STORMWATER MANAGEMENT REPORT

United Farm & Home Co-op

1385 North Main Street
Mt. Pleasant, Tennessee 38474
Maury County

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CONTENTS

PROJECT NARRATIVE

Project Description

The proposed project is the construction of a 18,000 sf feed building with a 720 sf office attached, with two new gravel drives through the site. The project is located off North Main Street in Mt. Pleasant, Tennessee. The approximate site area is 21.25 acres, with approximately 5.01 acres being disturbed. The site has been designed to meet the City of Mt. Pleasant stormwater management regulations.

Soil Conditions

The web soil survey shows that the site consists of Type A, B & Type C soils.

Refer to Appendix B for the soil report and further details.

Existing Stormwater Conditions

The site is currently a Co-op center providing feed and fertilizer. The stormwater currently sheet flows to a channel in the middle of the site that flows through the site, from east to west. Said channel splits the site, with about half of the stormwater coming from the north side of the channel and the remainder from the south side of the channel. The north side of the channel is where all of the buildings/facility are located, while the south side of the channel is a field used for row cropping. All the site's stormwater leaves the site through the channel to the west. There are a three storm pipe that route water from the northeast portion of the site to the channel in the middle of the site. Based on the FEMA map, approximately 40% of the site in Zone A floodplain.

See Appendix C for Existing Conditions Drainage Exhibit.

Proposed Stormwater Conditions

The proposed site will include a detention pond on the west side of the site, a few areas drains and storm pipe to be routed to the channel in the middle of the site, as it is doing in the existing condition.

See Appendix C for Proposed Development Drainage Exhibit.

STORMWATER QUANTITY (DETENTION)

Storm Sewer System

The storm sewer system on site conveys stormwater to the drainage channel. The system is shown on the Grading and Drainage plan for United Farm & Home Co-op accompanying this report.

Refer to Grading and Drainage Plans for storm sewer information.

The Storm Sewer calculations are provided in Appendix D.

Stormwater Detention

The detention pond on site are designed meet pre vs. post conditions. This will ensure there is no adverse effect on neighboring properties from this development. There is one foot and nine inches of freeboard between the top of berm elevation and the 100-year storm elevation in the pond.

The Detention Calculations are provided in Appendix E.

OFF-SITE DRAINAGE

Approximately 0.55 acres of offsite drainage, from the northeast, that was accounted for when performing the stormwater calculations for this site.

APPENDIX A: VICINITY MAP

Vicinity Map

Mt. Pleasant, Tennessee

APPENDIX B: SOILS REPORTS

USDA Web Soil Survey Report

United States Department of Agriculture

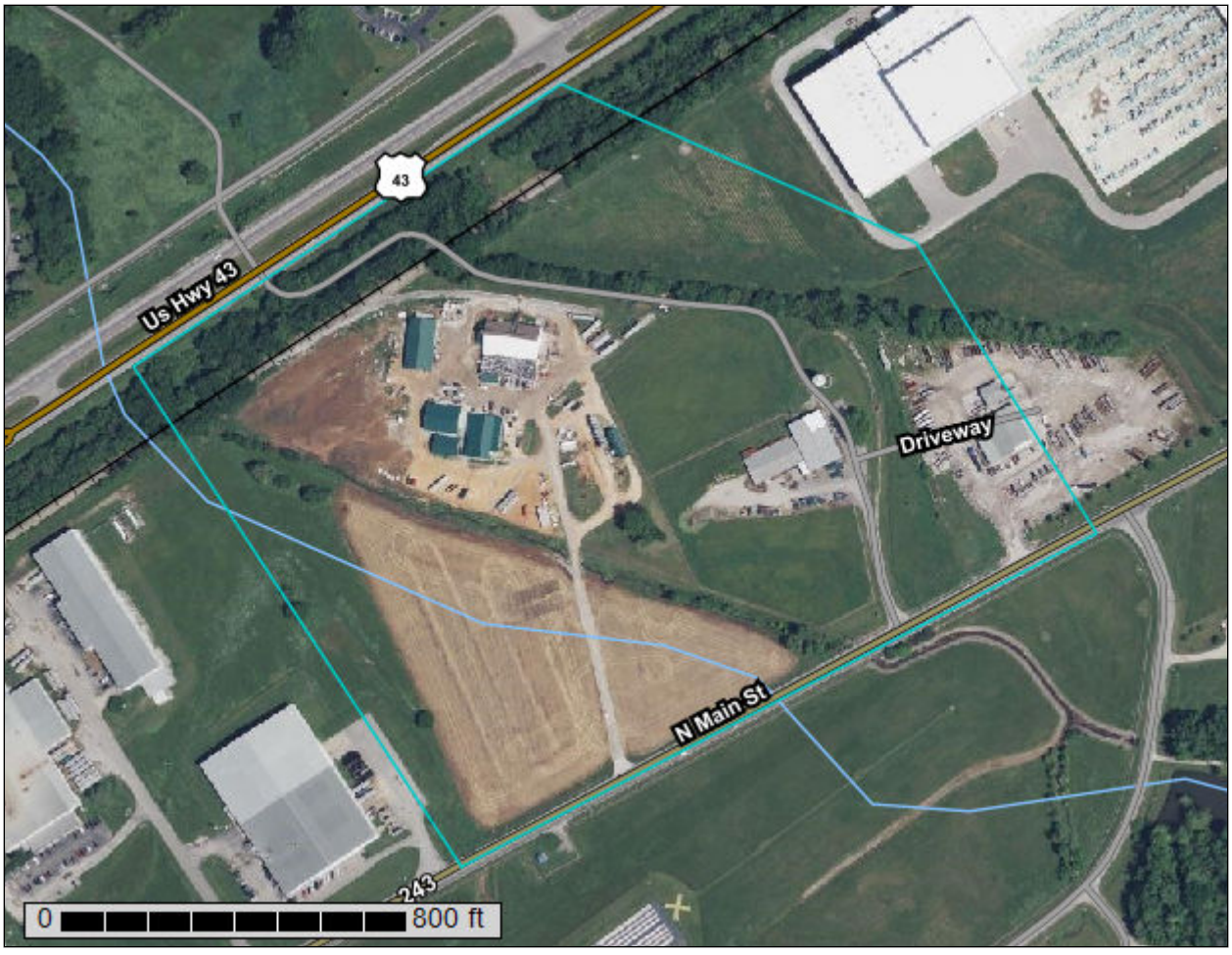
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Maury County, Tennessee

United Farm & Home



June 27, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:4,670 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

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 Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

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 1:20,000.

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: Maury County, Tennessee
Survey Area Data: Version 18, 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: Mar 20, 2021—Jun 14, 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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bg	Braxton cherty silty clay loam, severely eroded sloping phase	4.0	7.8%
Bm	Burgin silt loam, phosphatic phase (Eagleville)	0.4	0.7%
Dg	Dunning silty clay loam, phosphatic phase	0.0	0.0%
Ga	Godwin silt loam	1.0	1.9%
Hr	Huntington silt loam, local alluvium phosphatic phase	5.2	9.9%
Mb	Maury silt loam, eroded gently sloping phase	25.4	48.9%
Me	Maury silty clay loam, eroded sloping phase	3.4	6.5%
Mp	Mines, Pits, and Dumps	6.5	12.4%
Mr	Mine areas, reclaimed	6.2	12.0%
Totals for Area of Interest		**52.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas

are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Maury County, Tennessee

Bg—Braxton cherty silty clay loam, severely eroded sloping phase

Map Unit Setting

National map unit symbol: kq4x
Elevation: 900 to 1,200 feet
Mean annual precipitation: 48 to 55 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Braxton, severely eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Braxton, Severely Eroded

Setting

Landform: Hillslopes
Landform position (three-dimensional): Side slope
Parent material: Clayey alluvium and/or residuum weathered from limestone

Typical profile

H1 - 0 to 10 inches: gravelly silty clay loam
H2 - 10 to 30 inches: clay
H3 - 30 to 60 inches: clay

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F123XY001TN - Limestone Uplands
Hydric soil rating: No

Bm—Burgin silt loam, phosphatic phase (Eagleville)

Map Unit Setting

National map unit symbol: kq51
Elevation: 610 to 2,090 feet

Mean annual precipitation: 48 to 63 inches
Mean annual air temperature: 45 to 72 degrees F
Frost-free period: 154 to 189 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Eagleville and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Eagleville

Setting
Landform: Flood plains
Landform position (three-dimensional): Tread
Parent material: Clayey alluvium derived from limestone

Typical profile
H1 - 0 to 14 inches: silt loam
H2 - 14 to 35 inches: clay
R - 35 to 45 inches: bedrock

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 12 to 18 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: F123XY005TN - Floodplains
Hydric soil rating: No

Dg—Dunning silty clay loam, phosphatic phase

Map Unit Setting
National map unit symbol: kq5m
Elevation: 520 to 1,020 feet
Mean annual precipitation: 46 to 60 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 190 to 200 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Dunning and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dunning

Setting

Landform: Depressions
Landform position (three-dimensional): Dip
Parent material: Clayey alluvium derived from limestone

Typical profile

H1 - 0 to 14 inches: silty clay loam
H2 - 14 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Ga—Godwin silt loam

Map Unit Setting

National map unit symbol: kq66
Elevation: 600 to 1,000 feet
Mean annual precipitation: 46 to 54 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 190 to 220 days
Farmland classification: Prime farmland if protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Godwin and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Godwin

Setting

Landform: Hillslopes
Landform position (three-dimensional): Base slope

Parent material: Clayey alluvium derived from limestone

Typical profile

H1 - 0 to 18 inches: silt loam
H2 - 18 to 30 inches: silty clay loam
H3 - 30 to 60 inches: clay

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F123XY005TN - Floodplains
Hydric soil rating: No

Hr—Huntington silt loam, local alluvium phosphatic phase

Map Unit Setting

National map unit symbol: kq6s
Elevation: 510 to 1,000 feet
Mean annual precipitation: 48 to 55 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 190 to 205 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Huntington and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Huntington

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Parent material: Loamy alluvium derived from limestone, sandstone, and shale

Typical profile

H1 - 0 to 24 inches: silt loam
H2 - 24 to 64 inches: silt loam

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.9 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F123XY005TN - Floodplains
Hydric soil rating: No

Mb—Maury silt loam, eroded gently sloping phase

Map Unit Setting
National map unit symbol: kq72
Elevation: 540 to 930 feet
Mean annual precipitation: 46 to 60 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 190 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Maury and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Maury

Setting
Landform: Hillslopes
Landform position (three-dimensional): Crest
Parent material: Loess over clayey residuum and/or alluvium derived from limestone

Typical profile
H1 - 0 to 14 inches: silt loam
H2 - 14 to 26 inches: silty clay loam
H3 - 26 to 40 inches: silty clay
H4 - 40 to 60 inches: clay

Properties and qualities
Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F123XY001TN - Limestone Uplands
Hydric soil rating: No

Me—Maury silty clay loam, eroded sloping phase

Map Unit Setting

National map unit symbol: kq75
Elevation: 560 to 890 feet
Mean annual precipitation: 46 to 60 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 190 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Maury and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Maury

Setting

Landform: Hillslopes
Landform position (three-dimensional): Side slope
Parent material: Loess over clayey residuum and/or alluvium derived from limestone

Typical profile

H1 - 0 to 16 inches: silty clay loam
H2 - 16 to 40 inches: silty clay
H3 - 40 to 60 inches: clay

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F123XY001TN - Limestone Uplands
Hydric soil rating: No

Mp—Mines, Pits, and Dumps

Map Unit Composition

Mines: 40 percent
Dumps: 30 percent
Pits: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Mr—Mine areas, reclaimed

Map Unit Composition

Mine areas, reclaimed: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mine Areas, Reclaimed

Typical profile

H1 - 0 to 60 inches: variable

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

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.

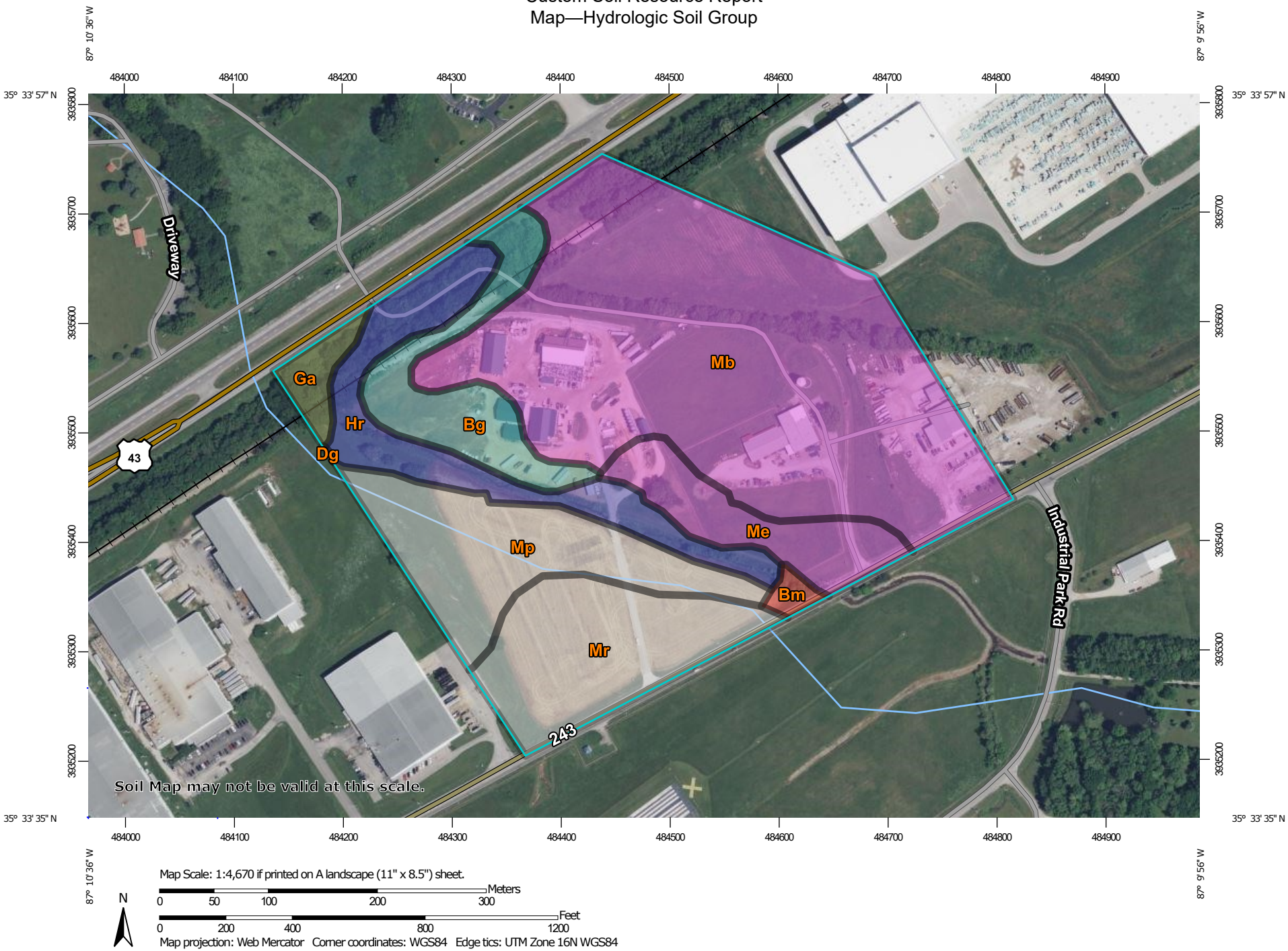
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

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.

Custom Soil Resource Report
Map—Hydrologic Soil Group



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 1:20,000.

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: Maury County, Tennessee
Survey Area Data: Version 18, 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: Mar 20, 2021—Jun 14, 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.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Bg	Braxton cherty silty clay loam, severely eroded sloping phase	C	4.0	7.8%
Bm	Burgin silt loam, phosphatic phase (Eagleville)	D	0.4	0.7%
Dg	Dunning silty clay loam, phosphatic phase	C/D	0.0	0.0%
Ga	Godwin silt loam	C/D	1.0	1.9%
Hr	Huntington silt loam, local alluvium phosphatic phase	B	5.2	9.9%
Mb	Maury silt loam, eroded gently sloping phase	A	25.4	48.9%
Me	Maury silty clay loam, eroded sloping phase	A	3.4	6.5%
Mp	Mines, Pits, and Dumps		6.5	12.4%
Mr	Mine areas, reclaimed		6.2	12.0%
Totals for Area of Interest			**52.0**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

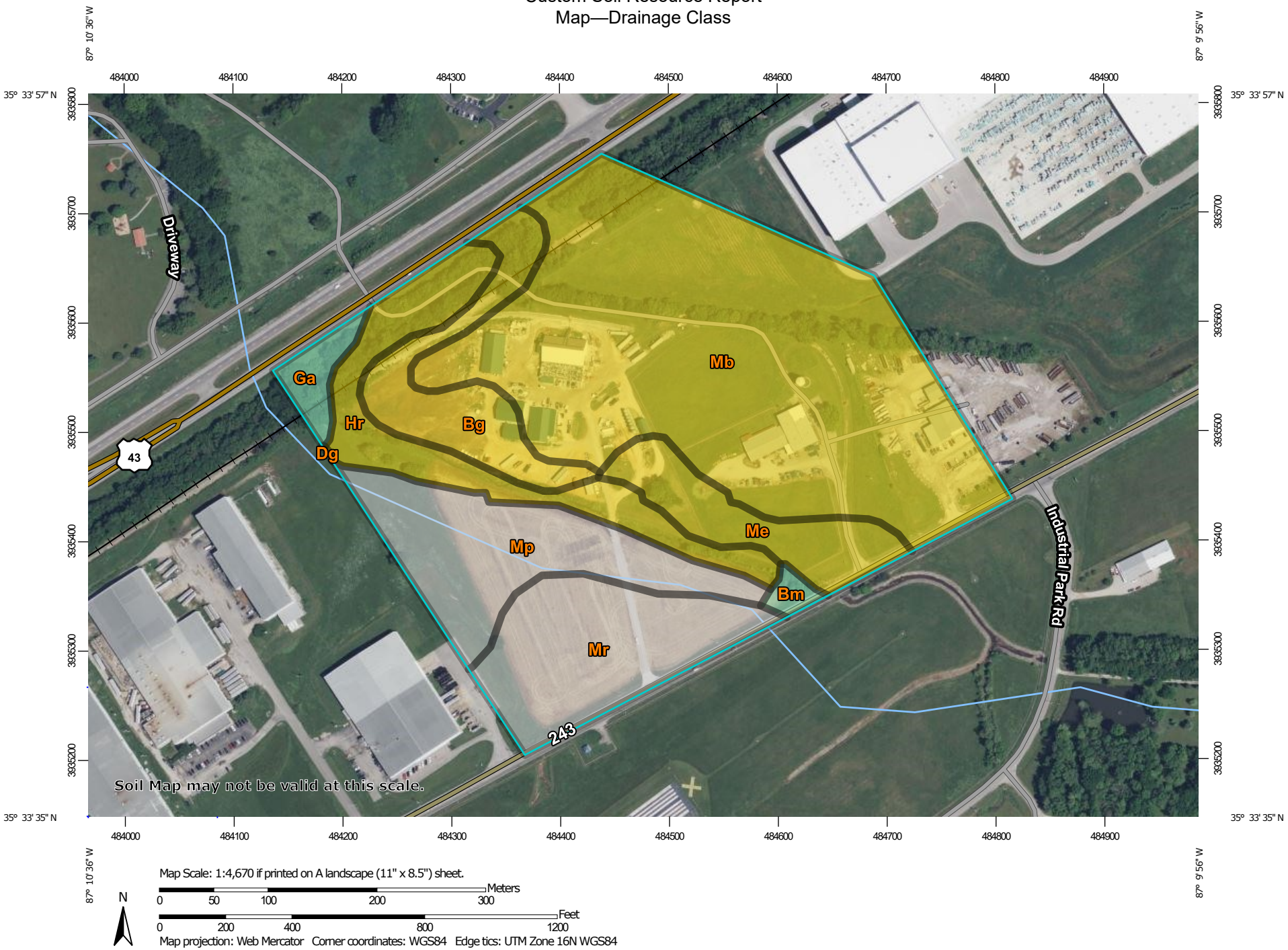
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Drainage Class

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Map—Drainage Class



Map Scale: 1:4,670 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

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

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Lines

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Points

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- 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 1:20,000.

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: Maury County, Tennessee
Survey Area Data: Version 18, 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: Mar 20, 2021—Jun 14, 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.

Table—Drainage Class

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Bg	Braxton cherty silty clay loam, severely eroded sloping phase	Well drained	4.0	7.8%
Bm	Burgin silt loam, phosphatic phase (Eagleville)	Somewhat poorly drained	0.4	0.7%
Dg	Dunning silty clay loam, phosphatic phase	Poorly drained	0.0	0.0%
Ga	Godwin silt loam	Somewhat poorly drained	1.0	1.9%
Hr	Huntington silt loam, local alluvium phosphatic phase	Well drained	5.2	9.9%
Mb	Maury silt loam, eroded gently sloping phase	Well drained	25.4	48.9%
Me	Maury silty clay loam, eroded sloping phase	Well drained	3.4	6.5%
Mp	Mines, Pits, and Dumps		6.5	12.4%
Mr	Mine areas, reclaimed		6.2	12.0%
Totals for Area of Interest			**52.0**	**100.0%**

Rating Options—Drainage Class

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

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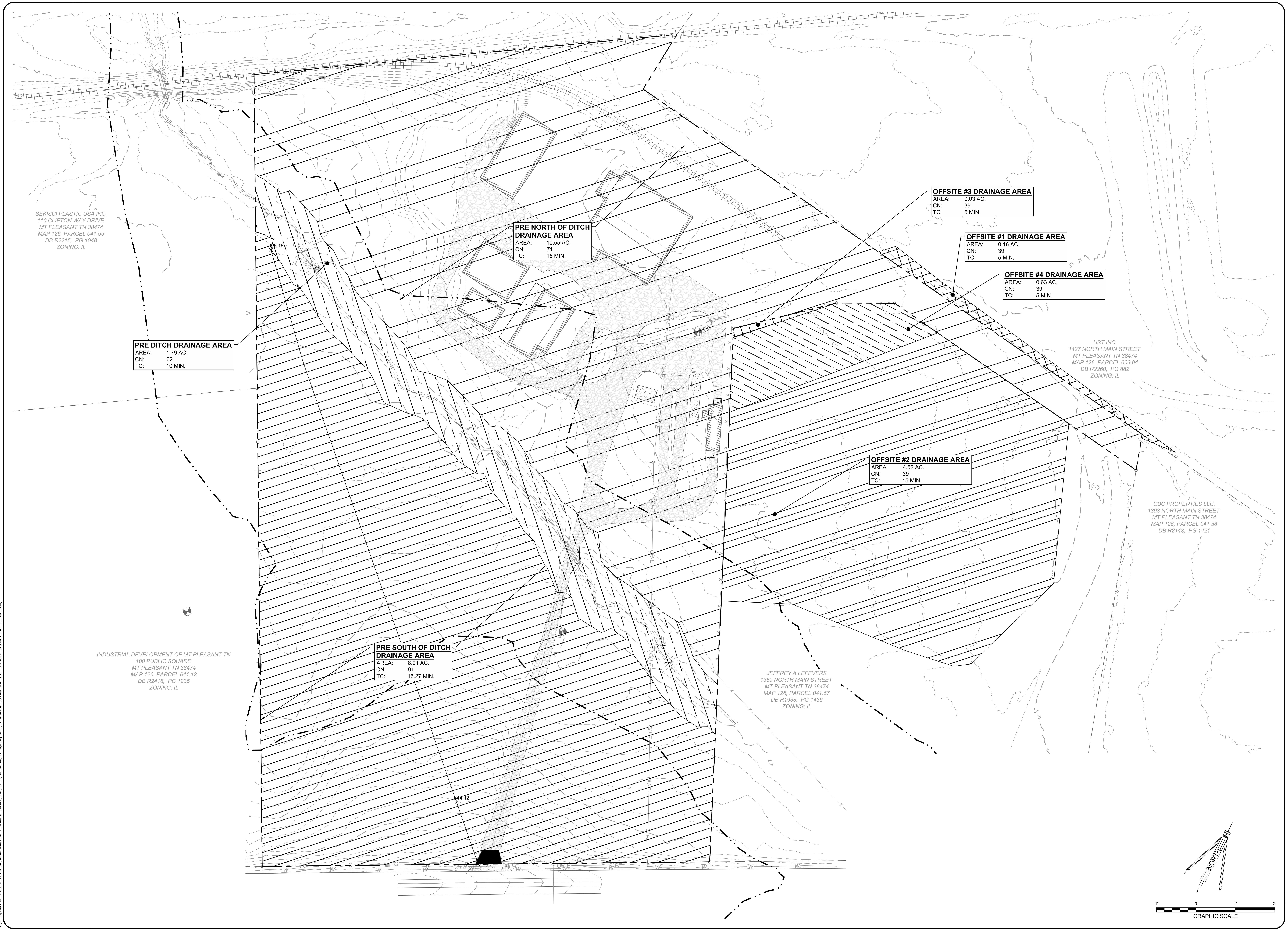
APPENDIX C: DRAINAGE MAP EXHIBITS

Existing Drainage Exhibit

Proposed Drainage Exhibit

Grading & Drainage Plan



BRIDGEPOINT, LLC
2095A COOKS RD.
MOUNT JULIET, TENNESSEE
(615)-453-5000
WWW.BRIDGEPOINTTN.COM

No.	Revision/Issue	Date

SITE PLANS FOR

UNITED FARM AND HOME CO-OP FEED BUILDING

1385 NORTH MAIN STREET
MOUNT PLEASANT, TENNESSEE
MAURY COUNTY, TENNESSEE

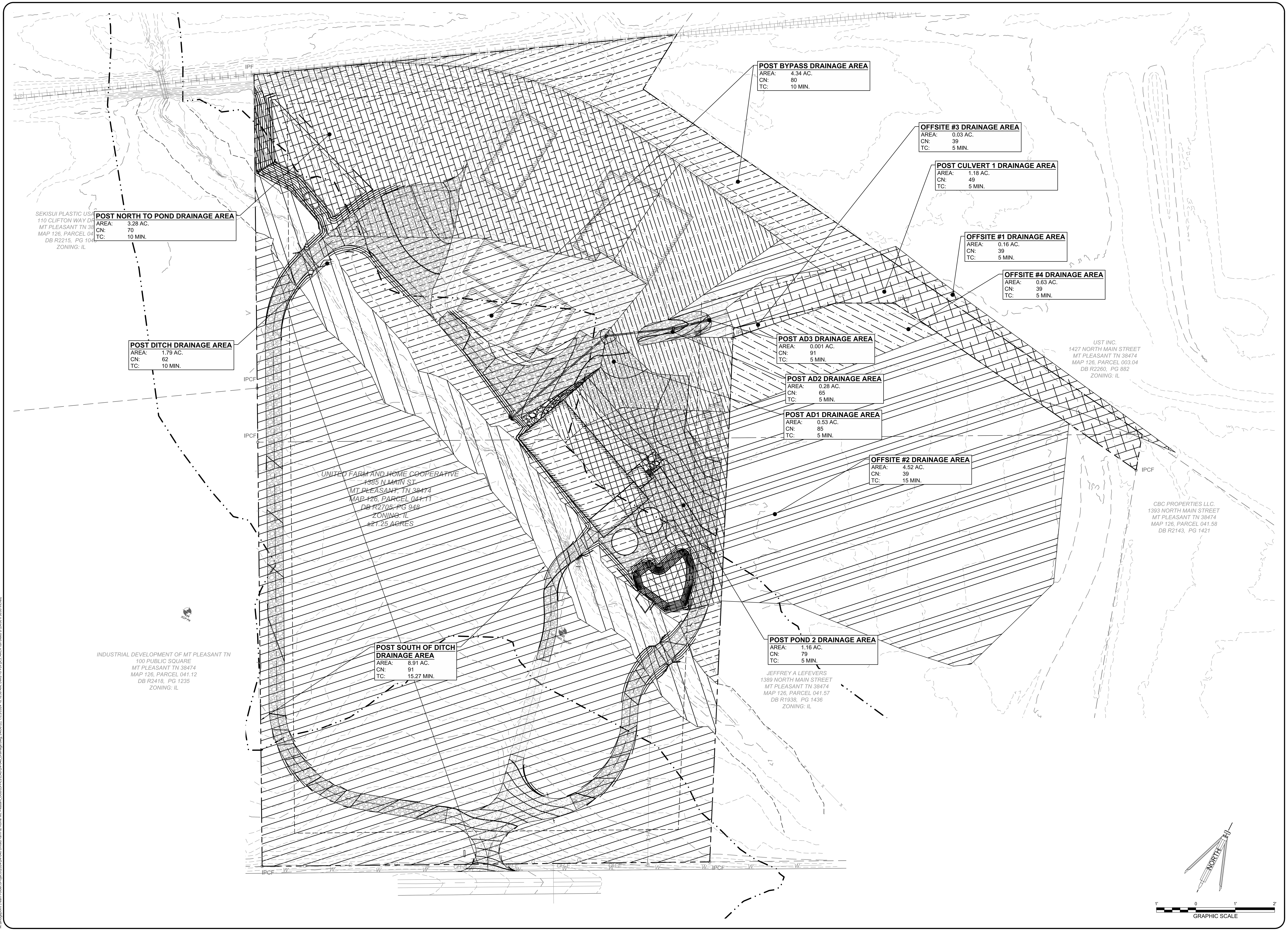
07-25-2024

EXISTING DRAINAGE EXHIBIT

DATE:	7/25/2024	DRAWN BY:	BRS
DRAWING SCALE:	AS SHOWN	CHECKED BY:	JMD
PROJECT NO.:	24-040	APPROVED BY:	JMD

SHEET NUMBER:

EX-01



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No.	Revision/Issue	Date

SITE PLANS FOR

UNITED FARM AND HOME CO-OP FEED BUILDING

1385 NORTH MAIN STREET
MOUNT PLEASANT, TENNESSEE
MAURY COUNTY, TENNESSEE

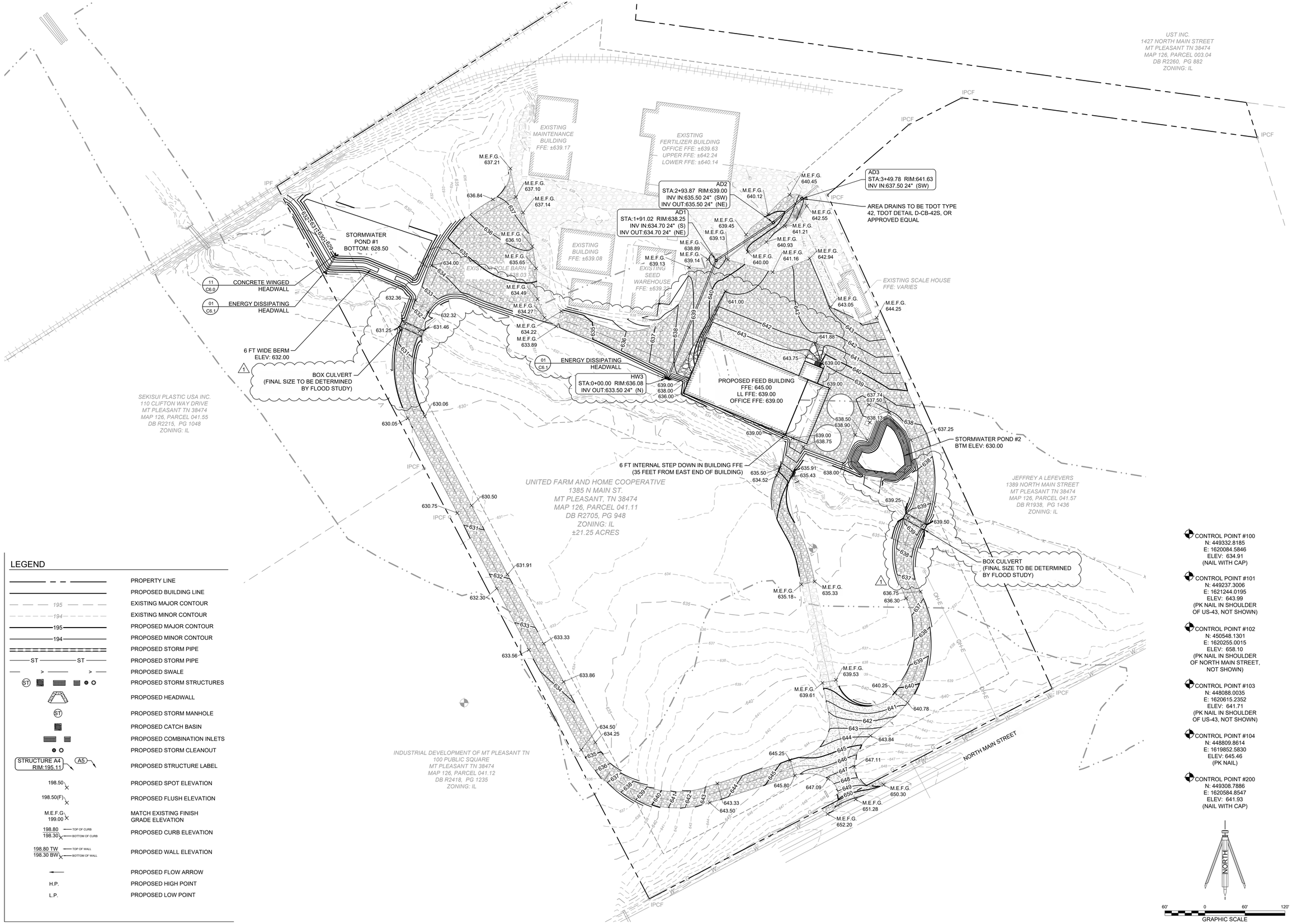
JESS MILES DILLARD, REGISTERED ENGINEER, No. 119269, STATE OF TENNESSEE — 07-25-2024

PROPOSED DRAINAGE EXHIBIT

DATE:	7/25/2024	DRAWN BY:	BRS
DRAWING SCALE:	AS SHOWN	CHECKED BY:	JMD
PROJECT NO.:	24-040	APPROVED BY:	JMD

SHEET NUMBER:

EX-02



LEGEND

- PROPERTY LINE
- PROPOSED BUILDING LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED STORM PIPE
- PROPOSED STORM PIPE
- PROPOSED SWALE
- PROPOSED STORM STRUCTURES
- PROPOSED HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED COMBINATION INLETS
- PROPOSED STORM CLEANOUT
- PROPOSED STRUCTURE LABEL (STRUCTURE A4, RIM:195.11, A5)
- PROPOSED SPOT ELEVATION (198.50)
- PROPOSED FLUSH ELEVATION (198.50(F))
- MATCH EXISTING FINISH GRADE ELEVATION (M.E.F.G. 199.00)
- PROPOSED CURB ELEVATION (198.80 TOP OF CURB / 198.30 BOTTOM OF CURB)
- PROPOSED WALL ELEVATION (198.80 TW TOP OF WALL / 198.30 BW BOTTOM OF WALL)
- PROPOSED FLOW ARROW
- H.P. PROPOSED HIGH POINT
- L.P. PROPOSED LOW POINT

BRIDGEPOINT, LLC
2095A COOKS RD.
MOUNT JULIET, TENNESSEE
(615)-453-5000
WWW.BRIDGEPOINTTN.COM

No.	Revision/Issue	Date
1	CITY, OWNER & TDEC COMMENTS	2024-07-25

SITE PLANS FOR

UNITED FARM AND HOME CO-OP FEED BUILDING

1385 NORTH MAIN STREET
MOUNT PLEASANT, TENNESSEE
MAURY COUNTY, TENNESSEE

GRADING & DRAINAGE PLAN

DATE:	7/25/2024	DRAWN BY: BRS
DRAWING SCALE:	AS SHOWN	CHECKED BY: JMD
PROJECT NO.:	24-040	APPROVED BY: JMD

SHEET NUMBER:

C3.0

M:\Bridgepoint (Team Folder)\Projects\2024\24-040 United Farm & Home Mt. Pleasant, Doug\OFFICE\CAD\SHEETS\C3.0.dwg, C3.0 GRADING & DRAINAGE PLAN, 7/25/2024 9:29:03 AM, DWG To PDF.pc3, ARCH full bleed D (24.00 x 36.00 Inches)

APPENDIX D: DETENTION CALCULATIONS

Hydrology Studio Hydrograph Report

Table of Contents

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

Contents continued...

Contents continued...

Contents continued...

Contents continued...

Contents continued...

Hydrograph by Return Period

Project Name:

07-25-2024

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	Pre South of Ditch		31.89		40.20	46.89	55.90	63.01	70.29
2	NRCS Runoff	Pre Ditch		1.788		3.053	4.182	5.824	7.199	8.663
3	NRCS Runoff	Pre North of Ditch		17.40		25.66	32.78	42.81	50.98	59.51
4	NRCS Runoff	Pre Offsite 1		0.001		0.003	0.019	0.085	0.156	0.246
5	NRCS Runoff	Pre Offsite 2		0.018		0.086	0.348	1.352	2.619	4.207
6	NRCS Runoff	Pre Offsite 3		0.000		0.000	0.003	0.013	0.024	0.038
7	NRCS Runoff	Post Offsite 4		0.002		0.012	0.074	0.327	0.599	0.946
8	Junction	Pre Offsite Combined		0.021		0.100	0.399	1.492	2.863	4.652
9	Junction	Pre Total		51.03		68.91	83.93	104.8	121.6	139.1
11	NRCS Runoff	Post South of Ditch		32.04		40.34	47.03	56.03	63.14	70.41
12	NRCS Runoff	Post Ditch		2.026		3.344	4.512	6.199	7.604	9.120
13	NRCS Runoff	Post North to Pond 1		5.806		8.628	11.06	14.56	17.42	20.42
14	Pond Route	Post Pond 1 Discharge		1.883		3.314	4.393	5.536	6.367	7.581
15	NRCS Runoff	Post Bypass		8.742		12.25	15.18	19.24	22.51	25.88
16	NRCS Runoff	Post Offsite 1		0.001		0.003	0.019	0.085	0.156	0.246
17	NRCS Runoff	Post Offsite 2		0.018		0.086	0.348	1.352	2.619	4.207
18	NRCS Runoff	Post Offsite 3		0.000		0.000	0.003	0.013	0.024	0.038
19	NRCS Runoff	Post Offsite 4		0.002		0.012	0.074	0.327	0.599	0.946
20	Junction	Post Offsite Combined		0.021		0.100	0.399	1.492	2.863	4.652
21	NRCS Runoff	Post Culvert 1		0.003		0.014	0.090	0.398	0.729	1.150
22	NRCS Runoff	Post Area Drain 3 (AD3)		0.005		0.006	0.007	0.008	0.009	0.010
23	NRCS Runoff	Post Area Drain 2 (AD2)		0.446		0.697	0.916	1.229	1.487	1.759
24	NRCS Runoff	Post Area Drain 1 (AD1)		2.052		2.688	3.205	3.905	4.460	5.028
25	NRCS Runoff	Post North to Pond 2		3.704		5.051	6.166	7.694	8.913	10.17
26	Pond Route	Post Pond 2 Discharge		0.000		0.000	0.000	0.000	0.000	0.000
27	Junction	Post North of Ditch		11.44		16.57	21.03	27.47	32.47	37.52
28	Junction	Post Combined		45.10		59.64	72.10	89.79	104.2	119.5

Hydrograph 2-yr Summary

Project Name:

07-25-2024

Hydrology Studio v 3.0.0.32

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre South of Ditch	31.89	12.03	92,197	----		
2	NRCS Runoff	Pre Ditch	1.788	12.03	5,331	----		
3	NRCS Runoff	Pre North of Ditch	17.40	12.07	50,519	----		
4	NRCS Runoff	Pre Offsite 1	0.001	18.17	20.1	----		
5	NRCS Runoff	Pre Offsite 2	0.018	18.27	580	----		
6	NRCS Runoff	Pre Offsite 3	0.000	18.17	3.09	----		
7	NRCS Runoff	Post Offsite 4	0.002	18.17	77.3	----		
8	Junction	Pre Offsite Combined	0.021	18.27	681	4, 5, 6, 7		
9	Junction	Pre Total	51.03	12.03	148,124	1, 2, 3, 7		
11	NRCS Runoff	Post South of Ditch	32.04	12.03	92,756	----		
12	NRCS Runoff	Post Ditch	2.026	12.03	5,851	----		
13	NRCS Runoff	Post North to Pond 1	5.806	12.03	15,522	----		
14	Pond Route	Post Pond 1 Discharge	1.883	12.23	15,495	13	629.13	4,952
15	NRCS Runoff	Post Bypass	8.742	12.00	22,840	----		
16	NRCS Runoff	Post Offsite 1	0.001	18.17	20.1	----		
17	NRCS Runoff	Post Offsite 2	0.018	18.27	580	----		
18	NRCS Runoff	Post Offsite 3	0.000	18.17	3.09	----		
19	NRCS Runoff	Post Offsite 4	0.002	18.17	77.3	----		
20	Junction	Post Offsite Combined	0.021	18.27	681	16, 17, 18, 19		
21	NRCS Runoff	Post Culvert 1	0.003	18.17	94.0	----		
22	NRCS Runoff	Post Area Drain 3 (AD3)	0.005	11.93	9.94	----		
23	NRCS Runoff	Post Area Drain 2 (AD2)	0.446	11.97	915	----		
24	NRCS Runoff	Post Area Drain 1 (AD1)	2.052	11.93	4,188	----		
25	NRCS Runoff	Post North to Pond 2	3.704	11.93	7,480	----		
26	Pond Route	Post Pond 2 Discharge	0.000	11.27	0.000	25	531.80	4,799
27	Junction	Post North of Ditch	11.44	12.00	43,543	14, 15, 21, 22, 23, 24		
28	Junction	Post Combined	45.10	12.03	142,831	11, 12, 20, 26, 27		

Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

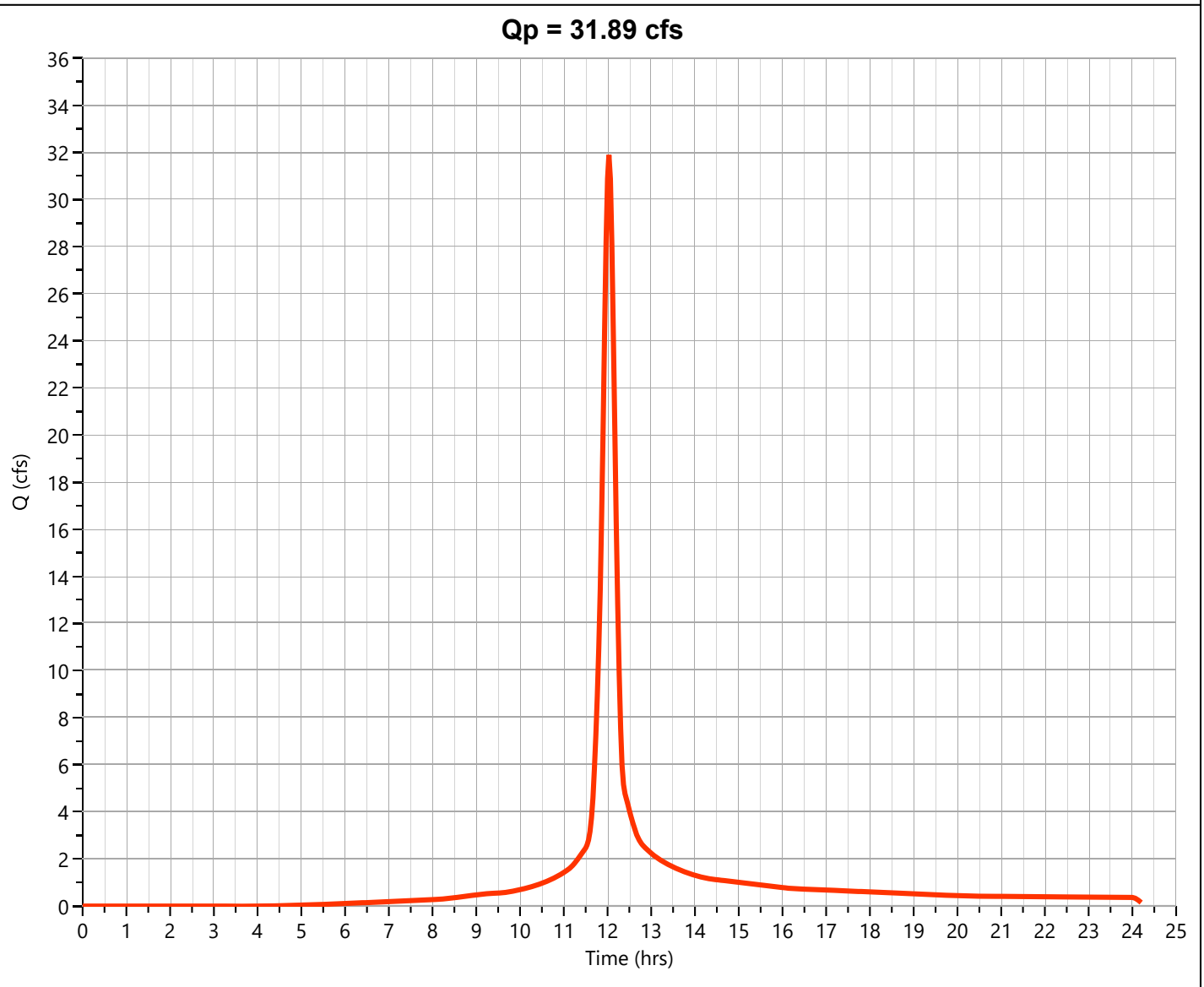
Pre South of Ditch

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 31.89 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 92,197 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.02*
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
8.69	91	No Rating (Row Crops)
0.2	91	Gravel
0.02	98	Concrete
8.91	**91**	Weighted CN Method Employed



Tc by TR55 Worksheet

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

South of Ditch
NRCS Runoff

Hyd. No. 1

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description	First 100 ft			
Manning's n	0.240	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	3.93	3.93	3.93	
Land Slope (%)	6.77			
Travel Time (min)	**7.91**	**0.00**	**0.00**	**7.91**
Shallow Concentrated Flow				
Flow Length (ft)	887			
Watercourse Slope (%)	15.94	0.00	0.00	
Surface Description	Min tillage	Paved	Paved	
Average Velocity (ft/s)	2.01			
Travel Time (min)	**7.36**	**0.00**	**0.00**	**7.36**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**15.27 min**

Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

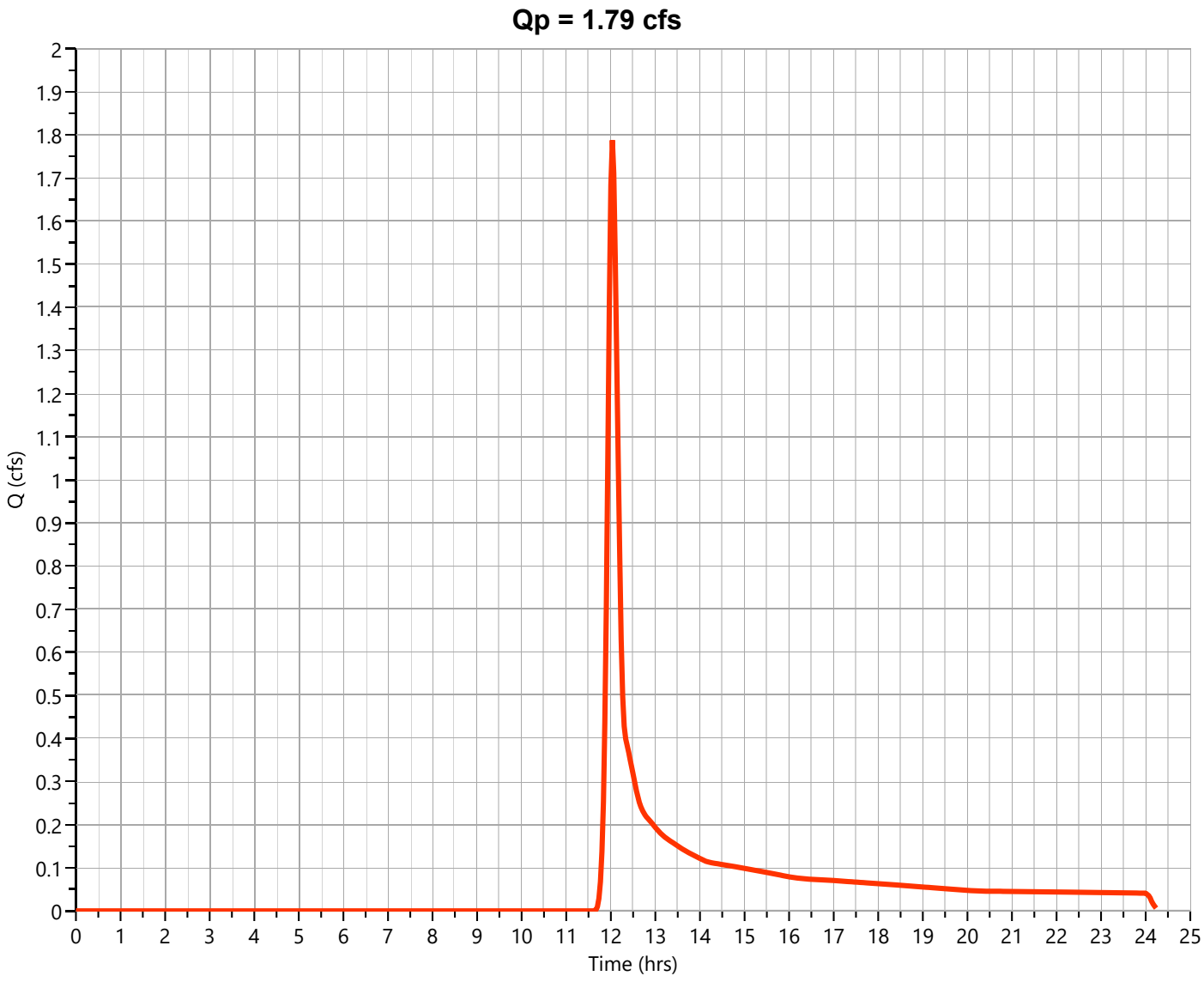
Pre Ditch

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.788 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 5,331 cuft
Drainage Area	= 1.79 ac	Curve Number	= 61.67*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.75	61	Ditch (inside buffer)
0.04	91	Gravel
1.79	**62**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

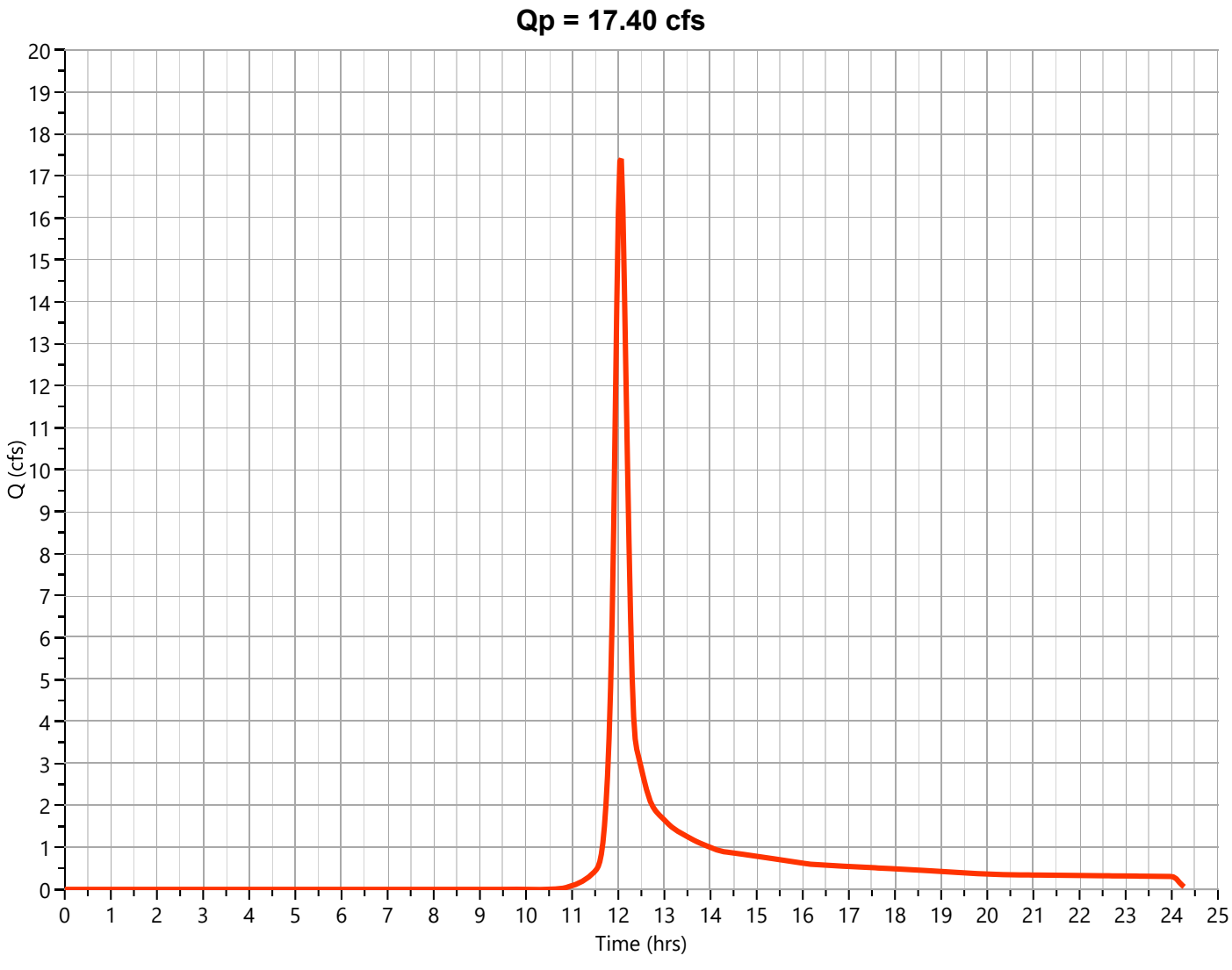
Pre North of Ditch

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 17.40 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Runoff Volume	= 50,519 cuft
Drainage Area	= 10.55 ac	Curve Number	= 71.42*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.945	79	Pervious (C)
3.945	49	Pervious (A)
0.89	98	Buildings
1.73	91	Gravel
0.04	98	Concrete
10.55	**71**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

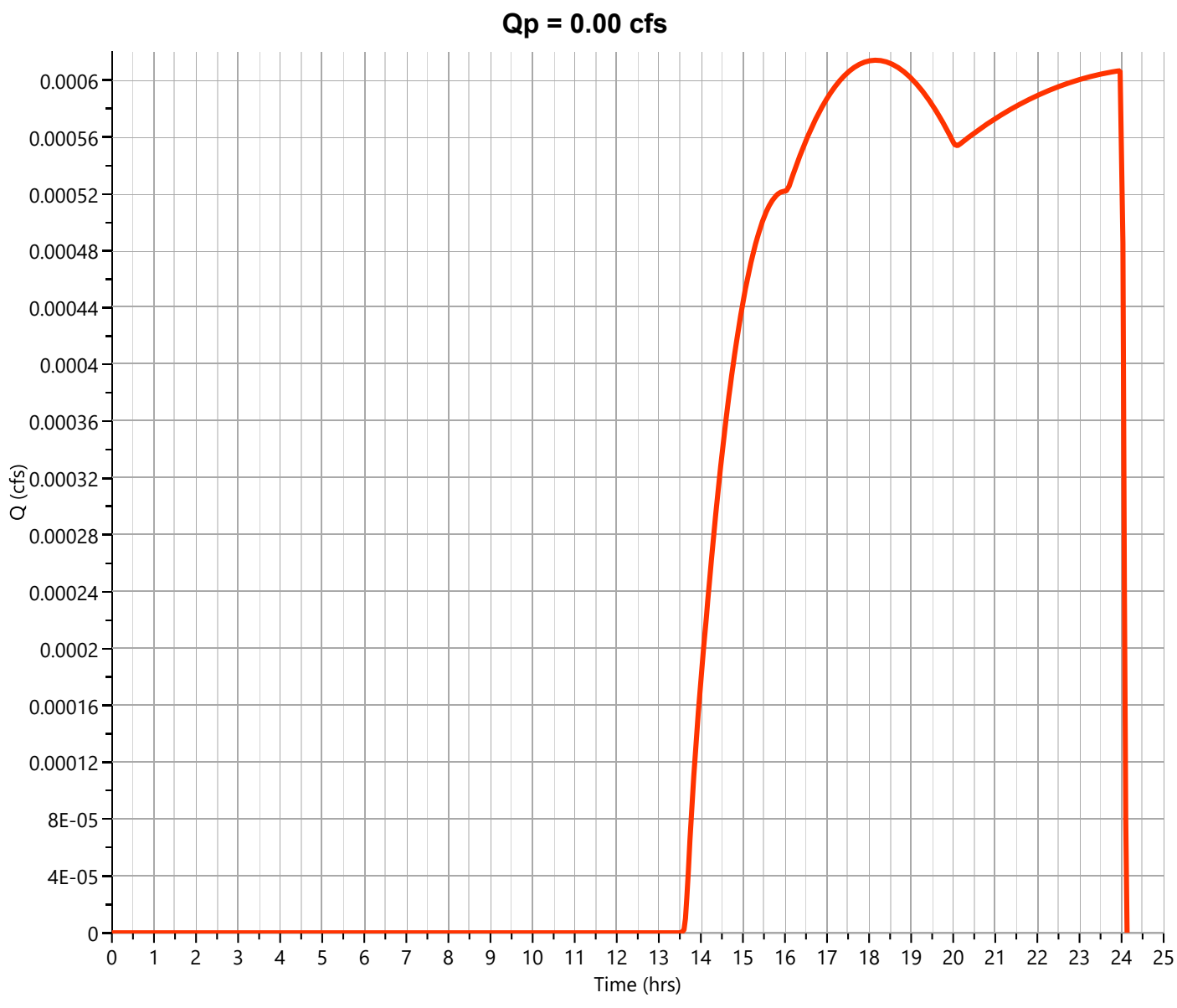
Pre Offsite 1

Hyd. No. 4

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.001 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.17 hrs
Time Interval	= 2 min	Runoff Volume	= 20.1 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

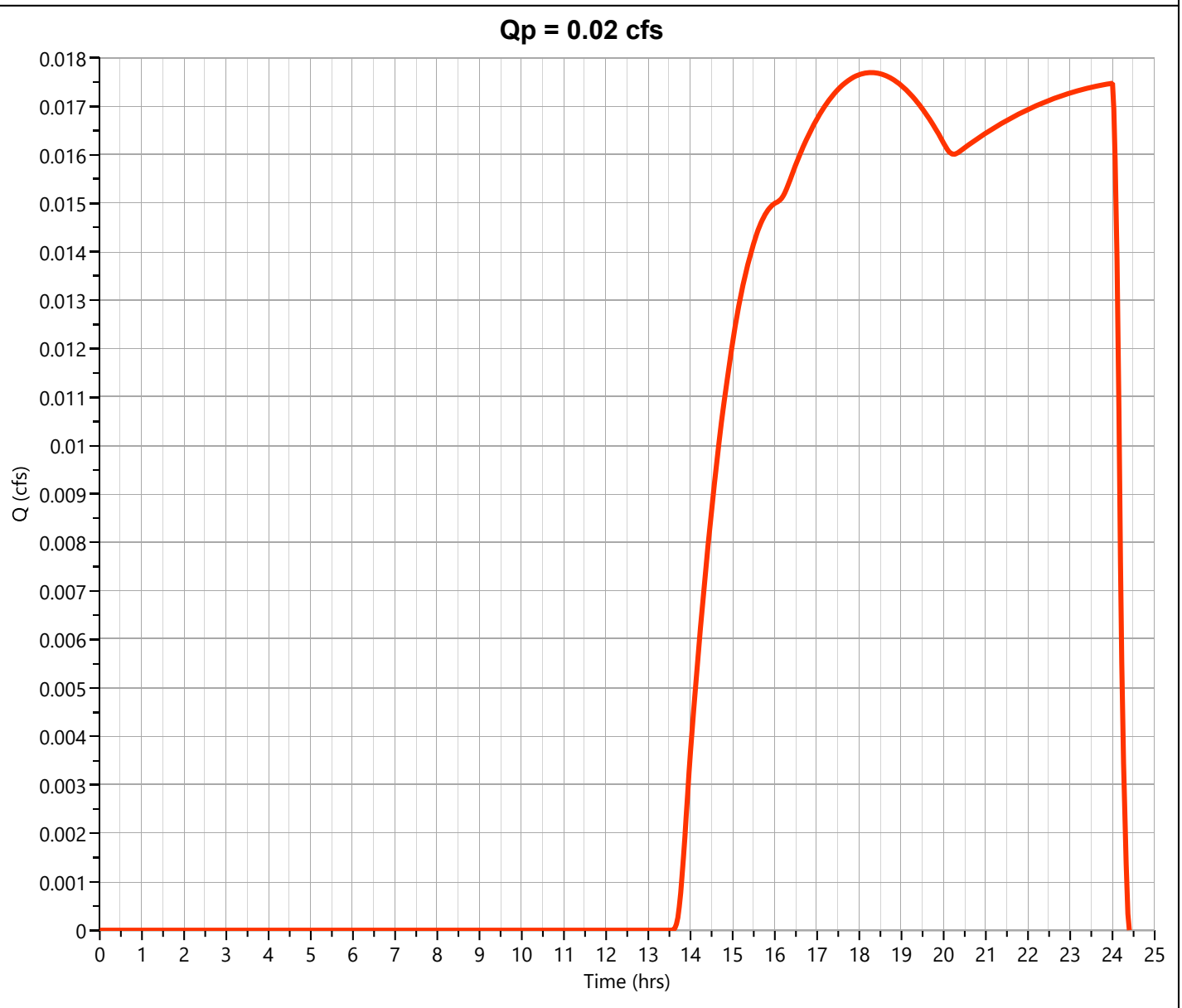
Pre Offsite 2

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.018 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.27 hrs
Time Interval	= 2 min	Runoff Volume	= 580 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

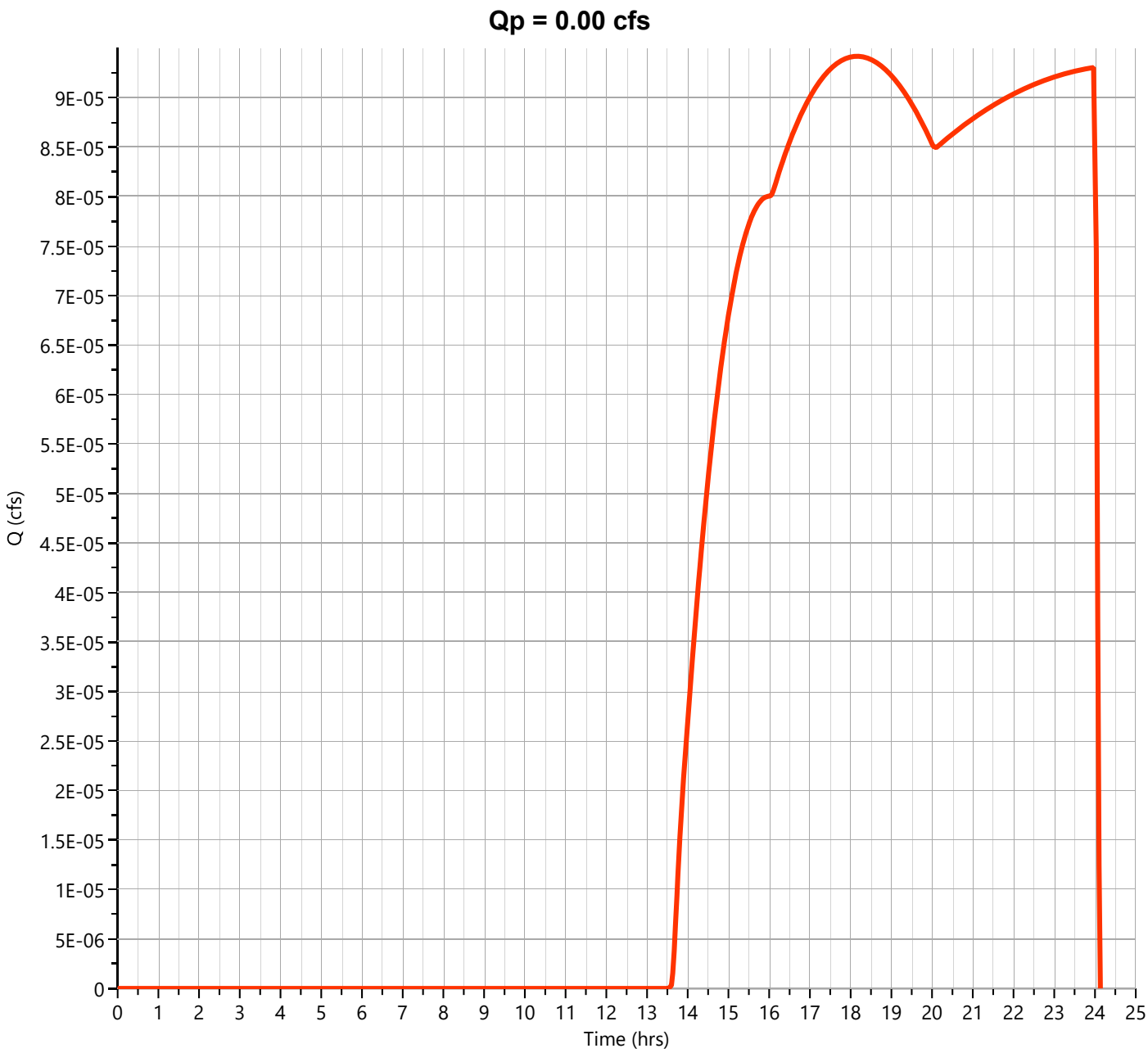
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite 3

Hyd. No. 6

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.000 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.17 hrs
Time Interval	= 2 min	Runoff Volume	= 3.09 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

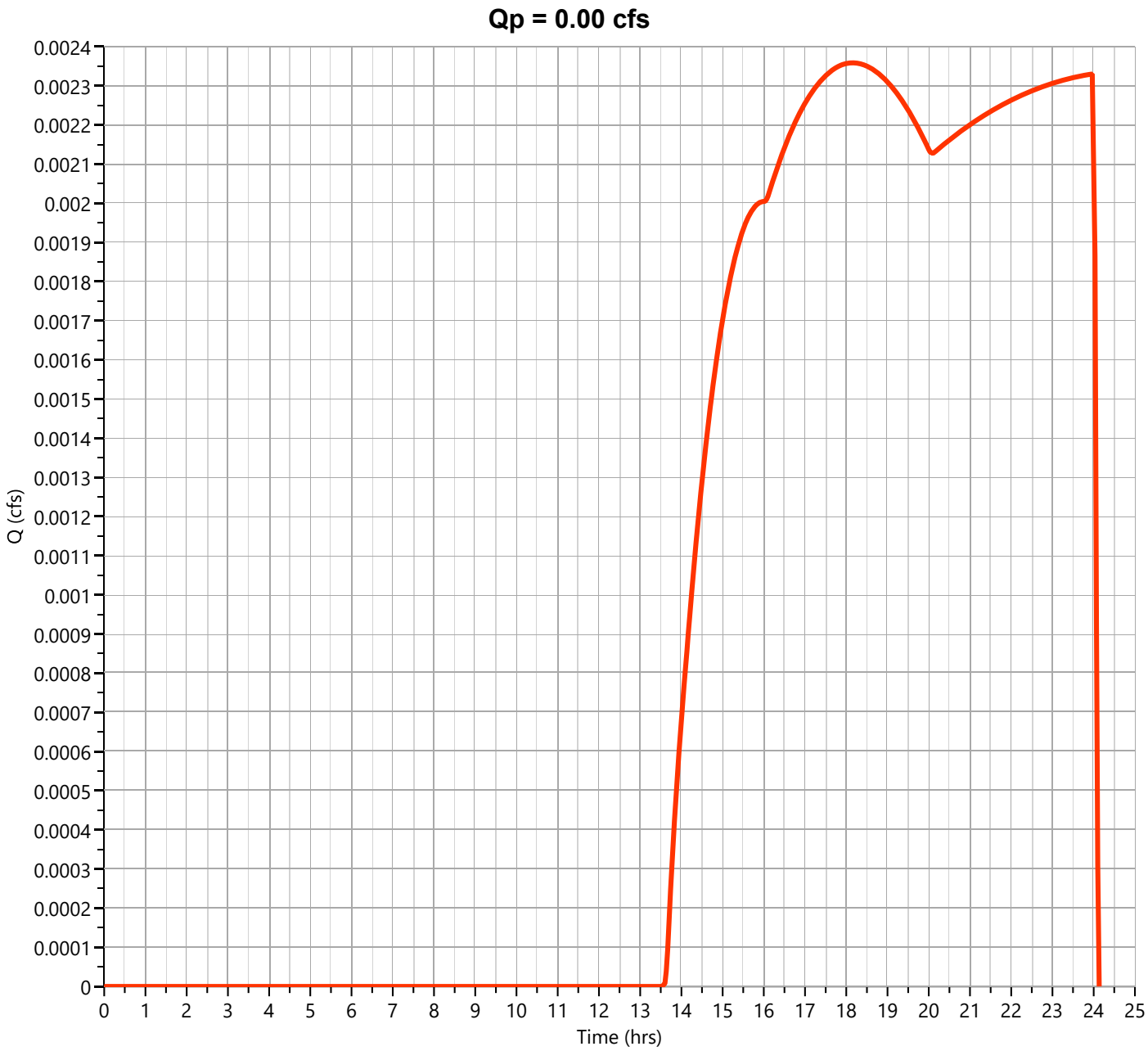
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.002 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.17 hrs
Time Interval	= 2 min	Runoff Volume	= 77.3 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

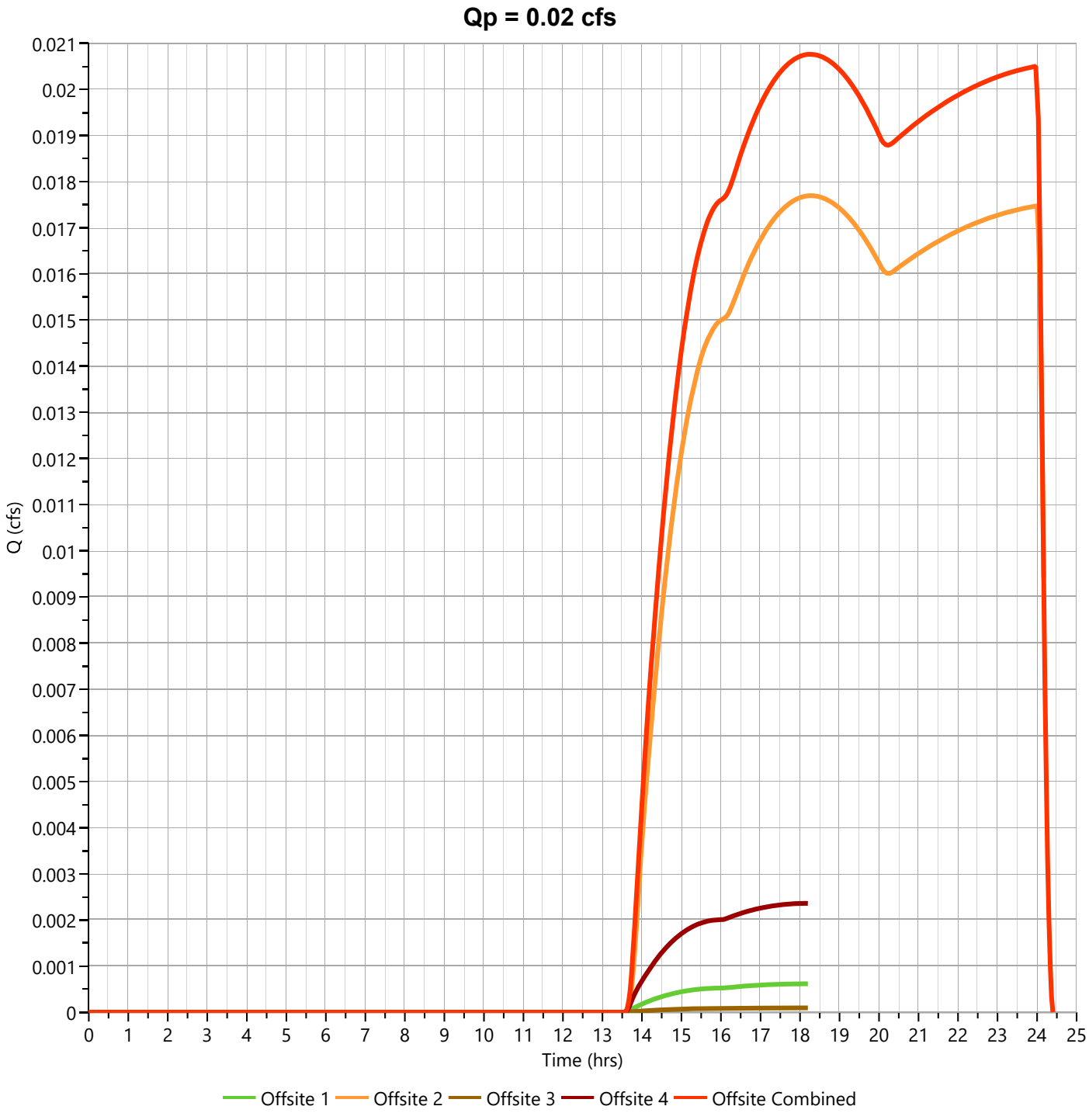
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite Combined

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 0.021 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.27 hrs
Time Interval	= 2 min	Hydrograph Volume	= 681 cuft
Inflow Hydrographs	= 4, 5, 6, 7	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

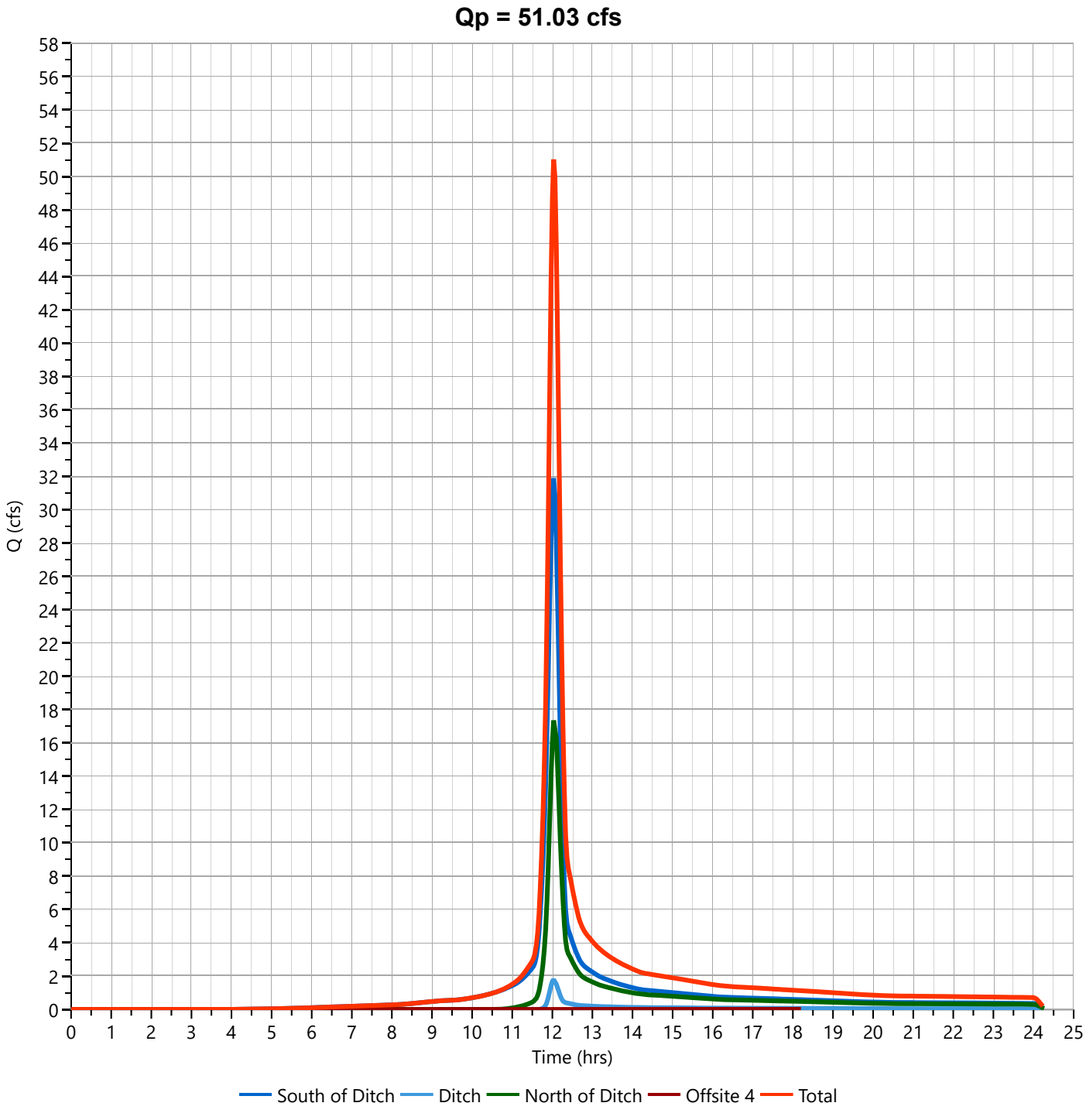
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Total

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 51.03 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 148,124 cuft
Inflow Hydrographs	= 1, 2, 3, 7	Total Contrib. Area	= 21.876 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

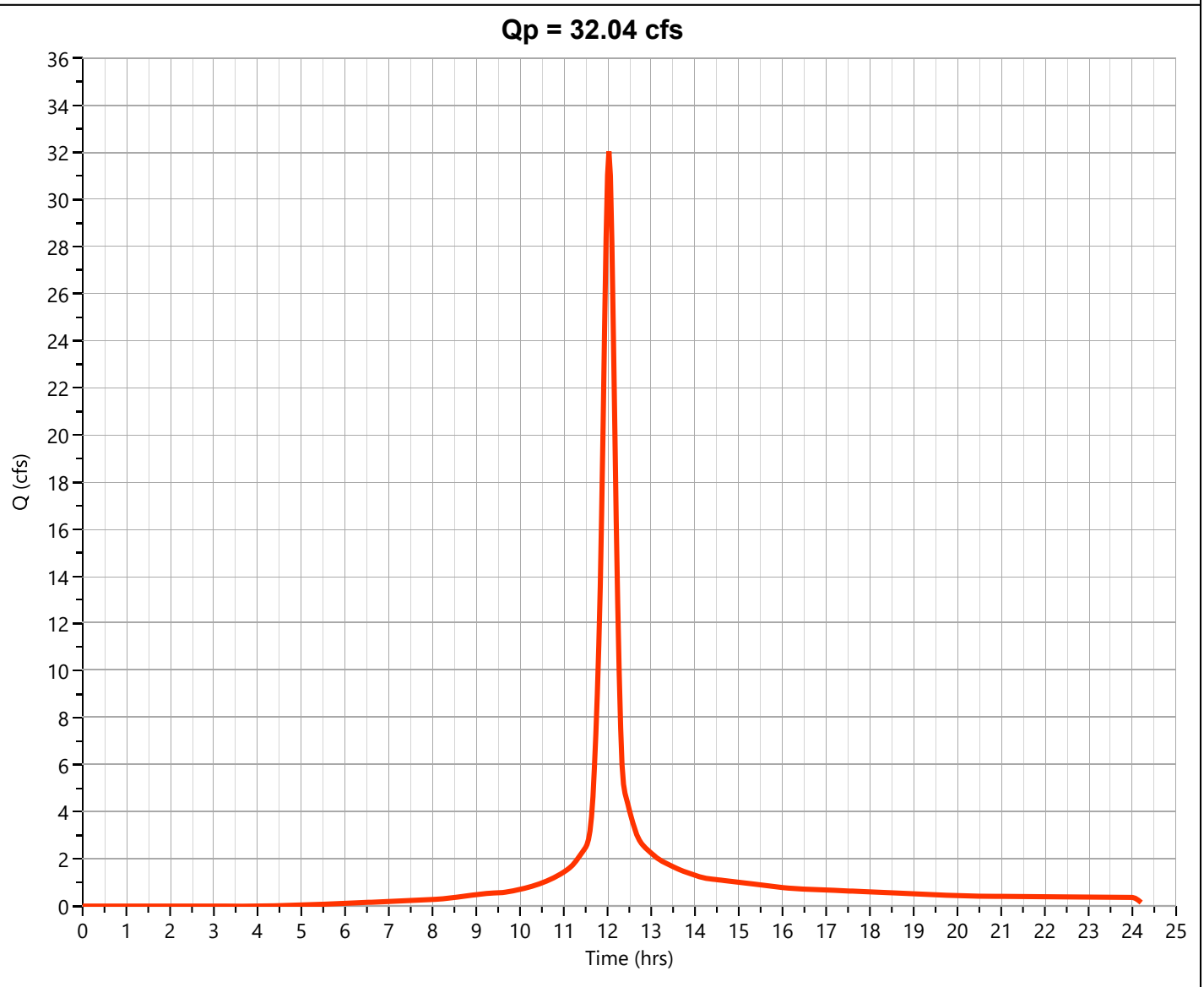
Post South of Ditch

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 32.04 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 92,756 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.2*
Tc Method	= User	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
7.83	91	Row Crop
0.82	91	Gravel Drive
0.26	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

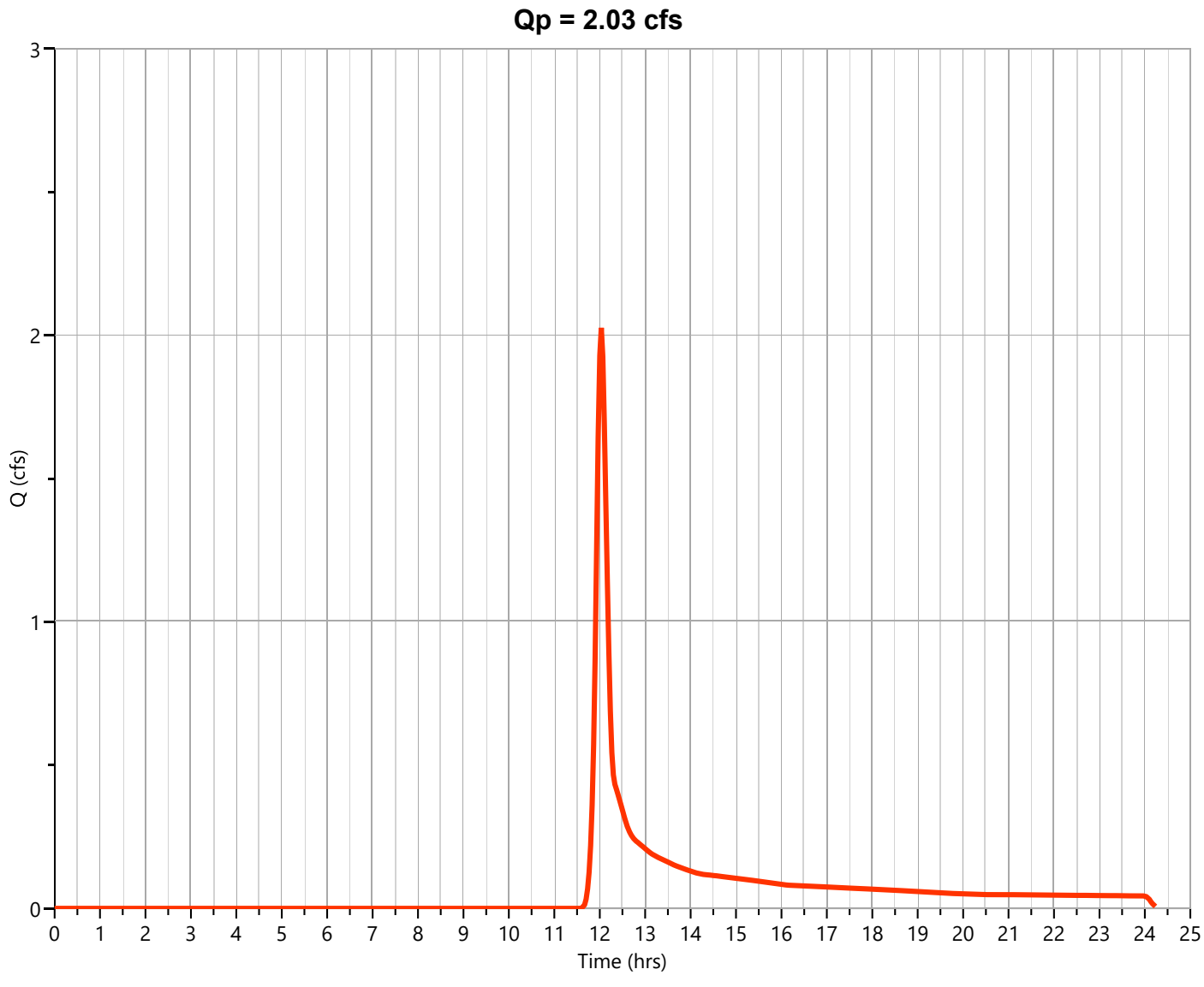
Post Ditch

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 2.026 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 5,851 cuft
Drainage Area	= 1.79 ac	Curve Number	= 63.18*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.66	61	Ditch (inside buffer)
0.13	91	Gravel
1.79	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

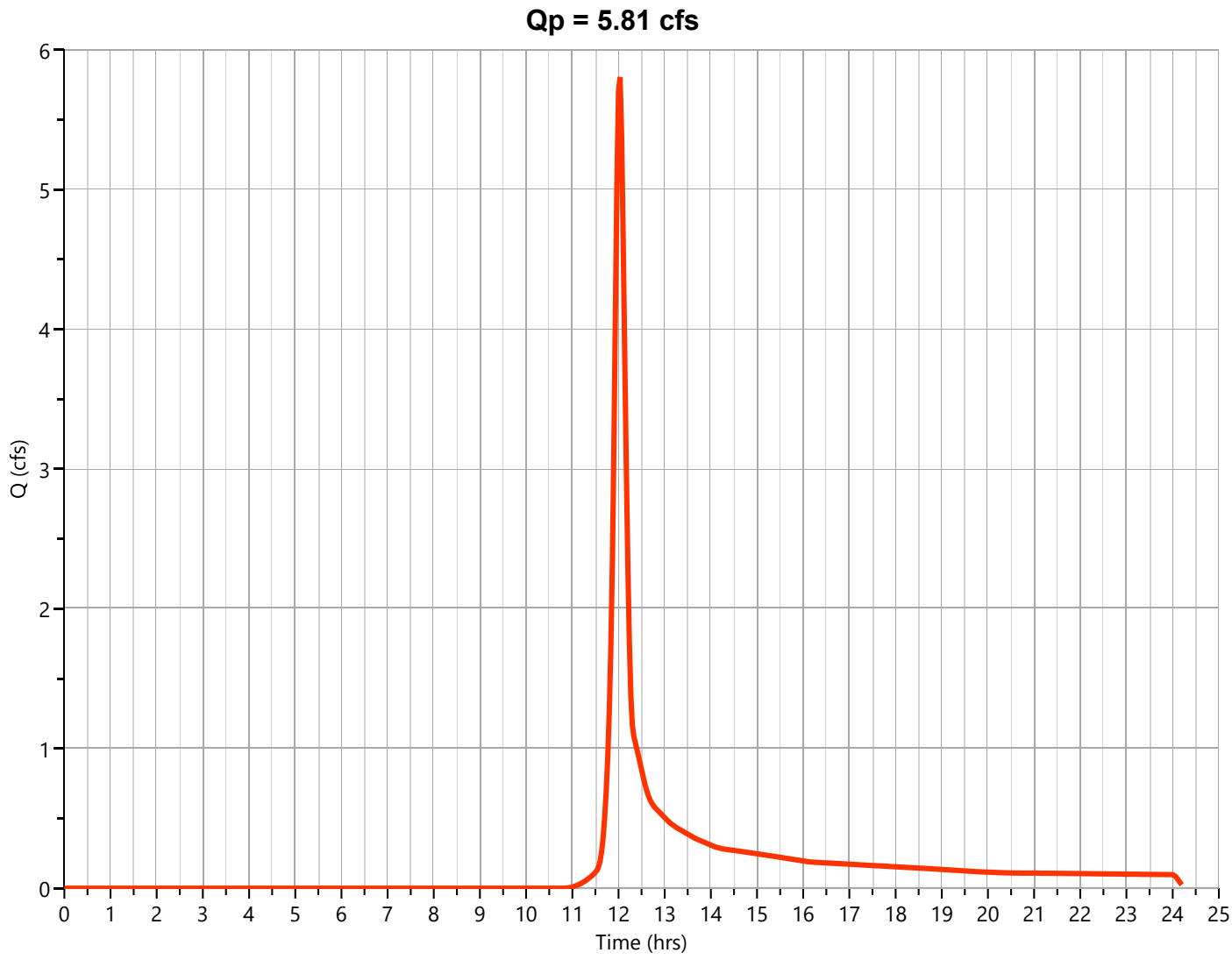
Post North to Pond 1

Hyd. No. 13

Hydrograph Type	= NRCS Runoff	Peak Flow	= 5.806 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 15,522 cuft
Drainage Area	= 3.282 ac	Curve Number	= 70*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.4	49	Pervious (A)
0.936	79	Pervious (C)
0.566	91	Gravel
0.38	98	Buildings
3.282	**70**	Weighted CN Method Employed



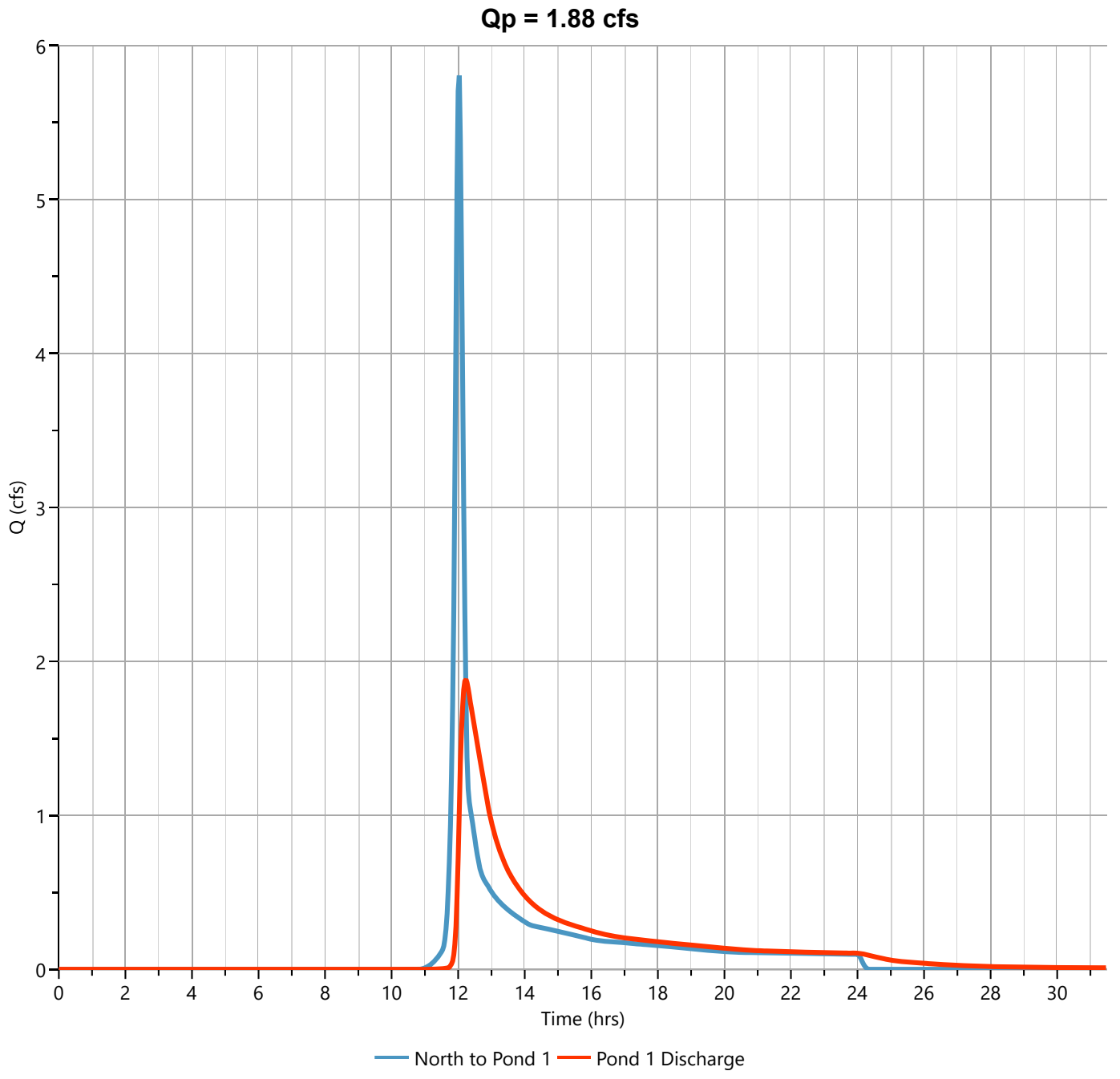
Post Pond 1 Discharge

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 1.883 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.23 hrs
Time Interval	= 2 min	Hydrograph Volume	= 15,495 cuft
Inflow Hydrograph	= 13 - North to Pond 1	Max. Elevation	= 629.13 ft
Pond Name	= Pond 1	Max. Storage	= 4,952 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 1.16 hrs



