Issue for Permit

Preliminary Drainage Assessment

Litchfield Civil Design

Silicon Ranch Corporation

Litchfield, Connecticut

September 30, 2020

(Revision 2)

STATE OF CONNECTICUT
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02/03/2021

Version Control

Version	**Date**	**Description/Summary of Changes**
Revision 0	9-30-20	Issued for Permit
Revision 1	1-18-21	Amended 1.1 Project Description
Revision 2	2-3-21	Amended 2.3.1 Wetland Description and updated maps in Appendix B & F

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1. Narrative

1.1. Project Description

The owner intends to develop a photovoltaic solar site consisting of fixed-tilt panels, inverters, transformers and collector substation. The project site is located on approximately 212 acres partially in the City of Torrington and Town of Litchfield. This report summarizes the proposed facilities and impacts to the stormwater runoff.

1.2. Existing Conditions

For the purpose of this project, the existing area was divided into 13 study areas: A, B, C, D, E, and F. These study areas were chosen to best orient the solar panels to face the south based on the lay of the land. Area G was later added to the project. Within these 13 areas, there are 13 basins created based on the land cover. Analysis points were chosen for each of these study areas such that offsite flows would not enter the study areas. Conveyances were incorporated the take runoff to our basins. Weighted Curve Numbers (CN) and Time of Concentrations were generated by using the TR-55 method and discussed further in Section 2. The results of the CN and Time of Concentration can be found in Appendix D and E respectively. This data, along with the drainage area, was input into HydroCAD to generate hydrographs. The output of the HydroCAD model can be found in Appendix C. The entire site consists of type A, B, C, and D soils, and primarily consists of soil type "B". The land use area is both wooded and pasture. The wooded land cover is sparsely covered in wood therefore fair hydrologic condition was used to compute the CN. Fair hydrologic condition was used woods land cover because from historical satellite images it appears that there is some forest litter which covers the soil. The pasture land cover is also covered in long grass and therefore fair hydrologic condition was used to compute the CN. For the existing and proposed conditions, the 2-year (24 hour), 10-year (24 hour), 25-year (24 hour), 50-year (24 hour), and 100-year (24 hour) storms were analyzed.

1.3. Proposed Conditions

Under post-developed conditions, the overland drainage pattern will remain basically the same. The ground cover in the Limits of Disturbance will change from wooded areas to open spaces with grass covering the area and in good condition, which creates the largest impact to the peak flows. The existing site requires very little grading, therefore the only effect of the time of concentration for the runoff is due to a lower Manning's N number because the proposed site will consist of grass within the Limits of Disturbance. Refer to the drainage area map in Appendix C. For the proposed conditions, the 2-year (24 hour), 10-year (24 hour), 25-year (24 hour), 50-year (24 hour), and 100-year (24 hour) storms were analyzed. Peak outflows for pre-developed and post-developed analyzed storms are in the following tables.

Table 1: Pre- and Post-development for the 2-yr, 24-hr storm

Name	Area (ac)	Pre-Inflow Q2 (cfs)	Post-Inflow Q2 (cfs)	Pre-Inflow vs. Post-Inflow Q2	Post-Outflow Q2 (cfs)	Pre-Inflow vs. Post-Outflow Q2
1	2.56	2.19	2.90	0.71	0.14	-2.05
2	11.57	5.56	9.45	3.89	0.37	-5.19
3	13.58	10.77	13.58	2.81	7.44	-3.33
4	1.98	1.08	1.50	0.42	0.03	-1.05
5	4.31	3.73	4.72	0.99	0.35	-3.38
7	13.81	4.09	7.21	3.12	0.33	-3.76
8*	17.26	13.64	20.09	6.45	11.81	-13.01
9	18.86	6.77	9.13	2.36	0.85	-5.92
10*	16.80	11.18	15.79	4.61	11.81	-13.01
11	2.82	0.41	1.37	0.96	0.00	-0.41
12**	4.01	3.02	4.28	1.26	N/A	N/A
13	6.38	2.51	4.75	2.24	0.16	-2.35
14	8.21	3.26	7.14	3.88	0.37	-2.89
15	2.83	1.53	1.90	0.37	0.08	-1.45

* One pond is used for basins 8 and 10. The Pre-Inflow vs. Post-Outflow shows the difference between the Post-Outflow vs. the combined Pre-Inflow.

**Due to the size of the subbasin, no pond was designed for this area.

Table 2: Pre- and Post-development for the 10-yr, 24-hr storm

Name	Area (ac)	Pre-Inflow Q10 (cfs)	Post-Inflow Q10 (cfs)	Pre-Inflow vs. Post-Inflow Q10	Post-Outflow Q10 (cfs)	Pre-Inflow vs. Post-Outflow Q10
1	2.56	4.25	5.24	0.99	2.02	-2.23
2	11.57	13.26	19.02	5.76	5.61	-7.65
3	13.58	21.27	25.37	4.10	18.35	-2.92
4	1.98	2.38	3.02	0.64	0.78	-1.60
5	4.31	7.51	8.99	1.48	3.19	-4.32
7	13.81	11.19	16.28	5.09	4.93	-6.26
8*	17.26	27.48	36.33	8.85	41.62	-8.38
9	18.86	12.43	17.39	4.96	7.21	-5.22
10*	16.80	22.52	29.09	6.57	41.62	-8.38
11	2.82	1.43	3.03	1.60	0.32	-1.11
12**	4.01	6.21	8.00	1.79	N/A	N/A
13	6.38	6.37	9.76	3.39	2.14	-4.23
14	8.21	8.60	14.38	5.78	4.12	-4.48
15	2.83	3.10	3.69	0.59	1.31	-1.79

* One pond is used for basins 8 and 10. The Pre-Inflow vs. Post-Outflow shows the difference between the Post-Outflow vs. the combined Pre-Inflow.

**Due to the size of the subbasin, no pond was designed for this area.

Table 3: Pre- and Post-development for the 25-yr, 24-hr storm

Name	Area (ac)	Pre-Inflow Q25 (cfs)	Post-Inflow Q25 (cfs)	Pre-Inflow vs. Post-Inflow Q25	Post-Outflow Q25 (cfs)	Pre-Inflow vs. Post-Outflow Q25
1	2.56	5.41	6.54	1.13	3.99	-1.42
2	11.57	17.87	24.48	6.61	12.66	-5.21
3	13.57	27.22	31.92	4.70	24.29	-2.93
4	1.98	3.14	3.98	0.84	2.04	-1.10
5	4.31	9.66	11.37	1.71	5.76	-3.90
7	13.81	15.62	21.63	6.01	11.10	-4.52
8*	17.26	35.36	45.24	9.88	58.54	-5.84
9	16.03	16.33	22.03	5.70	12.62	-3.71
10*	16.8	29.02	36.41	7.39	58.54	-5.84
11	2.82	2.12	4.00	1.88	0.85	-1.27
12**	4.01	8.04	10.06	2.02	N/A	N/A
13	6.38	8.73	12.65	3.92	5.94	-2.79
14	8.21	11.89	18.51	6.62	8.57	-3.32
15	2.83	3.99	4.69	0.70	2.78	-1.21

* One pond is used for basins 8 and 10. The Pre-Inflow vs. Post-Outflow shows the difference between the Post-Outflow vs. the combined Pre-Inflow.
**Due to the size of the subbasin, no pond was designed for this area.

Table 4: Pre- and Post-development for the 50-yr, 24-hr storm

Name	Area (ac)	Pre-Inflow Q50 (cfs)	Post-Inflow Q50 (cfs)	Pre-Inflow vs. Post-Inflow Q50	Post-Outflow Q50 (cfs)	Pre-Inflow vs. Post-Outflow Q50
1	2.56	6.59	7.83	1.24	5.95	-0.64
2	11.57	22.71	30.08	7.37	20.24	-2.47
3	13.57	33.28	38.55	5.27	30.12	-3.16
4	1.98	3.92	4.77	0.85	3.44	-0.48
5	4.31	11.89	13.79	1.90	8.42	-3.47
7	13.81	20.34	27.19	6.85	18.20	-2.14
8*	17.26	43.44	54.21	10.77	74.80	-4.29
9	16.03	20.38	26.76	6.38	18.43	-1.95
10*	16.8	35.65	43.81	8.16	74.80	-4.29
11	2.82	2.86	5.00	2.14	1.97	-0.89
12**	4.01	9.91	12.15	2.24	N/A	N/A
13	6.38	11.22	15.60	4.38	9.89	-1.33
14	8.21	15.38	22.74	7.36	13.43	-1.95
15	2.83	4.90	5.72	0.82	4.36	-0.54

* One pond is used for basins 8 and 10. The Pre-Inflow vs. Post-Outflow shows the difference between the Post-Outflow vs. the combined Pre-Inflow.
**Due to the size of the subbasin, no pond was designed for this area.

Table 5: Pre- and Post-development for the 100-yr, 24-hr storm

Name	Area (ac)	Pre-Inflow Q100 (cfs)	Post-Inflow Q100 (cfs)	Pre-Inflow vs. Post-Inflow Q100	Post-Outflow Q100 (cfs)	Pre-Inflow vs. Post-Outflow Q100
1	2.56	7.63	8.97	1.34	7.56	-0.07
2	11.57	27.08	35.04	7.96	26.85	-0.23
3	13.57	38.66	44.38	5.72	34.17	-4.49
4	1.98	4.63	5.56	0.93	4.62	-0.01
5	4.31	13.85	15.92	2.07	10.71	-3.14
7	13.81	24.64	32.18	7.54	24.58	-0.06
8*	17.26	50.60	62.08	11.48	88.34	-3.79
9	16.03	24.00	30.93	6.93	23.53	-0.47
10*	16.8	41.53	50.30	8.77	88.34	-3.79
11	2.82	3.56	5.90	2.34	3.21	-0.35
12**	4.01	11.58	13.99	2.41	N/A	N/A
13	6.38	13.48	18.24	4.76	13.39	-0.09
14	8.21	18.56	26.50	7.94	17.77	-0.79
15	2.83	5.71	6.62	0.91	5.67	-0.04

* One pond is used for basins 8 and 10. The Pre-Inflow vs. Post-Outflow shows the difference between the Post-Outflow vs. the combined Pre-Inflow.
**Due to the size of the subbasin, no pond was designed for this area.

2. Stormwater Calculations

2.1. Stormwater Peak Flow Calculations

A hydrologic analysis was completed using the NRCS hydrologic method (details for this methodology can be found in the NRCS National Engineering Handbook, Section 4). Sub-drainage areas were delineated for each solar array areas and can be seen on the drainage area map in Appendix C. Composite curve numbers were calculated for each sub-drainage area utilizing the proposed land cover and the hydrologic soil groups for the site found in the Soil Survey of Litchfield, Connecticut. The curve number calculations can be found in Appendix D. The Soil Resource Report for the site can be found in Appendix A. The time of concentration for each sub-drainage area was calculated using the NRCS TR-55 method. The time of concentration calculations can be found in Appendix F. The procedure for determining the CN and time of concentration can be found in the NRCS, TR-55, Second Edition, June 1986.

A hydrologic routing model was completed using the HydroCAD software program. The calculated drainage area size, composite curve number and time of concentration for each sub-drainage area was entered into the software. The total rainfall depths for the 2-year (24 hour), 10-year (24 hour), 25-year (24 hour), 50-year (24 hour), and 100-year (24 hour) storm events were obtained from Table 7-2 of the Connecticut Stormwater Manual. The table gives rainfall amounts for the 2-yr, 10-yr, 25-yr, and 100-yr, 24-hr rainstorm events. The 50-yr, 24-hr storm was logarithmically interpolated. Table 6 shows the values used to calculate the flows for this study.

Table 6: County Design Rainfall Amounts for Litchfield from Connecticut Stormwater Manual

County	24-Hour Rainfall Amount (inches)				
	2-yr	10-yr	25-yr	50-yr	100-yr
Litchfield	3.2	4.7	5.5	6.3	7.0

The total rainfall depth was entered into the model and ran utilizing the NRCS Type II rainfall distribution with a fifteen minute time interval.

2.2. Pond Calculation

As part of the Erosion and Sediment Control Plan (further discussed in Section 3), sediment basins will be used to mitigate the short-term impacts of construction. Also in every basin, the post-development discharge was greater than the pre-development discharges. In order to keep these post-development flows at or below the pre-development flows, these sediment basins will be converted to ponds. For these basins, a pond is was designed to attenuate the 100-year storm discharge. The pond will be converted from the erosion and sediment control sediment basin in Phase 3. The pond consists of an outfall structure with a weir and a spillway for 100-year storm discharge. Pond calculations can be found in Appendix C of this report.

To help with water flowing through the areas, three completely new culverts will need to be built. These culverts will consist of three bottomless arch culverts. These culverts were designed using AutoCAD Hydraflow Hydrographs Extension and SCS Curve Number method. These culverts were designed in accordance with CT DEEP Stream Crossing Guidelines and USACE Openness Ratio Calculations. For additional information on the culvert design calculations see Appendix H.

Each drainage area will require permanent ditches to help the water flow to the sediment basins or ponds. The ditches were designed using AutoCAD Hydraflow Express using the 10-yr storm event and CT DEEP conveyance criteria. The flows were calculated as a percentage of the overall subbasin flows per the proposed HydroCAD modeling results. These ditches consist of both trapezoidal and triangular channels. For additional information on ditch design calculations see Appendix H.

2.3. Wetlands, FEMA Floodplains, and Coastal Boundaries

2.3.1. Wetlands

Wetlands have been delineated for the site and a map of the wetlands can be found in Appendix F. Design has been considered in a way to reduce impacts to wetlands.

2.3.2. FEMA Floodplains

FEMA Floodplains are not located on the site. FEMA Maps of the site can be found in Appendix B.

2.3.3. Coastal Boundaries

Coastal Boundaries are not located near the site and were not a necessary consideration for this project. See FEMA Maps located in Appendix B.

3. Erosion and Sediment Control Plan

3.1. Erosion and Sediment Controls

An Erosion and Sediment (E&S) Control Plan has been developed to mitigate the short-term impacts of the site improvements during construction and includes the following information: descriptive specifications concerning land grading, topsoiling, temporary vegetative cover, permanent vegetative cover, vegetative cover selection and mulching, and erosion checks. Details can be found in the E&S plans and have been provided for all erosion controls as necessary. In all cases, the E&S Control Plan shall be implemented in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

3.2. Temporary Stabilization

Temporary stabilization for the site include silt fences, baffles, waddles, and ditch checks. These stabilization practices shall be installed and reinforced on the site before any construction occurs and according to the E&S plans and according to the proper phase of the project. The construction and maintenance of temporary stabilization shall follow the requirements of the E&S plans.

3.3. Permanent Stabilization

Permanent stabilization practice on the site will include sediment basins and stabilization of the site with permanent seed. Sediment basins will be constructed in each drainage area that will be converted to a stormwater pond at the end of the project to keep the post-development flows at or below the pre-development flows. See Appendix G for the Erosion and Sediment Control Calculations. Stabilization and permanent seed will be in accordance with the project specifications and plans. Construction of E&S control measures are in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

3.4. Sediment Tracking and Maintenance of Controls

The entrance of the construction site shall be installed and maintained to reduce vehicular tracking of sediment. The installation of these practices shall be according to the plans and all maintenance of controls shall be according to the E&S plans.

E&S controls will be installed and maintained throughout the construction in accordance with local, state, and federal requirements.

Appendix A

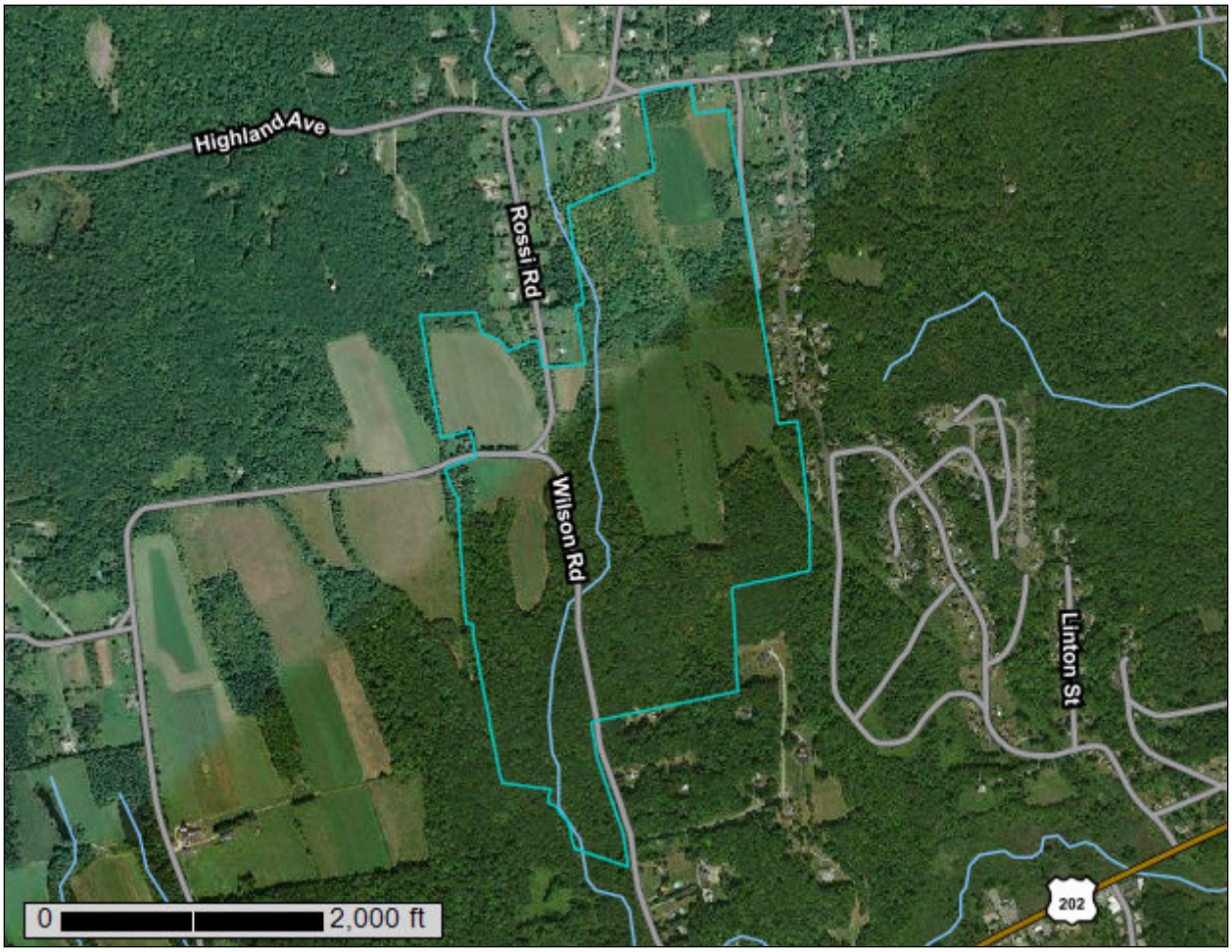
Soil Resource Report

United States Department of Agriculture

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 State of Connecticut



August 10, 2020

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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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.

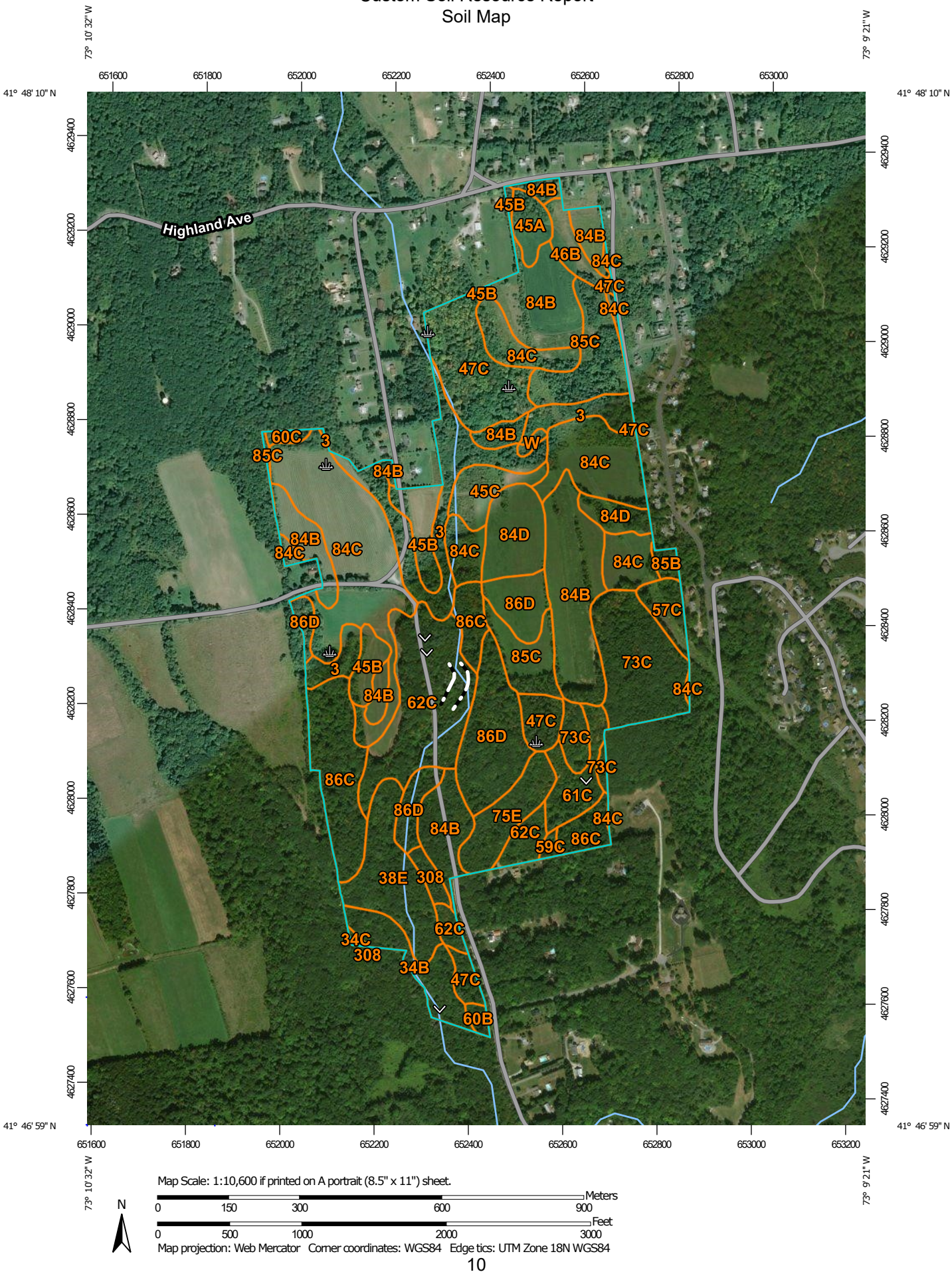
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree 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.



Map Scale: 1:10,600 if printed on A portrait (8.5" x 11") sheet.

N

0 150 300 600 900 Meters

0 500 1000 2000 3000 Feet

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil 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 1:12,000.

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

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

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 20, Jun 9, 2020

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

Date(s) aerial images were photographed: Jul 2, 2015—Sep 17, 2019

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
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	14.8	6.8%
34B	Merrimac fine sandy loam, 3 to 8 percent slopes	5.0	2.3%
34C	Merrimac fine sandy loam, 8 to 15 percent slopes	0.2	0.1%
38E	Hinckley loamy sand, 15 to 45 percent slopes	8.9	4.1%
45A	Woodbridge fine sandy loam, 0 to 3 percent slopes	2.3	1.1%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	5.6	2.6%
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	3.4	1.6%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	2.3	1.1%
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony	13.2	6.0%
57C	Gloucester gravelly sandy loam, 8 to 15 percent slopes	2.4	1.1%
59C	Gloucester gravelly sandy loam, 3 to 15 percent slopes, extremely stony	0.5	0.2%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	0.6	0.3%
60C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes	0.6	0.3%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	4.3	2.0%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	17.4	8.0%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	12.9	5.9%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	5.2	2.4%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	31.9	14.7%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	36.2	16.6%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	7.8	3.6%
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	0.8	0.4%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	11.1	5.1%
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony	13.4	6.2%
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	15.6	7.2%
308	Udorthents, smoothed	1.1	0.5%
W	Water	0.4	0.2%
Totals for Area of Interest		**217.8**	**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.

State of Connecticut

3—Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2t2qt
Elevation: 0 to 1,480 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Ridgebury, extremely stony, and similar soils: 40 percent
Leicester, extremely stony, and similar soils: 35 percent
Whitman, extremely stony, and similar soils: 17 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury, Extremely Stony

Setting

Landform: Drumlins, depressions, drainageways, hills, ground moraines
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: fine sandy loam
Bw - 6 to 10 inches: sandy loam
Bg - 10 to 19 inches: gravelly sandy loam
Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Description of Leicester, Extremely Stony

Setting

Landform: Ground moraines, depressions, drainageways, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 7 inches: fine sandy loam
Bg - 7 to 18 inches: fine sandy loam
BC - 18 to 24 inches: fine sandy loam
C1 - 24 to 39 inches: gravelly fine sandy loam
C2 - 39 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B/D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Description of Whitman, Extremely Stony

Setting

Landform: Depressions, drainageways, hills, ground moraines, drumlins
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 1 inches: peat

A - 1 to 10 inches: fine sandy loam
Bg - 10 to 17 inches: gravelly fine sandy loam
Cdg - 17 to 61 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 7 to 38 inches to densic material
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Woodbridge, extremely stony

Percent of map unit: 6 percent
Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Swansea

Percent of map unit: 2 percent
Landform: Swamps, bogs
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

34B—Merrimac fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyqs
Elevation: 0 to 1,290 feet

Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Kames, eskers, moraines, outwash terraces, outwash plains
Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water capacity: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F145XY008MA - Dry Outwash
Hydric soil rating: No

Minor Components

Sudbury

Percent of map unit: 5 percent
Landform: Outwash plains, terraces, deltas
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip

Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, outwash plains, eskers, kames
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Windsor

Percent of map unit: 3 percent
Landform: Outwash plains, deltas, dunes, outwash terraces
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Agawam

Percent of map unit: 2 percent
Landform: Outwash terraces, outwash plains, kames, eskers, stream terraces, moraines
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

34C—Merrimac fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2tyqt
Elevation: 0 to 1,030 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Merrimac and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Eskers, outwash terraces, kames, moraines, outwash plains

Landform position (two-dimensional): Backslope, footslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water capacity: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F145XY008MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 5 percent
Landform: Outwash terraces, deltas, dunes, outwash plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Landform: Outwash plains, eskers, kames, deltas
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Outwash plains, terraces, deltas
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

38E—Hinckley loamy sand, 15 to 45 percent slopes

Map Unit Setting

National map unit symbol: 2svmj
Elevation: 0 to 1,280 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Kames, eskers, kame terraces, outwash plains, moraines, outwash terraces, outwash deltas
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, riser
Down-slope shape: Linear, convex, concave
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Merrimac

Percent of map unit: 5 percent
Landform: Kames, eskers, moraines, outwash terraces, outwash plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Outwash deltas, moraines, kames, eskers, kame terraces, outwash plains, outwash terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Concave, linear, convex
Across-slope shape: Linear, concave, convex
Hydric soil rating: No

Agawam

Percent of map unit: 3 percent
Landform: Kames, moraines, outwash terraces, outwash deltas, kame terraces, eskers, outwash plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, riser
Down-slope shape: Linear, convex, concave
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 2 percent
Landform: Eskers, kames, moraines, outwash terraces, kame terraces, outwash plains, outwash deltas
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave

Hydric soil rating: No

45A—Woodbridge fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2w686
Elevation: 0 to 1,420 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Woodbridge and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge

Setting

Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw1 - 7 to 18 inches: fine sandy loam
Bw2 - 18 to 30 inches: fine sandy loam
Cd - 30 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D

Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton
Percent of map unit: 7 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury
Percent of map unit: 6 percent
Landform: Drumlins, drainageways, ground moraines, depressions, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Whitman, extremely stony
Percent of map unit: 1 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton
Percent of map unit: 1 percent
Landform: Hills, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

45B—Woodbridge fine sandy loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 2t2ql
Elevation: 0 to 1,470 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Woodbridge, fine sandy loam, and similar soils: 82 percent

Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Fine Sandy Loam

Setting

Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw1 - 7 to 18 inches: fine sandy loam
Bw2 - 18 to 30 inches: fine sandy loam
Cd - 30 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton

Percent of map unit: 10 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury

Percent of map unit: 8 percent
Landform: Ground moraines, depressions, drainageways, hills
Landform position (two-dimensional): Toeslope, backslope, footslope
Landform position (three-dimensional): Base slope, head slope, dip
Down-slope shape: Concave

Across-slope shape: Concave
Hydric soil rating: Yes

45C—Woodbridge fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w689
Elevation: 0 to 1,370 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Woodbridge and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge

Setting

Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw1 - 7 to 18 inches: fine sandy loam
Bw2 - 18 to 30 inches: fine sandy loam
Cd - 30 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C/D
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton
Percent of map unit: 10 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury
Percent of map unit: 4 percent
Landform: Drainageways, hills, ground moraines, depressions, drumlins
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton
Percent of map unit: 1 percent
Landform: Hills, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

46B—Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting
National map unit symbol: 2t2qr
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Woodbridge, very stony, and similar soils: 82 percent
Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Very Stony

Setting

Landform: Hills, ground moraines, drumlins
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 9 inches: fine sandy loam
Bw1 - 9 to 20 inches: fine sandy loam
Bw2 - 20 to 32 inches: fine sandy loam
Cd - 32 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 19 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton, very stony

Percent of map unit: 10 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 8 percent
Landform: Ground moraines, depressions, drumlins, drainageways, hills
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave

Across-slope shape: Concave
Hydric soil rating: Yes

47C—Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2w685
Elevation: 10 to 1,470 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Woodbridge, extremely stony, and similar soils: 83 percent
Minor components: 17 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Extremely Stony

Setting

Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 9 inches: fine sandy loam
Bw1 - 9 to 20 inches: fine sandy loam
Bw2 - 20 to 32 inches: fine sandy loam
Cd - 32 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 19 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C/D
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton, extremely stony

Percent of map unit: 9 percent
Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Ridgebury, extremely stony

Percent of map unit: 5 percent
Landform: Drumlins, ground moraines, drainageways, hills, depressions
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton, extremely stony

Percent of map unit: 2 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Whitman, extremely stony

Percent of map unit: 1 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

57C—Gloucester gravelly sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9lpf
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Gloucester and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting

Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 4 inches: gravelly sandy loam
Bw1 - 4 to 12 inches: gravelly sandy loam
Bw2 - 12 to 25 inches: very gravelly loamy sand
C1 - 25 to 35 inches: very gravelly loamy coarse sand
C2 - 35 to 60 inches: very gravelly loamy coarse sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Hinckley

Percent of map unit: 5 percent
Landform: Terraces, eskers, kames, outwash plains
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Canton

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Convex

Hydric soil rating: No

Charlton

Percent of map unit: 3 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Paxton

Percent of map unit: 3 percent
Landform: Drumlins, hills, till plains
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Sutton

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Leicester

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

59C—Gloucester gravelly sandy loam, 3 to 15 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 9lpk
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Gloucester and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting

Landform: Hills
Down-slope shape: Convex

Across-slope shape: Convex
Parent material: Sandy and gravelly melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 4 inches: gravelly sandy loam
Bw1 - 4 to 12 inches: gravelly sandy loam
Bw2 - 12 to 25 inches: very gravelly loamy sand
C1 - 25 to 35 inches: very gravelly loamy coarse sand
C2 - 35 to 60 inches: very gravelly loamy coarse sand

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Hinckley

Percent of map unit: 5 percent
Landform: Eskers, kames, outwash plains, terraces
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Canton

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Paxton

Percent of map unit: 3 percent
Landform: Drumlins, hills, till plains
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Charlton

Percent of map unit: 3 percent
Landform: Hills
Down-slope shape: Linear

Across-slope shape: Linear
Hydric soil rating: No

Sutton

Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Leicester

Percent of map unit: 2 percent
Landform: Drainageways, depressions
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

60B—Canton and Charlton fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w81s
Elevation: 0 to 1,460 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Canton and similar soils: 50 percent
Charlton and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton

Setting

Landform: Ridges, moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw1 - 7 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: gravelly fine sandy loam
2C - 26 to 65 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Landform: Hills, ground moraines, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Sutton

Percent of map unit: 5 percent
Landform: Hills, ridges, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent
Landform: Drainageways, ground moraines, hills, depressions
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Chatfield

Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

60C—Canton and Charlton fine sandy loams, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w81z
Elevation: 0 to 1,620 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Canton and similar soils: 50 percent
Charlton and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton

Setting

Landform: Ridges, moraines, hills

Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw1 - 7 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: gravelly fine sandy loam
2C - 26 to 65 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Landform: Hills, ground moraines, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Chatfield

Percent of map unit: 5 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent
Landform: Hills, depressions, drainageways, ground moraines
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton

Percent of map unit: 5 percent
Landform: Ground moraines, hills, ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

61C—Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w820
Elevation: 0 to 1,540 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Canton, very stony, and similar soils: 50 percent
Charlton, very stony, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton, Very Stony

Setting

Landform: Ridges, hills, moraines
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Charlton, Very Stony

Setting

Landform: Hills, ground moraines, ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex

Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Chatfield, very stony

Percent of map unit: 5 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Leicester, very stony

Percent of map unit: 5 percent
Landform: Hills, ground moraines, depressions, drainageways
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton, very stony

Percent of map unit: 5 percent
Landform: Hills, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear

Hydric soil rating: No

62C—Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2wks7
Elevation: 0 to 1,310 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Canton, extremely stony, and similar soils: 50 percent
Charlton, extremely stony, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton, Extremely Stony

Setting

Landform: Ridges, hills, moraines
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Charlton, Extremely Stony

Setting

Landform: Hills, ground moraines, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Leicester, extremely stony

Percent of map unit: 5 percent
Landform: Depressions, drainageways, hills, ground moraines
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave

Hydric soil rating: Yes

Sutton, extremely stony

Percent of map unit: 5 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Chatfield, extremely stony

Percent of map unit: 5 percent
Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

73C—Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky

Map Unit Setting

National map unit symbol: 2w698
Elevation: 0 to 1,550 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton, very stony, and similar soils: 50 percent
Chatfield, very stony, and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton, Very Stony

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam

Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Chatfield, Very Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 2 inches: fine sandy loam
Bw - 2 to 30 inches: gravelly fine sandy loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 41 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Sutton, very stony
Percent of map unit: 5 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop
Percent of map unit: 5 percent
Hydric soil rating: No

Hollis, very stony
Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Leicester, very stony
Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

75E—Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes

Map Unit Setting
National map unit symbol: 9lqp
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition
Hollis and similar soils: 35 percent
Chatfield and similar soils: 30 percent
Rock outcrop: 15 percent

Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Landform: Hills, ridges
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material
A - 1 to 6 inches: gravelly fine sandy loam
Bw1 - 6 to 9 inches: channery fine sandy loam
Bw2 - 9 to 15 inches: gravelly fine sandy loam
2R - 15 to 80 inches: bedrock

Properties and qualities

Slope: 15 to 45 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to high (0.01 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Chatfield

Setting

Landform: Hills, ridges
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material
A - 1 to 6 inches: gravelly fine sandy loam
Bw1 - 6 to 15 inches: gravelly fine sandy loam
Bw2 - 15 to 29 inches: gravelly fine sandy loam
2R - 29 to 80 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 45 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to high (0.01 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Rock Outcrop

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Runoff class: Very high

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Charlton

Percent of map unit: 7 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, red parent material

Percent of map unit: 1 percent
Hydric soil rating: No

Brimfield

Percent of map unit: 1 percent
Landform: Hills, ridges
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Unnamed, sandy subsoil

Percent of map unit: 1 percent
Hydric soil rating: No

84B—Paxton and Montauk fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t2qn
Elevation: 0 to 1,570 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Paxton and similar soils: 55 percent
Montauk and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 39 inches to densic material
Drainage class: Well drained

Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.1 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Montauk

Setting
Landform: Drumlins, hills
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile
A - 0 to 4 inches: fine sandy loam
Bw1 - 4 to 14 inches: fine sandy loam
Bw2 - 14 to 25 inches: sandy loam
2Cd1 - 25 to 39 inches: gravelly loamy coarse sand
2Cd2 - 39 to 60 inches: gravelly sandy loam

Properties and qualities
Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 38 inches to densic material
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 24 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Ridgebury
Percent of map unit: 5 percent
Landform: Hills, ground moraines, depressions, drainageways
Landform position (two-dimensional): Toeslope, backslope, footslope

Landform position (three-dimensional): Base slope, head slope, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Woodbridge

Percent of map unit: 5 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

84C—Paxton and Montauk fine sandy loams, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w67b
Elevation: 0 to 1,550 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Paxton and similar soils: 55 percent
Montauk and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam

Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Montauk

Setting

Landform: Recessionial moraines, drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 4 inches: fine sandy loam
Bw1 - 4 to 26 inches: fine sandy loam
Bw2 - 26 to 34 inches: sandy loam
2Cd - 34 to 72 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge
Percent of map unit: 6 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton
Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury
Percent of map unit: 3 percent
Landform: Hills, depressions, drumlins, drainageways, ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Stockbridge
Percent of map unit: 1 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

84D—Paxton and Montauk fine sandy loams, 15 to 25 percent slopes

Map Unit Setting
National map unit symbol: 2w67g
Elevation: 30 to 1,470 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Paxton and similar soils: 55 percent
Montauk and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Hills, ground moraines, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Montauk

Setting

Landform: Drumlins, hills, ground moraines, recessionial moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 4 inches: fine sandy loam
Bw1 - 4 to 26 inches: fine sandy loam
Bw2 - 26 to 34 inches: sandy loam
2Cd - 34 to 72 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 6 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge

Percent of map unit: 5 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 3 percent
Landform: Drainageways, hills, ground moraines, depressions, drumlins
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Linear, concave
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Stockbridge

Percent of map unit: 1 percent

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

85B—Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w679
Elevation: 0 to 1,530 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton, very stony, and similar soils: 55 percent
Montauk, very stony, and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Montauk, Very Stony

Setting

Landform: Ground moraines, recessionial moraines, drumlins, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 8 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope, summit, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton, very stony

Percent of map unit: 3 percent
Landform: Hills
Landform position (two-dimensional): Shoulder, summit, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 3 percent
Landform: Ground moraines, depressions, drumlins, drainageways, hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Stockbridge, very stony

Percent of map unit: 1 percent
Landform: Hills
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

85C—Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w67f
Elevation: 0 to 1,520 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton, very stony, and similar soils: 55 percent
Montauk, very stony, and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Montauk, Very Stony

Setting

Landform: Drumlins, hills, ground moraines, recessionial moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 6 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton, very stony

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 3 percent
Landform: Ground moraines, depressions, drumlins, drainageways, hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Stockbridge, very stony

Percent of map unit: 1 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

86C—Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2w67d
Elevation: 20 to 1,490 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton, extremely stony, and similar soils: 55 percent
Montauk, extremely stony, and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Extremely Stony

Setting

Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Summit, backslope, shoulder
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 20 to 43 inches to densic material

Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Montauk, Extremely Stony

Setting

Landform: Drumlins, hills, ground moraines, recessionial moraines
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Charlton, extremely stony

Percent of map unit: 6 percent
Landform: Hills
Landform position (two-dimensional): Shoulder, summit, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge, extremely stony

Percent of map unit: 5 percent
Landform: Hills, ground moraines, drumlins
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury, extremely stony

Percent of map unit: 3 percent
Landform: Drainageways, hills, ground moraines, depressions, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Stockbridge, extremely stony

Percent of map unit: 1 percent
Landform: Hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

86D—Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2w67c
Elevation: 0 to 1,400 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton, extremely stony, and similar soils: 55 percent
Montauk, extremely stony, and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Extremely Stony

Setting

Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Montauk, Extremely Stony

Setting

Landform: Drumlins, ground moraines, recessionial moraines, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Charlton, extremely stony

Percent of map unit: 6 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge, extremely stony

Percent of map unit: 5 percent
Landform: Drumlins, hills, ground moraines
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury, extremely stony

Percent of map unit: 3 percent
Landform: Drainageways, hills, ground moraines, depressions, drumlins
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Stockbridge, extremely stony

Percent of map unit: 1 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

308—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 9lmj
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex
Across-slope shape: Linear

Typical profile

A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: About 24 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Unnamed, undisturbed soils
Percent of map unit: 7 percent
Hydric soil rating: No

Udorthents, wet substratum
Percent of map unit: 7 percent
Hydric soil rating: No

Urban land
Percent of map unit: 5 percent
Hydric soil rating: No

Rock outcrop
Percent of map unit: 1 percent
Hydric soil rating: No

W—Water

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

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations 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 interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

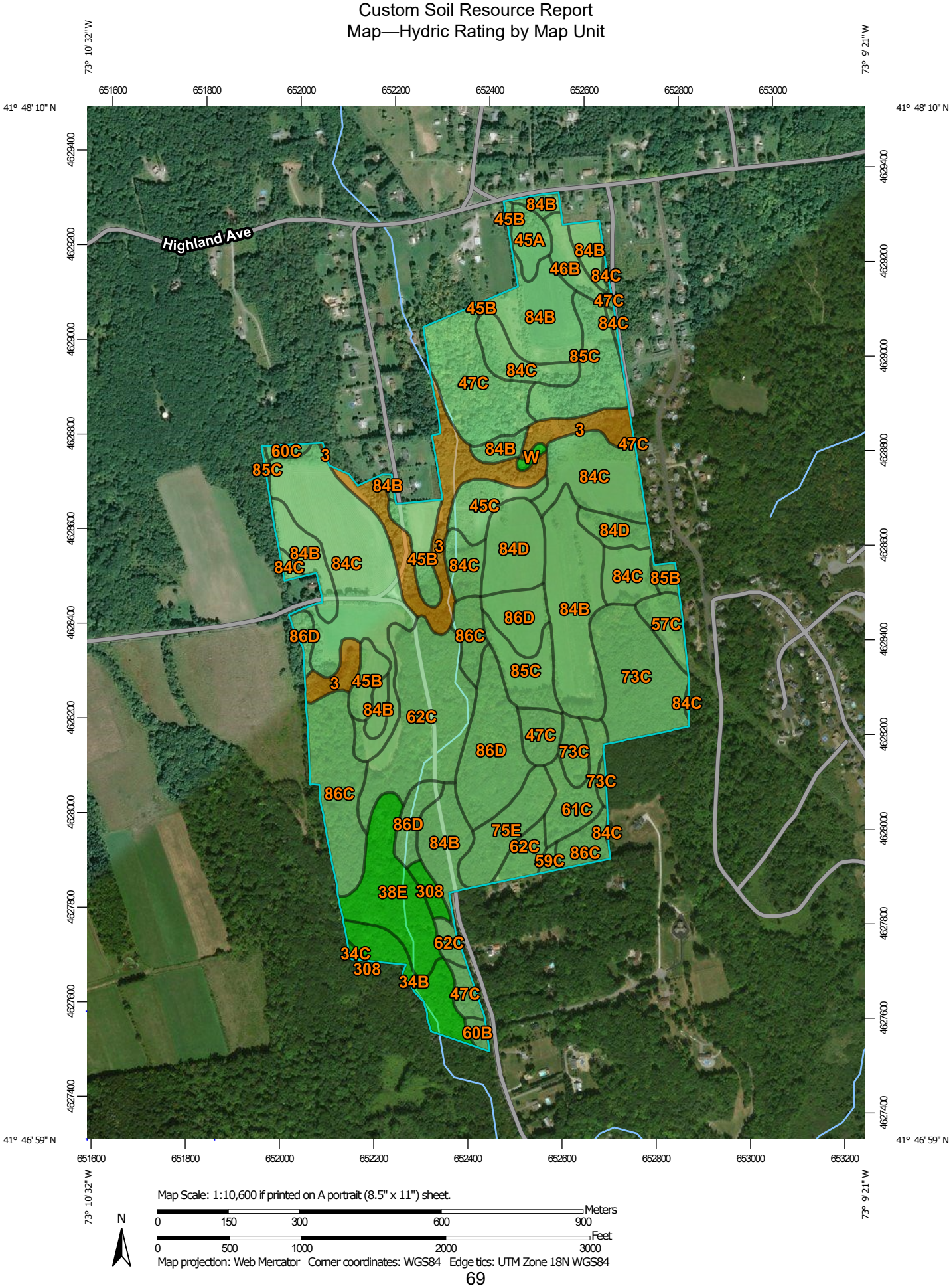
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Map—Hydric Rating by Map Unit



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

Hydric (100%)

Hydric (66 to 99%)

Hydric (33 to 65%)

Hydric (1 to 32%)

Not Hydric (0%)

Not rated or not available

Soil Rating Lines

Hydric (100%)

Hydric (66 to 99%)

Hydric (33 to 65%)

Hydric (1 to 32%)

Not Hydric (0%)

Not rated or not available

Soil Rating Points

Hydric (100%)

Hydric (66 to 99%)

Hydric (33 to 65%)

Hydric (1 to 32%)

Not Hydric (0%)

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

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

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

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

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 20, Jun 9, 2020

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

Date(s) aerial images were photographed: Jul 2, 2015—Sep 17, 2019

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—Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	94	14.8	6.8%
34B	Merrimac fine sandy loam, 3 to 8 percent slopes	0	5.0	2.3%
34C	Merrimac fine sandy loam, 8 to 15 percent slopes	0	0.2	0.1%
38E	Hinckley loamy sand, 15 to 45 percent slopes	0	8.9	4.1%
45A	Woodbridge fine sandy loam, 0 to 3 percent slopes	7	2.3	1.1%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	8	5.6	2.6%
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	4	3.4	1.6%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	8	2.3	1.1%
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony	6	13.2	6.0%
57C	Gloucester gravelly sandy loam, 8 to 15 percent slopes	2	2.4	1.1%
59C	Gloucester gravelly sandy loam, 3 to 15 percent slopes, extremely stony	2	0.5	0.2%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	5	0.6	0.3%
60C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes	5	0.6	0.3%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	5	4.3	2.0%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	5	17.4	8.0%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	5	12.9	5.9%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	5	5.2	2.4%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	5	31.9	14.7%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	3	36.2	16.6%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	3	7.8	3.6%
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	3	0.8	0.4%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	3	11.1	5.1%
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony	3	13.4	6.2%
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	3	15.6	7.2%
308	Udorthents, smoothed	0	1.1	0.5%
W	Water	0	0.4	0.2%
Totals for Area of Interest			**217.8**	**100.0%**

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

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.

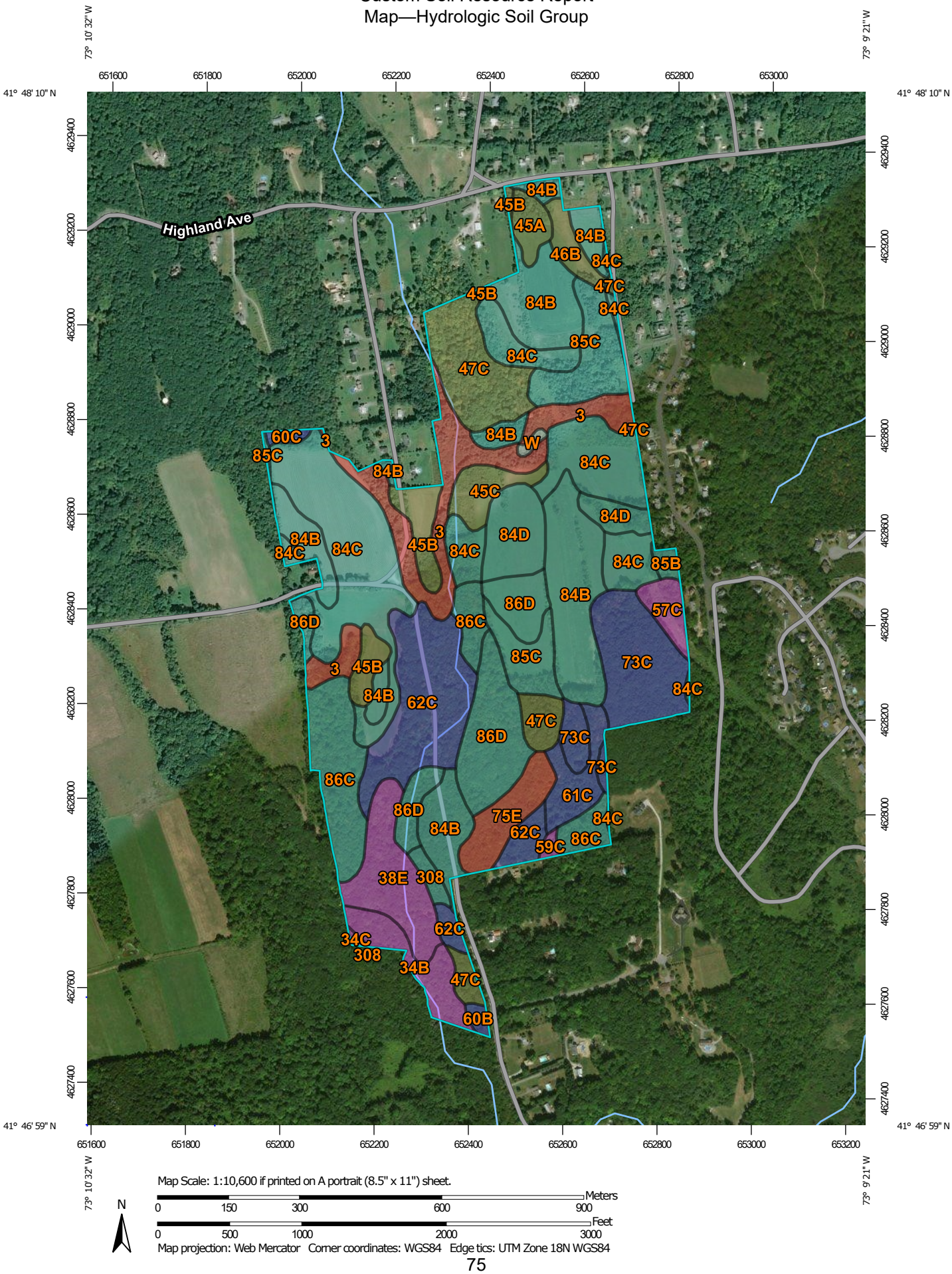
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

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.


73° 10' 32" W
73° 9' 21" W
41° 48' 10" N
41° 46' 59" N
651600
651800
652000
652200
652400
652600
652800
653000
653200
4629400
4629200
4629000
4628800
4628600
4628400
4628200
4628000
4627800
4627600
4627400
Highland Ave
84B
45B
45A
46B
84C
47C
85C
60C
3
W
45C
84D
85B
57C
86D
86C
73C
62C
61C
75E
59C
38E
308
34C
34B
60B
Map Scale: 1:10,600 if printed on A portrait (8.5" x 11") sheet.
Meters
0
150
300
600
900
Feet
0
500
1000
2000
3000
N
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

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

Soil Rating Lines

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

Soil Rating Points

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

Water Features

Streams and Canals

Transportation

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

Background

Aerial Photography

MAP INFORMATION

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

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

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

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 20, Jun 9, 2020

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

Date(s) aerial images were photographed: Jul 2, 2015—Sep 17, 2019

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
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	D	14.8	6.8%
34B	Merrimac fine sandy loam, 3 to 8 percent slopes	A	5.0	2.3%
34C	Merrimac fine sandy loam, 8 to 15 percent slopes	A	0.2	0.1%
38E	Hinckley loamy sand, 15 to 45 percent slopes	A	8.9	4.1%
45A	Woodbridge fine sandy loam, 0 to 3 percent slopes	C/D	2.3	1.1%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	C/D	5.6	2.6%
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	C/D	3.4	1.6%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	C/D	2.3	1.1%
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony	C/D	13.2	6.0%
57C	Gloucester gravelly sandy loam, 8 to 15 percent slopes	A	2.4	1.1%
59C	Gloucester gravelly sandy loam, 3 to 15 percent slopes, extremely stony	A	0.5	0.2%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	B	0.6	0.3%
60C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes	B	0.6	0.3%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	B	4.3	2.0%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B	17.4	8.0%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	B	12.9	5.9%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	D	5.2	2.4%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	C	31.9	14.7%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	C	36.2	16.6%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	C	7.8	3.6%
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony	C	0.8	0.4%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	C	11.1	5.1%
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony	C	13.4	6.2%
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	C	15.6	7.2%
308	Udorthents, smoothed	C	1.1	0.5%
W	Water		0.4	0.2%
Totals for Area of Interest			**217.8**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

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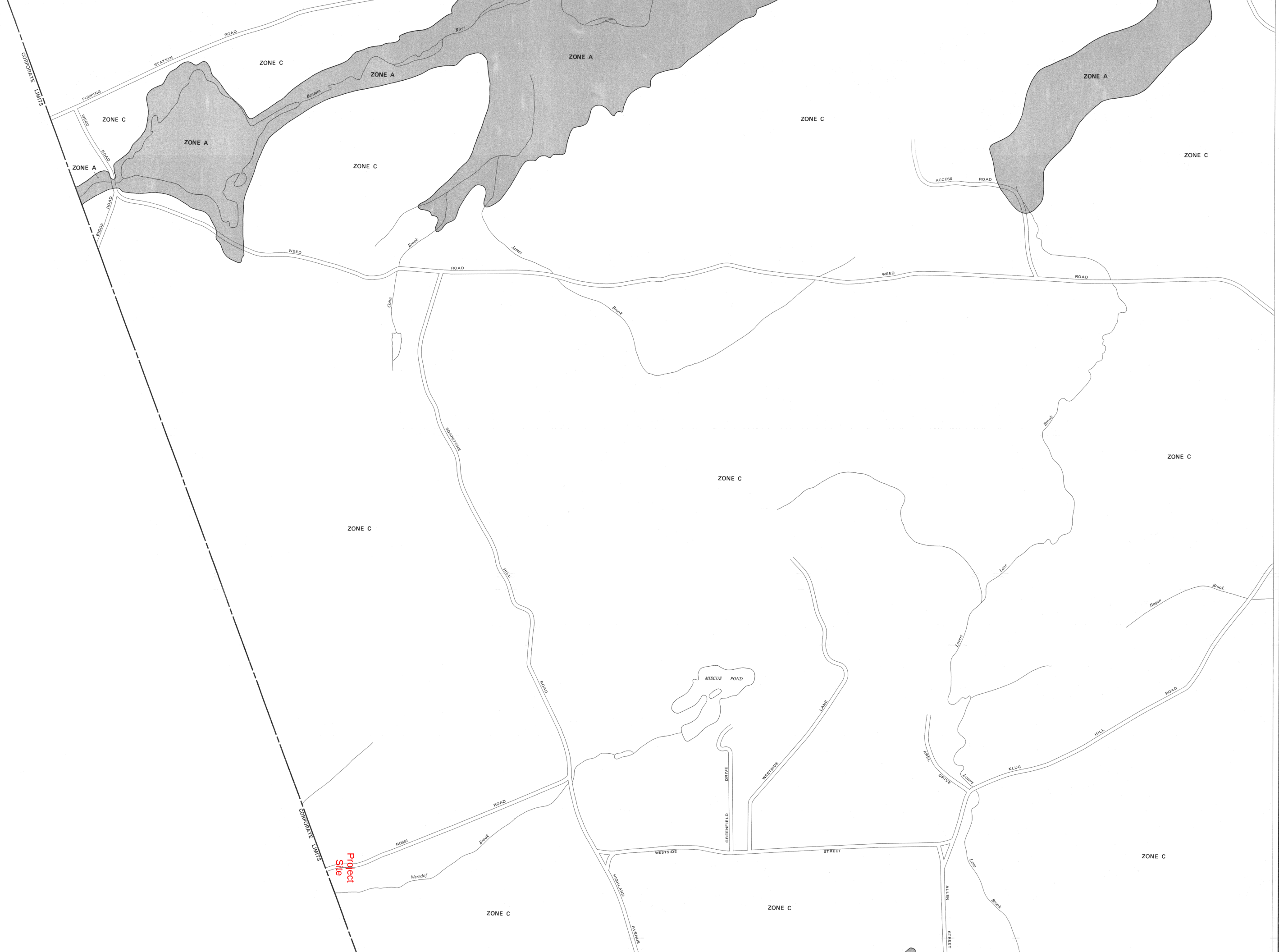
Appendix B

USGS & FEMA Firm Maps



100-Year Flood Boundary — ZONE B

Zone Designations* With Date of Identification e.g., 12/2/74 — ZONE A1 DATE / ZONE A5 DATE

100-Year Flood Boundary — ZONE B

500-Year Flood Boundary

Base Flood Elevation Line With Elevation In Feet** — 513

Base Flood Elevation in Feet Where Uniform Within Zone** — (EL 987)

Elevation Reference Mark — RM7×

Zone D Boundary

River Mile — •M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
JULY 1, 1970

FLOOD HAZARD BOUNDARY MAP REVISIONS:
NONE

FLOOD INSURANCE RATE MAP EFFECTIVE:
MAY 19, 1972

FLOOD INSURANCE RATE MAP REVISIONS:

July 1, 1974 - to change zone designations.

March 5, 1976 - to reflect curvilinear flood boundary and to add special flood hazard areas.

April 4, 1983 - to add special flood hazard areas, to change base flood elevations, to change zone designations.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE
400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
TORRINGTON,
CONNECTICUT
LITCHFIELD COUNTY

PANEL 1 OF 14
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
095081 0001 B

MAP REVISED:
APRIL 4, 1983

KEY TO MAP

500-Year Flood Boundary	
100-Year Flood Boundary	ZONE B
Zone Designations*	ZONE A1 / ZONE AB
100-Year Flood Boundary	ZONE B
500-Year Flood Boundary	
Base Flood Elevation Line With Elevation In Feet**	513
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	RM7 ×
Zone D Boundary	
River Mile	• M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
JUNE 21, 1974
FLOOD HAZARD BOUNDARY MAP REVISIONS:
DECEMBER 17, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE:
JUNE 15, 1982
FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE
400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
LITCHFIELD,
CONNECTICUT
LITCHFIELD COUNTY

PANEL 4 OF 18
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
090047 0004 B

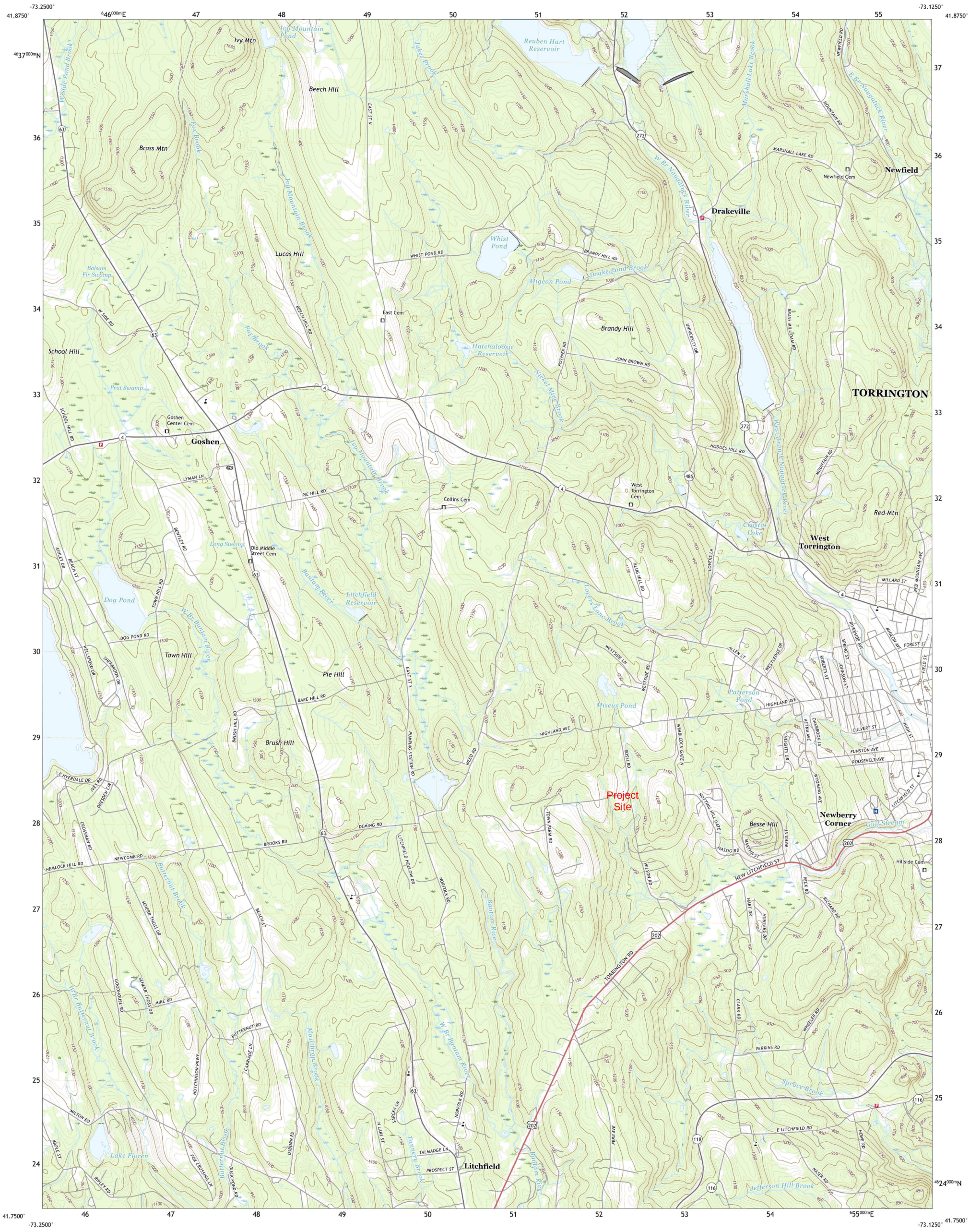
EFFECTIVE DATE:
JUNE 15, 1982

Federal Emergency Management Agency

USGS science for a changing world
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

WEST TORRINGTON QUADRANGLE
CONNECTICUT - LITCHFIELD COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 18T

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery....NAIP, July 2016 - September 2016
Roads.... U.S. Census Bureau, 2016
Names....GNIS, 1979 - 2017
Hydrography....National Hydrography Dataset, 2004 - 2016
Contours....National Elevation Dataset, 2012
Boundaries....Multiple sources; see metadata file 2016 - 2017

Wetlands....FWS National Wetlands Inventory 2010

MN
GN
13°35'
241 MILS
1°13'
22 MILS

UTM GRID AND 2017 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
XM
Grid Zone Designation
18T

SCALE 1:24 000

KILOMETERS 1 0.5 0 1 2
METERS 1000 500 0 1000 2000
MILES 1 0.5 0 1
FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

CONNECTICUT
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

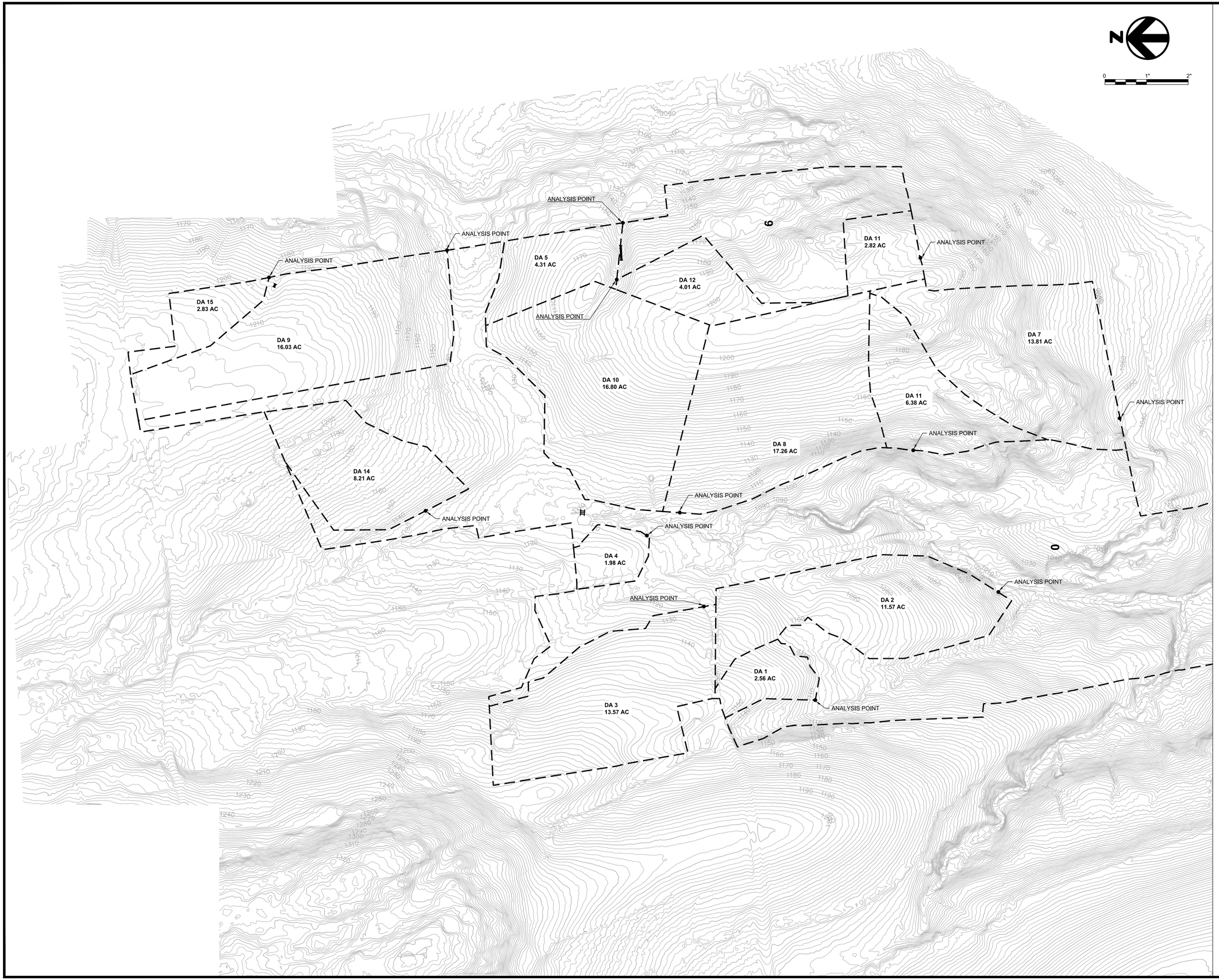
ADJOINING QUADRANGLES
1 South Canaan
2 Norfolk
3 Winsted
4 Cornwall
5 Torrington
6 New Preston
7 Litchfield
8 Thomaston

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

WEST TORRINGTON, CT
2018

Appendix C

Stormwater Drainage Area Map and Peak Flow Calculations



HDR Engineering Inc.
of the Carolinas

440 Church St. Suite 1000
Charlotte, NC 28202-2075
704.338.6700

N.C.B.E.L.S. License Number: F-0116

SILICON RANCH

NOT FOR CONSTRUCTION

LITCHFIELD SOLAR

2-298 ROSSI RD
TORRINGTON, CT 06790, USA

LAT: 41.794157°N
LON: 73.168028°W

LITCHFIELD, CT

REV. NO	DESCRIPTION	DATE
0	ISSUED FOR PERMIT	09/30/20

SHEET TITLE:

DRAINAGE AREA EXHIBIT EXISTING CONDITIONS

PROJ. MGR.	PROJ. ENGR.	DATE:
WK	MB	09/30/20
DRAWN BY: NC	CHECKED BY: CP	SCALE: 1"=200'

DRAWING NO.

EXHIBIT

HDR Engineering Inc.
of the Carolinas

440 Church St. Suite 1000
Charlotte, NC 28202-2075
704.338.6700

N.C.B.E.L.S. License Number: F-0116

SILICON RANCH

NOT FOR CONSTRUCTION

LITCHFIELD SOLAR

2-298 ROSSI RD
TORRINGTON, CT 06790, USA

LAT: 41.794157°N
LON: 73.168028°W

LITCHFIELD, CT

REV. NO	DESCRIPTION	DATE
0	ISSUED FOR PERMIT	09/30/20

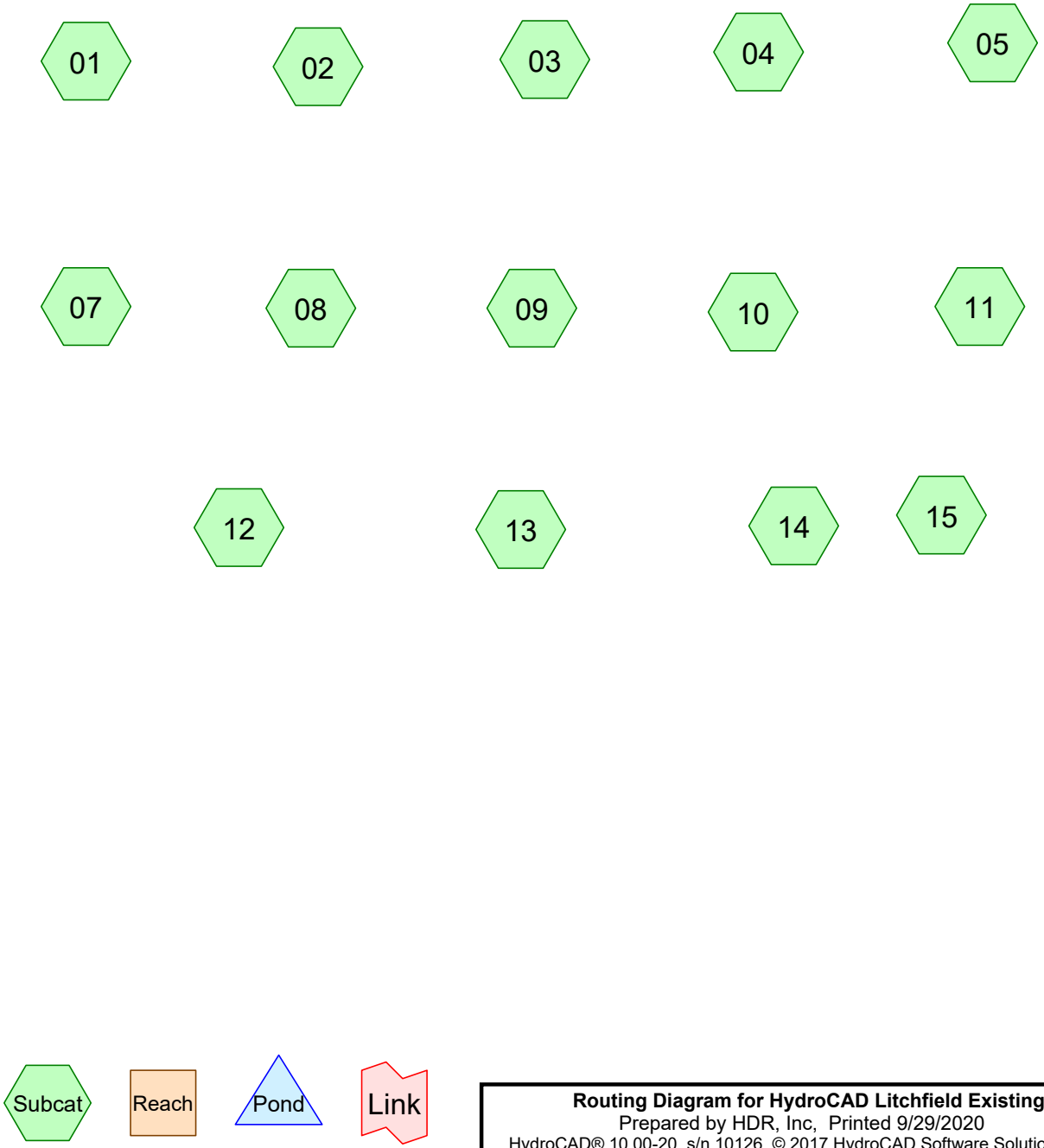
SHEET TITLE:

DRAINAGE AREA EXHIBIT
PROPOSED CONDITIONS

PROJ. MGR.	PROJ. ENGR.	DATE:
WK	MB	09/30/20
DRAWN BY:	CHECKED BY:	SCALE:
NC	CP	1"=200'

DRAWING NO.

EXHIBIT



Routing Diagram for HydroCAD Litchfield Existing
Prepared by HDR, Inc, Printed 9/29/2020
HydroCAD® 10.00-20 s/n 10126 © 2017 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.560	79	(01)
11.570	70	(02)
13.570	78	(03)
1.980	73	(04)
41.200	77	(05, 08, 10, 15)
13.810	66	(07)
16.030	74	(09)
2.820	61	(11)
4.010	76	(12)
6.380	68	(13)
8.210	67	(14)
122.140	**73**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment01: Runoff Area=2.560 ac 0.00% Impervious Runoff Depth>1.33"
Tc=30.9 min CN=79 Runoff=2.19 cfs 0.283 af

Subcatchment02: Runoff Area=11.570 ac 0.00% Impervious Runoff Depth>0.82"
Tc=31.4 min CN=70 Runoff=5.56 cfs 0.791 af

Subcatchment03: Runoff Area=13.570 ac 0.00% Impervious Runoff Depth>1.26"
Tc=32.4 min CN=78 Runoff=10.77 cfs 1.429 af

Subcatchment04: Runoff Area=1.980 ac 0.00% Impervious Runoff Depth>0.97"
Tc=37.7 min CN=73 Runoff=1.08 cfs 0.160 af

Subcatchment05: Runoff Area=4.310 ac 0.00% Impervious Runoff Depth>1.21"
Tc=23.5 min CN=77 Runoff=3.73 cfs 0.433 af

Subcatchment07: Runoff Area=13.810 ac 0.00% Impervious Runoff Depth>0.63"
Tc=42.1 min CN=66 Runoff=4.09 cfs 0.730 af

Subcatchment08: Runoff Area=17.260 ac 0.00% Impervious Runoff Depth>1.20"
Tc=28.9 min CN=77 Runoff=13.64 cfs 1.731 af

Subcatchment09: Runoff Area=16.030 ac 0.00% Impervious Runoff Depth>1.01"
Tc=84.5 min CN=74 Runoff=5.75 cfs 1.352 af

Subcatchment10: Runoff Area=16.800 ac 0.00% Impervious Runoff Depth>1.20"
Tc=41.4 min CN=77 Runoff=11.18 cfs 1.679 af

Subcatchment11: Runoff Area=2.820 ac 0.00% Impervious Runoff Depth>0.43"
Tc=55.7 min CN=61 Runoff=0.41 cfs 0.102 af

Subcatchment12: Runoff Area=4.010 ac 0.00% Impervious Runoff Depth>1.14"
Tc=28.3 min CN=76 Runoff=3.02 cfs 0.382 af

Subcatchment13: Runoff Area=6.380 ac 0.00% Impervious Runoff Depth>0.72"
Tc=34.2 min CN=68 Runoff=2.51 cfs 0.385 af

Subcatchment14: Runoff Area=8.210 ac 0.00% Impervious Runoff Depth>0.68"
Tc=27.5 min CN=67 Runoff=3.26 cfs 0.466 af

Subcatchment15: Runoff Area=2.830 ac 0.00% Impervious Runoff Depth>1.19"
Tc=59.4 min CN=77 Runoff=1.53 cfs 0.281 af

Total Runoff Area = 122.140 ac Runoff Volume = 10.205 af Average Runoff Depth = 1.00"
100.00% Pervious = 122.140 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 01:

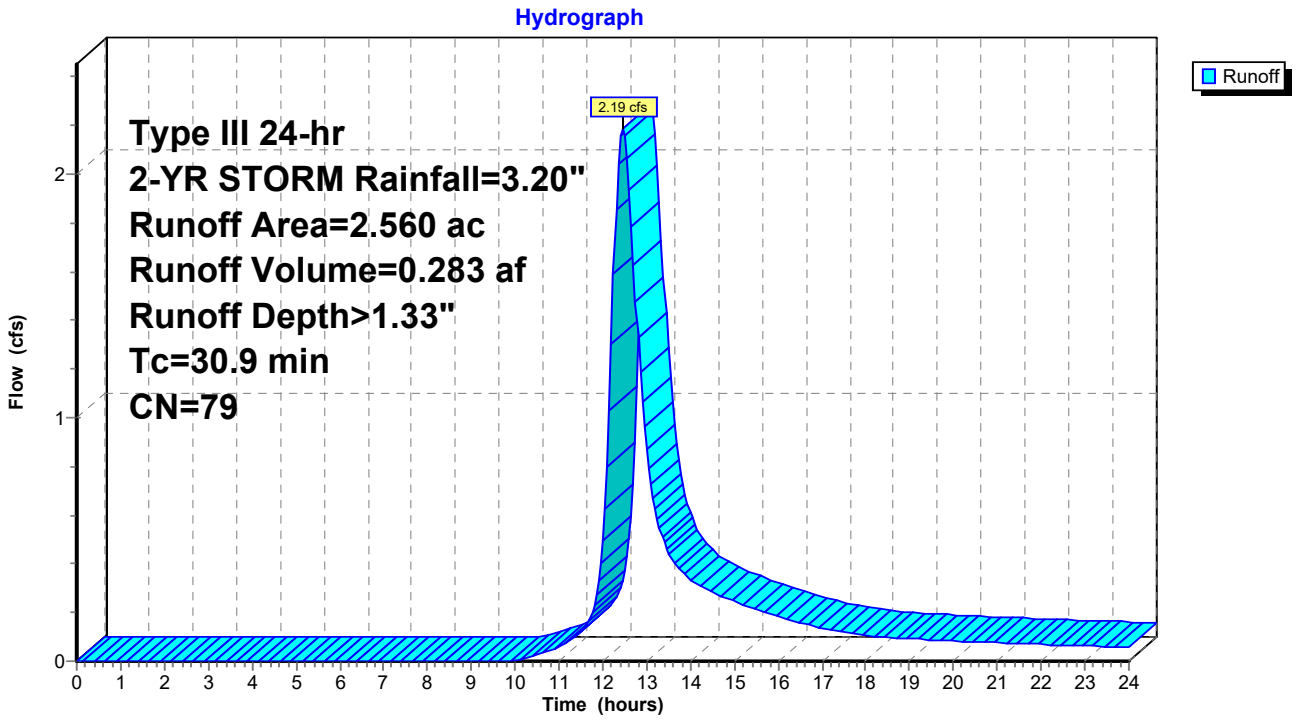
Runoff = 2.19 cfs @ 12.45 hrs, Volume= 0.283 af, Depth> 1.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	2.560	79	
	2.560		100.00% Pervious Area

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

Subcatchment 01:



Hydrograph for Subcatchment 01:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.01
10.50	0.69	0.01	0.02
10.75	0.74	0.02	0.04
11.00	0.80	0.02	0.06
11.25	0.87	0.04	0.08
11.50	0.95	0.06	0.12
11.75	1.14	0.11	0.20
12.00	1.60	0.31	0.50
12.25	2.06	0.56	**1.59**
12.50	2.25	0.67	**2.16**
12.75	2.33	0.73	1.48
13.00	2.40	0.77	0.87
13.25	2.46	0.81	0.58
13.50	2.51	0.84	0.44
13.75	2.55	0.87	0.38
14.00	2.60	0.90	0.34
14.25	2.63	0.93	0.31
14.50	2.67	0.95	0.28
14.75	2.70	0.98	0.26
15.00	2.73	1.00	0.25
15.25	2.76	1.02	0.23
15.50	2.79	1.04	0.22
15.75	2.81	1.05	0.20
16.00	2.84	1.07	0.18
16.25	2.86	1.08	0.17
16.50	2.87	1.10	0.16
16.75	2.89	1.11	0.15
17.00	2.91	1.12	0.14
17.25	2.93	1.14	0.13
17.50	2.94	1.15	0.12
17.75	2.96	1.16	0.12
18.00	2.97	1.17	0.11
18.25	2.98	1.18	0.10
18.50	2.99	1.18	0.10
18.75	3.01	1.19	0.09
19.00	3.02	1.20	0.09
19.25	3.03	1.21	0.09
19.50	3.04	1.22	0.09
19.75	3.05	1.23	0.09
20.00	3.06	1.23	0.08
20.25	3.07	1.24	0.08
20.50	3.08	1.25	0.08
20.75	3.09	1.26	0.08
21.00	3.10	1.26	0.08
21.25	3.11	1.27	0.07
21.50	3.12	1.28	0.07
21.75	3.13	1.28	0.07
22.00	3.14	1.29	0.07
22.25	3.15	1.30	0.07
22.50	3.16	1.30	0.07
22.75	3.16	1.31	0.06
23.00	3.17	1.31	0.06
23.25	3.18	1.32	0.06
23.50	3.19	1.33	0.06
23.75	3.19	1.33	0.06
24.00	**3.20**	**1.34**	0.06

Summary for Subcatchment 02:

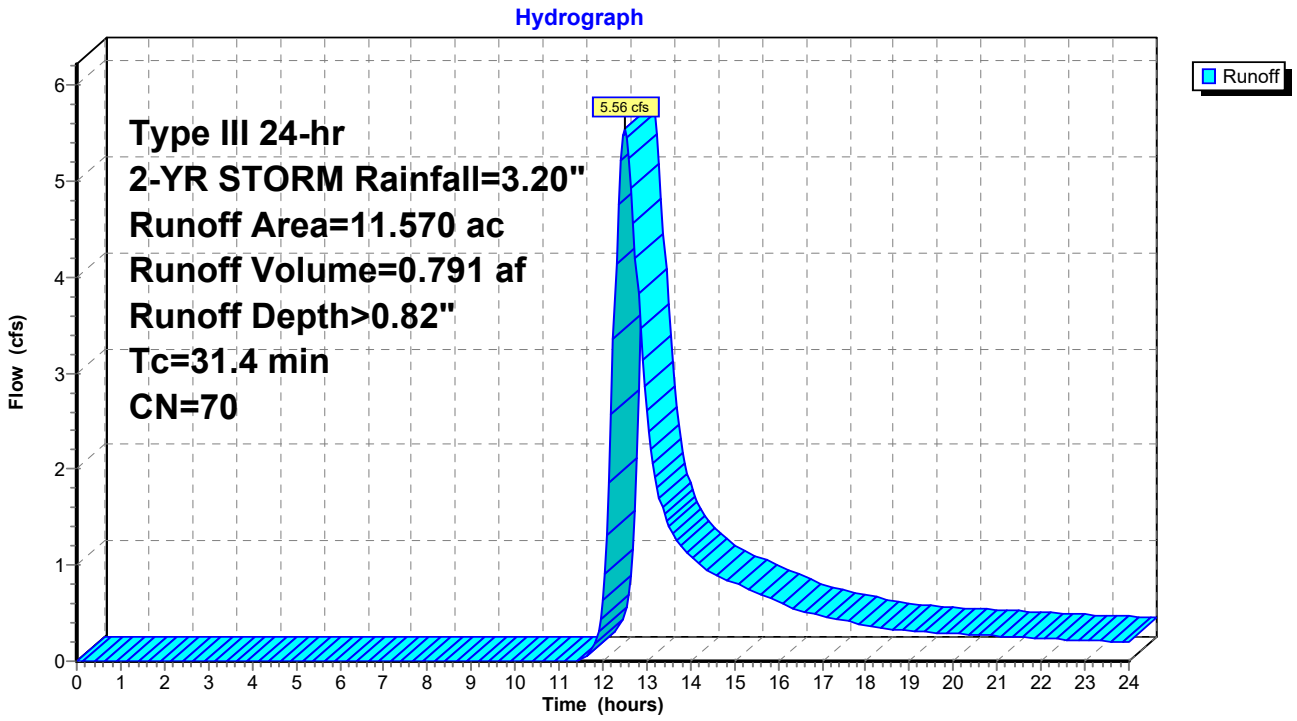
Runoff = 5.56 cfs @ 12.50 hrs, Volume= 0.791 af, Depth> 0.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	11.570	70	
	11.570		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.4					**Direct Entry, SCS TR-55**

Subcatchment 02:



Hydrograph for Subcatchment 02:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.00
10.75	0.74	0.00	0.00
11.00	0.80	0.00	0.00
11.25	0.87	0.00	0.00
11.50	0.95	0.00	0.01
11.75	1.14	0.02	0.09
12.00	1.60	0.11	0.63
12.25	2.06	0.26	3.37
12.50	2.25	0.34	**5.56**
12.75	2.33	0.38	4.20
13.00	2.40	0.41	2.61
13.25	2.46	0.43	1.80
13.50	2.51	0.46	1.41
13.75	2.55	0.48	1.21
14.00	2.60	0.50	1.09
14.25	2.63	0.52	0.99
14.50	2.67	0.54	0.92
14.75	2.70	0.56	0.86
15.00	2.73	0.57	0.81
15.25	2.76	0.59	0.77
15.50	2.79	0.60	0.72
15.75	2.81	0.61	0.67
16.00	2.84	0.62	0.62
16.25	2.86	0.64	0.57
16.50	2.87	0.65	0.53
16.75	2.89	0.66	0.50
17.00	2.91	0.67	0.47
17.25	2.93	0.67	0.45
17.50	2.94	0.68	0.42
17.75	2.96	0.69	0.40
18.00	2.97	0.70	0.38
18.25	2.98	0.70	0.35
18.50	2.99	0.71	0.33
18.75	3.01	0.72	0.32
19.00	3.02	0.72	0.32
19.25	3.03	0.73	0.31
19.50	3.04	0.74	0.30
19.75	3.05	0.74	0.29
20.00	3.06	0.75	0.29
20.25	3.07	0.76	0.28
20.50	3.08	0.76	0.27
20.75	3.09	0.77	0.27
21.00	3.10	0.77	0.26
21.25	3.11	0.78	0.26
21.50	3.12	0.78	0.25
21.75	3.13	0.79	0.25
22.00	3.14	0.79	0.24
22.25	3.15	0.80	0.24
22.50	3.16	0.80	0.23
22.75	3.16	0.81	0.22
23.00	3.17	0.81	0.22
23.25	3.18	0.82	0.21
23.50	3.19	0.82	0.21
23.75	3.19	0.82	0.20
24.00	**3.20**	**0.83**	0.20

Summary for Subcatchment 03:

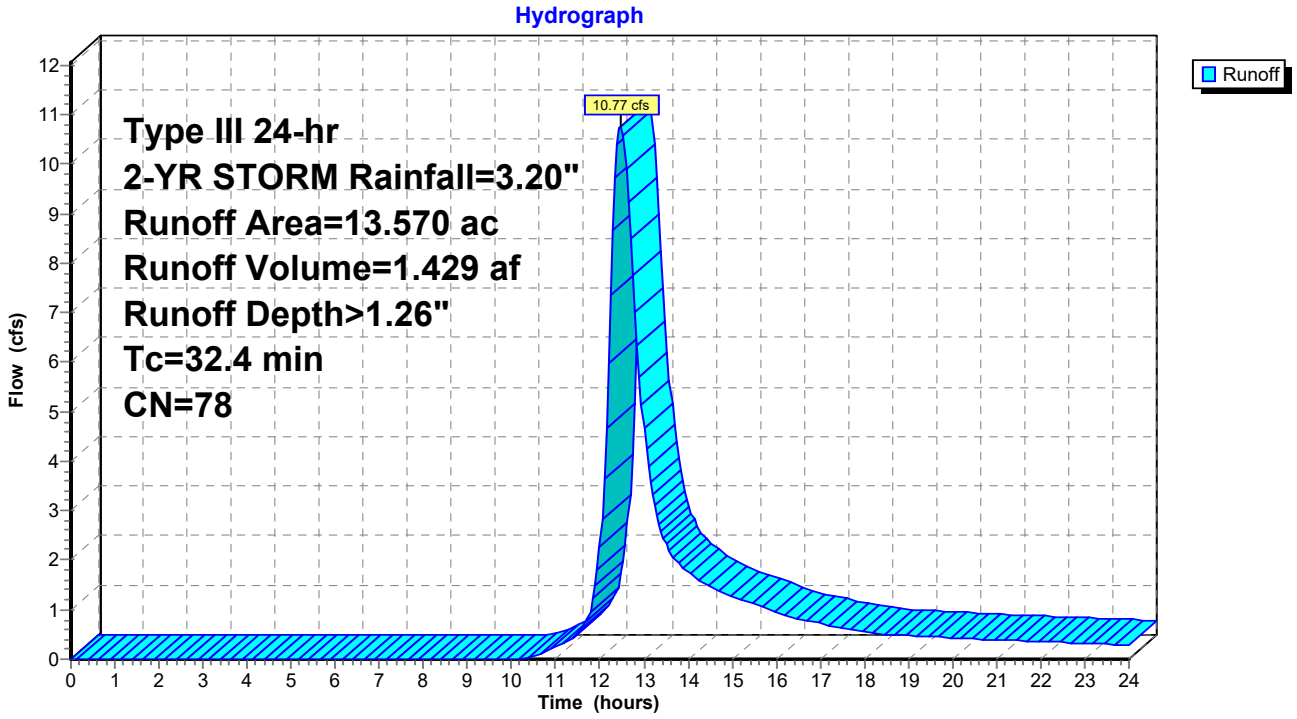
Runoff = 10.77 cfs @ 12.48 hrs, Volume= 1.429 af, Depth> 1.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	13.570	78	
	13.570		100.00% Pervious Area

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

Subcatchment 03:



Hydrograph for Subcatchment 03:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.02
10.50	0.69	0.01	0.07
10.75	0.74	0.01	0.14
11.00	0.80	0.02	0.24
11.25	0.87	0.03	0.35
11.50	0.95	0.05	0.54
11.75	1.14	0.10	0.89
12.00	1.60	0.28	2.25
12.25	2.06	0.52	7.36
12.50	2.25	0.63	**10.74**
12.75	2.33	0.68	7.73
13.00	2.40	0.72	4.66
13.25	2.46	0.76	3.10
13.50	2.51	0.79	2.34
13.75	2.55	0.82	1.98
14.00	2.60	0.85	1.76
14.25	2.63	0.88	1.58
14.50	2.67	0.90	1.45
14.75	2.70	0.92	1.36
15.00	2.73	0.94	1.28
15.25	2.76	0.96	1.20
15.50	2.79	0.98	1.12
15.75	2.81	1.00	1.04
16.00	2.84	1.01	0.96
16.25	2.86	1.03	0.87
16.50	2.87	1.04	0.81
16.75	2.89	1.05	0.76
17.00	2.91	1.07	0.72
17.25	2.93	1.08	0.68
17.50	2.94	1.09	0.65
17.75	2.96	1.10	0.61
18.00	2.97	1.11	0.57
18.25	2.98	1.12	0.54
18.50	2.99	1.12	0.51
18.75	3.01	1.13	0.49
19.00	3.02	1.14	0.48
19.25	3.03	1.15	0.46
19.50	3.04	1.16	0.45
19.75	3.05	1.17	0.44
20.00	3.06	1.17	0.43
20.25	3.07	1.18	0.42
20.50	3.08	1.19	0.41
20.75	3.09	1.20	0.40
21.00	3.10	1.20	0.39
21.25	3.11	1.21	0.38
21.50	3.12	1.22	0.38
21.75	3.13	1.22	0.37
22.00	3.14	1.23	0.36
22.25	3.15	1.23	0.35
22.50	3.16	1.24	0.34
22.75	3.16	1.25	0.33
23.00	3.17	1.25	0.32
23.25	3.18	1.26	0.32
23.50	3.19	1.26	0.31
23.75	3.19	1.27	0.30
24.00	**3.20**	**1.27**	0.29

Summary for Subcatchment 04:

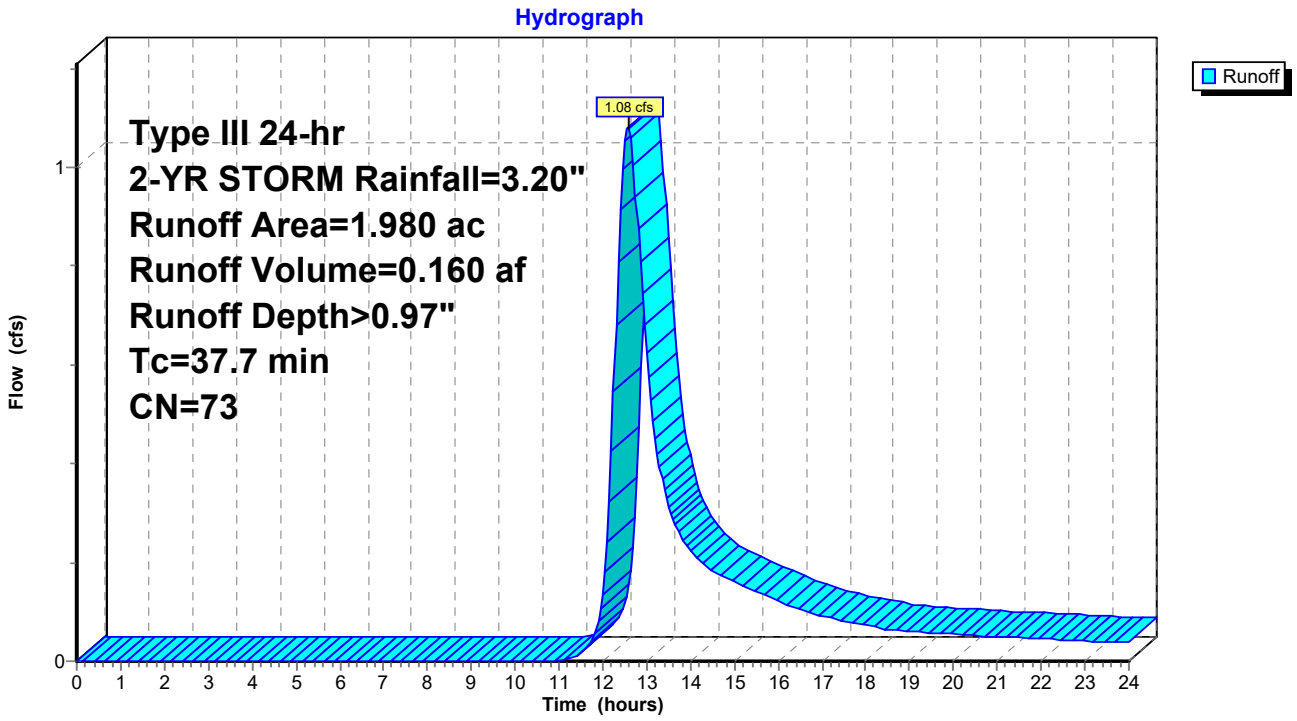
Runoff = 1.08 cfs @ 12.57 hrs, Volume= 0.160 af, Depth> 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	1.980	73	
	1.980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.7					**Direct Entry, SCS TR-55**

Subcatchment 04:



Hydrograph for Subcatchment 04:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.00
10.75	0.74	0.00	0.00
11.00	0.80	0.00	0.00
11.25	0.87	0.00	0.00
11.50	0.95	0.01	0.02
11.75	1.14	0.04	0.04
12.00	1.60	0.16	0.14
12.25	2.06	0.35	0.55
12.50	2.25	0.44	**1.05**
12.75	2.33	0.48	**0.94**
13.00	2.40	0.51	0.63
13.25	2.46	0.54	0.42
13.50	2.51	0.57	0.31
13.75	2.55	0.60	0.26
14.00	2.60	0.62	0.23
14.25	2.63	0.64	0.20
14.50	2.67	0.66	0.18
14.75	2.70	0.68	0.17
15.00	2.73	0.70	0.16
15.25	2.76	0.72	0.15
15.50	2.79	0.73	0.14
15.75	2.81	0.74	0.13
16.00	2.84	0.76	0.12
16.25	2.86	0.77	0.11
16.50	2.87	0.78	0.10
16.75	2.89	0.79	0.10
17.00	2.91	0.80	0.09
17.25	2.93	0.81	0.09
17.50	2.94	0.82	0.08
17.75	2.96	0.83	0.08
18.00	2.97	0.84	0.07
18.25	2.98	0.85	0.07
18.50	2.99	0.85	0.06
18.75	3.01	0.86	0.06
19.00	3.02	0.87	0.06
19.25	3.03	0.88	0.06
19.50	3.04	0.88	0.06
19.75	3.05	0.89	0.06
20.00	3.06	0.90	0.05
20.25	3.07	0.90	0.05
20.50	3.08	0.91	0.05
20.75	3.09	0.91	0.05
21.00	3.10	0.92	0.05
21.25	3.11	0.93	0.05
21.50	3.12	0.93	0.05
21.75	3.13	0.94	0.05
22.00	3.14	0.94	0.05
22.25	3.15	0.95	0.04
22.50	3.16	0.95	0.04
22.75	3.16	0.96	0.04
23.00	3.17	0.96	0.04
23.25	3.18	0.97	0.04
23.50	3.19	0.97	0.04
23.75	3.19	0.98	0.04
24.00	**3.20**	**0.98**	0.04

Summary for Subcatchment 05:

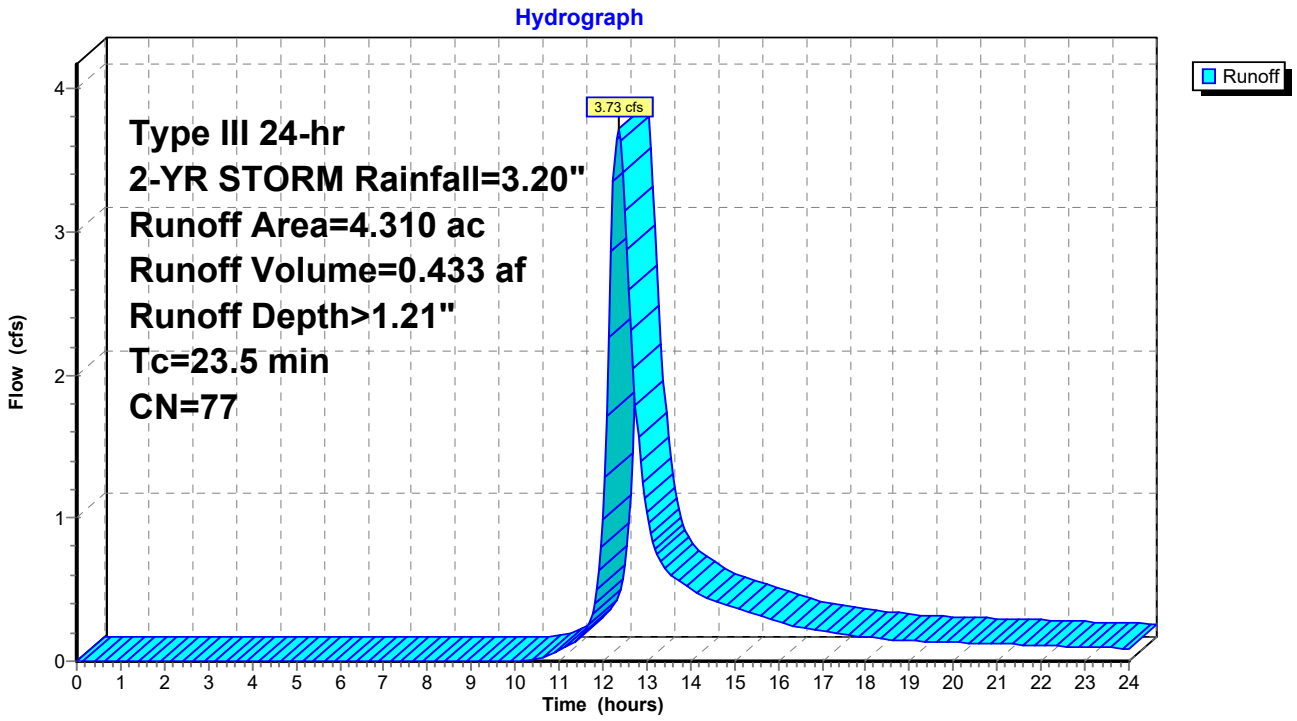
Runoff = 3.73 cfs @ 12.35 hrs, Volume= 0.433 af, Depth> 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	4.310	77	
	4.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5					**Direct Entry, SCS TR-55**

Subcatchment 05:



Hydrograph for Subcatchment 05:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.02
10.75	0.74	0.01	0.04
11.00	0.80	0.01	0.07
11.25	0.87	0.02	0.11
11.50	0.95	0.04	0.18
11.75	1.14	0.08	0.33
12.00	1.60	0.25	1.00
12.25	2.06	0.48	**3.36**
12.50	2.25	0.59	**3.15**
12.75	2.33	0.64	1.79
13.00	2.40	0.68	1.04
13.25	2.46	0.71	0.74
13.50	2.51	0.74	0.62
13.75	2.55	0.77	0.56
14.00	2.60	0.80	0.51
14.25	2.63	0.83	0.46
14.50	2.67	0.85	0.43
14.75	2.70	0.87	0.40
15.00	2.73	0.89	0.38
15.25	2.76	0.91	0.36
15.50	2.79	0.93	0.33
15.75	2.81	0.94	0.31
16.00	2.84	0.96	0.28
16.25	2.86	0.97	0.26
16.50	2.87	0.99	0.24
16.75	2.89	1.00	0.23
17.00	2.91	1.01	0.22
17.25	2.93	1.02	0.20
17.50	2.94	1.03	0.19
17.75	2.96	1.04	0.18
18.00	2.97	1.05	0.17
18.25	2.98	1.06	0.16
18.50	2.99	1.07	0.15
18.75	3.01	1.08	0.15
19.00	3.02	1.08	0.15
19.25	3.03	1.09	0.14
19.50	3.04	1.10	0.14
19.75	3.05	1.11	0.13
20.00	3.06	1.11	0.13
20.25	3.07	1.12	0.13
20.50	3.08	1.13	0.13
20.75	3.09	1.14	0.12
21.00	3.10	1.14	0.12
21.25	3.11	1.15	0.12
21.50	3.12	1.16	0.11
21.75	3.13	1.16	0.11
22.00	3.14	1.17	0.11
22.25	3.15	1.17	0.11
22.50	3.16	1.18	0.10
22.75	3.16	1.19	0.10
23.00	3.17	1.19	0.10
23.25	3.18	1.20	0.10
23.50	3.19	1.20	0.09
23.75	3.19	1.21	0.09
24.00	**3.20**	**1.21**	0.09

Summary for Subcatchment 07:

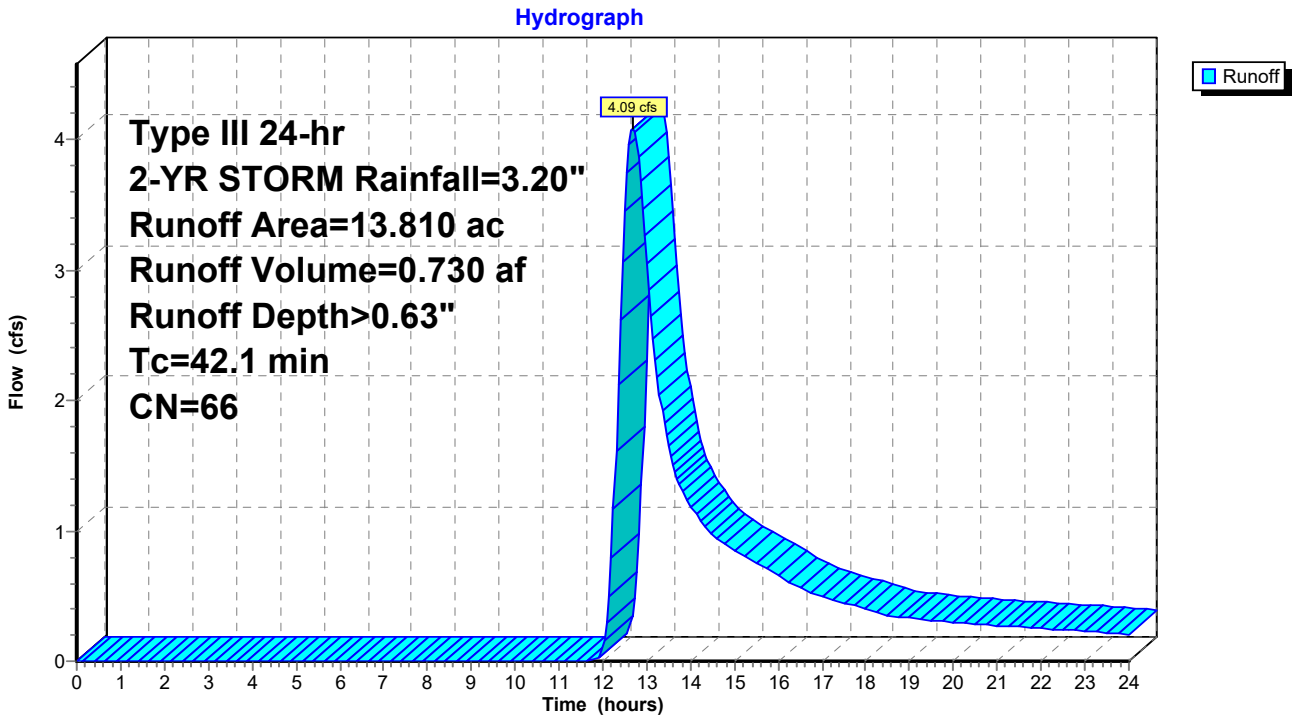
Runoff = 4.09 cfs @ 12.69 hrs, Volume= 0.730 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	13.810	66	
	13.810		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.1					**Direct Entry, SCS TR-55**

Subcatchment 07:



Hydrograph for Subcatchment 07:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.00
10.75	0.74	0.00	0.00
11.00	0.80	0.00	0.00
11.25	0.87	0.00	0.00
11.50	0.95	0.00	0.00
11.75	1.14	0.00	0.00
12.00	1.60	0.06	0.08
12.25	2.06	0.17	1.16
12.50	2.25	0.23	**3.45**
12.75	2.33	0.26	**4.02**
13.00	2.40	0.29	3.05
13.25	2.46	0.31	2.17
13.50	2.51	0.33	1.65
13.75	2.55	0.35	1.36
14.00	2.60	0.36	1.19
14.25	2.63	0.38	1.07
14.50	2.67	0.40	0.97
14.75	2.70	0.41	0.90
15.00	2.73	0.42	0.85
15.25	2.76	0.44	0.80
15.50	2.79	0.45	0.75
15.75	2.81	0.46	0.71
16.00	2.84	0.47	0.66
16.25	2.86	0.48	0.61
16.50	2.87	0.49	0.56
16.75	2.89	0.49	0.52
17.00	2.91	0.50	0.50
17.25	2.93	0.51	0.47
17.50	2.94	0.52	0.45
17.75	2.96	0.52	0.42
18.00	2.97	0.53	0.40
18.25	2.98	0.54	0.38
18.50	2.99	0.54	0.35
18.75	3.01	0.55	0.34
19.00	3.02	0.55	0.33
19.25	3.03	0.56	0.32
19.50	3.04	0.56	0.31
19.75	3.05	0.57	0.31
20.00	3.06	0.57	0.30
20.25	3.07	0.58	0.29
20.50	3.08	0.58	0.29
20.75	3.09	0.59	0.28
21.00	3.10	0.59	0.27
21.25	3.11	0.60	0.27
21.50	3.12	0.60	0.26
21.75	3.13	0.61	0.26
22.00	3.14	0.61	0.25
22.25	3.15	0.62	0.25
22.50	3.16	0.62	0.24
22.75	3.16	0.62	0.24
23.00	3.17	0.63	0.23
23.25	3.18	0.63	0.22
23.50	3.19	0.64	0.22
23.75	3.19	0.64	0.21
24.00	**3.20**	**0.64**	0.21

Summary for Subcatchment 08:

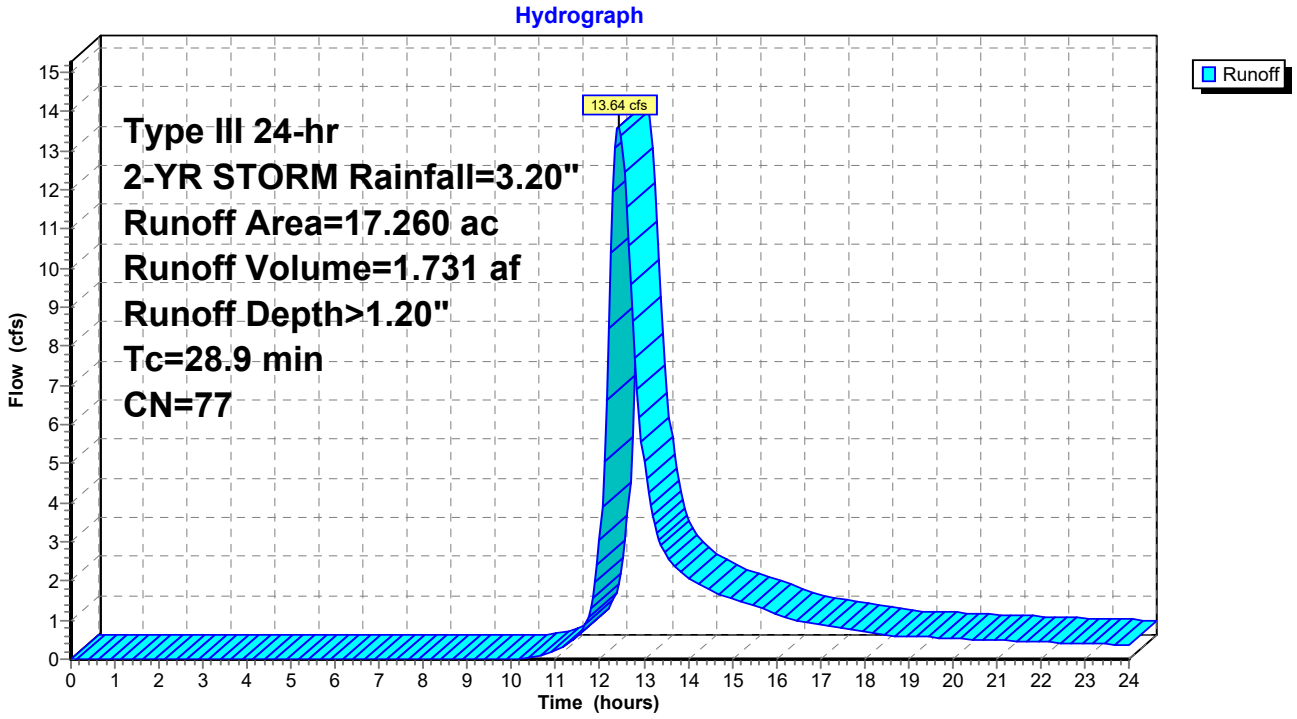
Runoff = 13.64 cfs @ 12.43 hrs, Volume= 1.731 af, Depth> 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	17.260	77	
	17.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.9					**Direct Entry, SCS TR-55**

Subcatchment 08:



Hydrograph for Subcatchment 08:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.01
10.50	0.69	0.00	0.05
10.75	0.74	0.01	0.13
11.00	0.80	0.01	0.24
11.25	0.87	0.02	0.39
11.50	0.95	0.04	0.62
11.75	1.14	0.08	1.09
12.00	1.60	0.25	3.05
12.25	2.06	0.48	**10.38**
12.50	2.25	0.59	**13.18**
12.75	2.33	0.64	8.63
13.00	2.40	0.68	5.04
13.25	2.46	0.71	3.44
13.50	2.51	0.74	2.68
13.75	2.55	0.77	2.33
14.00	2.60	0.80	2.10
14.25	2.63	0.83	1.91
14.50	2.67	0.85	1.76
14.75	2.70	0.87	1.65
15.00	2.73	0.89	1.55
15.25	2.76	0.91	1.45
15.50	2.79	0.93	1.36
15.75	2.81	0.94	1.26
16.00	2.84	0.96	1.16
16.25	2.86	0.97	1.06
16.50	2.87	0.99	0.98
16.75	2.89	1.00	0.93
17.00	2.91	1.01	0.88
17.25	2.93	1.02	0.83
17.50	2.94	1.03	0.79
17.75	2.96	1.04	0.74
18.00	2.97	1.05	0.70
18.25	2.98	1.06	0.65
18.50	2.99	1.07	0.62
18.75	3.01	1.08	0.60
19.00	3.02	1.08	0.59
19.25	3.03	1.09	0.57
19.50	3.04	1.10	0.56
19.75	3.05	1.11	0.54
20.00	3.06	1.11	0.53
20.25	3.07	1.12	0.52
20.50	3.08	1.13	0.51
20.75	3.09	1.14	0.49
21.00	3.10	1.14	0.48
21.25	3.11	1.15	0.47
21.50	3.12	1.16	0.46
21.75	3.13	1.16	0.45
22.00	3.14	1.17	0.44
22.25	3.15	1.17	0.43
22.50	3.16	1.18	0.42
22.75	3.16	1.19	0.41
23.00	3.17	1.19	0.40
23.25	3.18	1.20	0.39
23.50	3.19	1.20	0.38
23.75	3.19	1.21	0.37
24.00	**3.20**	**1.21**	0.36

