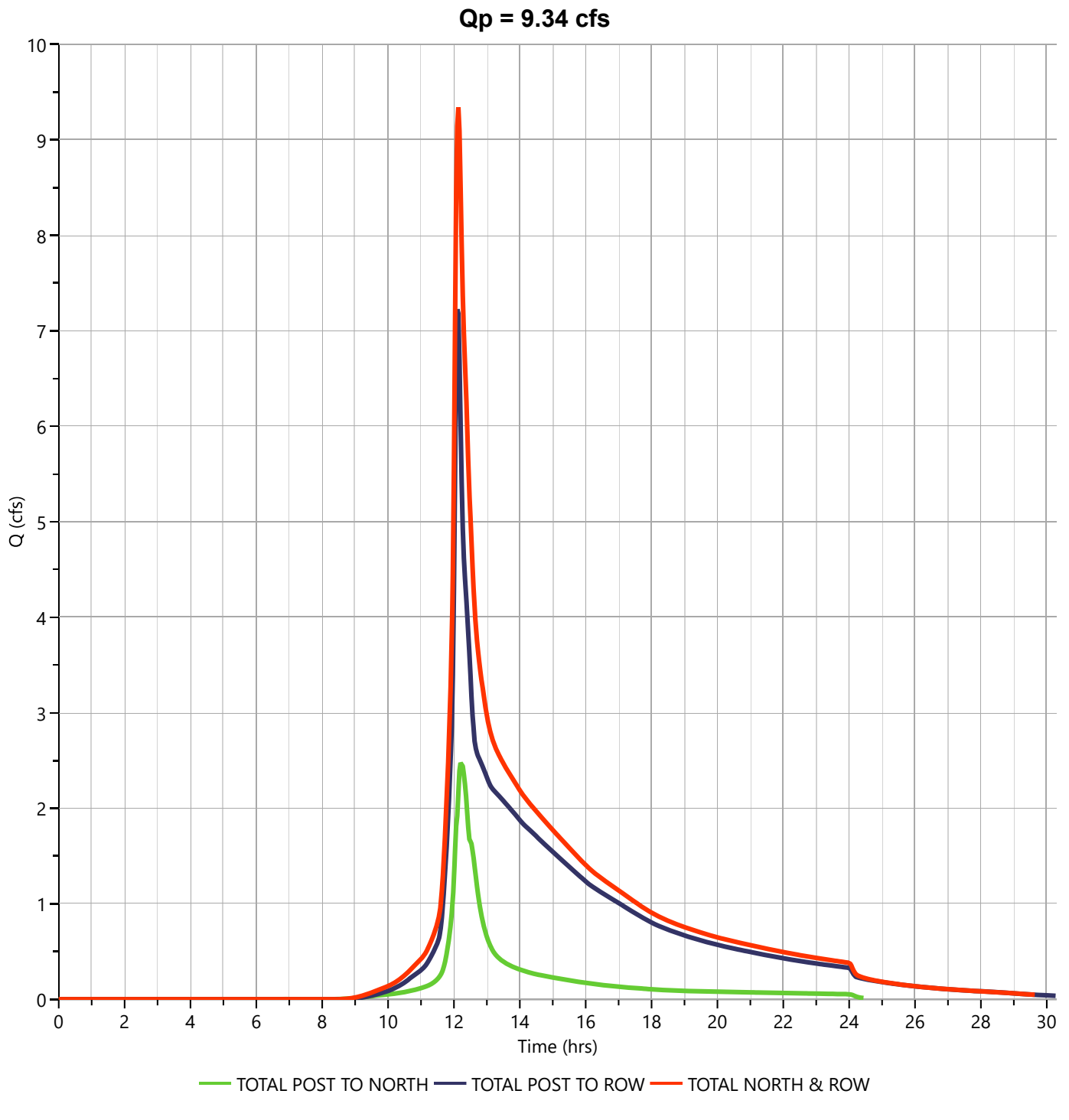
Hydrology Studio v 3.0.0.32

08-06-2024

Post TOTAL NORTH & ROW

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 9.339 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 71,815 cuft
Inflow Hydrographs	= 4, 8	Total Contrib. Area	= 1.626 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

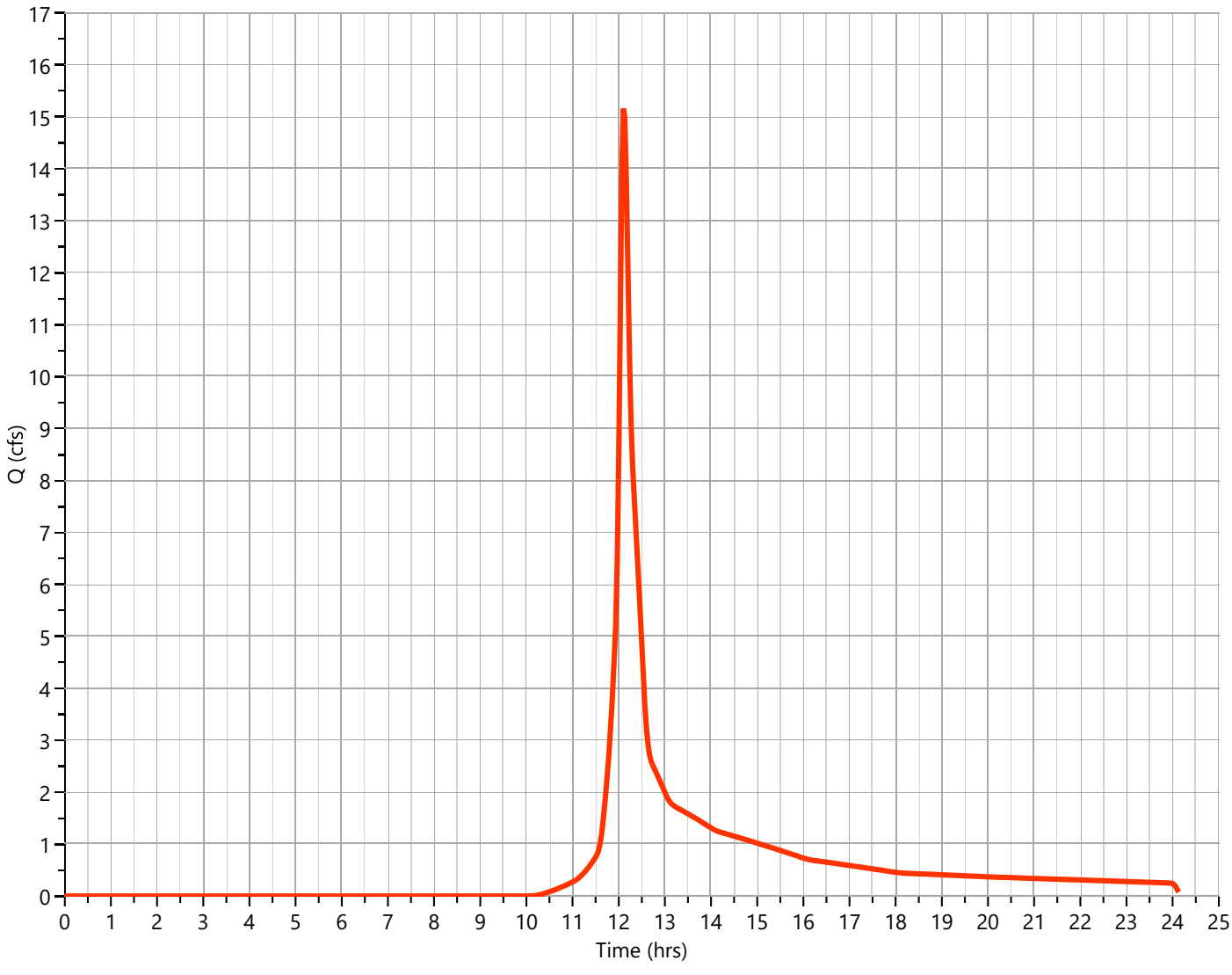
PRE TO ROW

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 15.16 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 53,763 cuft
Drainage Area	= 4.773 ac	Curve Number	= 55*
Tc Method	= User	Time of Conc. (Tc)	= 9.55 min
Total Rainfall	= 8.46 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.697	52	Grassland (A)
0.906	77	1/8th Acre Lots (exist)(A)
0.17	98	Impervious
4.773	**55**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