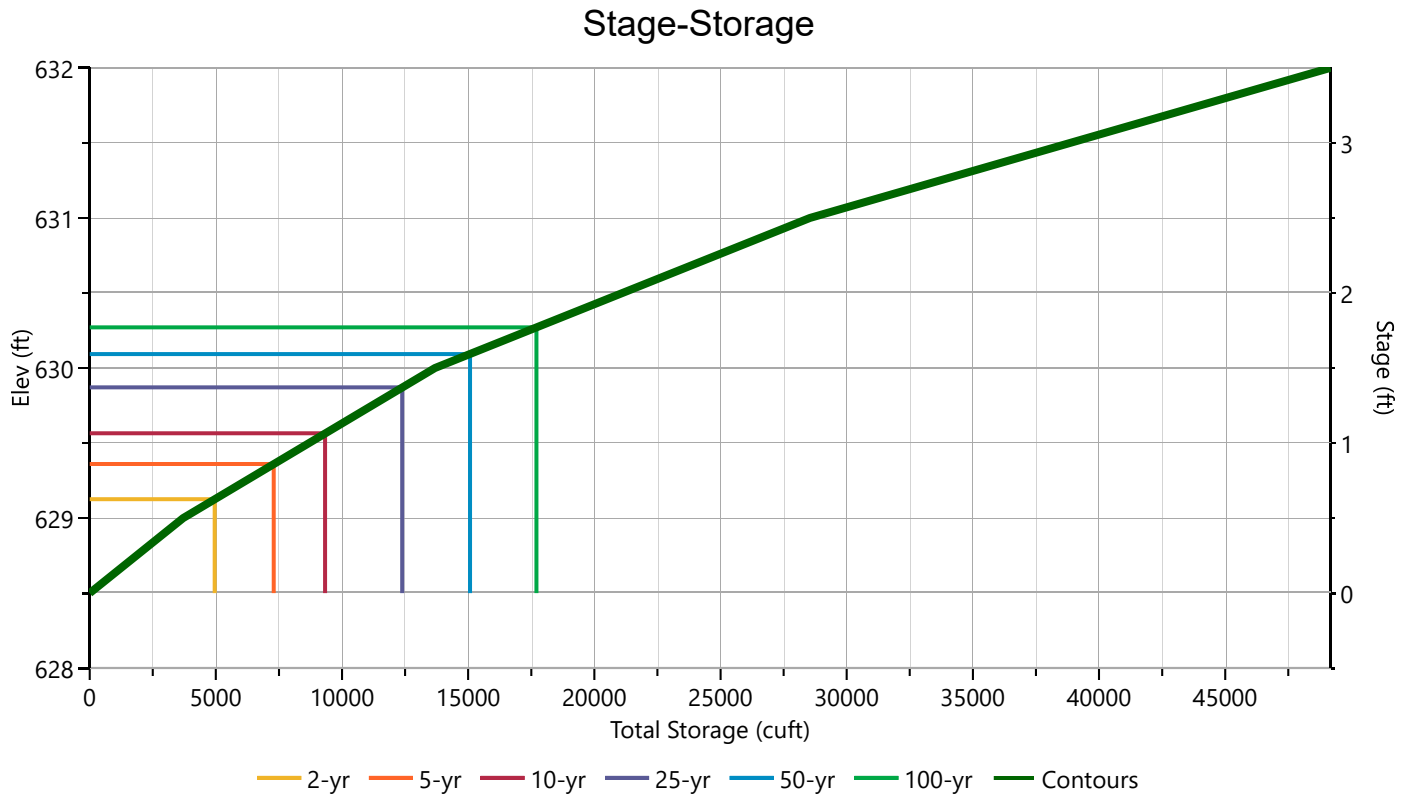
Pond 1

Stage-Storage

User Defined Contours	
Description	**Input**
Bottom Elevation, ft	628.50
Voids (%)	100.00
Volume Calc	None

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour Area (sqft)	Incr. Storage (cuft)	Total Storage (cuft)
0.00	628.50	6,840	0.000	0.000
0.50	629.00	7,970	3,703	3,703
1.50	630.00	12,000	9,985	13,688
2.50	631.00	17,723	14,862	28,549
3.50	632.00	23,520	20,622	49,171



Pond Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

Pond 1

Stage-Discharge

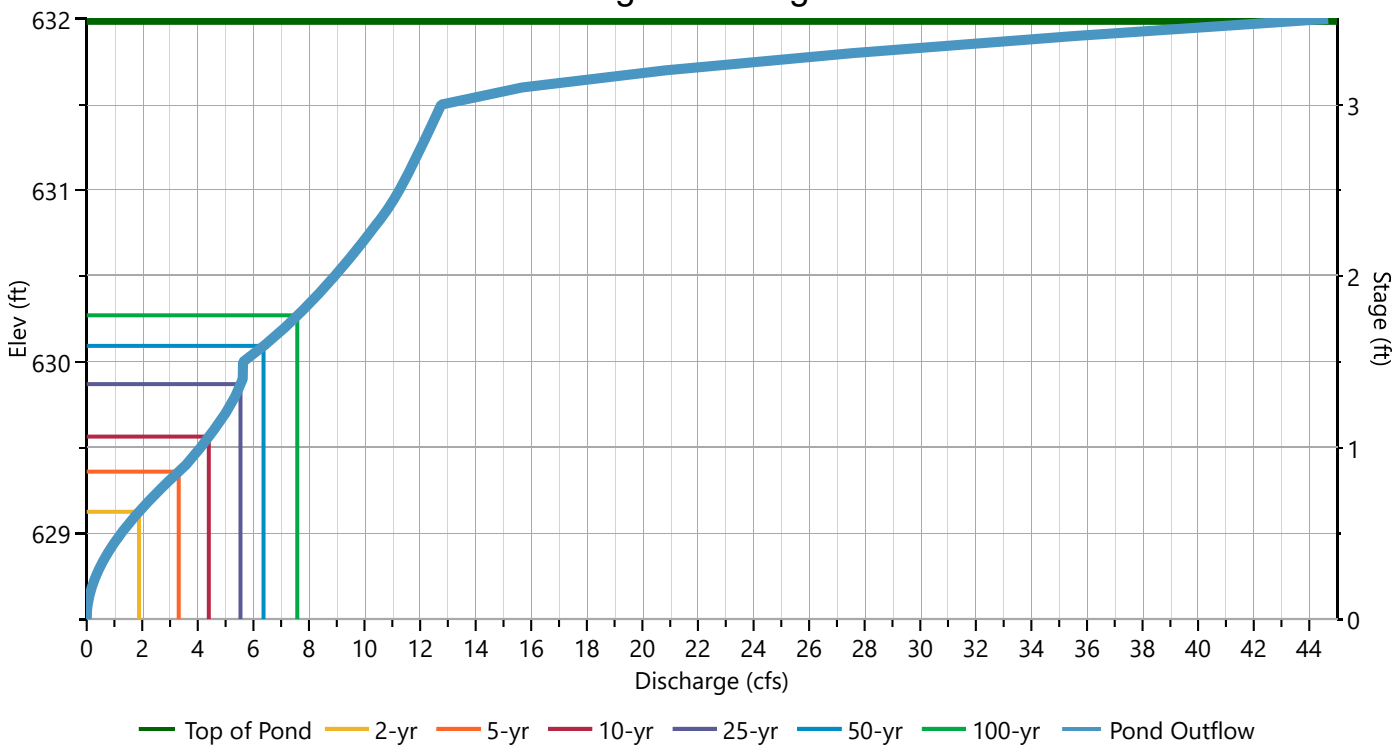
Culvert / Orifices	Culvert	Orifice		
		1	2	3
Rise, in	18			
Span, in	18			
No. Barrels	1			
Invert Elevation, ft	628.50			
Orifice Coefficient, Co	0.60			
Length, ft	33			
Barrel Slope, %	1			
N-Value, n	0.013			

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		631.5		
Crest Length, ft		25		
Angle, deg		18.4 (3:1)		
Weir Coefficient, Cw		3.3		

Ancillary	
Exfiltration, in/hr	

m = Flows through Culvert, i = Independent



Pond 1

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	628.50	0.000	0.000					0.000						0.000
0.50	629.00	3,703	1.243 ic					0.000						1.243
1.50	630.00	13,688	5.626 oc					0.000						5.626
2.50	631.00	28,549	11.25 ic					0.000						11.25
3.50	632.00	49,171	14.11 ic					30.57						44.68

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

Pond Report

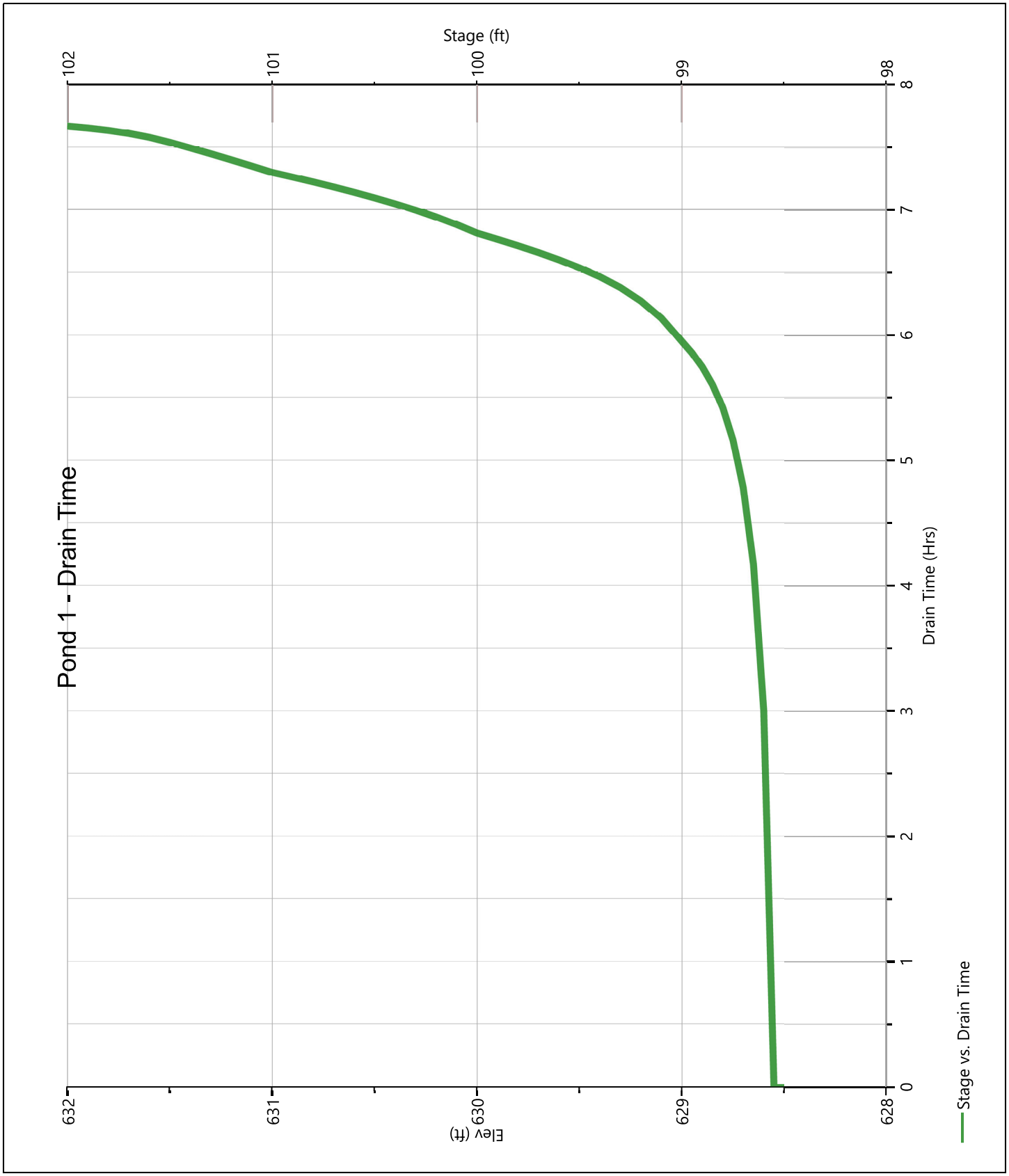
Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

Pond 1

Pond Drawdown



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

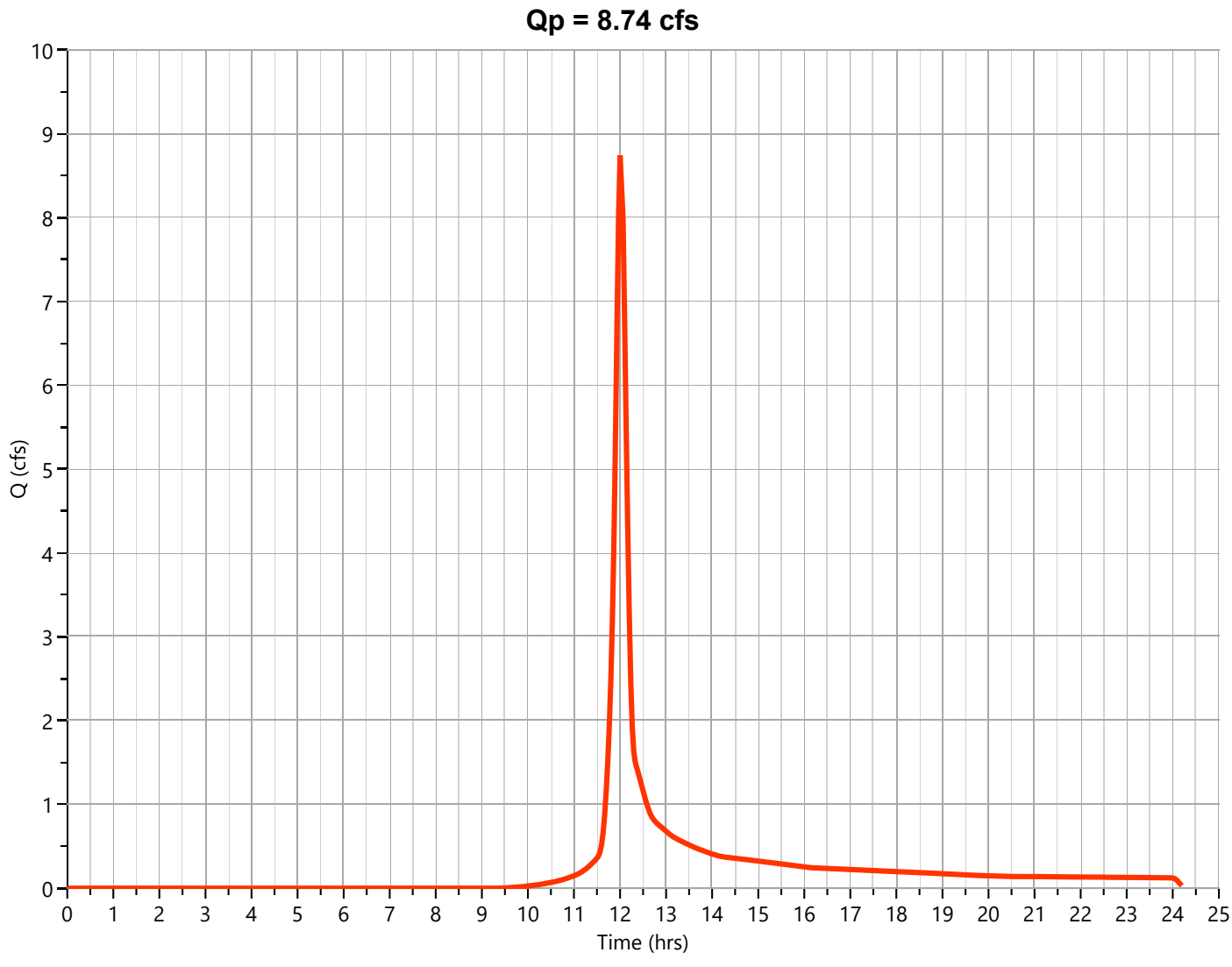
Post Bypass

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 8.742 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 22,840 cuft
Drainage Area	= 3.569 ac	Curve Number	= 76.66*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.95	49	Pervious (A)
1.26	79	Pervious (C)
0.81	91	Gravel
0.549	98	Buildings
3.569	**77**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

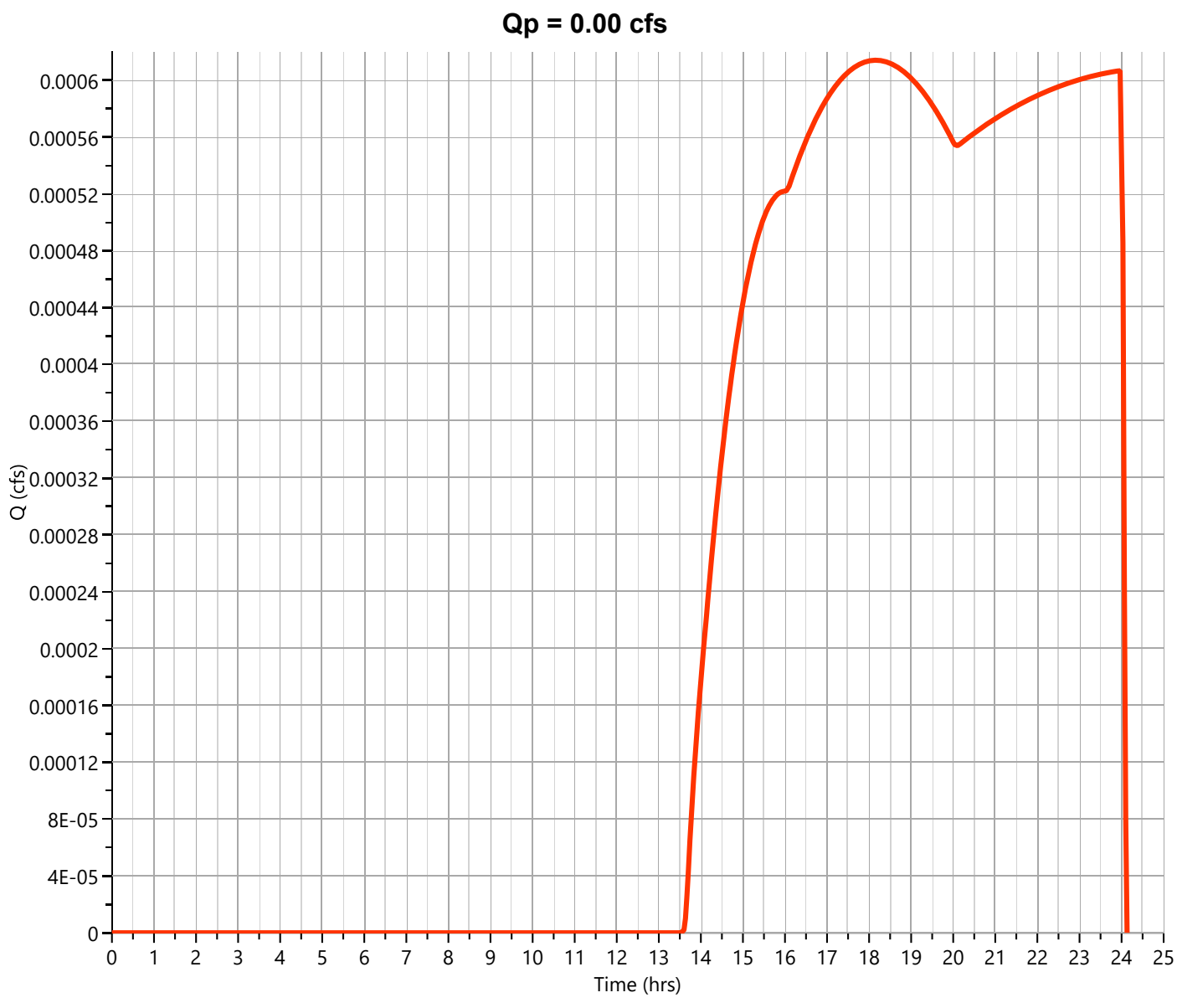
Post Offsite 1

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.001 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.17 hrs
Time Interval	= 2 min	Runoff Volume	= 20.1 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

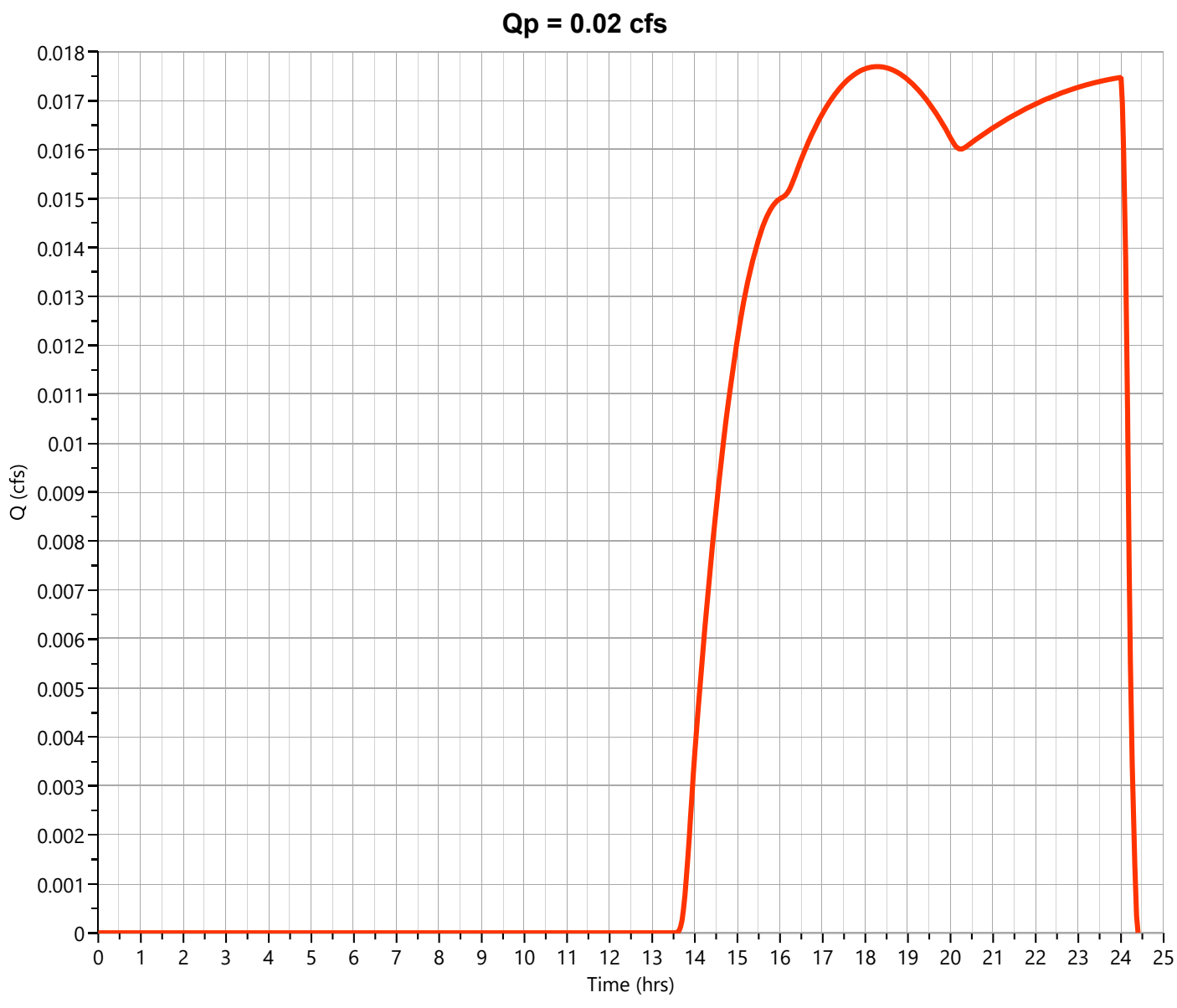
Post Offsite 2

Hyd. No. 17

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.018 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.27 hrs
Time Interval	= 2 min	Runoff Volume	= 580 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

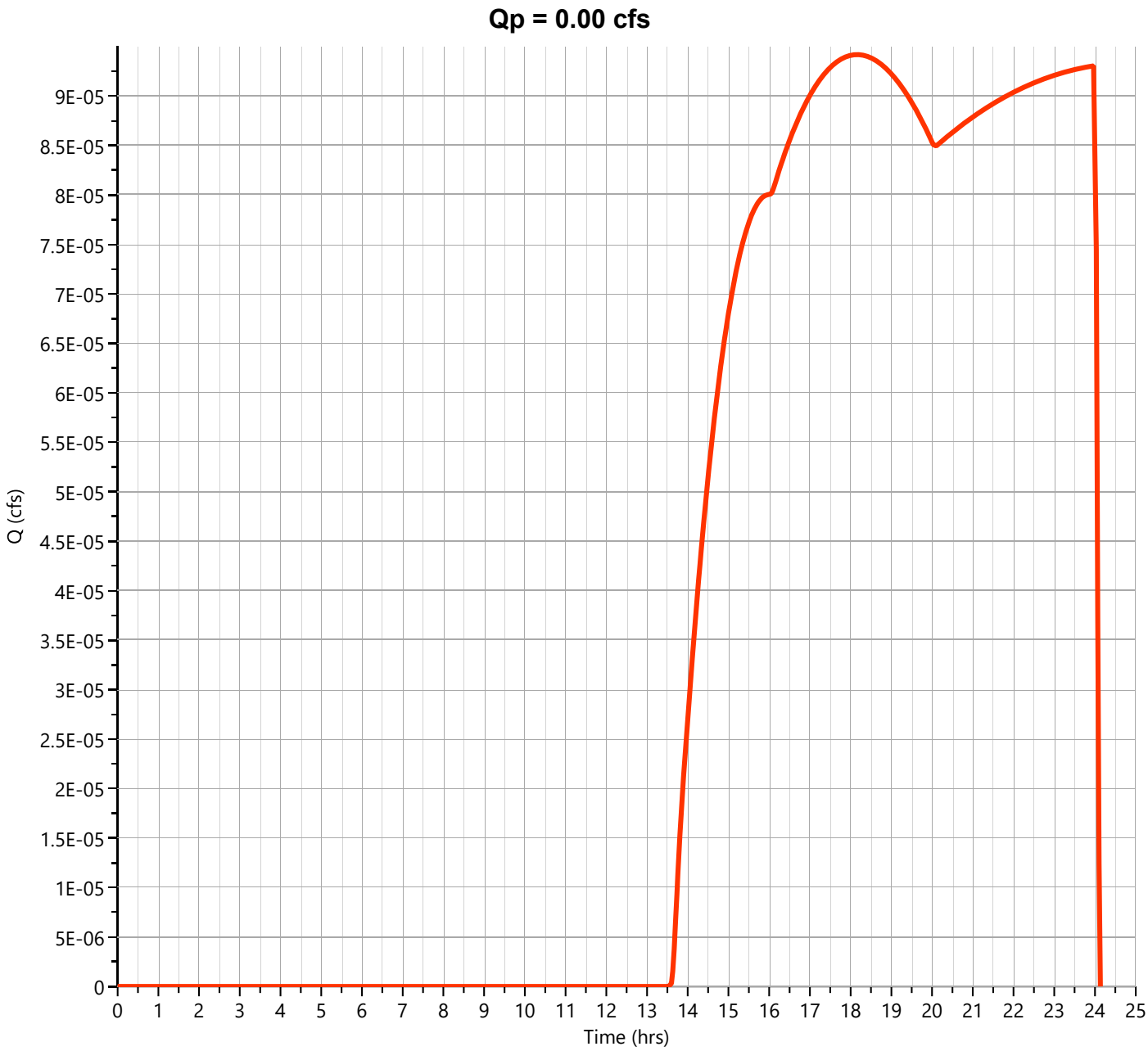
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 3

Hyd. No. 18

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.000 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.17 hrs
Time Interval	= 2 min	Runoff Volume	= 3.09 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

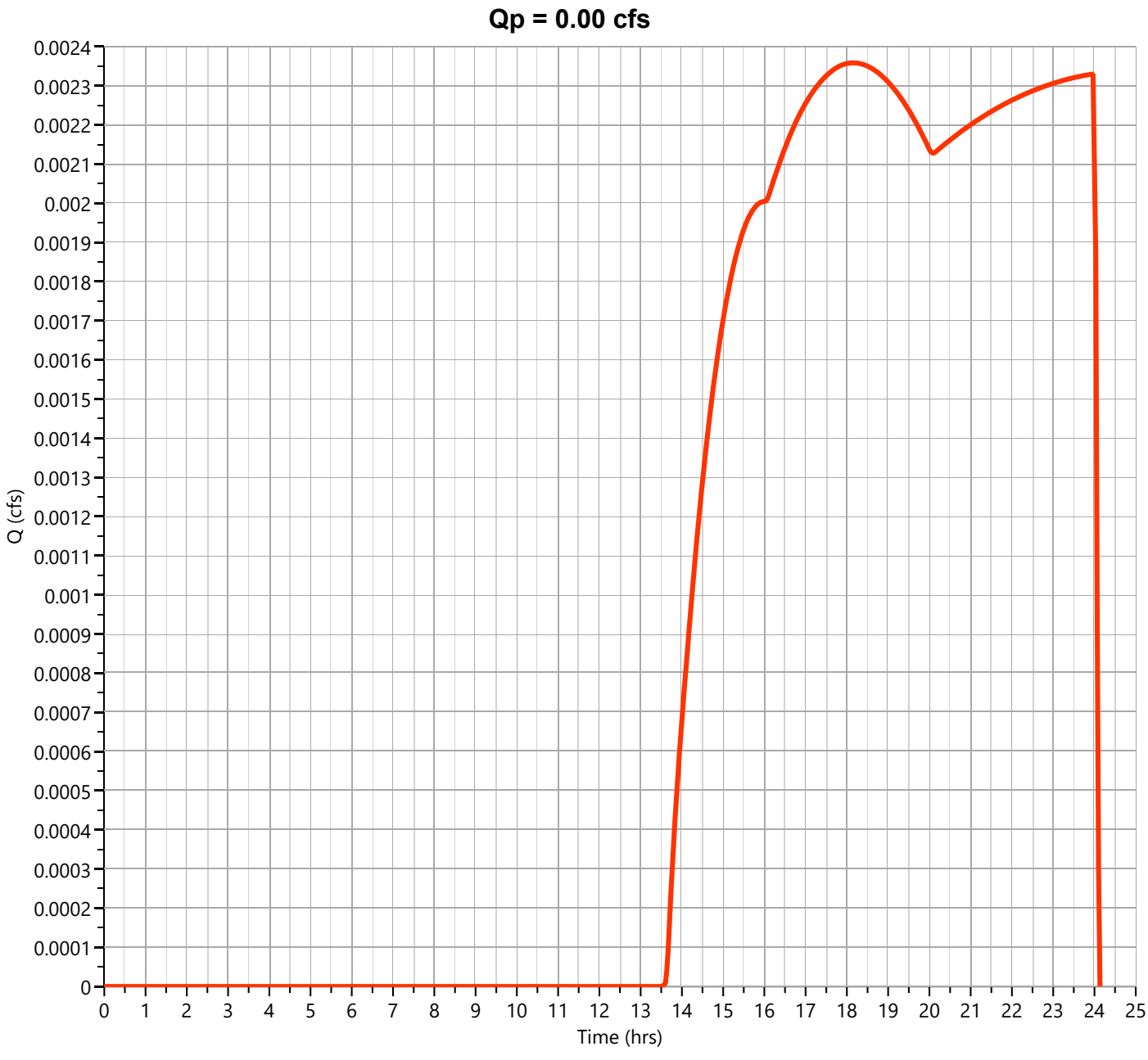
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 19

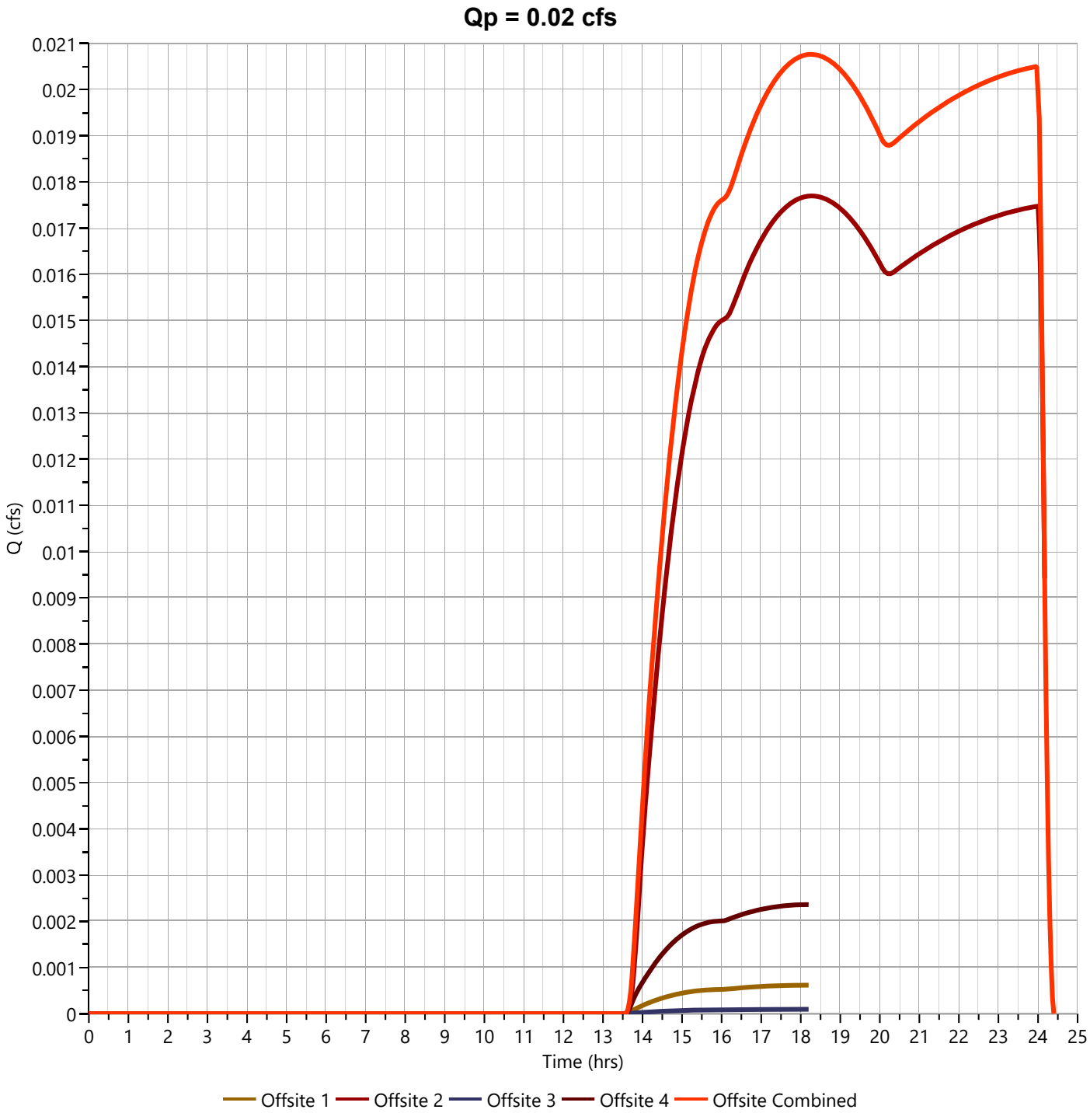
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.002 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.17 hrs
Time Interval	= 2 min	Runoff Volume	= 77.3 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Post Offsite Combined

Hyd. No. 20

Hydrograph Type	= Junction	Peak Flow	= 0.021 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.27 hrs
Time Interval	= 2 min	Hydrograph Volume	= 681 cuft
Inflow Hydrographs	= 16, 17, 18, 19	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

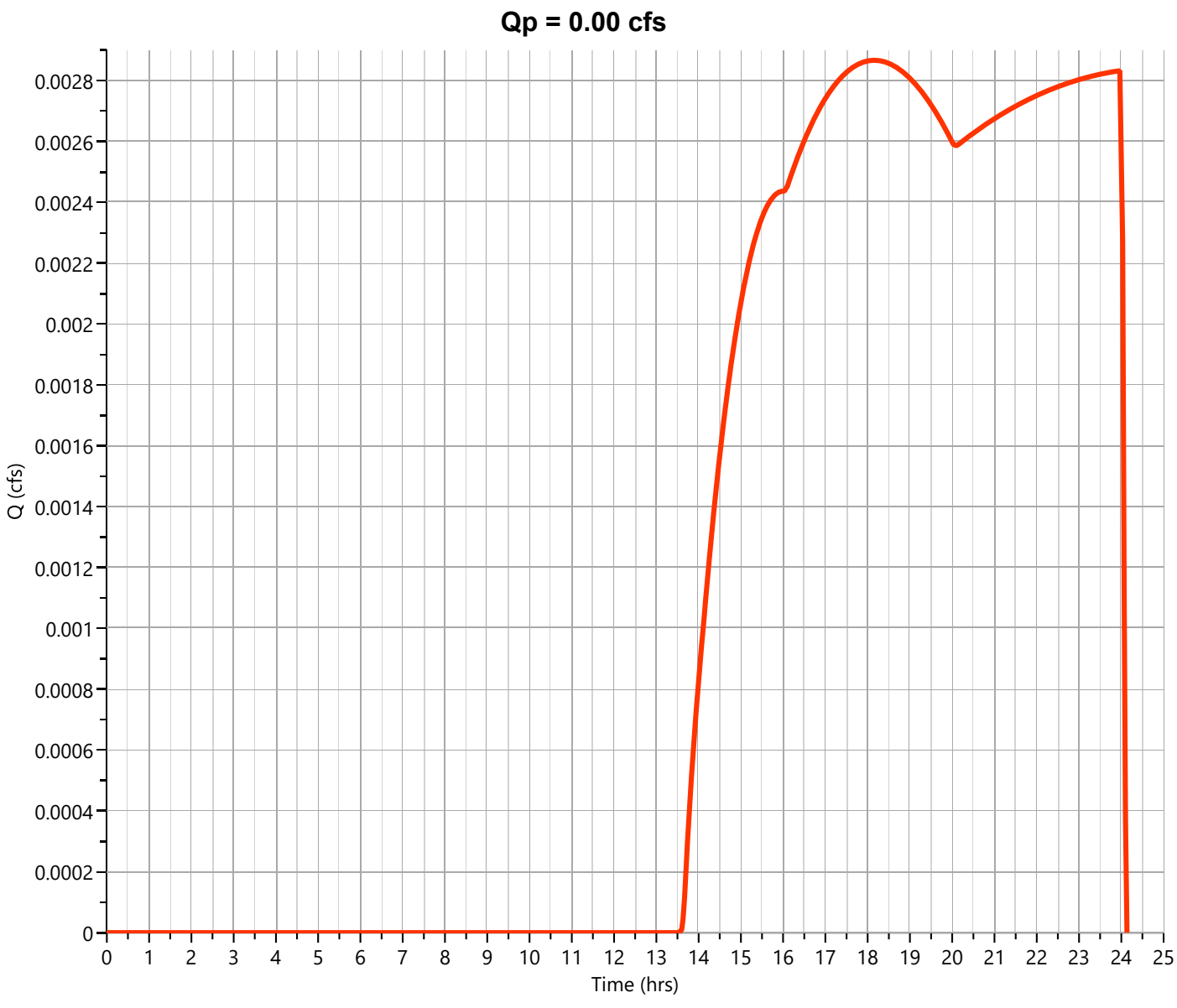
Post Culvert 1

Hyd. No. 21

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.003 cfs
Storm Frequency	= 2-yr	Time to Peak	= 18.17 hrs
Time Interval	= 2 min	Runoff Volume	= 94.0 cuft
Drainage Area	= 0.761 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.761	39	Pervious (A)
0.761	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

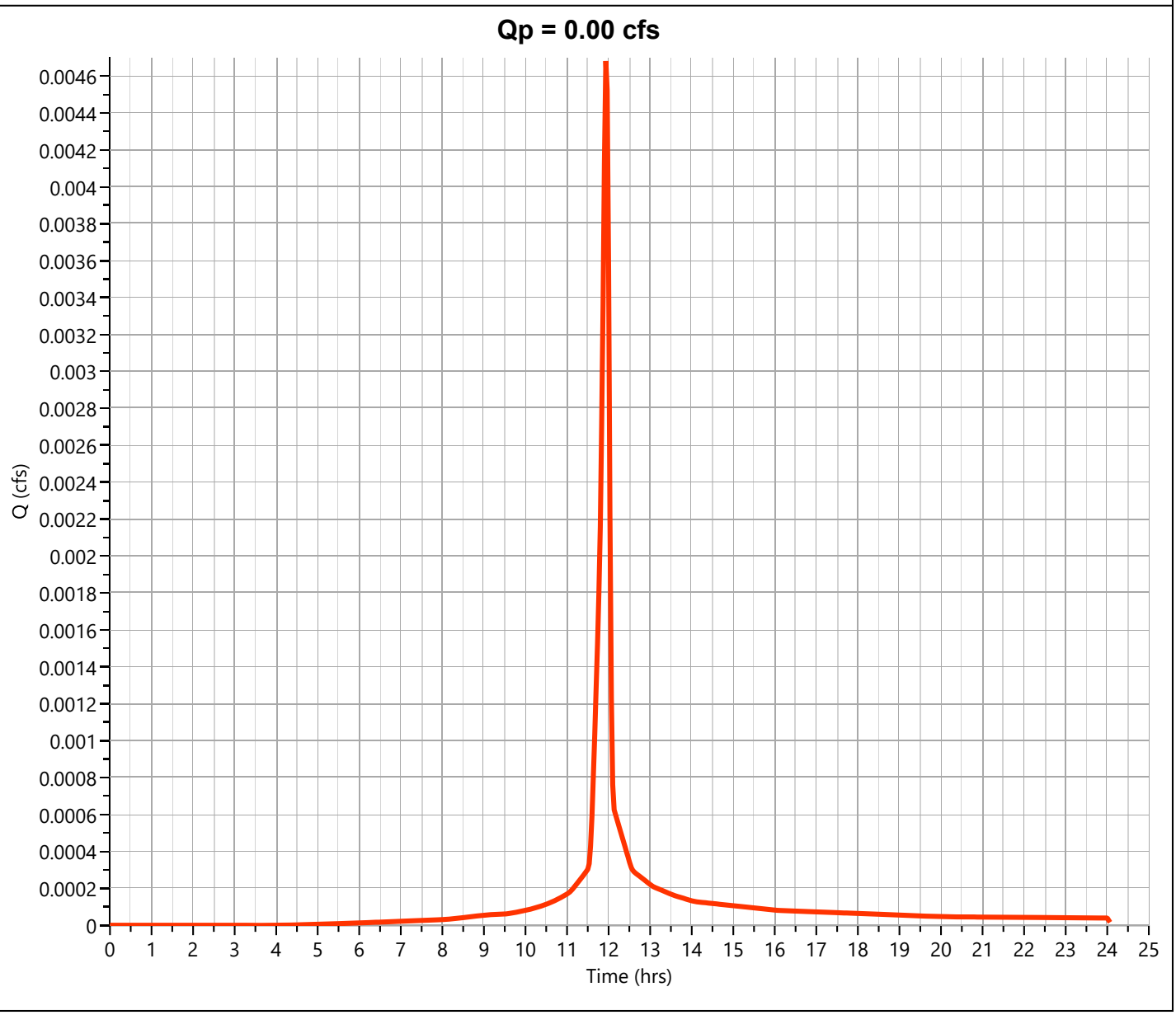
Post Area Drain 3 (AD3)

Hyd. No. 22

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.005 cfs
Storm Frequency	= 2-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 9.94 cuft
Drainage Area	= 0.001 ac	Curve Number	= 91*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.001	91	Gravel
0.001	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

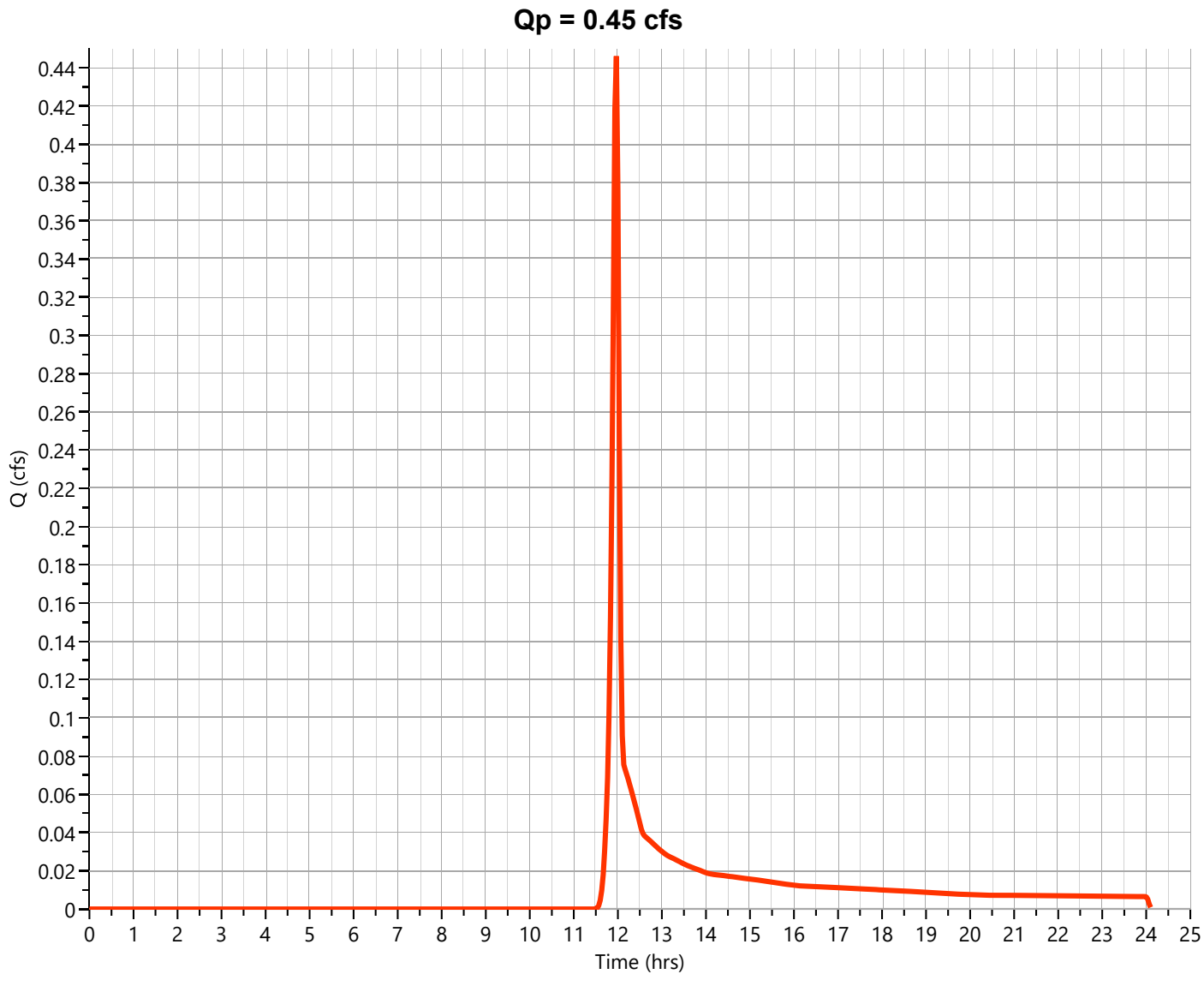
Post Area Drain 2 (AD2)

Hyd. No. 23

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.446 cfs
Storm Frequency	= 2-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 915 cuft
Drainage Area	= 0.28 ac	Curve Number	= 64.81*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.139	91	Gravel
0.141	39	Grass
0.28	**65**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

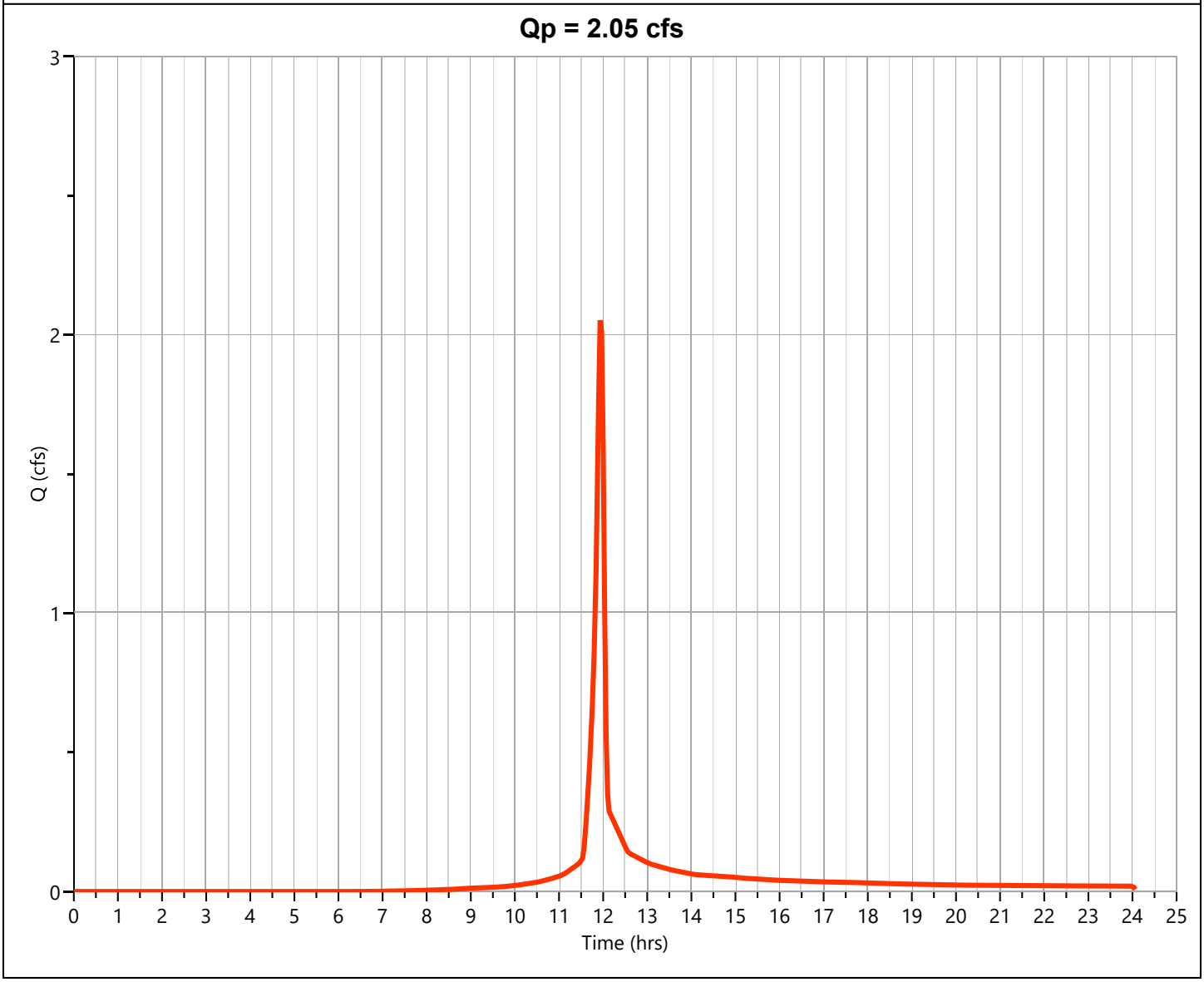
Post Area Drain 1 (AD1)

Hyd. No. 24

Hydrograph Type	= NRCS Runoff	Peak Flow	= 2.052 cfs
Storm Frequency	= 2-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 4,188 cuft
Drainage Area	= 0.527 ac	Curve Number	= 84.61*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.087	49	Pervious (A)
0.399	91	Gravel
0.041	98	Building
0.527	**85**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

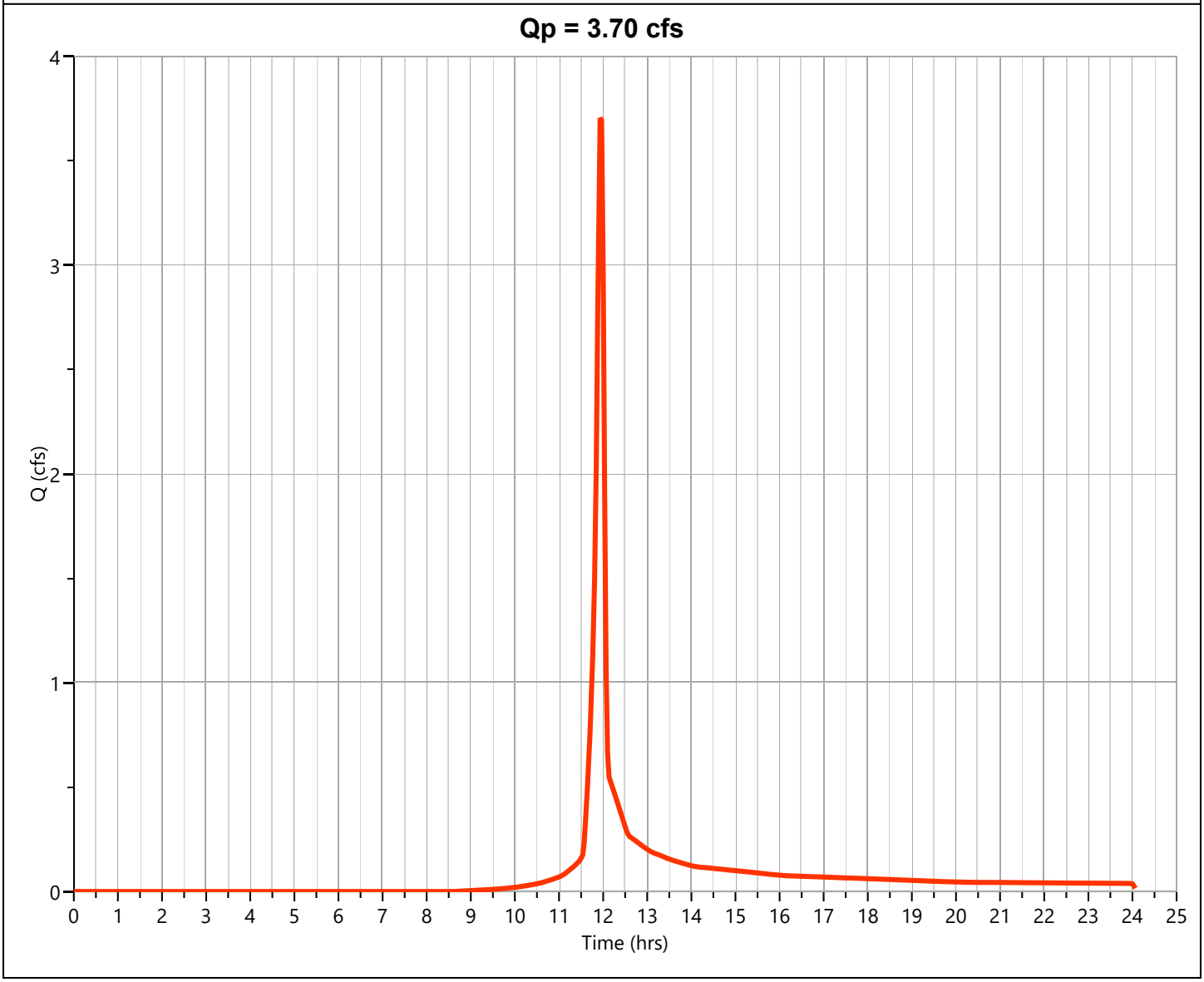
Post North to Pond 2

Hyd. No. 25

Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.704 cfs
Storm Frequency	= 2-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 7,480 cuft
Drainage Area	= 1.16 ac	Curve Number	= 79.16*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 3.90 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.618	91	Gravel
0.245	98	Bldg/Concrete
0.297	39	Grass
1.16	**79**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

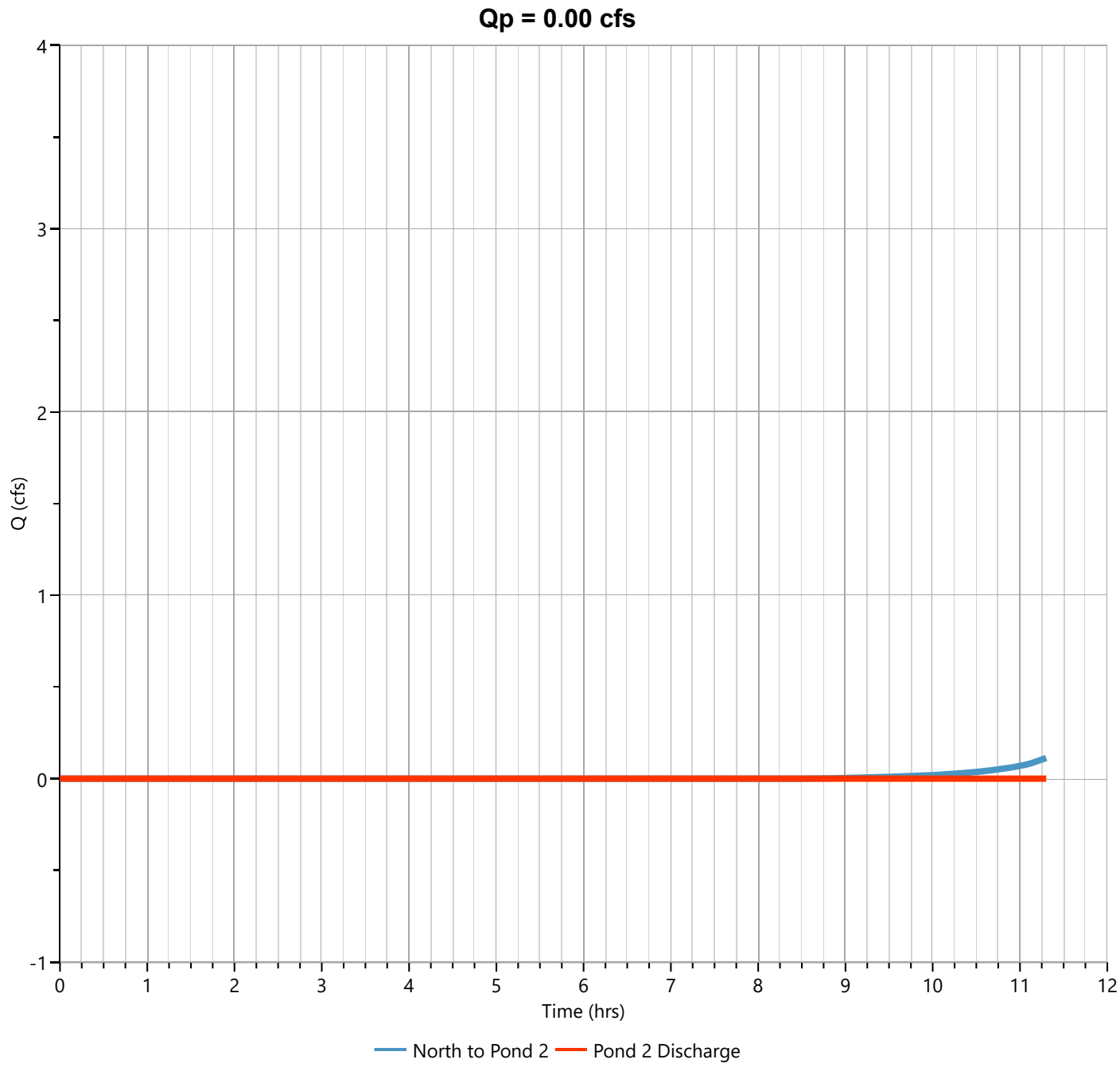
07-25-2024

Post Pond 2 Discharge

Hyd. No. 26

Hydrograph Type	= Pond Route	Peak Flow	= 0.000 cfs
Storm Frequency	= 2-yr	Time to Peak	= 11.27 hrs
Time Interval	= 2 min	Hydrograph Volume	= 0.000 cuft
Inflow Hydrograph	= 25 - North to Pond 2	Max. Elevation	= 531.80 ft
Pond Name	= Pond 2	Max. Storage	= 4,799 cuft

Pond Routing by Storage Indication Method



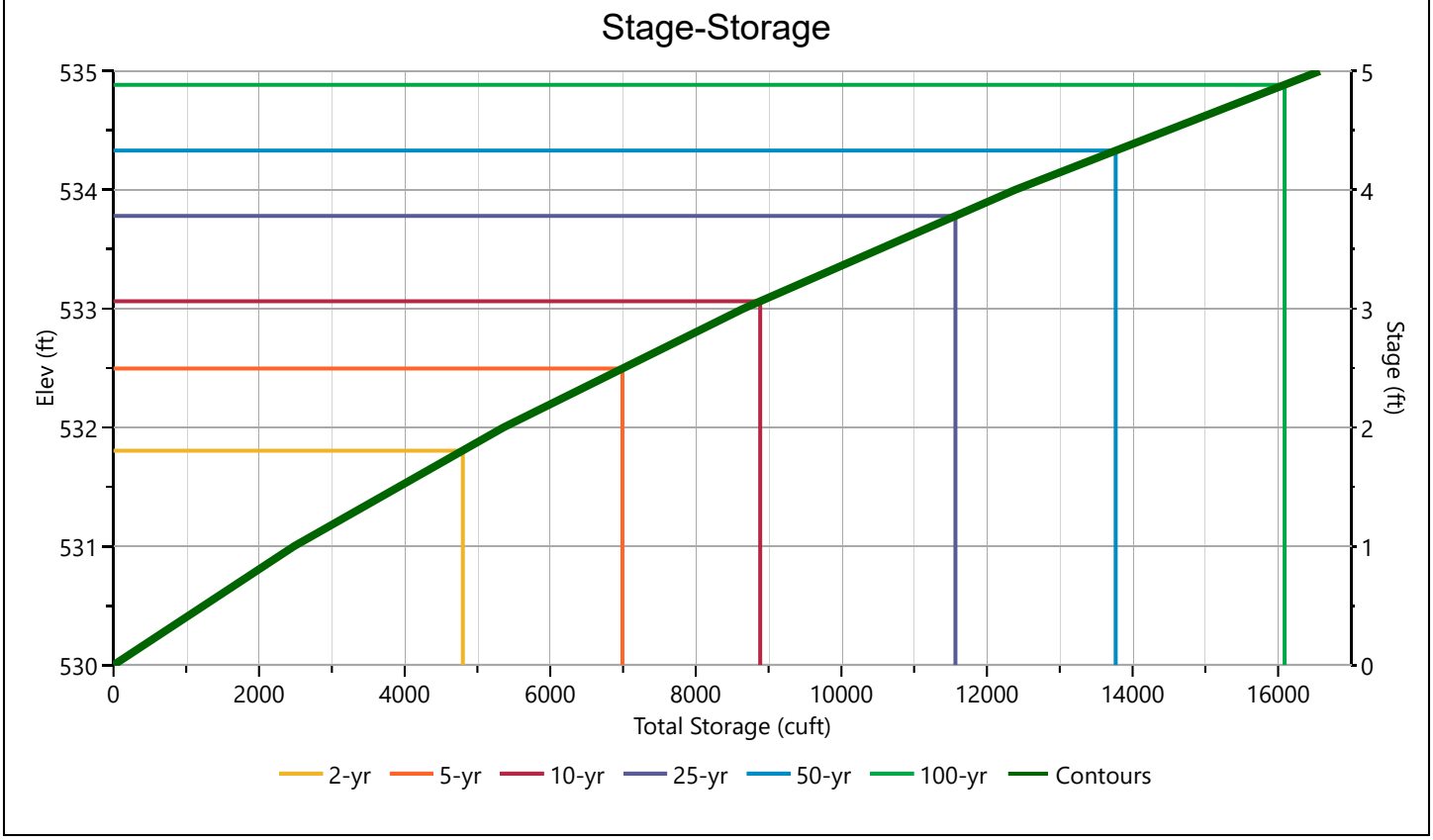
Pond 2

Stage-Storage

User Defined Contours	
Description	**Input**
Bottom Elevation, ft	530.00
Voids (%)	100.00
Volume Calc	None

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour Area (sqft)	Incr. Storage (cuft)	Total Storage (cuft)
0.00	530.00	2,292	0.000	0.000
1.00	531.00	2,674	2,483	2,483
2.00	532.00	3,079	2,877	5,360
3.00	533.00	3,506	3,293	8,652
4.00	534.00	3,955	3,731	12,383
5.00	535.00	4,426	4,191	16,573



Pond Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

Pond 2

Stage-Discharge

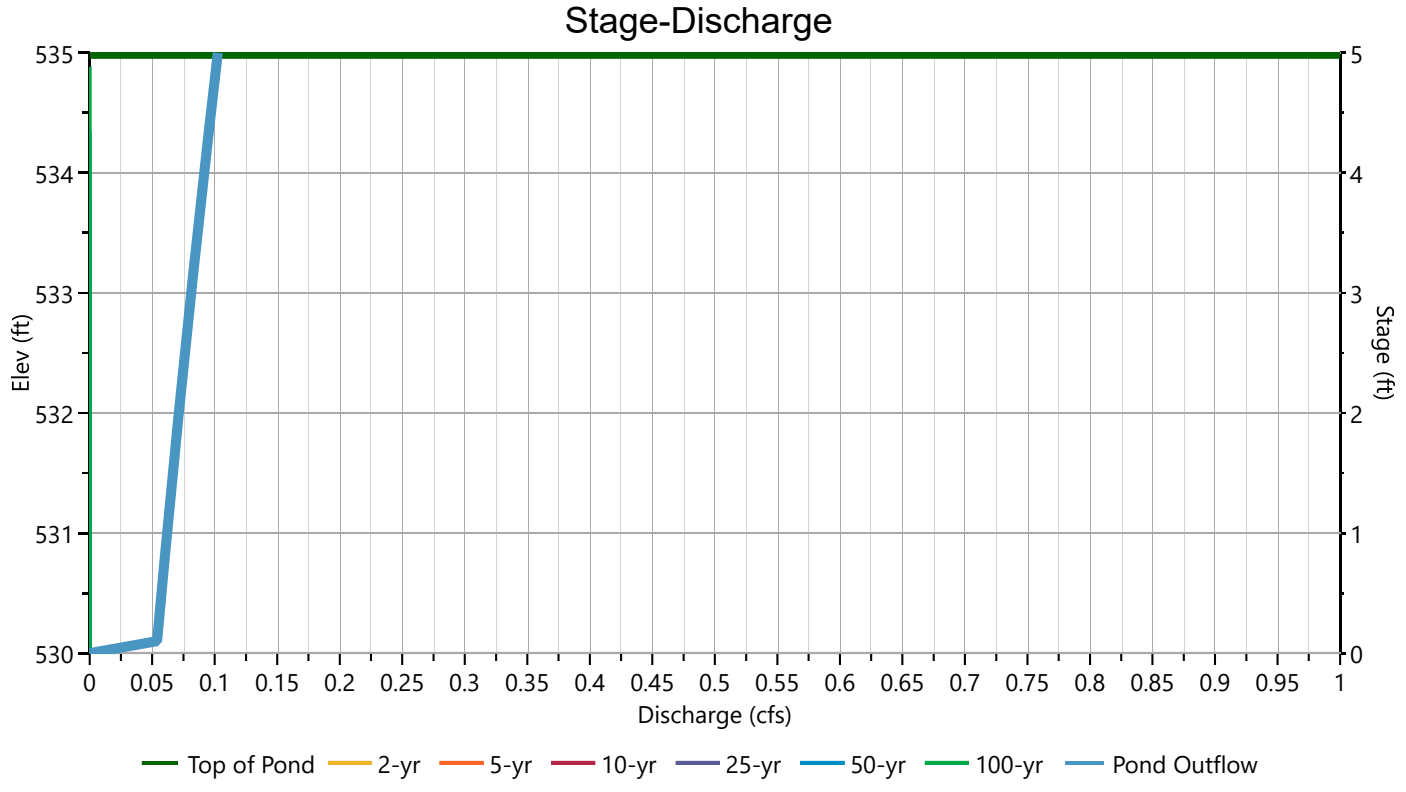
Culvert / Orifices	Culvert	Orifice		
		1	2	3
Rise, in				
Span, in				
No. Barrels				
Invert Elevation, ft				
Orifice Coefficient, Co				
Length, ft				
Barrel Slope, %				
N-Value, n				

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		634		
Crest Length, ft		25		
Angle, deg		18.4 (3:1)		
Weir Coefficient, Cw		3.3		

Ancillary	
Exfiltration, in/hr	1.00**

*m = Flows through Culvert, i = Independent **Exfiltration extracted from outflow hydrograph. Rate applied to contours.*



Pond 2

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	530.00	0.000						0.000				0.000		0.000
1.00	531.00	2,483						0.000				0.062		0.062
2.00	532.00	5,360						0.000				0.071		0.071
3.00	533.00	8,652						0.000				0.081		0.081
4.00	534.00	12,383						0.000				0.092		0.092
5.00	535.00	16,573						0.000				0.102		0.102

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

Pond Report

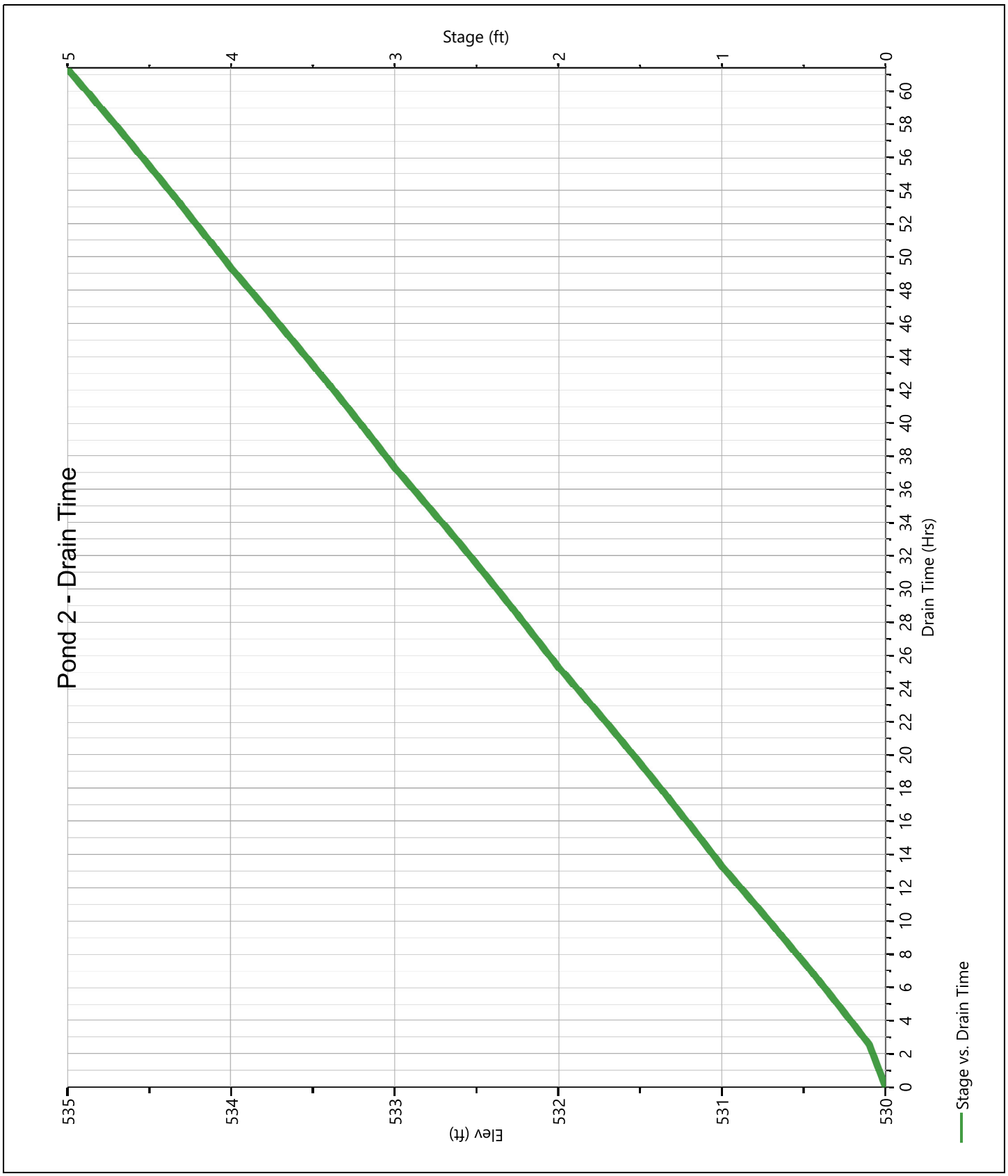
Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

Pond 2

Pond Drawdown



Hydrograph Report

Project Name:

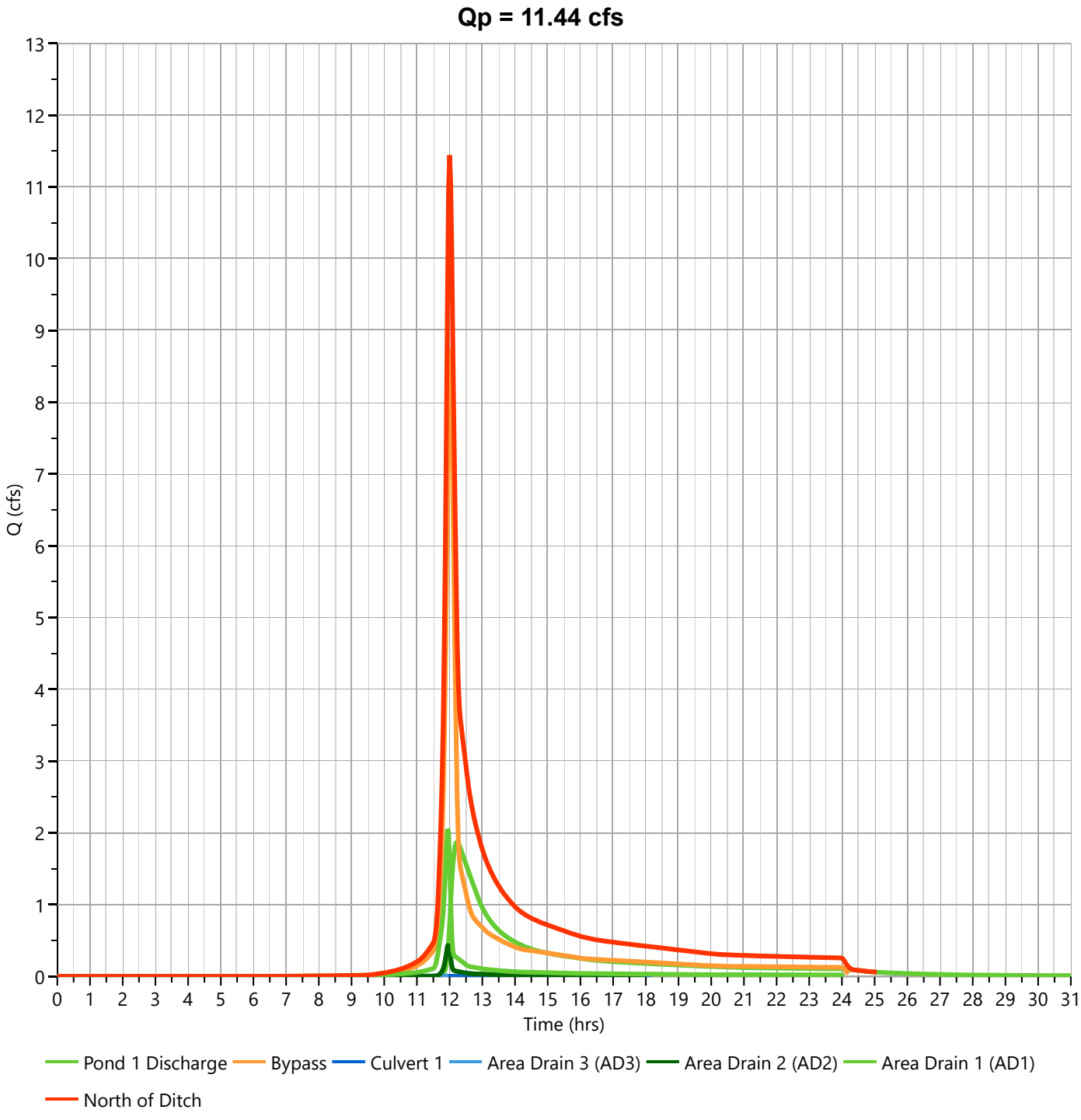
Hydrology Studio v 3.0.0.32

07-25-2024

Post North of Ditch

Hyd. No. 27

Hydrograph Type	= Junction	Peak Flow	= 11.44 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Hydrograph Volume	= 43,543 cuft
Inflow Hydrographs	= 14, 15, 21, 22, 23, 24	Total Contrib. Area	= 5.138 ac



Hydrograph Report

Project Name:

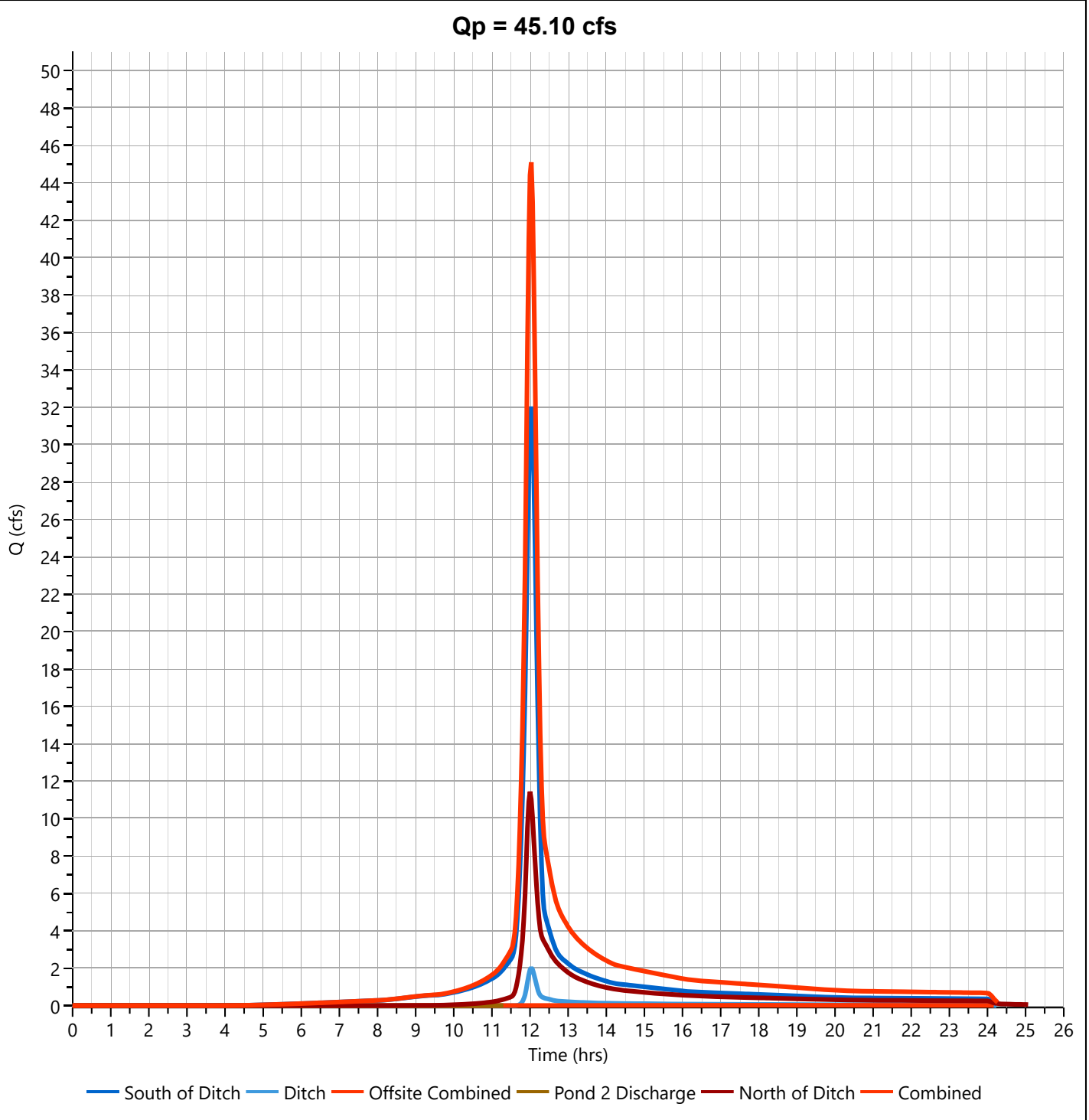
Hydrology Studio v 3.0.0.32

07-25-2024

Post Combined

Hyd. No. 28

Hydrograph Type	= Junction	Peak Flow	= 45.10 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 142,831 cuft
Inflow Hydrographs	= 11, 12, 20, 26, 27	Total Contrib. Area	= 21.17 ac



Design Storm Report

Custom Storm filename:

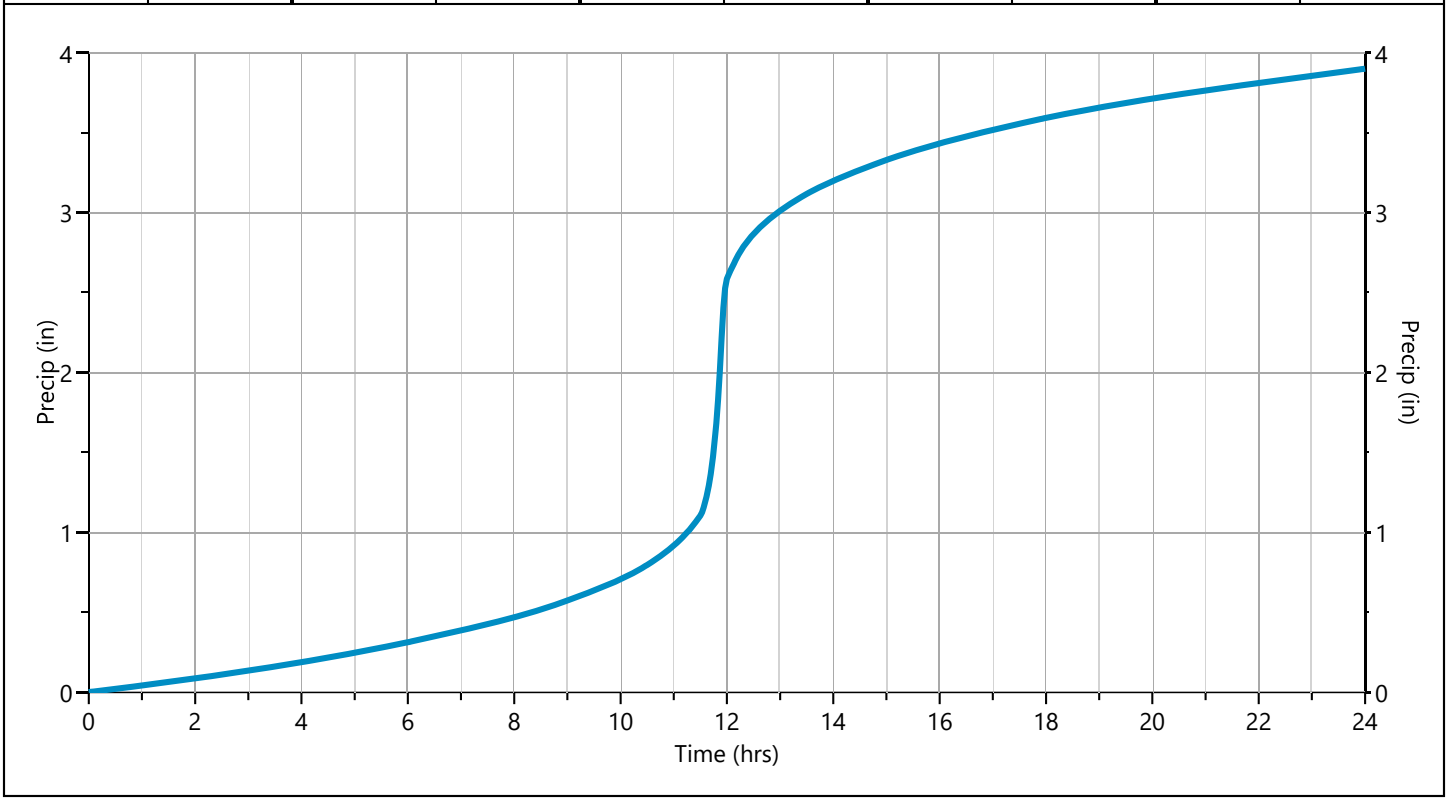
Hydrology Studio v 3.0.0.32

07-25-2024

Storm Distribution: NRCS/SCS - Type II, 24-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	✔ 2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
24 hrs	3.26	3.90	0.00	4.74	5.42	6.34	7.07	7.82	

Incremental Rainfall Distribution, 2-yr									
Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
10.90	0.008753	11.27	0.012480	11.63	0.051515	12.00	0.058608	12.37	0.015756
10.93	0.008927	11.30	0.012896	11.67	0.061776	12.03	0.026073	12.40	0.014768
10.97	0.009100	11.33	0.013312	11.70	0.072037	12.07	0.024648	12.43	0.013780
11.00	0.009273	11.37	0.013728	11.73	0.082299	12.10	0.023660	12.47	0.012792
11.03	0.009567	11.40	0.014144	11.77	0.094465	12.13	0.022672	12.50	0.011804
11.07	0.009984	11.43	0.014560	11.80	0.121097	12.17	0.021684	12.53	0.011199
11.10	0.010400	11.47	0.014976	11.83	0.149639	12.20	0.020696	12.57	0.010972
11.13	0.010816	11.50	0.015392	11.87	0.178181	12.23	0.019708	12.60	0.010746
11.17	0.011232	11.53	0.020760	**11.90**	**0.206723**	12.27	0.018720	12.63	0.010521
11.20	0.011648	11.57	0.030992	11.93	0.188654	12.30	0.017732	12.67	0.010296
11.23	0.012064	11.60	0.041253	11.97	0.123565	12.33	0.016744	12.70	0.010071



Hydrograph 5-yr Summary

Project Name:

07-25-2024

Hydrology Studio v 3.0.0.32

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre South of Ditch	40.20	12.03	117,692	----		
2	NRCS Runoff	Pre Ditch	3.053	12.03	8,437	----		
3	NRCS Runoff	Pre North of Ditch	25.66	12.03	72,977	----		
4	NRCS Runoff	Pre Offsite 1	0.003	12.43	83.5	----		
5	NRCS Runoff	Pre Offsite 2	0.086	12.57	2,408	----		
6	NRCS Runoff	Pre Offsite 3	0.000	12.43	12.8	----		
7	NRCS Runoff	Post Offsite 4	0.012	12.43	321	----		
8	Junction	Pre Offsite Combined	0.100	12.93	2,825	4, 5, 6, 7		
9	Junction	Pre Total	68.91	12.03	199,426	1, 2, 3, 7		
11	NRCS Runoff	Post South of Ditch	40.34	12.03	118,287	----		
12	NRCS Runoff	Post Ditch	3.344	12.03	9,106	----		
13	NRCS Runoff	Post North to Pond 1	8.628	12.03	22,676	----		
14	Pond Route	Post Pond 1 Discharge	3.314	12.20	22,649	13	629.36	7,293
15	NRCS Runoff	Post Bypass	12.25	12.00	31,775	----		
16	NRCS Runoff	Post Offsite 1	0.003	12.43	83.5	----		
17	NRCS Runoff	Post Offsite 2	0.086	12.57	2,408	----		
18	NRCS Runoff	Post Offsite 3	0.000	12.43	12.8	----		
19	NRCS Runoff	Post Offsite 4	0.012	12.43	321	----		
20	Junction	Post Offsite Combined	0.100	12.93	2,825	16, 17, 18, 19		
21	NRCS Runoff	Post Culvert 1	0.014	12.43	390	----		
22	NRCS Runoff	Post Area Drain 3 (AD3)	0.006	11.93	12.7	----		
23	NRCS Runoff	Post Area Drain 2 (AD2)	0.697	11.97	1,401	----		
24	NRCS Runoff	Post Area Drain 1 (AD1)	2.688	11.93	5,544	----		
25	NRCS Runoff	Post North to Pond 2	5.051	11.93	10,237	----		
26	Pond Route	Post Pond 2 Discharge	0.000	10.90	0.000	25	532.50	6,992
27	Junction	Post North of Ditch	16.57	12.00	61,771	14, 15, 21, 22, 23, 24		
28	Junction	Post Combined	59.64	12.03	191,989	11, 12, 20, 26, 27		

Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

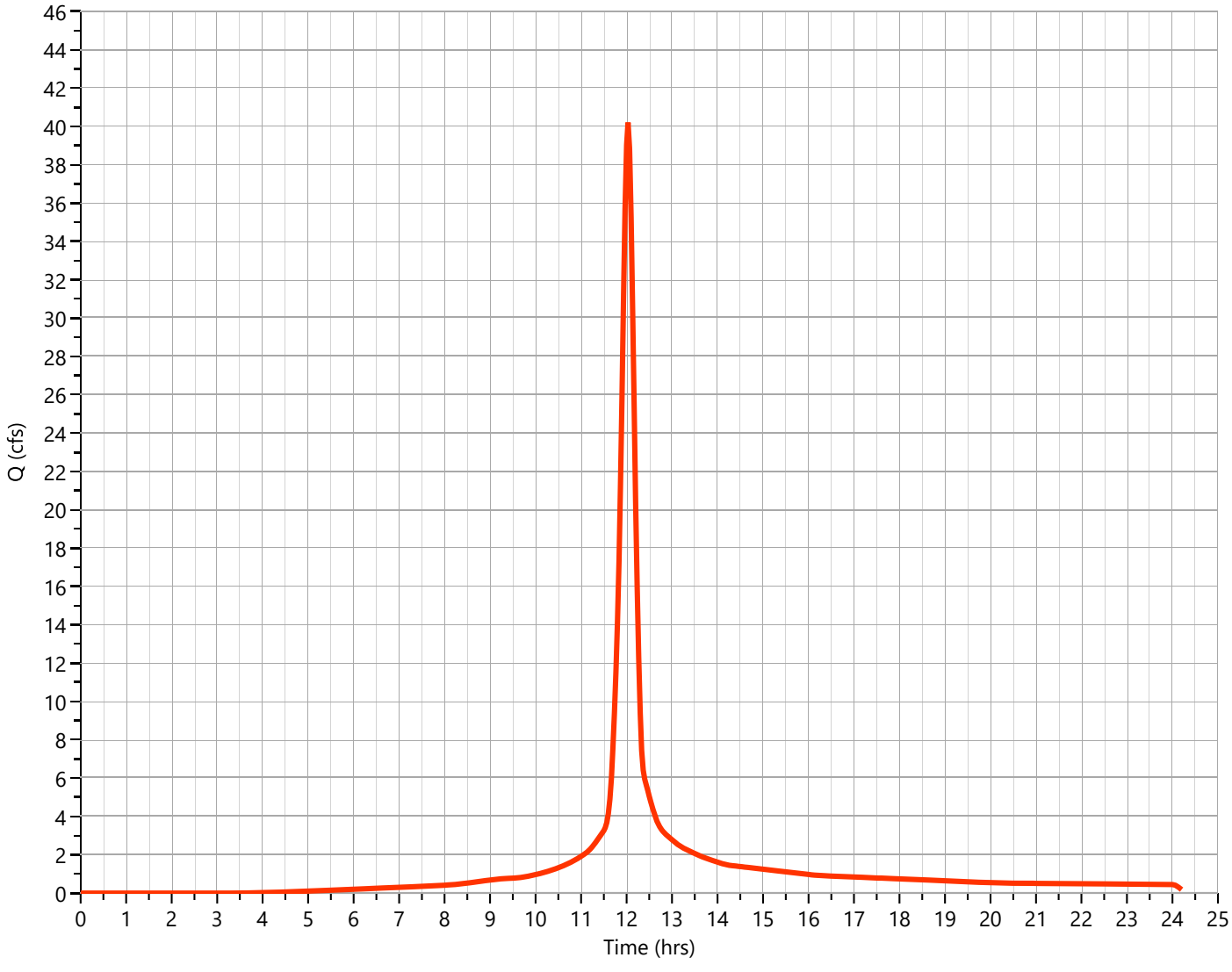
Pre South of Ditch

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 40.20 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 117,692 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.02*
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
8.69	91	No Rating (Row Crops)
0.2	91	Gravel
0.02	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

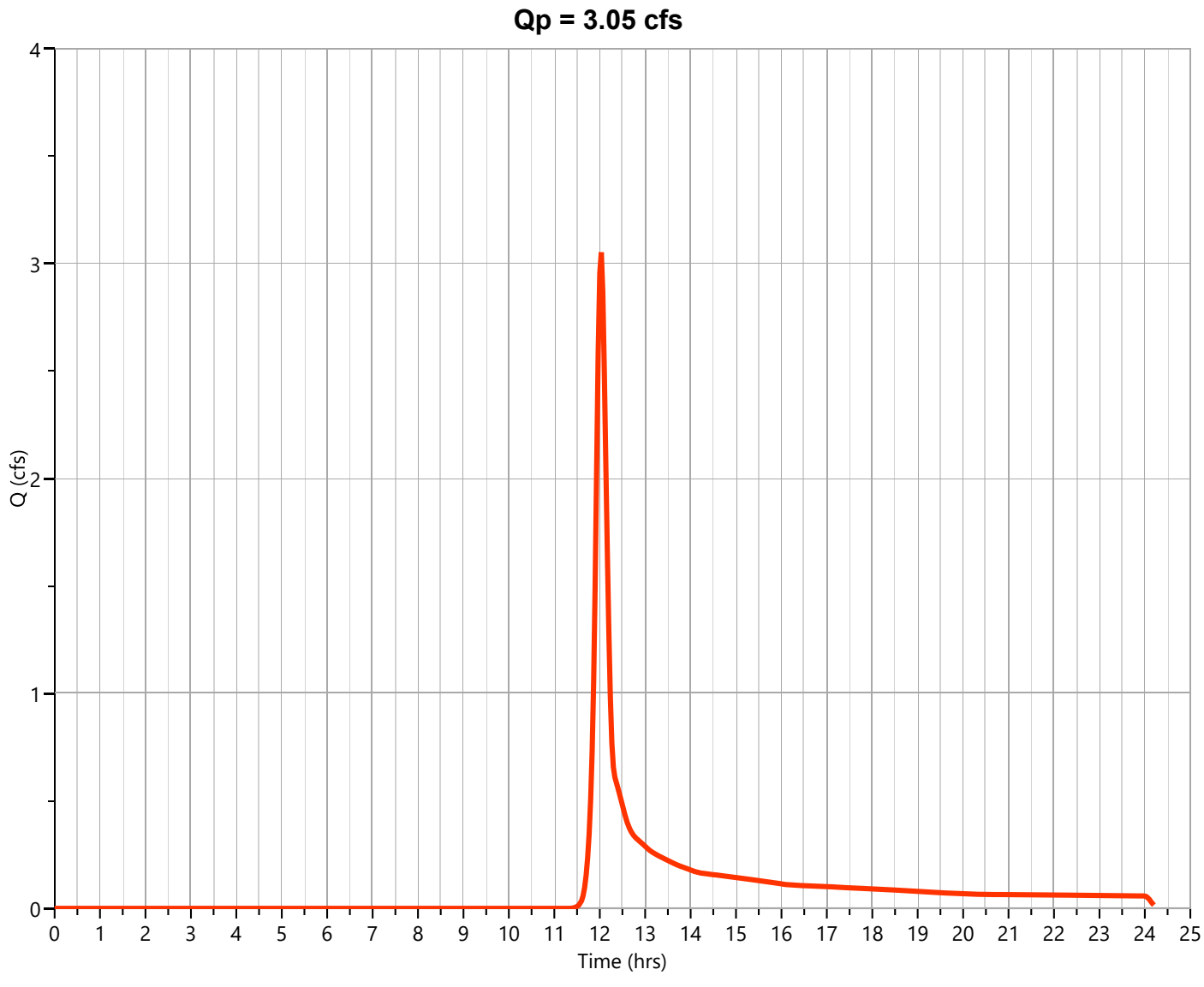
Pre Ditch

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.053 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 8,437 cuft
Drainage Area	= 1.79 ac	Curve Number	= 61.67*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.75	61	Ditch (inside buffer)
0.04	91	Gravel
1.79	**62**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