Summary for Subcatchment 09:

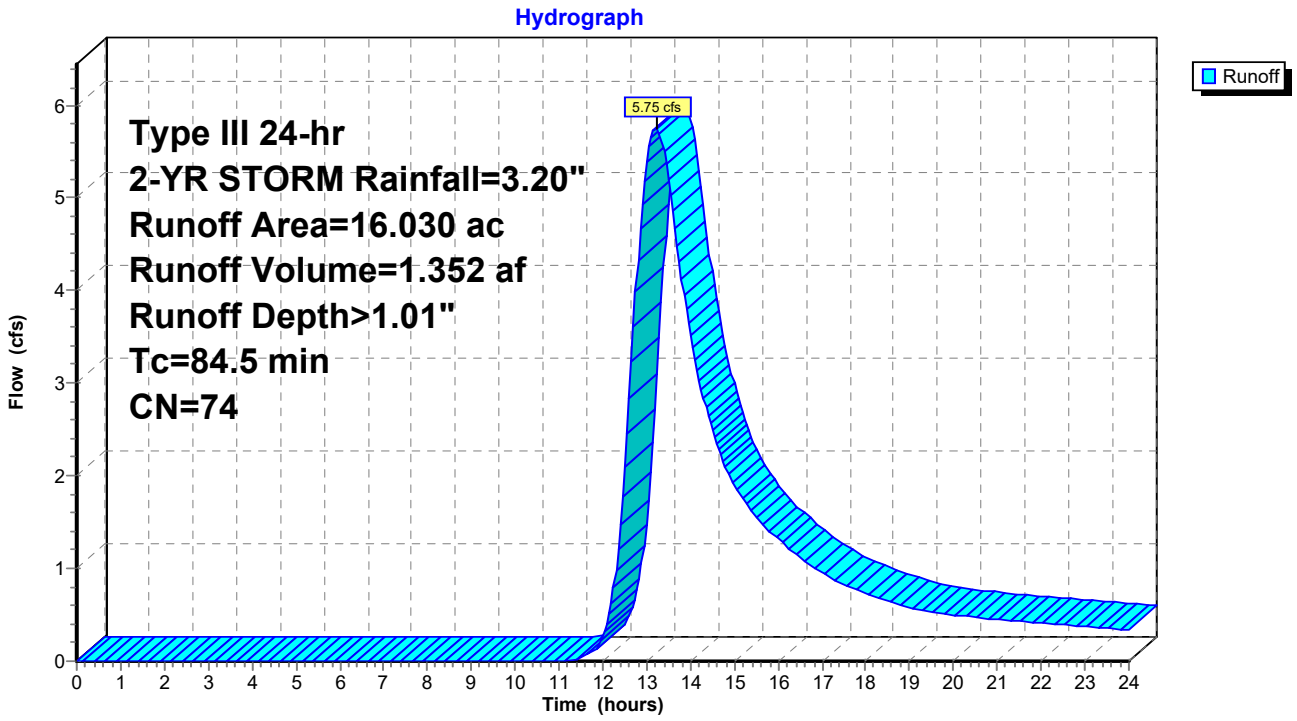
Runoff = 5.75 cfs @ 13.23 hrs, Volume= 1.352 af, Depth> 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	16.030	74	
	16.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
84.5					**Direct Entry, SCS TR-55**

Subcatchment 09:



Hydrograph for Subcatchment 09:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.00
10.75	0.74	0.00	0.00
11.00	0.80	0.00	0.00
11.25	0.87	0.01	0.01
11.50	0.95	0.02	0.03
11.75	1.14	0.05	0.10
12.00	1.60	0.18	0.25
12.25	2.06	0.38	0.79
12.50	2.25	0.47	2.10
12.75	2.33	0.52	3.98
13.00	2.40	0.55	5.39
13.25	2.46	0.58	**5.75**
13.50	2.51	0.61	5.21
13.75	2.55	0.64	4.30
14.00	2.60	0.66	3.51
14.25	2.63	0.68	2.92
14.50	2.67	0.71	2.49
14.75	2.70	0.73	2.16
15.00	2.73	0.74	1.91
15.25	2.76	0.76	1.71
15.50	2.79	0.78	1.56
15.75	2.81	0.79	1.43
16.00	2.84	0.81	1.32
16.25	2.86	0.82	1.22
16.50	2.87	0.83	1.12
16.75	2.89	0.84	1.03
17.00	2.91	0.85	0.95
17.25	2.93	0.86	0.88
17.50	2.94	0.87	0.83
17.75	2.96	0.88	0.78
18.00	2.97	0.89	0.73
18.25	2.98	0.90	0.69
18.50	2.99	0.90	0.65
18.75	3.01	0.91	0.61
19.00	3.02	0.92	0.58
19.25	3.03	0.93	0.55
19.50	3.04	0.93	0.53
19.75	3.05	0.94	0.51
20.00	3.06	0.95	0.50
20.25	3.07	0.95	0.48
20.50	3.08	0.96	0.47
20.75	3.09	0.97	0.46
21.00	3.10	0.97	0.45
21.25	3.11	0.98	0.44
21.50	3.12	0.99	0.43
21.75	3.13	0.99	0.42
22.00	3.14	1.00	0.41
22.25	3.15	1.00	0.40
22.50	3.16	1.01	0.39
22.75	3.16	1.01	0.38
23.00	3.17	1.02	0.37
23.25	3.18	1.02	0.36
23.50	3.19	1.03	0.35
23.75	3.19	1.03	0.35
24.00	**3.20**	**1.04**	0.34

Summary for Subcatchment 10:

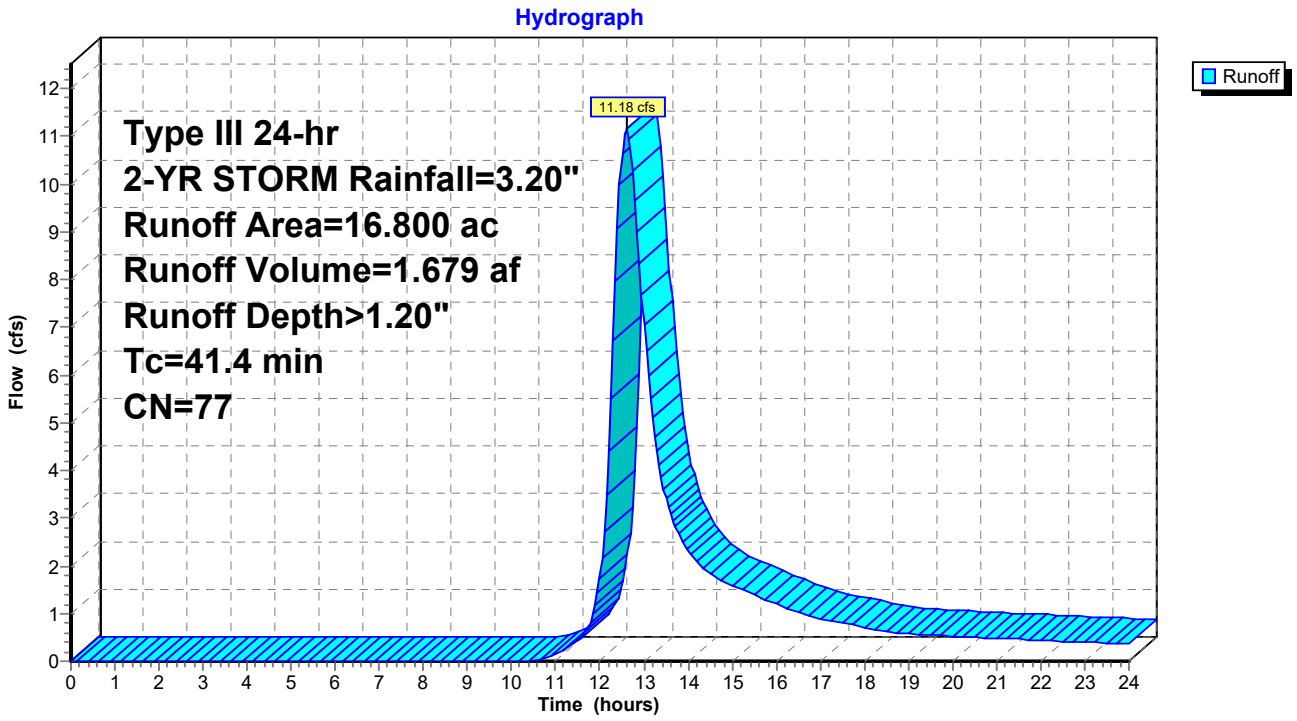
Runoff = 11.18 cfs @ 12.60 hrs, Volume= 1.679 af, Depth> 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	16.800	77	
	16.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
41.4					**Direct Entry, SCS TR-55**

Subcatchment 10:



Hydrograph for Subcatchment 10:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.02
10.75	0.74	0.01	0.08
11.00	0.80	0.01	0.16
11.25	0.87	0.02	0.28
11.50	0.95	0.04	0.45
11.75	1.14	0.08	0.75
12.00	1.60	0.25	1.73
12.25	2.06	0.48	5.52
12.50	2.25	0.59	**10.63**
12.75	2.33	0.64	**10.29**
13.00	2.40	0.68	7.06
13.25	2.46	0.71	4.71
13.50	2.51	0.74	3.42
13.75	2.55	0.77	2.72
14.00	2.60	0.80	2.33
14.25	2.63	0.83	2.05
14.50	2.67	0.85	1.84
14.75	2.70	0.87	1.70
15.00	2.73	0.89	1.59
15.25	2.76	0.91	1.49
15.50	2.79	0.93	1.40
15.75	2.81	0.94	1.30
16.00	2.84	0.96	1.20
16.25	2.86	0.97	1.10
16.50	2.87	0.99	1.02
16.75	2.89	1.00	0.95
17.00	2.91	1.01	0.89
17.25	2.93	1.02	0.85
17.50	2.94	1.03	0.80
17.75	2.96	1.04	0.76
18.00	2.97	1.05	0.71
18.25	2.98	1.06	0.67
18.50	2.99	1.07	0.63
18.75	3.01	1.08	0.60
19.00	3.02	1.08	0.58
19.25	3.03	1.09	0.57
19.50	3.04	1.10	0.55
19.75	3.05	1.11	0.54
20.00	3.06	1.11	0.53
20.25	3.07	1.12	0.51
20.50	3.08	1.13	0.50
20.75	3.09	1.14	0.49
21.00	3.10	1.14	0.48
21.25	3.11	1.15	0.47
21.50	3.12	1.16	0.46
21.75	3.13	1.16	0.45
22.00	3.14	1.17	0.44
22.25	3.15	1.17	0.43
22.50	3.16	1.18	0.42
22.75	3.16	1.19	0.41
23.00	3.17	1.19	0.40
23.25	3.18	1.20	0.39
23.50	3.19	1.20	0.38
23.75	3.19	1.21	0.37
24.00	**3.20**	**1.21**	0.36

Summary for Subcatchment 11:

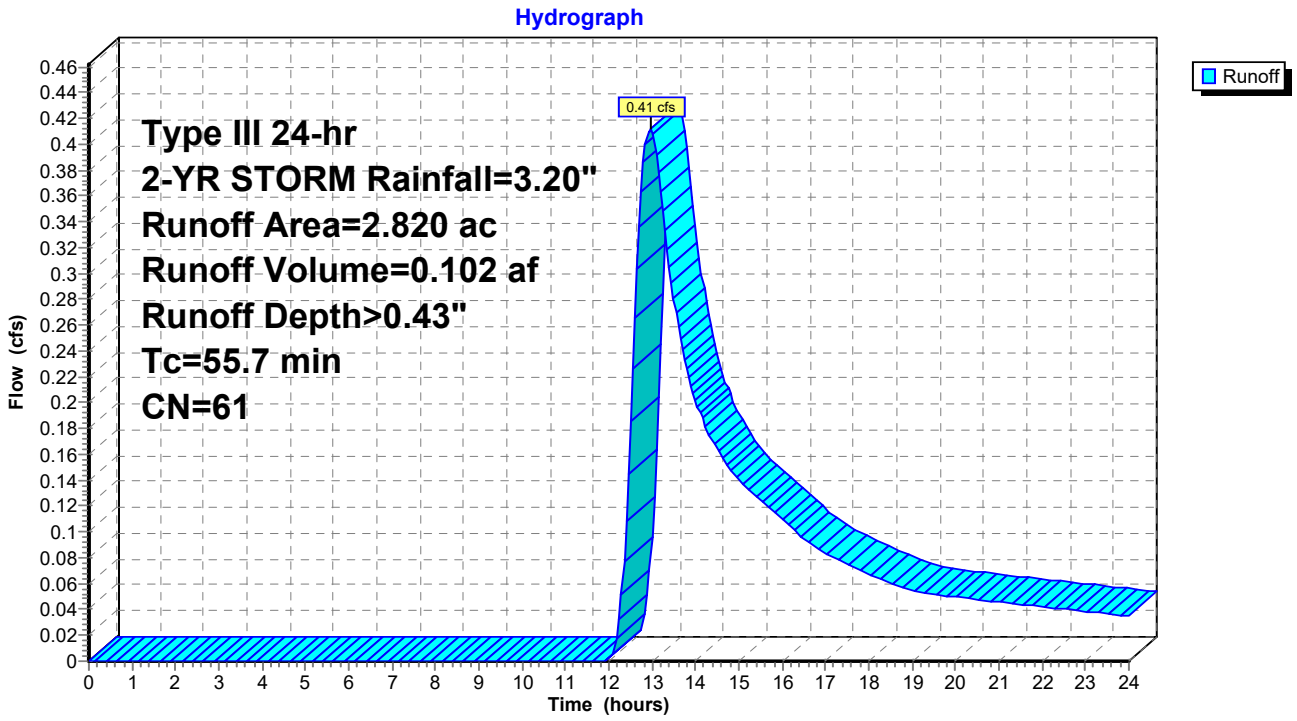
Runoff = 0.41 cfs @ 12.95 hrs, Volume= 0.102 af, Depth> 0.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	2.820	61	
	2.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
55.7					**Direct Entry, SCS TR-55**

Subcatchment 11:



Hydrograph for Subcatchment 11:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.00
10.75	0.74	0.00	0.00
11.00	0.80	0.00	0.00
11.25	0.87	0.00	0.00
11.50	0.95	0.00	0.00
11.75	1.14	0.00	0.00
12.00	1.60	0.02	0.00
12.25	2.06	0.09	0.03
12.50	2.25	0.13	0.19
12.75	2.33	0.15	**0.36**
13.00	2.40	0.17	**0.41**
13.25	2.46	0.18	0.35
13.50	2.51	0.20	0.28
13.75	2.55	0.21	0.23
14.00	2.60	0.22	0.20
14.25	2.63	0.24	0.18
14.50	2.67	0.25	0.16
14.75	2.70	0.26	0.15
15.00	2.73	0.27	0.14
15.25	2.76	0.28	0.13
15.50	2.79	0.29	0.12
15.75	2.81	0.30	0.12
16.00	2.84	0.30	0.11
16.25	2.86	0.31	0.10
16.50	2.87	0.32	0.10
16.75	2.89	0.33	0.09
17.00	2.91	0.33	0.08
17.25	2.93	0.34	0.08
17.50	2.94	0.34	0.08
17.75	2.96	0.35	0.07
18.00	2.97	0.35	0.07
18.25	2.98	0.36	0.06
18.50	2.99	0.36	0.06
18.75	3.01	0.37	0.06
19.00	3.02	0.37	0.06
19.25	3.03	0.38	0.05
19.50	3.04	0.38	0.05
19.75	3.05	0.38	0.05
20.00	3.06	0.39	0.05
20.25	3.07	0.39	0.05
20.50	3.08	0.40	0.05
20.75	3.09	0.40	0.05
21.00	3.10	0.40	0.05
21.25	3.11	0.41	0.04
21.50	3.12	0.41	0.04
21.75	3.13	0.42	0.04
22.00	3.14	0.42	0.04
22.25	3.15	0.42	0.04
22.50	3.16	0.43	0.04
22.75	3.16	0.43	0.04
23.00	3.17	0.43	0.04
23.25	3.18	0.44	0.04
23.50	3.19	0.44	0.04
23.75	3.19	0.44	0.04
24.00	**3.20**	**0.44**	0.03

Summary for Subcatchment 12:

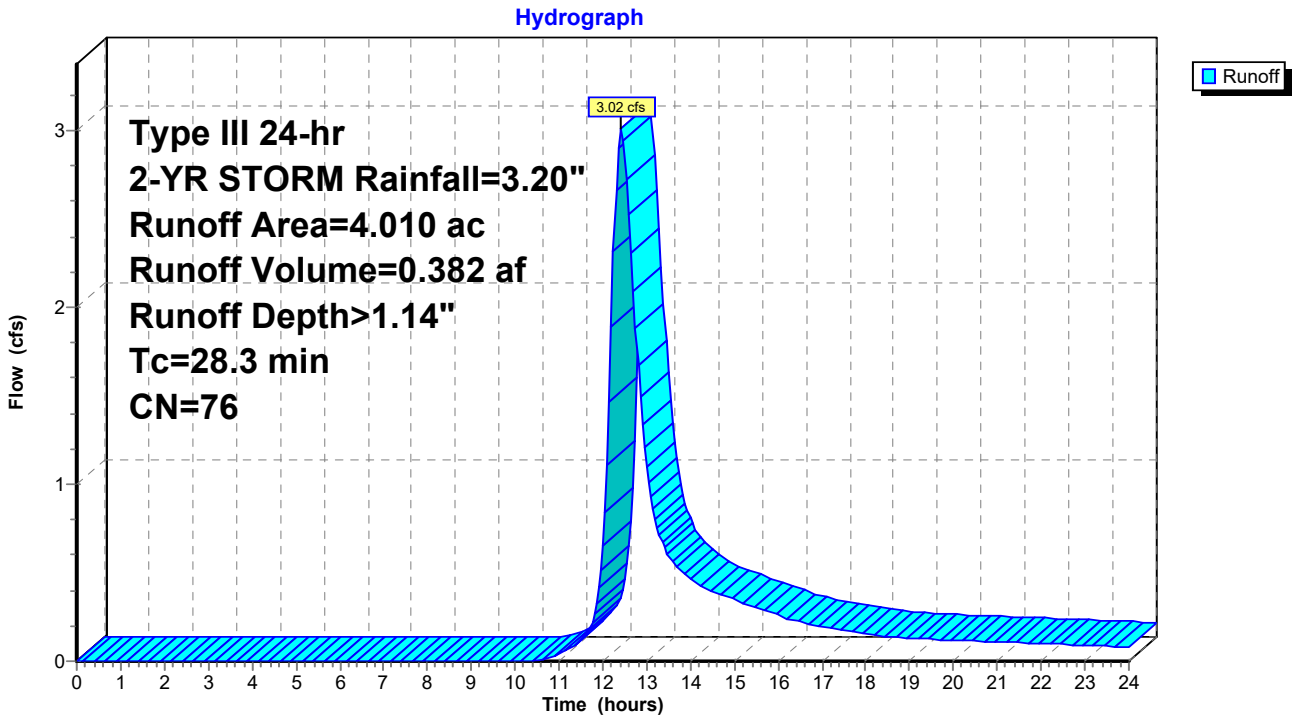
Runoff = 3.02 cfs @ 12.42 hrs, Volume= 0.382 af, Depth> 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	4.010	76	
	4.010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3					**Direct Entry, SCS TR-55**

Subcatchment 12:



Hydrograph for Subcatchment 12:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.00
10.75	0.74	0.00	0.02
11.00	0.80	0.01	0.04
11.25	0.87	0.02	0.07
11.50	0.95	0.03	0.12
11.75	1.14	0.07	0.22
12.00	1.60	0.23	0.66
12.25	2.06	0.45	**2.32**
12.50	2.25	0.55	**2.90**
12.75	2.33	0.60	1.88
13.00	2.40	0.63	1.10
13.25	2.46	0.67	0.75
13.50	2.51	0.70	0.59
13.75	2.55	0.73	0.52
14.00	2.60	0.75	0.47
14.25	2.63	0.78	0.43
14.50	2.67	0.80	0.39
14.75	2.70	0.82	0.37
15.00	2.73	0.84	0.35
15.25	2.76	0.86	0.33
15.50	2.79	0.88	0.30
15.75	2.81	0.89	0.28
16.00	2.84	0.91	0.26
16.25	2.86	0.92	0.24
16.50	2.87	0.93	0.22
16.75	2.89	0.94	0.21
17.00	2.91	0.96	0.20
17.25	2.93	0.97	0.19
17.50	2.94	0.98	0.18
17.75	2.96	0.99	0.17
18.00	2.97	0.99	0.16
18.25	2.98	1.00	0.15
18.50	2.99	1.01	0.14
18.75	3.01	1.02	0.14
19.00	3.02	1.03	0.13
19.25	3.03	1.04	0.13
19.50	3.04	1.04	0.13
19.75	3.05	1.05	0.12
20.00	3.06	1.06	0.12
20.25	3.07	1.06	0.12
20.50	3.08	1.07	0.11
20.75	3.09	1.08	0.11
21.00	3.10	1.08	0.11
21.25	3.11	1.09	0.11
21.50	3.12	1.10	0.10
21.75	3.13	1.10	0.10
22.00	3.14	1.11	0.10
22.25	3.15	1.12	0.10
22.50	3.16	1.12	0.10
22.75	3.16	1.13	0.09
23.00	3.17	1.13	0.09
23.25	3.18	1.14	0.09
23.50	3.19	1.14	0.09
23.75	3.19	1.15	0.08
24.00	**3.20**	**1.15**	0.08

Summary for Subcatchment 13:

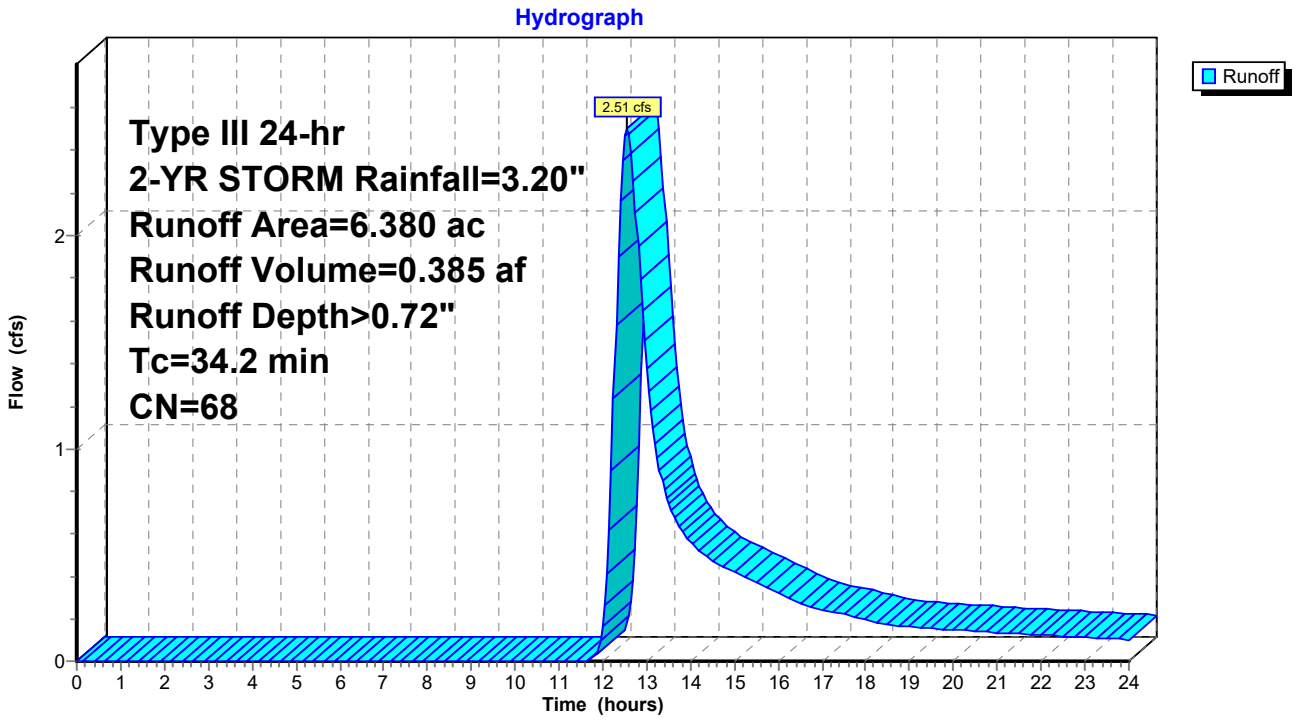
Runoff = 2.51 cfs @ 12.55 hrs, Volume= 0.385 af, Depth> 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	6.380	68	
	6.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2					**Direct Entry, SCS TR-55**

Subcatchment 13:



Hydrograph for Subcatchment 13:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.00
10.75	0.74	0.00	0.00
11.00	0.80	0.00	0.00
11.25	0.87	0.00	0.00
11.50	0.95	0.00	0.00
11.75	1.14	0.01	0.01
12.00	1.60	0.08	0.16
12.25	2.06	0.22	1.23
12.50	2.25	0.28	**2.47**
12.75	2.33	0.32	**2.11**
13.00	2.40	0.35	1.38
13.25	2.46	0.37	0.96
13.50	2.51	0.39	0.74
13.75	2.55	0.41	0.63
14.00	2.60	0.43	0.56
14.25	2.63	0.45	0.51
14.50	2.67	0.46	0.47
14.75	2.70	0.48	0.44
15.00	2.73	0.49	0.42
15.25	2.76	0.51	0.39
15.50	2.79	0.52	0.37
15.75	2.81	0.53	0.34
16.00	2.84	0.54	0.32
16.25	2.86	0.55	0.29
16.50	2.87	0.56	0.27
16.75	2.89	0.57	0.26
17.00	2.91	0.58	0.24
17.25	2.93	0.59	0.23
17.50	2.94	0.60	0.22
17.75	2.96	0.60	0.21
18.00	2.97	0.61	0.19
18.25	2.98	0.62	0.18
18.50	2.99	0.62	0.17
18.75	3.01	0.63	0.17
19.00	3.02	0.64	0.16
19.25	3.03	0.64	0.16
19.50	3.04	0.65	0.16
19.75	3.05	0.65	0.15
20.00	3.06	0.66	0.15
20.25	3.07	0.66	0.14
20.50	3.08	0.67	0.14
20.75	3.09	0.67	0.14
21.00	3.10	0.68	0.14
21.25	3.11	0.69	0.13
21.50	3.12	0.69	0.13
21.75	3.13	0.69	0.13
22.00	3.14	0.70	0.12
22.25	3.15	0.70	0.12
22.50	3.16	0.71	0.12
22.75	3.16	0.71	0.12
23.00	3.17	0.72	0.11
23.25	3.18	0.72	0.11
23.50	3.19	0.72	0.11
23.75	3.19	0.73	0.10
24.00	**3.20**	**0.73**	0.10

Summary for Subcatchment 14:

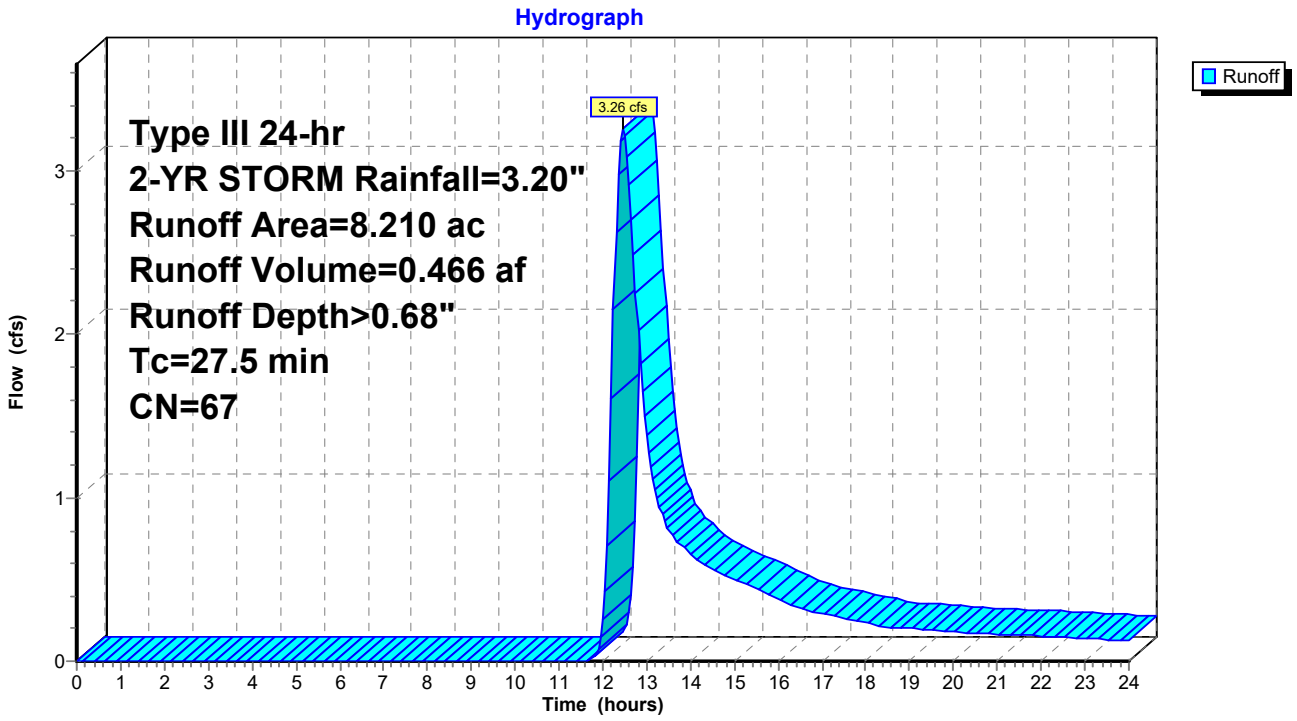
Runoff = 3.26 cfs @ 12.46 hrs, Volume= 0.466 af, Depth> 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	8.210	67	
	8.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5					**Direct Entry, SCS TR-55**

Subcatchment 14:



Hydrograph for Subcatchment 14:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.00
10.75	0.74	0.00	0.00
11.00	0.80	0.00	0.00
11.25	0.87	0.00	0.00
11.50	0.95	0.00	0.00
11.75	1.14	0.00	0.01
12.00	1.60	0.07	0.25
12.25	2.06	0.19	**2.15**
12.50	2.25	0.26	**3.22**
12.75	2.33	0.29	2.25
13.00	2.40	0.32	1.38
13.25	2.46	0.34	0.99
13.50	2.51	0.36	0.81
13.75	2.55	0.38	0.72
14.00	2.60	0.40	0.66
14.25	2.63	0.41	0.60
14.50	2.67	0.43	0.56
14.75	2.70	0.44	0.53
15.00	2.73	0.46	0.50
15.25	2.76	0.47	0.47
15.50	2.79	0.48	0.44
15.75	2.81	0.49	0.41
16.00	2.84	0.51	0.38
16.25	2.86	0.51	0.35
16.50	2.87	0.52	0.32
16.75	2.89	0.53	0.31
17.00	2.91	0.54	0.29
17.25	2.93	0.55	0.28
17.50	2.94	0.56	0.26
17.75	2.96	0.56	0.25
18.00	2.97	0.57	0.23
18.25	2.98	0.58	0.22
18.50	2.99	0.58	0.21
18.75	3.01	0.59	0.20
19.00	3.02	0.59	0.20
19.25	3.03	0.60	0.19
19.50	3.04	0.61	0.19
19.75	3.05	0.61	0.19
20.00	3.06	0.62	0.18
20.25	3.07	0.62	0.18
20.50	3.08	0.63	0.17
20.75	3.09	0.63	0.17
21.00	3.10	0.64	0.17
21.25	3.11	0.64	0.16
21.50	3.12	0.65	0.16
21.75	3.13	0.65	0.16
22.00	3.14	0.66	0.15
22.25	3.15	0.66	0.15
22.50	3.16	0.66	0.15
22.75	3.16	0.67	0.14
23.00	3.17	0.67	0.14
23.25	3.18	0.68	0.14
23.50	3.19	0.68	0.13
23.75	3.19	0.68	0.13
24.00	**3.20**	**0.69**	0.12

Summary for Subcatchment 15:

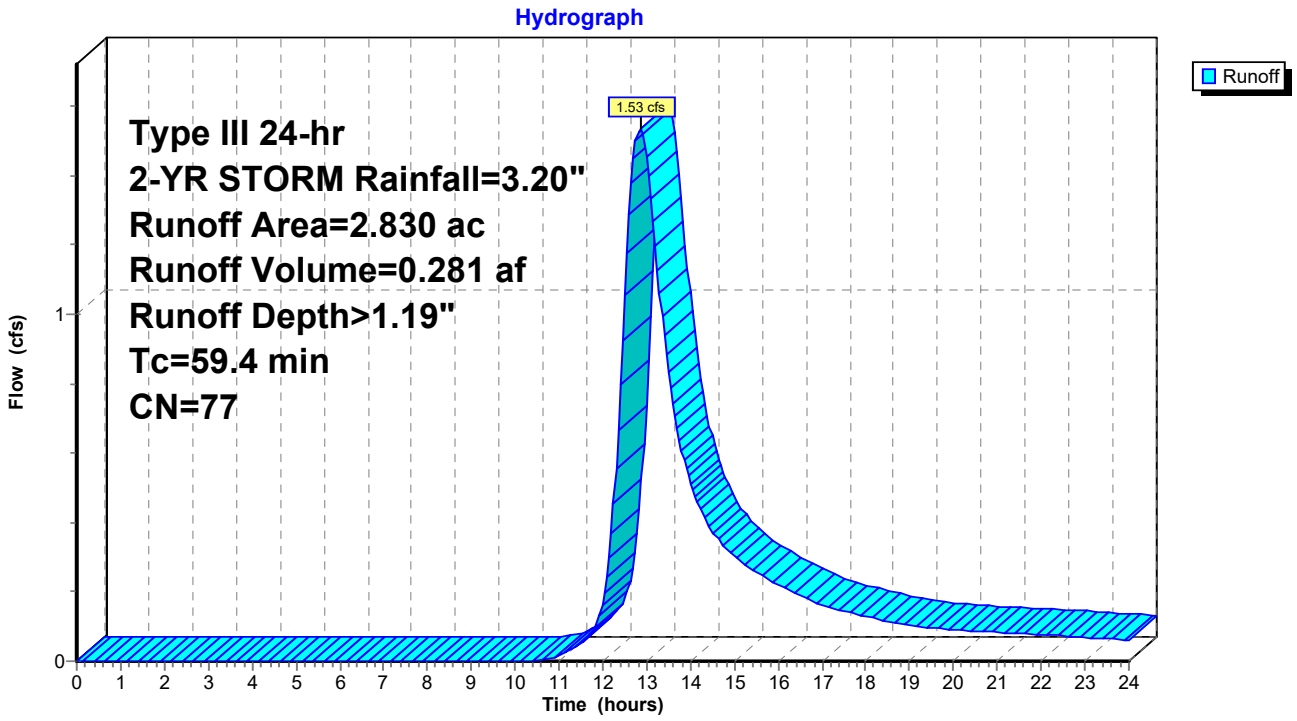
Runoff = 1.53 cfs @ 12.85 hrs, Volume= 0.281 af, Depth> 1.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	2.830	77	
	2.830		100.00% Pervious Area

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

Subcatchment 15:



Hydrograph for Subcatchment 15:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.08	0.00	0.00
2.75	0.09	0.00	0.00
3.00	0.10	0.00	0.00
3.25	0.11	0.00	0.00
3.50	0.12	0.00	0.00
3.75	0.13	0.00	0.00
4.00	0.14	0.00	0.00
4.25	0.15	0.00	0.00
4.50	0.16	0.00	0.00
4.75	0.17	0.00	0.00
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.00
10.75	0.74	0.01	0.01
11.00	0.80	0.01	0.01
11.25	0.87	0.02	0.03
11.50	0.95	0.04	0.05
11.75	1.14	0.08	0.08
12.00	1.60	0.25	0.16
12.25	2.06	0.48	0.45
12.50	2.25	0.59	1.05
12.75	2.33	0.64	**1.50**
13.00	2.40	0.68	**1.45**
13.25	2.46	0.71	1.12
13.50	2.51	0.74	0.83
13.75	2.55	0.77	0.64
14.00	2.60	0.80	0.51
14.25	2.63	0.83	0.43
14.50	2.67	0.85	0.37
14.75	2.70	0.87	0.33
15.00	2.73	0.89	0.30
15.25	2.76	0.91	0.28
15.50	2.79	0.93	0.26
15.75	2.81	0.94	0.24
16.00	2.84	0.96	0.22
16.25	2.86	0.97	0.20
16.50	2.87	0.99	0.19
16.75	2.89	1.00	0.17
17.00	2.91	1.01	0.16
17.25	2.93	1.02	0.15
17.50	2.94	1.03	0.14
17.75	2.96	1.04	0.14
18.00	2.97	1.05	0.13
18.25	2.98	1.06	0.12
18.50	2.99	1.07	0.11
18.75	3.01	1.08	0.11
19.00	3.02	1.08	0.10
19.25	3.03	1.09	0.10
19.50	3.04	1.10	0.10
19.75	3.05	1.11	0.09
20.00	3.06	1.11	0.09
20.25	3.07	1.12	0.09
20.50	3.08	1.13	0.09
20.75	3.09	1.14	0.08
21.00	3.10	1.14	0.08
21.25	3.11	1.15	0.08
21.50	3.12	1.16	0.08
21.75	3.13	1.16	0.08
22.00	3.14	1.17	0.08
22.25	3.15	1.17	0.07
22.50	3.16	1.18	0.07
22.75	3.16	1.19	0.07
23.00	3.17	1.19	0.07
23.25	3.18	1.20	0.07
23.50	3.19	1.20	0.07
23.75	3.19	1.21	0.06
24.00	**3.20**	**1.21**	0.06

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment01: Runoff Area=2.560 ac 0.00% Impervious Runoff Depth>2.53"
Tc=30.9 min CN=79 Runoff=4.25 cfs 0.540 af

Subcatchment02: Runoff Area=11.570 ac 0.00% Impervious Runoff Depth>1.80"
Tc=31.4 min CN=70 Runoff=13.26 cfs 1.738 af

Subcatchment03: Runoff Area=13.570 ac 0.00% Impervious Runoff Depth>2.44"
Tc=32.4 min CN=78 Runoff=21.27 cfs 2.762 af

Subcatchment04: Runoff Area=1.980 ac 0.00% Impervious Runoff Depth>2.03"
Tc=37.7 min CN=73 Runoff=2.38 cfs 0.335 af

Subcatchment05: Runoff Area=4.310 ac 0.00% Impervious Runoff Depth>2.36"
Tc=23.5 min CN=77 Runoff=7.51 cfs 0.849 af

Subcatchment07: Runoff Area=13.810 ac 0.00% Impervious Runoff Depth>1.51"
Tc=42.1 min CN=66 Runoff=11.19 cfs 1.737 af

Subcatchment08: Runoff Area=17.260 ac 0.00% Impervious Runoff Depth>2.36"
Tc=28.9 min CN=77 Runoff=27.48 cfs 3.394 af

Subcatchment09: Runoff Area=16.030 ac 0.00% Impervious Runoff Depth>2.08"
Tc=84.5 min CN=74 Runoff=12.43 cfs 2.783 af

Subcatchment10: Runoff Area=16.800 ac 0.00% Impervious Runoff Depth>2.35"
Tc=41.4 min CN=77 Runoff=22.52 cfs 3.294 af

Subcatchment11: Runoff Area=2.820 ac 0.00% Impervious Runoff Depth>1.17"
Tc=55.7 min CN=61 Runoff=1.43 cfs 0.275 af

Subcatchment12: Runoff Area=4.010 ac 0.00% Impervious Runoff Depth>2.28"
Tc=28.3 min CN=76 Runoff=6.21 cfs 0.761 af

Subcatchment13: Runoff Area=6.380 ac 0.00% Impervious Runoff Depth>1.65"
Tc=34.2 min CN=68 Runoff=6.37 cfs 0.880 af

Subcatchment14: Runoff Area=8.210 ac 0.00% Impervious Runoff Depth>1.59"
Tc=27.5 min CN=67 Runoff=8.60 cfs 1.085 af

Subcatchment15: Runoff Area=2.830 ac 0.00% Impervious Runoff Depth>2.34"
Tc=59.4 min CN=77 Runoff=3.10 cfs 0.552 af

Total Runoff Area = 122.140 ac Runoff Volume = 20.985 af Average Runoff Depth = 2.06"
100.00% Pervious = 122.140 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 01:

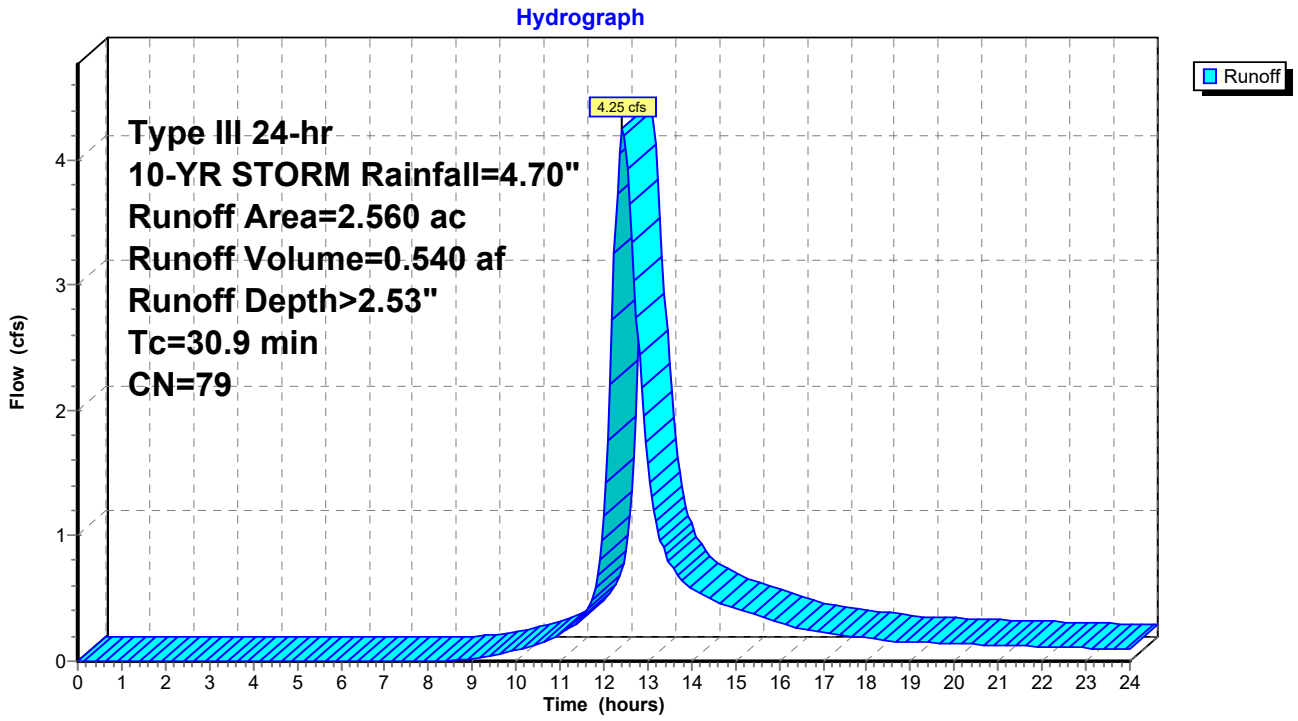
Runoff = 4.25 cfs @ 12.43 hrs, Volume= 0.540 af, Depth> 2.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	2.560	79	
	2.560		100.00% Pervious Area

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

Subcatchment 01:



Hydrograph for Subcatchment 01:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.01
9.00	0.69	0.01	0.02
9.25	0.73	0.01	0.04
9.50	0.78	0.02	0.05
9.75	0.83	0.03	0.07
10.00	0.89	0.04	0.09
10.25	0.95	0.06	0.11
10.50	1.02	0.08	0.14
10.75	1.09	0.10	0.18
11.00	1.18	0.13	0.22
11.25	1.27	0.16	0.27
11.50	1.40	0.21	0.35
11.75	1.67	0.34	0.52
12.00	2.35	0.74	1.16
12.25	3.03	1.21	**3.26**
12.50	3.30	1.41	**4.14**
12.75	3.43	1.51	2.73
13.00	3.52	1.59	1.57
13.25	3.61	1.65	1.03
13.50	3.68	1.71	0.78
13.75	3.75	1.76	0.66
14.00	3.81	1.81	0.58
14.25	3.87	1.86	0.53
14.50	3.92	1.90	0.48
14.75	3.97	1.94	0.45
15.00	4.01	1.98	0.42
15.25	4.06	2.01	0.39
15.50	4.10	2.04	0.37
15.75	4.13	2.07	0.34
16.00	4.16	2.10	0.31
16.25	4.19	2.12	0.29
16.50	4.22	2.15	0.26
16.75	4.25	2.17	0.25
17.00	4.27	2.19	0.23
17.25	4.30	2.21	0.22
17.50	4.32	2.23	0.21
17.75	4.34	2.24	0.20
18.00	4.36	2.26	0.19
18.25	4.38	2.28	0.17
18.50	4.40	2.29	0.16
18.75	4.42	2.31	0.16
19.00	4.43	2.32	0.15
19.25	4.45	2.33	0.15
19.50	4.47	2.35	0.15
19.75	4.48	2.36	0.14
20.00	4.50	2.37	0.14
20.25	4.51	2.39	0.14
20.50	4.53	2.40	0.13
20.75	4.54	2.41	0.13
21.00	4.56	2.42	0.13
21.25	4.57	2.44	0.12
21.50	4.58	2.45	0.12
21.75	4.60	2.46	0.12
22.00	4.61	2.47	0.12
22.25	4.62	2.48	0.11
22.50	4.63	2.49	0.11
22.75	4.65	2.50	0.11
23.00	4.66	2.51	0.10
23.25	4.67	2.52	0.10
23.50	4.68	2.53	0.10
23.75	4.69	2.54	0.10
24.00	**4.70**	**2.55**	0.09

Summary for Subcatchment 02:

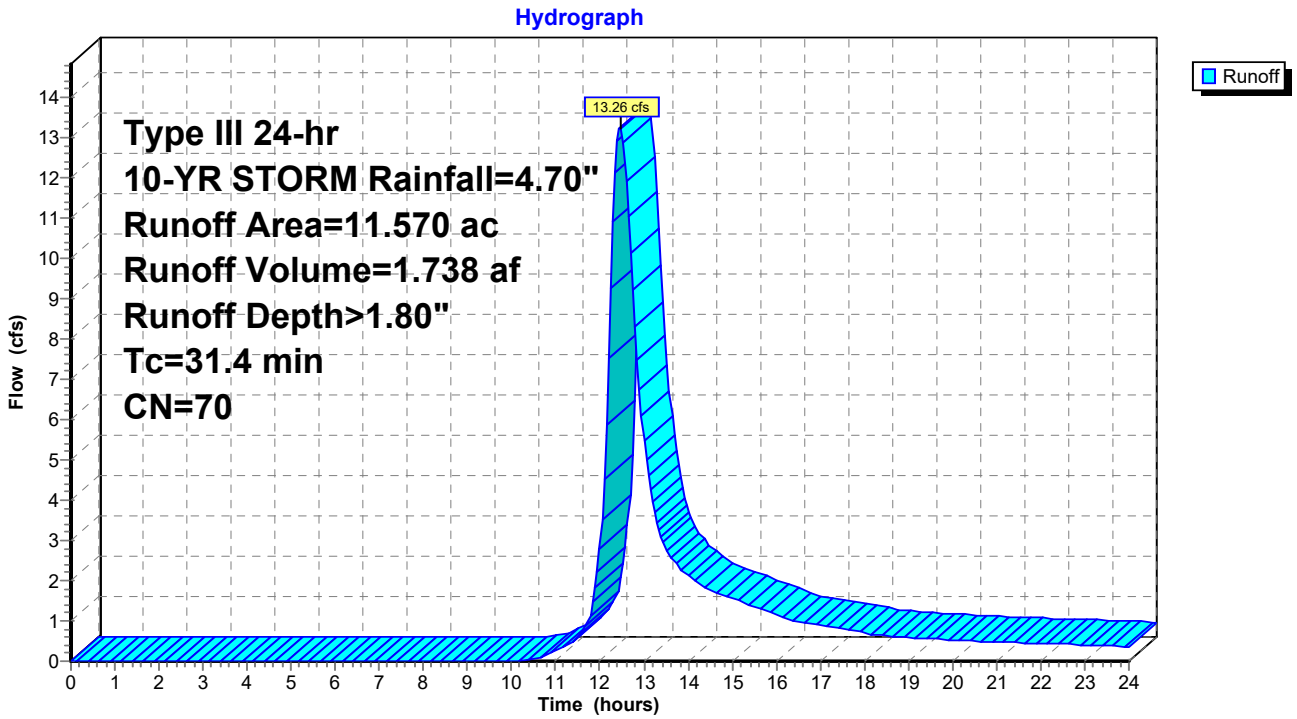
Runoff = 13.26 cfs @ 12.46 hrs, Volume= 1.738 af, Depth> 1.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	11.570	70	
	11.570		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.4					**Direct Entry, SCS TR-55**

Subcatchment 02:



Hydrograph for Subcatchment 02:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.00
9.25	0.73	0.00	0.00
9.50	0.78	0.00	0.00
9.75	0.83	0.00	0.00
10.00	0.89	0.00	0.00
10.25	0.95	0.00	0.01
10.50	1.02	0.01	0.06
10.75	1.09	0.01	0.14
11.00	1.18	0.02	0.26
11.25	1.27	0.04	0.40
11.50	1.40	0.06	0.62
11.75	1.67	0.13	1.06
12.00	2.35	0.39	2.78
12.25	3.03	0.73	**9.28**
12.50	3.30	0.89	**13.14**
12.75	3.43	0.96	9.23
13.00	3.52	1.02	5.51
13.25	3.61	1.07	3.69
13.50	3.68	1.12	2.81
13.75	3.75	1.17	2.39
14.00	3.81	1.21	2.14
14.25	3.87	1.24	1.93
14.50	3.92	1.28	1.77
14.75	3.97	1.31	1.66
15.00	4.01	1.34	1.56
15.25	4.06	1.37	1.47
15.50	4.10	1.39	1.37
15.75	4.13	1.42	1.27
16.00	4.16	1.44	1.17
16.25	4.19	1.46	1.07
16.50	4.22	1.48	0.99
16.75	4.25	1.50	0.93
17.00	4.27	1.52	0.88
17.25	4.30	1.53	0.84
17.50	4.32	1.55	0.79
17.75	4.34	1.56	0.75
18.00	4.36	1.58	0.70
18.25	4.38	1.59	0.66
18.50	4.40	1.60	0.62
18.75	4.42	1.61	0.60
19.00	4.43	1.63	0.59
19.25	4.45	1.64	0.57
19.50	4.47	1.65	0.56
19.75	4.48	1.66	0.54
20.00	4.50	1.67	0.53
20.25	4.51	1.68	0.52
20.50	4.53	1.69	0.50
20.75	4.54	1.70	0.49
21.00	4.56	1.71	0.48
21.25	4.57	1.72	0.47
21.50	4.58	1.73	0.46
21.75	4.60	1.74	0.45
22.00	4.61	1.75	0.44
22.25	4.62	1.76	0.43
22.50	4.63	1.77	0.42
22.75	4.65	1.78	0.41
23.00	4.66	1.79	0.40
23.25	4.67	1.79	0.39
23.50	4.68	1.80	0.38
23.75	4.69	1.81	0.37
24.00	**4.70**	**1.82**	0.36

Summary for Subcatchment 03:

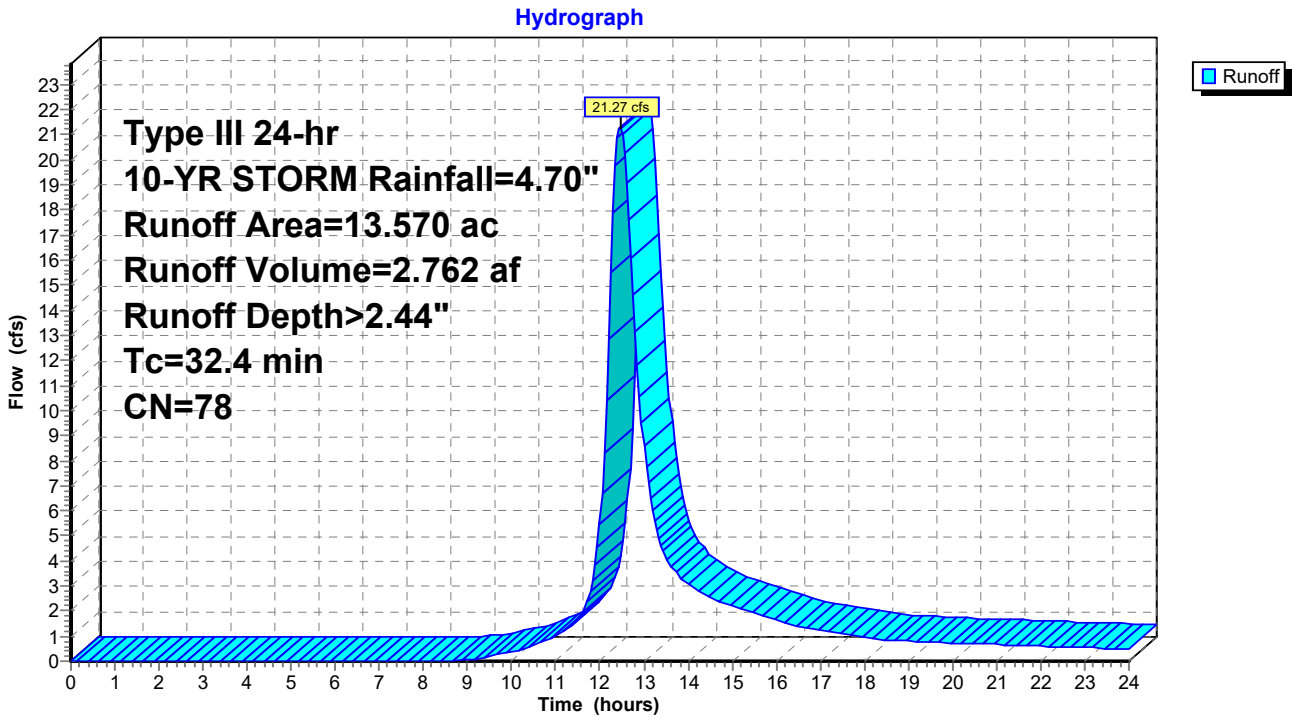
Runoff = 21.27 cfs @ 12.46 hrs, Volume= 2.762 af, Depth> 2.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	13.570	78	
	13.570		100.00% Pervious Area

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

Subcatchment 03:



Hydrograph for Subcatchment 03:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.02
9.00	0.69	0.00	0.06
9.25	0.73	0.01	0.13
9.50	0.78	0.02	0.20
9.75	0.83	0.02	0.29
10.00	0.89	0.03	0.39
10.25	0.95	0.05	0.50
10.50	1.02	0.06	0.64
10.75	1.09	0.08	0.82
11.00	1.18	0.11	1.03
11.25	1.27	0.14	1.28
11.50	1.40	0.19	1.68
11.75	1.67	0.31	2.47
12.00	2.35	0.69	5.48
12.25	3.03	1.15	**15.49**
12.50	3.30	1.35	**21.05**
12.75	3.43	1.44	14.58
13.00	3.52	1.52	8.58
13.25	3.61	1.58	5.60
13.50	3.68	1.64	4.18
13.75	3.75	1.69	3.49
14.00	3.81	1.74	3.08
14.25	3.87	1.78	2.77
14.50	3.92	1.82	2.53
14.75	3.97	1.86	2.35
15.00	4.01	1.90	2.21
15.25	4.06	1.93	2.06
15.50	4.10	1.96	1.92
15.75	4.13	1.99	1.78
16.00	4.16	2.02	1.64
16.25	4.19	2.04	1.50
16.50	4.22	2.07	1.38
16.75	4.25	2.09	1.30
17.00	4.27	2.11	1.23
17.25	4.30	2.13	1.16
17.50	4.32	2.15	1.10
17.75	4.34	2.16	1.04
18.00	4.36	2.18	0.97
18.25	4.38	2.19	0.91
18.50	4.40	2.21	0.86
18.75	4.42	2.22	0.83
19.00	4.43	2.24	0.81
19.25	4.45	2.25	0.79
19.50	4.47	2.27	0.77
19.75	4.48	2.28	0.75
20.00	4.50	2.29	0.73
20.25	4.51	2.30	0.71
20.50	4.53	2.32	0.69
20.75	4.54	2.33	0.68
21.00	4.56	2.34	0.66
21.25	4.57	2.35	0.65
21.50	4.58	2.36	0.63
21.75	4.60	2.37	0.62
22.00	4.61	2.38	0.60
22.25	4.62	2.39	0.59
22.50	4.63	2.40	0.57
22.75	4.65	2.41	0.56
23.00	4.66	2.42	0.55
23.25	4.67	2.43	0.53
23.50	4.68	2.44	0.52
23.75	4.69	2.45	0.50
24.00	**4.70**	**2.46**	0.49

Summary for Subcatchment 04:

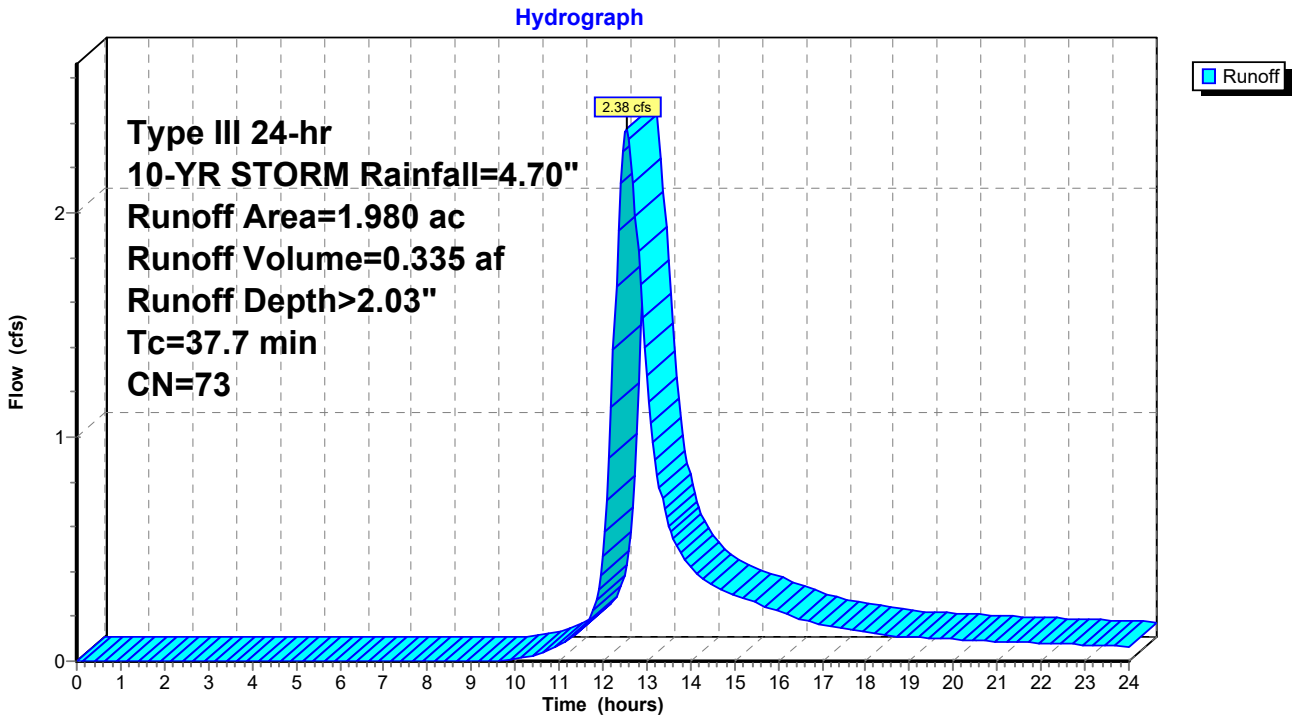
Runoff = 2.38 cfs @ 12.54 hrs, Volume= 0.335 af, Depth> 2.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	1.980	73	
	1.980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.7					**Direct Entry, SCS TR-55**

Subcatchment 04:



Hydrograph for Subcatchment 04:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.00
9.25	0.73	0.00	0.00
9.50	0.78	0.00	0.00
9.75	0.83	0.00	0.00
10.00	0.89	0.01	0.01
10.25	0.95	0.01	0.02
10.50	1.02	0.02	0.03
10.75	1.09	0.03	0.05
11.00	1.18	0.05	0.07
11.25	1.27	0.07	0.10
11.50	1.40	0.10	0.14
11.75	1.67	0.19	0.21
12.00	2.35	0.49	0.47
12.25	3.03	0.88	1.39
12.50	3.30	1.05	**2.35**
12.75	3.43	1.13	**1.98**
13.00	3.52	1.20	1.27
13.25	3.61	1.25	0.83
13.50	3.68	1.30	0.60
13.75	3.75	1.35	0.49
14.00	3.81	1.39	0.42
14.25	3.87	1.43	0.38
14.50	3.92	1.47	0.34
14.75	3.97	1.51	0.32
15.00	4.01	1.54	0.30
15.25	4.06	1.57	0.28
15.50	4.10	1.60	0.26
15.75	4.13	1.62	0.24
16.00	4.16	1.65	0.22
16.25	4.19	1.67	0.20
16.50	4.22	1.69	0.19
16.75	4.25	1.71	0.18
17.00	4.27	1.73	0.17
17.25	4.30	1.75	0.16
17.50	4.32	1.76	0.15
17.75	4.34	1.78	0.14
18.00	4.36	1.79	0.13
18.25	4.38	1.81	0.12
18.50	4.40	1.82	0.12
18.75	4.42	1.83	0.11
19.00	4.43	1.85	0.11
19.25	4.45	1.86	0.11
19.50	4.47	1.87	0.10
19.75	4.48	1.88	0.10
20.00	4.50	1.89	0.10
20.25	4.51	1.91	0.10
20.50	4.53	1.92	0.09
20.75	4.54	1.93	0.09
21.00	4.56	1.94	0.09
21.25	4.57	1.95	0.09
21.50	4.58	1.96	0.09
21.75	4.60	1.97	0.08
22.00	4.61	1.98	0.08
22.25	4.62	1.99	0.08
22.50	4.63	2.00	0.08
22.75	4.65	2.01	0.08
23.00	4.66	2.02	0.07
23.25	4.67	2.02	0.07
23.50	4.68	2.03	0.07
23.75	4.69	2.04	0.07
24.00	**4.70**	**2.05**	0.07

Summary for Subcatchment 05:

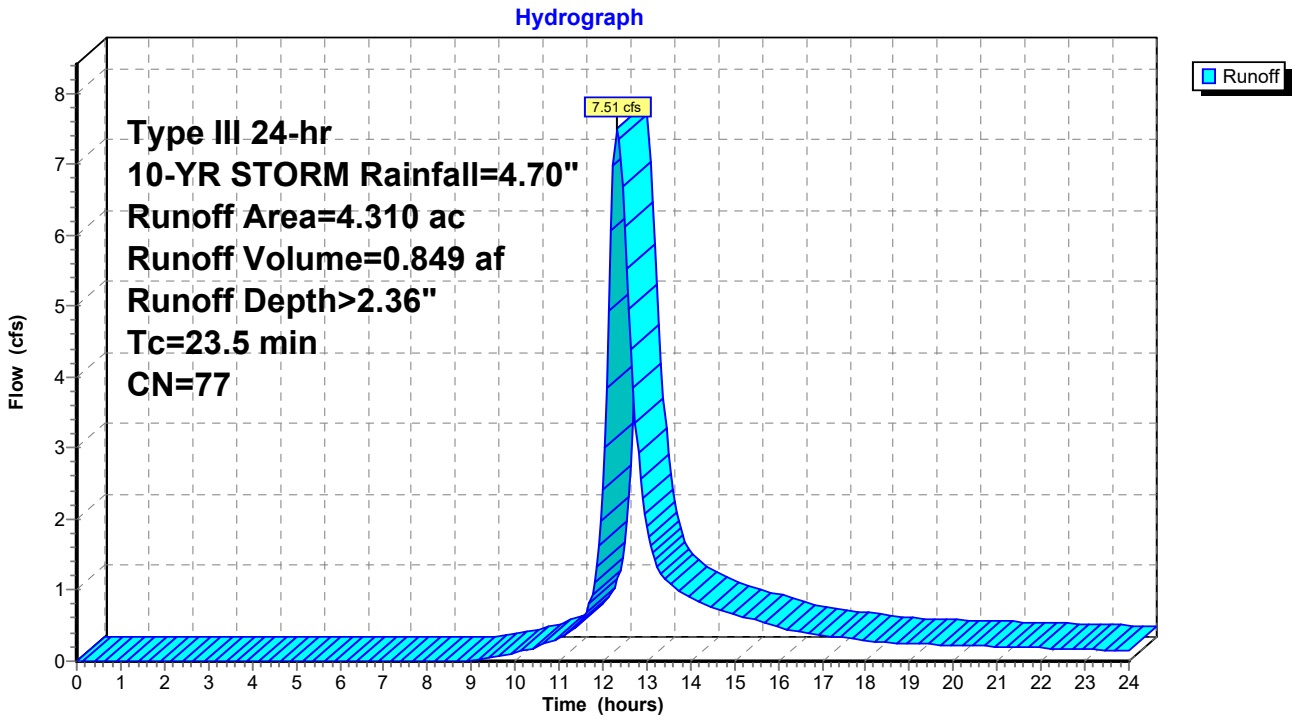
Runoff = 7.51 cfs @ 12.33 hrs, Volume= 0.849 af, Depth> 2.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	4.310	77	
	4.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5					**Direct Entry, SCS TR-55**

Subcatchment 05:



Hydrograph for Subcatchment 05:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.01
9.25	0.73	0.01	0.03
9.50	0.78	0.01	0.06
9.75	0.83	0.02	0.09
10.00	0.89	0.03	0.12
10.25	0.95	0.04	0.15
10.50	1.02	0.05	0.20
10.75	1.09	0.07	0.26
11.00	1.18	0.09	0.33
11.25	1.27	0.13	0.42
11.50	1.40	0.17	0.58
11.75	1.67	0.28	0.93
12.00	2.35	0.65	2.41
12.25	3.03	1.09	**6.97**
12.50	3.30	1.28	**6.11**
12.75	3.43	1.38	3.35
13.00	3.52	1.45	1.90
13.25	3.61	1.51	1.34
13.50	3.68	1.57	1.10
13.75	3.75	1.62	0.99
14.00	3.81	1.67	0.90
14.25	3.87	1.71	0.81
14.50	3.92	1.75	0.75
14.75	3.97	1.79	0.71
15.00	4.01	1.82	0.66
15.25	4.06	1.86	0.62
15.50	4.10	1.89	0.58
15.75	4.13	1.92	0.53
16.00	4.16	1.94	0.49
16.25	4.19	1.96	0.44
16.50	4.22	1.99	0.41
16.75	4.25	2.01	0.39
17.00	4.27	2.03	0.37
17.25	4.30	2.05	0.35
17.50	4.32	2.07	0.33
17.75	4.34	2.08	0.31
18.00	4.36	2.10	0.29
18.25	4.38	2.11	0.27
18.50	4.40	2.13	0.26
18.75	4.42	2.14	0.25
19.00	4.43	2.16	0.25
19.25	4.45	2.17	0.24
19.50	4.47	2.18	0.24
19.75	4.48	2.20	0.23
20.00	4.50	2.21	0.22
20.25	4.51	2.22	0.22
20.50	4.53	2.23	0.21
20.75	4.54	2.24	0.21
21.00	4.56	2.26	0.20
21.25	4.57	2.27	0.20
21.50	4.58	2.28	0.20
21.75	4.60	2.29	0.19
22.00	4.61	2.30	0.19
22.25	4.62	2.31	0.18
22.50	4.63	2.32	0.18
22.75	4.65	2.33	0.17
23.00	4.66	2.34	0.17
23.25	4.67	2.35	0.16
23.50	4.68	2.36	0.16
23.75	4.69	2.37	0.15
24.00	**4.70**	**2.37**	0.15

Summary for Subcatchment 07:

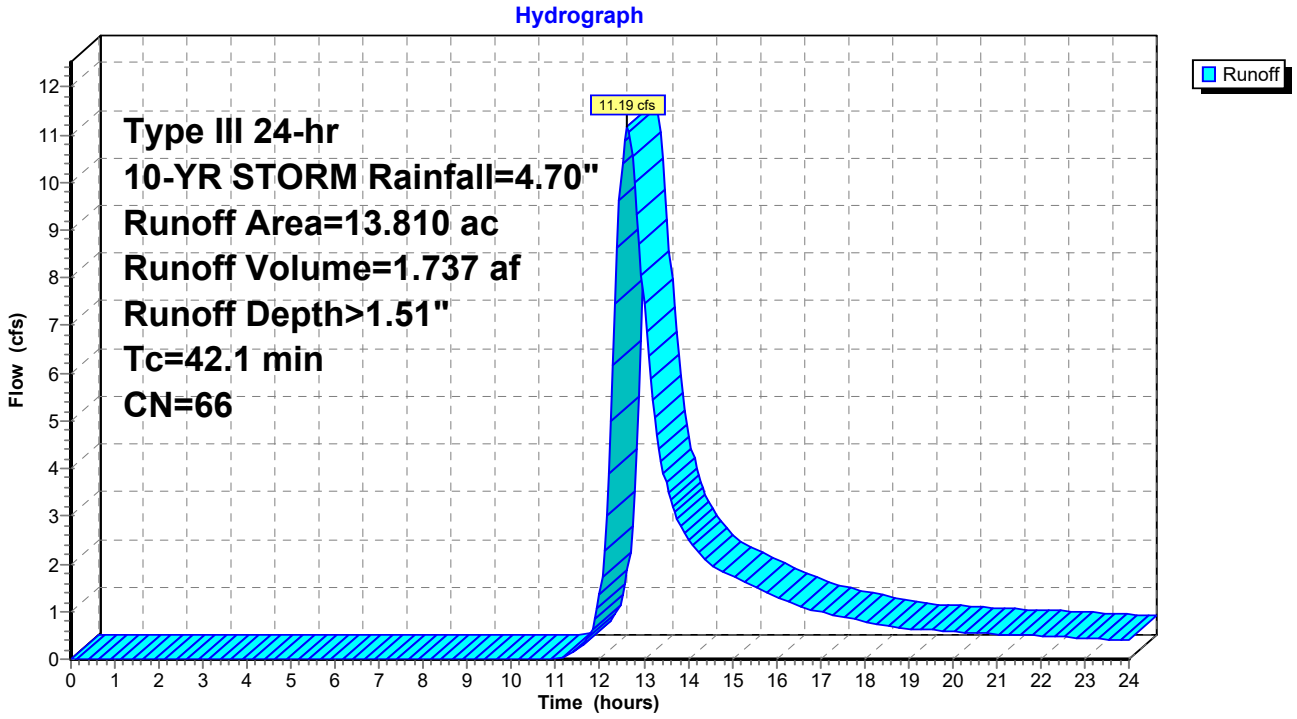
Runoff = 11.19 cfs @ 12.63 hrs, Volume= 1.737 af, Depth> 1.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	13.810	66	
	13.810		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.1					**Direct Entry, SCS TR-55**

Subcatchment 07:



Hydrograph for Subcatchment 07:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.00
9.25	0.73	0.00	0.00
9.50	0.78	0.00	0.00
9.75	0.83	0.00	0.00
10.00	0.89	0.00	0.00
10.25	0.95	0.00	0.00
10.50	1.02	0.00	0.00
10.75	1.09	0.00	0.00
11.00	1.18	0.00	0.02
11.25	1.27	0.01	0.08
11.50	1.40	0.02	0.22
11.75	1.67	0.07	0.48
12.00	2.35	0.27	1.36
12.25	3.03	0.56	4.98
12.50	3.30	0.69	**10.39**
12.75	3.43	0.76	**10.55**
13.00	3.52	0.81	7.44
13.25	3.61	0.86	5.05
13.50	3.68	0.90	3.69
13.75	3.75	0.94	2.95
14.00	3.81	0.98	2.53
14.25	3.87	1.01	2.24
14.50	3.92	1.04	2.01
14.75	3.97	1.07	1.86
15.00	4.01	1.09	1.74
15.25	4.06	1.12	1.63
15.50	4.10	1.14	1.53
15.75	4.13	1.17	1.43
16.00	4.16	1.19	1.32
16.25	4.19	1.20	1.22
16.50	4.22	1.22	1.12
16.75	4.25	1.24	1.05
17.00	4.27	1.25	0.99
17.25	4.30	1.27	0.94
17.50	4.32	1.28	0.89
17.75	4.34	1.30	0.84
18.00	4.36	1.31	0.79
18.25	4.38	1.32	0.74
18.50	4.40	1.33	0.70
18.75	4.42	1.34	0.67
19.00	4.43	1.35	0.65
19.25	4.45	1.36	0.63
19.50	4.47	1.37	0.61
19.75	4.48	1.39	0.60
20.00	4.50	1.40	0.58
20.25	4.51	1.40	0.57
20.50	4.53	1.41	0.56
20.75	4.54	1.42	0.54
21.00	4.56	1.43	0.53
21.25	4.57	1.44	0.52
21.50	4.58	1.45	0.51
21.75	4.60	1.46	0.50
22.00	4.61	1.47	0.49
22.25	4.62	1.48	0.48
22.50	4.63	1.48	0.47
22.75	4.65	1.49	0.45
23.00	4.66	1.50	0.44
23.25	4.67	1.51	0.43
23.50	4.68	1.51	0.42
23.75	4.69	1.52	0.41
24.00	**4.70**	**1.53**	0.40

Summary for Subcatchment 08:

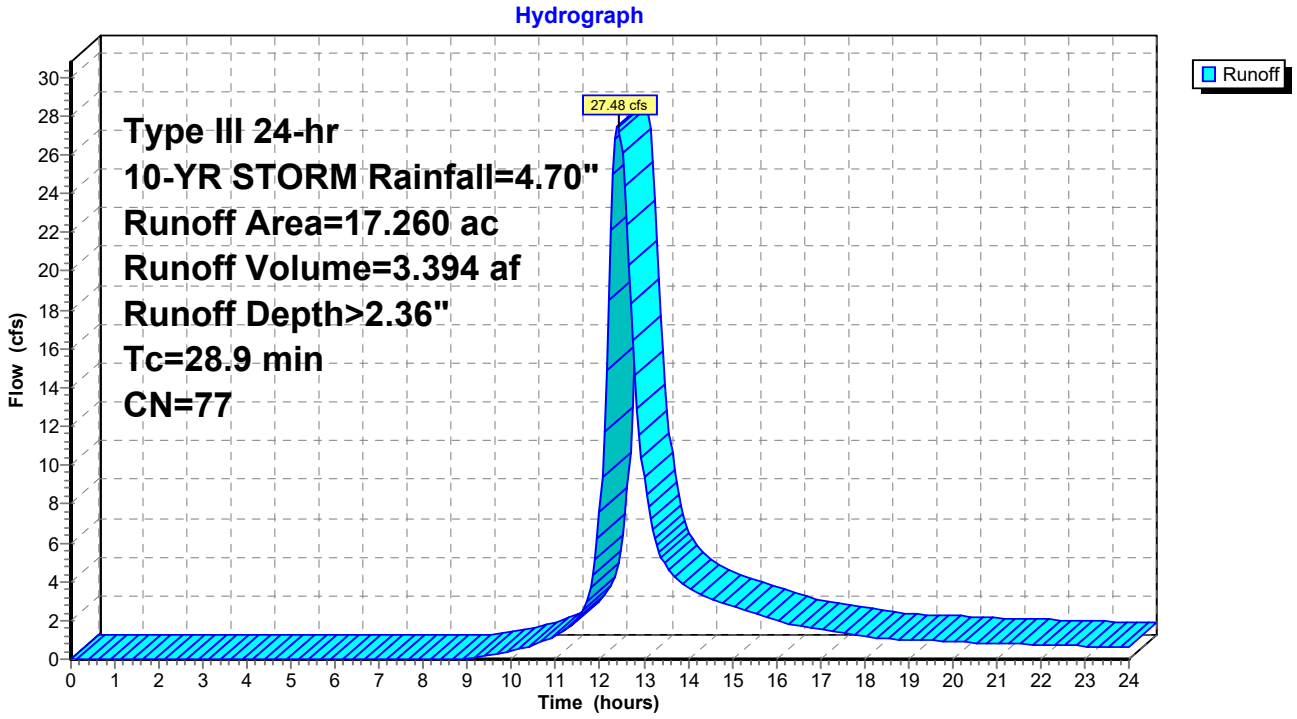
Runoff = 27.48 cfs @ 12.41 hrs, Volume= 3.394 af, Depth> 2.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	17.260	77	
	17.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.9					**Direct Entry, SCS TR-55**

Subcatchment 08:



Hydrograph for Subcatchment 08:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.04
9.25	0.73	0.01	0.11
9.50	0.78	0.01	0.20
9.75	0.83	0.02	0.31
10.00	0.89	0.03	0.43
10.25	0.95	0.04	0.57
10.50	1.02	0.05	0.74
10.75	1.09	0.07	0.97
11.00	1.18	0.09	1.23
11.25	1.27	0.13	1.55
11.50	1.40	0.17	2.09
11.75	1.67	0.28	3.18
12.00	2.35	0.65	7.58
12.25	3.03	1.09	**22.07**
12.50	3.30	1.28	**26.05**
12.75	3.43	1.38	16.40
13.00	3.52	1.45	9.34
13.25	3.61	1.51	6.25
13.50	3.68	1.57	4.82
13.75	3.75	1.62	4.14
14.00	3.81	1.67	3.72
14.25	3.87	1.71	3.37
14.50	3.92	1.75	3.09
14.75	3.97	1.79	2.89
15.00	4.01	1.82	2.71
15.25	4.06	1.86	2.54
15.50	4.10	1.89	2.36
15.75	4.13	1.92	2.19
16.00	4.16	1.94	2.01
16.25	4.19	1.96	1.83
16.50	4.22	1.99	1.69
16.75	4.25	2.01	1.60
17.00	4.27	2.03	1.51
17.25	4.30	2.05	1.44
17.50	4.32	2.07	1.36
17.75	4.34	2.08	1.28
18.00	4.36	2.10	1.20
18.25	4.38	2.11	1.12
18.50	4.40	2.13	1.06
18.75	4.42	2.14	1.03
19.00	4.43	2.16	1.00
19.25	4.45	2.17	0.98
19.50	4.47	2.18	0.95
19.75	4.48	2.20	0.93
20.00	4.50	2.21	0.91
20.25	4.51	2.22	0.88
20.50	4.53	2.23	0.86
20.75	4.54	2.24	0.84
21.00	4.56	2.26	0.82
21.25	4.57	2.27	0.81
21.50	4.58	2.28	0.79
21.75	4.60	2.29	0.77
22.00	4.61	2.30	0.75
22.25	4.62	2.31	0.73
22.50	4.63	2.32	0.72
22.75	4.65	2.33	0.70
23.00	4.66	2.34	0.68
23.25	4.67	2.35	0.66
23.50	4.68	2.36	0.64
23.75	4.69	2.37	0.62
24.00	**4.70**	**2.37**	0.60

Summary for Subcatchment 09:

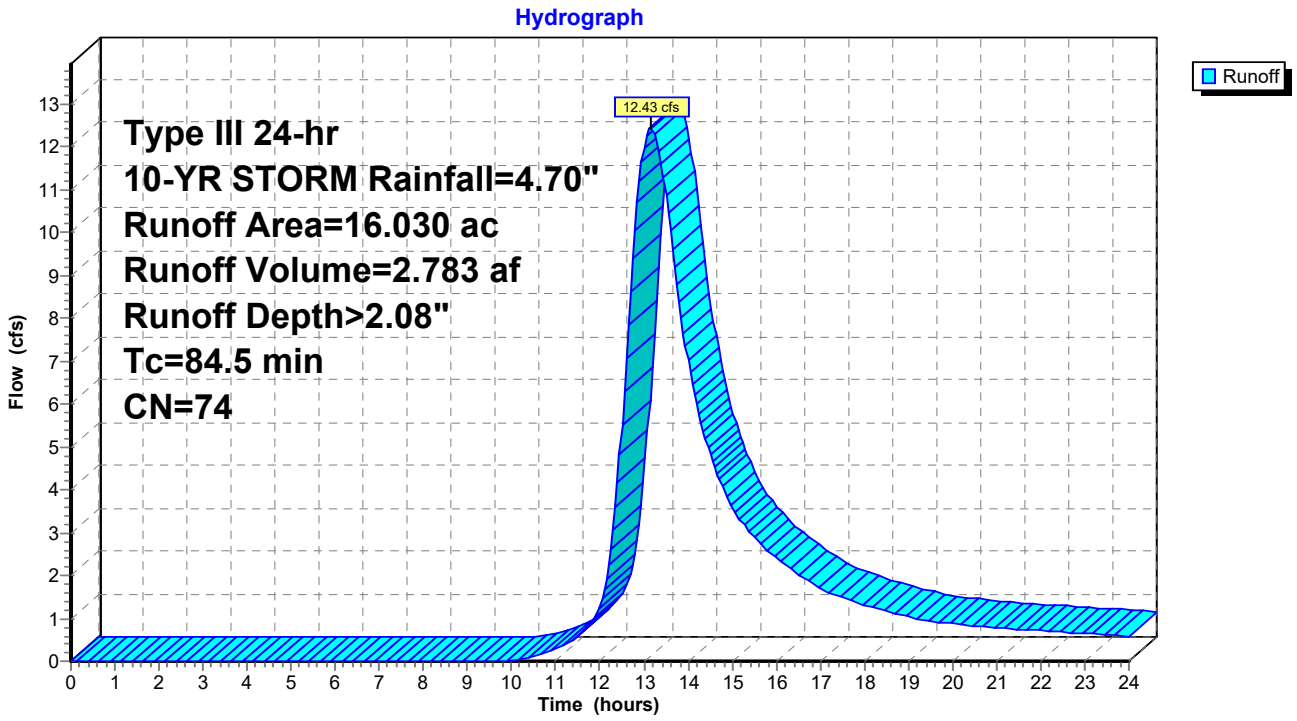
Runoff = 12.43 cfs @ 13.16 hrs, Volume= 2.783 af, Depth> 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	16.030	74	
	16.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
84.5					**Direct Entry, SCS TR-55**

Subcatchment 09:



Hydrograph for Subcatchment 09:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.00
9.25	0.73	0.00	0.00
9.50	0.78	0.00	0.00
9.75	0.83	0.00	0.01
10.00	0.89	0.01	0.02
10.25	0.95	0.02	0.06
10.50	1.02	0.03	0.11
10.75	1.09	0.04	0.19
11.00	1.18	0.06	0.29
11.25	1.27	0.08	0.43
11.50	1.40	0.12	0.60
11.75	1.67	0.21	0.84
12.00	2.35	0.53	1.29
12.25	3.03	0.93	2.62
12.50	3.30	1.10	5.51
12.75	3.43	1.19	9.38
13.00	3.52	1.26	**11.98**
13.25	3.61	1.31	**12.33**
13.50	3.68	1.37	10.86
13.75	3.75	1.42	8.77
14.00	3.81	1.46	7.02
14.25	3.87	1.50	5.76
14.50	3.92	1.54	4.83
14.75	3.97	1.57	4.13
15.00	4.01	1.61	3.60
15.25	4.06	1.64	3.20
15.50	4.10	1.67	2.89
15.75	4.13	1.69	2.63
16.00	4.16	1.72	2.41
16.25	4.19	1.74	2.21
16.50	4.22	1.76	2.02
16.75	4.25	1.78	1.85
17.00	4.27	1.80	1.71
17.25	4.30	1.82	1.58
17.50	4.32	1.84	1.48
17.75	4.34	1.85	1.39
18.00	4.36	1.87	1.31
18.25	4.38	1.88	1.23
18.50	4.40	1.89	1.16
18.75	4.42	1.91	1.09
19.00	4.43	1.92	1.03
19.25	4.45	1.93	0.98
19.50	4.47	1.95	0.94
19.75	4.48	1.96	0.91
20.00	4.50	1.97	0.88
20.25	4.51	1.98	0.86
20.50	4.53	1.99	0.83
20.75	4.54	2.00	0.81
21.00	4.56	2.02	0.79
21.25	4.57	2.03	0.77
21.50	4.58	2.04	0.75
21.75	4.60	2.05	0.73
22.00	4.61	2.06	0.72
22.25	4.62	2.07	0.70
22.50	4.63	2.08	0.68
22.75	4.65	2.09	0.67
23.00	4.66	2.09	0.65
23.25	4.67	2.10	0.64
23.50	4.68	2.11	0.62
23.75	4.69	2.12	0.61
24.00	**4.70**	**2.13**	0.59

Summary for Subcatchment 10:

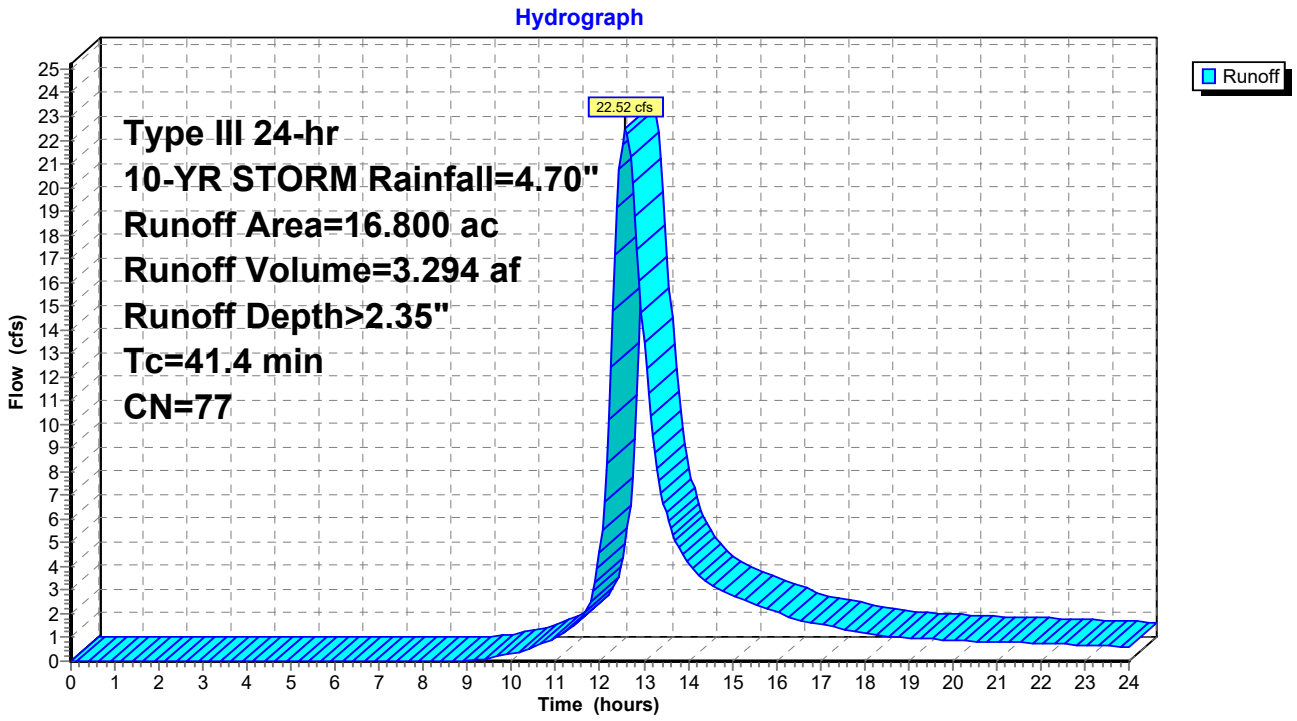
Runoff = 22.52 cfs @ 12.58 hrs, Volume= 3.294 af, Depth> 2.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	16.800	77	
	16.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
41.4					**Direct Entry, SCS TR-55**

Subcatchment 10:



Hydrograph for Subcatchment 10:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.02
9.25	0.73	0.01	0.06
9.50	0.78	0.01	0.13
9.75	0.83	0.02	0.22
10.00	0.89	0.03	0.33
10.25	0.95	0.04	0.45
10.50	1.02	0.05	0.60
10.75	1.09	0.07	0.78
11.00	1.18	0.09	1.01
11.25	1.27	0.13	1.28
11.50	1.40	0.17	1.66
11.75	1.67	0.28	2.37
12.00	2.35	0.65	4.62
12.25	3.03	1.09	12.40
12.50	3.30	1.28	**21.85**
12.75	3.43	1.38	**20.19**
13.00	3.52	1.45	13.46
13.25	3.61	1.51	8.80
13.50	3.68	1.57	6.26
13.75	3.75	1.62	4.92
14.00	3.81	1.67	4.16
14.25	3.87	1.71	3.64
14.50	3.92	1.75	3.25
14.75	3.97	1.79	2.99
15.00	4.01	1.82	2.78
15.25	4.06	1.86	2.61
15.50	4.10	1.89	2.43
15.75	4.13	1.92	2.26
16.00	4.16	1.94	2.09
16.25	4.19	1.96	1.92
16.50	4.22	1.99	1.76
16.75	4.25	2.01	1.64
17.00	4.27	2.03	1.54
17.25	4.30	2.05	1.46
17.50	4.32	2.07	1.38
17.75	4.34	2.08	1.30
18.00	4.36	2.10	1.22
18.25	4.38	2.11	1.15
18.50	4.40	2.13	1.08
18.75	4.42	2.14	1.03
19.00	4.43	2.16	1.00
19.25	4.45	2.17	0.97
19.50	4.47	2.18	0.95
19.75	4.48	2.20	0.92
20.00	4.50	2.21	0.90
20.25	4.51	2.22	0.88
20.50	4.53	2.23	0.85
20.75	4.54	2.24	0.83
21.00	4.56	2.26	0.82
21.25	4.57	2.27	0.80
21.50	4.58	2.28	0.78
21.75	4.60	2.29	0.76
22.00	4.61	2.30	0.75
22.25	4.62	2.31	0.73
22.50	4.63	2.32	0.71
22.75	4.65	2.33	0.69
23.00	4.66	2.34	0.67
23.25	4.67	2.35	0.66
23.50	4.68	2.36	0.64
23.75	4.69	2.37	0.62
24.00	**4.70**	**2.37**	0.60

Summary for Subcatchment 11:

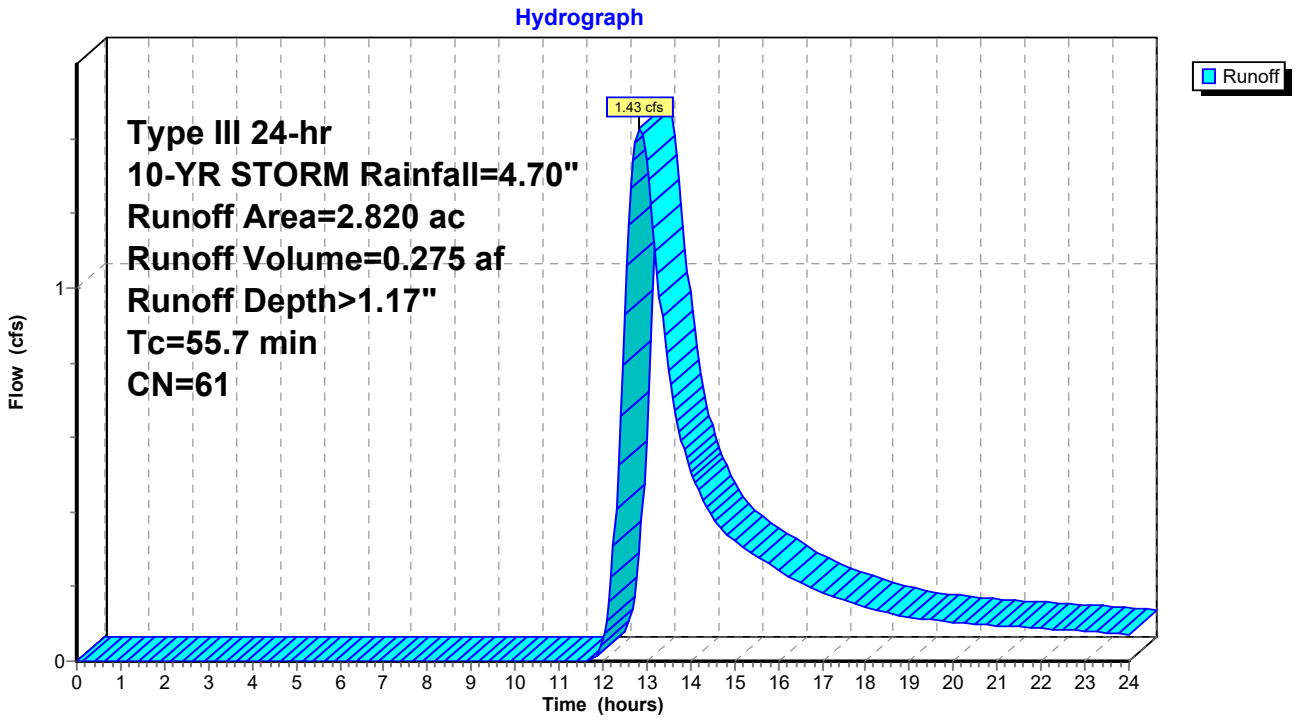
Runoff = 1.43 cfs @ 12.84 hrs, Volume= 0.275 af, Depth> 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	2.820	61	
	2.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
55.7					**Direct Entry, SCS TR-55**

Subcatchment 11:



Hydrograph for Subcatchment 11:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.00
9.25	0.73	0.00	0.00
9.50	0.78	0.00	0.00
9.75	0.83	0.00	0.00
10.00	0.89	0.00	0.00
10.25	0.95	0.00	0.00
10.50	1.02	0.00	0.00
10.75	1.09	0.00	0.00
11.00	1.18	0.00	0.00
11.25	1.27	0.00	0.00
11.50	1.40	0.00	0.00
11.75	1.67	0.02	0.01
12.00	2.35	0.15	0.05
12.25	3.03	0.38	0.31
12.50	3.30	0.49	0.93
12.75	3.43	0.54	**1.39**
13.00	3.52	0.58	**1.34**
13.25	3.61	0.62	1.04
13.50	3.68	0.66	0.78
13.75	3.75	0.69	0.61
14.00	3.81	0.72	0.51
14.25	3.87	0.75	0.44
14.50	3.92	0.77	0.39
14.75	3.97	0.80	0.35
15.00	4.01	0.82	0.32
15.25	4.06	0.84	0.30
15.50	4.10	0.86	0.28
15.75	4.13	0.88	0.26
16.00	4.16	0.90	0.25
16.25	4.19	0.91	0.23
16.50	4.22	0.93	0.21
16.75	4.25	0.94	0.19
17.00	4.27	0.96	0.18
17.25	4.30	0.97	0.17
17.50	4.32	0.98	0.16
17.75	4.34	0.99	0.15
18.00	4.36	1.00	0.15
18.25	4.38	1.01	0.14
18.50	4.40	1.02	0.13
18.75	4.42	1.03	0.12
19.00	4.43	1.04	0.12
19.25	4.45	1.05	0.11
19.50	4.47	1.06	0.11
19.75	4.48	1.07	0.11
20.00	4.50	1.08	0.11
20.25	4.51	1.09	0.10
20.50	4.53	1.09	0.10
20.75	4.54	1.10	0.10
21.00	4.56	1.11	0.10
21.25	4.57	1.12	0.09
21.50	4.58	1.13	0.09
21.75	4.60	1.13	0.09
22.00	4.61	1.14	0.09
22.25	4.62	1.15	0.09
22.50	4.63	1.15	0.08
22.75	4.65	1.16	0.08
23.00	4.66	1.17	0.08
23.25	4.67	1.17	0.08
23.50	4.68	1.18	0.08
23.75	4.69	1.19	0.07
24.00	**4.70**	**1.19**	0.07

Summary for Subcatchment 12:

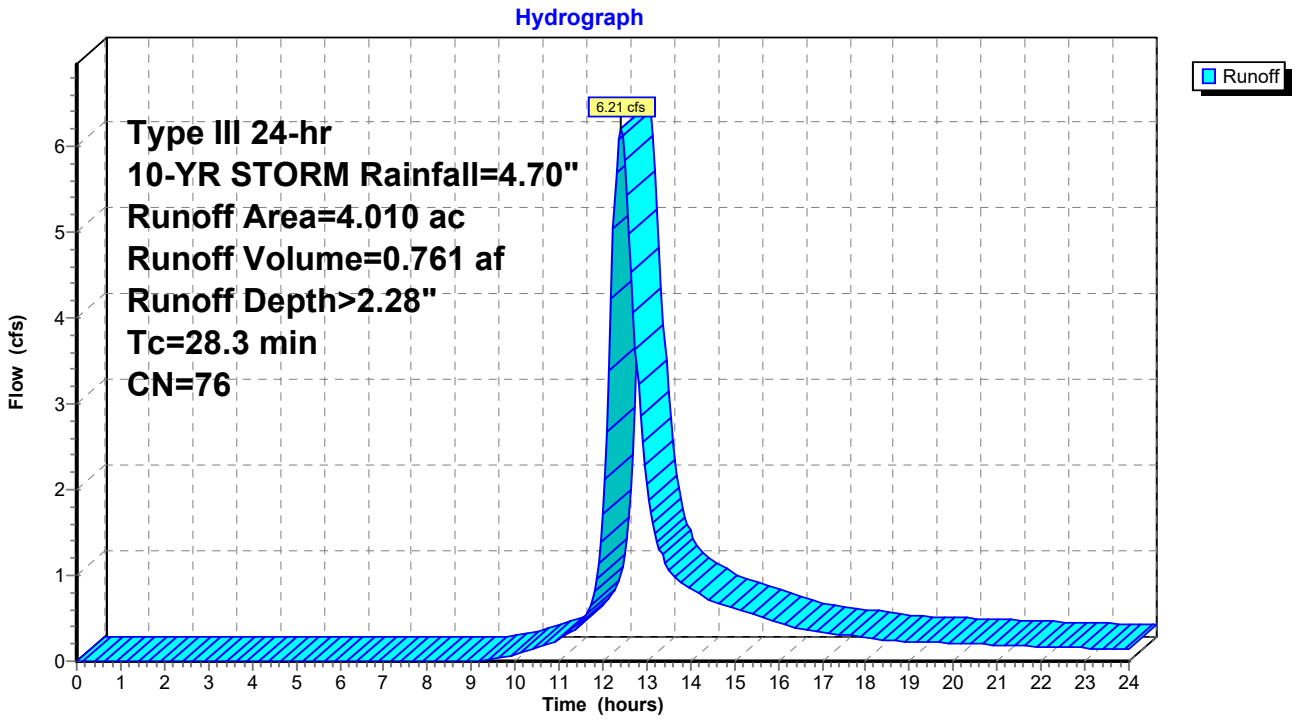
Runoff = 6.21 cfs @ 12.40 hrs, Volume= 0.761 af, Depth> 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	4.010	76	
	4.010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3					**Direct Entry, SCS TR-55**

Subcatchment 12:



Hydrograph for Subcatchment 12:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.00
9.25	0.73	0.00	0.01
9.50	0.78	0.01	0.03
9.75	0.83	0.01	0.05
10.00	0.89	0.02	0.08
10.25	0.95	0.03	0.11
10.50	1.02	0.04	0.15
10.75	1.09	0.06	0.20
11.00	1.18	0.08	0.26
11.25	1.27	0.11	0.33
11.50	1.40	0.15	0.45
11.75	1.67	0.26	0.70
12.00	2.35	0.61	1.70
12.25	3.03	1.04	**5.04**
12.50	3.30	1.22	**5.83**
12.75	3.43	1.31	3.63
13.00	3.52	1.38	2.06
13.25	3.61	1.44	1.39
13.50	3.68	1.50	1.08
13.75	3.75	1.55	0.94
14.00	3.81	1.60	0.84
14.25	3.87	1.64	0.76
14.50	3.92	1.68	0.70
14.75	3.97	1.72	0.66
15.00	4.01	1.75	0.62
15.25	4.06	1.78	0.58
15.50	4.10	1.81	0.54
15.75	4.13	1.84	0.50
16.00	4.16	1.87	0.46
16.25	4.19	1.89	0.42
16.50	4.22	1.91	0.39
16.75	4.25	1.93	0.36
17.00	4.27	1.95	0.34
17.25	4.30	1.97	0.33
17.50	4.32	1.99	0.31
17.75	4.34	2.00	0.29
18.00	4.36	2.02	0.27
18.25	4.38	2.03	0.25
18.50	4.40	2.05	0.24
18.75	4.42	2.06	0.23
19.00	4.43	2.08	0.23
19.25	4.45	2.09	0.22
19.50	4.47	2.10	0.22
19.75	4.48	2.12	0.21
20.00	4.50	2.13	0.21
20.25	4.51	2.14	0.20
20.50	4.53	2.15	0.20
20.75	4.54	2.16	0.19
21.00	4.56	2.17	0.19
21.25	4.57	2.19	0.18
21.50	4.58	2.20	0.18
21.75	4.60	2.21	0.18
22.00	4.61	2.22	0.17
22.25	4.62	2.23	0.17
22.50	4.63	2.24	0.16
22.75	4.65	2.25	0.16
23.00	4.66	2.26	0.15
23.25	4.67	2.27	0.15
23.50	4.68	2.27	0.15
23.75	4.69	2.28	0.14
24.00	**4.70**	**2.29**	0.14

Summary for Subcatchment 13:

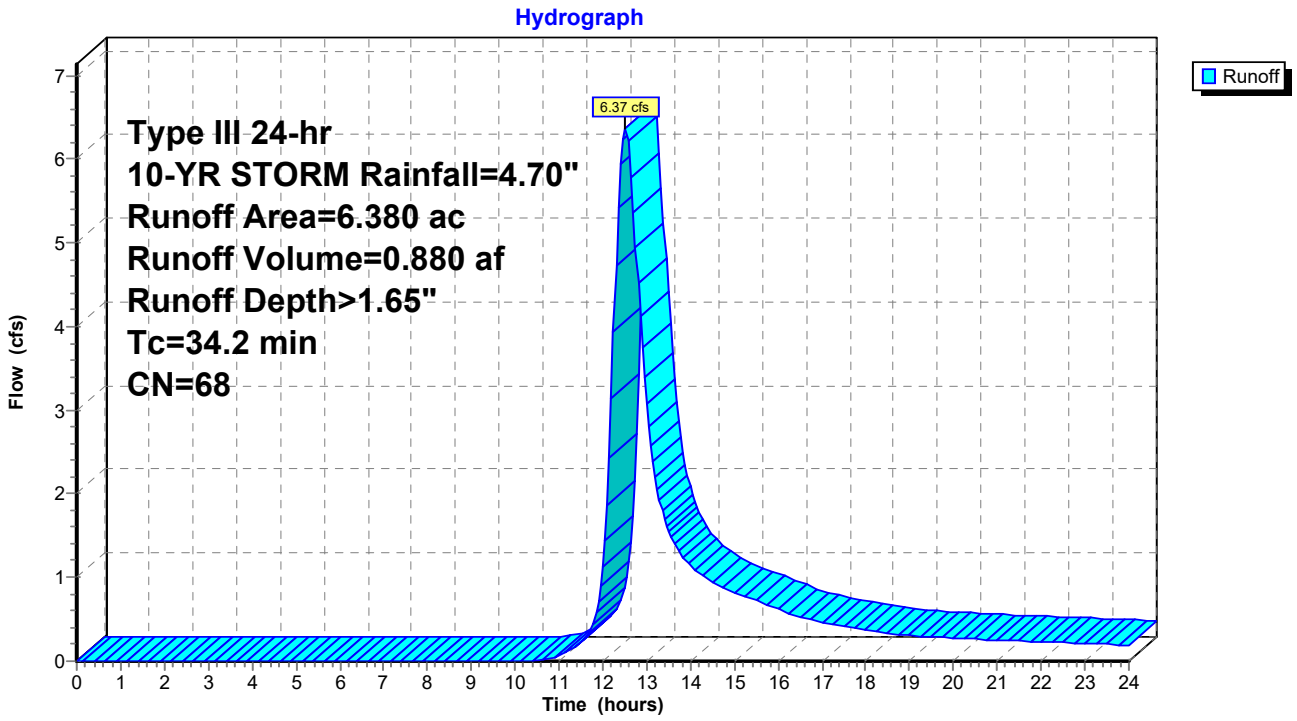
Runoff = 6.37 cfs @ 12.51 hrs, Volume= 0.880 af, Depth> 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	6.380	68	
	6.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2					**Direct Entry, SCS TR-55**

Subcatchment 13:



Hydrograph for Subcatchment 13:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.00
9.25	0.73	0.00	0.00
9.50	0.78	0.00	0.00
9.75	0.83	0.00	0.00
10.00	0.89	0.00	0.00
10.25	0.95	0.00	0.00
10.50	1.02	0.00	0.00
10.75	1.09	0.00	0.02
11.00	1.18	0.01	0.06
11.25	1.27	0.02	0.13
11.50	1.40	0.04	0.22
11.75	1.67	0.10	0.41
12.00	2.35	0.32	1.12
12.25	3.03	0.64	3.94
12.50	3.30	0.79	**6.37**
12.75	3.43	0.86	4.94
13.00	3.52	0.92	3.08
13.25	3.61	0.96	2.05
13.50	3.68	1.01	1.54
13.75	3.75	1.05	1.29
14.00	3.81	1.09	1.14
14.25	3.87	1.12	1.03
14.50	3.92	1.15	0.94
14.75	3.97	1.19	0.88
15.00	4.01	1.21	0.82
15.25	4.06	1.24	0.77
15.50	4.10	1.27	0.72
15.75	4.13	1.29	0.67
16.00	4.16	1.31	0.62
16.25	4.19	1.33	0.57
16.50	4.22	1.35	0.53
16.75	4.25	1.37	0.49
17.00	4.27	1.38	0.47
17.25	4.30	1.40	0.44
17.50	4.32	1.41	0.42
17.75	4.34	1.43	0.40
18.00	4.36	1.44	0.37
18.25	4.38	1.45	0.35
18.50	4.40	1.46	0.33
18.75	4.42	1.48	0.32
19.00	4.43	1.49	0.31
19.25	4.45	1.50	0.30
19.50	4.47	1.51	0.29
19.75	4.48	1.52	0.29
20.00	4.50	1.53	0.28
20.25	4.51	1.54	0.27
20.50	4.53	1.55	0.27
20.75	4.54	1.56	0.26
21.00	4.56	1.57	0.26
21.25	4.57	1.58	0.25
21.50	4.58	1.59	0.24
21.75	4.60	1.60	0.24
22.00	4.61	1.61	0.23
22.25	4.62	1.62	0.23
22.50	4.63	1.62	0.22
22.75	4.65	1.63	0.22
23.00	4.66	1.64	0.21
23.25	4.67	1.65	0.21
23.50	4.68	1.65	0.20
23.75	4.69	1.66	0.20
24.00	**4.70**	**1.67**	0.19

Summary for Subcatchment 14:

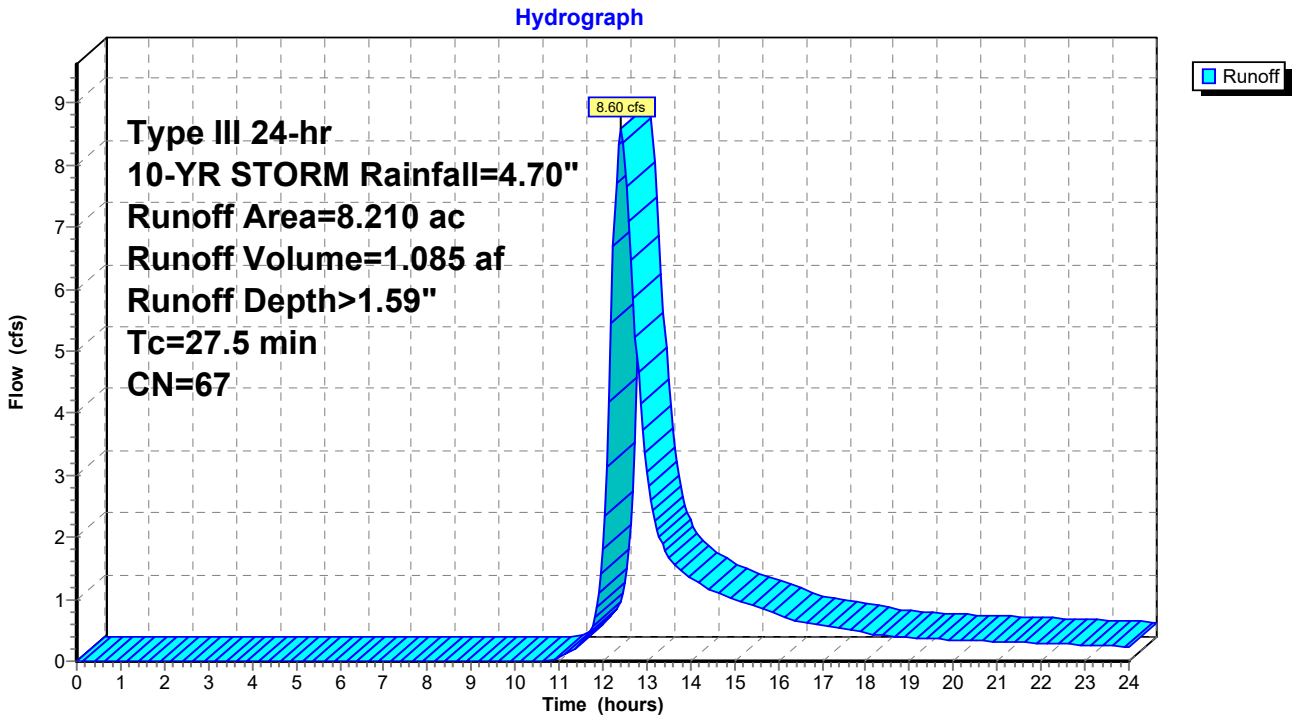
Runoff = 8.60 cfs @ 12.41 hrs, Volume= 1.085 af, Depth> 1.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	8.210	67	
	8.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5					**Direct Entry, SCS TR-55**

Subcatchment 14:



Hydrograph for Subcatchment 14:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.00
9.25	0.73	0.00	0.00
9.50	0.78	0.00	0.00
9.75	0.83	0.00	0.00
10.00	0.89	0.00	0.00
10.25	0.95	0.00	0.00
10.50	1.02	0.00	0.00
10.75	1.09	0.00	0.01
11.00	1.18	0.01	0.06
11.25	1.27	0.02	0.15
11.50	1.40	0.03	0.29
11.75	1.67	0.08	0.57
12.00	2.35	0.30	1.81
12.25	3.03	0.60	**6.69**
12.50	3.30	0.74	**8.18**
12.75	3.43	0.81	5.23
13.00	3.52	0.86	3.06
13.25	3.61	0.91	2.12
13.50	3.68	0.95	1.69
13.75	3.75	0.99	1.48
14.00	3.81	1.03	1.35
14.25	3.87	1.06	1.23
14.50	3.92	1.10	1.13
14.75	3.97	1.13	1.07
15.00	4.01	1.15	1.00
15.25	4.06	1.18	0.94
15.50	4.10	1.20	0.88
15.75	4.13	1.23	0.82
16.00	4.16	1.25	0.75
16.25	4.19	1.27	0.69
16.50	4.22	1.28	0.64
16.75	4.25	1.30	0.60
17.00	4.27	1.32	0.57
17.25	4.30	1.33	0.54
17.50	4.32	1.35	0.51
17.75	4.34	1.36	0.48
18.00	4.36	1.37	0.45
18.25	4.38	1.39	0.43
18.50	4.40	1.40	0.41
18.75	4.42	1.41	0.39
19.00	4.43	1.42	0.38
19.25	4.45	1.43	0.38
19.50	4.47	1.44	0.37
19.75	4.48	1.45	0.36
20.00	4.50	1.46	0.35
20.25	4.51	1.47	0.34
20.50	4.53	1.48	0.33
20.75	4.54	1.49	0.33
21.00	4.56	1.50	0.32
21.25	4.57	1.51	0.31
21.50	4.58	1.52	0.30
21.75	4.60	1.53	0.30
22.00	4.61	1.54	0.29
22.25	4.62	1.54	0.28
22.50	4.63	1.55	0.28
22.75	4.65	1.56	0.27
23.00	4.66	1.57	0.26
23.25	4.67	1.58	0.26
23.50	4.68	1.58	0.25
23.75	4.69	1.59	0.24
24.00	**4.70**	**1.60**	0.24

Summary for Subcatchment 15:

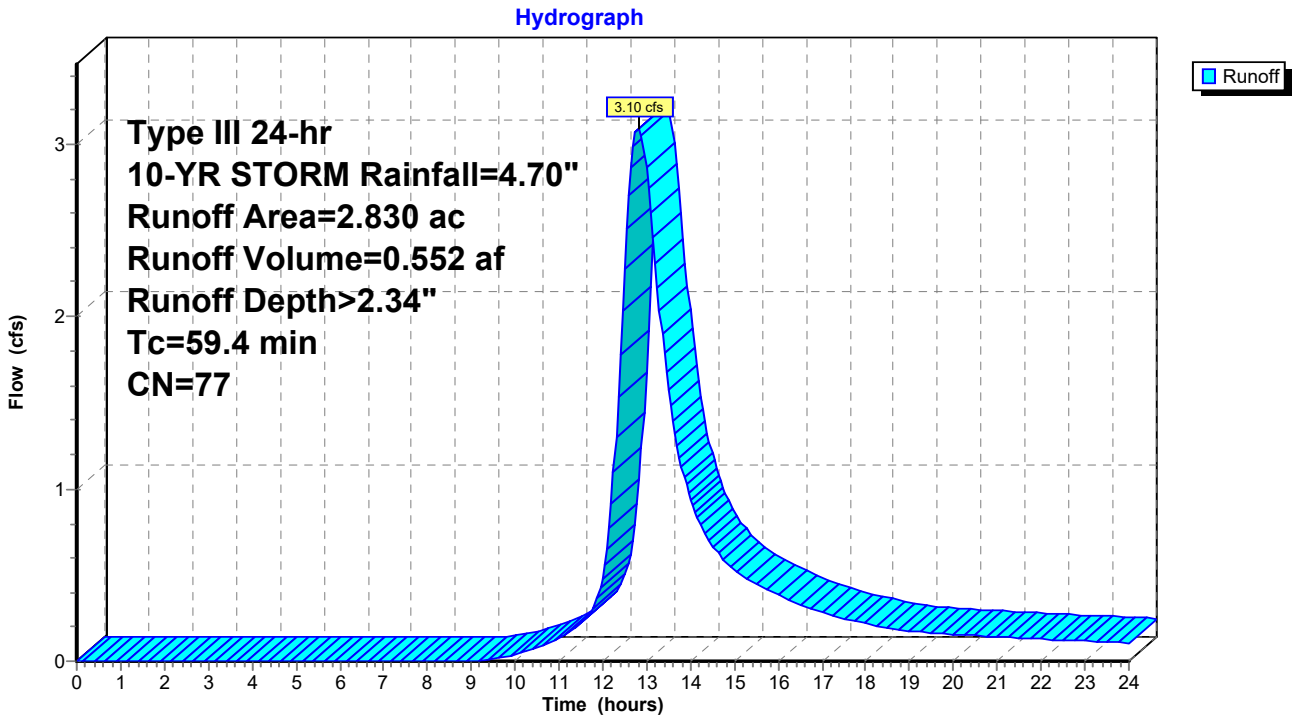
Runoff = 3.10 cfs @ 12.82 hrs, Volume= 0.552 af, Depth> 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	2.830	77	
	2.830		100.00% Pervious Area

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

Subcatchment 15:



Hydrograph for Subcatchment 15:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.09	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.13	0.00	0.00
3.00	0.14	0.00	0.00
3.25	0.16	0.00	0.00
3.50	0.17	0.00	0.00
3.75	0.19	0.00	0.00
4.00	0.20	0.00	0.00
4.25	0.22	0.00	0.00
4.50	0.23	0.00	0.00
4.75	0.25	0.00	0.00
5.00	0.27	0.00	0.00
5.25	0.28	0.00	0.00
5.50	0.30	0.00	0.00
5.75	0.32	0.00	0.00
6.00	0.34	0.00	0.00
6.25	0.36	0.00	0.00
6.50	0.38	0.00	0.00
6.75	0.40	0.00	0.00
7.00	0.43	0.00	0.00
7.25	0.45	0.00	0.00
7.50	0.48	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.54	0.00	0.00
8.25	0.57	0.00	0.00
8.50	0.60	0.00	0.00
8.75	0.64	0.00	0.00
9.00	0.69	0.00	0.00
9.25	0.73	0.01	0.00
9.50	0.78	0.01	0.01
9.75	0.83	0.02	0.02
10.00	0.89	0.03	0.04
10.25	0.95	0.04	0.06
10.50	1.02	0.05	0.08
10.75	1.09	0.07	0.10
11.00	1.18	0.09	0.13
11.25	1.27	0.13	0.17
11.50	1.40	0.17	0.22
11.75	1.67	0.28	0.30
12.00	2.35	0.65	0.48
12.25	3.03	1.09	1.10
12.50	3.30	1.28	2.28
12.75	3.43	1.38	**3.07**
13.00	3.52	1.45	**2.87**
13.25	3.61	1.51	2.17
13.50	3.68	1.57	1.57
13.75	3.75	1.62	1.18
14.00	3.81	1.67	0.94
14.25	3.87	1.71	0.78
14.50	3.92	1.75	0.67
14.75	3.97	1.79	0.59
15.00	4.01	1.82	0.53
15.25	4.06	1.86	0.49
15.50	4.10	1.89	0.45
15.75	4.13	1.92	0.42
16.00	4.16	1.94	0.38
16.25	4.19	1.96	0.36
16.50	4.22	1.99	0.33
16.75	4.25	2.01	0.30
17.00	4.27	2.03	0.28
17.25	4.30	2.05	0.26
17.50	4.32	2.07	0.25
17.75	4.34	2.08	0.24
18.00	4.36	2.10	0.22
18.25	4.38	2.11	0.21
18.50	4.40	2.13	0.20
18.75	4.42	2.14	0.18
19.00	4.43	2.16	0.18
19.25	4.45	2.17	0.17
19.50	4.47	2.18	0.17
19.75	4.48	2.20	0.16
20.00	4.50	2.21	0.16
20.25	4.51	2.22	0.15
20.50	4.53	2.23	0.15
20.75	4.54	2.24	0.14
21.00	4.56	2.26	0.14
21.25	4.57	2.27	0.14
21.50	4.58	2.28	0.13
21.75	4.60	2.29	0.13
22.00	4.61	2.30	0.13
22.25	4.62	2.31	0.13
22.50	4.63	2.32	0.12
22.75	4.65	2.33	0.12
23.00	4.66	2.34	0.12
23.25	4.67	2.35	0.11
23.50	4.68	2.36	0.11
23.75	4.69	2.37	0.11
24.00	**4.70**	**2.37**	0.10

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment01: Runoff Area=2.560 ac 0.00% Impervious Runoff Depth>3.22"
Tc=30.9 min CN=79 Runoff=5.41 cfs 0.686 af

Subcatchment02: Runoff Area=11.570 ac 0.00% Impervious Runoff Depth>2.40"
Tc=31.4 min CN=70 Runoff=17.87 cfs 2.311 af

Subcatchment03: Runoff Area=13.570 ac 0.00% Impervious Runoff Depth>3.12"
Tc=32.4 min CN=78 Runoff=27.22 cfs 3.529 af

Subcatchment04: Runoff Area=1.980 ac 0.00% Impervious Runoff Depth>2.66"
Tc=37.7 min CN=73 Runoff=3.14 cfs 0.438 af

Subcatchment05: Runoff Area=4.310 ac 0.00% Impervious Runoff Depth>3.03"
Tc=23.5 min CN=77 Runoff=9.66 cfs 1.089 af

Subcatchment07: Runoff Area=13.810 ac 0.00% Impervious Runoff Depth>2.05"
Tc=42.1 min CN=66 Runoff=15.62 cfs 2.364 af

Subcatchment08: Runoff Area=17.260 ac 0.00% Impervious Runoff Depth>3.03"
Tc=28.9 min CN=77 Runoff=35.36 cfs 4.357 af

Subcatchment09: Runoff Area=16.030 ac 0.00% Impervious Runoff Depth>2.71"
Tc=84.5 min CN=74 Runoff=16.33 cfs 3.627 af

Subcatchment10: Runoff Area=16.800 ac 0.00% Impervious Runoff Depth>3.02"
Tc=41.4 min CN=77 Runoff=29.02 cfs 4.229 af

Subcatchment11: Runoff Area=2.820 ac 0.00% Impervious Runoff Depth>1.65"
Tc=55.7 min CN=61 Runoff=2.12 cfs 0.388 af

Subcatchment12: Runoff Area=4.010 ac 0.00% Impervious Runoff Depth>2.94"
Tc=28.3 min CN=76 Runoff=8.04 cfs 0.981 af

Subcatchment13: Runoff Area=6.380 ac 0.00% Impervious Runoff Depth>2.23"
Tc=34.2 min CN=68 Runoff=8.73 cfs 1.183 af

Subcatchment14: Runoff Area=8.210 ac 0.00% Impervious Runoff Depth>2.15"
Tc=27.5 min CN=67 Runoff=11.89 cfs 1.468 af

Subcatchment15: Runoff Area=2.830 ac 0.00% Impervious Runoff Depth>3.01"
Tc=59.4 min CN=77 Runoff=3.99 cfs 0.709 af

Total Runoff Area = 122.140 ac Runoff Volume = 27.361 af Average Runoff Depth = 2.69"
100.00% Pervious = 122.140 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 01:

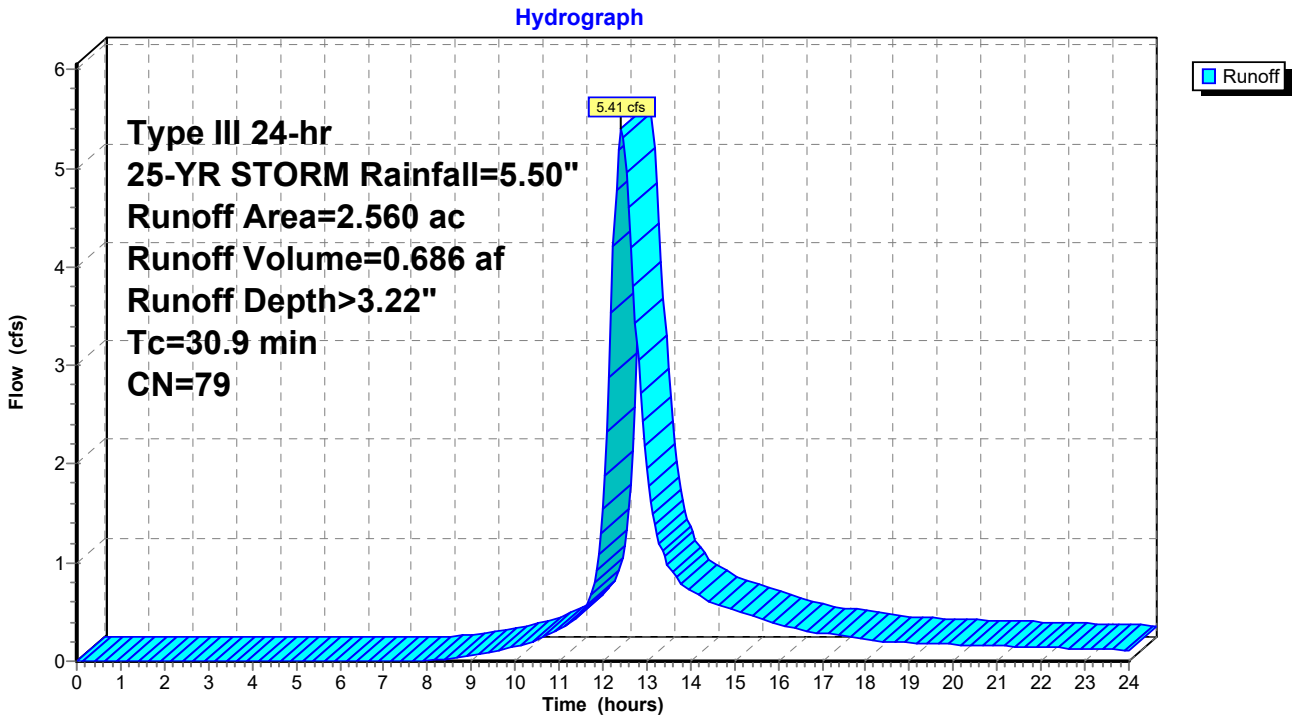
Runoff = 5.41 cfs @ 12.43 hrs, Volume= 0.686 af, Depth> 3.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	2.560	79	
	2.560		100.00% Pervious Area

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

Subcatchment 01:



Hydrograph for Subcatchment 01:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.01
8.25	0.66	0.01	0.02
8.50	0.71	0.01	0.03
8.75	0.75	0.02	0.04
9.00	0.80	0.02	0.06
9.25	0.86	0.04	0.08
9.50	0.91	0.05	0.10
9.75	0.97	0.06	0.12
10.00	1.04	0.08	0.15
10.25	1.11	0.10	0.18
10.50	1.19	0.13	0.22
10.75	1.28	0.16	0.26
11.00	1.37	0.20	0.32
11.25	1.49	0.25	0.38
11.50	1.64	0.33	0.49
11.75	1.95	0.50	0.71
12.00	2.75	1.01	1.55
12.25	3.55	1.60	**4.21**
12.50	3.86	1.85	**5.24**
12.75	4.01	1.97	3.42
13.00	4.12	2.07	1.96
13.25	4.22	2.14	1.28
13.50	4.31	2.22	0.96
13.75	4.39	2.28	0.81
14.00	4.46	2.34	0.72
14.25	4.53	2.40	0.65
14.50	4.59	2.45	0.59
14.75	4.64	2.50	0.55
15.00	4.70	2.54	0.52
15.25	4.75	2.59	0.48
15.50	4.79	2.62	0.45
15.75	4.84	2.66	0.42
16.00	4.87	2.69	0.38
16.25	4.91	2.72	0.35
16.50	4.94	2.75	0.32
16.75	4.97	2.78	0.30
17.00	5.00	2.80	0.29
17.25	5.03	2.83	0.27
17.50	5.06	2.85	0.26
17.75	5.08	2.87	0.24
18.00	5.10	2.89	0.23
18.25	5.13	2.91	0.21
18.50	5.15	2.93	0.20
18.75	5.17	2.95	0.19
19.00	5.19	2.96	0.19
19.25	5.21	2.98	0.18
19.50	5.23	3.00	0.18
19.75	5.25	3.01	0.17
20.00	5.26	3.03	0.17
20.25	5.28	3.05	0.16
20.50	5.30	3.06	0.16
20.75	5.32	3.08	0.16
21.00	5.33	3.09	0.15
21.25	5.35	3.10	0.15
21.50	5.36	3.12	0.15
21.75	5.38	3.13	0.14
22.00	5.39	3.14	0.14
22.25	5.41	3.16	0.14
22.50	5.42	3.17	0.13
22.75	5.44	3.18	0.13
23.00	5.45	3.19	0.13
23.25	5.46	3.20	0.12
23.50	5.48	3.22	0.12
23.75	5.49	3.23	0.12
24.00	**5.50**	**3.24**	0.11

Summary for Subcatchment 02:

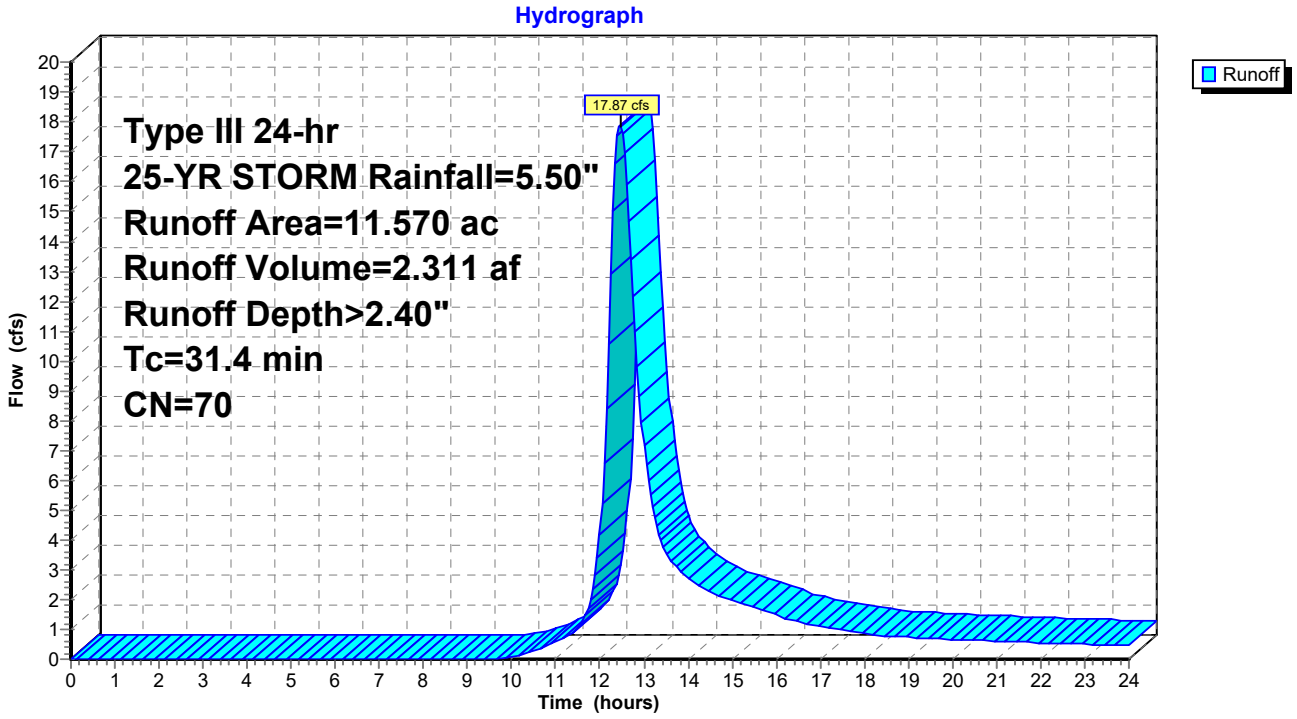
Runoff = 17.87 cfs @ 12.45 hrs, Volume= 2.311 af, Depth> 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	11.570	70	
	11.570		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.4					**Direct Entry, SCS TR-55**

Subcatchment 02:



Hydrograph for Subcatchment 02:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.00
8.50	0.71	0.00	0.00
8.75	0.75	0.00	0.00
9.00	0.80	0.00	0.00
9.25	0.86	0.00	0.00
9.50	0.91	0.00	0.00
9.75	0.97	0.00	0.03
10.00	1.04	0.01	0.09
10.25	1.11	0.01	0.17
10.50	1.19	0.02	0.27
10.75	1.28	0.04	0.41
11.00	1.37	0.06	0.57
11.25	1.49	0.08	0.77
11.50	1.64	0.12	1.09
11.75	1.95	0.22	1.72
12.00	2.75	0.58	4.17
12.25	3.55	1.04	**12.90**
12.50	3.86	1.24	**17.64**
12.75	4.01	1.34	12.16
13.00	4.12	1.41	7.17
13.25	4.22	1.48	4.76
13.50	4.31	1.54	3.61
13.75	4.39	1.60	3.06
14.00	4.46	1.65	2.72
14.25	4.53	1.69	2.46
14.50	4.59	1.74	2.25
14.75	4.64	1.78	2.11
15.00	4.70	1.82	1.98
15.25	4.75	1.85	1.85
15.50	4.79	1.88	1.73
15.75	4.84	1.92	1.60
16.00	4.87	1.94	1.48
16.25	4.91	1.97	1.35
16.50	4.94	1.99	1.25
16.75	4.97	2.02	1.17
17.00	5.00	2.04	1.11
17.25	5.03	2.06	1.05
17.50	5.06	2.08	1.00
17.75	5.08	2.10	0.94
18.00	5.10	2.11	0.88
18.25	5.13	2.13	0.82
18.50	5.15	2.15	0.78
18.75	5.17	2.16	0.75
19.00	5.19	2.18	0.73
19.25	5.21	2.19	0.72
19.50	5.23	2.21	0.70
19.75	5.25	2.22	0.68
20.00	5.26	2.23	0.67
20.25	5.28	2.25	0.65
20.50	5.30	2.26	0.63
20.75	5.32	2.27	0.62
21.00	5.33	2.29	0.60
21.25	5.35	2.30	0.59
21.50	5.36	2.31	0.58
21.75	5.38	2.32	0.57
22.00	5.39	2.33	0.55
22.25	5.41	2.34	0.54
22.50	5.42	2.36	0.53
22.75	5.44	2.37	0.51
23.00	5.45	2.38	0.50
23.25	5.46	2.39	0.49
23.50	5.48	2.40	0.47
23.75	5.49	2.41	0.46
24.00	**5.50**	**2.41**	0.45

Summary for Subcatchment 03:

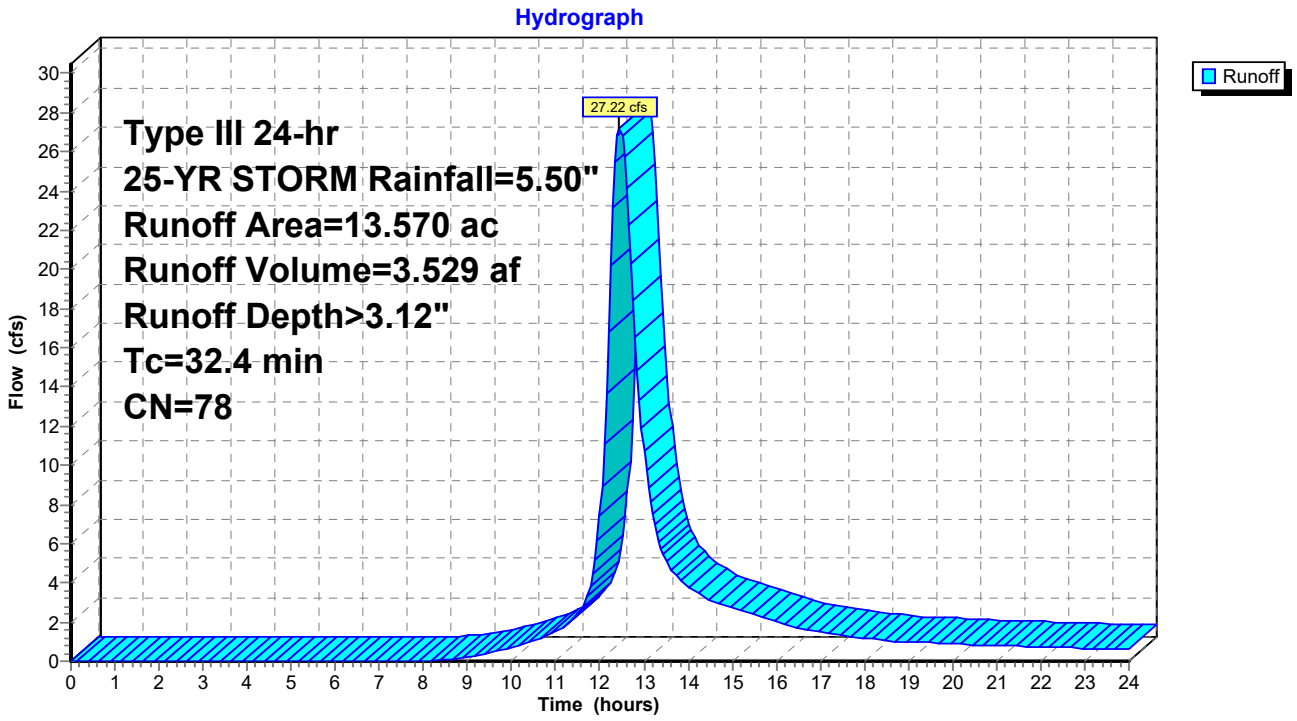
Runoff = 27.22 cfs @ 12.45 hrs, Volume= 3.529 af, Depth> 3.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	13.570	78	
	13.570		100.00% Pervious Area

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

Subcatchment 03:



Hydrograph for Subcatchment 03:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.01
8.25	0.66	0.00	0.04
8.50	0.71	0.01	0.09
8.75	0.75	0.01	0.15
9.00	0.80	0.02	0.23
9.25	0.86	0.03	0.32
9.50	0.91	0.04	0.43
9.75	0.97	0.05	0.55
10.00	1.04	0.07	0.68
10.25	1.11	0.09	0.83
10.50	1.19	0.11	1.02
10.75	1.28	0.14	1.26
11.00	1.37	0.18	1.53
11.25	1.49	0.23	1.86
11.50	1.64	0.30	2.40
11.75	1.95	0.46	3.45
12.00	2.75	0.95	7.40
12.25	3.55	1.53	**20.17**
12.50	3.86	1.78	**26.85**
12.75	4.01	1.89	18.38
13.00	4.12	1.99	10.74
13.25	4.22	2.06	6.97
13.50	4.31	2.14	5.17
13.75	4.39	2.20	4.31
14.00	4.46	2.26	3.79
14.25	4.53	2.31	3.40
14.50	4.59	2.37	3.11
14.75	4.64	2.41	2.89
15.00	4.70	2.46	2.71
15.25	4.75	2.50	2.53
15.50	4.79	2.54	2.36
15.75	4.84	2.57	2.18
16.00	4.87	2.60	2.01
16.25	4.91	2.63	1.83
16.50	4.94	2.66	1.69
16.75	4.97	2.69	1.59
17.00	5.00	2.71	1.50
17.25	5.03	2.74	1.42
17.50	5.06	2.76	1.34
17.75	5.08	2.78	1.26
18.00	5.10	2.80	1.18
18.25	5.13	2.82	1.11
18.50	5.15	2.84	1.05
18.75	5.17	2.85	1.01
19.00	5.19	2.87	0.98
19.25	5.21	2.89	0.96
19.50	5.23	2.91	0.93
19.75	5.25	2.92	0.91
20.00	5.26	2.94	0.89
20.25	5.28	2.95	0.86
20.50	5.30	2.97	0.84
20.75	5.32	2.98	0.82
21.00	5.33	3.00	0.81
21.25	5.35	3.01	0.79
21.50	5.36	3.02	0.77
21.75	5.38	3.04	0.75
22.00	5.39	3.05	0.73
22.25	5.41	3.06	0.72
22.50	5.42	3.07	0.70
22.75	5.44	3.09	0.68
23.00	5.45	3.10	0.66
23.25	5.46	3.11	0.65
23.50	5.48	3.12	0.63
23.75	5.49	3.13	0.61
24.00	**5.50**	**3.14**	0.59

Summary for Subcatchment 04:

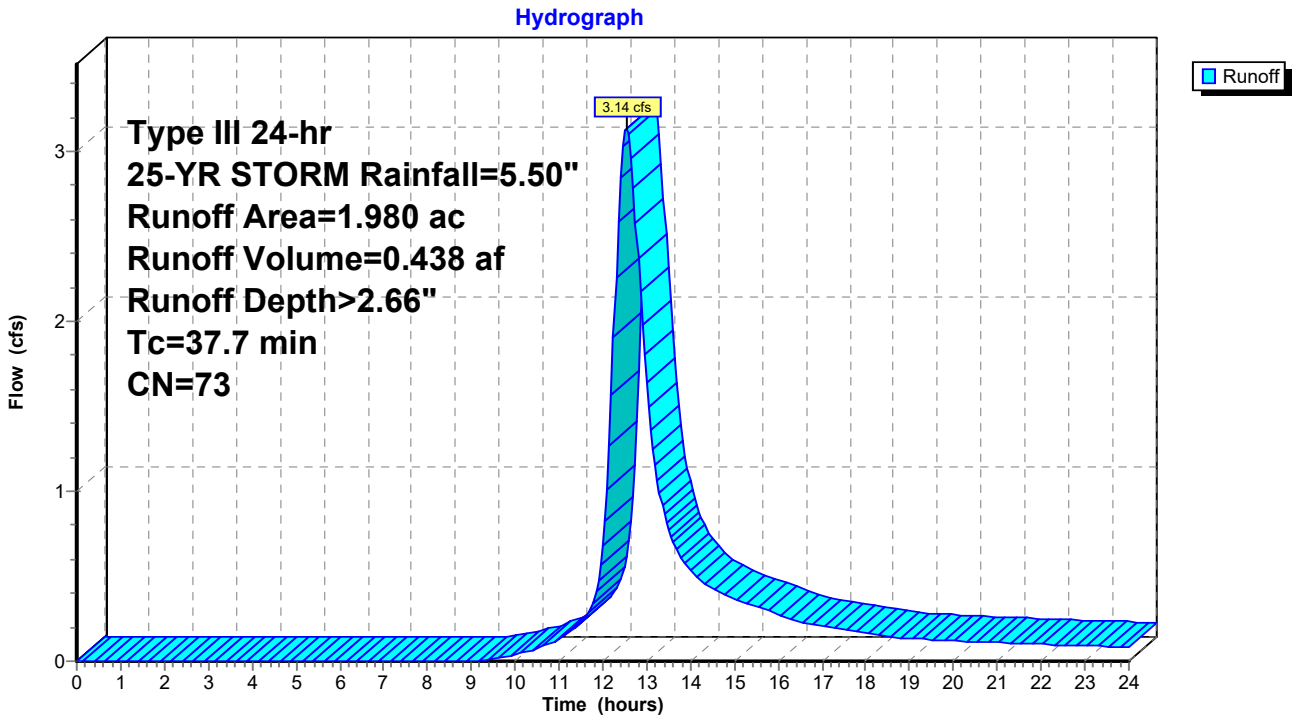
Runoff = 3.14 cfs @ 12.54 hrs, Volume= 0.438 af, Depth> 2.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	1.980	73	
	1.980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.7					**Direct Entry, SCS TR-55**

Subcatchment 04:



Hydrograph for Subcatchment 04:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.00
8.50	0.71	0.00	0.00
8.75	0.75	0.00	0.00
9.00	0.80	0.00	0.00
9.25	0.86	0.00	0.00
9.50	0.91	0.01	0.01
9.75	0.97	0.01	0.02
10.00	1.04	0.02	0.04
10.25	1.11	0.03	0.05
10.50	1.19	0.05	0.07
10.75	1.28	0.07	0.10
11.00	1.37	0.09	0.13
11.25	1.49	0.13	0.17
11.50	1.64	0.18	0.22
11.75	1.95	0.30	0.32
12.00	2.75	0.71	0.67
12.25	3.55	1.21	1.90
12.50	3.86	1.43	**3.12**
12.75	4.01	1.53	**2.58**
13.00	4.12	1.62	1.64
13.25	4.22	1.69	1.06
13.50	4.31	1.75	0.77
13.75	4.39	1.81	0.62
14.00	4.46	1.87	0.53
14.25	4.53	1.92	0.47
14.50	4.59	1.96	0.43
14.75	4.64	2.01	0.40
15.00	4.70	2.05	0.37
15.25	4.75	2.08	0.35
15.50	4.79	2.12	0.32
15.75	4.84	2.15	0.30
16.00	4.87	2.18	0.28
16.25	4.91	2.21	0.25
16.50	4.94	2.23	0.23
16.75	4.97	2.26	0.22
17.00	5.00	2.28	0.21
17.25	5.03	2.30	0.19
17.50	5.06	2.32	0.18
17.75	5.08	2.34	0.17
18.00	5.10	2.36	0.16
18.25	5.13	2.38	0.15
18.50	5.15	2.40	0.14
18.75	5.17	2.41	0.14
19.00	5.19	2.43	0.13
19.25	5.21	2.44	0.13
19.50	5.23	2.46	0.13
19.75	5.25	2.47	0.12
20.00	5.26	2.49	0.12
20.25	5.28	2.50	0.12
20.50	5.30	2.52	0.12
20.75	5.32	2.53	0.11
21.00	5.33	2.54	0.11
21.25	5.35	2.56	0.11
21.50	5.36	2.57	0.11
21.75	5.38	2.58	0.10
22.00	5.39	2.59	0.10
22.25	5.41	2.61	0.10
22.50	5.42	2.62	0.10
22.75	5.44	2.63	0.09
23.00	5.45	2.64	0.09
23.25	5.46	2.65	0.09
23.50	5.48	2.66	0.09
23.75	5.49	2.67	0.08
24.00	**5.50**	**2.68**	0.08

Summary for Subcatchment 05:

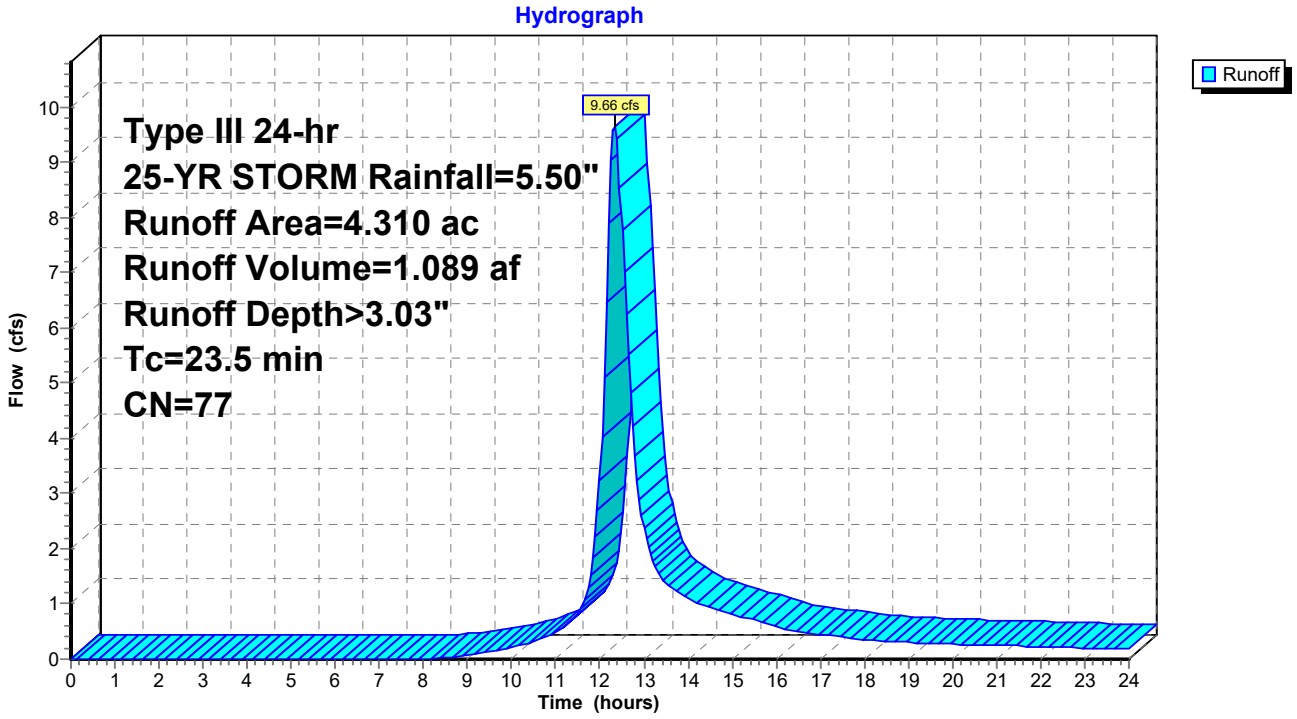
Runoff = 9.66 cfs @ 12.33 hrs, Volume= 1.089 af, Depth> 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	4.310	77	
	4.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5					**Direct Entry, SCS TR-55**

Subcatchment 05:



Hydrograph for Subcatchment 05:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.01
8.50	0.71	0.00	0.02
8.75	0.75	0.01	0.04
9.00	0.80	0.01	0.07
9.25	0.86	0.02	0.10
9.50	0.91	0.03	0.13
9.75	0.97	0.04	0.17
10.00	1.04	0.06	0.21
10.25	1.11	0.08	0.26
10.50	1.19	0.10	0.33
10.75	1.28	0.13	0.41
11.00	1.37	0.16	0.50
11.25	1.49	0.21	0.61
11.50	1.64	0.27	0.82
11.75	1.95	0.42	1.29
12.00	2.75	0.90	3.25
12.25	3.55	1.46	**9.04**
12.50	3.86	1.70	**7.76**
12.75	4.01	1.82	4.21
13.00	4.12	1.91	2.37
13.25	4.22	1.99	1.67
13.50	4.31	2.06	1.37
13.75	4.39	2.12	1.22
14.00	4.46	2.18	1.11
14.25	4.53	2.23	1.00
14.50	4.59	2.28	0.93
14.75	4.64	2.33	0.87
15.00	4.70	2.37	0.82
15.25	4.75	2.41	0.76
15.50	4.79	2.45	0.71
15.75	4.84	2.49	0.65
16.00	4.87	2.52	0.60
16.25	4.91	2.55	0.54
16.50	4.94	2.57	0.51
16.75	4.97	2.60	0.48
17.00	5.00	2.62	0.46
17.25	5.03	2.65	0.43
17.50	5.06	2.67	0.41
17.75	5.08	2.69	0.38
18.00	5.10	2.71	0.36
18.25	5.13	2.73	0.33
18.50	5.15	2.75	0.32
18.75	5.17	2.76	0.31
19.00	5.19	2.78	0.30
19.25	5.21	2.80	0.30
19.50	5.23	2.81	0.29
19.75	5.25	2.83	0.28
20.00	5.26	2.84	0.27
20.25	5.28	2.86	0.27
20.50	5.30	2.87	0.26
20.75	5.32	2.89	0.25
21.00	5.33	2.90	0.25
21.25	5.35	2.92	0.24
21.50	5.36	2.93	0.24
21.75	5.38	2.94	0.23
22.00	5.39	2.96	0.23
22.25	5.41	2.97	0.22
22.50	5.42	2.98	0.22
22.75	5.44	2.99	0.21
23.00	5.45	3.00	0.20
23.25	5.46	3.01	0.20
23.50	5.48	3.03	0.19
23.75	5.49	3.04	0.19
24.00	**5.50**	**3.05**	0.18

Summary for Subcatchment 07:

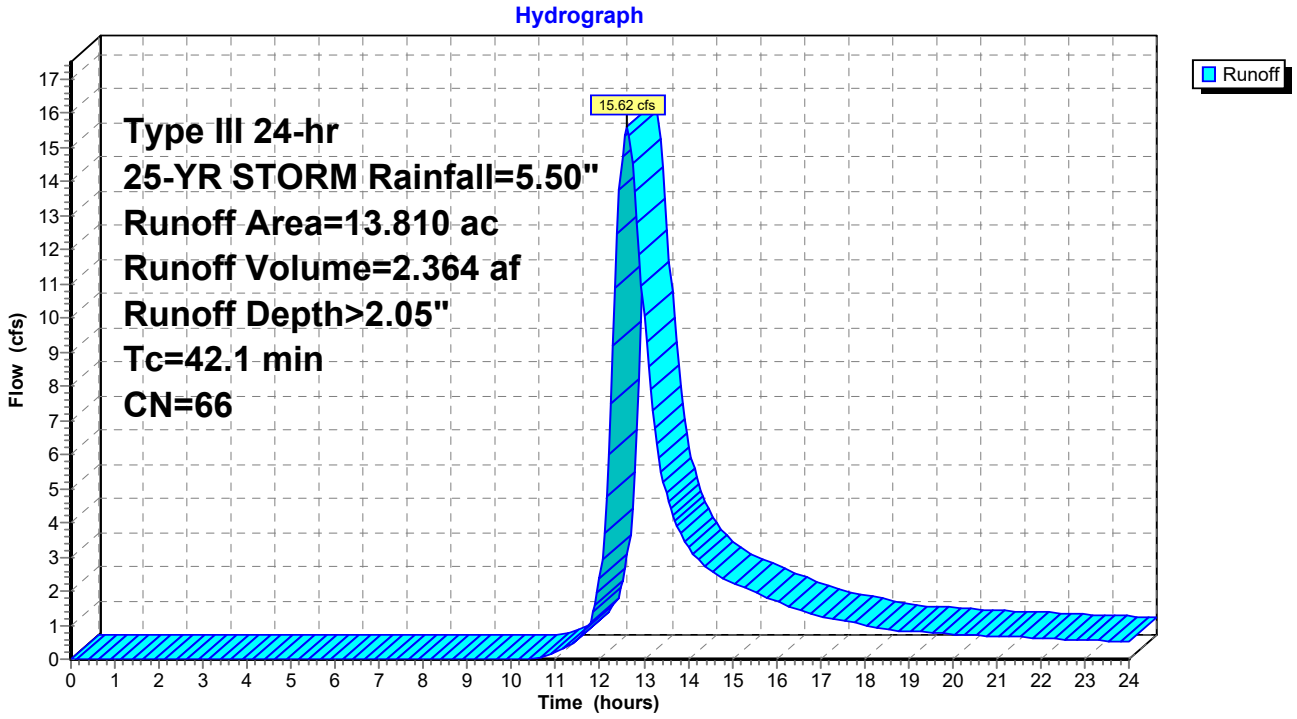
Runoff = 15.62 cfs @ 12.61 hrs, Volume= 2.364 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	13.810	66	
	13.810		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.1					**Direct Entry, SCS TR-55**

Subcatchment 07:



Hydrograph for Subcatchment 07:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.00
8.50	0.71	0.00	0.00
8.75	0.75	0.00	0.00
9.00	0.80	0.00	0.00
9.25	0.86	0.00	0.00
9.50	0.91	0.00	0.00
9.75	0.97	0.00	0.00
10.00	1.04	0.00	0.00
10.25	1.11	0.00	0.00
10.50	1.19	0.00	0.03
10.75	1.28	0.01	0.10
11.00	1.37	0.02	0.22
11.25	1.49	0.04	0.38
11.50	1.64	0.06	0.61
11.75	1.95	0.14	1.03
12.00	2.75	0.43	2.37
12.25	3.55	0.83	7.51
12.50	3.86	1.00	**14.73**
12.75	4.01	1.09	**14.53**
13.00	4.12	1.16	10.08
13.25	4.22	1.22	6.76
13.50	4.31	1.28	4.89
13.75	4.39	1.33	3.88
14.00	4.46	1.37	3.31
14.25	4.53	1.41	2.91
14.50	4.59	1.45	2.61
14.75	4.64	1.49	2.40
15.00	4.70	1.53	2.25
15.25	4.75	1.56	2.11
15.50	4.79	1.59	1.97
15.75	4.84	1.62	1.84
16.00	4.87	1.64	1.70
16.25	4.91	1.67	1.56
16.50	4.94	1.69	1.44
16.75	4.97	1.71	1.34
17.00	5.00	1.73	1.27
17.25	5.03	1.75	1.20
17.50	5.06	1.77	1.13
17.75	5.08	1.78	1.07
18.00	5.10	1.80	1.01
18.25	5.13	1.81	0.95
18.50	5.15	1.83	0.89
18.75	5.17	1.84	0.85
19.00	5.19	1.86	0.82
19.25	5.21	1.87	0.80
19.50	5.23	1.88	0.78
19.75	5.25	1.90	0.76
20.00	5.26	1.91	0.74
20.25	5.28	1.92	0.73
20.50	5.30	1.93	0.71
20.75	5.32	1.95	0.69
21.00	5.33	1.96	0.68
21.25	5.35	1.97	0.66
21.50	5.36	1.98	0.65
21.75	5.38	1.99	0.63
22.00	5.39	2.00	0.62
22.25	5.41	2.01	0.60
22.50	5.42	2.02	0.59
22.75	5.44	2.03	0.58
23.00	5.45	2.04	0.56
23.25	5.46	2.05	0.55
23.50	5.48	2.06	0.53
23.75	5.49	2.07	0.52
24.00	**5.50**	**2.08**	0.50

Summary for Subcatchment 08:

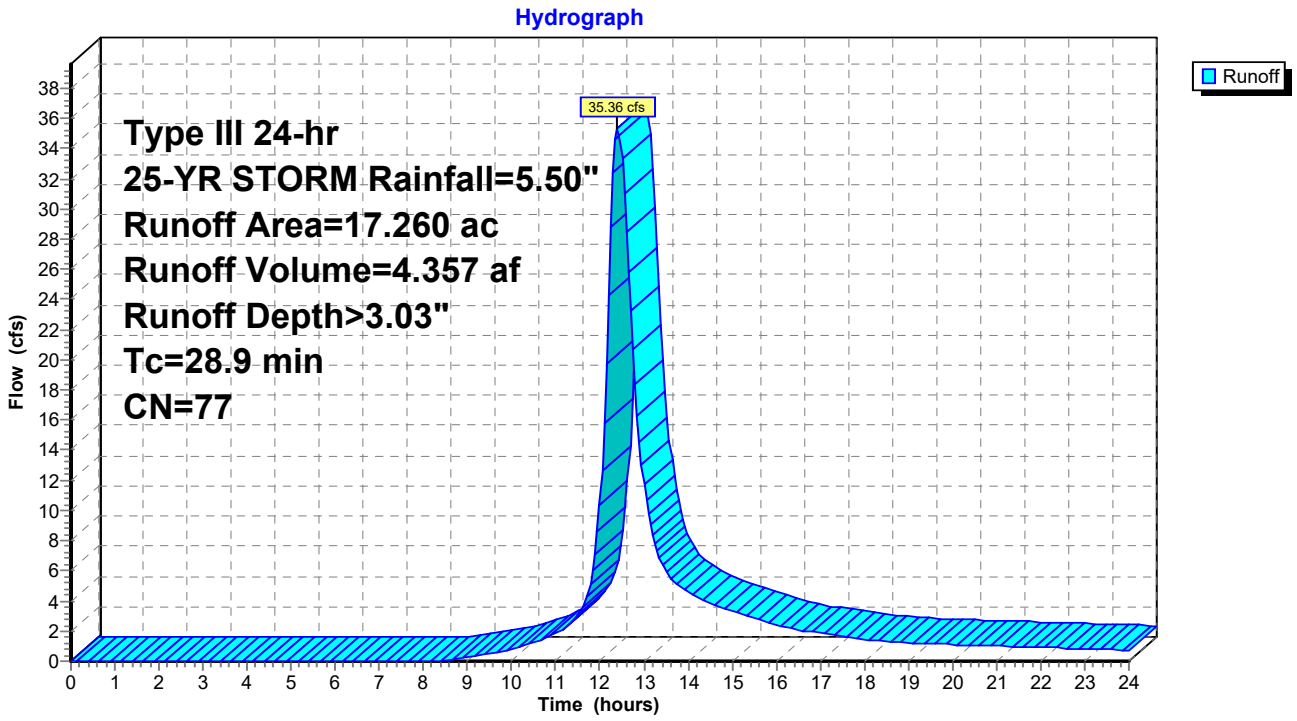
Runoff = 35.36 cfs @ 12.40 hrs, Volume= 4.357 af, Depth> 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	17.260	77	
	17.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.9					**Direct Entry, SCS TR-55**

Subcatchment 08:



Hydrograph for Subcatchment 08:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.02
8.50	0.71	0.00	0.07
8.75	0.75	0.01	0.15
9.00	0.80	0.01	0.24
9.25	0.86	0.02	0.35
9.50	0.91	0.03	0.48
9.75	0.97	0.04	0.63
10.00	1.04	0.06	0.80
10.25	1.11	0.08	0.98
10.50	1.19	0.10	1.22
10.75	1.28	0.13	1.52
11.00	1.37	0.16	1.87
11.25	1.49	0.21	2.29
11.50	1.64	0.27	3.01
11.75	1.95	0.42	4.48
12.00	2.75	0.90	10.31
12.25	3.55	1.46	**28.82**
12.50	3.86	1.70	**33.31**
12.75	4.01	1.82	20.72
13.00	4.12	1.91	11.72
13.25	4.22	1.99	7.79
13.50	4.31	2.06	5.99
13.75	4.39	2.12	5.13
14.00	4.46	2.18	4.60
14.25	4.53	2.23	4.16
14.50	4.59	2.28	3.81
14.75	4.64	2.33	3.56
15.00	4.70	2.37	3.34
15.25	4.75	2.41	3.12
15.50	4.79	2.45	2.91
15.75	4.84	2.49	2.69
16.00	4.87	2.52	2.47
16.25	4.91	2.55	2.25
16.50	4.94	2.57	2.08
16.75	4.97	2.60	1.96
17.00	5.00	2.62	1.86
17.25	5.03	2.65	1.76
17.50	5.06	2.67	1.66
17.75	5.08	2.69	1.56
18.00	5.10	2.71	1.46
18.25	5.13	2.73	1.37
18.50	5.15	2.75	1.30
18.75	5.17	2.76	1.26
19.00	5.19	2.78	1.23
19.25	5.21	2.80	1.20
19.50	5.23	2.81	1.17
19.75	5.25	2.83	1.14
20.00	5.26	2.84	1.11
20.25	5.28	2.86	1.08
20.50	5.30	2.87	1.05
20.75	5.32	2.89	1.03
21.00	5.33	2.90	1.01
21.25	5.35	2.92	0.98
21.50	5.36	2.93	0.96
21.75	5.38	2.94	0.94
22.00	5.39	2.96	0.92
22.25	5.41	2.97	0.90
22.50	5.42	2.98	0.87
22.75	5.44	2.99	0.85
23.00	5.45	3.00	0.83
23.25	5.46	3.01	0.81
23.50	5.48	3.03	0.78
23.75	5.49	3.04	0.76
24.00	**5.50**	**3.05**	0.74

Summary for Subcatchment 09:

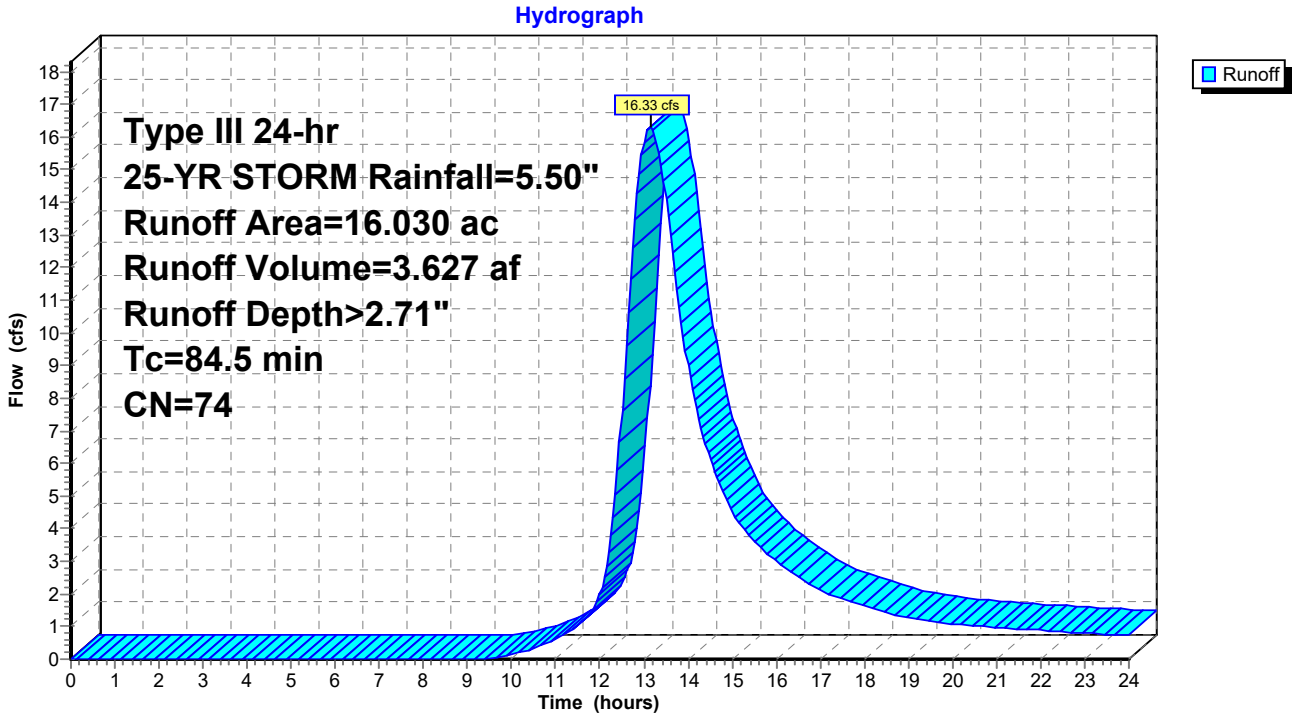
Runoff = 16.33 cfs @ 13.15 hrs, Volume= 3.627 af, Depth> 2.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	16.030	74	
	16.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
84.5					**Direct Entry, SCS TR-55**

Subcatchment 09:



Hydrograph for Subcatchment 09:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.00
8.50	0.71	0.00	0.00
8.75	0.75	0.00	0.00
9.00	0.80	0.00	0.00
9.25	0.86	0.01	0.01
9.50	0.91	0.01	0.03
9.75	0.97	0.02	0.08
10.00	1.04	0.03	0.14
10.25	1.11	0.04	0.22
10.50	1.19	0.06	0.33
10.75	1.28	0.08	0.46
11.00	1.37	0.11	0.61
11.25	1.49	0.14	0.80
11.50	1.64	0.20	1.04
11.75	1.95	0.33	1.38
12.00	2.75	0.75	2.00
12.25	3.55	1.27	3.79
12.50	3.86	1.50	7.59
12.75	4.01	1.60	12.59
13.00	4.12	1.69	**15.85**
13.25	4.22	1.76	**16.14**
13.50	4.31	1.83	14.11
13.75	4.39	1.89	11.33
14.00	4.46	1.94	9.02
14.25	4.53	1.99	7.36
14.50	4.59	2.04	6.14
14.75	4.64	2.08	5.23
15.00	4.70	2.13	4.54
15.25	4.75	2.16	4.02
15.50	4.79	2.20	3.62
15.75	4.84	2.23	3.28
16.00	4.87	2.26	3.01
16.25	4.91	2.29	2.76
16.50	4.94	2.32	2.52
16.75	4.97	2.34	2.30
17.00	5.00	2.37	2.12
17.25	5.03	2.39	1.97
17.50	5.06	2.41	1.84
17.75	5.08	2.43	1.73
18.00	5.10	2.45	1.62
18.25	5.13	2.46	1.53
18.50	5.15	2.48	1.44
18.75	5.17	2.50	1.35
19.00	5.19	2.52	1.28
19.25	5.21	2.53	1.22
19.50	5.23	2.55	1.16
19.75	5.25	2.56	1.12
20.00	5.26	2.58	1.09
20.25	5.28	2.59	1.06
20.50	5.30	2.60	1.03
20.75	5.32	2.62	1.00
21.00	5.33	2.63	0.97
21.25	5.35	2.64	0.95
21.50	5.36	2.66	0.93
21.75	5.38	2.67	0.91
22.00	5.39	2.68	0.88
22.25	5.41	2.69	0.87
22.50	5.42	2.71	0.84
22.75	5.44	2.72	0.82
23.00	5.45	2.73	0.81
23.25	5.46	2.74	0.78
23.50	5.48	2.75	0.76
23.75	5.49	2.76	0.75
24.00	**5.50**	**2.77**	0.73

Summary for Subcatchment 10:

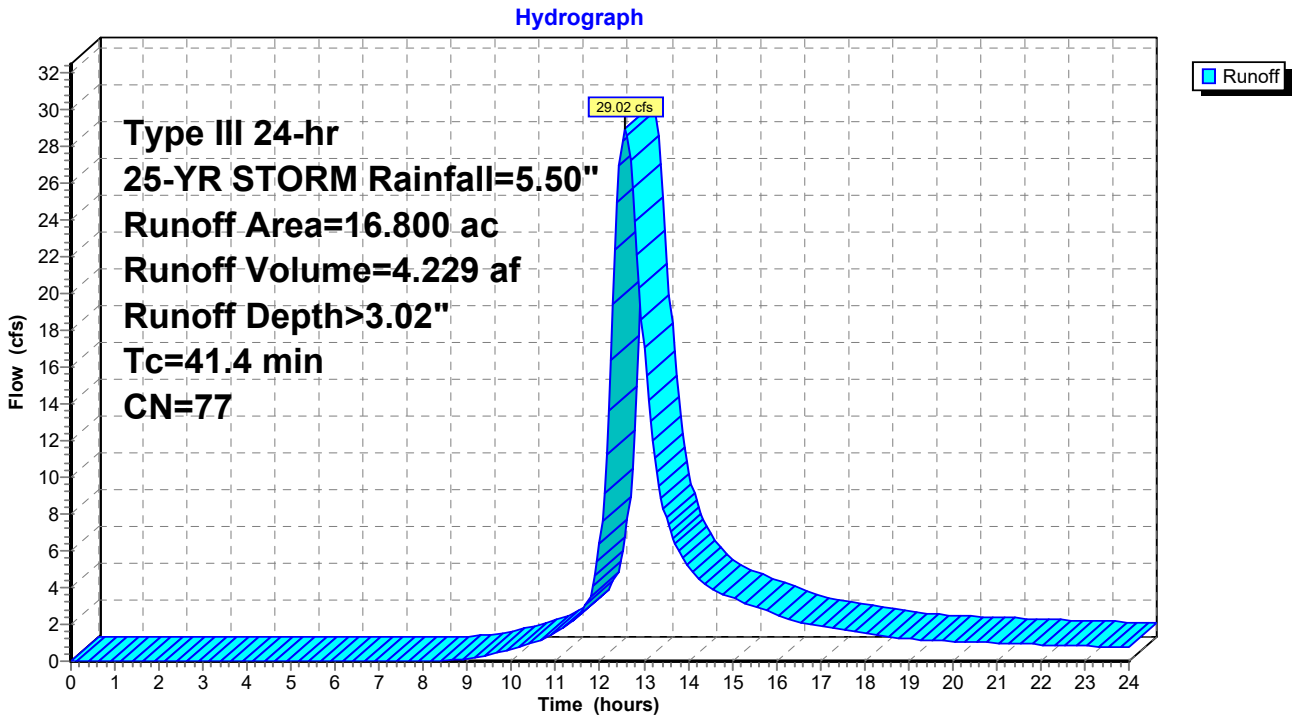
Runoff = 29.02 cfs @ 12.57 hrs, Volume= 4.229 af, Depth> 3.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	16.800	77	
	16.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
41.4					**Direct Entry, SCS TR-55**

Subcatchment 10:



Hydrograph for Subcatchment 10:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.01
8.50	0.71	0.00	0.04
8.75	0.75	0.01	0.09
9.00	0.80	0.01	0.17
9.25	0.86	0.02	0.26
9.50	0.91	0.03	0.38
9.75	0.97	0.04	0.51
10.00	1.04	0.06	0.66
10.25	1.11	0.08	0.82
10.50	1.19	0.10	1.02
10.75	1.28	0.13	1.27
11.00	1.37	0.16	1.57
11.25	1.49	0.21	1.93
11.50	1.64	0.27	2.44
11.75	1.95	0.42	3.38
12.00	2.75	0.90	6.38
12.25	3.55	1.46	16.44
12.50	3.86	1.70	**28.27**
12.75	4.01	1.82	**25.76**
13.00	4.12	1.91	17.03
13.25	4.22	1.99	11.06
13.50	4.31	2.06	7.83
13.75	4.39	2.12	6.12
14.00	4.46	2.18	5.16
14.25	4.53	2.23	4.50
14.50	4.59	2.28	4.02
14.75	4.64	2.33	3.69
15.00	4.70	2.37	3.43
15.25	4.75	2.41	3.21
15.50	4.79	2.45	2.99
15.75	4.84	2.49	2.78
16.00	4.87	2.52	2.56
16.25	4.91	2.55	2.35
16.50	4.94	2.57	2.16
16.75	4.97	2.60	2.01
17.00	5.00	2.62	1.89
17.25	5.03	2.65	1.79
17.50	5.06	2.67	1.69
17.75	5.08	2.69	1.59
18.00	5.10	2.71	1.50
18.25	5.13	2.73	1.40
18.50	5.15	2.75	1.32
18.75	5.17	2.76	1.26
19.00	5.19	2.78	1.22
19.25	5.21	2.80	1.19
19.50	5.23	2.81	1.16
19.75	5.25	2.83	1.13
20.00	5.26	2.84	1.10
20.25	5.28	2.86	1.07
20.50	5.30	2.87	1.04
20.75	5.32	2.89	1.02
21.00	5.33	2.90	1.00
21.25	5.35	2.92	0.97
21.50	5.36	2.93	0.95
21.75	5.38	2.94	0.93
22.00	5.39	2.96	0.91
22.25	5.41	2.97	0.89
22.50	5.42	2.98	0.87
22.75	5.44	2.99	0.84
23.00	5.45	3.00	0.82
23.25	5.46	3.01	0.80
23.50	5.48	3.03	0.78
23.75	5.49	3.04	0.76
24.00	**5.50**	**3.05**	0.73

Summary for Subcatchment 11:

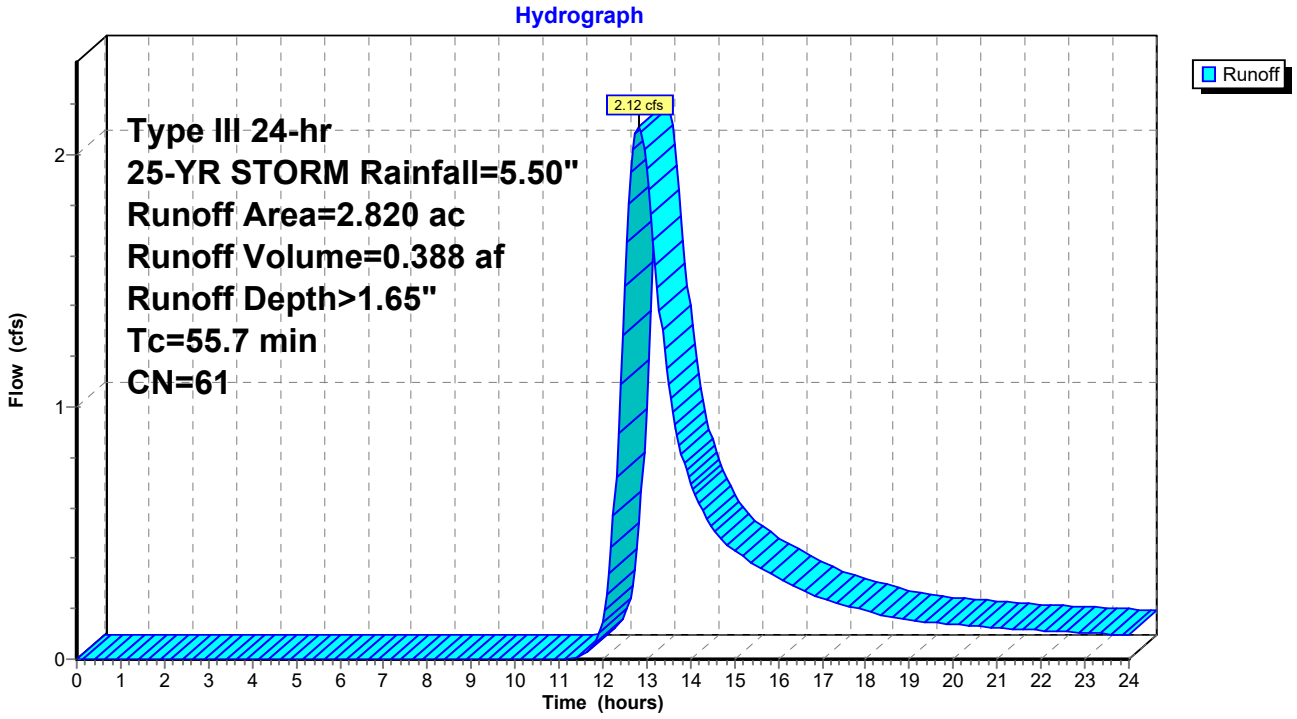
Runoff = 2.12 cfs @ 12.82 hrs, Volume= 0.388 af, Depth> 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	2.820	61	
	2.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
55.7					**Direct Entry, SCS TR-55**

Subcatchment 11:



Hydrograph for Subcatchment 11:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.00
8.50	0.71	0.00	0.00
8.75	0.75	0.00	0.00
9.00	0.80	0.00	0.00
9.25	0.86	0.00	0.00
9.50	0.91	0.00	0.00
9.75	0.97	0.00	0.00
10.00	1.04	0.00	0.00
10.25	1.11	0.00	0.00
10.50	1.19	0.00	0.00
10.75	1.28	0.00	0.00
11.00	1.37	0.00	0.00
11.25	1.49	0.01	0.00
11.50	1.64	0.02	0.01
11.75	1.95	0.06	0.05
12.00	2.75	0.28	0.15
12.25	3.55	0.59	0.57
12.50	3.86	0.74	1.48
12.75	4.01	0.82	**2.08**
13.00	4.12	0.88	**1.95**
13.25	4.22	0.93	1.47
13.50	4.31	0.97	1.09
13.75	4.39	1.02	0.85
14.00	4.46	1.06	0.69
14.25	4.53	1.09	0.60
14.50	4.59	1.13	0.52
14.75	4.64	1.16	0.47
15.00	4.70	1.19	0.43
15.25	4.75	1.22	0.40
15.50	4.79	1.25	0.37
15.75	4.84	1.27	0.35
16.00	4.87	1.29	0.32
16.25	4.91	1.31	0.30
16.50	4.94	1.33	0.28
16.75	4.97	1.35	0.26
17.00	5.00	1.37	0.24
17.25	5.03	1.39	0.23
17.50	5.06	1.40	0.21
17.75	5.08	1.42	0.20
18.00	5.10	1.43	0.19
18.25	5.13	1.45	0.18
18.50	5.15	1.46	0.17
18.75	5.17	1.47	0.16
19.00	5.19	1.48	0.15
19.25	5.21	1.50	0.15
19.50	5.23	1.51	0.15
19.75	5.25	1.52	0.14
20.00	5.26	1.53	0.14
20.25	5.28	1.54	0.13
20.50	5.30	1.55	0.13
20.75	5.32	1.56	0.13
21.00	5.33	1.57	0.13
21.25	5.35	1.58	0.12
21.50	5.36	1.59	0.12
21.75	5.38	1.60	0.12
22.00	5.39	1.61	0.11
22.25	5.41	1.62	0.11
22.50	5.42	1.63	0.11
22.75	5.44	1.64	0.11
23.00	5.45	1.65	0.10
23.25	5.46	1.66	0.10
23.50	5.48	1.66	0.10
23.75	5.49	1.67	0.10
24.00	**5.50**	**1.68**	0.09

Summary for Subcatchment 12:

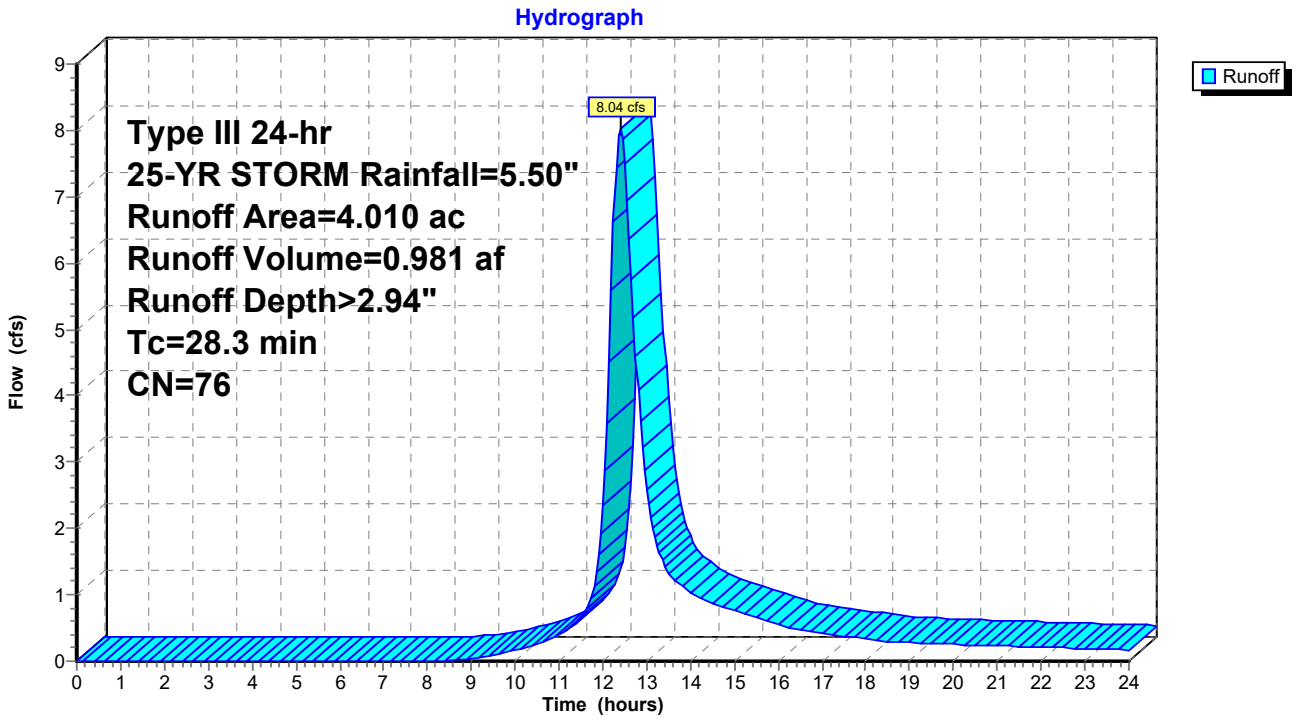
Runoff = 8.04 cfs @ 12.40 hrs, Volume= 0.981 af, Depth> 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	4.010	76	
	4.010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3					**Direct Entry, SCS TR-55**

Subcatchment 12:



Hydrograph for Subcatchment 12:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.00
8.50	0.71	0.00	0.01
8.75	0.75	0.00	0.02
9.00	0.80	0.01	0.04
9.25	0.86	0.01	0.06
9.50	0.91	0.02	0.09
9.75	0.97	0.03	0.12
10.00	1.04	0.05	0.16
10.25	1.11	0.06	0.20
10.50	1.19	0.08	0.26
10.75	1.28	0.11	0.32
11.00	1.37	0.14	0.40
11.25	1.49	0.18	0.50
11.50	1.64	0.24	0.66
11.75	1.95	0.39	0.99
12.00	2.75	0.85	2.34
12.25	3.55	1.40	**6.63**
12.50	3.86	1.63	**7.49**
12.75	4.01	1.75	4.60
13.00	4.12	1.83	2.60
13.25	4.22	1.91	1.74
13.50	4.31	1.98	1.35
13.75	4.39	2.04	1.16
14.00	4.46	2.10	1.05
14.25	4.53	2.15	0.95
14.50	4.59	2.20	0.87
14.75	4.64	2.25	0.81
15.00	4.70	2.29	0.76
15.25	4.75	2.33	0.71
15.50	4.79	2.37	0.66
15.75	4.84	2.40	0.61
16.00	4.87	2.43	0.56
16.25	4.91	2.46	0.51
16.50	4.94	2.49	0.47
16.75	4.97	2.51	0.45
17.00	5.00	2.54	0.42
17.25	5.03	2.56	0.40
17.50	5.06	2.58	0.38
17.75	5.08	2.60	0.36
18.00	5.10	2.62	0.33
18.25	5.13	2.64	0.31
18.50	5.15	2.66	0.30
18.75	5.17	2.67	0.29
19.00	5.19	2.69	0.28
19.25	5.21	2.71	0.27
19.50	5.23	2.72	0.27
19.75	5.25	2.74	0.26
20.00	5.26	2.75	0.25
20.25	5.28	2.77	0.25
20.50	5.30	2.78	0.24
20.75	5.32	2.80	0.24
21.00	5.33	2.81	0.23
21.25	5.35	2.82	0.23
21.50	5.36	2.84	0.22
21.75	5.38	2.85	0.22
22.00	5.39	2.86	0.21
22.25	5.41	2.88	0.20
22.50	5.42	2.89	0.20
22.75	5.44	2.90	0.19
23.00	5.45	2.91	0.19
23.25	5.46	2.92	0.18
23.50	5.48	2.93	0.18
23.75	5.49	2.94	0.17
24.00	**5.50**	**2.95**	0.17

Summary for Subcatchment 13:

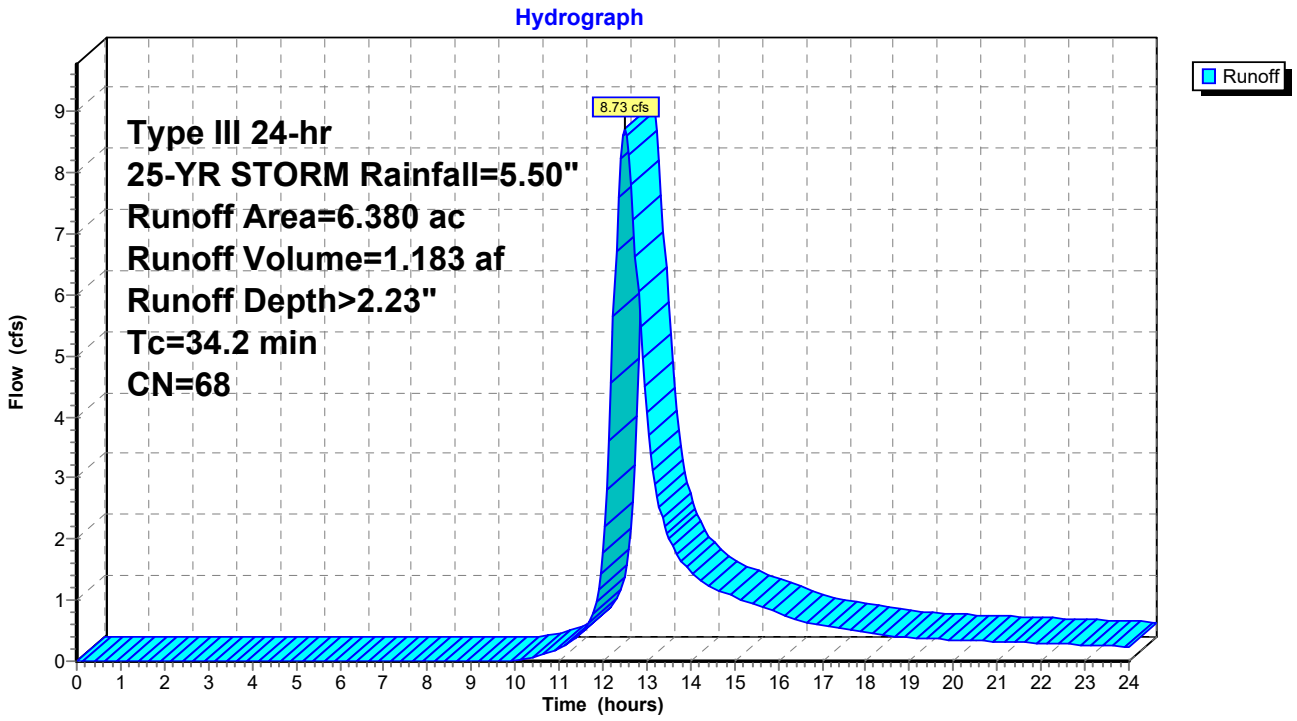
Runoff = 8.73 cfs @ 12.50 hrs, Volume= 1.183 af, Depth> 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	6.380	68	
	6.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2					**Direct Entry, SCS TR-55**

Subcatchment 13:



Hydrograph for Subcatchment 13:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.00
8.50	0.71	0.00	0.00
8.75	0.75	0.00	0.00
9.00	0.80	0.00	0.00
9.25	0.86	0.00	0.00
9.50	0.91	0.00	0.00
9.75	0.97	0.00	0.00
10.00	1.04	0.00	0.01
10.25	1.11	0.01	0.03
10.50	1.19	0.01	0.07
10.75	1.28	0.02	0.13
11.00	1.37	0.04	0.21
11.25	1.49	0.06	0.31
11.50	1.64	0.09	0.45
11.75	1.95	0.18	0.73
12.00	2.75	0.50	1.77
12.25	3.55	0.93	5.64
12.50	3.86	1.12	**8.73**
12.75	4.01	1.21	6.63
13.00	4.12	1.28	4.07
13.25	4.22	1.35	2.69
13.50	4.31	1.41	2.00
13.75	4.39	1.46	1.67
14.00	4.46	1.51	1.47
14.25	4.53	1.55	1.32
14.50	4.59	1.59	1.20
14.75	4.64	1.63	1.12
15.00	4.70	1.67	1.05
15.25	4.75	1.70	0.99
15.50	4.79	1.73	0.92
15.75	4.84	1.76	0.86
16.00	4.87	1.79	0.79
16.25	4.91	1.81	0.72
16.50	4.94	1.84	0.67
16.75	4.97	1.86	0.63
17.00	5.00	1.88	0.59
17.25	5.03	1.90	0.56
17.50	5.06	1.92	0.53
17.75	5.08	1.94	0.50
18.00	5.10	1.95	0.47
18.25	5.13	1.97	0.44
18.50	5.15	1.98	0.42
18.75	5.17	2.00	0.40
19.00	5.19	2.01	0.39
19.25	5.21	2.03	0.38
19.50	5.23	2.04	0.37
19.75	5.25	2.06	0.36
20.00	5.26	2.07	0.35
20.25	5.28	2.08	0.35
20.50	5.30	2.09	0.34
20.75	5.32	2.11	0.33
21.00	5.33	2.12	0.32
21.25	5.35	2.13	0.32
21.50	5.36	2.14	0.31
21.75	5.38	2.15	0.30
22.00	5.39	2.16	0.29
22.25	5.41	2.18	0.29
22.50	5.42	2.19	0.28
22.75	5.44	2.20	0.27
23.00	5.45	2.21	0.27
23.25	5.46	2.22	0.26
23.50	5.48	2.23	0.25
23.75	5.49	2.23	0.25
24.00	**5.50**	**2.24**	0.24

Summary for Subcatchment 14:

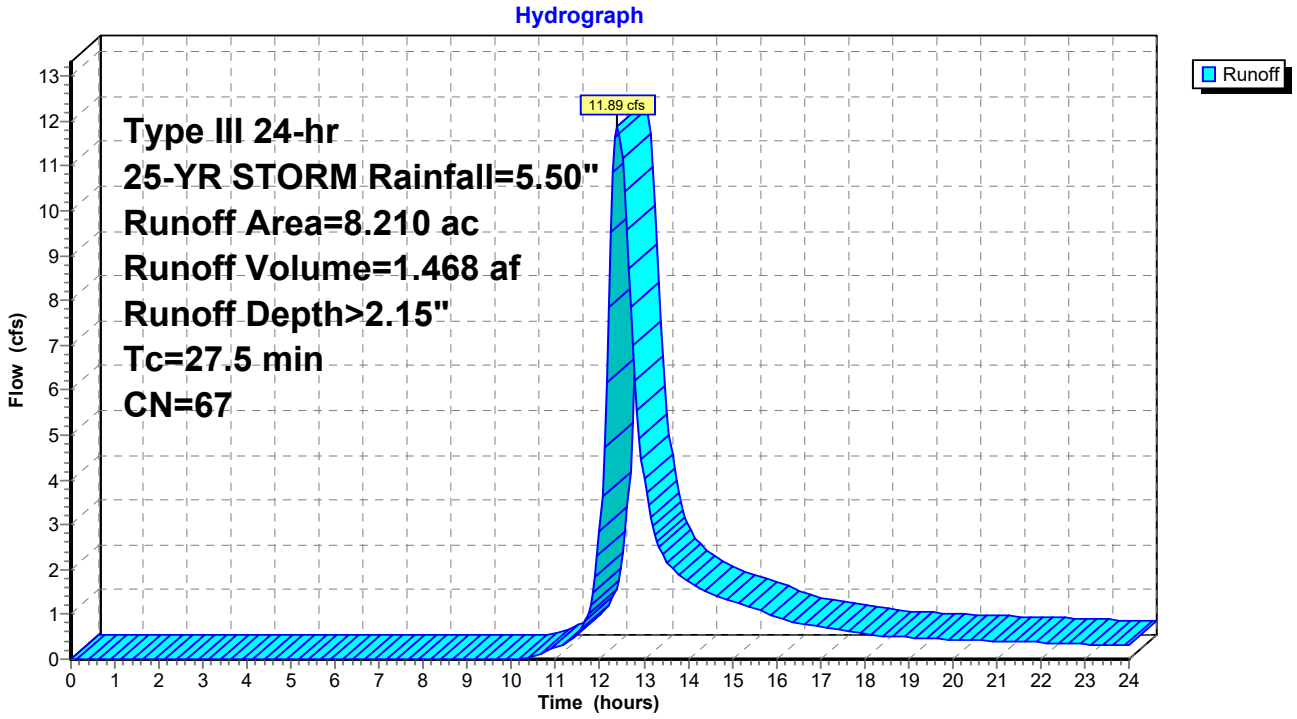
Runoff = 11.89 cfs @ 12.41 hrs, Volume= 1.468 af, Depth> 2.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	8.210	67	
	8.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5					**Direct Entry, SCS TR-55**

Subcatchment 14:



Hydrograph for Subcatchment 14:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.00
8.50	0.71	0.00	0.00
8.75	0.75	0.00	0.00
9.00	0.80	0.00	0.00
9.25	0.86	0.00	0.00
9.50	0.91	0.00	0.00
9.75	0.97	0.00	0.00
10.00	1.04	0.00	0.00
10.25	1.11	0.00	0.02
10.50	1.19	0.01	0.08
10.75	1.28	0.02	0.16
11.00	1.37	0.03	0.26
11.25	1.49	0.05	0.38
11.50	1.64	0.08	0.60
11.75	1.95	0.16	1.03
12.00	2.75	0.47	2.86
12.25	3.55	0.88	**9.53**
12.50	3.86	1.06	**11.18**
12.75	4.01	1.15	7.00
13.00	4.12	1.22	4.04
13.25	4.22	1.28	2.78
13.50	4.31	1.34	2.19
13.75	4.39	1.39	1.92
14.00	4.46	1.44	1.74
14.25	4.53	1.48	1.58
14.50	4.59	1.52	1.46
14.75	4.64	1.56	1.37
15.00	4.70	1.60	1.29
15.25	4.75	1.63	1.21
15.50	4.79	1.66	1.13
15.75	4.84	1.69	1.04
16.00	4.87	1.72	0.96
16.25	4.91	1.74	0.88
16.50	4.94	1.76	0.81
16.75	4.97	1.78	0.77
17.00	5.00	1.80	0.73
17.25	5.03	1.82	0.69
17.50	5.06	1.84	0.65
17.75	5.08	1.86	0.62
18.00	5.10	1.88	0.58
18.25	5.13	1.89	0.54
18.50	5.15	1.91	0.51
18.75	5.17	1.92	0.50
19.00	5.19	1.94	0.49
19.25	5.21	1.95	0.48
19.50	5.23	1.96	0.46
19.75	5.25	1.98	0.45
20.00	5.26	1.99	0.44
20.25	5.28	2.00	0.43
20.50	5.30	2.01	0.42
20.75	5.32	2.03	0.41
21.00	5.33	2.04	0.40
21.25	5.35	2.05	0.39
21.50	5.36	2.06	0.39
21.75	5.38	2.07	0.38
22.00	5.39	2.08	0.37
22.25	5.41	2.09	0.36
22.50	5.42	2.10	0.35
22.75	5.44	2.11	0.34
23.00	5.45	2.12	0.33
23.25	5.46	2.13	0.32
23.50	5.48	2.14	0.32
23.75	5.49	2.15	0.31
24.00	**5.50**	**2.16**	0.30

Summary for Subcatchment 15:

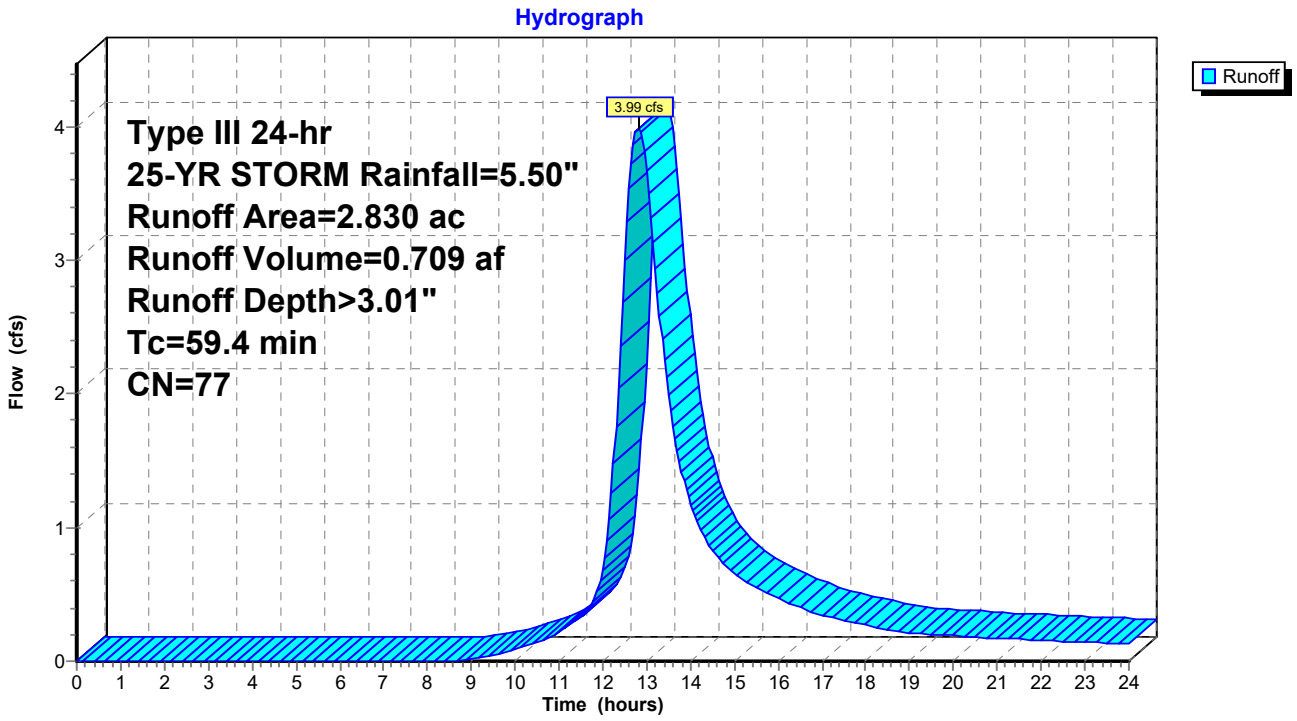
Runoff = 3.99 cfs @ 12.81 hrs, Volume= 0.709 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	2.830	77	
	2.830		100.00% Pervious Area

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

Subcatchment 15:



Hydrograph for Subcatchment 15:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.12	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.15	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.20	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.25	0.00	0.00
4.50	0.27	0.00	0.00
4.75	0.29	0.00	0.00
5.00	0.31	0.00	0.00
5.25	0.33	0.00	0.00
5.50	0.35	0.00	0.00
5.75	0.37	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.44	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.53	0.00	0.00
7.50	0.56	0.00	0.00
7.75	0.59	0.00	0.00
8.00	0.63	0.00	0.00
8.25	0.66	0.00	0.00
8.50	0.71	0.00	0.00
8.75	0.75	0.01	0.01
9.00	0.80	0.01	0.02
9.25	0.86	0.02	0.03
9.50	0.91	0.03	0.04
9.75	0.97	0.04	0.06
10.00	1.04	0.06	0.09
10.25	1.11	0.08	0.11
10.50	1.19	0.10	0.14
10.75	1.28	0.13	0.17
11.00	1.37	0.16	0.21
11.25	1.49	0.21	0.27
11.50	1.64	0.27	0.33
11.75	1.95	0.42	0.43
12.00	2.75	0.90	0.68
12.25	3.55	1.46	1.49
12.50	3.86	1.70	2.99
12.75	4.01	1.82	**3.96**
13.00	4.12	1.91	**3.67**
13.25	4.22	1.99	2.75
13.50	4.31	2.06	1.99
13.75	4.39	2.12	1.49
14.00	4.46	2.18	1.17
14.25	4.53	2.23	0.97
14.50	4.59	2.28	0.83
14.75	4.64	2.33	0.73
15.00	4.70	2.37	0.66
15.25	4.75	2.41	0.60
15.50	4.79	2.45	0.55
15.75	4.84	2.49	0.51
16.00	4.87	2.52	0.47
16.25	4.91	2.55	0.44
16.50	4.94	2.57	0.40
16.75	4.97	2.60	0.37
17.00	5.00	2.62	0.35
17.25	5.03	2.65	0.32
17.50	5.06	2.67	0.31
17.75	5.08	2.69	0.29
18.00	5.10	2.71	0.27
18.25	5.13	2.73	0.25
18.50	5.15	2.75	0.24
18.75	5.17	2.76	0.23
19.00	5.19	2.78	0.22
19.25	5.21	2.80	0.21
19.50	5.23	2.81	0.20
19.75	5.25	2.83	0.20
20.00	5.26	2.84	0.19
20.25	5.28	2.86	0.19
20.50	5.30	2.87	0.18
20.75	5.32	2.89	0.18
21.00	5.33	2.90	0.17
21.25	5.35	2.92	0.17
21.50	5.36	2.93	0.16
21.75	5.38	2.94	0.16
22.00	5.39	2.96	0.16
22.25	5.41	2.97	0.15
22.50	5.42	2.98	0.15
22.75	5.44	2.99	0.15
23.00	5.45	3.00	0.14
23.25	5.46	3.01	0.14
23.50	5.48	3.03	0.14
23.75	5.49	3.04	0.13
24.00	**5.50**	**3.05**	0.13

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment01: Runoff Area=2.560 ac 0.00% Impervious Runoff Depth>3.93"
Tc=30.9 min CN=79 Runoff=6.59 cfs 0.838 af

Subcatchment02: Runoff Area=11.570 ac 0.00% Impervious Runoff Depth>3.02"
Tc=31.4 min CN=70 Runoff=22.71 cfs 2.916 af

Subcatchment03: Runoff Area=13.570 ac 0.00% Impervious Runoff Depth>3.82"
Tc=32.4 min CN=78 Runoff=33.28 cfs 4.322 af

Subcatchment04: Runoff Area=1.980 ac 0.00% Impervious Runoff Depth>3.31"
Tc=37.7 min CN=73 Runoff=3.92 cfs 0.547 af

Subcatchment05: Runoff Area=4.310 ac 0.00% Impervious Runoff Depth>3.73"
Tc=23.5 min CN=77 Runoff=11.89 cfs 1.338 af

Subcatchment07: Runoff Area=13.810 ac 0.00% Impervious Runoff Depth>2.64"
Tc=42.1 min CN=66 Runoff=20.34 cfs 3.036 af

Subcatchment08: Runoff Area=17.260 ac 0.00% Impervious Runoff Depth>3.72"
Tc=28.9 min CN=77 Runoff=43.44 cfs 5.353 af

Subcatchment09: Runoff Area=16.030 ac 0.00% Impervious Runoff Depth>3.37"
Tc=84.5 min CN=74 Runoff=20.38 cfs 4.508 af

Subcatchment10: Runoff Area=16.800 ac 0.00% Impervious Runoff Depth>3.71"
Tc=41.4 min CN=77 Runoff=35.65 cfs 5.197 af

Subcatchment11: Runoff Area=2.820 ac 0.00% Impervious Runoff Depth>2.18"
Tc=55.7 min CN=61 Runoff=2.86 cfs 0.511 af

Subcatchment12: Runoff Area=4.010 ac 0.00% Impervious Runoff Depth>3.62"
Tc=28.3 min CN=76 Runoff=9.91 cfs 1.210 af

Subcatchment13: Runoff Area=6.380 ac 0.00% Impervious Runoff Depth>2.83"
Tc=34.2 min CN=68 Runoff=11.22 cfs 1.505 af

Subcatchment14: Runoff Area=8.210 ac 0.00% Impervious Runoff Depth>2.74"
Tc=27.5 min CN=67 Runoff=15.38 cfs 1.876 af

Subcatchment15: Runoff Area=2.830 ac 0.00% Impervious Runoff Depth>3.70"
Tc=59.4 min CN=77 Runoff=4.90 cfs 0.872 af

Total Runoff Area = 122.140 ac Runoff Volume = 34.028 af Average Runoff Depth = 3.34"
100.00% Pervious = 122.140 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 01:

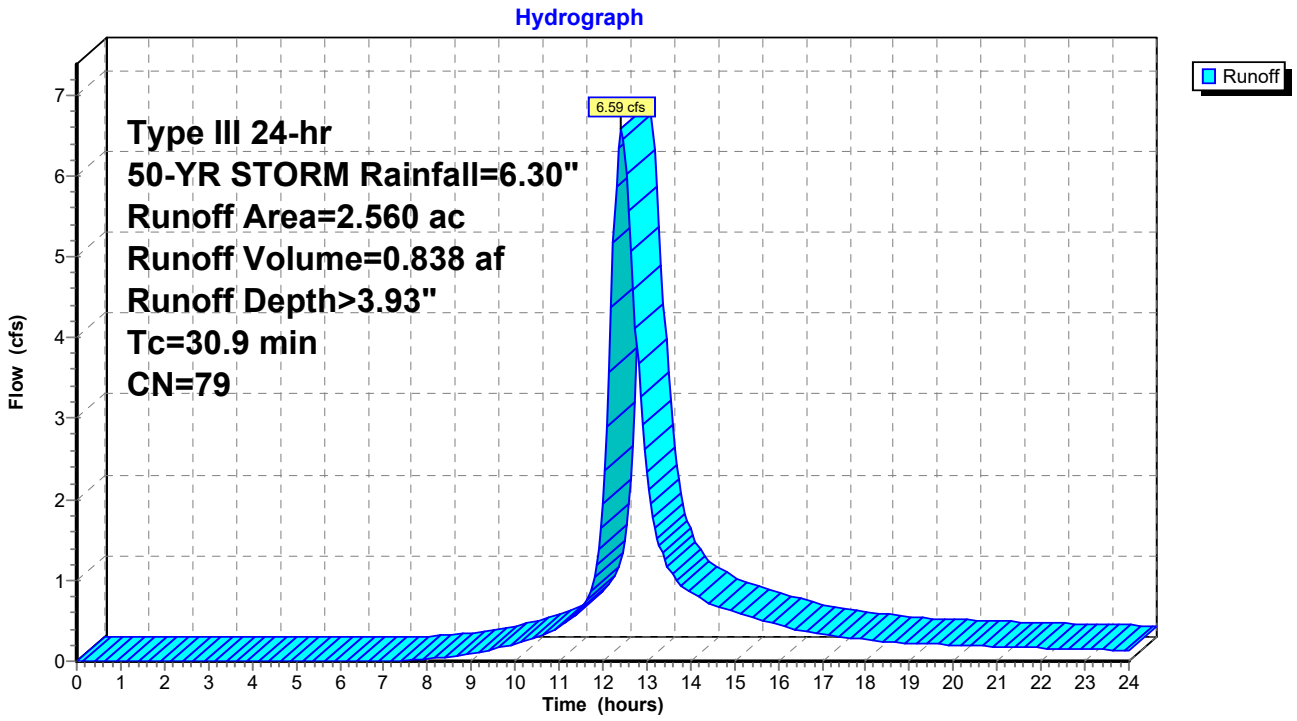
Runoff = 6.59 cfs @ 12.42 hrs, Volume= 0.838 af, Depth> 3.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	2.560	79	
	2.560		100.00% Pervious Area

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

Subcatchment 01:



Hydrograph for Subcatchment 01:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.01
7.75	0.68	0.01	0.02
8.00	0.72	0.01	0.03
8.25	0.76	0.02	0.04
8.50	0.81	0.03	0.06
8.75	0.86	0.04	0.08
9.00	0.92	0.05	0.10
9.25	0.98	0.06	0.12
9.50	1.05	0.08	0.15
9.75	1.12	0.11	0.18
10.00	1.19	0.13	0.21
10.25	1.27	0.16	0.25
10.50	1.36	0.20	0.30
10.75	1.46	0.24	0.36
11.00	1.58	0.29	0.43
11.25	1.71	0.36	0.51
11.50	1.88	0.45	0.64
11.75	2.24	0.67	0.92
12.00	3.15	1.30	1.96
12.25	4.06	2.01	**5.18**
12.50	4.42	2.31	**6.36**
12.75	4.59	2.45	4.12
13.00	4.72	2.57	2.35
13.25	4.84	2.66	1.53
13.50	4.94	2.75	1.14
13.75	5.03	2.83	0.96
14.00	5.11	2.90	0.85
14.25	5.18	2.96	0.77
14.50	5.25	3.02	0.70
14.75	5.32	3.08	0.65
15.00	5.38	3.13	0.61
15.25	5.44	3.18	0.57
15.50	5.49	3.23	0.53
15.75	5.54	3.27	0.49
16.00	5.58	3.31	0.45
16.25	5.62	3.34	0.41
16.50	5.66	3.38	0.38
16.75	5.70	3.41	0.36
17.00	5.73	3.44	0.34
17.25	5.76	3.47	0.32
17.50	5.79	3.49	0.30
17.75	5.82	3.52	0.28
18.00	5.85	3.54	0.27
18.25	5.87	3.56	0.25
18.50	5.90	3.59	0.23
18.75	5.92	3.61	0.23
19.00	5.94	3.63	0.22
19.25	5.97	3.65	0.22
19.50	5.99	3.67	0.21
19.75	6.01	3.69	0.20
20.00	6.03	3.71	0.20
20.25	6.05	3.72	0.19
20.50	6.07	3.74	0.19
20.75	6.09	3.76	0.18
21.00	6.11	3.78	0.18
21.25	6.13	3.79	0.18
21.50	6.14	3.81	0.17
21.75	6.16	3.82	0.17
22.00	6.18	3.84	0.16
22.25	6.20	3.85	0.16
22.50	6.21	3.87	0.16
22.75	6.23	3.88	0.15
23.00	6.24	3.90	0.15
23.25	6.26	3.91	0.14
23.50	6.27	3.92	0.14
23.75	6.29	3.94	0.14
24.00	**6.30**	**3.95**	0.13

Summary for Subcatchment 02:

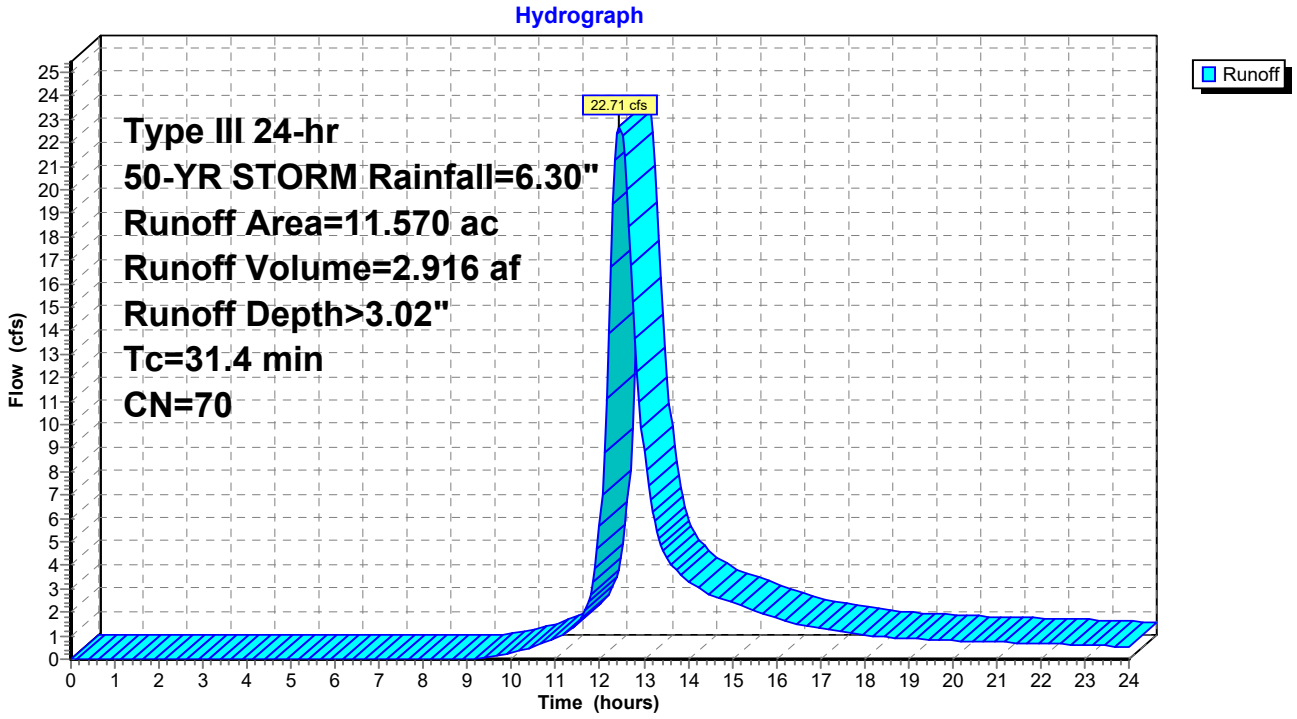
Runoff = 22.71 cfs @ 12.45 hrs, Volume= 2.916 af, Depth> 3.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	11.570	70	
	11.570		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.4					**Direct Entry, SCS TR-55**

Subcatchment 02:



Hydrograph for Subcatchment 02:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.00
8.00	0.72	0.00	0.00
8.25	0.76	0.00	0.00
8.50	0.81	0.00	0.00
8.75	0.86	0.00	0.00
9.00	0.92	0.00	0.00
9.25	0.98	0.00	0.03
9.50	1.05	0.01	0.09
9.75	1.12	0.01	0.18
10.00	1.19	0.02	0.27
10.25	1.27	0.04	0.39
10.50	1.36	0.05	0.53
10.75	1.46	0.08	0.71
11.00	1.58	0.10	0.93
11.25	1.71	0.14	1.19
11.50	1.88	0.20	1.61
11.75	2.24	0.34	2.45
12.00	3.15	0.80	5.69
12.25	4.06	1.37	**16.74**
12.50	4.42	1.62	**22.34**
12.75	4.59	1.74	15.19
13.00	4.72	1.83	8.89
13.25	4.84	1.92	5.86
13.50	4.94	1.99	4.43
13.75	5.03	2.06	3.73
14.00	5.11	2.12	3.32
14.25	5.18	2.17	2.99
14.50	5.25	2.23	2.74
14.75	5.32	2.28	2.56
15.00	5.38	2.32	2.40
15.25	5.44	2.37	2.25
15.50	5.49	2.41	2.09
15.75	5.54	2.44	1.94
16.00	5.58	2.48	1.78
16.25	5.62	2.51	1.63
16.50	5.66	2.54	1.50
16.75	5.70	2.57	1.42
17.00	5.73	2.59	1.34
17.25	5.76	2.62	1.27
17.50	5.79	2.64	1.20
17.75	5.82	2.66	1.13
18.00	5.85	2.68	1.06
18.25	5.87	2.70	0.99
18.50	5.90	2.72	0.94
18.75	5.92	2.74	0.91
19.00	5.94	2.76	0.88
19.25	5.97	2.78	0.86
19.50	5.99	2.79	0.84
19.75	6.01	2.81	0.82
20.00	6.03	2.83	0.80
20.25	6.05	2.84	0.78
20.50	6.07	2.86	0.76
20.75	6.09	2.88	0.74
21.00	6.11	2.89	0.73
21.25	6.13	2.91	0.71
21.50	6.14	2.92	0.70
21.75	6.16	2.93	0.68
22.00	6.18	2.95	0.66
22.25	6.20	2.96	0.65
22.50	6.21	2.97	0.63
22.75	6.23	2.99	0.62
23.00	6.24	3.00	0.60
23.25	6.26	3.01	0.58
23.50	6.27	3.02	0.57
23.75	6.29	3.03	0.55
24.00	**6.30**	**3.05**	0.53

Summary for Subcatchment 03:

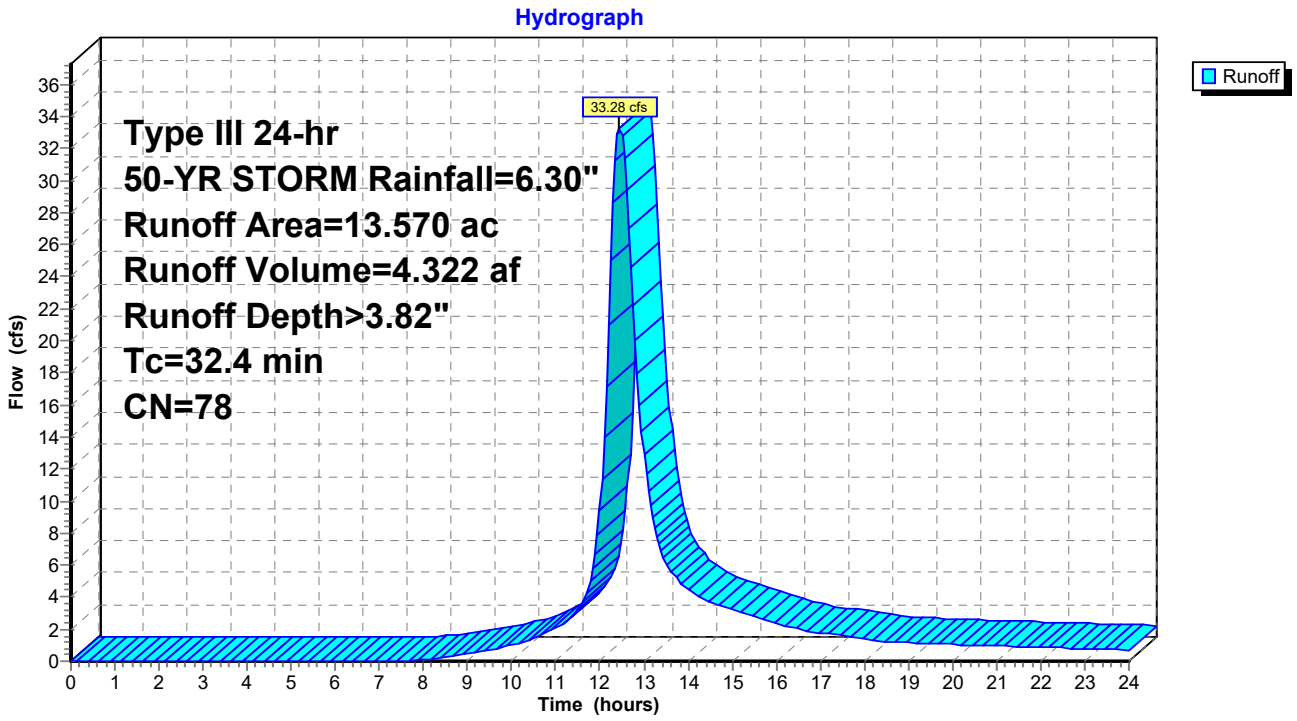
Runoff = 33.28 cfs @ 12.45 hrs, Volume= 4.322 af, Depth> 3.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	13.570	78	
	13.570		100.00% Pervious Area

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

Subcatchment 03:



Hydrograph for Subcatchment 03:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.02
7.75	0.68	0.00	0.06
8.00	0.72	0.01	0.11
8.25	0.76	0.01	0.17
8.50	0.81	0.02	0.24
8.75	0.86	0.03	0.32
9.00	0.92	0.04	0.43
9.25	0.98	0.05	0.55
9.50	1.05	0.07	0.69
9.75	1.12	0.09	0.84
10.00	1.19	0.11	1.01
10.25	1.27	0.14	1.20
10.50	1.36	0.18	1.44
10.75	1.46	0.22	1.74
11.00	1.58	0.27	2.09
11.25	1.71	0.33	2.49
11.50	1.88	0.42	3.16
11.75	2.24	0.62	4.48
12.00	3.15	1.24	9.41
12.25	4.06	1.94	**24.99**
12.50	4.42	2.23	**32.76**
12.75	4.59	2.37	22.23
13.00	4.72	2.48	12.91
13.25	4.84	2.57	8.34
13.50	4.94	2.66	6.17
13.75	5.03	2.73	5.13
14.00	5.11	2.80	4.51
14.25	5.18	2.87	4.04
14.50	5.25	2.93	3.69
14.75	5.32	2.99	3.43
15.00	5.38	3.04	3.21
15.25	5.44	3.09	3.00
15.50	5.49	3.13	2.79
15.75	5.54	3.17	2.58
16.00	5.58	3.21	2.37
16.25	5.62	3.25	2.17
16.50	5.66	3.28	2.00
16.75	5.70	3.31	1.87
17.00	5.73	3.34	1.77
17.25	5.76	3.37	1.68
17.50	5.79	3.40	1.58
17.75	5.82	3.42	1.49
18.00	5.85	3.44	1.40
18.25	5.87	3.47	1.31
18.50	5.90	3.49	1.24
18.75	5.92	3.51	1.19
19.00	5.94	3.53	1.16
19.25	5.97	3.55	1.13
19.50	5.99	3.57	1.10
19.75	6.01	3.59	1.07
20.00	6.03	3.60	1.05
20.25	6.05	3.62	1.02
20.50	6.07	3.64	0.99
20.75	6.09	3.66	0.97
21.00	6.11	3.67	0.95
21.25	6.13	3.69	0.93
21.50	6.14	3.71	0.91
21.75	6.16	3.72	0.89
22.00	6.18	3.74	0.87
22.25	6.20	3.75	0.84
22.50	6.21	3.77	0.82
22.75	6.23	3.78	0.80
23.00	6.24	3.79	0.78
23.25	6.26	3.81	0.76
23.50	6.27	3.82	0.74
23.75	6.29	3.83	0.72
24.00	**6.30**	**3.85**	0.70

Summary for Subcatchment 04:

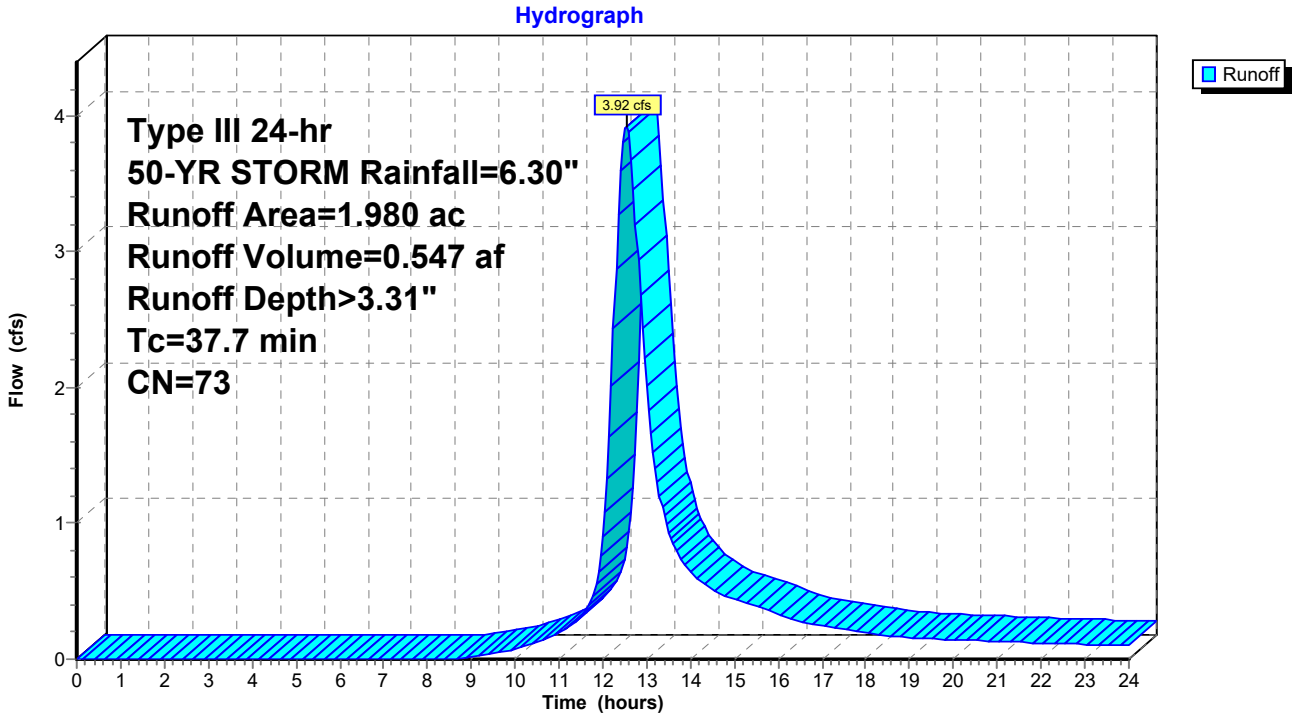
Runoff = 3.92 cfs @ 12.53 hrs, Volume= 0.547 af, Depth> 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	1.980	73	
	1.980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.7					**Direct Entry, SCS TR-55**

Subcatchment 04:



Hydrograph for Subcatchment 04:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.00
8.00	0.72	0.00	0.00
8.25	0.76	0.00	0.00
8.50	0.81	0.00	0.00
8.75	0.86	0.00	0.00
9.00	0.92	0.01	0.01
9.25	0.98	0.01	0.02
9.50	1.05	0.02	0.04
9.75	1.12	0.03	0.06
10.00	1.19	0.05	0.07
10.25	1.27	0.07	0.10
10.50	1.36	0.09	0.12
10.75	1.46	0.12	0.16
11.00	1.58	0.15	0.19
11.25	1.71	0.20	0.24
11.50	1.88	0.27	0.31
11.75	2.24	0.43	0.45
12.00	3.15	0.95	0.90
12.25	4.06	1.57	2.44
12.50	4.42	1.84	**3.91**
12.75	4.59	1.97	**3.19**
13.00	4.72	2.07	2.01
13.25	4.84	2.15	1.30
13.50	4.94	2.23	0.93
13.75	5.03	2.30	0.75
14.00	5.11	2.37	0.64
14.25	5.18	2.43	0.57
14.50	5.25	2.48	0.51
14.75	5.32	2.53	0.48
15.00	5.38	2.58	0.44
15.25	5.44	2.63	0.42
15.50	5.49	2.67	0.39
15.75	5.54	2.71	0.36
16.00	5.58	2.75	0.33
16.25	5.62	2.78	0.30
16.50	5.66	2.81	0.28
16.75	5.70	2.84	0.26
17.00	5.73	2.87	0.25
17.25	5.76	2.89	0.23
17.50	5.79	2.92	0.22
17.75	5.82	2.94	0.21
18.00	5.85	2.96	0.20
18.25	5.87	2.98	0.18
18.50	5.90	3.00	0.17
18.75	5.92	3.02	0.17
19.00	5.94	3.04	0.16
19.25	5.97	3.06	0.16
19.50	5.99	3.08	0.15
19.75	6.01	3.10	0.15
20.00	6.03	3.11	0.14
20.25	6.05	3.13	0.14
20.50	6.07	3.15	0.14
20.75	6.09	3.16	0.13
21.00	6.11	3.18	0.13
21.25	6.13	3.19	0.13
21.50	6.14	3.21	0.13
21.75	6.16	3.22	0.12
22.00	6.18	3.24	0.12
22.25	6.20	3.25	0.12
22.50	6.21	3.27	0.11
22.75	6.23	3.28	0.11
23.00	6.24	3.29	0.11
23.25	6.26	3.30	0.11
23.50	6.27	3.32	0.10
23.75	6.29	3.33	0.10
24.00	**6.30**	**3.34**	0.10

Summary for Subcatchment 05:

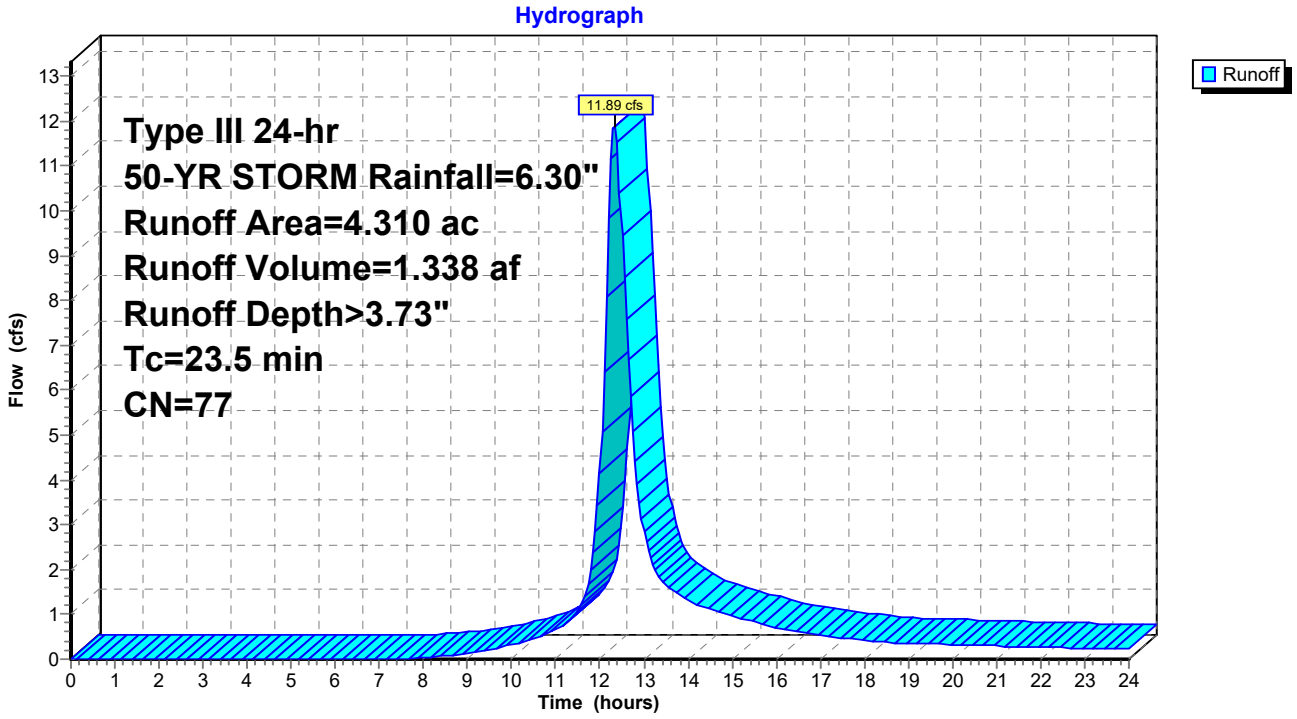
Runoff = 11.89 cfs @ 12.32 hrs, Volume= 1.338 af, Depth> 3.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	4.310	77	
	4.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5					**Direct Entry, SCS TR-55**

Subcatchment 05:



Hydrograph for Subcatchment 05:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.01
8.00	0.72	0.00	0.03
8.25	0.76	0.01	0.05
8.50	0.81	0.01	0.07
8.75	0.86	0.02	0.10
9.00	0.92	0.03	0.13
9.25	0.98	0.04	0.17
9.50	1.05	0.06	0.22
9.75	1.12	0.08	0.27
10.00	1.19	0.10	0.32
10.25	1.27	0.12	0.38
10.50	1.36	0.16	0.46
10.75	1.46	0.20	0.57
11.00	1.58	0.24	0.68
11.25	1.71	0.30	0.82
11.50	1.88	0.38	1.09
11.75	2.24	0.58	1.68
12.00	3.15	1.18	4.14
12.25	4.06	1.86	**11.16**
12.50	4.42	2.15	**9.45**
12.75	4.59	2.29	5.08
13.00	4.72	2.39	2.85
13.25	4.84	2.49	1.99
13.50	4.94	2.57	1.63
13.75	5.03	2.65	1.46
14.00	5.11	2.71	1.32
14.25	5.18	2.78	1.19
14.50	5.25	2.84	1.10
14.75	5.32	2.89	1.03
15.00	5.38	2.95	0.97
15.25	5.44	2.99	0.90
15.50	5.49	3.04	0.84
15.75	5.54	3.08	0.77
16.00	5.58	3.12	0.71
16.25	5.62	3.15	0.64
16.50	5.66	3.18	0.60
16.75	5.70	3.21	0.57
17.00	5.73	3.24	0.54
17.25	5.76	3.27	0.51
17.50	5.79	3.30	0.48
17.75	5.82	3.32	0.45
18.00	5.85	3.35	0.42
18.25	5.87	3.37	0.40
18.50	5.90	3.39	0.38
18.75	5.92	3.41	0.37
19.00	5.94	3.43	0.36
19.25	5.97	3.45	0.35
19.50	5.99	3.47	0.34
19.75	6.01	3.49	0.33
20.00	6.03	3.50	0.32
20.25	6.05	3.52	0.32
20.50	6.07	3.54	0.31
20.75	6.09	3.56	0.30
21.00	6.11	3.57	0.29
21.25	6.13	3.59	0.29
21.50	6.14	3.61	0.28
21.75	6.16	3.62	0.27
22.00	6.18	3.64	0.27
22.25	6.20	3.65	0.26
22.50	6.21	3.66	0.25
22.75	6.23	3.68	0.25
23.00	6.24	3.69	0.24
23.25	6.26	3.71	0.23
23.50	6.27	3.72	0.23
23.75	6.29	3.73	0.22
24.00	**6.30**	**3.74**	0.21

Summary for Subcatchment 07:

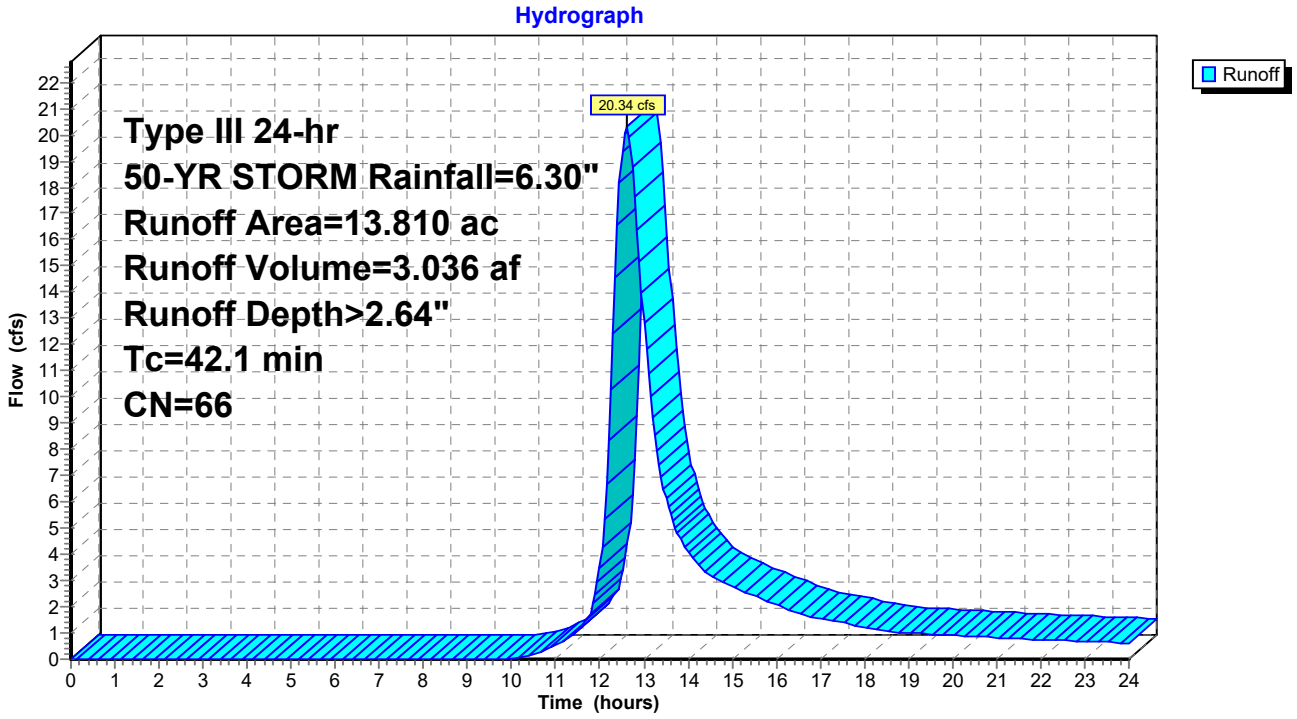
Runoff = 20.34 cfs @ 12.60 hrs, Volume= 3.036 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	13.810	66	
	13.810		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.1					**Direct Entry, SCS TR-55**

Subcatchment 07:



Hydrograph for Subcatchment 07:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.00
8.00	0.72	0.00	0.00
8.25	0.76	0.00	0.00
8.50	0.81	0.00	0.00
8.75	0.86	0.00	0.00
9.00	0.92	0.00	0.00
9.25	0.98	0.00	0.00
9.50	1.05	0.00	0.00
9.75	1.12	0.00	0.00
10.00	1.19	0.00	0.03
10.25	1.27	0.01	0.10
10.50	1.36	0.02	0.20
10.75	1.46	0.03	0.35
11.00	1.58	0.05	0.53
11.25	1.71	0.08	0.76
11.50	1.88	0.12	1.08
11.75	2.24	0.23	1.66
12.00	3.15	0.62	3.50
12.25	4.06	1.12	10.27
12.50	4.42	1.35	**19.36**
12.75	4.59	1.46	**18.74**
13.00	4.72	1.54	12.85
13.25	4.84	1.62	8.54
13.50	4.94	1.68	6.13
13.75	5.03	1.75	4.84
14.00	5.11	1.80	4.11
14.25	5.18	1.85	3.61
14.50	5.25	1.90	3.22
14.75	5.32	1.95	2.96
15.00	5.38	1.99	2.77
15.25	5.44	2.03	2.59
15.50	5.49	2.07	2.42
15.75	5.54	2.10	2.26
16.00	5.58	2.14	2.09
16.25	5.62	2.16	1.92
16.50	5.66	2.19	1.76
16.75	5.70	2.22	1.64
17.00	5.73	2.24	1.55
17.25	5.76	2.27	1.47
17.50	5.79	2.29	1.39
17.75	5.82	2.31	1.31
18.00	5.85	2.33	1.23
18.25	5.87	2.35	1.15
18.50	5.90	2.36	1.09
18.75	5.92	2.38	1.04
19.00	5.94	2.40	1.00
19.25	5.97	2.41	0.98
19.50	5.99	2.43	0.95
19.75	6.01	2.45	0.93
20.00	6.03	2.46	0.91
20.25	6.05	2.48	0.88
20.50	6.07	2.49	0.86
20.75	6.09	2.51	0.84
21.00	6.11	2.52	0.82
21.25	6.13	2.53	0.81
21.50	6.14	2.55	0.79
21.75	6.16	2.56	0.77
22.00	6.18	2.57	0.75
22.25	6.20	2.59	0.74
22.50	6.21	2.60	0.72
22.75	6.23	2.61	0.70
23.00	6.24	2.62	0.68
23.25	6.26	2.63	0.66
23.50	6.27	2.64	0.65
23.75	6.29	2.65	0.63
24.00	**6.30**	**2.66**	0.61

Summary for Subcatchment 08:

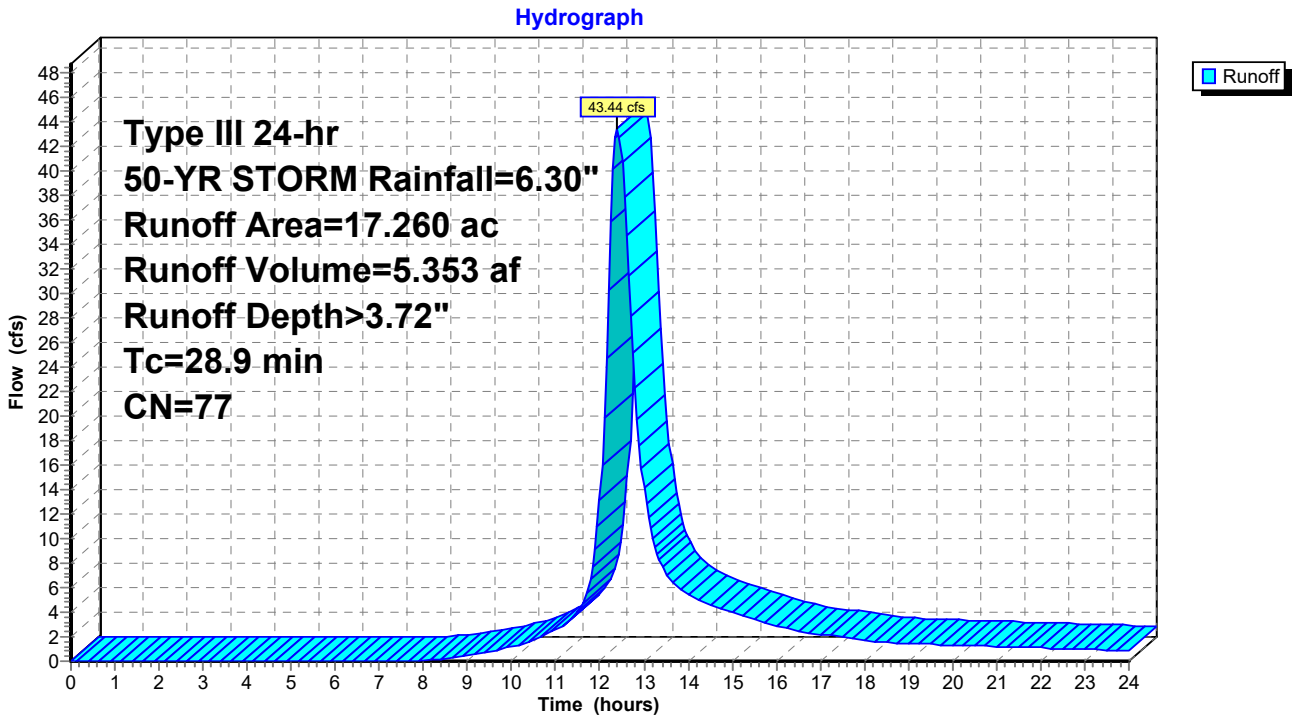
Runoff = 43.44 cfs @ 12.40 hrs, Volume= 5.353 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	17.260	77	
	17.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.9					**Direct Entry, SCS TR-55**

Subcatchment 08:



Hydrograph for Subcatchment 08:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.04
8.00	0.72	0.00	0.09
8.25	0.76	0.01	0.16
8.50	0.81	0.01	0.25
8.75	0.86	0.02	0.35
9.00	0.92	0.03	0.48
9.25	0.98	0.04	0.63
9.50	1.05	0.06	0.80
9.75	1.12	0.08	1.00
10.00	1.19	0.10	1.21
10.25	1.27	0.12	1.45
10.50	1.36	0.16	1.75
10.75	1.46	0.20	2.13
11.00	1.58	0.24	2.57
11.25	1.71	0.30	3.09
11.50	1.88	0.38	4.00
11.75	2.24	0.58	5.85
12.00	3.15	1.18	13.17
12.25	4.06	1.86	**35.77**
12.50	4.42	2.15	**40.71**
12.75	4.59	2.29	25.10
13.00	4.72	2.39	14.11
13.25	4.84	2.49	9.34
13.50	4.94	2.57	7.16
13.75	5.03	2.65	6.12
14.00	5.11	2.71	5.49
14.25	5.18	2.78	4.95
14.50	5.25	2.84	4.54
14.75	5.32	2.89	4.23
15.00	5.38	2.95	3.97
15.25	5.44	2.99	3.71
15.50	5.49	3.04	3.45
15.75	5.54	3.08	3.19
16.00	5.58	3.12	2.92
16.25	5.62	3.15	2.66
16.50	5.66	3.18	2.46
16.75	5.70	3.21	2.32
17.00	5.73	3.24	2.20
17.25	5.76	3.27	2.08
17.50	5.79	3.30	1.97
17.75	5.82	3.32	1.85
18.00	5.85	3.35	1.73
18.25	5.87	3.37	1.62
18.50	5.90	3.39	1.54
18.75	5.92	3.41	1.49
19.00	5.94	3.43	1.45
19.25	5.97	3.45	1.41
19.50	5.99	3.47	1.38
19.75	6.01	3.49	1.34
20.00	6.03	3.50	1.31
20.25	6.05	3.52	1.27
20.50	6.07	3.54	1.24
20.75	6.09	3.56	1.21
21.00	6.11	3.57	1.19
21.25	6.13	3.59	1.16
21.50	6.14	3.61	1.14
21.75	6.16	3.62	1.11
22.00	6.18	3.64	1.08
22.25	6.20	3.65	1.06
22.50	6.21	3.66	1.03
22.75	6.23	3.68	1.00
23.00	6.24	3.69	0.98
23.25	6.26	3.71	0.95
23.50	6.27	3.72	0.92
23.75	6.29	3.73	0.90
24.00	**6.30**	**3.74**	0.87

Summary for Subcatchment 09:

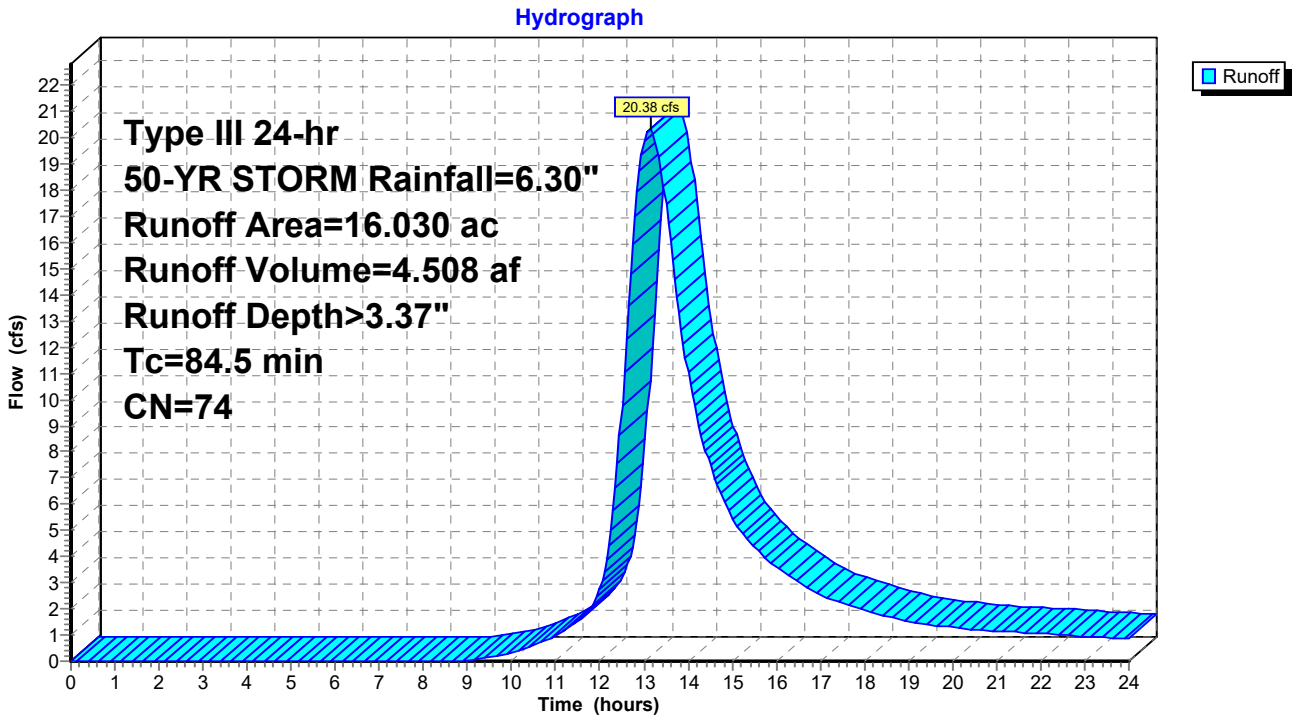
Runoff = 20.38 cfs @ 13.13 hrs, Volume= 4.508 af, Depth> 3.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	16.030	74	
	16.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
84.5					**Direct Entry, SCS TR-55**

Subcatchment 09:



Hydrograph for Subcatchment 09:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.00
8.00	0.72	0.00	0.00
8.25	0.76	0.00	0.00
8.50	0.81	0.00	0.00
8.75	0.86	0.01	0.01
9.00	0.92	0.01	0.04
9.25	0.98	0.02	0.08
9.50	1.05	0.03	0.15
9.75	1.12	0.04	0.23
10.00	1.19	0.06	0.34
10.25	1.27	0.08	0.46
10.50	1.36	0.10	0.61
10.75	1.46	0.14	0.78
11.00	1.58	0.17	0.99
11.25	1.71	0.22	1.24
11.50	1.88	0.29	1.55
11.75	2.24	0.47	1.98
12.00	3.15	1.00	2.77
12.25	4.06	1.64	5.04
12.50	4.42	1.91	9.80
12.75	4.59	2.04	15.95
13.00	4.72	2.15	**19.86**
13.25	4.84	2.23	**20.08**
13.50	4.94	2.31	17.45
13.75	5.03	2.39	13.94
14.00	5.11	2.45	11.06
14.25	5.18	2.51	8.99
14.50	5.25	2.57	7.47
14.75	5.32	2.62	6.35
15.00	5.38	2.67	5.49
15.25	5.44	2.72	4.85
15.50	5.49	2.76	4.36
15.75	5.54	2.80	3.95
16.00	5.58	2.84	3.61
16.25	5.62	2.87	3.31
16.50	5.66	2.90	3.02
16.75	5.70	2.93	2.75
17.00	5.73	2.96	2.53
17.25	5.76	2.99	2.35
17.50	5.79	3.01	2.20
17.75	5.82	3.03	2.06
18.00	5.85	3.06	1.94
18.25	5.87	3.08	1.82
18.50	5.90	3.10	1.71
18.75	5.92	3.12	1.61
19.00	5.94	3.14	1.52
19.25	5.97	3.16	1.45
19.50	5.99	3.17	1.39
19.75	6.01	3.19	1.34
20.00	6.03	3.21	1.30
20.25	6.05	3.23	1.26
20.50	6.07	3.24	1.22
20.75	6.09	3.26	1.19
21.00	6.11	3.28	1.16
21.25	6.13	3.29	1.13
21.50	6.14	3.31	1.10
21.75	6.16	3.32	1.08
22.00	6.18	3.34	1.05
22.25	6.20	3.35	1.03
22.50	6.21	3.36	1.00
22.75	6.23	3.38	0.98
23.00	6.24	3.39	0.96
23.25	6.26	3.40	0.93
23.50	6.27	3.42	0.91
23.75	6.29	3.43	0.89
24.00	**6.30**	**3.44**	0.86

Summary for Subcatchment 10:

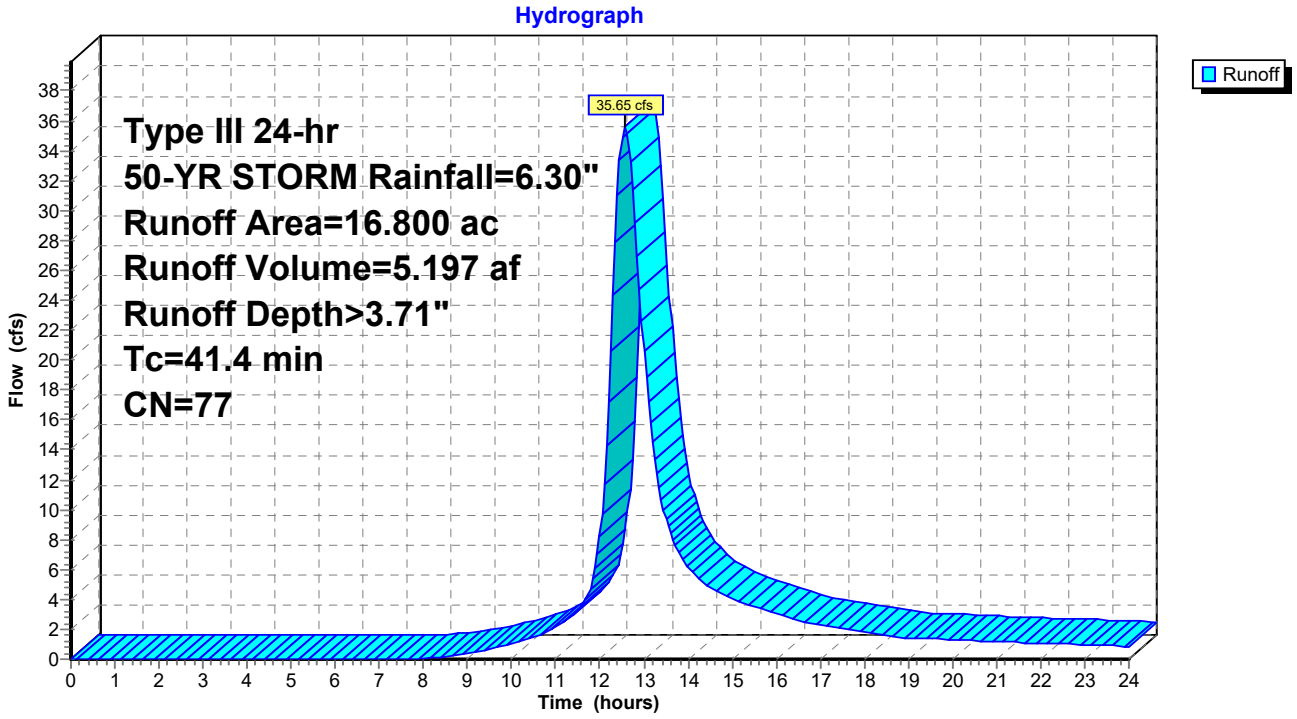
Runoff = 35.65 cfs @ 12.57 hrs, Volume= 5.197 af, Depth> 3.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	16.800	77	
	16.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
41.4					**Direct Entry, SCS TR-55**

Subcatchment 10:



Hydrograph for Subcatchment 10:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.02
8.00	0.72	0.00	0.05
8.25	0.76	0.01	0.11
8.50	0.81	0.01	0.18
8.75	0.86	0.02	0.27
9.00	0.92	0.03	0.38
9.25	0.98	0.04	0.51
9.50	1.05	0.06	0.66
9.75	1.12	0.08	0.83
10.00	1.19	0.10	1.02
10.25	1.27	0.12	1.24
10.50	1.36	0.16	1.49
10.75	1.46	0.20	1.81
11.00	1.58	0.24	2.19
11.25	1.71	0.30	2.64
11.50	1.88	0.38	3.28
11.75	2.24	0.58	4.46
12.00	3.15	1.18	8.23
12.25	4.06	1.86	20.63
12.50	4.42	2.15	**34.84**
12.75	4.59	2.29	**31.44**
13.00	4.72	2.39	20.65
13.25	4.84	2.49	13.35
13.50	4.94	2.57	9.41
13.75	5.03	2.65	7.33
14.00	5.11	2.71	6.17
14.25	5.18	2.78	5.37
14.50	5.25	2.84	4.78
14.75	5.32	2.89	4.39
15.00	5.38	2.95	4.08
15.25	5.44	2.99	3.81
15.50	5.49	3.04	3.56
15.75	5.54	3.08	3.30
16.00	5.58	3.12	3.04
16.25	5.62	3.15	2.79
16.50	5.66	3.18	2.56
16.75	5.70	3.21	2.38
17.00	5.73	3.24	2.24
17.25	5.76	3.27	2.12
17.50	5.79	3.30	2.00
17.75	5.82	3.32	1.89
18.00	5.85	3.35	1.78
18.25	5.87	3.37	1.66
18.50	5.90	3.39	1.56
18.75	5.92	3.41	1.49
19.00	5.94	3.43	1.45
19.25	5.97	3.45	1.40
19.50	5.99	3.47	1.37
19.75	6.01	3.49	1.33
20.00	6.03	3.50	1.30
20.25	6.05	3.52	1.27
20.50	6.07	3.54	1.23
20.75	6.09	3.56	1.20
21.00	6.11	3.57	1.18
21.25	6.13	3.59	1.15
21.50	6.14	3.61	1.13
21.75	6.16	3.62	1.10
22.00	6.18	3.64	1.07
22.25	6.20	3.65	1.05
22.50	6.21	3.66	1.02
22.75	6.23	3.68	1.00
23.00	6.24	3.69	0.97
23.25	6.26	3.71	0.94
23.50	6.27	3.72	0.92
23.75	6.29	3.73	0.89
24.00	**6.30**	**3.74**	0.87

Summary for Subcatchment 11:

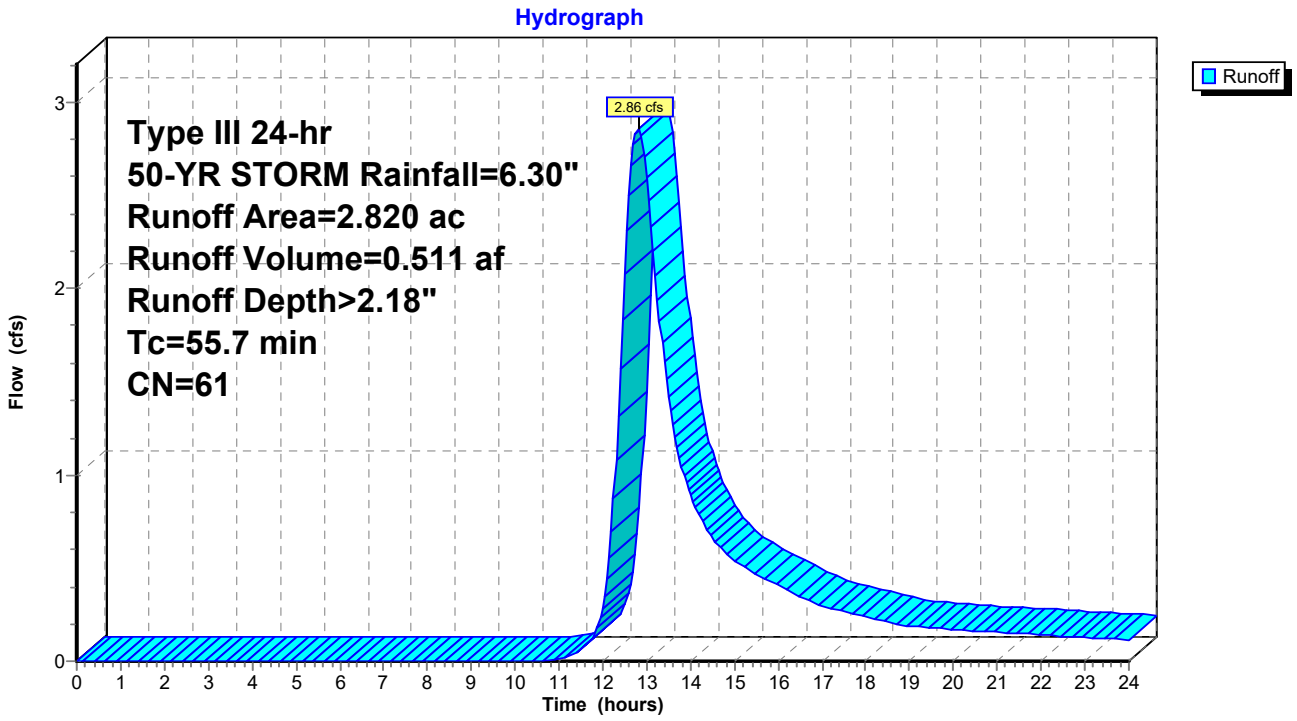
Runoff = 2.86 cfs @ 12.81 hrs, Volume= 0.511 af, Depth> 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	2.820	61	
	2.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
55.7					**Direct Entry, SCS TR-55**

Subcatchment 11:



Hydrograph for Subcatchment 11:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.00
8.00	0.72	0.00	0.00
8.25	0.76	0.00	0.00
8.50	0.81	0.00	0.00
8.75	0.86	0.00	0.00
9.00	0.92	0.00	0.00
9.25	0.98	0.00	0.00
9.50	1.05	0.00	0.00
9.75	1.12	0.00	0.00
10.00	1.19	0.00	0.00
10.25	1.27	0.00	0.00
10.50	1.36	0.00	0.00
10.75	1.46	0.01	0.00
11.00	1.58	0.01	0.01
11.25	1.71	0.03	0.03
11.50	1.88	0.05	0.07
11.75	2.24	0.13	0.13
12.00	3.15	0.42	0.28
12.25	4.06	0.84	0.88
12.50	4.42	1.04	2.08
12.75	4.59	1.13	**2.83**
13.00	4.72	1.21	**2.60**
13.25	4.84	1.27	1.94
13.50	4.94	1.33	1.42
13.75	5.03	1.39	1.09
14.00	5.11	1.44	0.89
14.25	5.18	1.48	0.76
14.50	5.25	1.52	0.66
14.75	5.32	1.57	0.60
15.00	5.38	1.60	0.54
15.25	5.44	1.64	0.50
15.50	5.49	1.67	0.47
15.75	5.54	1.70	0.44
16.00	5.58	1.73	0.41
16.25	5.62	1.76	0.38
16.50	5.66	1.78	0.35
16.75	5.70	1.80	0.32
17.00	5.73	1.83	0.30
17.25	5.76	1.85	0.28
17.50	5.79	1.87	0.27
17.75	5.82	1.89	0.25
18.00	5.85	1.90	0.24
18.25	5.87	1.92	0.22
18.50	5.90	1.94	0.21
18.75	5.92	1.95	0.20
19.00	5.94	1.97	0.19
19.25	5.97	1.98	0.19
19.50	5.99	2.00	0.18
19.75	6.01	2.01	0.18
20.00	6.03	2.03	0.17
20.25	6.05	2.04	0.17
20.50	6.07	2.05	0.16
20.75	6.09	2.06	0.16
21.00	6.11	2.08	0.15
21.25	6.13	2.09	0.15
21.50	6.14	2.10	0.15
21.75	6.16	2.11	0.15
22.00	6.18	2.13	0.14
22.25	6.20	2.14	0.14
22.50	6.21	2.15	0.14
22.75	6.23	2.16	0.13
23.00	6.24	2.17	0.13
23.25	6.26	2.18	0.13
23.50	6.27	2.19	0.12
23.75	6.29	2.20	0.12
24.00	**6.30**	**2.21**	0.12

Summary for Subcatchment 12:

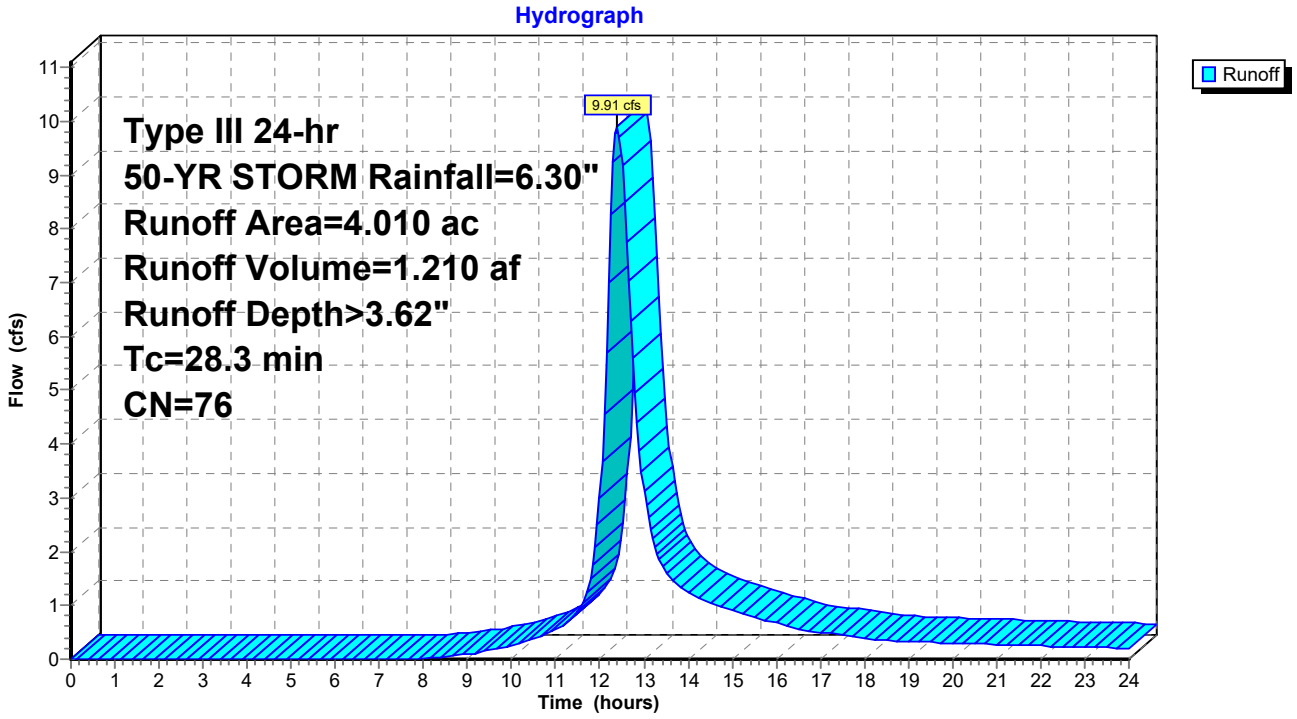
Runoff = 9.91 cfs @ 12.39 hrs, Volume= 1.210 af, Depth> 3.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	4.010	76	
	4.010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3					**Direct Entry, SCS TR-55**

Subcatchment 12:



Hydrograph for Subcatchment 12:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.00
8.00	0.72	0.00	0.01
8.25	0.76	0.01	0.02
8.50	0.81	0.01	0.04
8.75	0.86	0.02	0.06
9.00	0.92	0.02	0.09
9.25	0.98	0.03	0.13
9.50	1.05	0.05	0.16
9.75	1.12	0.06	0.21
10.00	1.19	0.08	0.25
10.25	1.27	0.11	0.31
10.50	1.36	0.14	0.38
10.75	1.46	0.17	0.46
11.00	1.58	0.22	0.56
11.25	1.71	0.27	0.68
11.50	1.88	0.35	0.89
11.75	2.24	0.54	1.31
12.00	3.15	1.12	3.01
12.25	4.06	1.79	**8.27**
12.50	4.42	2.07	**9.19**
12.75	4.59	2.20	5.59
13.00	4.72	2.31	3.14
13.25	4.84	2.40	2.09
13.50	4.94	2.48	1.62
13.75	5.03	2.56	1.39
14.00	5.11	2.63	1.25
14.25	5.18	2.69	1.13
14.50	5.25	2.75	1.04
14.75	5.32	2.80	0.97
15.00	5.38	2.85	0.91
15.25	5.44	2.90	0.85
15.50	5.49	2.95	0.79
15.75	5.54	2.99	0.73
16.00	5.58	3.02	0.67
16.25	5.62	3.06	0.61
16.50	5.66	3.09	0.56
16.75	5.70	3.12	0.53
17.00	5.73	3.15	0.50
17.25	5.76	3.18	0.48
17.50	5.79	3.20	0.45
17.75	5.82	3.23	0.42
18.00	5.85	3.25	0.40
18.25	5.87	3.27	0.37
18.50	5.90	3.29	0.35
18.75	5.92	3.31	0.34
19.00	5.94	3.33	0.33
19.25	5.97	3.35	0.32
19.50	5.99	3.37	0.32
19.75	6.01	3.39	0.31
20.00	6.03	3.41	0.30
20.25	6.05	3.42	0.29
20.50	6.07	3.44	0.28
20.75	6.09	3.46	0.28
21.00	6.11	3.47	0.27
21.25	6.13	3.49	0.27
21.50	6.14	3.50	0.26
21.75	6.16	3.52	0.25
22.00	6.18	3.53	0.25
22.25	6.20	3.55	0.24
22.50	6.21	3.56	0.24
22.75	6.23	3.58	0.23
23.00	6.24	3.59	0.22
23.25	6.26	3.60	0.22
23.50	6.27	3.62	0.21
23.75	6.29	3.63	0.21
24.00	**6.30**	**3.64**	0.20

Summary for Subcatchment 13:

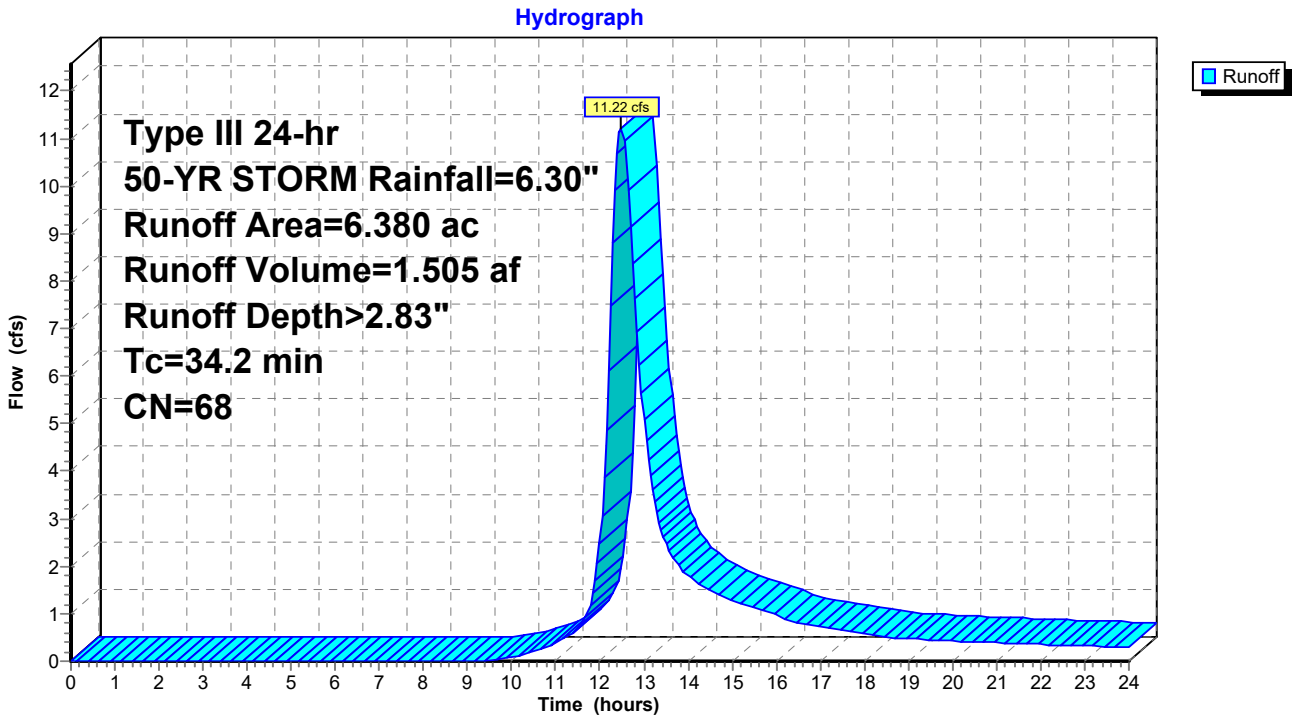
Runoff = 11.22 cfs @ 12.49 hrs, Volume= 1.505 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	6.380	68	
	6.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2					**Direct Entry, SCS TR-55**

Subcatchment 13:



Hydrograph for Subcatchment 13:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.00
8.00	0.72	0.00	0.00
8.25	0.76	0.00	0.00
8.50	0.81	0.00	0.00
8.75	0.86	0.00	0.00
9.00	0.92	0.00	0.00
9.25	0.98	0.00	0.00
9.50	1.05	0.00	0.01
9.75	1.12	0.01	0.03
10.00	1.19	0.01	0.08
10.25	1.27	0.02	0.13
10.50	1.36	0.03	0.20
10.75	1.46	0.05	0.28
11.00	1.58	0.08	0.39
11.25	1.71	0.11	0.51
11.50	1.88	0.16	0.71
11.75	2.24	0.28	1.09
12.00	3.15	0.71	2.49
12.25	4.06	1.24	7.47
12.50	4.42	1.48	**11.22**
12.75	4.59	1.59	8.38
13.00	4.72	1.69	5.10
13.25	4.84	1.76	3.35
13.50	4.94	1.83	2.48
13.75	5.03	1.90	2.06
14.00	5.11	1.96	1.80
14.25	5.18	2.01	1.62
14.50	5.25	2.06	1.47
14.75	5.32	2.11	1.37
15.00	5.38	2.16	1.29
15.25	5.44	2.20	1.21
15.50	5.49	2.24	1.13
15.75	5.54	2.27	1.05
16.00	5.58	2.30	0.96
16.25	5.62	2.33	0.88
16.50	5.66	2.36	0.81
16.75	5.70	2.39	0.76
17.00	5.73	2.42	0.72
17.25	5.76	2.44	0.68
17.50	5.79	2.46	0.65
17.75	5.82	2.48	0.61
18.00	5.85	2.50	0.57
18.25	5.87	2.52	0.54
18.50	5.90	2.54	0.51
18.75	5.92	2.56	0.49
19.00	5.94	2.58	0.47
19.25	5.97	2.59	0.46
19.50	5.99	2.61	0.45
19.75	6.01	2.63	0.44
20.00	6.03	2.64	0.43
20.25	6.05	2.66	0.42
20.50	6.07	2.67	0.41
20.75	6.09	2.69	0.40
21.00	6.11	2.70	0.39
21.25	6.13	2.72	0.38
21.50	6.14	2.73	0.37
21.75	6.16	2.75	0.36
22.00	6.18	2.76	0.36
22.25	6.20	2.77	0.35
22.50	6.21	2.78	0.34
22.75	6.23	2.80	0.33
23.00	6.24	2.81	0.32
23.25	6.26	2.82	0.31
23.50	6.27	2.83	0.30
23.75	6.29	2.84	0.30
24.00	**6.30**	**2.85**	0.29

Summary for Subcatchment 14:

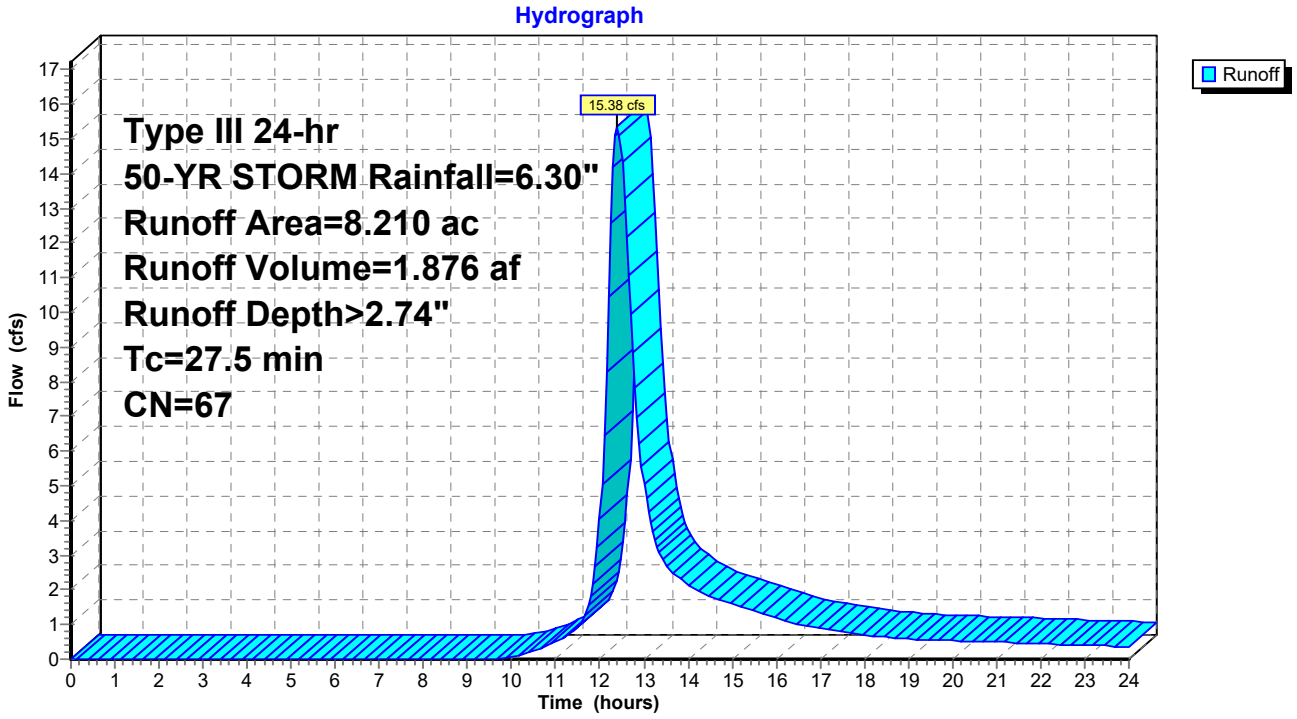
Runoff = 15.38 cfs @ 12.40 hrs, Volume= 1.876 af, Depth> 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	8.210	67	
	8.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5					**Direct Entry, SCS TR-55**

Subcatchment 14:



Hydrograph for Subcatchment 14:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.00
8.00	0.72	0.00	0.00
8.25	0.76	0.00	0.00
8.50	0.81	0.00	0.00
8.75	0.86	0.00	0.00
9.00	0.92	0.00	0.00
9.25	0.98	0.00	0.00
9.50	1.05	0.00	0.00
9.75	1.12	0.00	0.03
10.00	1.19	0.01	0.08
10.25	1.27	0.02	0.15
10.50	1.36	0.03	0.24
10.75	1.46	0.04	0.35
11.00	1.58	0.06	0.49
11.25	1.71	0.09	0.66
11.50	1.88	0.14	0.95
11.75	2.24	0.25	1.54
12.00	3.15	0.66	4.02
12.25	4.06	1.18	**12.56**
12.50	4.42	1.41	**14.33**
12.75	4.59	1.52	8.84
13.00	4.72	1.61	5.06
13.25	4.84	1.69	3.45
13.50	4.94	1.76	2.72
13.75	5.03	1.82	2.37
14.00	5.11	1.88	2.15
14.25	5.18	1.93	1.95
14.50	5.25	1.98	1.79
14.75	5.32	2.03	1.68
15.00	5.38	2.07	1.58
15.25	5.44	2.11	1.48
15.50	5.49	2.15	1.38
15.75	5.54	2.19	1.28
16.00	5.58	2.22	1.17
16.25	5.62	2.25	1.07
16.50	5.66	2.28	0.99
16.75	5.70	2.30	0.94
17.00	5.73	2.33	0.89
17.25	5.76	2.35	0.84
17.50	5.79	2.37	0.80
17.75	5.82	2.40	0.75
18.00	5.85	2.41	0.70
18.25	5.87	2.43	0.66
18.50	5.90	2.45	0.63
18.75	5.92	2.47	0.61
19.00	5.94	2.49	0.59
19.25	5.97	2.50	0.58
19.50	5.99	2.52	0.56
19.75	6.01	2.54	0.55
20.00	6.03	2.55	0.54
20.25	6.05	2.57	0.52
20.50	6.07	2.58	0.51
20.75	6.09	2.60	0.50
21.00	6.11	2.61	0.49
21.25	6.13	2.63	0.48
21.50	6.14	2.64	0.47
21.75	6.16	2.65	0.46
22.00	6.18	2.67	0.45
22.25	6.20	2.68	0.44
22.50	6.21	2.69	0.42
22.75	6.23	2.70	0.41
23.00	6.24	2.71	0.40
23.25	6.26	2.73	0.39
23.50	6.27	2.74	0.38
23.75	6.29	2.75	0.37
24.00	**6.30**	**2.76**	0.36

Summary for Subcatchment 15:

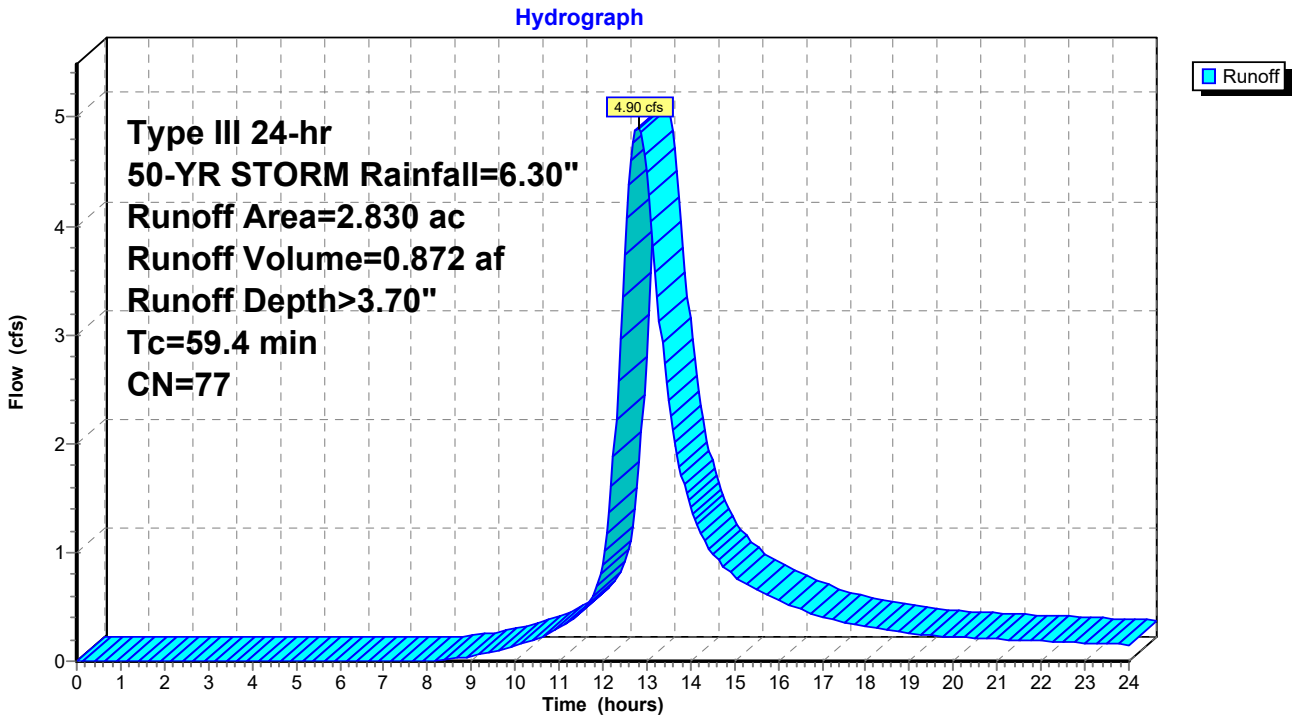
Runoff = 4.90 cfs @ 12.80 hrs, Volume= 0.872 af, Depth> 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	2.830	77	
	2.830		100.00% Pervious Area

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

Subcatchment 15:



Hydrograph for Subcatchment 15:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.08	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.13	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.51	0.00	0.00
6.75	0.54	0.00	0.00
7.00	0.57	0.00	0.00
7.25	0.60	0.00	0.00
7.50	0.64	0.00	0.00
7.75	0.68	0.00	0.00
8.00	0.72	0.00	0.00
8.25	0.76	0.01	0.01
8.50	0.81	0.01	0.02
8.75	0.86	0.02	0.03
9.00	0.92	0.03	0.05
9.25	0.98	0.04	0.06
9.50	1.05	0.06	0.09
9.75	1.12	0.08	0.11
10.00	1.19	0.10	0.14
10.25	1.27	0.12	0.17
10.50	1.36	0.16	0.21
10.75	1.46	0.20	0.25
11.00	1.58	0.24	0.31
11.25	1.71	0.30	0.37
11.50	1.88	0.38	0.45
11.75	2.24	0.58	0.58
12.00	3.15	1.18	0.89
12.25	4.06	1.86	1.89
12.50	4.42	2.15	3.73
12.75	4.59	2.29	**4.88**
13.00	4.72	2.39	**4.49**
13.25	4.84	2.49	3.35
13.50	4.94	2.57	2.41
13.75	5.03	2.65	1.79
14.00	5.11	2.71	1.41
14.25	5.18	2.78	1.16
14.50	5.25	2.84	0.99
14.75	5.32	2.89	0.87
15.00	5.38	2.95	0.78
15.25	5.44	2.99	0.71
15.50	5.49	3.04	0.66
15.75	5.54	3.08	0.61
16.00	5.58	3.12	0.56
16.25	5.62	3.15	0.52
16.50	5.66	3.18	0.48
16.75	5.70	3.21	0.44
17.00	5.73	3.24	0.41
17.25	5.76	3.27	0.38
17.50	5.79	3.30	0.36
17.75	5.82	3.32	0.34
18.00	5.85	3.35	0.32
18.25	5.87	3.37	0.30
18.50	5.90	3.39	0.28
18.75	5.92	3.41	0.27
19.00	5.94	3.43	0.26
19.25	5.97	3.45	0.25
19.50	5.99	3.47	0.24
19.75	6.01	3.49	0.23
20.00	6.03	3.50	0.23
20.25	6.05	3.52	0.22
20.50	6.07	3.54	0.21
20.75	6.09	3.56	0.21
21.00	6.11	3.57	0.20
21.25	6.13	3.59	0.20
21.50	6.14	3.61	0.19
21.75	6.16	3.62	0.19
22.00	6.18	3.64	0.19
22.25	6.20	3.65	0.18
22.50	6.21	3.66	0.18
22.75	6.23	3.68	0.17
23.00	6.24	3.69	0.17
23.25	6.26	3.71	0.16
23.50	6.27	3.72	0.16
23.75	6.29	3.73	0.16
24.00	**6.30**	**3.74**	0.15

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment01: Runoff Area=2.560 ac 0.00% Impervious Runoff Depth>4.56"
Tc=30.9 min CN=79 Runoff=7.63 cfs 0.973 af

Subcatchment02: Runoff Area=11.570 ac 0.00% Impervious Runoff Depth>3.59"
Tc=31.4 min CN=70 Runoff=27.08 cfs 3.466 af

Subcatchment03: Runoff Area=13.570 ac 0.00% Impervious Runoff Depth>4.45"
Tc=32.4 min CN=78 Runoff=38.66 cfs 5.030 af

Subcatchment04: Runoff Area=1.980 ac 0.00% Impervious Runoff Depth>3.91"
Tc=37.7 min CN=73 Runoff=4.63 cfs 0.644 af

Subcatchment05: Runoff Area=4.310 ac 0.00% Impervious Runoff Depth>4.35"
Tc=23.5 min CN=77 Runoff=13.85 cfs 1.561 af

Subcatchment07: Runoff Area=13.810 ac 0.00% Impervious Runoff Depth>3.17"
Tc=42.1 min CN=66 Runoff=24.64 cfs 3.652 af

Subcatchment08: Runoff Area=17.260 ac 0.00% Impervious Runoff Depth>4.34"
Tc=28.9 min CN=77 Runoff=50.60 cfs 6.246 af

Subcatchment09: Runoff Area=16.030 ac 0.00% Impervious Runoff Depth>3.97"
Tc=84.5 min CN=74 Runoff=24.00 cfs 5.302 af

Subcatchment10: Runoff Area=16.800 ac 0.00% Impervious Runoff Depth>4.33"
Tc=41.4 min CN=77 Runoff=41.53 cfs 6.064 af

Subcatchment11: Runoff Area=2.820 ac 0.00% Impervious Runoff Depth>2.66"
Tc=55.7 min CN=61 Runoff=3.56 cfs 0.626 af

Subcatchment12: Runoff Area=4.010 ac 0.00% Impervious Runoff Depth>4.23"
Tc=28.3 min CN=76 Runoff=11.58 cfs 1.415 af

Subcatchment13: Runoff Area=6.380 ac 0.00% Impervious Runoff Depth>3.38"
Tc=34.2 min CN=68 Runoff=13.48 cfs 1.800 af

Subcatchment14: Runoff Area=8.210 ac 0.00% Impervious Runoff Depth>3.29"
Tc=27.5 min CN=67 Runoff=18.56 cfs 2.249 af

Subcatchment15: Runoff Area=2.830 ac 0.00% Impervious Runoff Depth>4.31"
Tc=59.4 min CN=77 Runoff=5.71 cfs 1.018 af

Total Runoff Area = 122.140 ac Runoff Volume = 40.046 af Average Runoff Depth = 3.93"
100.00% Pervious = 122.140 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 01:

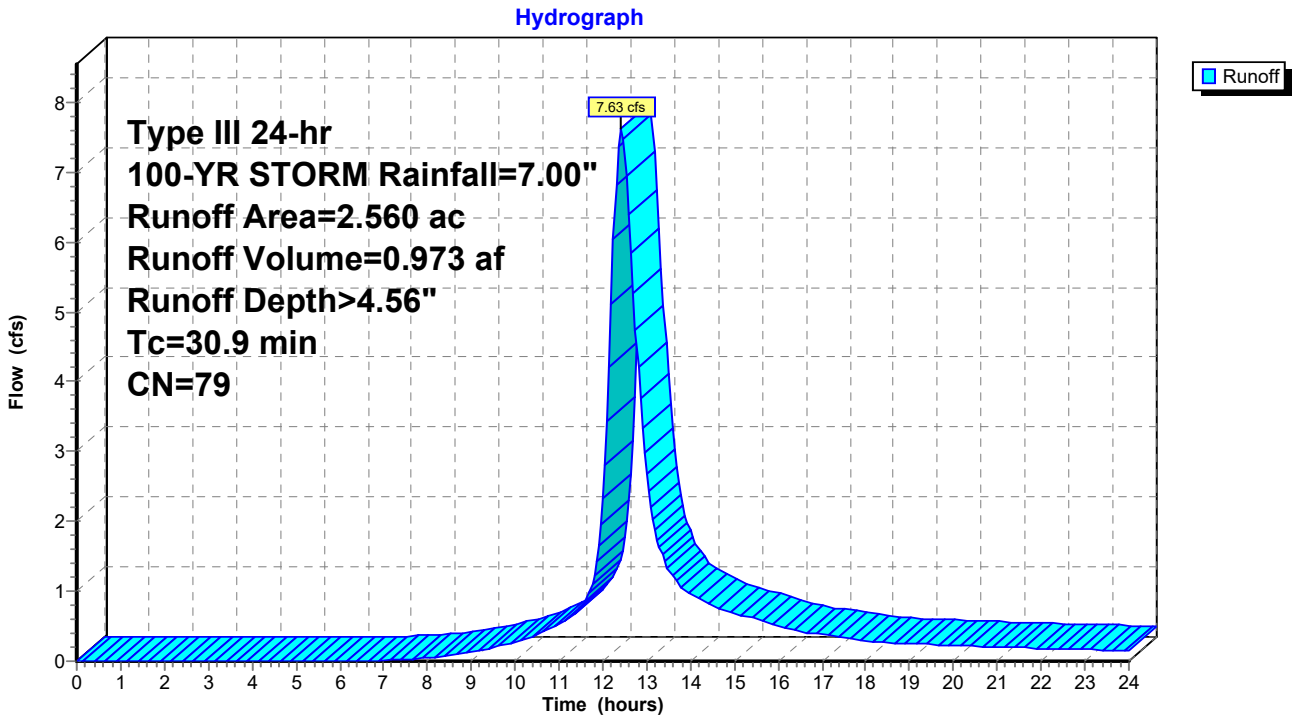
Runoff = 7.63 cfs @ 12.42 hrs, Volume= 0.973 af, Depth> 4.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	2.560	79	
	2.560		100.00% Pervious Area

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

Subcatchment 01:



Hydrograph for Subcatchment 01:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.01
7.25	0.67	0.01	0.02
7.50	0.71	0.01	0.03
7.75	0.75	0.02	0.04
8.00	0.80	0.02	0.05
8.25	0.85	0.03	0.07
8.50	0.90	0.04	0.09
8.75	0.96	0.06	0.11
9.00	1.02	0.08	0.13
9.25	1.09	0.10	0.17
9.50	1.16	0.12	0.20
9.75	1.24	0.15	0.24
10.00	1.32	0.18	0.28
10.25	1.41	0.22	0.32
10.50	1.52	0.27	0.38
10.75	1.63	0.32	0.45
11.00	1.75	0.38	0.53
11.25	1.90	0.46	0.62
11.50	2.09	0.57	0.78
11.75	2.49	0.83	1.10
12.00	3.50	1.57	2.32
12.25	4.51	2.39	**6.04**
12.50	4.91	2.73	**7.35**
12.75	5.10	2.89	4.73
13.00	5.25	3.02	2.69
13.25	5.37	3.12	1.74
13.50	5.48	3.22	1.30
13.75	5.59	3.31	1.09
14.00	5.68	3.39	0.97
14.25	5.76	3.47	0.87
14.50	5.84	3.54	0.79
14.75	5.91	3.60	0.74
15.00	5.98	3.66	0.69
15.25	6.04	3.72	0.65
15.50	6.10	3.77	0.60
15.75	6.15	3.82	0.56
16.00	6.20	3.86	0.51
16.25	6.25	3.90	0.46
16.50	6.29	3.94	0.43
16.75	6.33	3.97	0.40
17.00	6.37	4.01	0.38
17.25	6.40	4.04	0.36
17.50	6.44	4.07	0.34
17.75	6.47	4.10	0.32
18.00	6.50	4.13	0.30
18.25	6.52	4.15	0.28
18.50	6.55	4.18	0.27
18.75	6.58	4.20	0.26
19.00	6.60	4.22	0.25
19.25	6.63	4.25	0.24
19.50	6.65	4.27	0.24
19.75	6.68	4.29	0.23
20.00	6.70	4.31	0.23
20.25	6.72	4.33	0.22
20.50	6.74	4.35	0.21
20.75	6.77	4.37	0.21
21.00	6.79	4.39	0.20
21.25	6.81	4.41	0.20
21.50	6.83	4.43	0.20
21.75	6.85	4.44	0.19
22.00	6.87	4.46	0.19
22.25	6.88	4.48	0.18
22.50	6.90	4.49	0.18
22.75	6.92	4.51	0.17
23.00	6.94	4.53	0.17
23.25	6.95	4.54	0.16
23.50	6.97	4.56	0.16
23.75	6.98	4.57	0.15
24.00	**7.00**	**4.58**	0.15

Summary for Subcatchment 02:

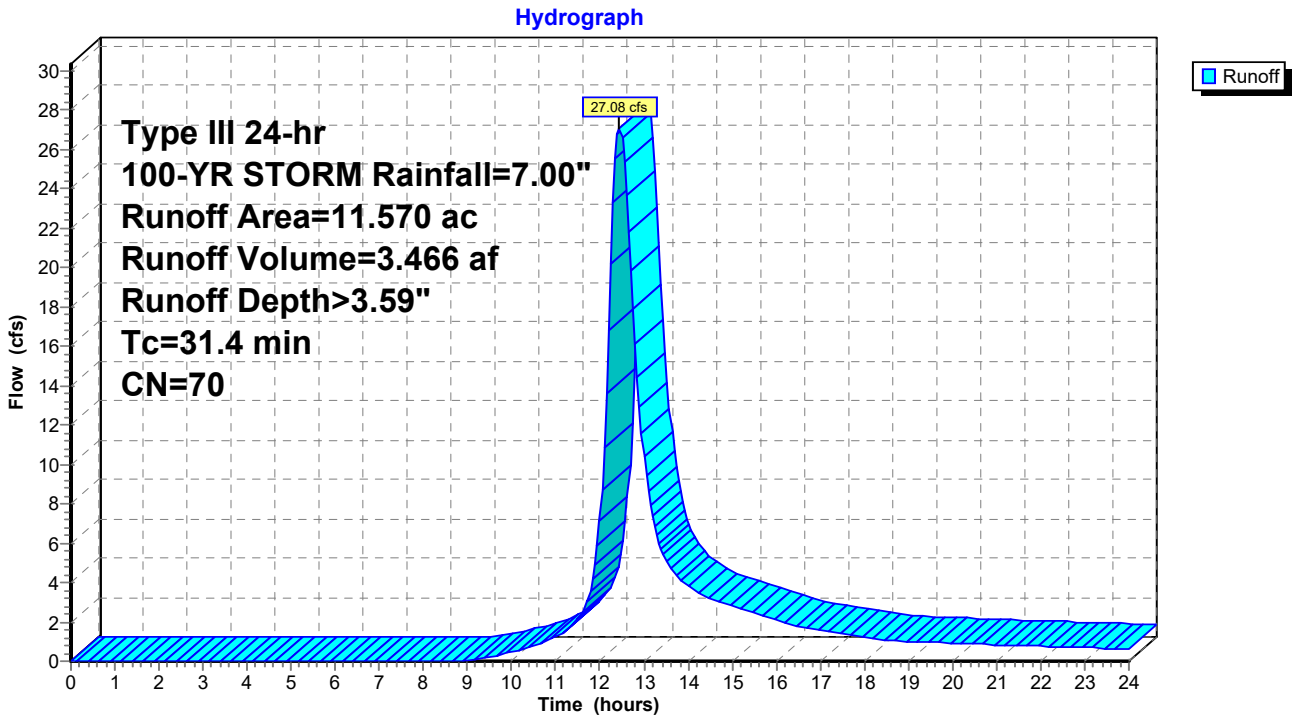
Runoff = 27.08 cfs @ 12.44 hrs, Volume= 3.466 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	11.570	70	
	11.570		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.4					**Direct Entry, SCS TR-55**

Subcatchment 02:



Hydrograph for Subcatchment 02:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.00
7.50	0.71	0.00	0.00
7.75	0.75	0.00	0.00
8.00	0.80	0.00	0.00
8.25	0.85	0.00	0.00
8.50	0.90	0.00	0.00
8.75	0.96	0.00	0.02
9.00	1.02	0.01	0.07
9.25	1.09	0.01	0.14
9.50	1.16	0.02	0.23
9.75	1.24	0.03	0.34
10.00	1.32	0.05	0.47
10.25	1.41	0.06	0.61
10.50	1.52	0.09	0.78
10.75	1.63	0.12	1.01
11.00	1.75	0.15	1.27
11.25	1.90	0.20	1.59
11.50	2.09	0.27	2.11
11.75	2.49	0.45	3.14
12.00	3.50	1.01	7.09
12.25	4.51	1.68	**20.24**
12.50	4.91	1.97	**26.56**
12.75	5.10	2.11	17.90
13.00	5.25	2.22	10.41
13.25	5.37	2.32	6.84
13.50	5.48	2.40	5.15
13.75	5.59	2.48	4.33
14.00	5.68	2.55	3.84
14.25	5.76	2.62	3.46
14.50	5.84	2.68	3.17
14.75	5.91	2.74	2.96
15.00	5.98	2.79	2.77
15.25	6.04	2.84	2.59
15.50	6.10	2.89	2.42
15.75	6.15	2.93	2.24
16.00	6.20	2.97	2.06
16.25	6.25	3.00	1.88
16.50	6.29	3.04	1.73
16.75	6.33	3.07	1.63
17.00	6.37	3.10	1.54
17.25	6.40	3.13	1.46
17.50	6.44	3.15	1.38
17.75	6.47	3.18	1.30
18.00	6.50	3.20	1.22
18.25	6.52	3.23	1.14
18.50	6.55	3.25	1.08
18.75	6.58	3.27	1.04
19.00	6.60	3.29	1.02
19.25	6.63	3.31	0.99
19.50	6.65	3.33	0.97
19.75	6.68	3.35	0.94
20.00	6.70	3.37	0.92
20.25	6.72	3.39	0.89
20.50	6.74	3.41	0.87
20.75	6.77	3.42	0.85
21.00	6.79	3.44	0.83
21.25	6.81	3.46	0.82
21.50	6.83	3.47	0.80
21.75	6.85	3.49	0.78
22.00	6.87	3.51	0.76
22.25	6.88	3.52	0.74
22.50	6.90	3.54	0.72
22.75	6.92	3.55	0.71
23.00	6.94	3.57	0.69
23.25	6.95	3.58	0.67
23.50	6.97	3.59	0.65
23.75	6.98	3.61	0.63
24.00	**7.00**	**3.62**	0.61

Summary for Subcatchment 03:

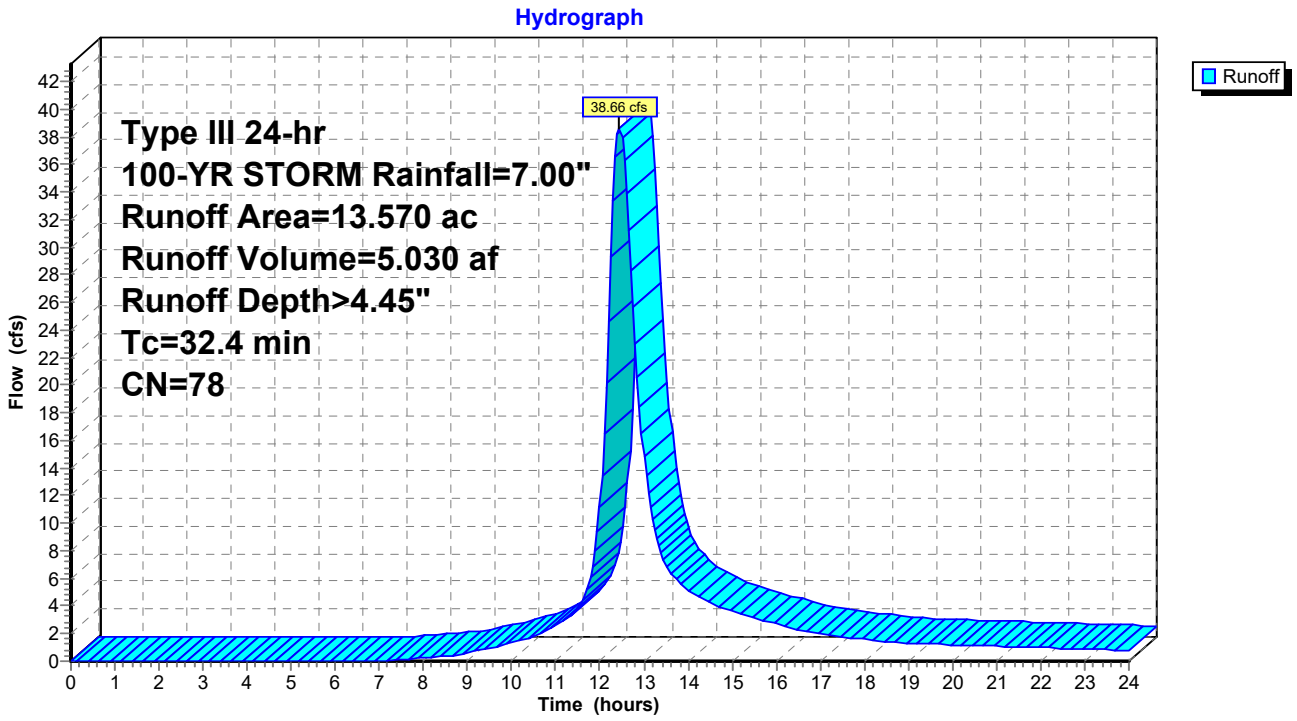
Runoff = 38.66 cfs @ 12.44 hrs, Volume= 5.030 af, Depth> 4.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	13.570	78	
	13.570		100.00% Pervious Area

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

Subcatchment 03:



Hydrograph for Subcatchment 03:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.02
7.25	0.67	0.00	0.05
7.50	0.71	0.01	0.10
7.75	0.75	0.01	0.16
8.00	0.80	0.02	0.22
8.25	0.85	0.03	0.29
8.50	0.90	0.04	0.38
8.75	0.96	0.05	0.49
9.00	1.02	0.06	0.62
9.25	1.09	0.08	0.77
9.50	1.16	0.10	0.94
9.75	1.24	0.13	1.13
10.00	1.32	0.16	1.33
10.25	1.41	0.20	1.55
10.50	1.52	0.24	1.83
10.75	1.63	0.29	2.19
11.00	1.75	0.35	2.60
11.25	1.90	0.43	3.07
11.50	2.09	0.53	3.86
11.75	2.49	0.78	5.42
12.00	3.50	1.50	11.23
12.25	4.51	2.30	**29.27**
12.50	4.91	2.64	**37.98**
12.75	5.10	2.80	25.62
13.00	5.25	2.93	14.83
13.25	5.37	3.03	9.55
13.50	5.48	3.13	7.05
13.75	5.59	3.22	5.85
14.00	5.68	3.30	5.14
14.25	5.76	3.37	4.60
14.50	5.84	3.44	4.20
14.75	5.91	3.50	3.90
15.00	5.98	3.56	3.65
15.25	6.04	3.62	3.41
15.50	6.10	3.67	3.17
15.75	6.15	3.72	2.93
16.00	6.20	3.76	2.69
16.25	6.25	3.80	2.46
16.50	6.29	3.83	2.26
16.75	6.33	3.87	2.13
17.00	6.37	3.90	2.01
17.25	6.40	3.94	1.90
17.50	6.44	3.97	1.80
17.75	6.47	3.99	1.69
18.00	6.50	4.02	1.59
18.25	6.52	4.05	1.48
18.50	6.55	4.07	1.40
18.75	6.58	4.09	1.35
19.00	6.60	4.12	1.31
19.25	6.63	4.14	1.28
19.50	6.65	4.16	1.25
19.75	6.68	4.18	1.22
20.00	6.70	4.20	1.19
20.25	6.72	4.22	1.15
20.50	6.74	4.24	1.12
20.75	6.77	4.26	1.10
21.00	6.79	4.28	1.07
21.25	6.81	4.30	1.05
21.50	6.83	4.32	1.03
21.75	6.85	4.34	1.00
22.00	6.87	4.35	0.98
22.25	6.88	4.37	0.95
22.50	6.90	4.39	0.93
22.75	6.92	4.40	0.91
23.00	6.94	4.42	0.88
23.25	6.95	4.43	0.86
23.50	6.97	4.45	0.84
23.75	6.98	4.46	0.81
24.00	**7.00**	**4.47**	0.79

Summary for Subcatchment 04:

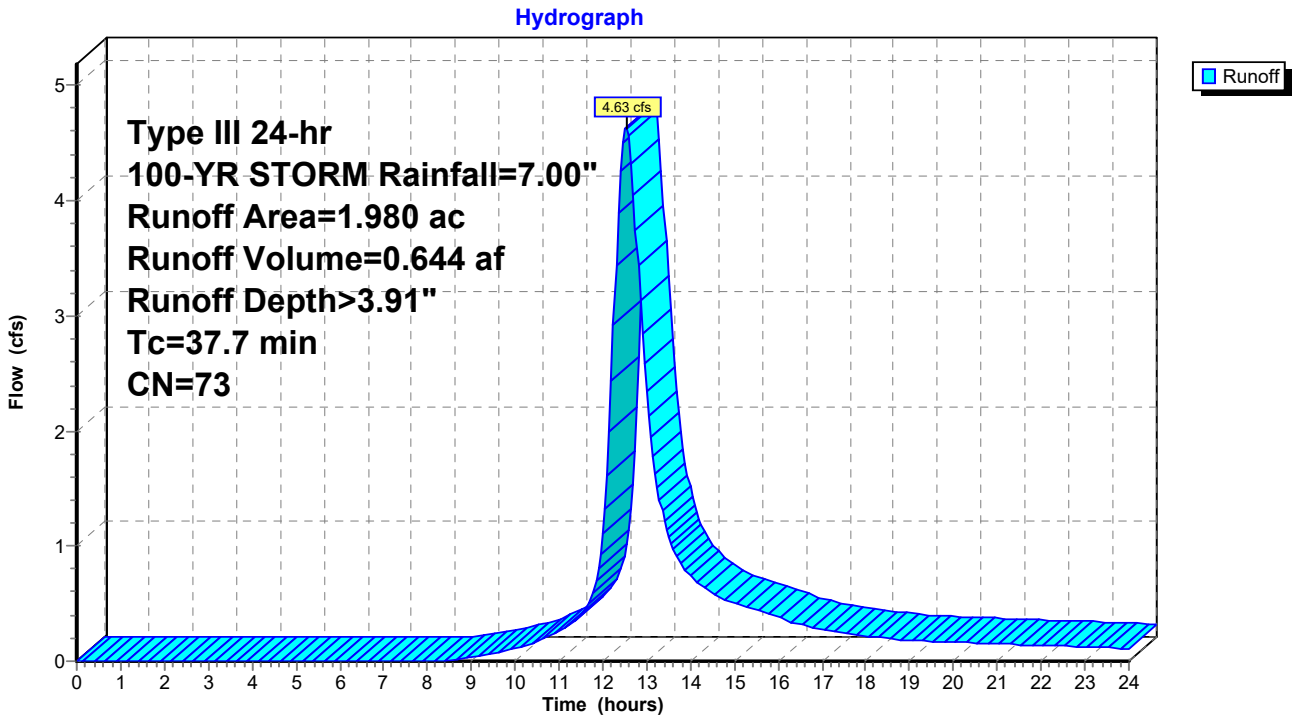
Runoff = 4.63 cfs @ 12.52 hrs, Volume= 0.644 af, Depth> 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	1.980	73	
	1.980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
37.7					**Direct Entry, SCS TR-55**

Subcatchment 04:



Hydrograph for Subcatchment 04:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.00
7.50	0.71	0.00	0.00
7.75	0.75	0.00	0.00
8.00	0.80	0.00	0.00
8.25	0.85	0.00	0.00
8.50	0.90	0.01	0.01
8.75	0.96	0.01	0.02
9.00	1.02	0.02	0.03
9.25	1.09	0.03	0.05
9.50	1.16	0.04	0.07
9.75	1.24	0.06	0.09
10.00	1.32	0.08	0.11
10.25	1.41	0.10	0.14
10.50	1.52	0.13	0.17
10.75	1.63	0.17	0.21
11.00	1.75	0.22	0.26
11.25	1.90	0.28	0.31
11.50	2.09	0.36	0.40
11.75	2.49	0.56	0.56
12.00	3.50	1.18	1.10
12.25	4.51	1.91	2.92
12.50	4.91	2.21	**4.62**
12.75	5.10	2.36	3.74
13.00	5.25	2.48	2.34
13.25	5.37	2.58	1.51
13.50	5.48	2.67	1.08
13.75	5.59	2.75	0.86
14.00	5.68	2.82	0.74
14.25	5.76	2.89	0.65
14.50	5.84	2.96	0.59
14.75	5.91	3.02	0.55
15.00	5.98	3.07	0.51
15.25	6.04	3.12	0.48
15.50	6.10	3.17	0.44
15.75	6.15	3.22	0.41
16.00	6.20	3.26	0.38
16.25	6.25	3.29	0.35
16.50	6.29	3.33	0.32
16.75	6.33	3.36	0.30
17.00	6.37	3.40	0.28
17.25	6.40	3.43	0.27
17.50	6.44	3.45	0.25
17.75	6.47	3.48	0.24
18.00	6.50	3.50	0.22
18.25	6.52	3.53	0.21
18.50	6.55	3.55	0.20
18.75	6.58	3.57	0.19
19.00	6.60	3.60	0.18
19.25	6.63	3.62	0.18
19.50	6.65	3.64	0.17
19.75	6.68	3.66	0.17
20.00	6.70	3.68	0.17
20.25	6.72	3.70	0.16
20.50	6.74	3.72	0.16
20.75	6.77	3.73	0.15
21.00	6.79	3.75	0.15
21.25	6.81	3.77	0.15
21.50	6.83	3.79	0.14
21.75	6.85	3.80	0.14
22.00	6.87	3.82	0.14
22.25	6.88	3.84	0.13
22.50	6.90	3.85	0.13
22.75	6.92	3.87	0.13
23.00	6.94	3.88	0.12
23.25	6.95	3.89	0.12
23.50	6.97	3.91	0.12
23.75	6.98	3.92	0.11
24.00	**7.00**	**3.94**	0.11

Summary for Subcatchment 05:

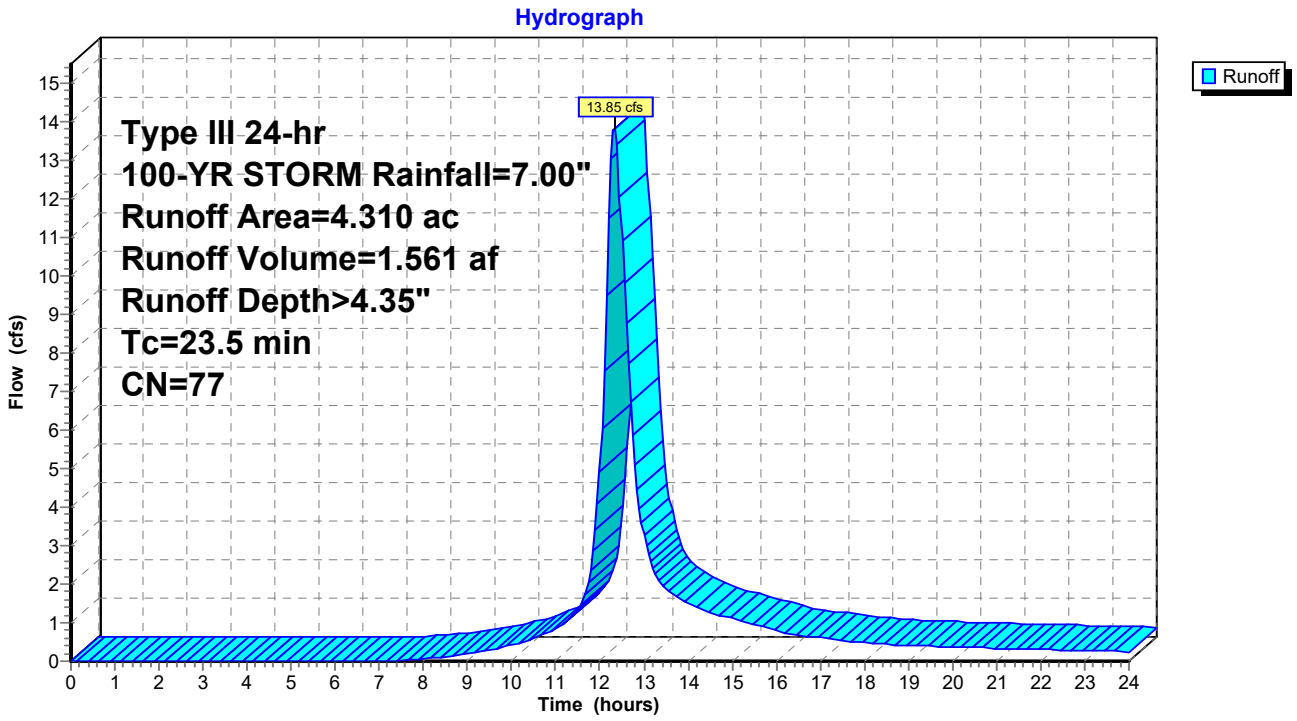
Runoff = 13.85 cfs @ 12.32 hrs, Volume= 1.561 af, Depth> 4.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	4.310	77	
	4.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5					**Direct Entry, SCS TR-55**

Subcatchment 05:



Hydrograph for Subcatchment 05:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.01
7.50	0.71	0.00	0.03
7.75	0.75	0.01	0.04
8.00	0.80	0.01	0.06
8.25	0.85	0.02	0.09
8.50	0.90	0.03	0.12
8.75	0.96	0.04	0.15
9.00	1.02	0.05	0.19
9.25	1.09	0.07	0.24
9.50	1.16	0.09	0.30
9.75	1.24	0.11	0.36
10.00	1.32	0.14	0.42
10.25	1.41	0.18	0.50
10.50	1.52	0.22	0.59
10.75	1.63	0.26	0.71
11.00	1.75	0.32	0.85
11.25	1.90	0.39	1.01
11.50	2.09	0.50	1.34
11.75	2.49	0.73	2.04
12.00	3.50	1.43	4.93
12.25	4.51	2.22	**13.05**
12.50	4.91	2.55	**10.93**
12.75	5.10	2.71	5.85
13.00	5.25	2.83	3.27
13.25	5.37	2.94	2.28
13.50	5.48	3.03	1.86
13.75	5.59	3.12	1.66
14.00	5.68	3.20	1.51
14.25	5.76	3.27	1.36
14.50	5.84	3.34	1.26
14.75	5.91	3.40	1.18
15.00	5.98	3.46	1.10
15.25	6.04	3.52	1.03
15.50	6.10	3.57	0.95
15.75	6.15	3.61	0.88
16.00	6.20	3.66	0.81
16.25	6.25	3.70	0.73
16.50	6.29	3.73	0.68
16.75	6.33	3.77	0.65
17.00	6.37	3.80	0.61
17.25	6.40	3.83	0.58
17.50	6.44	3.86	0.55
17.75	6.47	3.89	0.51
18.00	6.50	3.92	0.48
18.25	6.52	3.94	0.45
18.50	6.55	3.96	0.43
18.75	6.58	3.99	0.42
19.00	6.60	4.01	0.41
19.25	6.63	4.03	0.40
19.50	6.65	4.05	0.39
19.75	6.68	4.08	0.38
20.00	6.70	4.10	0.37
20.25	6.72	4.12	0.36
20.50	6.74	4.14	0.35
20.75	6.77	4.16	0.34
21.00	6.79	4.17	0.33
21.25	6.81	4.19	0.33
21.50	6.83	4.21	0.32
21.75	6.85	4.23	0.31
22.00	6.87	4.24	0.30
22.25	6.88	4.26	0.30
22.50	6.90	4.28	0.29
22.75	6.92	4.29	0.28
23.00	6.94	4.31	0.27
23.25	6.95	4.32	0.27
23.50	6.97	4.34	0.26
23.75	6.98	4.35	0.25
24.00	**7.00**	**4.37**	0.24

Summary for Subcatchment 07:

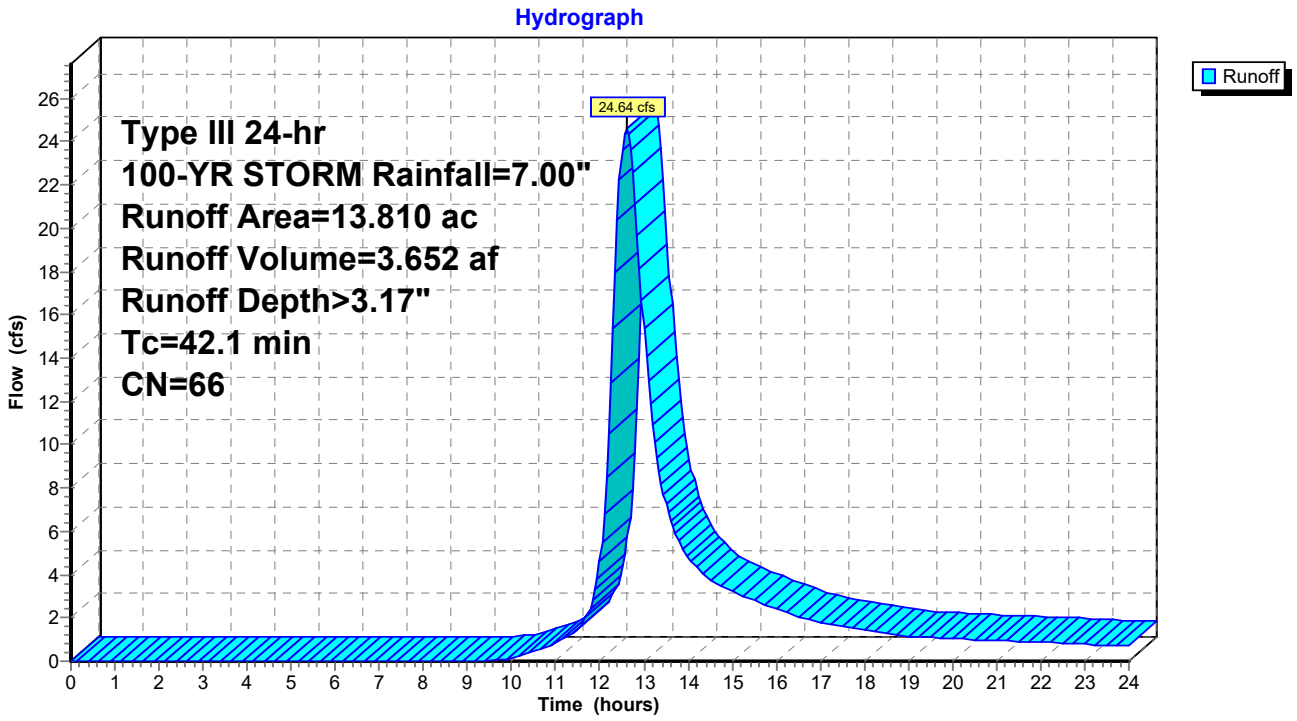
Runoff = 24.64 cfs @ 12.60 hrs, Volume= 3.652 af, Depth> 3.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	13.810	66	
	13.810		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.1					**Direct Entry, SCS TR-55**

Subcatchment 07:



Hydrograph for Subcatchment 07:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.00
7.50	0.71	0.00	0.00
7.75	0.75	0.00	0.00
8.00	0.80	0.00	0.00
8.25	0.85	0.00	0.00
8.50	0.90	0.00	0.00
8.75	0.96	0.00	0.00
9.00	1.02	0.00	0.00
9.25	1.09	0.00	0.00
9.50	1.16	0.00	0.01
9.75	1.24	0.01	0.07
10.00	1.32	0.02	0.16
10.25	1.41	0.03	0.28
10.50	1.52	0.04	0.43
10.75	1.63	0.06	0.62
11.00	1.75	0.09	0.85
11.25	1.90	0.13	1.14
11.50	2.09	0.18	1.54
11.75	2.49	0.32	2.27
12.00	3.50	0.80	4.58
12.25	4.51	1.40	12.83
12.50	4.91	1.67	**23.60**
12.75	5.10	1.80	**22.55**
13.00	5.25	1.90	15.34
13.25	5.37	1.99	10.14
13.50	5.48	2.07	7.25
13.75	5.59	2.14	5.69
14.00	5.68	2.20	4.82
14.25	5.76	2.26	4.22
14.50	5.84	2.32	3.77
14.75	5.91	2.37	3.46
15.00	5.98	2.43	3.23
15.25	6.04	2.47	3.02
15.50	6.10	2.52	2.82
15.75	6.15	2.55	2.63
16.00	6.20	2.59	2.43
16.25	6.25	2.62	2.23
16.50	6.29	2.66	2.05
16.75	6.33	2.69	1.91
17.00	6.37	2.72	1.80
17.25	6.40	2.74	1.70
17.50	6.44	2.77	1.61
17.75	6.47	2.79	1.52
18.00	6.50	2.81	1.43
18.25	6.52	2.83	1.34
18.50	6.55	2.86	1.26
18.75	6.58	2.88	1.20
19.00	6.60	2.90	1.16
19.25	6.63	2.91	1.13
19.50	6.65	2.93	1.10
19.75	6.68	2.95	1.08
20.00	6.70	2.97	1.05
20.25	6.72	2.99	1.02
20.50	6.74	3.00	1.00
20.75	6.77	3.02	0.97
21.00	6.79	3.04	0.95
21.25	6.81	3.05	0.93
21.50	6.83	3.07	0.91
21.75	6.85	3.08	0.89
22.00	6.87	3.10	0.87
22.25	6.88	3.11	0.85
22.50	6.90	3.13	0.83
22.75	6.92	3.14	0.81
23.00	6.94	3.15	0.79
23.25	6.95	3.17	0.77
23.50	6.97	3.18	0.75
23.75	6.98	3.19	0.73
24.00	**7.00**	**3.20**	0.71

Summary for Subcatchment 08:

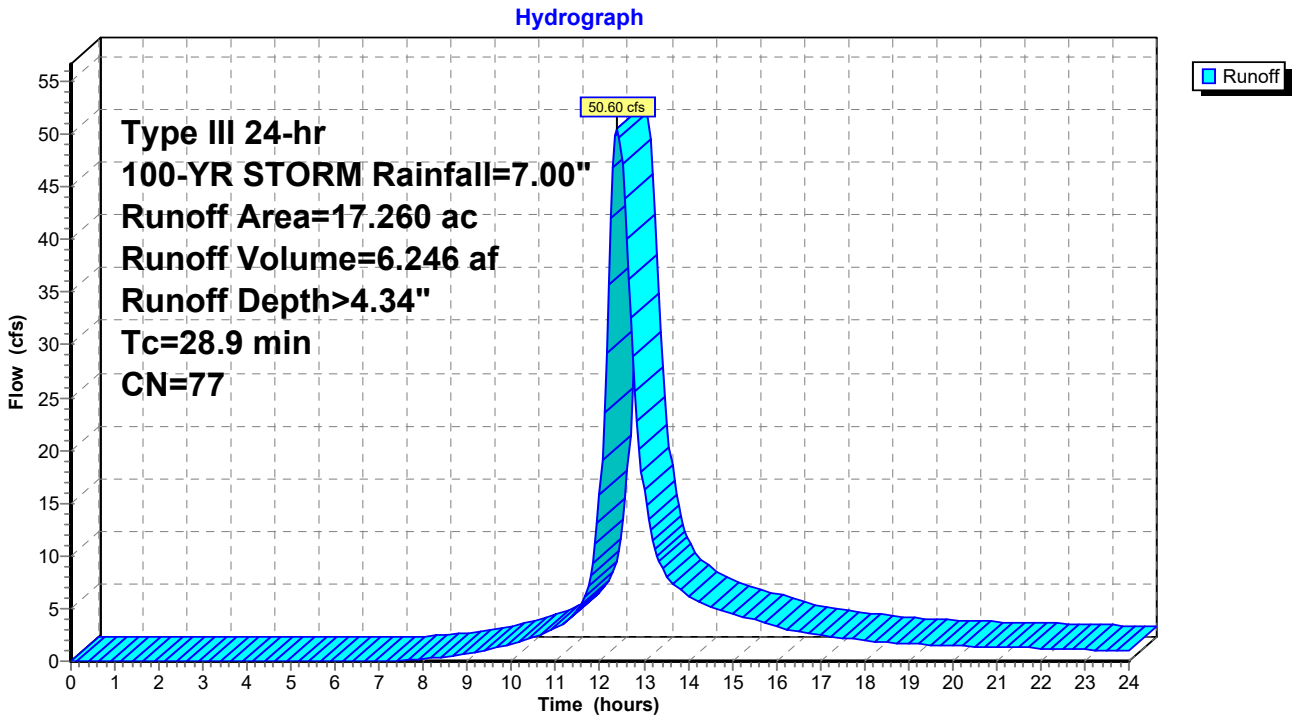
Runoff = 50.60 cfs @ 12.40 hrs, Volume= 6.246 af, Depth> 4.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	17.260	77	
	17.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.9					**Direct Entry, SCS TR-55**

Subcatchment 08:



Hydrograph for Subcatchment 08:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.03
7.50	0.71	0.00	0.08
7.75	0.75	0.01	0.15
8.00	0.80	0.01	0.23
8.25	0.85	0.02	0.32
8.50	0.90	0.03	0.42
8.75	0.96	0.04	0.56
9.00	1.02	0.05	0.72
9.25	1.09	0.07	0.91
9.50	1.16	0.09	1.12
9.75	1.24	0.11	1.35
10.00	1.32	0.14	1.61
10.25	1.41	0.18	1.89
10.50	1.52	0.22	2.25
10.75	1.63	0.26	2.70
11.00	1.75	0.32	3.22
11.25	1.90	0.39	3.83
11.50	2.09	0.50	4.91
11.75	2.49	0.73	7.10
12.00	3.50	1.43	15.75
12.25	4.51	2.22	**41.96**
12.50	4.91	2.55	**47.26**
12.75	5.10	2.71	28.95
13.00	5.25	2.83	16.22
13.25	5.37	2.94	10.70
13.50	5.48	3.03	8.18
13.75	5.59	3.12	6.99
14.00	5.68	3.20	6.26
14.25	5.76	3.27	5.64
14.50	5.84	3.34	5.17
14.75	5.91	3.40	4.82
15.00	5.98	3.46	4.52
15.25	6.04	3.52	4.22
15.50	6.10	3.57	3.92
15.75	6.15	3.61	3.62
16.00	6.20	3.66	3.32
16.25	6.25	3.70	3.03
16.50	6.29	3.73	2.80
16.75	6.33	3.77	2.64
17.00	6.37	3.80	2.50
17.25	6.40	3.83	2.37
17.50	6.44	3.86	2.23
17.75	6.47	3.89	2.10
18.00	6.50	3.92	1.97
18.25	6.52	3.94	1.84
18.50	6.55	3.96	1.74
18.75	6.58	3.99	1.69
19.00	6.60	4.01	1.64
19.25	6.63	4.03	1.60
19.50	6.65	4.05	1.56
19.75	6.68	4.08	1.52
20.00	6.70	4.10	1.48
20.25	6.72	4.12	1.44
20.50	6.74	4.14	1.41
20.75	6.77	4.16	1.38
21.00	6.79	4.17	1.35
21.25	6.81	4.19	1.32
21.50	6.83	4.21	1.29
21.75	6.85	4.23	1.26
22.00	6.87	4.24	1.23
22.25	6.88	4.26	1.20
22.50	6.90	4.28	1.17
22.75	6.92	4.29	1.14
23.00	6.94	4.31	1.11
23.25	6.95	4.32	1.08
23.50	6.97	4.34	1.05
23.75	6.98	4.35	1.02
24.00	**7.00**	**4.37**	0.99

Summary for Subcatchment 09:

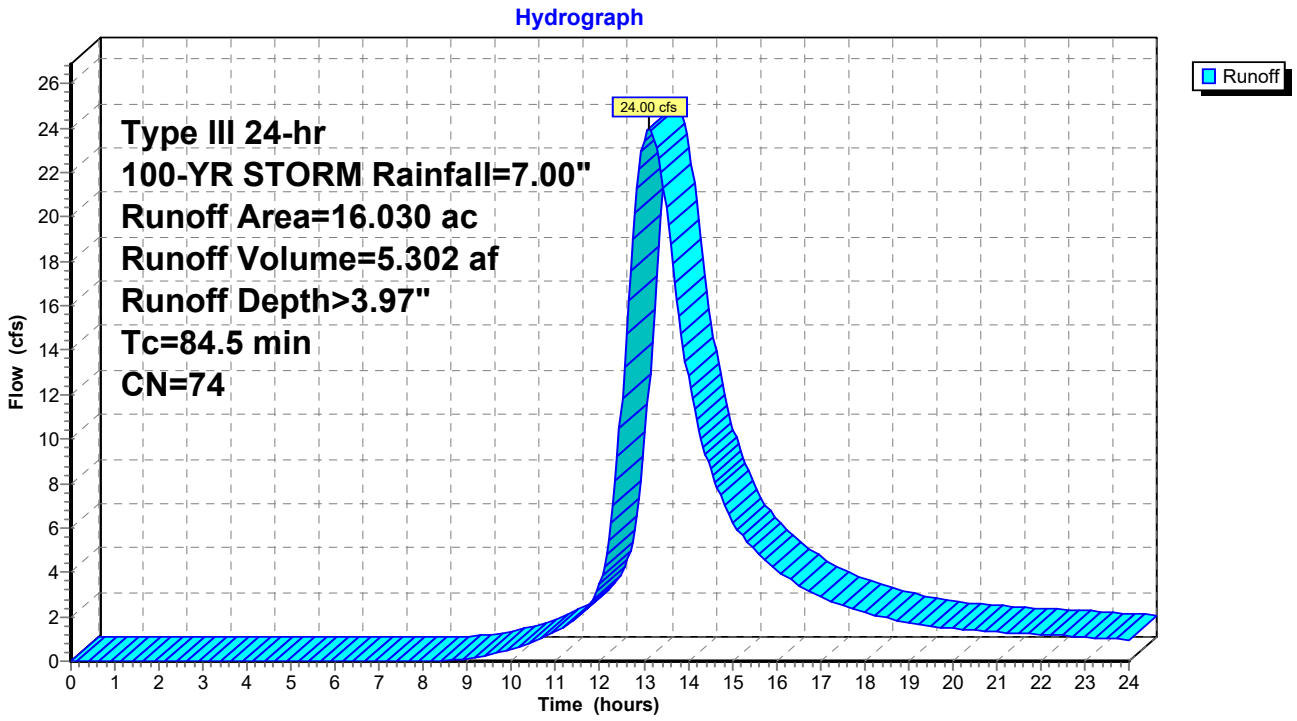
Runoff = 24.00 cfs @ 13.13 hrs, Volume= 5.302 af, Depth> 3.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	16.030	74	
	16.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
84.5					**Direct Entry, SCS TR-55**

Subcatchment 09:



Hydrograph for Subcatchment 09:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.00
7.50	0.71	0.00	0.00
7.75	0.75	0.00	0.00
8.00	0.80	0.00	0.00
8.25	0.85	0.01	0.01
8.50	0.90	0.01	0.03
8.75	0.96	0.02	0.07
9.00	1.02	0.03	0.12
9.25	1.09	0.04	0.20
9.50	1.16	0.05	0.29
9.75	1.24	0.07	0.41
10.00	1.32	0.09	0.55
10.25	1.41	0.12	0.70
10.50	1.52	0.15	0.88
10.75	1.63	0.19	1.10
11.00	1.75	0.24	1.35
11.25	1.90	0.30	1.65
11.50	2.09	0.39	2.03
11.75	2.49	0.60	2.54
12.00	3.50	1.24	3.50
12.25	4.51	1.98	6.20
12.50	4.91	2.30	11.80
12.75	5.10	2.45	18.98
13.00	5.25	2.57	**23.45**
13.25	5.37	2.66	**23.60**
13.50	5.48	2.76	20.42
13.75	5.59	2.84	16.27
14.00	5.68	2.92	12.87
14.25	5.76	2.98	10.43
14.50	5.84	3.05	8.65
14.75	5.91	3.11	7.33
15.00	5.98	3.17	6.33
15.25	6.04	3.22	5.59
15.50	6.10	3.27	5.01
15.75	6.15	3.31	4.53
16.00	6.20	3.36	4.14
16.25	6.25	3.39	3.79
16.50	6.29	3.43	3.45
16.75	6.33	3.46	3.15
17.00	6.37	3.50	2.90
17.25	6.40	3.53	2.68
17.50	6.44	3.55	2.51
17.75	6.47	3.58	2.36
18.00	6.50	3.61	2.21
18.25	6.52	3.63	2.08
18.50	6.55	3.65	1.95
18.75	6.58	3.68	1.84
19.00	6.60	3.70	1.73
19.25	6.63	3.72	1.65
19.50	6.65	3.74	1.58
19.75	6.68	3.76	1.53
20.00	6.70	3.78	1.48
20.25	6.72	3.80	1.43
20.50	6.74	3.82	1.39
20.75	6.77	3.84	1.36
21.00	6.79	3.86	1.32
21.25	6.81	3.87	1.29
21.50	6.83	3.89	1.26
21.75	6.85	3.91	1.23
22.00	6.87	3.92	1.20
22.25	6.88	3.94	1.17
22.50	6.90	3.96	1.14
22.75	6.92	3.97	1.12
23.00	6.94	3.99	1.09
23.25	6.95	4.00	1.06
23.50	6.97	4.02	1.03
23.75	6.98	4.03	1.01
24.00	**7.00**	**4.04**	0.98