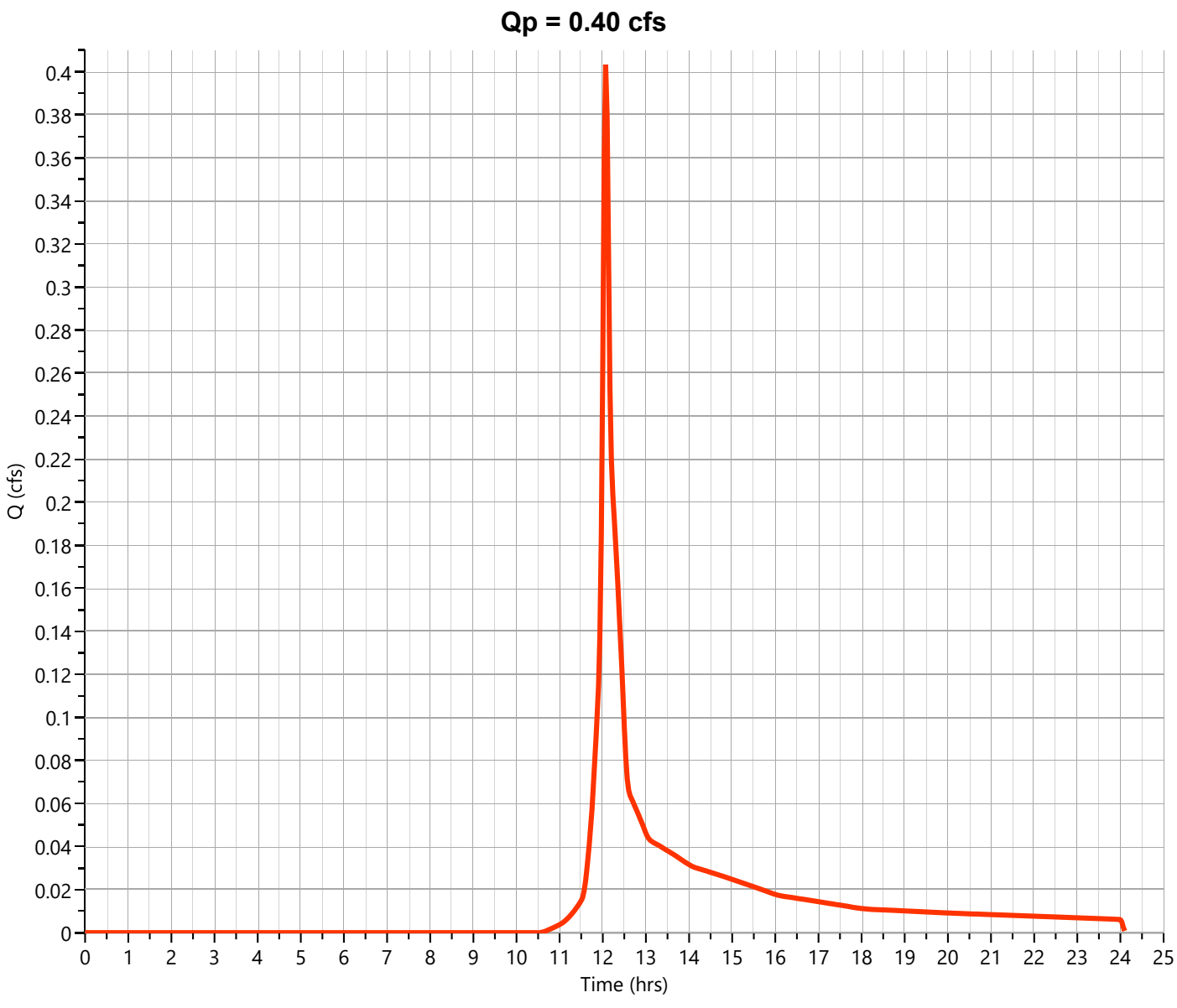
PRE TO NORTH

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.403 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 1,268 cuft
Drainage Area	= 0.135 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 8.46 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.135	52	Grassland (A)
0.135	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

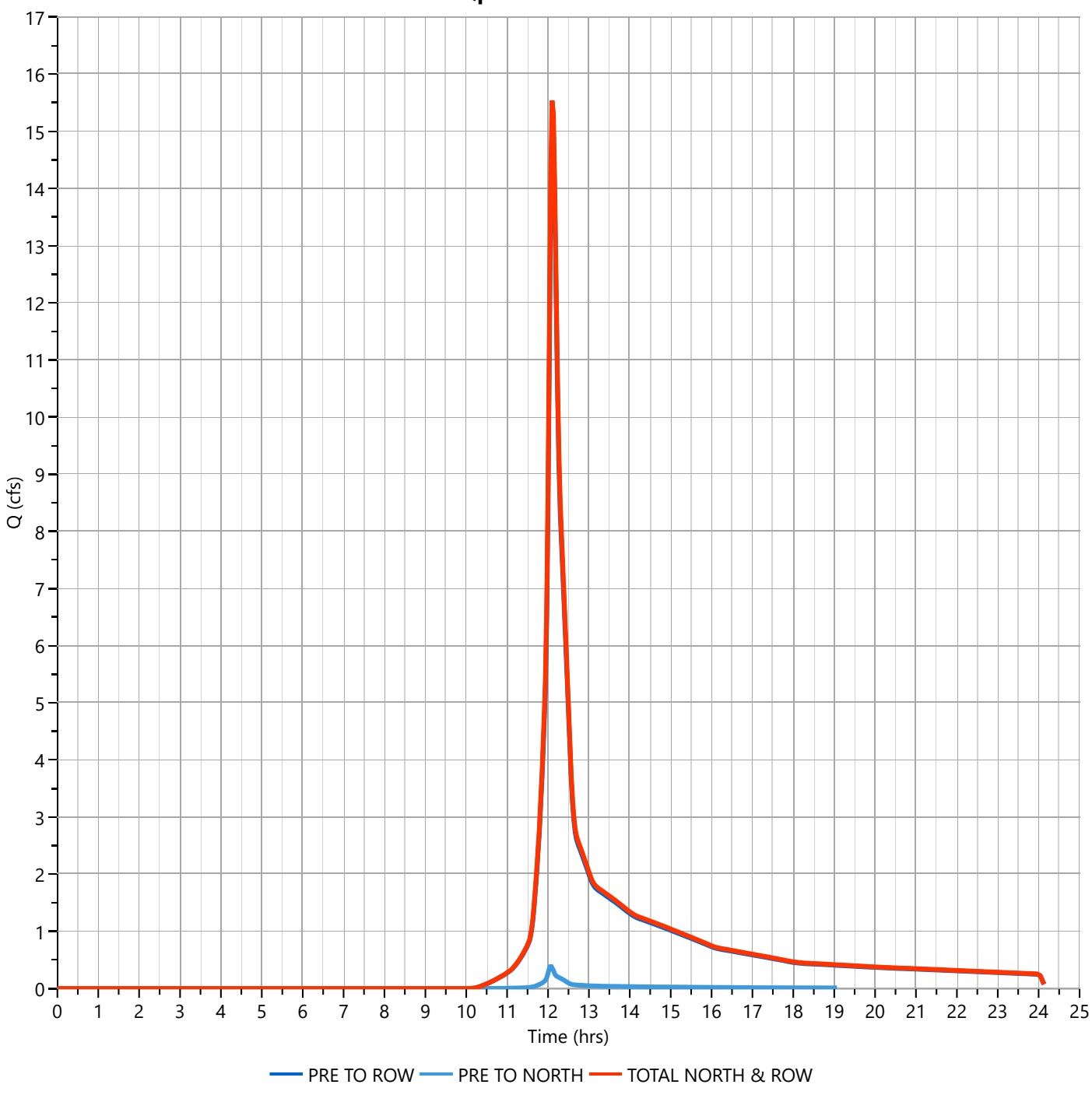
Hydrology Studio v 3.0.0.32

08-06-2024

Pre TOTAL NORTH & ROW

Hyd. No. 13

Hydrograph Type	= Junction	Peak Flow	= 15.54 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Hydrograph Volume	= 55,031 cuft
Inflow Hydrographs	= 11, 12	Total Contrib. Area	= 4.908 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

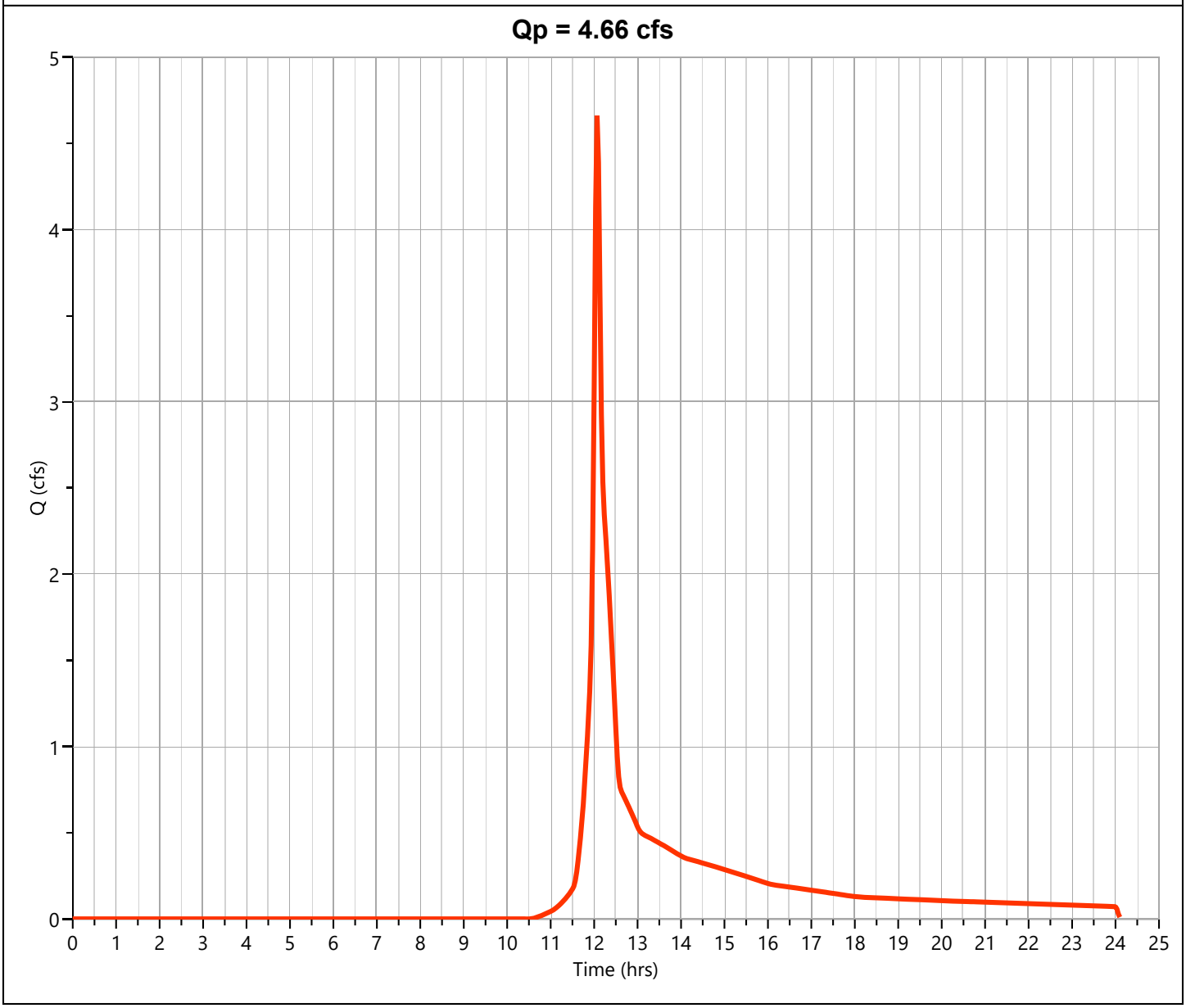
POST TO EAST

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 4.661 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 14,656 cuft
Drainage Area	= 1.56 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 8.46 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.56	52	Grassland (A)
1.56	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