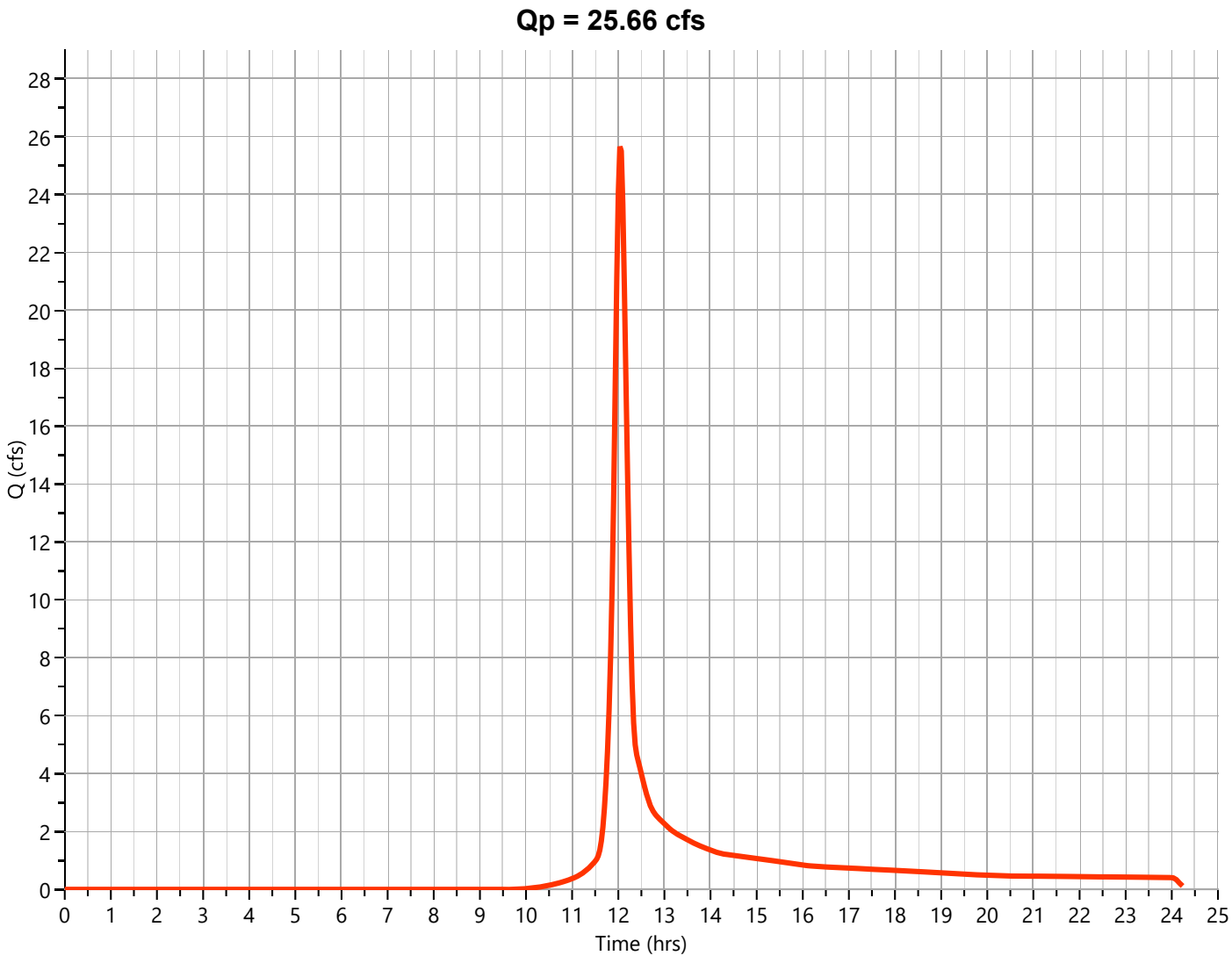
Pre North of Ditch

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 25.66 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 72,977 cuft
Drainage Area	= 10.55 ac	Curve Number	= 71.42*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.945	79	Pervious (C)
3.945	49	Pervious (A)
0.89	98	Buildings
1.73	91	Gravel
0.04	98	Concrete
10.55	**71**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

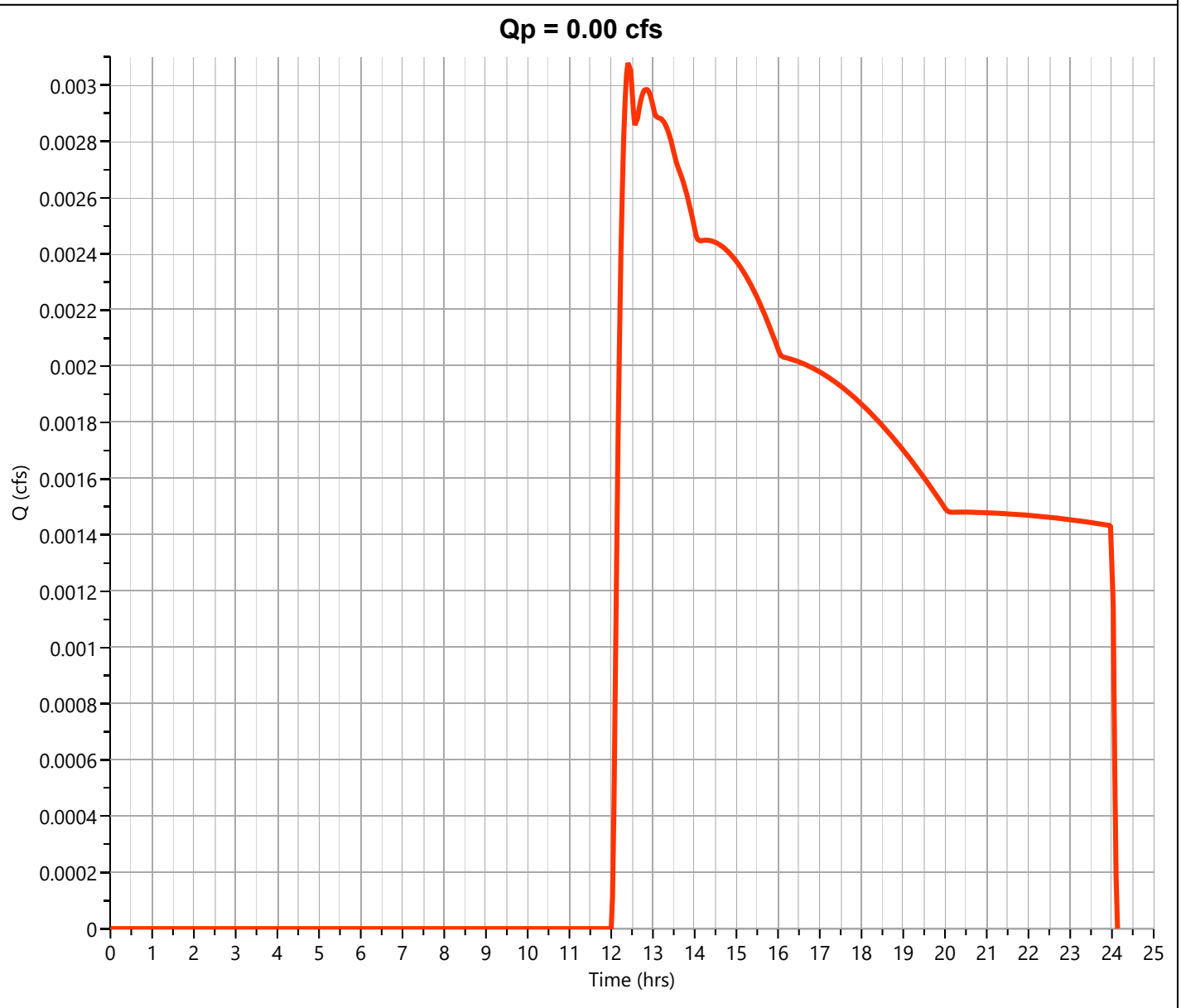
Pre Offsite 1

Hyd. No. 4

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.003 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.43 hrs
Time Interval	= 2 min	Runoff Volume	= 83.5 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

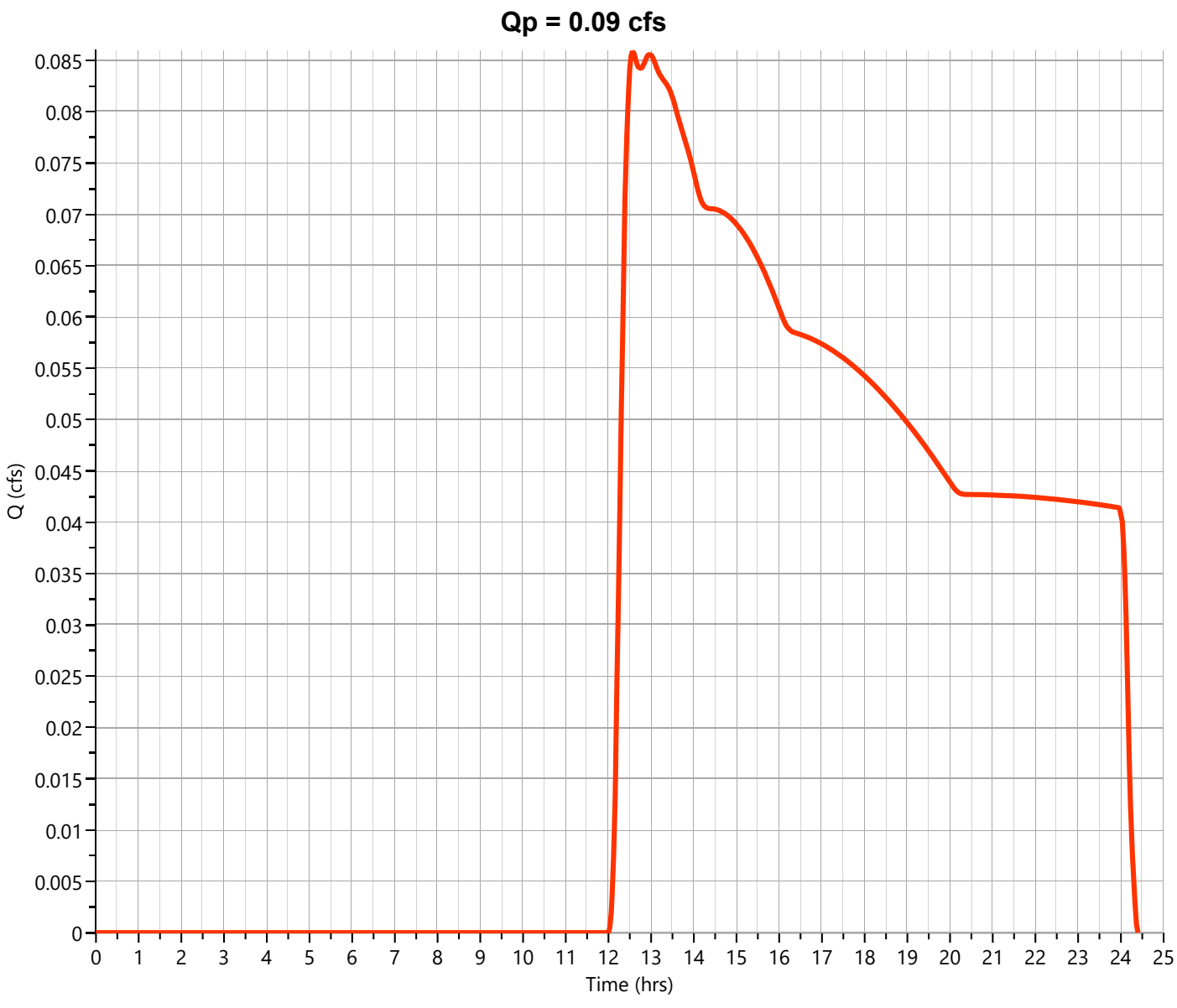
Pre Offsite 2

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.086 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.57 hrs
Time Interval	= 2 min	Runoff Volume	= 2,408 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite 3

Hyd. No. 6

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.000 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.43 hrs
Time Interval	= 2 min	Runoff Volume	= 12.8 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

Hydrograph Report

Project Name:

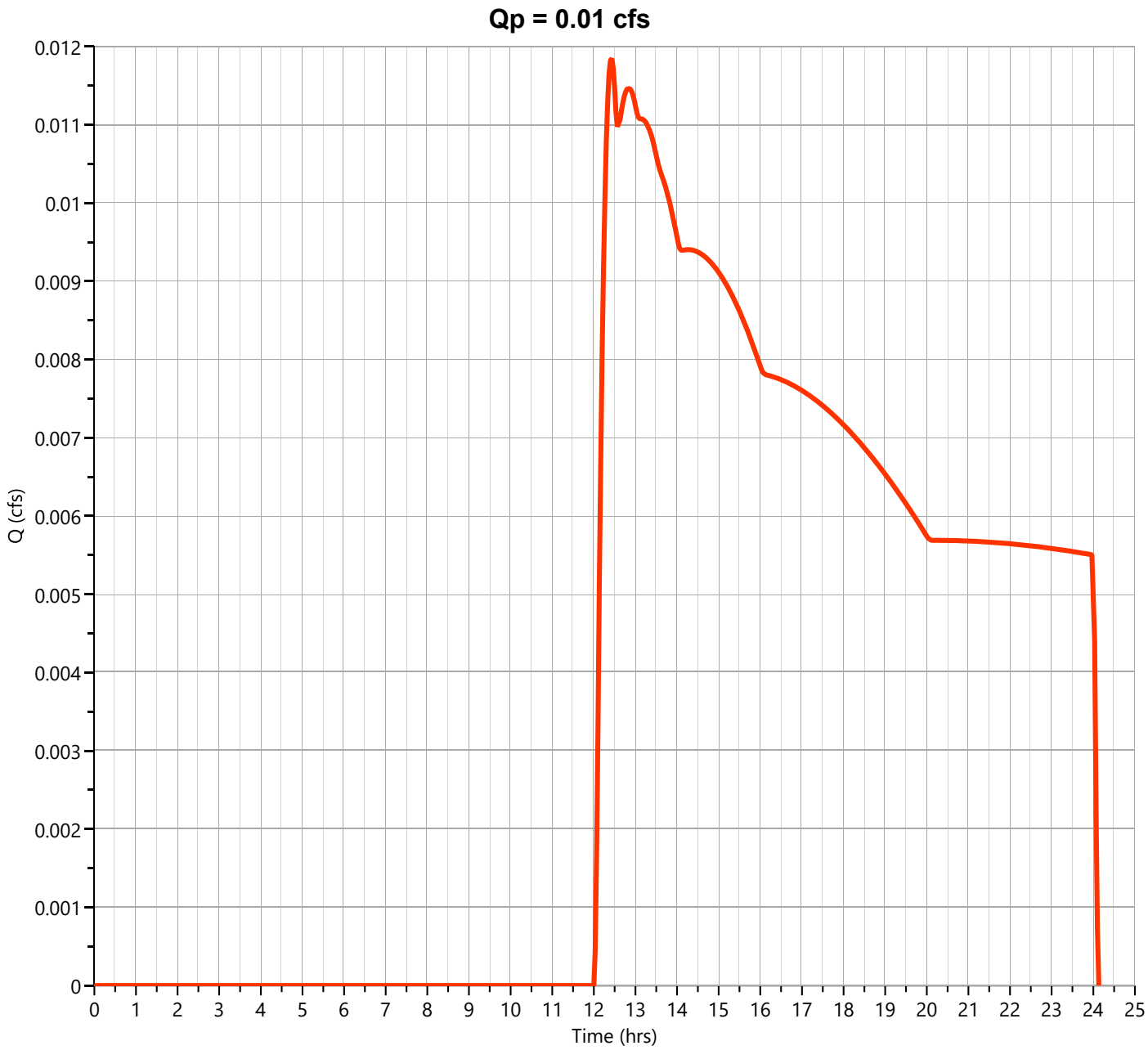
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.012 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.43 hrs
Time Interval	= 2 min	Runoff Volume	= 321 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

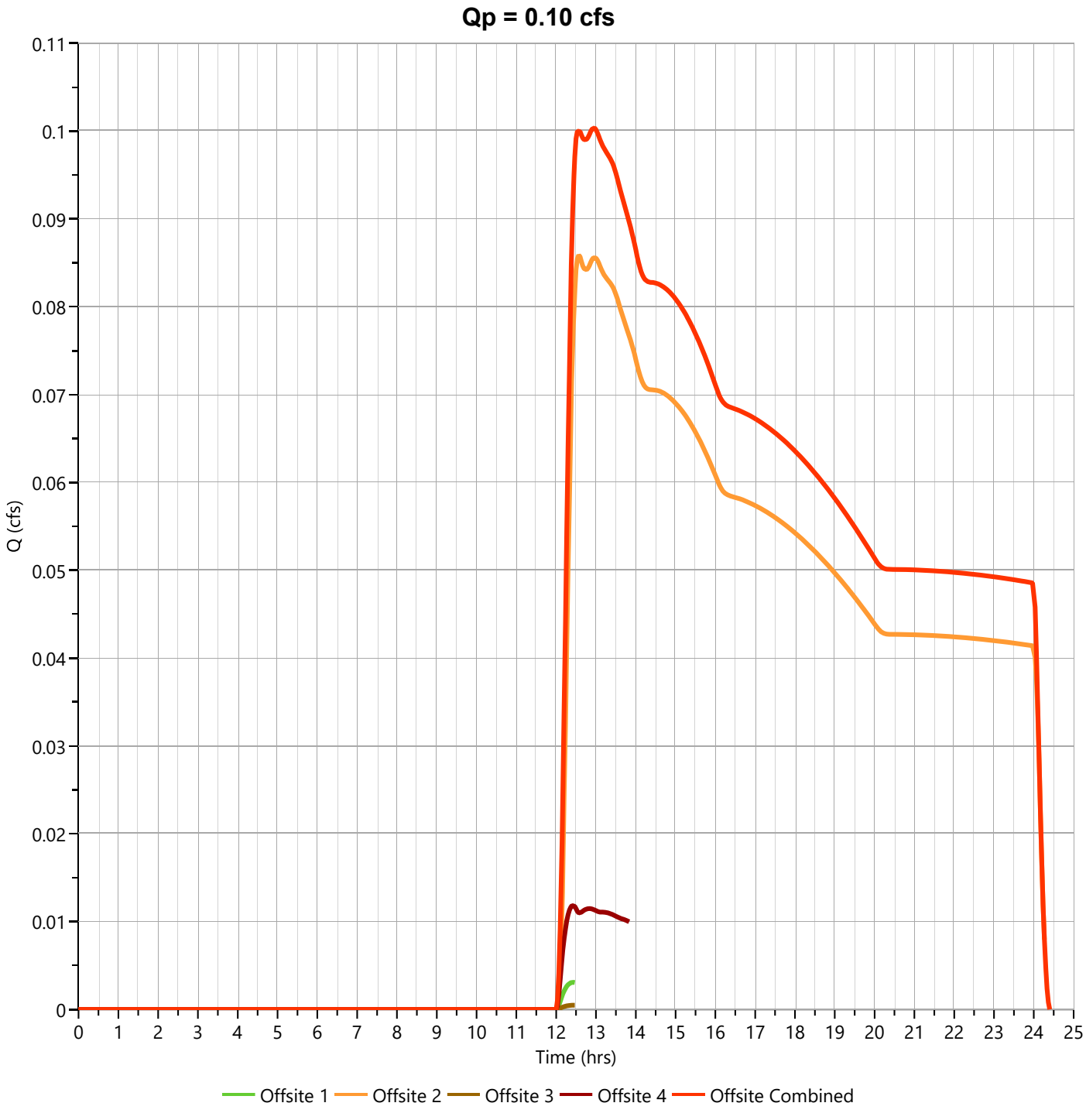
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite Combined

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 0.100 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.93 hrs
Time Interval	= 2 min	Hydrograph Volume	= 2,825 cuft
Inflow Hydrographs	= 4, 5, 6, 7	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

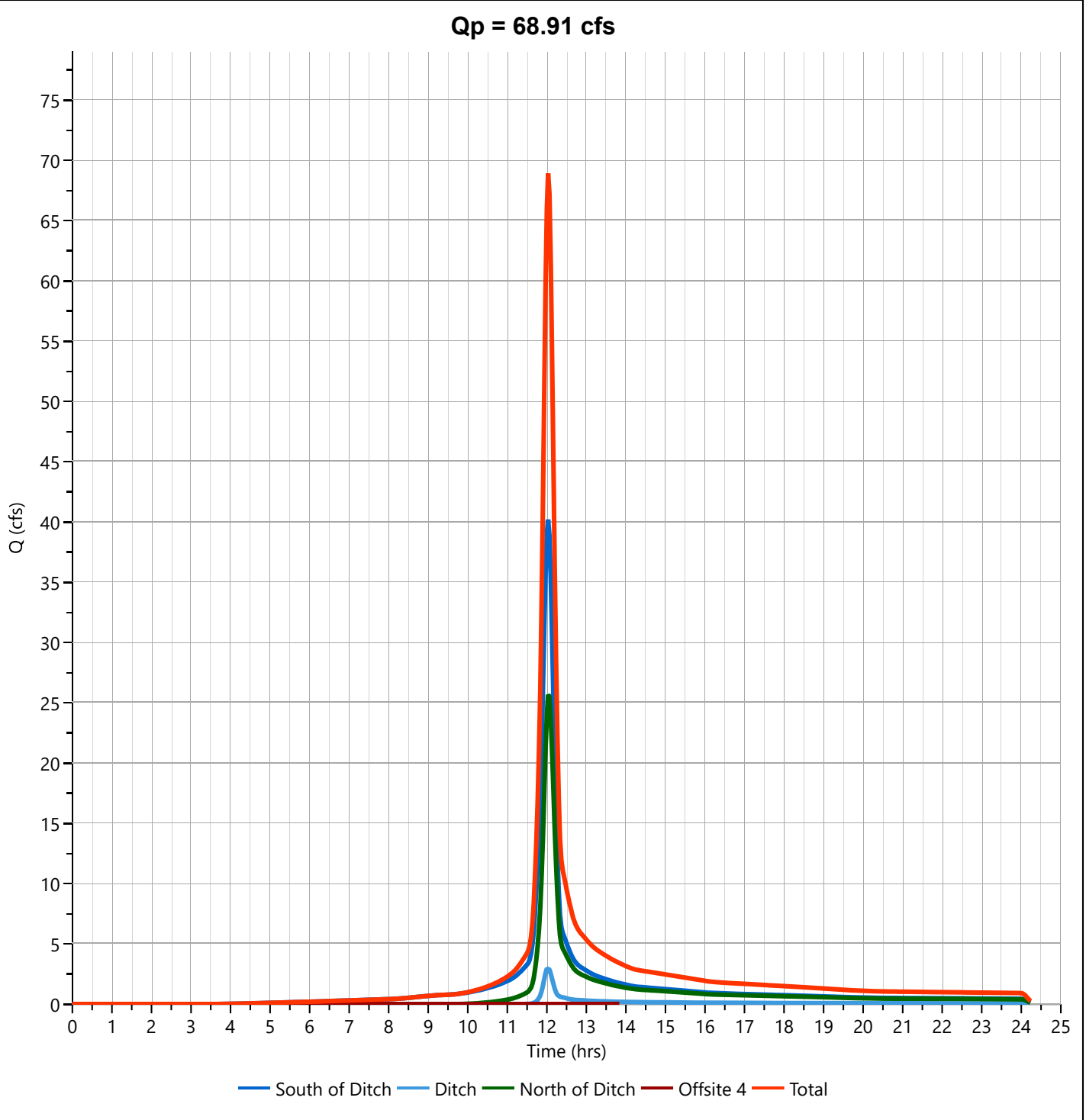
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Total

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 68.91 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 199,426 cuft
Inflow Hydrographs	= 1, 2, 3, 7	Total Contrib. Area	= 21.876 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

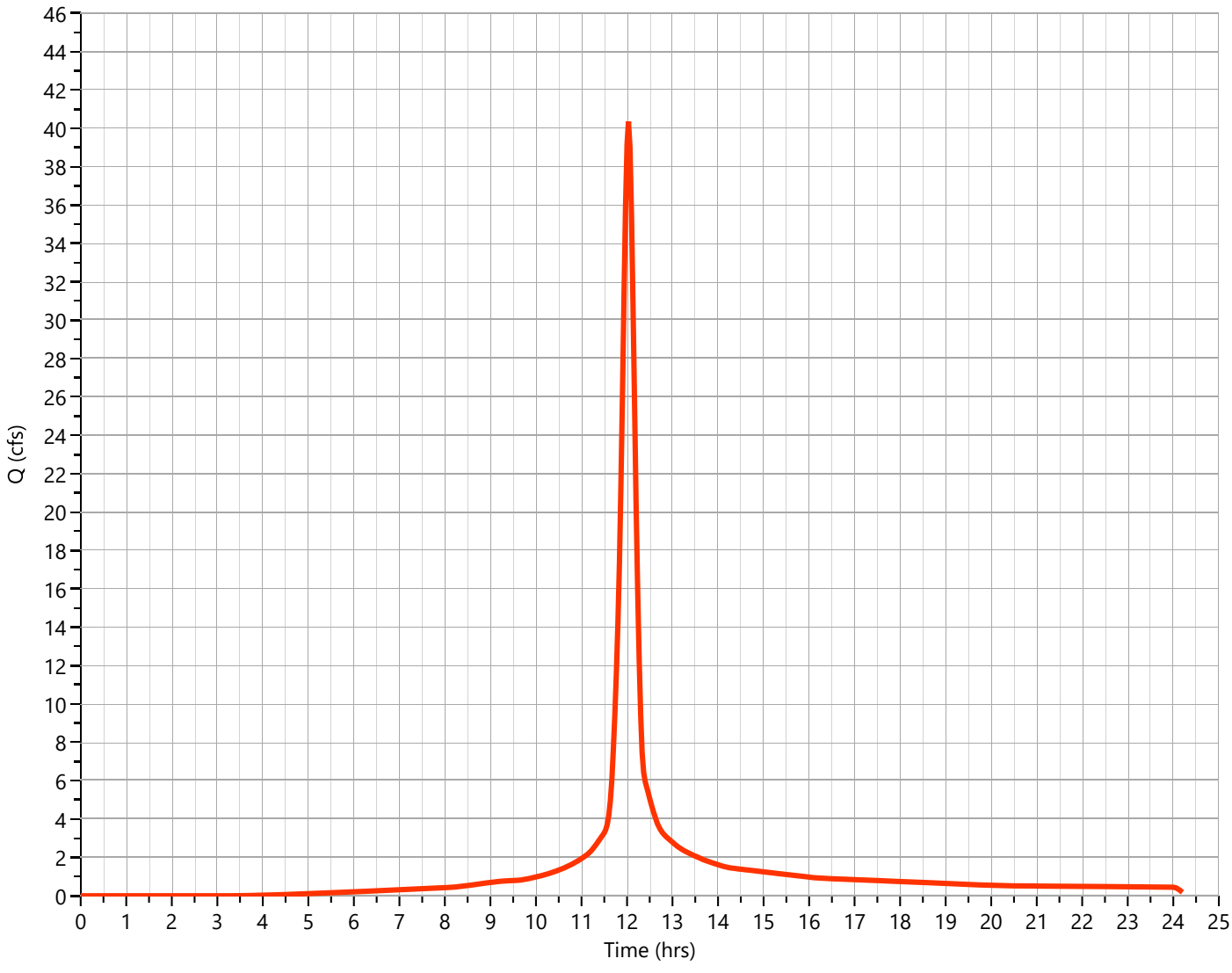
Post South of Ditch

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 40.34 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 118,287 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.2*
Tc Method	= User	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
7.83	91	Row Crop
0.82	91	Gravel Drive
0.26	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

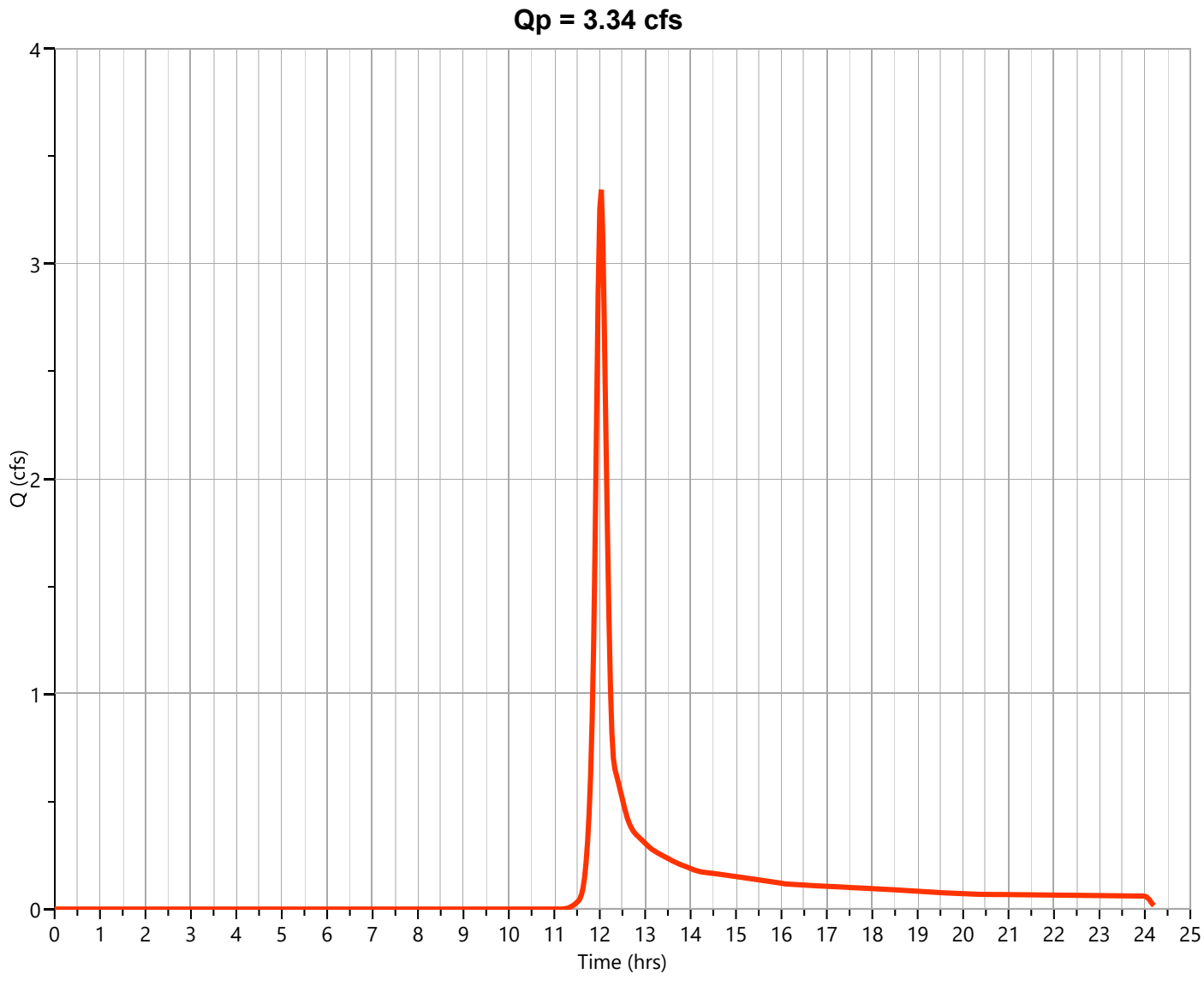
Post Ditch

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.344 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 9,106 cuft
Drainage Area	= 1.79 ac	Curve Number	= 63.18*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.66	61	Ditch (inside buffer)
0.13	91	Gravel
1.79	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

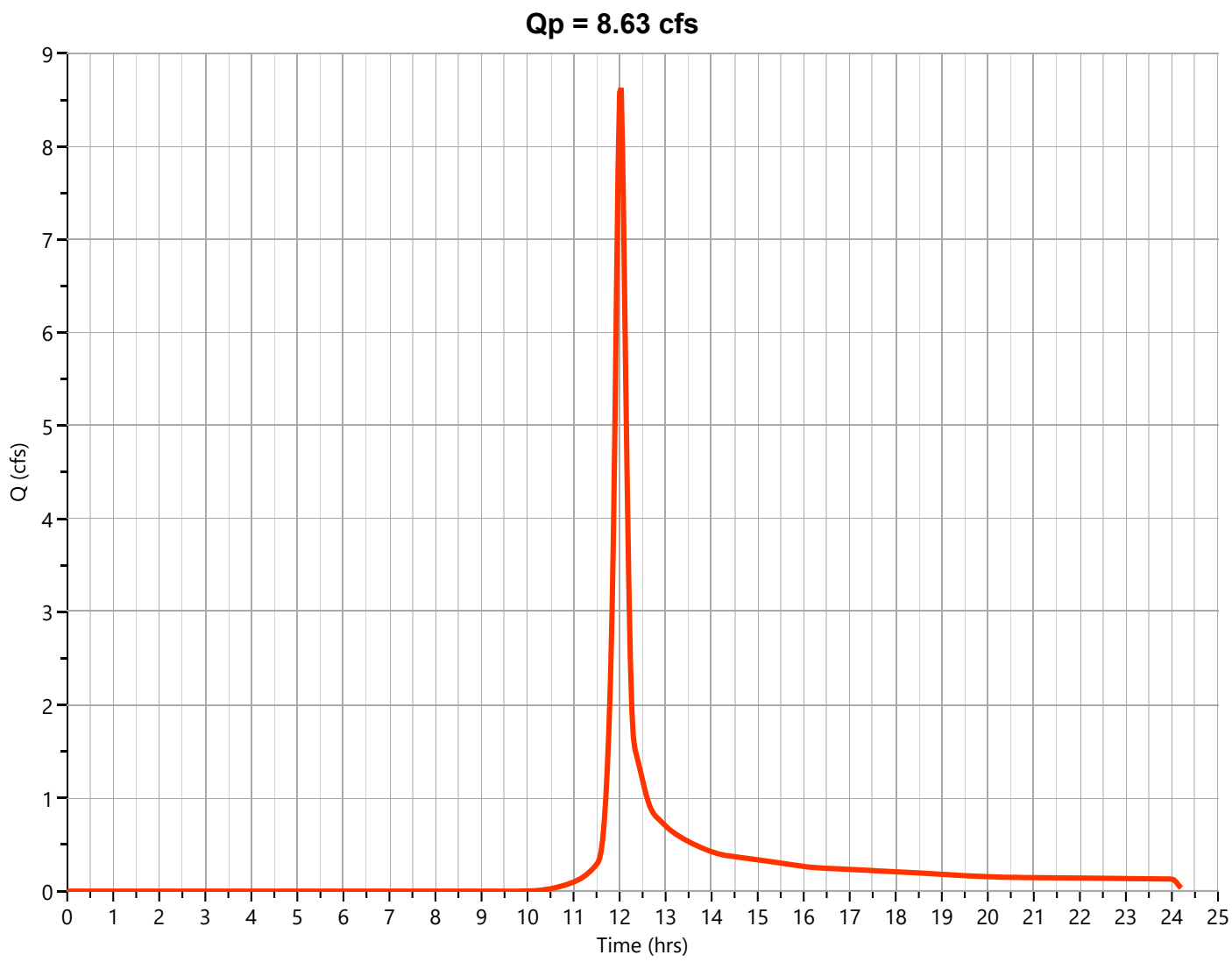
Post North to Pond 1

Hyd. No. 13

Hydrograph Type	= NRCS Runoff	Peak Flow	= 8.628 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 22,676 cuft
Drainage Area	= 3.282 ac	Curve Number	= 70*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.4	49	Pervious (A)
0.936	79	Pervious (C)
0.566	91	Gravel
0.38	98	Buildings
3.282	**70**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

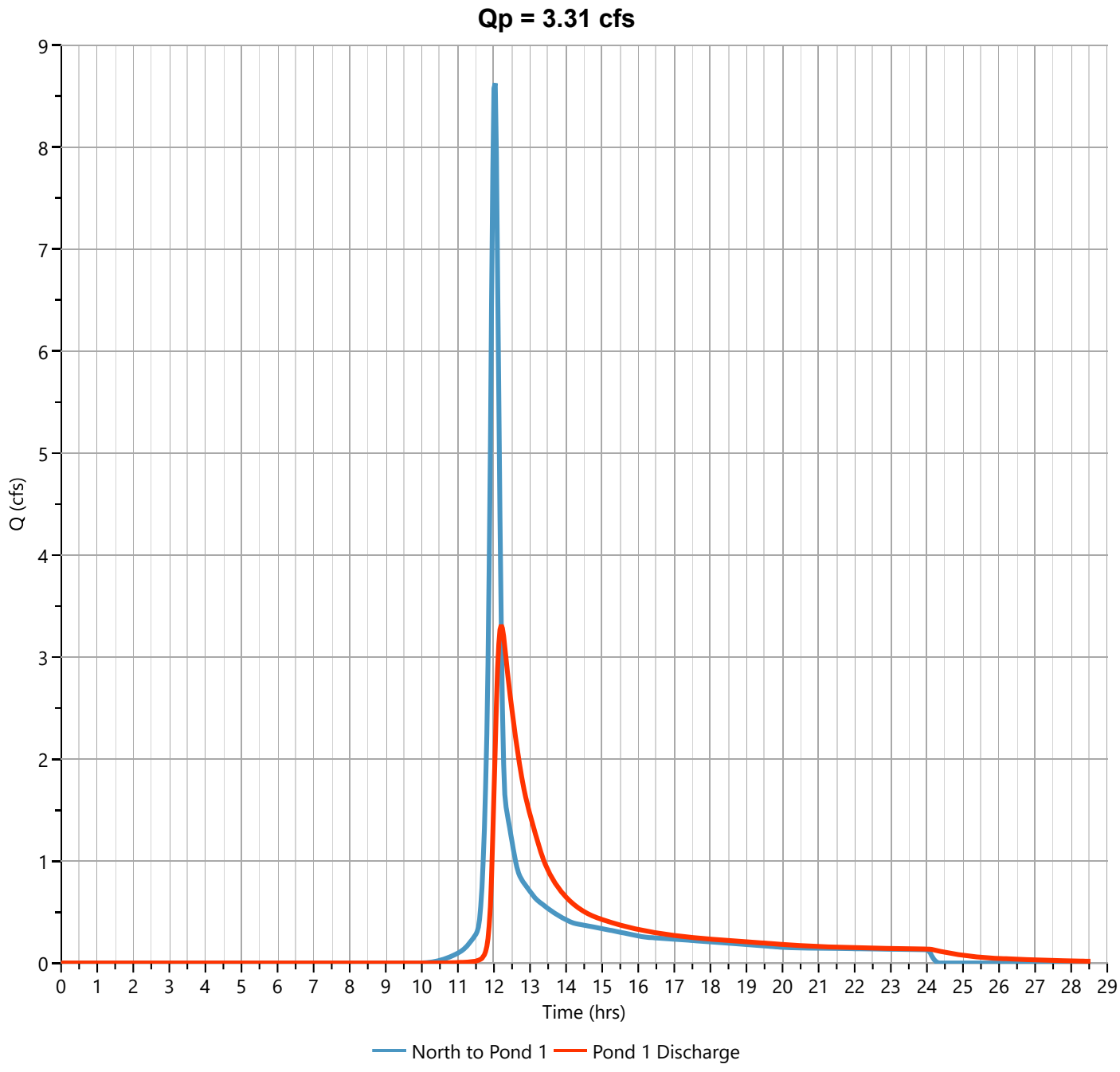
Post Pond 1 Discharge

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 3.314 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.20 hrs
Time Interval	= 2 min	Hydrograph Volume	= 22,649 cuft
Inflow Hydrograph	= 13 - North to Pond 1	Max. Elevation	= 629.36 ft
Pond Name	= Pond 1	Max. Storage	= 7,293 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 57 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

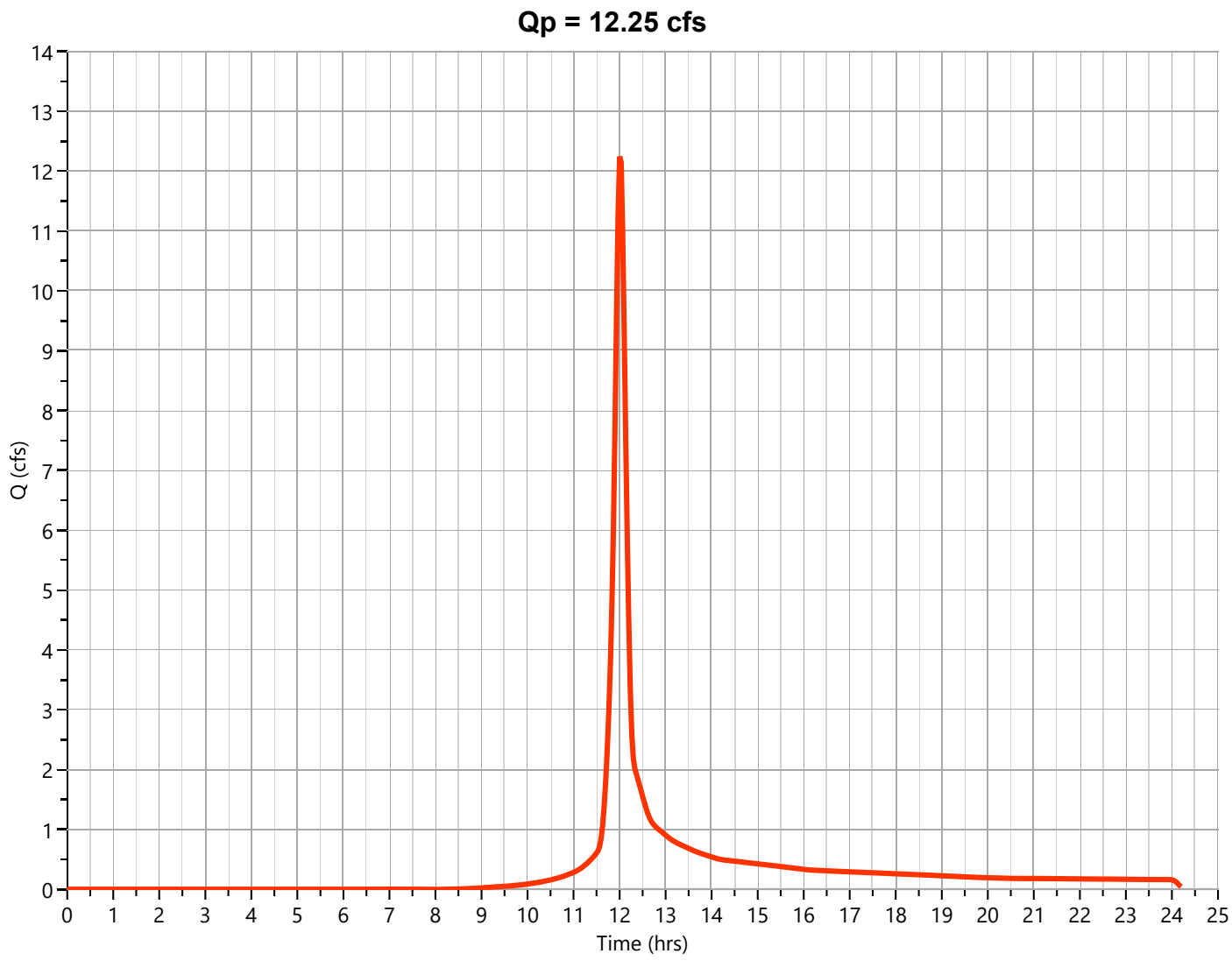
Post Bypass

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 12.25 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 31,775 cuft
Drainage Area	= 3.569 ac	Curve Number	= 76.66*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.95	49	Pervious (A)
1.26	79	Pervious (C)
0.81	91	Gravel
0.549	98	Buildings
3.569	**77**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

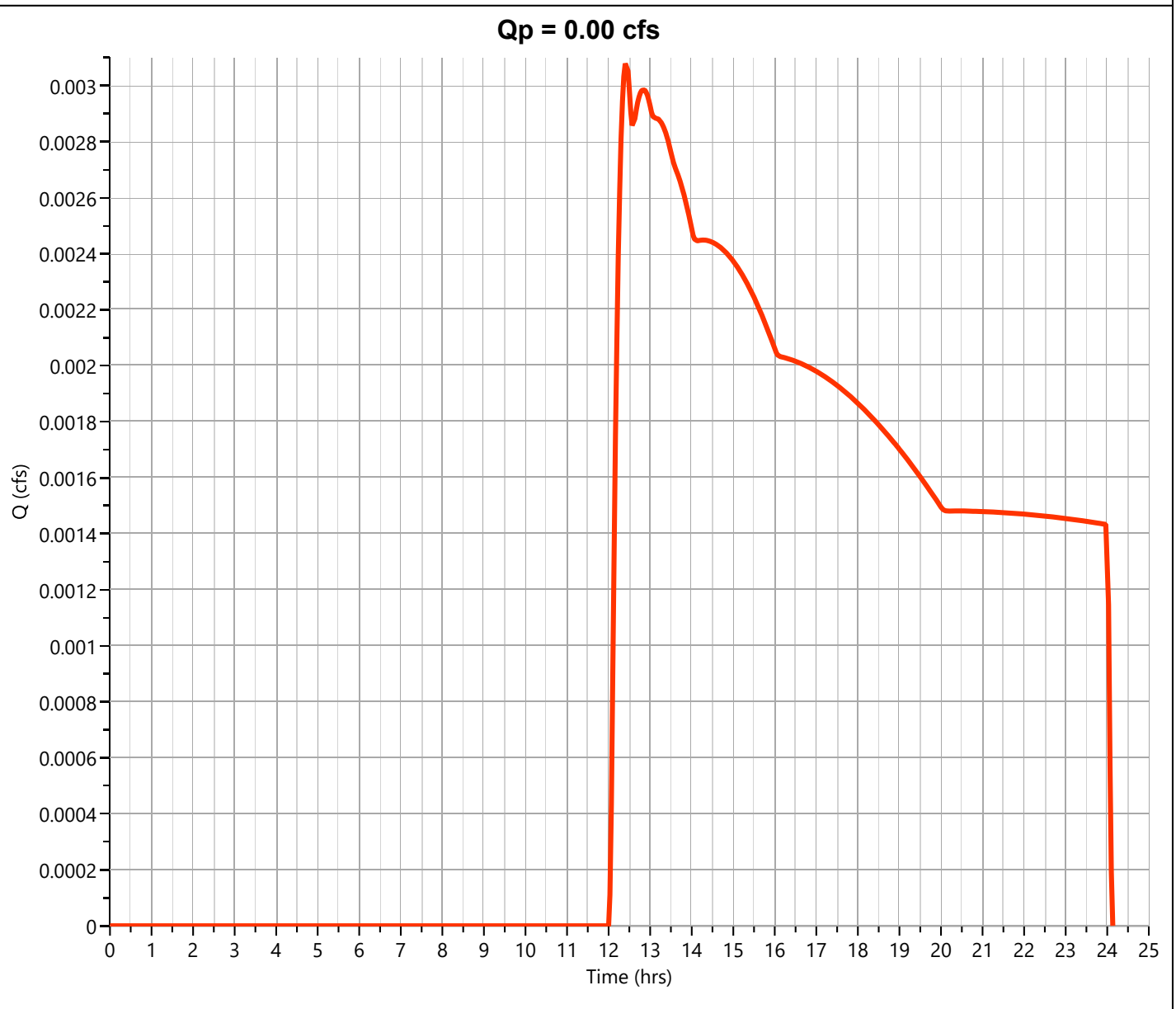
Post Offsite 1

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.003 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.43 hrs
Time Interval	= 2 min	Runoff Volume	= 83.5 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

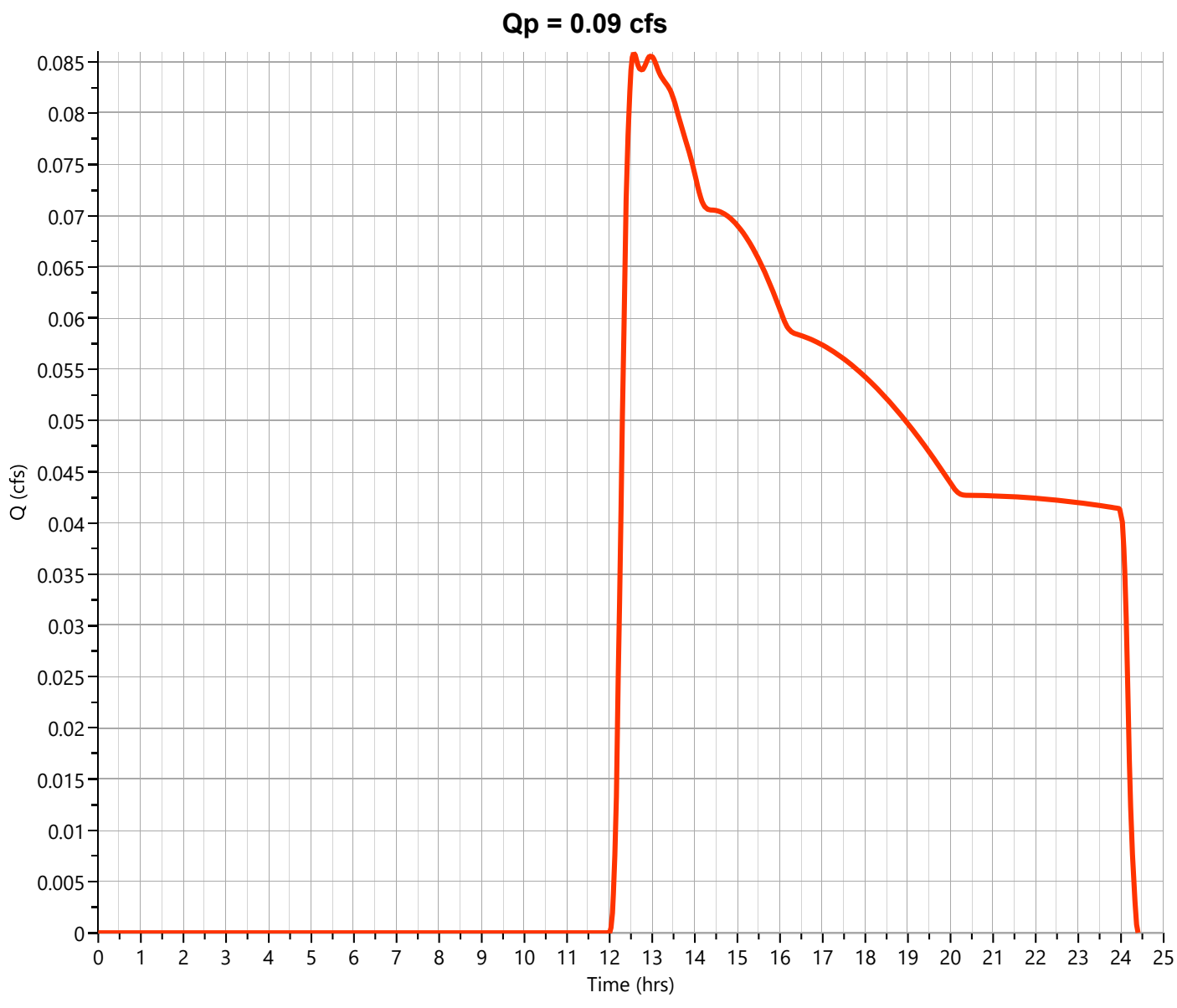
Post Offsite 2

Hyd. No. 17

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.086 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.57 hrs
Time Interval	= 2 min	Runoff Volume	= 2,408 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 3

Hyd. No. 18

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.000 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.43 hrs
Time Interval	= 2 min	Runoff Volume	= 12.8 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

Hydrograph Report

Project Name:

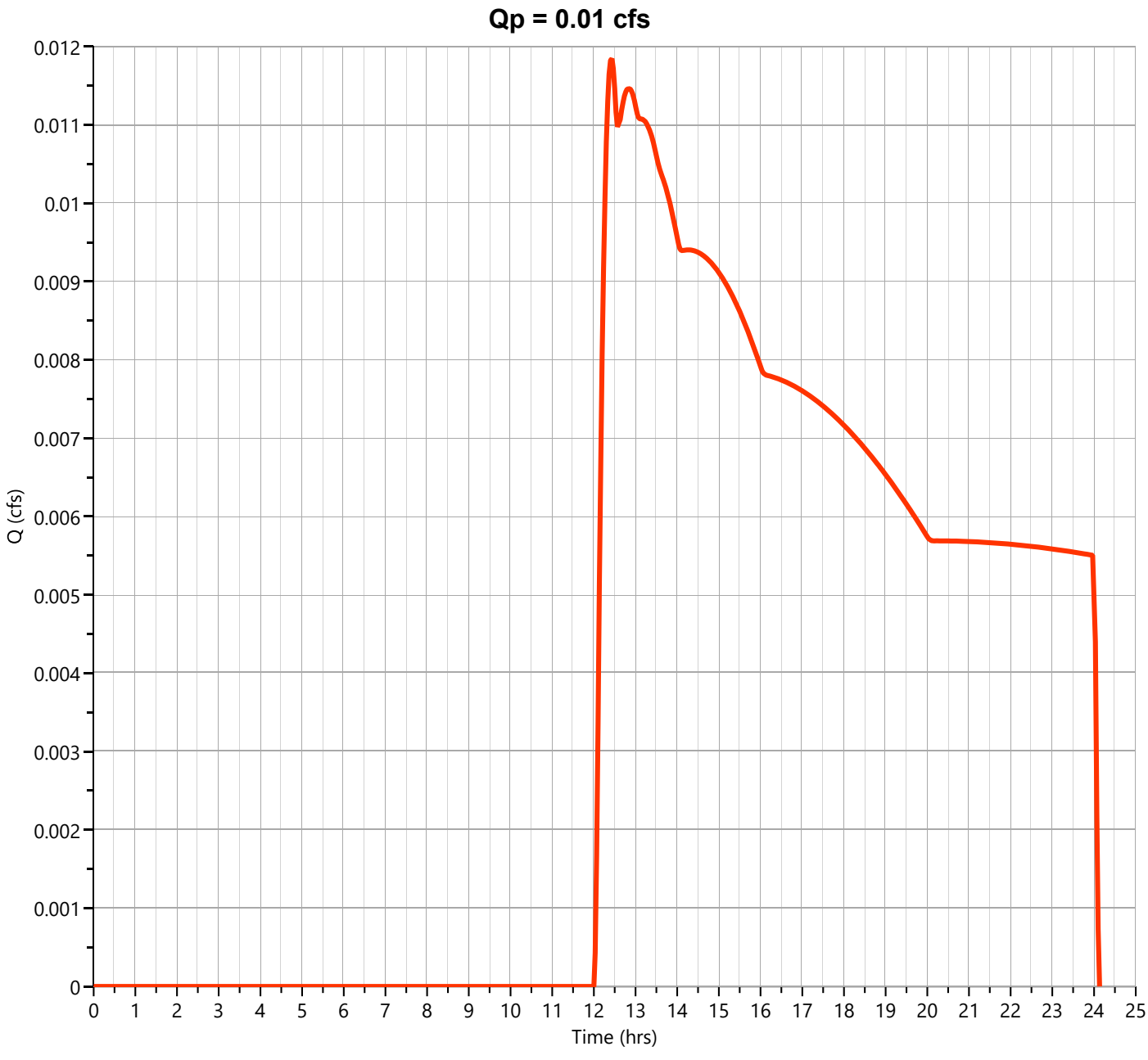
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 19

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.012 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.43 hrs
Time Interval	= 2 min	Runoff Volume	= 321 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

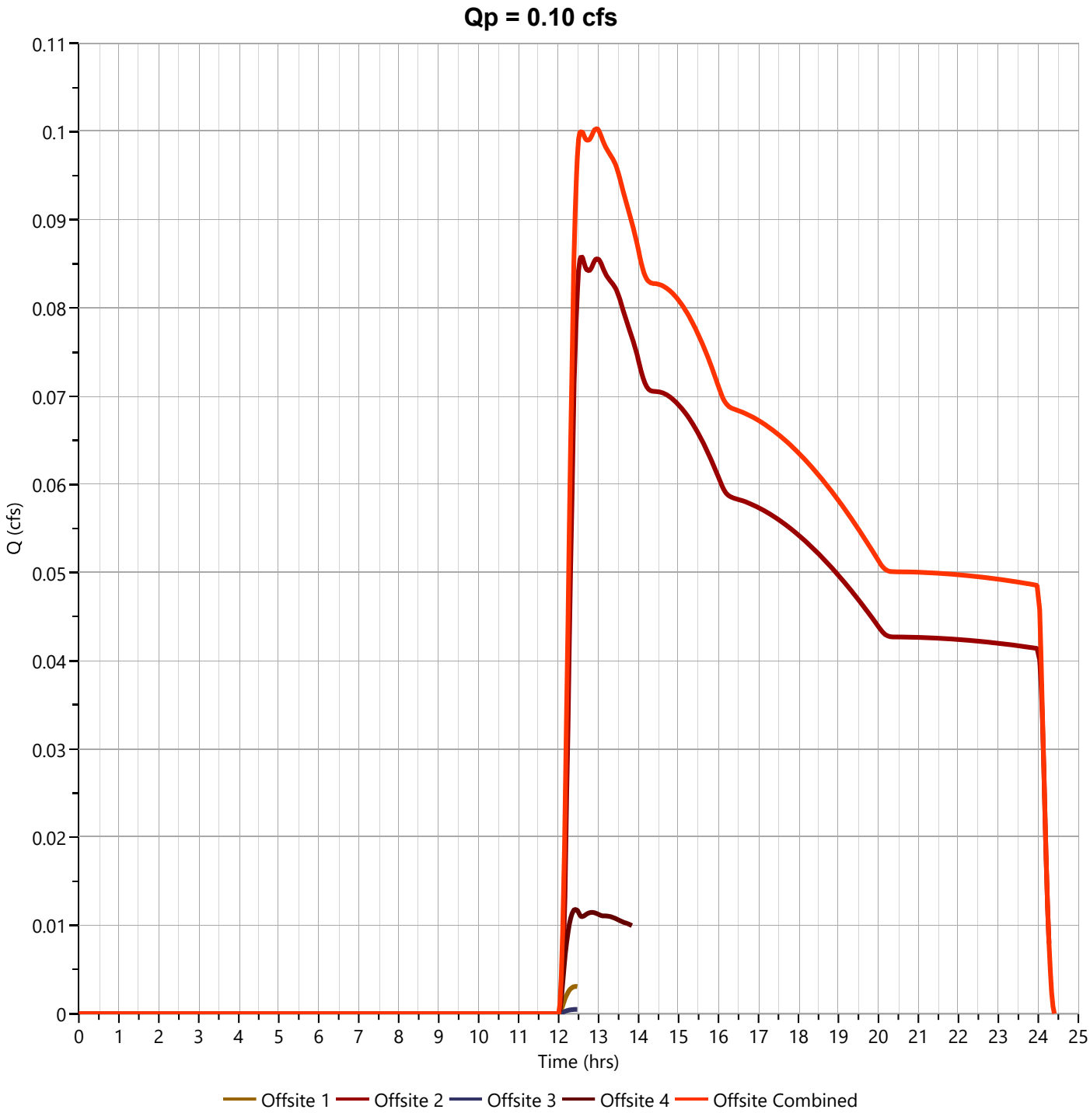
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite Combined

Hyd. No. 20

Hydrograph Type	= Junction	Peak Flow	= 0.100 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.93 hrs
Time Interval	= 2 min	Hydrograph Volume	= 2,825 cuft
Inflow Hydrographs	= 16, 17, 18, 19	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

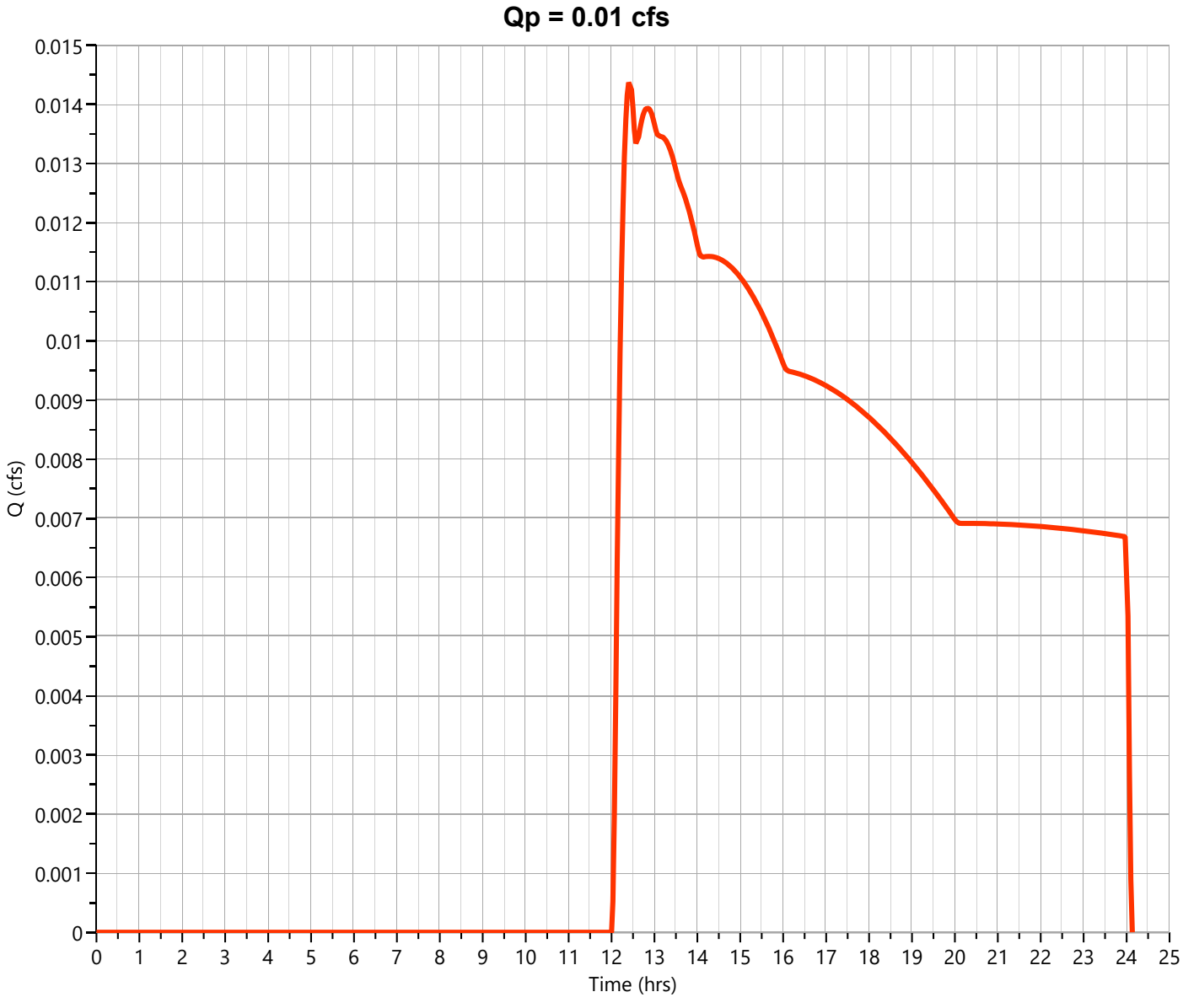
Post Culvert 1

Hyd. No. 21

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.014 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.43 hrs
Time Interval	= 2 min	Runoff Volume	= 390 cuft
Drainage Area	= 0.761 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.761	39	Pervious (A)
0.761	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

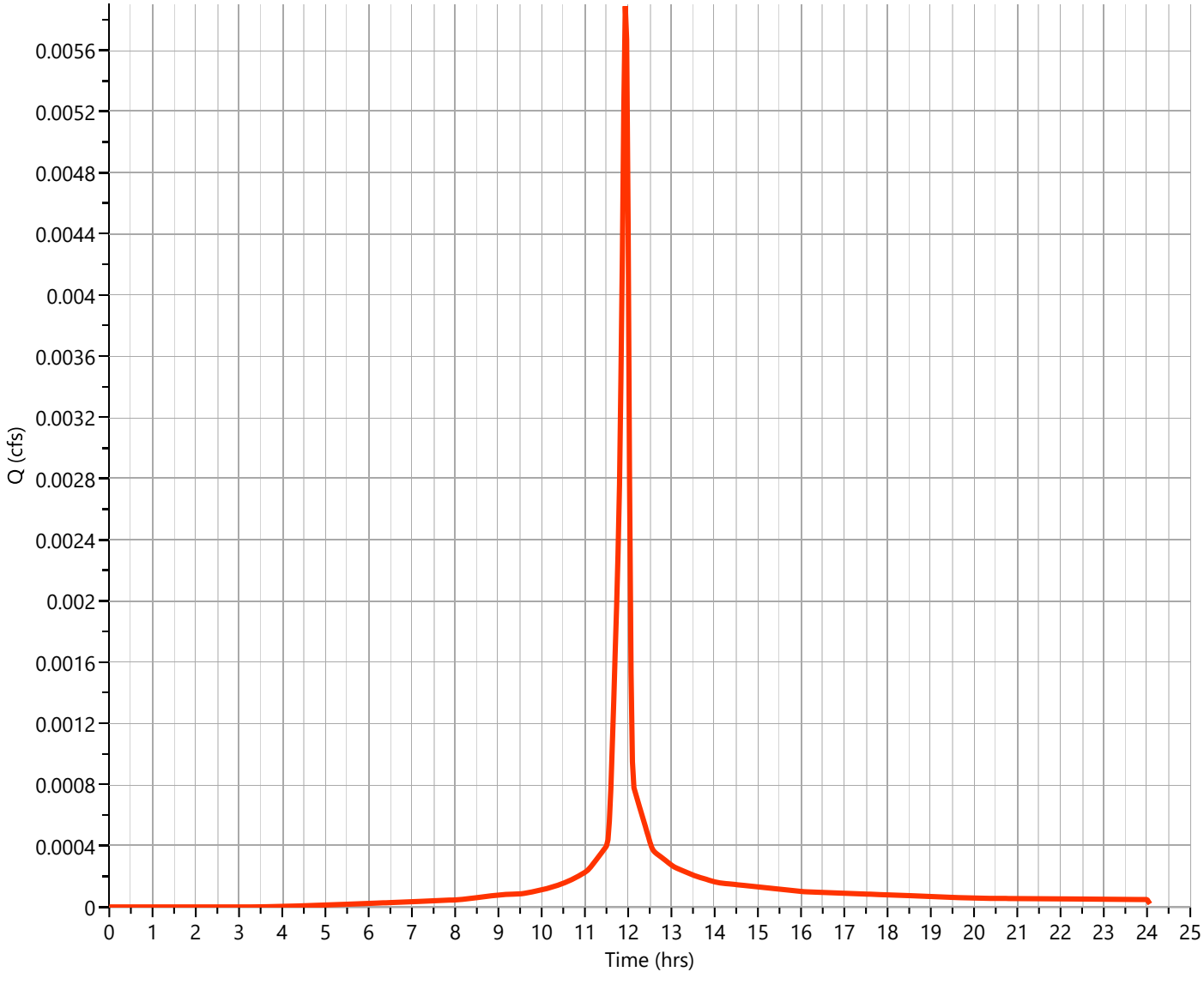
Post Area Drain 3 (AD3)

Hyd. No. 22

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.006 cfs
Storm Frequency	= 5-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 12.7 cuft
Drainage Area	= 0.001 ac	Curve Number	= 91*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.001	91	Gravel
0.001	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

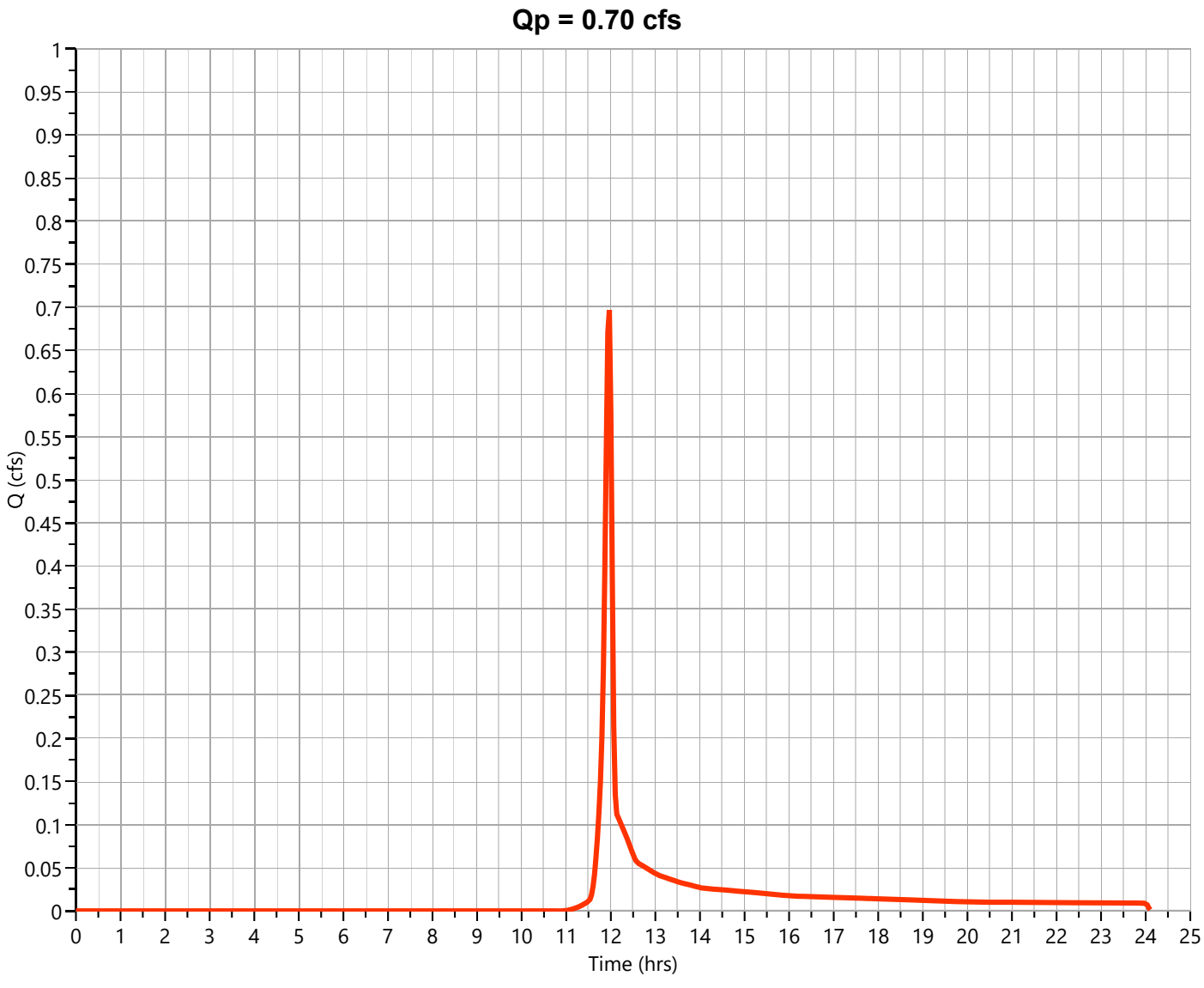
Post Area Drain 2 (AD2)

Hyd. No. 23

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.697 cfs
Storm Frequency	= 5-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 1,401 cuft
Drainage Area	= 0.28 ac	Curve Number	= 64.81*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.139	91	Gravel
0.141	39	Grass
0.28	**65**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

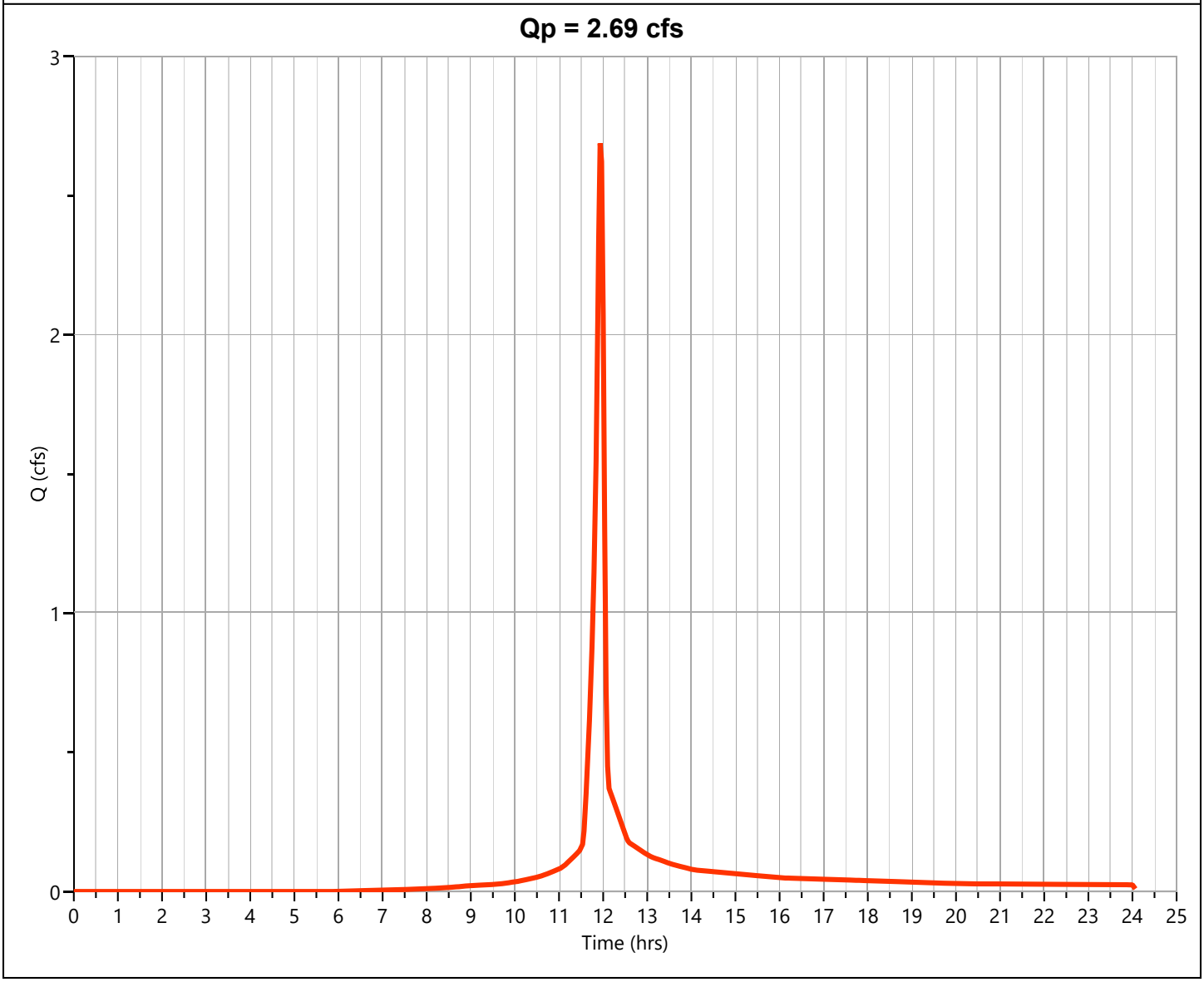
Post Area Drain 1 (AD1)

Hyd. No. 24

Hydrograph Type	= NRCS Runoff	Peak Flow	= 2.688 cfs
Storm Frequency	= 5-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 5,544 cuft
Drainage Area	= 0.527 ac	Curve Number	= 84.61*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.087	49	Pervious (A)
0.399	91	Gravel
0.041	98	Building
0.527	**85**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

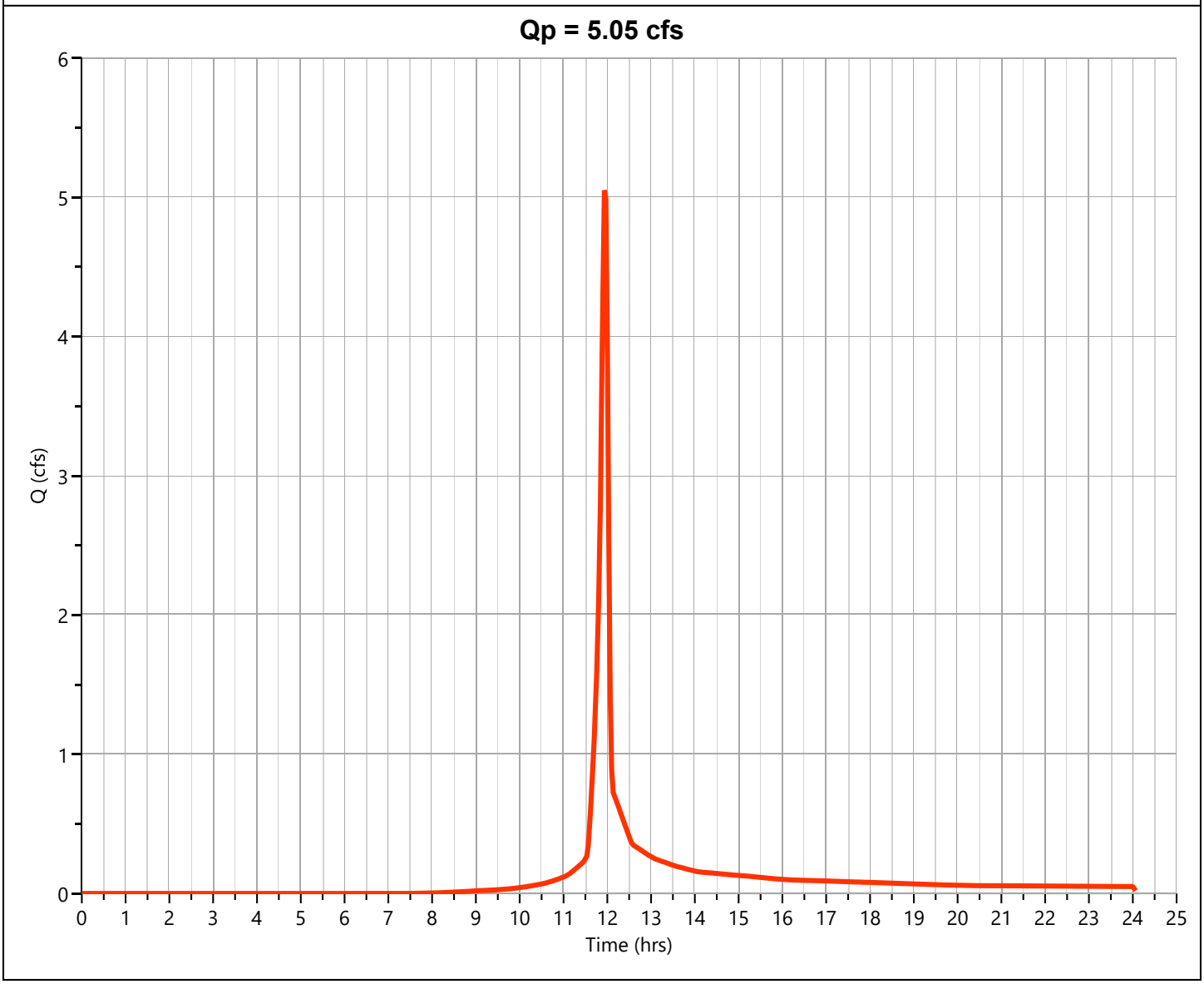
Post North to Pond 2

Hyd. No. 25

Hydrograph Type	= NRCS Runoff	Peak Flow	= 5.051 cfs
Storm Frequency	= 5-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 10,237 cuft
Drainage Area	= 1.16 ac	Curve Number	= 79.16*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 4.74 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.618	91	Gravel
0.245	98	Bldg/Concrete
0.297	39	Grass
1.16	**79**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

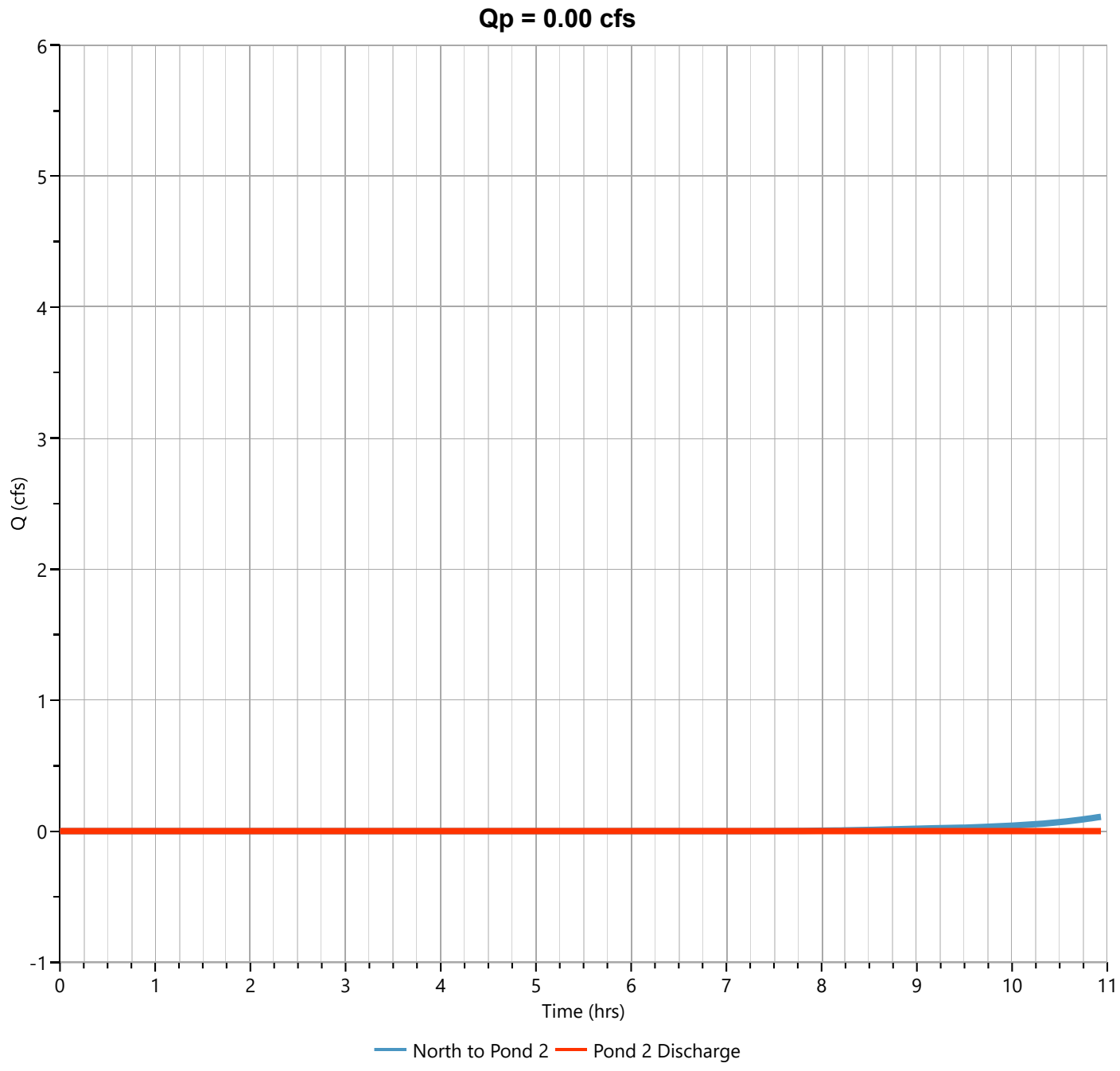
07-25-2024

Post Pond 2 Discharge

Hyd. No. 26

Hydrograph Type	= Pond Route	Peak Flow	= 0.000 cfs
Storm Frequency	= 5-yr	Time to Peak	= 10.90 hrs
Time Interval	= 2 min	Hydrograph Volume	= 0.000 cuft
Inflow Hydrograph	= 25 - North to Pond 2	Max. Elevation	= 532.50 ft
Pond Name	= Pond 2	Max. Storage	= 6,992 cuft

Pond Routing by Storage Indication Method



Hydrograph Report

Project Name:

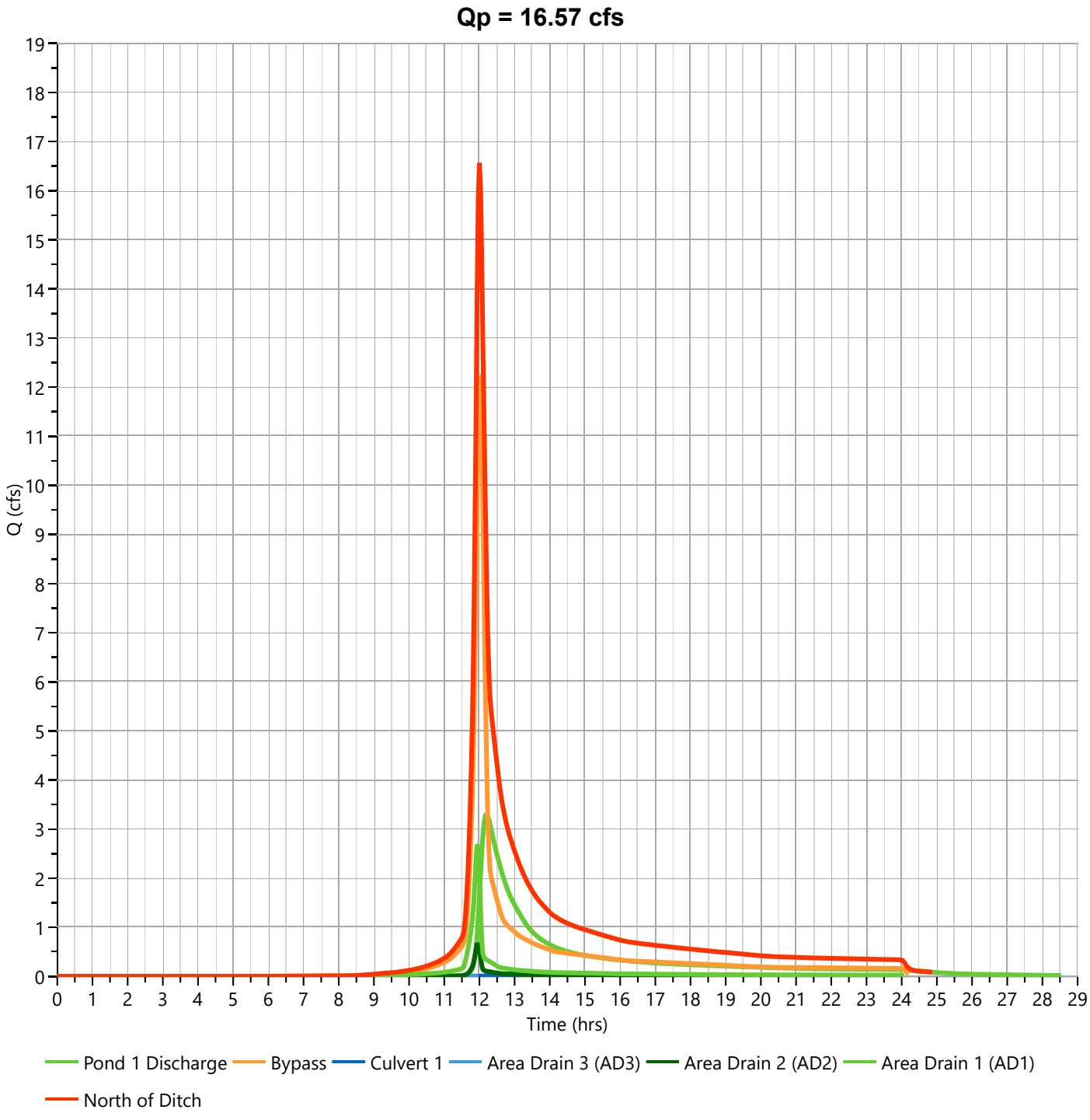
Hydrology Studio v 3.0.0.32

07-25-2024

Post North of Ditch

Hyd. No. 27

Hydrograph Type	= Junction	Peak Flow	= 16.57 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Hydrograph Volume	= 61,771 cuft
Inflow Hydrographs	= 14, 15, 21, 22, 23, 24	Total Contrib. Area	= 5.138 ac



Hydrograph Report

Project Name:

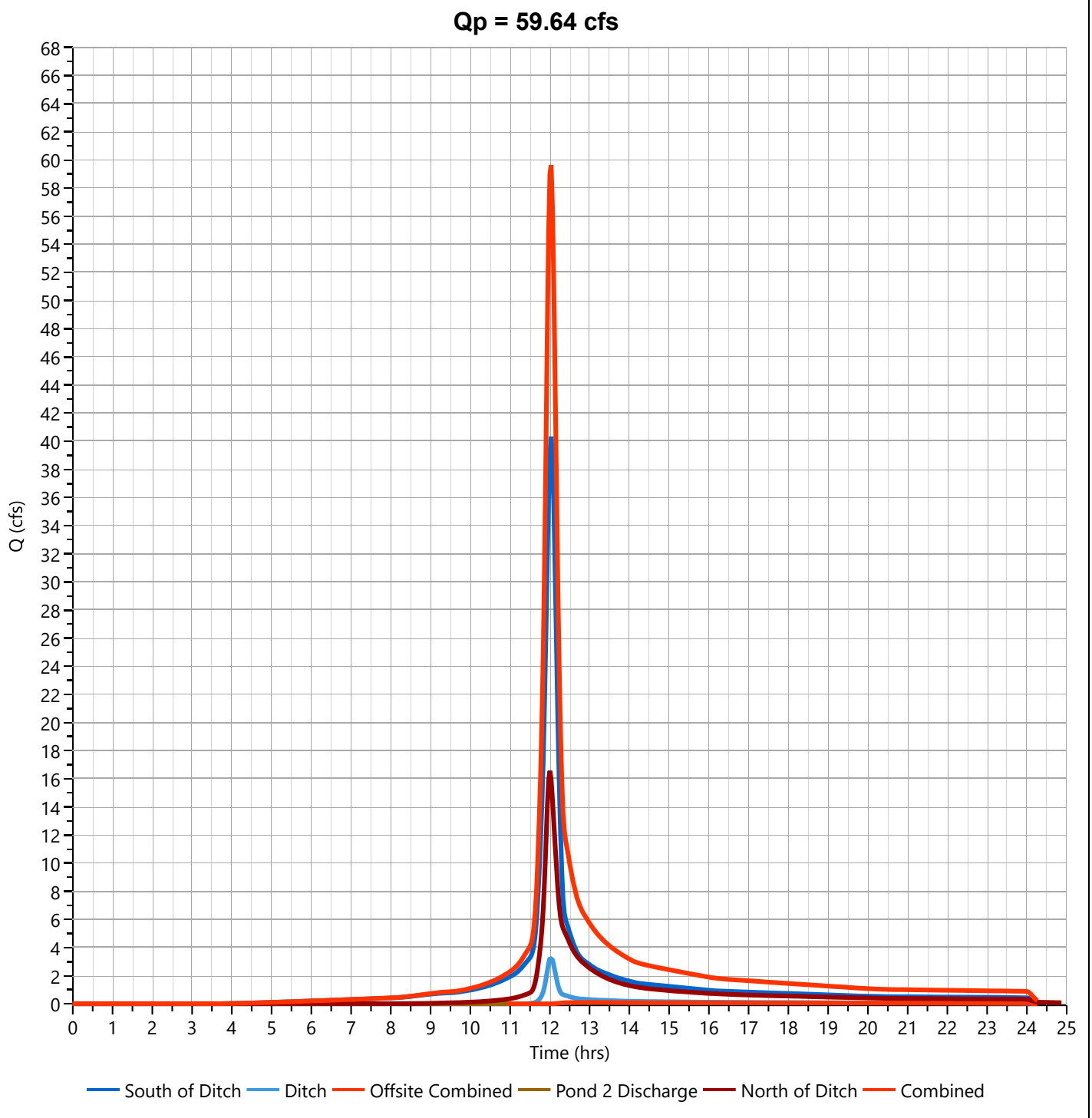
Hydrology Studio v 3.0.0.32

07-25-2024

Post Combined

Hyd. No. 28

Hydrograph Type	= Junction	Peak Flow	= 59.64 cfs
Storm Frequency	= 5-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 191,989 cuft
Inflow Hydrographs	= 11, 12, 20, 26, 27	Total Contrib. Area	= 21.17 ac



Design Storm Report

Custom Storm filename:

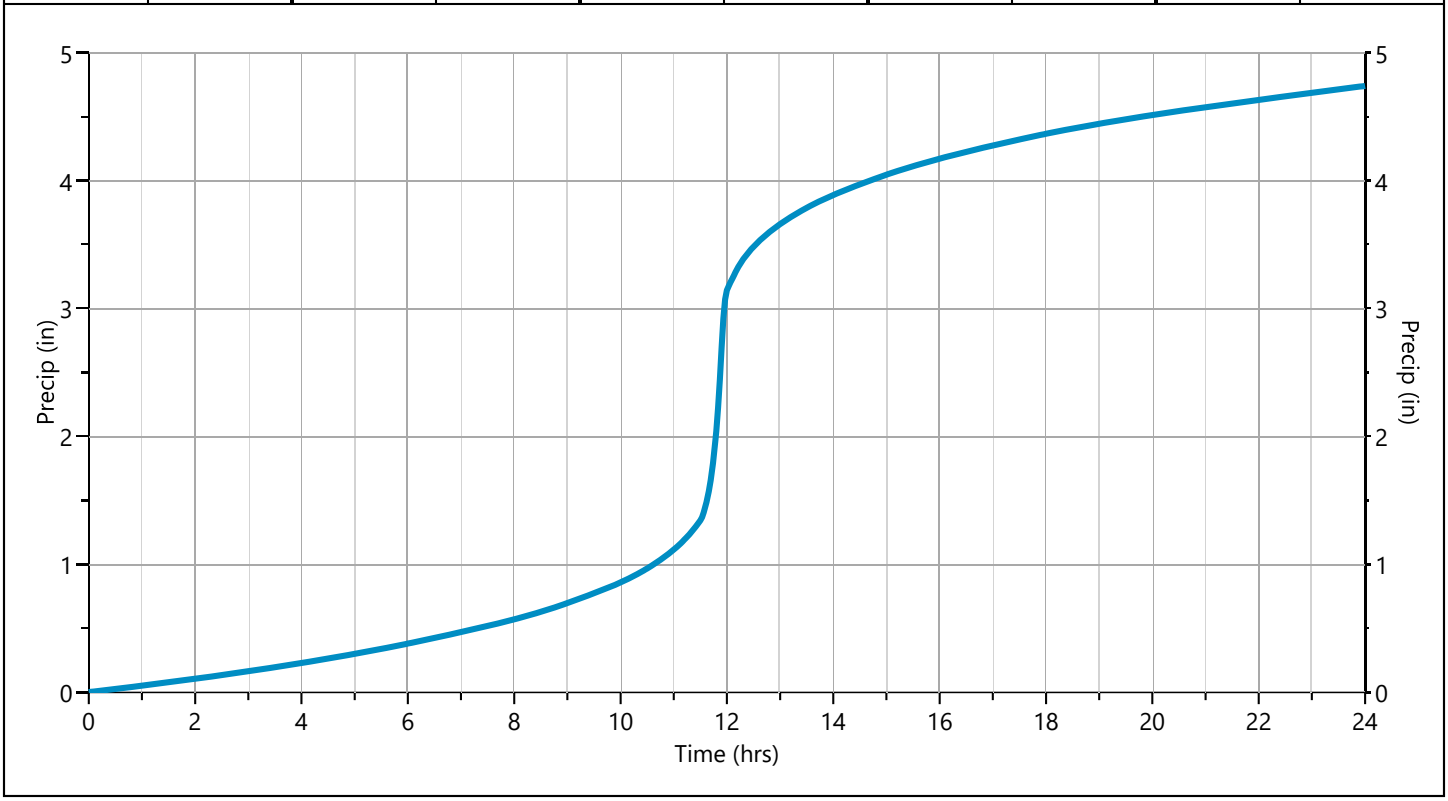
Hydrology Studio v 3.0.0.32

07-25-2024

Storm Distribution: NRCS/SCS - Type II, 24-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	2-yr	3-yr	✔ 5-yr	10-yr	25-yr	50-yr	100-yr	
24 hrs	3.26	3.90	0.00	4.74	5.42	6.34	7.07	7.82	

Incremental Rainfall Distribution, 5-yr									
Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
10.90	0.010639	11.27	0.015168	11.63	0.062610	12.00	0.071231	12.37	0.019150
10.93	0.010849	11.30	0.015674	11.67	0.075082	12.03	0.031688	12.40	0.017949
10.97	0.011060	11.33	0.016179	11.70	0.087553	12.07	0.029957	12.43	0.016748
11.00	0.011271	11.37	0.016685	11.73	0.100025	12.10	0.028756	12.47	0.015547
11.03	0.011627	11.40	0.017190	11.77	0.114811	12.13	0.027555	12.50	0.014347
11.07	0.012134	11.43	0.017696	11.80	0.147179	12.17	0.026354	12.53	0.013610
11.10	0.012640	11.47	0.018202	11.83	0.181869	12.20	0.025154	12.57	0.013335
11.13	0.013146	11.50	0.018707	11.87	0.216559	12.23	0.023953	12.60	0.013061
11.17	0.013651	11.53	0.025231	**11.90**	**0.251248**	12.27	0.022752	12.63	0.012787
11.20	0.014157	11.57	0.037667	11.93	0.229286	12.30	0.021551	12.67	0.012514
11.23	0.014662	11.60	0.050139	11.97	0.150178	12.33	0.020350	12.70	0.012240



Hydrograph 10-yr Summary

Project Name:

07-25-2024

Hydrology Studio v 3.0.0.32

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre South of Ditch	46.89	12.03	138,527	----		
2	NRCS Runoff	Pre Ditch	4.182	12.03	11,249	----		
3	NRCS Runoff	Pre North of Ditch	32.78	12.03	92,429	----		
4	NRCS Runoff	Pre Offsite 1	0.019	12.03	162	----		
5	NRCS Runoff	Pre Offsite 2	0.348	12.23	4,681	----		
6	NRCS Runoff	Pre Offsite 3	0.003	12.03	24.9	----		
7	NRCS Runoff	Post Offsite 4	0.074	12.03	624	----		
8	Junction	Pre Offsite Combined	0.399	12.23	5,492	4, 5, 6, 7		
9	Junction	Pre Total	83.93	12.03	242,829	1, 2, 3, 7		
11	NRCS Runoff	Post South of Ditch	47.03	12.03	139,146	----		
12	NRCS Runoff	Post Ditch	4.512	12.03	12,030	----		
13	NRCS Runoff	Post North to Pond 1	11.06	12.00	28,907	----		
14	Pond Route	Post Pond 1 Discharge	4.393	12.20	28,881	13	629.56	9,327
15	NRCS Runoff	Post Bypass	15.18	12.00	39,366	----		
16	NRCS Runoff	Post Offsite 1	0.019	12.03	162	----		
17	NRCS Runoff	Post Offsite 2	0.348	12.23	4,681	----		
18	NRCS Runoff	Post Offsite 3	0.003	12.03	24.9	----		
19	NRCS Runoff	Post Offsite 4	0.074	12.03	624	----		
20	Junction	Post Offsite Combined	0.399	12.23	5,492	16, 17, 18, 19		
21	NRCS Runoff	Post Culvert 1	0.090	12.03	758	----		
22	NRCS Runoff	Post Area Drain 3 (AD3)	0.007	11.93	14.9	----		
23	NRCS Runoff	Post Area Drain 2 (AD2)	0.916	11.97	1,833	----		
24	NRCS Runoff	Post Area Drain 1 (AD1)	3.205	11.93	6,669	----		
25	NRCS Runoff	Post North to Pond 2	6.166	11.93	12,560	----		
26	Pond Route	Post Pond 2 Discharge	0.000	10.37	0.000	25	533.06	8,884
27	Junction	Post North of Ditch	21.03	12.00	77,521	14, 15, 21, 22, 23, 24		
28	Junction	Post Combined	72.10	12.03	234,189	11, 12, 20, 26, 27		

Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

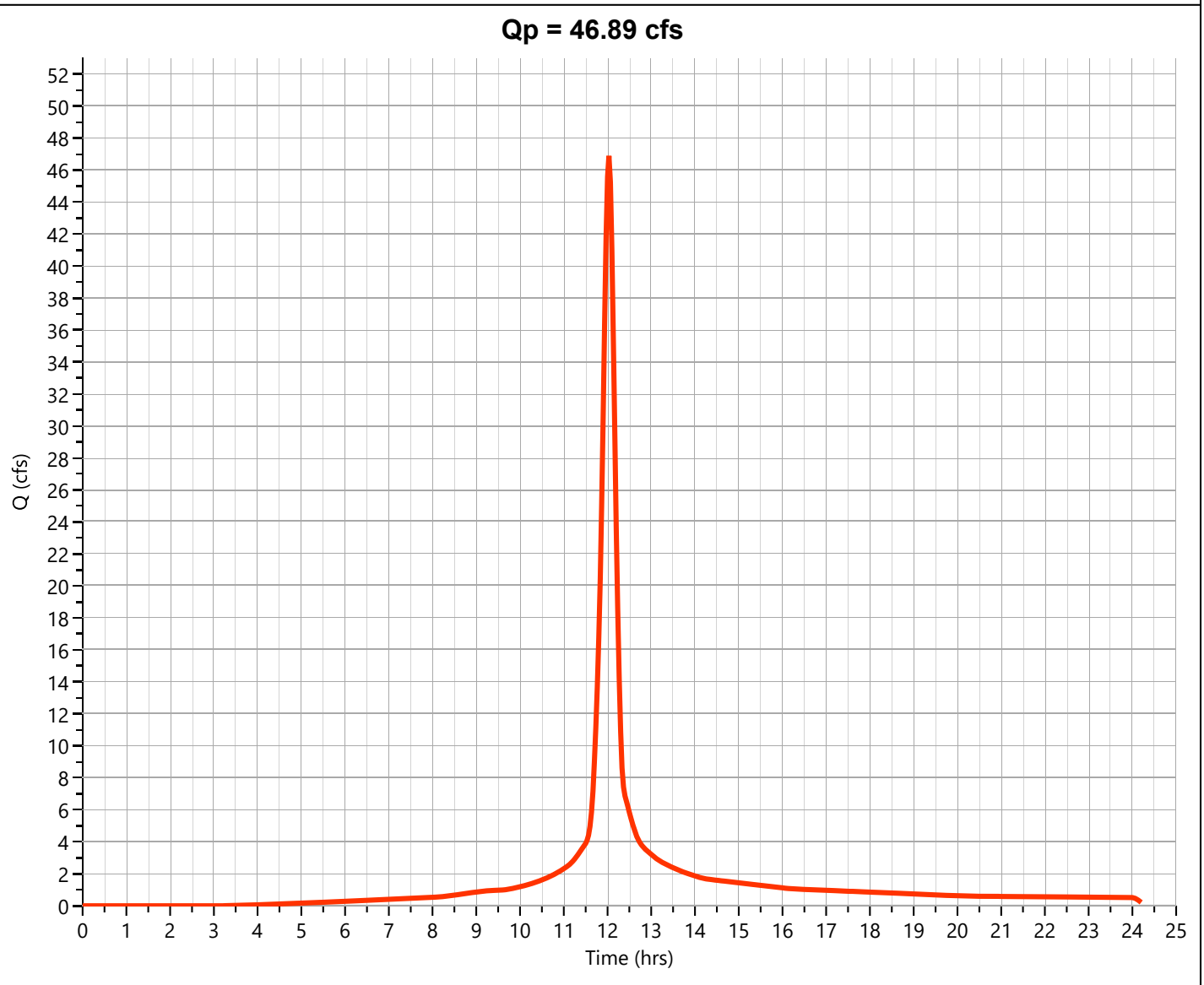
Pre South of Ditch

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 46.89 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 138,527 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.02*
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
8.69	91	No Rating (Row Crops)
0.2	91	Gravel
0.02	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

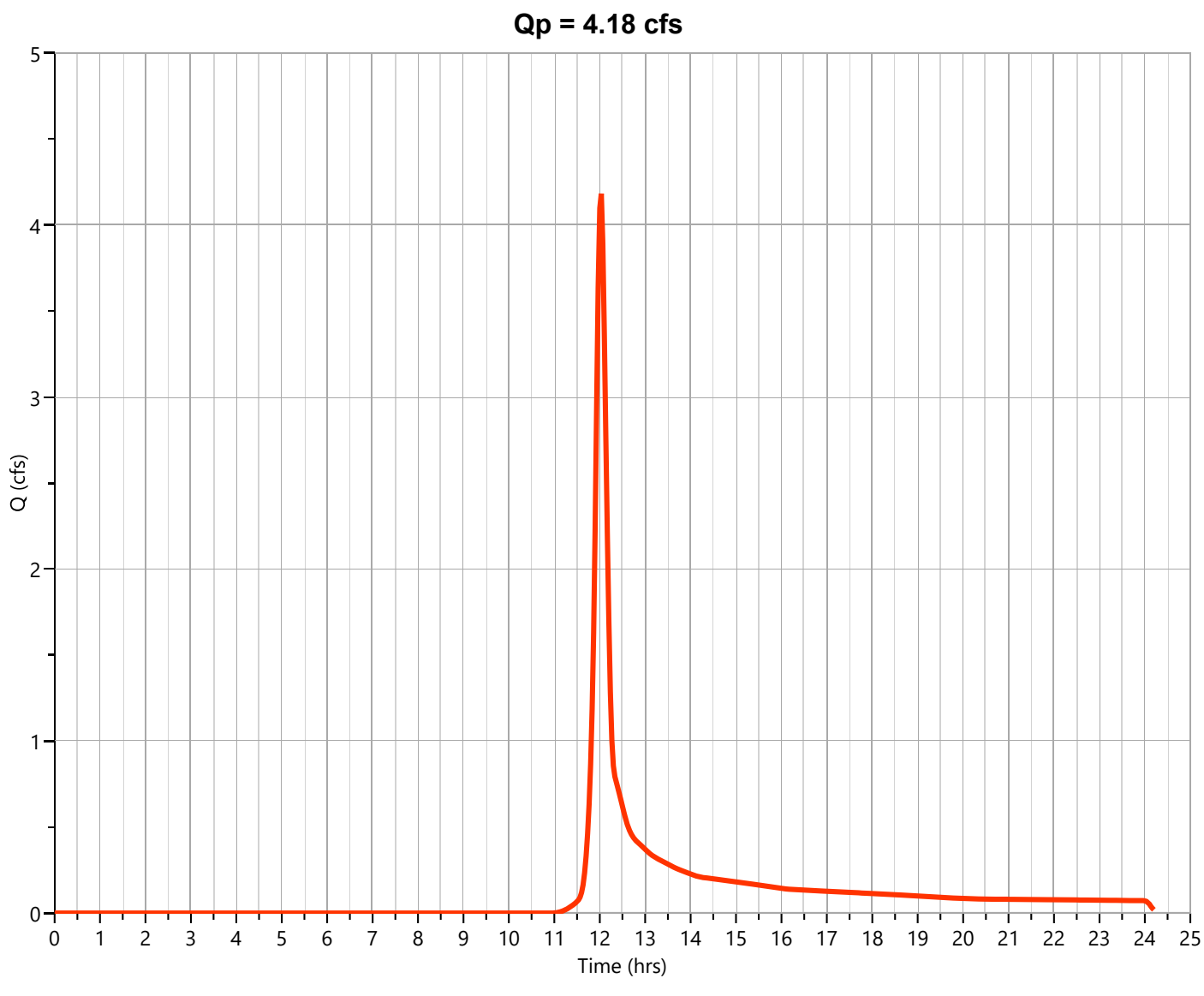
Pre Ditch

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 4.182 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 11,249 cuft
Drainage Area	= 1.79 ac	Curve Number	= 61.67*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.75	61	Ditch (inside buffer)
0.04	91	Gravel
1.79	**62**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

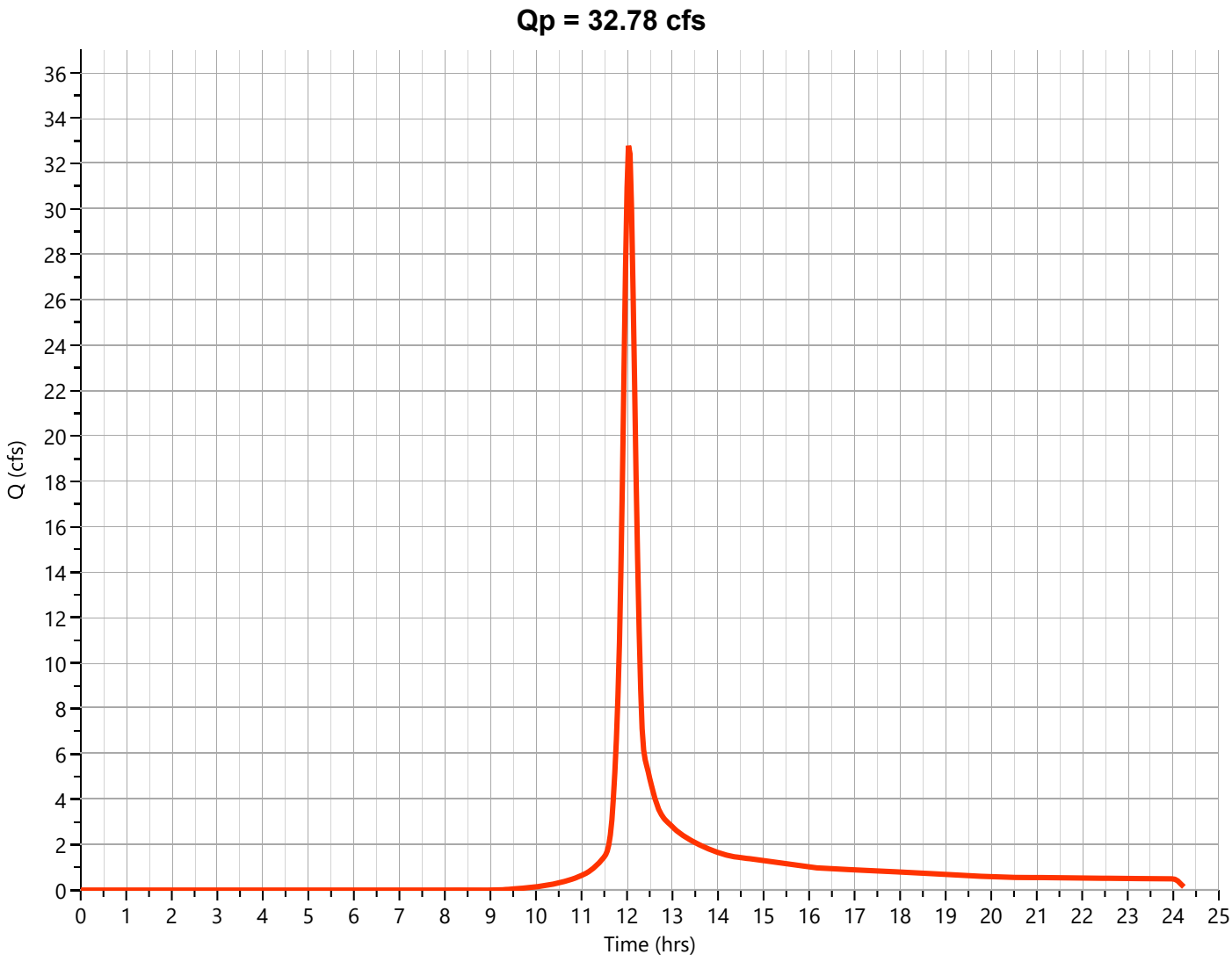
Pre North of Ditch

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 32.78 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 92,429 cuft
Drainage Area	= 10.55 ac	Curve Number	= 71.42*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.945	79	Pervious (C)
3.945	49	Pervious (A)
0.89	98	Buildings
1.73	91	Gravel
0.04	98	Concrete
10.55	**71**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

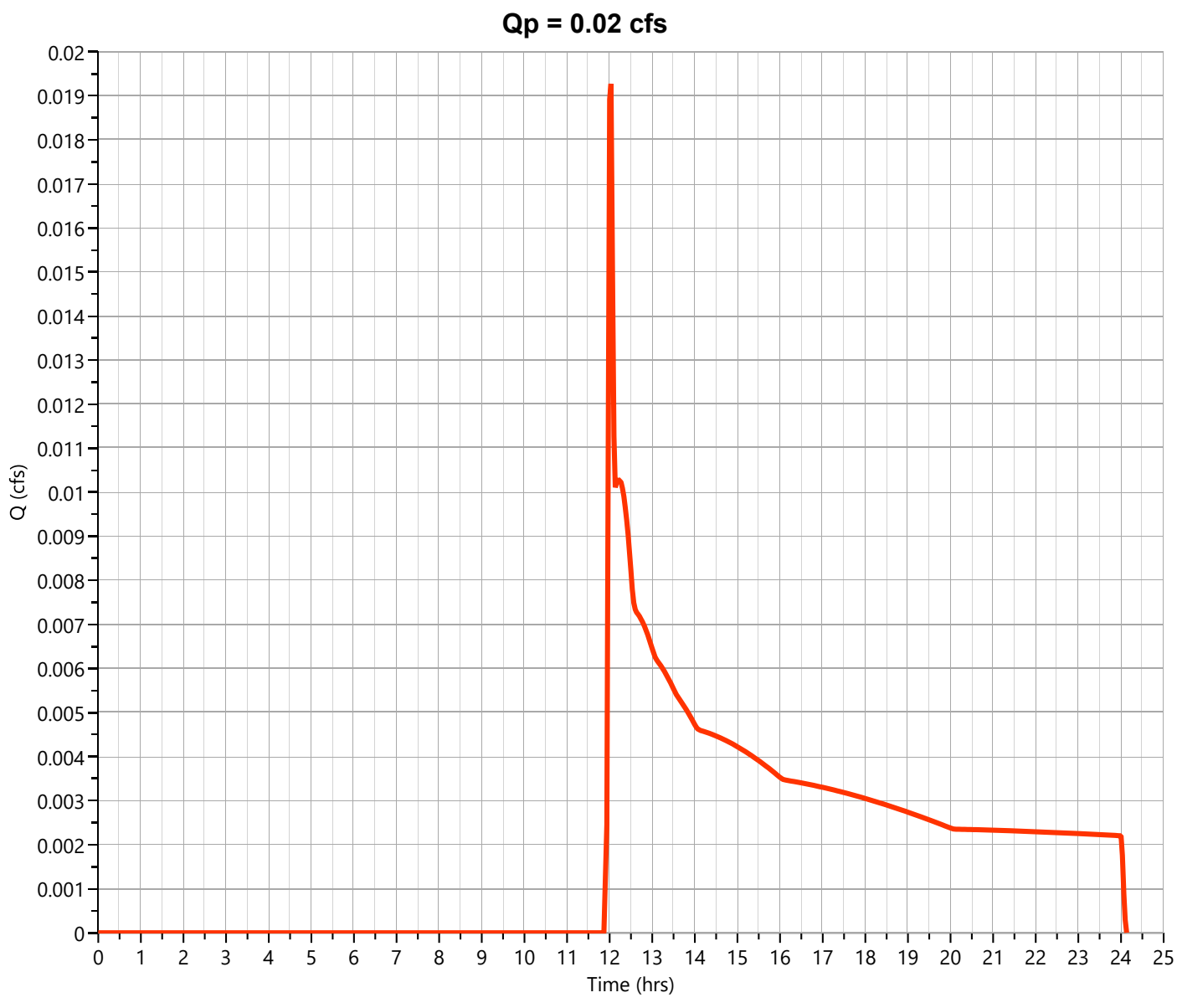
Pre Offsite 1

Hyd. No. 4

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.019 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 162 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

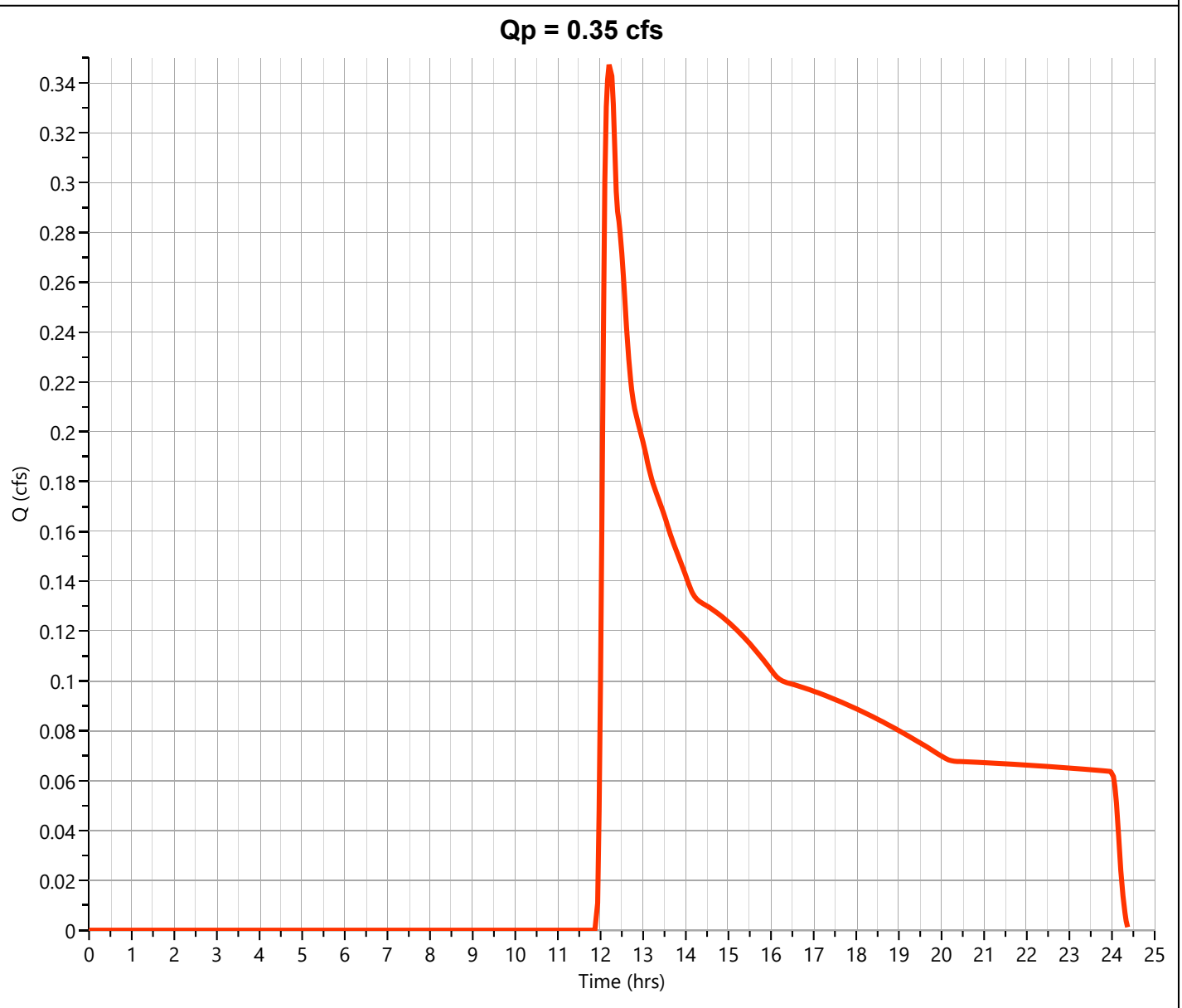
Pre Offsite 2

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.348 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.23 hrs
Time Interval	= 2 min	Runoff Volume	= 4,681 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

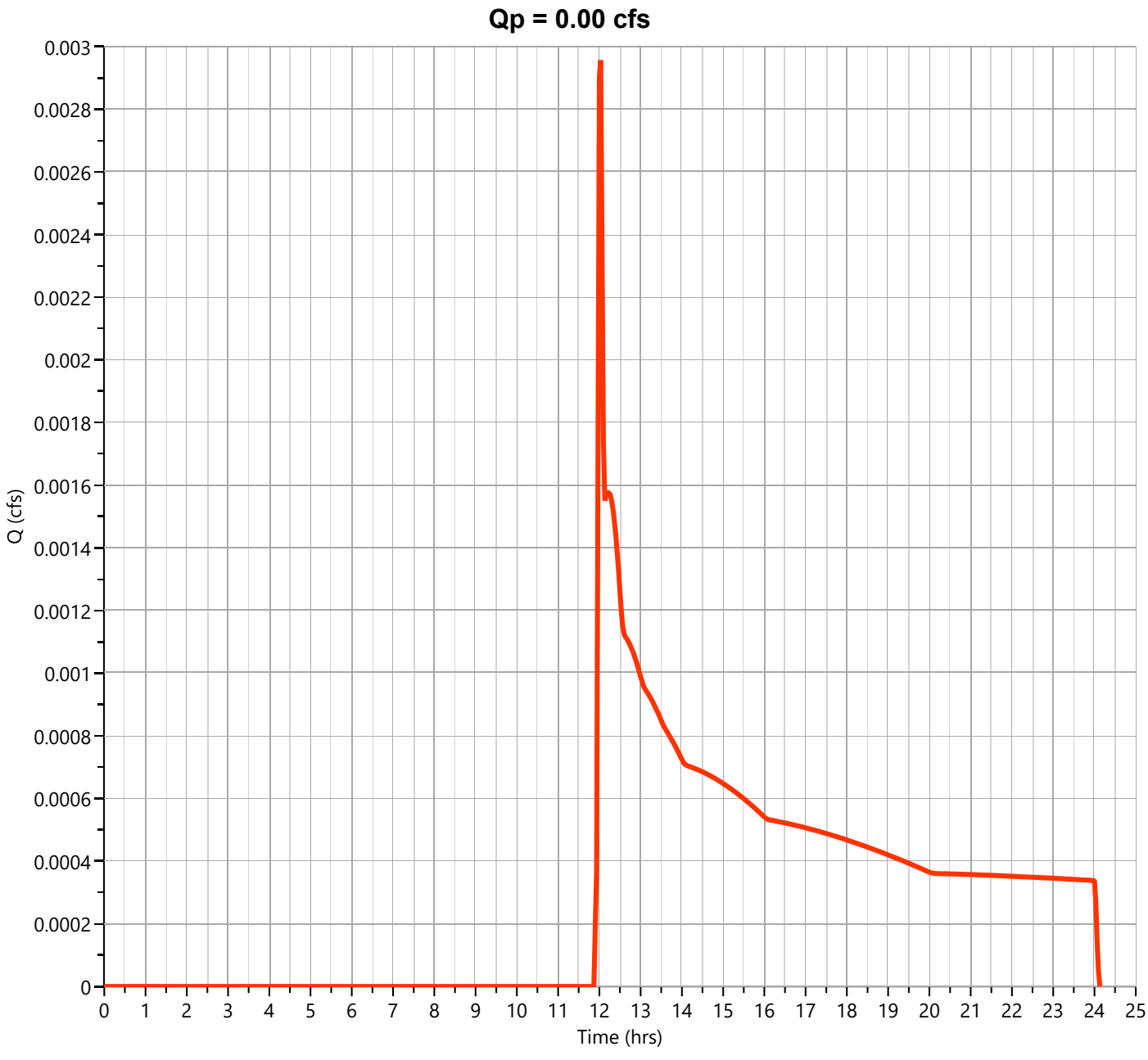
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite 3

Hyd. No. 6

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.003 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 24.9 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

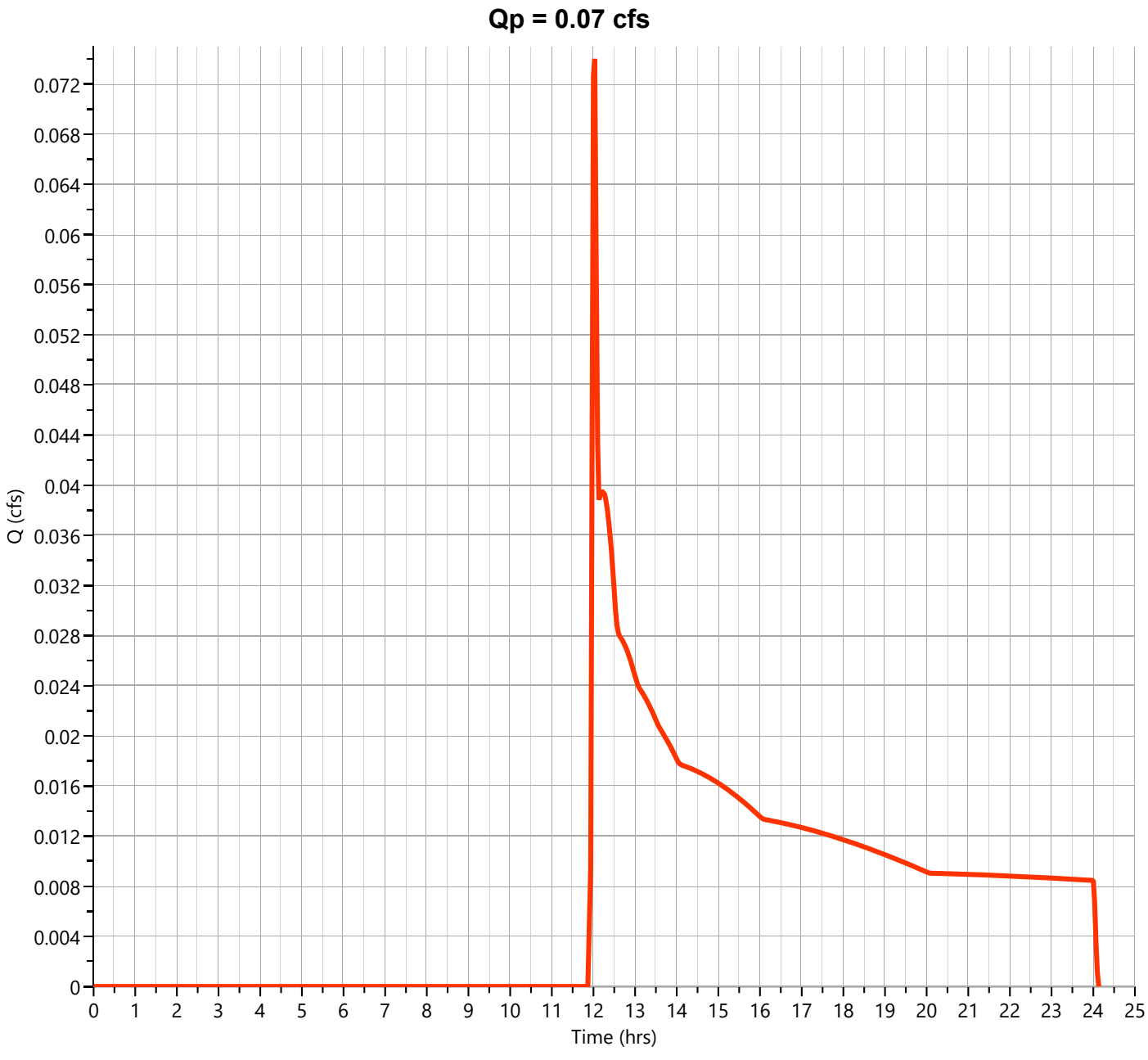
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.074 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 624 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

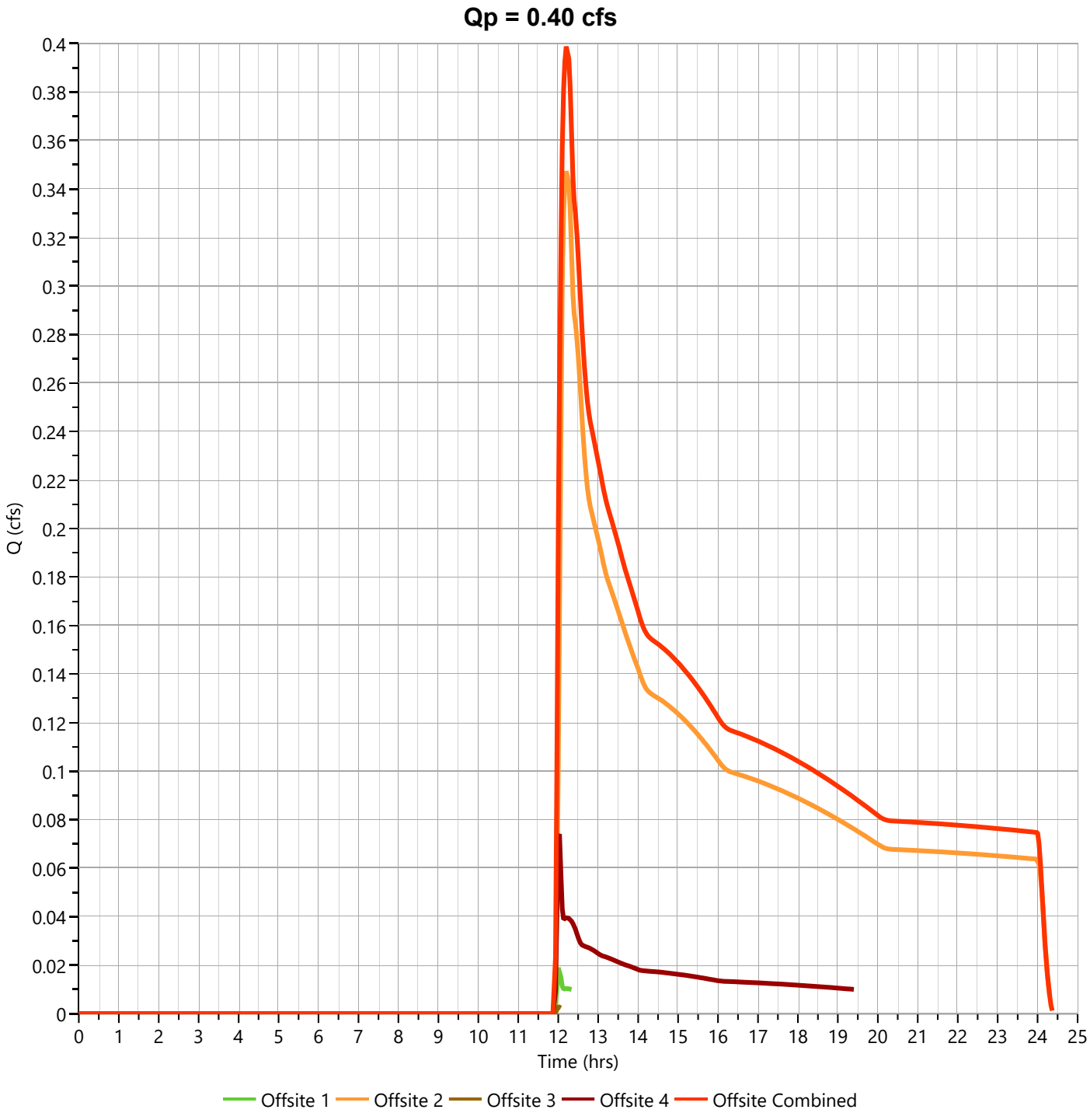
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite Combined

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 0.399 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.23 hrs
Time Interval	= 2 min	Hydrograph Volume	= 5,492 cuft
Inflow Hydrographs	= 4, 5, 6, 7	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

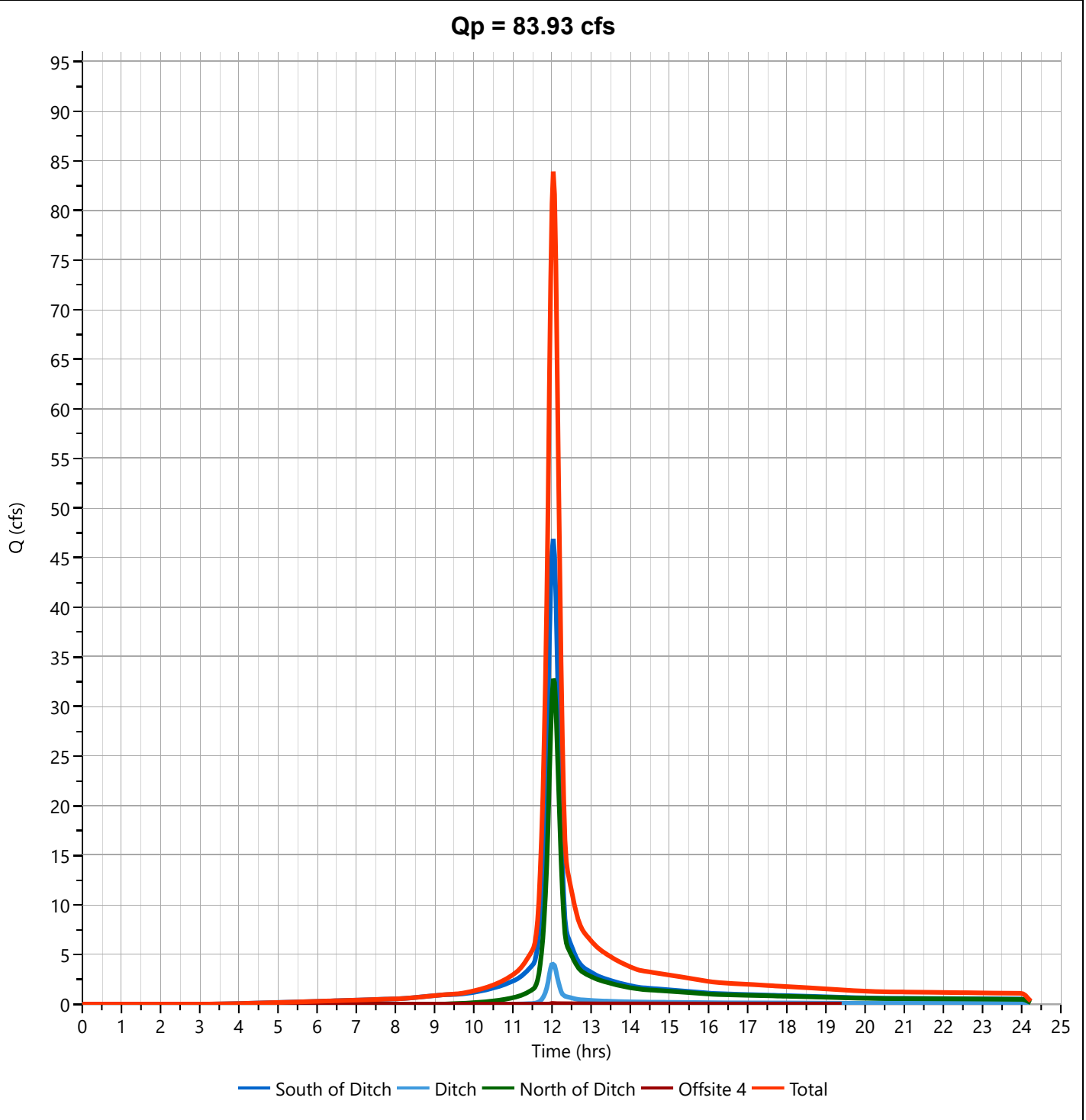
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Total

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 83.93 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 242,829 cuft
Inflow Hydrographs	= 1, 2, 3, 7	Total Contrib. Area	= 21.876 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

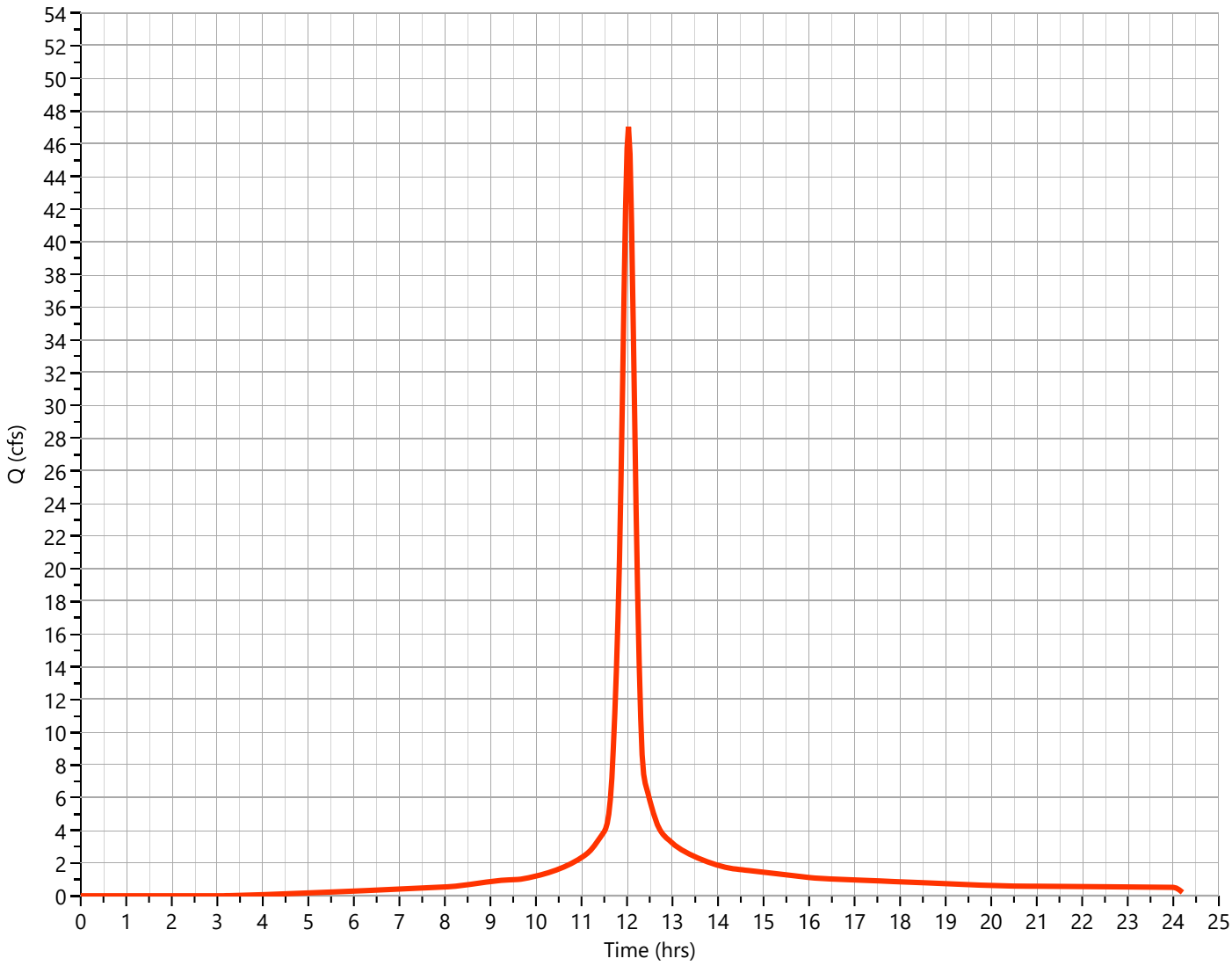
Post South of Ditch

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 47.03 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 139,146 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.2*
Tc Method	= User	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
7.83	91	Row Crop
0.82	91	Gravel Drive
0.26	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

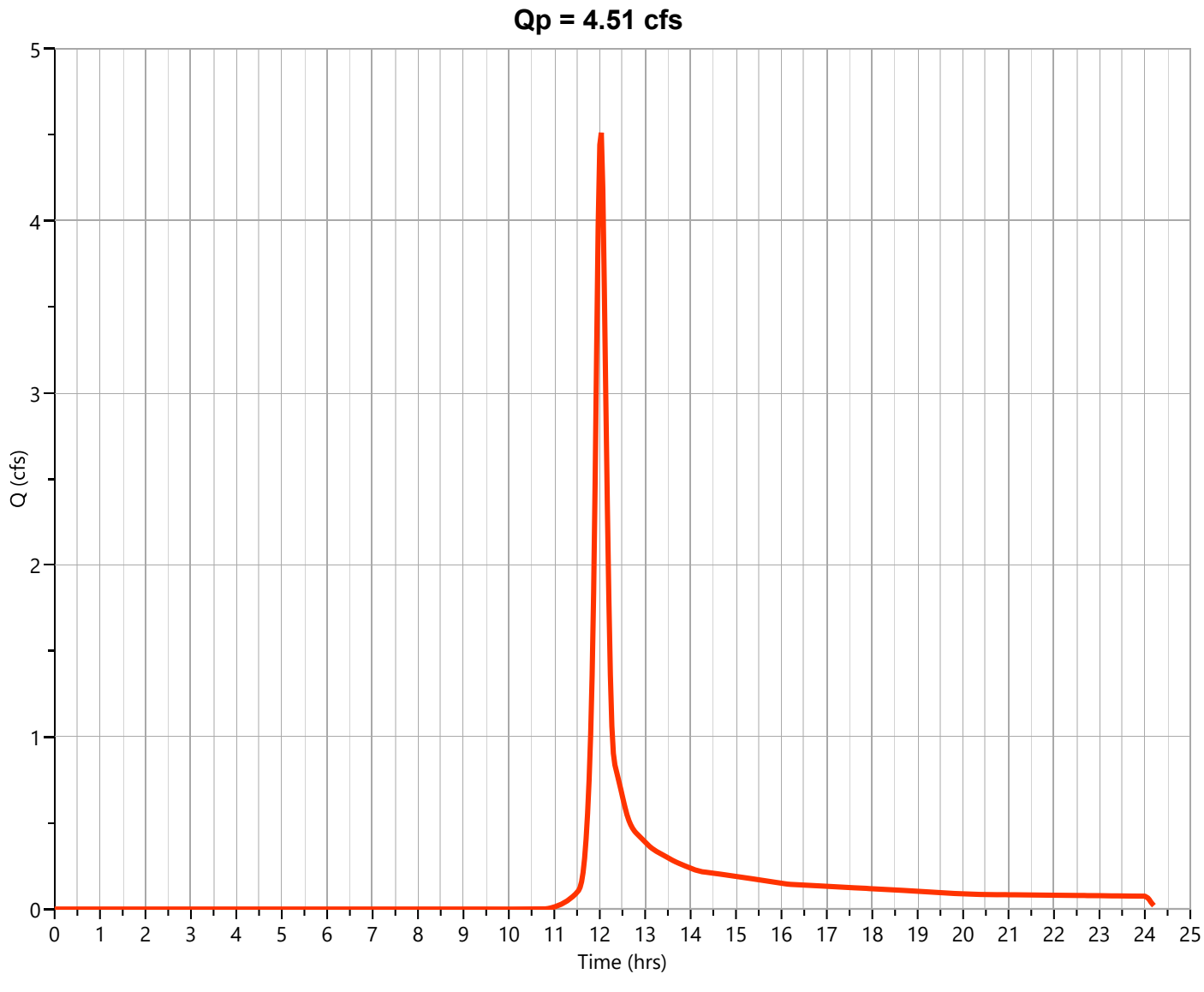
Post Ditch

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 4.512 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 12,030 cuft
Drainage Area	= 1.79 ac	Curve Number	= 63.18*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.66	61	Ditch (inside buffer)
0.13	91	Gravel
1.79	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

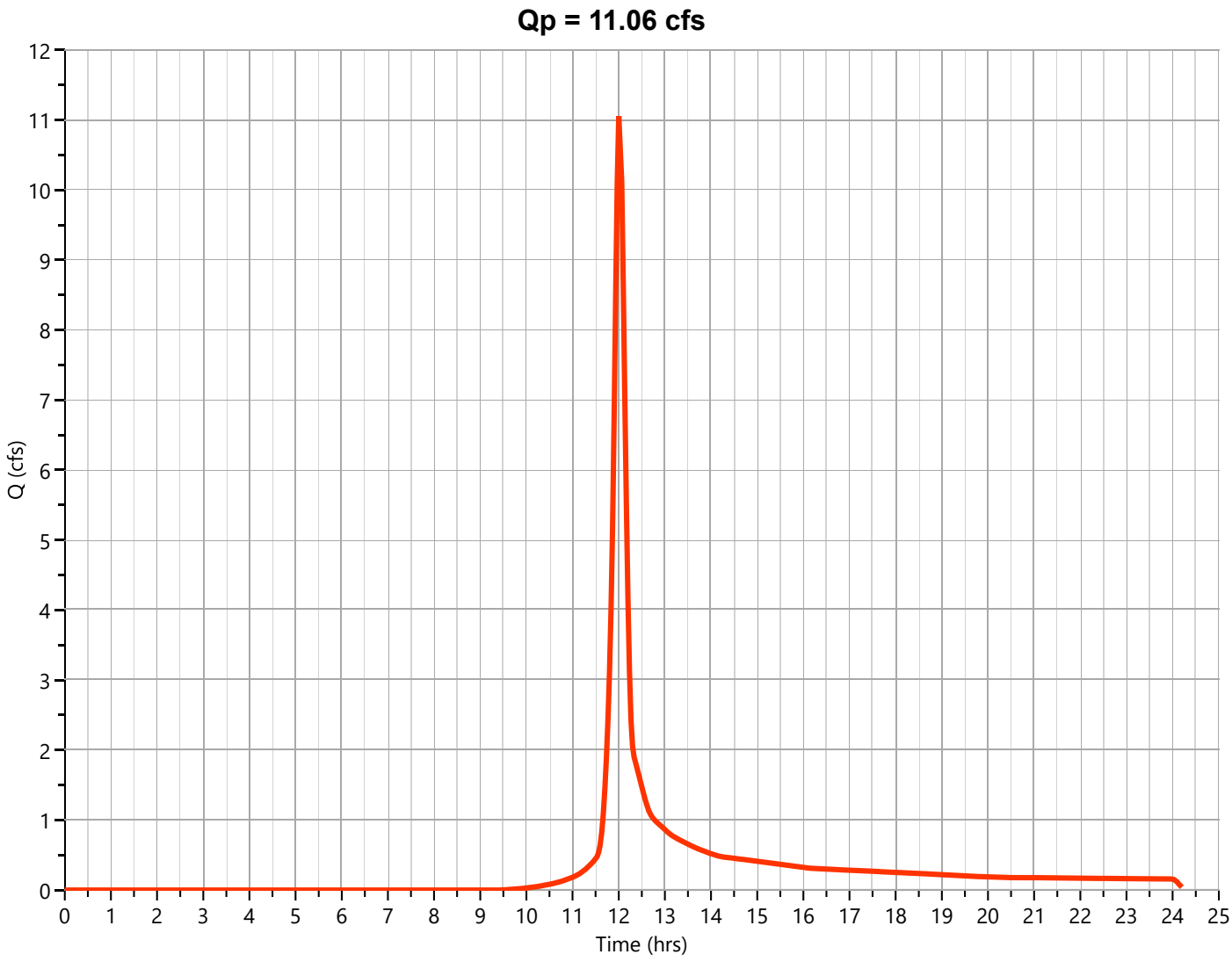
Post North to Pond 1

Hyd. No. 13

Hydrograph Type	= NRCS Runoff	Peak Flow	= 11.06 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 28,907 cuft
Drainage Area	= 3.282 ac	Curve Number	= 70*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.4	49	Pervious (A)
0.936	79	Pervious (C)
0.566	91	Gravel
0.38	98	Buildings
3.282	**70**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

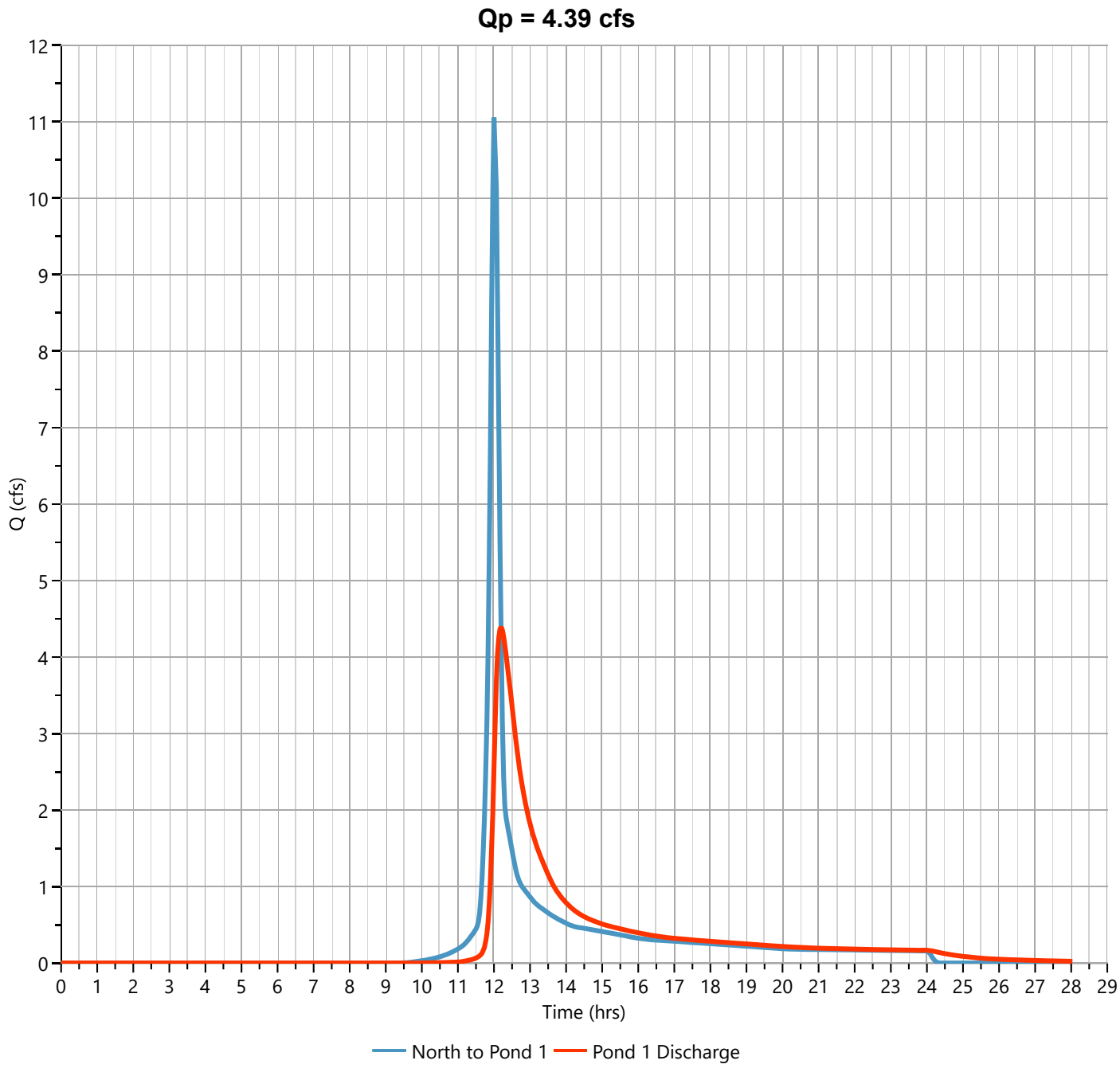
Post Pond 1 Discharge

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 4.393 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.20 hrs
Time Interval	= 2 min	Hydrograph Volume	= 28,881 cuft
Inflow Hydrograph	= 13 - North to Pond 1	Max. Elevation	= 629.56 ft
Pond Name	= Pond 1	Max. Storage	= 9,327 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 51 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

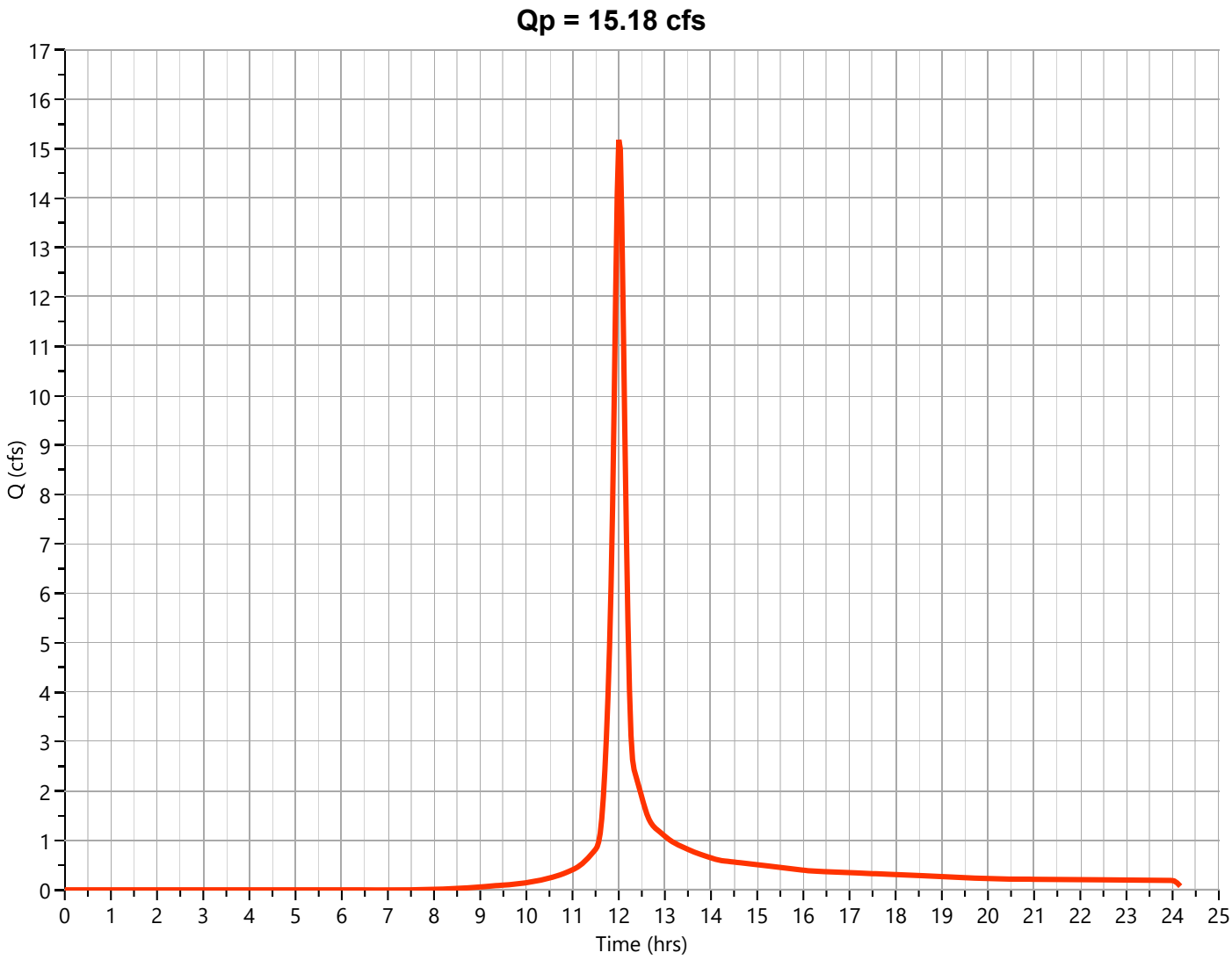
Post Bypass

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 15.18 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 39,366 cuft
Drainage Area	= 3.569 ac	Curve Number	= 76.66*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.95	49	Pervious (A)
1.26	79	Pervious (C)
0.81	91	Gravel
0.549	98	Buildings
3.569	**77**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

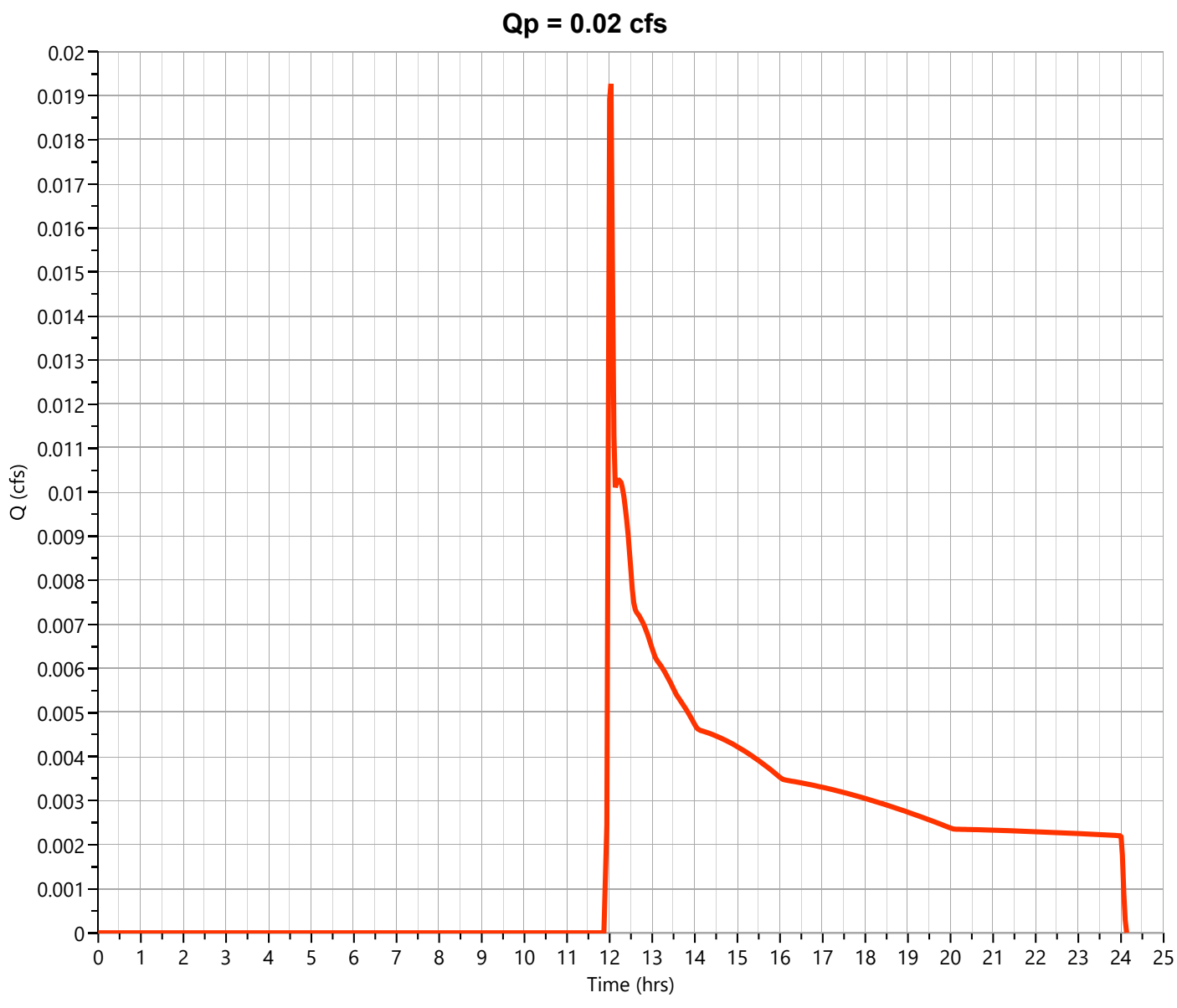
Post Offsite 1

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.019 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 162 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

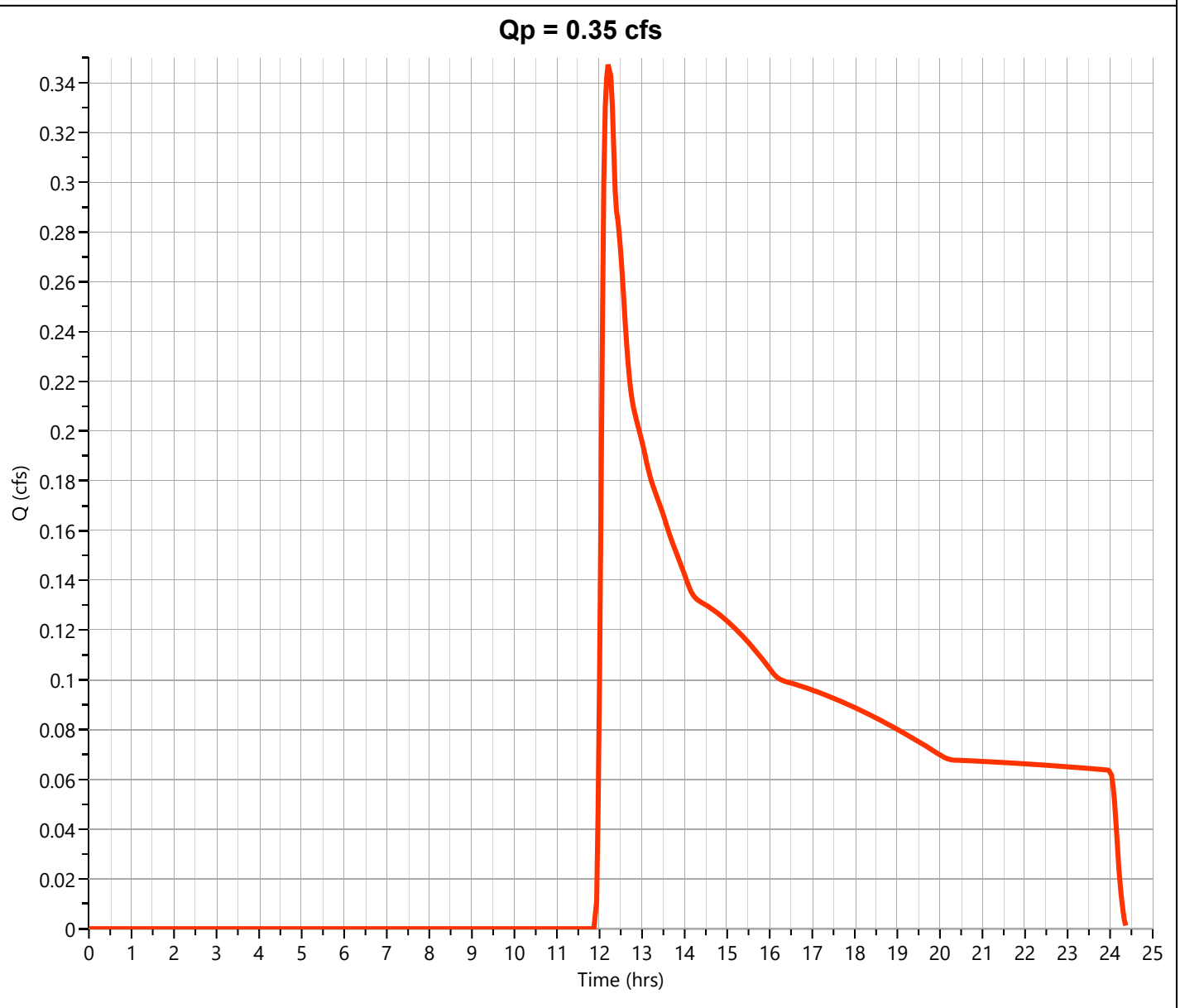
Post Offsite 2

Hyd. No. 17

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.348 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.23 hrs
Time Interval	= 2 min	Runoff Volume	= 4,681 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

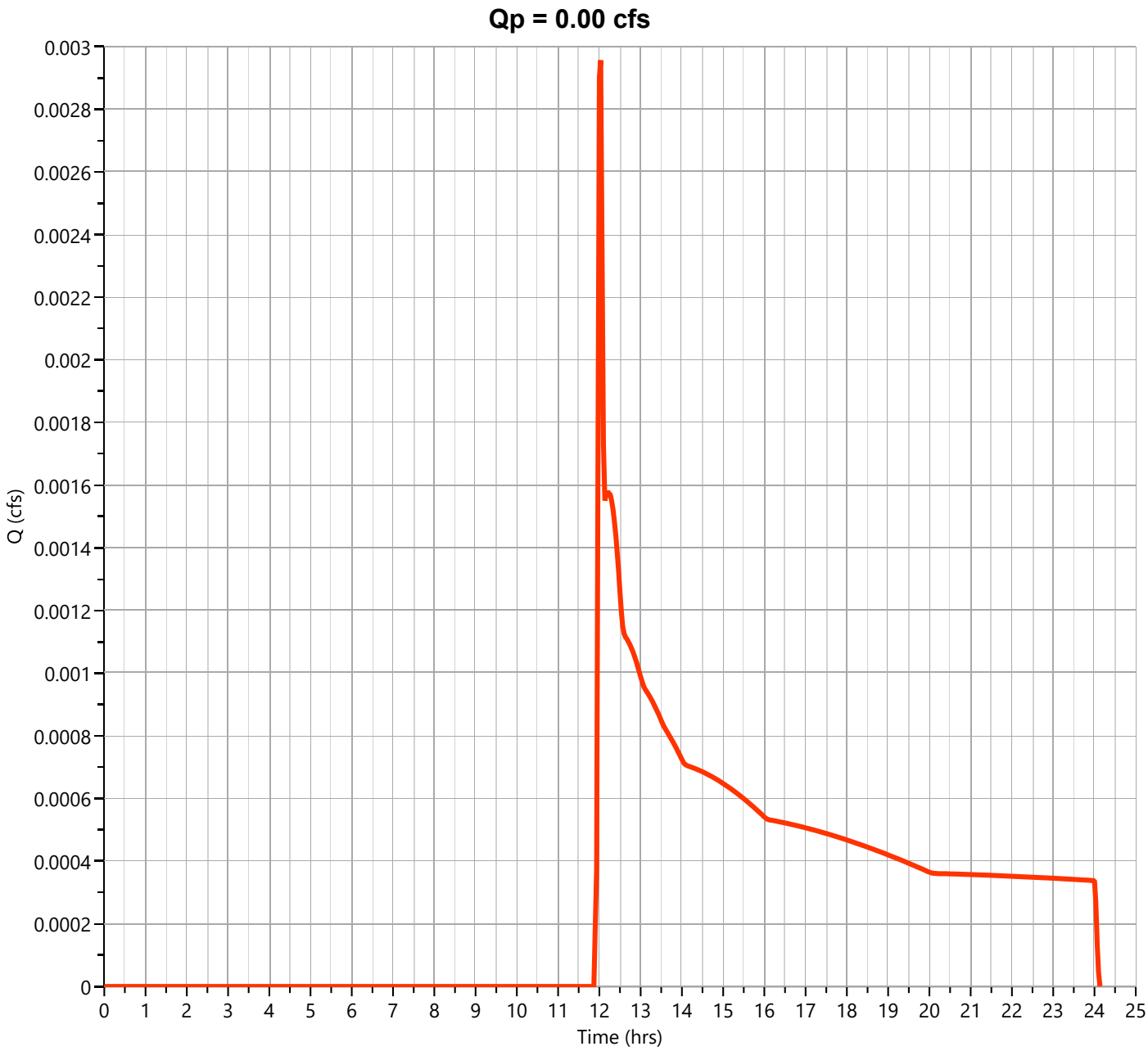
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 3

Hyd. No. 18

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.003 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 24.9 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

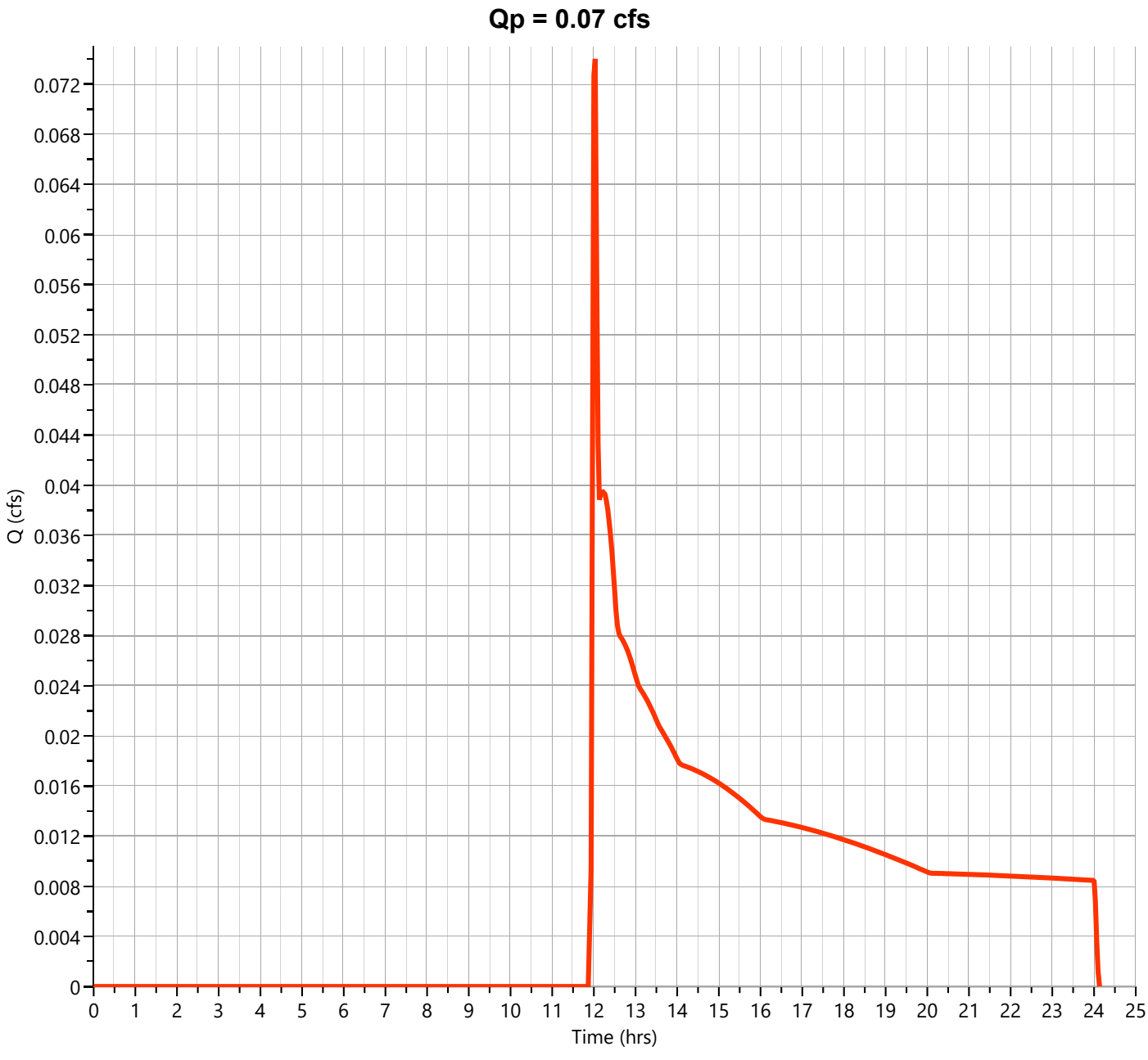
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 19

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.074 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 624 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

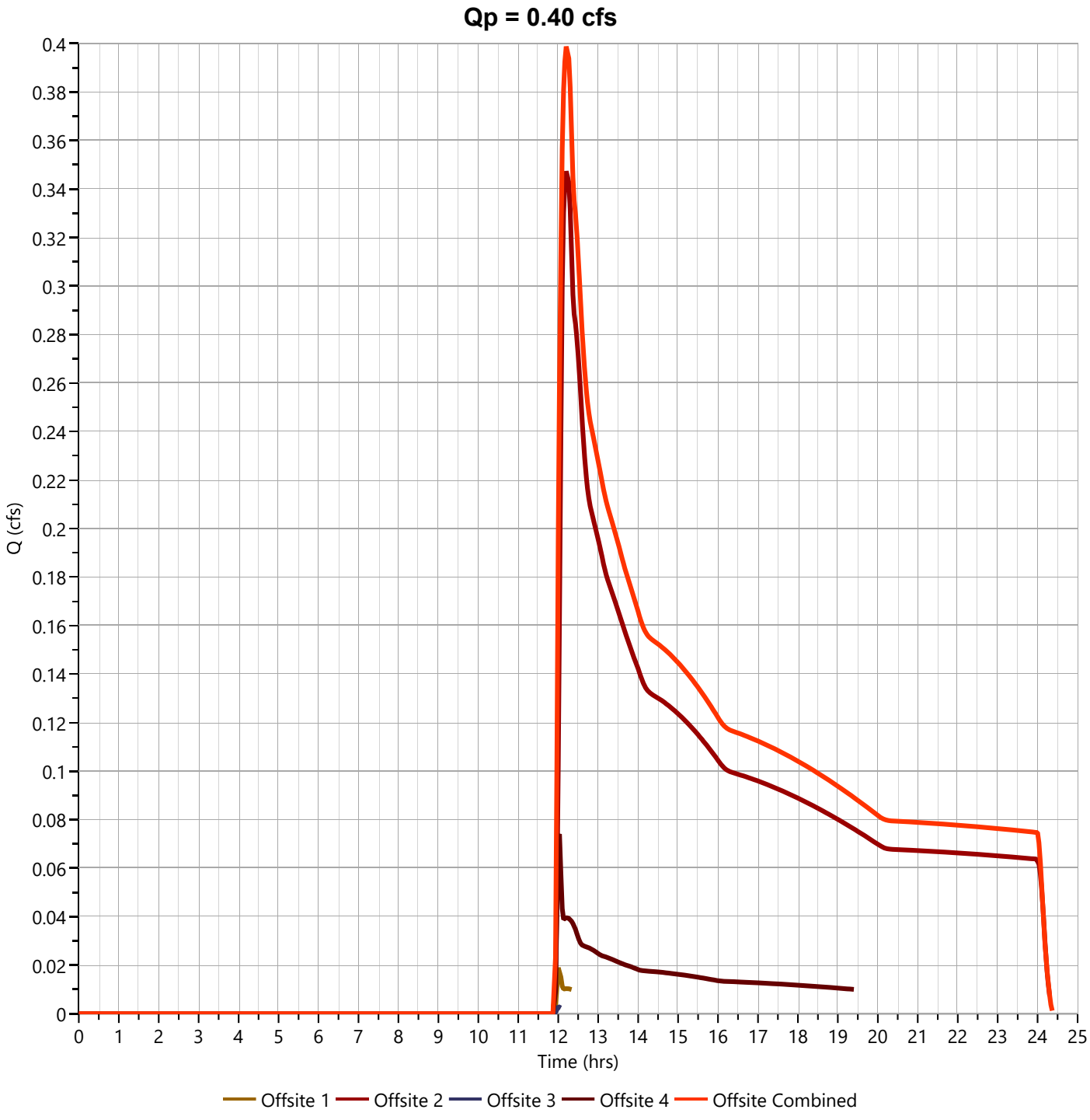
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite Combined

Hyd. No. 20

Hydrograph Type	= Junction	Peak Flow	= 0.399 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.23 hrs
Time Interval	= 2 min	Hydrograph Volume	= 5,492 cuft
Inflow Hydrographs	= 16, 17, 18, 19	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

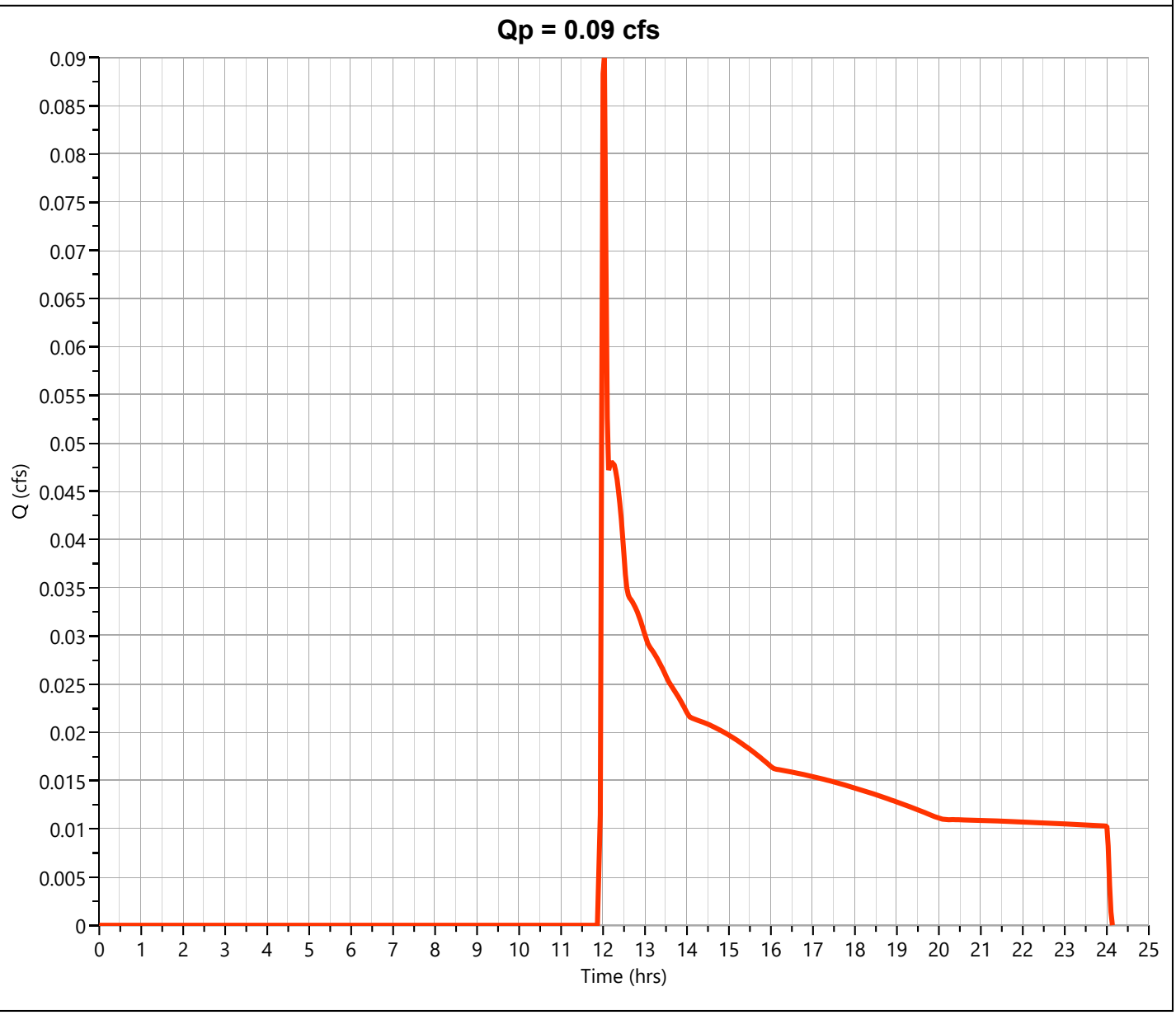
Post Culvert 1

Hyd. No. 21

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.090 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 758 cuft
Drainage Area	= 0.761 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.761	39	Pervious (A)
0.761	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

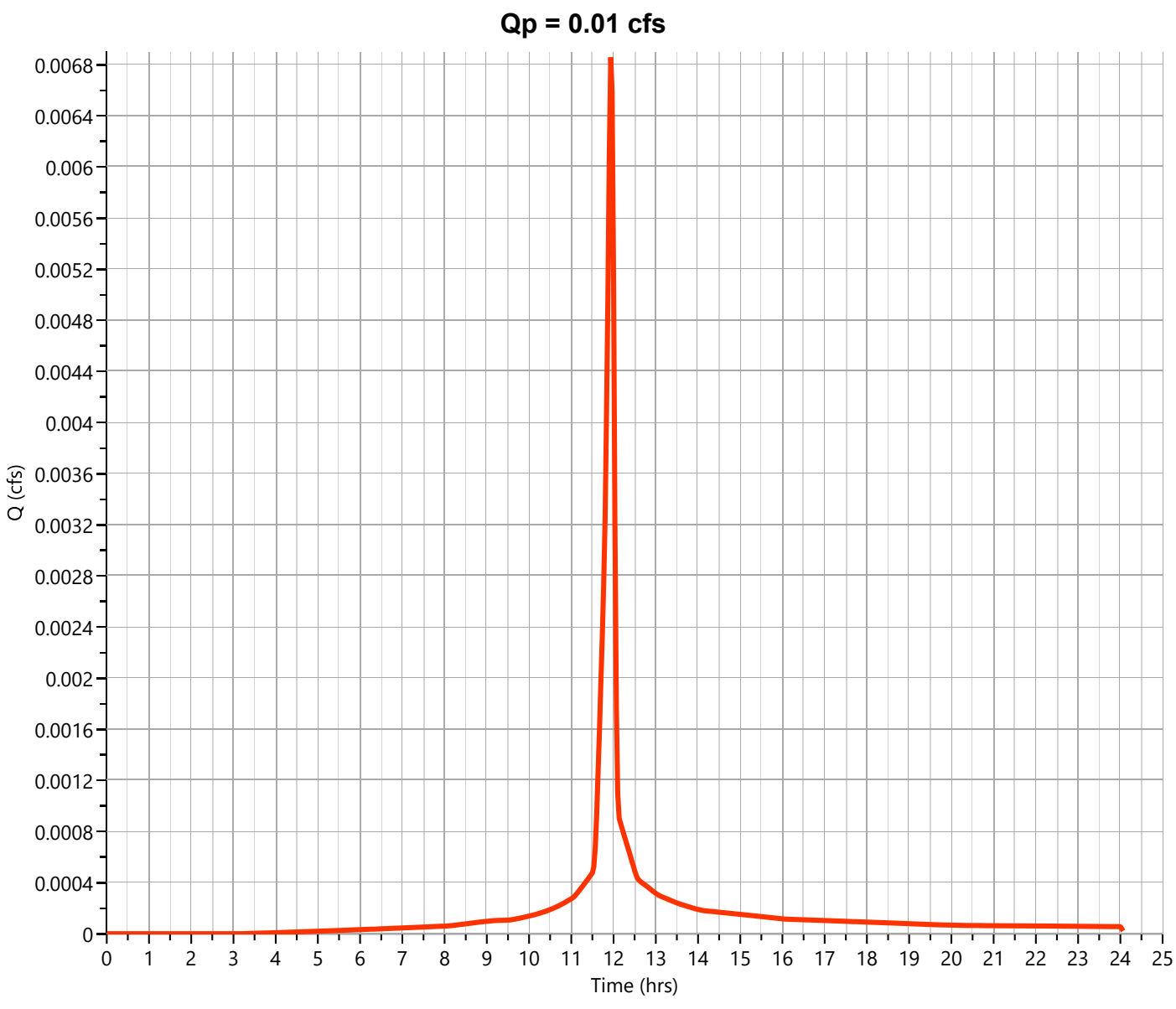
Post Area Drain 3 (AD3)

Hyd. No. 22

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.007 cfs
Storm Frequency	= 10-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 14.9 cuft
Drainage Area	= 0.001 ac	Curve Number	= 91*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.001	91	Gravel
0.001	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

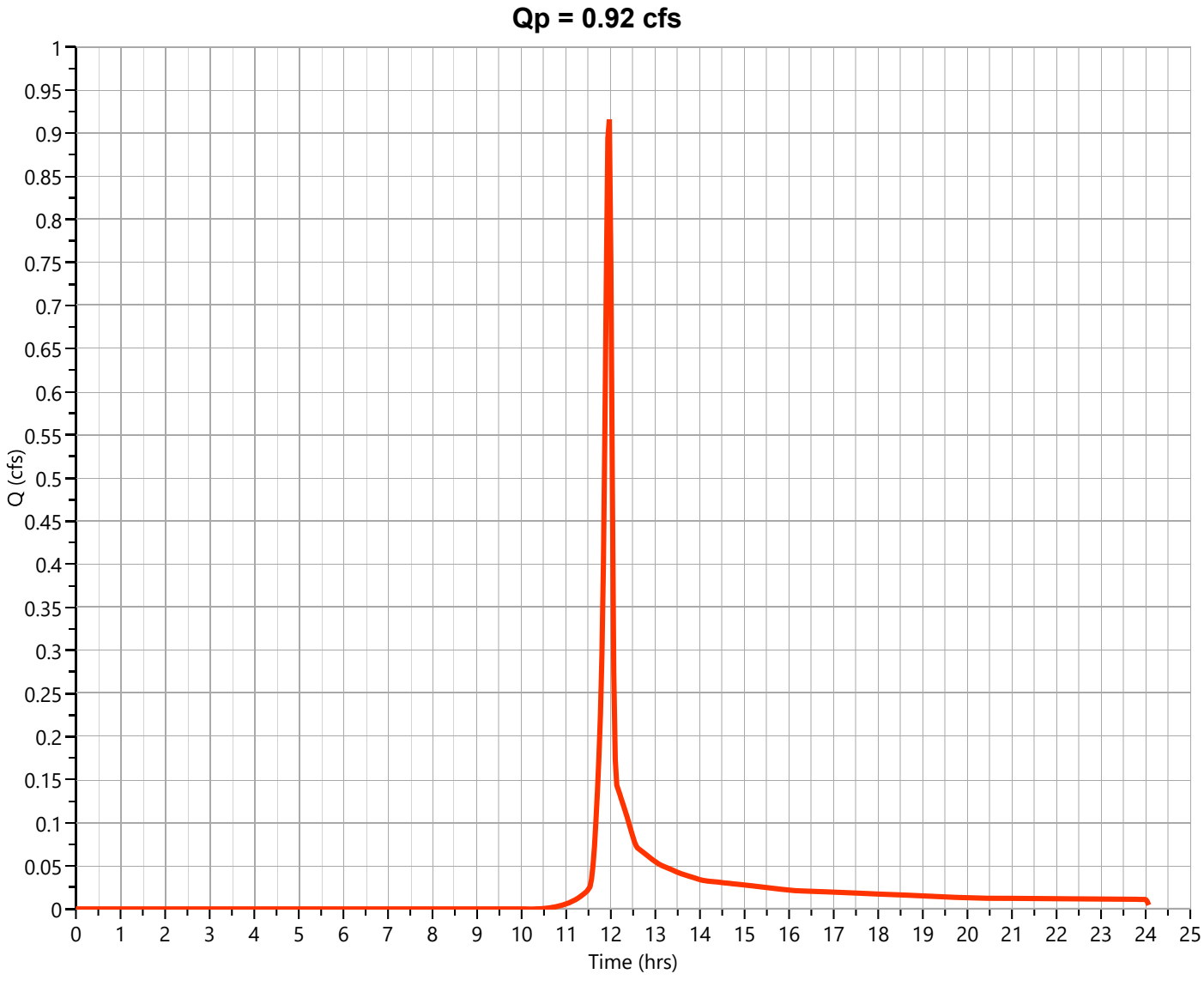
Post Area Drain 2 (AD2)

Hyd. No. 23

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.916 cfs
Storm Frequency	= 10-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 1,833 cuft
Drainage Area	= 0.28 ac	Curve Number	= 64.81*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.139	91	Gravel
0.141	39	Grass
0.28	**65**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

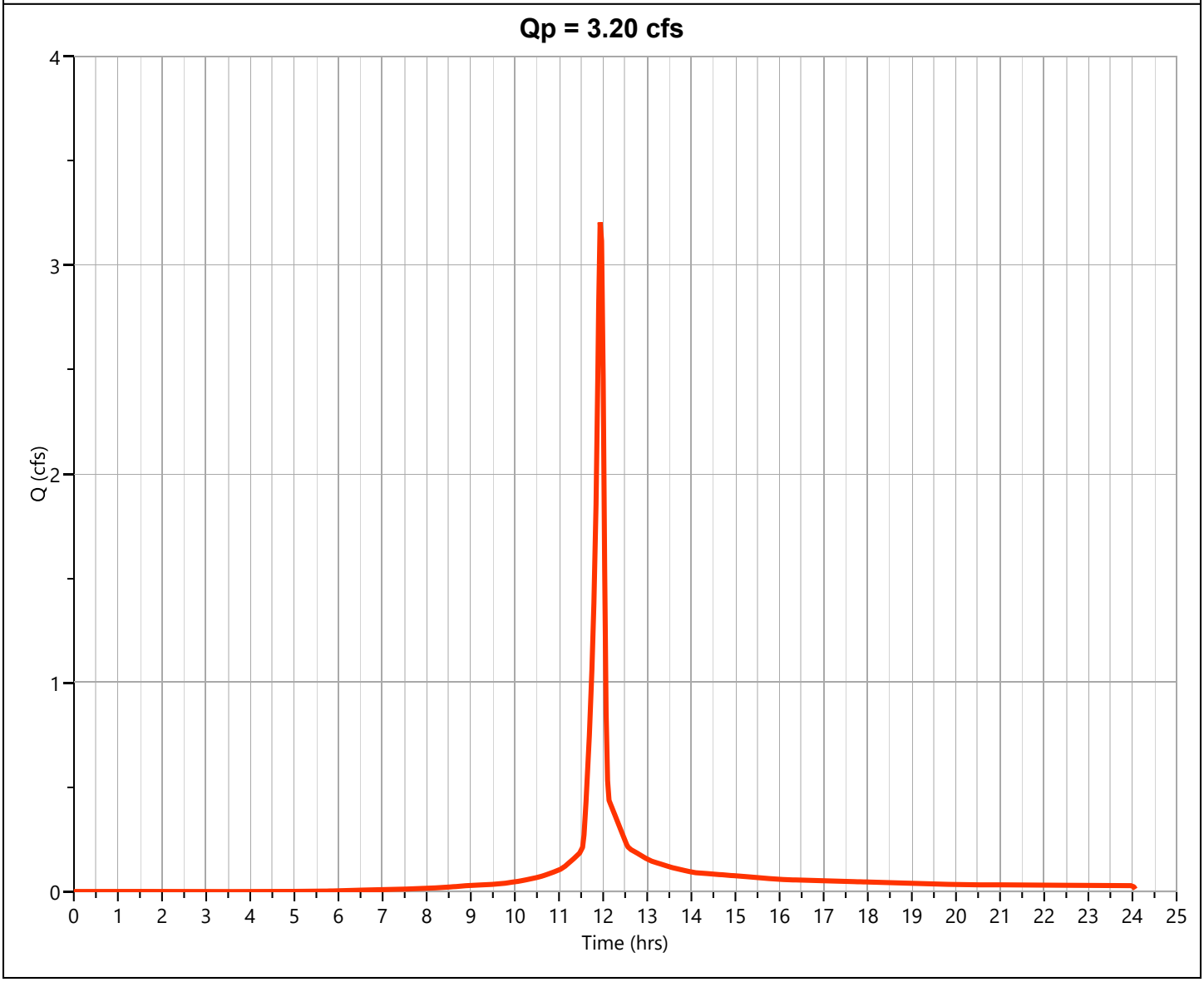
Post Area Drain 1 (AD1)