Summary for Subcatchment 10:

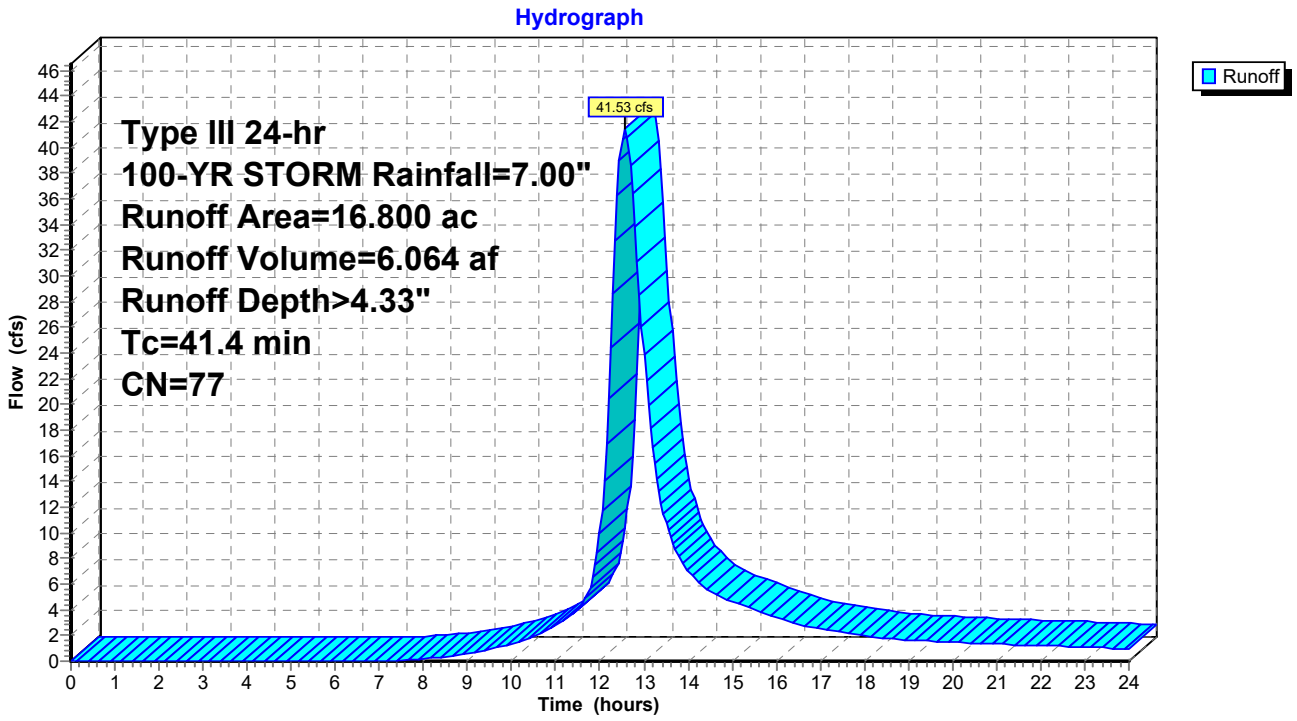
Runoff = 41.53 cfs @ 12.56 hrs, Volume= 6.064 af, Depth> 4.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	16.800	77	
	16.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
41.4					**Direct Entry, SCS TR-55**

Subcatchment 10:



Hydrograph for Subcatchment 10:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.01
7.50	0.71	0.00	0.05
7.75	0.75	0.01	0.10
8.00	0.80	0.01	0.17
8.25	0.85	0.02	0.24
8.50	0.90	0.03	0.34
8.75	0.96	0.04	0.45
9.00	1.02	0.05	0.59
9.25	1.09	0.07	0.75
9.50	1.16	0.09	0.94
9.75	1.24	0.11	1.15
10.00	1.32	0.14	1.38
10.25	1.41	0.18	1.63
10.50	1.52	0.22	1.93
10.75	1.63	0.26	2.31
11.00	1.75	0.32	2.77
11.25	1.90	0.39	3.29
11.50	2.09	0.50	4.05
11.75	2.49	0.73	5.45
12.00	3.50	1.43	9.91
12.25	4.51	2.22	24.38
12.50	4.91	2.55	**40.68**
12.75	5.10	2.71	**36.45**
13.00	5.25	2.83	23.84
13.25	5.37	2.94	15.36
13.50	5.48	3.03	10.79
13.75	5.59	3.12	8.39
14.00	5.68	3.20	7.05
14.25	5.76	3.27	6.12
14.50	5.84	3.34	5.45
14.75	5.91	3.40	5.00
15.00	5.98	3.46	4.65
15.25	6.04	3.52	4.34
15.50	6.10	3.57	4.05
15.75	6.15	3.61	3.75
16.00	6.20	3.66	3.46
16.25	6.25	3.70	3.17
16.50	6.29	3.73	2.91
16.75	6.33	3.77	2.71
17.00	6.37	3.80	2.55
17.25	6.40	3.83	2.41
17.50	6.44	3.86	2.27
17.75	6.47	3.89	2.14
18.00	6.50	3.92	2.02
18.25	6.52	3.94	1.89
18.50	6.55	3.96	1.77
18.75	6.58	3.99	1.69
19.00	6.60	4.01	1.64
19.25	6.63	4.03	1.59
19.50	6.65	4.05	1.55
19.75	6.68	4.08	1.51
20.00	6.70	4.10	1.47
20.25	6.72	4.12	1.44
20.50	6.74	4.14	1.40
20.75	6.77	4.16	1.37
21.00	6.79	4.17	1.33
21.25	6.81	4.19	1.30
21.50	6.83	4.21	1.28
21.75	6.85	4.23	1.25
22.00	6.87	4.24	1.22
22.25	6.88	4.26	1.19
22.50	6.90	4.28	1.16
22.75	6.92	4.29	1.13
23.00	6.94	4.31	1.10
23.25	6.95	4.32	1.07
23.50	6.97	4.34	1.04
23.75	6.98	4.35	1.01
24.00	**7.00**	**4.37**	0.98

Summary for Subcatchment 11:

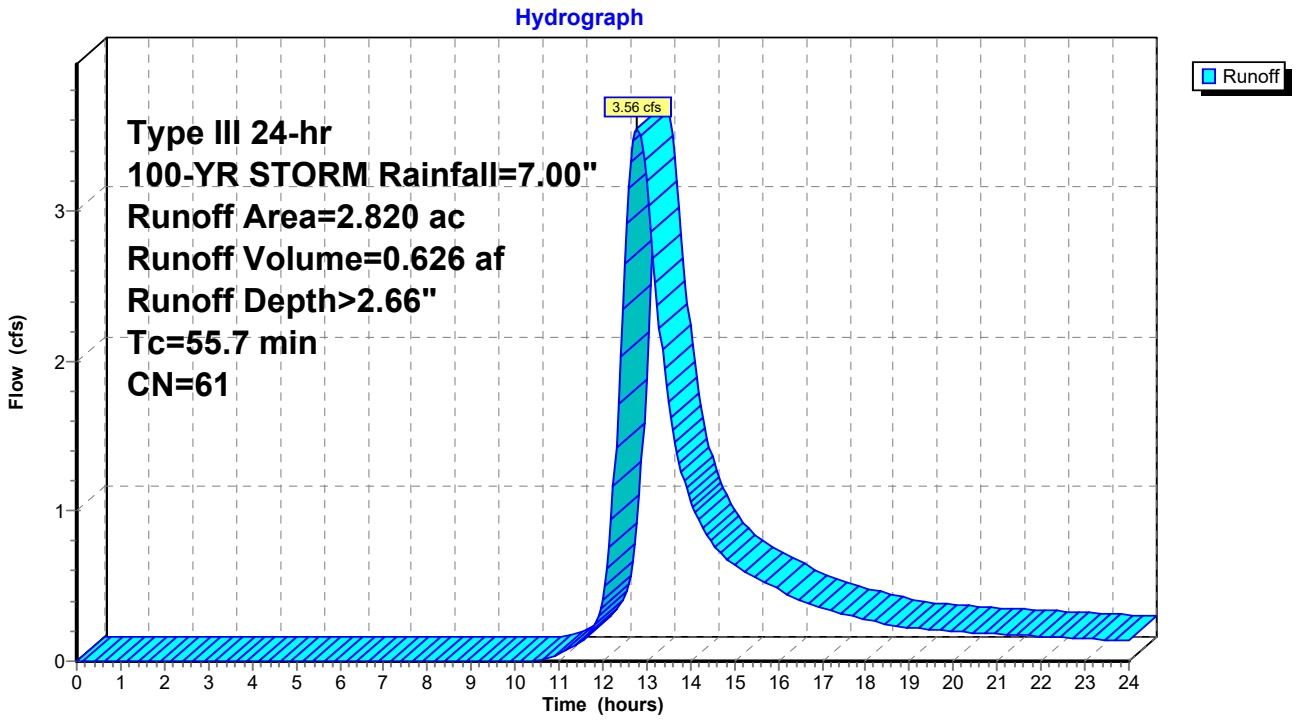
Runoff = 3.56 cfs @ 12.80 hrs, Volume= 0.626 af, Depth> 2.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	2.820	61	
	2.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
55.7					**Direct Entry, SCS TR-55**

Subcatchment 11:



Hydrograph for Subcatchment 11:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.00
7.50	0.71	0.00	0.00
7.75	0.75	0.00	0.00
8.00	0.80	0.00	0.00
8.25	0.85	0.00	0.00
8.50	0.90	0.00	0.00
8.75	0.96	0.00	0.00
9.00	1.02	0.00	0.00
9.25	1.09	0.00	0.00
9.50	1.16	0.00	0.00
9.75	1.24	0.00	0.00
10.00	1.32	0.00	0.00
10.25	1.41	0.00	0.00
10.50	1.52	0.01	0.01
10.75	1.63	0.02	0.02
11.00	1.75	0.03	0.04
11.25	1.90	0.05	0.08
11.50	2.09	0.09	0.13
11.75	2.49	0.19	0.21
12.00	3.50	0.57	0.41
12.25	4.51	1.09	1.17
12.50	4.91	1.32	2.65
12.75	5.10	1.43	**3.53**
13.00	5.25	1.52	**3.20**
13.25	5.37	1.60	2.37
13.50	5.48	1.67	1.72
13.75	5.59	1.73	1.32
14.00	5.68	1.79	1.07
14.25	5.76	1.85	0.90
14.50	5.84	1.90	0.79
14.75	5.91	1.95	0.71
15.00	5.98	1.99	0.64
15.25	6.04	2.03	0.59
15.50	6.10	2.07	0.55
15.75	6.15	2.11	0.52
16.00	6.20	2.14	0.48
16.25	6.25	2.17	0.44
16.50	6.29	2.20	0.41
16.75	6.33	2.23	0.38
17.00	6.37	2.25	0.35
17.25	6.40	2.28	0.33
17.50	6.44	2.30	0.31
17.75	6.47	2.32	0.30
18.00	6.50	2.34	0.28
18.25	6.52	2.36	0.26
18.50	6.55	2.38	0.25
18.75	6.58	2.40	0.23
19.00	6.60	2.42	0.22
19.25	6.63	2.44	0.22
19.50	6.65	2.45	0.21
19.75	6.68	2.47	0.21
20.00	6.70	2.49	0.20
20.25	6.72	2.50	0.20
20.50	6.74	2.52	0.19
20.75	6.77	2.53	0.19
21.00	6.79	2.55	0.18
21.25	6.81	2.56	0.18
21.50	6.83	2.58	0.17
21.75	6.85	2.59	0.17
22.00	6.87	2.61	0.17
22.25	6.88	2.62	0.16
22.50	6.90	2.63	0.16
22.75	6.92	2.64	0.15
23.00	6.94	2.66	0.15
23.25	6.95	2.67	0.15
23.50	6.97	2.68	0.14
23.75	6.98	2.69	0.14
24.00	**7.00**	**2.70**	0.14

Summary for Subcatchment 12:

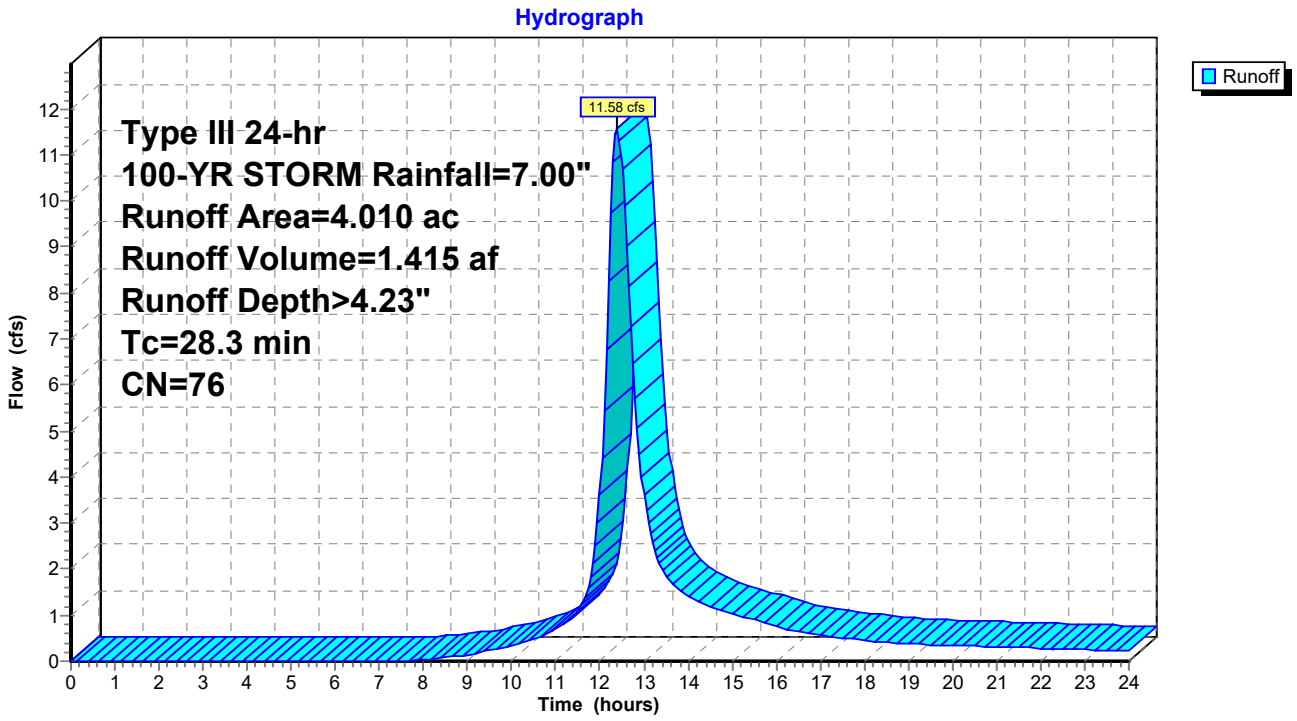
Runoff = 11.58 cfs @ 12.39 hrs, Volume= 1.415 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	4.010	76	
	4.010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3					**Direct Entry, SCS TR-55**

Subcatchment 12:



Hydrograph for Subcatchment 12:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.00
7.50	0.71	0.00	0.01
7.75	0.75	0.00	0.02
8.00	0.80	0.01	0.04
8.25	0.85	0.01	0.06
8.50	0.90	0.02	0.08
8.75	0.96	0.03	0.11
9.00	1.02	0.04	0.15
9.25	1.09	0.06	0.19
9.50	1.16	0.08	0.23
9.75	1.24	0.10	0.29
10.00	1.32	0.12	0.34
10.25	1.41	0.16	0.41
10.50	1.52	0.19	0.49
10.75	1.63	0.24	0.59
11.00	1.75	0.29	0.71
11.25	1.90	0.36	0.85
11.50	2.09	0.46	1.10
11.75	2.49	0.69	1.60
12.00	3.50	1.37	3.61
12.25	4.51	2.14	**9.73**
12.50	4.91	2.46	**10.70**
12.75	5.10	2.62	6.47
13.00	5.25	2.74	3.62
13.25	5.37	2.85	2.40
13.50	5.48	2.94	1.85
13.75	5.59	3.03	1.59
14.00	5.68	3.10	1.43
14.25	5.76	3.17	1.29
14.50	5.84	3.24	1.18
14.75	5.91	3.30	1.10
15.00	5.98	3.36	1.03
15.25	6.04	3.42	0.97
15.50	6.10	3.47	0.90
15.75	6.15	3.51	0.83
16.00	6.20	3.56	0.76
16.25	6.25	3.59	0.69
16.50	6.29	3.63	0.64
16.75	6.33	3.67	0.60
17.00	6.37	3.70	0.57
17.25	6.40	3.73	0.54
17.50	6.44	3.76	0.51
17.75	6.47	3.79	0.48
18.00	6.50	3.81	0.45
18.25	6.52	3.84	0.42
18.50	6.55	3.86	0.40
18.75	6.58	3.88	0.39
19.00	6.60	3.91	0.38
19.25	6.63	3.93	0.37
19.50	6.65	3.95	0.36
19.75	6.68	3.97	0.35
20.00	6.70	3.99	0.34
20.25	6.72	4.01	0.33
20.50	6.74	4.03	0.32
20.75	6.77	4.05	0.32
21.00	6.79	4.07	0.31
21.25	6.81	4.09	0.30
21.50	6.83	4.10	0.30
21.75	6.85	4.12	0.29
22.00	6.87	4.14	0.28
22.25	6.88	4.15	0.28
22.50	6.90	4.17	0.27
22.75	6.92	4.19	0.26
23.00	6.94	4.20	0.25
23.25	6.95	4.22	0.25
23.50	6.97	4.23	0.24
23.75	6.98	4.24	0.23
24.00	**7.00**	**4.26**	0.23

Summary for Subcatchment 13:

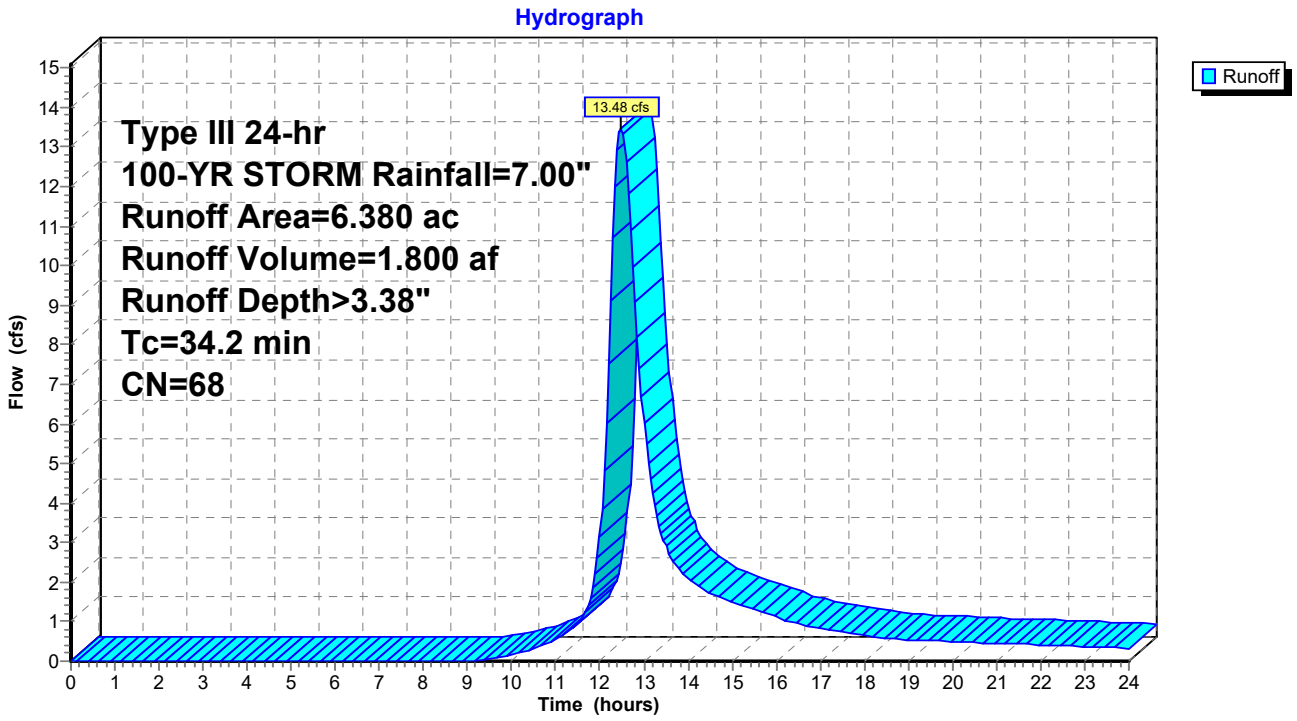
Runoff = 13.48 cfs @ 12.49 hrs, Volume= 1.800 af, Depth> 3.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	6.380	68	
	6.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2					**Direct Entry, SCS TR-55**

Subcatchment 13:



Hydrograph for Subcatchment 13:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.00
7.50	0.71	0.00	0.00
7.75	0.75	0.00	0.00
8.00	0.80	0.00	0.00
8.25	0.85	0.00	0.00
8.50	0.90	0.00	0.00
8.75	0.96	0.00	0.00
9.00	1.02	0.00	0.00
9.25	1.09	0.00	0.02
9.50	1.16	0.01	0.06
9.75	1.24	0.02	0.11
10.00	1.32	0.03	0.17
10.25	1.41	0.04	0.24
10.50	1.52	0.06	0.32
10.75	1.63	0.09	0.43
11.00	1.75	0.12	0.56
11.25	1.90	0.16	0.72
11.50	2.09	0.22	0.96
11.75	2.49	0.38	1.43
12.00	3.50	0.90	3.16
12.25	4.51	1.54	9.14
12.50	4.91	1.82	**13.47**
12.75	5.10	1.95	9.96
13.00	5.25	2.06	6.03
13.25	5.37	2.15	3.93
13.50	5.48	2.23	2.90
13.75	5.59	2.31	2.40
14.00	5.68	2.38	2.10
14.25	5.76	2.44	1.88
14.50	5.84	2.50	1.71
14.75	5.91	2.55	1.59
15.00	5.98	2.61	1.49
15.25	6.04	2.65	1.40
15.50	6.10	2.70	1.30
15.75	6.15	2.74	1.21
16.00	6.20	2.78	1.12
16.25	6.25	2.81	1.02
16.50	6.29	2.84	0.94
16.75	6.33	2.88	0.88
17.00	6.37	2.91	0.83
17.25	6.40	2.93	0.79
17.50	6.44	2.96	0.75
17.75	6.47	2.98	0.70
18.00	6.50	3.01	0.66
18.25	6.52	3.03	0.62
18.50	6.55	3.05	0.58
18.75	6.58	3.07	0.56
19.00	6.60	3.09	0.55
19.25	6.63	3.11	0.53
19.50	6.65	3.13	0.52
19.75	6.68	3.15	0.51
20.00	6.70	3.17	0.49
20.25	6.72	3.19	0.48
20.50	6.74	3.20	0.47
20.75	6.77	3.22	0.46
21.00	6.79	3.24	0.45
21.25	6.81	3.25	0.44
21.50	6.83	3.27	0.43
21.75	6.85	3.29	0.42
22.00	6.87	3.30	0.41
22.25	6.88	3.32	0.40
22.50	6.90	3.33	0.39
22.75	6.92	3.35	0.38
23.00	6.94	3.36	0.37
23.25	6.95	3.37	0.36
23.50	6.97	3.39	0.35
23.75	6.98	3.40	0.34
24.00	**7.00**	**3.41**	0.33

Summary for Subcatchment 14:

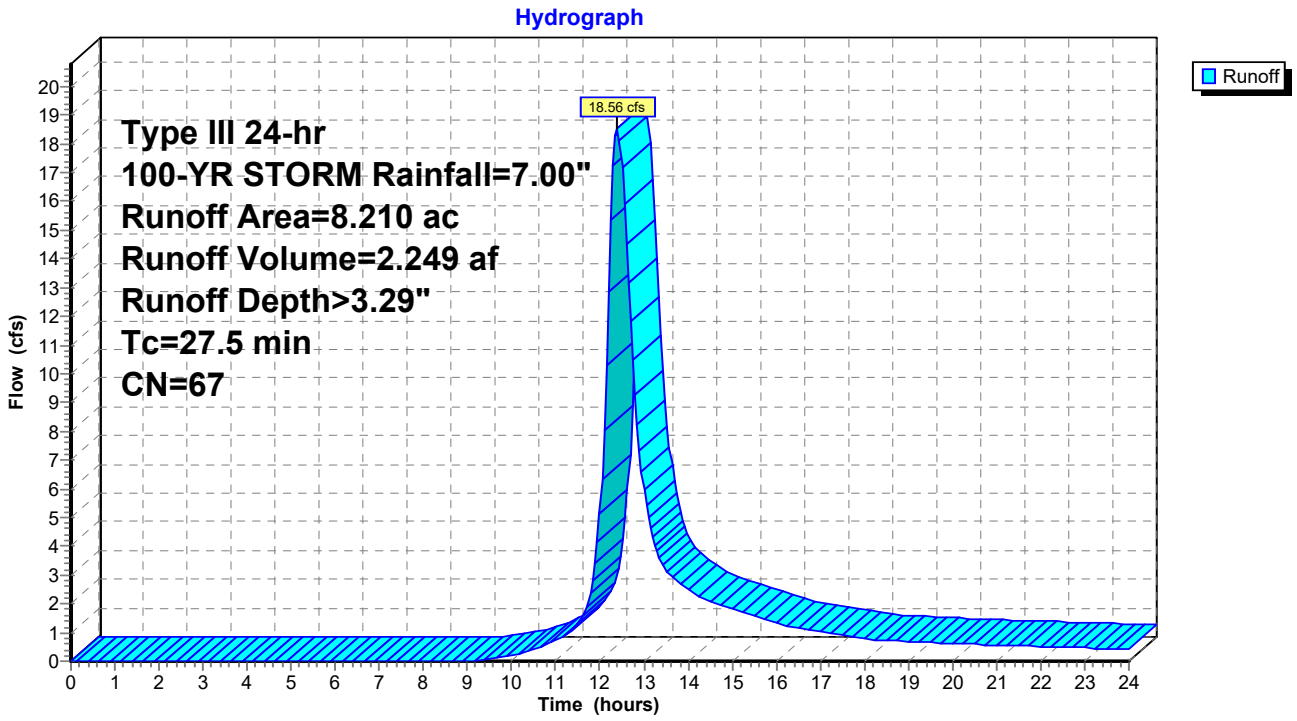
Runoff = 18.56 cfs @ 12.39 hrs, Volume= 2.249 af, Depth> 3.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	8.210	67	
	8.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5					**Direct Entry, SCS TR-55**

Subcatchment 14:



Hydrograph for Subcatchment 14:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.00
7.50	0.71	0.00	0.00
7.75	0.75	0.00	0.00
8.00	0.80	0.00	0.00
8.25	0.85	0.00	0.00
8.50	0.90	0.00	0.00
8.75	0.96	0.00	0.00
9.00	1.02	0.00	0.00
9.25	1.09	0.00	0.01
9.50	1.16	0.01	0.06
9.75	1.24	0.01	0.12
10.00	1.32	0.02	0.20
10.25	1.41	0.03	0.29
10.50	1.52	0.05	0.40
10.75	1.63	0.07	0.55
11.00	1.75	0.10	0.72
11.25	1.90	0.14	0.93
11.50	2.09	0.20	1.29
11.75	2.49	0.35	2.03
12.00	3.50	0.85	5.10
12.25	4.51	1.47	**15.34**
12.50	4.91	1.74	**17.18**
12.75	5.10	1.87	10.49
13.00	5.25	1.98	5.96
13.25	5.37	2.07	4.05
13.50	5.48	2.15	3.18
13.75	5.59	2.22	2.77
14.00	5.68	2.29	2.50
14.25	5.76	2.35	2.27
14.50	5.84	2.41	2.09
14.75	5.91	2.46	1.96
15.00	5.98	2.51	1.84
15.25	6.04	2.56	1.72
15.50	6.10	2.61	1.60
15.75	6.15	2.65	1.48
16.00	6.20	2.68	1.36
16.25	6.25	2.72	1.24
16.50	6.29	2.75	1.15
16.75	6.33	2.78	1.09
17.00	6.37	2.81	1.03
17.25	6.40	2.84	0.98
17.50	6.44	2.86	0.92
17.75	6.47	2.89	0.87
18.00	6.50	2.91	0.81
18.25	6.52	2.93	0.76
18.50	6.55	2.95	0.72
18.75	6.58	2.97	0.70
19.00	6.60	2.99	0.68
19.25	6.63	3.01	0.67
19.50	6.65	3.03	0.65
19.75	6.68	3.05	0.64
20.00	6.70	3.07	0.62
20.25	6.72	3.09	0.60
20.50	6.74	3.10	0.59
20.75	6.77	3.12	0.58
21.00	6.79	3.14	0.56
21.25	6.81	3.15	0.55
21.50	6.83	3.17	0.54
21.75	6.85	3.18	0.53
22.00	6.87	3.20	0.51
22.25	6.88	3.21	0.50
22.50	6.90	3.23	0.49
22.75	6.92	3.24	0.48
23.00	6.94	3.26	0.46
23.25	6.95	3.27	0.45
23.50	6.97	3.28	0.44
23.75	6.98	3.29	0.43
24.00	**7.00**	**3.31**	0.41

Summary for Subcatchment 15:

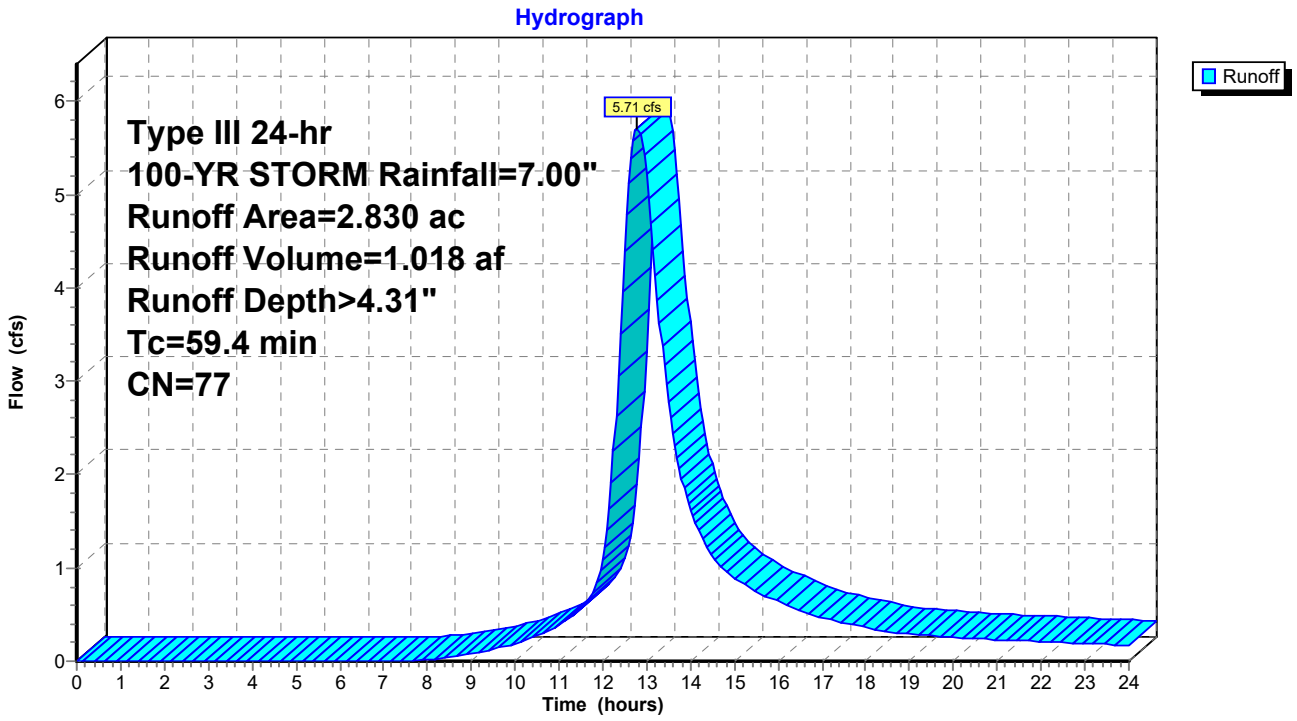
Runoff = 5.71 cfs @ 12.79 hrs, Volume= 1.018 af, Depth> 4.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	2.830	77	
	2.830		100.00% Pervious Area

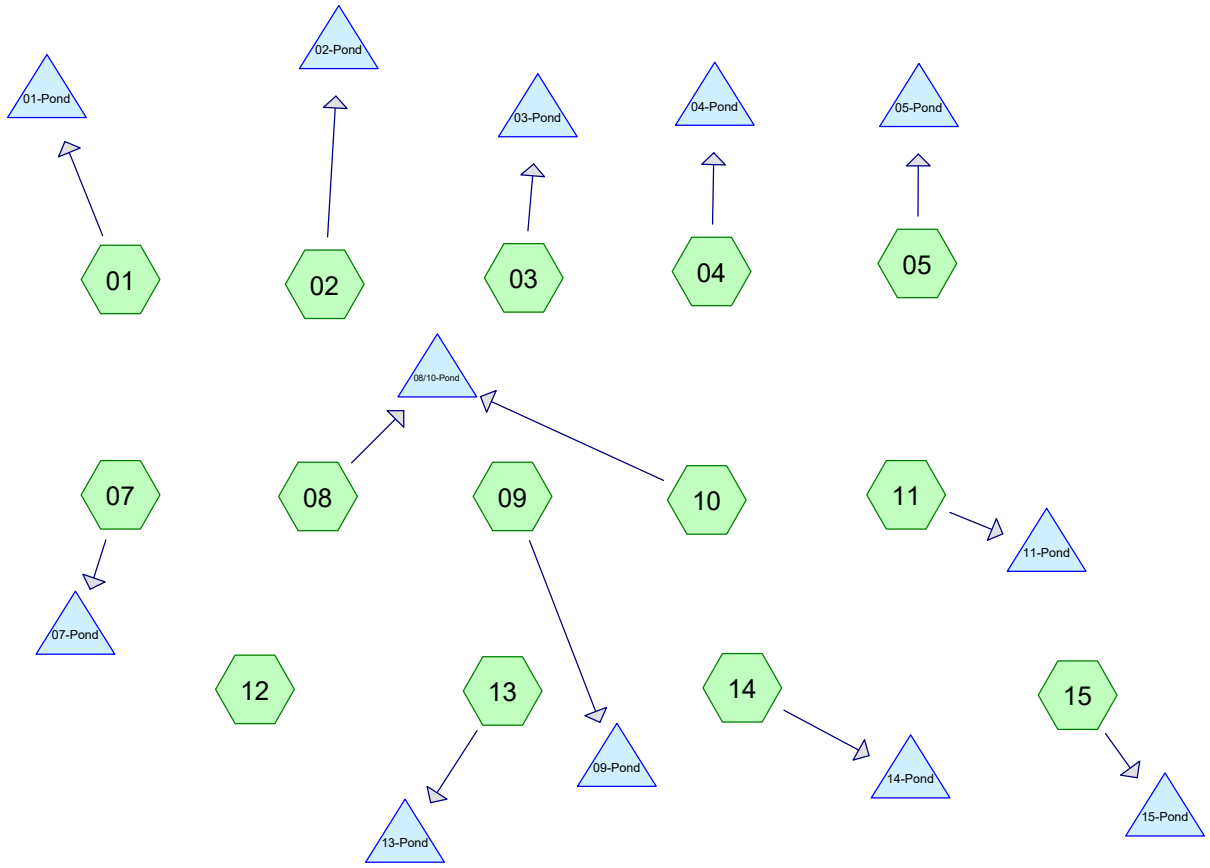
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
59.4					**Direct Entry,**

Subcatchment 15:



Hydrograph for Subcatchment 15:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.02	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.05	0.00	0.00
1.00	0.07	0.00	0.00
1.25	0.09	0.00	0.00
1.50	0.10	0.00	0.00
1.75	0.12	0.00	0.00
2.00	0.14	0.00	0.00
2.25	0.16	0.00	0.00
2.50	0.18	0.00	0.00
2.75	0.20	0.00	0.00
3.00	0.22	0.00	0.00
3.25	0.24	0.00	0.00
3.50	0.26	0.00	0.00
3.75	0.28	0.00	0.00
4.00	0.30	0.00	0.00
4.25	0.32	0.00	0.00
4.50	0.35	0.00	0.00
4.75	0.37	0.00	0.00
5.00	0.40	0.00	0.00
5.25	0.42	0.00	0.00
5.50	0.45	0.00	0.00
5.75	0.48	0.00	0.00
6.00	0.50	0.00	0.00
6.25	0.53	0.00	0.00
6.50	0.56	0.00	0.00
6.75	0.60	0.00	0.00
7.00	0.63	0.00	0.00
7.25	0.67	0.00	0.00
7.50	0.71	0.00	0.00
7.75	0.75	0.01	0.01
8.00	0.80	0.01	0.02
8.25	0.85	0.02	0.03
8.50	0.90	0.03	0.04
8.75	0.96	0.04	0.06
9.00	1.02	0.05	0.08
9.25	1.09	0.07	0.10
9.50	1.16	0.09	0.13
9.75	1.24	0.11	0.16
10.00	1.32	0.14	0.19
10.25	1.41	0.18	0.23
10.50	1.52	0.22	0.27
10.75	1.63	0.26	0.33
11.00	1.75	0.32	0.39
11.25	1.90	0.39	0.47
11.50	2.09	0.50	0.56
11.75	2.49	0.73	0.71
12.00	3.50	1.43	1.08
12.25	4.51	2.22	2.25
12.50	4.91	2.55	4.39
12.75	5.10	2.71	**5.69**
13.00	5.25	2.83	**5.21**
13.25	5.37	2.94	3.87
13.50	5.48	3.03	2.78
13.75	5.59	3.12	2.06
14.00	5.68	3.20	1.62
14.25	5.76	3.27	1.33
14.50	5.84	3.34	1.13
14.75	5.91	3.40	0.99
15.00	5.98	3.46	0.89
15.25	6.04	3.52	0.81
15.50	6.10	3.57	0.75
15.75	6.15	3.61	0.69
16.00	6.20	3.66	0.64
16.25	6.25	3.70	0.59
16.50	6.29	3.73	0.54
16.75	6.33	3.77	0.50
17.00	6.37	3.80	0.46
17.25	6.40	3.83	0.44
17.50	6.44	3.86	0.41
17.75	6.47	3.89	0.39
18.00	6.50	3.92	0.36
18.25	6.52	3.94	0.34
18.50	6.55	3.96	0.32
18.75	6.58	3.99	0.30
19.00	6.60	4.01	0.29
19.25	6.63	4.03	0.28
19.50	6.65	4.05	0.27
19.75	6.68	4.08	0.26
20.00	6.70	4.10	0.26
20.25	6.72	4.12	0.25
20.50	6.74	4.14	0.24
20.75	6.77	4.16	0.24
21.00	6.79	4.17	0.23
21.25	6.81	4.19	0.23
21.50	6.83	4.21	0.22
21.75	6.85	4.23	0.22
22.00	6.87	4.24	0.21
22.25	6.88	4.26	0.21
22.50	6.90	4.28	0.20
22.75	6.92	4.29	0.20
23.00	6.94	4.31	0.19
23.25	6.95	4.32	0.19
23.50	6.97	4.34	0.18
23.75	6.98	4.35	0.18
24.00	**7.00**	**4.37**	0.17



Subcat Reach Pond Link

Routing Diagram for HydroCAD Litchfield Proposed
Prepared by HDR, Inc, Printed 9/29/2020
HydroCAD® 10.00-20 s/n 10126 © 2017 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
19.820	83	(01, 08)
21.750	77	(02, 04, 14)
17.590	81	(03, 12)
20.340	80	(05, 09)
13.810	72	(07)
16.800	82	(10)
2.820	73	(11)
6.380	76	(13)
2.830	79	(15)
122.140	**79**	**TOTAL AREA**

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	01-Pond	1,107.00	1,105.00	40.0	0.0500	0.012	18.0	0.0	0.0
2	02-Pond	1,038.00	1,016.00	98.0	0.2245	0.012	24.0	0.0	0.0
3	03-Pond	1,131.00	1,127.00	50.0	0.0800	0.012	36.0	0.0	0.0
4	04-Pond	1,105.00	1,104.50	35.0	0.0143	0.012	24.0	0.0	0.0
5	05-Pond	1,136.00	1,131.00	50.0	0.1000	0.014	24.0	0.0	0.0
6	07-Pond	1,130.00	1,069.00	380.0	0.1605	0.012	24.0	0.0	0.0
7	08/10-Pond	1,121.70	1,105.00	88.0	0.1898	0.012	54.0	0.0	0.0
8	09-Pond	1,145.00	1,130.00	112.0	0.1339	0.012	24.0	0.0	0.0
9	11-Pond	1,188.00	1,185.00	46.0	0.0652	0.012	18.0	0.0	0.0
10	13-Pond	1,142.00	1,058.00	270.0	0.3111	0.012	18.0	0.0	0.0
11	14-Pond	1,150.00	1,143.00	52.0	0.1346	0.012	24.0	0.0	0.0
12	15-Pond	1,197.00	1,196.00	70.0	0.0143	0.012	18.0	0.0	0.0

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment01: Runoff Area=2.560 ac 0.00% Impervious Runoff Depth=1.61"
Tc=26.0 min CN=83 Runoff=2.90 cfs 0.343 af

Subcatchment02: Runoff Area=11.560 ac 0.00% Impervious Runoff Depth=1.21"
Tc=26.9 min CN=77 Runoff=9.45 cfs 1.167 af

Subcatchment03: Runoff Area=13.580 ac 0.00% Impervious Runoff Depth=1.47"
Tc=27.7 min CN=81 Runoff=13.58 cfs 1.662 af

Subcatchment04: Runoff Area=1.980 ac 0.00% Impervious Runoff Depth=1.21"
Tc=31.8 min CN=77 Runoff=1.50 cfs 0.200 af

Subcatchment05: Runoff Area=4.310 ac 0.00% Impervious Runoff Depth=1.40"
Tc=19.9 min CN=80 Runoff=4.72 cfs 0.504 af

Subcatchment07: Runoff Area=13.810 ac 0.00% Impervious Runoff Depth=0.93"
Tc=36.0 min CN=72 Runoff=7.21 cfs 1.070 af

Subcatchment08: Runoff Area=17.260 ac 0.00% Impervious Runoff Depth=1.61"
Tc=24.5 min CN=83 Runoff=20.09 cfs 2.315 af

Subcatchment09: Runoff Area=16.030 ac 0.00% Impervious Runoff Depth=1.40"
Tc=71.9 min CN=80 Runoff=9.13 cfs 1.873 af

Subcatchment10: Runoff Area=16.800 ac 0.00% Impervious Runoff Depth=1.54"
Tc=35.2 min CN=82 Runoff=15.79 cfs 2.153 af

Subcatchment11: Runoff Area=2.820 ac 0.00% Impervious Runoff Depth=0.98"
Tc=46.9 min CN=73 Runoff=1.37 cfs 0.231 af

Subcatchment12: Runoff Area=4.010 ac 0.00% Impervious Runoff Depth=1.47"
Tc=23.9 min CN=81 Runoff=4.28 cfs 0.491 af

Subcatchment13: Runoff Area=6.380 ac 0.00% Impervious Runoff Depth=1.15"
Tc=29.1 min CN=76 Runoff=4.75 cfs 0.612 af

Subcatchment14: Runoff Area=8.210 ac 0.00% Impervious Runoff Depth=1.21"
Tc=23.3 min CN=77 Runoff=7.14 cfs 0.829 af

Subcatchment15: Runoff Area=2.830 ac 0.00% Impervious Runoff Depth=1.34"
Tc=50.3 min CN=79 Runoff=1.90 cfs 0.315 af

Pond 01-Pond: Peak Elev=1,113.76' Storage=0.280 af Inflow=2.90 cfs 0.343 af
Primary=0.14 cfs 0.087 af Secondary=0.00 cfs 0.000 af Outflow=0.14 cfs 0.087 af

Pond 02-Pond: Peak Elev=1,044.20' Storage=1.001 af Inflow=9.45 cfs 1.167 af
Primary=0.37 cfs 0.250 af Secondary=0.00 cfs 0.000 af Outflow=0.37 cfs 0.250 af

Pond 03-Pond: Peak Elev=1,132.27' Storage=0.552 af Inflow=13.58 cfs 1.662 af
Primary=7.44 cfs 1.498 af Secondary=0.00 cfs 0.000 af Outflow=7.44 cfs 1.498 af

Pond 04-Pond: Peak Elev=1,108.85' Storage=0.196 af Inflow=1.50 cfs 0.200 af
Primary=0.03 cfs 0.014 af Secondary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.014 af

Pond 05-Pond: Peak Elev=1,139.17' Storage=0.356 af Inflow=4.72 cfs 0.504 af
Primary=0.35 cfs 0.187 af Secondary=0.00 cfs 0.000 af Outflow=0.35 cfs 0.187 af

Pond 07-Pond: Peak Elev=1,134.10' Storage=0.934 af Inflow=7.21 cfs 1.070 af
Primary=0.33 cfs 0.231 af Secondary=0.00 cfs 0.000 af Outflow=0.33 cfs 0.231 af

Pond 08/10-Pond: Peak Elev=1,123.73' Storage=2.040 af Inflow=34.47 cfs 4.468 af
Primary=11.81 cfs 3.188 af Secondary=0.00 cfs 0.000 af Outflow=11.81 cfs 3.188 af

Pond 09-Pond: Peak Elev=1,149.44' Storage=1.463 af Inflow=9.13 cfs 1.873 af
Primary=0.85 cfs 0.564 af Secondary=0.00 cfs 0.000 af Outflow=0.85 cfs 0.564 af

Pond 11-Pond: Peak Elev=1,190.67' Storage=0.229 af Inflow=1.37 cfs 0.231 af
Primary=0.00 cfs 0.008 af Secondary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.008 af

Pond 13-Pond: Peak Elev=1,145.71' Storage=0.560 af Inflow=4.75 cfs 0.612 af
Primary=0.16 cfs 0.093 af Secondary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.093 af

Pond 14-Pond: Peak Elev=1,153.11' Storage=0.656 af Inflow=7.14 cfs 0.829 af
Primary=0.37 cfs 0.231 af Secondary=0.00 cfs 0.000 af Outflow=0.37 cfs 0.231 af

Pond 15-Pond: Peak Elev=1,200.53' Storage=12,604 cf Inflow=1.90 cfs 0.315 af
Primary=0.08 cfs 0.037 af Secondary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.037 af

Total Runoff Area = 122.140 ac Runoff Volume = 13.766 af Average Runoff Depth = 1.35"
100.00% Pervious = 122.140 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 01:

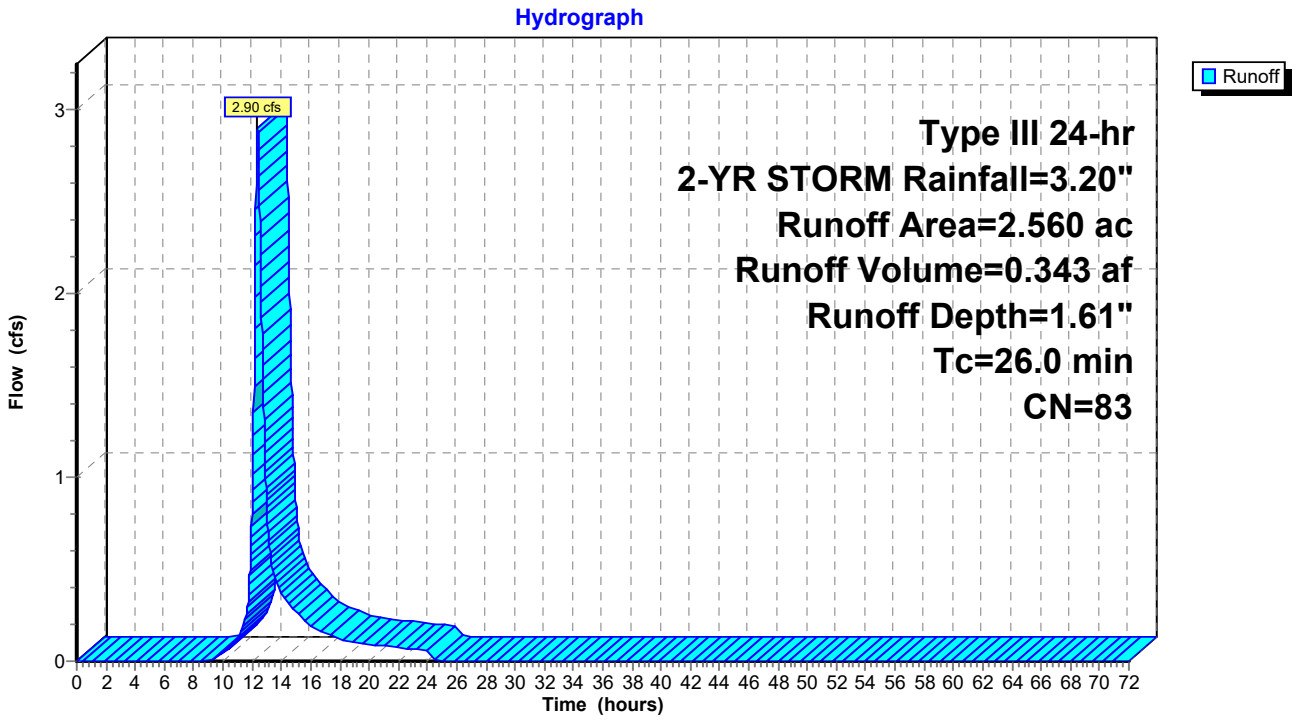
Runoff = 2.90 cfs @ 12.37 hrs, Volume= 0.343 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	2.560	83	
	2.560		100.00% Pervious Area

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

Subcatchment 01:



Hydrograph for Subcatchment 01:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.02	0.04
11.00	0.80	0.06	0.13
12.00	1.60	0.44	**0.86**
13.00	2.40	0.98	**0.84**
14.00	2.60	1.13	0.37
15.00	2.73	1.24	0.27
16.00	2.84	1.32	0.20
17.00	2.91	1.37	0.15
18.00	2.97	1.42	0.12
19.00	3.02	1.46	0.10
20.00	3.06	1.50	0.09
21.00	3.10	1.53	0.08
22.00	3.14	1.56	0.08
23.00	3.17	1.59	0.07
24.00	**3.20**	**1.61**	0.06
25.00	3.20	1.61	0.00
26.00	3.20	1.61	0.00
27.00	3.20	1.61	0.00
28.00	3.20	1.61	0.00
29.00	3.20	1.61	0.00
30.00	3.20	1.61	0.00
31.00	3.20	1.61	0.00
32.00	3.20	1.61	0.00
33.00	3.20	1.61	0.00
34.00	3.20	1.61	0.00
35.00	3.20	1.61	0.00
36.00	3.20	1.61	0.00
37.00	3.20	1.61	0.00
38.00	3.20	1.61	0.00
39.00	3.20	1.61	0.00
40.00	3.20	1.61	0.00
41.00	3.20	1.61	0.00
42.00	3.20	1.61	0.00
43.00	3.20	1.61	0.00
44.00	3.20	1.61	0.00
45.00	3.20	1.61	0.00
46.00	3.20	1.61	0.00
47.00	3.20	1.61	0.00
48.00	3.20	1.61	0.00
49.00	3.20	1.61	0.00
50.00	3.20	1.61	0.00
51.00	3.20	1.61	0.00
52.00	3.20	1.61	0.00
53.00	3.20	1.61	0.00
54.00	3.20	1.61	0.00
55.00	3.20	1.61	0.00
56.00	3.20	1.61	0.00
57.00	3.20	1.61	0.00
58.00	3.20	1.61	0.00
59.00	3.20	1.61	0.00
60.00	3.20	1.61	0.00
61.00	3.20	1.61	0.00
62.00	3.20	1.61	0.00
63.00	3.20	1.61	0.00
64.00	3.20	1.61	0.00
65.00	3.20	1.61	0.00
66.00	3.20	1.61	0.00
67.00	3.20	1.61	0.00
68.00	3.20	1.61	0.00
69.00	3.20	1.61	0.00
70.00	3.20	1.61	0.00
71.00	3.20	1.61	0.00
72.00	3.20	1.61	0.00

Summary for Subcatchment 02:

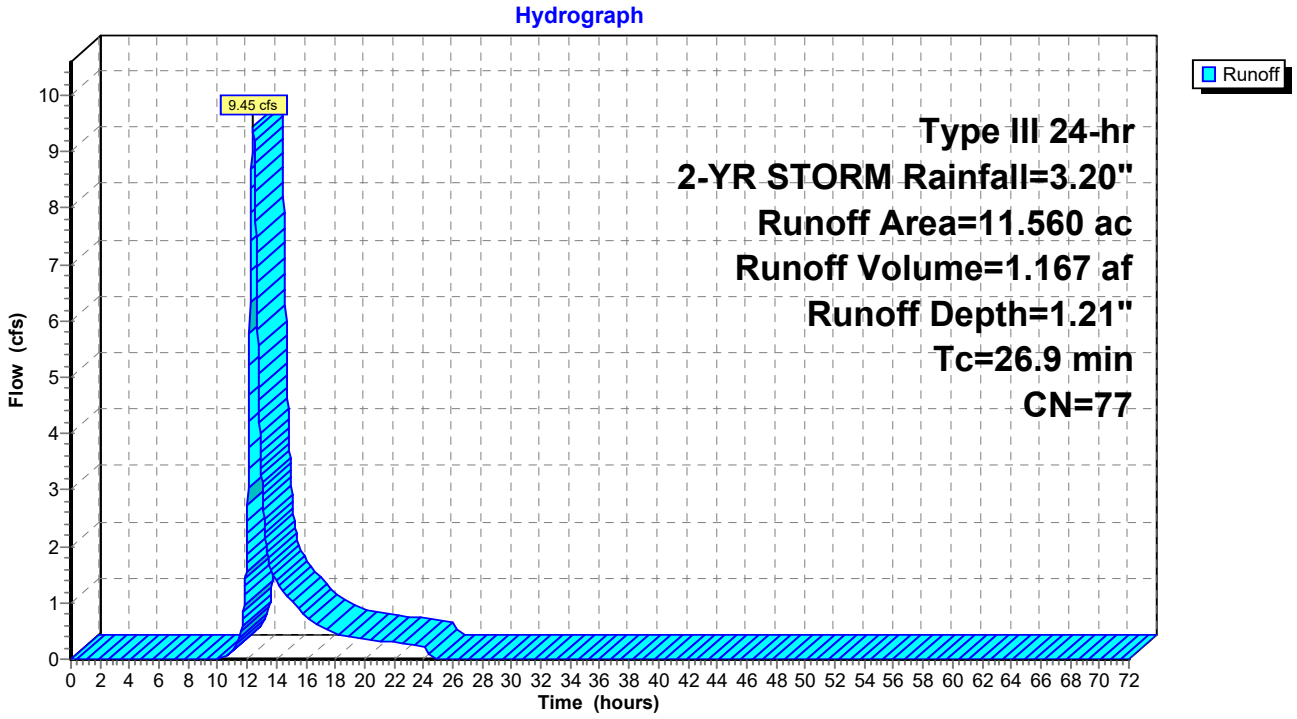
Runoff = 9.45 cfs @ 12.40 hrs, Volume= 1.167 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	11.560	77	
	11.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9					**Direct Entry, SCS TR-55**

Subcatchment 02:



Hydrograph for Subcatchment 02:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.00
11.00	0.80	0.01	0.17
12.00	1.60	0.25	**2.25**
13.00	2.40	0.68	**3.14**
14.00	2.60	0.80	1.39
15.00	2.73	0.89	1.03
16.00	2.84	0.96	0.77
17.00	2.91	1.01	0.58
18.00	2.97	1.05	0.46
19.00	3.02	1.08	0.39
20.00	3.06	1.11	0.35
21.00	3.10	1.14	0.32
22.00	3.14	1.17	0.30
23.00	3.17	1.19	0.27
24.00	**3.20**	**1.21**	0.24
25.00	3.20	1.21	0.00
26.00	3.20	1.21	0.00
27.00	3.20	1.21	0.00
28.00	3.20	1.21	0.00
29.00	3.20	1.21	0.00
30.00	3.20	1.21	0.00
31.00	3.20	1.21	0.00
32.00	3.20	1.21	0.00
33.00	3.20	1.21	0.00
34.00	3.20	1.21	0.00
35.00	3.20	1.21	0.00
36.00	3.20	1.21	0.00
37.00	3.20	1.21	0.00
38.00	3.20	1.21	0.00
39.00	3.20	1.21	0.00
40.00	3.20	1.21	0.00
41.00	3.20	1.21	0.00
42.00	3.20	1.21	0.00
43.00	3.20	1.21	0.00
44.00	3.20	1.21	0.00
45.00	3.20	1.21	0.00
46.00	3.20	1.21	0.00
47.00	3.20	1.21	0.00
48.00	3.20	1.21	0.00
49.00	3.20	1.21	0.00
50.00	3.20	1.21	0.00
51.00	3.20	1.21	0.00
52.00	3.20	1.21	0.00
53.00	3.20	1.21	0.00
54.00	3.20	1.21	0.00
55.00	3.20	1.21	0.00
56.00	3.20	1.21	0.00
57.00	3.20	1.21	0.00
58.00	3.20	1.21	0.00
59.00	3.20	1.21	0.00
60.00	3.20	1.21	0.00
61.00	3.20	1.21	0.00
62.00	3.20	1.21	0.00
63.00	3.20	1.21	0.00
64.00	3.20	1.21	0.00
65.00	3.20	1.21	0.00
66.00	3.20	1.21	0.00
67.00	3.20	1.21	0.00
68.00	3.20	1.21	0.00
69.00	3.20	1.21	0.00
70.00	3.20	1.21	0.00
71.00	3.20	1.21	0.00
72.00	3.20	1.21	0.00

Summary for Subcatchment 03:

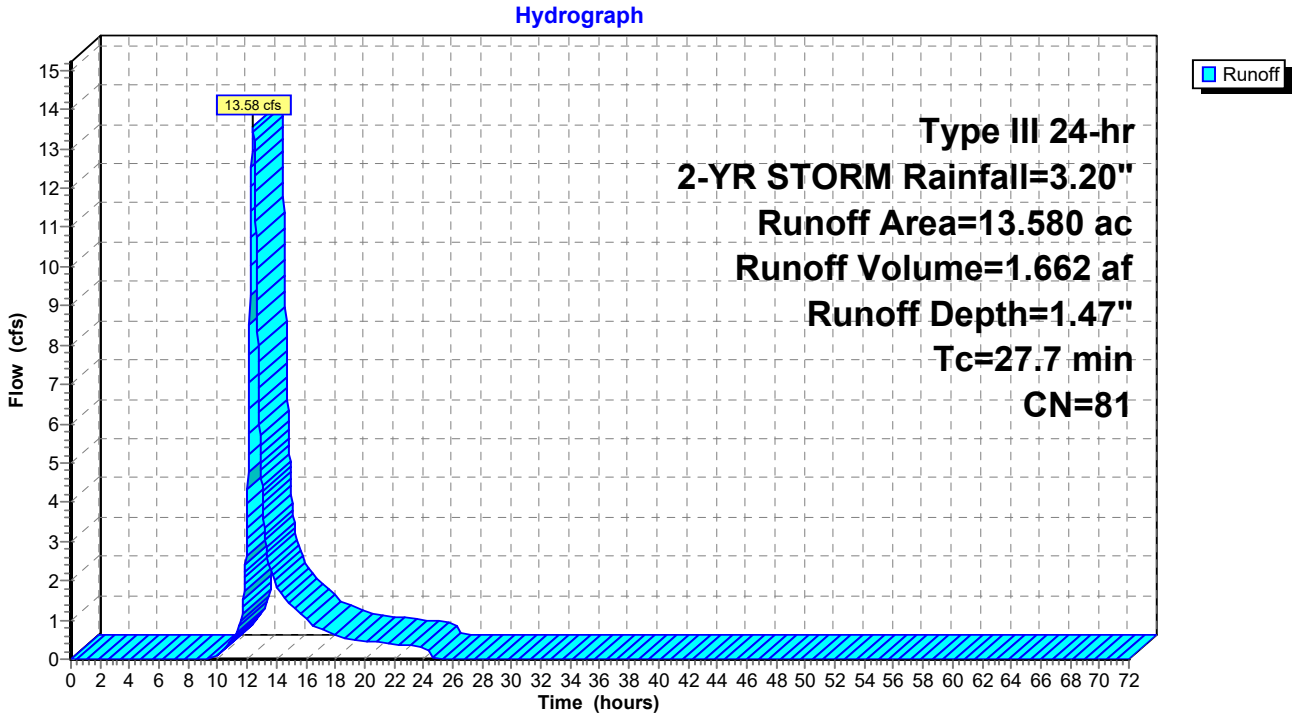
Runoff = 13.58 cfs @ 12.40 hrs, Volume= 1.662 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	13.580	81	
	13.580		100.00% Pervious Area

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

Subcatchment 03:



Hydrograph for Subcatchment 03:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.01	0.12
11.00	0.80	0.04	0.49
12.00	1.60	0.37	**3.63**
13.00	2.40	0.87	**4.44**
14.00	2.60	1.01	1.86
15.00	2.73	1.11	1.37
16.00	2.84	1.19	1.01
17.00	2.91	1.25	0.77
18.00	2.97	1.29	0.61
19.00	3.02	1.33	0.51
20.00	3.06	1.36	0.46
21.00	3.10	1.39	0.42
22.00	3.14	1.42	0.38
23.00	3.17	1.45	0.35
24.00	**3.20**	**1.47**	0.31
25.00	3.20	1.47	0.01
26.00	3.20	1.47	0.00
27.00	3.20	1.47	0.00
28.00	3.20	1.47	0.00
29.00	3.20	1.47	0.00
30.00	3.20	1.47	0.00
31.00	3.20	1.47	0.00
32.00	3.20	1.47	0.00
33.00	3.20	1.47	0.00
34.00	3.20	1.47	0.00
35.00	3.20	1.47	0.00
36.00	3.20	1.47	0.00
37.00	3.20	1.47	0.00
38.00	3.20	1.47	0.00
39.00	3.20	1.47	0.00
40.00	3.20	1.47	0.00
41.00	3.20	1.47	0.00
42.00	3.20	1.47	0.00
43.00	3.20	1.47	0.00
44.00	3.20	1.47	0.00
45.00	3.20	1.47	0.00
46.00	3.20	1.47	0.00
47.00	3.20	1.47	0.00
48.00	3.20	1.47	0.00
49.00	3.20	1.47	0.00
50.00	3.20	1.47	0.00
51.00	3.20	1.47	0.00
52.00	3.20	1.47	0.00
53.00	3.20	1.47	0.00
54.00	3.20	1.47	0.00
55.00	3.20	1.47	0.00
56.00	3.20	1.47	0.00
57.00	3.20	1.47	0.00
58.00	3.20	1.47	0.00
59.00	3.20	1.47	0.00
60.00	3.20	1.47	0.00
61.00	3.20	1.47	0.00
62.00	3.20	1.47	0.00
63.00	3.20	1.47	0.00
64.00	3.20	1.47	0.00
65.00	3.20	1.47	0.00
66.00	3.20	1.47	0.00
67.00	3.20	1.47	0.00
68.00	3.20	1.47	0.00
69.00	3.20	1.47	0.00
70.00	3.20	1.47	0.00
71.00	3.20	1.47	0.00
72.00	3.20	1.47	0.00

Summary for Subcatchment 04:

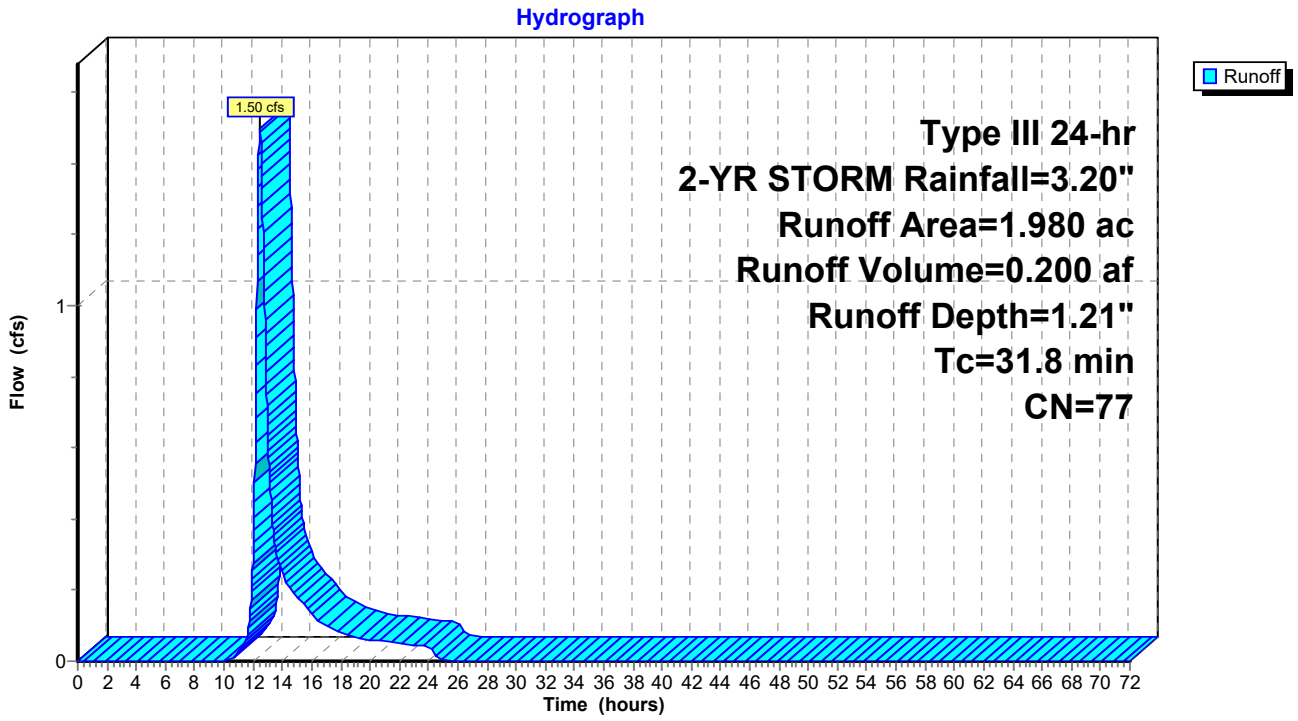
Runoff = 1.50 cfs @ 12.47 hrs, Volume= 0.200 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	1.980	77	
	1.980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.8					**Direct Entry, SCS TR-55**

Subcatchment 04:



Hydrograph for Subcatchment 04:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.00
11.00	0.80	0.01	0.03
12.00	1.60	0.25	**0.30**
13.00	2.40	0.68	**0.64**
14.00	2.60	0.80	0.25
15.00	2.73	0.89	0.18
16.00	2.84	0.96	0.13
17.00	2.91	1.01	0.10
18.00	2.97	1.05	0.08
19.00	3.02	1.08	0.07
20.00	3.06	1.11	0.06
21.00	3.10	1.14	0.06
22.00	3.14	1.17	0.05
23.00	3.17	1.19	0.05
24.00	**3.20**	**1.21**	0.04
25.00	3.20	1.21	0.00
26.00	3.20	1.21	0.00
27.00	3.20	1.21	0.00
28.00	3.20	1.21	0.00
29.00	3.20	1.21	0.00
30.00	3.20	1.21	0.00
31.00	3.20	1.21	0.00
32.00	3.20	1.21	0.00
33.00	3.20	1.21	0.00
34.00	3.20	1.21	0.00
35.00	3.20	1.21	0.00
36.00	3.20	1.21	0.00
37.00	3.20	1.21	0.00
38.00	3.20	1.21	0.00
39.00	3.20	1.21	0.00
40.00	3.20	1.21	0.00
41.00	3.20	1.21	0.00
42.00	3.20	1.21	0.00
43.00	3.20	1.21	0.00
44.00	3.20	1.21	0.00
45.00	3.20	1.21	0.00
46.00	3.20	1.21	0.00
47.00	3.20	1.21	0.00
48.00	3.20	1.21	0.00
49.00	3.20	1.21	0.00
50.00	3.20	1.21	0.00
51.00	3.20	1.21	0.00
52.00	3.20	1.21	0.00
53.00	3.20	1.21	0.00
54.00	3.20	1.21	0.00
55.00	3.20	1.21	0.00
56.00	3.20	1.21	0.00
57.00	3.20	1.21	0.00
58.00	3.20	1.21	0.00
59.00	3.20	1.21	0.00
60.00	3.20	1.21	0.00
61.00	3.20	1.21	0.00
62.00	3.20	1.21	0.00
63.00	3.20	1.21	0.00
64.00	3.20	1.21	0.00
65.00	3.20	1.21	0.00
66.00	3.20	1.21	0.00
67.00	3.20	1.21	0.00
68.00	3.20	1.21	0.00
69.00	3.20	1.21	0.00
70.00	3.20	1.21	0.00
71.00	3.20	1.21	0.00
72.00	3.20	1.21	0.00

Summary for Subcatchment 05:

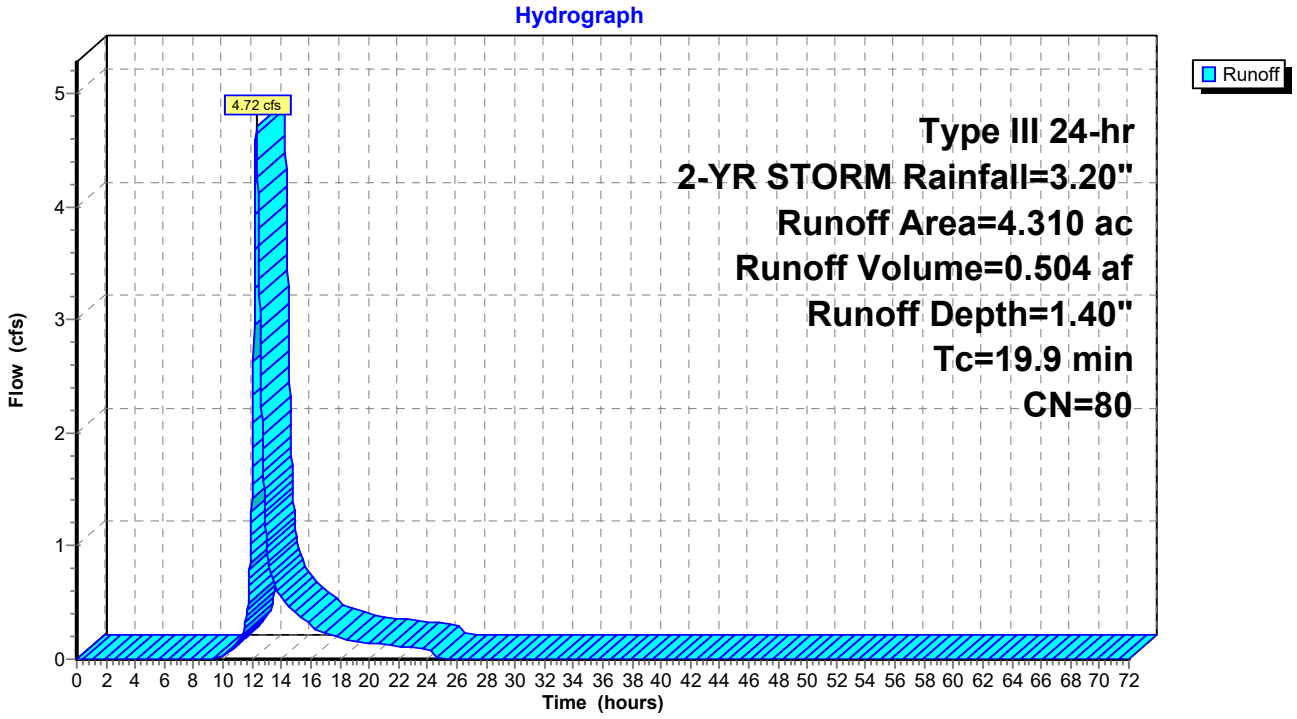
Runoff = 4.72 cfs @ 12.28 hrs, Volume= 0.504 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	4.310	80	
	4.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9					**Direct Entry, SCS TR-55**

Subcatchment 05:



Hydrograph for Subcatchment 05:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.03
11.00	0.80	0.03	0.15
12.00	1.60	0.34	**1.55**
13.00	2.40	0.82	**1.03**
14.00	2.60	0.96	0.55
15.00	2.73	1.05	0.41
16.00	2.84	1.13	0.30
17.00	2.91	1.18	0.23
18.00	2.97	1.23	0.18
19.00	3.02	1.26	0.16
20.00	3.06	1.30	0.14
21.00	3.10	1.33	0.13
22.00	3.14	1.35	0.12
23.00	3.17	1.38	0.11
24.00	**3.20**	**1.40**	0.09
25.00	3.20	1.40	0.00
26.00	3.20	1.40	0.00
27.00	3.20	1.40	0.00
28.00	3.20	1.40	0.00
29.00	3.20	1.40	0.00
30.00	3.20	1.40	0.00
31.00	3.20	1.40	0.00
32.00	3.20	1.40	0.00
33.00	3.20	1.40	0.00
34.00	3.20	1.40	0.00
35.00	3.20	1.40	0.00
36.00	3.20	1.40	0.00
37.00	3.20	1.40	0.00
38.00	3.20	1.40	0.00
39.00	3.20	1.40	0.00
40.00	3.20	1.40	0.00
41.00	3.20	1.40	0.00
42.00	3.20	1.40	0.00
43.00	3.20	1.40	0.00
44.00	3.20	1.40	0.00
45.00	3.20	1.40	0.00
46.00	3.20	1.40	0.00
47.00	3.20	1.40	0.00
48.00	3.20	1.40	0.00
49.00	3.20	1.40	0.00
50.00	3.20	1.40	0.00
51.00	3.20	1.40	0.00
52.00	3.20	1.40	0.00
53.00	3.20	1.40	0.00
54.00	3.20	1.40	0.00
55.00	3.20	1.40	0.00
56.00	3.20	1.40	0.00
57.00	3.20	1.40	0.00
58.00	3.20	1.40	0.00
59.00	3.20	1.40	0.00
60.00	3.20	1.40	0.00
61.00	3.20	1.40	0.00
62.00	3.20	1.40	0.00
63.00	3.20	1.40	0.00
64.00	3.20	1.40	0.00
65.00	3.20	1.40	0.00
66.00	3.20	1.40	0.00
67.00	3.20	1.40	0.00
68.00	3.20	1.40	0.00
69.00	3.20	1.40	0.00
70.00	3.20	1.40	0.00
71.00	3.20	1.40	0.00
72.00	3.20	1.40	0.00

Summary for Subcatchment 07:

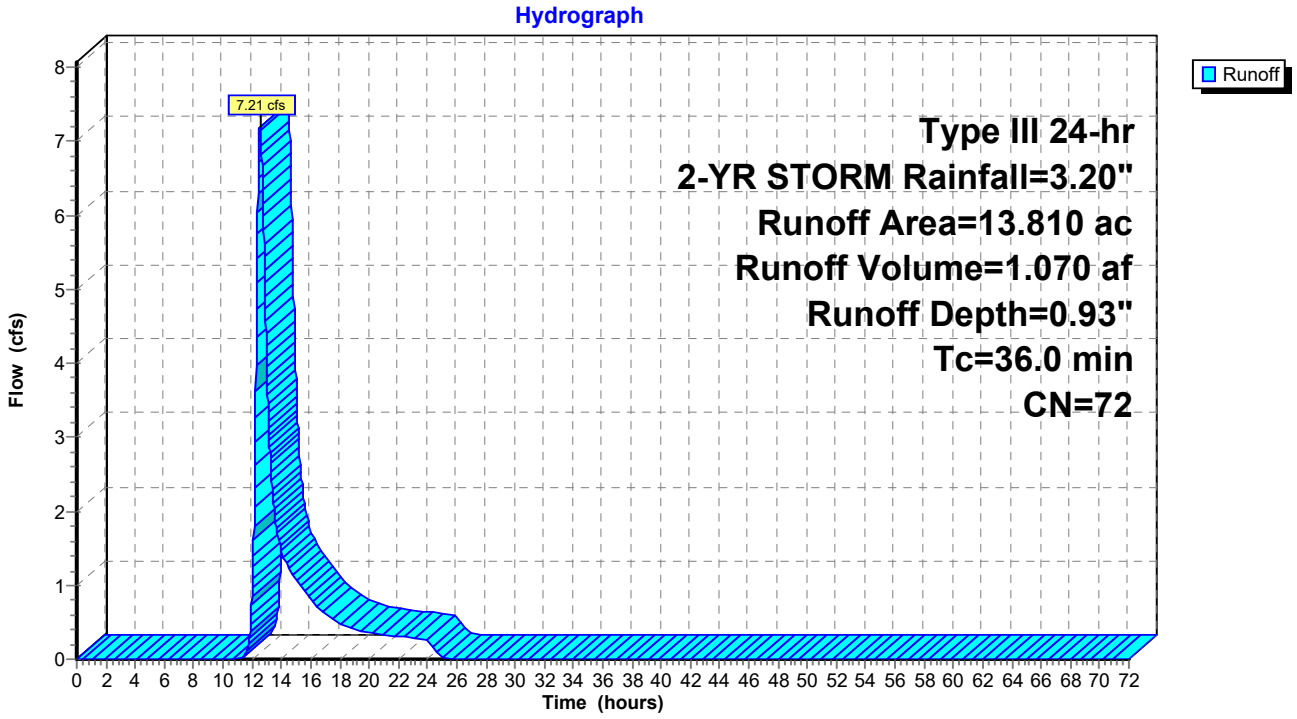
Runoff = 7.21 cfs @ 12.55 hrs, Volume= 1.070 af, Depth= 0.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	13.810	72	
	13.810		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.0					**Direct Entry, SCS TR-55**

Subcatchment 07:



Hydrograph for Subcatchment 07:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.00
11.00	0.80	0.00	0.00
12.00	1.60	0.14	**0.86**
13.00	2.40	0.48	**3.96**
14.00	2.60	0.58	1.48
15.00	2.73	0.65	1.07
16.00	2.84	0.71	0.81
17.00	2.91	0.76	0.61
18.00	2.97	0.79	0.49
19.00	3.02	0.82	0.41
20.00	3.06	0.85	0.37
21.00	3.10	0.87	0.34
22.00	3.14	0.89	0.31
23.00	3.17	0.91	0.28
24.00	**3.20**	**0.93**	0.25
25.00	3.20	0.93	0.02
26.00	3.20	0.93	0.00
27.00	3.20	0.93	0.00
28.00	3.20	0.93	0.00
29.00	3.20	0.93	0.00
30.00	3.20	0.93	0.00
31.00	3.20	0.93	0.00
32.00	3.20	0.93	0.00
33.00	3.20	0.93	0.00
34.00	3.20	0.93	0.00
35.00	3.20	0.93	0.00
36.00	3.20	0.93	0.00
37.00	3.20	0.93	0.00
38.00	3.20	0.93	0.00
39.00	3.20	0.93	0.00
40.00	3.20	0.93	0.00
41.00	3.20	0.93	0.00
42.00	3.20	0.93	0.00
43.00	3.20	0.93	0.00
44.00	3.20	0.93	0.00
45.00	3.20	0.93	0.00
46.00	3.20	0.93	0.00
47.00	3.20	0.93	0.00
48.00	3.20	0.93	0.00
49.00	3.20	0.93	0.00
50.00	3.20	0.93	0.00
51.00	3.20	0.93	0.00
52.00	3.20	0.93	0.00
53.00	3.20	0.93	0.00
54.00	3.20	0.93	0.00
55.00	3.20	0.93	0.00
56.00	3.20	0.93	0.00
57.00	3.20	0.93	0.00
58.00	3.20	0.93	0.00
59.00	3.20	0.93	0.00
60.00	3.20	0.93	0.00
61.00	3.20	0.93	0.00
62.00	3.20	0.93	0.00
63.00	3.20	0.93	0.00
64.00	3.20	0.93	0.00
65.00	3.20	0.93	0.00
66.00	3.20	0.93	0.00
67.00	3.20	0.93	0.00
68.00	3.20	0.93	0.00
69.00	3.20	0.93	0.00
70.00	3.20	0.93	0.00
71.00	3.20	0.93	0.00
72.00	3.20	0.93	0.00

Summary for Subcatchment 08:

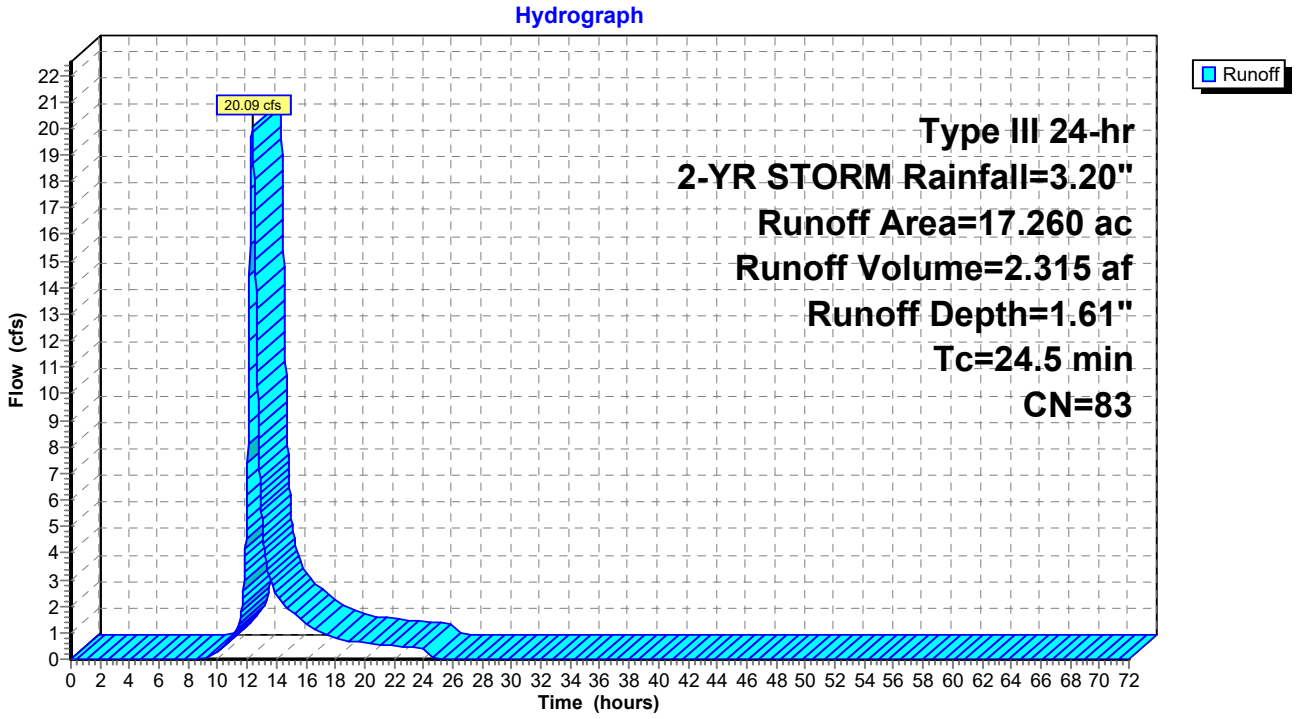
Runoff = 20.09 cfs @ 12.34 hrs, Volume= 2.315 af, Depth= 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	17.260	83	
	17.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5					**Direct Entry, SCS TR-55**

Subcatchment 08:



Hydrograph for Subcatchment 08:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.03
10.00	0.60	0.02	0.31
11.00	0.80	0.06	0.87
12.00	1.60	0.44	**6.22**
13.00	2.40	0.98	**5.36**
14.00	2.60	1.13	2.45
15.00	2.73	1.24	1.81
16.00	2.84	1.32	1.33
17.00	2.91	1.37	1.01
18.00	2.97	1.42	0.80
19.00	3.02	1.46	0.68
20.00	3.06	1.50	0.61
21.00	3.10	1.53	0.56
22.00	3.14	1.56	0.51
23.00	3.17	1.59	0.46
24.00	**3.20**	**1.61**	0.41
25.00	3.20	1.61	0.00
26.00	3.20	1.61	0.00
27.00	3.20	1.61	0.00
28.00	3.20	1.61	0.00
29.00	3.20	1.61	0.00
30.00	3.20	1.61	0.00
31.00	3.20	1.61	0.00
32.00	3.20	1.61	0.00
33.00	3.20	1.61	0.00
34.00	3.20	1.61	0.00
35.00	3.20	1.61	0.00
36.00	3.20	1.61	0.00
37.00	3.20	1.61	0.00
38.00	3.20	1.61	0.00
39.00	3.20	1.61	0.00
40.00	3.20	1.61	0.00
41.00	3.20	1.61	0.00
42.00	3.20	1.61	0.00
43.00	3.20	1.61	0.00
44.00	3.20	1.61	0.00
45.00	3.20	1.61	0.00
46.00	3.20	1.61	0.00
47.00	3.20	1.61	0.00
48.00	3.20	1.61	0.00
49.00	3.20	1.61	0.00
50.00	3.20	1.61	0.00
51.00	3.20	1.61	0.00
52.00	3.20	1.61	0.00
53.00	3.20	1.61	0.00
54.00	3.20	1.61	0.00
55.00	3.20	1.61	0.00
56.00	3.20	1.61	0.00
57.00	3.20	1.61	0.00
58.00	3.20	1.61	0.00
59.00	3.20	1.61	0.00
60.00	3.20	1.61	0.00
61.00	3.20	1.61	0.00
62.00	3.20	1.61	0.00
63.00	3.20	1.61	0.00
64.00	3.20	1.61	0.00
65.00	3.20	1.61	0.00
66.00	3.20	1.61	0.00
67.00	3.20	1.61	0.00
68.00	3.20	1.61	0.00
69.00	3.20	1.61	0.00
70.00	3.20	1.61	0.00
71.00	3.20	1.61	0.00
72.00	3.20	1.61	0.00

Summary for Subcatchment 09:

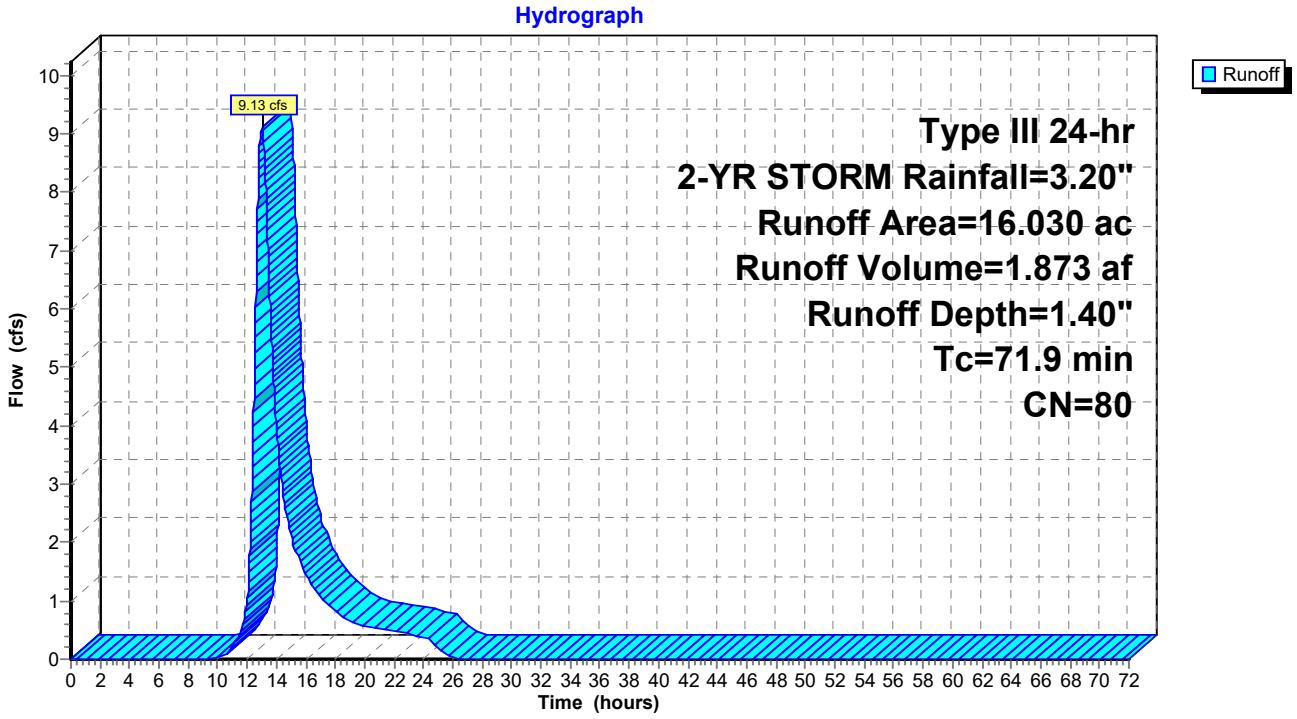
Runoff = 9.13 cfs @ 13.02 hrs, Volume= 1.873 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	16.030	80	
	16.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
71.9					**Direct Entry, SCS TR-55**

Subcatchment 09:



Hydrograph for Subcatchment 09:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.01
11.00	0.80	0.03	0.21
12.00	1.60	0.34	1.02
13.00	2.40	0.82	**9.12**
14.00	2.60	0.96	**3.95**
15.00	2.73	1.05	2.10
16.00	2.84	1.13	1.47
17.00	2.91	1.18	1.07
18.00	2.97	1.23	0.83
19.00	3.02	1.26	0.66
20.00	3.06	1.30	0.57
21.00	3.10	1.33	0.52
22.00	3.14	1.35	0.47
23.00	3.17	1.38	0.43
24.00	**3.20**	**1.40**	0.39
25.00	3.20	1.40	0.18
26.00	3.20	1.40	0.02
27.00	3.20	1.40	0.00
28.00	3.20	1.40	0.00
29.00	3.20	1.40	0.00
30.00	3.20	1.40	0.00
31.00	3.20	1.40	0.00
32.00	3.20	1.40	0.00
33.00	3.20	1.40	0.00
34.00	3.20	1.40	0.00
35.00	3.20	1.40	0.00
36.00	3.20	1.40	0.00
37.00	3.20	1.40	0.00
38.00	3.20	1.40	0.00
39.00	3.20	1.40	0.00
40.00	3.20	1.40	0.00
41.00	3.20	1.40	0.00
42.00	3.20	1.40	0.00
43.00	3.20	1.40	0.00
44.00	3.20	1.40	0.00
45.00	3.20	1.40	0.00
46.00	3.20	1.40	0.00
47.00	3.20	1.40	0.00
48.00	3.20	1.40	0.00
49.00	3.20	1.40	0.00
50.00	3.20	1.40	0.00
51.00	3.20	1.40	0.00
52.00	3.20	1.40	0.00
53.00	3.20	1.40	0.00
54.00	3.20	1.40	0.00
55.00	3.20	1.40	0.00
56.00	3.20	1.40	0.00
57.00	3.20	1.40	0.00
58.00	3.20	1.40	0.00
59.00	3.20	1.40	0.00
60.00	3.20	1.40	0.00
61.00	3.20	1.40	0.00
62.00	3.20	1.40	0.00
63.00	3.20	1.40	0.00
64.00	3.20	1.40	0.00
65.00	3.20	1.40	0.00
66.00	3.20	1.40	0.00
67.00	3.20	1.40	0.00
68.00	3.20	1.40	0.00
69.00	3.20	1.40	0.00
70.00	3.20	1.40	0.00
71.00	3.20	1.40	0.00
72.00	3.20	1.40	0.00

Summary for Subcatchment 10:

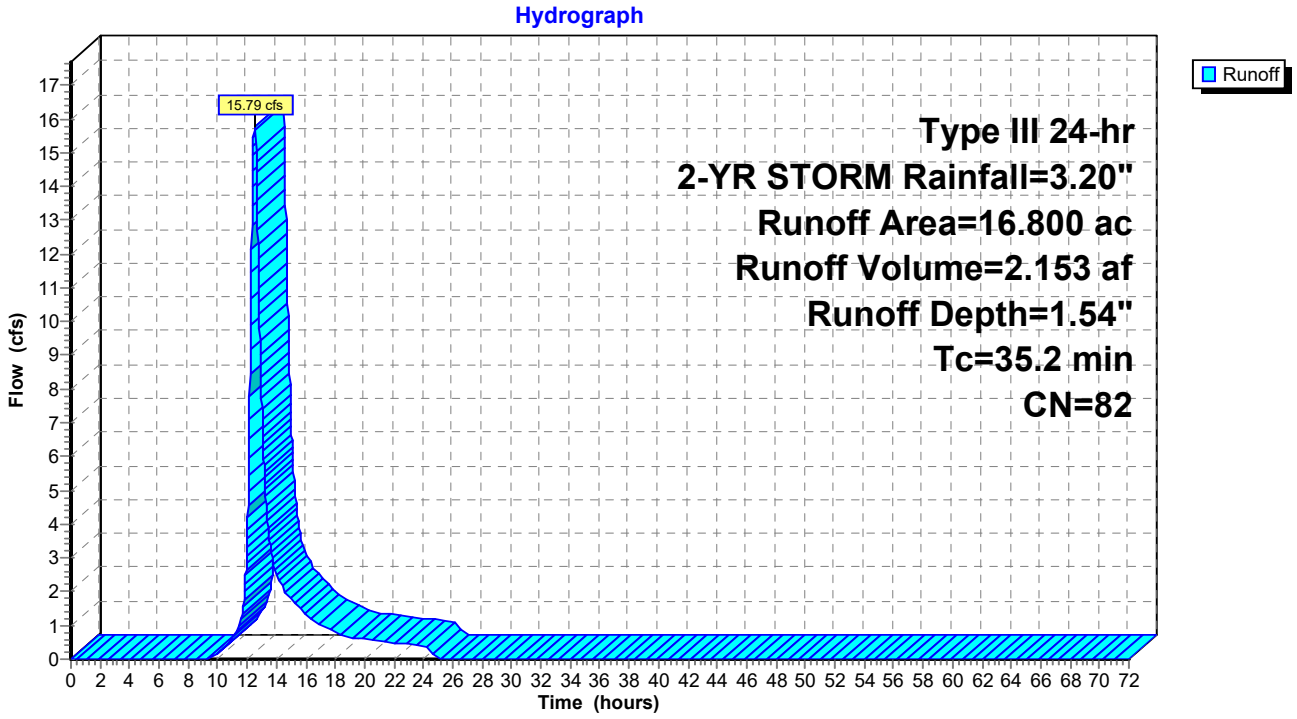
Runoff = 15.79 cfs @ 12.49 hrs, Volume= 2.153 af, Depth= 1.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	16.800	82	
	16.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
35.2					**Direct Entry, SCS TR-55**

Subcatchment 10:



Hydrograph for Subcatchment 10:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.01	0.18
11.00	0.80	0.05	0.63
12.00	1.60	0.40	**3.57**
13.00	2.40	0.93	**7.41**
14.00	2.60	1.07	2.53
15.00	2.73	1.17	1.79
16.00	2.84	1.25	1.34
17.00	2.91	1.31	1.00
18.00	2.97	1.36	0.79
19.00	3.02	1.39	0.65
20.00	3.06	1.43	0.59
21.00	3.10	1.46	0.54
22.00	3.14	1.49	0.49
23.00	3.17	1.51	0.44
24.00	**3.20**	**1.54**	0.40
25.00	3.20	1.54	0.02
26.00	3.20	1.54	0.00
27.00	3.20	1.54	0.00
28.00	3.20	1.54	0.00
29.00	3.20	1.54	0.00
30.00	3.20	1.54	0.00
31.00	3.20	1.54	0.00
32.00	3.20	1.54	0.00
33.00	3.20	1.54	0.00
34.00	3.20	1.54	0.00
35.00	3.20	1.54	0.00
36.00	3.20	1.54	0.00
37.00	3.20	1.54	0.00
38.00	3.20	1.54	0.00
39.00	3.20	1.54	0.00
40.00	3.20	1.54	0.00
41.00	3.20	1.54	0.00
42.00	3.20	1.54	0.00
43.00	3.20	1.54	0.00
44.00	3.20	1.54	0.00
45.00	3.20	1.54	0.00
46.00	3.20	1.54	0.00
47.00	3.20	1.54	0.00
48.00	3.20	1.54	0.00
49.00	3.20	1.54	0.00
50.00	3.20	1.54	0.00
51.00	3.20	1.54	0.00
52.00	3.20	1.54	0.00
53.00	3.20	1.54	0.00
54.00	3.20	1.54	0.00
55.00	3.20	1.54	0.00
56.00	3.20	1.54	0.00
57.00	3.20	1.54	0.00
58.00	3.20	1.54	0.00
59.00	3.20	1.54	0.00
60.00	3.20	1.54	0.00
61.00	3.20	1.54	0.00
62.00	3.20	1.54	0.00
63.00	3.20	1.54	0.00
64.00	3.20	1.54	0.00
65.00	3.20	1.54	0.00
66.00	3.20	1.54	0.00
67.00	3.20	1.54	0.00
68.00	3.20	1.54	0.00
69.00	3.20	1.54	0.00
70.00	3.20	1.54	0.00
71.00	3.20	1.54	0.00
72.00	3.20	1.54	0.00

Summary for Subcatchment 11:

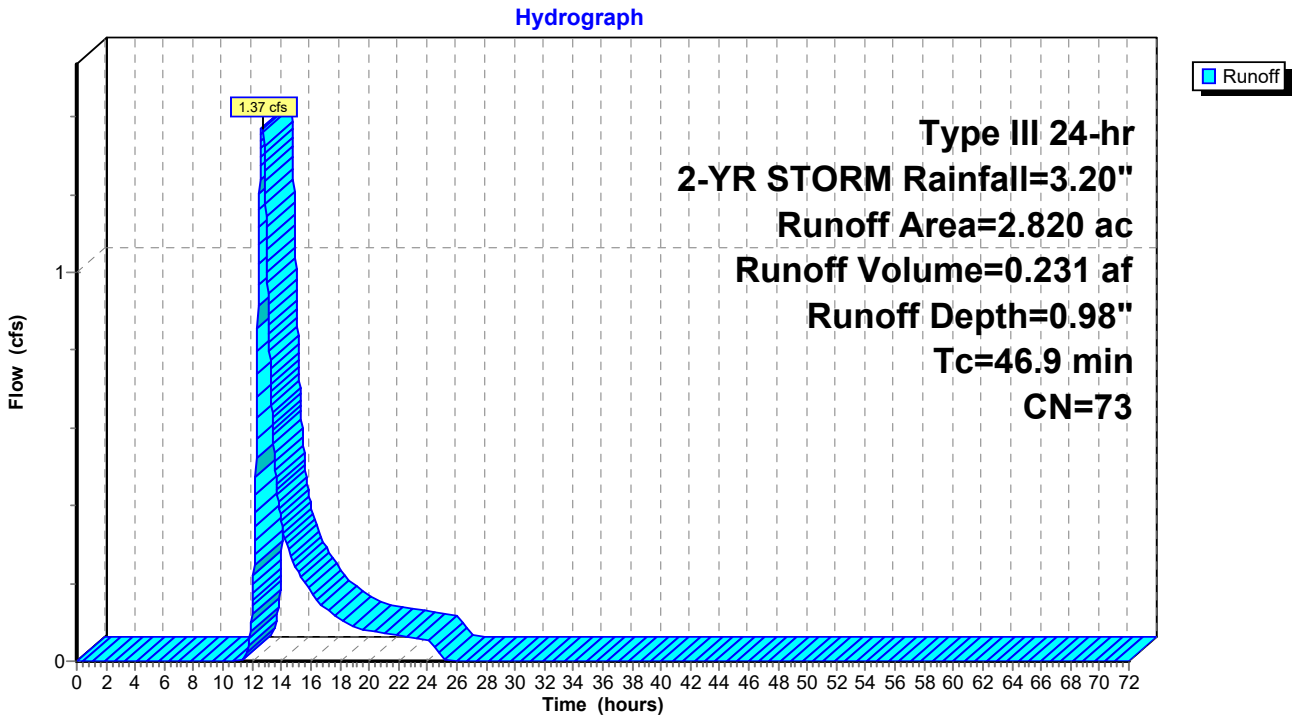
Runoff = 1.37 cfs @ 12.69 hrs, Volume= 0.231 af, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	2.820	73	
	2.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
46.9					**Direct Entry, SCS TR-55**

Subcatchment 11:



Hydrograph for Subcatchment 11:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.00
11.00	0.80	0.00	0.00
12.00	1.60	0.16	**0.13**
13.00	2.40	0.51	**1.06**
14.00	2.60	0.62	0.36
15.00	2.73	0.70	0.24
16.00	2.84	0.76	0.18
17.00	2.91	0.80	0.14
18.00	2.97	0.84	0.11
19.00	3.02	0.87	0.09
20.00	3.06	0.90	0.08
21.00	3.10	0.92	0.07
22.00	3.14	0.94	0.07
23.00	3.17	0.96	0.06
24.00	**3.20**	**0.98**	0.05
25.00	3.20	0.98	0.01
26.00	3.20	0.98	0.00
27.00	3.20	0.98	0.00
28.00	3.20	0.98	0.00
29.00	3.20	0.98	0.00
30.00	3.20	0.98	0.00
31.00	3.20	0.98	0.00
32.00	3.20	0.98	0.00
33.00	3.20	0.98	0.00
34.00	3.20	0.98	0.00
35.00	3.20	0.98	0.00
36.00	3.20	0.98	0.00
37.00	3.20	0.98	0.00
38.00	3.20	0.98	0.00
39.00	3.20	0.98	0.00
40.00	3.20	0.98	0.00
41.00	3.20	0.98	0.00
42.00	3.20	0.98	0.00
43.00	3.20	0.98	0.00
44.00	3.20	0.98	0.00
45.00	3.20	0.98	0.00
46.00	3.20	0.98	0.00
47.00	3.20	0.98	0.00
48.00	3.20	0.98	0.00
49.00	3.20	0.98	0.00
50.00	3.20	0.98	0.00
51.00	3.20	0.98	0.00
52.00	3.20	0.98	0.00
53.00	3.20	0.98	0.00
54.00	3.20	0.98	0.00
55.00	3.20	0.98	0.00
56.00	3.20	0.98	0.00
57.00	3.20	0.98	0.00
58.00	3.20	0.98	0.00
59.00	3.20	0.98	0.00
60.00	3.20	0.98	0.00
61.00	3.20	0.98	0.00
62.00	3.20	0.98	0.00
63.00	3.20	0.98	0.00
64.00	3.20	0.98	0.00
65.00	3.20	0.98	0.00
66.00	3.20	0.98	0.00
67.00	3.20	0.98	0.00
68.00	3.20	0.98	0.00
69.00	3.20	0.98	0.00
70.00	3.20	0.98	0.00
71.00	3.20	0.98	0.00
72.00	3.20	0.98	0.00

Summary for Subcatchment 12:

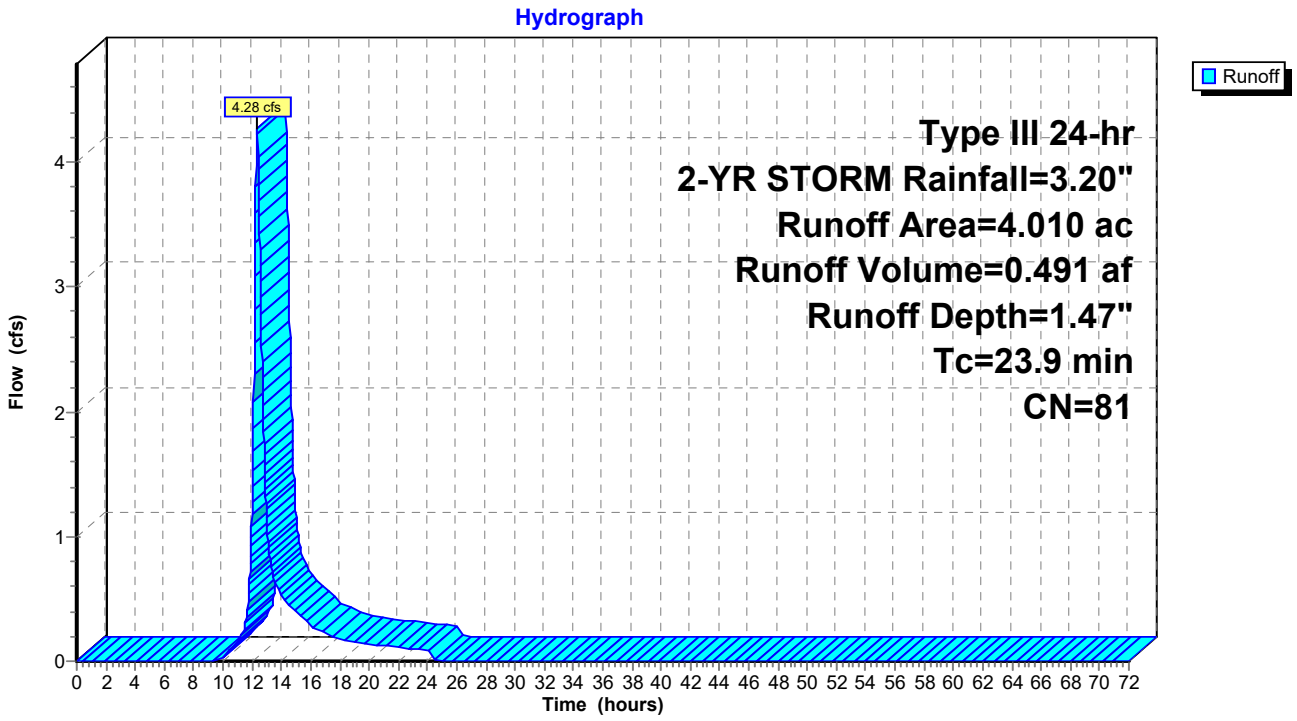
Runoff = 4.28 cfs @ 12.34 hrs, Volume= 0.491 af, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	4.010	81	
	4.010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.9					**Direct Entry, SCS TR-55**

Subcatchment 12:



Hydrograph for Subcatchment 12:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.01	0.04
11.00	0.80	0.04	0.15
12.00	1.60	0.37	**1.28**
13.00	2.40	0.87	**1.14**
14.00	2.60	1.01	0.54
15.00	2.73	1.11	0.40
16.00	2.84	1.19	0.29
17.00	2.91	1.25	0.22
18.00	2.97	1.29	0.18
19.00	3.02	1.33	0.15
20.00	3.06	1.36	0.14
21.00	3.10	1.39	0.12
22.00	3.14	1.42	0.11
23.00	3.17	1.45	0.10
24.00	**3.20**	**1.47**	0.09
25.00	3.20	1.47	0.00
26.00	3.20	1.47	0.00
27.00	3.20	1.47	0.00
28.00	3.20	1.47	0.00
29.00	3.20	1.47	0.00
30.00	3.20	1.47	0.00
31.00	3.20	1.47	0.00
32.00	3.20	1.47	0.00
33.00	3.20	1.47	0.00
34.00	3.20	1.47	0.00
35.00	3.20	1.47	0.00
36.00	3.20	1.47	0.00
37.00	3.20	1.47	0.00
38.00	3.20	1.47	0.00
39.00	3.20	1.47	0.00
40.00	3.20	1.47	0.00
41.00	3.20	1.47	0.00
42.00	3.20	1.47	0.00
43.00	3.20	1.47	0.00
44.00	3.20	1.47	0.00
45.00	3.20	1.47	0.00
46.00	3.20	1.47	0.00
47.00	3.20	1.47	0.00
48.00	3.20	1.47	0.00
49.00	3.20	1.47	0.00
50.00	3.20	1.47	0.00
51.00	3.20	1.47	0.00
52.00	3.20	1.47	0.00
53.00	3.20	1.47	0.00
54.00	3.20	1.47	0.00
55.00	3.20	1.47	0.00
56.00	3.20	1.47	0.00
57.00	3.20	1.47	0.00
58.00	3.20	1.47	0.00
59.00	3.20	1.47	0.00
60.00	3.20	1.47	0.00
61.00	3.20	1.47	0.00
62.00	3.20	1.47	0.00
63.00	3.20	1.47	0.00
64.00	3.20	1.47	0.00
65.00	3.20	1.47	0.00
66.00	3.20	1.47	0.00
67.00	3.20	1.47	0.00
68.00	3.20	1.47	0.00
69.00	3.20	1.47	0.00
70.00	3.20	1.47	0.00
71.00	3.20	1.47	0.00
72.00	3.20	1.47	0.00

Summary for Subcatchment 13:

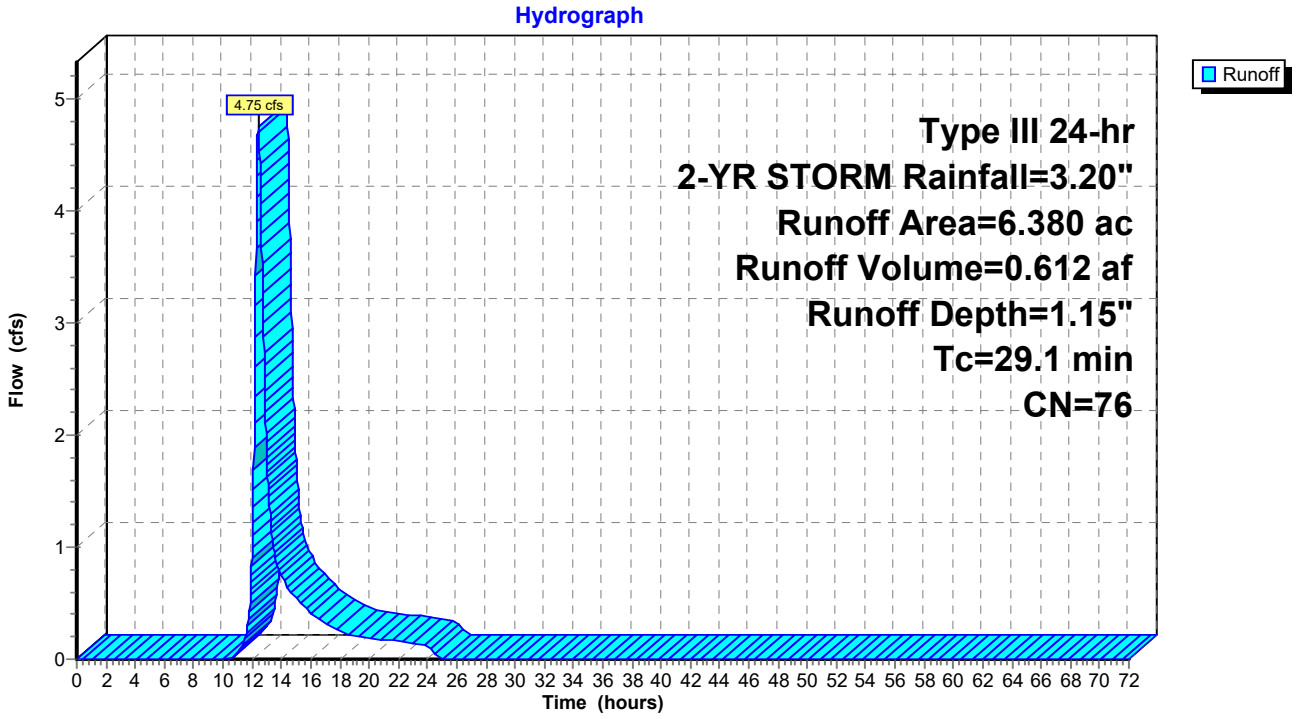
Runoff = 4.75 cfs @ 12.44 hrs, Volume= 0.612 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	6.380	76	
	6.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.1					**Direct Entry, SCS TR-55**