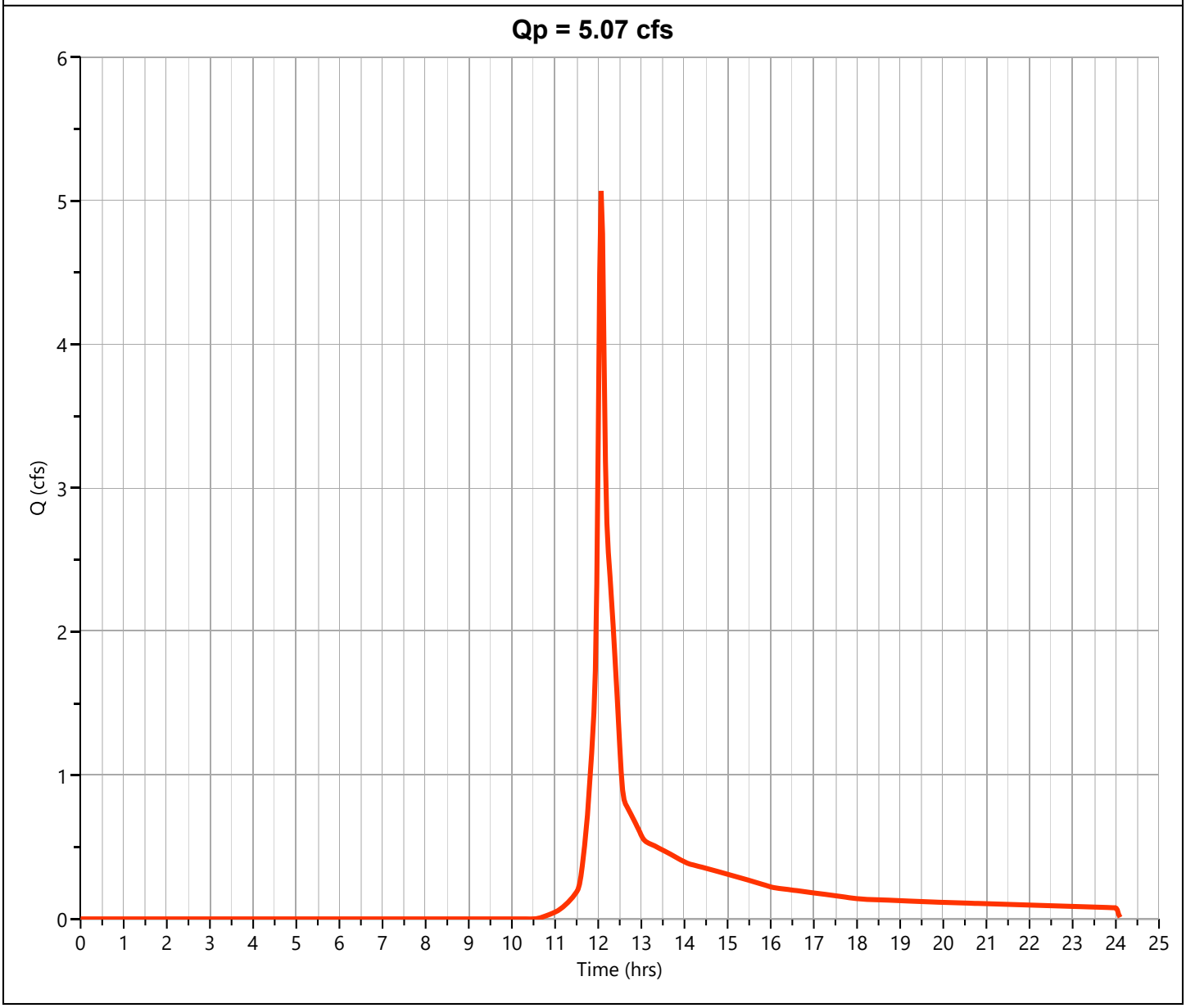
PRE TO EAST

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 5.067 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 15,934 cuft
Drainage Area	= 1.696 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 8.46 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.696	52	Grassland (A)
1.696	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

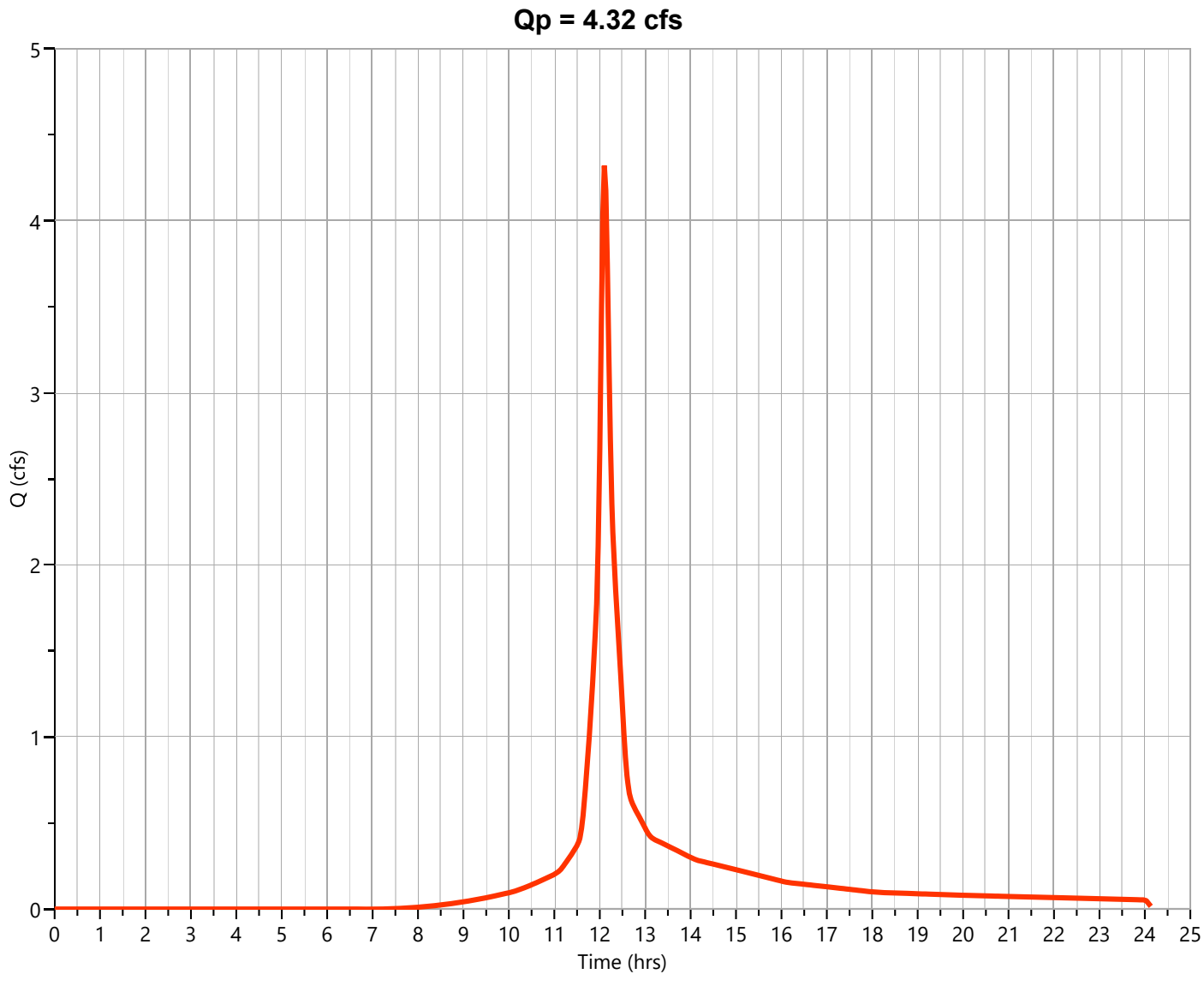
POST TO WEST POND

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 4.320 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 14,758 cuft
Drainage Area	= 0.707 ac	Curve Number	= 68*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 9.76 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.408	61	1/4 Acre Lots (A)
0.299	77	1/8th Acre Lots (exist)(A)
0.707	**68**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