Hyd. No. 24

Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.205 cfs
Storm Frequency	= 10-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 6,669 cuft
Drainage Area	= 0.527 ac	Curve Number	= 84.61*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.087	49	Pervious (A)
0.399	91	Gravel
0.041	98	Building
0.527	**85**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

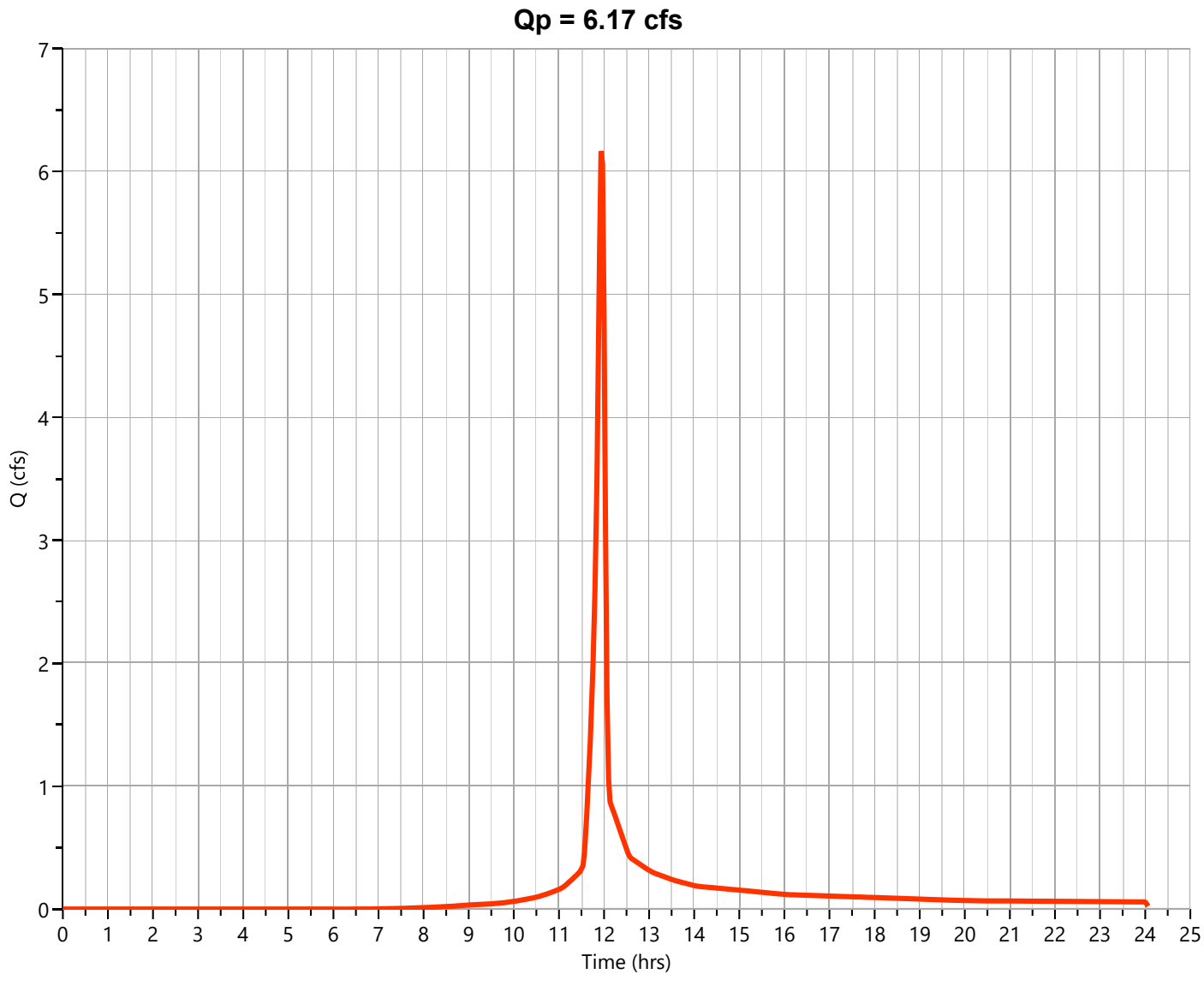
Post North to Pond 2

Hyd. No. 25

Hydrograph Type	= NRCS Runoff	Peak Flow	= 6.166 cfs
Storm Frequency	= 10-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 12,560 cuft
Drainage Area	= 1.16 ac	Curve Number	= 79.16*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 5.42 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.618	91	Gravel
0.245	98	Bldg/Concrete
0.297	39	Grass
1.16	**79**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

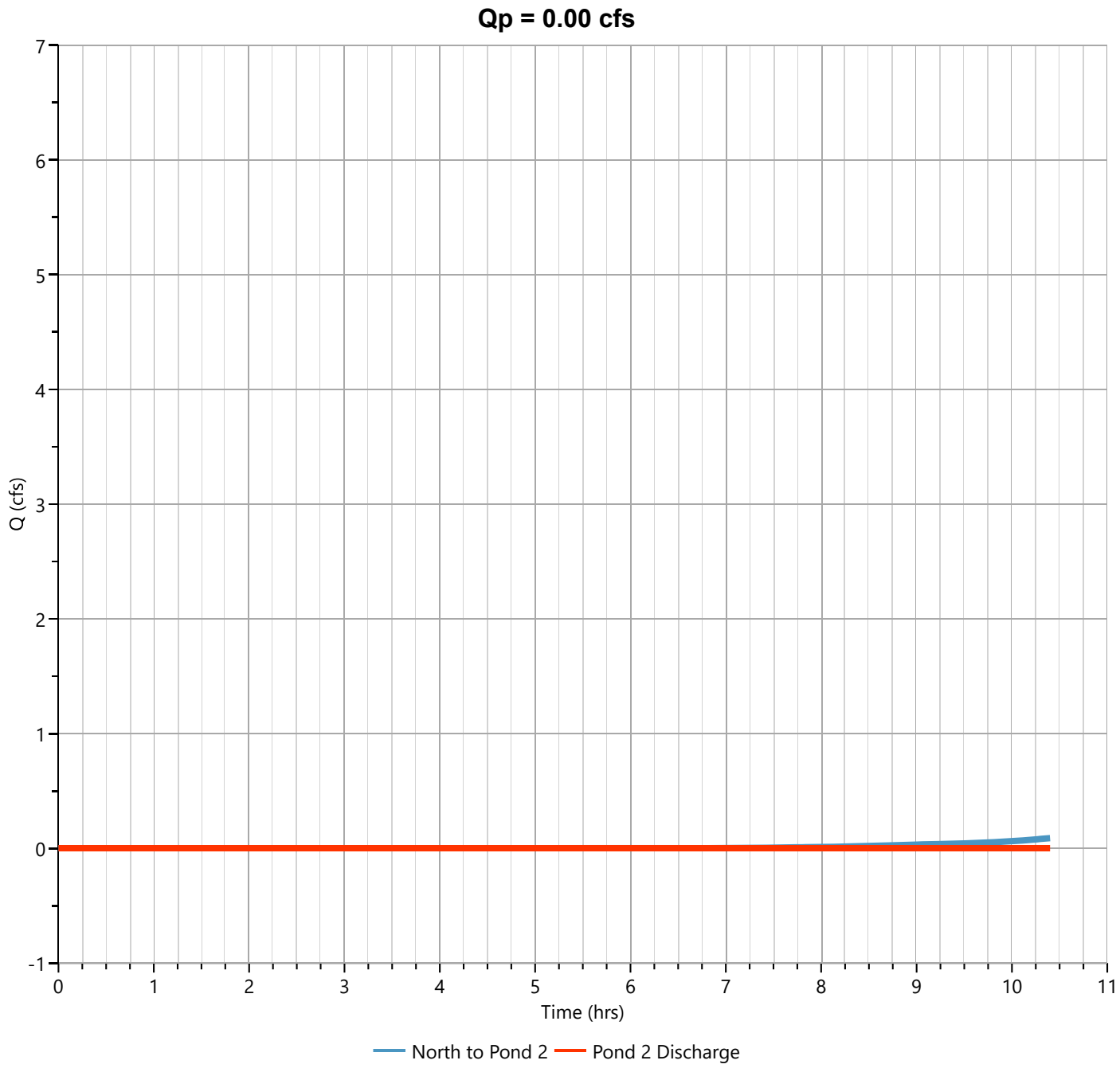
07-25-2024

Post Pond 2 Discharge

Hyd. No. 26

Hydrograph Type	= Pond Route	Peak Flow	= 0.000 cfs
Storm Frequency	= 10-yr	Time to Peak	= 10.37 hrs
Time Interval	= 2 min	Hydrograph Volume	= 0.000 cuft
Inflow Hydrograph	= 25 - North to Pond 2	Max. Elevation	= 533.06 ft
Pond Name	= Pond 2	Max. Storage	= 8,884 cuft

Pond Routing by Storage Indication Method



Hydrograph Report

Project Name:

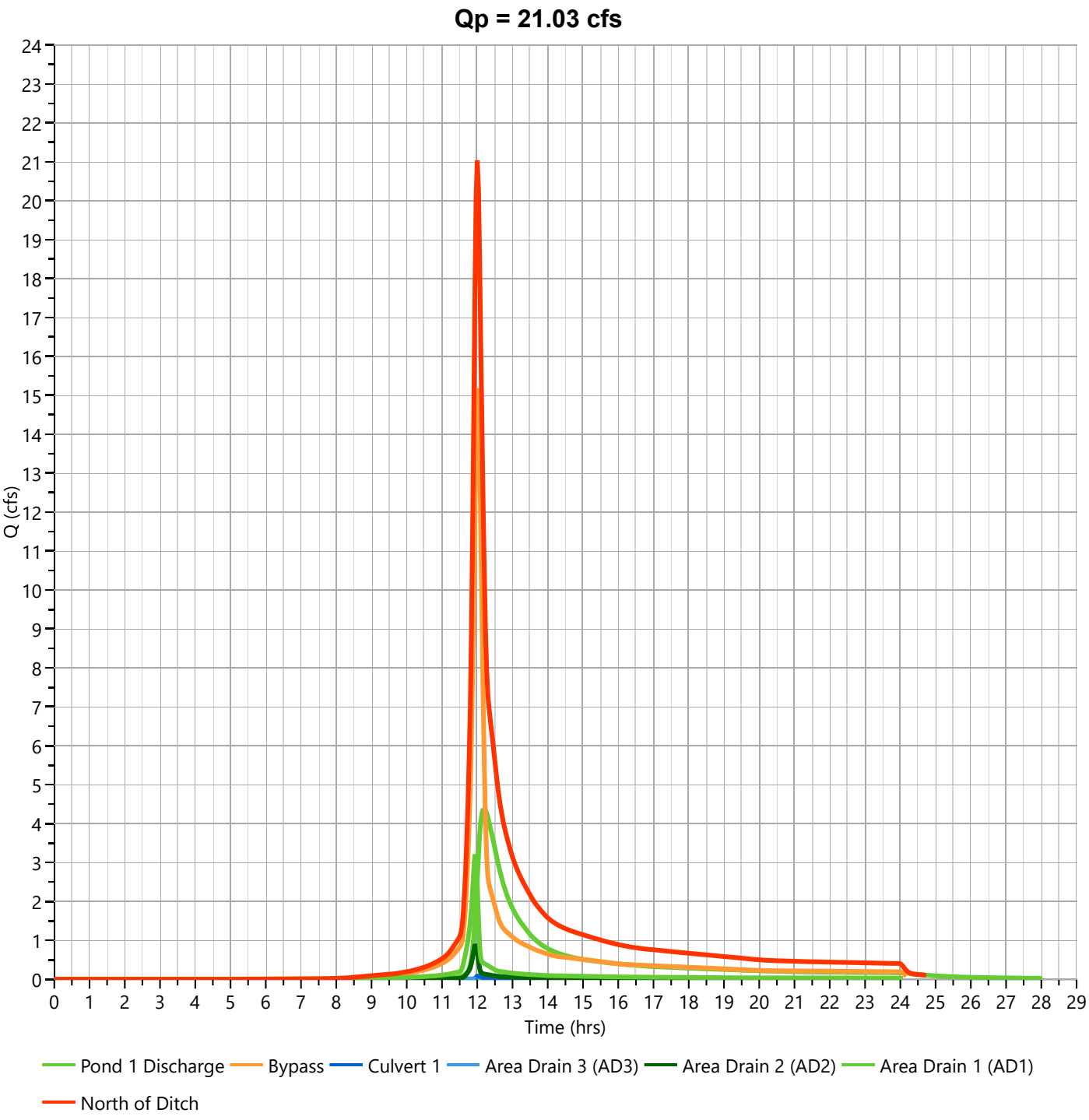
Hydrology Studio v 3.0.0.32

07-25-2024

Post North of Ditch

Hyd. No. 27

Hydrograph Type	= Junction	Peak Flow	= 21.03 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Hydrograph Volume	= 77,521 cuft
Inflow Hydrographs	= 14, 15, 21, 22, 23, 24	Total Contrib. Area	= 5.138 ac



Hydrograph Report

Project Name:

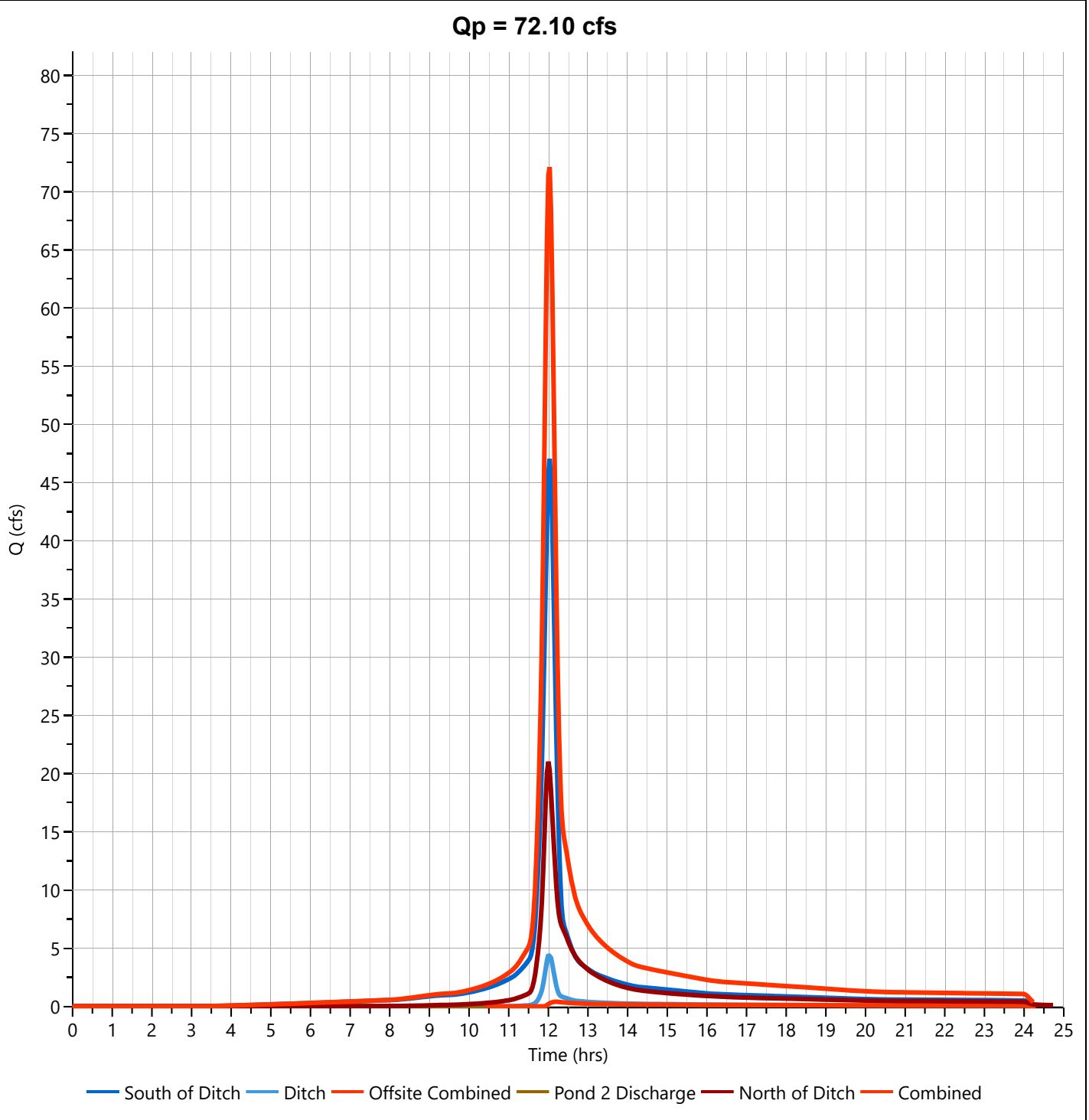
Hydrology Studio v 3.0.0.32

07-25-2024

Post Combined

Hyd. No. 28

Hydrograph Type	= Junction	Peak Flow	= 72.10 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 234,189 cuft
Inflow Hydrographs	= 11, 12, 20, 26, 27	Total Contrib. Area	= 21.17 ac



Design Storm Report

Custom Storm filename:

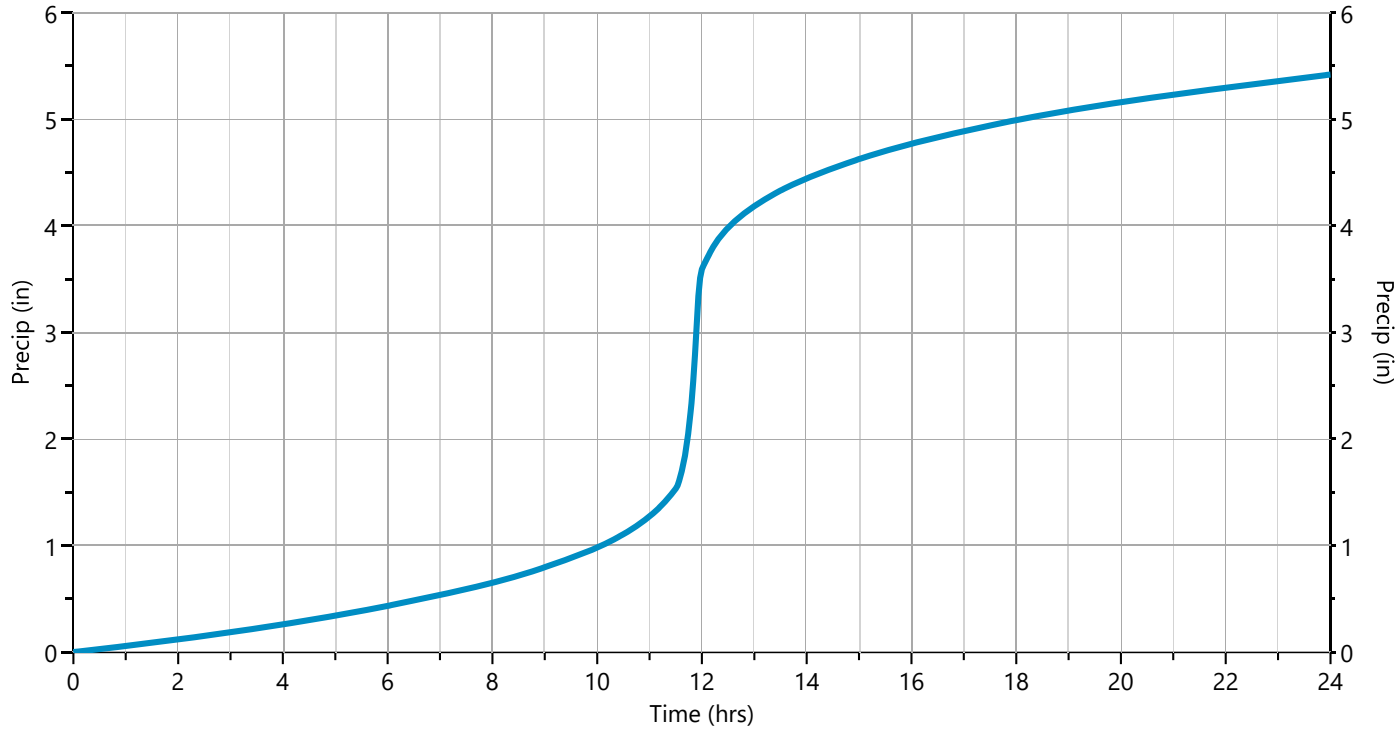
Hydrology Studio v 3.0.0.32

07-25-2024

Storm Distribution: NRCS/SCS - Type II, 24-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	2-yr	3-yr	5-yr	✔ 10-yr	25-yr	50-yr	100-yr	
24 hrs	3.26	3.90	0.00	4.74	5.42	6.34	7.07	7.82	

Incremental Rainfall Distribution, 10-yr									
Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
10.90	0.012165	11.27	0.017344	11.63	0.071592	12.00	0.081450	12.37	0.021897
10.93	0.012406	11.30	0.017922	11.67	0.085853	12.03	0.036234	12.40	0.020524
10.97	0.012647	11.33	0.018500	11.70	0.100114	12.07	0.034255	12.43	0.019151
11.00	0.012888	11.37	0.019078	11.73	0.114374	12.10	0.032881	12.47	0.017778
11.03	0.013295	11.40	0.019657	11.77	0.131282	12.13	0.031508	12.50	0.016404
11.07	0.013875	11.43	0.020235	11.80	0.168293	12.17	0.030135	12.53	0.015563
11.10	0.014453	11.47	0.020813	11.83	0.207959	12.20	0.028762	12.57	0.015248
11.13	0.015031	11.50	0.021391	11.87	0.247626	12.23	0.027389	12.60	0.014935
11.17	0.015610	11.53	0.028851	**11.90**	**0.287292**	12.27	0.026016	12.63	0.014622
11.20	0.016188	11.57	0.043071	11.93	0.262180	12.30	0.024643	12.67	0.014308
11.23	0.016766	11.60	0.057332	11.97	0.171723	12.33	0.023270	12.70	0.013996



Hydrograph 25-yr Summary

Project Name:

07-25-2024

Hydrology Studio v 3.0.0.32

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre South of Ditch	55.90	12.03	166,901	----		
2	NRCS Runoff	Pre Ditch	5.824	12.03	15,388	----		
3	NRCS Runoff	Pre North of Ditch	42.81	12.03	120,094	----		
4	NRCS Runoff	Pre Offsite 1	0.085	12.00	303	----		
5	NRCS Runoff	Pre Offsite 2	1.352	12.10	8,731	----		
6	NRCS Runoff	Pre Offsite 3	0.013	12.00	46.5	----		
7	NRCS Runoff	Post Offsite 4	0.327	12.00	1,163	----		
8	Junction	Pre Offsite Combined	1.492	12.10	10,243	4, 5, 6, 7		
9	Junction	Pre Total	104.8	12.03	303,547	1, 2, 3, 7		
11	NRCS Runoff	Post South of Ditch	56.03	12.03	167,544	----		
12	NRCS Runoff	Post Ditch	6.199	12.03	16,307	----		
13	NRCS Runoff	Post North to Pond 1	14.56	12.00	37,809	----		
14	Pond Route	Post Pond 1 Discharge	5.536	12.20	37,782	13	629.87	12,387
15	NRCS Runoff	Post Bypass	19.24	12.00	50,004	----		
16	NRCS Runoff	Post Offsite 1	0.085	12.00	303	----		
17	NRCS Runoff	Post Offsite 2	1.352	12.10	8,731	----		
18	NRCS Runoff	Post Offsite 3	0.013	12.00	46.5	----		
19	NRCS Runoff	Post Offsite 4	0.327	12.00	1,163	----		
20	Junction	Post Offsite Combined	1.492	12.10	10,243	16, 17, 18, 19		
21	NRCS Runoff	Post Culvert 1	0.398	12.00	1,414	----		
22	NRCS Runoff	Post Area Drain 3 (AD3)	0.008	11.93	18.0	----		
23	NRCS Runoff	Post Area Drain 2 (AD2)	1.229	11.97	2,462	----		
24	NRCS Runoff	Post Area Drain 1 (AD1)	3.905	11.93	8,217	----		
25	NRCS Runoff	Post North to Pond 2	7.694	11.93	15,796	----		
26	Pond Route	Post Pond 2 Discharge	0.000	10.10	0.000	25	533.78	11,566
27	Junction	Post North of Ditch	27.47	12.00	99,897	14, 15, 21, 22, 23, 24		
28	Junction	Post Combined	89.79	12.03	293,992	11, 12, 20, 26, 27		

Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

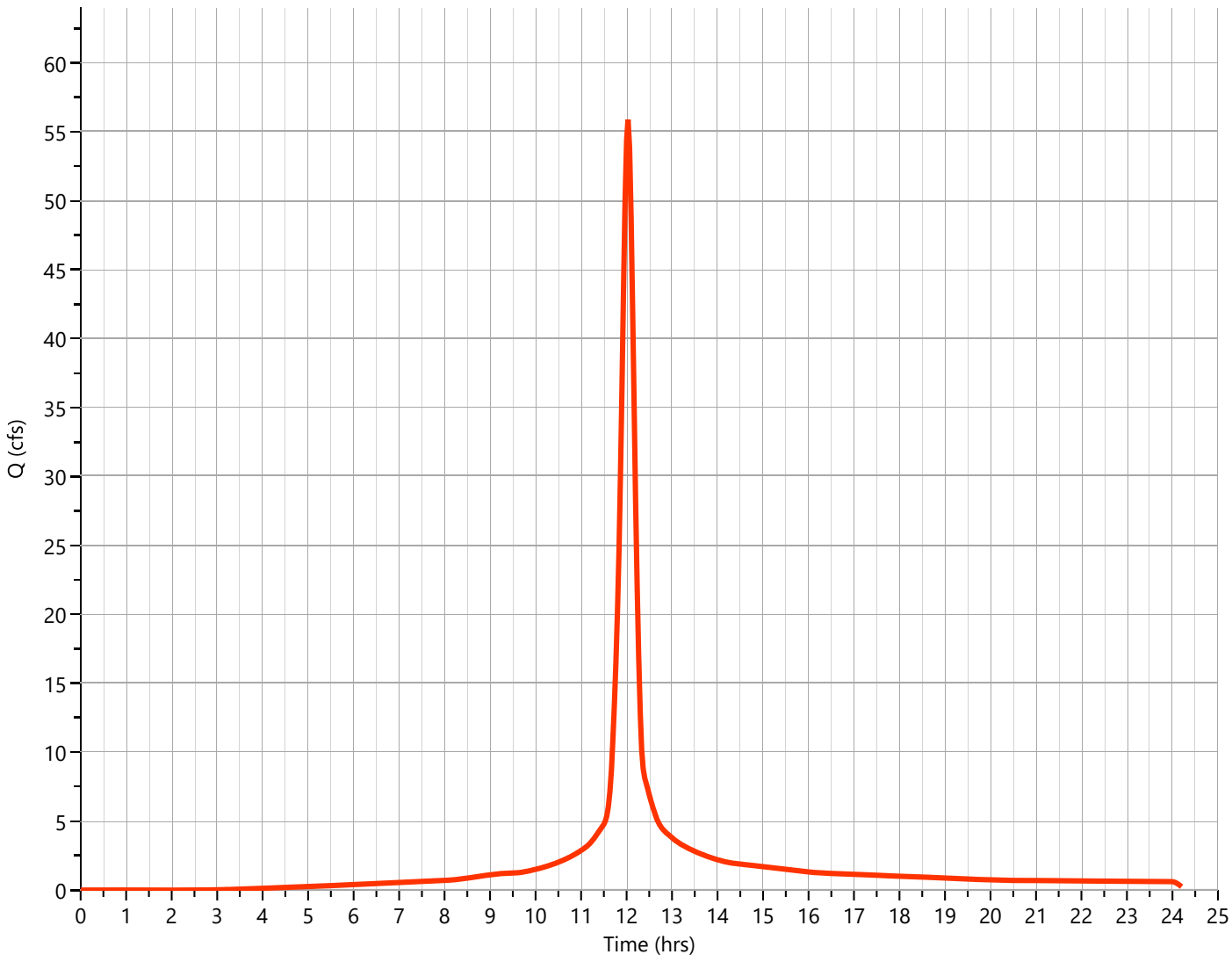
Pre South of Ditch

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 55.90 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 166,901 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.02*
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
8.69	91	No Rating (Row Crops)
0.2	91	Gravel
0.02	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

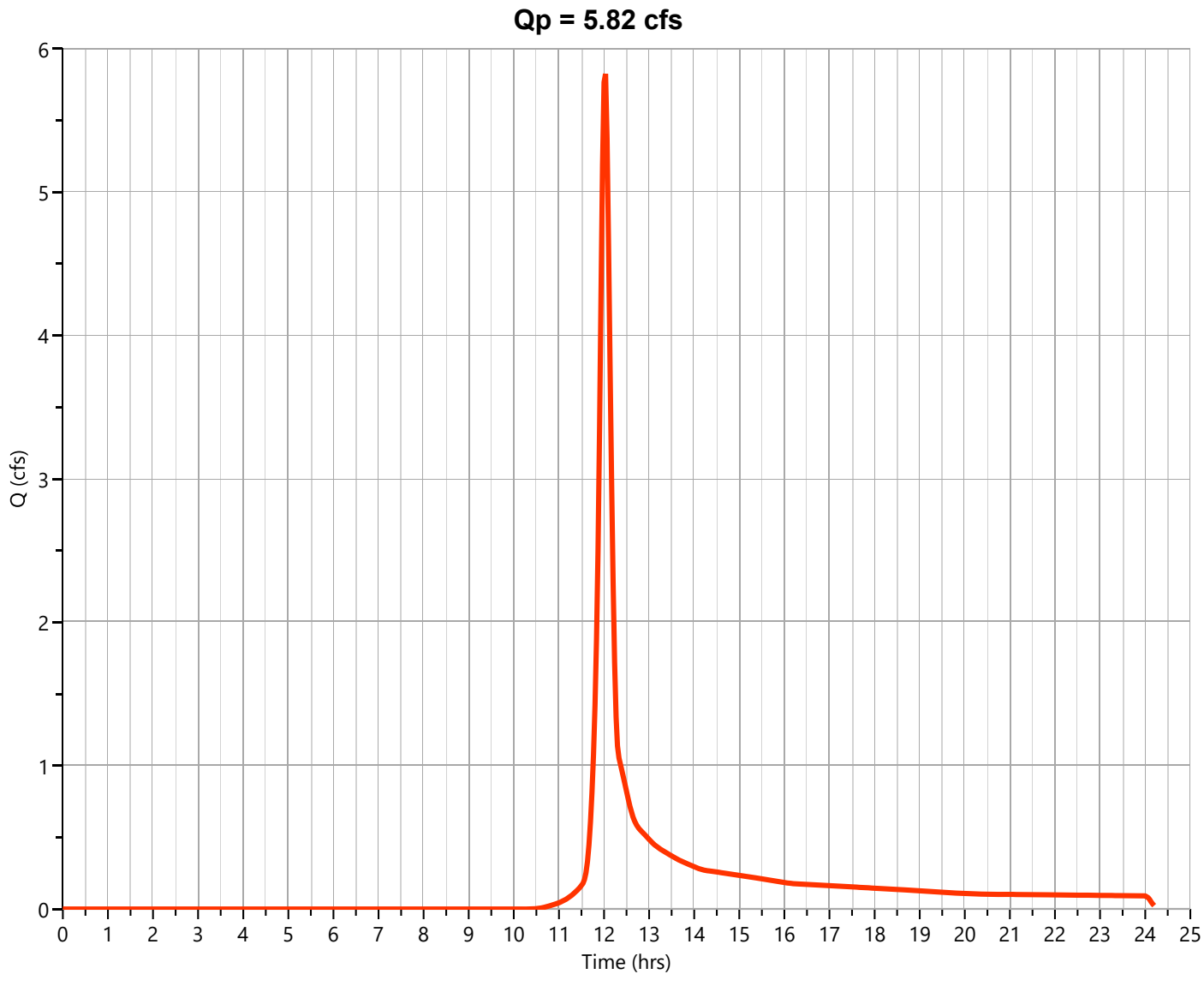
Pre Ditch

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 5.824 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 15,388 cuft
Drainage Area	= 1.79 ac	Curve Number	= 61.67*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.75	61	Ditch (inside buffer)
0.04	91	Gravel
1.79	**62**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

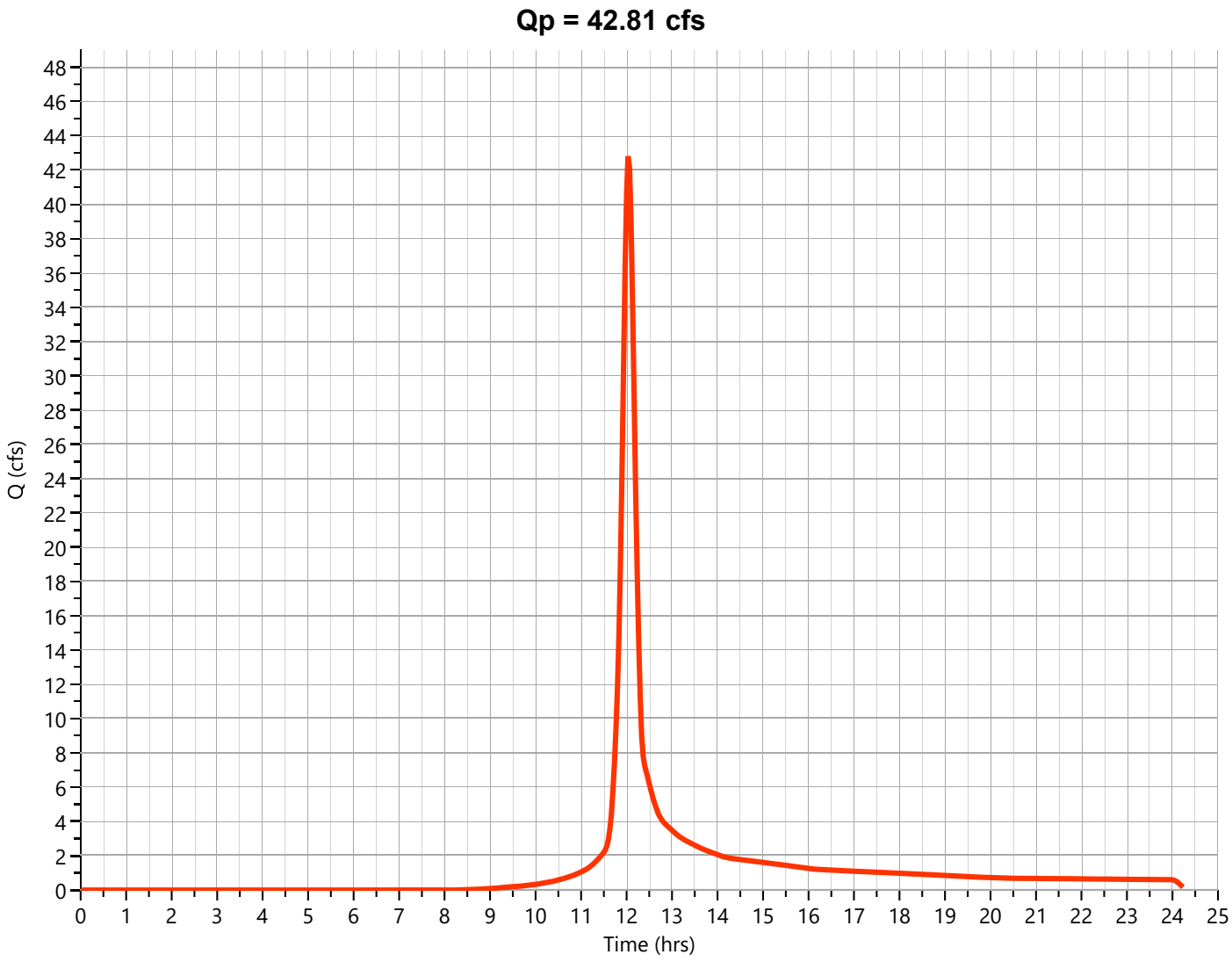
Pre North of Ditch

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 42.81 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 120,094 cuft
Drainage Area	= 10.55 ac	Curve Number	= 71.42*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.945	79	Pervious (C)
3.945	49	Pervious (A)
0.89	98	Buildings
1.73	91	Gravel
0.04	98	Concrete
10.55	**71**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

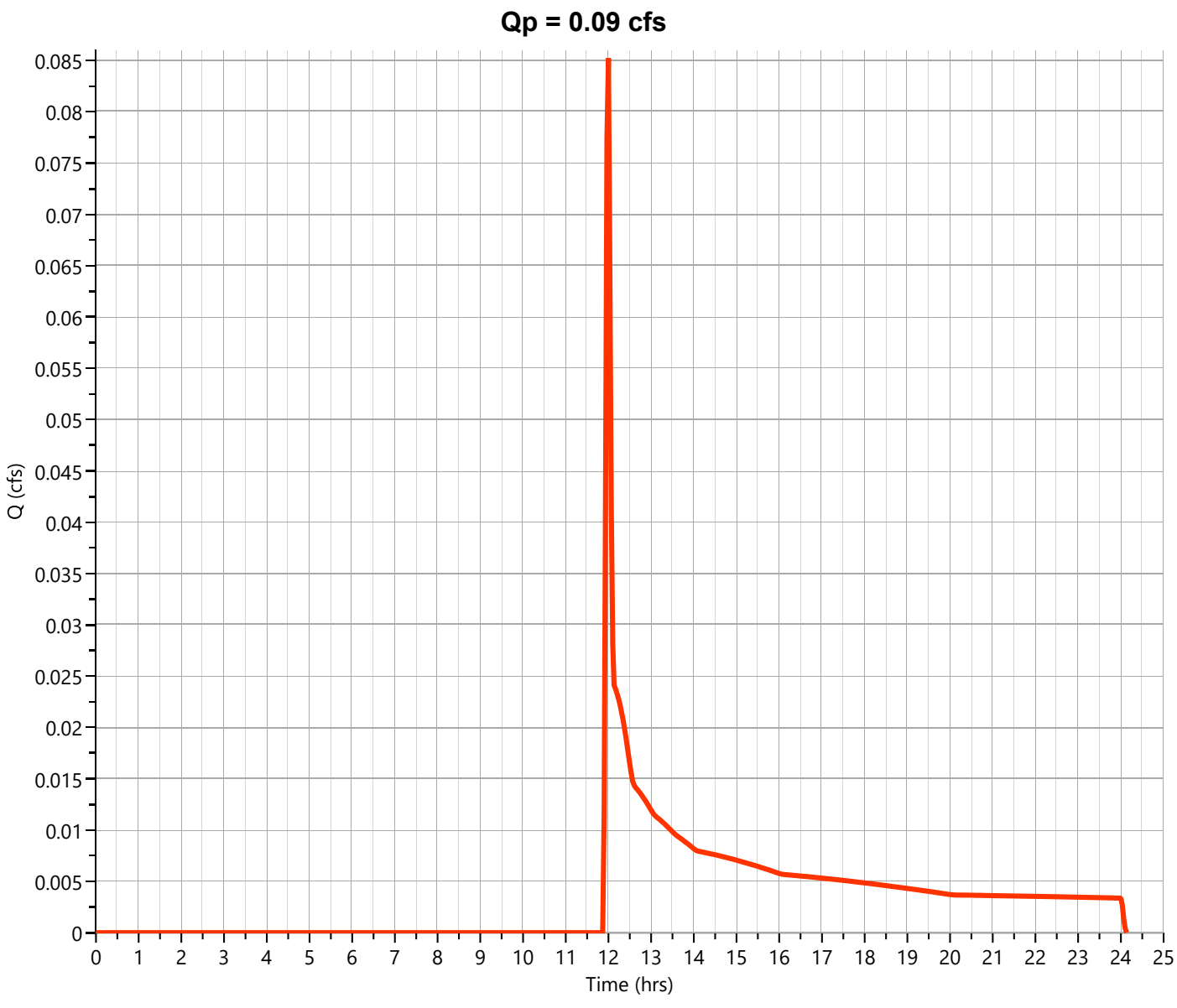
Pre Offsite 1

Hyd. No. 4

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.085 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 303 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

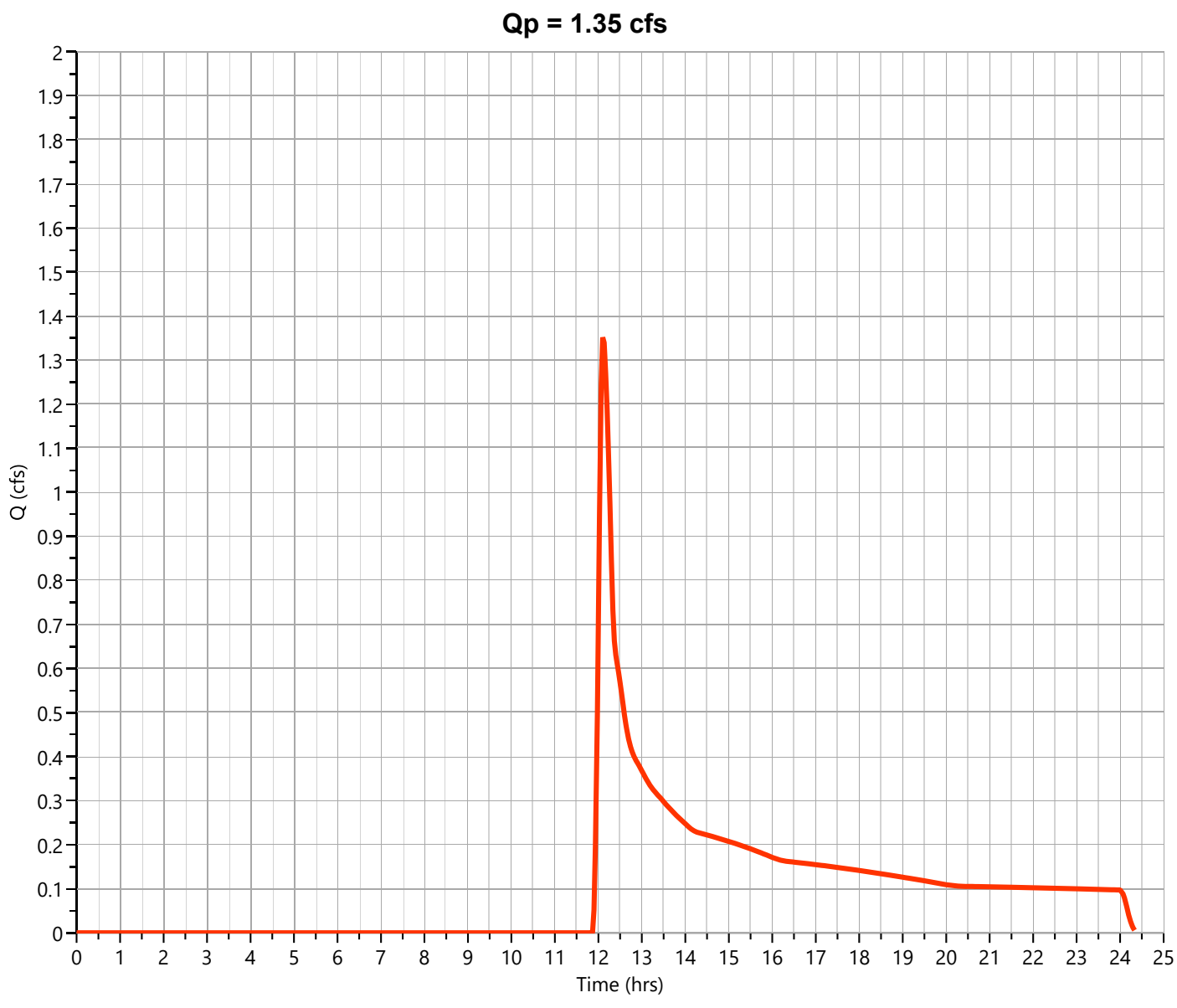
Pre Offsite 2

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.352 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 8,731 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

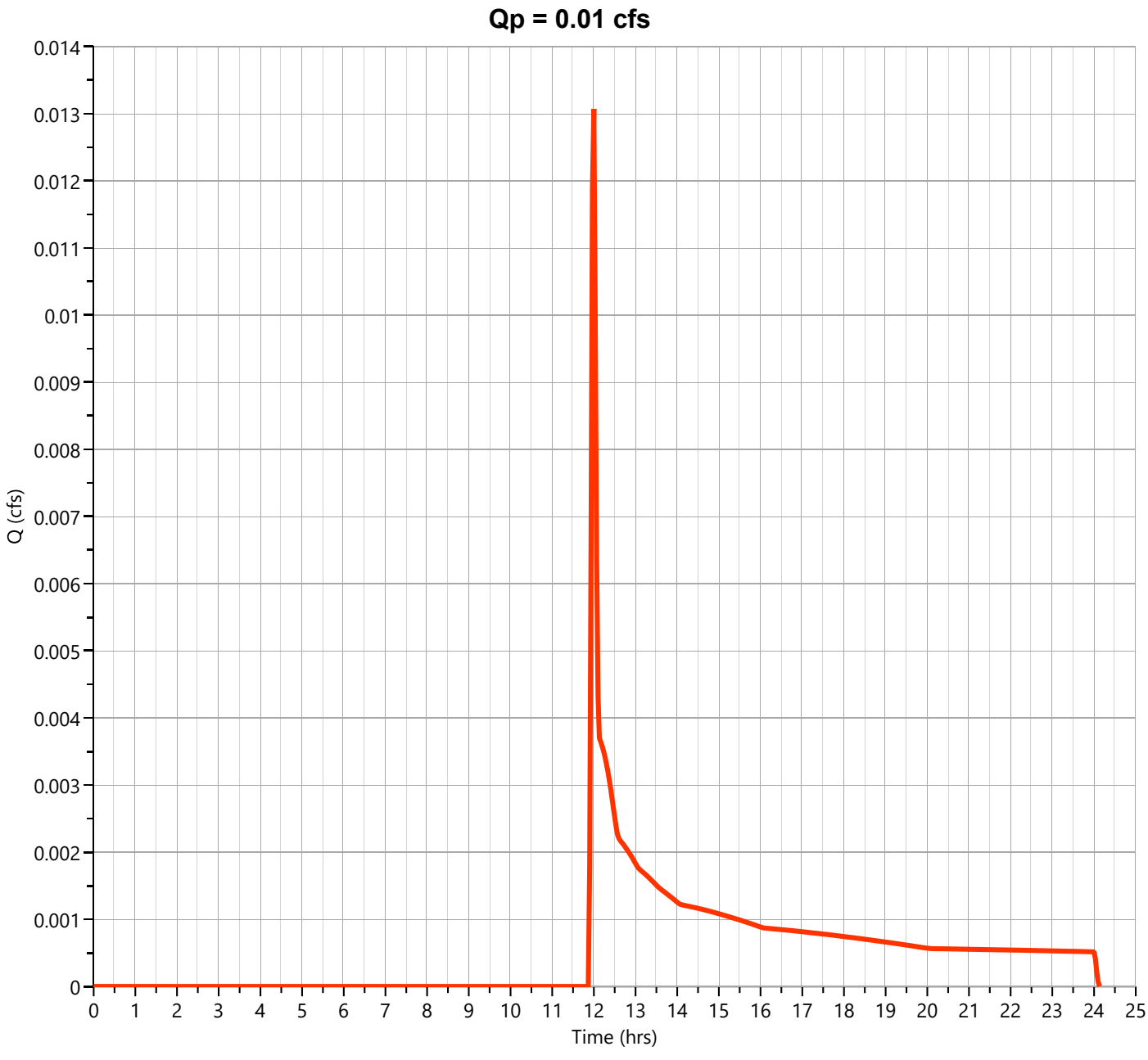
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite 3

Hyd. No. 6

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.013 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 46.5 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

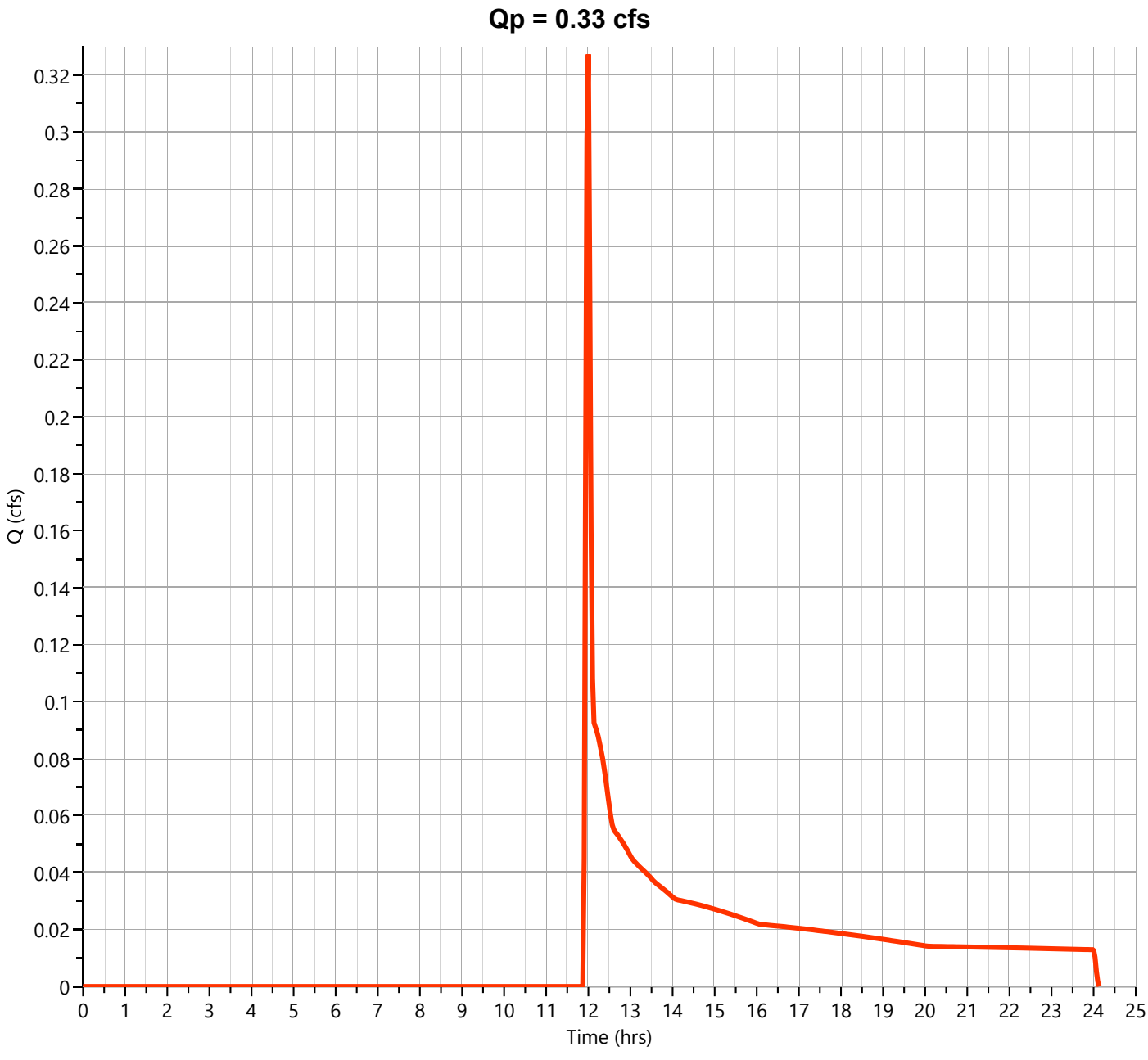
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.327 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 1,163 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

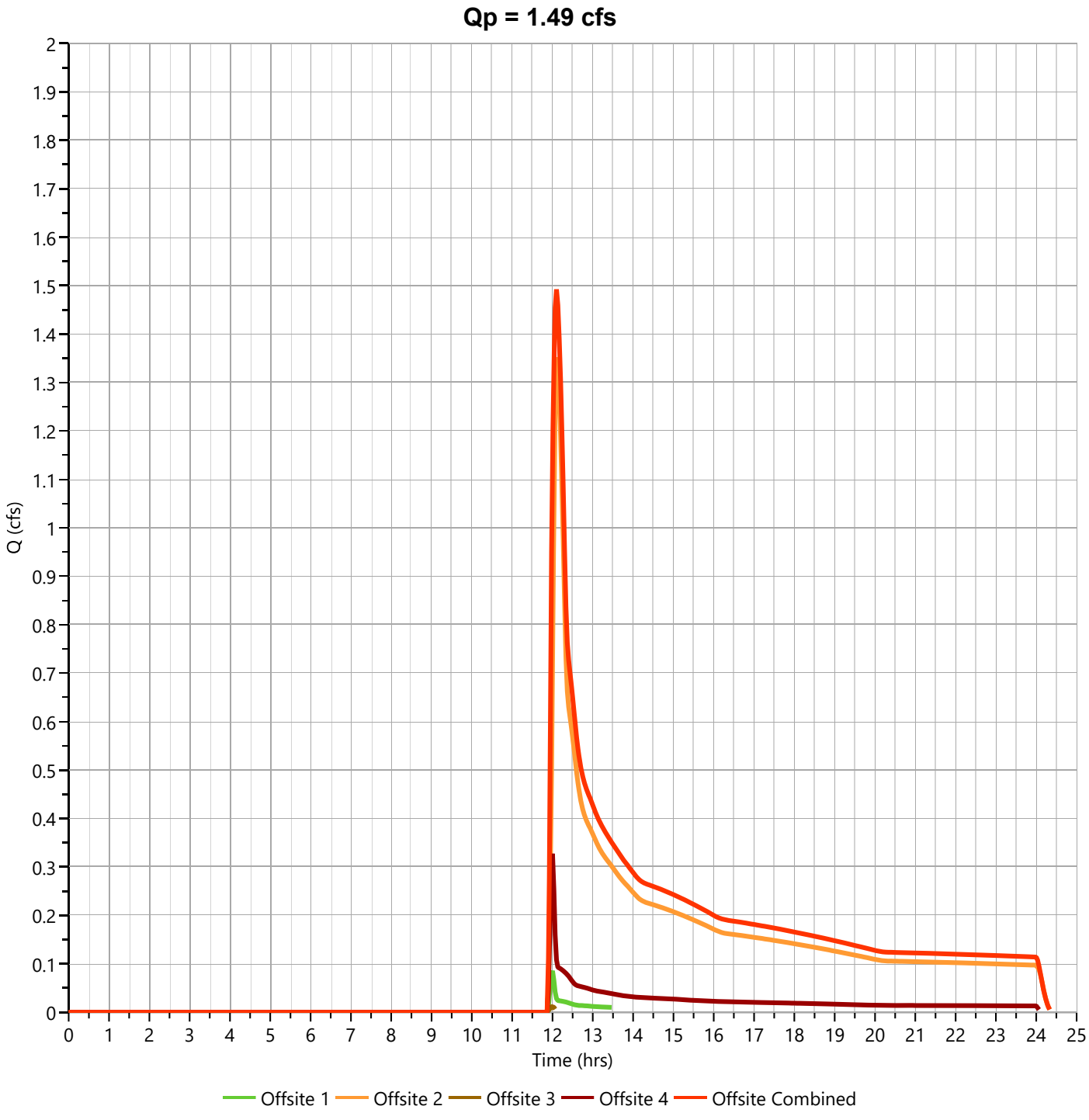
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite Combined

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 1.492 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Hydrograph Volume	= 10,243 cuft
Inflow Hydrographs	= 4, 5, 6, 7	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

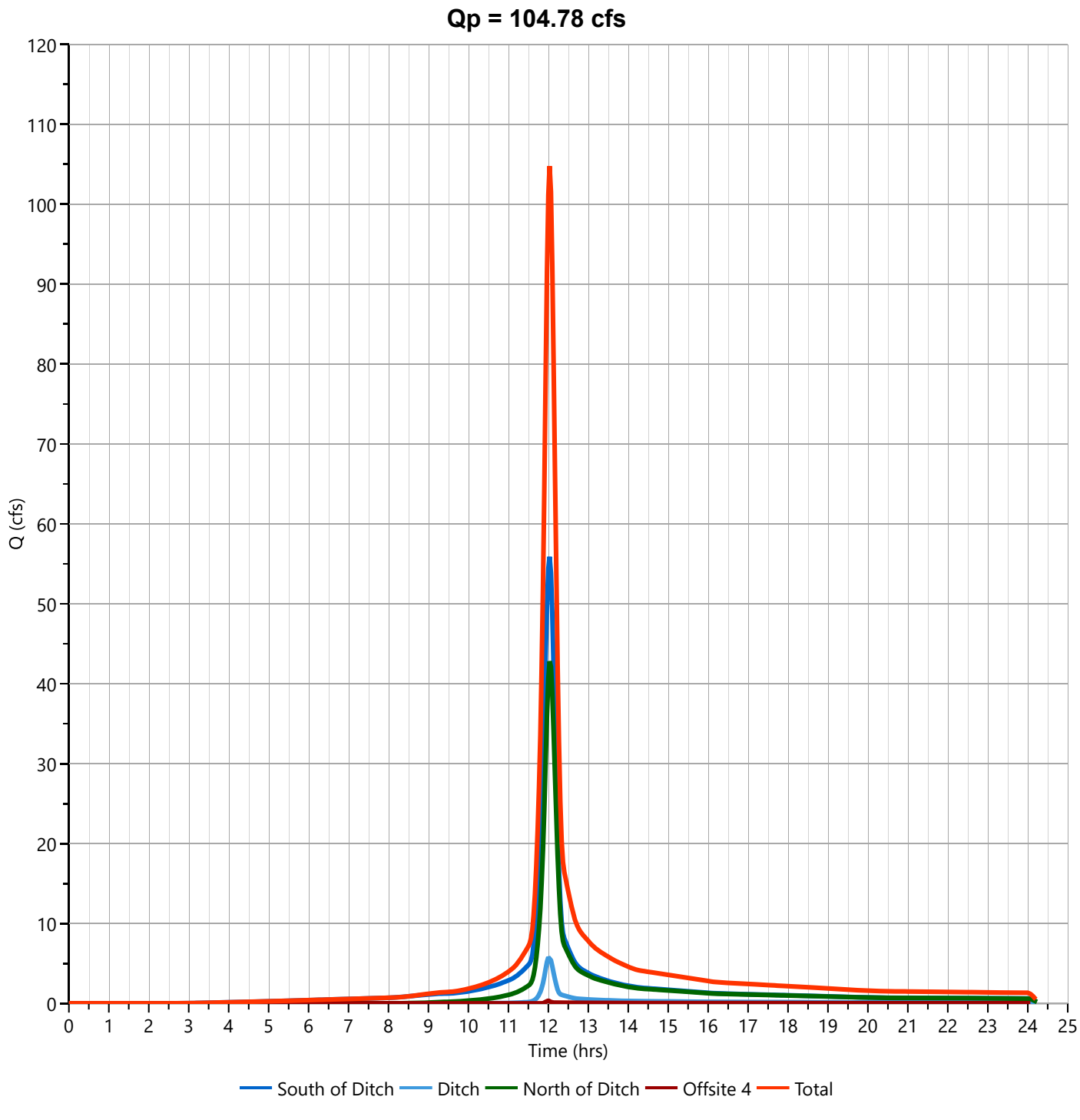
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Total

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 104.8 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 303,547 cuft
Inflow Hydrographs	= 1, 2, 3, 7	Total Contrib. Area	= 21.876 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

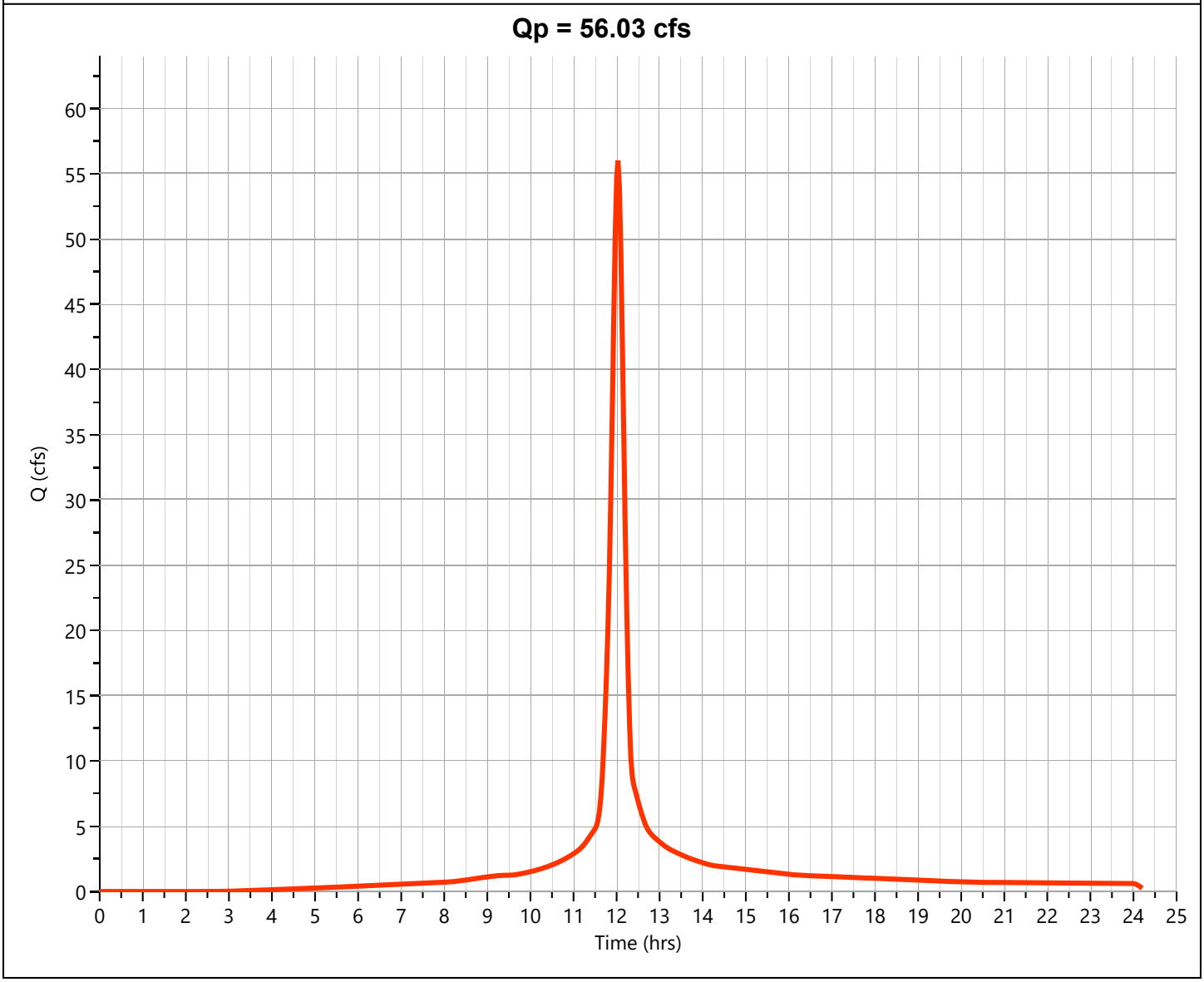
Post South of Ditch

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 56.03 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 167,544 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.2*
Tc Method	= User	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
7.83	91	Row Crop
0.82	91	Gravel Drive
0.26	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

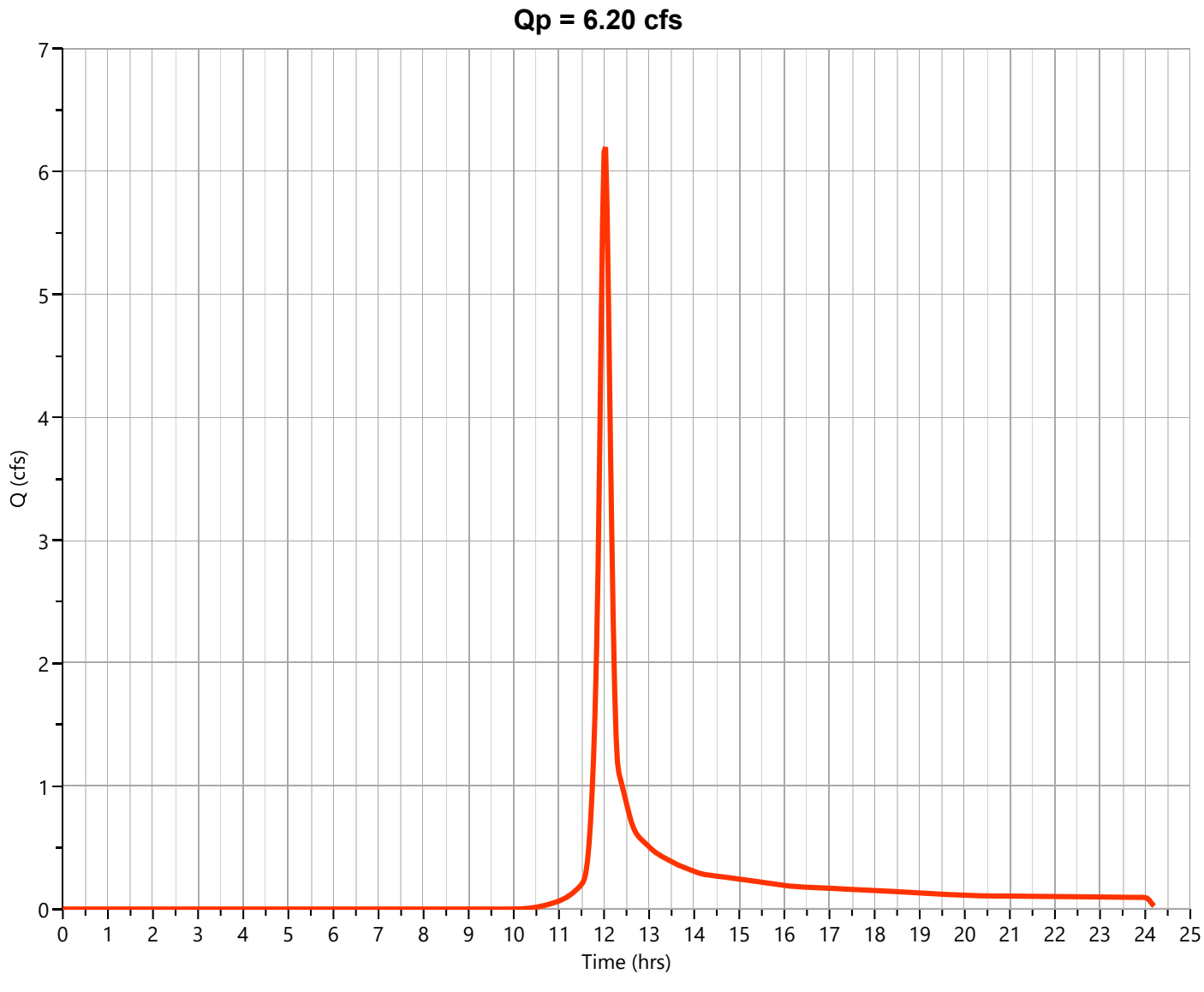
Post Ditch

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 6.199 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 16,307 cuft
Drainage Area	= 1.79 ac	Curve Number	= 63.18*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.66	61	Ditch (inside buffer)
0.13	91	Gravel
1.79	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

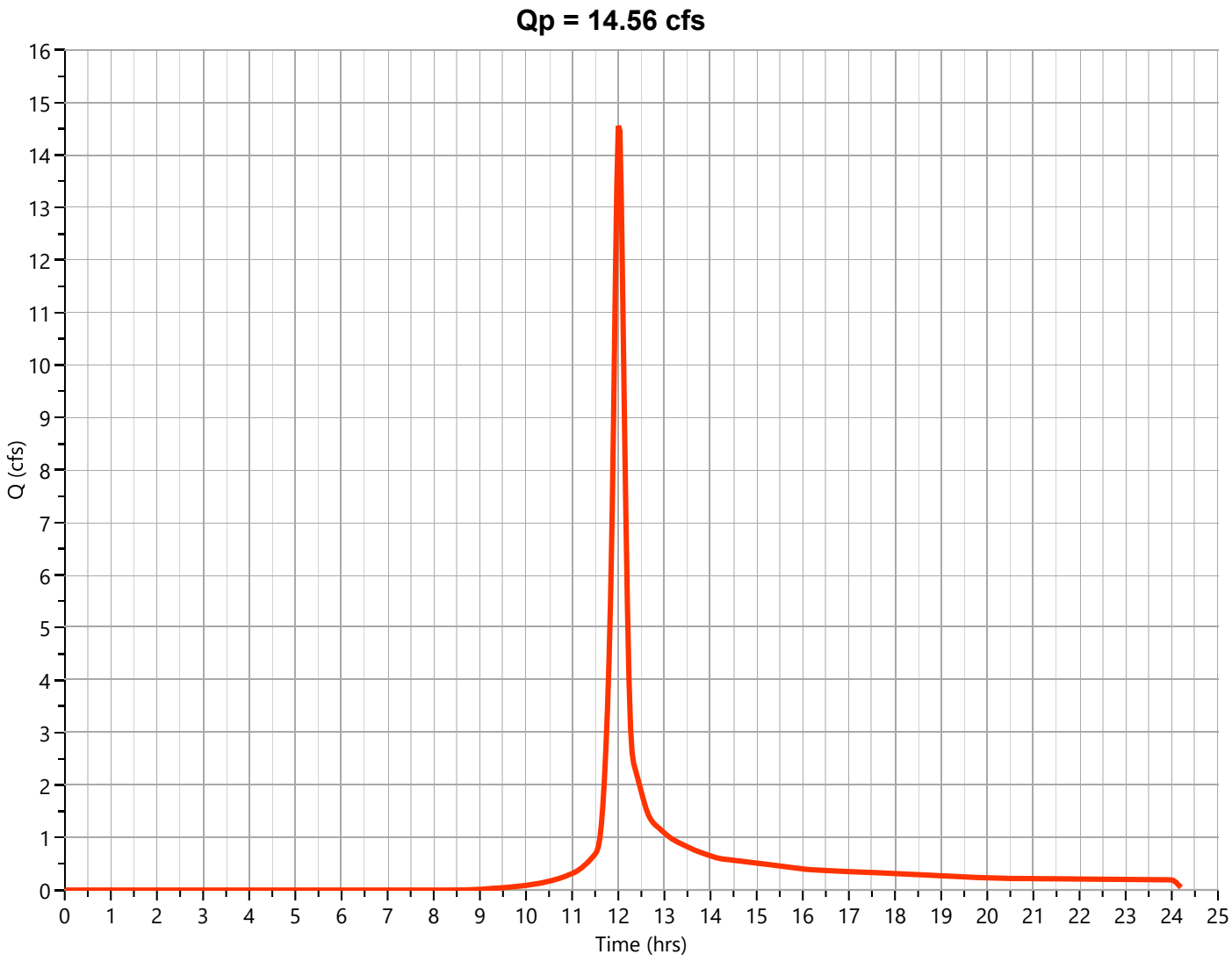
Post North to Pond 1

Hyd. No. 13

Hydrograph Type	= NRCS Runoff	Peak Flow	= 14.56 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 37,809 cuft
Drainage Area	= 3.282 ac	Curve Number	= 70*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.4	49	Pervious (A)
0.936	79	Pervious (C)
0.566	91	Gravel
0.38	98	Buildings
3.282	**70**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

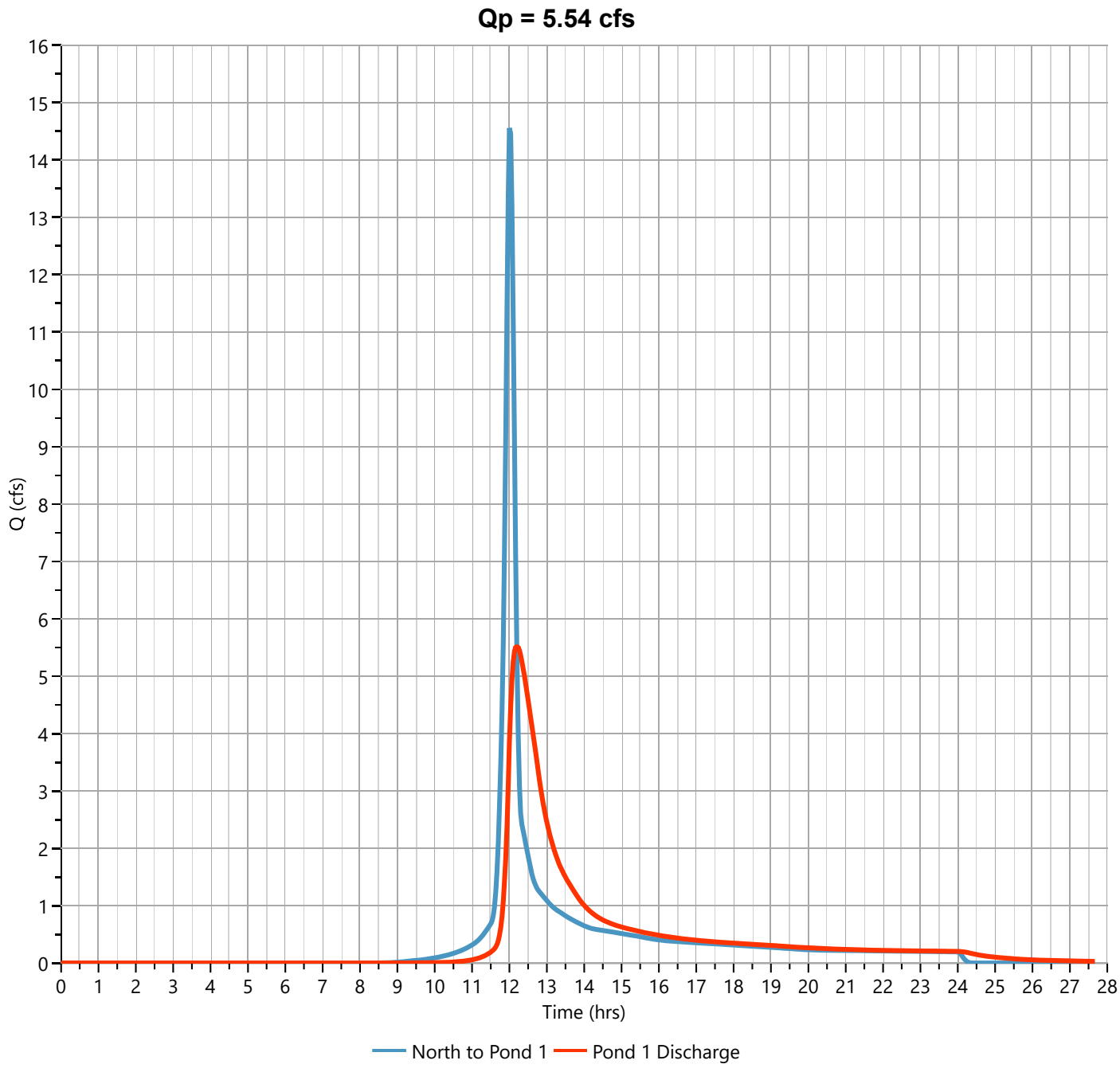
Post Pond 1 Discharge

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 5.536 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.20 hrs
Time Interval	= 2 min	Hydrograph Volume	= 37,782 cuft
Inflow Hydrograph	= 13 - North to Pond 1	Max. Elevation	= 629.87 ft
Pond Name	= Pond 1	Max. Storage	= 12,387 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 47 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

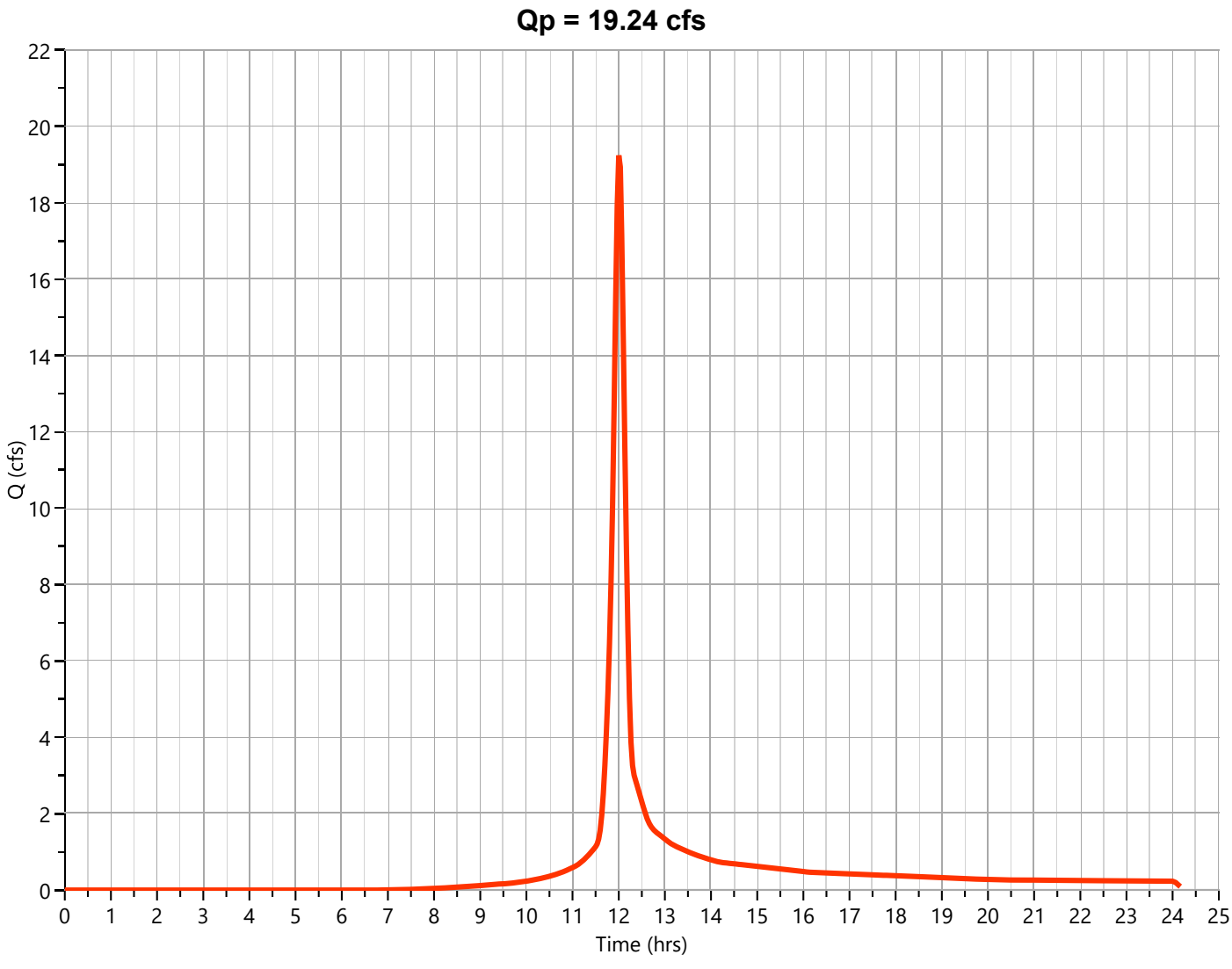
Post Bypass

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 19.24 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 50,004 cuft
Drainage Area	= 3.569 ac	Curve Number	= 76.66*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.95	49	Pervious (A)
1.26	79	Pervious (C)
0.81	91	Gravel
0.549	98	Buildings
3.569	**77**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

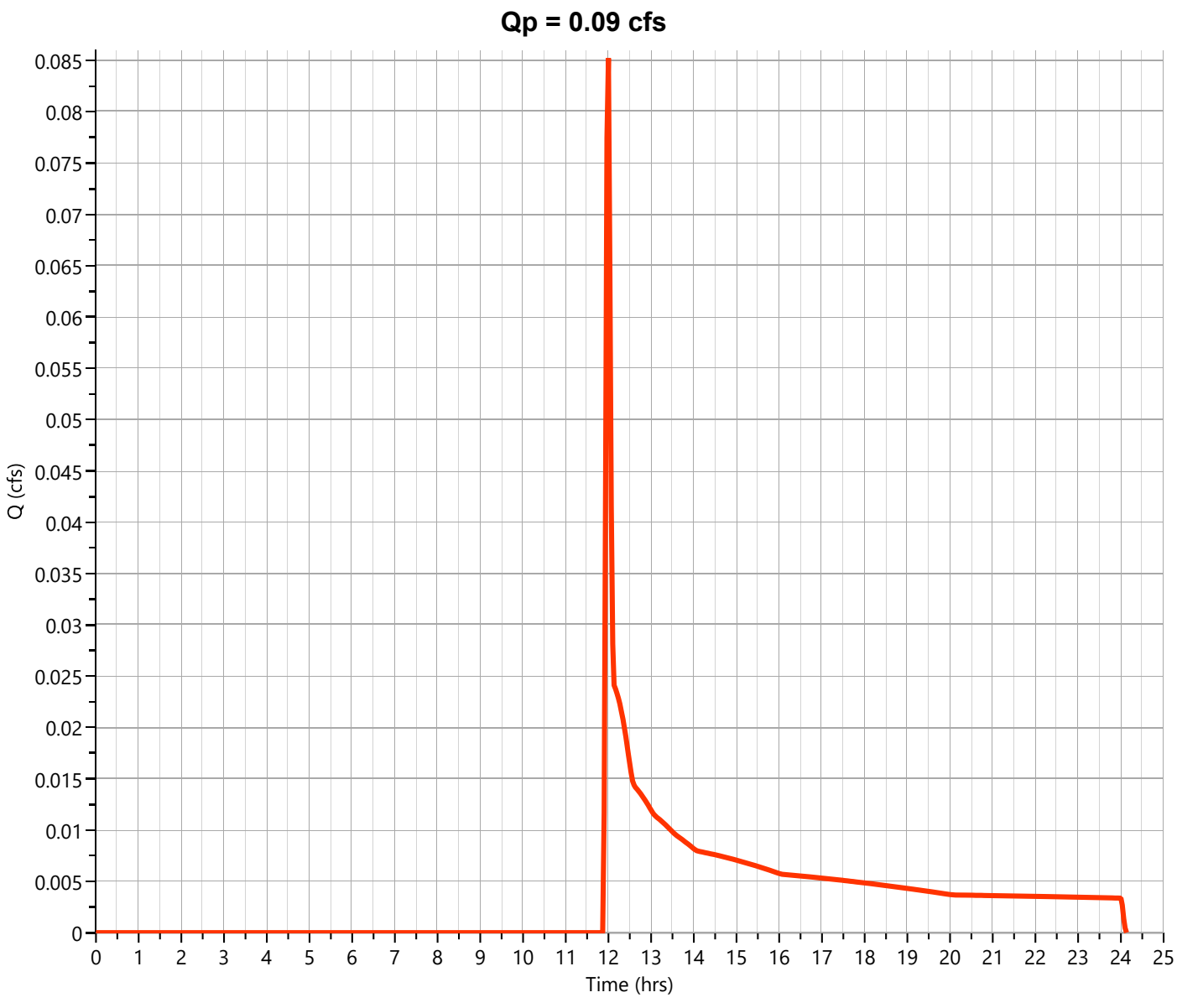
Post Offsite 1

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.085 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 303 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

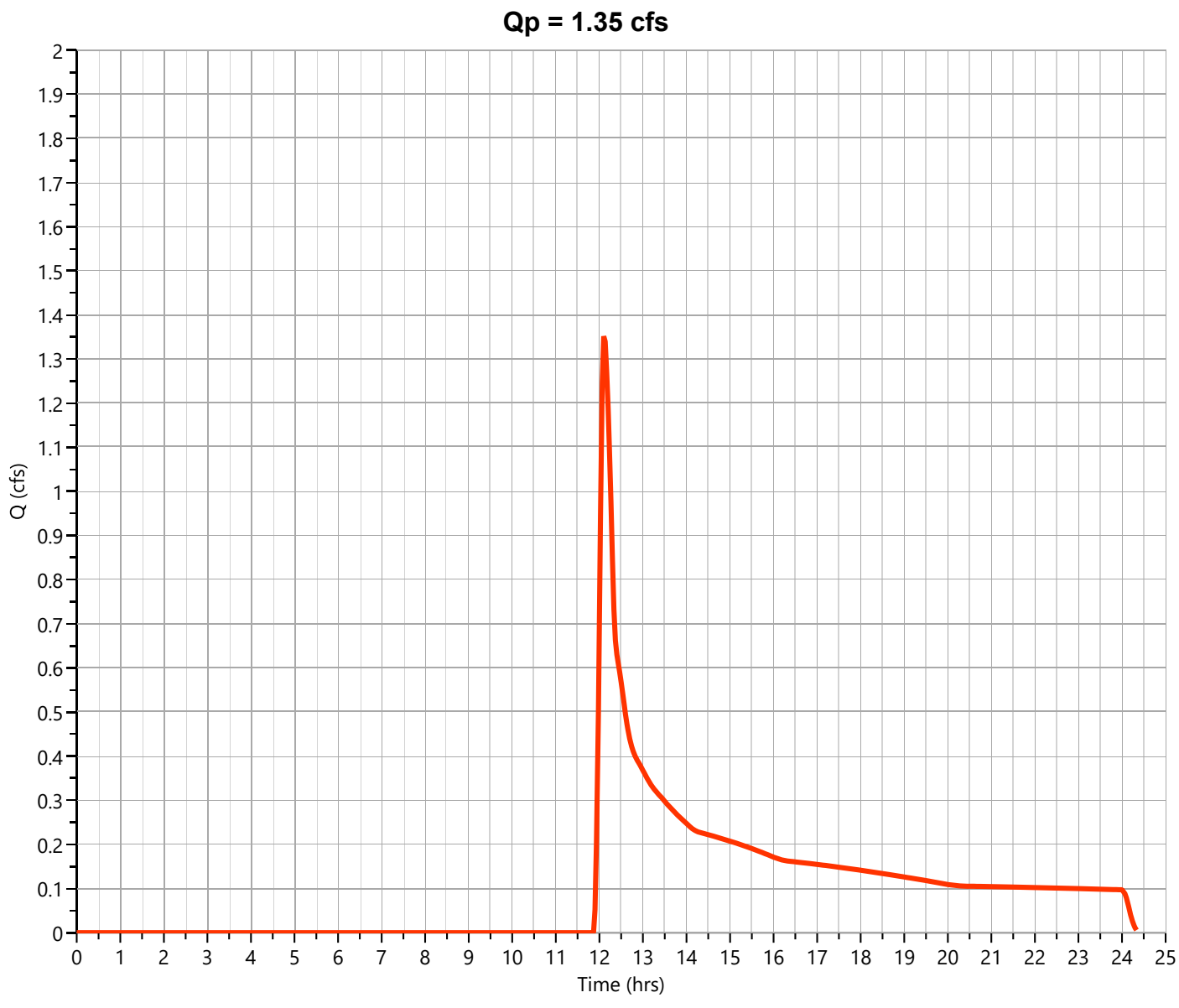
Post Offsite 2

Hyd. No. 17

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.352 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 8,731 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

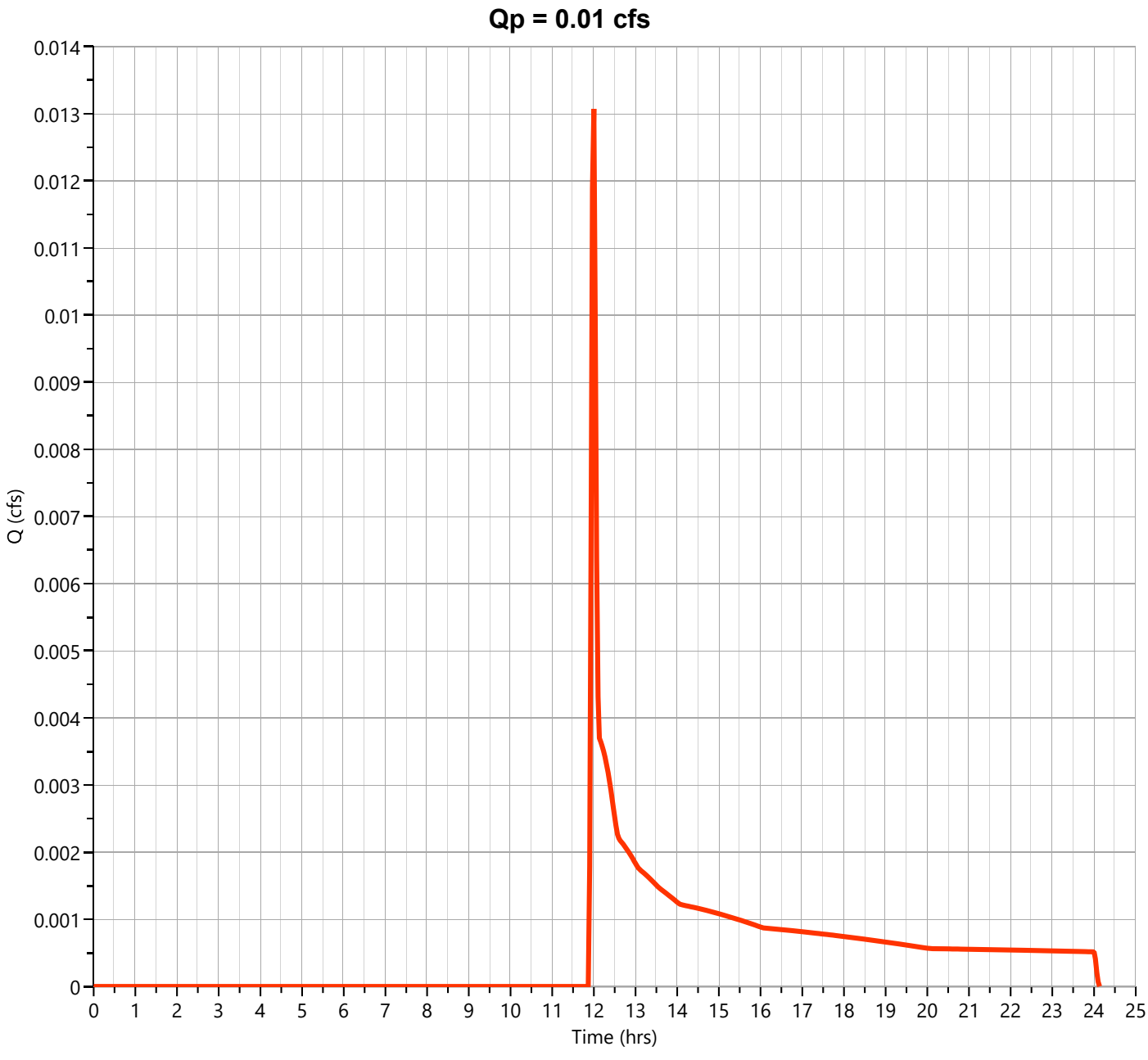
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 3

Hyd. No. 18

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.013 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 46.5 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

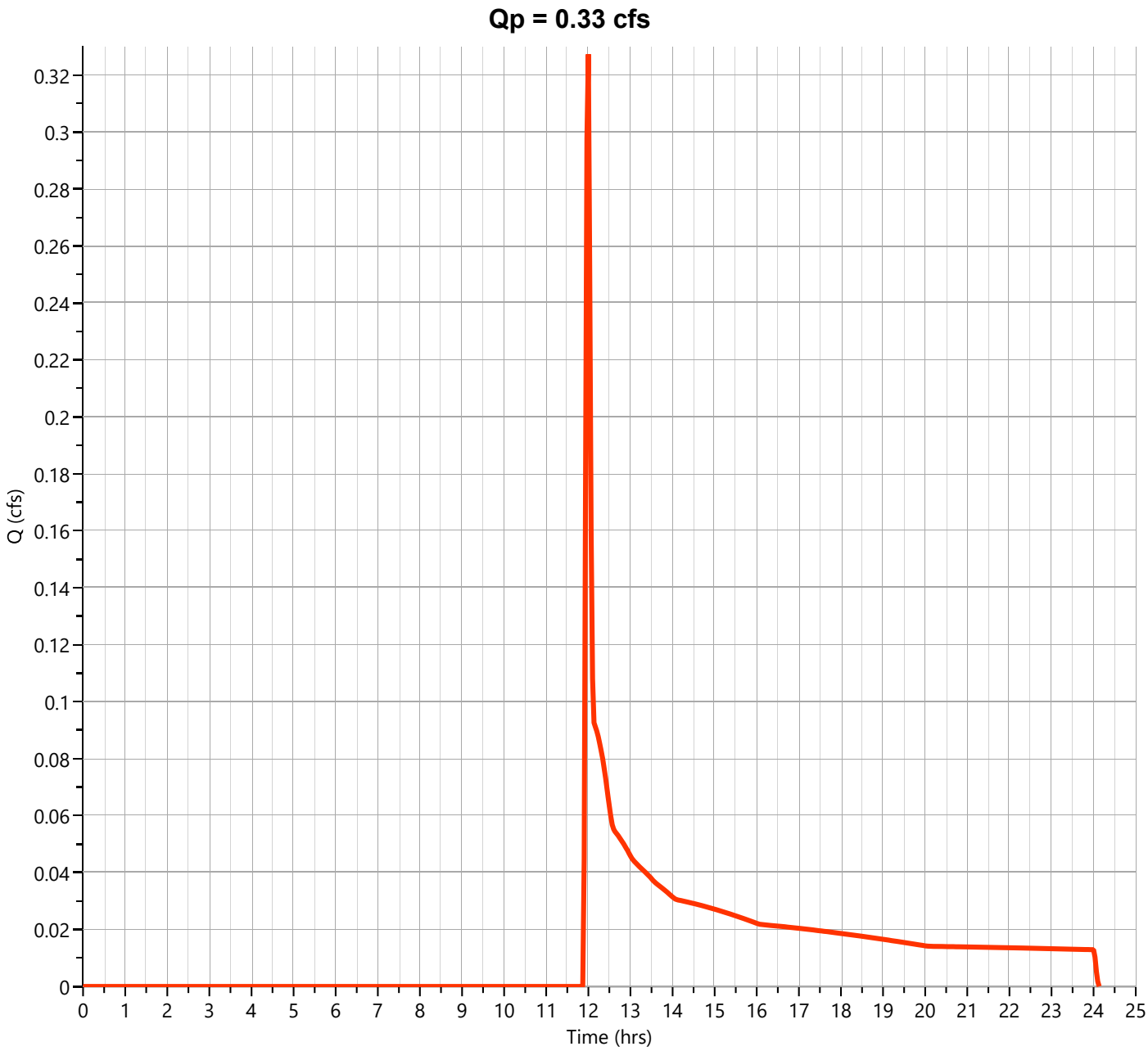
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 19