Subcatchment 13:



Hydrograph for Subcatchment 13:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.00
11.00	0.80	0.01	0.06
12.00	1.60	0.23	**1.00**
13.00	2.40	0.63	**1.79**
14.00	2.60	0.75	0.75
15.00	2.73	0.84	0.55
16.00	2.84	0.91	0.42
17.00	2.91	0.96	0.32
18.00	2.97	0.99	0.25
19.00	3.02	1.03	0.21
20.00	3.06	1.06	0.19
21.00	3.10	1.08	0.17
22.00	3.14	1.11	0.16
23.00	3.17	1.13	0.14
24.00	**3.20**	**1.15**	0.13
25.00	3.20	1.15	0.00
26.00	3.20	1.15	0.00
27.00	3.20	1.15	0.00
28.00	3.20	1.15	0.00
29.00	3.20	1.15	0.00
30.00	3.20	1.15	0.00
31.00	3.20	1.15	0.00
32.00	3.20	1.15	0.00
33.00	3.20	1.15	0.00
34.00	3.20	1.15	0.00
35.00	3.20	1.15	0.00
36.00	3.20	1.15	0.00
37.00	3.20	1.15	0.00
38.00	3.20	1.15	0.00
39.00	3.20	1.15	0.00
40.00	3.20	1.15	0.00
41.00	3.20	1.15	0.00
42.00	3.20	1.15	0.00
43.00	3.20	1.15	0.00
44.00	3.20	1.15	0.00
45.00	3.20	1.15	0.00
46.00	3.20	1.15	0.00
47.00	3.20	1.15	0.00
48.00	3.20	1.15	0.00
49.00	3.20	1.15	0.00
50.00	3.20	1.15	0.00
51.00	3.20	1.15	0.00
52.00	3.20	1.15	0.00
53.00	3.20	1.15	0.00
54.00	3.20	1.15	0.00
55.00	3.20	1.15	0.00
56.00	3.20	1.15	0.00
57.00	3.20	1.15	0.00
58.00	3.20	1.15	0.00
59.00	3.20	1.15	0.00
60.00	3.20	1.15	0.00
61.00	3.20	1.15	0.00
62.00	3.20	1.15	0.00
63.00	3.20	1.15	0.00
64.00	3.20	1.15	0.00
65.00	3.20	1.15	0.00
66.00	3.20	1.15	0.00
67.00	3.20	1.15	0.00
68.00	3.20	1.15	0.00
69.00	3.20	1.15	0.00
70.00	3.20	1.15	0.00
71.00	3.20	1.15	0.00
72.00	3.20	1.15	0.00

Summary for Subcatchment 14:

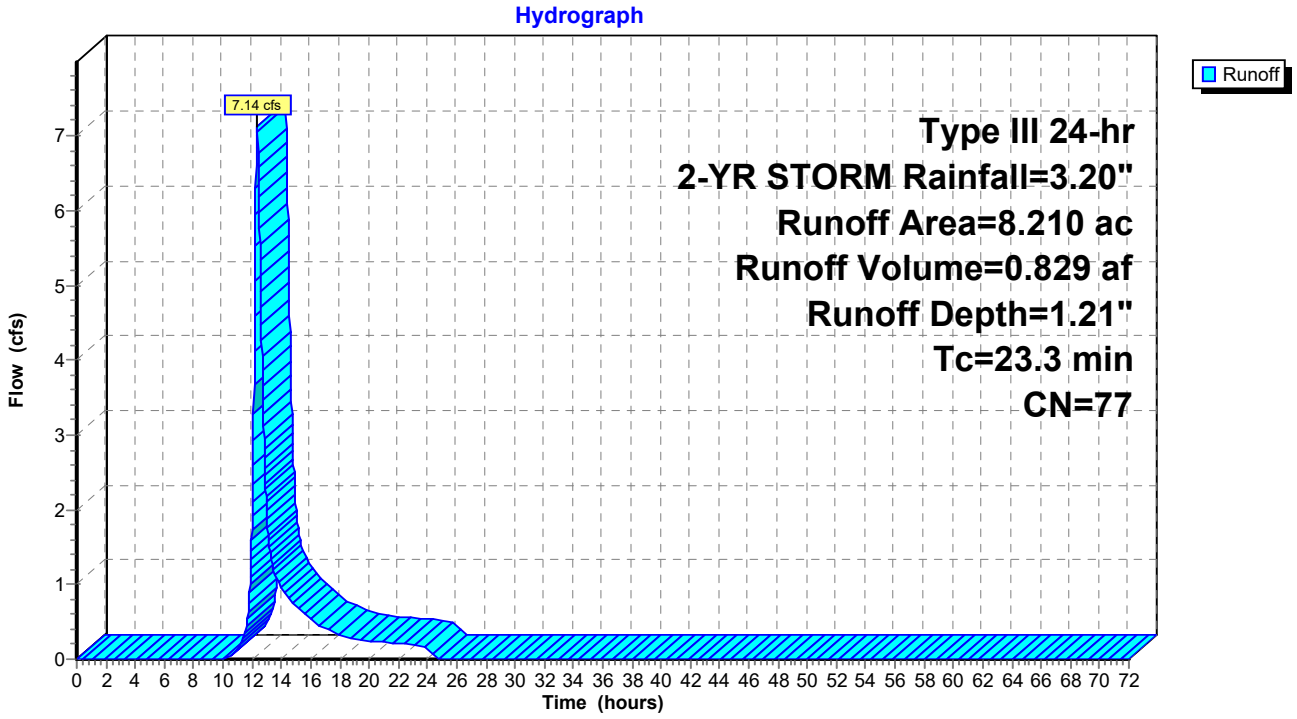
Runoff = 7.14 cfs @ 12.34 hrs, Volume= 0.829 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	8.210	77	
	8.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.3					**Direct Entry, SCS TR-55**

Subcatchment 14:



Hydrograph for Subcatchment 14:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.00
11.00	0.80	0.01	0.14
12.00	1.60	0.25	**1.91**
13.00	2.40	0.68	**1.96**
14.00	2.60	0.80	0.97
15.00	2.73	0.89	0.72
16.00	2.84	0.96	0.53
17.00	2.91	1.01	0.41
18.00	2.97	1.05	0.32
19.00	3.02	1.08	0.28
20.00	3.06	1.11	0.25
21.00	3.10	1.14	0.23
22.00	3.14	1.17	0.21
23.00	3.17	1.19	0.19
24.00	**3.20**	**1.21**	0.17
25.00	3.20	1.21	0.00
26.00	3.20	1.21	0.00
27.00	3.20	1.21	0.00
28.00	3.20	1.21	0.00
29.00	3.20	1.21	0.00
30.00	3.20	1.21	0.00
31.00	3.20	1.21	0.00
32.00	3.20	1.21	0.00
33.00	3.20	1.21	0.00
34.00	3.20	1.21	0.00
35.00	3.20	1.21	0.00
36.00	3.20	1.21	0.00
37.00	3.20	1.21	0.00
38.00	3.20	1.21	0.00
39.00	3.20	1.21	0.00
40.00	3.20	1.21	0.00
41.00	3.20	1.21	0.00
42.00	3.20	1.21	0.00
43.00	3.20	1.21	0.00
44.00	3.20	1.21	0.00
45.00	3.20	1.21	0.00
46.00	3.20	1.21	0.00
47.00	3.20	1.21	0.00
48.00	3.20	1.21	0.00
49.00	3.20	1.21	0.00
50.00	3.20	1.21	0.00
51.00	3.20	1.21	0.00
52.00	3.20	1.21	0.00
53.00	3.20	1.21	0.00
54.00	3.20	1.21	0.00
55.00	3.20	1.21	0.00
56.00	3.20	1.21	0.00
57.00	3.20	1.21	0.00
58.00	3.20	1.21	0.00
59.00	3.20	1.21	0.00
60.00	3.20	1.21	0.00
61.00	3.20	1.21	0.00
62.00	3.20	1.21	0.00
63.00	3.20	1.21	0.00
64.00	3.20	1.21	0.00
65.00	3.20	1.21	0.00
66.00	3.20	1.21	0.00
67.00	3.20	1.21	0.00
68.00	3.20	1.21	0.00
69.00	3.20	1.21	0.00
70.00	3.20	1.21	0.00
71.00	3.20	1.21	0.00
72.00	3.20	1.21	0.00

Summary for Subcatchment 15:

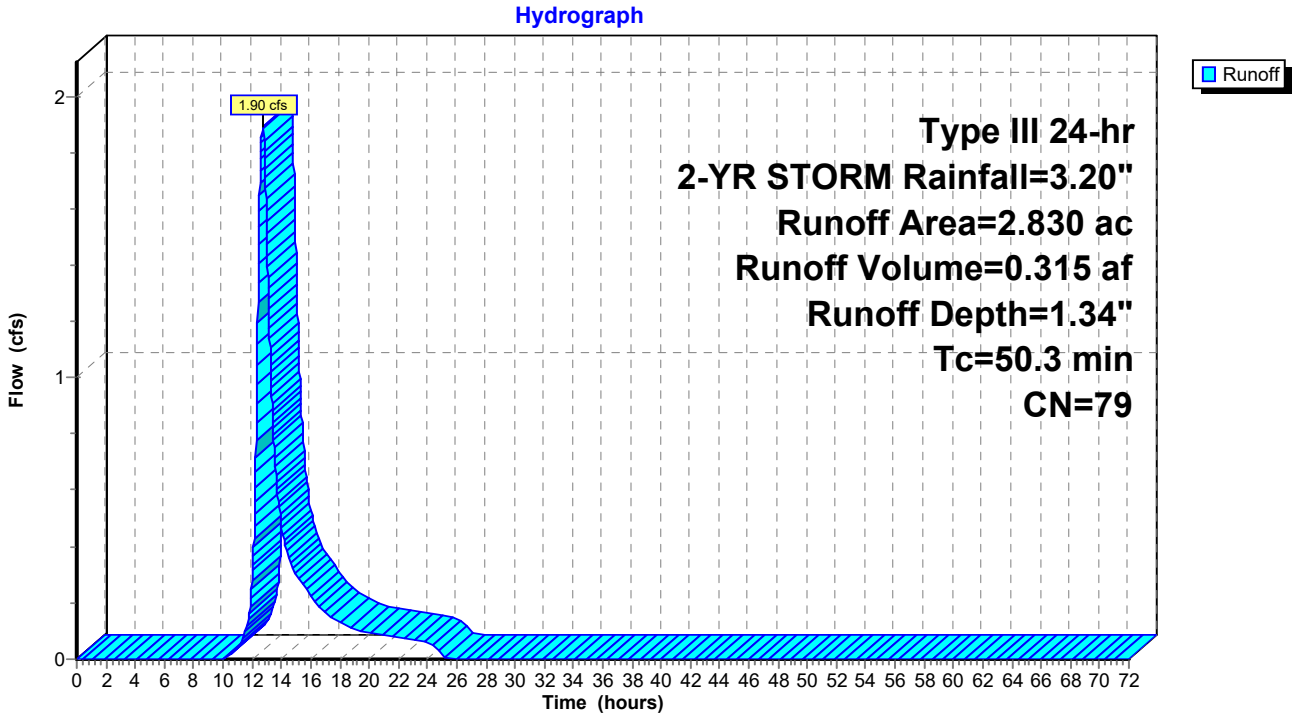
Runoff = 1.90 cfs @ 12.70 hrs, Volume= 0.315 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 2-YR STORM Rainfall=3.20"

	Area (ac)	CN	Description
*	2.830	79	
	2.830		100.00% Pervious Area

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

Subcatchment 15:



Hydrograph for Subcatchment 15:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.00
11.00	0.80	0.02	0.04
12.00	1.60	0.31	**0.27**
13.00	2.40	0.77	**1.51**
14.00	2.60	0.90	0.48
15.00	2.73	1.00	0.30
16.00	2.84	1.07	0.22
17.00	2.91	1.12	0.17
18.00	2.97	1.17	0.13
19.00	3.02	1.20	0.11
20.00	3.06	1.23	0.09
21.00	3.10	1.26	0.09
22.00	3.14	1.29	0.08
23.00	3.17	1.31	0.07
24.00	**3.20**	**1.34**	0.06
25.00	3.20	1.34	0.01
26.00	3.20	1.34	0.00
27.00	3.20	1.34	0.00
28.00	3.20	1.34	0.00
29.00	3.20	1.34	0.00
30.00	3.20	1.34	0.00
31.00	3.20	1.34	0.00
32.00	3.20	1.34	0.00
33.00	3.20	1.34	0.00
34.00	3.20	1.34	0.00
35.00	3.20	1.34	0.00
36.00	3.20	1.34	0.00
37.00	3.20	1.34	0.00
38.00	3.20	1.34	0.00
39.00	3.20	1.34	0.00
40.00	3.20	1.34	0.00
41.00	3.20	1.34	0.00
42.00	3.20	1.34	0.00
43.00	3.20	1.34	0.00
44.00	3.20	1.34	0.00
45.00	3.20	1.34	0.00
46.00	3.20	1.34	0.00
47.00	3.20	1.34	0.00
48.00	3.20	1.34	0.00
49.00	3.20	1.34	0.00
50.00	3.20	1.34	0.00
51.00	3.20	1.34	0.00
52.00	3.20	1.34	0.00
53.00	3.20	1.34	0.00
54.00	3.20	1.34	0.00
55.00	3.20	1.34	0.00
56.00	3.20	1.34	0.00
57.00	3.20	1.34	0.00
58.00	3.20	1.34	0.00
59.00	3.20	1.34	0.00
60.00	3.20	1.34	0.00
61.00	3.20	1.34	0.00
62.00	3.20	1.34	0.00
63.00	3.20	1.34	0.00
64.00	3.20	1.34	0.00
65.00	3.20	1.34	0.00
66.00	3.20	1.34	0.00
67.00	3.20	1.34	0.00
68.00	3.20	1.34	0.00
69.00	3.20	1.34	0.00
70.00	3.20	1.34	0.00
71.00	3.20	1.34	0.00
72.00	3.20	1.34	0.00

Summary for Pond 01-Pond:

Inflow Area = 2.560 ac, 0.00% Impervious, Inflow Depth = 1.61" for 2-YR STORM event
Inflow = 2.90 cfs @ 12.37 hrs, Volume= 0.343 af
Outflow = 0.14 cfs @ 17.24 hrs, Volume= 0.087 af, Atten= 95%, Lag= 292.3 min
Primary = 0.14 cfs @ 17.24 hrs, Volume= 0.087 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,113.76' @ 17.24 hrs Surf.Area= 0.111 ac Storage= 0.280 af

Plug-Flow detention time= 822.0 min calculated for 0.087 af (25% of inflow)
Center-of-Mass det. time= 683.2 min (1,534.7 - 851.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,110.00'	0.438 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

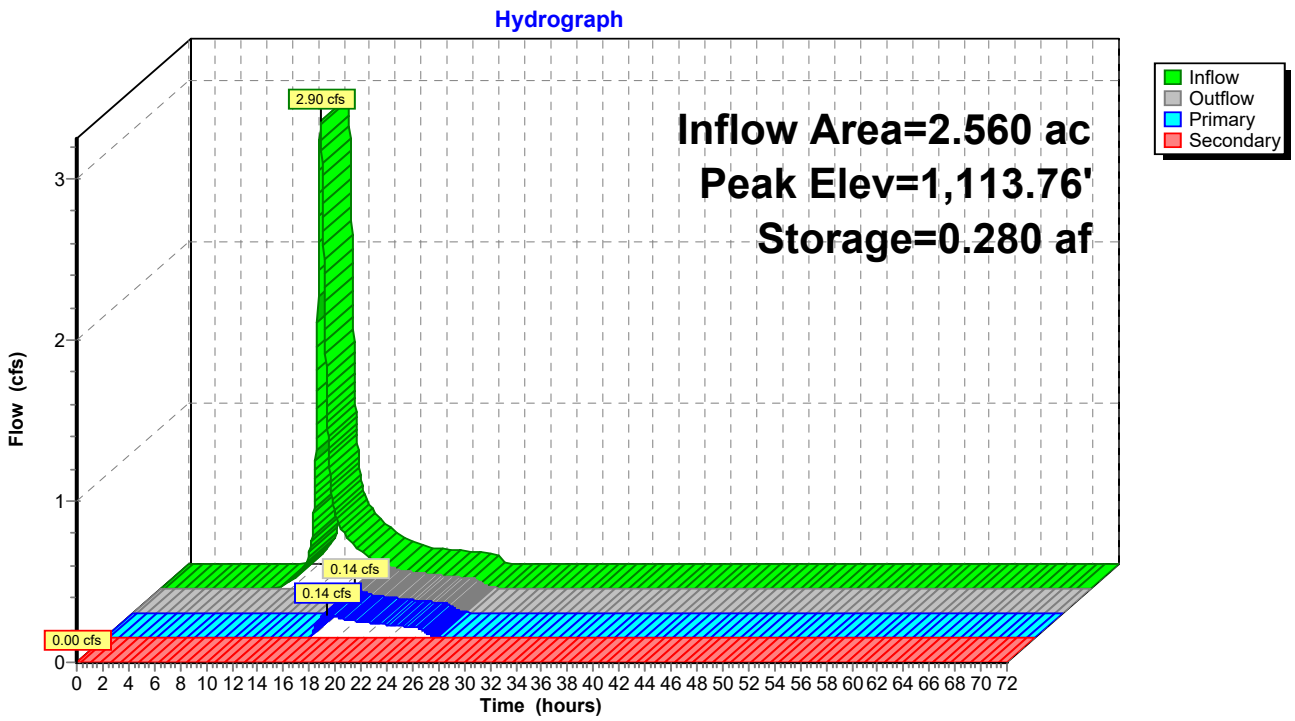
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,110.00	0.044	0.000	0.000
1,111.00	0.058	0.051	0.051
1,112.00	0.075	0.066	0.117
1,113.00	0.094	0.084	0.202
1,114.00	0.117	0.105	0.307
1,115.00	0.144	0.130	0.438

Device	Routing	Invert	Outlet Devices
#1	Primary	1,107.00'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,107.00' / 1,105.00' S= 0.0500 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,113.70'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,114.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,110.00'	**0.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.14 cfs @ 17.24 hrs HW=1,113.76' (Free Discharge)
└─**1=Culvert** (Passes 0.14 cfs of 20.85 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.13 cfs @ 0.79 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.32 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,110.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 01-Pond:


Hydrograph
Inflow Area=2.560 ac
Peak Elev=1,113.76'
Storage=0.280 af
2.90 cfs
0.14 cfs
0.14 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 01-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,110.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,110.00	0.00	0.00	0.00
4.00	0.00	0.000	1,110.00	0.00	0.00	0.00
6.00	0.00	0.000	1,110.00	0.00	0.00	0.00
8.00	0.00	0.000	1,110.00	0.00	0.00	0.00
10.00	0.04	0.002	1,110.04	0.00	0.00	0.00
12.00	**0.86**	0.032	1,110.66	0.00	0.00	0.00
14.00	**0.37**	0.228	1,113.27	0.00	0.00	0.00
16.00	0.20	**0.273**	**1,113.69**	**0.00**	**0.00**	0.00
18.00	0.12	**0.279**	**1,113.75**	**0.13**	**0.13**	0.00
20.00	0.09	0.278	1,113.74	0.10	0.10	0.00
22.00	0.08	0.277	1,113.73	0.08	0.08	0.00
24.00	0.06	0.276	1,113.73	0.07	0.07	0.00
26.00	0.00	0.273	1,113.70	0.00	0.00	0.00
28.00	0.00	0.273	1,113.69	0.00	0.00	0.00
30.00	0.00	0.272	1,113.69	0.00	0.00	0.00
32.00	0.00	0.271	1,113.68	0.00	0.00	0.00
34.00	0.00	0.270	1,113.67	0.00	0.00	0.00
36.00	0.00	0.270	1,113.67	0.00	0.00	0.00
38.00	0.00	0.269	1,113.66	0.00	0.00	0.00
40.00	0.00	0.268	1,113.65	0.00	0.00	0.00
42.00	0.00	0.267	1,113.65	0.00	0.00	0.00
44.00	0.00	0.267	1,113.64	0.00	0.00	0.00
46.00	0.00	0.266	1,113.63	0.00	0.00	0.00
48.00	0.00	0.265	1,113.62	0.00	0.00	0.00
50.00	0.00	0.264	1,113.62	0.00	0.00	0.00
52.00	0.00	0.264	1,113.61	0.00	0.00	0.00
54.00	0.00	0.263	1,113.60	0.00	0.00	0.00
56.00	0.00	0.262	1,113.60	0.00	0.00	0.00
58.00	0.00	0.262	1,113.59	0.00	0.00	0.00
60.00	0.00	0.261	1,113.58	0.00	0.00	0.00
62.00	0.00	0.260	1,113.58	0.00	0.00	0.00
64.00	0.00	0.259	1,113.57	0.00	0.00	0.00
66.00	0.00	0.259	1,113.56	0.00	0.00	0.00
68.00	0.00	0.258	1,113.56	0.00	0.00	0.00
70.00	0.00	0.257	1,113.55	0.00	0.00	0.00
72.00	0.00	0.256	1,113.54	0.00	0.00	0.00

Summary for Pond 02-Pond:

Inflow Area = 11.560 ac, 0.00% Impervious, Inflow Depth = 1.21" for 2-YR STORM event
Inflow = 9.45 cfs @ 12.40 hrs, Volume= 1.167 af
Outflow = 0.37 cfs @ 19.66 hrs, Volume= 0.250 af, Atten= 96%, Lag= 435.6 min
Primary = 0.37 cfs @ 19.66 hrs, Volume= 0.250 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,044.20' @ 19.66 hrs Surf.Area= 0.241 ac Storage= 1.001 af

Plug-Flow detention time= 951.8 min calculated for 0.250 af (21% of inflow)
Center-of-Mass det. time= 806.1 min (1,677.9 - 871.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,038.00'	1.483 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

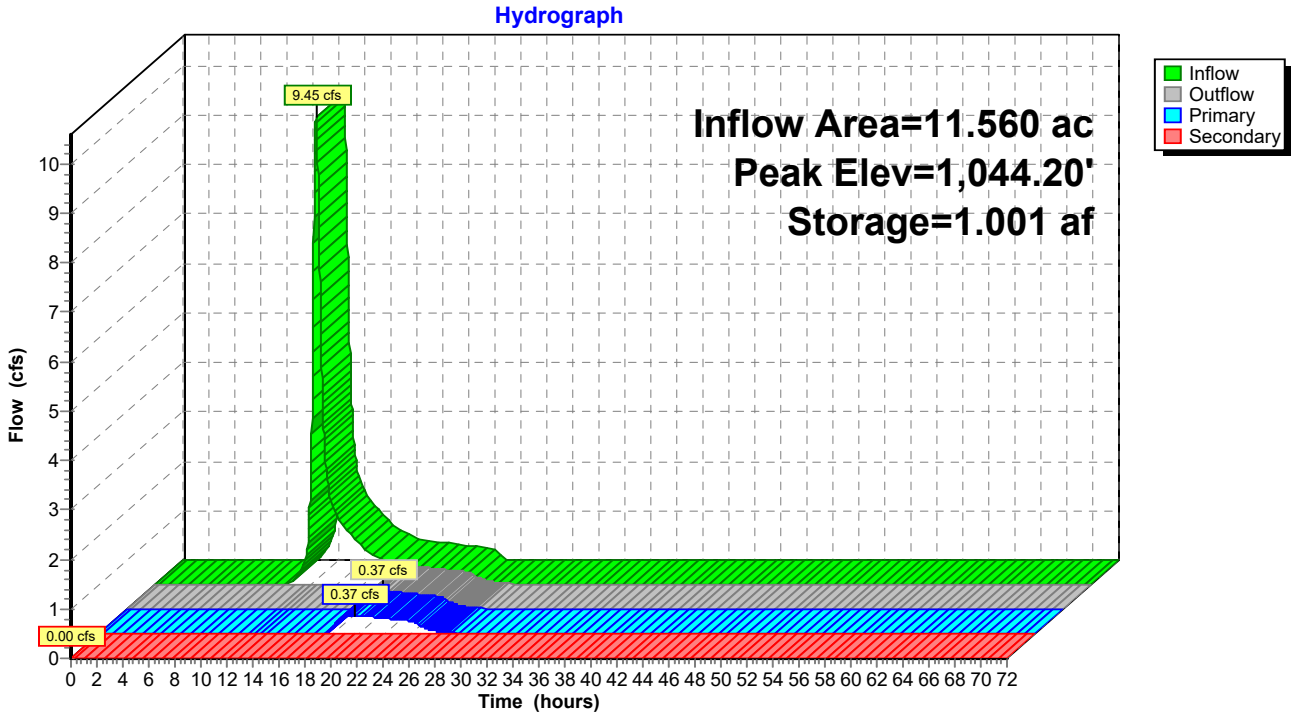
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,038.00	0.092	0.000	0.000
1,039.00	0.112	0.102	0.102
1,040.00	0.133	0.123	0.225
1,041.00	0.156	0.144	0.369
1,042.00	0.181	0.168	0.537
1,043.00	0.207	0.194	0.731
1,044.00	0.235	0.221	0.952
1,045.00	0.264	0.250	1.202
1,046.00	0.297	0.280	1.483

Device	Routing	Invert	Outlet Devices
#1	Primary	1,038.00'	**24.0" Round Culvert** L= 98.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,038.00' / 1,016.00' S= 0.2245 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,044.10'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,045.80'	**40.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,038.00'	**0.5" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.35 cfs @ 19.66 hrs HW=1,044.20' (Free Discharge)
└─**1=Culvert** (Passes 0.35 cfs of 34.50 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.33 cfs @ 1.08 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 11.97 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,038.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 02-Pond:


Hydrograph
Inflow Area=11.560 ac
Peak Elev=1,044.20'
Storage=1.001 af
9.45 cfs
0.37 cfs
0.37 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 02-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,038.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,038.00	0.00	0.00	0.00
4.00	0.00	0.000	1,038.00	0.00	0.00	0.00
6.00	0.00	0.000	1,038.00	0.00	0.00	0.00
8.00	0.00	0.000	1,038.00	0.00	0.00	0.00
10.00	0.00	0.000	1,038.00	0.00	0.00	0.00
12.00	**2.25**	0.056	1,038.57	0.00	0.00	0.00
14.00	**1.39**	0.724	1,042.96	0.01	0.01	0.00
16.00	0.77	0.894	1,043.75	0.02	0.02	0.00
18.00	0.46	**0.987**	**1,044.15**	**0.13**	**0.13**	0.00
20.00	0.35	**1.001**	**1,044.20**	**0.36**	**0.36**	0.00
22.00	0.30	0.998	1,044.19	0.31	0.31	0.00
24.00	0.24	0.995	1,044.18	0.26	0.26	0.00
26.00	0.00	0.980	1,044.12	0.05	0.05	0.00
28.00	0.00	0.975	1,044.10	0.02	0.02	0.00
30.00	0.00	0.973	1,044.09	0.02	0.02	0.00
32.00	0.00	0.970	1,044.07	0.02	0.02	0.00
34.00	0.00	0.967	1,044.06	0.02	0.02	0.00
36.00	0.00	0.965	1,044.05	0.02	0.02	0.00
38.00	0.00	0.962	1,044.04	0.02	0.02	0.00
40.00	0.00	0.959	1,044.03	0.02	0.02	0.00
42.00	0.00	0.957	1,044.02	0.02	0.02	0.00
44.00	0.00	0.954	1,044.01	0.02	0.02	0.00
46.00	0.00	0.951	1,044.00	0.02	0.02	0.00
48.00	0.00	0.949	1,043.98	0.02	0.02	0.00
50.00	0.00	0.946	1,043.97	0.02	0.02	0.00
52.00	0.00	0.943	1,043.96	0.02	0.02	0.00
54.00	0.00	0.941	1,043.95	0.02	0.02	0.00
56.00	0.00	0.938	1,043.94	0.02	0.02	0.00
58.00	0.00	0.936	1,043.93	0.02	0.02	0.00
60.00	0.00	0.933	1,043.92	0.02	0.02	0.00
62.00	0.00	0.930	1,043.90	0.02	0.02	0.00
64.00	0.00	0.928	1,043.89	0.02	0.02	0.00
66.00	0.00	0.925	1,043.88	0.02	0.02	0.00
68.00	0.00	0.922	1,043.87	0.02	0.02	0.00
70.00	0.00	0.920	1,043.86	0.02	0.02	0.00
72.00	0.00	0.917	1,043.85	0.02	0.02	0.00

Summary for Pond 03-Pond:

Inflow Area = 13.580 ac, 0.00% Impervious, Inflow Depth = 1.47" for 2-YR STORM event
Inflow = 13.58 cfs @ 12.40 hrs, Volume= 1.662 af
Outflow = 7.44 cfs @ 12.77 hrs, Volume= 1.498 af, Atten= 45%, Lag= 22.3 min
Primary = 7.44 cfs @ 12.77 hrs, Volume= 1.498 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,132.27' @ 12.77 hrs Surf.Area= 0.462 ac Storage= 0.552 af

Plug-Flow detention time= 190.1 min calculated for 1.497 af (90% of inflow)
Center-of-Mass det. time= 142.5 min (1,002.1 - 859.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,131.00'	1.978 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

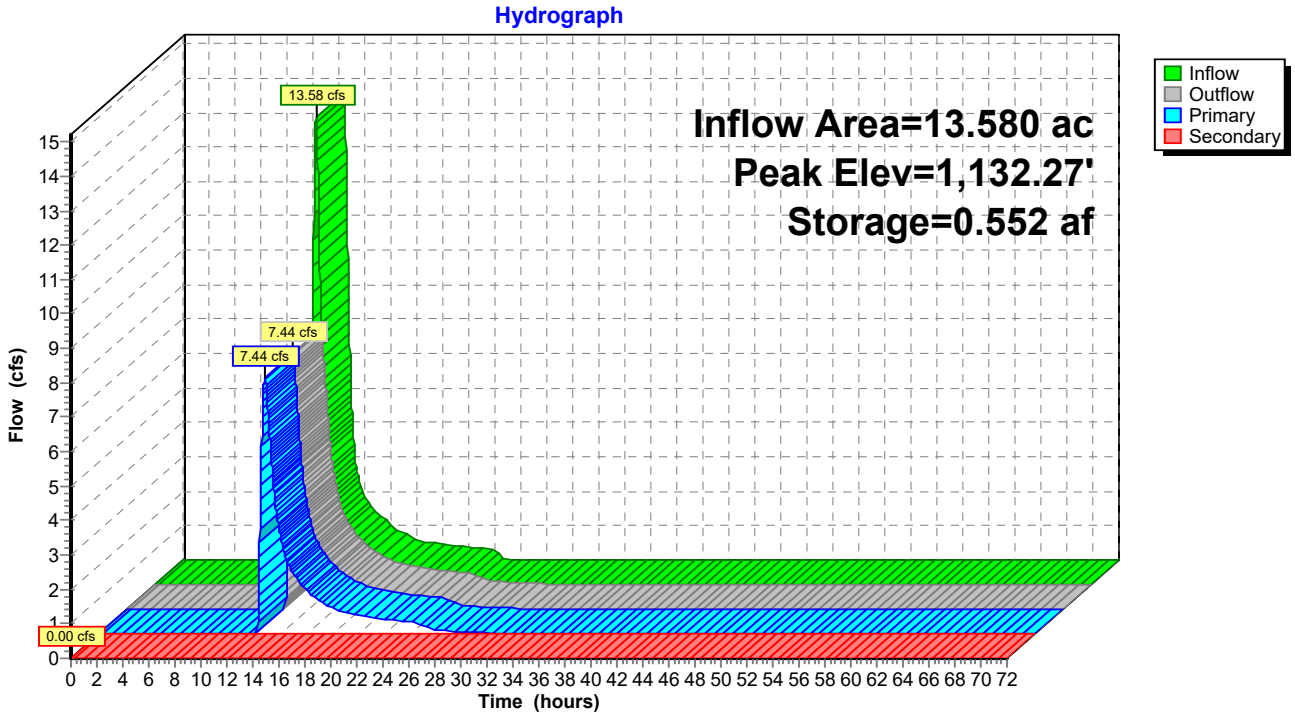
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,131.00	0.410	0.000	0.000
1,132.00	0.451	0.431	0.431
1,133.00	0.494	0.472	0.903
1,134.00	0.537	0.515	1.418
1,135.00	0.583	0.560	1.978

Device	Routing	Invert	Outlet Devices
#1	Primary	1,131.00'	**36.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,131.00' / 1,127.00' S= 0.0800 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Device 1	1,131.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,134.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,131.00'	**0.9" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=7.44 cfs @ 12.77 hrs HW=1,132.27' (Free Discharge)
└─**1=Culvert** (Passes 7.44 cfs of 10.86 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 7.41 cfs @ 3.40 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 5.34 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,131.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 03-Pond:


Hydrograph
Inflow Area=13.580 ac
Peak Elev=1,132.27'
Storage=0.552 af
13.58 cfs
7.44 cfs
7.44 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 03-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,131.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,131.00	0.00	0.00	0.00
4.00	0.00	0.000	1,131.00	0.00	0.00	0.00
6.00	0.00	0.000	1,131.00	0.00	0.00	0.00
8.00	0.00	0.000	1,131.00	0.00	0.00	0.00
10.00	0.12	0.003	1,131.01	0.00	0.00	0.00
12.00	**3.63**	**0.123**	**1,131.30**	**0.01**	**0.01**	0.00
14.00	**1.86**	**0.389**	**1,131.91**	**2.76**	**2.76**	0.00
16.00	1.01	0.318	1,131.75	1.27	1.27	0.00
18.00	0.61	0.285	1,131.67	0.75	0.75	0.00
20.00	0.46	0.269	1,131.64	0.52	0.52	0.00
22.00	0.38	0.261	1,131.62	0.42	0.42	0.00
24.00	0.31	0.255	1,131.60	0.35	0.35	0.00
26.00	0.00	0.229	1,131.54	0.11	0.11	0.00
28.00	0.00	0.218	1,131.52	0.04	0.04	0.00
30.00	0.00	0.213	1,131.51	0.02	0.02	0.00
32.00	0.00	0.210	1,131.50	0.01	0.01	0.00
34.00	0.00	0.207	1,131.49	0.01	0.01	0.00
36.00	0.00	0.205	1,131.49	0.01	0.01	0.00
38.00	0.00	0.203	1,131.48	0.01	0.01	0.00
40.00	0.00	0.200	1,131.48	0.01	0.01	0.00
42.00	0.00	0.198	1,131.47	0.01	0.01	0.00
44.00	0.00	0.196	1,131.47	0.01	0.01	0.00
46.00	0.00	0.193	1,131.46	0.01	0.01	0.00
48.00	0.00	0.191	1,131.46	0.01	0.01	0.00
50.00	0.00	0.189	1,131.45	0.01	0.01	0.00
52.00	0.00	0.187	1,131.45	0.01	0.01	0.00
54.00	0.00	0.184	1,131.44	0.01	0.01	0.00
56.00	0.00	0.182	1,131.43	0.01	0.01	0.00
58.00	0.00	0.180	1,131.43	0.01	0.01	0.00
60.00	0.00	0.178	1,131.42	0.01	0.01	0.00
62.00	0.00	0.176	1,131.42	0.01	0.01	0.00
64.00	0.00	0.173	1,131.41	0.01	0.01	0.00
66.00	0.00	0.171	1,131.41	0.01	0.01	0.00
68.00	0.00	0.169	1,131.40	0.01	0.01	0.00
70.00	0.00	0.167	1,131.40	0.01	0.01	0.00
72.00	0.00	0.165	1,131.39	0.01	0.01	0.00

Summary for Pond 04-Pond:

04-Pond

Inflow Area =	1.980 ac,	0.00% Impervious,	Inflow Depth =	1.21"	for 2-YR STORM event
Inflow =	1.50 cfs @	12.47 hrs,	Volume=	0.200 af	
Outflow =	0.03 cfs @	24.28 hrs,	Volume=	0.014 af,	Atten= 98%, Lag= 708.3 min
Primary =	0.03 cfs @	24.28 hrs,	Volume=	0.014 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,108.85' @ 24.28 hrs Surf.Area= 0.082 ac Storage= 0.196 af

Plug-Flow detention time= 1,533.9 min calculated for 0.014 af (7% of inflow)
Center-of-Mass det. time= 1,366.4 min (2,242.7 - 876.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,105.00'	0.303 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

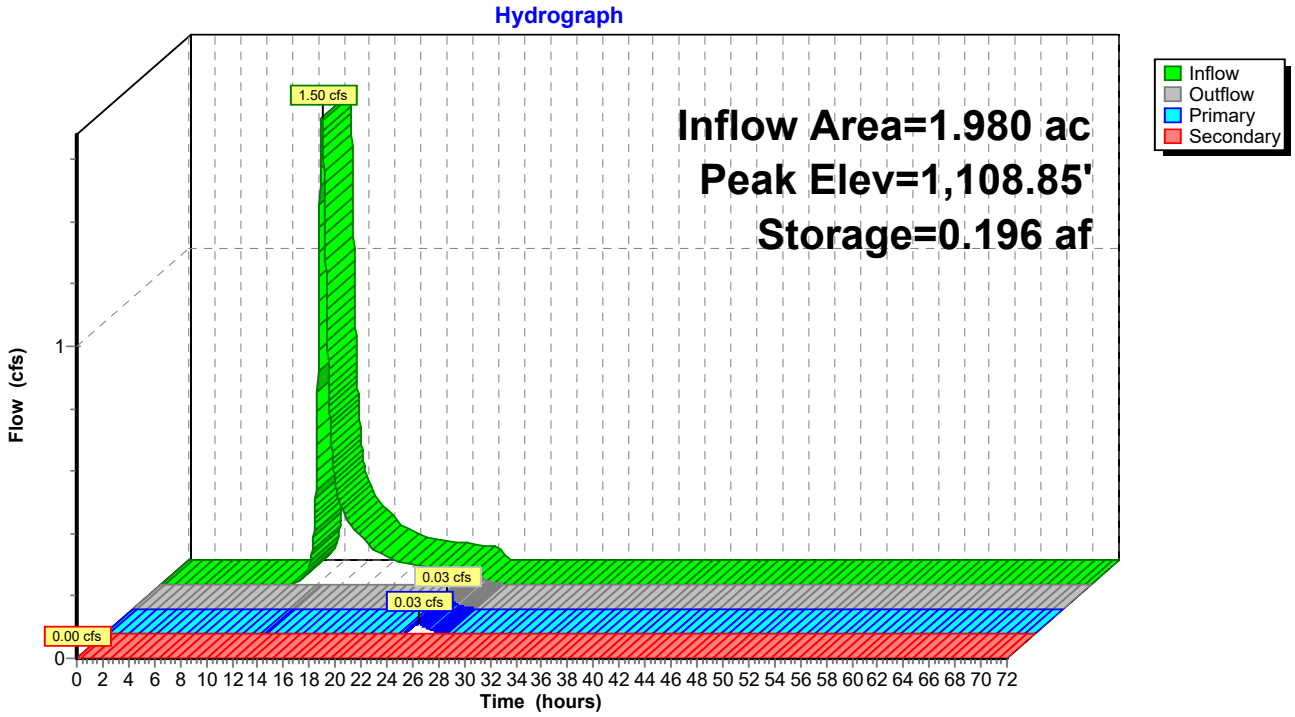
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,105.00	0.023	0.000	0.000
1,106.00	0.036	0.029	0.029
1,107.00	0.051	0.044	0.073
1,108.00	0.067	0.059	0.132
1,109.00	0.085	0.076	0.208
1,110.00	0.105	0.095	0.303

Device	Routing	Invert	Outlet Devices
#1	Primary	1,105.00'	**24.0" Round Culvert** L= 35.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,105.00' / 1,104.50' S= 0.0143 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,108.83'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,109.40'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,105.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.03 cfs @ 24.28 hrs HW=1,108.85' (Free Discharge)
└─**1=Culvert** (Passes 0.03 cfs of 25.54 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.03 cfs @ 0.48 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.44 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,105.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 04-Pond:


Hydrograph
Inflow Area=1.980 ac
Peak Elev=1,108.85'
Storage=0.196 af
Inflow
Outflow
Primary
Secondary
1.50 cfs
0.03 cfs
0.03 cfs
0.00 cfs
Flow (cfs)
Time (hours)

Hydrograph for Pond 04-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,105.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,105.00	0.00	0.00	0.00
4.00	0.00	0.000	1,105.00	0.00	0.00	0.00
6.00	0.00	0.000	1,105.00	0.00	0.00	0.00
8.00	0.00	0.000	1,105.00	0.00	0.00	0.00
10.00	0.00	0.000	1,105.00	0.00	0.00	0.00
12.00	**0.30**	0.008	1,105.32	0.00	0.00	0.00
14.00	**0.25**	0.123	1,107.86	0.00	0.00	0.00
16.00	0.13	0.152	1,108.29	0.00	0.00	0.00
18.00	0.08	0.169	1,108.52	0.00	0.00	0.00
20.00	0.06	0.180	1,108.66	0.00	0.00	0.00
22.00	0.05	0.189	1,108.77	0.00	0.00	0.00
24.00	0.04	**0.195**	**1,108.85**	**0.03**	**0.03**	0.00
26.00	0.00	**0.194**	**1,108.83**	**0.00**	**0.00**	0.00
28.00	0.00	0.194	1,108.83	0.00	0.00	0.00
30.00	0.00	0.193	1,108.82	0.00	0.00	0.00
32.00	0.00	0.193	1,108.82	0.00	0.00	0.00
34.00	0.00	0.193	1,108.81	0.00	0.00	0.00
36.00	0.00	0.192	1,108.81	0.00	0.00	0.00
38.00	0.00	0.192	1,108.81	0.00	0.00	0.00
40.00	0.00	0.192	1,108.80	0.00	0.00	0.00
42.00	0.00	0.191	1,108.80	0.00	0.00	0.00
44.00	0.00	0.191	1,108.79	0.00	0.00	0.00
46.00	0.00	0.191	1,108.79	0.00	0.00	0.00
48.00	0.00	0.190	1,108.79	0.00	0.00	0.00
50.00	0.00	0.190	1,108.78	0.00	0.00	0.00
52.00	0.00	0.190	1,108.78	0.00	0.00	0.00
54.00	0.00	0.189	1,108.77	0.00	0.00	0.00
56.00	0.00	0.189	1,108.77	0.00	0.00	0.00
58.00	0.00	0.188	1,108.76	0.00	0.00	0.00
60.00	0.00	0.188	1,108.76	0.00	0.00	0.00
62.00	0.00	0.188	1,108.76	0.00	0.00	0.00
64.00	0.00	0.187	1,108.75	0.00	0.00	0.00
66.00	0.00	0.187	1,108.75	0.00	0.00	0.00
68.00	0.00	0.187	1,108.74	0.00	0.00	0.00
70.00	0.00	0.186	1,108.74	0.00	0.00	0.00
72.00	0.00	0.186	1,108.74	0.00	0.00	0.00

Summary for Pond 05-Pond:

Inflow Area = 4.310 ac, 0.00% Impervious, Inflow Depth = 1.40" for 2-YR STORM event
Inflow = 4.72 cfs @ 12.28 hrs, Volume= 0.504 af
Outflow = 0.35 cfs @ 15.54 hrs, Volume= 0.187 af, Atten= 93%, Lag= 195.3 min
Primary = 0.35 cfs @ 15.54 hrs, Volume= 0.187 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,139.17' @ 15.54 hrs Surf.Area= 0.148 ac Storage= 0.356 af

Plug-Flow detention time= 541.2 min calculated for 0.187 af (37% of inflow)
Center-of-Mass det. time= 411.6 min (1,267.3 - 855.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,136.00'	0.881 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

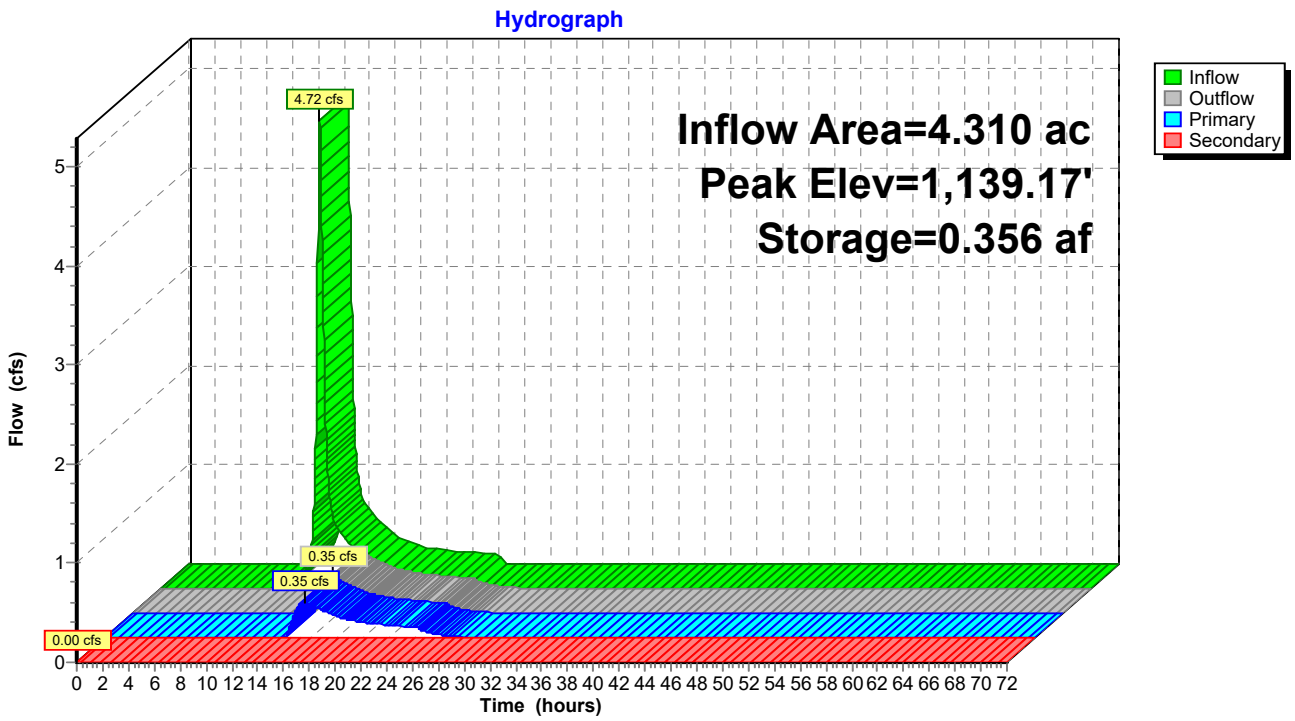
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,136.00	0.078	0.000	0.000
1,137.00	0.099	0.088	0.088
1,138.00	0.121	0.110	0.198
1,139.00	0.144	0.133	0.331
1,140.00	0.169	0.157	0.487
1,141.00	0.196	0.183	0.670
1,142.00	0.225	0.211	0.881

Device	Routing	Invert	Outlet Devices
#1	Primary	1,136.00'	**24.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,136.00' / 1,131.00' S= 0.1000 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Device 1	1,139.00'	**1.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,141.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,136.00'	**0.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.35 cfs @ 15.54 hrs HW=1,139.17' (Free Discharge)
└─**1=Culvert** (Passes 0.35 cfs of 22.27 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.34 cfs @ 1.40 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 8.55 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,136.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 05-Pond:


Hydrograph
Inflow Area=4.310 ac
Peak Elev=1,139.17'
Storage=0.356 af
4.72 cfs
0.35 cfs
0.35 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 05-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,136.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,136.00	0.00	0.00	0.00
4.00	0.00	0.000	1,136.00	0.00	0.00	0.00
6.00	0.00	0.000	1,136.00	0.00	0.00	0.00
8.00	0.00	0.000	1,136.00	0.00	0.00	0.00
10.00	0.03	0.001	1,136.01	0.00	0.00	0.00
12.00	**1.55**	0.043	1,136.52	0.00	0.00	0.00
14.00	**0.55**	**0.329**	**1,138.99**	**0.00**	**0.00**	0.00
16.00	0.30	**0.355**	**1,139.16**	**0.34**	**0.34**	0.00
18.00	0.18	0.349	1,139.12	0.21	0.21	0.00
20.00	0.14	0.345	1,139.10	0.16	0.16	0.00
22.00	0.12	0.343	1,139.08	0.13	0.13	0.00
24.00	0.09	0.341	1,139.07	0.10	0.10	0.00
26.00	0.00	0.334	1,139.02	0.03	0.03	0.00
28.00	0.00	0.331	1,139.00	0.01	0.01	0.00
30.00	0.00	0.331	1,139.00	0.00	0.00	0.00
32.00	0.00	0.330	1,138.99	0.00	0.00	0.00
34.00	0.00	0.329	1,138.99	0.00	0.00	0.00
36.00	0.00	0.329	1,138.98	0.00	0.00	0.00
38.00	0.00	0.328	1,138.98	0.00	0.00	0.00
40.00	0.00	0.327	1,138.97	0.00	0.00	0.00
42.00	0.00	0.327	1,138.97	0.00	0.00	0.00
44.00	0.00	0.326	1,138.96	0.00	0.00	0.00
46.00	0.00	0.325	1,138.96	0.00	0.00	0.00
48.00	0.00	0.325	1,138.95	0.00	0.00	0.00
50.00	0.00	0.324	1,138.95	0.00	0.00	0.00
52.00	0.00	0.323	1,138.95	0.00	0.00	0.00
54.00	0.00	0.323	1,138.94	0.00	0.00	0.00
56.00	0.00	0.322	1,138.94	0.00	0.00	0.00
58.00	0.00	0.321	1,138.93	0.00	0.00	0.00
60.00	0.00	0.321	1,138.93	0.00	0.00	0.00
62.00	0.00	0.320	1,138.92	0.00	0.00	0.00
64.00	0.00	0.319	1,138.92	0.00	0.00	0.00
66.00	0.00	0.319	1,138.91	0.00	0.00	0.00
68.00	0.00	0.318	1,138.91	0.00	0.00	0.00
70.00	0.00	0.317	1,138.90	0.00	0.00	0.00
72.00	0.00	0.317	1,138.90	0.00	0.00	0.00

Summary for Pond 07-Pond:

Inflow Area = 13.810 ac, 0.00% Impervious, Inflow Depth = 0.93" for 2-YR STORM event
Inflow = 7.21 cfs @ 12.55 hrs, Volume= 1.070 af
Outflow = 0.33 cfs @ 21.14 hrs, Volume= 0.231 af, Atten= 95%, Lag= 515.5 min
Primary = 0.33 cfs @ 21.14 hrs, Volume= 0.231 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,134.10' @ 21.14 hrs Surf.Area= 0.283 ac Storage= 0.934 af

Plug-Flow detention time= 1,069.8 min calculated for 0.230 af (22% of inflow)
Center-of-Mass det. time= 915.1 min (1,811.7 - 896.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,130.00'	1.525 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

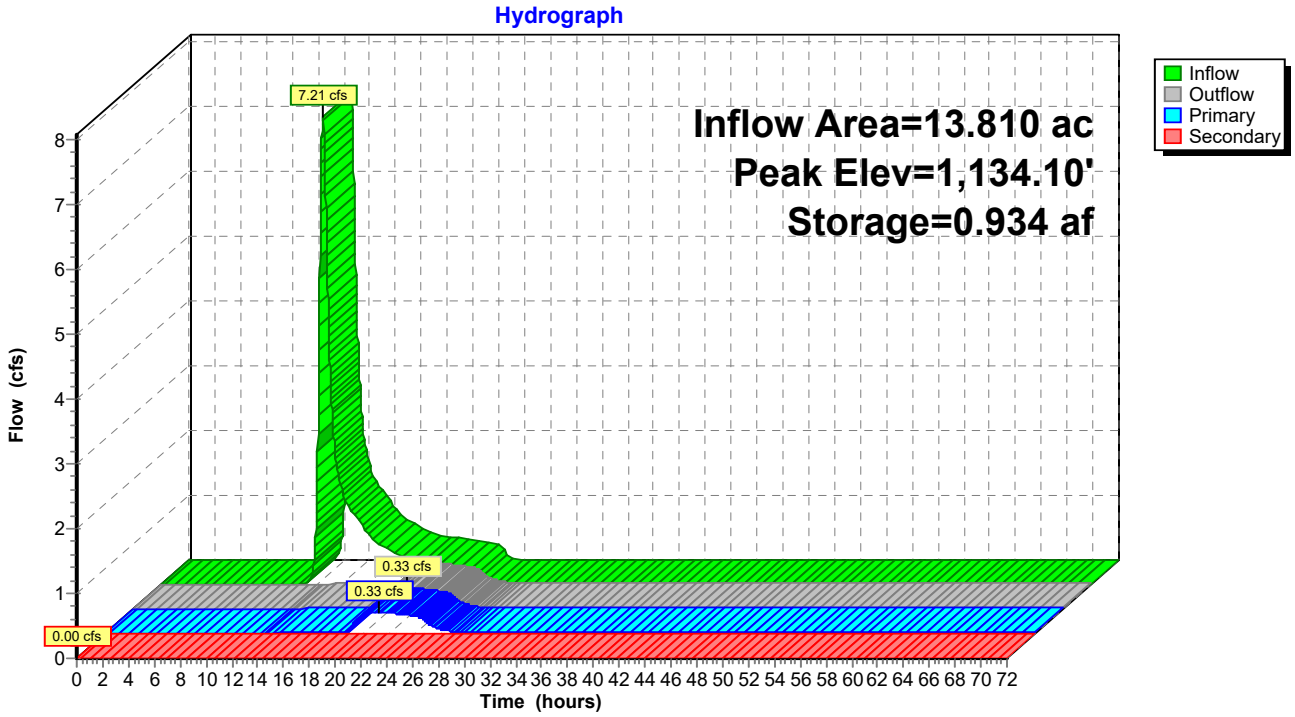
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,130.00	0.176	0.000	0.000
1,131.00	0.200	0.188	0.188
1,132.00	0.226	0.213	0.401
1,133.00	0.252	0.239	0.640
1,134.00	0.280	0.266	0.906
1,135.00	0.309	0.294	1.200
1,136.00	0.340	0.325	1.525

Device	Routing	Invert	Outlet Devices
#1	Primary	1,130.00'	**24.0" Round Culvert X 2.00** L= 380.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,130.00' / 1,069.00' S= 0.1605 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,134.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,135.75'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,130.00'	**0.6" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.32 cfs @ 21.14 hrs HW=1,134.10' (Free Discharge)
└─**1=Culvert** (Passes 0.32 cfs of 53.25 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.31 cfs @ 1.05 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 9.72 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,130.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 07-Pond:


Hydrograph
Inflow Area=13.810 ac
Peak Elev=1,134.10'
Storage=0.934 af
7.21 cfs
0.33 cfs
0.33 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 07-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,130.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,130.00	0.00	0.00	0.00
4.00	0.00	0.000	1,130.00	0.00	0.00	0.00
6.00	0.00	0.000	1,130.00	0.00	0.00	0.00
8.00	0.00	0.000	1,130.00	0.00	0.00	0.00
10.00	0.00	0.000	1,130.00	0.00	0.00	0.00
12.00	**0.86**	0.013	1,130.07	0.00	0.00	0.00
14.00	**1.48**	0.602	1,132.85	0.02	0.02	0.00
16.00	0.81	0.780	1,133.54	0.02	0.02	0.00
18.00	0.49	0.880	1,133.91	0.02	0.02	0.00
20.00	0.37	**0.930**	**1,134.09**	**0.28**	**0.28**	0.00
22.00	0.31	**0.933**	**1,134.10**	**0.32**	**0.32**	0.00
24.00	0.25	0.930	1,134.09	0.27	0.27	0.00
26.00	0.00	0.913	1,134.03	0.06	0.06	0.00
28.00	0.00	0.907	1,134.00	0.02	0.02	0.00
30.00	0.00	0.904	1,133.99	0.02	0.02	0.00
32.00	0.00	0.901	1,133.98	0.02	0.02	0.00
34.00	0.00	0.898	1,133.97	0.02	0.02	0.00
36.00	0.00	0.894	1,133.96	0.02	0.02	0.00
38.00	0.00	0.891	1,133.95	0.02	0.02	0.00
40.00	0.00	0.888	1,133.94	0.02	0.02	0.00
42.00	0.00	0.885	1,133.93	0.02	0.02	0.00
44.00	0.00	0.882	1,133.91	0.02	0.02	0.00
46.00	0.00	0.879	1,133.90	0.02	0.02	0.00
48.00	0.00	0.876	1,133.89	0.02	0.02	0.00
50.00	0.00	0.873	1,133.88	0.02	0.02	0.00
52.00	0.00	0.870	1,133.87	0.02	0.02	0.00
54.00	0.00	0.867	1,133.86	0.02	0.02	0.00
56.00	0.00	0.864	1,133.85	0.02	0.02	0.00
58.00	0.00	0.861	1,133.84	0.02	0.02	0.00
60.00	0.00	0.858	1,133.83	0.02	0.02	0.00
62.00	0.00	0.855	1,133.81	0.02	0.02	0.00
64.00	0.00	0.851	1,133.80	0.02	0.02	0.00
66.00	0.00	0.848	1,133.79	0.02	0.02	0.00
68.00	0.00	0.845	1,133.78	0.02	0.02	0.00
70.00	0.00	0.842	1,133.77	0.02	0.02	0.00
72.00	0.00	0.839	1,133.76	0.02	0.02	0.00

Summary for Pond 08/10-Pond:

Inflow Area = 34.060 ac, 0.00% Impervious, Inflow Depth = 1.57" for 2-YR STORM event
Inflow = 34.47 cfs @ 12.40 hrs, Volume= 4.468 af
Outflow = 11.81 cfs @ 13.04 hrs, Volume= 3.188 af, Atten= 66%, Lag= 38.6 min
Primary = 11.81 cfs @ 13.04 hrs, Volume= 3.188 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,123.73' @ 13.04 hrs Surf.Area= 0.886 ac Storage= 2.040 af

Plug-Flow detention time= 307.8 min calculated for 3.188 af (71% of inflow)
Center-of-Mass det. time= 211.6 min (1,068.1 - 856.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,121.00'	5.497 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

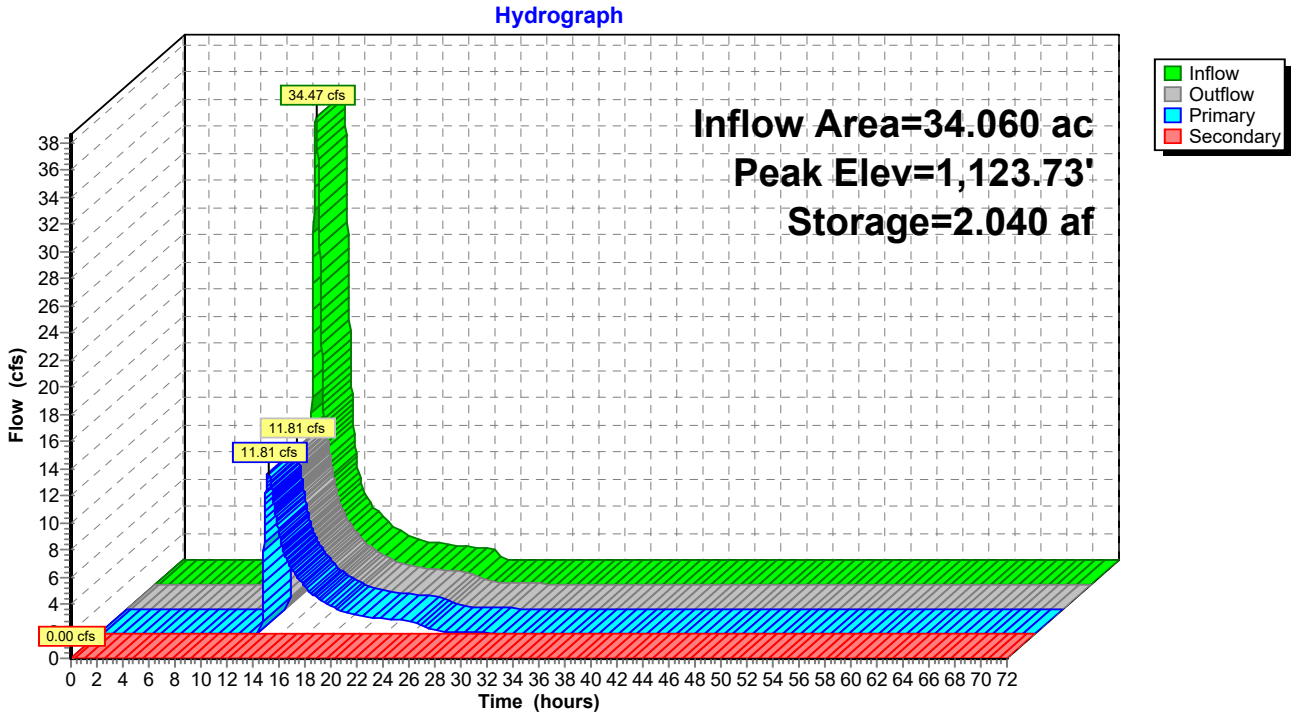
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,121.00	0.609	0.000	0.000
1,122.00	0.709	0.659	0.659
1,123.00	0.810	0.759	1.418
1,124.00	0.913	0.862	2.280
1,125.00	1.018	0.965	3.246
1,126.00	1.125	1.071	4.317
1,127.00	1.234	1.180	5.497

Device	Routing	Invert	Outlet Devices
#1	Primary	1,121.70'	**54.0" Round Culvert** L= 88.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,121.70' / 1,105.00' S= 0.1898 '/' Cc= 0.900 n= 0.012, Flow Area= 15.90 sf
#2	Device 1	1,123.00'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,125.80'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,121.70'	**1.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=11.80 cfs @ 13.04 hrs HW=1,123.73' (Free Discharge)
└─**1=Culvert** (Passes 11.80 cfs of 33.87 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 11.75 cfs @ 3.30 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.05 cfs @ 6.78 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,121.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 08/10-Pond:



Hydrograph for Pond 08/10-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,121.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,121.00	0.00	0.00	0.00
4.00	0.00	0.000	1,121.00	0.00	0.00	0.00
6.00	0.00	0.000	1,121.00	0.00	0.00	0.00
8.00	0.00	0.000	1,121.00	0.00	0.00	0.00
10.00	0.49	0.018	1,121.03	0.00	0.00	0.00
12.00	**9.79**	**0.374**	**1,121.59**	**0.00**	**0.00**	0.00
14.00	**4.98**	**1.857**	**1,123.52**	**6.90**	**6.90**	0.00
16.00	2.67	1.689	1,123.33	3.32	3.32	0.00
18.00	1.59	1.608	1,123.23	1.95	1.95	0.00
20.00	1.20	1.566	1,123.18	1.36	1.36	0.00
22.00	1.00	1.547	1,123.16	1.10	1.10	0.00
24.00	0.80	1.530	1,123.14	0.91	0.91	0.00
26.00	0.00	1.464	1,123.06	0.28	0.28	0.00
28.00	0.00	1.436	1,123.02	0.11	0.11	0.00
30.00	0.00	1.422	1,123.00	0.06	0.06	0.00
32.00	0.00	1.415	1,123.00	0.04	0.04	0.00
34.00	0.00	1.408	1,122.99	0.04	0.04	0.00
36.00	0.00	1.401	1,122.98	0.04	0.04	0.00
38.00	0.00	1.394	1,122.97	0.04	0.04	0.00
40.00	0.00	1.387	1,122.96	0.04	0.04	0.00
42.00	0.00	1.380	1,122.95	0.04	0.04	0.00
44.00	0.00	1.373	1,122.94	0.04	0.04	0.00
46.00	0.00	1.366	1,122.94	0.04	0.04	0.00
48.00	0.00	1.360	1,122.93	0.04	0.04	0.00
50.00	0.00	1.353	1,122.92	0.04	0.04	0.00
52.00	0.00	1.346	1,122.91	0.04	0.04	0.00
54.00	0.00	1.339	1,122.90	0.04	0.04	0.00
56.00	0.00	1.333	1,122.89	0.04	0.04	0.00
58.00	0.00	1.326	1,122.89	0.04	0.04	0.00
60.00	0.00	1.319	1,122.88	0.04	0.04	0.00
62.00	0.00	1.313	1,122.87	0.04	0.04	0.00
64.00	0.00	1.306	1,122.86	0.04	0.04	0.00
66.00	0.00	1.300	1,122.85	0.04	0.04	0.00
68.00	0.00	1.293	1,122.84	0.04	0.04	0.00
70.00	0.00	1.287	1,122.84	0.04	0.04	0.00
72.00	0.00	1.280	1,122.83	0.04	0.04	0.00

Summary for Pond 09-Pond:

Inflow Area = 16.030 ac, 0.00% Impervious, Inflow Depth = 1.40" for 2-YR STORM event
Inflow = 9.13 cfs @ 13.02 hrs, Volume= 1.873 af
Outflow = 0.85 cfs @ 17.88 hrs, Volume= 0.564 af, Atten= 91%, Lag= 292.1 min
Primary = 0.85 cfs @ 17.88 hrs, Volume= 0.564 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,149.44' @ 17.88 hrs Surf.Area= 0.486 ac Storage= 1.463 af

Plug-Flow detention time= 704.1 min calculated for 0.564 af (30% of inflow)
Center-of-Mass det. time= 558.0 min (1,461.9 - 903.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,145.00'	3.685 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

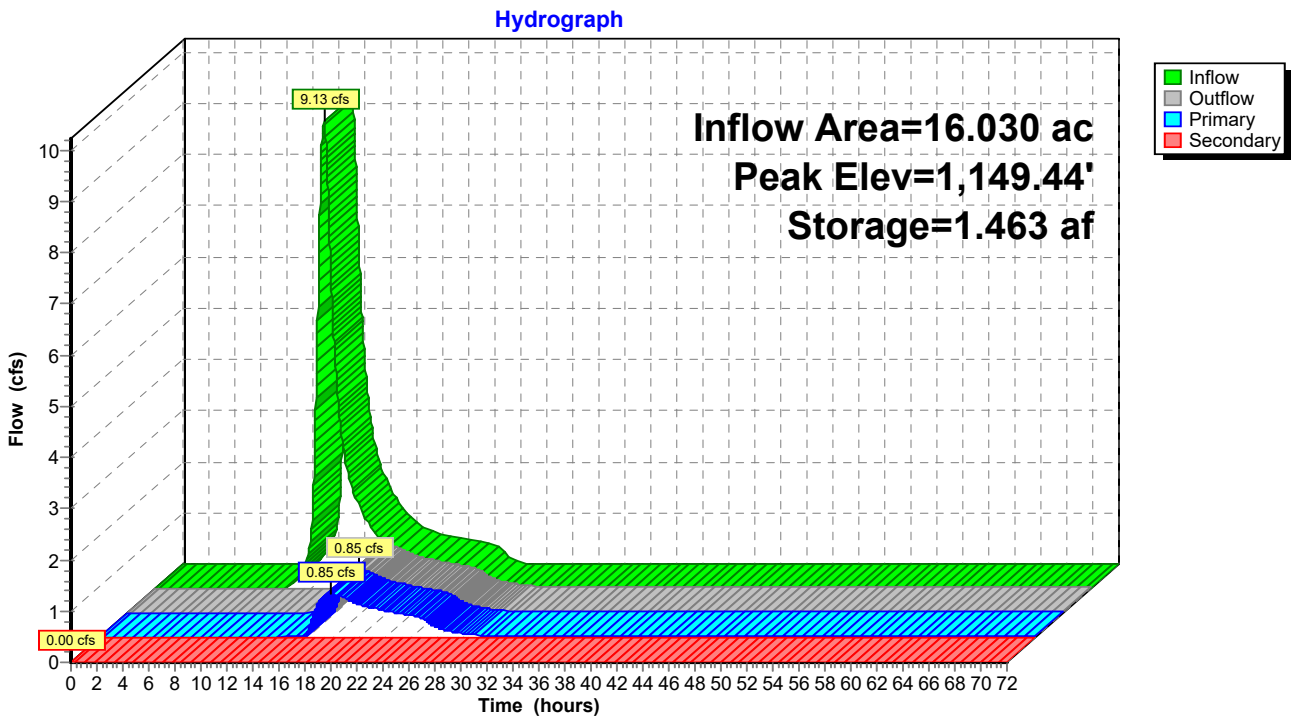
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,145.00	0.180	0.000	0.000
1,146.00	0.246	0.213	0.213
1,147.00	0.313	0.279	0.493
1,148.00	0.382	0.347	0.840
1,149.00	0.454	0.418	1.258
1,150.00	0.528	0.491	1.749
1,151.00	0.604	0.566	2.315
1,152.00	0.683	0.643	2.958
1,153.00	0.770	0.726	3.685

Device	Routing	Invert	Outlet Devices
#1	Primary	1,145.00'	**24.0" Round Culvert** L= 112.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,145.00' / 1,130.00' S= 0.1339 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,149.25'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,152.00'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,145.00'	**0.6" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.84 cfs @ 17.88 hrs HW=1,149.44' (Free Discharge)
└─**1=Culvert** (Passes 0.84 cfs of 28.04 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.82 cfs @ 1.48 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 10.11 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,145.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 09-Pond:


Hydrograph
Inflow Area=16.030 ac
Peak Elev=1,149.44'
Storage=1.463 af
9.13 cfs
0.85 cfs
0.85 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 09-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,145.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,145.00	0.00	0.00	0.00
4.00	0.00	0.000	1,145.00	0.00	0.00	0.00
6.00	0.00	0.000	1,145.00	0.00	0.00	0.00
8.00	0.00	0.000	1,145.00	0.00	0.00	0.00
10.00	0.01	0.000	1,145.00	0.00	0.00	0.00
12.00	**1.02**	0.047	1,145.25	0.00	0.00	0.00
14.00	**3.95**	1.008	1,148.42	0.02	0.02	0.00
16.00	1.47	**1.384**	**1,149.27**	**0.08**	**0.08**	0.00
18.00	0.83	**1.463**	**1,149.44**	**0.85**	**0.85**	0.00
20.00	0.57	1.449	1,149.41	0.65	0.65	0.00
22.00	0.47	1.438	1,149.38	0.53	0.53	0.00
24.00	0.39	1.429	1,149.37	0.44	0.44	0.00
26.00	0.02	1.406	1,149.32	0.20	0.20	0.00
28.00	0.00	1.385	1,149.27	0.08	0.08	0.00
30.00	0.00	1.376	1,149.26	0.03	0.03	0.00
32.00	0.00	1.372	1,149.25	0.02	0.02	0.00
34.00	0.00	1.369	1,149.24	0.02	0.02	0.00
36.00	0.00	1.366	1,149.23	0.02	0.02	0.00
38.00	0.00	1.363	1,149.23	0.02	0.02	0.00
40.00	0.00	1.360	1,149.22	0.02	0.02	0.00
42.00	0.00	1.356	1,149.21	0.02	0.02	0.00
44.00	0.00	1.353	1,149.21	0.02	0.02	0.00
46.00	0.00	1.350	1,149.20	0.02	0.02	0.00
48.00	0.00	1.347	1,149.19	0.02	0.02	0.00
50.00	0.00	1.344	1,149.19	0.02	0.02	0.00
52.00	0.00	1.340	1,149.18	0.02	0.02	0.00
54.00	0.00	1.337	1,149.17	0.02	0.02	0.00
56.00	0.00	1.334	1,149.17	0.02	0.02	0.00
58.00	0.00	1.331	1,149.16	0.02	0.02	0.00
60.00	0.00	1.328	1,149.15	0.02	0.02	0.00
62.00	0.00	1.325	1,149.14	0.02	0.02	0.00
64.00	0.00	1.321	1,149.14	0.02	0.02	0.00
66.00	0.00	1.318	1,149.13	0.02	0.02	0.00
68.00	0.00	1.315	1,149.12	0.02	0.02	0.00
70.00	0.00	1.312	1,149.12	0.02	0.02	0.00
72.00	0.00	1.309	1,149.11	0.02	0.02	0.00

Summary for Pond 11-Pond:

Inflow Area = 2.820 ac, 0.00% Impervious, Inflow Depth = 0.98" for 2-YR STORM event
Inflow = 1.37 cfs @ 12.69 hrs, Volume= 0.231 af
Outflow = 0.00 cfs @ 25.52 hrs, Volume= 0.008 af, Atten= 100%, Lag= 769.6 min
Primary = 0.00 cfs @ 25.52 hrs, Volume= 0.008 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,190.67' @ 25.52 hrs Surf.Area= 0.120 ac Storage= 0.229 af

Plug-Flow detention time= 1,835.2 min calculated for 0.008 af (4% of inflow)
Center-of-Mass det. time= 1,655.5 min (2,558.8 - 903.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,188.00'	0.587 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

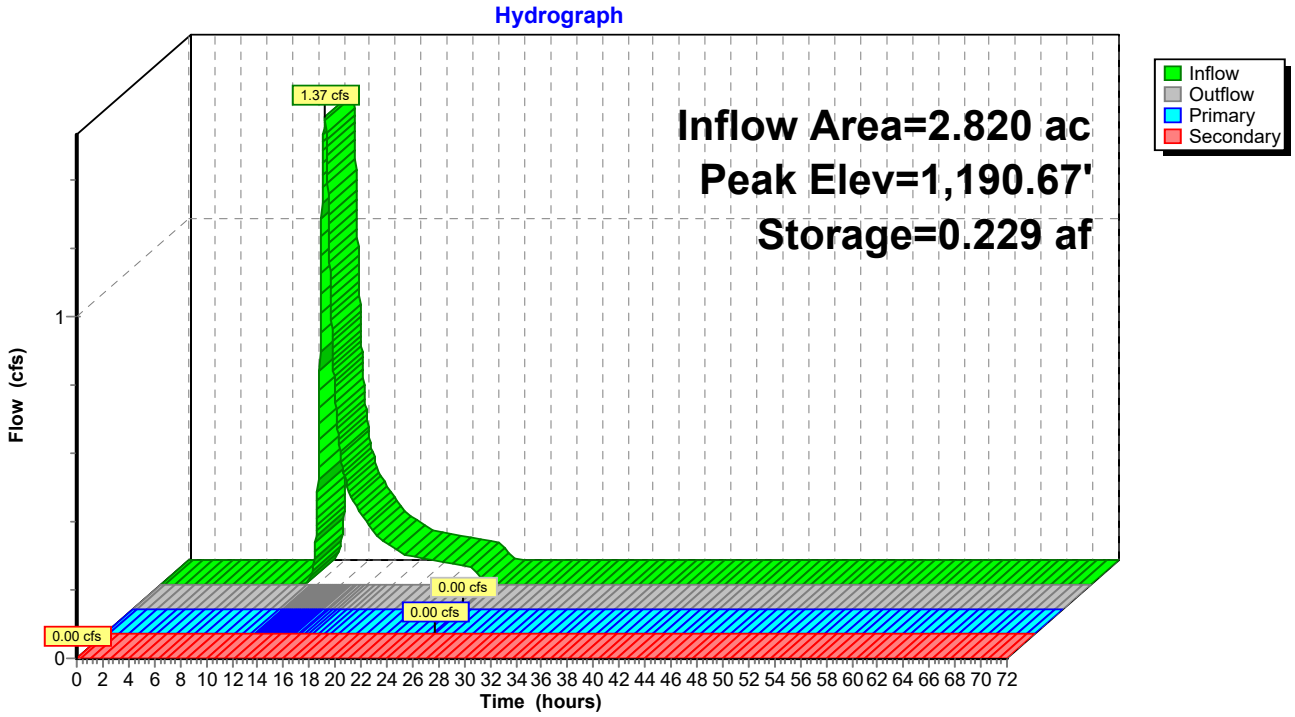
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,188.00	0.053	0.000	0.000
1,189.00	0.077	0.065	0.065
1,190.00	0.102	0.089	0.154
1,191.00	0.129	0.116	0.270
1,192.00	0.158	0.143	0.414
1,193.00	0.189	0.173	0.587

Device	Routing	Invert	Outlet Devices
#1	Primary	1,188.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,188.00' / 1,185.00' S= 0.0652 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,191.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,192.00'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,188.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.00 cfs @ 25.52 hrs HW=1,190.67' (Free Discharge)
└─**1=Culvert** (Passes 0.00 cfs of 11.80 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 7.86 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,188.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 11-Pond:


Hydrograph
Inflow Area=2.820 ac
Peak Elev=1,190.67'
Storage=0.229 af
1.37 cfs
0.00 cfs
0.00 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
1
0
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
Time (hours)

Hydrograph for Pond 11-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,188.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,188.00	0.00	0.00	0.00
4.00	0.00	0.000	1,188.00	0.00	0.00	0.00
6.00	0.00	0.000	1,188.00	0.00	0.00	0.00
8.00	0.00	0.000	1,188.00	0.00	0.00	0.00
10.00	0.00	0.000	1,188.00	0.00	0.00	0.00
12.00	**0.13**	0.002	1,188.04	0.00	0.00	0.00
14.00	**0.36**	0.127	1,189.72	0.00	0.00	0.00
16.00	0.18	0.168	1,190.13	0.00	0.00	0.00
18.00	0.11	0.190	1,190.34	0.00	0.00	0.00
20.00	0.08	0.205	1,190.47	0.00	0.00	0.00
22.00	0.07	0.217	1,190.57	0.00	0.00	0.00
24.00	0.05	**0.226**	**1,190.65**	**0.00**	**0.00**	0.00
26.00	0.00	**0.229**	**1,190.67**	**0.00**	**0.00**	0.00
28.00	0.00	0.229	1,190.67	0.00	0.00	0.00
30.00	0.00	0.229	1,190.67	0.00	0.00	0.00
32.00	0.00	0.228	1,190.67	0.00	0.00	0.00
34.00	0.00	0.228	1,190.66	0.00	0.00	0.00
36.00	0.00	0.228	1,190.66	0.00	0.00	0.00
38.00	0.00	0.227	1,190.66	0.00	0.00	0.00
40.00	0.00	0.227	1,190.66	0.00	0.00	0.00
42.00	0.00	0.227	1,190.65	0.00	0.00	0.00
44.00	0.00	0.227	1,190.65	0.00	0.00	0.00
46.00	0.00	0.226	1,190.65	0.00	0.00	0.00
48.00	0.00	0.226	1,190.65	0.00	0.00	0.00
50.00	0.00	0.226	1,190.64	0.00	0.00	0.00
52.00	0.00	0.226	1,190.64	0.00	0.00	0.00
54.00	0.00	0.225	1,190.64	0.00	0.00	0.00
56.00	0.00	0.225	1,190.64	0.00	0.00	0.00
58.00	0.00	0.225	1,190.63	0.00	0.00	0.00
60.00	0.00	0.224	1,190.63	0.00	0.00	0.00
62.00	0.00	0.224	1,190.63	0.00	0.00	0.00
64.00	0.00	0.224	1,190.63	0.00	0.00	0.00
66.00	0.00	0.224	1,190.63	0.00	0.00	0.00
68.00	0.00	0.223	1,190.62	0.00	0.00	0.00
70.00	0.00	0.223	1,190.62	0.00	0.00	0.00
72.00	0.00	0.223	1,190.62	0.00	0.00	0.00

Summary for Pond 13-Pond:

Inflow Area = 6.380 ac, 0.00% Impervious, Inflow Depth = 1.15" for 2-YR STORM event
Inflow = 4.75 cfs @ 12.44 hrs, Volume= 0.612 af
Outflow = 0.16 cfs @ 22.08 hrs, Volume= 0.093 af, Atten= 97%, Lag= 578.9 min
Primary = 0.16 cfs @ 22.08 hrs, Volume= 0.093 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,145.71' @ 22.08 hrs Surf.Area= 0.199 ac Storage= 0.560 af

Plug-Flow detention time= 1,136.1 min calculated for 0.093 af (15% of inflow)
Center-of-Mass det. time= 983.3 min (1,860.3 - 877.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,141.00'	0.849 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

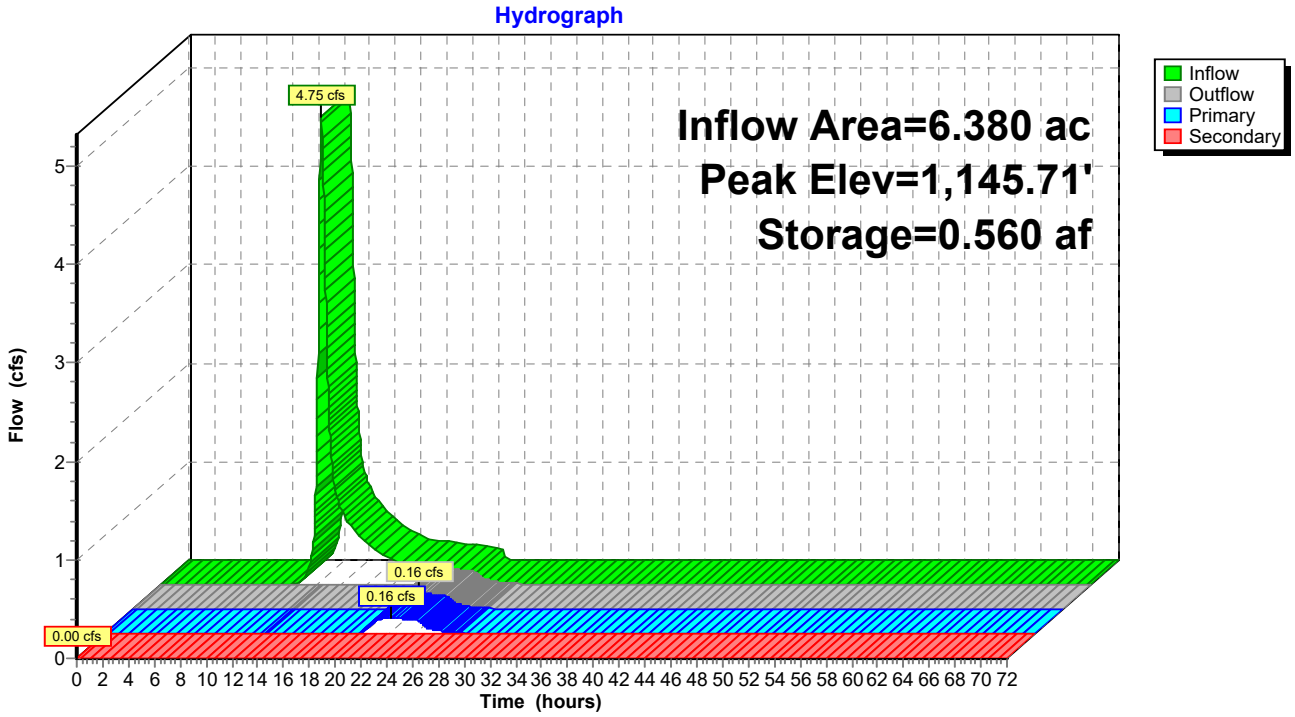
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,141.00	0.044	0.000	0.000
1,142.00	0.075	0.060	0.060
1,143.00	0.106	0.090	0.150
1,144.00	0.139	0.123	0.272
1,145.00	0.173	0.156	0.428
1,146.00	0.210	0.191	0.620
1,147.00	0.248	0.229	0.849

Device	Routing	Invert	Outlet Devices
#1	Primary	1,142.00'	**18.0" Round Culvert** L= 270.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,142.00' / 1,058.00' S= 0.3111 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,145.65'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,146.80'	**35.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,142.00'	**0.4" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.14 cfs @ 22.08 hrs HW=1,145.71' (Free Discharge)
└─**1=Culvert** (Passes 0.14 cfs of 14.63 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.14 cfs @ 0.79 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.25 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,141.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 13-Pond:


Hydrograph
Inflow Area=6.380 ac
Peak Elev=1,145.71'
Storage=0.560 af
4.75 cfs
0.16 cfs
0.16 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 13-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,141.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,141.00	0.00	0.00	0.00
4.00	0.00	0.000	1,141.00	0.00	0.00	0.00
6.00	0.00	0.000	1,141.00	0.00	0.00	0.00
8.00	0.00	0.000	1,141.00	0.00	0.00	0.00
10.00	0.00	0.000	1,141.00	0.00	0.00	0.00
12.00	**1.00**	0.023	1,141.46	0.00	0.00	0.00
14.00	**0.75**	0.373	1,144.67	0.01	0.01	0.00
16.00	0.42	0.465	1,145.21	0.01	0.01	0.00
18.00	0.25	0.517	1,145.48	0.01	0.01	0.00
20.00	0.19	0.550	1,145.66	0.02	0.02	0.00
22.00	0.16	**0.560**	**1,145.71**	**0.16**	**0.16**	0.00
24.00	0.13	**0.559**	**1,145.70**	**0.14**	**0.14**	0.00
26.00	0.00	0.551	1,145.66	0.03	0.03	0.00
28.00	0.00	0.549	1,145.65	0.01	0.01	0.00
30.00	0.00	0.547	1,145.64	0.01	0.01	0.00
32.00	0.00	0.546	1,145.64	0.01	0.01	0.00
34.00	0.00	0.545	1,145.63	0.01	0.01	0.00
36.00	0.00	0.543	1,145.62	0.01	0.01	0.00
38.00	0.00	0.542	1,145.62	0.01	0.01	0.00
40.00	0.00	0.541	1,145.61	0.01	0.01	0.00
42.00	0.00	0.539	1,145.60	0.01	0.01	0.00
44.00	0.00	0.538	1,145.60	0.01	0.01	0.00
46.00	0.00	0.537	1,145.59	0.01	0.01	0.00
48.00	0.00	0.535	1,145.58	0.01	0.01	0.00
50.00	0.00	0.534	1,145.58	0.01	0.01	0.00
52.00	0.00	0.533	1,145.57	0.01	0.01	0.00
54.00	0.00	0.532	1,145.56	0.01	0.01	0.00
56.00	0.00	0.530	1,145.56	0.01	0.01	0.00
58.00	0.00	0.529	1,145.55	0.01	0.01	0.00
60.00	0.00	0.528	1,145.54	0.01	0.01	0.00
62.00	0.00	0.526	1,145.53	0.01	0.01	0.00
64.00	0.00	0.525	1,145.53	0.01	0.01	0.00
66.00	0.00	0.524	1,145.52	0.01	0.01	0.00
68.00	0.00	0.522	1,145.51	0.01	0.01	0.00
70.00	0.00	0.521	1,145.51	0.01	0.01	0.00
72.00	0.00	0.520	1,145.50	0.01	0.01	0.00

Summary for Pond 14-Pond:

Inflow Area = 8.210 ac, 0.00% Impervious, Inflow Depth = 1.21" for 2-YR STORM event
Inflow = 7.14 cfs @ 12.34 hrs, Volume= 0.829 af
Outflow = 0.37 cfs @ 17.53 hrs, Volume= 0.231 af, Atten= 95%, Lag= 311.0 min
Primary = 0.37 cfs @ 17.53 hrs, Volume= 0.231 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,153.11' @ 17.53 hrs Surf.Area= 0.297 ac Storage= 0.656 af

Plug-Flow detention time= 688.2 min calculated for 0.231 af (28% of inflow)
Center-of-Mass det. time= 548.5 min (1,416.9 - 868.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,150.00'	1.323 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

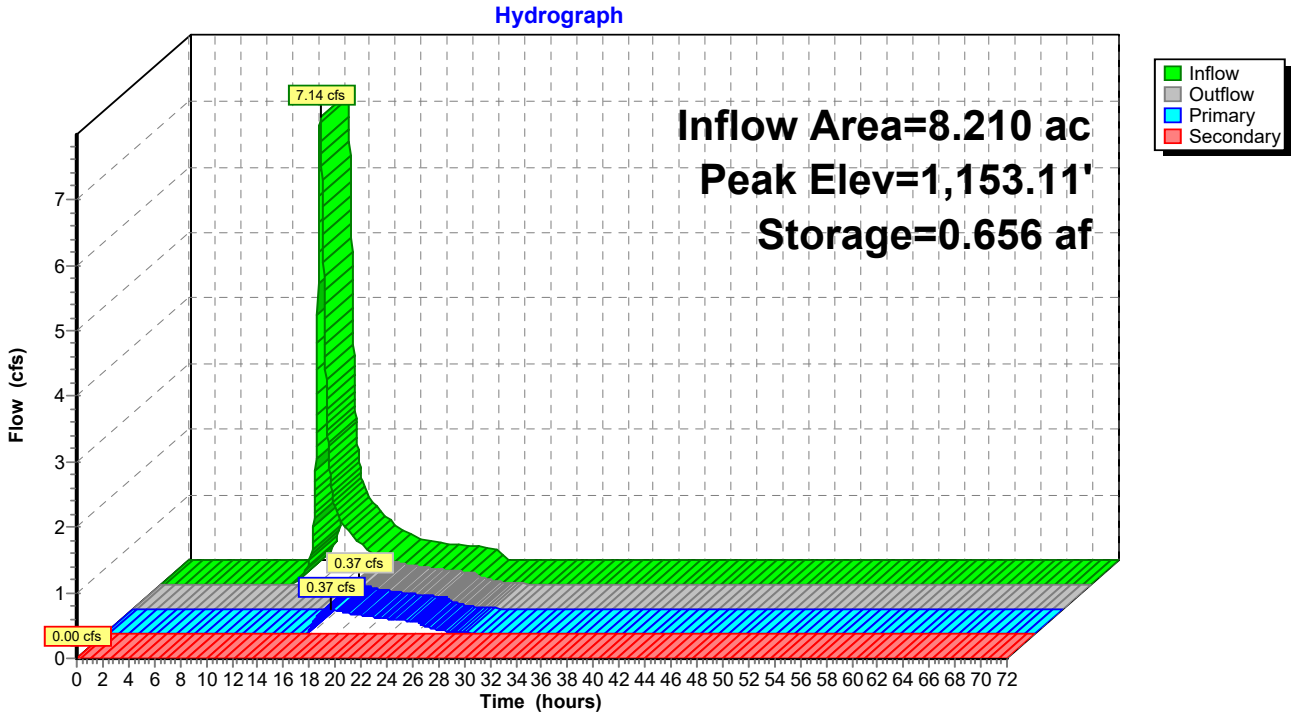
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,150.00	0.127	0.000	0.000
1,151.00	0.180	0.153	0.153
1,152.00	0.235	0.208	0.361
1,153.00	0.291	0.263	0.624
1,154.00	0.349	0.320	0.944
1,155.00	0.409	0.379	1.323

Device	Routing	Invert	Outlet Devices
#1	Primary	1,150.00'	**24.0" Round Culvert** L= 52.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,150.00' / 1,143.00' S= 0.1346 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,153.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,154.50'	**30.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,150.00'	**0.4" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.36 cfs @ 17.53 hrs HW=1,153.11' (Free Discharge)
└─**1=Culvert** (Passes 0.36 cfs of 21.96 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.35 cfs @ 1.10 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 8.47 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,150.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 14-Pond:


Hydrograph
Inflow Area=8.210 ac
Peak Elev=1,153.11'
Storage=0.656 af
7.14 cfs
0.37 cfs
0.37 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 14-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,150.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,150.00	0.00	0.00	0.00
4.00	0.00	0.000	1,150.00	0.00	0.00	0.00
6.00	0.00	0.000	1,150.00	0.00	0.00	0.00
8.00	0.00	0.000	1,150.00	0.00	0.00	0.00
10.00	0.00	0.000	1,150.00	0.00	0.00	0.00
12.00	**1.91**	0.046	1,150.34	0.00	0.00	0.00
14.00	**0.97**	0.520	1,152.63	0.01	0.01	0.00
16.00	0.53	**0.637**	**1,153.04**	**0.11**	**0.11**	0.00
18.00	0.32	**0.655**	**1,153.11**	**0.35**	**0.35**	0.00
20.00	0.25	0.650	1,153.09	0.28	0.28	0.00
22.00	0.21	0.646	1,153.08	0.23	0.23	0.00
24.00	0.17	0.644	1,153.07	0.19	0.19	0.00
26.00	0.00	0.630	1,153.02	0.05	0.05	0.00
28.00	0.00	0.625	1,153.00	0.02	0.02	0.00
30.00	0.00	0.624	1,153.00	0.01	0.01	0.00
32.00	0.00	0.622	1,152.99	0.01	0.01	0.00
34.00	0.00	0.621	1,152.99	0.01	0.01	0.00
36.00	0.00	0.620	1,152.99	0.01	0.01	0.00
38.00	0.00	0.619	1,152.98	0.01	0.01	0.00
40.00	0.00	0.618	1,152.98	0.01	0.01	0.00
42.00	0.00	0.616	1,152.97	0.01	0.01	0.00
44.00	0.00	0.615	1,152.97	0.01	0.01	0.00
46.00	0.00	0.614	1,152.97	0.01	0.01	0.00
48.00	0.00	0.613	1,152.96	0.01	0.01	0.00
50.00	0.00	0.612	1,152.96	0.01	0.01	0.00
52.00	0.00	0.610	1,152.95	0.01	0.01	0.00
54.00	0.00	0.609	1,152.95	0.01	0.01	0.00
56.00	0.00	0.608	1,152.94	0.01	0.01	0.00
58.00	0.00	0.607	1,152.94	0.01	0.01	0.00
60.00	0.00	0.606	1,152.94	0.01	0.01	0.00
62.00	0.00	0.604	1,152.93	0.01	0.01	0.00
64.00	0.00	0.603	1,152.93	0.01	0.01	0.00
66.00	0.00	0.602	1,152.92	0.01	0.01	0.00
68.00	0.00	0.601	1,152.92	0.01	0.01	0.00
70.00	0.00	0.600	1,152.92	0.01	0.01	0.00
72.00	0.00	0.599	1,152.91	0.01	0.01	0.00

Summary for Pond 15-Pond:

Inflow Area = 2.830 ac, 0.00% Impervious, Inflow Depth = 1.34" for 2-YR STORM event
Inflow = 1.90 cfs @ 12.70 hrs, Volume= 0.315 af
Outflow = 0.08 cfs @ 22.07 hrs, Volume= 0.037 af, Atten= 96%, Lag= 562.0 min
Primary = 0.08 cfs @ 22.07 hrs, Volume= 0.037 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,200.53' @ 22.07 hrs Surf.Area= 4,928 sf Storage= 12,604 cf

Plug-Flow detention time= 950.4 min calculated for 0.037 af (12% of inflow)
Center-of-Mass det. time= 788.0 min (1,675.1 - 887.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,197.00'	20,760 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

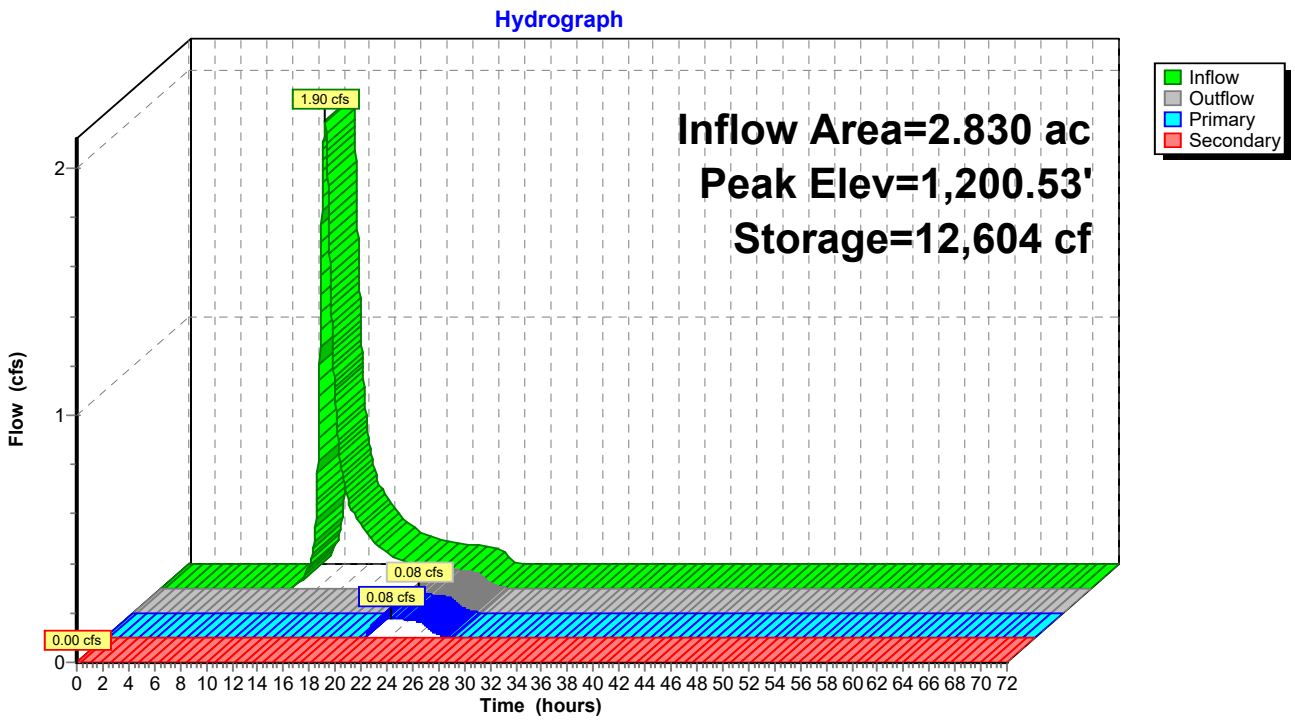
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,197.00	2,331	0	0
1,198.00	2,984	2,658	2,658
1,199.00	3,701	3,343	6,000
1,200.00	4,479	4,090	10,090
1,201.00	5,319	4,899	14,989
1,202.00	6,222	5,771	20,760

Device	Routing	Invert	Outlet Devices
#1	Primary	1,197.00'	**18.0" Round Culvert** L= 70.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,197.00' / 1,196.00' S= 0.0143 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,200.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,201.50'	**30.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,197.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.07 cfs @ 22.07 hrs HW=1,200.53' (Free Discharge)
└─**1=Culvert** (Passes 0.07 cfs of 14.20 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.06 cfs @ 0.61 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.04 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,197.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 15-Pond:


Hydrograph
Inflow Area=2.830 ac
Peak Elev=1,200.53'
Storage=12,604 cf
Inflow
Outflow
Primary
Secondary
1.90 cfs
0.08 cfs
0.08 cfs
0.00 cfs
Flow (cfs)
Time (hours)

Hydrograph for Pond 15-Pond:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	1,197.00	0.00	0.00	**0.00**
2.00	0.00	0	1,197.00	0.00	0.00	0.00
4.00	0.00	0	1,197.00	0.00	0.00	0.00
6.00	0.00	0	1,197.00	0.00	0.00	0.00
8.00	0.00	0	1,197.00	0.00	0.00	0.00
10.00	0.00	0	1,197.00	0.00	0.00	0.00
12.00	**0.27**	453	1,197.19	0.00	0.00	0.00
14.00	**0.48**	8,139	1,199.55	0.00	0.00	0.00
16.00	0.22	10,395	1,200.07	0.00	0.00	0.00
18.00	0.13	11,604	1,200.33	0.00	0.00	0.00
20.00	0.09	12,372	1,200.49	0.00	0.00	0.00
22.00	0.08	**12,604**	**1,200.53**	**0.08**	**0.08**	0.00
24.00	0.06	**12,582**	**1,200.53**	**0.07**	**0.07**	0.00
26.00	0.00	12,454	1,200.50	0.01	0.01	0.00
28.00	0.00	12,428	1,200.50	0.00	0.00	0.00
30.00	0.00	12,414	1,200.50	0.00	0.00	0.00
32.00	0.00	12,400	1,200.49	0.00	0.00	0.00
34.00	0.00	12,386	1,200.49	0.00	0.00	0.00
36.00	0.00	12,371	1,200.49	0.00	0.00	0.00
38.00	0.00	12,357	1,200.48	0.00	0.00	0.00
40.00	0.00	12,343	1,200.48	0.00	0.00	0.00
42.00	0.00	12,329	1,200.48	0.00	0.00	0.00
44.00	0.00	12,315	1,200.48	0.00	0.00	0.00
46.00	0.00	12,301	1,200.47	0.00	0.00	0.00
48.00	0.00	12,287	1,200.47	0.00	0.00	0.00
50.00	0.00	12,273	1,200.47	0.00	0.00	0.00
52.00	0.00	12,259	1,200.46	0.00	0.00	0.00
54.00	0.00	12,245	1,200.46	0.00	0.00	0.00
56.00	0.00	12,231	1,200.46	0.00	0.00	0.00
58.00	0.00	12,217	1,200.46	0.00	0.00	0.00
60.00	0.00	12,203	1,200.45	0.00	0.00	0.00
62.00	0.00	12,189	1,200.45	0.00	0.00	0.00
64.00	0.00	12,175	1,200.45	0.00	0.00	0.00
66.00	0.00	12,161	1,200.44	0.00	0.00	0.00
68.00	0.00	12,146	1,200.44	0.00	0.00	0.00
70.00	0.00	12,132	1,200.44	0.00	0.00	0.00
72.00	0.00	12,118	1,200.44	0.00	0.00	0.00

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment01: Runoff Area=2.560 ac 0.00% Impervious Runoff Depth=2.90"
Tc=26.0 min CN=83 Runoff=5.24 cfs 0.620 af

Subcatchment02: Runoff Area=11.560 ac 0.00% Impervious Runoff Depth=2.37"
Tc=26.9 min CN=77 Runoff=19.02 cfs 2.287 af

Subcatchment03: Runoff Area=13.580 ac 0.00% Impervious Runoff Depth=2.72"
Tc=27.7 min CN=81 Runoff=25.37 cfs 3.080 af

Subcatchment04: Runoff Area=1.980 ac 0.00% Impervious Runoff Depth=2.37"
Tc=31.8 min CN=77 Runoff=3.02 cfs 0.392 af

Subcatchment05: Runoff Area=4.310 ac 0.00% Impervious Runoff Depth=2.63"
Tc=19.9 min CN=80 Runoff=8.99 cfs 0.946 af

Subcatchment07: Runoff Area=13.810 ac 0.00% Impervious Runoff Depth=1.97"
Tc=36.0 min CN=72 Runoff=16.28 cfs 2.267 af

Subcatchment08: Runoff Area=17.260 ac 0.00% Impervious Runoff Depth=2.90"
Tc=24.5 min CN=83 Runoff=36.33 cfs 4.177 af

Subcatchment09: Runoff Area=16.030 ac 0.00% Impervious Runoff Depth=2.63"
Tc=71.9 min CN=80 Runoff=17.39 cfs 3.517 af

Subcatchment10: Runoff Area=16.800 ac 0.00% Impervious Runoff Depth=2.81"
Tc=35.2 min CN=82 Runoff=29.09 cfs 3.937 af

Subcatchment11: Runoff Area=2.820 ac 0.00% Impervious Runoff Depth=2.05"
Tc=46.9 min CN=73 Runoff=3.03 cfs 0.481 af

Subcatchment12: Runoff Area=4.010 ac 0.00% Impervious Runoff Depth=2.72"
Tc=23.9 min CN=81 Runoff=8.00 cfs 0.910 af

Subcatchment13: Runoff Area=6.380 ac 0.00% Impervious Runoff Depth=2.29"
Tc=29.1 min CN=76 Runoff=9.76 cfs 1.218 af

Subcatchment14: Runoff Area=8.210 ac 0.00% Impervious Runoff Depth=2.37"
Tc=23.3 min CN=77 Runoff=14.38 cfs 1.624 af

Subcatchment15: Runoff Area=2.830 ac 0.00% Impervious Runoff Depth=2.55"
Tc=50.3 min CN=79 Runoff=3.69 cfs 0.600 af

Pond 01-Pond: Peak Elev=1,114.03' Storage=0.312 af Inflow=5.24 cfs 0.620 af
Primary=2.02 cfs 0.363 af Secondary=0.00 cfs 0.000 af Outflow=2.02 cfs 0.363 af

Pond 02-Pond: Peak Elev=1,044.74' Storage=1.135 af Inflow=19.02 cfs 2.287 af
Primary=5.61 cfs 1.369 af Secondary=0.00 cfs 0.000 af Outflow=5.61 cfs 1.369 af

Pond 03-Pond: Peak Elev=1,132.84' Storage=0.823 af Inflow=25.37 cfs 3.080 af
Primary=18.35 cfs 2.915 af Secondary=0.00 cfs 0.000 af Outflow=18.35 cfs 2.915 af

Pond 04-Pond: Peak Elev=1,109.01' Storage=0.209 af Inflow=3.02 cfs 0.392 af
Primary=0.78 cfs 0.206 af Secondary=0.00 cfs 0.000 af Outflow=0.78 cfs 0.206 af

Pond 05-Pond: Peak Elev=1,139.72' Storage=0.441 af Inflow=8.99 cfs 0.946 af
Primary=3.19 cfs 0.629 af Secondary=0.00 cfs 0.000 af Outflow=3.19 cfs 0.629 af

Pond 07-Pond: Peak Elev=1,134.59' Storage=1.077 af Inflow=16.28 cfs 2.267 af
Primary=4.93 cfs 1.427 af Secondary=0.00 cfs 0.000 af Outflow=4.93 cfs 1.427 af

Pond 08/10-Pond: Peak Elev=1,124.57' Storage=2.814 af Inflow=62.91 cfs 8.114 af
Primary=41.62 cfs 6.832 af Secondary=0.00 cfs 0.000 af Outflow=41.62 cfs 6.832 af

Pond 09-Pond: Peak Elev=1,150.00' Storage=1.750 af Inflow=17.39 cfs 3.517 af
Primary=7.21 cfs 2.207 af Secondary=0.00 cfs 0.000 af Outflow=7.21 cfs 2.207 af

Pond 11-Pond: Peak Elev=1,191.60' Storage=0.353 af Inflow=3.03 cfs 0.481 af
Primary=0.32 cfs 0.150 af Secondary=0.00 cfs 0.000 af Outflow=0.32 cfs 0.150 af

Pond 13-Pond: Peak Elev=1,146.03' Storage=0.626 af Inflow=9.76 cfs 1.218 af
Primary=2.47 cfs 0.698 af Secondary=0.00 cfs 0.000 af Outflow=2.47 cfs 0.698 af

Pond 14-Pond: Peak Elev=1,153.53' Storage=0.786 af Inflow=14.38 cfs 1.624 af
Primary=4.12 cfs 1.025 af Secondary=0.00 cfs 0.000 af Outflow=4.12 cfs 1.025 af

Pond 15-Pond: Peak Elev=1,200.75' Storage=13,700 cf Inflow=3.69 cfs 0.600 af
Primary=1.31 cfs 0.322 af Secondary=0.00 cfs 0.000 af Outflow=1.31 cfs 0.322 af

Total Runoff Area = 122.140 ac Runoff Volume = 26.055 af Average Runoff Depth = 2.56"
100.00% Pervious = 122.140 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 01:

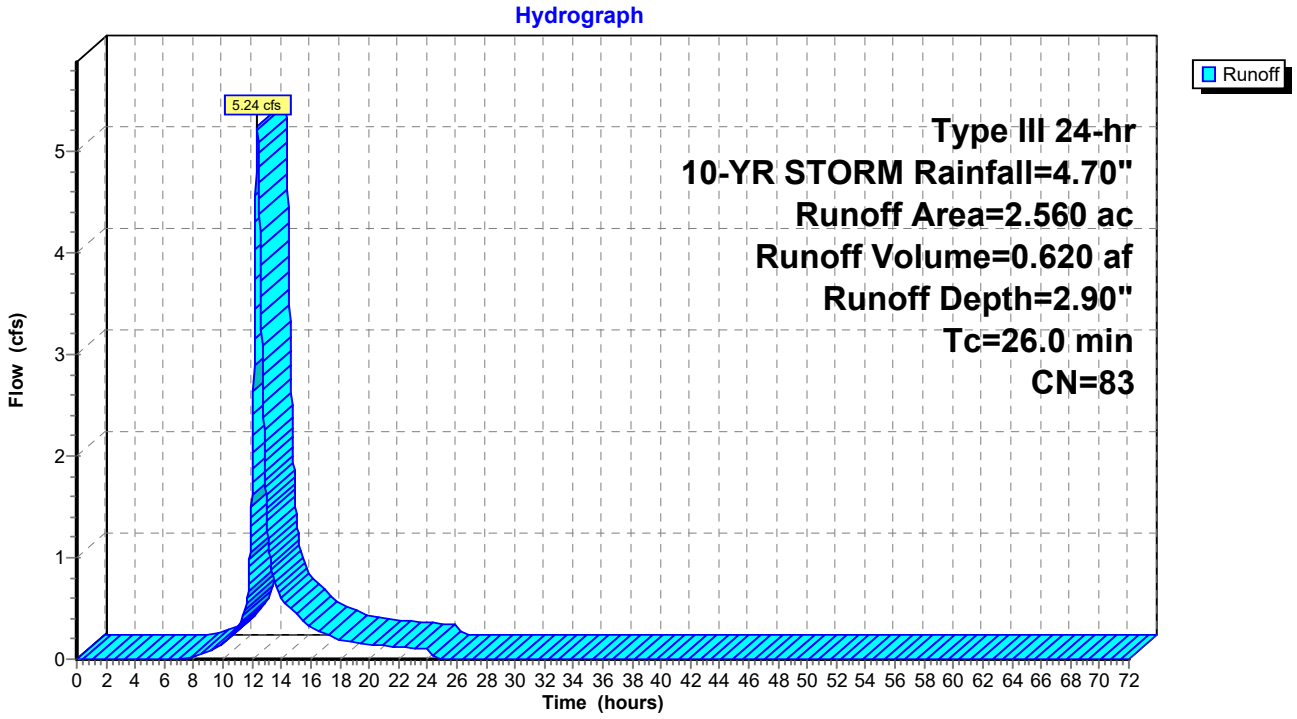
Runoff = 5.24 cfs @ 12.35 hrs, Volume= 0.620 af, Depth= 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	2.560	83	
	2.560		100.00% Pervious Area

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

Subcatchment 01:



Hydrograph for Subcatchment 01:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.01	0.02
9.00	0.69	0.03	0.07
10.00	0.89	0.09	0.16
11.00	1.18	0.21	0.32
12.00	2.35	0.94	**1.74**
13.00	3.52	1.88	**1.43**
14.00	3.81	2.12	0.61
15.00	4.01	2.30	0.44
16.00	4.16	2.43	0.32
17.00	4.27	2.53	0.25
18.00	4.36	2.60	0.19
19.00	4.43	2.67	0.16
20.00	4.50	2.72	0.15
21.00	4.56	2.78	0.13
22.00	4.61	2.82	0.12
23.00	4.66	2.87	0.11
24.00	**4.70**	**2.90**	0.10
25.00	4.70	2.90	0.00
26.00	4.70	2.90	0.00
27.00	4.70	2.90	0.00
28.00	4.70	2.90	0.00
29.00	4.70	2.90	0.00
30.00	4.70	2.90	0.00
31.00	4.70	2.90	0.00
32.00	4.70	2.90	0.00
33.00	4.70	2.90	0.00
34.00	4.70	2.90	0.00
35.00	4.70	2.90	0.00
36.00	4.70	2.90	0.00
37.00	4.70	2.90	0.00
38.00	4.70	2.90	0.00
39.00	4.70	2.90	0.00
40.00	4.70	2.90	0.00
41.00	4.70	2.90	0.00
42.00	4.70	2.90	0.00
43.00	4.70	2.90	0.00
44.00	4.70	2.90	0.00
45.00	4.70	2.90	0.00
46.00	4.70	2.90	0.00
47.00	4.70	2.90	0.00
48.00	4.70	2.90	0.00
49.00	4.70	2.90	0.00
50.00	4.70	2.90	0.00
51.00	4.70	2.90	0.00
52.00	4.70	2.90	0.00
53.00	4.70	2.90	0.00
54.00	4.70	2.90	0.00
55.00	4.70	2.90	0.00
56.00	4.70	2.90	0.00
57.00	4.70	2.90	0.00
58.00	4.70	2.90	0.00
59.00	4.70	2.90	0.00
60.00	4.70	2.90	0.00
61.00	4.70	2.90	0.00
62.00	4.70	2.90	0.00
63.00	4.70	2.90	0.00
64.00	4.70	2.90	0.00
65.00	4.70	2.90	0.00
66.00	4.70	2.90	0.00
67.00	4.70	2.90	0.00
68.00	4.70	2.90	0.00
69.00	4.70	2.90	0.00
70.00	4.70	2.90	0.00
71.00	4.70	2.90	0.00
72.00	4.70	2.90	0.00