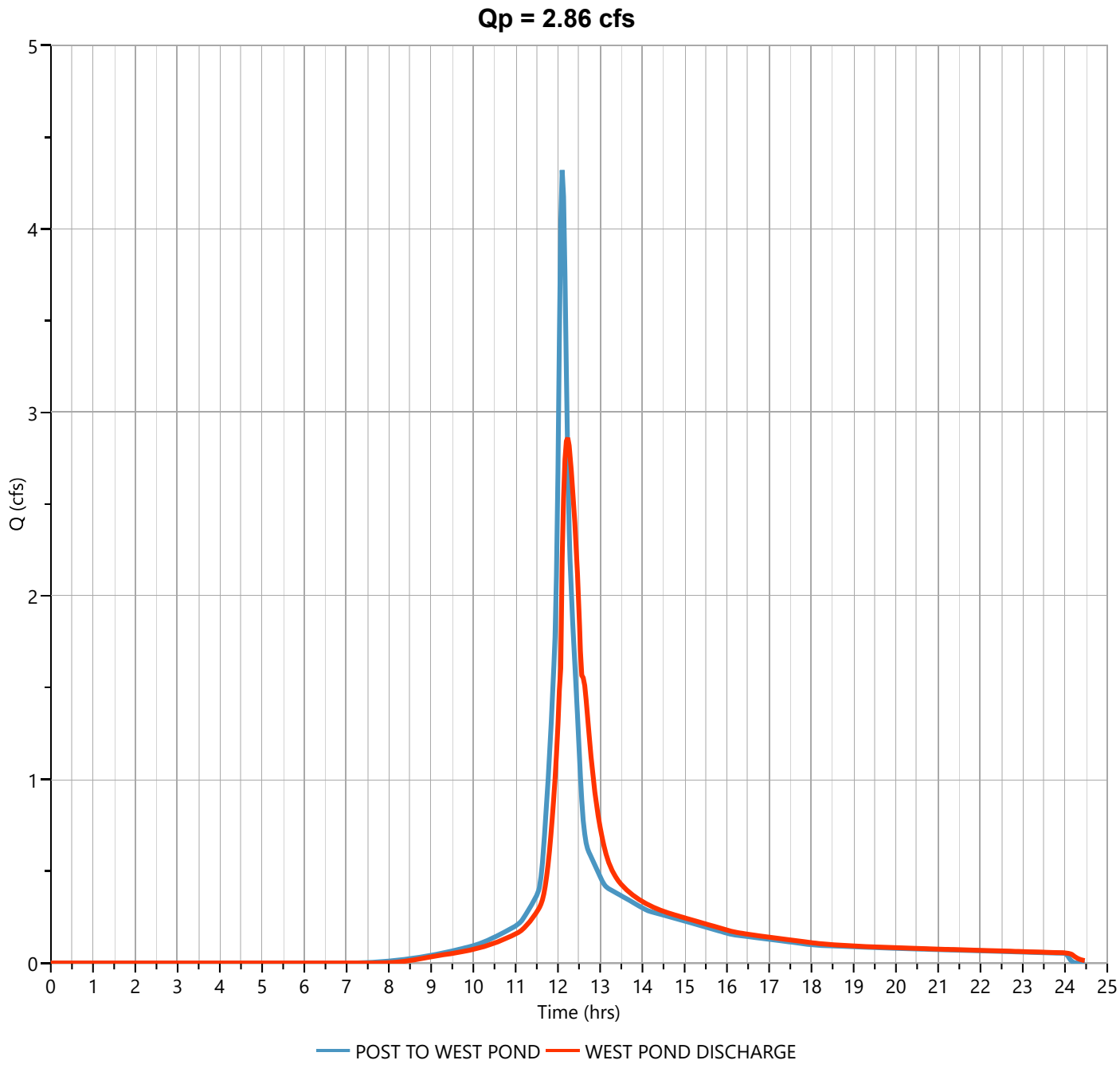
WEST POND DISCHARGE

Hyd. No. 2

Hydrograph Type	= Pond Route	Peak Flow	= 2.861 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.23 hrs
Time Interval	= 2 min	Hydrograph Volume	= 14,750 cuft
Inflow Hydrograph	= 1 - POST TO WEST POND	Max. Elevation	= 590.26 ft
Pond Name	= WEST POND	Max. Storage	= 2,365 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 16 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

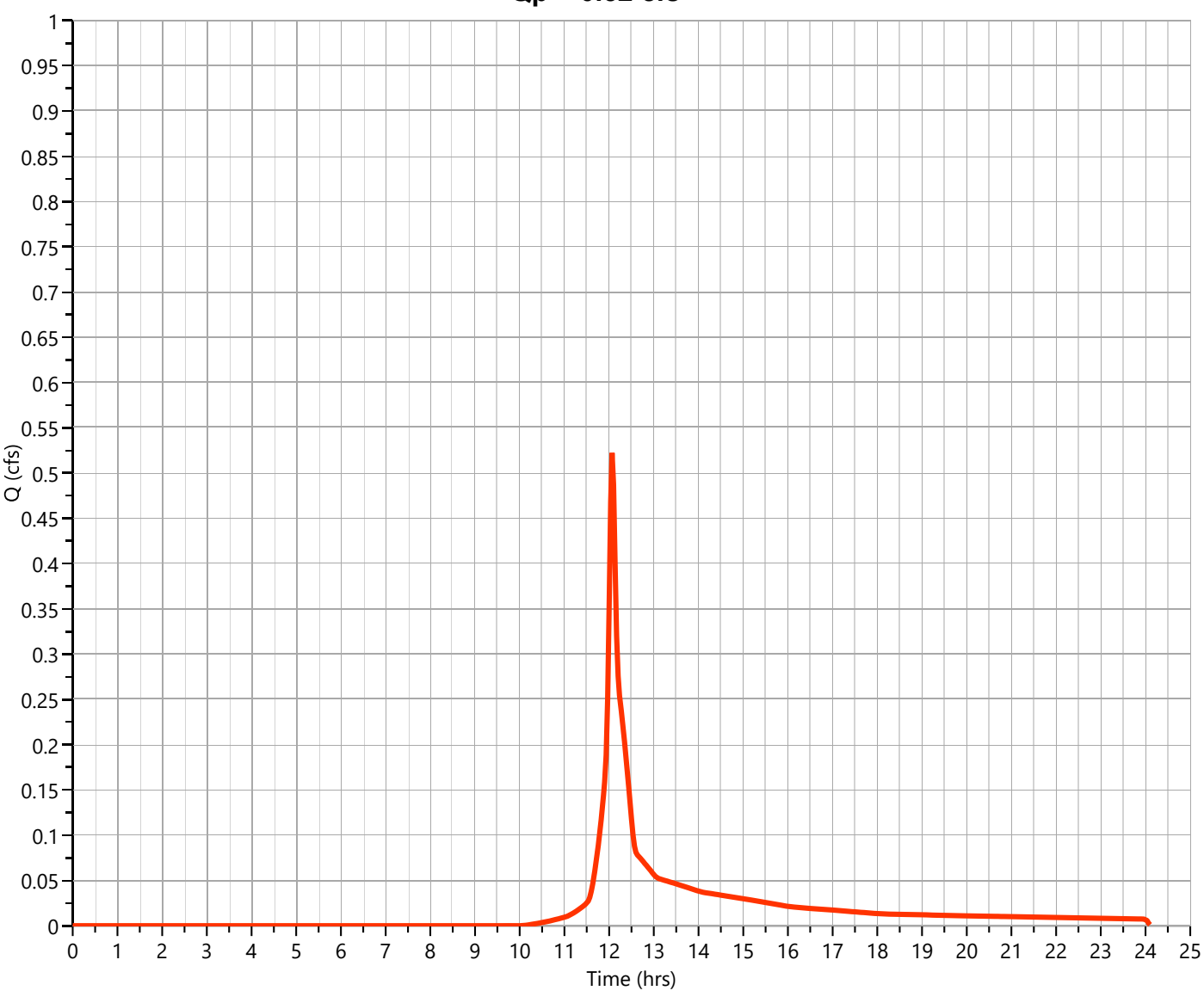
Post NORTH UNDISTURBED

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.522 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 1,604 cuft
Drainage Area	= 0.129 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 9.76 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.129	52	Grassland (A)
0.129	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

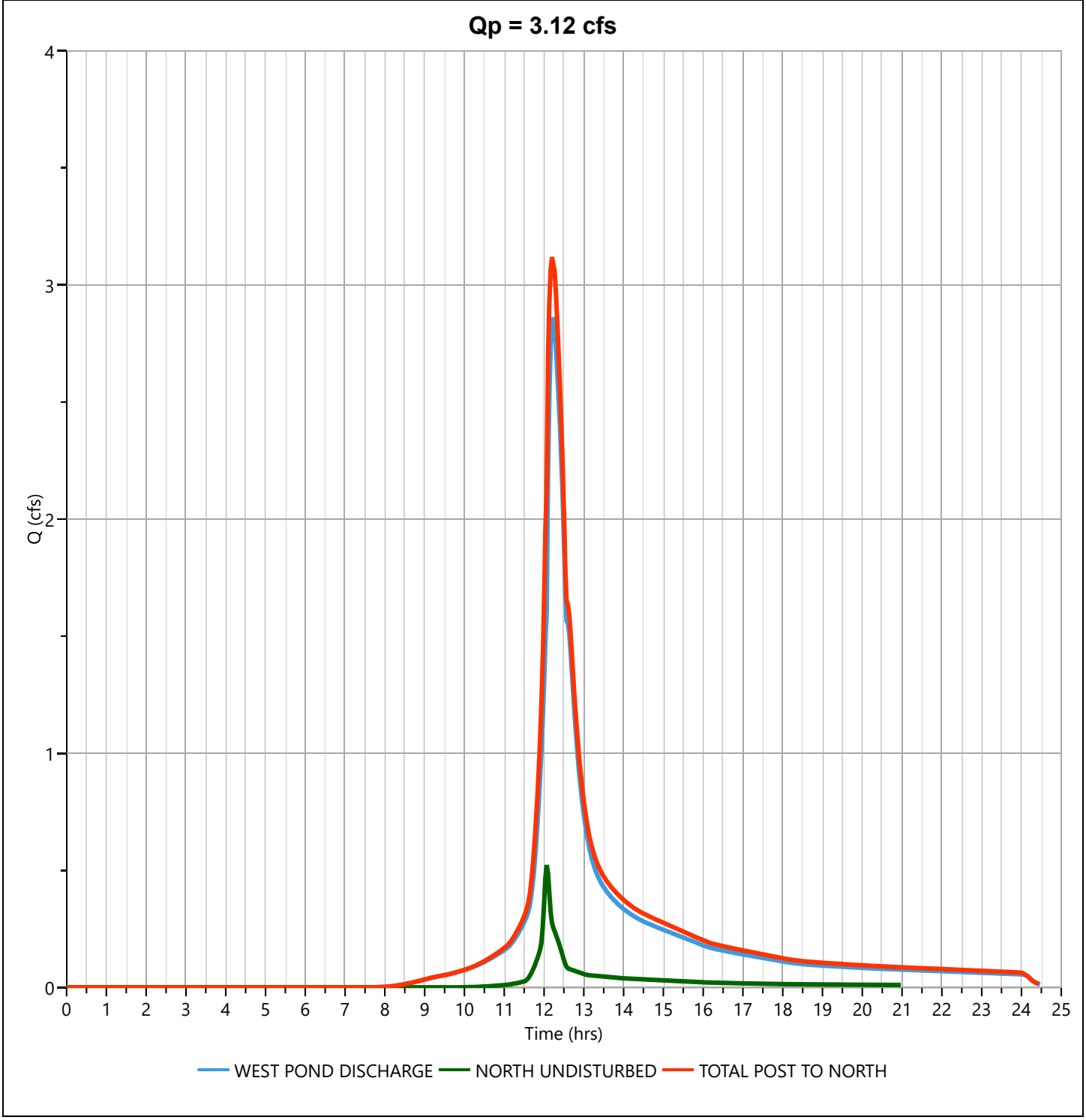
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO NORTH