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.327 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 1,163 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

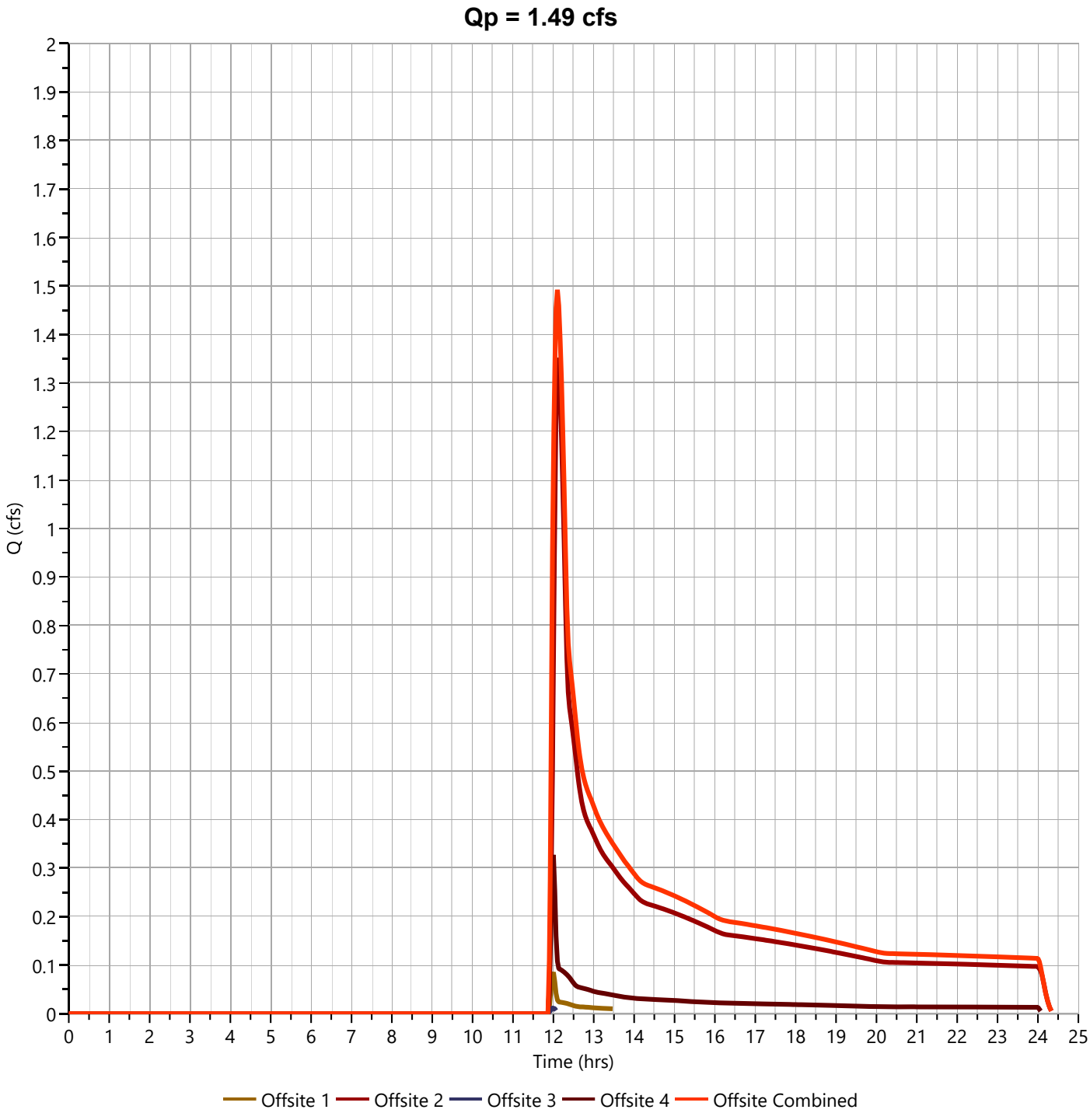
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite Combined

Hyd. No. 20

Hydrograph Type	= Junction	Peak Flow	= 1.492 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Hydrograph Volume	= 10,243 cuft
Inflow Hydrographs	= 16, 17, 18, 19	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

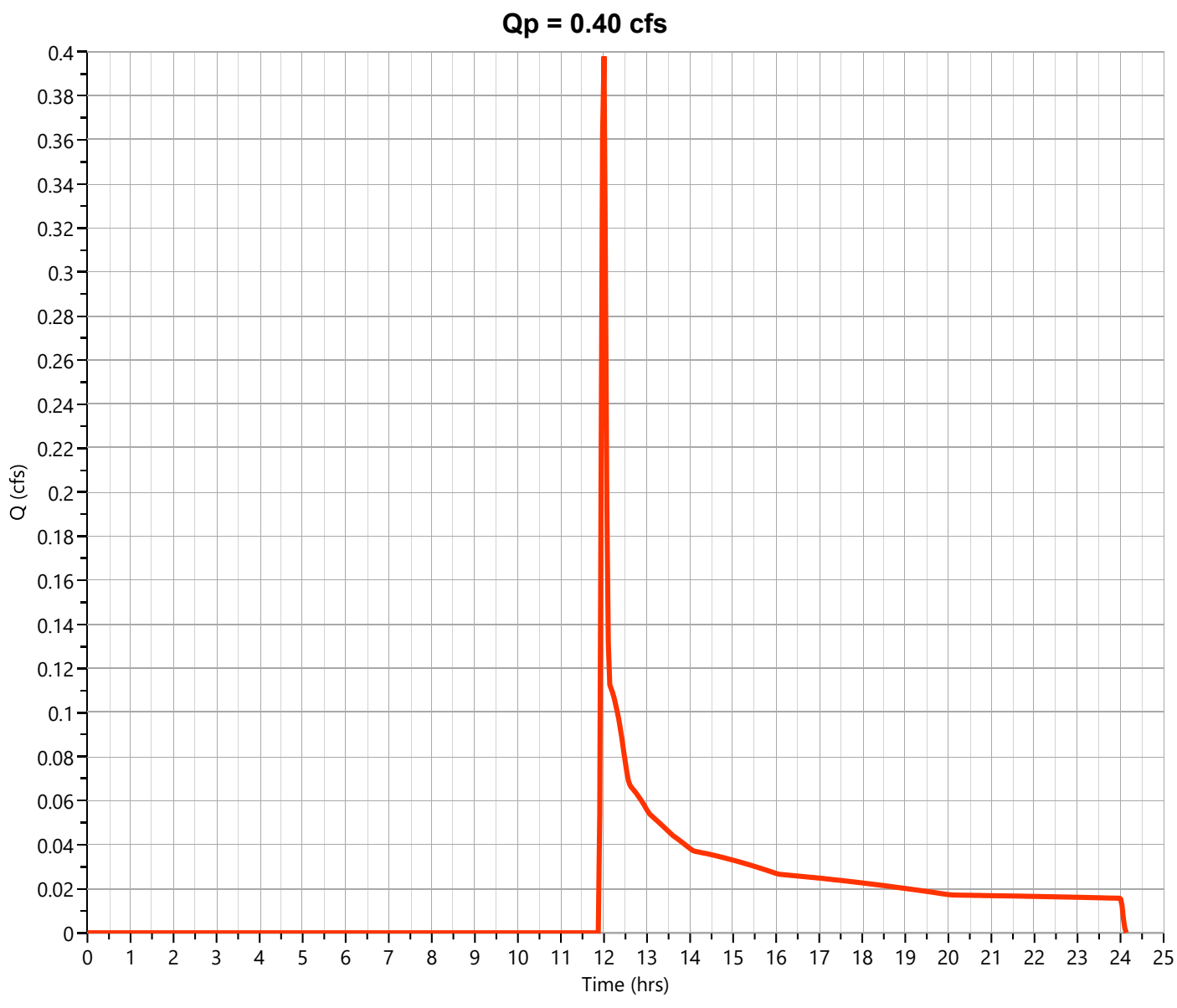
Post Culvert 1

Hyd. No. 21

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.398 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 1,414 cuft
Drainage Area	= 0.761 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.761	39	Pervious (A)
0.761	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

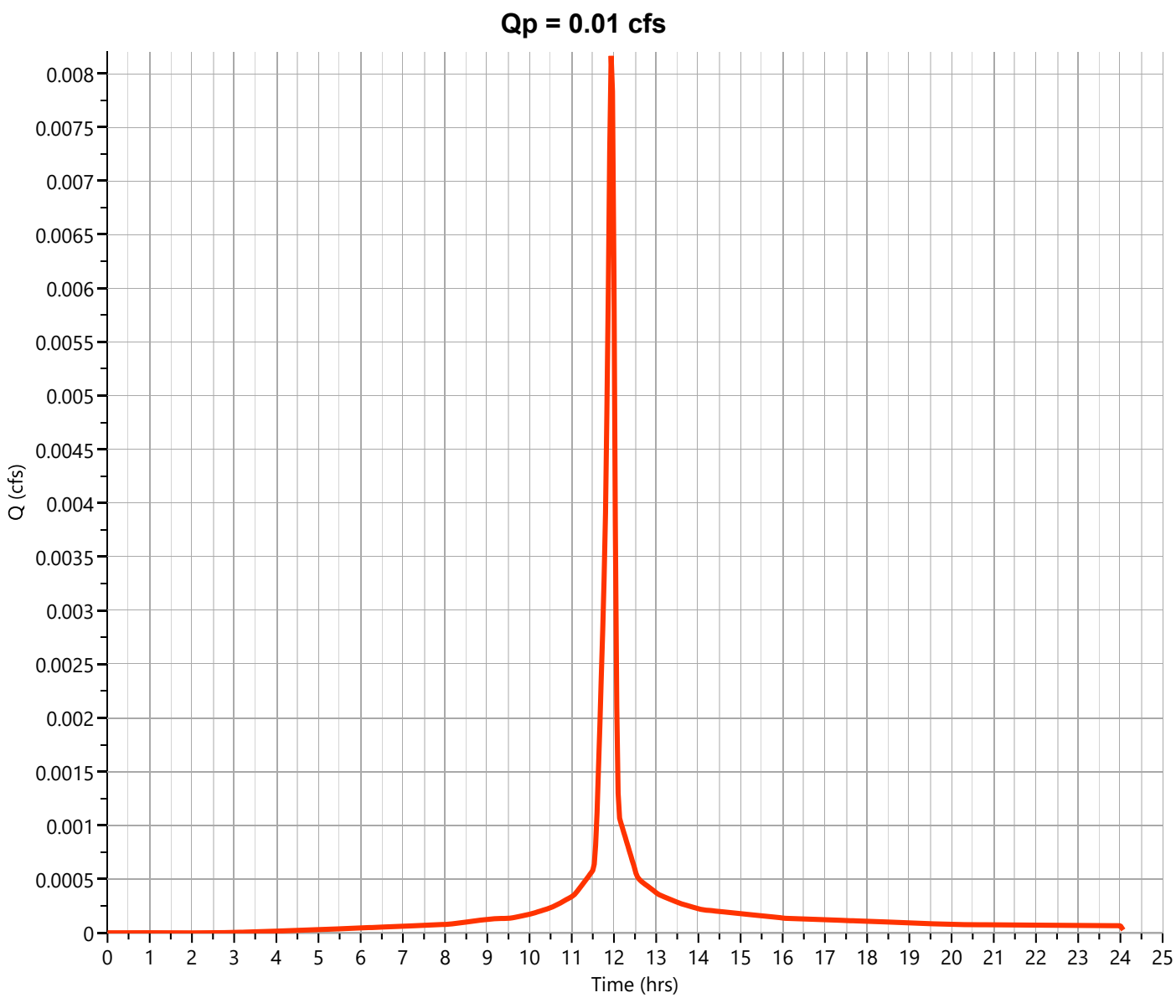
Post Area Drain 3 (AD3)

Hyd. No. 22

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.008 cfs
Storm Frequency	= 25-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 18.0 cuft
Drainage Area	= 0.001 ac	Curve Number	= 91*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.001	91	Gravel
0.001	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

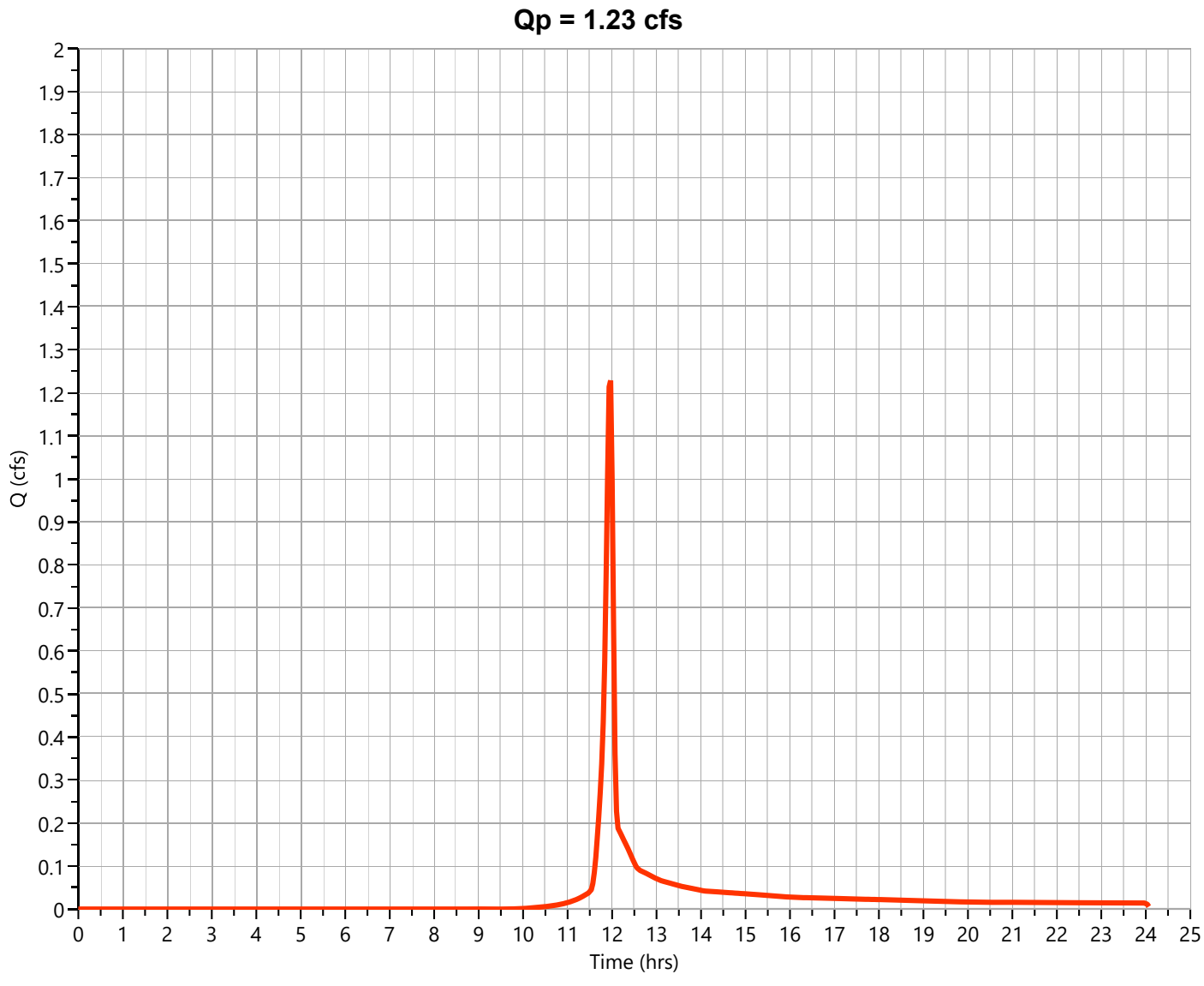
Post Area Drain 2 (AD2)

Hyd. No. 23

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.229 cfs
Storm Frequency	= 25-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 2,462 cuft
Drainage Area	= 0.28 ac	Curve Number	= 64.81*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.139	91	Gravel
0.141	39	Grass
0.28	**65**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

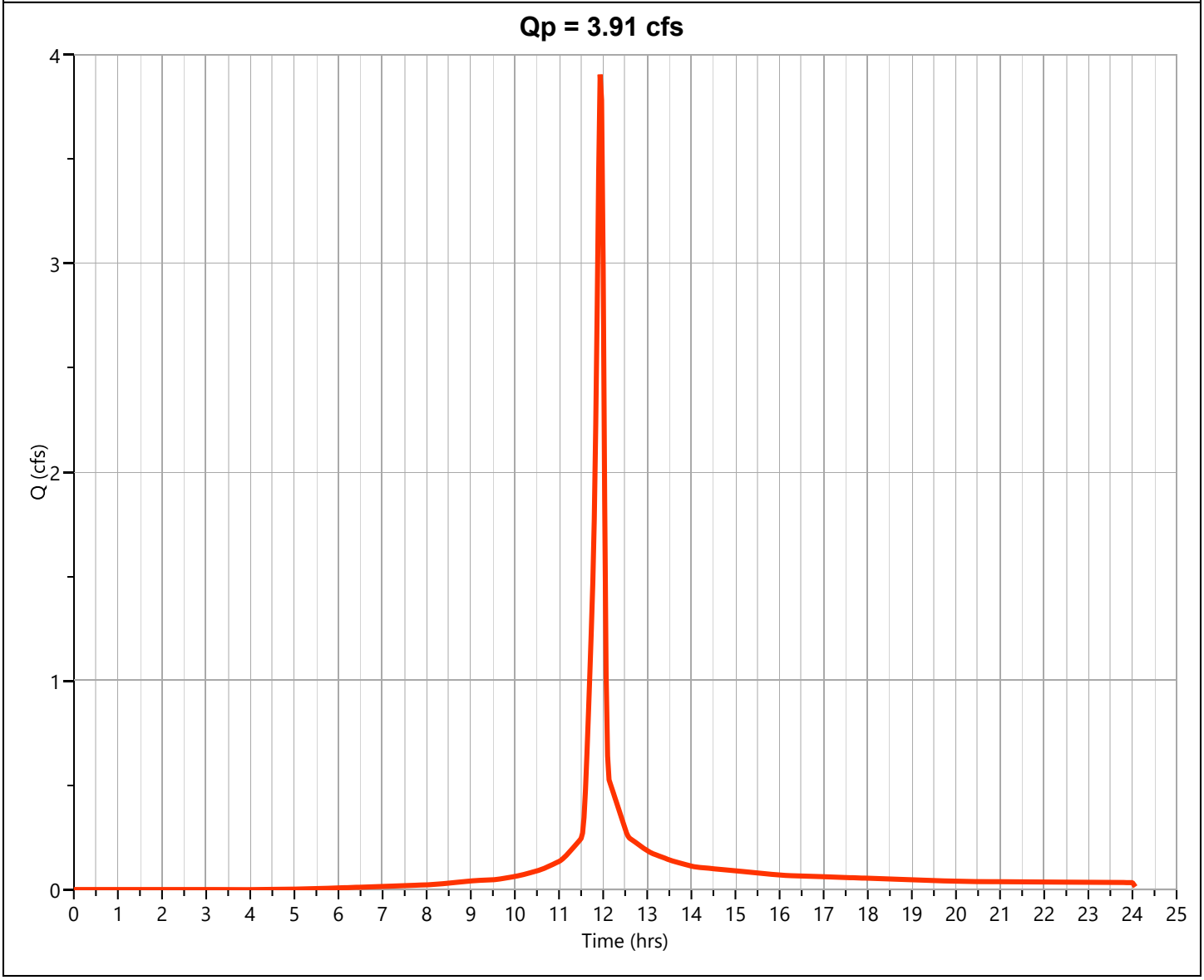
Post Area Drain 1 (AD1)

Hyd. No. 24

Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.905 cfs
Storm Frequency	= 25-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 8,217 cuft
Drainage Area	= 0.527 ac	Curve Number	= 84.61*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.087	49	Pervious (A)
0.399	91	Gravel
0.041	98	Building
0.527	**85**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

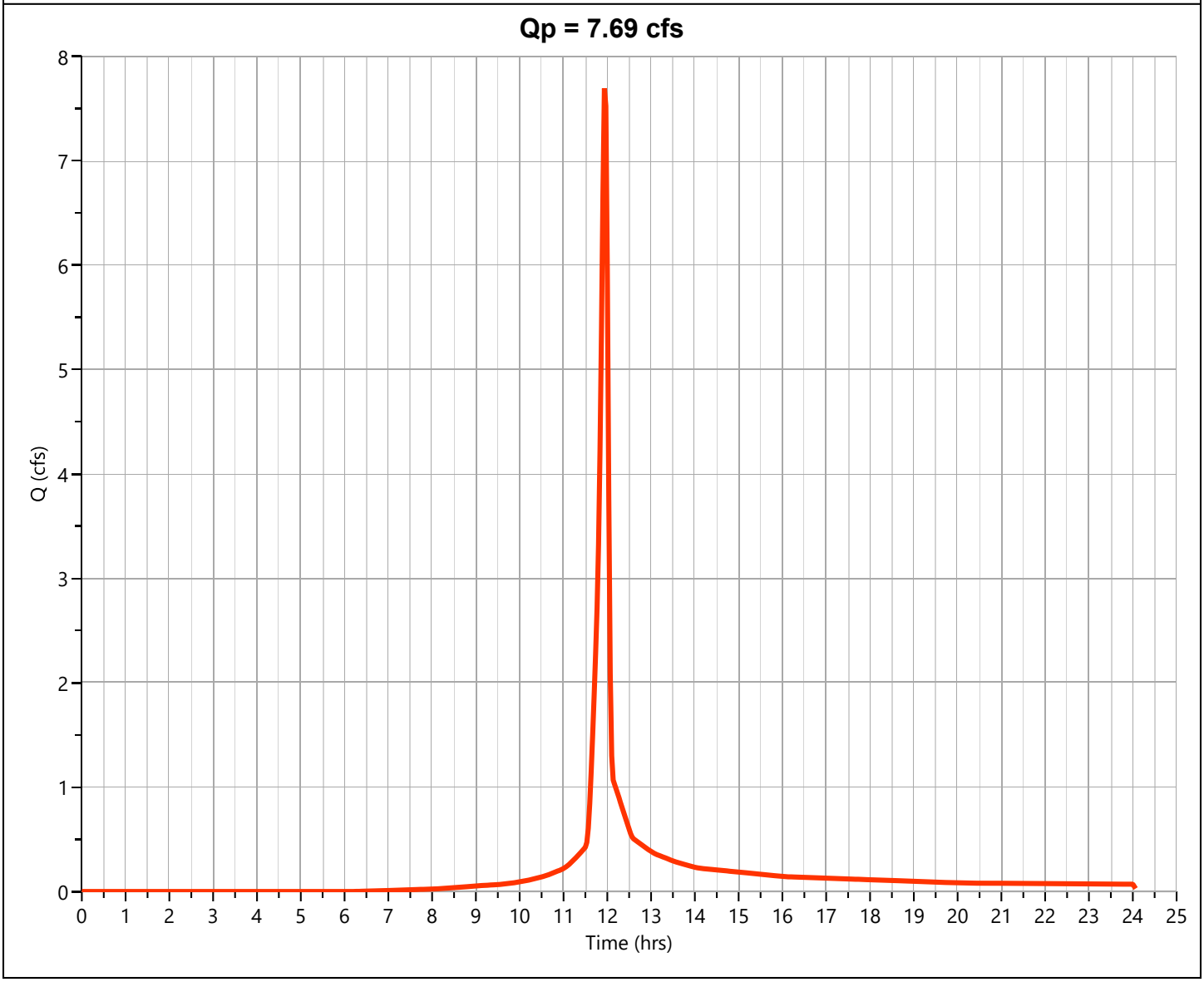
Post North to Pond 2

Hyd. No. 25

Hydrograph Type	= NRCS Runoff	Peak Flow	= 7.694 cfs
Storm Frequency	= 25-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 15,796 cuft
Drainage Area	= 1.16 ac	Curve Number	= 79.16*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 6.34 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.618	91	Gravel
0.245	98	Bldg/Concrete
0.297	39	Grass
1.16	**79**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

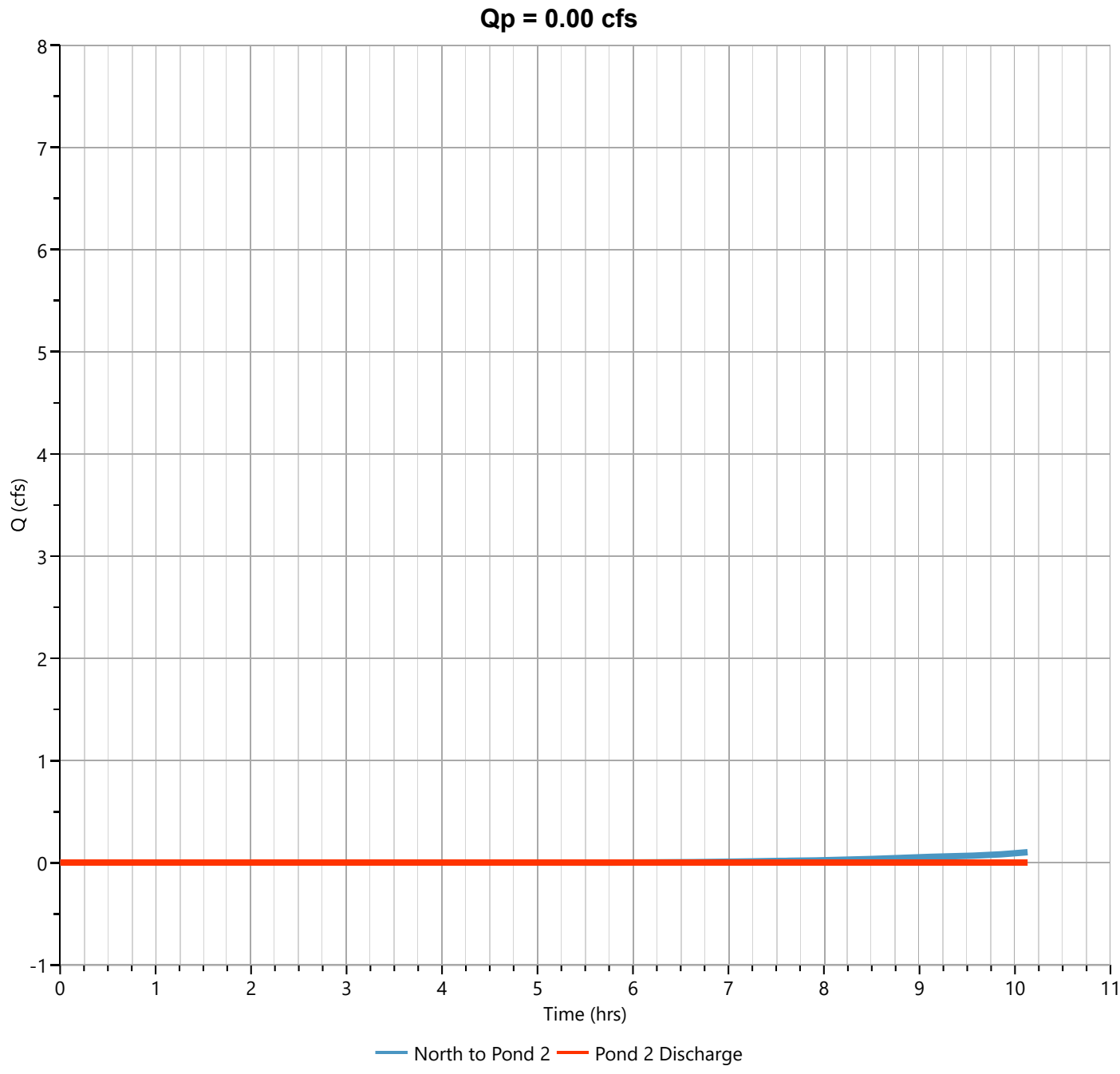
07-25-2024

Post Pond 2 Discharge

Hyd. No. 26

Hydrograph Type	= Pond Route	Peak Flow	= 0.000 cfs
Storm Frequency	= 25-yr	Time to Peak	= 10.10 hrs
Time Interval	= 2 min	Hydrograph Volume	= 0.000 cuft
Inflow Hydrograph	= 25 - North to Pond 2	Max. Elevation	= 533.78 ft
Pond Name	= Pond 2	Max. Storage	= 11,566 cuft

Pond Routing by Storage Indication Method



Hydrograph Report

Project Name:

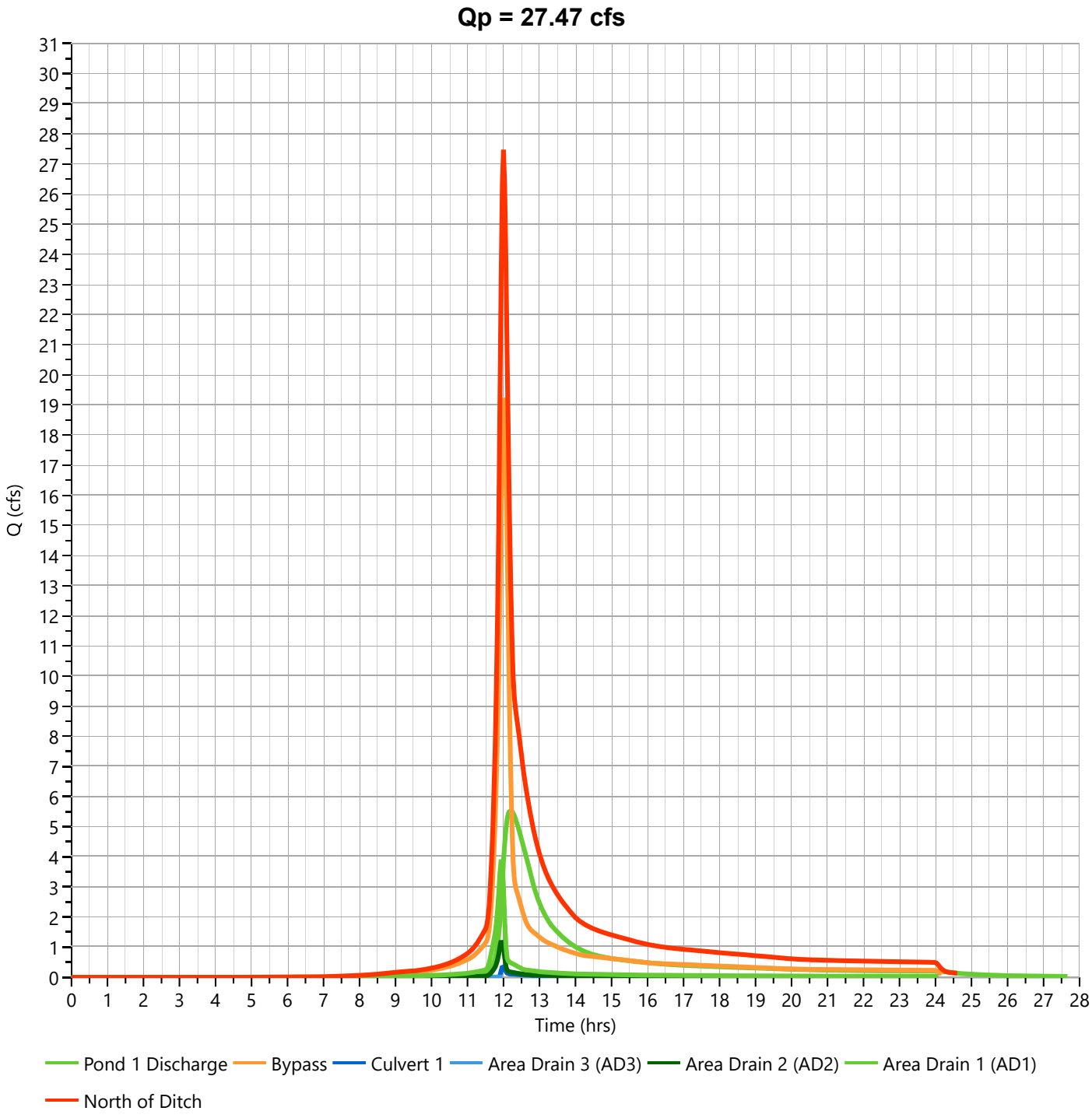
Hydrology Studio v 3.0.0.32

07-25-2024

Post North of Ditch

Hyd. No. 27

Hydrograph Type	= Junction	Peak Flow	= 27.47 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Hydrograph Volume	= 99,897 cuft
Inflow Hydrographs	= 14, 15, 21, 22, 23, 24	Total Contrib. Area	= 5.138 ac



Hydrograph Report

Project Name:

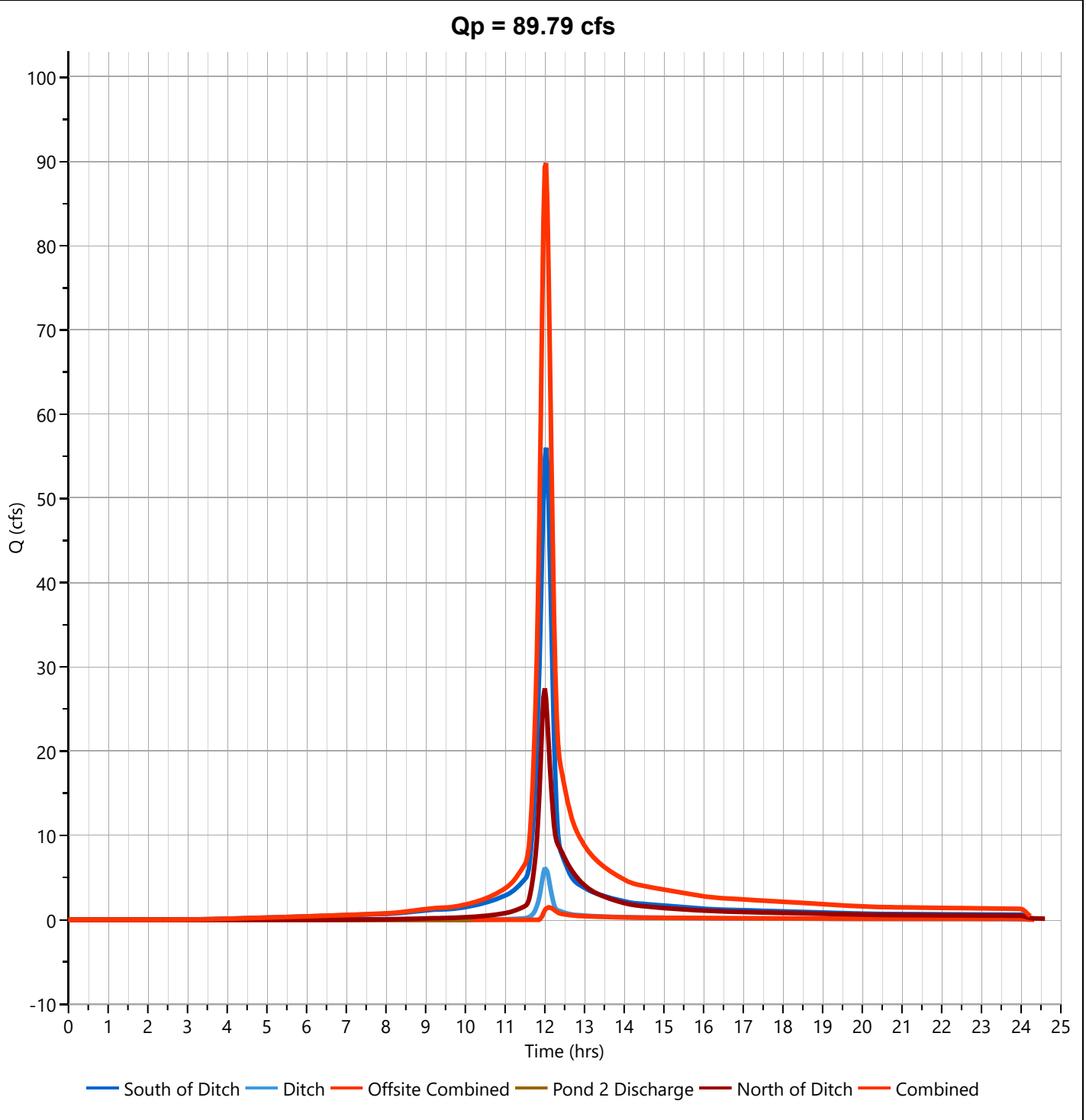
Hydrology Studio v 3.0.0.32

07-25-2024

Post Combined

Hyd. No. 28

Hydrograph Type	= Junction	Peak Flow	= 89.79 cfs
Storm Frequency	= 25-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 293,992 cuft
Inflow Hydrographs	= 11, 12, 20, 26, 27	Total Contrib. Area	= 21.17 ac



Design Storm Report

Custom Storm filename:

Hydrology Studio v 3.0.0.32

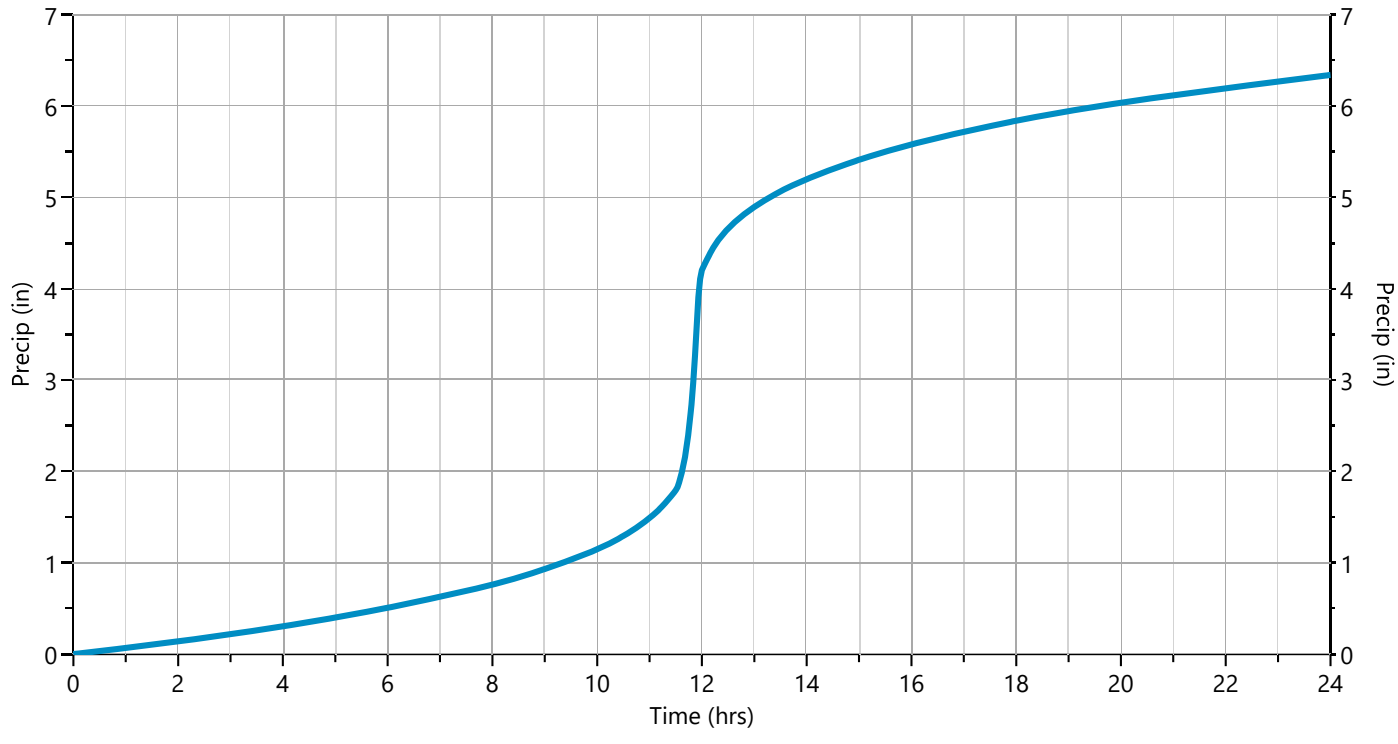
07-25-2024

Storm Distribution: NRCS/SCS - Type II, 24-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	2-yr	3-yr	5-yr	10-yr	✔ 25-yr	50-yr	100-yr	
24 hrs	3.26	3.90	0.00	4.74	5.42	6.34	7.07	7.82	

Incremental Rainfall Distribution, 25-yr

Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
10.90	0.014230	11.27	0.020288	11.63	0.083745	12.00	0.095275	12.37	0.025614
10.93	0.014511	11.30	0.020964	11.67	0.100426	12.03	0.042385	12.40	0.024007
10.97	0.014793	11.33	0.021641	11.70	0.117107	12.07	0.040069	12.43	0.022401
11.00	0.015075	11.37	0.022317	11.73	0.133788	12.10	0.038463	12.47	0.020795
11.03	0.015552	11.40	0.022993	11.77	0.153566	12.13	0.036856	12.50	0.019189
11.07	0.016230	11.43	0.023669	11.80	0.196860	12.17	0.035251	12.53	0.018204
11.10	0.016907	11.47	0.024346	11.83	0.243259	12.20	0.033644	12.57	0.017837
11.13	0.017583	11.50	0.025022	11.87	0.289658	12.23	0.032038	12.60	0.017470
11.17	0.018259	11.53	0.033748	**11.90**	**0.336058**	12.27	0.030432	12.63	0.017104
11.20	0.018935	11.57	0.050382	11.93	0.306683	12.30	0.028826	12.67	0.016737
11.23	0.019612	11.60	0.067063	11.97	0.200872	12.33	0.027219	12.70	0.016371



Hydrograph 50-yr Summary

Project Name:

07-25-2024

Hydrology Studio v 3.0.0.32

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre South of Ditch	63.01	12.03	189,522	----		
2	NRCS Runoff	Pre Ditch	7.199	12.03	18,893	----		
3	NRCS Runoff	Pre North of Ditch	50.98	12.03	142,898	----		
4	NRCS Runoff	Pre Offsite 1	0.156	11.97	440	----		
5	NRCS Runoff	Pre Offsite 2	2.619	12.10	12,680	----		
6	NRCS Runoff	Pre Offsite 3	0.024	11.97	67.5	----		
7	NRCS Runoff	Post Offsite 4	0.599	11.97	1,689	----		
8	Junction	Pre Offsite Combined	2.863	12.07	14,877	4, 5, 6, 7		
9	Junction	Pre Total	121.6	12.03	353,001	1, 2, 3, 7		
11	NRCS Runoff	Post South of Ditch	63.14	12.03	190,181	----		
12	NRCS Runoff	Post Ditch	7.604	12.03	19,911	----		
13	NRCS Runoff	Post North to Pond 1	17.42	12.00	45,171	----		
14	Pond Route	Post Pond 1 Discharge	6.367	12.20	45,144	13	630.09	15,070
15	NRCS Runoff	Post Bypass	22.51	12.00	58,674	----		
16	NRCS Runoff	Post Offsite 1	0.156	11.97	440	----		
17	NRCS Runoff	Post Offsite 2	2.619	12.10	12,680	----		
18	NRCS Runoff	Post Offsite 3	0.024	11.97	67.5	----		
19	NRCS Runoff	Post Offsite 4	0.599	11.97	1,689	----		
20	Junction	Post Offsite Combined	2.863	12.07	14,877	16, 17, 18, 19		
21	NRCS Runoff	Post Culvert 1	0.729	11.97	2,054	----		
22	NRCS Runoff	Post Area Drain 3 (AD3)	0.009	11.93	20.4	----		
23	NRCS Runoff	Post Area Drain 2 (AD2)	1.487	11.97	2,989	----		
24	NRCS Runoff	Post Area Drain 1 (AD1)	4.460	11.93	9,461	----		
25	NRCS Runoff	Post North to Pond 2	8.913	11.93	18,420	----		
26	Pond Route	Post Pond 2 Discharge	0.000	9.53	0.000	25	534.33	13,768
27	Junction	Post North of Ditch	32.47	12.00	118,343	14, 15, 21, 22, 23, 24		
28	Junction	Post Combined	104.2	12.03	343,311	11, 12, 20, 26, 27		

Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

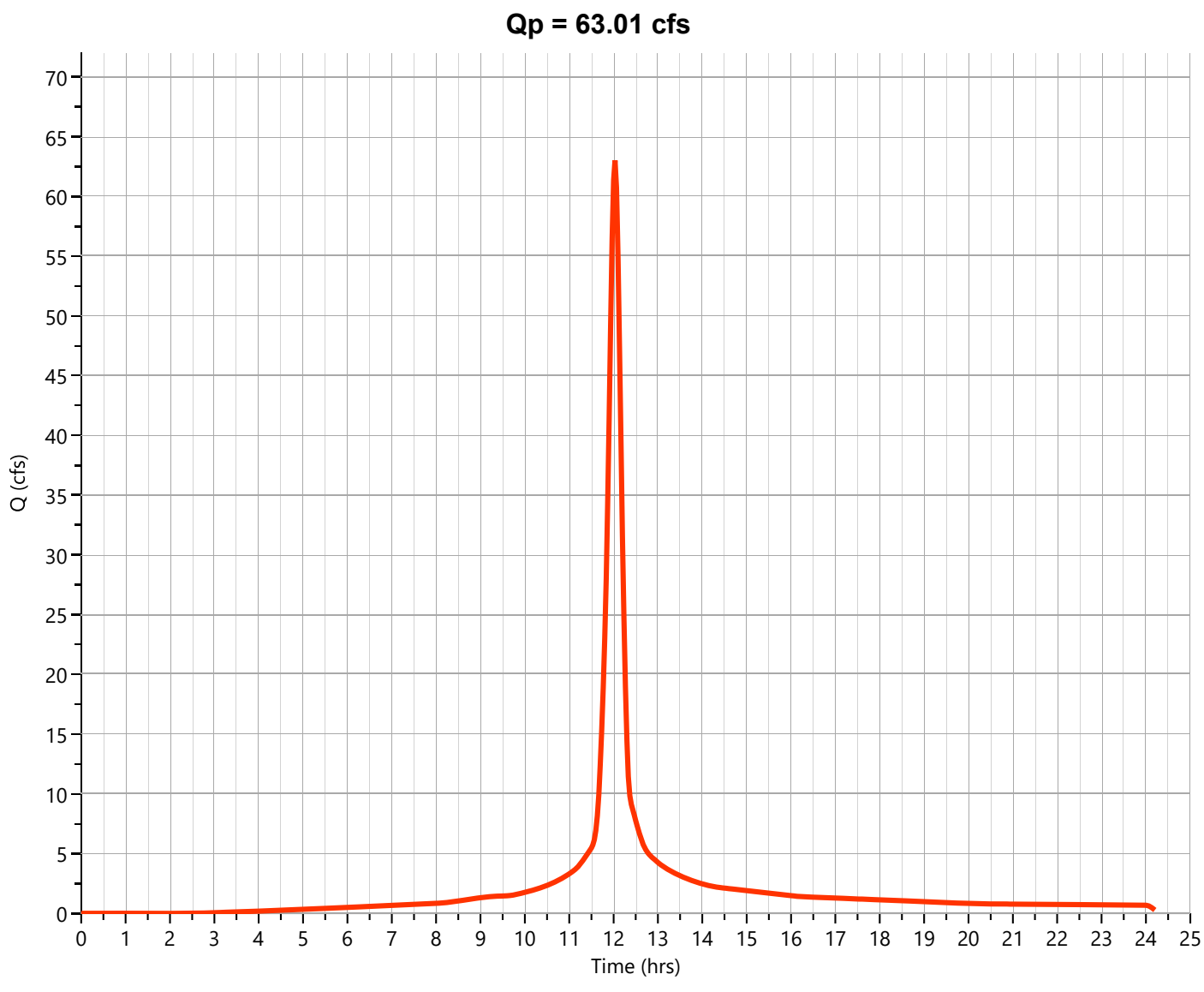
Pre South of Ditch

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 63.01 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 189,522 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.02*
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
8.69	91	No Rating (Row Crops)
0.2	91	Gravel
0.02	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

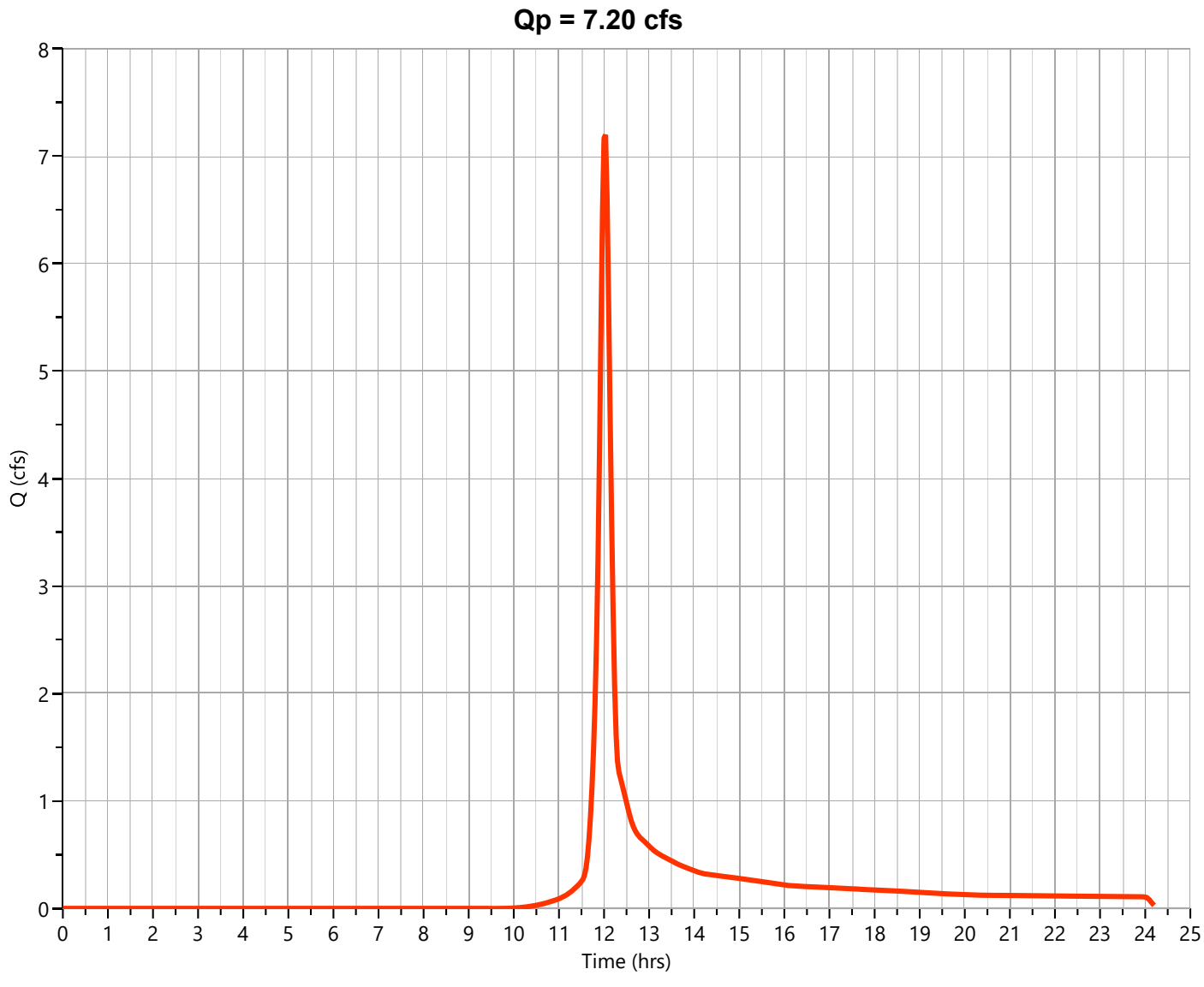
Pre Ditch

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 7.199 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 18,893 cuft
Drainage Area	= 1.79 ac	Curve Number	= 61.67*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.75	61	Ditch (inside buffer)
0.04	91	Gravel
1.79	**62**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

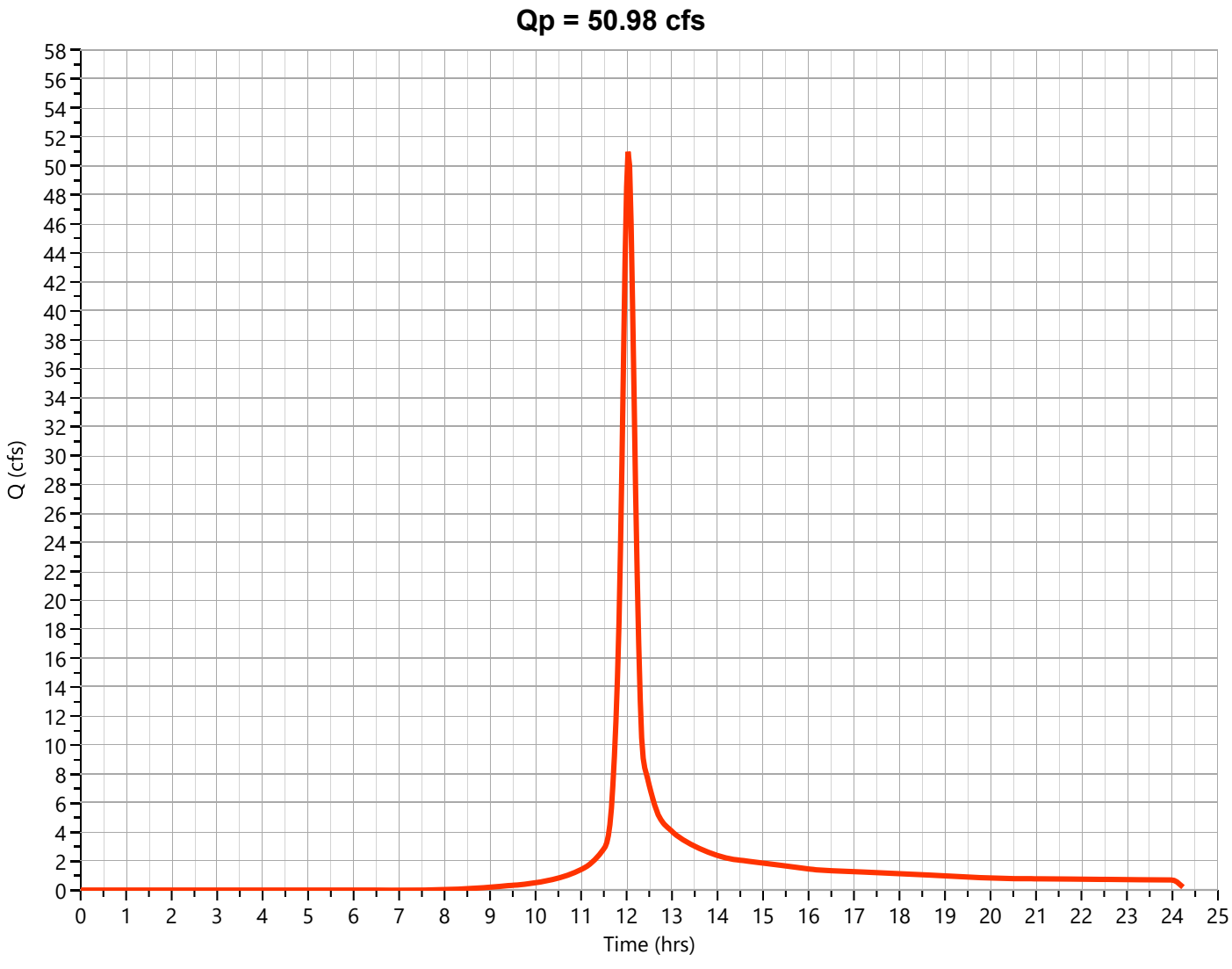
Pre North of Ditch

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 50.98 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 142,898 cuft
Drainage Area	= 10.55 ac	Curve Number	= 71.42*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.945	79	Pervious (C)
3.945	49	Pervious (A)
0.89	98	Buildings
1.73	91	Gravel
0.04	98	Concrete
10.55	**71**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

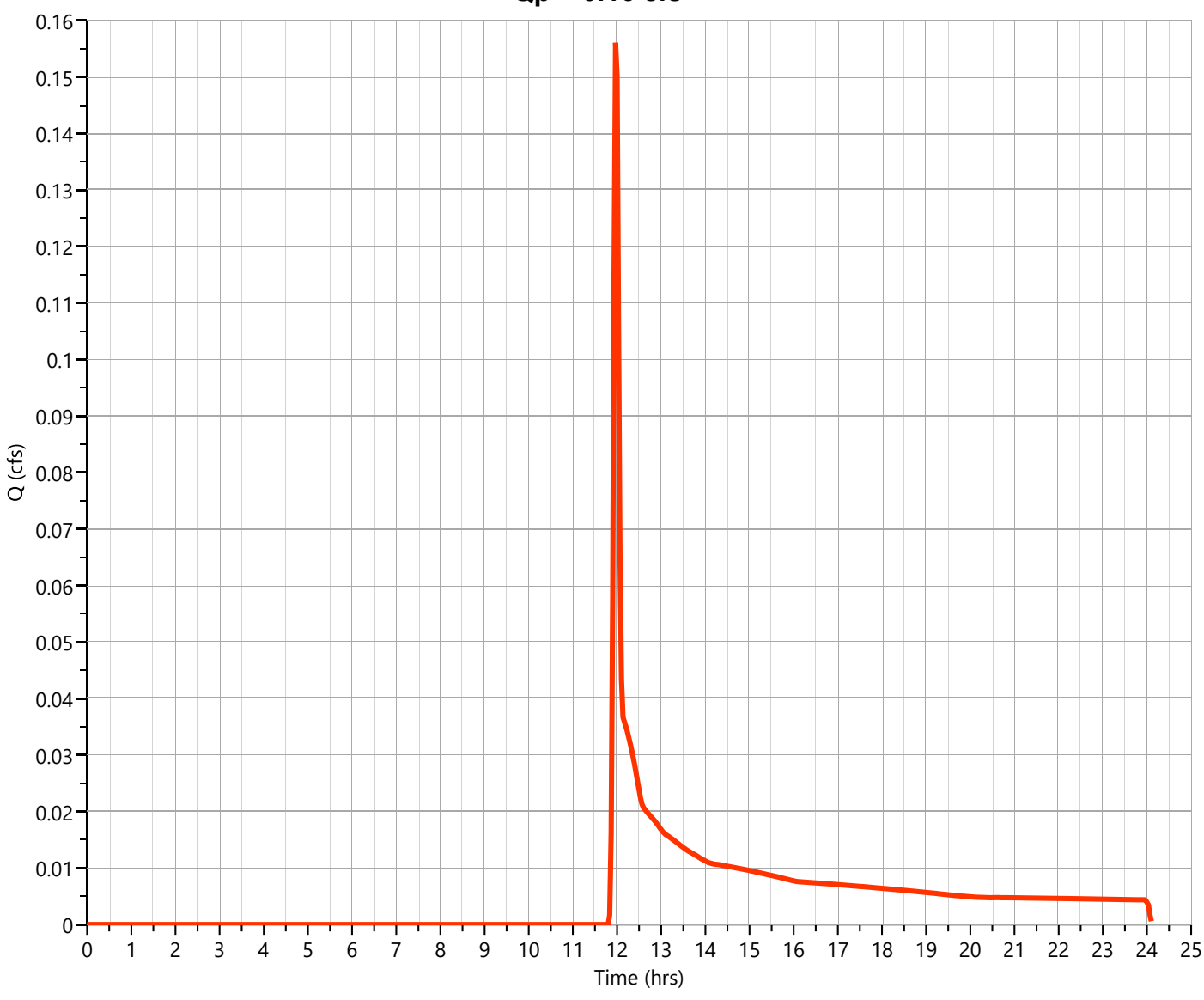
Pre Offsite 1

Hyd. No. 4

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.156 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 440 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

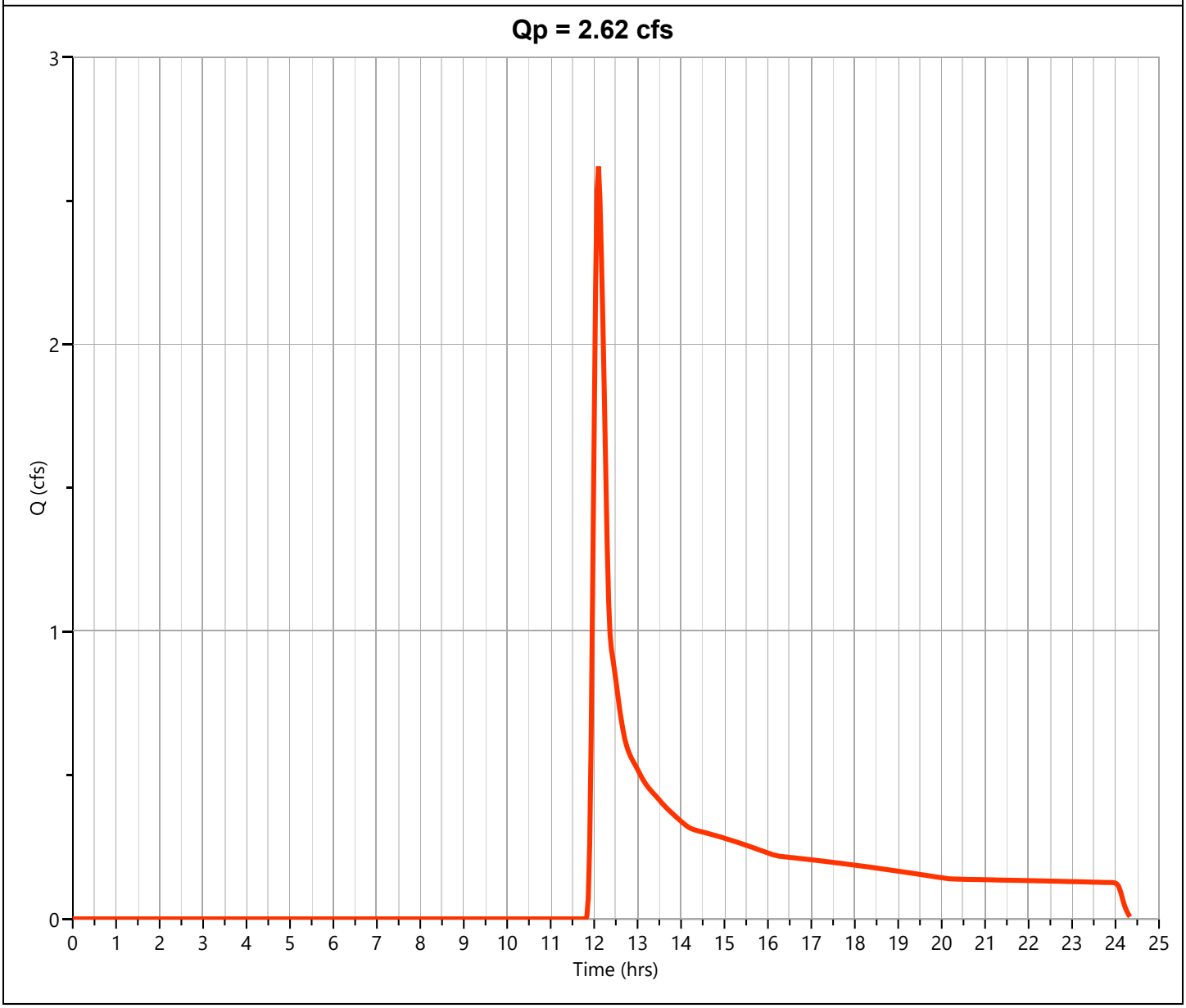
Pre Offsite 2

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 2.619 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 12,680 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

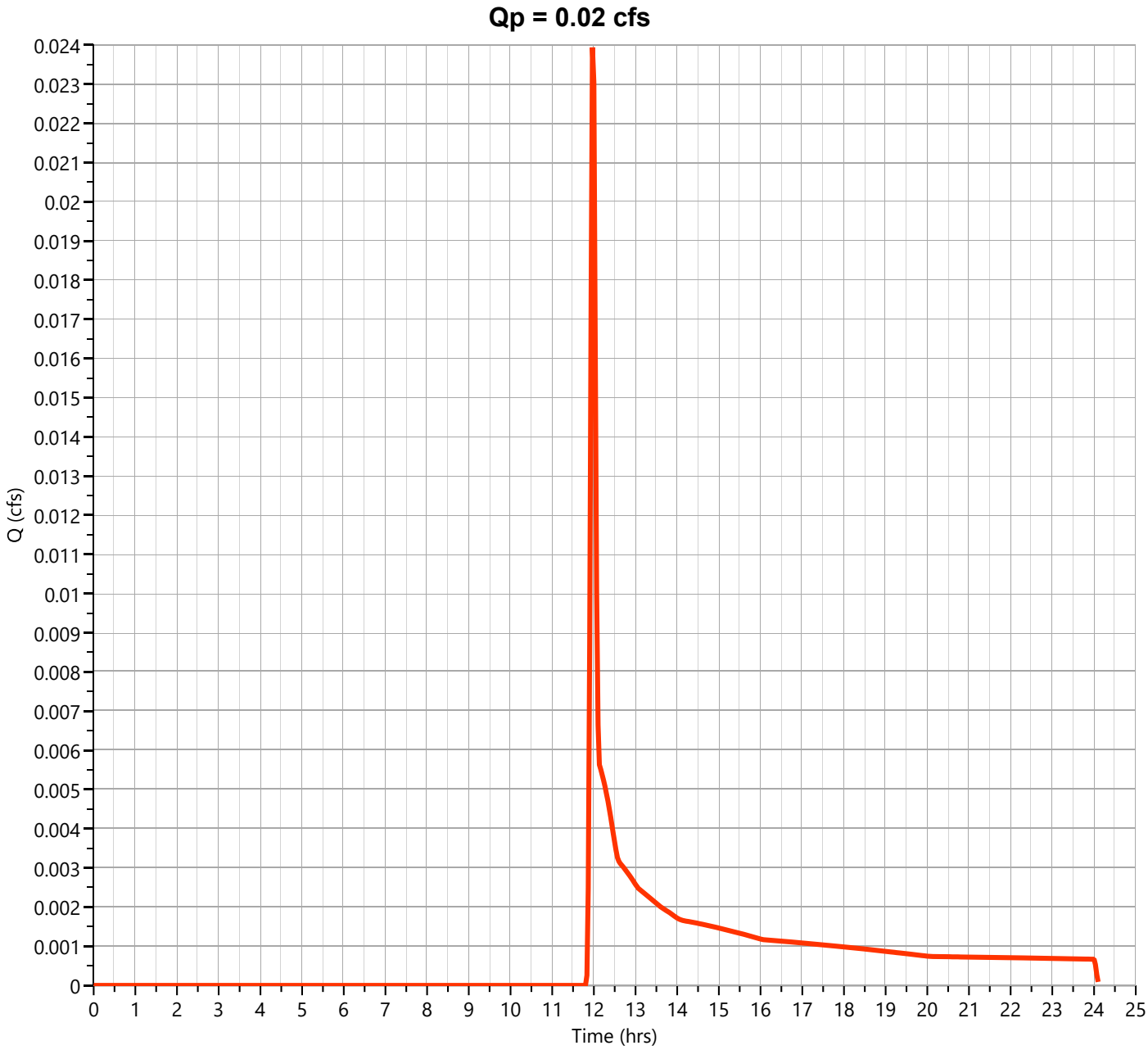
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite 3

Hyd. No. 6

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.024 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 67.5 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

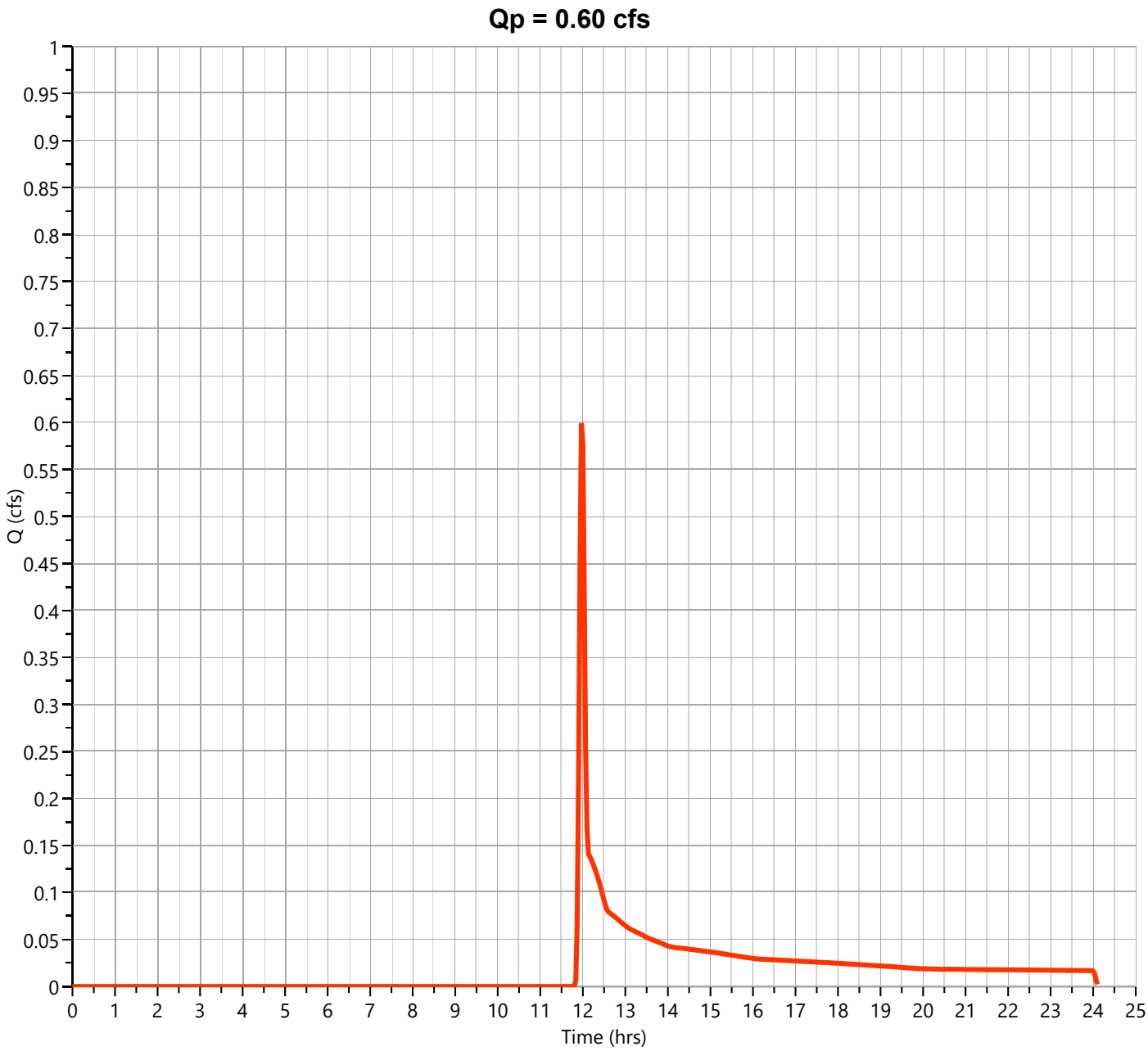
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.599 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 1,689 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

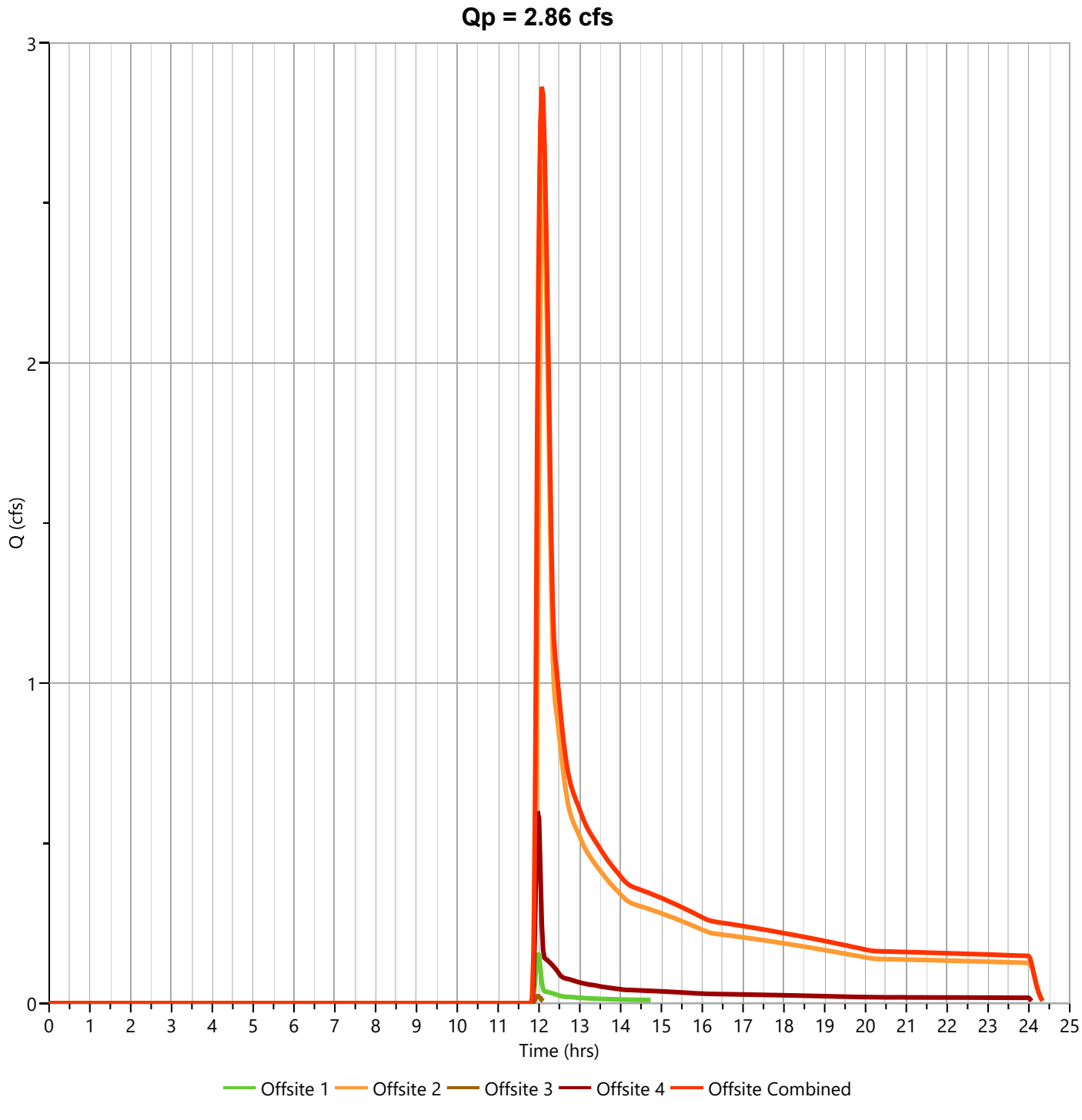
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite Combined

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 2.863 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Hydrograph Volume	= 14,877 cuft
Inflow Hydrographs	= 4, 5, 6, 7	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

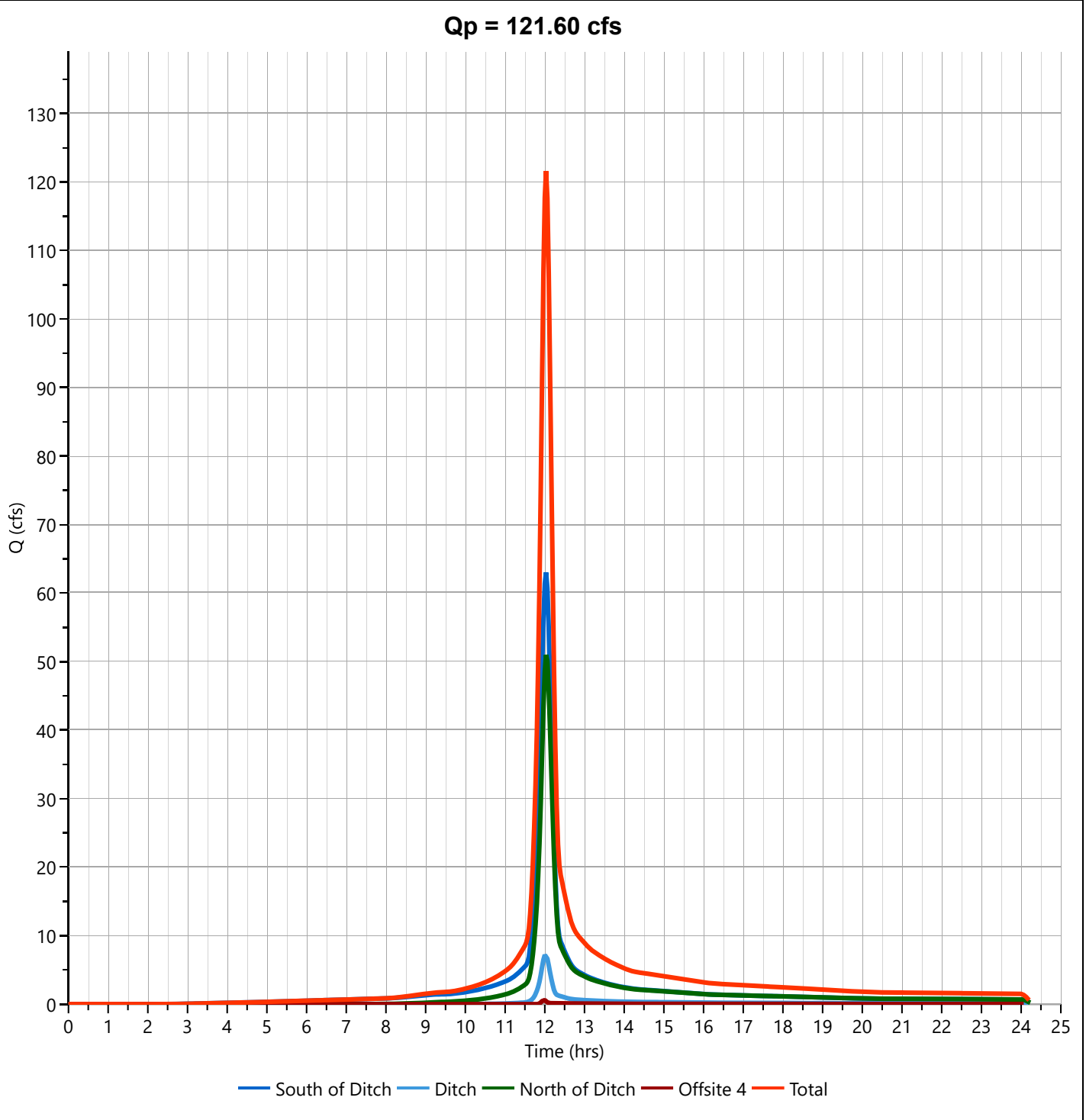
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Total

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 121.6 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 353,001 cuft
Inflow Hydrographs	= 1, 2, 3, 7	Total Contrib. Area	= 21.876 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

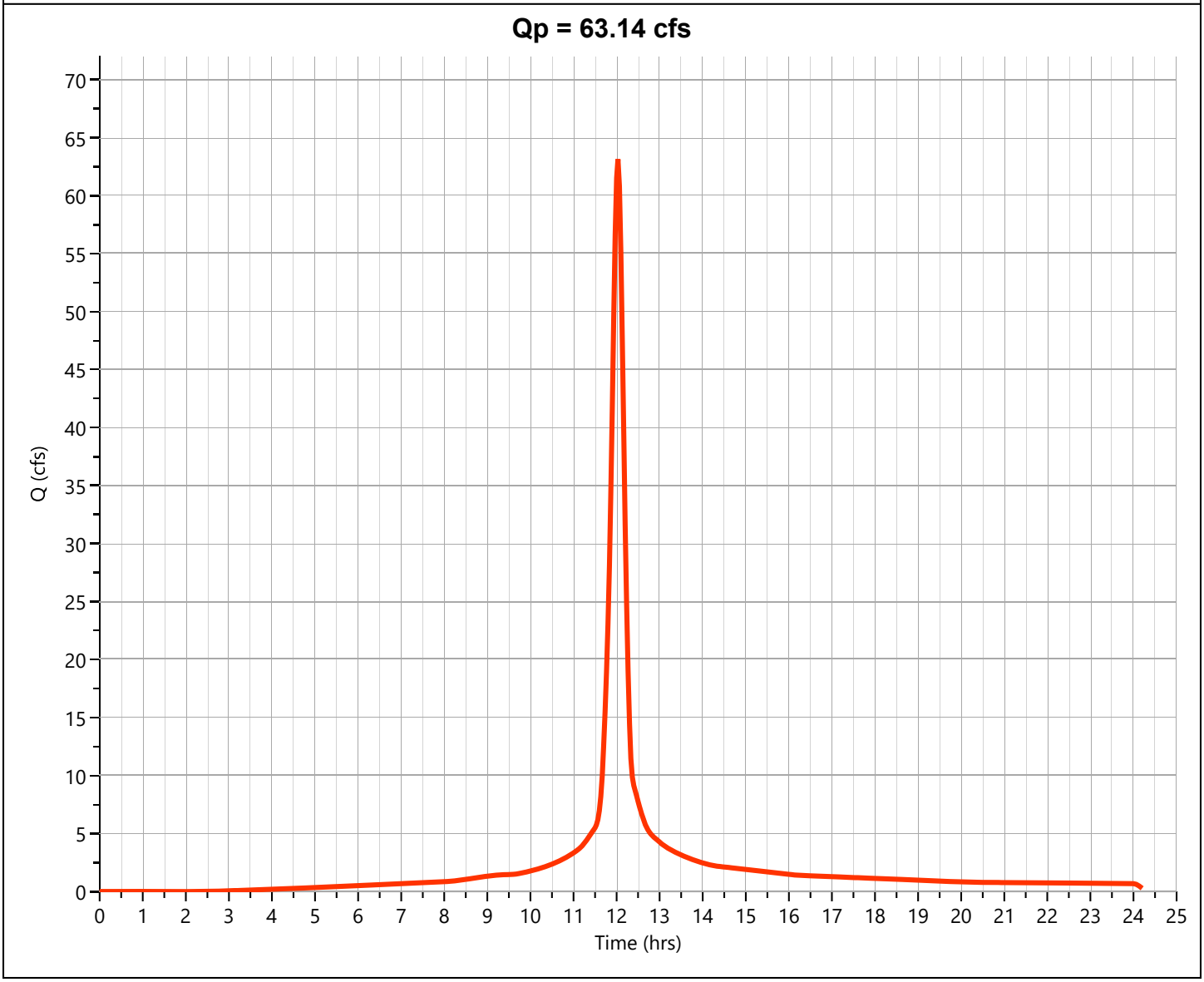
Post South of Ditch

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 63.14 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 190,181 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.2*
Tc Method	= User	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
7.83	91	Row Crop
0.82	91	Gravel Drive
0.26	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

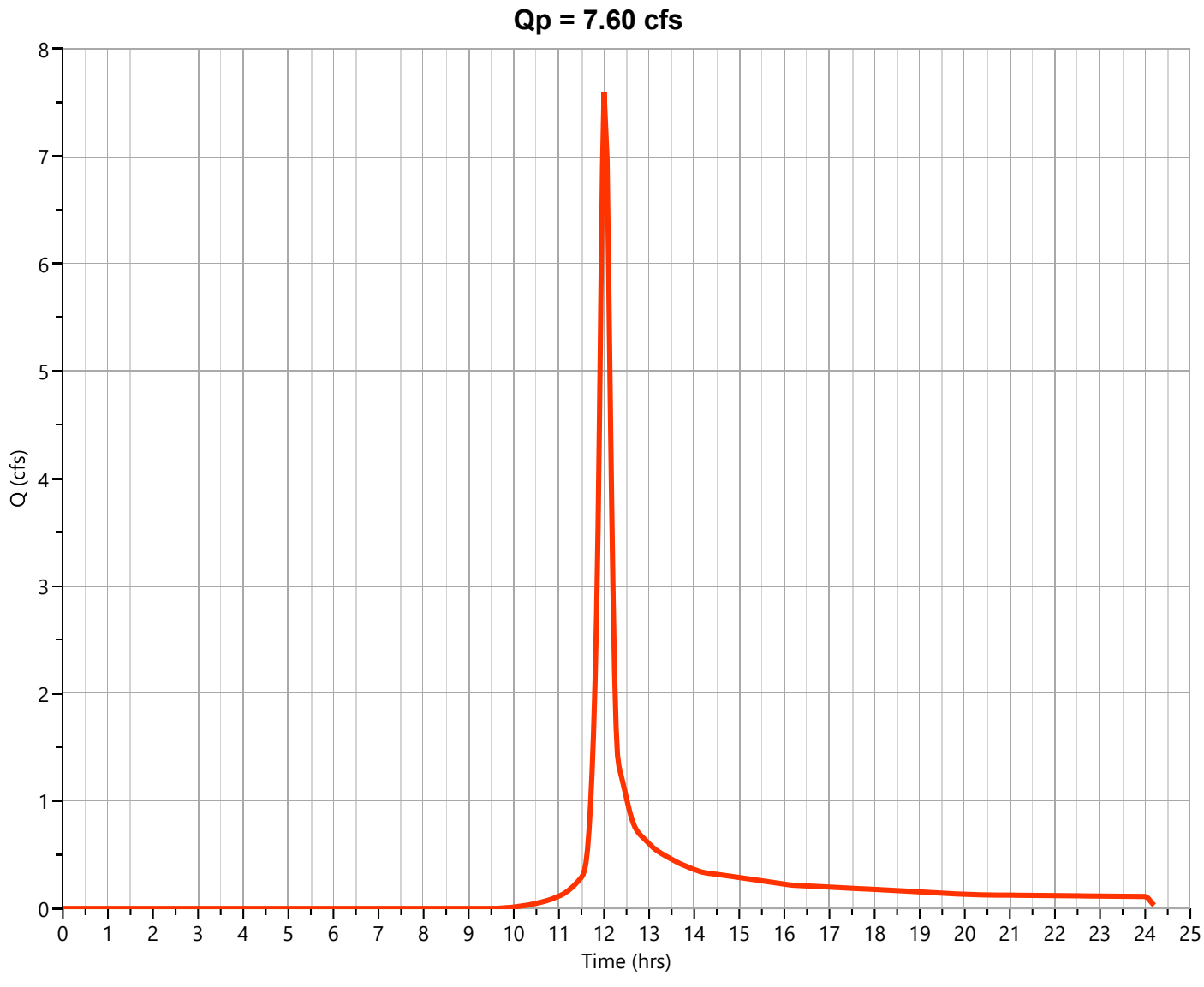
Post Ditch

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 7.604 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 19,911 cuft
Drainage Area	= 1.79 ac	Curve Number	= 63.18*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.66	61	Ditch (inside buffer)
0.13	91	Gravel
1.79	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

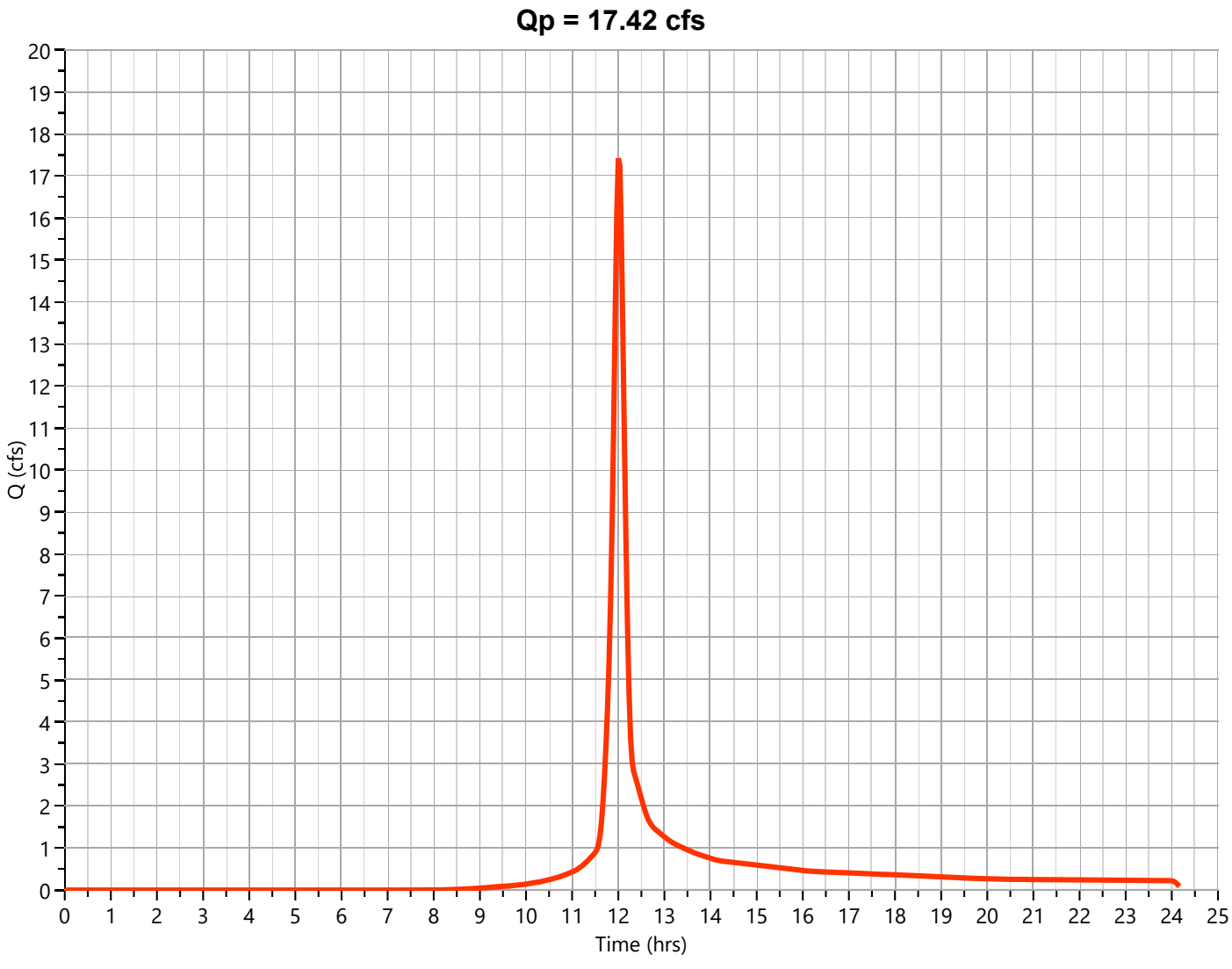
Post North to Pond 1

Hyd. No. 13

Hydrograph Type	= NRCS Runoff	Peak Flow	= 17.42 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 45,171 cuft
Drainage Area	= 3.282 ac	Curve Number	= 70*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.4	49	Pervious (A)
0.936	79	Pervious (C)
0.566	91	Gravel
0.38	98	Buildings
3.282	**70**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

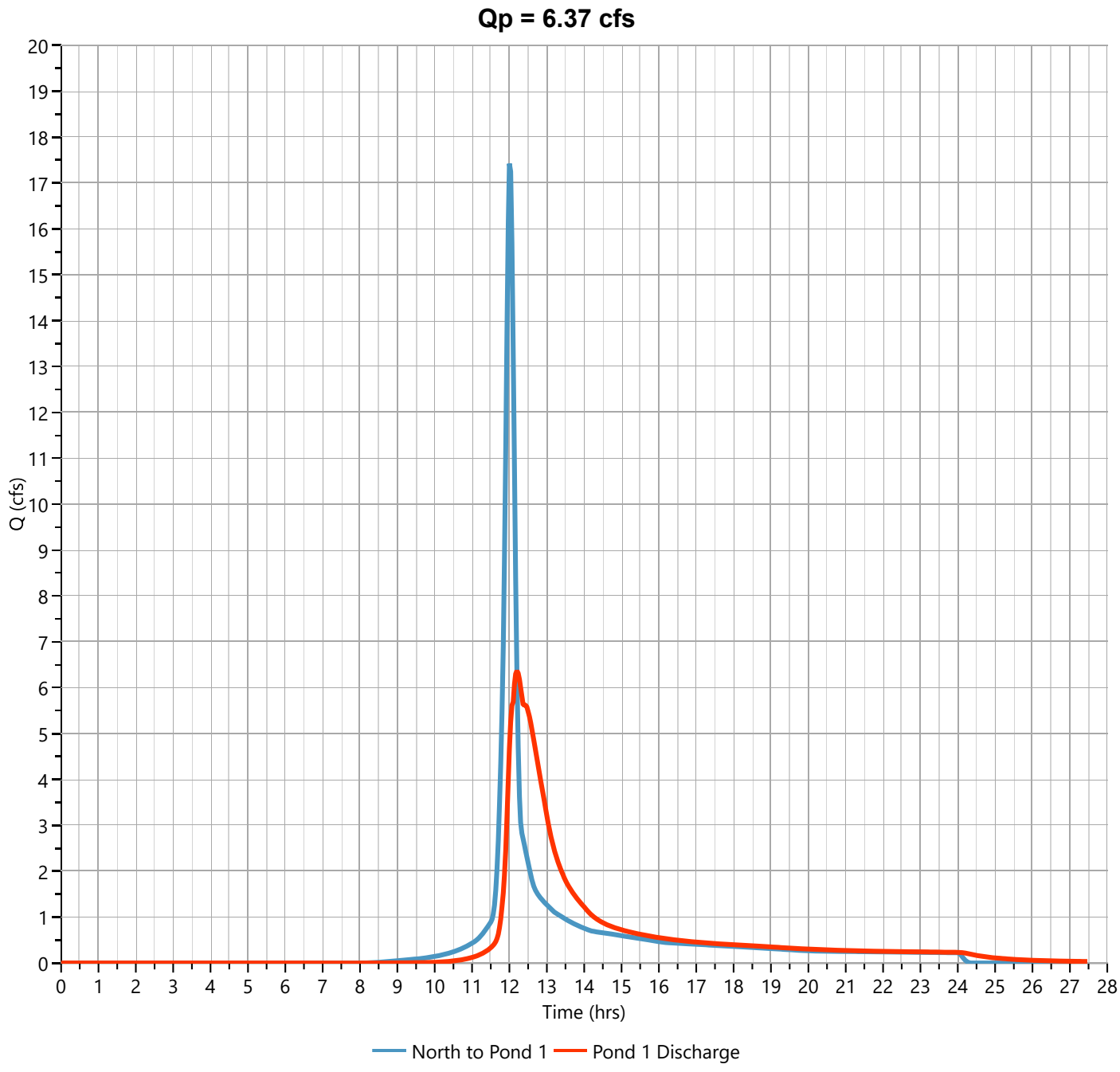
Post Pond 1 Discharge

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 6.367 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.20 hrs
Time Interval	= 2 min	Hydrograph Volume	= 45,144 cuft
Inflow Hydrograph	= 13 - North to Pond 1	Max. Elevation	= 630.09 ft
Pond Name	= Pond 1	Max. Storage	= 15,070 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 45 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