Summary for Subcatchment 02:

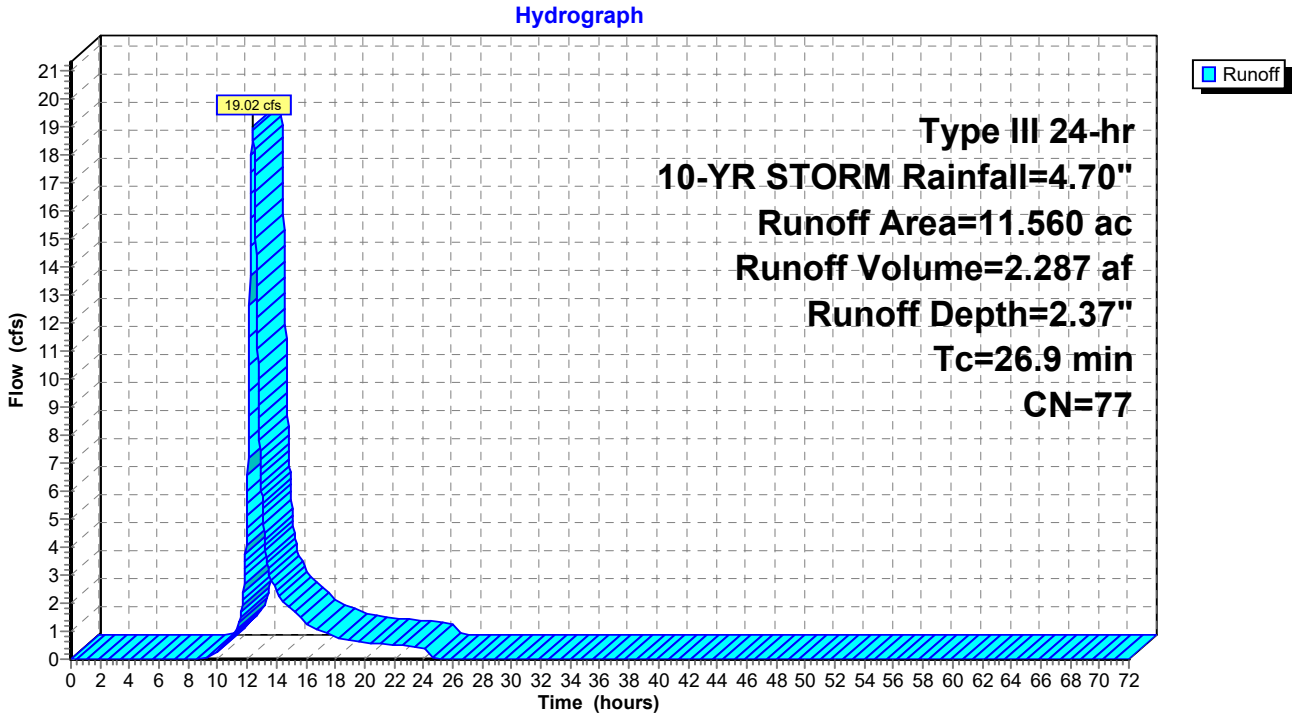
Runoff = 19.02 cfs @ 12.38 hrs, Volume= 2.287 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	11.560	77	
	11.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9					**Direct Entry, SCS TR-55**

Subcatchment 02:



Hydrograph for Subcatchment 02:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.00
9.00	0.69	0.00	0.03
10.00	0.89	0.03	0.30
11.00	1.18	0.09	0.84
12.00	2.35	0.65	**5.53**
13.00	3.52	1.45	**5.80**
14.00	3.81	1.67	2.46
15.00	4.01	1.82	1.80
16.00	4.16	1.94	1.33
17.00	4.27	2.03	1.01
18.00	4.36	2.10	0.79
19.00	4.43	2.16	0.67
20.00	4.50	2.21	0.61
21.00	4.56	2.26	0.55
22.00	4.61	2.30	0.50
23.00	4.66	2.34	0.45
24.00	**4.70**	**2.37**	0.40
25.00	4.70	2.37	0.01
26.00	4.70	2.37	0.00
27.00	4.70	2.37	0.00
28.00	4.70	2.37	0.00
29.00	4.70	2.37	0.00
30.00	4.70	2.37	0.00
31.00	4.70	2.37	0.00
32.00	4.70	2.37	0.00
33.00	4.70	2.37	0.00
34.00	4.70	2.37	0.00
35.00	4.70	2.37	0.00
36.00	4.70	2.37	0.00
37.00	4.70	2.37	0.00
38.00	4.70	2.37	0.00
39.00	4.70	2.37	0.00
40.00	4.70	2.37	0.00
41.00	4.70	2.37	0.00
42.00	4.70	2.37	0.00
43.00	4.70	2.37	0.00
44.00	4.70	2.37	0.00
45.00	4.70	2.37	0.00
46.00	4.70	2.37	0.00
47.00	4.70	2.37	0.00
48.00	4.70	2.37	0.00
49.00	4.70	2.37	0.00
50.00	4.70	2.37	0.00
51.00	4.70	2.37	0.00
52.00	4.70	2.37	0.00
53.00	4.70	2.37	0.00
54.00	4.70	2.37	0.00
55.00	4.70	2.37	0.00
56.00	4.70	2.37	0.00
57.00	4.70	2.37	0.00
58.00	4.70	2.37	0.00
59.00	4.70	2.37	0.00
60.00	4.70	2.37	0.00
61.00	4.70	2.37	0.00
62.00	4.70	2.37	0.00
63.00	4.70	2.37	0.00
64.00	4.70	2.37	0.00
65.00	4.70	2.37	0.00
66.00	4.70	2.37	0.00
67.00	4.70	2.37	0.00
68.00	4.70	2.37	0.00
69.00	4.70	2.37	0.00
70.00	4.70	2.37	0.00
71.00	4.70	2.37	0.00
72.00	4.70	2.37	0.00

Summary for Subcatchment 03:

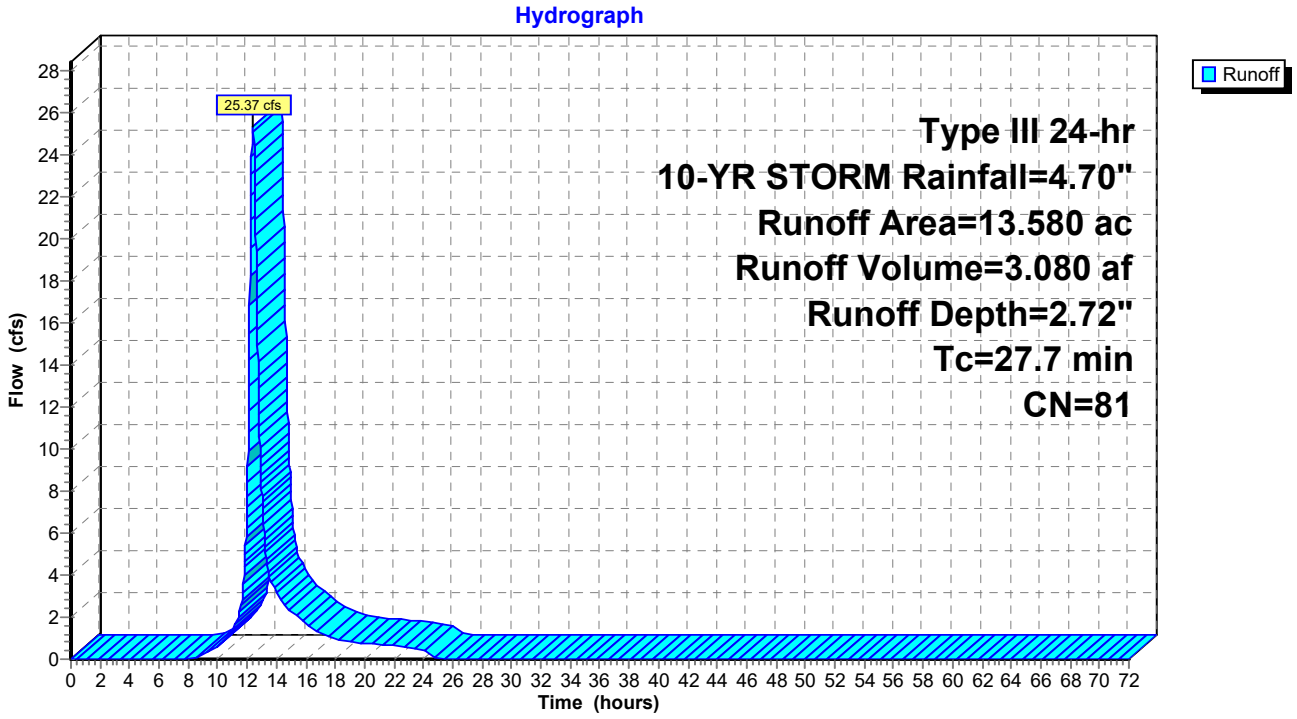
Runoff = 25.37 cfs @ 12.39 hrs, Volume= 3.080 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	13.580	81	
	13.580		100.00% Pervious Area

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

Subcatchment 03:



Hydrograph for Subcatchment 03:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.03
9.00	0.69	0.02	0.24
10.00	0.89	0.06	0.65
11.00	1.18	0.16	1.43
12.00	2.35	0.84	**7.79**
13.00	3.52	1.73	**7.76**
14.00	3.81	1.96	3.15
15.00	4.01	2.13	2.29
16.00	4.16	2.26	1.68
17.00	4.27	2.35	1.27
18.00	4.36	2.43	1.00
19.00	4.43	2.49	0.84
20.00	4.50	2.55	0.76
21.00	4.56	2.60	0.69
22.00	4.61	2.64	0.63
23.00	4.66	2.68	0.57
24.00	**4.70**	**2.72**	0.50
25.00	4.70	2.72	0.01
26.00	4.70	2.72	0.00
27.00	4.70	2.72	0.00
28.00	4.70	2.72	0.00
29.00	4.70	2.72	0.00
30.00	4.70	2.72	0.00
31.00	4.70	2.72	0.00
32.00	4.70	2.72	0.00
33.00	4.70	2.72	0.00
34.00	4.70	2.72	0.00
35.00	4.70	2.72	0.00
36.00	4.70	2.72	0.00
37.00	4.70	2.72	0.00
38.00	4.70	2.72	0.00
39.00	4.70	2.72	0.00
40.00	4.70	2.72	0.00
41.00	4.70	2.72	0.00
42.00	4.70	2.72	0.00
43.00	4.70	2.72	0.00
44.00	4.70	2.72	0.00
45.00	4.70	2.72	0.00
46.00	4.70	2.72	0.00
47.00	4.70	2.72	0.00
48.00	4.70	2.72	0.00
49.00	4.70	2.72	0.00
50.00	4.70	2.72	0.00
51.00	4.70	2.72	0.00
52.00	4.70	2.72	0.00
53.00	4.70	2.72	0.00
54.00	4.70	2.72	0.00
55.00	4.70	2.72	0.00
56.00	4.70	2.72	0.00
57.00	4.70	2.72	0.00
58.00	4.70	2.72	0.00
59.00	4.70	2.72	0.00
60.00	4.70	2.72	0.00
61.00	4.70	2.72	0.00
62.00	4.70	2.72	0.00
63.00	4.70	2.72	0.00
64.00	4.70	2.72	0.00
65.00	4.70	2.72	0.00
66.00	4.70	2.72	0.00
67.00	4.70	2.72	0.00
68.00	4.70	2.72	0.00
69.00	4.70	2.72	0.00
70.00	4.70	2.72	0.00
71.00	4.70	2.72	0.00
72.00	4.70	2.72	0.00

Summary for Subcatchment 04:

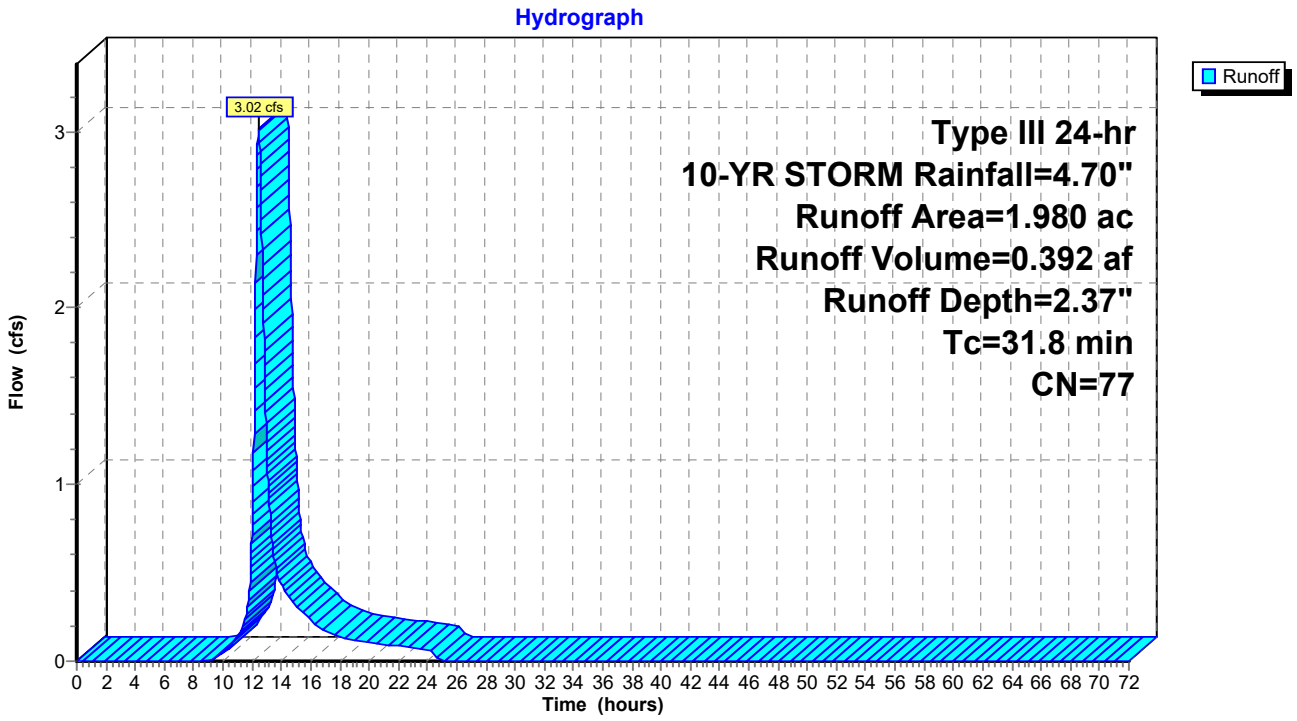
Runoff = 3.02 cfs @ 12.45 hrs, Volume= 0.392 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	1.980	77	
	1.980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.8					**Direct Entry, SCS TR-55**

Subcatchment 04:



Hydrograph for Subcatchment 04:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.00
9.00	0.69	0.00	0.00
10.00	0.89	0.03	0.05
11.00	1.18	0.09	0.14
12.00	2.35	0.65	**0.77**
13.00	3.52	1.45	**1.19**
14.00	3.81	1.67	0.44
15.00	4.01	1.82	0.31
16.00	4.16	1.94	0.23
17.00	4.27	2.03	0.18
18.00	4.36	2.10	0.14
19.00	4.43	2.16	0.12
20.00	4.50	2.21	0.10
21.00	4.56	2.26	0.09
22.00	4.61	2.30	0.09
23.00	4.66	2.34	0.08
24.00	**4.70**	**2.37**	0.07
25.00	4.70	2.37	0.00
26.00	4.70	2.37	0.00
27.00	4.70	2.37	0.00
28.00	4.70	2.37	0.00
29.00	4.70	2.37	0.00
30.00	4.70	2.37	0.00
31.00	4.70	2.37	0.00
32.00	4.70	2.37	0.00
33.00	4.70	2.37	0.00
34.00	4.70	2.37	0.00
35.00	4.70	2.37	0.00
36.00	4.70	2.37	0.00
37.00	4.70	2.37	0.00
38.00	4.70	2.37	0.00
39.00	4.70	2.37	0.00
40.00	4.70	2.37	0.00
41.00	4.70	2.37	0.00
42.00	4.70	2.37	0.00
43.00	4.70	2.37	0.00
44.00	4.70	2.37	0.00
45.00	4.70	2.37	0.00
46.00	4.70	2.37	0.00
47.00	4.70	2.37	0.00
48.00	4.70	2.37	0.00
49.00	4.70	2.37	0.00
50.00	4.70	2.37	0.00
51.00	4.70	2.37	0.00
52.00	4.70	2.37	0.00
53.00	4.70	2.37	0.00
54.00	4.70	2.37	0.00
55.00	4.70	2.37	0.00
56.00	4.70	2.37	0.00
57.00	4.70	2.37	0.00
58.00	4.70	2.37	0.00
59.00	4.70	2.37	0.00
60.00	4.70	2.37	0.00
61.00	4.70	2.37	0.00
62.00	4.70	2.37	0.00
63.00	4.70	2.37	0.00
64.00	4.70	2.37	0.00
65.00	4.70	2.37	0.00
66.00	4.70	2.37	0.00
67.00	4.70	2.37	0.00
68.00	4.70	2.37	0.00
69.00	4.70	2.37	0.00
70.00	4.70	2.37	0.00
71.00	4.70	2.37	0.00
72.00	4.70	2.37	0.00

Summary for Subcatchment 05:

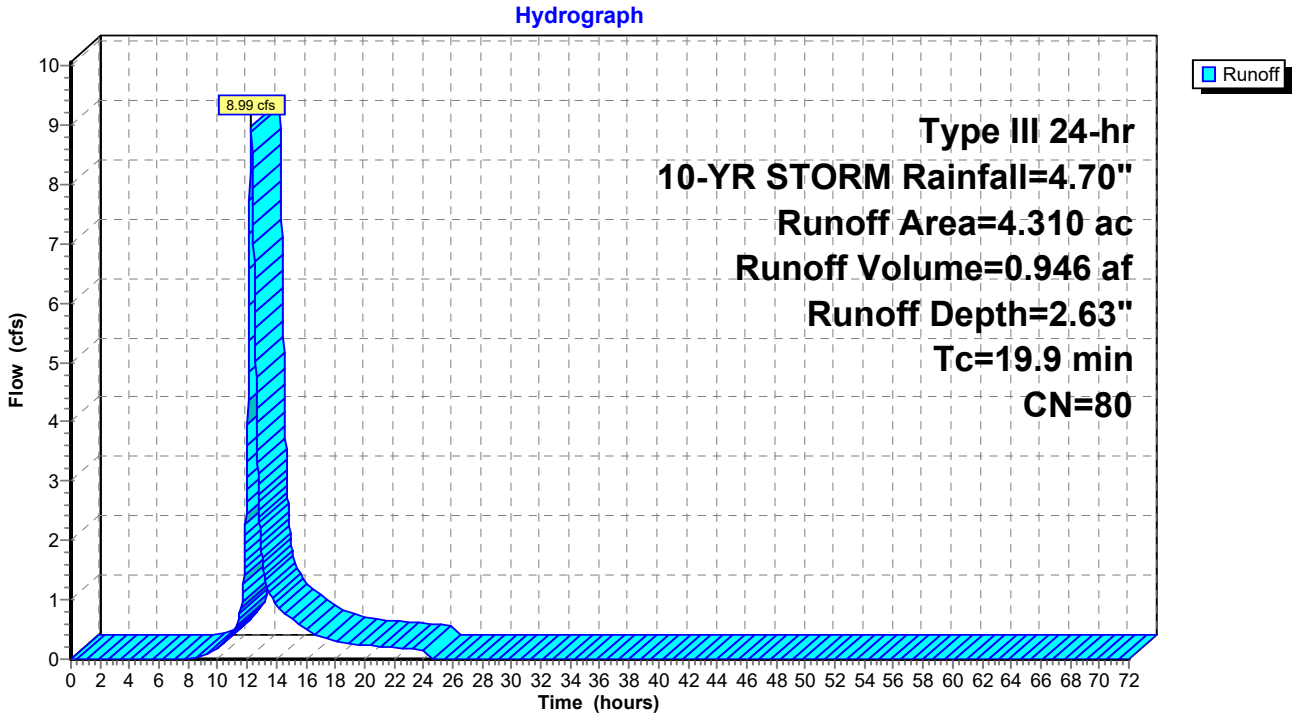
Runoff = 8.99 cfs @ 12.27 hrs, Volume= 0.946 af, Depth= 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	4.310	80	
	4.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9					**Direct Entry, SCS TR-55**

Subcatchment 05:



Hydrograph for Subcatchment 05:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.00
9.00	0.69	0.01	0.07
10.00	0.89	0.05	0.20
11.00	1.18	0.14	0.46
12.00	2.35	0.79	**3.33**
13.00	3.52	1.66	**1.79**
14.00	3.81	1.89	0.93
15.00	4.01	2.05	0.69
16.00	4.16	2.18	0.50
17.00	4.27	2.27	0.39
18.00	4.36	2.34	0.30
19.00	4.43	2.40	0.26
20.00	4.50	2.46	0.23
21.00	4.56	2.51	0.21
22.00	4.61	2.56	0.19
23.00	4.66	2.60	0.17
24.00	**4.70**	**2.63**	0.16
25.00	4.70	2.63	0.00
26.00	4.70	2.63	0.00
27.00	4.70	2.63	0.00
28.00	4.70	2.63	0.00
29.00	4.70	2.63	0.00
30.00	4.70	2.63	0.00
31.00	4.70	2.63	0.00
32.00	4.70	2.63	0.00
33.00	4.70	2.63	0.00
34.00	4.70	2.63	0.00
35.00	4.70	2.63	0.00
36.00	4.70	2.63	0.00
37.00	4.70	2.63	0.00
38.00	4.70	2.63	0.00
39.00	4.70	2.63	0.00
40.00	4.70	2.63	0.00
41.00	4.70	2.63	0.00
42.00	4.70	2.63	0.00
43.00	4.70	2.63	0.00
44.00	4.70	2.63	0.00
45.00	4.70	2.63	0.00
46.00	4.70	2.63	0.00
47.00	4.70	2.63	0.00
48.00	4.70	2.63	0.00
49.00	4.70	2.63	0.00
50.00	4.70	2.63	0.00
51.00	4.70	2.63	0.00
52.00	4.70	2.63	0.00
53.00	4.70	2.63	0.00
54.00	4.70	2.63	0.00
55.00	4.70	2.63	0.00
56.00	4.70	2.63	0.00
57.00	4.70	2.63	0.00
58.00	4.70	2.63	0.00
59.00	4.70	2.63	0.00
60.00	4.70	2.63	0.00
61.00	4.70	2.63	0.00
62.00	4.70	2.63	0.00
63.00	4.70	2.63	0.00
64.00	4.70	2.63	0.00
65.00	4.70	2.63	0.00
66.00	4.70	2.63	0.00
67.00	4.70	2.63	0.00
68.00	4.70	2.63	0.00
69.00	4.70	2.63	0.00
70.00	4.70	2.63	0.00
71.00	4.70	2.63	0.00
72.00	4.70	2.63	0.00

Summary for Subcatchment 07:

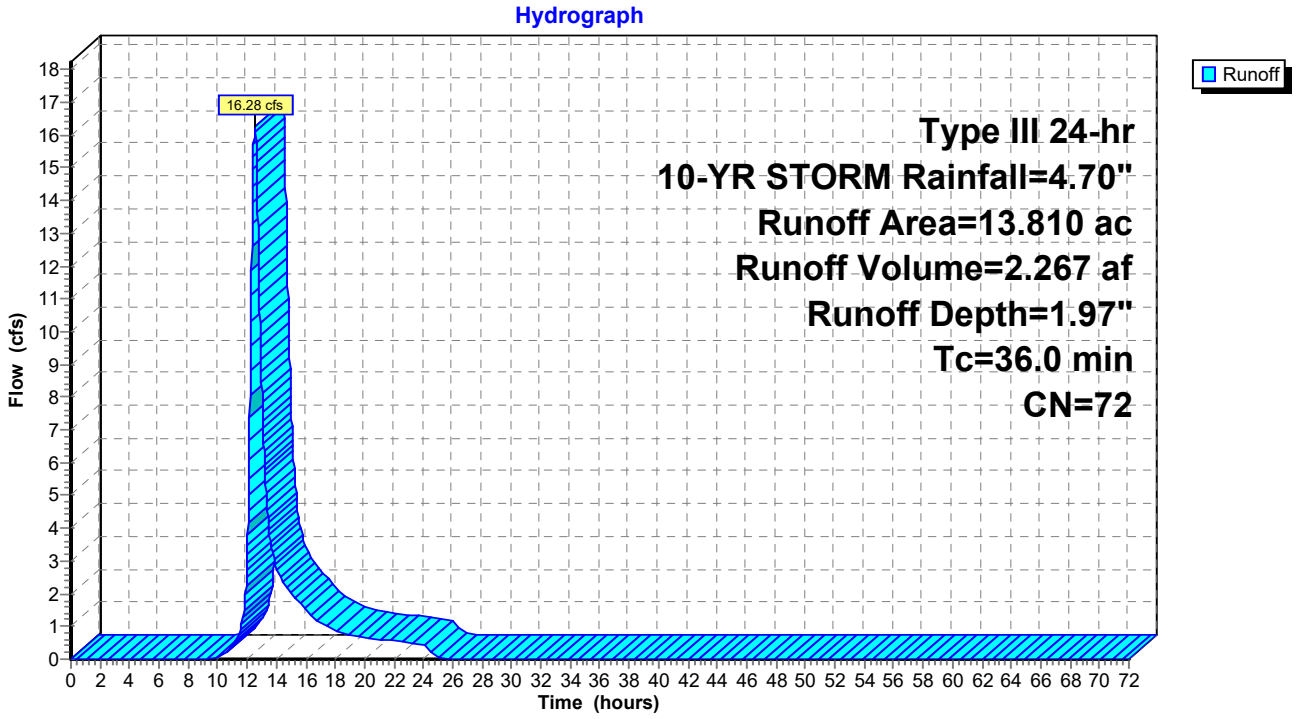
Runoff = 16.28 cfs @ 12.52 hrs, Volume= 2.267 af, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	13.810	72	
	13.810		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.0					**Direct Entry, SCS TR-55**

Subcatchment 07:



Hydrograph for Subcatchment 07:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.00
9.00	0.69	0.00	0.00
10.00	0.89	0.00	0.02
11.00	1.18	0.04	0.43
12.00	2.35	0.45	**3.20**
13.00	3.52	1.14	**8.15**
14.00	3.81	1.33	2.81
15.00	4.01	1.47	2.00
16.00	4.16	1.58	1.50
17.00	4.27	1.66	1.12
18.00	4.36	1.72	0.89
19.00	4.43	1.77	0.74
20.00	4.50	1.82	0.67
21.00	4.56	1.86	0.61
22.00	4.61	1.90	0.55
23.00	4.66	1.94	0.50
24.00	**4.70**	**1.97**	0.45
25.00	4.70	1.97	0.03
26.00	4.70	1.97	0.00
27.00	4.70	1.97	0.00
28.00	4.70	1.97	0.00
29.00	4.70	1.97	0.00
30.00	4.70	1.97	0.00
31.00	4.70	1.97	0.00
32.00	4.70	1.97	0.00
33.00	4.70	1.97	0.00
34.00	4.70	1.97	0.00
35.00	4.70	1.97	0.00
36.00	4.70	1.97	0.00
37.00	4.70	1.97	0.00
38.00	4.70	1.97	0.00
39.00	4.70	1.97	0.00
40.00	4.70	1.97	0.00
41.00	4.70	1.97	0.00
42.00	4.70	1.97	0.00
43.00	4.70	1.97	0.00
44.00	4.70	1.97	0.00
45.00	4.70	1.97	0.00
46.00	4.70	1.97	0.00
47.00	4.70	1.97	0.00
48.00	4.70	1.97	0.00
49.00	4.70	1.97	0.00
50.00	4.70	1.97	0.00
51.00	4.70	1.97	0.00
52.00	4.70	1.97	0.00
53.00	4.70	1.97	0.00
54.00	4.70	1.97	0.00
55.00	4.70	1.97	0.00
56.00	4.70	1.97	0.00
57.00	4.70	1.97	0.00
58.00	4.70	1.97	0.00
59.00	4.70	1.97	0.00
60.00	4.70	1.97	0.00
61.00	4.70	1.97	0.00
62.00	4.70	1.97	0.00
63.00	4.70	1.97	0.00
64.00	4.70	1.97	0.00
65.00	4.70	1.97	0.00
66.00	4.70	1.97	0.00
67.00	4.70	1.97	0.00
68.00	4.70	1.97	0.00
69.00	4.70	1.97	0.00
70.00	4.70	1.97	0.00
71.00	4.70	1.97	0.00
72.00	4.70	1.97	0.00

Summary for Subcatchment 08:

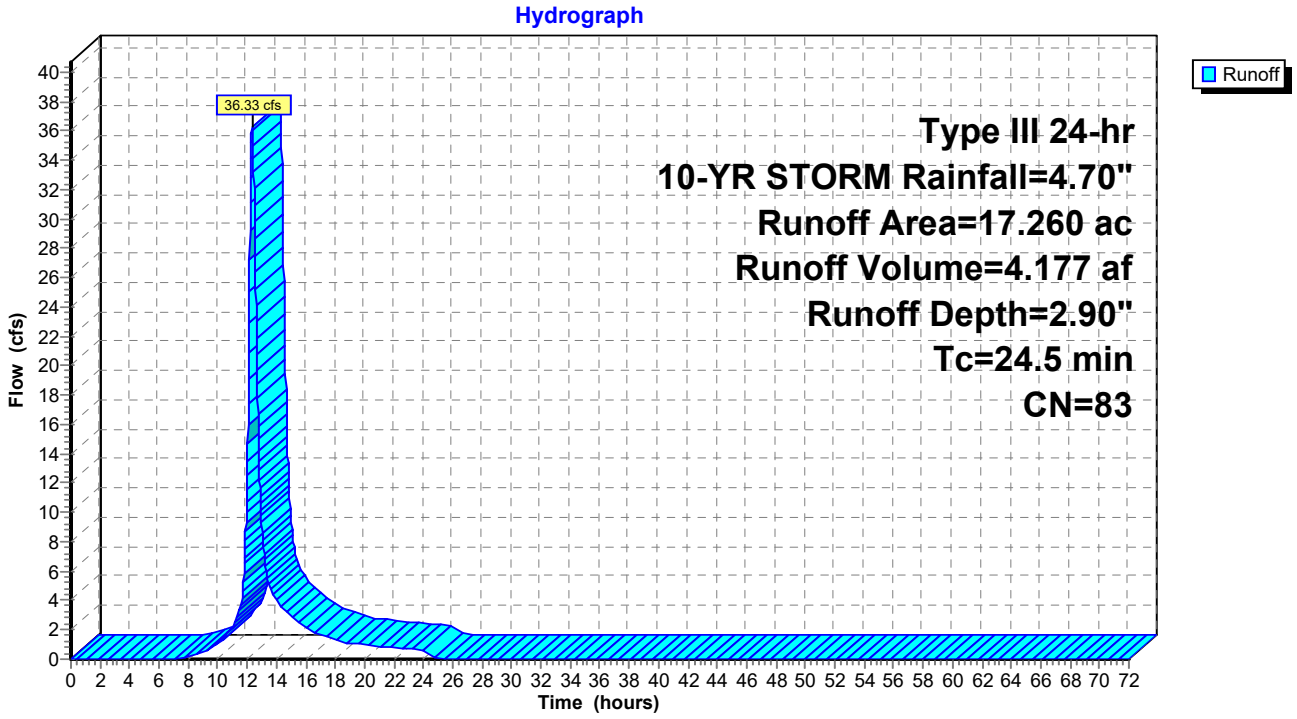
Runoff = 36.33 cfs @ 12.34 hrs, Volume= 4.177 af, Depth= 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	17.260	83	
	17.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5					**Direct Entry, SCS TR-55**

Subcatchment 08:



Hydrograph for Subcatchment 08:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.01	0.15
9.00	0.69	0.03	0.49
10.00	0.89	0.09	1.09
11.00	1.18	0.21	2.21
12.00	2.35	0.94	**12.51**
13.00	3.52	1.88	**9.08**
14.00	3.81	2.12	4.06
15.00	4.01	2.30	2.96
16.00	4.16	2.43	2.17
17.00	4.27	2.53	1.65
18.00	4.36	2.60	1.29
19.00	4.43	2.67	1.09
20.00	4.50	2.72	0.99
21.00	4.56	2.78	0.90
22.00	4.61	2.82	0.81
23.00	4.66	2.87	0.74
24.00	**4.70**	**2.90**	0.65
25.00	4.70	2.90	0.01
26.00	4.70	2.90	0.00
27.00	4.70	2.90	0.00
28.00	4.70	2.90	0.00
29.00	4.70	2.90	0.00
30.00	4.70	2.90	0.00
31.00	4.70	2.90	0.00
32.00	4.70	2.90	0.00
33.00	4.70	2.90	0.00
34.00	4.70	2.90	0.00
35.00	4.70	2.90	0.00
36.00	4.70	2.90	0.00
37.00	4.70	2.90	0.00
38.00	4.70	2.90	0.00
39.00	4.70	2.90	0.00
40.00	4.70	2.90	0.00
41.00	4.70	2.90	0.00
42.00	4.70	2.90	0.00
43.00	4.70	2.90	0.00
44.00	4.70	2.90	0.00
45.00	4.70	2.90	0.00
46.00	4.70	2.90	0.00
47.00	4.70	2.90	0.00
48.00	4.70	2.90	0.00
49.00	4.70	2.90	0.00
50.00	4.70	2.90	0.00
51.00	4.70	2.90	0.00
52.00	4.70	2.90	0.00
53.00	4.70	2.90	0.00
54.00	4.70	2.90	0.00
55.00	4.70	2.90	0.00
56.00	4.70	2.90	0.00
57.00	4.70	2.90	0.00
58.00	4.70	2.90	0.00
59.00	4.70	2.90	0.00
60.00	4.70	2.90	0.00
61.00	4.70	2.90	0.00
62.00	4.70	2.90	0.00
63.00	4.70	2.90	0.00
64.00	4.70	2.90	0.00
65.00	4.70	2.90	0.00
66.00	4.70	2.90	0.00
67.00	4.70	2.90	0.00
68.00	4.70	2.90	0.00
69.00	4.70	2.90	0.00
70.00	4.70	2.90	0.00
71.00	4.70	2.90	0.00
72.00	4.70	2.90	0.00

Summary for Subcatchment 09:

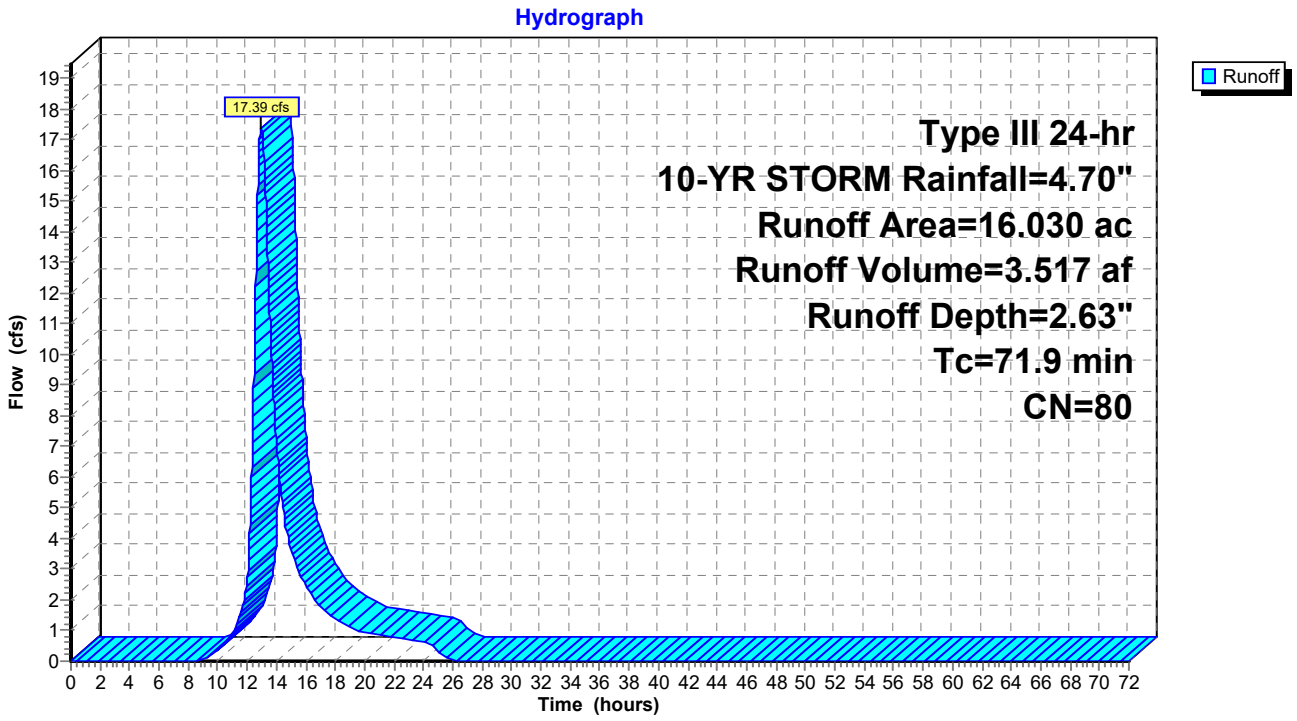
Runoff = 17.39 cfs @ 13.00 hrs, Volume= 3.517 af, Depth= 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	16.030	80	
	16.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
71.9					**Direct Entry, SCS TR-55**

Subcatchment 09:



Hydrograph for Subcatchment 09:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.00
9.00	0.69	0.01	0.07
10.00	0.89	0.05	0.37
11.00	1.18	0.14	0.94
12.00	2.35	0.79	2.67
13.00	3.52	1.66	**17.39**
14.00	3.81	1.89	7.08
15.00	4.01	2.05	3.62
16.00	4.16	2.18	2.48
17.00	4.27	2.27	1.79
18.00	4.36	2.34	1.39
19.00	4.43	2.40	1.09
20.00	4.50	2.46	0.95
21.00	4.56	2.51	0.86
22.00	4.61	2.56	0.78
23.00	4.66	2.60	0.71
24.00	**4.70**	**2.63**	0.64
25.00	4.70	2.63	0.30
26.00	4.70	2.63	0.04
27.00	4.70	2.63	0.00
28.00	4.70	2.63	0.00
29.00	4.70	2.63	0.00
30.00	4.70	2.63	0.00
31.00	4.70	2.63	0.00
32.00	4.70	2.63	0.00
33.00	4.70	2.63	0.00
34.00	4.70	2.63	0.00
35.00	4.70	2.63	0.00
36.00	4.70	2.63	0.00
37.00	4.70	2.63	0.00
38.00	4.70	2.63	0.00
39.00	4.70	2.63	0.00
40.00	4.70	2.63	0.00
41.00	4.70	2.63	0.00
42.00	4.70	2.63	0.00
43.00	4.70	2.63	0.00
44.00	4.70	2.63	0.00
45.00	4.70	2.63	0.00
46.00	4.70	2.63	0.00
47.00	4.70	2.63	0.00
48.00	4.70	2.63	0.00
49.00	4.70	2.63	0.00
50.00	4.70	2.63	0.00
51.00	4.70	2.63	0.00
52.00	4.70	2.63	0.00
53.00	4.70	2.63	0.00
54.00	4.70	2.63	0.00
55.00	4.70	2.63	0.00
56.00	4.70	2.63	0.00
57.00	4.70	2.63	0.00
58.00	4.70	2.63	0.00
59.00	4.70	2.63	0.00
60.00	4.70	2.63	0.00
61.00	4.70	2.63	0.00
62.00	4.70	2.63	0.00
63.00	4.70	2.63	0.00
64.00	4.70	2.63	0.00
65.00	4.70	2.63	0.00
66.00	4.70	2.63	0.00
67.00	4.70	2.63	0.00
68.00	4.70	2.63	0.00
69.00	4.70	2.63	0.00
70.00	4.70	2.63	0.00
71.00	4.70	2.63	0.00
72.00	4.70	2.63	0.00

Summary for Subcatchment 10:

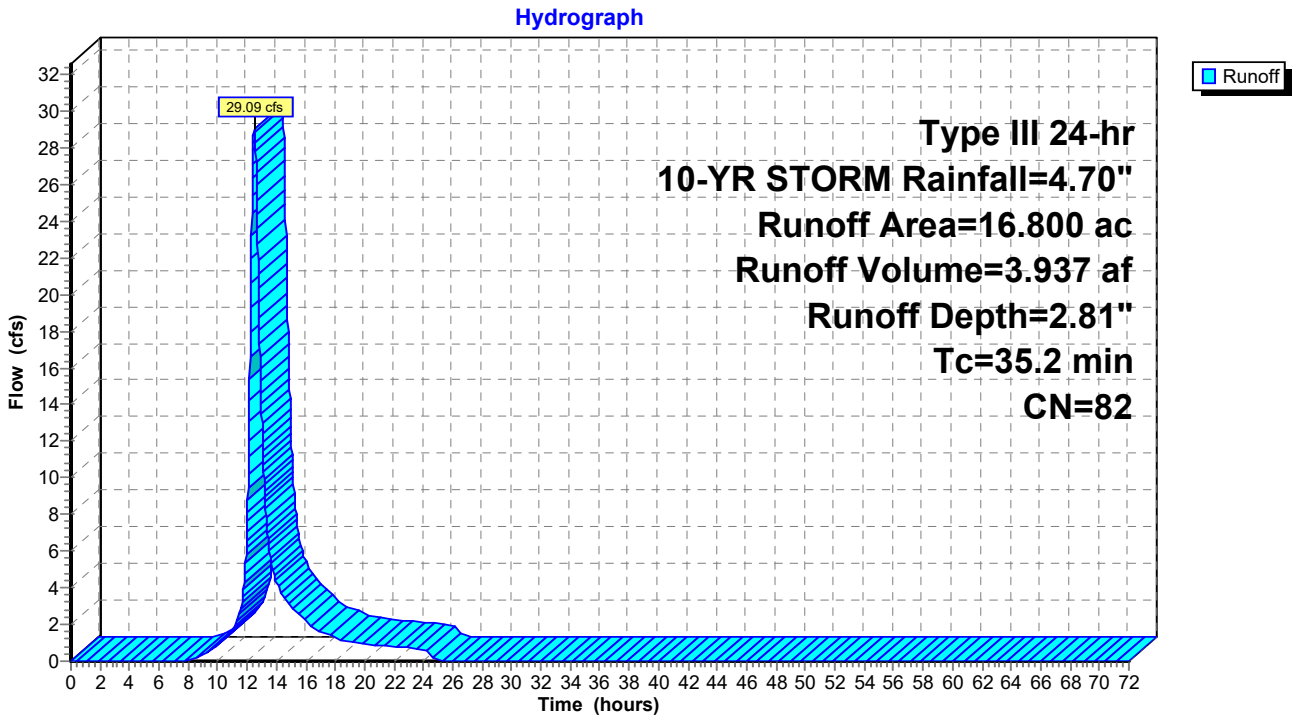
Runoff = 29.09 cfs @ 12.48 hrs, Volume= 3.937 af, Depth= 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	16.800	82	
	16.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
35.2					**Direct Entry, SCS TR-55**

Subcatchment 10:



Hydrograph for Subcatchment 10:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.06
9.00	0.69	0.02	0.33
10.00	0.89	0.08	0.84
11.00	1.18	0.18	1.78
12.00	2.35	0.89	**7.60**
13.00	3.52	1.80	**12.95**
14.00	3.81	2.04	4.24
15.00	4.01	2.22	2.97
16.00	4.16	2.34	2.21
17.00	4.27	2.44	1.64
18.00	4.36	2.52	1.29
19.00	4.43	2.58	1.07
20.00	4.50	2.63	0.96
21.00	4.56	2.69	0.87
22.00	4.61	2.73	0.80
23.00	4.66	2.77	0.72
24.00	**4.70**	**2.81**	0.64
25.00	4.70	2.81	0.04
26.00	4.70	2.81	0.00
27.00	4.70	2.81	0.00
28.00	4.70	2.81	0.00
29.00	4.70	2.81	0.00
30.00	4.70	2.81	0.00
31.00	4.70	2.81	0.00
32.00	4.70	2.81	0.00
33.00	4.70	2.81	0.00
34.00	4.70	2.81	0.00
35.00	4.70	2.81	0.00
36.00	4.70	2.81	0.00
37.00	4.70	2.81	0.00
38.00	4.70	2.81	0.00
39.00	4.70	2.81	0.00
40.00	4.70	2.81	0.00
41.00	4.70	2.81	0.00
42.00	4.70	2.81	0.00
43.00	4.70	2.81	0.00
44.00	4.70	2.81	0.00
45.00	4.70	2.81	0.00
46.00	4.70	2.81	0.00
47.00	4.70	2.81	0.00
48.00	4.70	2.81	0.00
49.00	4.70	2.81	0.00
50.00	4.70	2.81	0.00
51.00	4.70	2.81	0.00
52.00	4.70	2.81	0.00
53.00	4.70	2.81	0.00
54.00	4.70	2.81	0.00
55.00	4.70	2.81	0.00
56.00	4.70	2.81	0.00
57.00	4.70	2.81	0.00
58.00	4.70	2.81	0.00
59.00	4.70	2.81	0.00
60.00	4.70	2.81	0.00
61.00	4.70	2.81	0.00
62.00	4.70	2.81	0.00
63.00	4.70	2.81	0.00
64.00	4.70	2.81	0.00
65.00	4.70	2.81	0.00
66.00	4.70	2.81	0.00
67.00	4.70	2.81	0.00
68.00	4.70	2.81	0.00
69.00	4.70	2.81	0.00
70.00	4.70	2.81	0.00
71.00	4.70	2.81	0.00
72.00	4.70	2.81	0.00

Summary for Subcatchment 11:

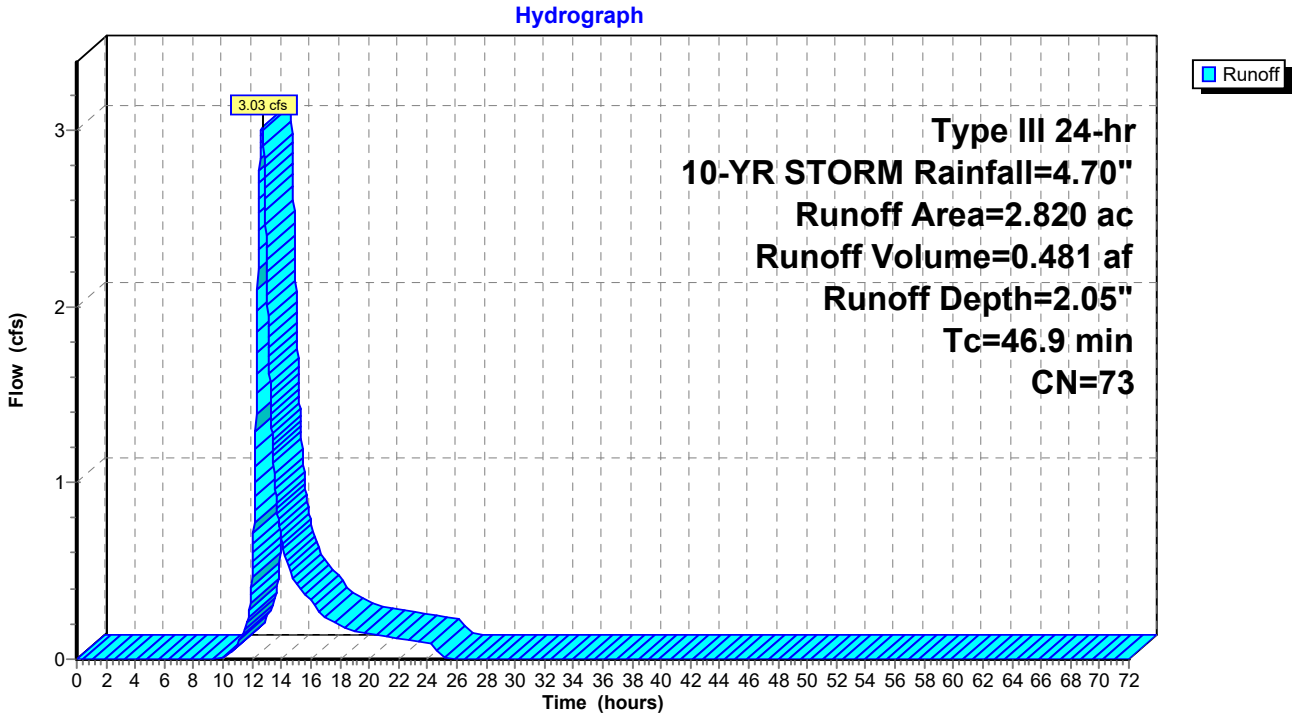
Runoff = 3.03 cfs @ 12.66 hrs, Volume= 0.481 af, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	2.820	73	
	2.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
46.9					**Direct Entry, SCS TR-55**

Subcatchment 11:



Hydrograph for Subcatchment 11:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.00
9.00	0.69	0.00	0.00
10.00	0.89	0.01	0.01
11.00	1.18	0.05	0.09
12.00	2.35	0.49	**0.48**
13.00	3.52	1.20	**2.20**
14.00	3.81	1.39	0.68
15.00	4.01	1.54	0.44
16.00	4.16	1.65	0.33
17.00	4.27	1.73	0.24
18.00	4.36	1.79	0.19
19.00	4.43	1.85	0.16
20.00	4.50	1.89	0.14
21.00	4.56	1.94	0.13
22.00	4.61	1.98	0.12
23.00	4.66	2.02	0.11
24.00	**4.70**	**2.05**	0.10
25.00	4.70	2.05	0.02
26.00	4.70	2.05	0.00
27.00	4.70	2.05	0.00
28.00	4.70	2.05	0.00
29.00	4.70	2.05	0.00
30.00	4.70	2.05	0.00
31.00	4.70	2.05	0.00
32.00	4.70	2.05	0.00
33.00	4.70	2.05	0.00
34.00	4.70	2.05	0.00
35.00	4.70	2.05	0.00
36.00	4.70	2.05	0.00
37.00	4.70	2.05	0.00
38.00	4.70	2.05	0.00
39.00	4.70	2.05	0.00
40.00	4.70	2.05	0.00
41.00	4.70	2.05	0.00
42.00	4.70	2.05	0.00
43.00	4.70	2.05	0.00
44.00	4.70	2.05	0.00
45.00	4.70	2.05	0.00
46.00	4.70	2.05	0.00
47.00	4.70	2.05	0.00
48.00	4.70	2.05	0.00
49.00	4.70	2.05	0.00
50.00	4.70	2.05	0.00
51.00	4.70	2.05	0.00
52.00	4.70	2.05	0.00
53.00	4.70	2.05	0.00
54.00	4.70	2.05	0.00
55.00	4.70	2.05	0.00
56.00	4.70	2.05	0.00
57.00	4.70	2.05	0.00
58.00	4.70	2.05	0.00
59.00	4.70	2.05	0.00
60.00	4.70	2.05	0.00
61.00	4.70	2.05	0.00
62.00	4.70	2.05	0.00
63.00	4.70	2.05	0.00
64.00	4.70	2.05	0.00
65.00	4.70	2.05	0.00
66.00	4.70	2.05	0.00
67.00	4.70	2.05	0.00
68.00	4.70	2.05	0.00
69.00	4.70	2.05	0.00
70.00	4.70	2.05	0.00
71.00	4.70	2.05	0.00
72.00	4.70	2.05	0.00

Summary for Subcatchment 12:

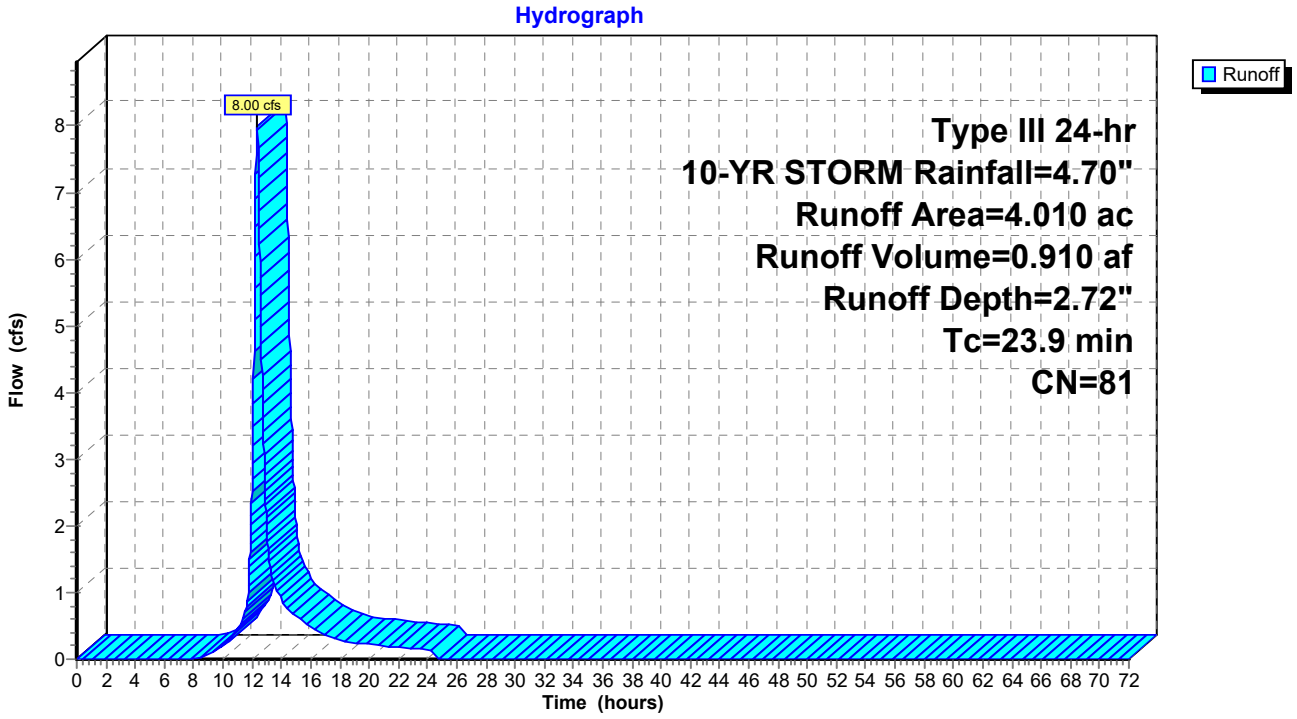
Runoff = 8.00 cfs @ 12.33 hrs, Volume= 0.910 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	4.010	81	
	4.010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.9					**Direct Entry, SCS TR-55**

Subcatchment 12:



Hydrograph for Subcatchment 12:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.01
9.00	0.69	0.02	0.08
10.00	0.89	0.06	0.20
11.00	1.18	0.16	0.44
12.00	2.35	0.84	**2.71**
13.00	3.52	1.73	**1.97**
14.00	3.81	1.96	0.91
15.00	4.01	2.13	0.66
16.00	4.16	2.26	0.49
17.00	4.27	2.35	0.37
18.00	4.36	2.43	0.29
19.00	4.43	2.49	0.25
20.00	4.50	2.55	0.22
21.00	4.56	2.60	0.20
22.00	4.61	2.64	0.18
23.00	4.66	2.68	0.17
24.00	**4.70**	**2.72**	0.15
25.00	4.70	2.72	0.00
26.00	4.70	2.72	0.00
27.00	4.70	2.72	0.00
28.00	4.70	2.72	0.00
29.00	4.70	2.72	0.00
30.00	4.70	2.72	0.00
31.00	4.70	2.72	0.00
32.00	4.70	2.72	0.00
33.00	4.70	2.72	0.00
34.00	4.70	2.72	0.00
35.00	4.70	2.72	0.00
36.00	4.70	2.72	0.00
37.00	4.70	2.72	0.00
38.00	4.70	2.72	0.00
39.00	4.70	2.72	0.00
40.00	4.70	2.72	0.00
41.00	4.70	2.72	0.00
42.00	4.70	2.72	0.00
43.00	4.70	2.72	0.00
44.00	4.70	2.72	0.00
45.00	4.70	2.72	0.00
46.00	4.70	2.72	0.00
47.00	4.70	2.72	0.00
48.00	4.70	2.72	0.00
49.00	4.70	2.72	0.00
50.00	4.70	2.72	0.00
51.00	4.70	2.72	0.00
52.00	4.70	2.72	0.00
53.00	4.70	2.72	0.00
54.00	4.70	2.72	0.00
55.00	4.70	2.72	0.00
56.00	4.70	2.72	0.00
57.00	4.70	2.72	0.00
58.00	4.70	2.72	0.00
59.00	4.70	2.72	0.00
60.00	4.70	2.72	0.00
61.00	4.70	2.72	0.00
62.00	4.70	2.72	0.00
63.00	4.70	2.72	0.00
64.00	4.70	2.72	0.00
65.00	4.70	2.72	0.00
66.00	4.70	2.72	0.00
67.00	4.70	2.72	0.00
68.00	4.70	2.72	0.00
69.00	4.70	2.72	0.00
70.00	4.70	2.72	0.00
71.00	4.70	2.72	0.00
72.00	4.70	2.72	0.00

Summary for Subcatchment 13:

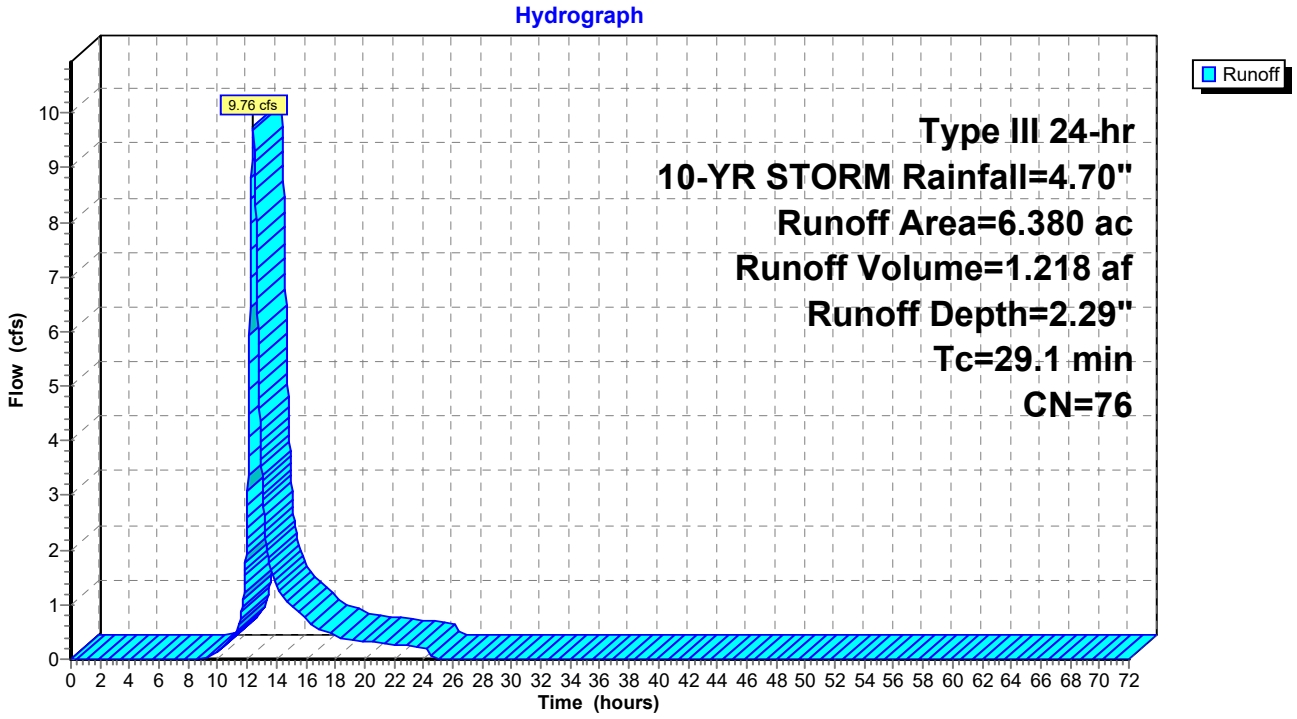
Runoff = 9.76 cfs @ 12.41 hrs, Volume= 1.218 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	6.380	76	
	6.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.1					**Direct Entry, SCS TR-55**

Subcatchment 13:



Hydrograph for Subcatchment 13:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.00
9.00	0.69	0.00	0.00
10.00	0.89	0.02	0.13
11.00	1.18	0.08	0.40
12.00	2.35	0.61	**2.61**
13.00	3.52	1.38	**3.38**
14.00	3.81	1.60	1.35
15.00	4.01	1.75	0.98
16.00	4.16	1.87	0.73
17.00	4.27	1.95	0.55
18.00	4.36	2.02	0.43
19.00	4.43	2.08	0.36
20.00	4.50	2.13	0.33
21.00	4.56	2.17	0.30
22.00	4.61	2.22	0.27
23.00	4.66	2.26	0.25
24.00	**4.70**	**2.29**	0.22
25.00	4.70	2.29	0.01
26.00	4.70	2.29	0.00
27.00	4.70	2.29	0.00
28.00	4.70	2.29	0.00
29.00	4.70	2.29	0.00
30.00	4.70	2.29	0.00
31.00	4.70	2.29	0.00
32.00	4.70	2.29	0.00
33.00	4.70	2.29	0.00
34.00	4.70	2.29	0.00
35.00	4.70	2.29	0.00
36.00	4.70	2.29	0.00
37.00	4.70	2.29	0.00
38.00	4.70	2.29	0.00
39.00	4.70	2.29	0.00
40.00	4.70	2.29	0.00
41.00	4.70	2.29	0.00
42.00	4.70	2.29	0.00
43.00	4.70	2.29	0.00
44.00	4.70	2.29	0.00
45.00	4.70	2.29	0.00
46.00	4.70	2.29	0.00
47.00	4.70	2.29	0.00
48.00	4.70	2.29	0.00
49.00	4.70	2.29	0.00
50.00	4.70	2.29	0.00
51.00	4.70	2.29	0.00
52.00	4.70	2.29	0.00
53.00	4.70	2.29	0.00
54.00	4.70	2.29	0.00
55.00	4.70	2.29	0.00
56.00	4.70	2.29	0.00
57.00	4.70	2.29	0.00
58.00	4.70	2.29	0.00
59.00	4.70	2.29	0.00
60.00	4.70	2.29	0.00
61.00	4.70	2.29	0.00
62.00	4.70	2.29	0.00
63.00	4.70	2.29	0.00
64.00	4.70	2.29	0.00
65.00	4.70	2.29	0.00
66.00	4.70	2.29	0.00
67.00	4.70	2.29	0.00
68.00	4.70	2.29	0.00
69.00	4.70	2.29	0.00
70.00	4.70	2.29	0.00
71.00	4.70	2.29	0.00
72.00	4.70	2.29	0.00

Summary for Subcatchment 14:

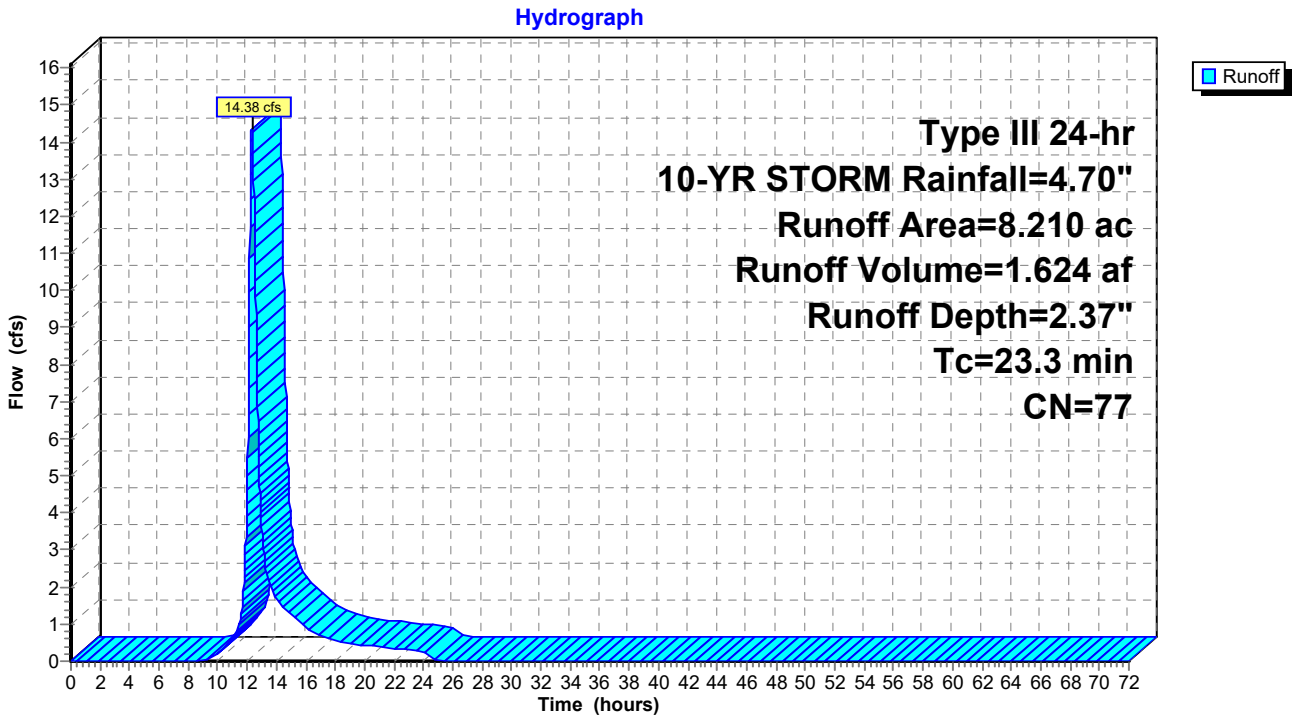
Runoff = 14.38 cfs @ 12.33 hrs, Volume= 1.624 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	8.210	77	
	8.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.3					**Direct Entry, SCS TR-55**

Subcatchment 14:



Hydrograph for Subcatchment 14:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.00
9.00	0.69	0.00	0.03
10.00	0.89	0.03	0.22
11.00	1.18	0.09	0.63
12.00	2.35	0.65	**4.62**
13.00	3.52	1.45	**3.59**
14.00	3.81	1.67	1.71
15.00	4.01	1.82	1.26
16.00	4.16	1.94	0.92
17.00	4.27	2.03	0.71
18.00	4.36	2.10	0.56
19.00	4.43	2.16	0.47
20.00	4.50	2.21	0.43
21.00	4.56	2.26	0.39
22.00	4.61	2.30	0.35
23.00	4.66	2.34	0.32
24.00	**4.70**	**2.37**	0.28
25.00	4.70	2.37	0.00
26.00	4.70	2.37	0.00
27.00	4.70	2.37	0.00
28.00	4.70	2.37	0.00
29.00	4.70	2.37	0.00
30.00	4.70	2.37	0.00
31.00	4.70	2.37	0.00
32.00	4.70	2.37	0.00
33.00	4.70	2.37	0.00
34.00	4.70	2.37	0.00
35.00	4.70	2.37	0.00
36.00	4.70	2.37	0.00
37.00	4.70	2.37	0.00
38.00	4.70	2.37	0.00
39.00	4.70	2.37	0.00
40.00	4.70	2.37	0.00
41.00	4.70	2.37	0.00
42.00	4.70	2.37	0.00
43.00	4.70	2.37	0.00
44.00	4.70	2.37	0.00
45.00	4.70	2.37	0.00
46.00	4.70	2.37	0.00
47.00	4.70	2.37	0.00
48.00	4.70	2.37	0.00
49.00	4.70	2.37	0.00
50.00	4.70	2.37	0.00
51.00	4.70	2.37	0.00
52.00	4.70	2.37	0.00
53.00	4.70	2.37	0.00
54.00	4.70	2.37	0.00
55.00	4.70	2.37	0.00
56.00	4.70	2.37	0.00
57.00	4.70	2.37	0.00
58.00	4.70	2.37	0.00
59.00	4.70	2.37	0.00
60.00	4.70	2.37	0.00
61.00	4.70	2.37	0.00
62.00	4.70	2.37	0.00
63.00	4.70	2.37	0.00
64.00	4.70	2.37	0.00
65.00	4.70	2.37	0.00
66.00	4.70	2.37	0.00
67.00	4.70	2.37	0.00
68.00	4.70	2.37	0.00
69.00	4.70	2.37	0.00
70.00	4.70	2.37	0.00
71.00	4.70	2.37	0.00
72.00	4.70	2.37	0.00

Summary for Subcatchment 15:

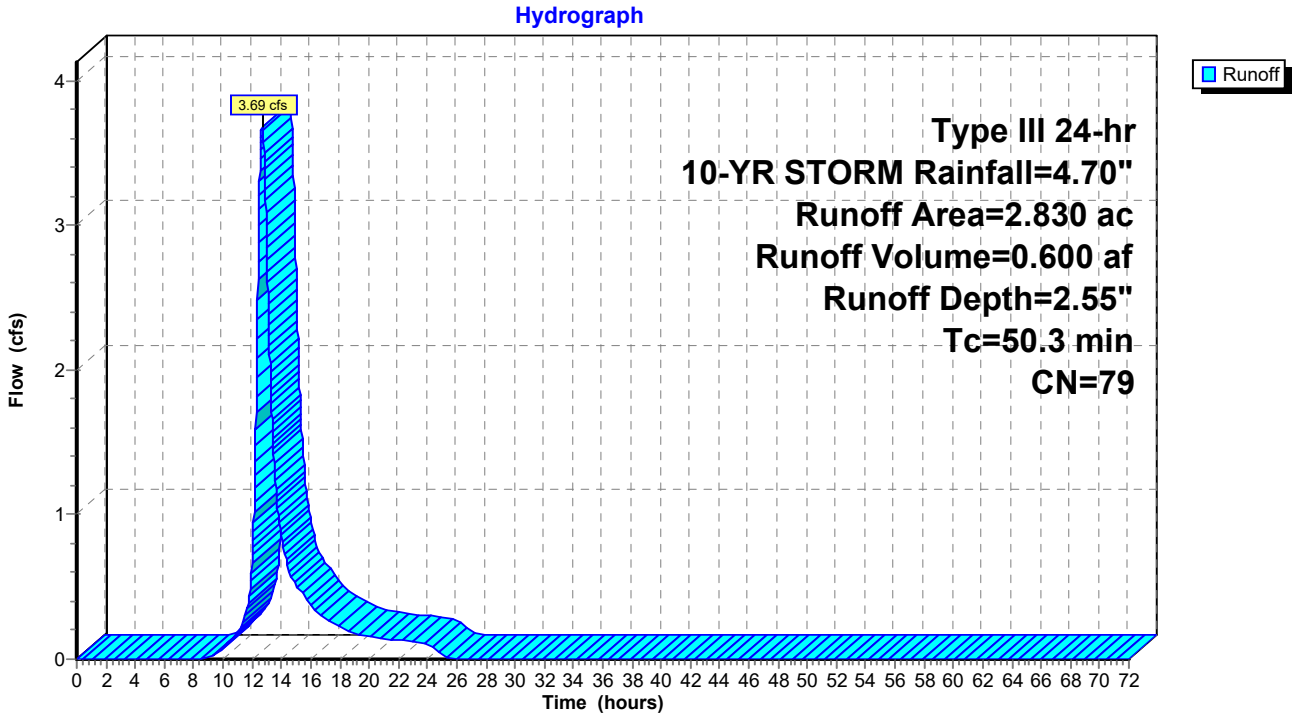
Runoff = 3.69 cfs @ 12.69 hrs, Volume= 0.600 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 10-YR STORM Rainfall=4.70"

	Area (ac)	CN	Description
*	2.830	79	
	2.830		100.00% Pervious Area

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

Subcatchment 15:



Hydrograph for Subcatchment 15:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.09	0.00	0.00
3.00	0.14	0.00	0.00
4.00	0.20	0.00	0.00
5.00	0.27	0.00	0.00
6.00	0.34	0.00	0.00
7.00	0.43	0.00	0.00
8.00	0.54	0.00	0.00
9.00	0.69	0.01	0.01
10.00	0.89	0.04	0.07
11.00	1.18	0.13	0.19
12.00	2.35	0.74	**0.69**
13.00	3.52	1.59	**2.84**
14.00	3.81	1.81	0.84
15.00	4.01	1.98	0.51
16.00	4.16	2.10	0.38
17.00	4.27	2.19	0.28
18.00	4.36	2.26	0.22
19.00	4.43	2.32	0.18
20.00	4.50	2.37	0.16
21.00	4.56	2.42	0.14
22.00	4.61	2.47	0.13
23.00	4.66	2.51	0.12
24.00	**4.70**	**2.55**	0.11
25.00	4.70	2.55	0.02
26.00	4.70	2.55	0.00
27.00	4.70	2.55	0.00
28.00	4.70	2.55	0.00
29.00	4.70	2.55	0.00
30.00	4.70	2.55	0.00
31.00	4.70	2.55	0.00
32.00	4.70	2.55	0.00
33.00	4.70	2.55	0.00
34.00	4.70	2.55	0.00
35.00	4.70	2.55	0.00
36.00	4.70	2.55	0.00
37.00	4.70	2.55	0.00
38.00	4.70	2.55	0.00
39.00	4.70	2.55	0.00
40.00	4.70	2.55	0.00
41.00	4.70	2.55	0.00
42.00	4.70	2.55	0.00
43.00	4.70	2.55	0.00
44.00	4.70	2.55	0.00
45.00	4.70	2.55	0.00
46.00	4.70	2.55	0.00
47.00	4.70	2.55	0.00
48.00	4.70	2.55	0.00
49.00	4.70	2.55	0.00
50.00	4.70	2.55	0.00
51.00	4.70	2.55	0.00
52.00	4.70	2.55	0.00
53.00	4.70	2.55	0.00
54.00	4.70	2.55	0.00
55.00	4.70	2.55	0.00
56.00	4.70	2.55	0.00
57.00	4.70	2.55	0.00
58.00	4.70	2.55	0.00
59.00	4.70	2.55	0.00
60.00	4.70	2.55	0.00
61.00	4.70	2.55	0.00
62.00	4.70	2.55	0.00
63.00	4.70	2.55	0.00
64.00	4.70	2.55	0.00
65.00	4.70	2.55	0.00
66.00	4.70	2.55	0.00
67.00	4.70	2.55	0.00
68.00	4.70	2.55	0.00
69.00	4.70	2.55	0.00
70.00	4.70	2.55	0.00
71.00	4.70	2.55	0.00
72.00	4.70	2.55	0.00

Summary for Pond 01-Pond:

Inflow Area = 2.560 ac, 0.00% Impervious, Inflow Depth = 2.90" for 10-YR STORM event
Inflow = 5.24 cfs @ 12.35 hrs, Volume= 0.620 af
Outflow = 2.02 cfs @ 12.85 hrs, Volume= 0.363 af, Atten= 62%, Lag= 29.6 min
Primary = 2.02 cfs @ 12.85 hrs, Volume= 0.363 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,114.03' @ 12.85 hrs Surf.Area= 0.118 ac Storage= 0.312 af

Plug-Flow detention time= 317.6 min calculated for 0.363 af (59% of inflow)
Center-of-Mass det. time= 209.9 min (1,044.5 - 834.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,110.00'	0.438 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

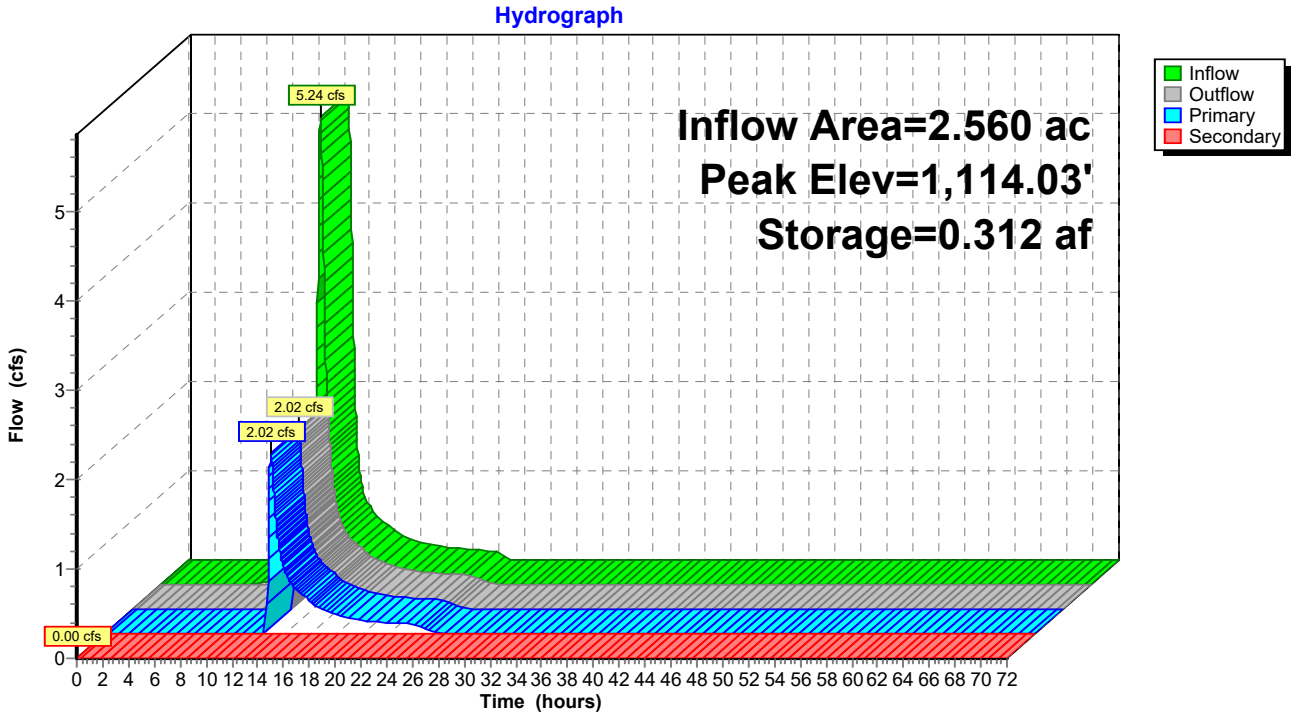
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,110.00	0.044	0.000	0.000
1,111.00	0.058	0.051	0.051
1,112.00	0.075	0.066	0.117
1,113.00	0.094	0.084	0.202
1,114.00	0.117	0.105	0.307
1,115.00	0.144	0.130	0.438

Device	Routing	Invert	Outlet Devices
#1	Primary	1,107.00'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,107.00' / 1,105.00' S= 0.0500 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,113.70'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,114.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,110.00'	**0.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=2.01 cfs @ 12.85 hrs HW=1,114.03' (Free Discharge)
└─**1=Culvert** (Passes 2.01 cfs of 21.33 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 2.01 cfs @ 2.05 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.66 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,110.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 01-Pond:


Hydrograph
Inflow Area=2.560 ac
Peak Elev=1,114.03'
Storage=0.312 af
Inflow
Outflow
Primary
Secondary
5.24 cfs
2.02 cfs
2.02 cfs
0.00 cfs
Flow (cfs)
Time (hours)

Hydrograph for Pond 01-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,110.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,110.00	0.00	0.00	0.00
4.00	0.00	0.000	1,110.00	0.00	0.00	0.00
6.00	0.00	0.000	1,110.00	0.00	0.00	0.00
8.00	0.02	0.001	1,110.02	0.00	0.00	0.00
10.00	0.16	0.013	1,110.29	0.00	0.00	0.00
12.00	**1.74**	**0.085**	**1,111.54**	**0.00**	**0.00**	0.00
14.00	**0.61**	**0.292**	**1,113.86**	**0.68**	**0.68**	0.00
16.00	0.32	0.285	1,113.81	0.35	0.35	0.00
18.00	0.19	0.282	1,113.77	0.21	0.21	0.00
20.00	0.15	0.280	1,113.76	0.15	0.15	0.00
22.00	0.12	0.279	1,113.75	0.13	0.13	0.00
24.00	0.10	0.278	1,113.74	0.10	0.10	0.00
26.00	0.00	0.274	1,113.70	0.01	0.01	0.00
28.00	0.00	0.273	1,113.69	0.00	0.00	0.00
30.00	0.00	0.272	1,113.69	0.00	0.00	0.00
32.00	0.00	0.271	1,113.68	0.00	0.00	0.00
34.00	0.00	0.271	1,113.67	0.00	0.00	0.00
36.00	0.00	0.270	1,113.67	0.00	0.00	0.00
38.00	0.00	0.269	1,113.66	0.00	0.00	0.00
40.00	0.00	0.268	1,113.65	0.00	0.00	0.00
42.00	0.00	0.268	1,113.65	0.00	0.00	0.00
44.00	0.00	0.267	1,113.64	0.00	0.00	0.00
46.00	0.00	0.266	1,113.63	0.00	0.00	0.00
48.00	0.00	0.265	1,113.63	0.00	0.00	0.00
50.00	0.00	0.265	1,113.62	0.00	0.00	0.00
52.00	0.00	0.264	1,113.61	0.00	0.00	0.00
54.00	0.00	0.263	1,113.61	0.00	0.00	0.00
56.00	0.00	0.262	1,113.60	0.00	0.00	0.00
58.00	0.00	0.262	1,113.59	0.00	0.00	0.00
60.00	0.00	0.261	1,113.58	0.00	0.00	0.00
62.00	0.00	0.260	1,113.58	0.00	0.00	0.00
64.00	0.00	0.259	1,113.57	0.00	0.00	0.00
66.00	0.00	0.259	1,113.56	0.00	0.00	0.00
68.00	0.00	0.258	1,113.56	0.00	0.00	0.00
70.00	0.00	0.257	1,113.55	0.00	0.00	0.00
72.00	0.00	0.256	1,113.54	0.00	0.00	0.00

Summary for Pond 02-Pond:

Inflow Area = 11.560 ac, 0.00% Impervious, Inflow Depth = 2.37" for 10-YR STORM event
Inflow = 19.02 cfs @ 12.38 hrs, Volume= 2.287 af
Outflow = 5.61 cfs @ 13.02 hrs, Volume= 1.369 af, Atten= 71%, Lag= 38.2 min
Primary = 5.61 cfs @ 13.02 hrs, Volume= 1.369 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,044.74' @ 13.02 hrs Surf.Area= 0.257 ac Storage= 1.135 af

Plug-Flow detention time= 319.9 min calculated for 1.369 af (60% of inflow)
Center-of-Mass det. time= 210.0 min (1,062.0 - 852.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,038.00'	1.483 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

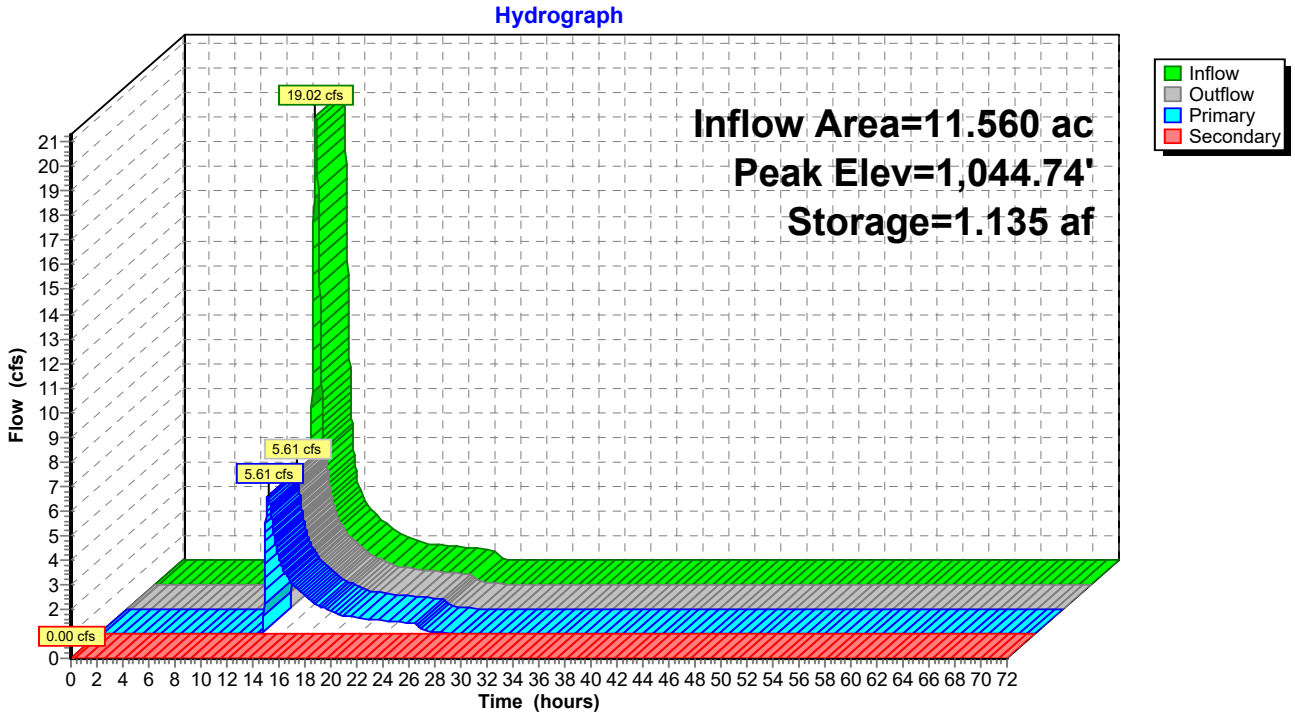
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,038.00	0.092	0.000	0.000
1,039.00	0.112	0.102	0.102
1,040.00	0.133	0.123	0.225
1,041.00	0.156	0.144	0.369
1,042.00	0.181	0.168	0.537
1,043.00	0.207	0.194	0.731
1,044.00	0.235	0.221	0.952
1,045.00	0.264	0.250	1.202
1,046.00	0.297	0.280	1.483

Device	Routing	Invert	Outlet Devices
#1	Primary	1,038.00'	**24.0" Round Culvert** L= 98.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,038.00' / 1,016.00' S= 0.2245 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,044.10'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,045.80'	**40.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,038.00'	**0.5" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.60 cfs @ 13.02 hrs HW=1,044.74' (Free Discharge)
└─**1=Culvert** (Passes 5.60 cfs of 36.25 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 5.59 cfs @ 3.03 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 12.48 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,038.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 02-Pond:


Hydrograph
Inflow Area=11.560 ac
Peak Elev=1,044.74'
Storage=1.135 af
19.02 cfs
5.61 cfs
5.61 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 02-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,038.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,038.00	0.00	0.00	0.00
4.00	0.00	0.000	1,038.00	0.00	0.00	0.00
6.00	0.00	0.000	1,038.00	0.00	0.00	0.00
8.00	0.00	0.000	1,038.00	0.00	0.00	0.00
10.00	0.30	0.013	1,038.13	0.00	0.00	0.00
12.00	**5.53**	**0.211**	**1,039.90**	**0.01**	**0.01**	0.00
14.00	**2.46**	**1.078**	**1,044.52**	**2.86**	**2.86**	0.00
16.00	1.33	1.042	1,044.37	1.50	1.50	0.00
18.00	0.79	1.023	1,044.29	0.89	0.89	0.00
20.00	0.61	1.013	1,044.25	0.64	0.64	0.00
22.00	0.50	1.009	1,044.24	0.53	0.53	0.00
24.00	0.40	1.004	1,044.22	0.43	0.43	0.00
26.00	0.00	0.982	1,044.12	0.07	0.07	0.00
28.00	0.00	0.976	1,044.10	0.02	0.02	0.00
30.00	0.00	0.973	1,044.09	0.02	0.02	0.00
32.00	0.00	0.970	1,044.08	0.02	0.02	0.00
34.00	0.00	0.968	1,044.06	0.02	0.02	0.00
36.00	0.00	0.965	1,044.05	0.02	0.02	0.00
38.00	0.00	0.962	1,044.04	0.02	0.02	0.00
40.00	0.00	0.960	1,044.03	0.02	0.02	0.00
42.00	0.00	0.957	1,044.02	0.02	0.02	0.00
44.00	0.00	0.955	1,044.01	0.02	0.02	0.00
46.00	0.00	0.952	1,044.00	0.02	0.02	0.00
48.00	0.00	0.949	1,043.99	0.02	0.02	0.00
50.00	0.00	0.947	1,043.97	0.02	0.02	0.00
52.00	0.00	0.944	1,043.96	0.02	0.02	0.00
54.00	0.00	0.941	1,043.95	0.02	0.02	0.00
56.00	0.00	0.939	1,043.94	0.02	0.02	0.00
58.00	0.00	0.936	1,043.93	0.02	0.02	0.00
60.00	0.00	0.933	1,043.92	0.02	0.02	0.00
62.00	0.00	0.931	1,043.91	0.02	0.02	0.00
64.00	0.00	0.928	1,043.90	0.02	0.02	0.00
66.00	0.00	0.925	1,043.88	0.02	0.02	0.00
68.00	0.00	0.923	1,043.87	0.02	0.02	0.00
70.00	0.00	0.920	1,043.86	0.02	0.02	0.00
72.00	0.00	0.918	1,043.85	0.02	0.02	0.00

Summary for Pond 03-Pond:

Inflow Area = 13.580 ac, 0.00% Impervious, Inflow Depth = 2.72" for 10-YR STORM event
Inflow = 25.37 cfs @ 12.39 hrs, Volume= 3.080 af
Outflow = 18.35 cfs @ 12.63 hrs, Volume= 2.915 af, Atten= 28%, Lag= 14.3 min
Primary = 18.35 cfs @ 12.63 hrs, Volume= 2.915 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,132.84' @ 12.63 hrs Surf.Area= 0.487 ac Storage= 0.823 af

Plug-Flow detention time= 119.7 min calculated for 2.914 af (95% of inflow)
Center-of-Mass det. time= 91.3 min (933.2 - 841.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,131.00'	1.978 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

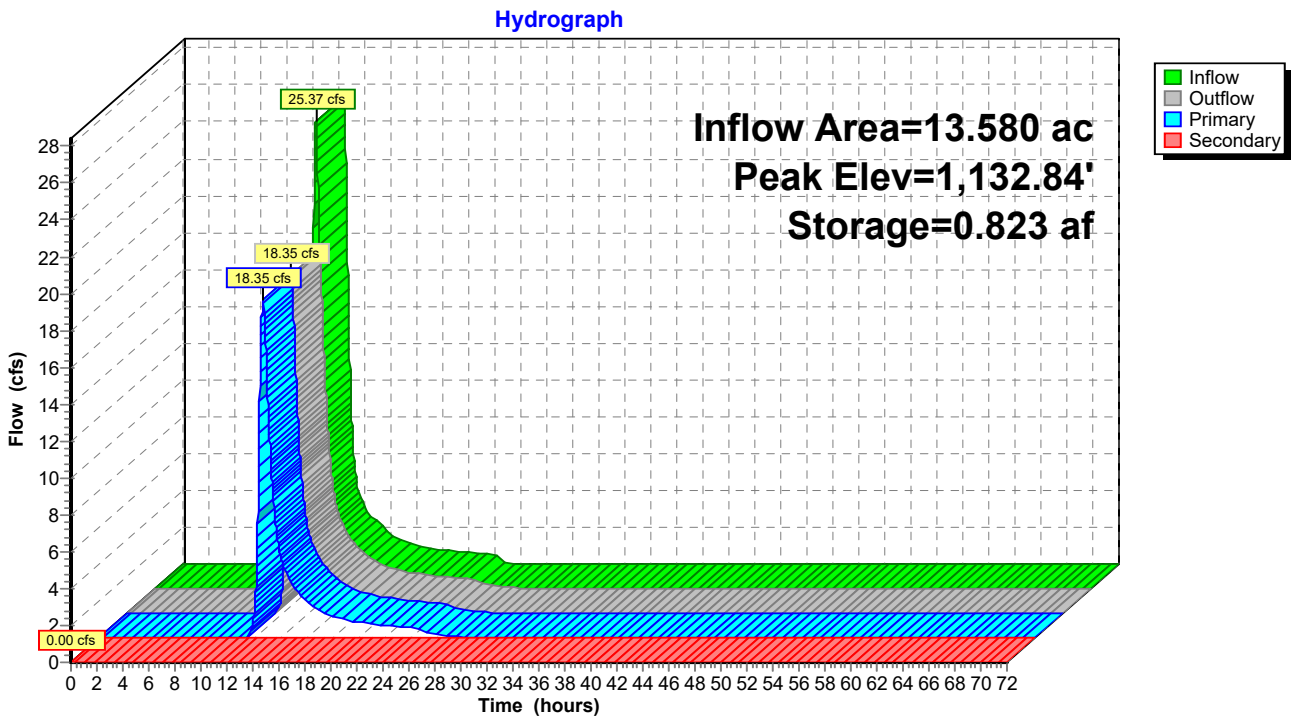
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,131.00	0.410	0.000	0.000
1,132.00	0.451	0.431	0.431
1,133.00	0.494	0.472	0.903
1,134.00	0.537	0.515	1.418
1,135.00	0.583	0.560	1.978

Device	Routing	Invert	Outlet Devices
#1	Primary	1,131.00'	**36.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,131.00' / 1,127.00' S= 0.0800 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Device 1	1,131.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,134.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,131.00'	**0.9" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=18.34 cfs @ 12.63 hrs HW=1,132.84' (Free Discharge)
└─**1=Culvert** (Passes 18.34 cfs of 20.92 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 18.32 cfs @ 5.02 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.03 cfs @ 6.46 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,131.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 03-Pond:


Hydrograph
Inflow Area=13.580 ac
Peak Elev=1,132.84'
Storage=0.823 af
25.37 cfs
18.35 cfs
18.35 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 03-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,131.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,131.00	0.00	0.00	0.00
4.00	0.00	0.000	1,131.00	0.00	0.00	0.00
6.00	0.00	0.000	1,131.00	0.00	0.00	0.00
8.00	0.03	0.000	1,131.00	0.00	0.00	0.00
10.00	0.65	0.045	1,131.11	0.01	0.01	0.00
12.00	**7.79**	**0.342**	**1,131.80**	**1.72**	**1.72**	0.00
14.00	**3.15**	**0.454**	**1,132.05**	**4.43**	**4.43**	0.00
16.00	1.68	0.357	1,131.84	2.04	2.04	0.00
18.00	1.00	0.313	1,131.74	1.20	1.20	0.00
20.00	0.76	0.291	1,131.69	0.84	0.84	0.00
22.00	0.63	0.281	1,131.66	0.68	0.68	0.00
24.00	0.50	0.272	1,131.64	0.56	0.56	0.00
26.00	0.00	0.234	1,131.55	0.14	0.14	0.00
28.00	0.00	0.219	1,131.52	0.05	0.05	0.00
30.00	0.00	0.214	1,131.51	0.03	0.03	0.00
32.00	0.00	0.210	1,131.50	0.02	0.02	0.00
34.00	0.00	0.208	1,131.49	0.01	0.01	0.00
36.00	0.00	0.206	1,131.49	0.01	0.01	0.00
38.00	0.00	0.203	1,131.48	0.01	0.01	0.00
40.00	0.00	0.201	1,131.48	0.01	0.01	0.00
42.00	0.00	0.199	1,131.47	0.01	0.01	0.00
44.00	0.00	0.196	1,131.47	0.01	0.01	0.00
46.00	0.00	0.194	1,131.46	0.01	0.01	0.00
48.00	0.00	0.192	1,131.46	0.01	0.01	0.00
50.00	0.00	0.189	1,131.45	0.01	0.01	0.00
52.00	0.00	0.187	1,131.45	0.01	0.01	0.00
54.00	0.00	0.185	1,131.44	0.01	0.01	0.00
56.00	0.00	0.183	1,131.44	0.01	0.01	0.00
58.00	0.00	0.180	1,131.43	0.01	0.01	0.00
60.00	0.00	0.178	1,131.43	0.01	0.01	0.00
62.00	0.00	0.176	1,131.42	0.01	0.01	0.00
64.00	0.00	0.174	1,131.42	0.01	0.01	0.00
66.00	0.00	0.172	1,131.41	0.01	0.01	0.00
68.00	0.00	0.170	1,131.41	0.01	0.01	0.00
70.00	0.00	0.167	1,131.40	0.01	0.01	0.00
72.00	0.00	0.165	1,131.40	0.01	0.01	0.00

Summary for Pond 04-Pond:

04-Pond

Inflow Area =	1.980 ac,	0.00% Impervious,	Inflow Depth =	2.37"	for 10-YR STORM event
Inflow =	3.02 cfs @	12.45 hrs,	Volume=	0.392 af	
Outflow =	0.78 cfs @	13.25 hrs,	Volume=	0.206 af,	Atten= 74%, Lag= 47.8 min
Primary =	0.78 cfs @	13.25 hrs,	Volume=	0.206 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,109.01' @ 13.25 hrs Surf.Area= 0.085 ac Storage= 0.209 af

Plug-Flow detention time= 327.7 min calculated for 0.206 af (52% of inflow)
Center-of-Mass det. time= 210.3 min (1,066.8 - 856.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,105.00'	0.303 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

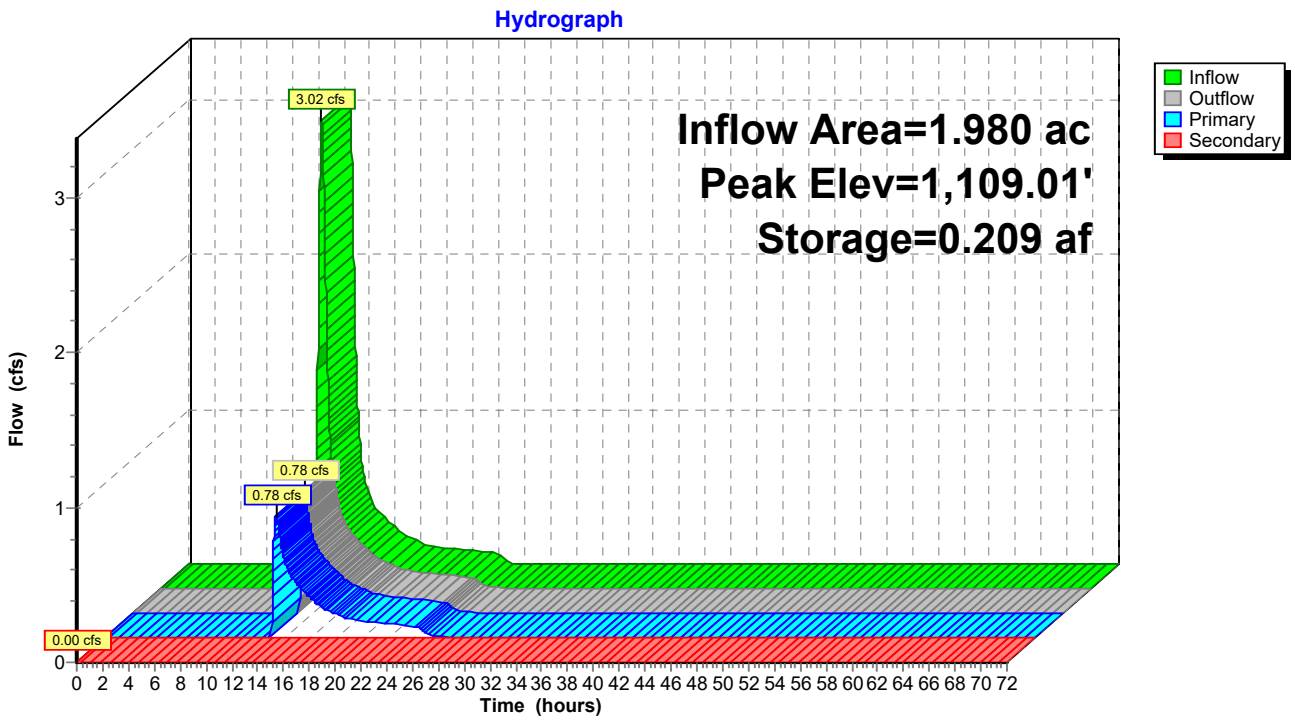
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,105.00	0.023	0.000	0.000
1,106.00	0.036	0.029	0.029
1,107.00	0.051	0.044	0.073
1,108.00	0.067	0.059	0.132
1,109.00	0.085	0.076	0.208
1,110.00	0.105	0.095	0.303

Device	Routing	Invert	Outlet Devices
#1	Primary	1,105.00'	**24.0" Round Culvert** L= 35.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,105.00' / 1,104.50' S= 0.0143 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,108.83'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,109.40'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,105.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.78 cfs @ 13.25 hrs HW=1,109.01' (Free Discharge)
└─**1=Culvert** (Passes 0.78 cfs of 26.25 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.78 cfs @ 1.45 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.63 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,105.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 04-Pond:


Hydrograph
Inflow Area=1.980 ac
Peak Elev=1,109.01'
Storage=0.209 af
Inflow
Outflow
Primary
Secondary
3.02 cfs
0.78 cfs
0.78 cfs
0.00 cfs
Flow (cfs)
Time (hours)

Hydrograph for Pond 04-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,105.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,105.00	0.00	0.00	0.00
4.00	0.00	0.000	1,105.00	0.00	0.00	0.00
6.00	0.00	0.000	1,105.00	0.00	0.00	0.00
8.00	0.00	0.000	1,105.00	0.00	0.00	0.00
10.00	0.05	0.002	1,105.08	0.00	0.00	0.00
12.00	**0.77**	**0.032**	**1,106.07**	**0.00**	**0.00**	0.00
14.00	**0.44**	**0.205**	**1,108.96**	**0.48**	**0.48**	0.00
16.00	0.23	0.201	1,108.91	0.25	0.25	0.00
18.00	0.14	0.199	1,108.89	0.15	0.15	0.00
20.00	0.10	0.198	1,108.88	0.11	0.11	0.00
22.00	0.09	0.197	1,108.87	0.09	0.09	0.00
24.00	0.07	0.197	1,108.86	0.07	0.07	0.00
26.00	0.00	0.194	1,108.83	0.01	0.01	0.00
28.00	0.00	0.194	1,108.83	0.00	0.00	0.00
30.00	0.00	0.193	1,108.82	0.00	0.00	0.00
32.00	0.00	0.193	1,108.82	0.00	0.00	0.00
34.00	0.00	0.193	1,108.81	0.00	0.00	0.00
36.00	0.00	0.192	1,108.81	0.00	0.00	0.00
38.00	0.00	0.192	1,108.81	0.00	0.00	0.00
40.00	0.00	0.192	1,108.80	0.00	0.00	0.00
42.00	0.00	0.191	1,108.80	0.00	0.00	0.00
44.00	0.00	0.191	1,108.79	0.00	0.00	0.00
46.00	0.00	0.191	1,108.79	0.00	0.00	0.00
48.00	0.00	0.190	1,108.79	0.00	0.00	0.00
50.00	0.00	0.190	1,108.78	0.00	0.00	0.00
52.00	0.00	0.190	1,108.78	0.00	0.00	0.00
54.00	0.00	0.189	1,108.77	0.00	0.00	0.00
56.00	0.00	0.189	1,108.77	0.00	0.00	0.00
58.00	0.00	0.189	1,108.77	0.00	0.00	0.00
60.00	0.00	0.188	1,108.76	0.00	0.00	0.00
62.00	0.00	0.188	1,108.76	0.00	0.00	0.00
64.00	0.00	0.188	1,108.75	0.00	0.00	0.00
66.00	0.00	0.187	1,108.75	0.00	0.00	0.00
68.00	0.00	0.187	1,108.74	0.00	0.00	0.00
70.00	0.00	0.187	1,108.74	0.00	0.00	0.00
72.00	0.00	0.186	1,108.74	0.00	0.00	0.00

Summary for Pond 05-Pond:

Inflow Area = 4.310 ac, 0.00% Impervious, Inflow Depth = 2.63" for 10-YR STORM event
Inflow = 8.99 cfs @ 12.27 hrs, Volume= 0.946 af
Outflow = 3.19 cfs @ 12.73 hrs, Volume= 0.629 af, Atten= 65%, Lag= 27.5 min
Primary = 3.19 cfs @ 12.73 hrs, Volume= 0.629 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,139.72' @ 12.73 hrs Surf.Area= 0.162 ac Storage= 0.441 af

Plug-Flow detention time= 256.3 min calculated for 0.629 af (66% of inflow)
Center-of-Mass det. time= 156.1 min (993.5 - 837.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,136.00'	0.881 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

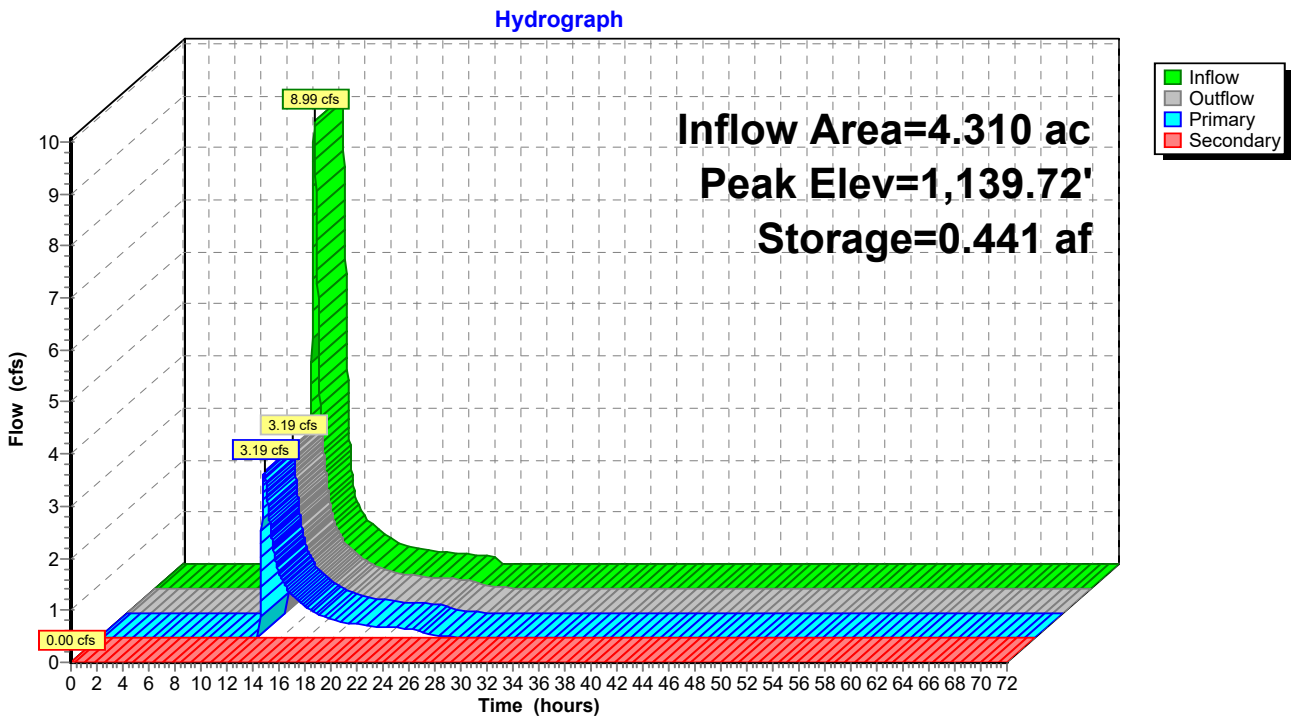
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,136.00	0.078	0.000	0.000
1,137.00	0.099	0.088	0.088
1,138.00	0.121	0.110	0.198
1,139.00	0.144	0.133	0.331
1,140.00	0.169	0.157	0.487
1,141.00	0.196	0.183	0.670
1,142.00	0.225	0.211	0.881

Device	Routing	Invert	Outlet Devices
#1	Primary	1,136.00'	**24.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,136.00' / 1,131.00' S= 0.1000 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Device 1	1,139.00'	**1.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,141.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,136.00'	**0.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=3.19 cfs @ 12.73 hrs HW=1,139.72' (Free Discharge)
└─**1=Culvert** (Passes 3.19 cfs of 24.94 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 3.18 cfs @ 3.26 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.27 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,136.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 05-Pond:


Hydrograph
Inflow Area=4.310 ac
Peak Elev=1,139.72'
Storage=0.441 af
8.99 cfs
3.19 cfs
3.19 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 05-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,136.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,136.00	0.00	0.00	0.00
4.00	0.00	0.000	1,136.00	0.00	0.00	0.00
6.00	0.00	0.000	1,136.00	0.00	0.00	0.00
8.00	0.00	0.000	1,136.00	0.00	0.00	0.00
10.00	0.20	0.013	1,136.16	0.00	0.00	0.00
12.00	**3.33**	**0.126**	**1,137.37**	**0.00**	**0.00**	0.00
14.00	**0.93**	**0.386**	**1,139.37**	**1.16**	**1.16**	0.00
16.00	0.50	0.366	1,139.24	0.59	0.59	0.00
18.00	0.30	0.356	1,139.17	0.35	0.35	0.00
20.00	0.23	0.351	1,139.13	0.25	0.25	0.00
22.00	0.19	0.348	1,139.12	0.21	0.21	0.00
24.00	0.16	0.346	1,139.10	0.17	0.17	0.00
26.00	0.00	0.335	1,139.03	0.04	0.04	0.00
28.00	0.00	0.332	1,139.00	0.01	0.01	0.00
30.00	0.00	0.331	1,139.00	0.00	0.00	0.00
32.00	0.00	0.330	1,138.99	0.00	0.00	0.00
34.00	0.00	0.329	1,138.99	0.00	0.00	0.00
36.00	0.00	0.329	1,138.98	0.00	0.00	0.00
38.00	0.00	0.328	1,138.98	0.00	0.00	0.00
40.00	0.00	0.327	1,138.97	0.00	0.00	0.00
42.00	0.00	0.327	1,138.97	0.00	0.00	0.00
44.00	0.00	0.326	1,138.97	0.00	0.00	0.00
46.00	0.00	0.325	1,138.96	0.00	0.00	0.00
48.00	0.00	0.325	1,138.96	0.00	0.00	0.00
50.00	0.00	0.324	1,138.95	0.00	0.00	0.00
52.00	0.00	0.323	1,138.95	0.00	0.00	0.00
54.00	0.00	0.323	1,138.94	0.00	0.00	0.00
56.00	0.00	0.322	1,138.94	0.00	0.00	0.00
58.00	0.00	0.321	1,138.93	0.00	0.00	0.00
60.00	0.00	0.321	1,138.93	0.00	0.00	0.00
62.00	0.00	0.320	1,138.92	0.00	0.00	0.00
64.00	0.00	0.319	1,138.92	0.00	0.00	0.00
66.00	0.00	0.319	1,138.91	0.00	0.00	0.00
68.00	0.00	0.318	1,138.91	0.00	0.00	0.00
70.00	0.00	0.317	1,138.90	0.00	0.00	0.00
72.00	0.00	0.317	1,138.90	0.00	0.00	0.00