Hyd. No. 4

Hydrograph Type	= Junction	Peak Flow	= 3.119 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.20 hrs
Time Interval	= 2 min	Hydrograph Volume	= 16,354 cuft
Inflow Hydrographs	= 2, 3	Total Contrib. Area	= 0.129 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

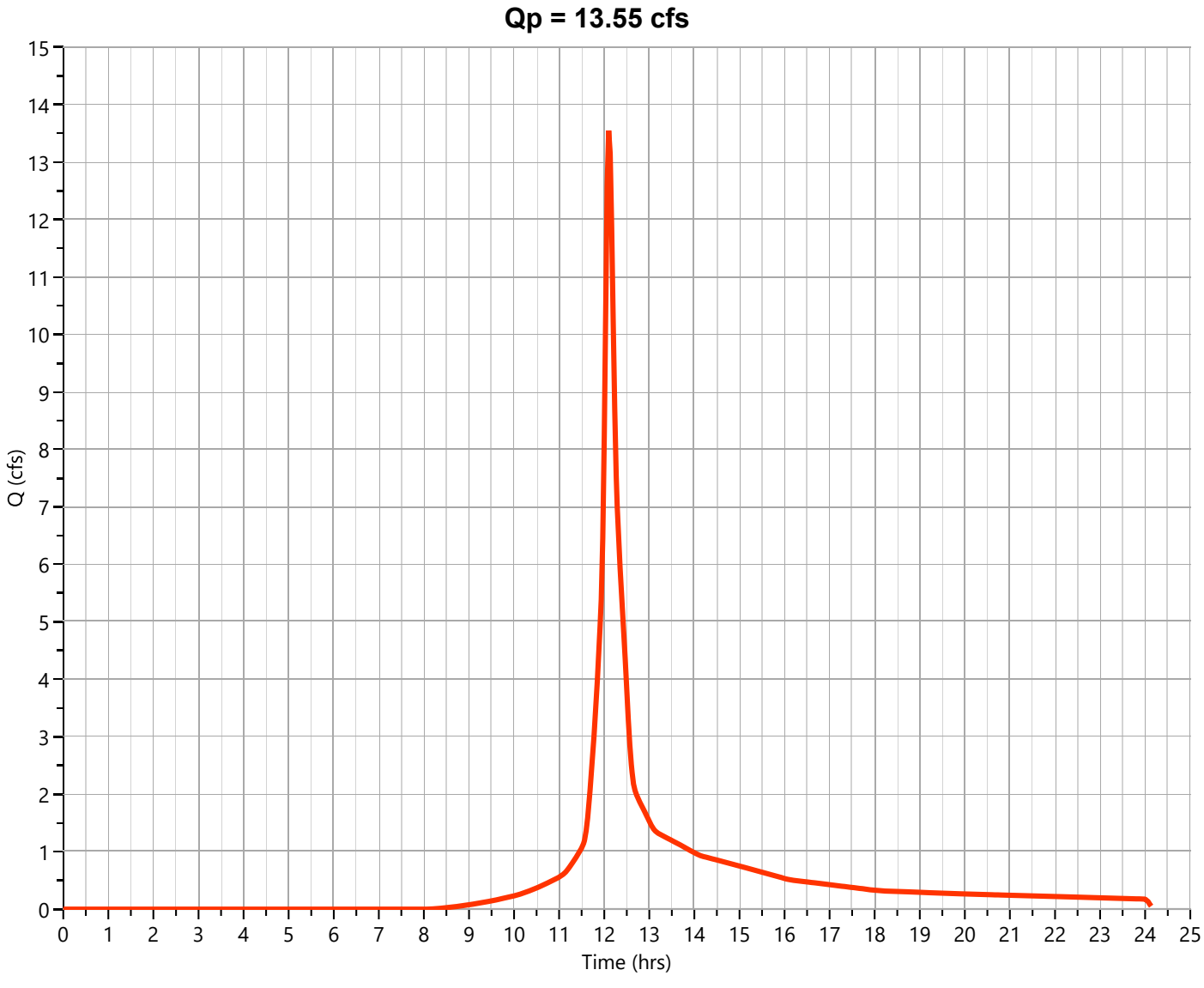
POST TO EAST POND

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 13.55 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 46,275 cuft
Drainage Area	= 2.438 ac	Curve Number	= 64*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 9.76 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
2.012	61	1/4 Acre Lots (A)
0.426	77	1/8th Acre Lots (exist)(A)
2.438	**64**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

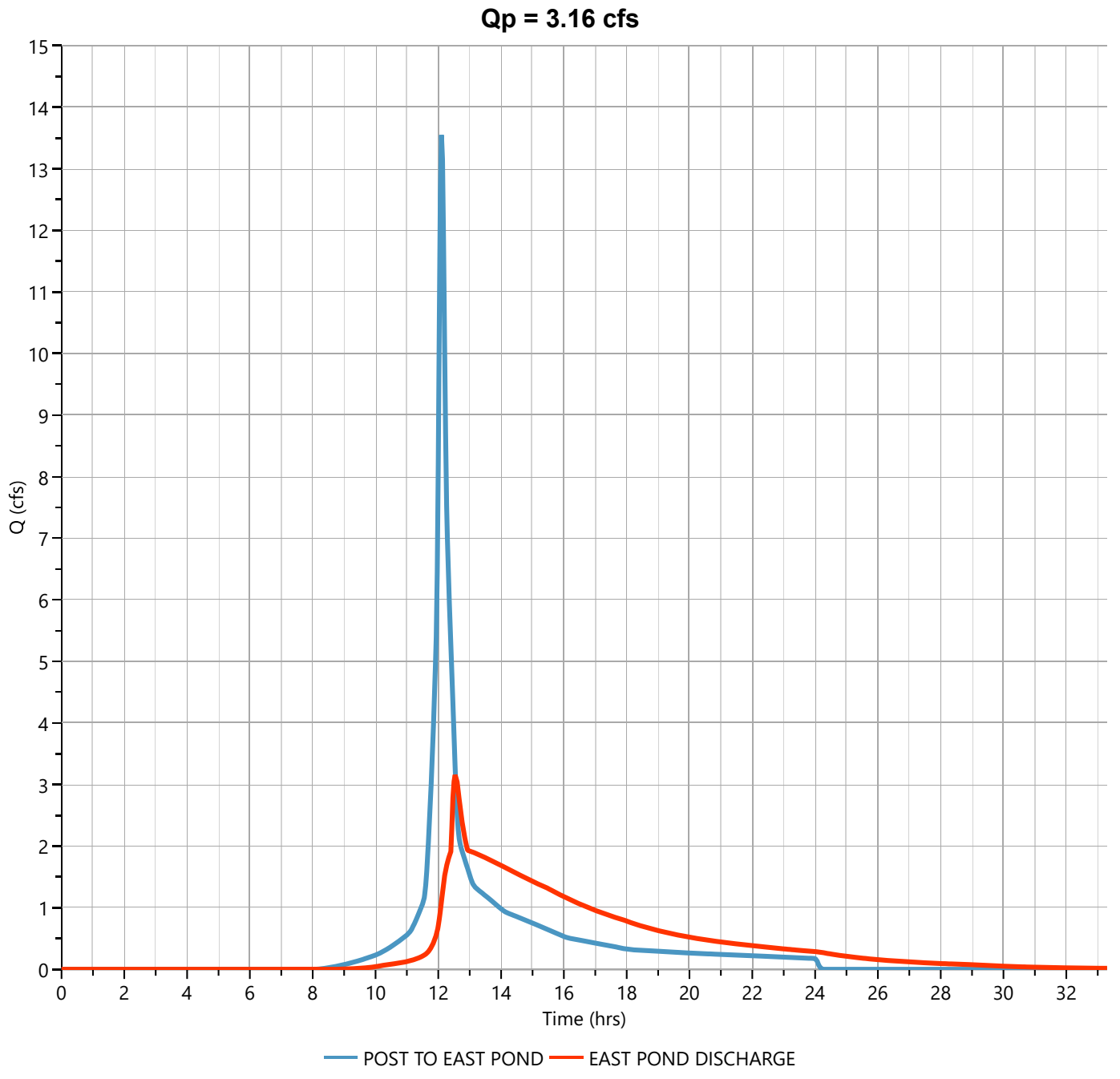
EAST POND DISCHARGE

Hyd. No. 6

Hydrograph Type	= Pond Route	Peak Flow	= 3.155 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.53 hrs
Time Interval	= 2 min	Hydrograph Volume	= 46,237 cuft
Inflow Hydrograph	= 5 - POST TO EAST POND	Max. Elevation	= 589.09 ft
Pond Name	= EAST POND	Max. Storage	= 20,122 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 2.75 hrs