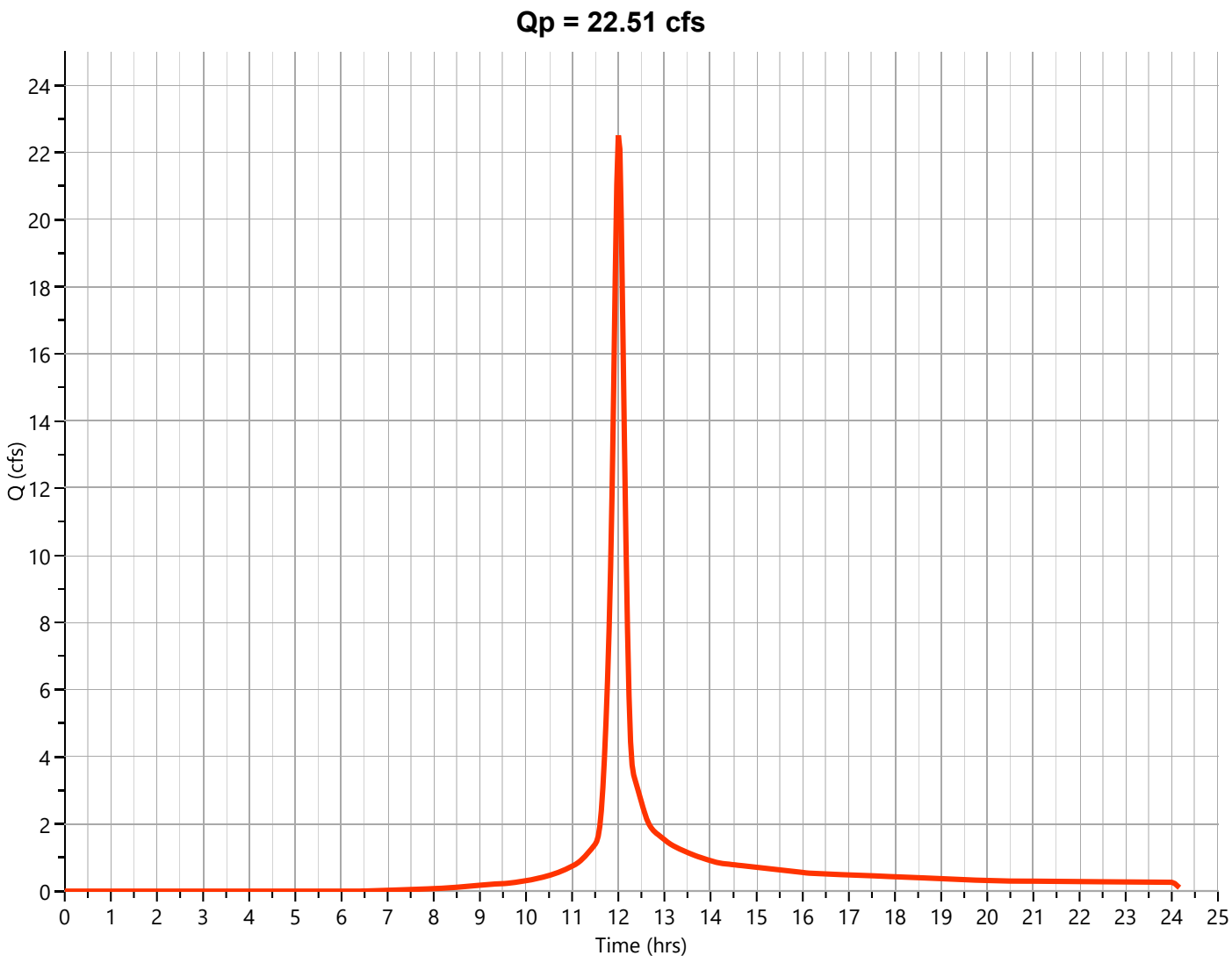
Post Bypass

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 22.51 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 58,674 cuft
Drainage Area	= 3.569 ac	Curve Number	= 76.66*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.95	49	Pervious (A)
1.26	79	Pervious (C)
0.81	91	Gravel
0.549	98	Buildings
3.569	**77**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

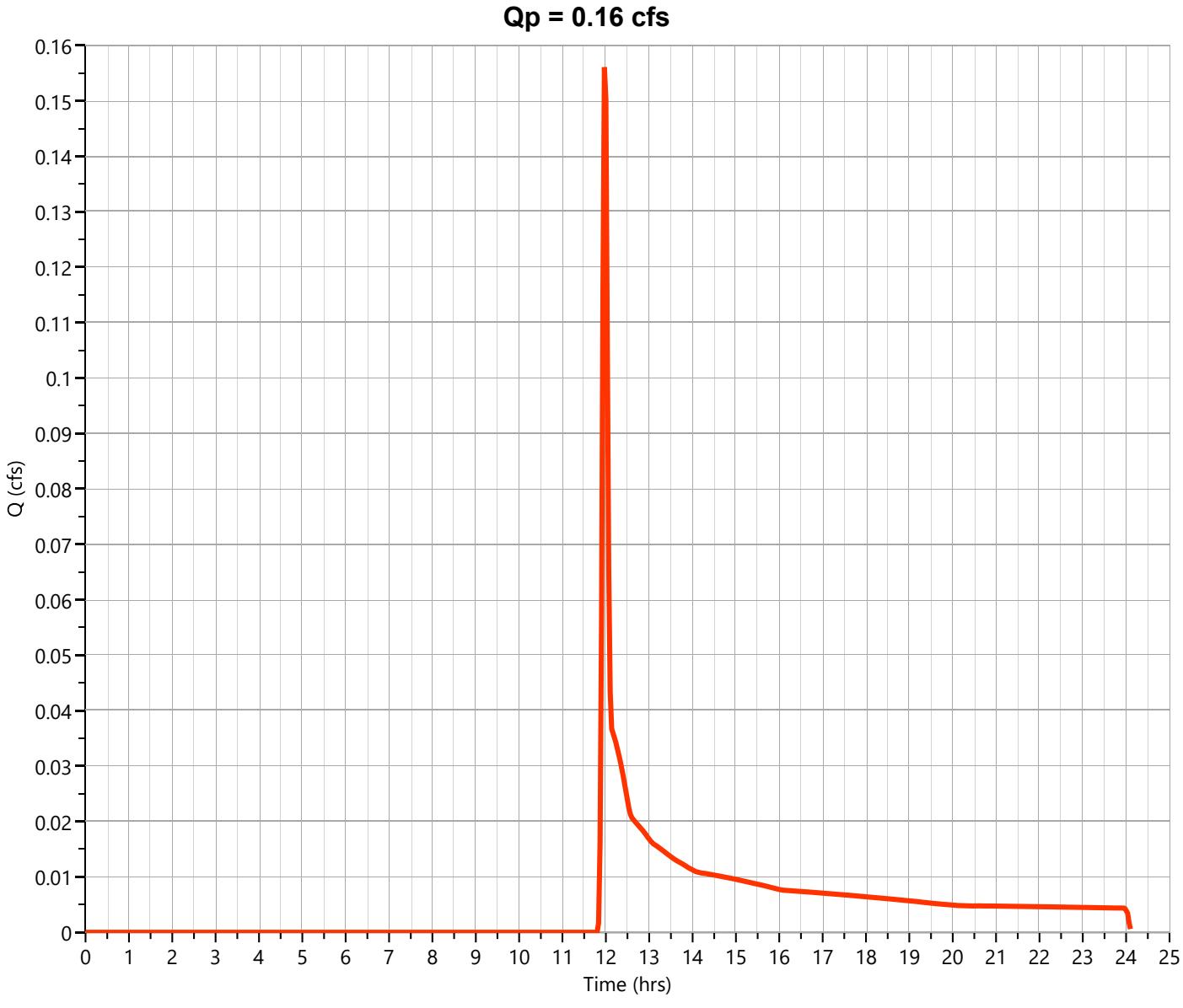
Post Offsite 1

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.156 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 440 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

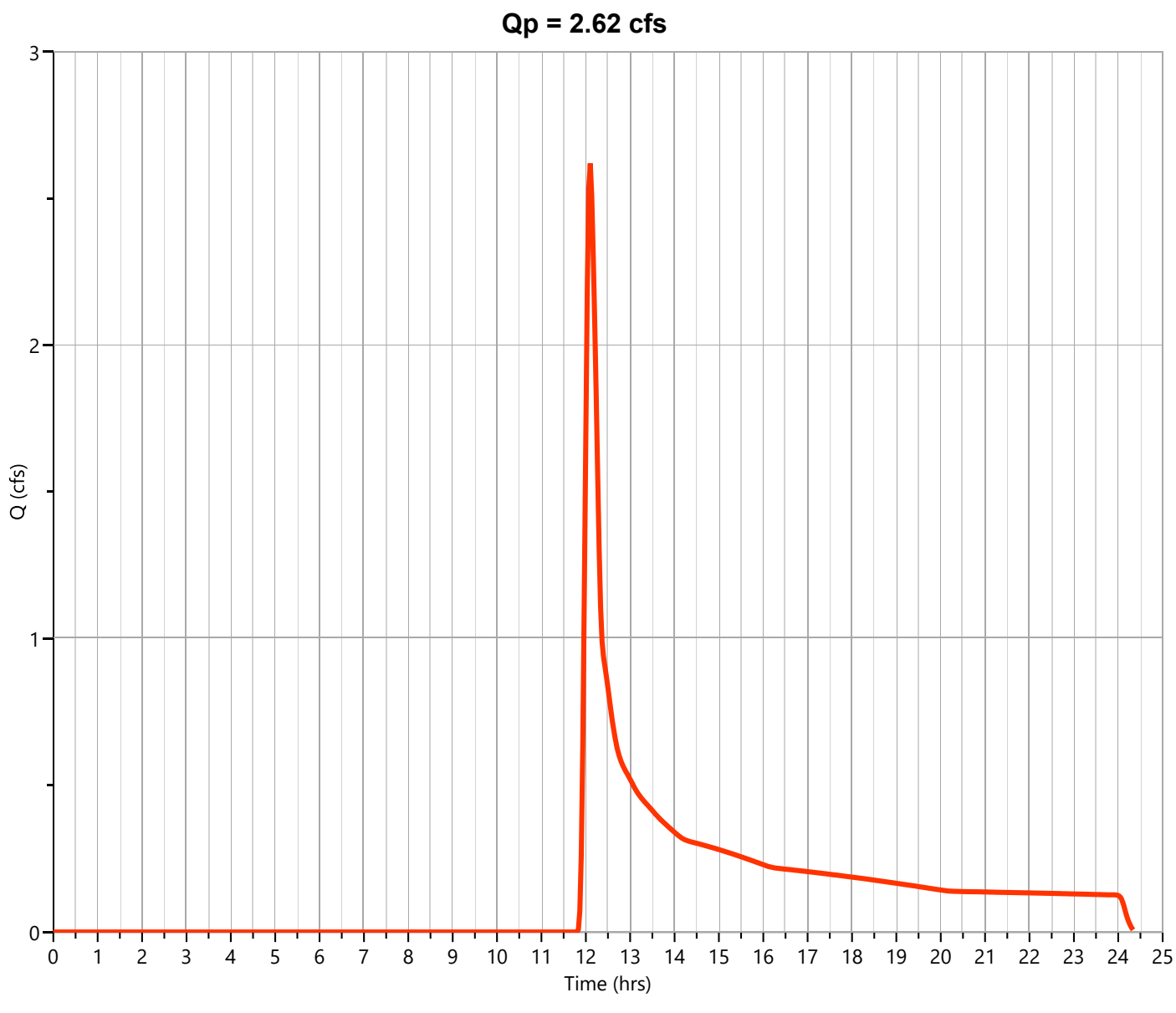
Post Offsite 2

Hyd. No. 17

Hydrograph Type	= NRCS Runoff	Peak Flow	= 2.619 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 12,680 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

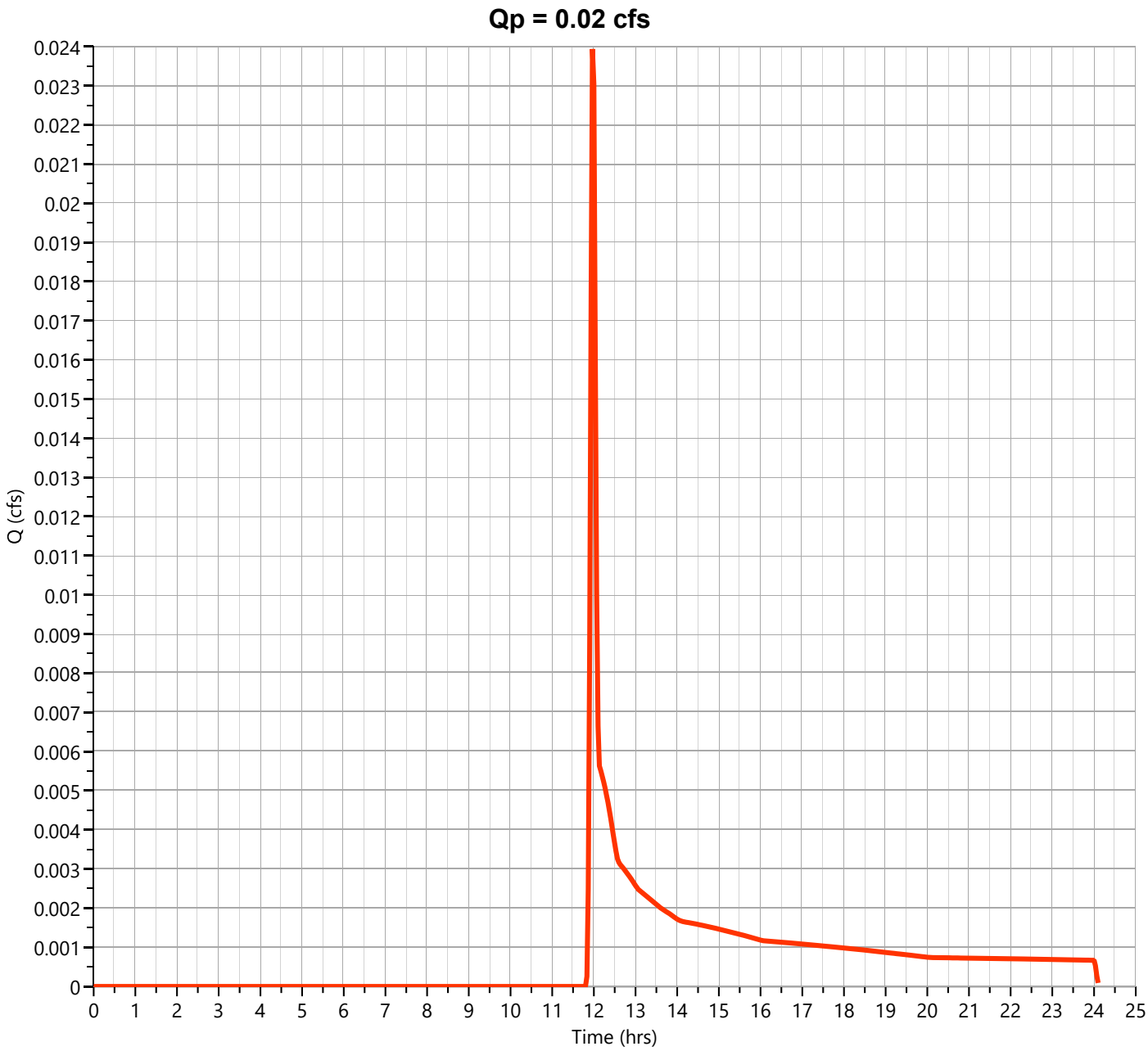
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 3

Hyd. No. 18

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.024 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 67.5 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

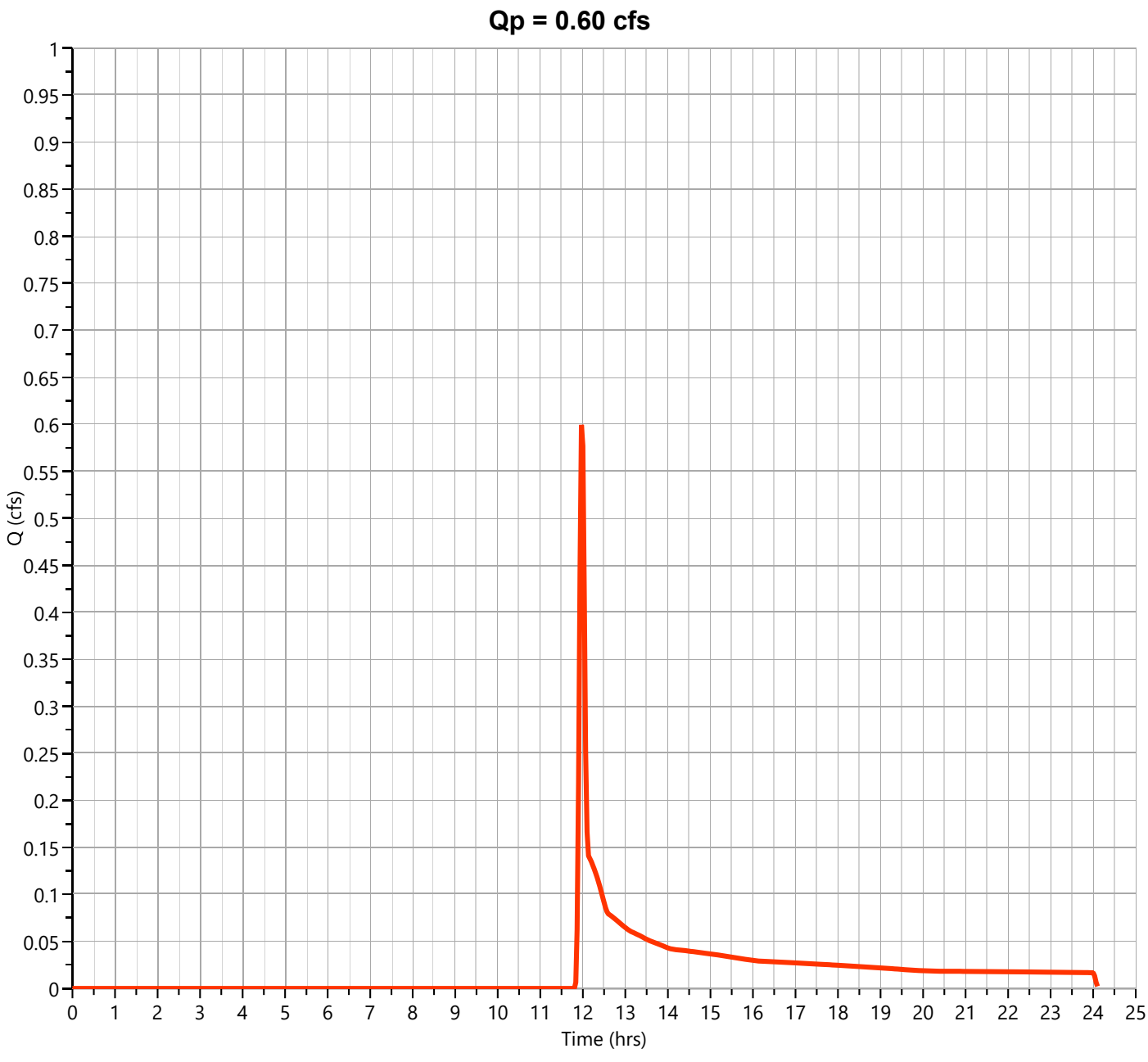
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 19

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.599 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 1,689 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

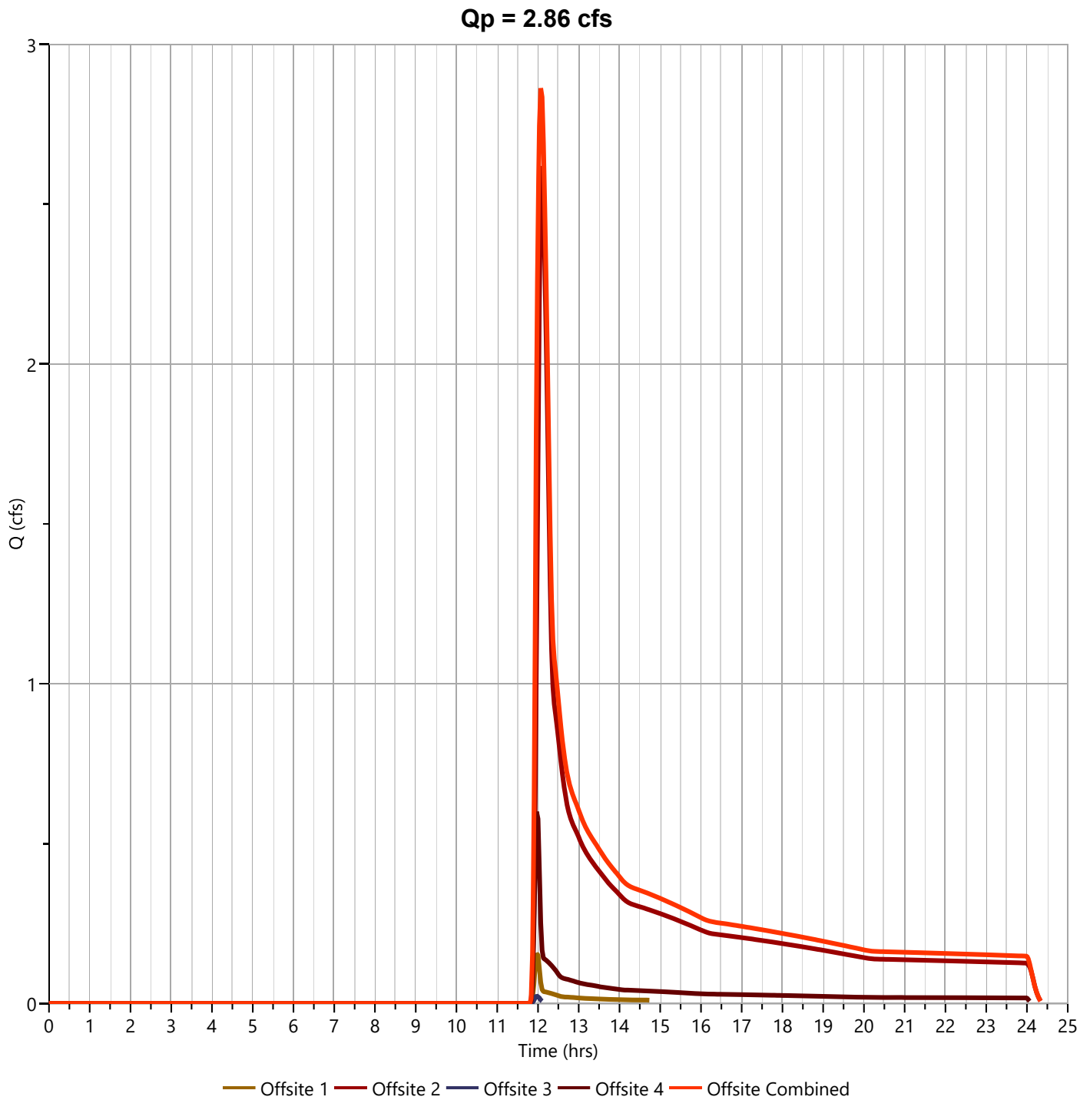
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite Combined

Hyd. No. 20

Hydrograph Type	= Junction	Peak Flow	= 2.863 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Hydrograph Volume	= 14,877 cuft
Inflow Hydrographs	= 16, 17, 18, 19	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

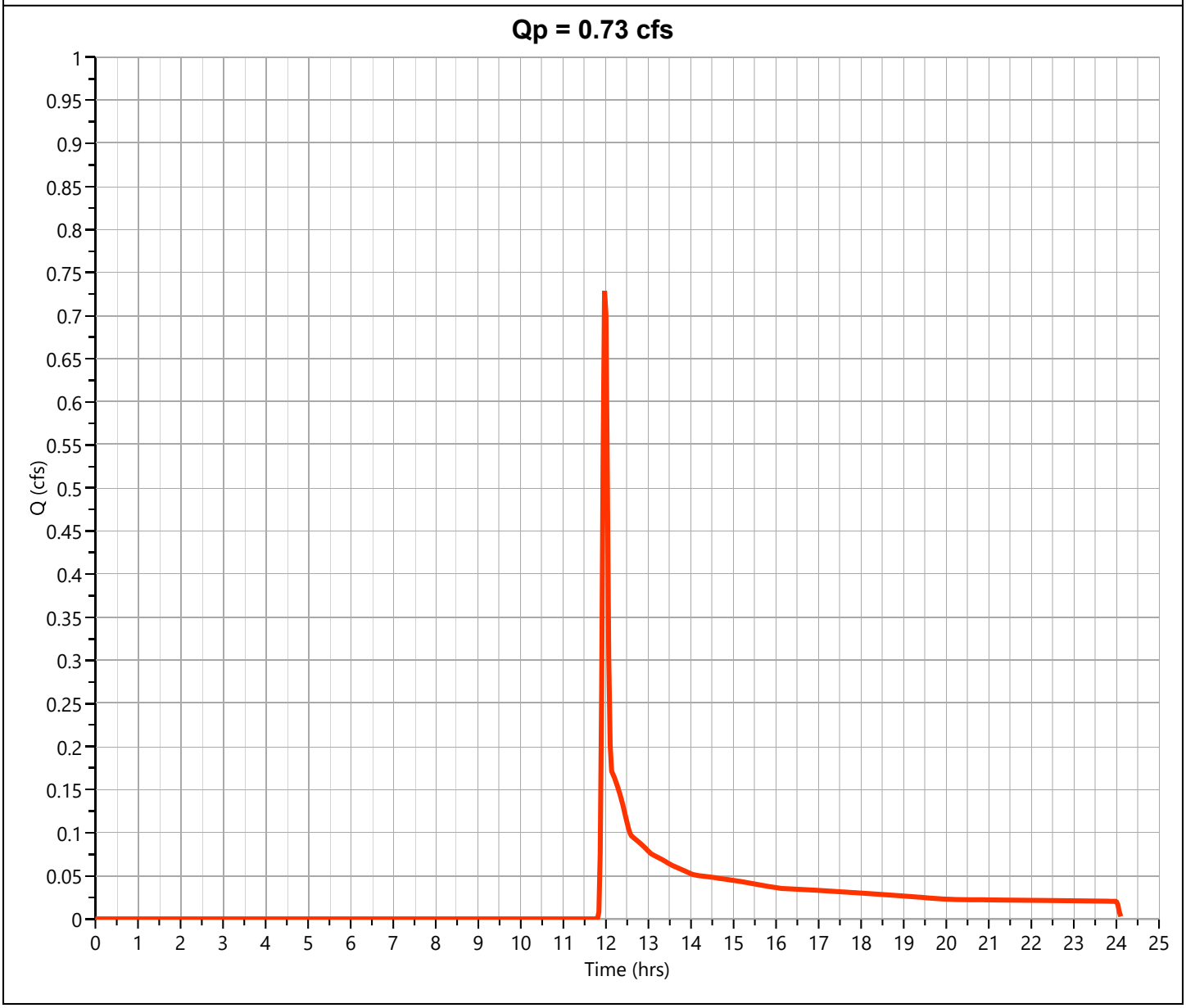
Post Culvert 1

Hyd. No. 21

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.729 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 2,054 cuft
Drainage Area	= 0.761 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.761	39	Pervious (A)
0.761	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

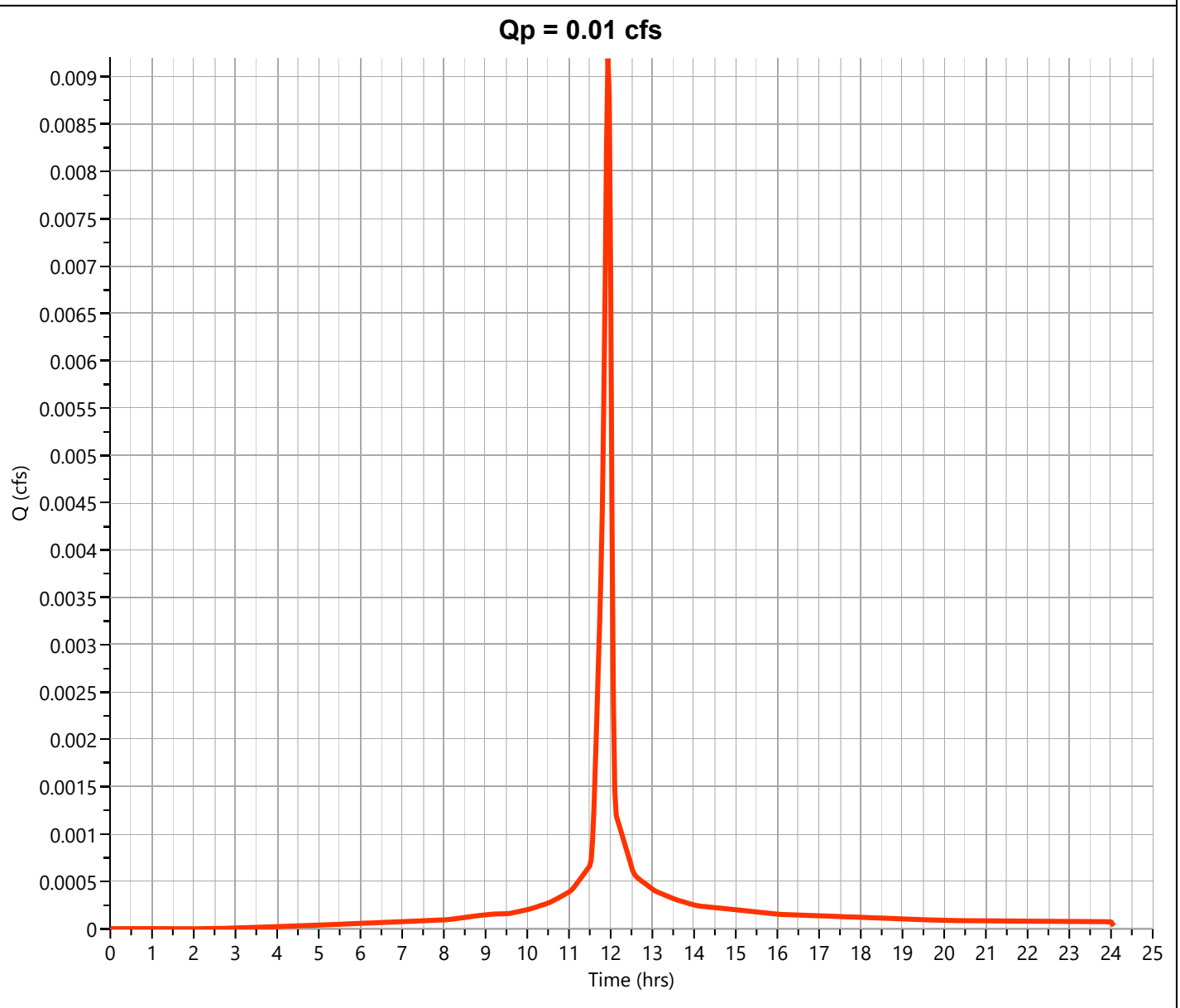
Post Area Drain 3 (AD3)

Hyd. No. 22

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.009 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 20.4 cuft
Drainage Area	= 0.001 ac	Curve Number	= 91*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.001	91	Gravel
0.001	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

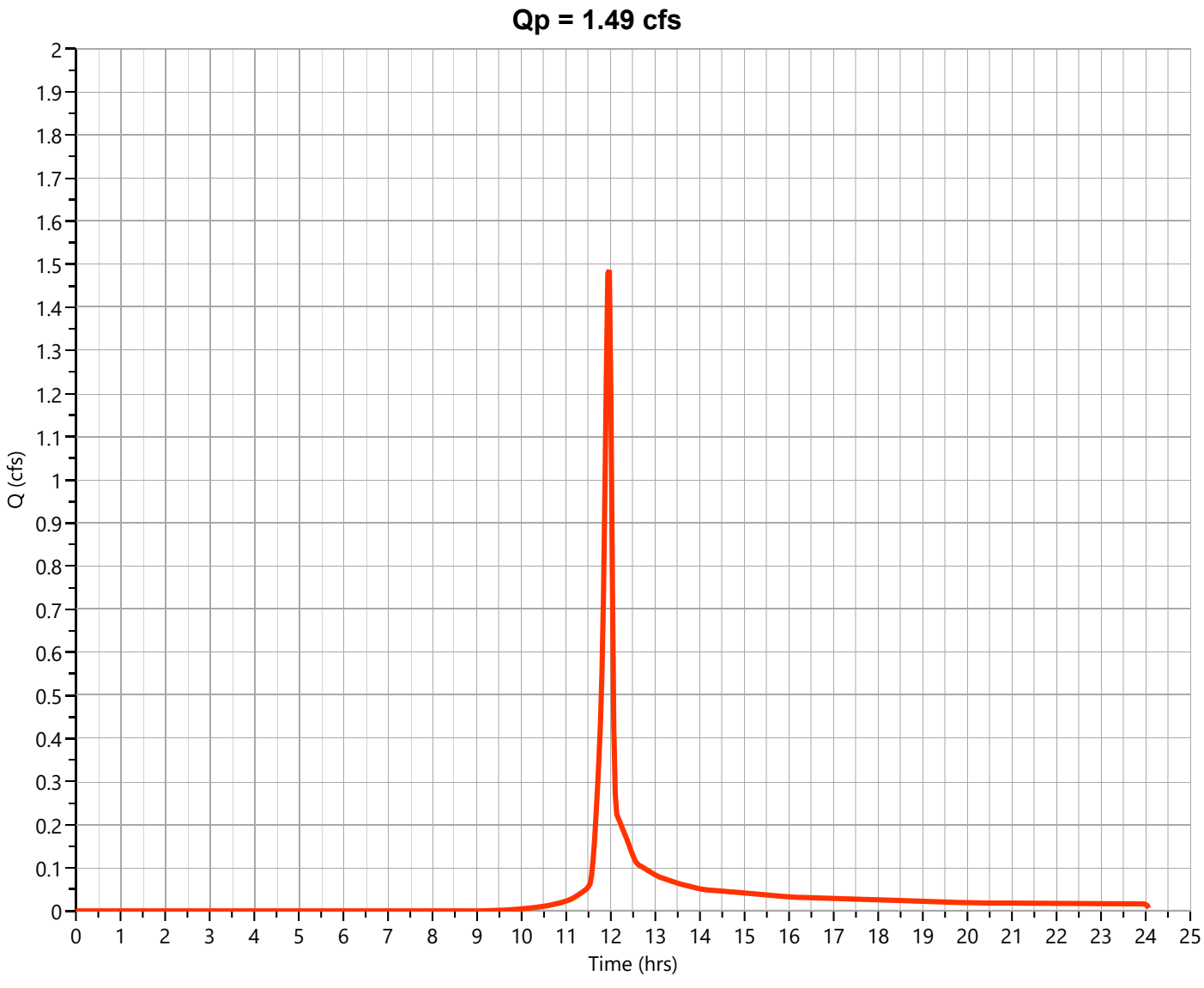
Post Area Drain 2 (AD2)

Hyd. No. 23

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.487 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 2,989 cuft
Drainage Area	= 0.28 ac	Curve Number	= 64.81*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.139	91	Gravel
0.141	39	Grass
0.28	**65**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

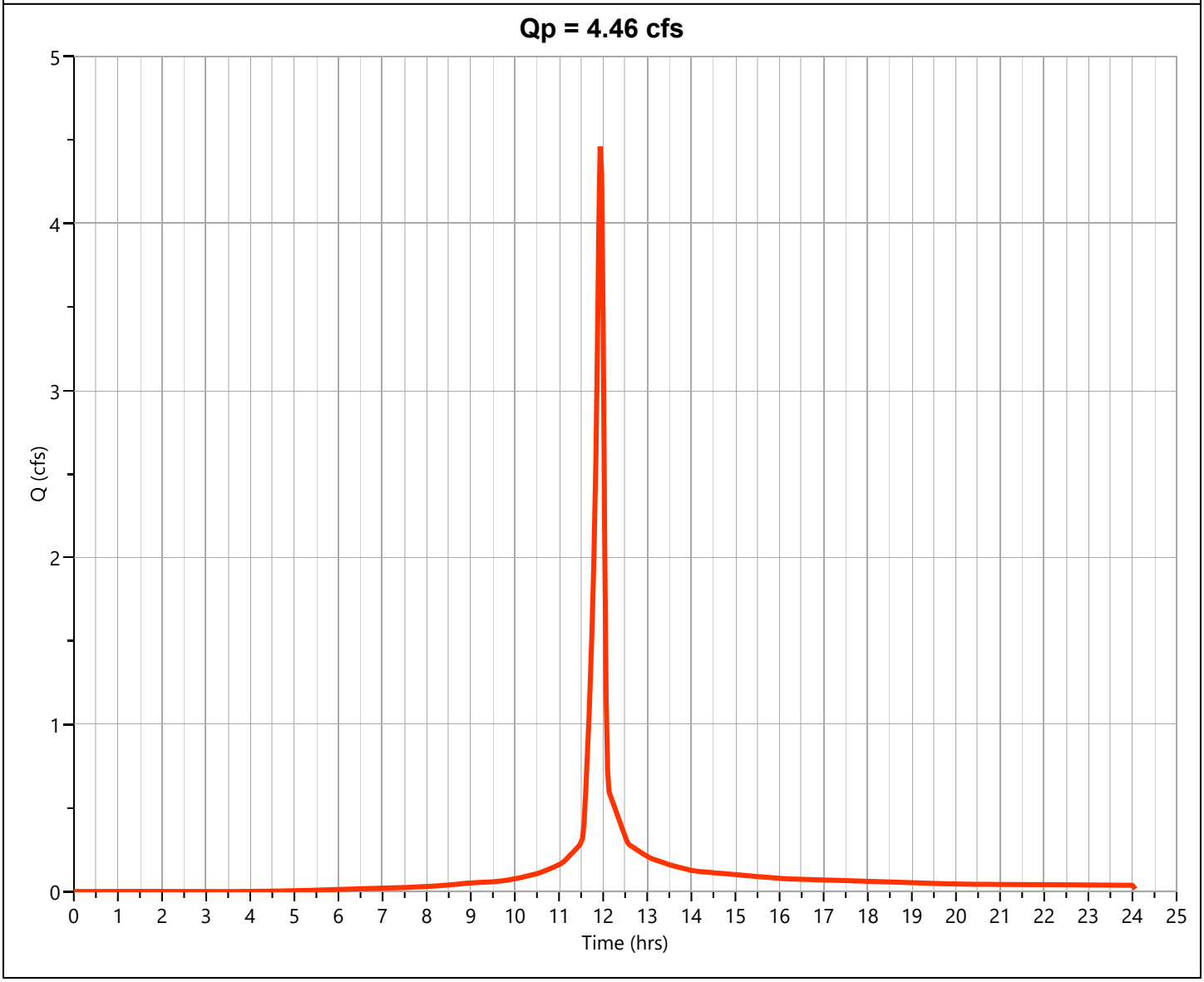
Post Area Drain 1 (AD1)

Hyd. No. 24

Hydrograph Type	= NRCS Runoff	Peak Flow	= 4.460 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 9,461 cuft
Drainage Area	= 0.527 ac	Curve Number	= 84.61*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.087	49	Pervious (A)
0.399	91	Gravel
0.041	98	Building
0.527	**85**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

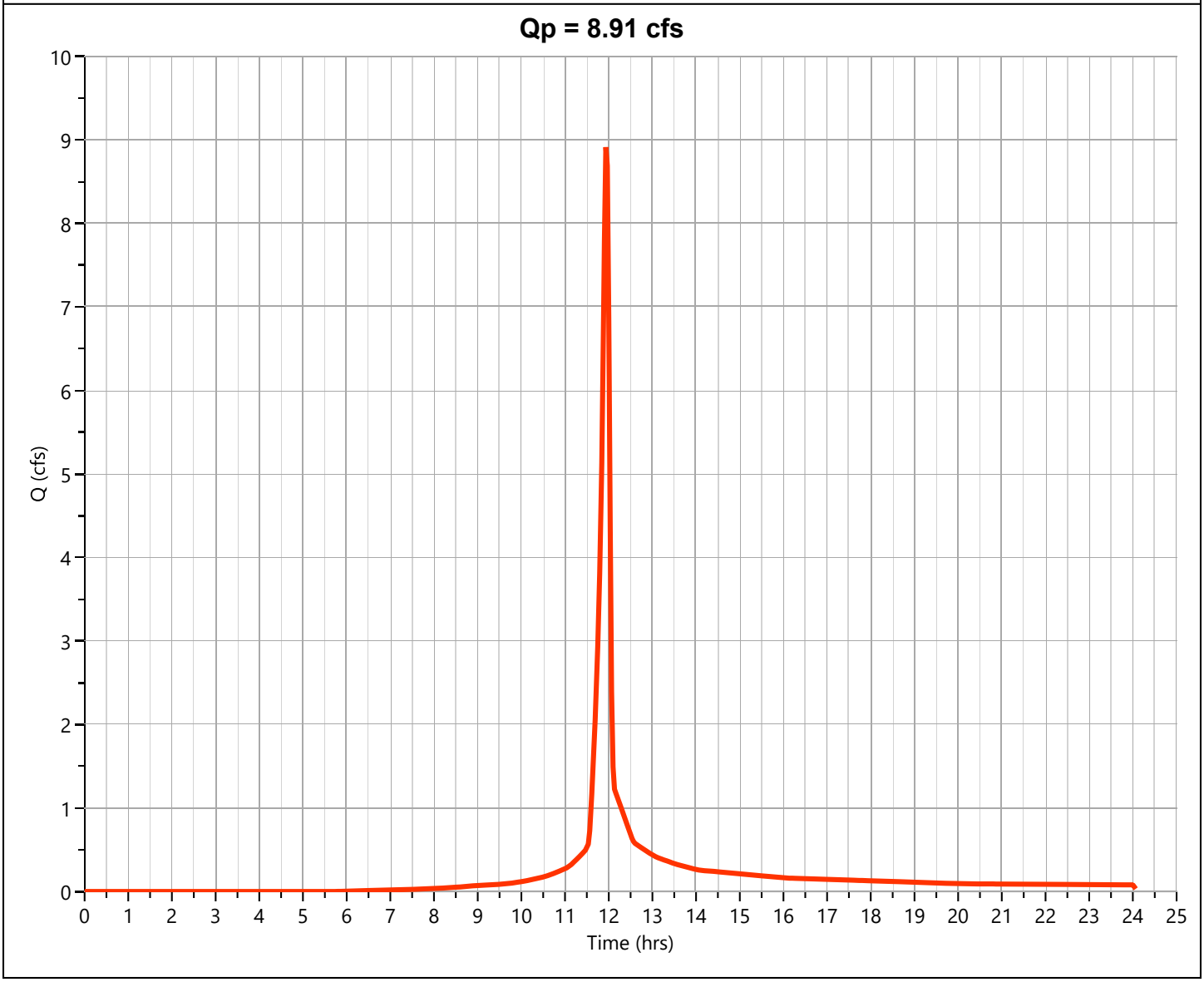
Post North to Pond 2

Hyd. No. 25

Hydrograph Type	= NRCS Runoff	Peak Flow	= 8.913 cfs
Storm Frequency	= 50-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 18,420 cuft
Drainage Area	= 1.16 ac	Curve Number	= 79.16*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.07 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.618	91	Gravel
0.245	98	Bldg/Concrete
0.297	39	Grass
1.16	**79**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

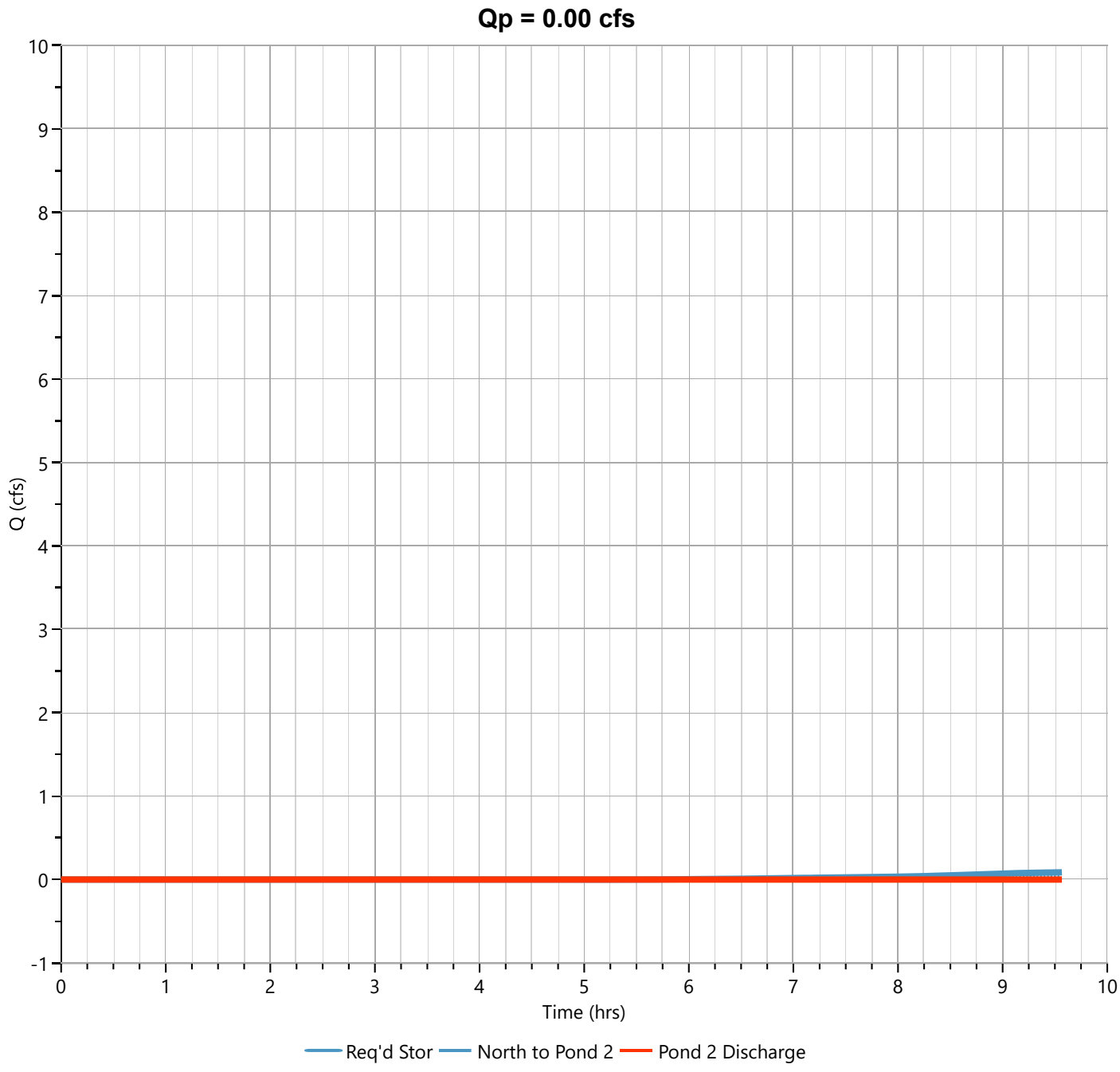
07-25-2024

Post Pond 2 Discharge

Hyd. No. 26

Hydrograph Type	= Pond Route	Peak Flow	= 0.000 cfs
Storm Frequency	= 50-yr	Time to Peak	= 9.53 hrs
Time Interval	= 2 min	Hydrograph Volume	= 0.000 cuft
Inflow Hydrograph	= 25 - North to Pond 2	Max. Elevation	= 534.33 ft
Pond Name	= Pond 2	Max. Storage	= 13,768 cuft

Pond Routing by Storage Indication Method



Hydrograph Report

Project Name:

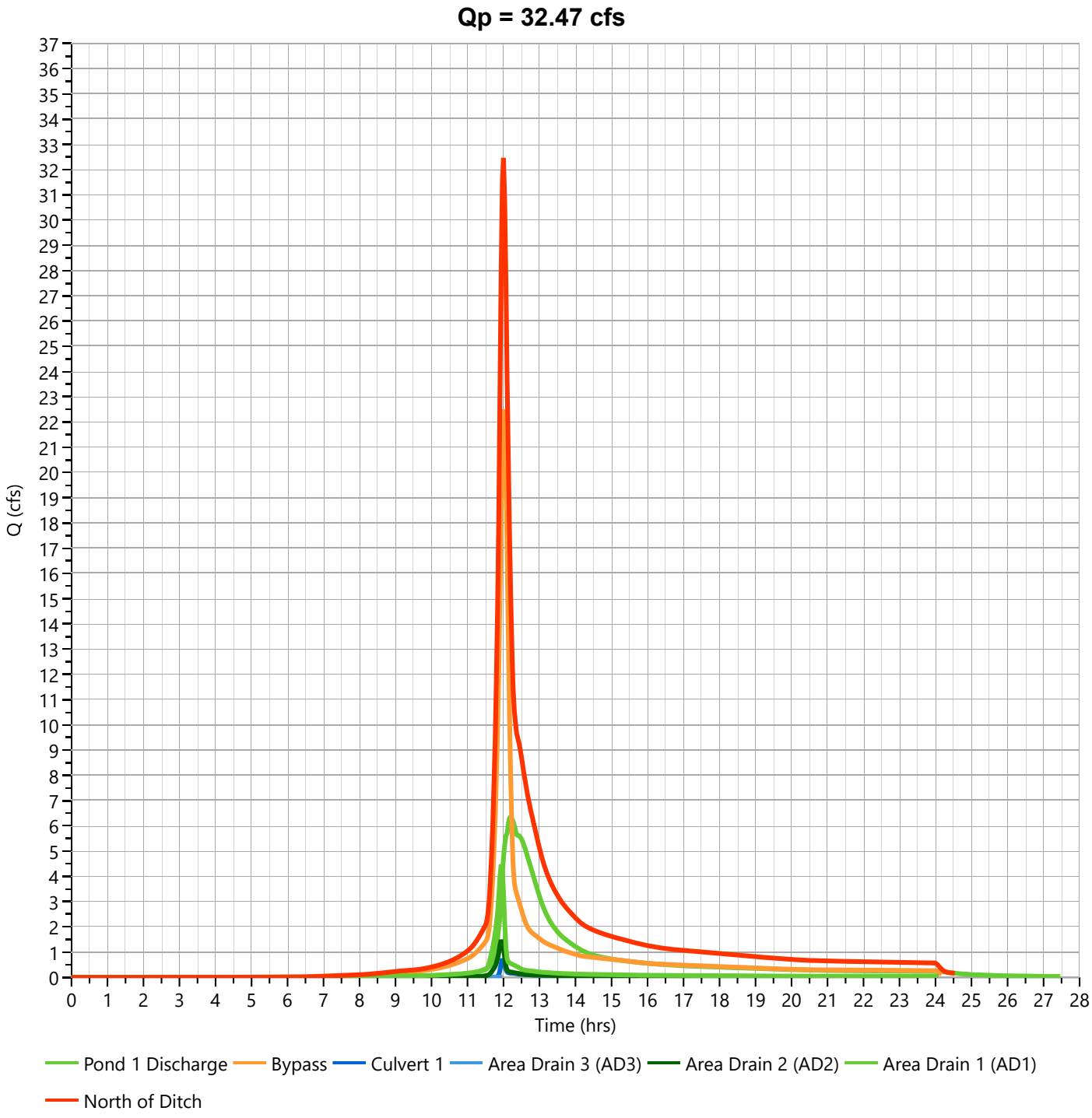
Hydrology Studio v 3.0.0.32

07-25-2024

Post North of Ditch

Hyd. No. 27

Hydrograph Type	= Junction	Peak Flow	= 32.47 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Hydrograph Volume	= 118,343 cuft
Inflow Hydrographs	= 14, 15, 21, 22, 23, 24	Total Contrib. Area	= 5.138 ac



Hydrograph Report

Project Name:

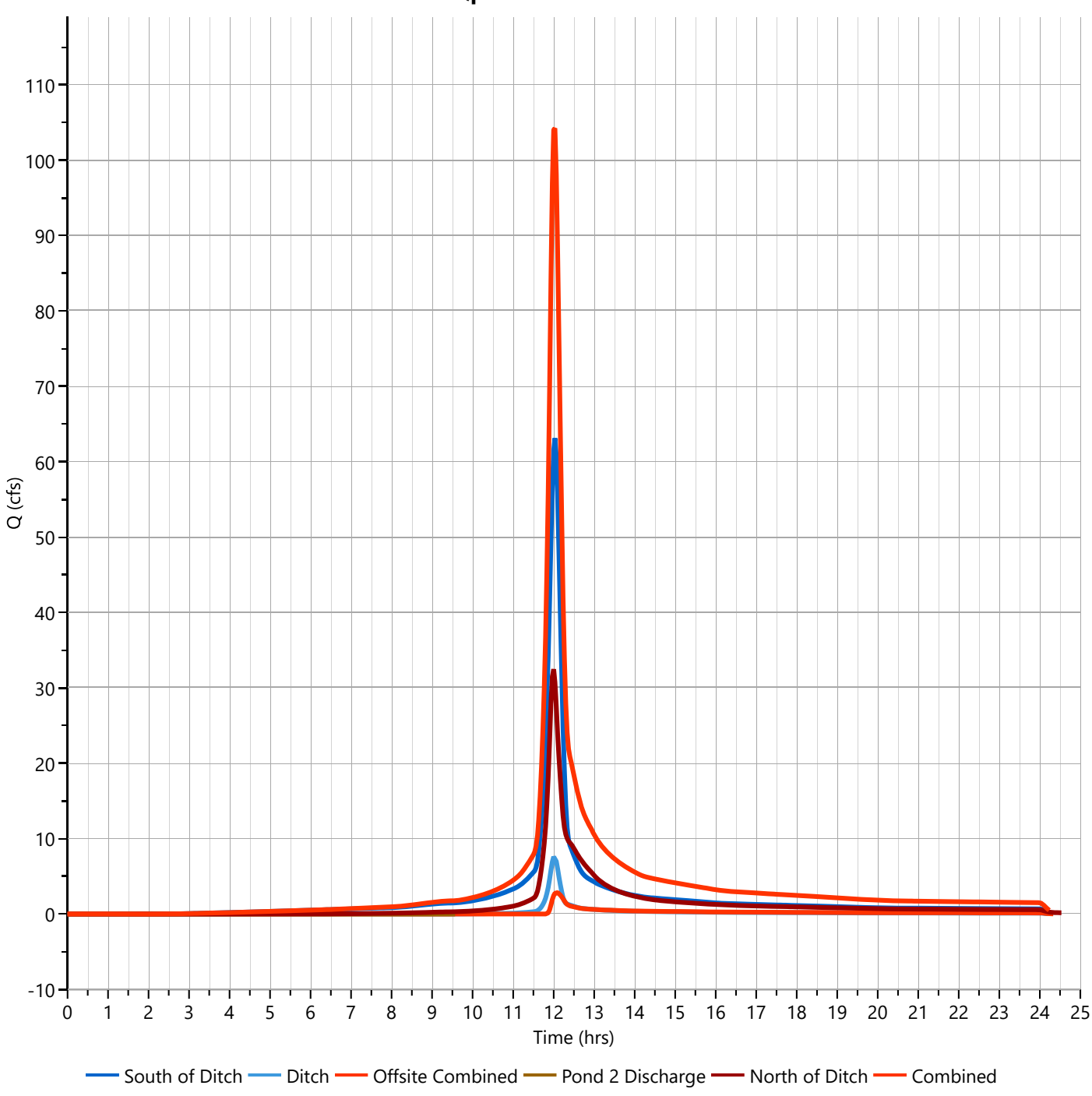
Hydrology Studio v 3.0.0.32

07-25-2024

Post Combined

Hyd. No. 28

Hydrograph Type	= Junction	Peak Flow	= 104.2 cfs
Storm Frequency	= 50-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 343,311 cuft
Inflow Hydrographs	= 11, 12, 20, 26, 27	Total Contrib. Area	= 21.17 ac



Design Storm Report

Custom Storm filename:

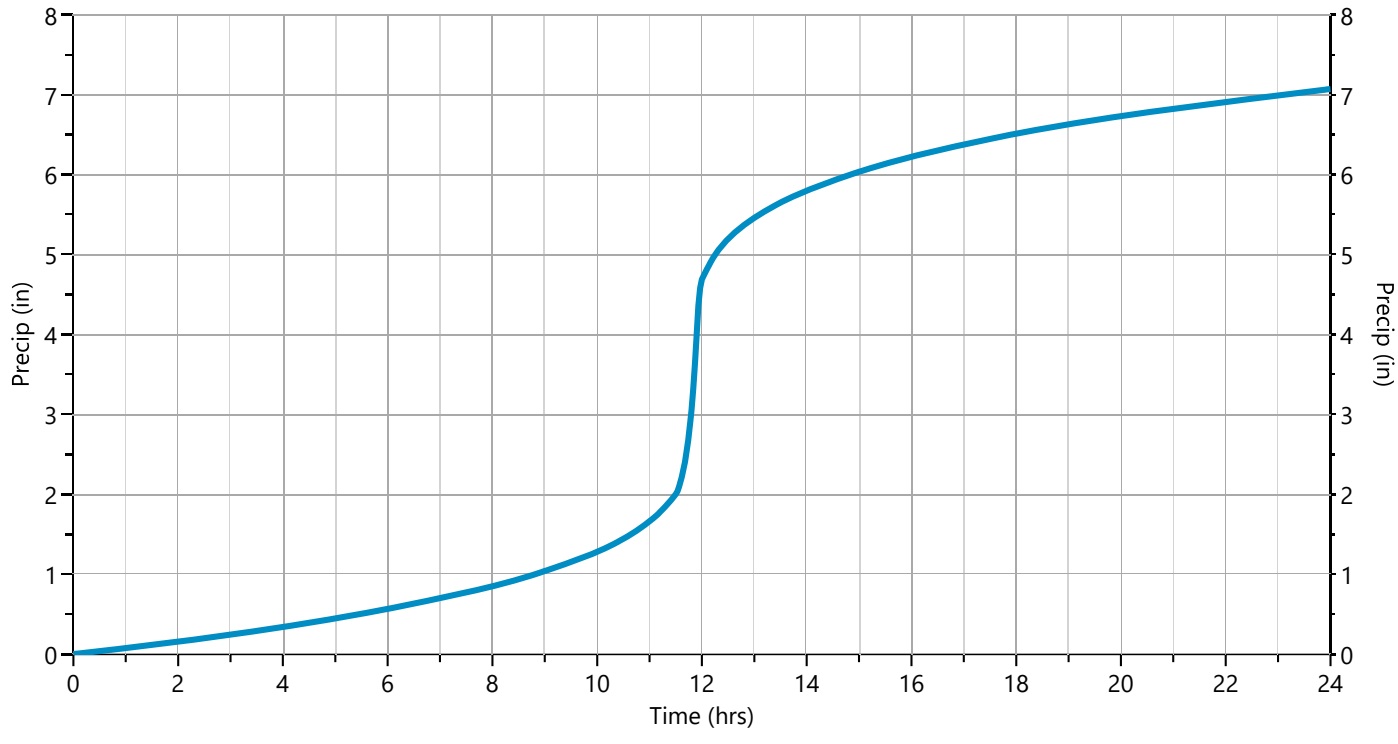
Hydrology Studio v 3.0.0.32

07-25-2024

Storm Distribution: NRCS/SCS - Type II, 24-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	✔ 50-yr	100-yr	
24 hrs	3.26	3.90	0.00	4.74	5.42	6.34	7.07	7.82	

Incremental Rainfall Distribution, 50-yr									
Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
10.90	0.015868	11.27	0.022624	11.63	0.093387	12.00	0.106246	12.37	0.028563
10.93	0.016183	11.30	0.023378	11.67	0.111989	12.03	0.047265	12.40	0.026772
10.97	0.016497	11.33	0.024132	11.70	0.130591	12.07	0.044683	12.43	0.024981
11.00	0.016811	11.37	0.024886	11.73	0.149193	12.10	0.042892	12.47	0.023190
11.03	0.017343	11.40	0.025641	11.77	0.171248	12.13	0.041100	12.50	0.021399
11.07	0.018099	11.43	0.026395	11.80	0.219526	12.17	0.039310	12.53	0.020301
11.10	0.018853	11.47	0.027149	11.83	0.271268	12.20	0.037518	12.57	0.019890
11.13	0.019608	11.50	0.027903	11.87	0.323010	12.23	0.035727	12.60	0.019482
11.17	0.020362	11.53	0.037634	**11.90**	**0.374752**	12.27	0.033936	12.63	0.019073
11.20	0.021116	11.57	0.056183	11.93	0.341995	12.30	0.032145	12.67	0.018665
11.23	0.021870	11.60	0.074785	11.97	0.224001	12.33	0.030354	12.70	0.018256



Hydrograph 100-yr Summary

Project Name:

07-25-2024

Hydrology Studio v 3.0.0.32

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	Pre South of Ditch	70.29	12.03	212,832	----		
2	NRCS Runoff	Pre Ditch	8.663	12.00	22,658	----		
3	NRCS Runoff	Pre North of Ditch	59.51	12.03	166,941	----		
4	NRCS Runoff	Pre Offsite 1	0.246	11.97	601	----		
5	NRCS Runoff	Pre Offsite 2	4.207	12.10	17,312	----		
6	NRCS Runoff	Pre Offsite 3	0.038	11.97	92.1	----		
7	NRCS Runoff	Post Offsite 4	0.946	11.97	2,306	----		
8	Junction	Pre Offsite Combined	4.652	12.07	20,311	4, 5, 6, 7		
9	Junction	Pre Total	139.1	12.03	404,737	1, 2, 3, 7		
11	NRCS Runoff	Post South of Ditch	70.41	12.03	213,505	----		
12	NRCS Runoff	Post Ditch	9.120	12.00	23,771	----		
13	NRCS Runoff	Post North to Pond 1	20.42	12.00	52,953	----		
14	Pond Route	Post Pond 1 Discharge	7.581	12.20	52,926	13	630.27	17,703
15	NRCS Runoff	Post Bypass	25.88	12.00	67,741	----		
16	NRCS Runoff	Post Offsite 1	0.246	11.97	601	----		
17	NRCS Runoff	Post Offsite 2	4.207	12.10	17,312	----		
18	NRCS Runoff	Post Offsite 3	0.038	11.97	92.1	----		
19	NRCS Runoff	Post Offsite 4	0.946	11.97	2,306	----		
20	Junction	Post Offsite Combined	4.652	12.07	20,311	16, 17, 18, 19		
21	NRCS Runoff	Post Culvert 1	1.150	11.97	2,804	----		
22	NRCS Runoff	Post Area Drain 3 (AD3)	0.010	11.93	23.0	----		
23	NRCS Runoff	Post Area Drain 2 (AD2)	1.759	11.93	3,552	----		
24	NRCS Runoff	Post Area Drain 1 (AD1)	5.028	11.93	10,750	----		
25	NRCS Runoff	Post North to Pond 2	10.17	11.93	21,156	----		
26	Pond Route	Post Pond 2 Discharge	0.000	8.90	0.000	25	534.88	16,090
27	Junction	Post North of Ditch	37.52	12.00	137,796	14, 15, 21, 22, 23, 24		
28	Junction	Post Combined	119.5	12.00	395,383	11, 12, 20, 26, 27		

Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

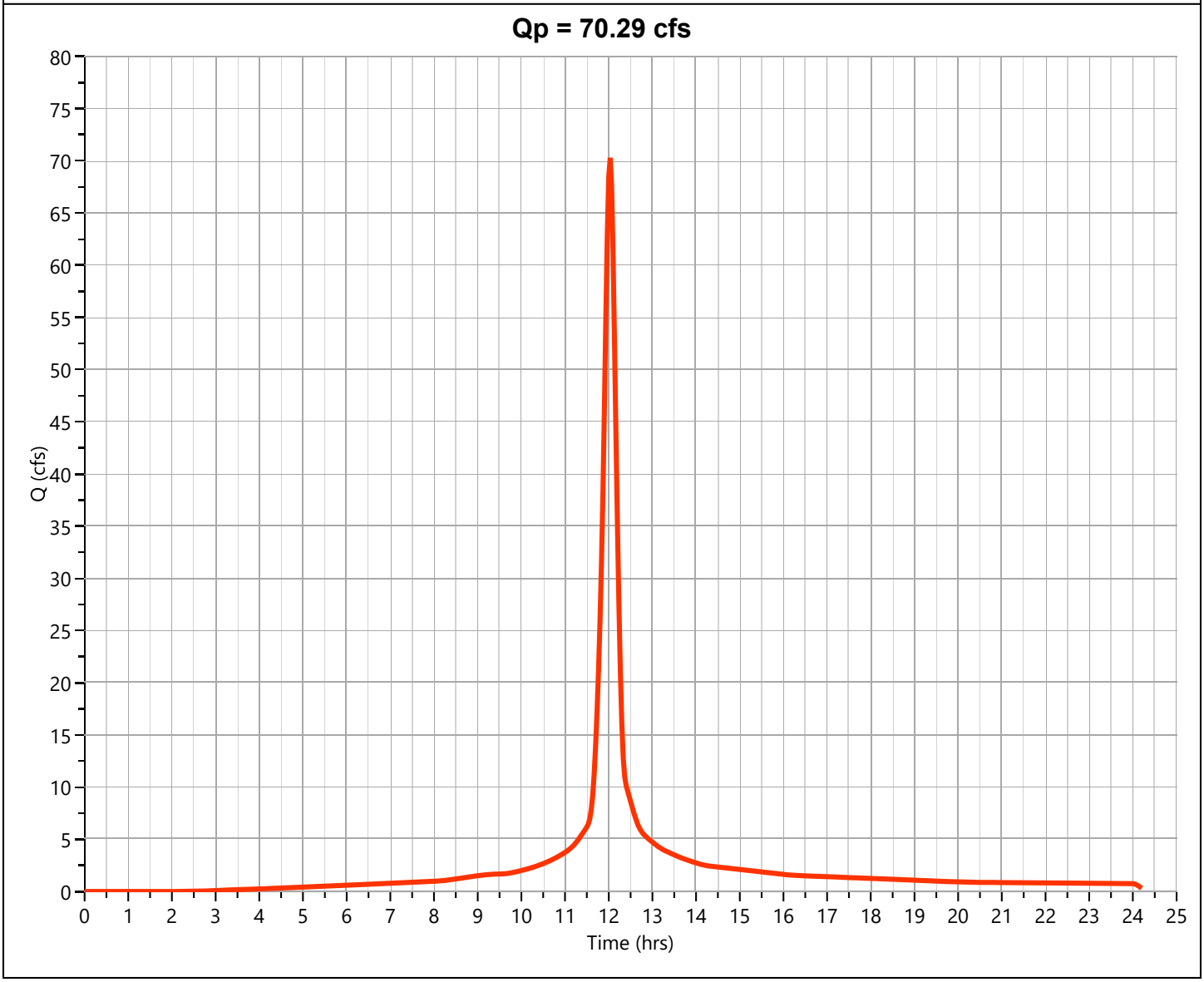
Pre South of Ditch

Hyd. No. 1

Hydrograph Type	= NRCS Runoff	Peak Flow	= 70.29 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 212,832 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.02*
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
8.69	91	No Rating (Row Crops)
0.2	91	Gravel
0.02	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

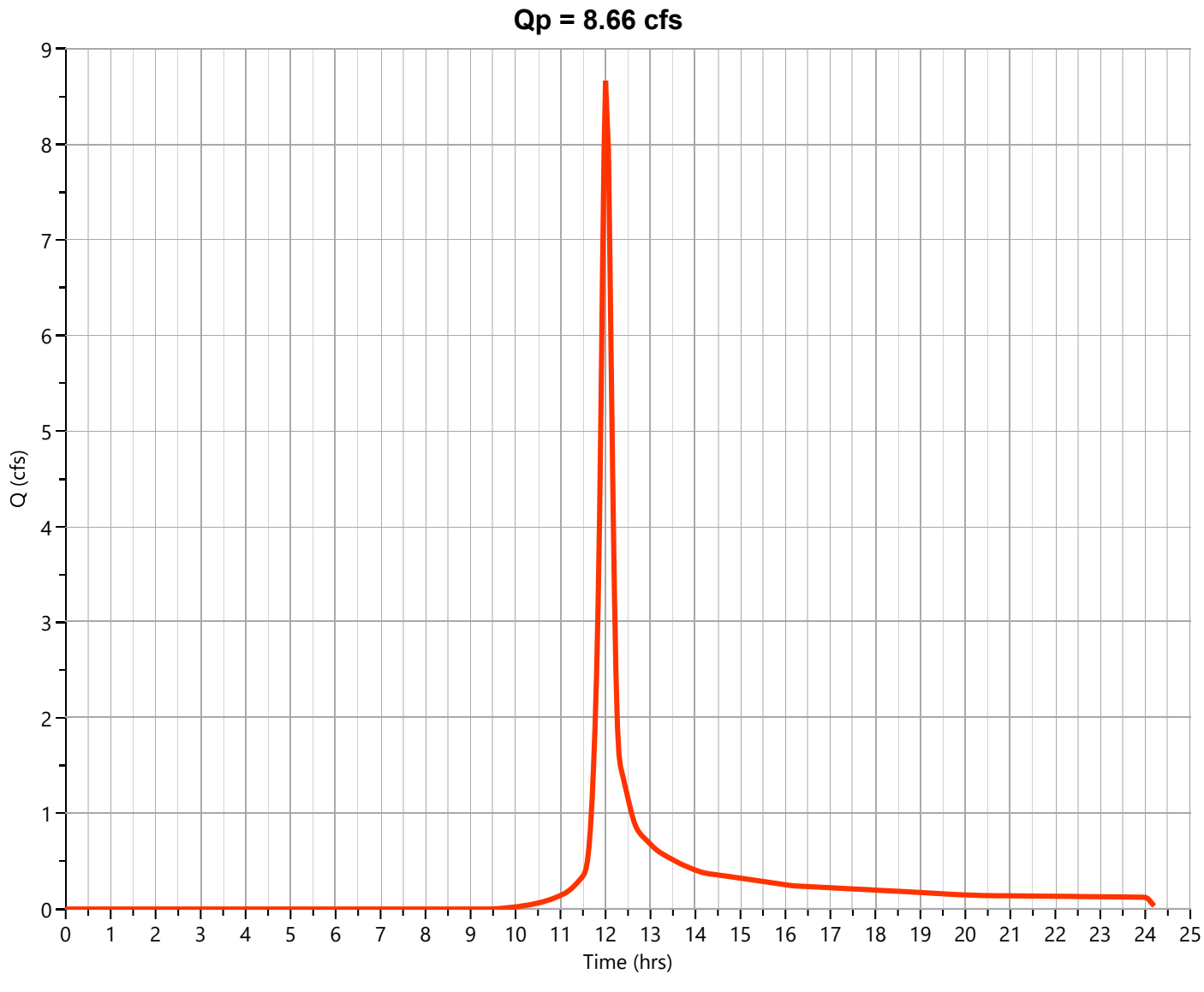
Pre Ditch

Hyd. No. 2

Hydrograph Type	= NRCS Runoff	Peak Flow	= 8.663 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 22,658 cuft
Drainage Area	= 1.79 ac	Curve Number	= 61.67*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.75	61	Ditch (inside buffer)
0.04	91	Gravel
1.79	**62**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

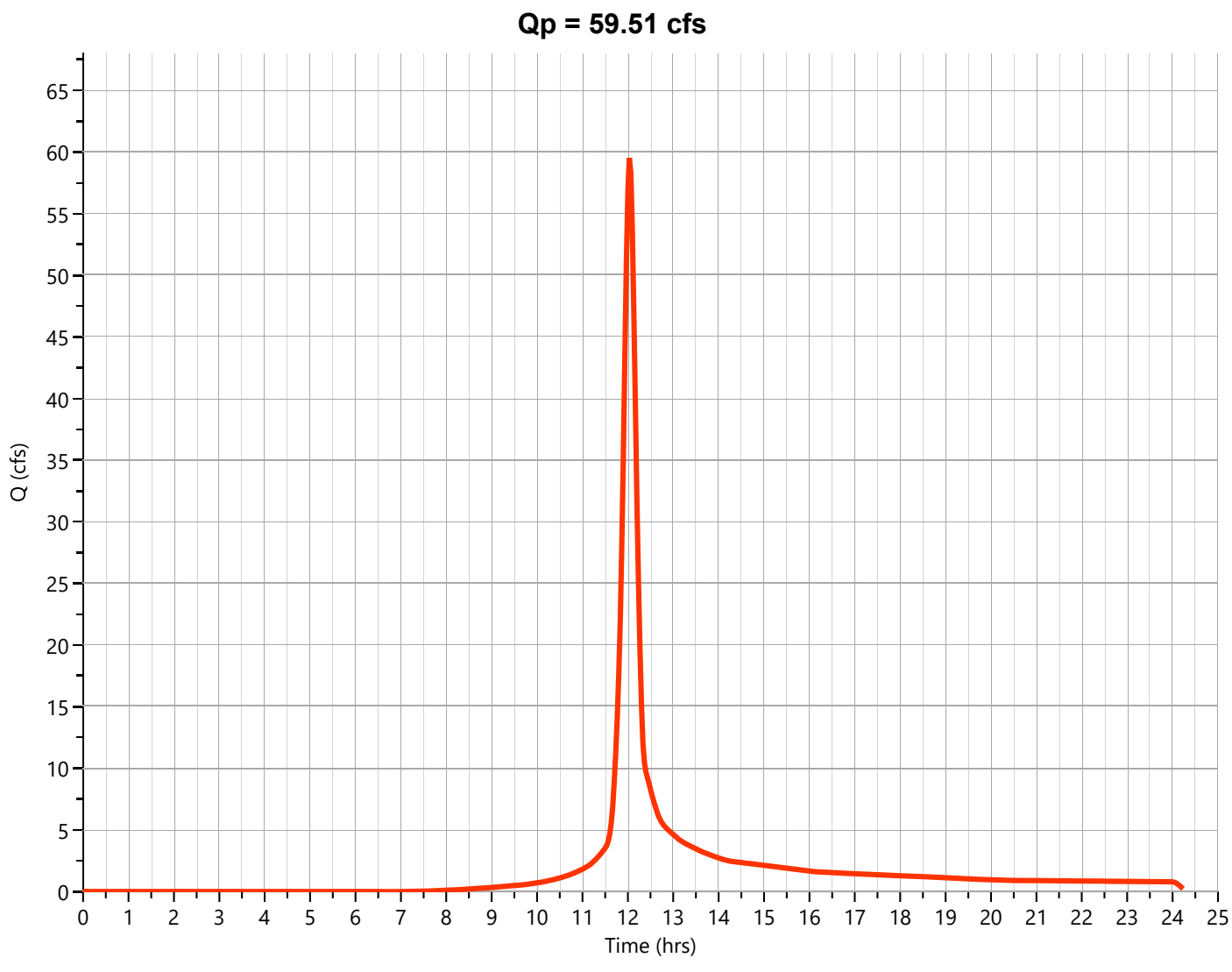
Pre North of Ditch

Hyd. No. 3

Hydrograph Type	= NRCS Runoff	Peak Flow	= 59.51 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 166,941 cuft
Drainage Area	= 10.55 ac	Curve Number	= 71.42*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
3.945	79	Pervious (C)
3.945	49	Pervious (A)
0.89	98	Buildings
1.73	91	Gravel
0.04	98	Concrete
10.55	**71**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

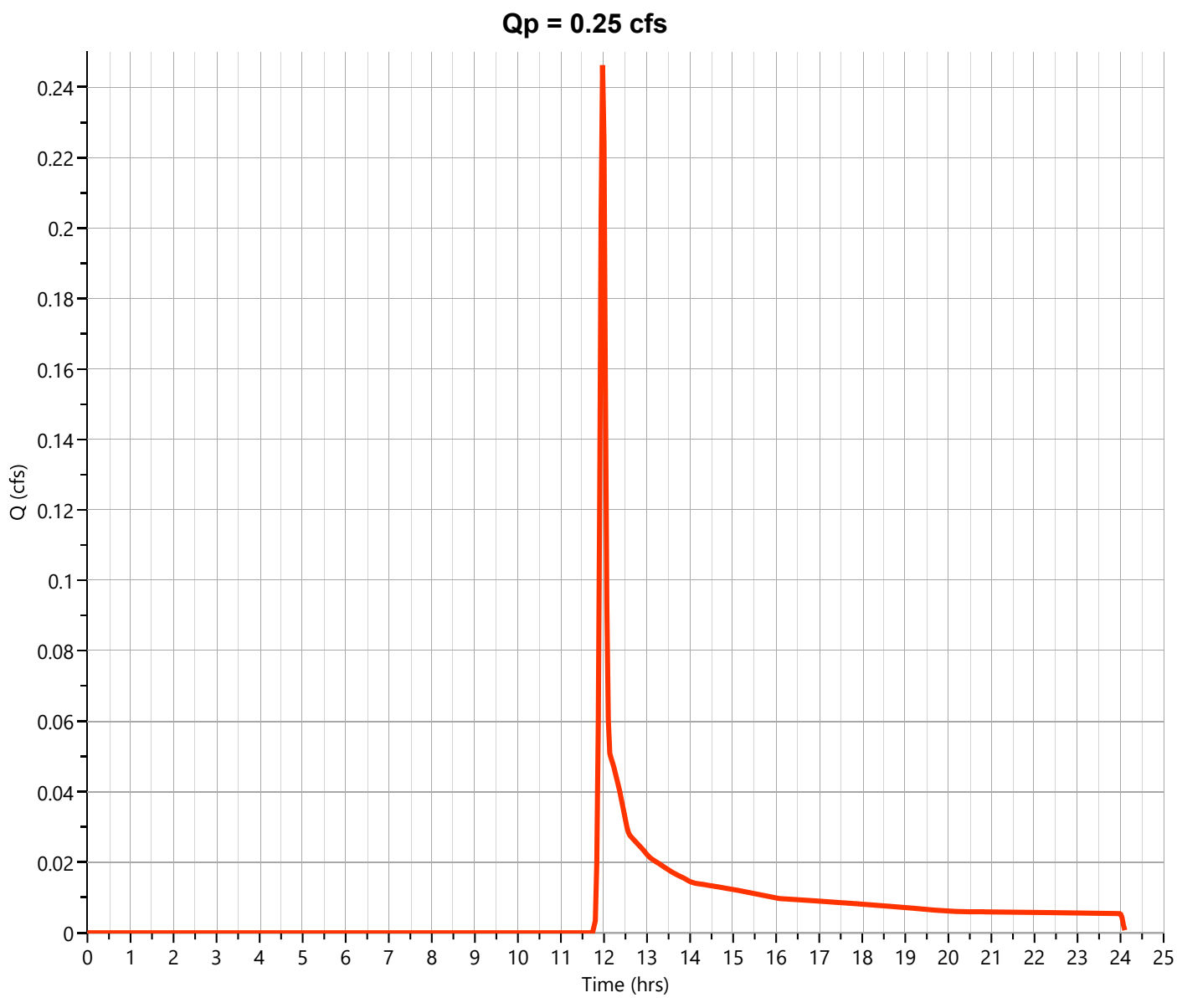
Pre Offsite 1

Hyd. No. 4

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.246 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 601 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

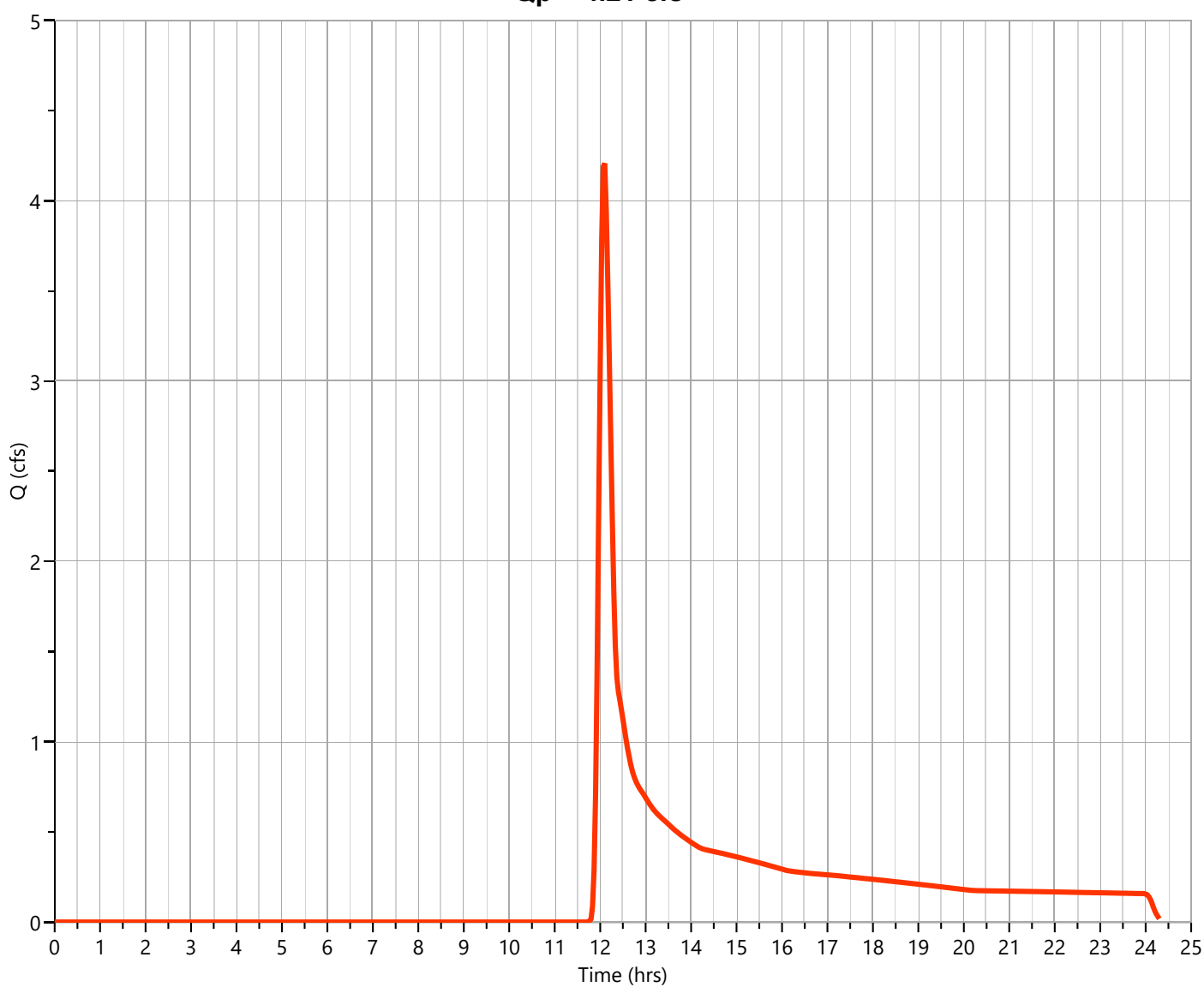
Pre Offsite 2

Hyd. No. 5

Hydrograph Type	= NRCS Runoff	Peak Flow	= 4.207 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 17,312 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

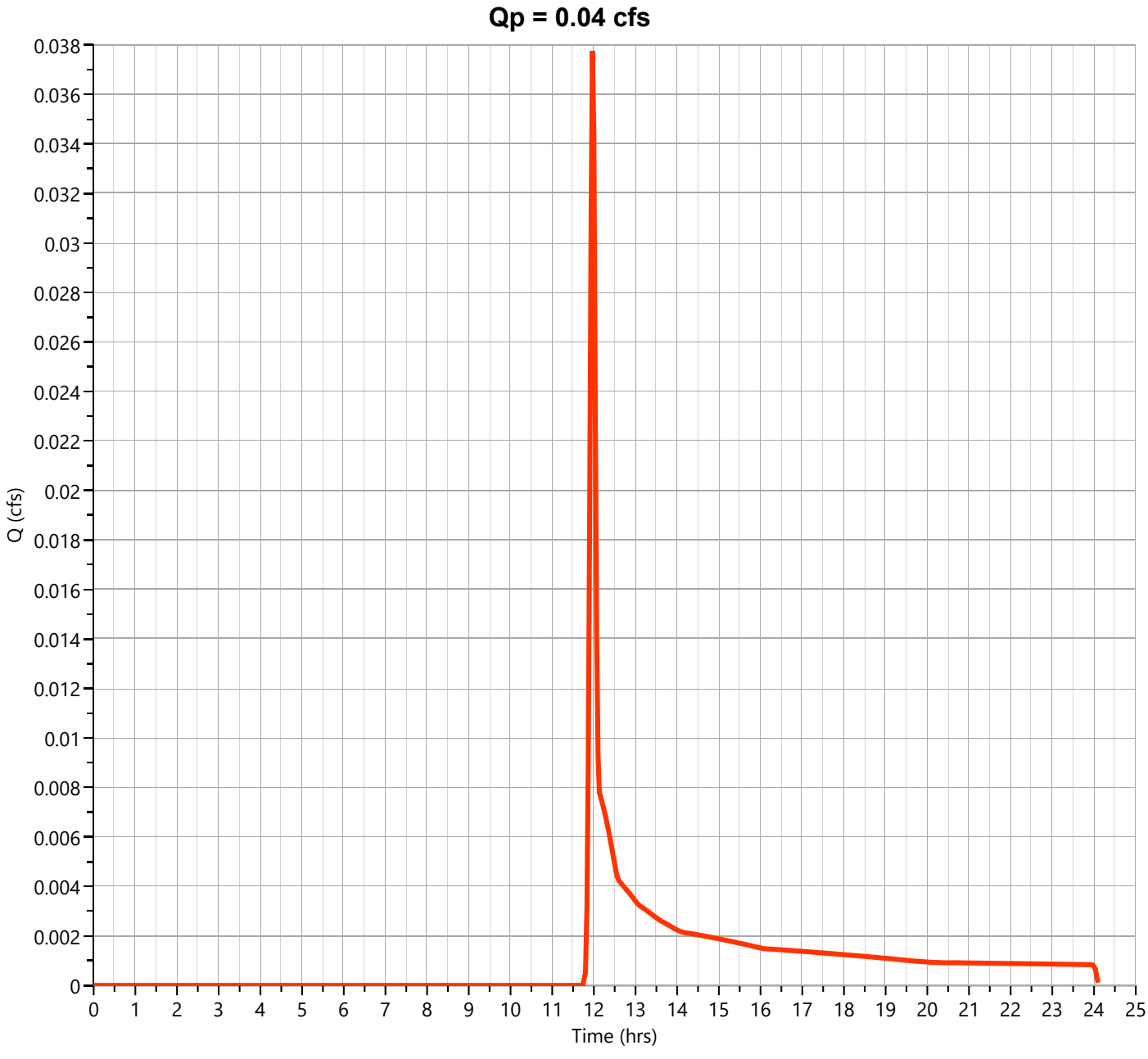
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite 3

Hyd. No. 6

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.038 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 92.1 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

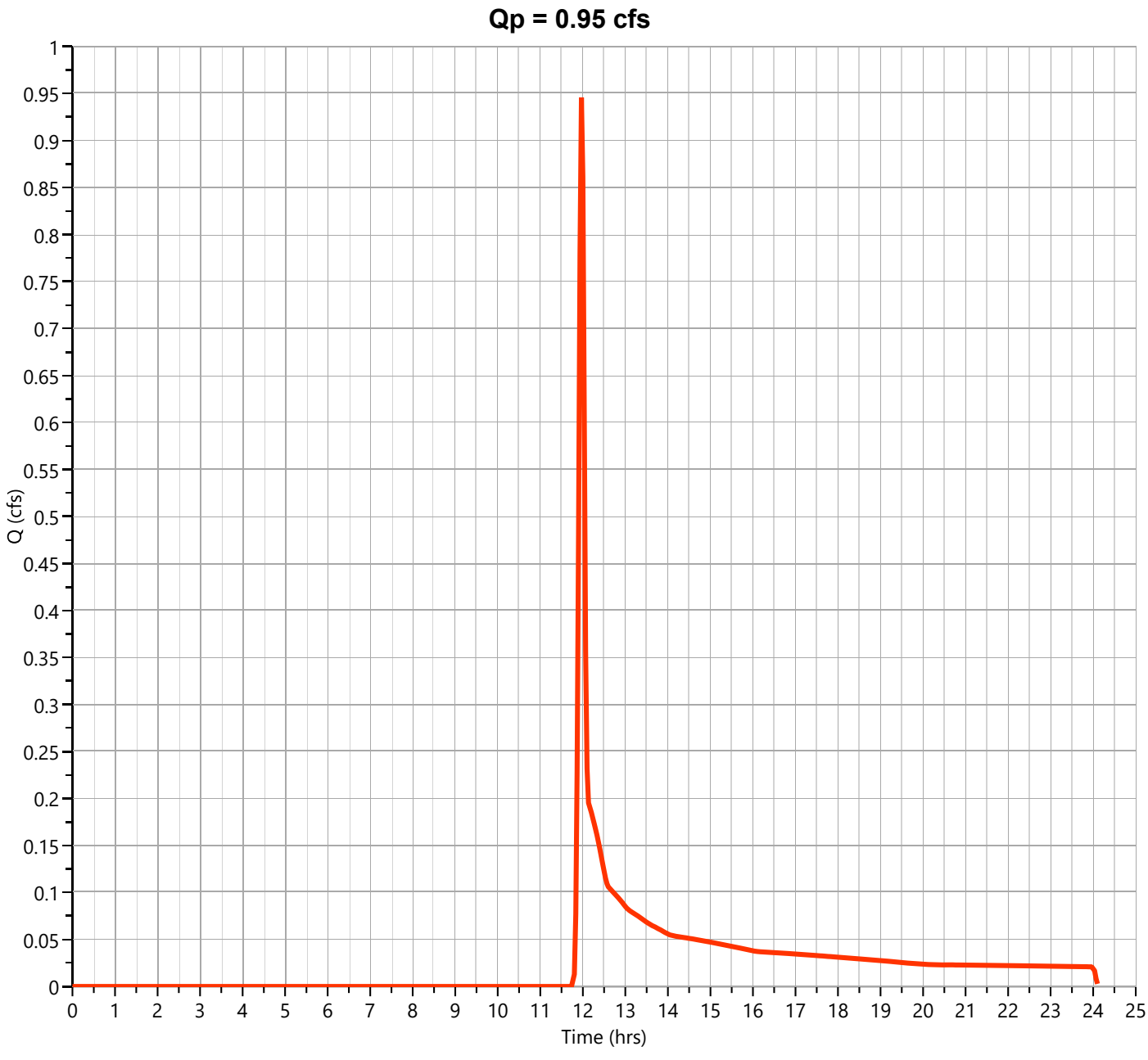
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 7

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.946 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 2,306 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

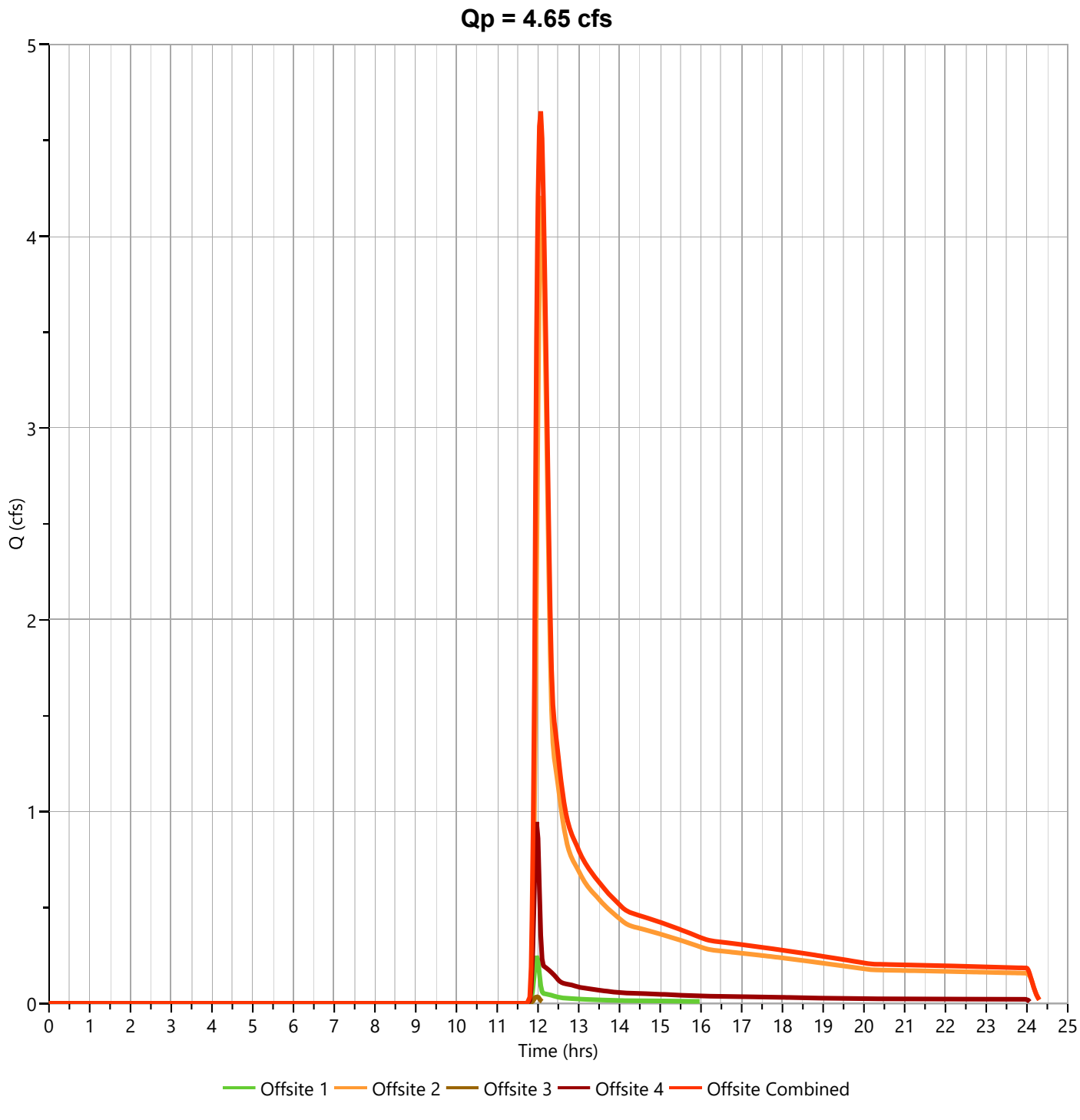
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Offsite Combined