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

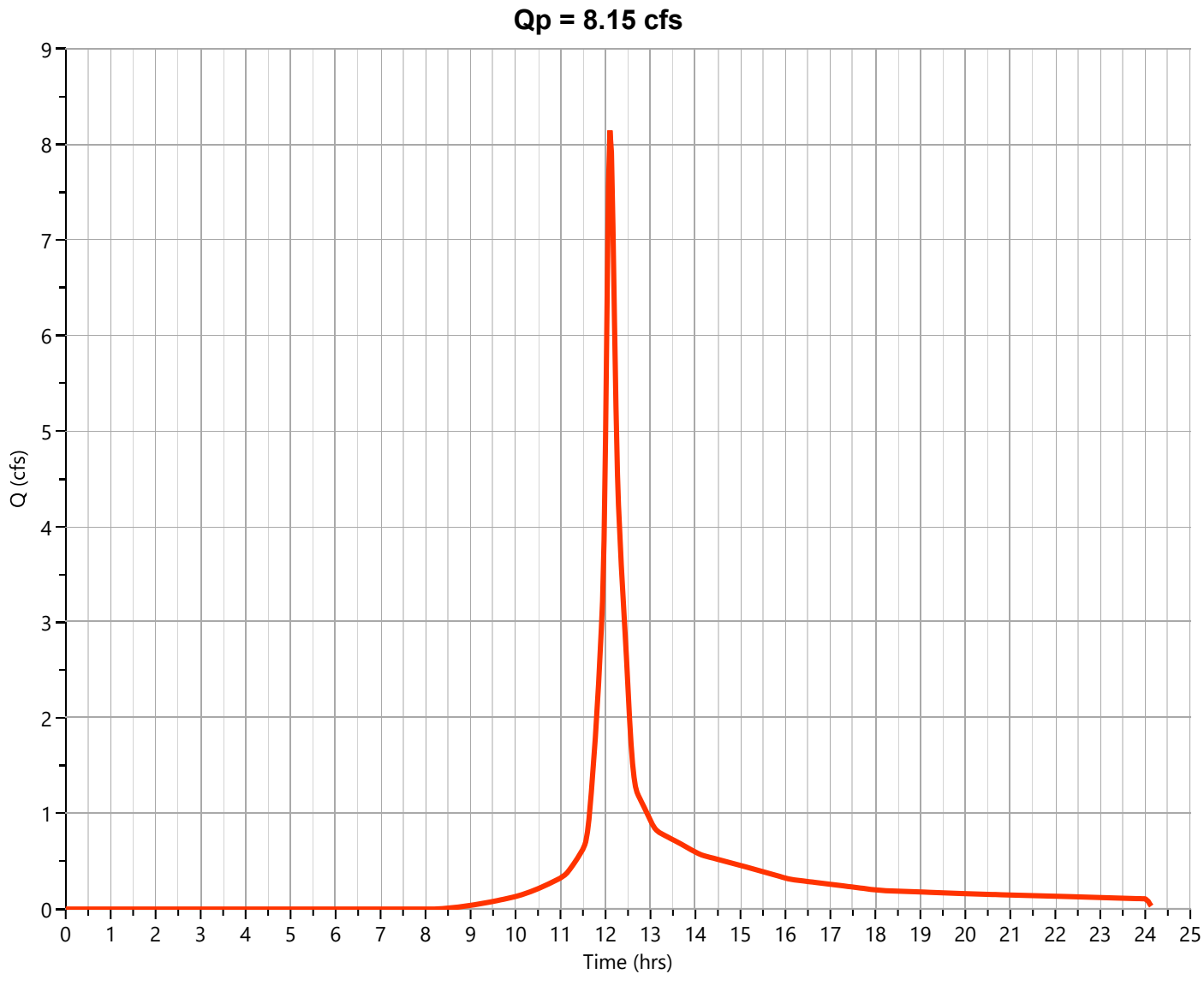
POST BYPASS TO ROW

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 8.145 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 27,838 cuft
Drainage Area	= 1.497 ac	Curve Number	= 63.19*
Tc Method	= User	Time of Conc. (Tc)	= 8.0 min
Total Rainfall	= 9.76 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.292	61	1/4 Ac Lots (A)(includes Drive)
0.205	77	1/8th Acre Lots (exist)(A)
1.497	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

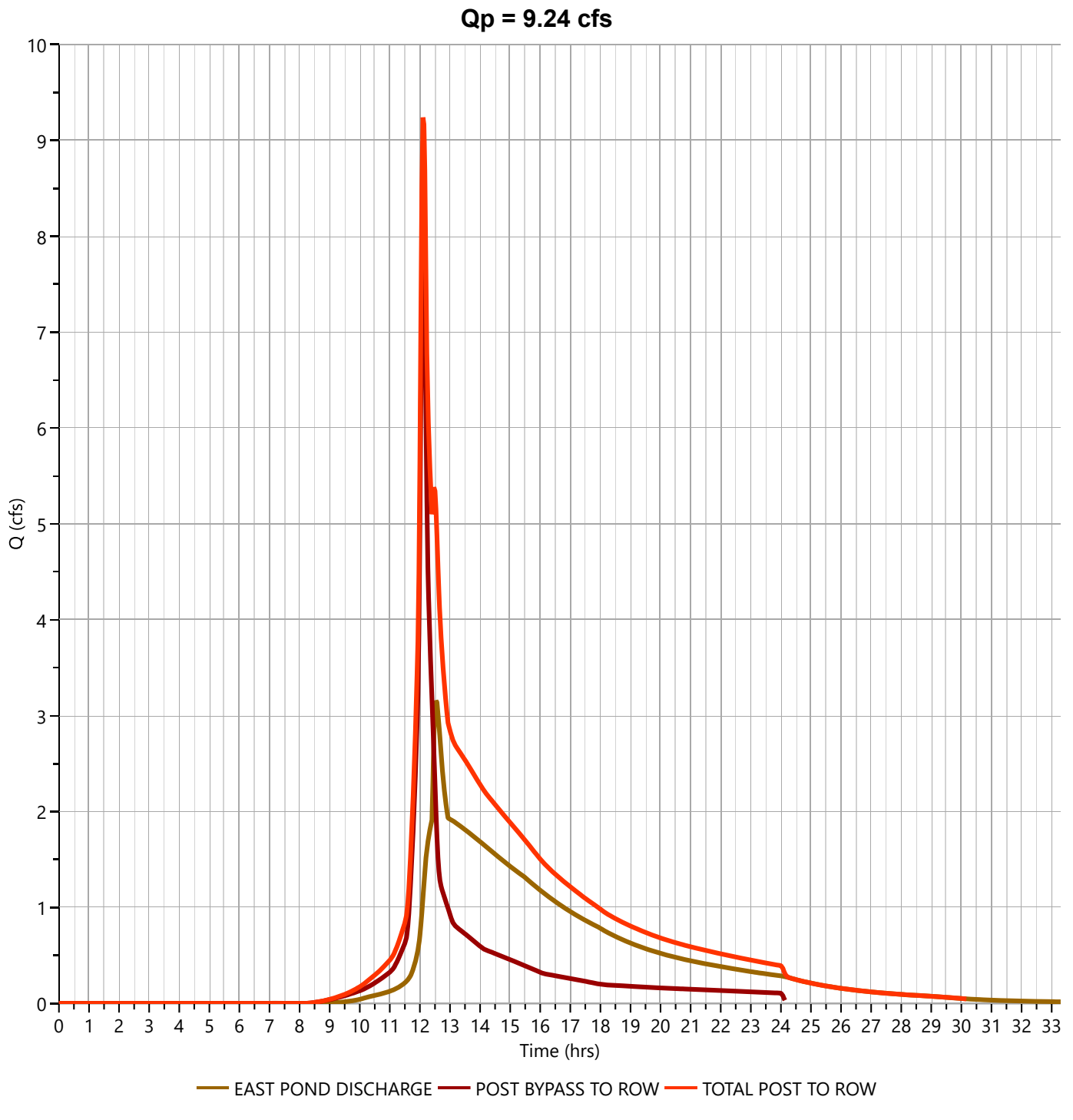
Hydrology Studio v 3.0.0.32

08-06-2024

TOTAL POST TO ROW

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 9.239 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Hydrograph Volume	= 74,075 cuft
Inflow Hydrographs	= 6, 7	Total Contrib. Area	= 1.497 ac



Hydrograph Report

Project Name:

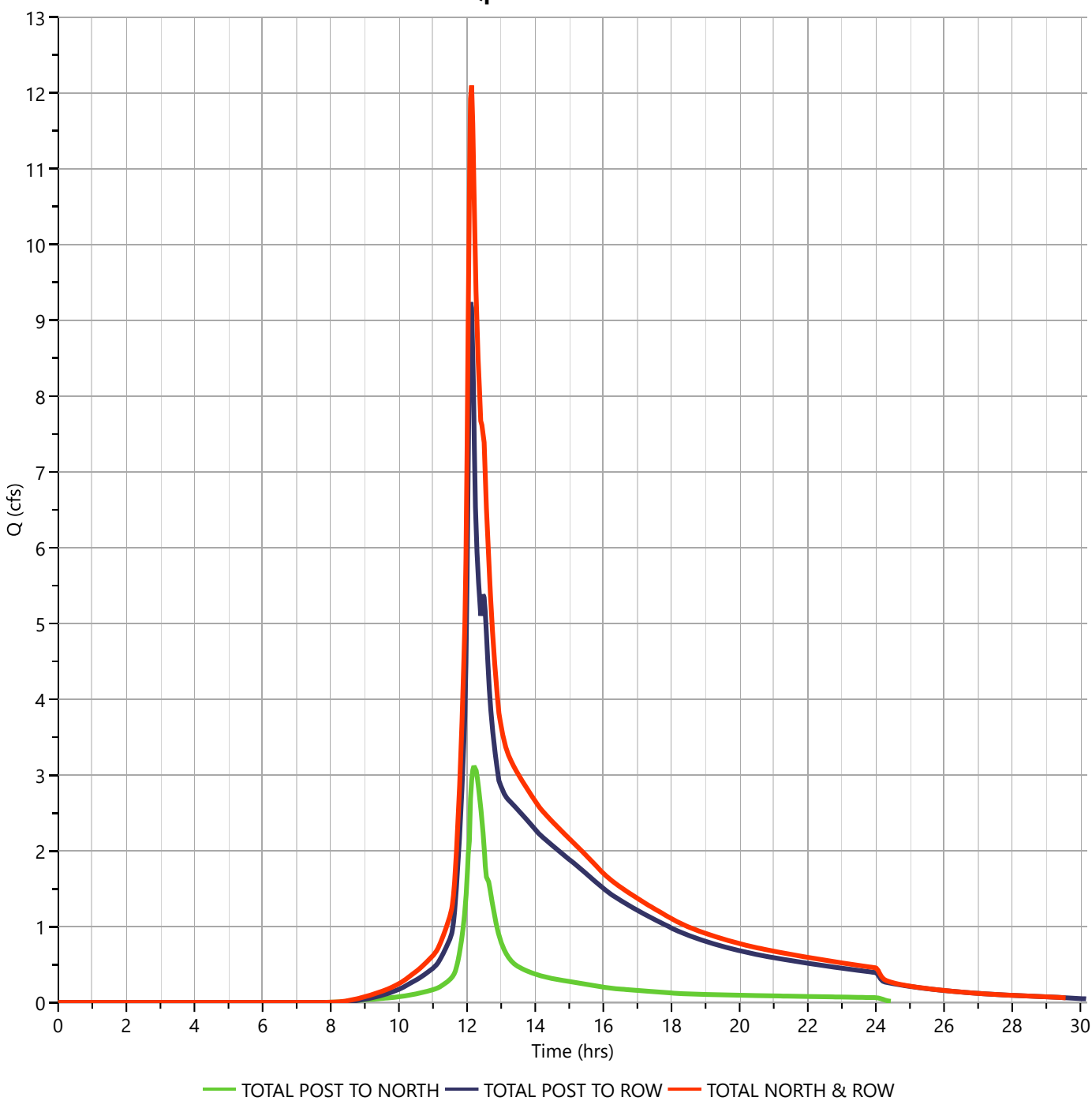
Hydrology Studio v 3.0.0.32

08-06-2024

Post TOTAL NORTH & ROW

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 12.10 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.13 hrs
Time Interval	= 2 min	Hydrograph Volume	= 90,429 cuft
Inflow Hydrographs	= 4, 8	Total Contrib. Area	= 1.626 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

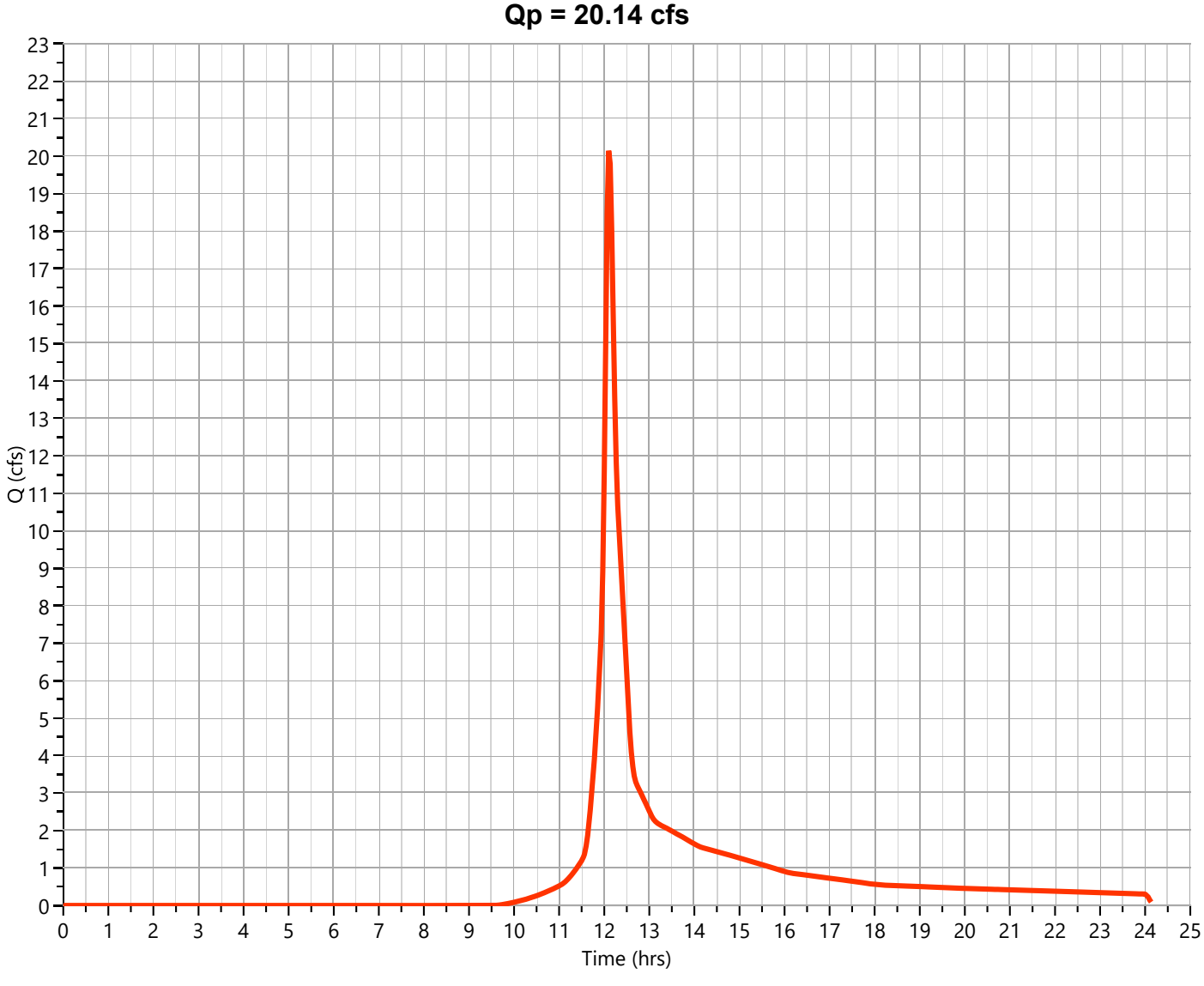
PRE TO ROW

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 20.14 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 70,124 cuft
Drainage Area	= 4.773 ac	Curve Number	= 55*
Tc Method	= User	Time of Conc. (Tc)	= 9.55 min
Total Rainfall	= 9.76 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.697	52	Grassland (A)
0.906	77	1/8th Acre Lots (exist)(A)
0.17	98	Impervious
4.773	**55**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

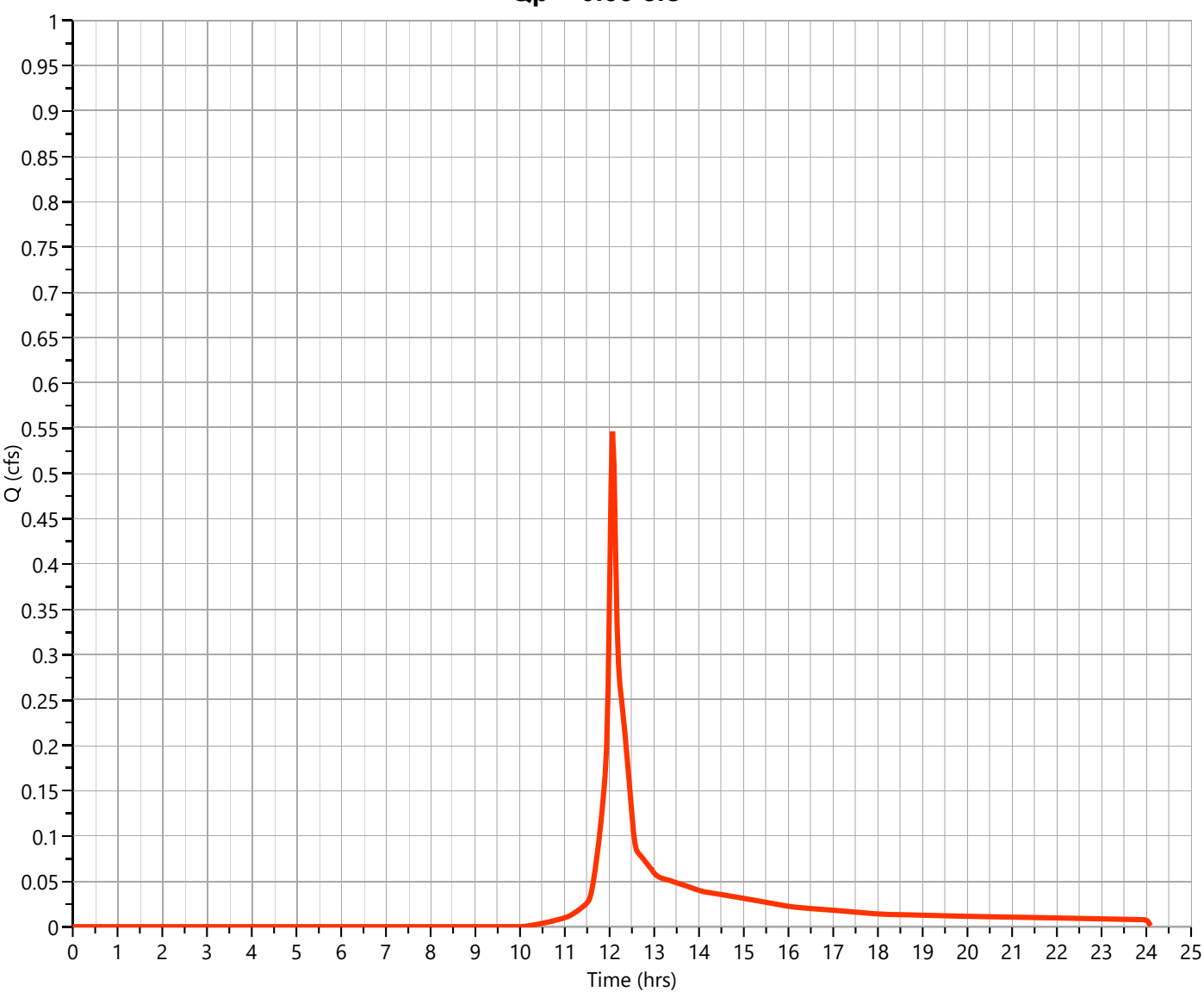
PRE TO NORTH

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.547 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 1,678 cuft
Drainage Area	= 0.135 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 9.76 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.135	52	Grassland (A)
0.135	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