Hyd. No. 8

Hydrograph Type	= Junction	Peak Flow	= 4.652 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Hydrograph Volume	= 20,311 cuft
Inflow Hydrographs	= 4, 5, 6, 7	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

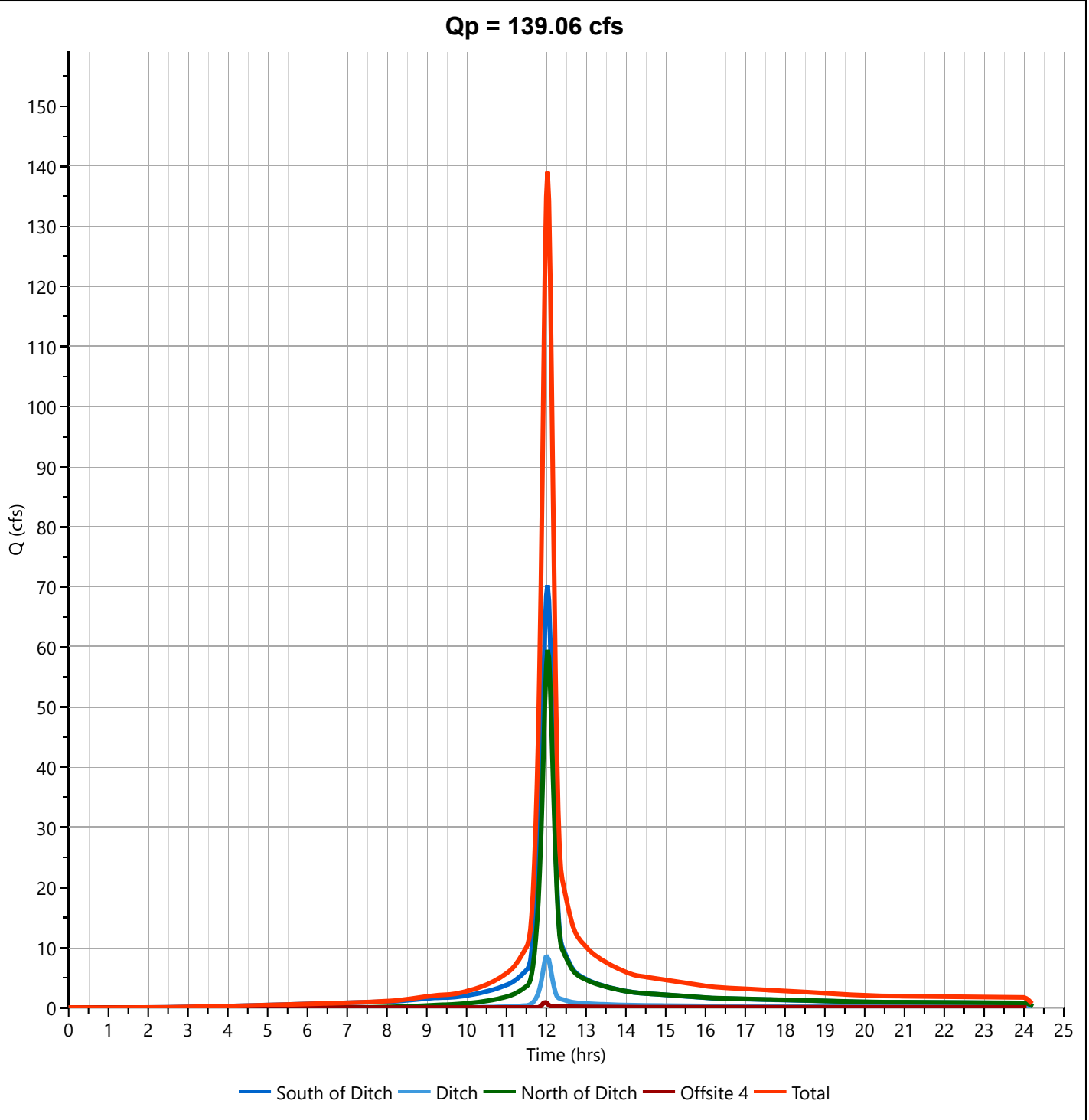
Hydrology Studio v 3.0.0.32

07-25-2024

Pre Total

Hyd. No. 9

Hydrograph Type	= Junction	Peak Flow	= 139.1 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Hydrograph Volume	= 404,737 cuft
Inflow Hydrographs	= 1, 2, 3, 7	Total Contrib. Area	= 21.876 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

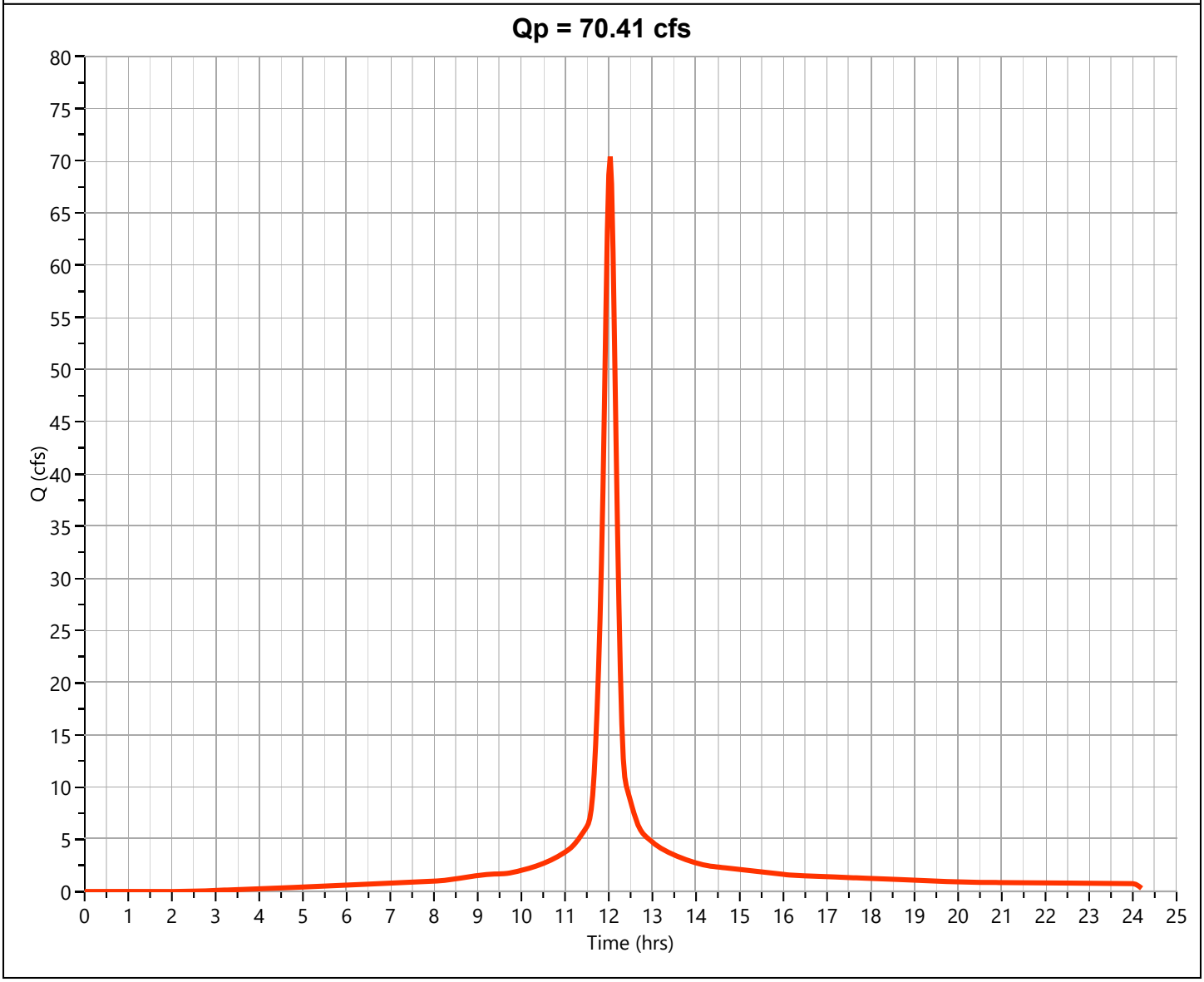
Post South of Ditch

Hyd. No. 11

Hydrograph Type	= NRCS Runoff	Peak Flow	= 70.41 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.03 hrs
Time Interval	= 2 min	Runoff Volume	= 213,505 cuft
Drainage Area	= 8.91 ac	Curve Number	= 91.2*
Tc Method	= User	Time of Conc. (Tc)	= 15.27 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
7.83	91	Row Crop
0.82	91	Gravel Drive
0.26	98	Concrete
8.91	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

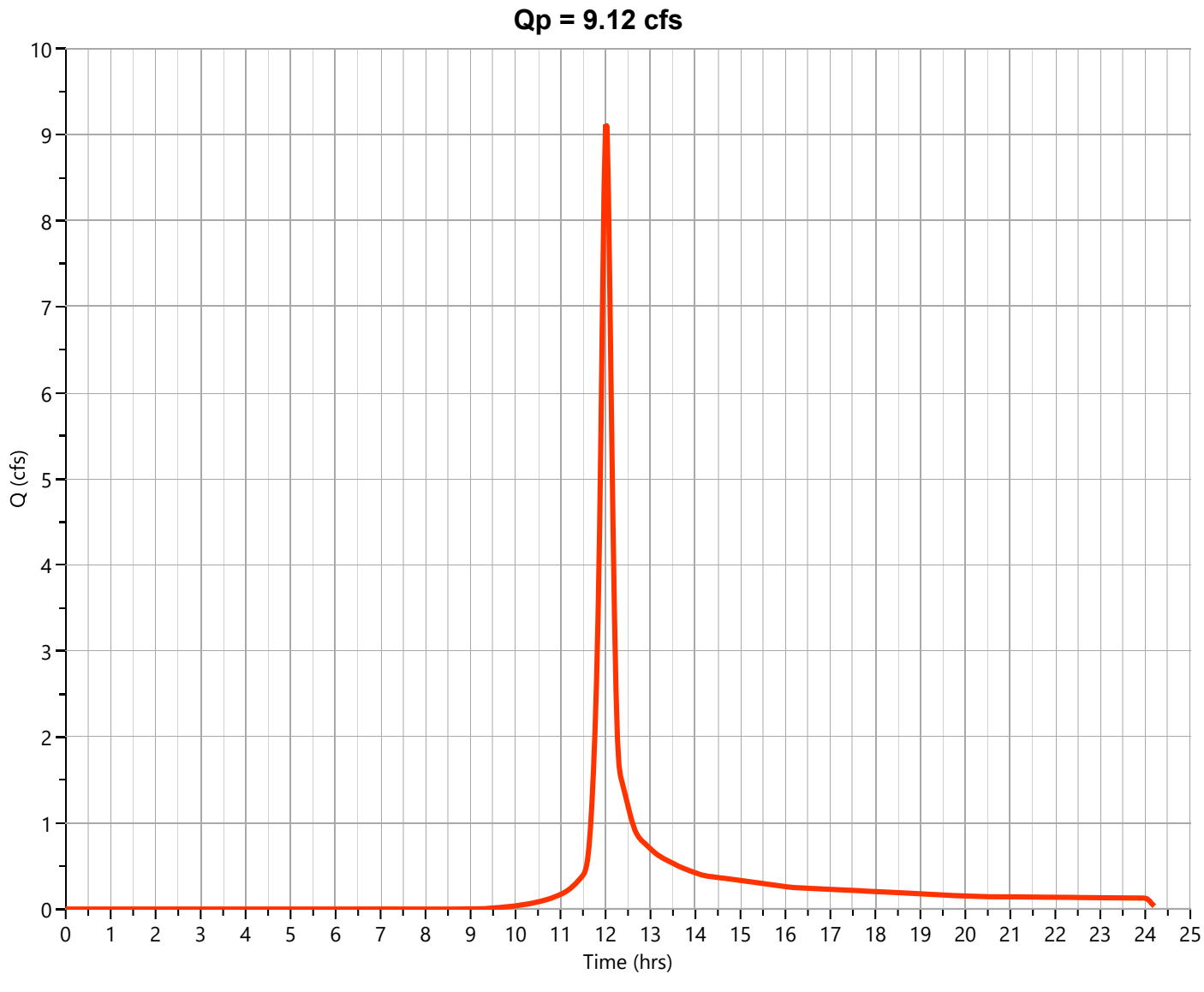
Post Ditch

Hyd. No. 12

Hydrograph Type	= NRCS Runoff	Peak Flow	= 9.120 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 23,771 cuft
Drainage Area	= 1.79 ac	Curve Number	= 63.18*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.66	61	Ditch (inside buffer)
0.13	91	Gravel
1.79	**63**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

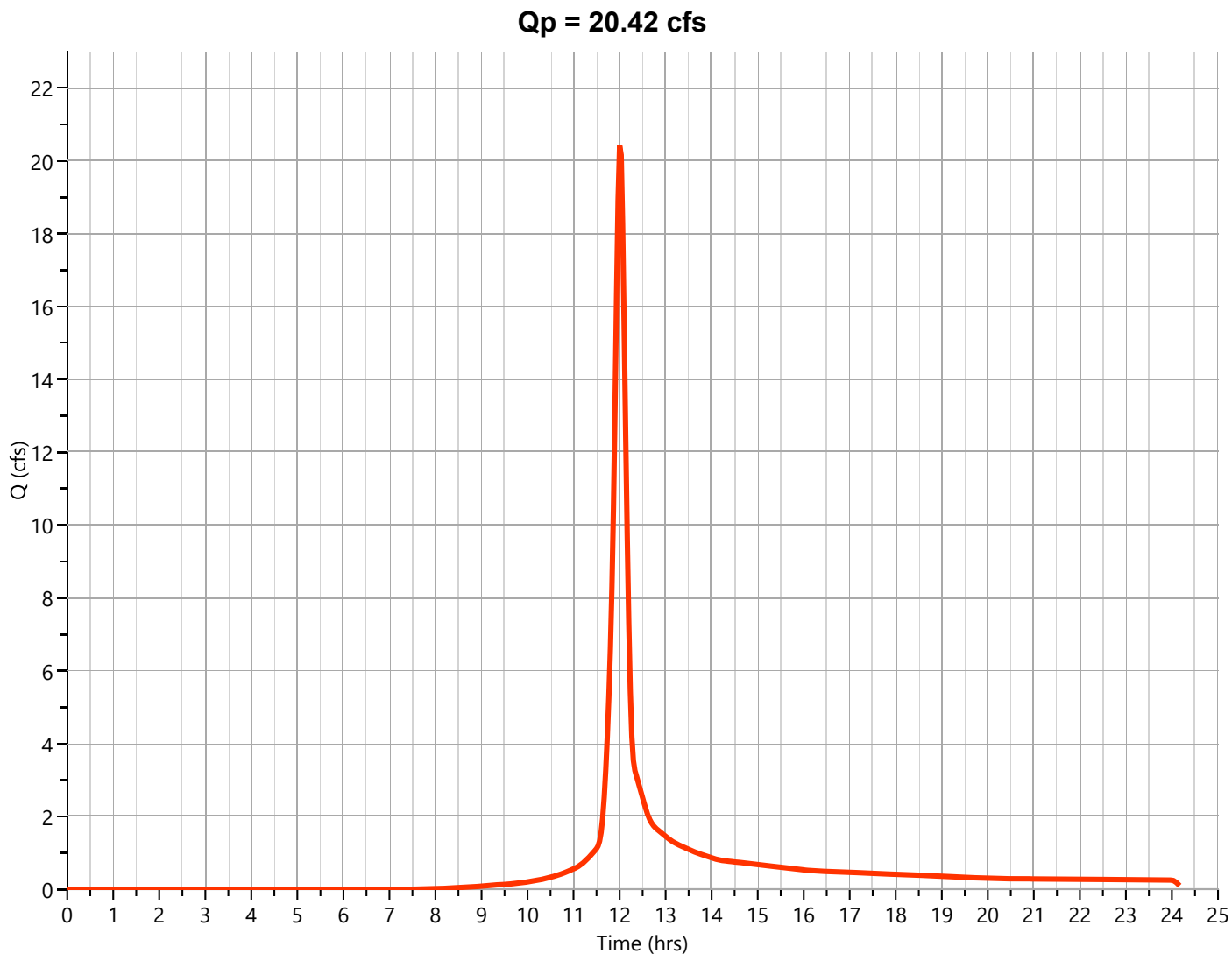
Post North to Pond 1

Hyd. No. 13

Hydrograph Type	= NRCS Runoff	Peak Flow	= 20.42 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 52,953 cuft
Drainage Area	= 3.282 ac	Curve Number	= 70*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
1.4	49	Pervious (A)
0.936	79	Pervious (C)
0.566	91	Gravel
0.38	98	Buildings
3.282	**70**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

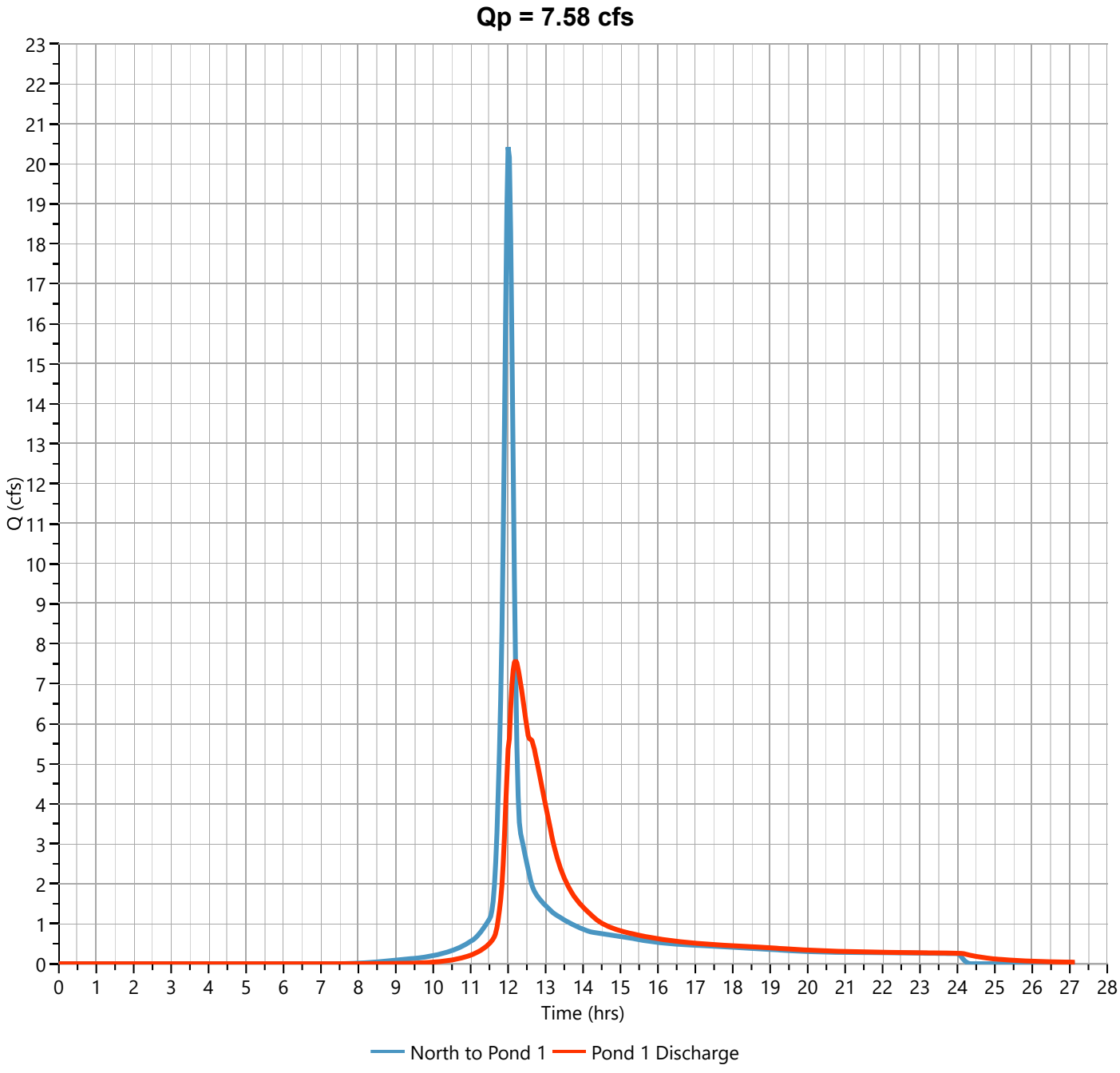
Post Pond 1 Discharge

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 7.581 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.20 hrs
Time Interval	= 2 min	Hydrograph Volume	= 52,926 cuft
Inflow Hydrograph	= 13 - North to Pond 1	Max. Elevation	= 630.27 ft
Pond Name	= Pond 1	Max. Storage	= 17,703 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 44 min



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

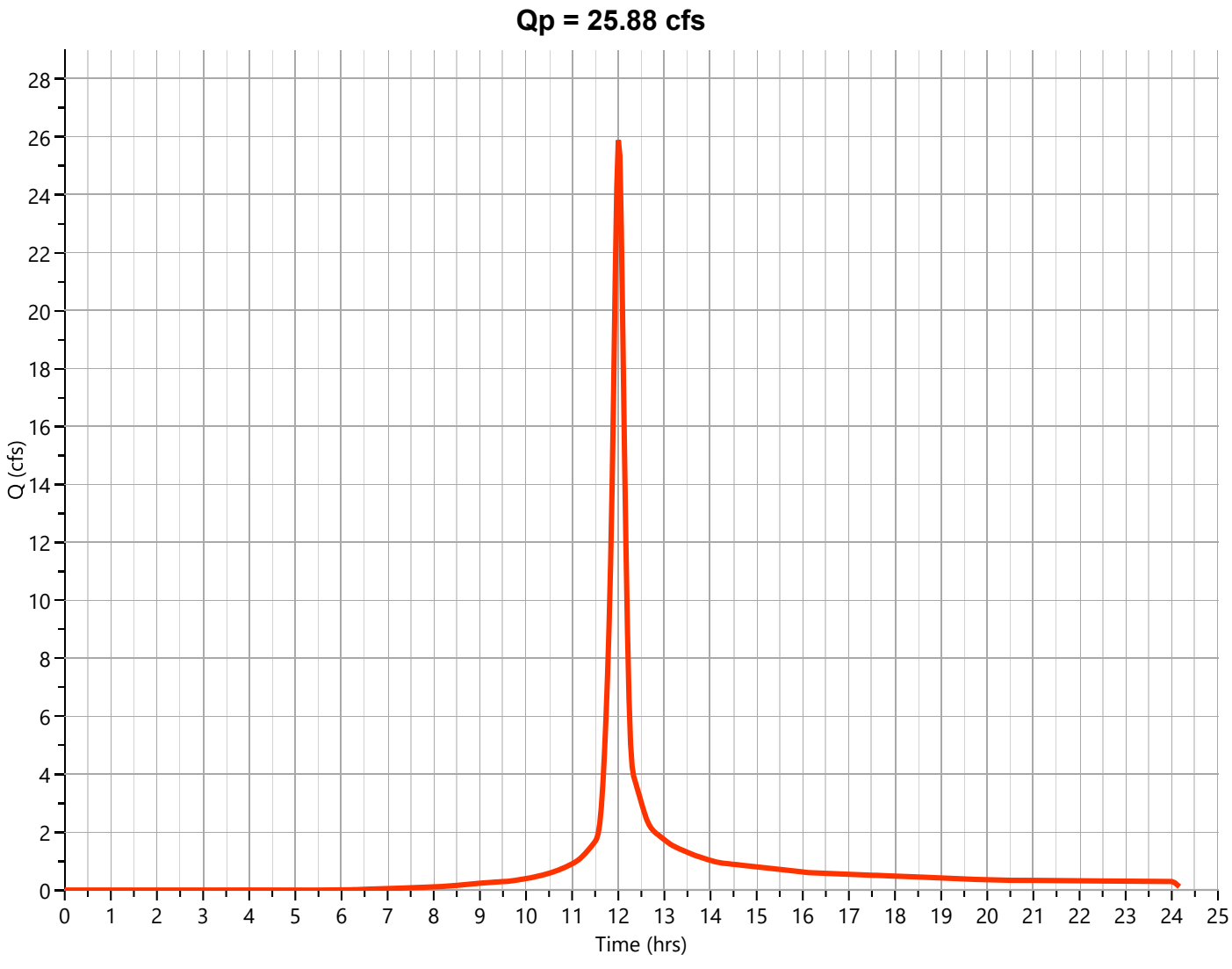
Post Bypass

Hyd. No. 15

Hydrograph Type	= NRCS Runoff	Peak Flow	= 25.88 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Runoff Volume	= 67,741 cuft
Drainage Area	= 3.569 ac	Curve Number	= 76.66*
Tc Method	= User	Time of Conc. (Tc)	= 10.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.95	49	Pervious (A)
1.26	79	Pervious (C)
0.81	91	Gravel
0.549	98	Buildings
3.569	**77**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

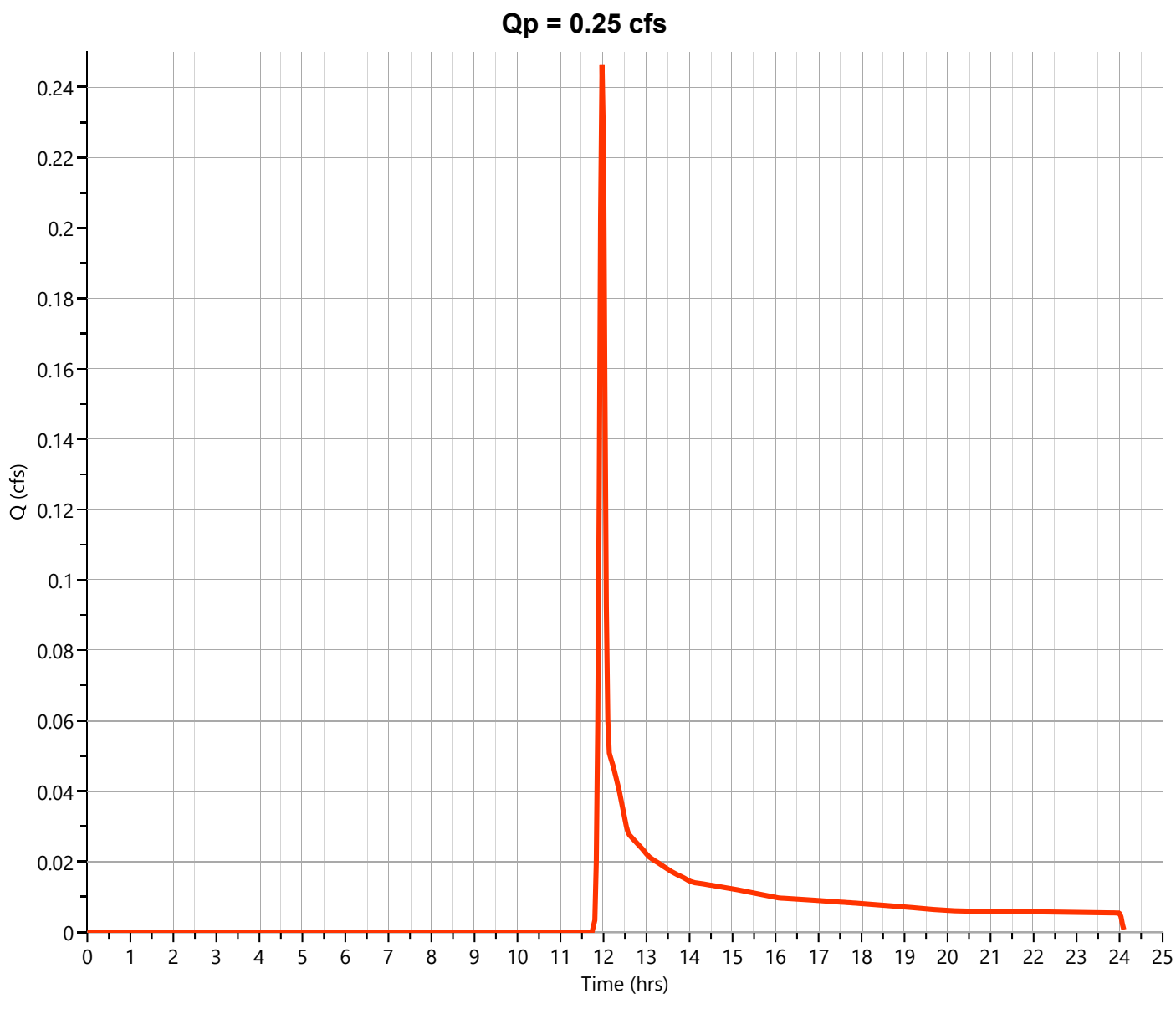
Post Offsite 1

Hyd. No. 16

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.246 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 601 cuft
Drainage Area	= 0.163 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.163	39	Offsite
0.163	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

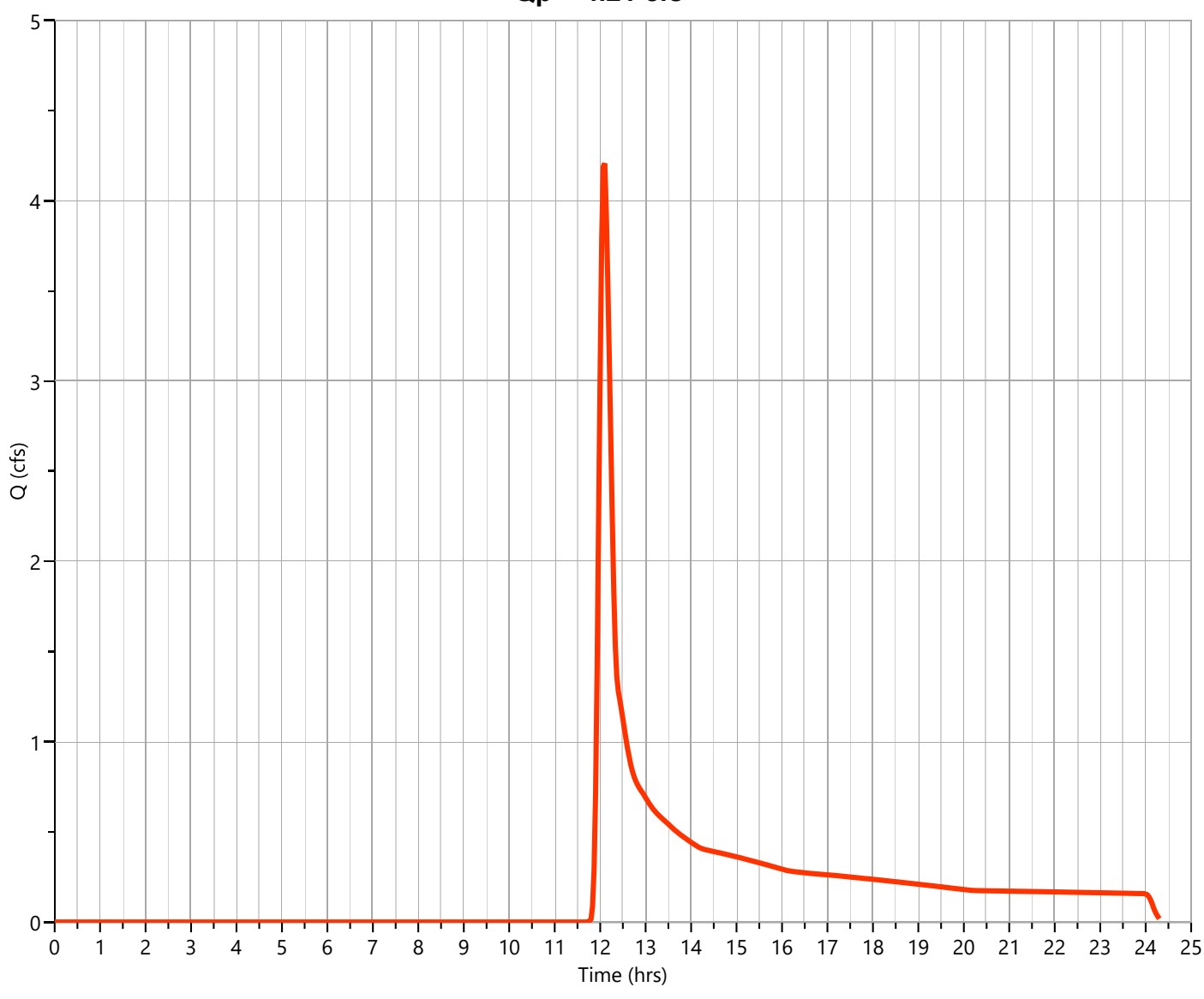
Post Offsite 2

Hyd. No. 17

Hydrograph Type	= NRCS Runoff	Peak Flow	= 4.207 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 2 min	Runoff Volume	= 17,312 cuft
Drainage Area	= 4.518 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 15.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
4.518	39	Offsite
4.518	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

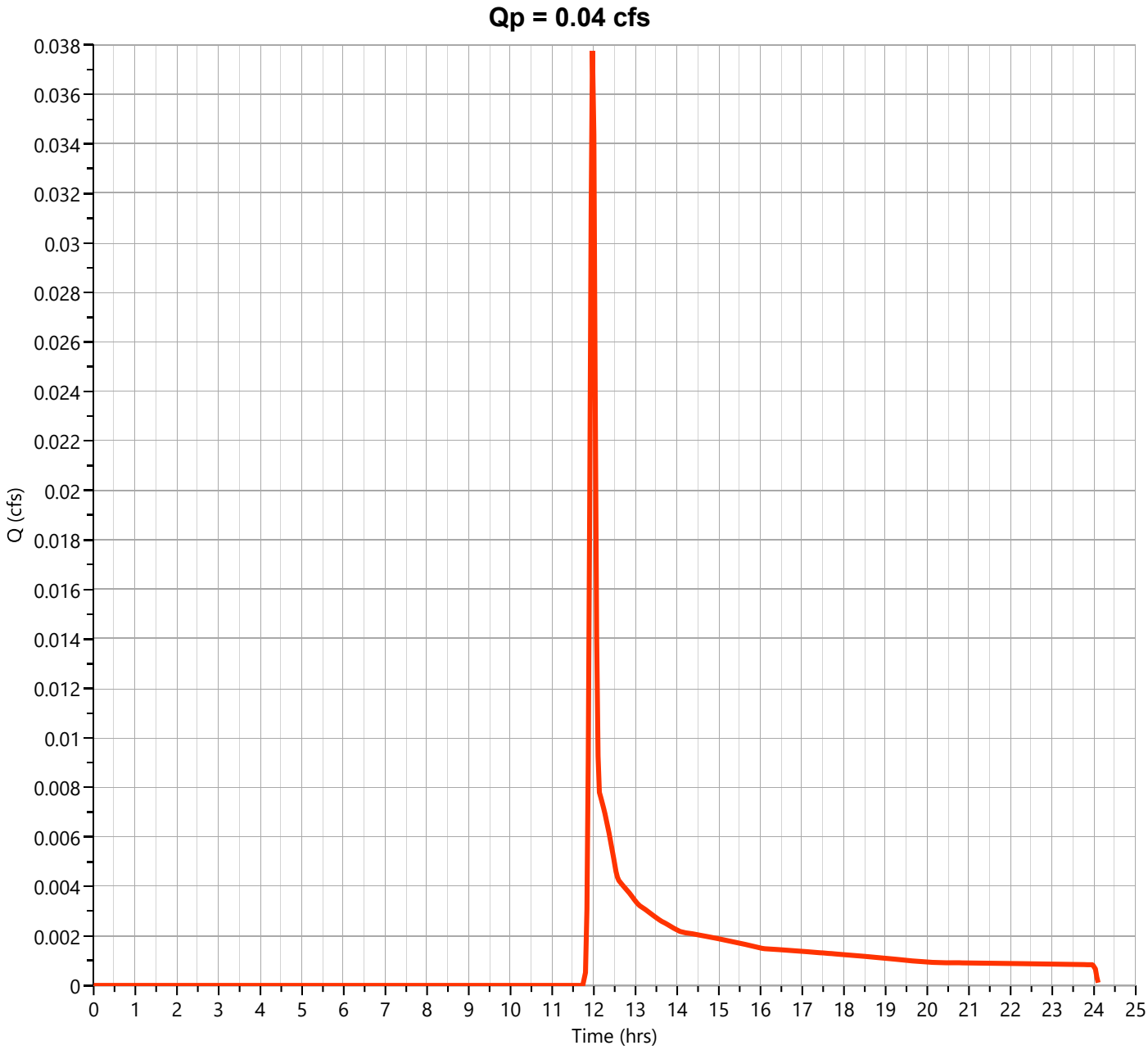
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 3

Hyd. No. 18

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.038 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 92.1 cuft
Drainage Area	= 0.025 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

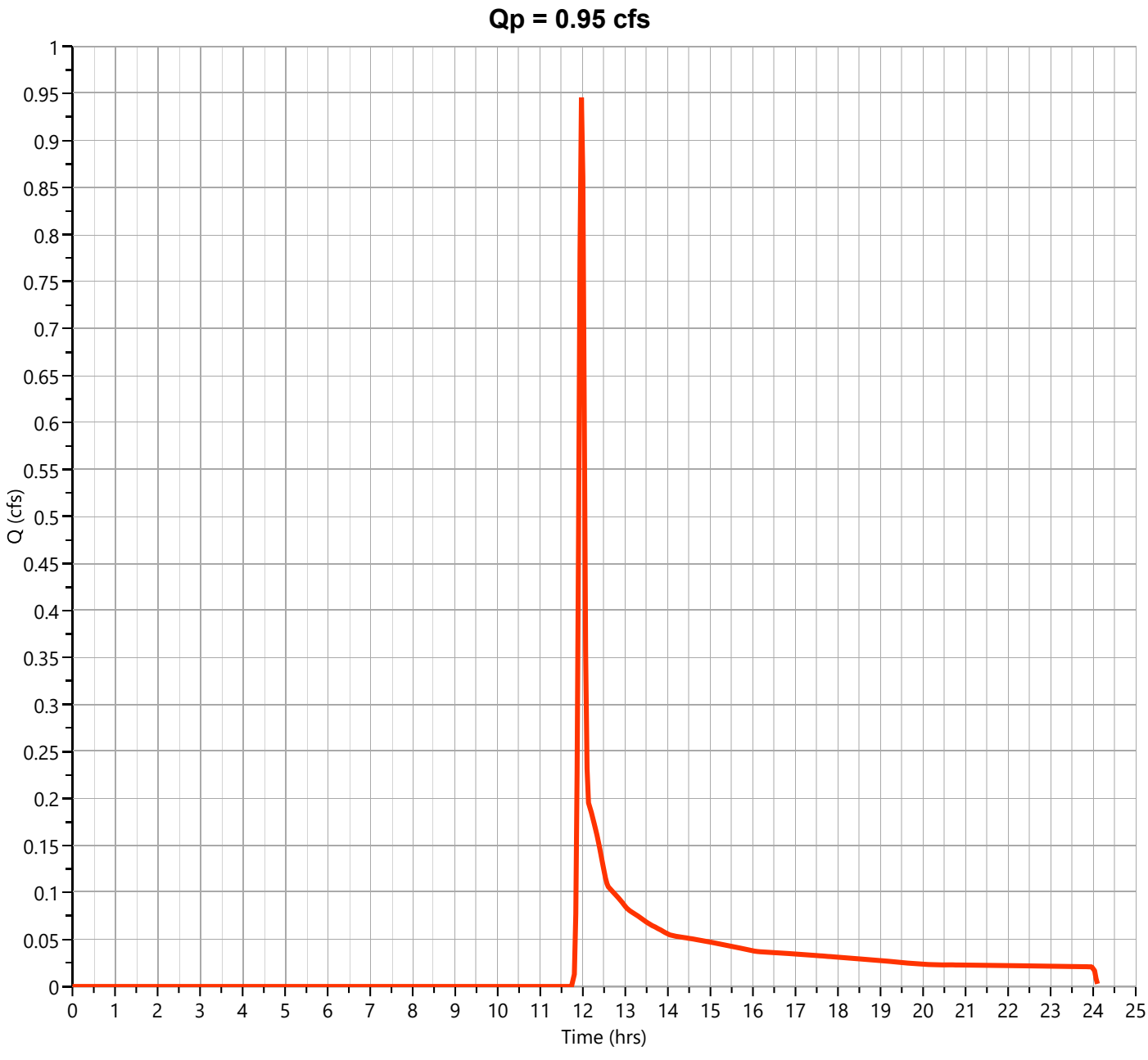
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite 4

Hyd. No. 19

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.946 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 2,306 cuft
Drainage Area	= 0.626 ac	Curve Number	= 39
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484



Hydrograph Report

Project Name:

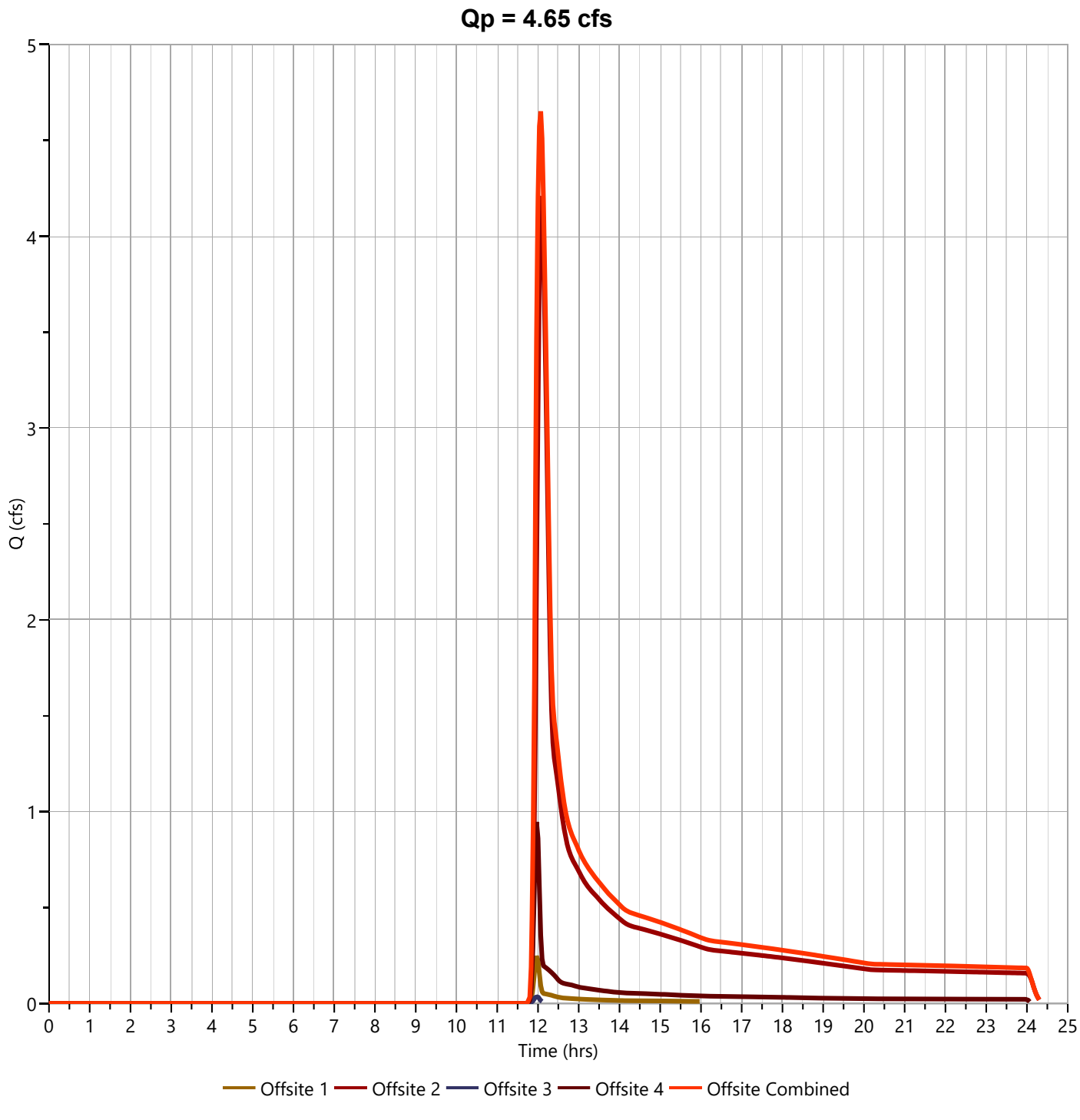
Hydrology Studio v 3.0.0.32

07-25-2024

Post Offsite Combined

Hyd. No. 20

Hydrograph Type	= Junction	Peak Flow	= 4.652 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.07 hrs
Time Interval	= 2 min	Hydrograph Volume	= 20,311 cuft
Inflow Hydrographs	= 16, 17, 18, 19	Total Contrib. Area	= 5.332 ac



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

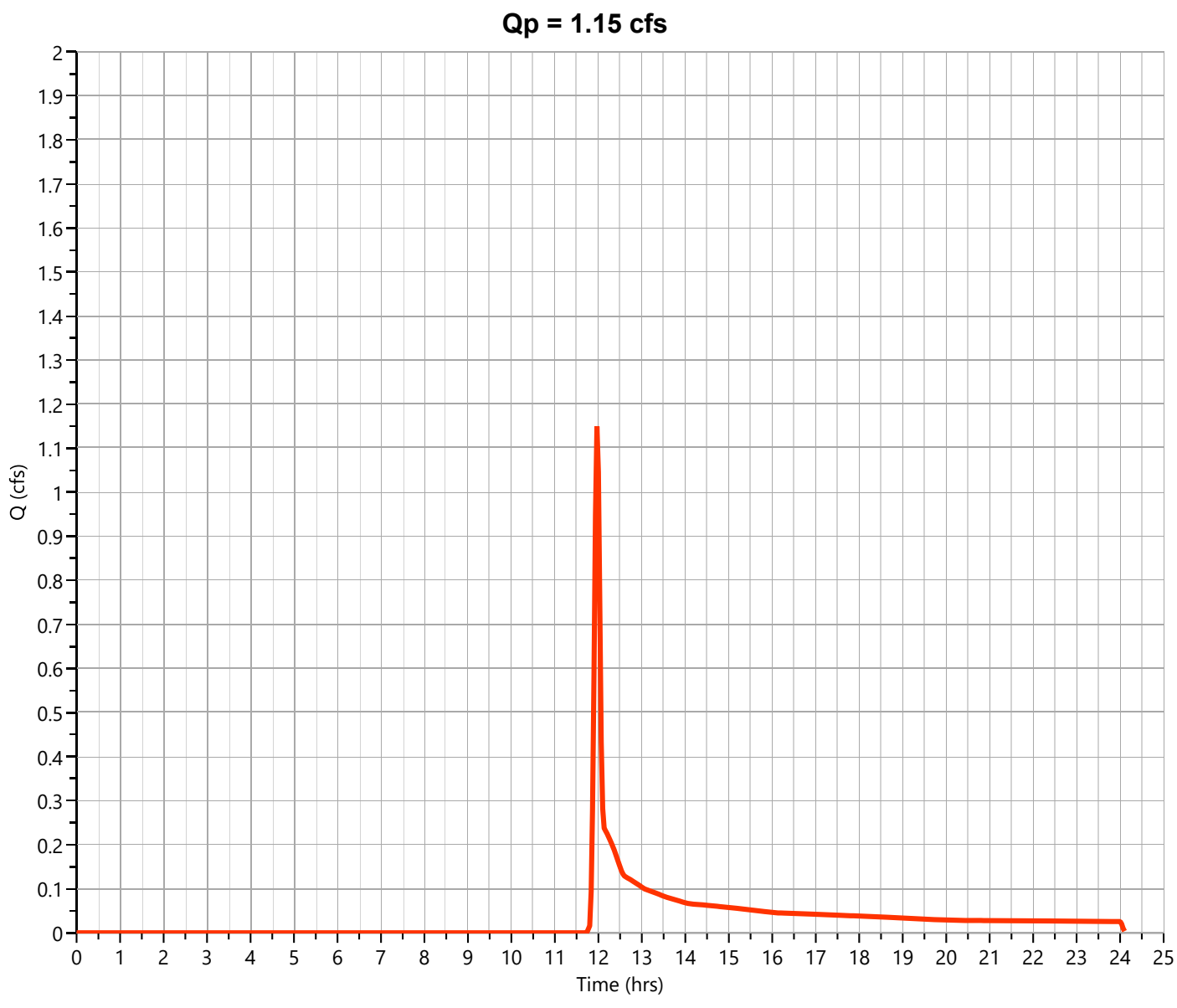
Post Culvert 1

Hyd. No. 21

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.150 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.97 hrs
Time Interval	= 2 min	Runoff Volume	= 2,804 cuft
Drainage Area	= 0.761 ac	Curve Number	= 39*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.761	39	Pervious (A)
0.761	**39**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

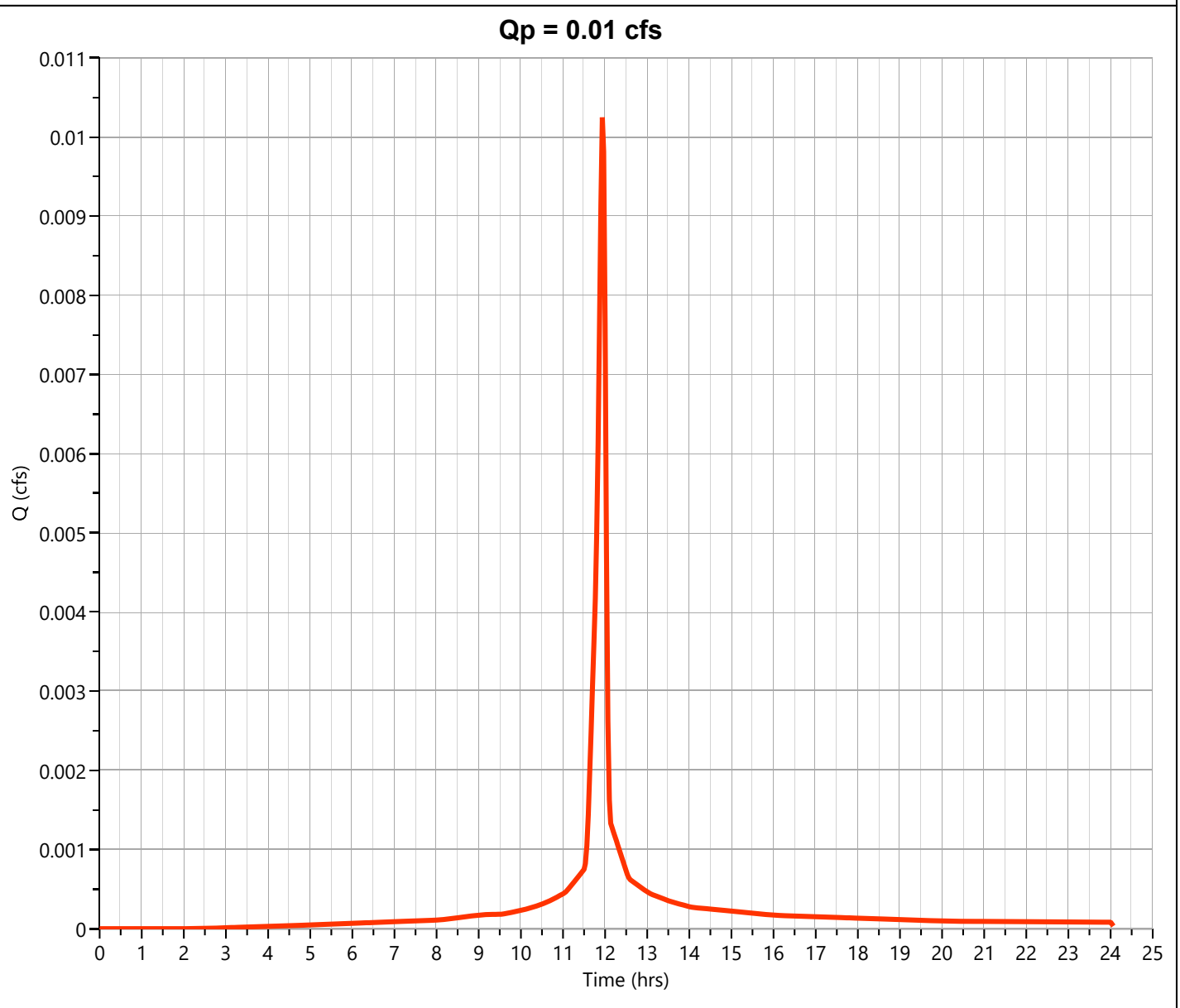
Post Area Drain 3 (AD3)

Hyd. No. 22

Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.010 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 23.0 cuft
Drainage Area	= 0.001 ac	Curve Number	= 91*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.001	91	Gravel
0.001	**91**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

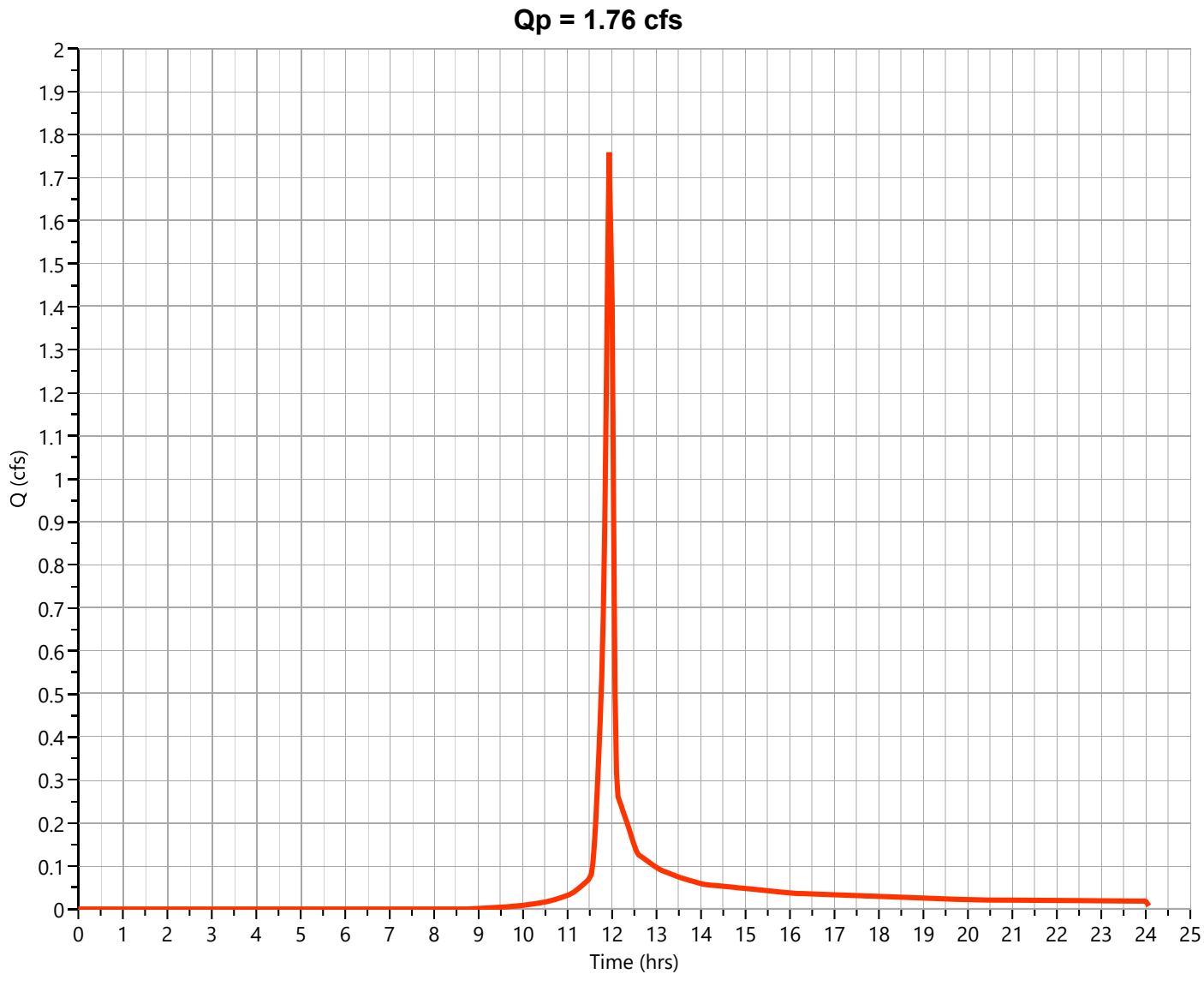
Post Area Drain 2 (AD2)

Hyd. No. 23

Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.759 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 3,552 cuft
Drainage Area	= 0.28 ac	Curve Number	= 64.81*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.139	91	Gravel
0.141	39	Grass
0.28	**65**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

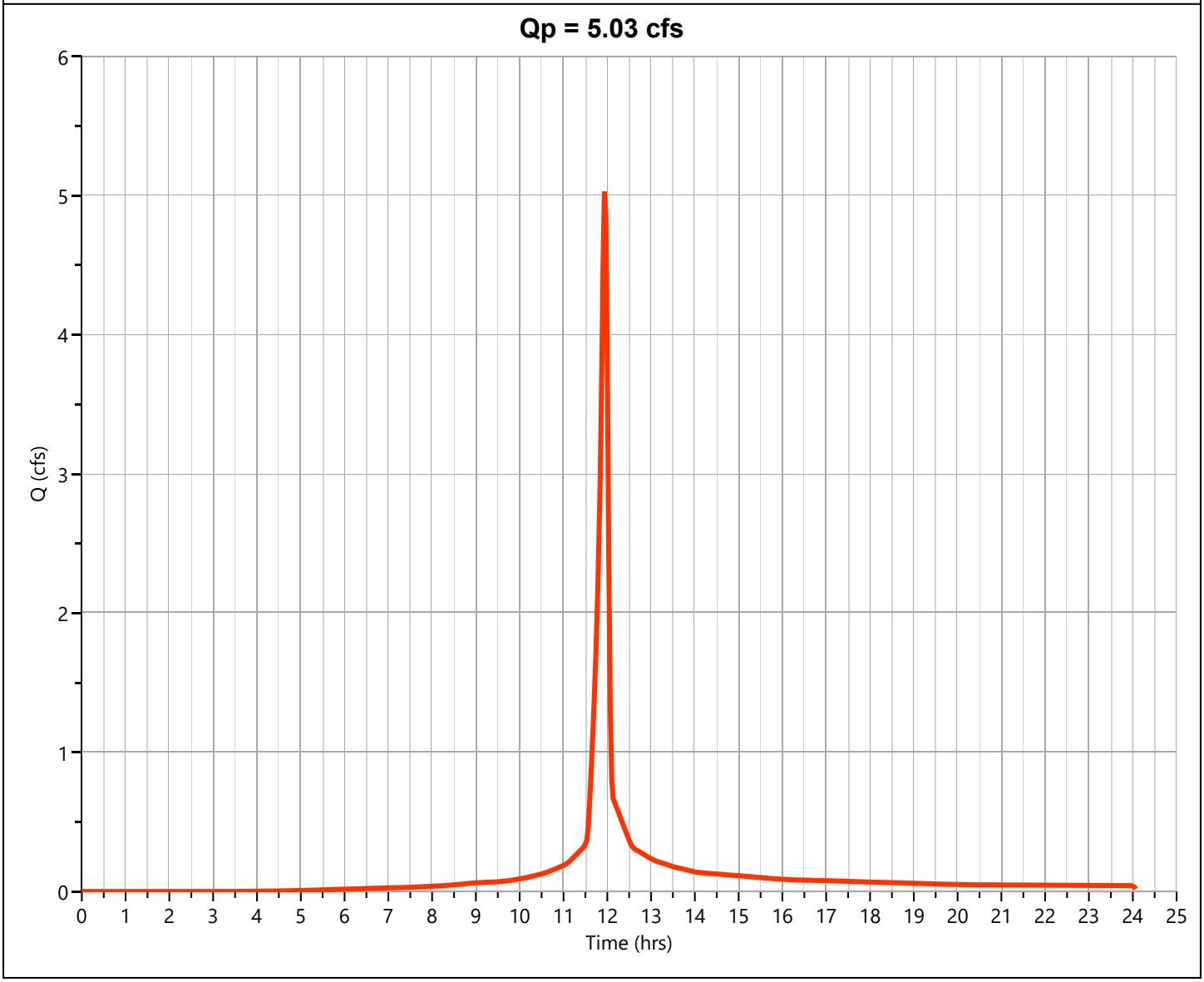
Post Area Drain 1 (AD1)

Hyd. No. 24

Hydrograph Type	= NRCS Runoff	Peak Flow	= 5.028 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 10,750 cuft
Drainage Area	= 0.527 ac	Curve Number	= 84.61*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.087	49	Pervious (A)
0.399	91	Gravel
0.041	98	Building
0.527	**85**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

07-25-2024

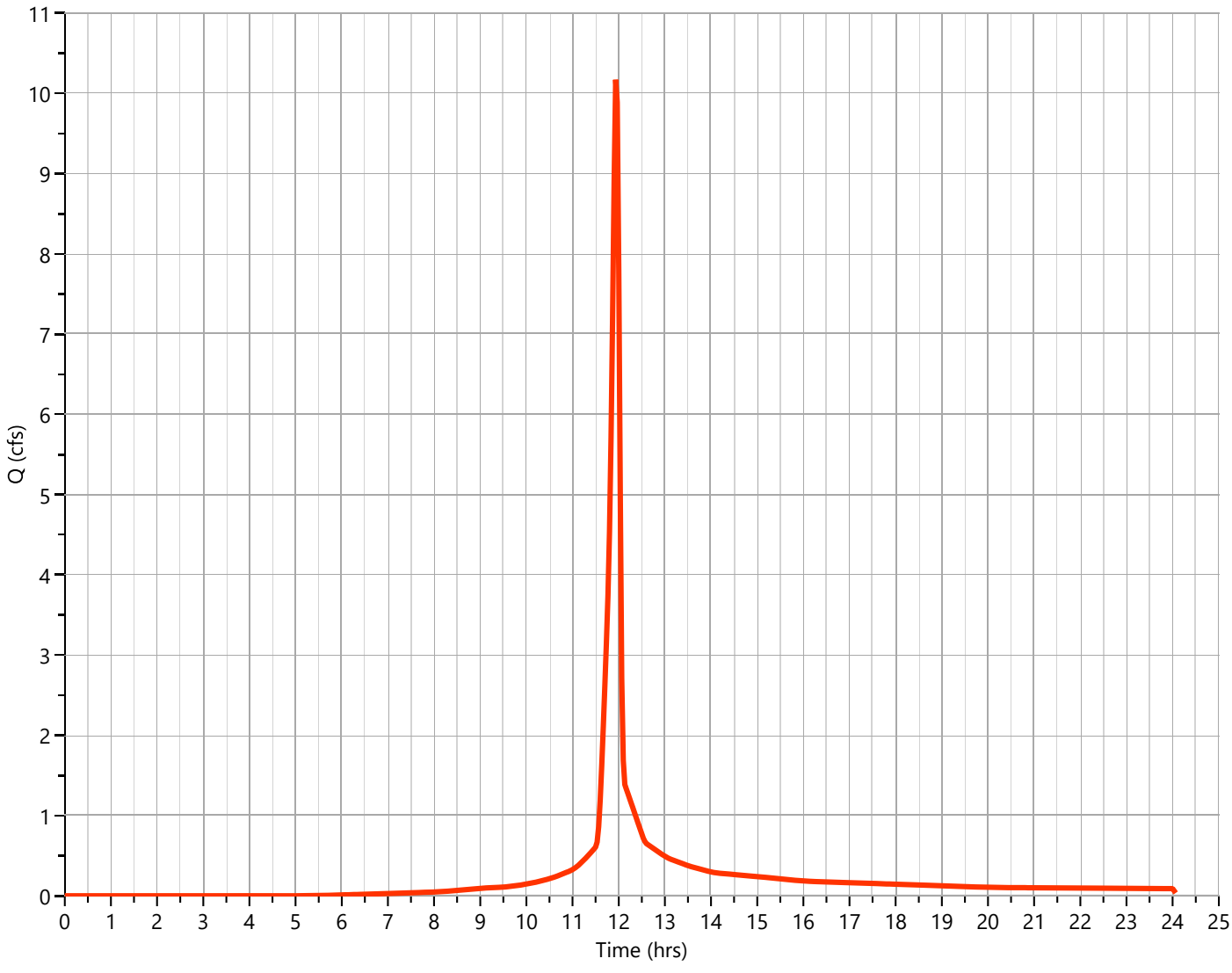
Post North to Pond 2

Hyd. No. 25

Hydrograph Type	= NRCS Runoff	Peak Flow	= 10.17 cfs
Storm Frequency	= 100-yr	Time to Peak	= 11.93 hrs
Time Interval	= 2 min	Runoff Volume	= 21,156 cuft
Drainage Area	= 1.16 ac	Curve Number	= 79.16*
Tc Method	= User	Time of Conc. (Tc)	= 5.0 min
Total Rainfall	= 7.82 in	Design Storm	= Type II
Storm Duration	= 24 hrs	Shape Factor	= 484

*** Composite CN Worksheet**

AREA (ac)	CN	DESCRIPTION
0.618	91	Gravel
0.245	98	Bldg/Concrete
0.297	39	Grass
1.16	**79**	Weighted CN Method Employed



Hydrograph Report

Project Name:

Hydrology Studio v 3.0.0.32

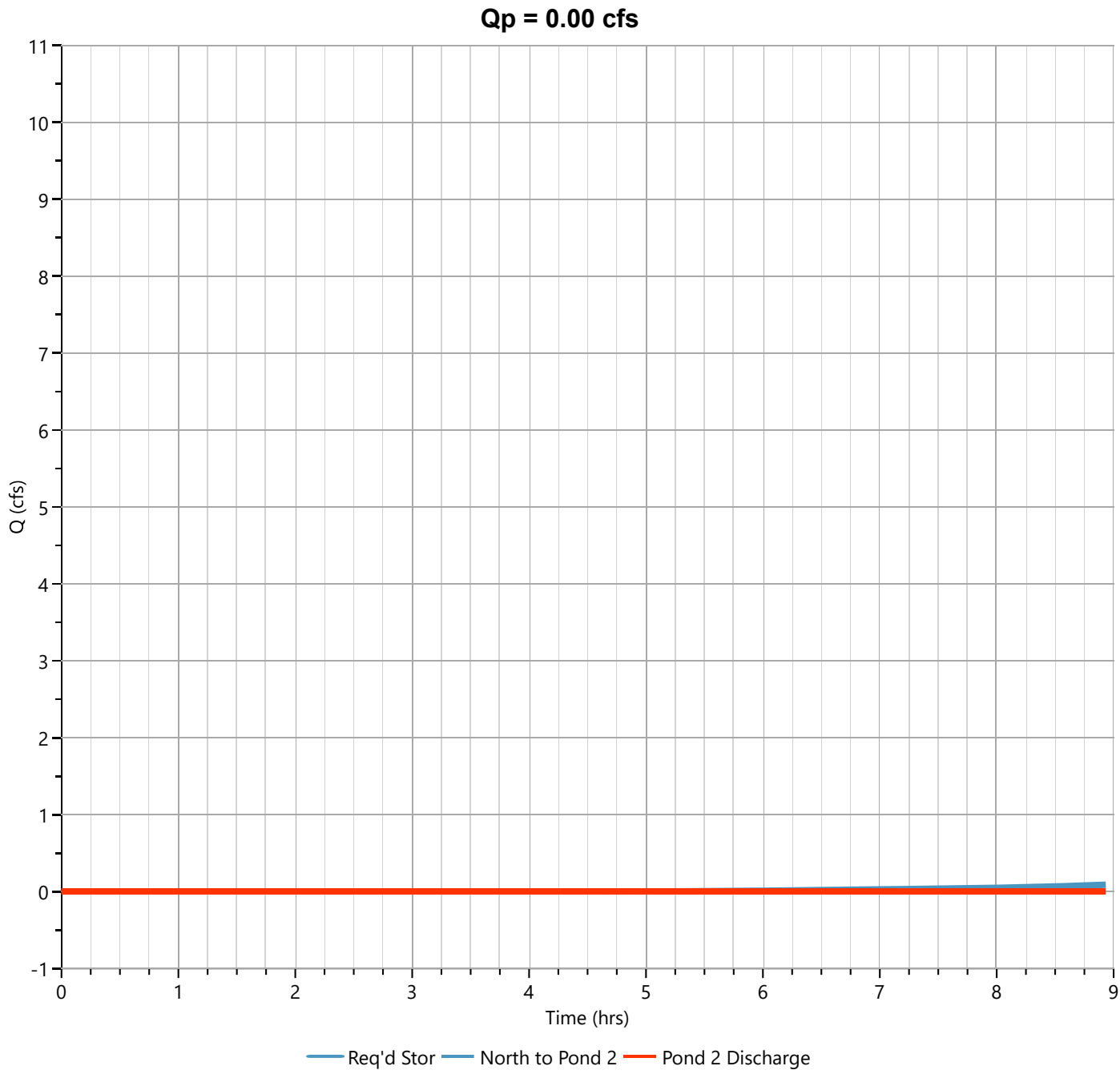
07-25-2024

Post Pond 2 Discharge

Hyd. No. 26

Hydrograph Type	= Pond Route	Peak Flow	= 0.000 cfs
Storm Frequency	= 100-yr	Time to Peak	= 8.90 hrs
Time Interval	= 2 min	Hydrograph Volume	= 0.000 cuft
Inflow Hydrograph	= 25 - North to Pond 2	Max. Elevation	= 534.88 ft
Pond Name	= Pond 2	Max. Storage	= 16,090 cuft

Pond Routing by Storage Indication Method



Hydrograph Report

Project Name:

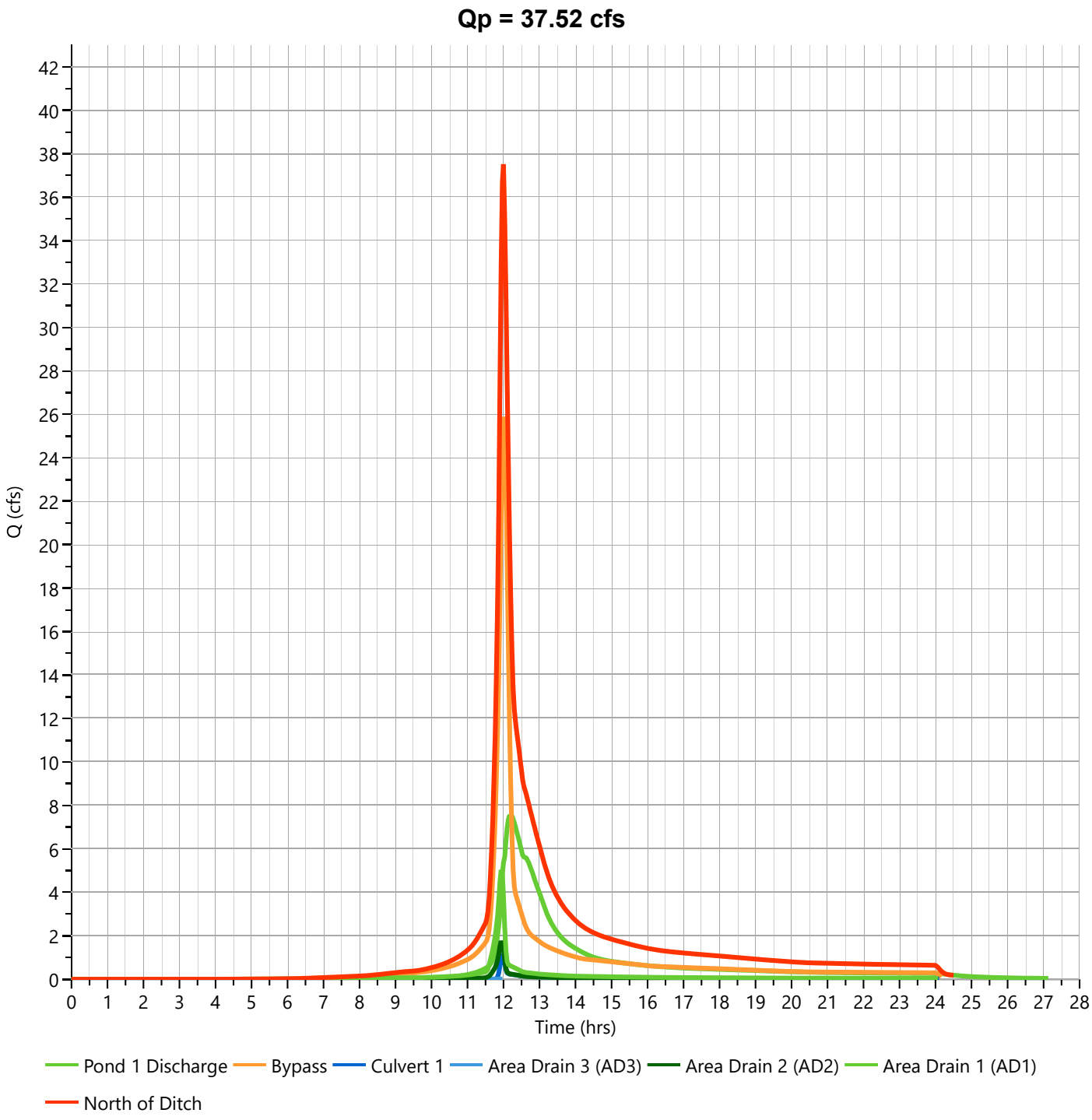
Hydrology Studio v 3.0.0.32

07-25-2024

Post North of Ditch

Hyd. No. 27

Hydrograph Type	= Junction	Peak Flow	= 37.52 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Hydrograph Volume	= 137,796 cuft
Inflow Hydrographs	= 14, 15, 21, 22, 23, 24	Total Contrib. Area	= 5.138 ac



Hydrograph Report

Project Name:

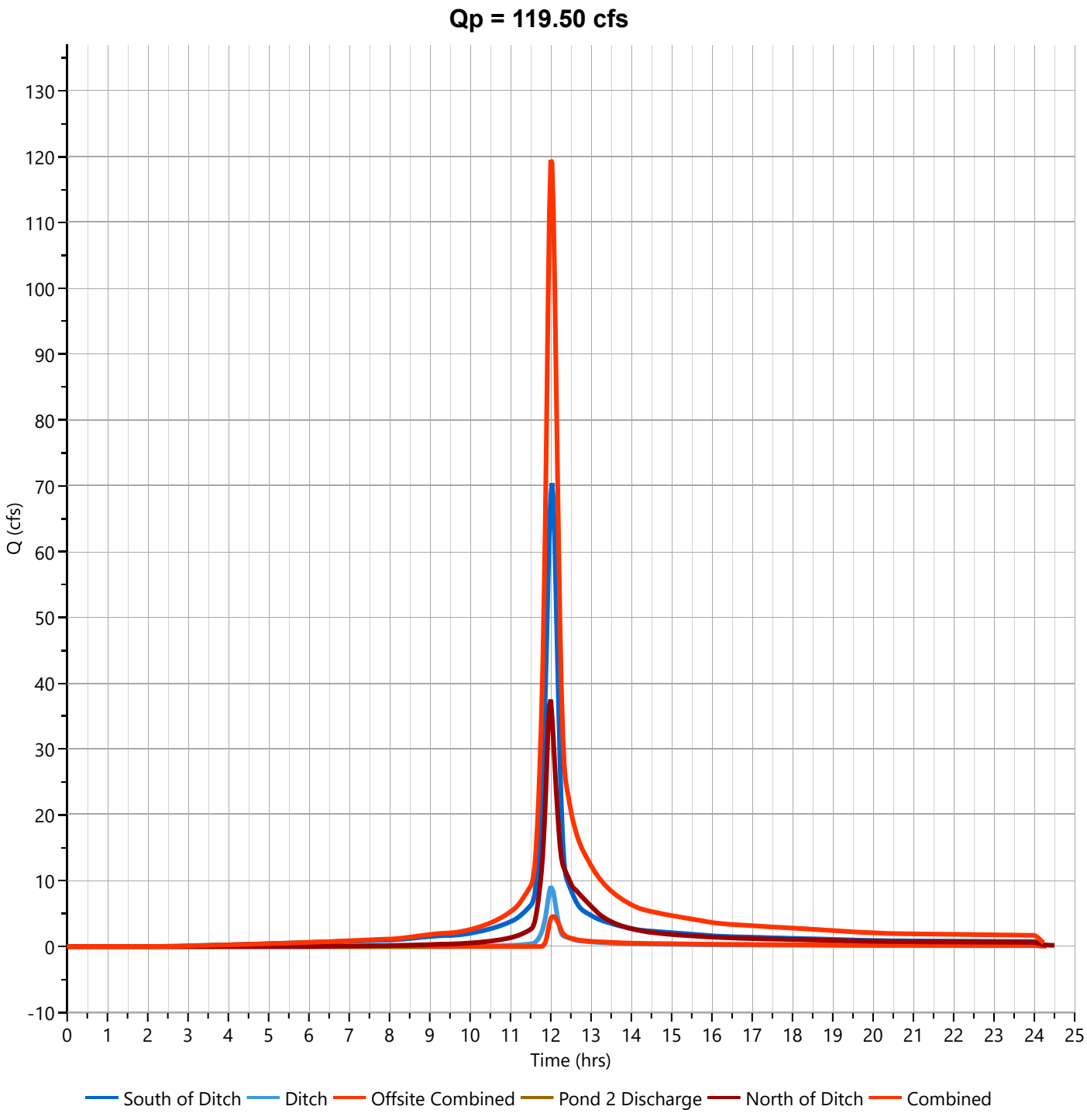
Hydrology Studio v 3.0.0.32

07-25-2024

Post Combined

Hyd. No. 28

Hydrograph Type	= Junction	Peak Flow	= 119.5 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.00 hrs
Time Interval	= 2 min	Hydrograph Volume	= 395,383 cuft
Inflow Hydrographs	= 11, 12, 20, 26, 27	Total Contrib. Area	= 21.17 ac



Design Storm Report

Custom Storm filename:

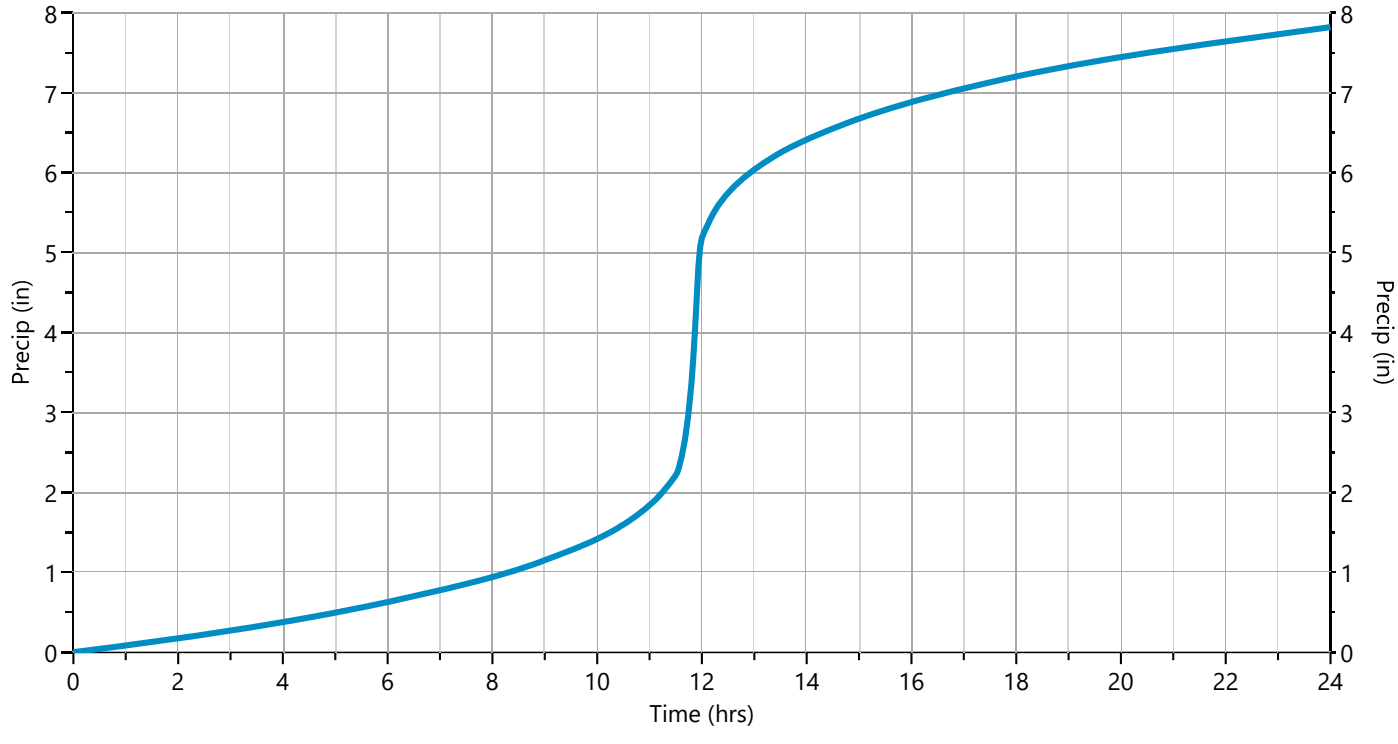
Hydrology Studio v 3.0.0.32

07-25-2024

Storm Distribution: NRCS/SCS - Type II, 24-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	✔ 100-yr	
24 hrs	3.26	3.90	0.00	4.74	5.42	6.34	7.07	7.82	

Incremental Rainfall Distribution, 100-yr									
Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
10.90	0.017552	11.27	0.025024	11.63	0.103294	12.00	0.117517	12.37	0.031593
10.93	0.017899	11.30	0.025858	11.67	0.123869	12.03	0.052279	12.40	0.029612
10.97	0.018247	11.33	0.026692	11.70	0.144445	12.07	0.049423	12.43	0.027630
11.00	0.018594	11.37	0.027526	11.73	0.165020	12.10	0.047441	12.47	0.025650
11.03	0.019183	11.40	0.028361	11.77	0.189415	12.13	0.045460	12.50	0.023668
11.07	0.020019	11.43	0.029195	11.80	0.242814	12.17	0.043479	12.53	0.022454
11.10	0.020853	11.47	0.030029	11.83	0.300045	12.20	0.041498	12.57	0.022000
11.13	0.021687	11.50	0.030863	11.87	0.357276	12.23	0.039517	12.60	0.021548
11.17	0.022522	11.53	0.041626	**11.90**	**0.414506**	12.27	0.037536	12.63	0.021097
11.20	0.023356	11.57	0.062143	11.93	0.378274	12.30	0.035555	12.67	0.020645
11.23	0.024190	11.60	0.082718	11.97	0.247763	12.33	0.033574	12.70	0.020193



IDF Report

IDF filename: 24-040Precipitation.idf

Hydrology Studio v 3.0.0.32

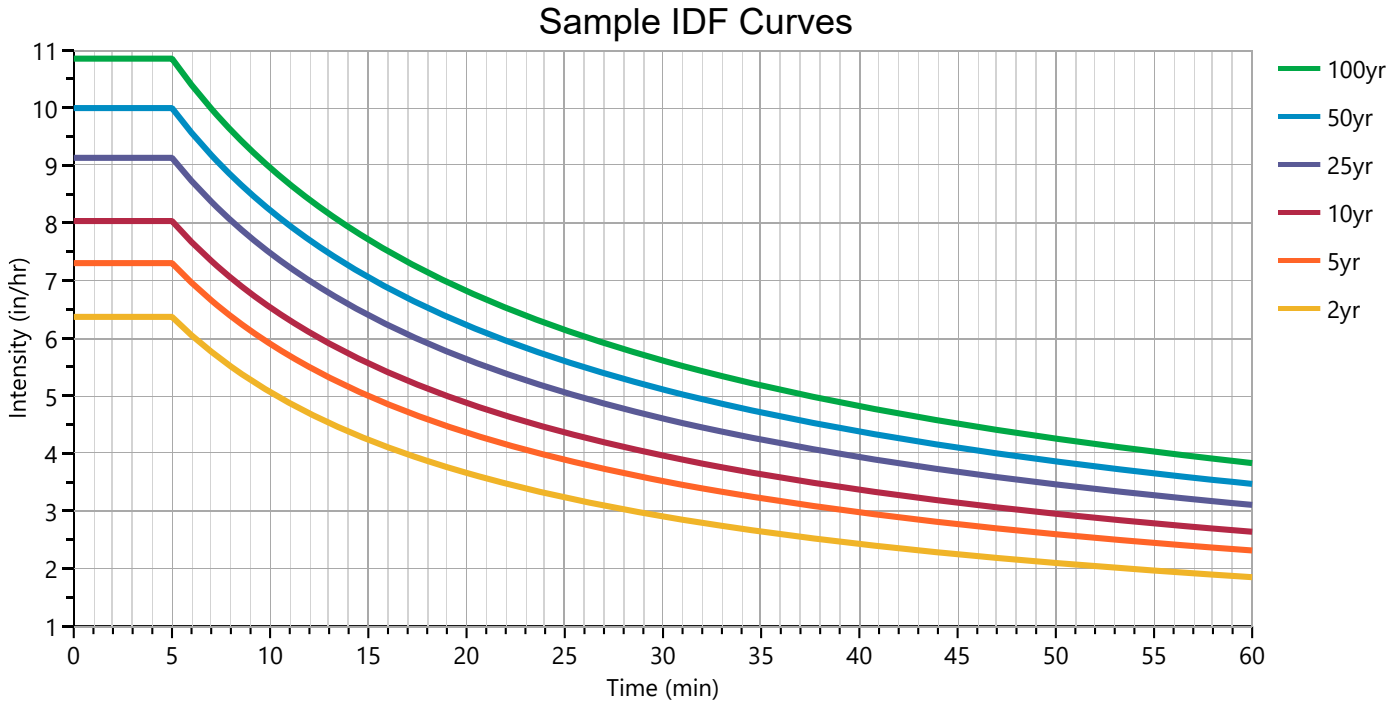
07-25-2024

Equation Coefficients	Intensity = B / (Tc + D)^E (in/hr)								
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
B	0.0000	58.1215	0.0000	57.1446	58.8780	63.5498	67.7965	72.2003	
D	0.0000	10.3000	0.0000	10.3000	10.3000	10.4000	10.5000	10.6000	
E	0.0000	0.8106	0.0000	0.7542	0.7303	0.7097	0.6986	0.6898	

Minimum Tc = 5 minutes

Tc (min)	Intensity Values (in/hr)								
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
Cf	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
5	0	6.37	0	7.30	8.03	9.13	9.99	10.85	
10	0	5.06	0	5.90	6.53	7.48	8.22	8.96	
15	0	4.24	0	5.00	5.56	6.40	7.06	7.71	
20	0	3.66	0	4.36	4.88	5.63	6.23	6.82	
25	0	3.23	0	3.89	4.36	5.06	5.60	6.14	
30	0	2.90	0	3.52	3.96	4.60	5.11	5.61	
35	0	2.64	0	3.22	3.64	4.24	4.71	5.18	
40	0	2.43	0	2.98	3.37	3.94	4.38	4.82	
45	0	2.25	0	2.77	3.14	3.68	4.10	4.52	
50	0	2.10	0	2.60	2.95	3.46	3.86	4.26	
55	0	1.96	0	2.44	2.78	3.27	3.65	4.03	
60	0	1.85	0	2.31	2.64	3.10	3.47	3.83	

Cf = Correction Factor applied to Rational Method runoff coefficient.



Precipitation Report

Precipitation filename: 24-040Rainfall Data.pcp

Hydrology Studio v 3.0.0.32 (Rainfall totals in Inches)

07-25-2024

	Active	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
Active			✔		✔	✔	✔	✔	✔
SCS Storms	**> SCS Dimensionless Storms**								
SCS 6hr		0	0	0	0	0	0	0	0
Type I, 24-hr		0	0	0	0	0	0	0	0
Type IA, 24-hr		0	0	0	0	0	0	0	0
Type II, 24-hr	✔	3.26	3.90	0	4.74	5.42	6.34	7.07	7.82
Type II FL, 24-hr		0	0	0	0	0	0	0	0
Type III, 24-hr		0	0	0	0	0	0	0	0
Synthetic Storms	**> IDF-Based Synthetic Storms**								
1-hr		0	1.85	0	2.31	2.64	3.10	3.47	3.83
2-hr		0	2.24	0	2.90	3.36	4.01	4.51	5.01
3-hr		0	2.48	0	3.27	3.82	4.60	5.20	5.79
6-hr		0	2.89	0	3.96	4.70	5.73	6.53	7.32
12-hr		0	3.33	0	4.75	5.73	7.08	8.13	9.17
24-hr		0	3.82	0	5.66	6.94	8.70	10.07	11.42
Huff Distribution	**> 1st Quartile (0 to 6 hrs)**								
1-hr		0	0	0	0	0	0	0	0
2-hr		0	0	0	0	0	0	0	0
3-hr		0	0	0	0	0	0	0	0
6-hr		0	0	0	0	0	0	0	0
Huff Distribution	**> 2nd Quartile (>6 to 12 hrs)**								
8-hr		0	0	0	0	0	0	0	0
12-hr		0	0	0	0	0	0	0	0
Huff Distribution	**> 3rd Quartile (>12 to 24 hrs)**								
18-hr		0	0	0	0	0	0	0	0
24-hr		0	0	0	0	0	0	0	0
Custom Storms	**> Custom Storm Distributions**								
My Custom Storm 1		0	0	0	0	0	0	0	0
My Custom Storm 2		0	0	0	0	0	0	0	0
My Custom Storm 3		0	0	0	0	0	0	0	0
My Custom Storm 4		0	0	0	0	0	0	0	0
My Custom Storm 5		0	0	0	0	0	0	0	0
My Custom Storm 6		0	0	0	0	0	0	0	0
My Custom Storm 7		0	0	0	0	0	0	0	0
My Custom Storm 8		0	0	0	0	0	0	0	0
My Custom Storm 9		0	0	0	0	0	0	0	0
My Custom Storm 10		0	0	0	0	0	0	0	0

Precipitation Report Cont'd

Precipitation filename: 24-040Rainfall Data.pcp

Rainfall totals in Inches

07-25-2024

	Active	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
Active			✔		✔	✔	✔	✔	✔
Huff Indiana	**> Indianapolis**								
30-min		0	0	0	0	0	0	0	0
1-hr		0	0	0	0	0	0	0	0
2-hr		0	0	0	0	0	0	0	0
3-hr		0	0	0	0	0	0	0	0
6-hr		0	0	0	0	0	0	0	0
12-hr		0	0	0	0	0	0	0	0
24-hr		0	0	0	0	0	0	0	0
Huff Indiana	**> Evansville**								
30-min		0	0	0	0	0	0	0	0
1-hr		0	0	0	0	0	0	0	0
2-hr		0	0	0	0	0	0	0	0
3-hr		0	0	0	0	0	0	0	0
6-hr		0	0	0	0	0	0	0	0
12-hr		0	0	0	0	0	0	0	0
24-hr		0	0	0	0	0	0	0	0
Huff Indiana	**> Fort Wayne**								
30-min		0	0	0	0	0	0	0	0
1-hr		0	0	0	0	0	0	0	0
2-hr		0	0	0	0	0	0	0	0
3-hr		0	0	0	0	0	0	0	0
6-hr		0	0	0	0	0	0	0	0
12-hr		0	0	0	0	0	0	0	0
24-hr		0	0	0	0	0	0	0	0
Huff Indiana	**> South Bend**								
30-min		0	0	0	0	0	0	0	0
1-hr		0	0	0	0	0	0	0	0
2-hr		0	0	0	0	0	0	0	0
3-hr		0	0	0	0	0	0	0	0
6-hr		0	0	0	0	0	0	0	0
12-hr		0	0	0	0	0	0	0	0
24-hr		0	0	0	0	0	0	0	0

Precipitation Report Cont'd

Precipitation filename: 24-040Rainfall Data.pcp

Rainfall totals in Inches

07-25-2024

	Active	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
Active			✔		✔	✔	✔	✔	✔
NRCS Storms	**> NRCS Dimensionless Storms**								
NRCS MSE1, 24-hr		0	0	0	0	0	0	0	0
NRCS MSE2, 24-hr		0	0	0	0	0	0	0	0
NRCS MSE3, 24-hr		0	0	0	0	0	0	0	0
NRCS MSE4, 24-hr		0	0	0	0	0	0	0	0
NRCS MSE5, 24-hr		0	0	0	0	0	0	0	0
NRCS MSE6, 24-hr		0	0	0	0	0	0	0	0
NOAA-A, 24-hr		0	0	0	0	0	0	0	0
NOAA-B, 24-hr		0	0	0	0	0	0	0	0
NOAA-C, 24-hr		0	0	0	0	0	0	0	0
NOAA-D, 24-hr		0	0	0	0	0	0	0	0
NRCC-A, 24-hr		0	0	0	0	0	0	0	0
NRCC-B, 24-hr		0	0	0	0	0	0	0	0
NRCC-C, 24-hr		0	0	0	0	0	0	0	0
NRCC-D, 24-hr		0	0	0	0	0	0	0	0
CA-1, 24-hr		0	0	0	0	0	0	0	0
CA-2, 24-hr		0	0	0	0	0	0	0	0
CA-3, 24-hr		0	0	0	0	0	0	0	0
CA-4, 24-hr		0	0	0	0	0	0	0	0
CA-5, 24-hr		0	0	0	0	0	0	0	0
CA-6, 24-hr		0	0	0	0	0	0	0	0
FDOT Storms	**> Florida DOT Storms**								
FDOT, 1-hr		0	0	0	0	0	0	0	0
FDOT, 2-hr		0	0	0	0	0	0	0	0
FDOT, 4-hr		0	0	0	0	0	0	0	0
FDOT, 8-hr		0	0	0	0	0	0	0	0
FDOT, 24-hr		0	0	0	0	0	0	0	0
FDOT, 72-hr		0	0	0	0	0	0	0	0
SFWMD, 72-hr		0	0	0	0	0	0	0	0
Austin Storms	**> Austin Frequency Storms**								
Austin Zone 1, 24-hr		0	0	0	0	0	0	0	0
Austin Zone 2, 24-hr		0	0	0	0	0	0	0	0