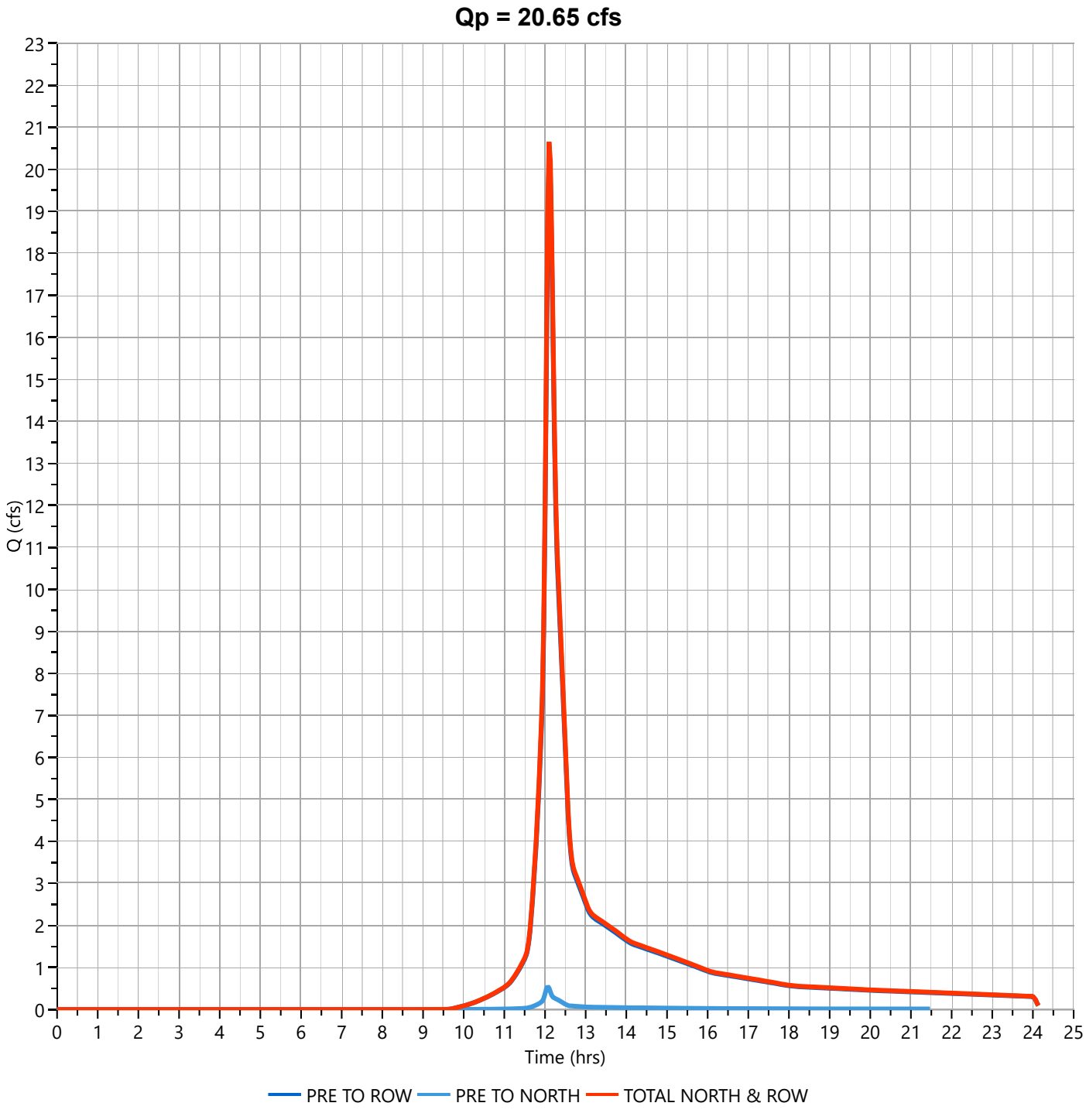
Hydrology Studio v 3.0.0.32

08-06-2024

Pre TOTAL NORTH & ROW

Hyd. No. 13

Hydrograph Type	= Junction	Peak Flow	= 20.65 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Hydrograph Volume	= 71,802 cuft
Inflow Hydrographs	= 11, 12	Total Contrib. Area	= 4.908 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

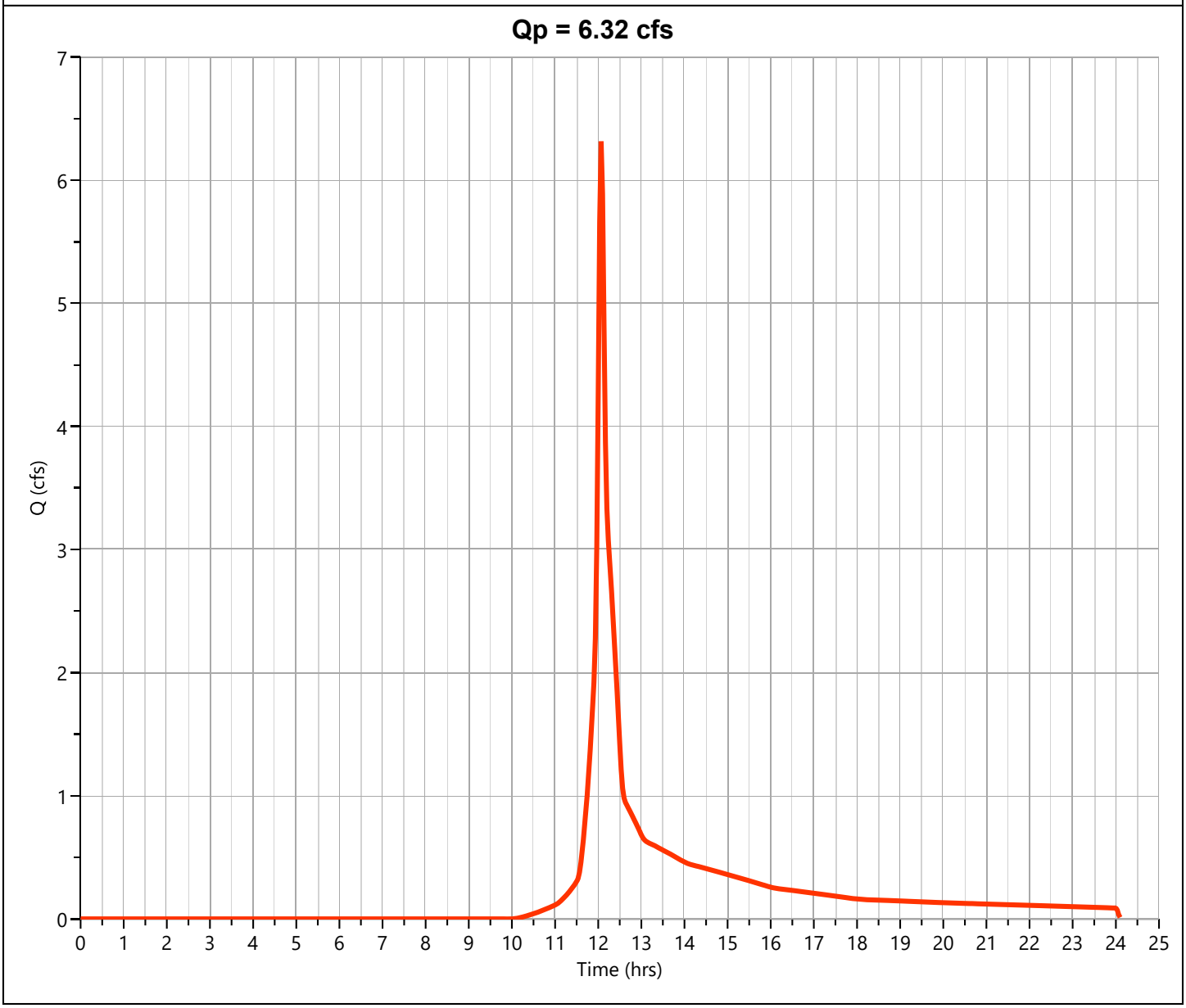
POST TO EAST

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 6.316 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 19,393 cuft
Drainage Area	= 1.56 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 9.76 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.56	52	Grassland (A)
1.56	**52**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

08-06-2024

PRE TO EAST

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 6.867 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 21,084 cuft
Drainage Area	= 1.696 ac	Curve Number	= 52*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 9.76 in	Design Storm	= Type III
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.696	52	Grassland (A)
1.696	**52**	Weighted CN Method Employed