Summary for Pond 07-Pond:

Inflow Area = 13.810 ac, 0.00% Impervious, Inflow Depth = 1.97" for 10-YR STORM event
Inflow = 16.28 cfs @ 12.52 hrs, Volume= 2.267 af
Outflow = 4.93 cfs @ 13.31 hrs, Volume= 1.427 af, Atten= 70%, Lag= 47.2 min
Primary = 4.93 cfs @ 13.31 hrs, Volume= 1.427 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,134.59' @ 13.31 hrs Surf.Area= 0.297 ac Storage= 1.077 af

Plug-Flow detention time= 329.1 min calculated for 1.426 af (63% of inflow)
Center-of-Mass det. time= 218.6 min (1,092.1 - 873.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,130.00'	1.525 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

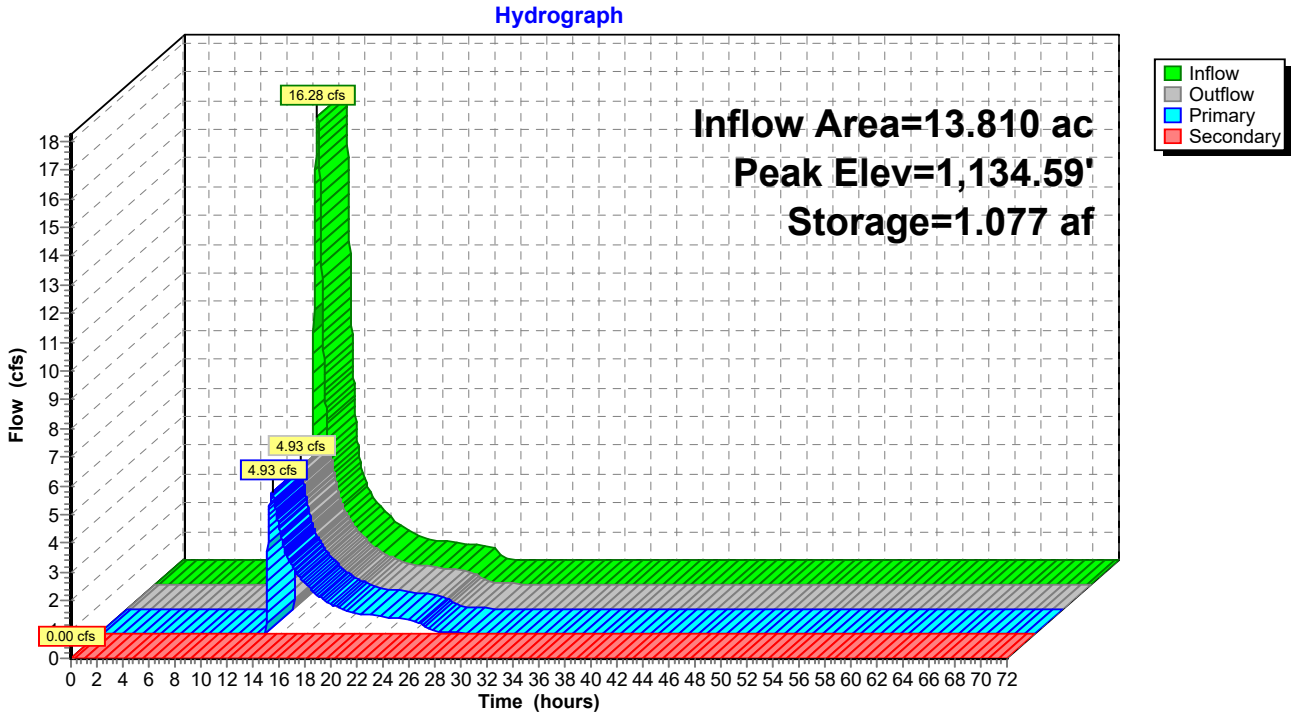
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,130.00	0.176	0.000	0.000
1,131.00	0.200	0.188	0.188
1,132.00	0.226	0.213	0.401
1,133.00	0.252	0.239	0.640
1,134.00	0.280	0.266	0.906
1,135.00	0.309	0.294	1.200
1,136.00	0.340	0.325	1.525

Device	Routing	Invert	Outlet Devices
#1	Primary	1,130.00'	**24.0" Round Culvert X 2.00** L= 380.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,130.00' / 1,069.00' S= 0.1605 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,134.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,135.75'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,130.00'	**0.6" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=4.93 cfs @ 13.31 hrs HW=1,134.59' (Free Discharge)
└─**1=Culvert** (Passes 4.93 cfs of 57.33 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 4.91 cfs @ 2.88 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 10.29 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,130.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 07-Pond:


Hydrograph
Inflow Area=13.810 ac
Peak Elev=1,134.59'
Storage=1.077 af
16.28 cfs
4.93 cfs
4.93 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 07-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,130.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,130.00	0.00	0.00	0.00
4.00	0.00	0.000	1,130.00	0.00	0.00	0.00
6.00	0.00	0.000	1,130.00	0.00	0.00	0.00
8.00	0.00	0.000	1,130.00	0.00	0.00	0.00
10.00	0.02	0.000	1,130.00	0.00	0.00	0.00
12.00	**3.20**	**0.107**	**1,130.59**	**0.01**	**0.01**	0.00
14.00	**2.81**	**1.040**	**1,134.47**	**3.42**	**3.42**	0.00
16.00	1.50	0.991	1,134.30	1.70	1.70	0.00
18.00	0.89	0.965	1,134.21	1.00	1.00	0.00
20.00	0.67	0.953	1,134.17	0.71	0.71	0.00
22.00	0.55	0.947	1,134.15	0.58	0.58	0.00
24.00	0.45	0.942	1,134.13	0.48	0.48	0.00
26.00	0.00	0.916	1,134.04	0.10	0.10	0.00
28.00	0.00	0.908	1,134.01	0.03	0.03	0.00
30.00	0.00	0.904	1,133.99	0.02	0.02	0.00
32.00	0.00	0.901	1,133.98	0.02	0.02	0.00
34.00	0.00	0.898	1,133.97	0.02	0.02	0.00
36.00	0.00	0.895	1,133.96	0.02	0.02	0.00
38.00	0.00	0.892	1,133.95	0.02	0.02	0.00
40.00	0.00	0.889	1,133.94	0.02	0.02	0.00
42.00	0.00	0.886	1,133.93	0.02	0.02	0.00
44.00	0.00	0.883	1,133.92	0.02	0.02	0.00
46.00	0.00	0.880	1,133.91	0.02	0.02	0.00
48.00	0.00	0.877	1,133.89	0.02	0.02	0.00
50.00	0.00	0.873	1,133.88	0.02	0.02	0.00
52.00	0.00	0.870	1,133.87	0.02	0.02	0.00
54.00	0.00	0.867	1,133.86	0.02	0.02	0.00
56.00	0.00	0.864	1,133.85	0.02	0.02	0.00
58.00	0.00	0.861	1,133.84	0.02	0.02	0.00
60.00	0.00	0.858	1,133.83	0.02	0.02	0.00
62.00	0.00	0.855	1,133.82	0.02	0.02	0.00
64.00	0.00	0.852	1,133.81	0.02	0.02	0.00
66.00	0.00	0.849	1,133.79	0.02	0.02	0.00
68.00	0.00	0.846	1,133.78	0.02	0.02	0.00
70.00	0.00	0.843	1,133.77	0.02	0.02	0.00
72.00	0.00	0.840	1,133.76	0.02	0.02	0.00

Summary for Pond 08/10-Pond:

Inflow Area = 34.060 ac, 0.00% Impervious, Inflow Depth = 2.86" for 10-YR STORM event
Inflow = 62.91 cfs @ 12.39 hrs, Volume= 8.114 af
Outflow = 41.62 cfs @ 12.71 hrs, Volume= 6.832 af, Atten= 34%, Lag= 19.0 min
Primary = 41.62 cfs @ 12.71 hrs, Volume= 6.832 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,124.57' @ 12.71 hrs Surf.Area= 0.972 ac Storage= 2.814 af

Plug-Flow detention time= 186.6 min calculated for 6.832 af (84% of inflow)
Center-of-Mass det. time= 119.8 min (959.1 - 839.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,121.00'	5.497 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

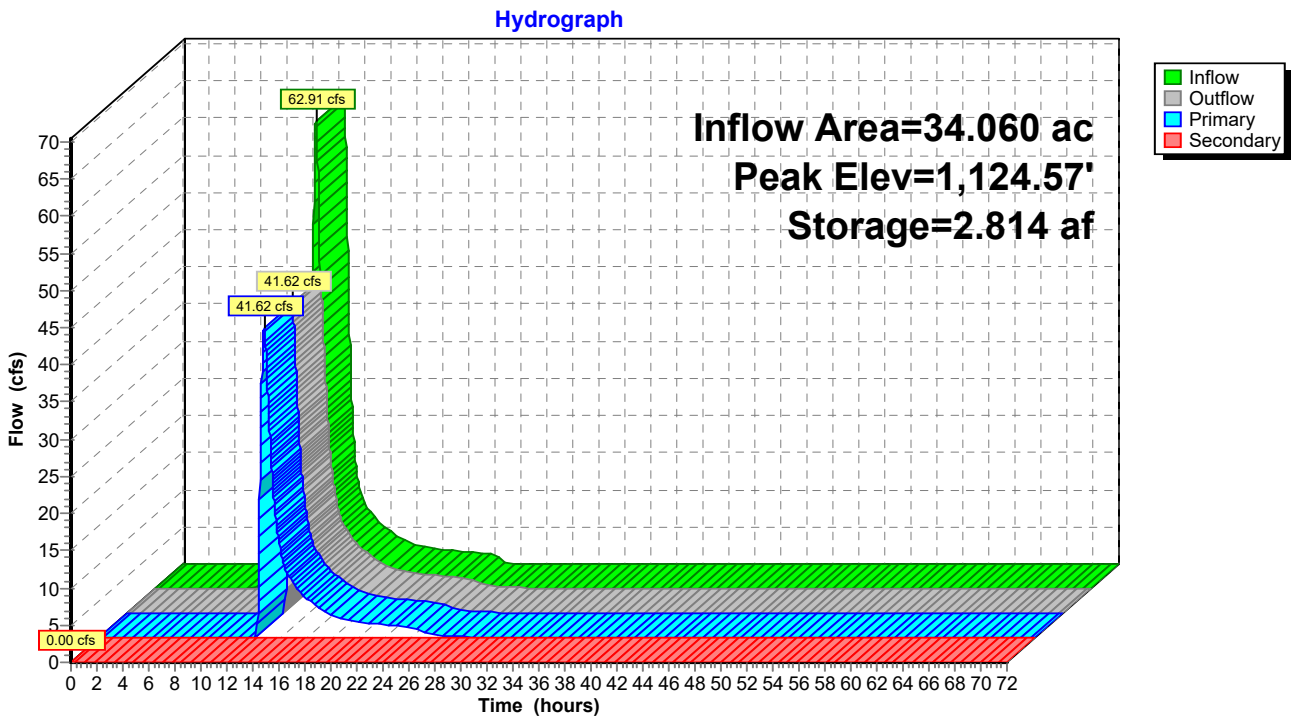
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,121.00	0.609	0.000	0.000
1,122.00	0.709	0.659	0.659
1,123.00	0.810	0.759	1.418
1,124.00	0.913	0.862	2.280
1,125.00	1.018	0.965	3.246
1,126.00	1.125	1.071	4.317
1,127.00	1.234	1.180	5.497

Device	Routing	Invert	Outlet Devices
#1	Primary	1,121.70'	**54.0" Round Culvert** L= 88.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,121.70' / 1,105.00' S= 0.1898 '/' Cc= 0.900 n= 0.012, Flow Area= 15.90 sf
#2	Device 1	1,123.00'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,125.80'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,121.70'	**1.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=41.60 cfs @ 12.71 hrs HW=1,124.57' (Free Discharge)
└─**1=Culvert** (Passes 41.60 cfs of 61.61 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 41.53 cfs @ 5.66 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.06 cfs @ 8.08 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,121.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 08/10-Pond:



Hydrograph for Pond 08/10-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,121.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,121.00	0.00	0.00	0.00
4.00	0.00	0.000	1,121.00	0.00	0.00	0.00
6.00	0.00	0.000	1,121.00	0.00	0.00	0.00
8.00	0.21	0.006	1,121.01	0.00	0.00	0.00
10.00	1.93	0.156	1,121.25	0.00	0.00	0.00
12.00	**20.11**	**1.020**	**1,122.49**	**0.03**	**0.03**	0.00
14.00	**8.29**	**2.034**	**1,123.73**	**11.63**	**11.63**	0.00
16.00	4.37	1.785	1,123.44	5.26	5.26	0.00
18.00	2.59	1.676	1,123.31	3.08	3.08	0.00
20.00	1.95	1.621	1,123.25	2.15	2.15	0.00
22.00	1.61	1.595	1,123.21	1.75	1.75	0.00
24.00	1.29	1.572	1,123.19	1.43	1.43	0.00
26.00	0.00	1.476	1,123.07	0.38	0.38	0.00
28.00	0.00	1.440	1,123.03	0.13	0.13	0.00
30.00	0.00	1.425	1,123.01	0.07	0.07	0.00
32.00	0.00	1.416	1,123.00	0.04	0.04	0.00
34.00	0.00	1.409	1,122.99	0.04	0.04	0.00
36.00	0.00	1.402	1,122.98	0.04	0.04	0.00
38.00	0.00	1.395	1,122.97	0.04	0.04	0.00
40.00	0.00	1.389	1,122.96	0.04	0.04	0.00
42.00	0.00	1.382	1,122.95	0.04	0.04	0.00
44.00	0.00	1.375	1,122.95	0.04	0.04	0.00
46.00	0.00	1.368	1,122.94	0.04	0.04	0.00
48.00	0.00	1.361	1,122.93	0.04	0.04	0.00
50.00	0.00	1.354	1,122.92	0.04	0.04	0.00
52.00	0.00	1.348	1,122.91	0.04	0.04	0.00
54.00	0.00	1.341	1,122.90	0.04	0.04	0.00
56.00	0.00	1.334	1,122.90	0.04	0.04	0.00
58.00	0.00	1.328	1,122.89	0.04	0.04	0.00
60.00	0.00	1.321	1,122.88	0.04	0.04	0.00
62.00	0.00	1.314	1,122.87	0.04	0.04	0.00
64.00	0.00	1.308	1,122.86	0.04	0.04	0.00
66.00	0.00	1.301	1,122.85	0.04	0.04	0.00
68.00	0.00	1.295	1,122.85	0.04	0.04	0.00
70.00	0.00	1.288	1,122.84	0.04	0.04	0.00
72.00	0.00	1.282	1,122.83	0.04	0.04	0.00

Summary for Pond 09-Pond:

Inflow Area = 16.030 ac, 0.00% Impervious, Inflow Depth = 2.63" for 10-YR STORM event
Inflow = 17.39 cfs @ 13.00 hrs, Volume= 3.517 af
Outflow = 7.21 cfs @ 13.98 hrs, Volume= 2.207 af, Atten= 59%, Lag= 59.0 min
Primary = 7.21 cfs @ 13.98 hrs, Volume= 2.207 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,150.00' @ 13.98 hrs Surf.Area= 0.528 ac Storage= 1.750 af

Plug-Flow detention time= 307.3 min calculated for 2.207 af (63% of inflow)
Center-of-Mass det. time= 200.6 min (1,086.2 - 885.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,145.00'	3.685 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

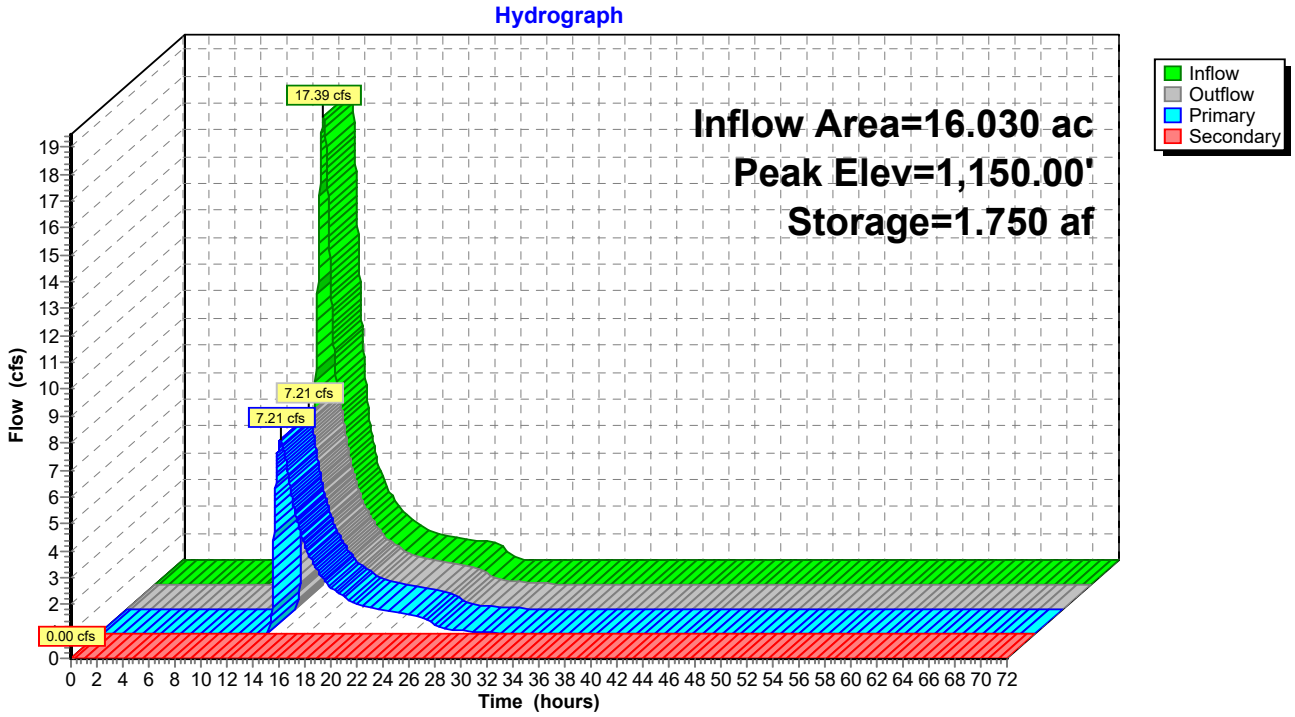
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,145.00	0.180	0.000	0.000
1,146.00	0.246	0.213	0.213
1,147.00	0.313	0.279	0.493
1,148.00	0.382	0.347	0.840
1,149.00	0.454	0.418	1.258
1,150.00	0.528	0.491	1.749
1,151.00	0.604	0.566	2.315
1,152.00	0.683	0.643	2.958
1,153.00	0.770	0.726	3.685

Device	Routing	Invert	Outlet Devices
#1	Primary	1,145.00'	**24.0" Round Culvert** L= 112.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,145.00' / 1,130.00' S= 0.1339 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,149.25'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,152.00'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,145.00'	**0.6" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=7.21 cfs @ 13.98 hrs HW=1,150.00' (Free Discharge)
└─**1=Culvert** (Passes 7.21 cfs of 30.26 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 7.19 cfs @ 3.36 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 10.74 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,145.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 09-Pond:


Hydrograph
Inflow Area=16.030 ac
Peak Elev=1,150.00'
Storage=1.750 af
17.39 cfs
7.21 cfs
7.21 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 09-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,145.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,145.00	0.00	0.00	0.00
4.00	0.00	0.000	1,145.00	0.00	0.00	0.00
6.00	0.00	0.000	1,145.00	0.00	0.00	0.00
8.00	0.00	0.000	1,145.00	0.00	0.00	0.00
10.00	0.37	0.018	1,145.10	0.00	0.00	0.00
12.00	**2.67**	**0.195**	**1,145.92**	**0.01**	**0.01**	0.00
14.00	**7.08**	**1.750**	**1,150.00**	**7.21**	**7.21**	0.00
16.00	2.48	1.589	1,149.69	3.12	3.12	0.00
18.00	1.39	1.517	1,149.55	1.68	1.68	0.00
20.00	0.95	1.480	1,149.47	1.09	1.09	0.00
22.00	0.78	1.464	1,149.44	0.86	0.86	0.00
24.00	0.64	1.452	1,149.41	0.70	0.70	0.00
26.00	0.04	1.417	1,149.34	0.31	0.31	0.00
28.00	0.00	1.389	1,149.28	0.10	0.10	0.00
30.00	0.00	1.378	1,149.26	0.04	0.04	0.00
32.00	0.00	1.373	1,149.25	0.02	0.02	0.00
34.00	0.00	1.370	1,149.24	0.02	0.02	0.00
36.00	0.00	1.367	1,149.24	0.02	0.02	0.00
38.00	0.00	1.364	1,149.23	0.02	0.02	0.00
40.00	0.00	1.360	1,149.22	0.02	0.02	0.00
42.00	0.00	1.357	1,149.21	0.02	0.02	0.00
44.00	0.00	1.354	1,149.21	0.02	0.02	0.00
46.00	0.00	1.351	1,149.20	0.02	0.02	0.00
48.00	0.00	1.348	1,149.19	0.02	0.02	0.00
50.00	0.00	1.345	1,149.19	0.02	0.02	0.00
52.00	0.00	1.341	1,149.18	0.02	0.02	0.00
54.00	0.00	1.338	1,149.17	0.02	0.02	0.00
56.00	0.00	1.335	1,149.17	0.02	0.02	0.00
58.00	0.00	1.332	1,149.16	0.02	0.02	0.00
60.00	0.00	1.329	1,149.15	0.02	0.02	0.00
62.00	0.00	1.325	1,149.15	0.02	0.02	0.00
64.00	0.00	1.322	1,149.14	0.02	0.02	0.00
66.00	0.00	1.319	1,149.13	0.02	0.02	0.00
68.00	0.00	1.316	1,149.13	0.02	0.02	0.00
70.00	0.00	1.313	1,149.12	0.02	0.02	0.00
72.00	0.00	1.310	1,149.11	0.02	0.02	0.00

Summary for Pond 11-Pond:

Inflow Area = 2.820 ac, 0.00% Impervious, Inflow Depth = 2.05" for 10-YR STORM event
Inflow = 3.03 cfs @ 12.66 hrs, Volume= 0.481 af
Outflow = 0.32 cfs @ 16.15 hrs, Volume= 0.150 af, Atten= 90%, Lag= 209.1 min
Primary = 0.32 cfs @ 16.15 hrs, Volume= 0.150 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,191.60' @ 16.15 hrs Surf.Area= 0.146 ac Storage= 0.353 af

Plug-Flow detention time= 501.0 min calculated for 0.150 af (31% of inflow)
Center-of-Mass det. time= 362.5 min (1,243.5 - 881.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,188.00'	0.587 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

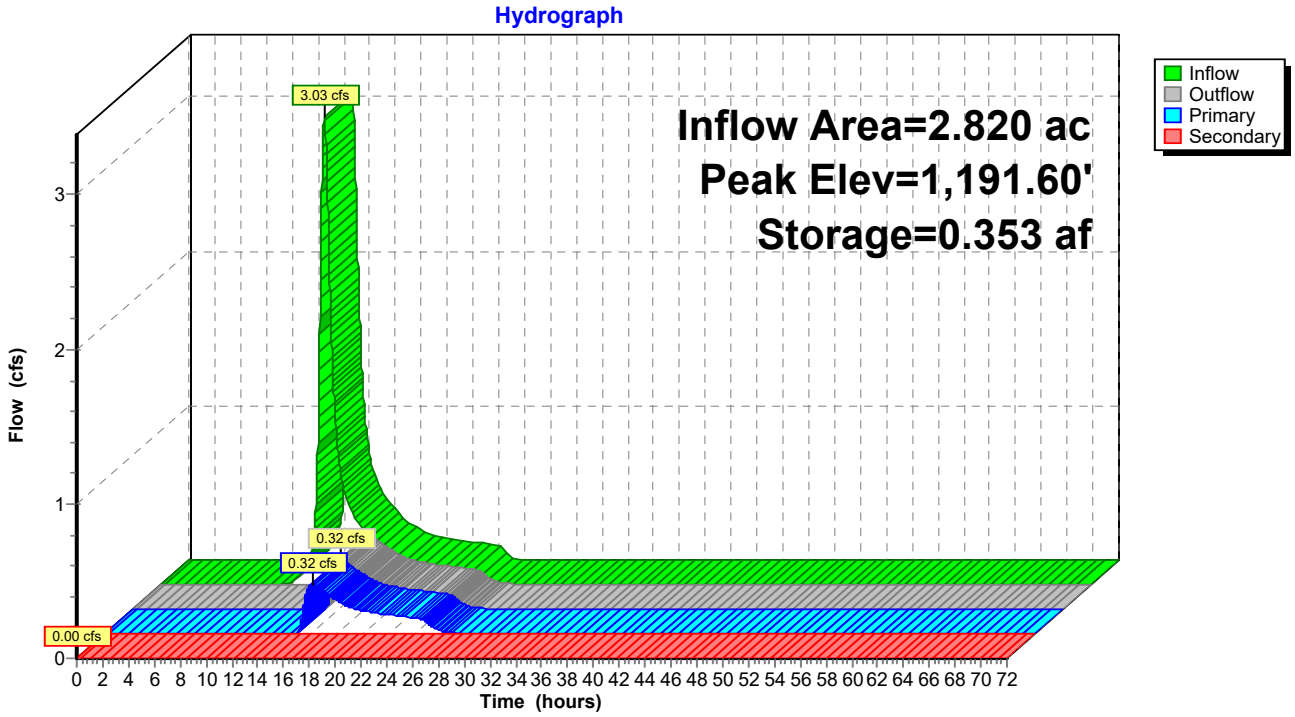
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,188.00	0.053	0.000	0.000
1,189.00	0.077	0.065	0.065
1,190.00	0.102	0.089	0.154
1,191.00	0.129	0.116	0.270
1,192.00	0.158	0.143	0.414
1,193.00	0.189	0.173	0.587

Device	Routing	Invert	Outlet Devices
#1	Primary	1,188.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,188.00' / 1,185.00' S= 0.0652 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,191.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,192.00'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,188.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.32 cfs @ 16.15 hrs HW=1,191.60' (Free Discharge)
└─**1=Culvert** (Passes 0.32 cfs of 14.36 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.31 cfs @ 1.06 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.12 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,188.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 11-Pond:


Hydrograph
Inflow Area=2.820 ac
Peak Elev=1,191.60'
Storage=0.353 af
3.03 cfs
0.32 cfs
0.32 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 11-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,188.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,188.00	0.00	0.00	0.00
4.00	0.00	0.000	1,188.00	0.00	0.00	0.00
6.00	0.00	0.000	1,188.00	0.00	0.00	0.00
8.00	0.00	0.000	1,188.00	0.00	0.00	0.00
10.00	0.01	0.000	1,188.00	0.00	0.00	0.00
12.00	**0.48**	0.020	1,188.34	0.00	0.00	0.00
14.00	**0.68**	0.292	1,191.17	0.00	0.00	0.00
16.00	0.33	**0.352**	**1,191.60**	**0.31**	**0.31**	0.00
18.00	0.19	**0.349**	**1,191.58**	**0.22**	**0.22**	0.00
20.00	0.14	0.347	1,191.56	0.15	0.15	0.00
22.00	0.12	0.346	1,191.55	0.12	0.12	0.00
24.00	0.10	0.345	1,191.55	0.10	0.10	0.00
26.00	0.00	0.339	1,191.51	0.02	0.02	0.00
28.00	0.00	0.338	1,191.50	0.00	0.00	0.00
30.00	0.00	0.338	1,191.50	0.00	0.00	0.00
32.00	0.00	0.337	1,191.50	0.00	0.00	0.00
34.00	0.00	0.337	1,191.49	0.00	0.00	0.00
36.00	0.00	0.337	1,191.49	0.00	0.00	0.00
38.00	0.00	0.336	1,191.49	0.00	0.00	0.00
40.00	0.00	0.336	1,191.49	0.00	0.00	0.00
42.00	0.00	0.336	1,191.48	0.00	0.00	0.00
44.00	0.00	0.336	1,191.48	0.00	0.00	0.00
46.00	0.00	0.335	1,191.48	0.00	0.00	0.00
48.00	0.00	0.335	1,191.48	0.00	0.00	0.00
50.00	0.00	0.335	1,191.47	0.00	0.00	0.00
52.00	0.00	0.334	1,191.47	0.00	0.00	0.00
54.00	0.00	0.334	1,191.47	0.00	0.00	0.00
56.00	0.00	0.334	1,191.47	0.00	0.00	0.00
58.00	0.00	0.333	1,191.47	0.00	0.00	0.00
60.00	0.00	0.333	1,191.46	0.00	0.00	0.00
62.00	0.00	0.333	1,191.46	0.00	0.00	0.00
64.00	0.00	0.332	1,191.46	0.00	0.00	0.00
66.00	0.00	0.332	1,191.46	0.00	0.00	0.00
68.00	0.00	0.332	1,191.45	0.00	0.00	0.00
70.00	0.00	0.331	1,191.45	0.00	0.00	0.00
72.00	0.00	0.331	1,191.45	0.00	0.00	0.00

Summary for Pond 13-Pond:

Inflow Area = 6.380 ac, 0.00% Impervious, Inflow Depth = 2.29" for 10-YR STORM event
Inflow = 9.76 cfs @ 12.41 hrs, Volume= 1.218 af
Outflow = 2.47 cfs @ 13.19 hrs, Volume= 0.698 af, Atten= 75%, Lag= 46.6 min
Primary = 2.47 cfs @ 13.19 hrs, Volume= 0.698 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,146.03' @ 13.19 hrs Surf.Area= 0.211 ac Storage= 0.626 af

Plug-Flow detention time= 330.6 min calculated for 0.698 af (57% of inflow)
Center-of-Mass det. time= 217.4 min (1,074.1 - 856.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,141.00'	0.849 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

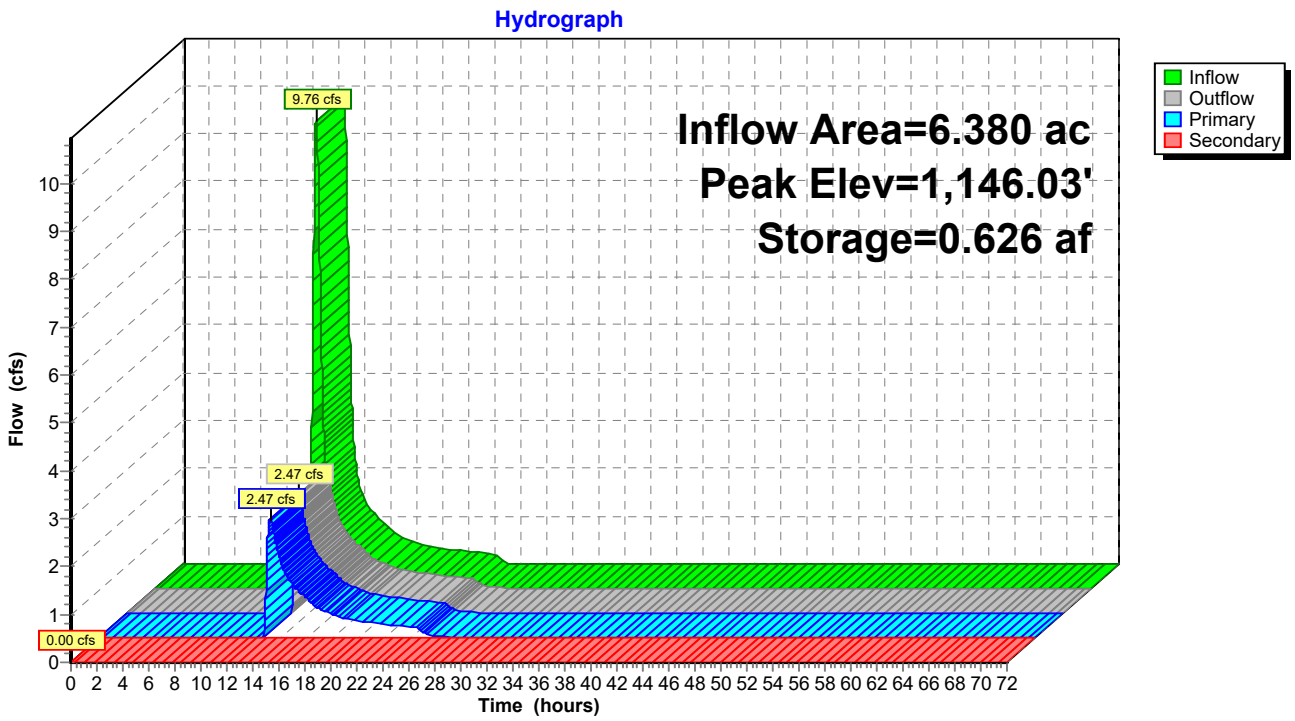
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,141.00	0.044	0.000	0.000
1,142.00	0.075	0.060	0.060
1,143.00	0.106	0.090	0.150
1,144.00	0.139	0.123	0.272
1,145.00	0.173	0.156	0.428
1,146.00	0.210	0.191	0.620
1,147.00	0.248	0.229	0.849

Device	Routing	Invert	Outlet Devices
#1	Primary	1,142.00'	**18.0" Round Culvert** L= 270.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,142.00' / 1,058.00' S= 0.3111 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,145.65'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,146.80'	**35.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,142.00'	**0.4" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=2.46 cfs @ 13.19 hrs HW=1,146.03' (Free Discharge)
└─**1=Culvert** (Passes 2.46 cfs of 15.41 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 2.46 cfs @ 2.21 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.65 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,141.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 13-Pond:


Hydrograph
Inflow Area=6.380 ac
Peak Elev=1,146.03'
Storage=0.626 af
9.76 cfs
2.47 cfs
2.47 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 13-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,141.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,141.00	0.00	0.00	0.00
4.00	0.00	0.000	1,141.00	0.00	0.00	0.00
6.00	0.00	0.000	1,141.00	0.00	0.00	0.00
8.00	0.00	0.000	1,141.00	0.00	0.00	0.00
10.00	0.13	0.004	1,141.10	0.00	0.00	0.00
12.00	**2.61**	**0.099**	**1,142.48**	**0.00**	**0.00**	0.00
14.00	**1.35**	**0.606**	**1,145.93**	**1.58**	**1.58**	0.00
16.00	0.73	0.586	1,145.84	0.82	0.82	0.00
18.00	0.43	0.575	1,145.78	0.49	0.49	0.00
20.00	0.33	0.569	1,145.75	0.35	0.35	0.00
22.00	0.27	0.567	1,145.74	0.29	0.29	0.00
24.00	0.22	0.564	1,145.73	0.24	0.24	0.00
26.00	0.00	0.552	1,145.67	0.04	0.04	0.00
28.00	0.00	0.549	1,145.65	0.01	0.01	0.00
30.00	0.00	0.548	1,145.64	0.01	0.01	0.00
32.00	0.00	0.546	1,145.64	0.01	0.01	0.00
34.00	0.00	0.545	1,145.63	0.01	0.01	0.00
36.00	0.00	0.544	1,145.62	0.01	0.01	0.00
38.00	0.00	0.542	1,145.62	0.01	0.01	0.00
40.00	0.00	0.541	1,145.61	0.01	0.01	0.00
42.00	0.00	0.540	1,145.60	0.01	0.01	0.00
44.00	0.00	0.538	1,145.60	0.01	0.01	0.00
46.00	0.00	0.537	1,145.59	0.01	0.01	0.00
48.00	0.00	0.536	1,145.58	0.01	0.01	0.00
50.00	0.00	0.534	1,145.58	0.01	0.01	0.00
52.00	0.00	0.533	1,145.57	0.01	0.01	0.00
54.00	0.00	0.532	1,145.56	0.01	0.01	0.00
56.00	0.00	0.530	1,145.56	0.01	0.01	0.00
58.00	0.00	0.529	1,145.55	0.01	0.01	0.00
60.00	0.00	0.528	1,145.54	0.01	0.01	0.00
62.00	0.00	0.527	1,145.54	0.01	0.01	0.00
64.00	0.00	0.525	1,145.53	0.01	0.01	0.00
66.00	0.00	0.524	1,145.52	0.01	0.01	0.00
68.00	0.00	0.523	1,145.52	0.01	0.01	0.00
70.00	0.00	0.521	1,145.51	0.01	0.01	0.00
72.00	0.00	0.520	1,145.50	0.01	0.01	0.00

Summary for Pond 14-Pond:

Inflow Area = 8.210 ac, 0.00% Impervious, Inflow Depth = 2.37" for 10-YR STORM event
Inflow = 14.38 cfs @ 12.33 hrs, Volume= 1.624 af
Outflow = 4.12 cfs @ 12.93 hrs, Volume= 1.025 af, Atten= 71%, Lag= 35.8 min
Primary = 4.12 cfs @ 12.93 hrs, Volume= 1.025 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,153.53' @ 12.93 hrs Surf.Area= 0.322 ac Storage= 0.786 af

Plug-Flow detention time= 280.7 min calculated for 1.025 af (63% of inflow)
Center-of-Mass det. time= 173.5 min (1,022.2 - 848.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,150.00'	1.323 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

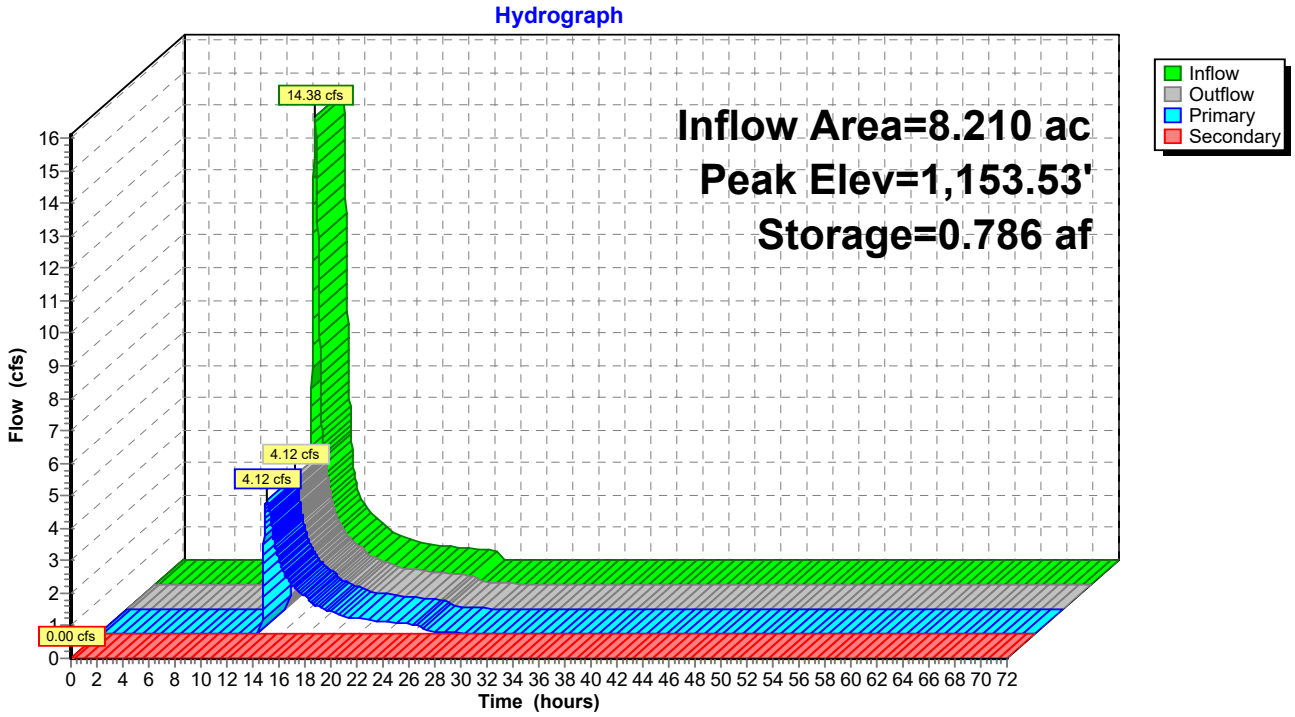
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,150.00	0.127	0.000	0.000
1,151.00	0.180	0.153	0.153
1,152.00	0.235	0.208	0.361
1,153.00	0.291	0.263	0.624
1,154.00	0.349	0.320	0.944
1,155.00	0.409	0.379	1.323

Device	Routing	Invert	Outlet Devices
#1	Primary	1,150.00'	**24.0" Round Culvert** L= 52.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,150.00' / 1,143.00' S= 0.1346 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,153.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,154.50'	**30.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,150.00'	**0.4" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=4.11 cfs @ 12.93 hrs HW=1,153.53' (Free Discharge)
└─**1=Culvert** (Passes 4.11 cfs of 24.05 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 4.11 cfs @ 2.68 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.02 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,150.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 14-Pond:


Hydrograph
Inflow Area=8.210 ac
Peak Elev=1,153.53'
Storage=0.786 af
14.38 cfs
4.12 cfs
4.12 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 14-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,150.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,150.00	0.00	0.00	0.00
4.00	0.00	0.000	1,150.00	0.00	0.00	0.00
6.00	0.00	0.000	1,150.00	0.00	0.00	0.00
8.00	0.00	0.000	1,150.00	0.00	0.00	0.00
10.00	0.22	0.010	1,150.08	0.00	0.00	0.00
12.00	**4.62**	**0.165**	**1,151.06**	**0.00**	**0.00**	0.00
14.00	**1.71**	**0.728**	**1,153.34**	**2.11**	**2.11**	0.00
16.00	0.92	0.691	1,153.22	1.09	1.09	0.00
18.00	0.56	0.671	1,153.16	0.65	0.65	0.00
20.00	0.43	0.661	1,153.13	0.46	0.46	0.00
22.00	0.35	0.656	1,153.11	0.38	0.38	0.00
24.00	0.28	0.653	1,153.10	0.31	0.31	0.00
26.00	0.00	0.632	1,153.03	0.07	0.07	0.00
28.00	0.00	0.626	1,153.01	0.02	0.02	0.00
30.00	0.00	0.624	1,153.00	0.01	0.01	0.00
32.00	0.00	0.623	1,153.00	0.01	0.01	0.00
34.00	0.00	0.621	1,152.99	0.01	0.01	0.00
36.00	0.00	0.620	1,152.99	0.01	0.01	0.00
38.00	0.00	0.619	1,152.98	0.01	0.01	0.00
40.00	0.00	0.618	1,152.98	0.01	0.01	0.00
42.00	0.00	0.617	1,152.97	0.01	0.01	0.00
44.00	0.00	0.615	1,152.97	0.01	0.01	0.00
46.00	0.00	0.614	1,152.97	0.01	0.01	0.00
48.00	0.00	0.613	1,152.96	0.01	0.01	0.00
50.00	0.00	0.612	1,152.96	0.01	0.01	0.00
52.00	0.00	0.611	1,152.95	0.01	0.01	0.00
54.00	0.00	0.609	1,152.95	0.01	0.01	0.00
56.00	0.00	0.608	1,152.95	0.01	0.01	0.00
58.00	0.00	0.607	1,152.94	0.01	0.01	0.00
60.00	0.00	0.606	1,152.94	0.01	0.01	0.00
62.00	0.00	0.605	1,152.93	0.01	0.01	0.00
64.00	0.00	0.604	1,152.93	0.01	0.01	0.00
66.00	0.00	0.602	1,152.92	0.01	0.01	0.00
68.00	0.00	0.601	1,152.92	0.01	0.01	0.00
70.00	0.00	0.600	1,152.92	0.01	0.01	0.00
72.00	0.00	0.599	1,152.91	0.01	0.01	0.00

Summary for Pond 15-Pond:

Inflow Area = 2.830 ac, 0.00% Impervious, Inflow Depth = 2.55" for 10-YR STORM event
Inflow = 3.69 cfs @ 12.69 hrs, Volume= 0.600 af
Outflow = 1.31 cfs @ 13.54 hrs, Volume= 0.322 af, Atten= 65%, Lag= 51.4 min
Primary = 1.31 cfs @ 13.54 hrs, Volume= 0.322 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,200.75' @ 13.54 hrs Surf.Area= 5,111 sf Storage= 13,700 cf

Plug-Flow detention time= 294.2 min calculated for 0.322 af (54% of inflow)
Center-of-Mass det. time= 178.7 min (1,047.0 - 868.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,197.00'	20,760 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

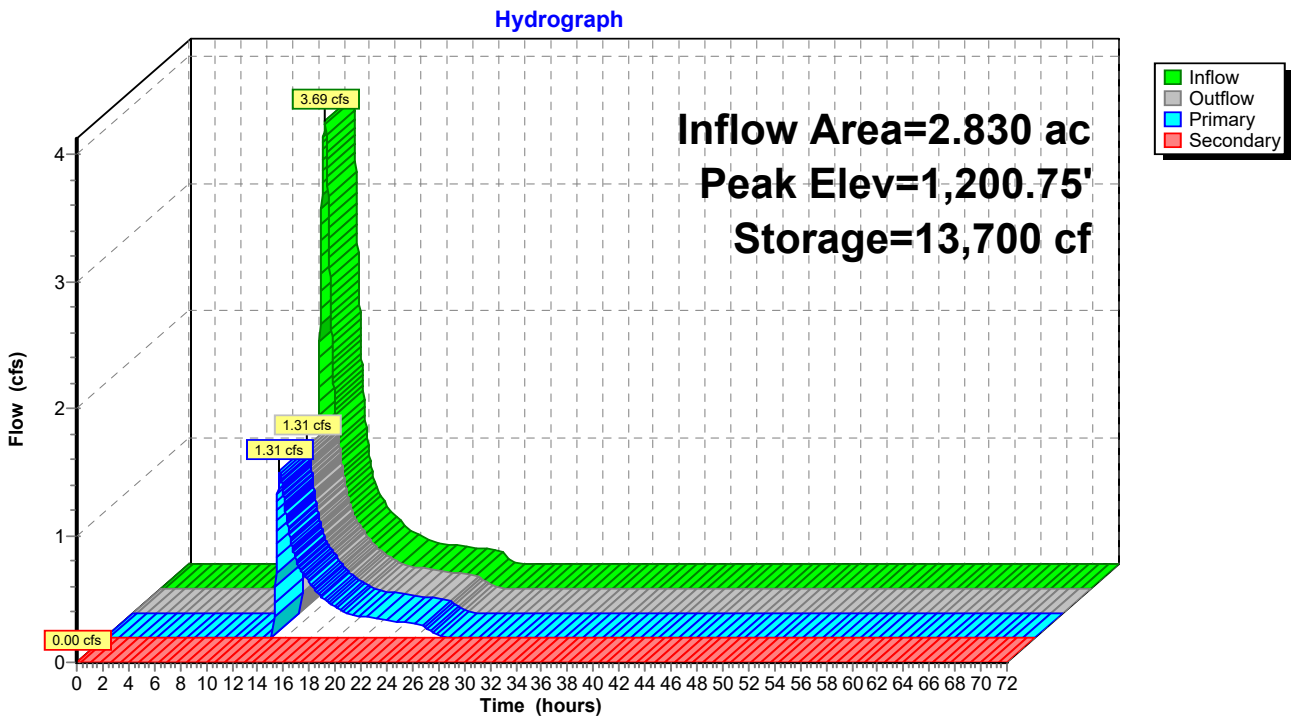
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,197.00	2,331	0	0
1,198.00	2,984	2,658	2,658
1,199.00	3,701	3,343	6,000
1,200.00	4,479	4,090	10,090
1,201.00	5,319	4,899	14,989
1,202.00	6,222	5,771	20,760

Device	Routing	Invert	Outlet Devices
#1	Primary	1,197.00'	**18.0" Round Culvert** L= 70.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,197.00' / 1,196.00' S= 0.0143 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,200.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,201.50'	**30.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,197.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.30 cfs @ 13.54 hrs HW=1,200.75' (Free Discharge)
└─**1=Culvert** (Passes 1.30 cfs of 14.74 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 1.30 cfs @ 1.75 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.32 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,197.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 15-Pond:


Hydrograph
Inflow Area=2.830 ac
Peak Elev=1,200.75'
Storage=13,700 cf
3.69 cfs
1.31 cfs
1.31 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 15-Pond:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	1,197.00	0.00	0.00	**0.00**
2.00	0.00	0	1,197.00	0.00	0.00	0.00
4.00	0.00	0	1,197.00	0.00	0.00	0.00
6.00	0.00	0	1,197.00	0.00	0.00	0.00
8.00	0.00	0	1,197.00	0.00	0.00	0.00
10.00	0.07	154	1,197.07	0.00	0.00	0.00
12.00	**0.69**	**1,798**	**1,197.70**	**0.00**	**0.00**	0.00
14.00	**0.84**	**13,484**	**1,200.71**	**0.99**	**0.99**	0.00
16.00	0.38	13,018	1,200.62	0.41	0.41	0.00
18.00	0.22	12,835	1,200.58	0.24	0.24	0.00
20.00	0.16	12,744	1,200.56	0.17	0.17	0.00
22.00	0.13	12,708	1,200.56	0.14	0.14	0.00
24.00	0.11	12,678	1,200.55	0.11	0.11	0.00
26.00	0.00	12,469	1,200.51	0.02	0.02	0.00
28.00	0.00	12,430	1,200.50	0.00	0.00	0.00
30.00	0.00	12,416	1,200.50	0.00	0.00	0.00
32.00	0.00	12,402	1,200.49	0.00	0.00	0.00
34.00	0.00	12,388	1,200.49	0.00	0.00	0.00
36.00	0.00	12,374	1,200.49	0.00	0.00	0.00
38.00	0.00	12,360	1,200.48	0.00	0.00	0.00
40.00	0.00	12,345	1,200.48	0.00	0.00	0.00
42.00	0.00	12,331	1,200.48	0.00	0.00	0.00
44.00	0.00	12,317	1,200.48	0.00	0.00	0.00
46.00	0.00	12,303	1,200.47	0.00	0.00	0.00
48.00	0.00	12,289	1,200.47	0.00	0.00	0.00
50.00	0.00	12,275	1,200.47	0.00	0.00	0.00
52.00	0.00	12,261	1,200.46	0.00	0.00	0.00
54.00	0.00	12,247	1,200.46	0.00	0.00	0.00
56.00	0.00	12,233	1,200.46	0.00	0.00	0.00
58.00	0.00	12,219	1,200.46	0.00	0.00	0.00
60.00	0.00	12,205	1,200.45	0.00	0.00	0.00
62.00	0.00	12,191	1,200.45	0.00	0.00	0.00
64.00	0.00	12,177	1,200.45	0.00	0.00	0.00
66.00	0.00	12,163	1,200.44	0.00	0.00	0.00
68.00	0.00	12,149	1,200.44	0.00	0.00	0.00
70.00	0.00	12,135	1,200.44	0.00	0.00	0.00
72.00	0.00	12,121	1,200.44	0.00	0.00	0.00

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment01: Runoff Area=2.560 ac 0.00% Impervious Runoff Depth=3.63"
Tc=26.0 min CN=83 Runoff=6.54 cfs 0.774 af

Subcatchment02: Runoff Area=11.560 ac 0.00% Impervious Runoff Depth=3.05"
Tc=26.9 min CN=77 Runoff=24.48 cfs 2.935 af

Subcatchment03: Runoff Area=13.580 ac 0.00% Impervious Runoff Depth=3.43"
Tc=27.7 min CN=81 Runoff=31.92 cfs 3.883 af

Subcatchment04: Runoff Area=1.980 ac 0.00% Impervious Runoff Depth=3.05"
Tc=31.8 min CN=77 Runoff=3.89 cfs 0.503 af

Subcatchment05: Runoff Area=4.310 ac 0.00% Impervious Runoff Depth=3.33"
Tc=19.9 min CN=80 Runoff=11.37 cfs 1.197 af

Subcatchment07: Runoff Area=13.810 ac 0.00% Impervious Runoff Depth=2.59"
Tc=36.0 min CN=72 Runoff=21.63 cfs 2.980 af

Subcatchment08: Runoff Area=17.260 ac 0.00% Impervious Runoff Depth=3.63"
Tc=24.5 min CN=83 Runoff=45.24 cfs 5.221 af

Subcatchment09: Runoff Area=16.030 ac 0.00% Impervious Runoff Depth=3.33"
Tc=71.9 min CN=80 Runoff=22.03 cfs 4.453 af

Subcatchment10: Runoff Area=16.800 ac 0.00% Impervious Runoff Depth=3.53"
Tc=35.2 min CN=82 Runoff=36.41 cfs 4.942 af

Subcatchment11: Runoff Area=2.820 ac 0.00% Impervious Runoff Depth=2.68"
Tc=46.9 min CN=73 Runoff=4.00 cfs 0.630 af

Subcatchment12: Runoff Area=4.010 ac 0.00% Impervious Runoff Depth=3.43"
Tc=23.9 min CN=81 Runoff=10.06 cfs 1.147 af

Subcatchment13: Runoff Area=6.380 ac 0.00% Impervious Runoff Depth=2.95"
Tc=29.1 min CN=76 Runoff=12.65 cfs 1.570 af

Subcatchment14: Runoff Area=8.210 ac 0.00% Impervious Runoff Depth=3.05"
Tc=23.3 min CN=77 Runoff=18.51 cfs 2.084 af

Subcatchment15: Runoff Area=2.830 ac 0.00% Impervious Runoff Depth=3.24"
Tc=50.3 min CN=79 Runoff=4.69 cfs 0.763 af

Pond 01-Pond: Peak Elev=1,114.22' Storage=0.334 af Inflow=6.54 cfs 0.774 af
Primary=3.99 cfs 0.518 af Secondary=0.00 cfs 0.000 af Outflow=3.99 cfs 0.518 af

Pond 02-Pond: Peak Elev=1,045.17' Storage=1.246 af Inflow=24.48 cfs 2.935 af
Primary=12.66 cfs 2.017 af Secondary=0.00 cfs 0.000 af Outflow=12.66 cfs 2.017 af

Pond 03-Pond: Peak Elev=1,133.08' Storage=0.945 af Inflow=31.92 cfs 3.883 af
Primary=24.29 cfs 3.717 af Secondary=0.00 cfs 0.000 af Outflow=24.29 cfs 3.717 af

Pond 04-Pond: Peak Elev=1,109.17' Storage=0.223 af Inflow=3.89 cfs 0.503 af
Primary=2.04 cfs 0.316 af Secondary=0.00 cfs 0.000 af Outflow=2.04 cfs 0.316 af

Pond 05-Pond: Peak Elev=1,140.06' Storage=0.497 af Inflow=11.37 cfs 1.197 af
Primary=5.76 cfs 0.881 af Secondary=0.00 cfs 0.000 af Outflow=5.76 cfs 0.881 af

Pond 07-Pond: Peak Elev=1,134.98' Storage=1.195 af Inflow=21.63 cfs 2.980 af
Primary=11.10 cfs 2.140 af Secondary=0.00 cfs 0.000 af Outflow=11.10 cfs 2.140 af

Pond 08/10-Pond: Peak Elev=1,124.91' Storage=3.154 af Inflow=78.55 cfs 10.163 af
Primary=58.54 cfs 8.881 af Secondary=0.00 cfs 0.000 af Outflow=58.54 cfs 8.881 af

Pond 09-Pond: Peak Elev=1,150.31' Storage=1.918 af Inflow=22.03 cfs 4.453 af
Primary=12.62 cfs 3.143 af Secondary=0.00 cfs 0.000 af Outflow=12.62 cfs 3.143 af

Pond 11-Pond: Peak Elev=1,191.69' Storage=0.366 af Inflow=4.00 cfs 0.630 af
Primary=0.85 cfs 0.299 af Secondary=0.00 cfs 0.000 af Outflow=0.85 cfs 0.299 af

Pond 13-Pond: Peak Elev=1,146.32' Storage=0.688 af Inflow=12.65 cfs 1.570 af
Primary=5.94 cfs 1.050 af Secondary=0.00 cfs 0.000 af Outflow=5.94 cfs 1.050 af

Pond 14-Pond: Peak Elev=1,153.84' Storage=0.888 af Inflow=18.51 cfs 2.084 af
Primary=8.57 cfs 1.485 af Secondary=0.00 cfs 0.000 af Outflow=8.57 cfs 1.485 af

Pond 15-Pond: Peak Elev=1,200.91' Storage=14,522 cf Inflow=4.69 cfs 0.763 af
Primary=2.78 cfs 0.485 af Secondary=0.00 cfs 0.000 af Outflow=2.78 cfs 0.485 af

Total Runoff Area = 122.140 ac Runoff Volume = 33.081 af Average Runoff Depth = 3.25"
100.00% Pervious = 122.140 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 01:

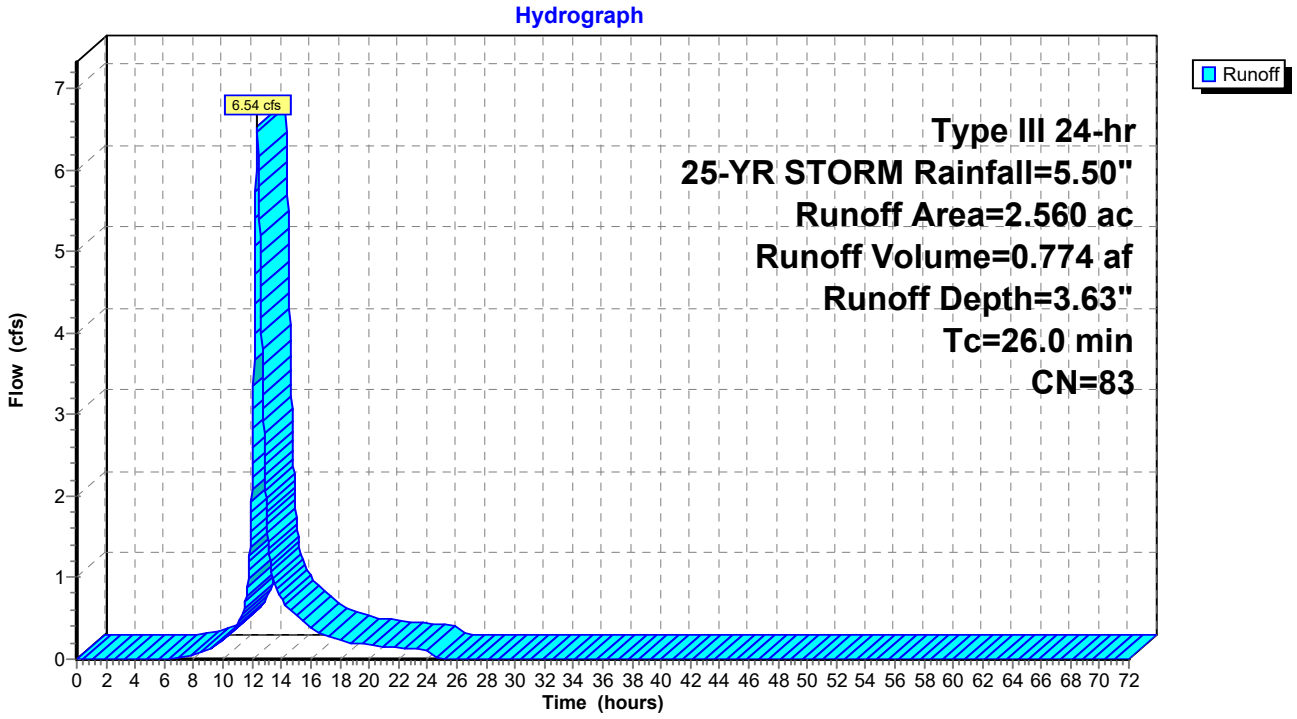
Runoff = 6.54 cfs @ 12.35 hrs, Volume= 0.774 af, Depth= 3.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	2.560	83	
	2.560		100.00% Pervious Area

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

Subcatchment 01:



Hydrograph for Subcatchment 01:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.01
8.00	0.63	0.02	0.05
9.00	0.80	0.06	0.12
10.00	1.04	0.15	0.23
11.00	1.37	0.31	0.44
12.00	2.75	1.25	**2.24**
13.00	4.12	2.40	**1.74**
14.00	4.46	2.69	0.74
15.00	4.70	2.90	0.53
16.00	4.87	3.06	0.39
17.00	5.00	3.18	0.30
18.00	5.10	3.27	0.23
19.00	5.19	3.34	0.19
20.00	5.26	3.41	0.18
21.00	5.33	3.48	0.16
22.00	5.39	3.53	0.15
23.00	5.45	3.58	0.13
24.00	**5.50**	**3.63**	0.12
25.00	5.50	3.63	0.00
26.00	5.50	3.63	0.00
27.00	5.50	3.63	0.00
28.00	5.50	3.63	0.00
29.00	5.50	3.63	0.00
30.00	5.50	3.63	0.00
31.00	5.50	3.63	0.00
32.00	5.50	3.63	0.00
33.00	5.50	3.63	0.00
34.00	5.50	3.63	0.00
35.00	5.50	3.63	0.00
36.00	5.50	3.63	0.00
37.00	5.50	3.63	0.00
38.00	5.50	3.63	0.00
39.00	5.50	3.63	0.00
40.00	5.50	3.63	0.00
41.00	5.50	3.63	0.00
42.00	5.50	3.63	0.00
43.00	5.50	3.63	0.00
44.00	5.50	3.63	0.00
45.00	5.50	3.63	0.00
46.00	5.50	3.63	0.00
47.00	5.50	3.63	0.00
48.00	5.50	3.63	0.00
49.00	5.50	3.63	0.00
50.00	5.50	3.63	0.00
51.00	5.50	3.63	0.00
52.00	5.50	3.63	0.00
53.00	5.50	3.63	0.00
54.00	5.50	3.63	0.00
55.00	5.50	3.63	0.00
56.00	5.50	3.63	0.00
57.00	5.50	3.63	0.00
58.00	5.50	3.63	0.00
59.00	5.50	3.63	0.00
60.00	5.50	3.63	0.00
61.00	5.50	3.63	0.00
62.00	5.50	3.63	0.00
63.00	5.50	3.63	0.00
64.00	5.50	3.63	0.00
65.00	5.50	3.63	0.00
66.00	5.50	3.63	0.00
67.00	5.50	3.63	0.00
68.00	5.50	3.63	0.00
69.00	5.50	3.63	0.00
70.00	5.50	3.63	0.00
71.00	5.50	3.63	0.00
72.00	5.50	3.63	0.00

Summary for Subcatchment 02:

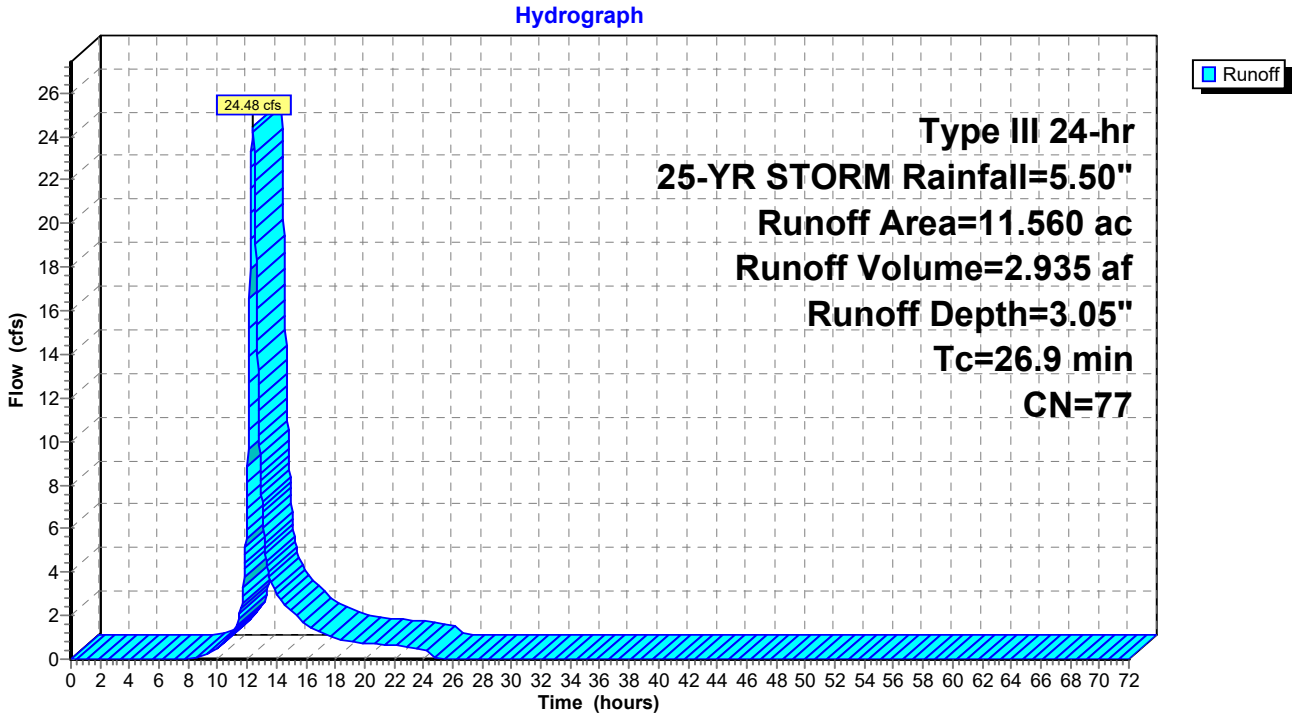
Runoff = 24.48 cfs @ 12.37 hrs, Volume= 2.935 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	11.560	77	
	11.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9					**Direct Entry, SCS TR-55**

Subcatchment 02:



Hydrograph for Subcatchment 02:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.00	0.00
9.00	0.80	0.01	0.17
10.00	1.04	0.06	0.55
11.00	1.37	0.16	1.28
12.00	2.75	0.90	**7.50**
13.00	4.12	1.91	**7.26**
14.00	4.46	2.18	3.04
15.00	4.70	2.37	2.22
16.00	4.87	2.52	1.63
17.00	5.00	2.62	1.24
18.00	5.10	2.71	0.97
19.00	5.19	2.78	0.82
20.00	5.26	2.84	0.74
21.00	5.33	2.90	0.67
22.00	5.39	2.96	0.61
23.00	5.45	3.00	0.55
24.00	**5.50**	**3.05**	0.49
25.00	5.50	3.05	0.01
26.00	5.50	3.05	0.00
27.00	5.50	3.05	0.00
28.00	5.50	3.05	0.00
29.00	5.50	3.05	0.00
30.00	5.50	3.05	0.00
31.00	5.50	3.05	0.00
32.00	5.50	3.05	0.00
33.00	5.50	3.05	0.00
34.00	5.50	3.05	0.00
35.00	5.50	3.05	0.00
36.00	5.50	3.05	0.00
37.00	5.50	3.05	0.00
38.00	5.50	3.05	0.00
39.00	5.50	3.05	0.00
40.00	5.50	3.05	0.00
41.00	5.50	3.05	0.00
42.00	5.50	3.05	0.00
43.00	5.50	3.05	0.00
44.00	5.50	3.05	0.00
45.00	5.50	3.05	0.00
46.00	5.50	3.05	0.00
47.00	5.50	3.05	0.00
48.00	5.50	3.05	0.00
49.00	5.50	3.05	0.00
50.00	5.50	3.05	0.00
51.00	5.50	3.05	0.00
52.00	5.50	3.05	0.00
53.00	5.50	3.05	0.00
54.00	5.50	3.05	0.00
55.00	5.50	3.05	0.00
56.00	5.50	3.05	0.00
57.00	5.50	3.05	0.00
58.00	5.50	3.05	0.00
59.00	5.50	3.05	0.00
60.00	5.50	3.05	0.00
61.00	5.50	3.05	0.00
62.00	5.50	3.05	0.00
63.00	5.50	3.05	0.00
64.00	5.50	3.05	0.00
65.00	5.50	3.05	0.00
66.00	5.50	3.05	0.00
67.00	5.50	3.05	0.00
68.00	5.50	3.05	0.00
69.00	5.50	3.05	0.00
70.00	5.50	3.05	0.00
71.00	5.50	3.05	0.00
72.00	5.50	3.05	0.00

Summary for Subcatchment 03:

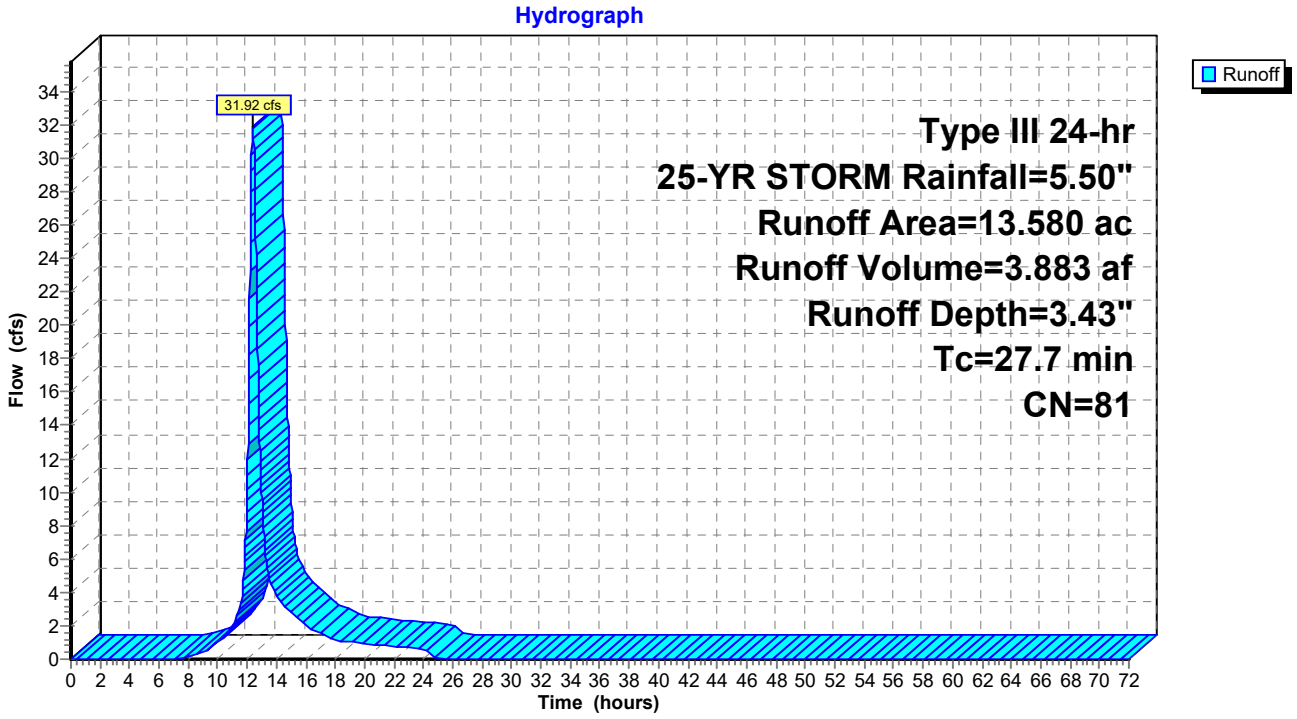
Runoff = 31.92 cfs @ 12.38 hrs, Volume= 3.883 af, Depth= 3.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	13.580	81	
	13.580		100.00% Pervious Area

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

Subcatchment 03:



Hydrograph for Subcatchment 03:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.01	0.14
9.00	0.80	0.04	0.45
10.00	1.04	0.11	1.01
11.00	1.37	0.25	2.02
12.00	2.75	1.12	**10.20**
13.00	4.12	2.23	**9.55**
14.00	4.46	2.51	3.84
15.00	4.70	2.72	2.78
16.00	4.87	2.87	2.04
17.00	5.00	2.99	1.54
18.00	5.10	3.08	1.21
19.00	5.19	3.15	1.01
20.00	5.26	3.22	0.92
21.00	5.33	3.28	0.83
22.00	5.39	3.34	0.76
23.00	5.45	3.39	0.68
24.00	**5.50**	**3.43**	0.61
25.00	5.50	3.43	0.01
26.00	5.50	3.43	0.00
27.00	5.50	3.43	0.00
28.00	5.50	3.43	0.00
29.00	5.50	3.43	0.00
30.00	5.50	3.43	0.00
31.00	5.50	3.43	0.00
32.00	5.50	3.43	0.00
33.00	5.50	3.43	0.00
34.00	5.50	3.43	0.00
35.00	5.50	3.43	0.00
36.00	5.50	3.43	0.00
37.00	5.50	3.43	0.00
38.00	5.50	3.43	0.00
39.00	5.50	3.43	0.00
40.00	5.50	3.43	0.00
41.00	5.50	3.43	0.00
42.00	5.50	3.43	0.00
43.00	5.50	3.43	0.00
44.00	5.50	3.43	0.00
45.00	5.50	3.43	0.00
46.00	5.50	3.43	0.00
47.00	5.50	3.43	0.00
48.00	5.50	3.43	0.00
49.00	5.50	3.43	0.00
50.00	5.50	3.43	0.00
51.00	5.50	3.43	0.00
52.00	5.50	3.43	0.00
53.00	5.50	3.43	0.00
54.00	5.50	3.43	0.00
55.00	5.50	3.43	0.00
56.00	5.50	3.43	0.00
57.00	5.50	3.43	0.00
58.00	5.50	3.43	0.00
59.00	5.50	3.43	0.00
60.00	5.50	3.43	0.00
61.00	5.50	3.43	0.00
62.00	5.50	3.43	0.00
63.00	5.50	3.43	0.00
64.00	5.50	3.43	0.00
65.00	5.50	3.43	0.00
66.00	5.50	3.43	0.00
67.00	5.50	3.43	0.00
68.00	5.50	3.43	0.00
69.00	5.50	3.43	0.00
70.00	5.50	3.43	0.00
71.00	5.50	3.43	0.00
72.00	5.50	3.43	0.00

Summary for Subcatchment 04:

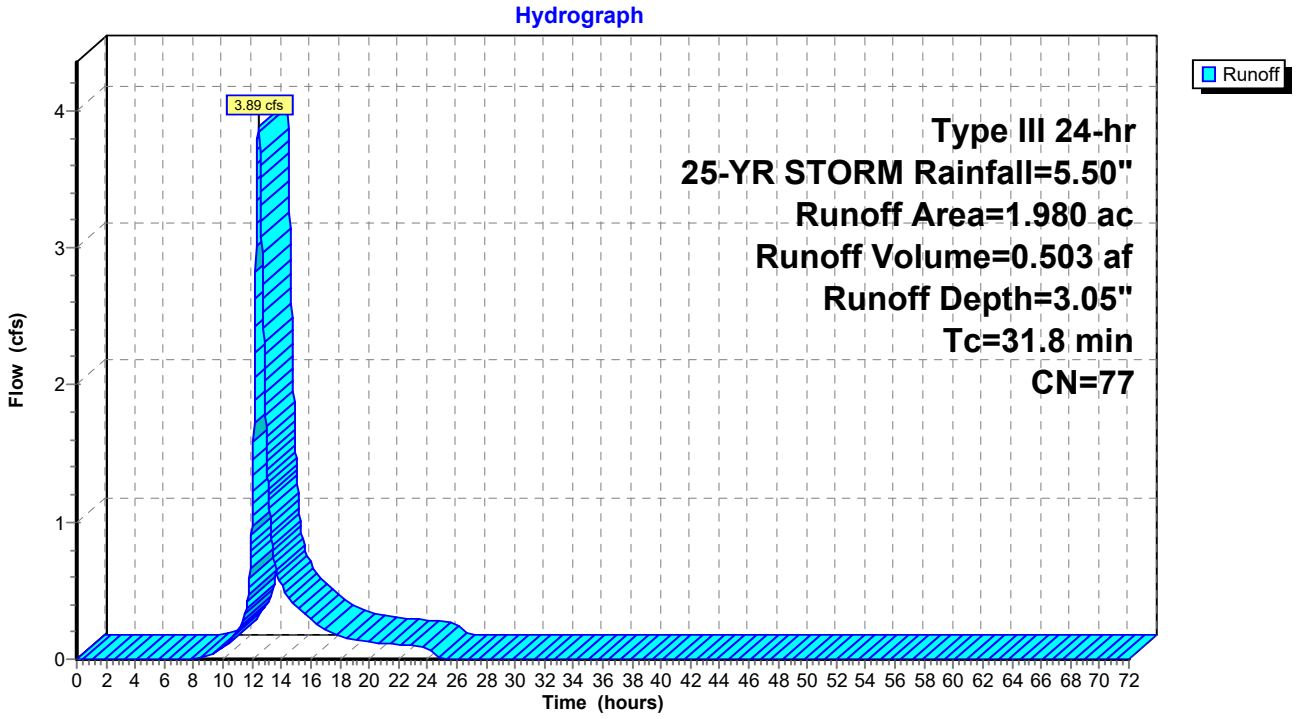
Runoff = 3.89 cfs @ 12.45 hrs, Volume= 0.503 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	1.980	77	
	1.980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.8					**Direct Entry, SCS TR-55**

Subcatchment 04:



Hydrograph for Subcatchment 04:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.00	0.00
9.00	0.80	0.01	0.03
10.00	1.04	0.06	0.09
11.00	1.37	0.16	0.21
12.00	2.75	0.90	**1.05**
13.00	4.12	1.91	**1.50**
14.00	4.46	2.18	0.54
15.00	4.70	2.37	0.39
16.00	4.87	2.52	0.29
17.00	5.00	2.62	0.22
18.00	5.10	2.71	0.17
19.00	5.19	2.78	0.14
20.00	5.26	2.84	0.13
21.00	5.33	2.90	0.12
22.00	5.39	2.96	0.11
23.00	5.45	3.00	0.10
24.00	**5.50**	**3.05**	0.09
25.00	5.50	3.05	0.00
26.00	5.50	3.05	0.00
27.00	5.50	3.05	0.00
28.00	5.50	3.05	0.00
29.00	5.50	3.05	0.00
30.00	5.50	3.05	0.00
31.00	5.50	3.05	0.00
32.00	5.50	3.05	0.00
33.00	5.50	3.05	0.00
34.00	5.50	3.05	0.00
35.00	5.50	3.05	0.00
36.00	5.50	3.05	0.00
37.00	5.50	3.05	0.00
38.00	5.50	3.05	0.00
39.00	5.50	3.05	0.00
40.00	5.50	3.05	0.00
41.00	5.50	3.05	0.00
42.00	5.50	3.05	0.00
43.00	5.50	3.05	0.00
44.00	5.50	3.05	0.00
45.00	5.50	3.05	0.00
46.00	5.50	3.05	0.00
47.00	5.50	3.05	0.00
48.00	5.50	3.05	0.00
49.00	5.50	3.05	0.00
50.00	5.50	3.05	0.00
51.00	5.50	3.05	0.00
52.00	5.50	3.05	0.00
53.00	5.50	3.05	0.00
54.00	5.50	3.05	0.00
55.00	5.50	3.05	0.00
56.00	5.50	3.05	0.00
57.00	5.50	3.05	0.00
58.00	5.50	3.05	0.00
59.00	5.50	3.05	0.00
60.00	5.50	3.05	0.00
61.00	5.50	3.05	0.00
62.00	5.50	3.05	0.00
63.00	5.50	3.05	0.00
64.00	5.50	3.05	0.00
65.00	5.50	3.05	0.00
66.00	5.50	3.05	0.00
67.00	5.50	3.05	0.00
68.00	5.50	3.05	0.00
69.00	5.50	3.05	0.00
70.00	5.50	3.05	0.00
71.00	5.50	3.05	0.00
72.00	5.50	3.05	0.00

Summary for Subcatchment 05:

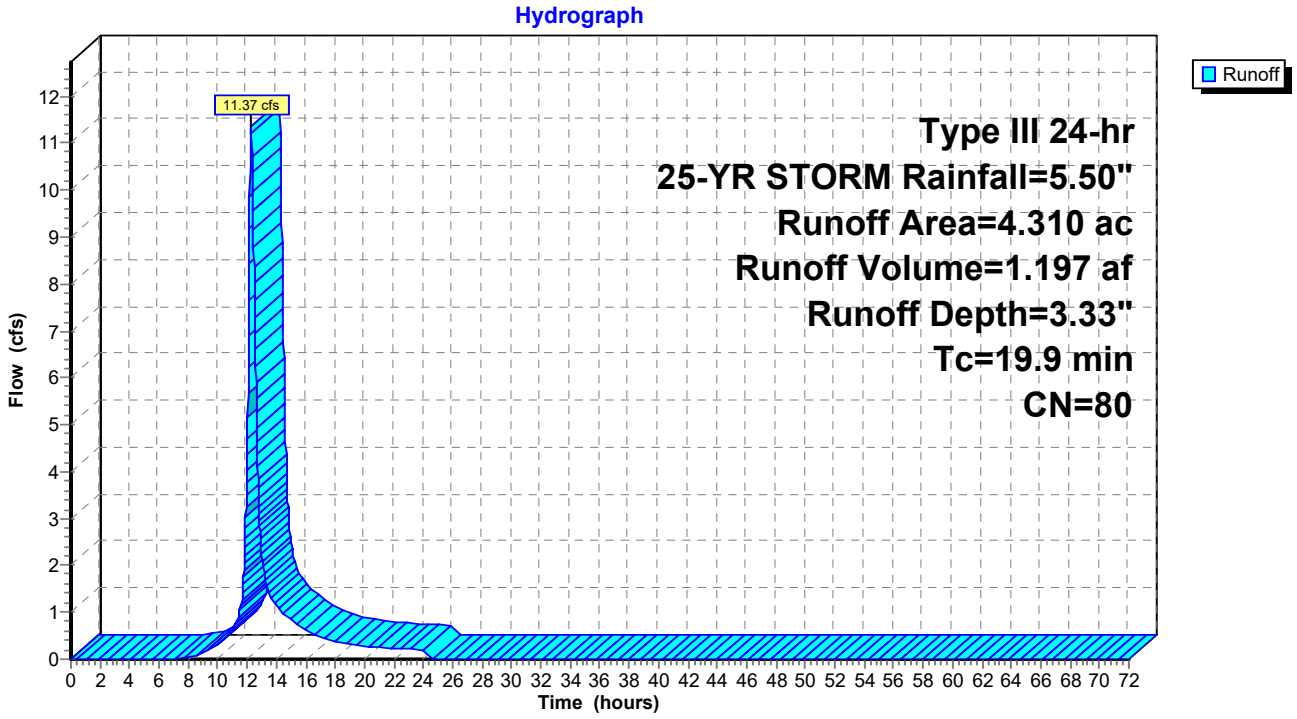
Runoff = 11.37 cfs @ 12.27 hrs, Volume= 1.197 af, Depth= 3.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	4.310	80	
	4.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9					**Direct Entry, SCS TR-55**

Subcatchment 05:



Hydrograph for Subcatchment 05:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.01	0.04
9.00	0.80	0.03	0.14
10.00	1.04	0.10	0.31
11.00	1.37	0.23	0.65
12.00	2.75	1.07	**4.36**
13.00	4.12	2.15	**2.20**
14.00	4.46	2.43	1.14
15.00	4.70	2.63	0.84
16.00	4.87	2.78	0.61
17.00	5.00	2.89	0.47
18.00	5.10	2.98	0.37
19.00	5.19	3.06	0.31
20.00	5.26	3.12	0.28
21.00	5.33	3.18	0.26
22.00	5.39	3.24	0.23
23.00	5.45	3.29	0.21
24.00	**5.50**	**3.33**	0.19
25.00	5.50	3.33	0.00
26.00	5.50	3.33	0.00
27.00	5.50	3.33	0.00
28.00	5.50	3.33	0.00
29.00	5.50	3.33	0.00
30.00	5.50	3.33	0.00
31.00	5.50	3.33	0.00
32.00	5.50	3.33	0.00
33.00	5.50	3.33	0.00
34.00	5.50	3.33	0.00
35.00	5.50	3.33	0.00
36.00	5.50	3.33	0.00
37.00	5.50	3.33	0.00
38.00	5.50	3.33	0.00
39.00	5.50	3.33	0.00
40.00	5.50	3.33	0.00
41.00	5.50	3.33	0.00
42.00	5.50	3.33	0.00
43.00	5.50	3.33	0.00
44.00	5.50	3.33	0.00
45.00	5.50	3.33	0.00
46.00	5.50	3.33	0.00
47.00	5.50	3.33	0.00
48.00	5.50	3.33	0.00
49.00	5.50	3.33	0.00
50.00	5.50	3.33	0.00
51.00	5.50	3.33	0.00
52.00	5.50	3.33	0.00
53.00	5.50	3.33	0.00
54.00	5.50	3.33	0.00
55.00	5.50	3.33	0.00
56.00	5.50	3.33	0.00
57.00	5.50	3.33	0.00
58.00	5.50	3.33	0.00
59.00	5.50	3.33	0.00
60.00	5.50	3.33	0.00
61.00	5.50	3.33	0.00
62.00	5.50	3.33	0.00
63.00	5.50	3.33	0.00
64.00	5.50	3.33	0.00
65.00	5.50	3.33	0.00
66.00	5.50	3.33	0.00
67.00	5.50	3.33	0.00
68.00	5.50	3.33	0.00
69.00	5.50	3.33	0.00
70.00	5.50	3.33	0.00
71.00	5.50	3.33	0.00
72.00	5.50	3.33	0.00

Summary for Subcatchment 07:

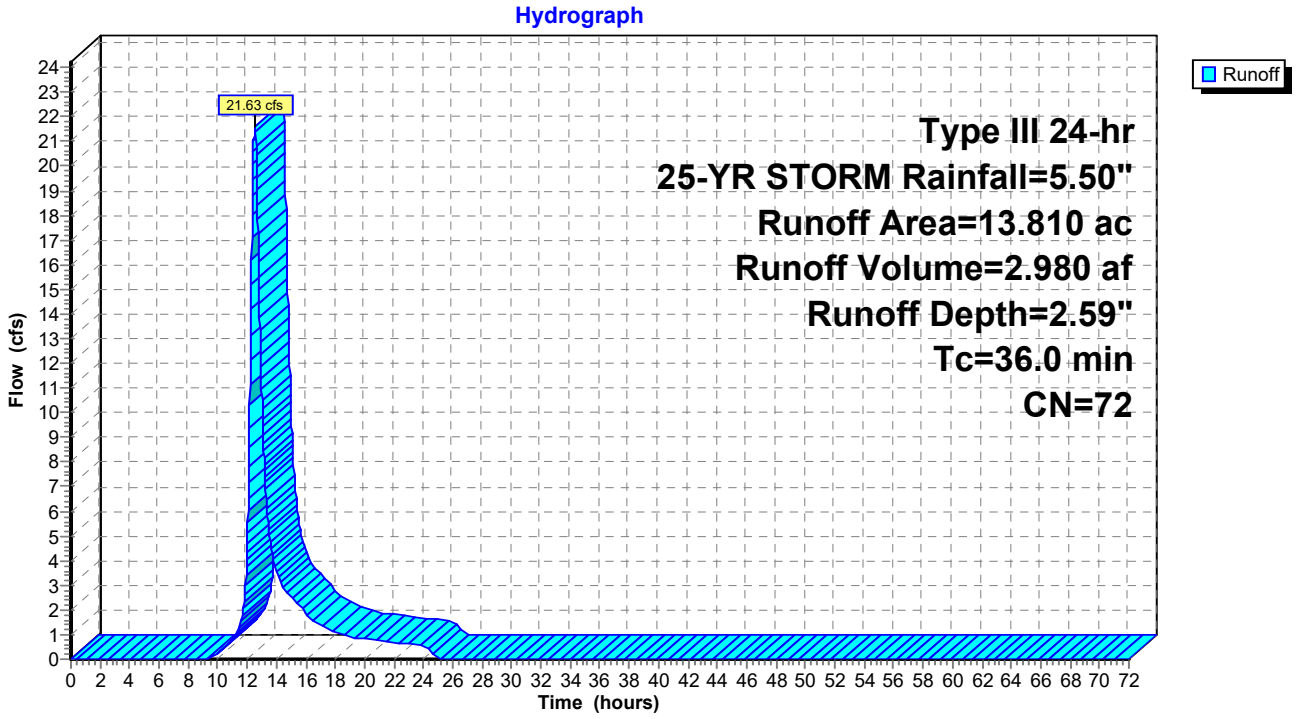
Runoff = 21.63 cfs @ 12.52 hrs, Volume= 2.980 af, Depth= 2.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	13.810	72	
	13.810		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.0					**Direct Entry, SCS TR-55**

Subcatchment 07:



Hydrograph for Subcatchment 07:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.00	0.00
9.00	0.80	0.00	0.00
10.00	1.04	0.02	0.20
11.00	1.37	0.08	0.82
12.00	2.75	0.66	**4.69**
13.00	4.12	1.55	**10.54**
14.00	4.46	1.79	3.56
15.00	4.70	1.97	2.51
16.00	4.87	2.10	1.88
17.00	5.00	2.20	1.40
18.00	5.10	2.28	1.11
19.00	5.19	2.34	0.92
20.00	5.26	2.40	0.83
21.00	5.33	2.46	0.75
22.00	5.39	2.51	0.69
23.00	5.45	2.55	0.62
24.00	**5.50**	**2.59**	0.56
25.00	5.50	2.59	0.04
26.00	5.50	2.59	0.00
27.00	5.50	2.59	0.00
28.00	5.50	2.59	0.00
29.00	5.50	2.59	0.00
30.00	5.50	2.59	0.00
31.00	5.50	2.59	0.00
32.00	5.50	2.59	0.00
33.00	5.50	2.59	0.00
34.00	5.50	2.59	0.00
35.00	5.50	2.59	0.00
36.00	5.50	2.59	0.00
37.00	5.50	2.59	0.00
38.00	5.50	2.59	0.00
39.00	5.50	2.59	0.00
40.00	5.50	2.59	0.00
41.00	5.50	2.59	0.00
42.00	5.50	2.59	0.00
43.00	5.50	2.59	0.00
44.00	5.50	2.59	0.00
45.00	5.50	2.59	0.00
46.00	5.50	2.59	0.00
47.00	5.50	2.59	0.00
48.00	5.50	2.59	0.00
49.00	5.50	2.59	0.00
50.00	5.50	2.59	0.00
51.00	5.50	2.59	0.00
52.00	5.50	2.59	0.00
53.00	5.50	2.59	0.00
54.00	5.50	2.59	0.00
55.00	5.50	2.59	0.00
56.00	5.50	2.59	0.00
57.00	5.50	2.59	0.00
58.00	5.50	2.59	0.00
59.00	5.50	2.59	0.00
60.00	5.50	2.59	0.00
61.00	5.50	2.59	0.00
62.00	5.50	2.59	0.00
63.00	5.50	2.59	0.00
64.00	5.50	2.59	0.00
65.00	5.50	2.59	0.00
66.00	5.50	2.59	0.00
67.00	5.50	2.59	0.00
68.00	5.50	2.59	0.00
69.00	5.50	2.59	0.00
70.00	5.50	2.59	0.00
71.00	5.50	2.59	0.00
72.00	5.50	2.59	0.00

Summary for Subcatchment 08:

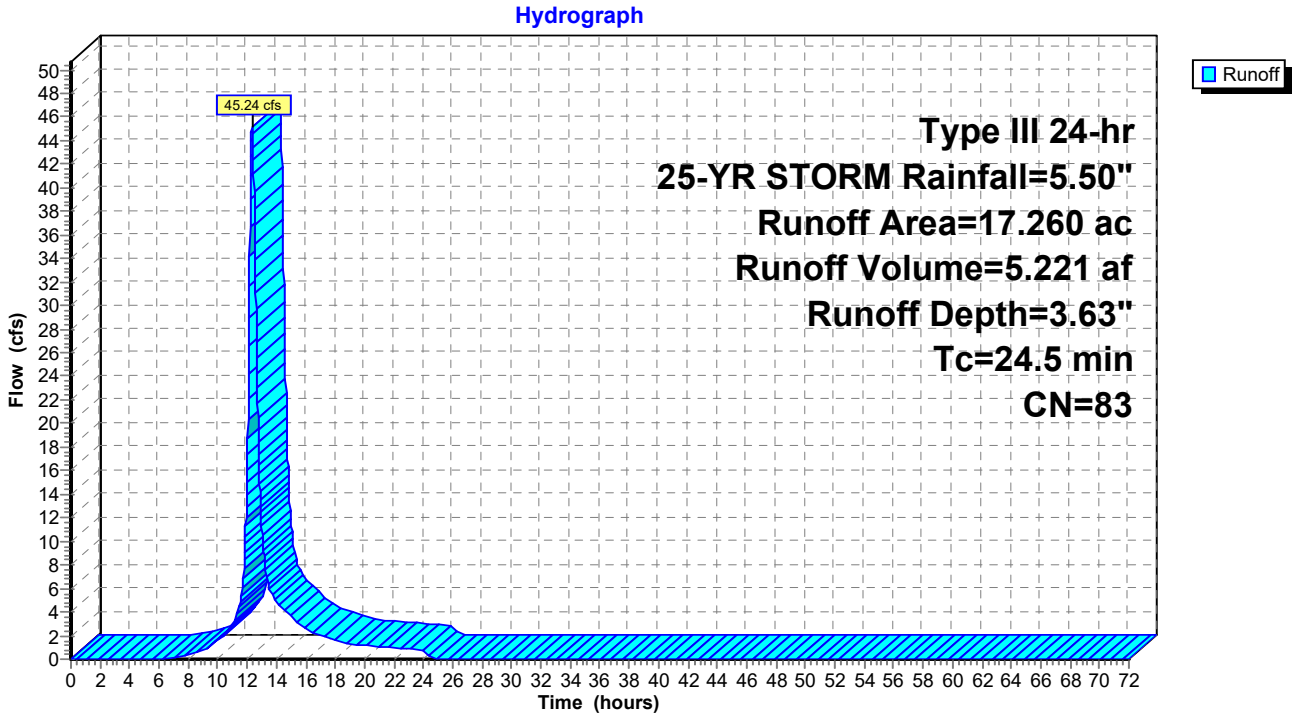
Runoff = 45.24 cfs @ 12.33 hrs, Volume= 5.221 af, Depth= 3.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	17.260	83	
	17.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5					**Direct Entry, SCS TR-55**

Subcatchment 08:



Hydrograph for Subcatchment 08:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.08
8.00	0.63	0.02	0.33
9.00	0.80	0.06	0.80
10.00	1.04	0.15	1.59
11.00	1.37	0.31	3.01
12.00	2.75	1.25	**16.08**
13.00	4.12	2.40	**11.08**
14.00	4.46	2.69	4.91
15.00	4.70	2.90	3.58
16.00	4.87	3.06	2.61
17.00	5.00	3.18	1.98
18.00	5.10	3.27	1.55
19.00	5.19	3.34	1.31
20.00	5.26	3.41	1.18
21.00	5.33	3.48	1.08
22.00	5.39	3.53	0.98
23.00	5.45	3.58	0.88
24.00	**5.50**	**3.63**	0.78
25.00	5.50	3.63	0.01
26.00	5.50	3.63	0.00
27.00	5.50	3.63	0.00
28.00	5.50	3.63	0.00
29.00	5.50	3.63	0.00
30.00	5.50	3.63	0.00
31.00	5.50	3.63	0.00
32.00	5.50	3.63	0.00
33.00	5.50	3.63	0.00
34.00	5.50	3.63	0.00
35.00	5.50	3.63	0.00
36.00	5.50	3.63	0.00
37.00	5.50	3.63	0.00
38.00	5.50	3.63	0.00
39.00	5.50	3.63	0.00
40.00	5.50	3.63	0.00
41.00	5.50	3.63	0.00
42.00	5.50	3.63	0.00
43.00	5.50	3.63	0.00
44.00	5.50	3.63	0.00
45.00	5.50	3.63	0.00
46.00	5.50	3.63	0.00
47.00	5.50	3.63	0.00
48.00	5.50	3.63	0.00
49.00	5.50	3.63	0.00
50.00	5.50	3.63	0.00
51.00	5.50	3.63	0.00
52.00	5.50	3.63	0.00
53.00	5.50	3.63	0.00
54.00	5.50	3.63	0.00
55.00	5.50	3.63	0.00
56.00	5.50	3.63	0.00
57.00	5.50	3.63	0.00
58.00	5.50	3.63	0.00
59.00	5.50	3.63	0.00
60.00	5.50	3.63	0.00
61.00	5.50	3.63	0.00
62.00	5.50	3.63	0.00
63.00	5.50	3.63	0.00
64.00	5.50	3.63	0.00
65.00	5.50	3.63	0.00
66.00	5.50	3.63	0.00
67.00	5.50	3.63	0.00
68.00	5.50	3.63	0.00
69.00	5.50	3.63	0.00
70.00	5.50	3.63	0.00
71.00	5.50	3.63	0.00
72.00	5.50	3.63	0.00

Summary for Subcatchment 09:

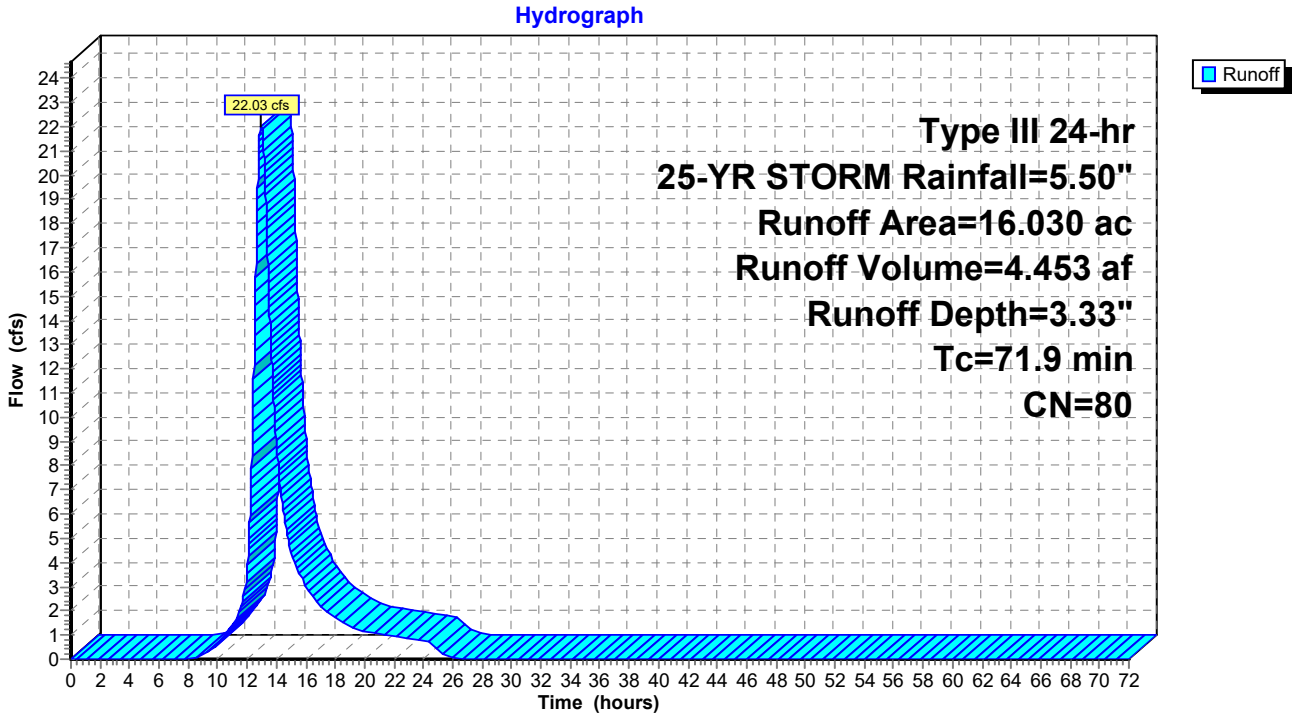
Runoff = 22.03 cfs @ 12.96 hrs, Volume= 4.453 af, Depth= 3.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	16.030	80	
	16.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
71.9					**Direct Entry, SCS TR-55**

Subcatchment 09:



Hydrograph for Subcatchment 09:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.01	0.03
9.00	0.80	0.03	0.22
10.00	1.04	0.10	0.65
11.00	1.37	0.23	1.41
12.00	2.75	1.07	**3.67**
13.00	4.12	2.15	**22.01**
14.00	4.46	2.43	8.79
15.00	4.70	2.63	4.44
16.00	4.87	2.78	3.02
17.00	5.00	2.89	2.17
18.00	5.10	2.98	1.69
19.00	5.19	3.06	1.33
20.00	5.26	3.12	1.15
21.00	5.33	3.18	1.04
22.00	5.39	3.24	0.94
23.00	5.45	3.29	0.86
24.00	**5.50**	**3.33**	0.77
25.00	5.50	3.33	0.37
26.00	5.50	3.33	0.05
27.00	5.50	3.33	0.01
28.00	5.50	3.33	0.00
29.00	5.50	3.33	0.00
30.00	5.50	3.33	0.00
31.00	5.50	3.33	0.00
32.00	5.50	3.33	0.00
33.00	5.50	3.33	0.00
34.00	5.50	3.33	0.00
35.00	5.50	3.33	0.00
36.00	5.50	3.33	0.00
37.00	5.50	3.33	0.00
38.00	5.50	3.33	0.00
39.00	5.50	3.33	0.00
40.00	5.50	3.33	0.00
41.00	5.50	3.33	0.00
42.00	5.50	3.33	0.00
43.00	5.50	3.33	0.00
44.00	5.50	3.33	0.00
45.00	5.50	3.33	0.00
46.00	5.50	3.33	0.00
47.00	5.50	3.33	0.00
48.00	5.50	3.33	0.00
49.00	5.50	3.33	0.00
50.00	5.50	3.33	0.00
51.00	5.50	3.33	0.00
52.00	5.50	3.33	0.00
53.00	5.50	3.33	0.00
54.00	5.50	3.33	0.00
55.00	5.50	3.33	0.00
56.00	5.50	3.33	0.00
57.00	5.50	3.33	0.00
58.00	5.50	3.33	0.00
59.00	5.50	3.33	0.00
60.00	5.50	3.33	0.00
61.00	5.50	3.33	0.00
62.00	5.50	3.33	0.00
63.00	5.50	3.33	0.00
64.00	5.50	3.33	0.00
65.00	5.50	3.33	0.00
66.00	5.50	3.33	0.00
67.00	5.50	3.33	0.00
68.00	5.50	3.33	0.00
69.00	5.50	3.33	0.00
70.00	5.50	3.33	0.00
71.00	5.50	3.33	0.00
72.00	5.50	3.33	0.00

Summary for Subcatchment 10:

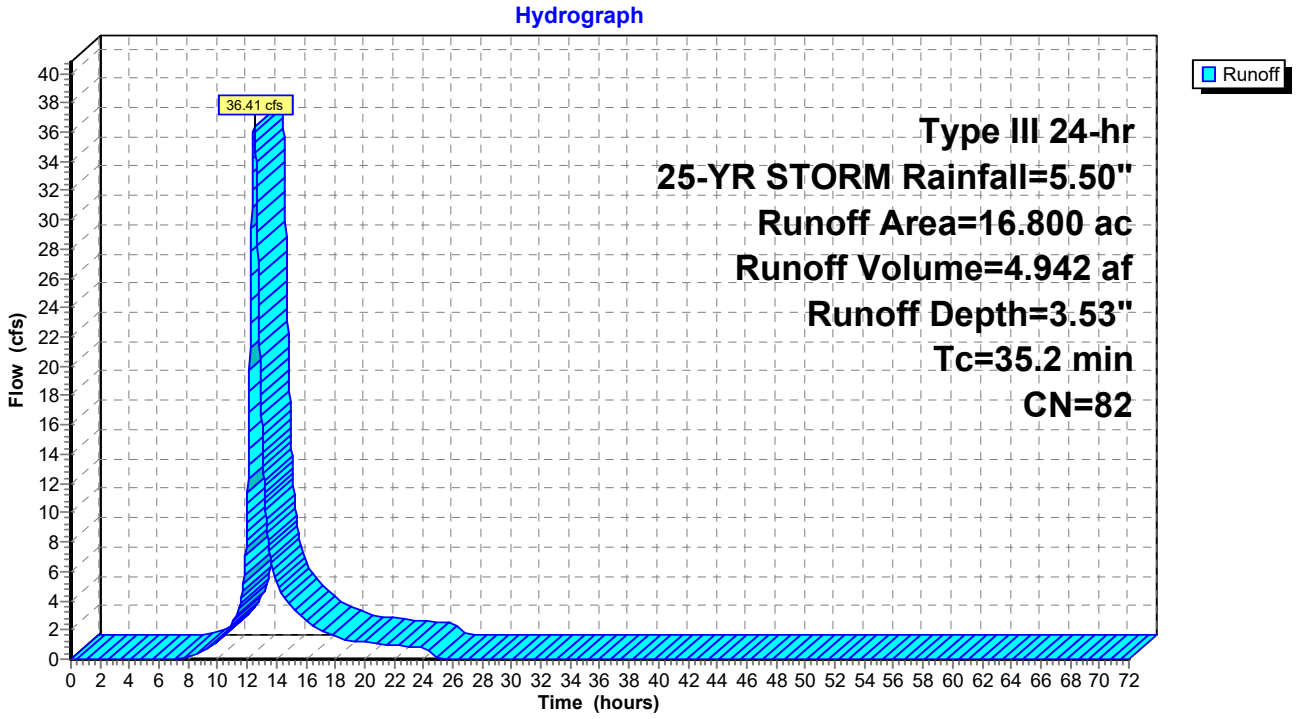
Runoff = 36.41 cfs @ 12.48 hrs, Volume= 4.942 af, Depth= 3.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	16.800	82	
	16.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
35.2					**Direct Entry, SCS TR-55**

Subcatchment 10:



Hydrograph for Subcatchment 10:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.02
8.00	0.63	0.01	0.21
9.00	0.80	0.05	0.59
10.00	1.04	0.13	1.28
11.00	1.37	0.28	2.48
12.00	2.75	1.19	**9.93**
13.00	4.12	2.31	**15.96**
14.00	4.46	2.60	5.15
15.00	4.70	2.81	3.60
16.00	4.87	2.97	2.67
17.00	5.00	3.08	1.98
18.00	5.10	3.17	1.56
19.00	5.19	3.25	1.29
20.00	5.26	3.32	1.16
21.00	5.33	3.38	1.05
22.00	5.39	3.43	0.96
23.00	5.45	3.48	0.86
24.00	**5.50**	**3.53**	0.77
25.00	5.50	3.53	0.05
26.00	5.50	3.53	0.00
27.00	5.50	3.53	0.00
28.00	5.50	3.53	0.00
29.00	5.50	3.53	0.00
30.00	5.50	3.53	0.00
31.00	5.50	3.53	0.00
32.00	5.50	3.53	0.00
33.00	5.50	3.53	0.00
34.00	5.50	3.53	0.00
35.00	5.50	3.53	0.00
36.00	5.50	3.53	0.00
37.00	5.50	3.53	0.00
38.00	5.50	3.53	0.00
39.00	5.50	3.53	0.00
40.00	5.50	3.53	0.00
41.00	5.50	3.53	0.00
42.00	5.50	3.53	0.00
43.00	5.50	3.53	0.00
44.00	5.50	3.53	0.00
45.00	5.50	3.53	0.00
46.00	5.50	3.53	0.00
47.00	5.50	3.53	0.00
48.00	5.50	3.53	0.00
49.00	5.50	3.53	0.00
50.00	5.50	3.53	0.00
51.00	5.50	3.53	0.00
52.00	5.50	3.53	0.00
53.00	5.50	3.53	0.00
54.00	5.50	3.53	0.00
55.00	5.50	3.53	0.00
56.00	5.50	3.53	0.00
57.00	5.50	3.53	0.00
58.00	5.50	3.53	0.00
59.00	5.50	3.53	0.00
60.00	5.50	3.53	0.00
61.00	5.50	3.53	0.00
62.00	5.50	3.53	0.00
63.00	5.50	3.53	0.00
64.00	5.50	3.53	0.00
65.00	5.50	3.53	0.00
66.00	5.50	3.53	0.00
67.00	5.50	3.53	0.00
68.00	5.50	3.53	0.00
69.00	5.50	3.53	0.00
70.00	5.50	3.53	0.00
71.00	5.50	3.53	0.00
72.00	5.50	3.53	0.00

Summary for Subcatchment 11:

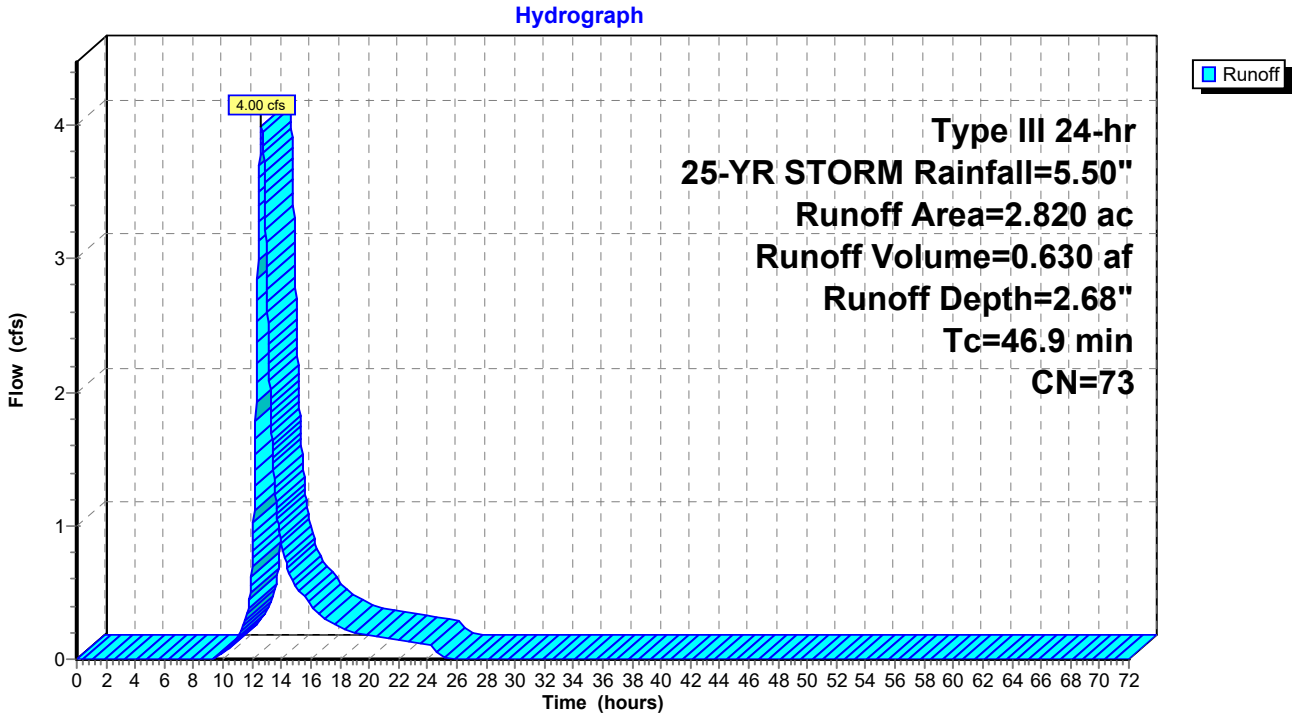
Runoff = 4.00 cfs @ 12.66 hrs, Volume= 0.630 af, Depth= 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	2.820	73	
	2.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
46.9					**Direct Entry, SCS TR-55**

Subcatchment 11:



Hydrograph for Subcatchment 11:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.00	0.00
9.00	0.80	0.00	0.00
10.00	1.04	0.02	0.04
11.00	1.37	0.09	0.16
12.00	2.75	0.71	**0.71**
13.00	4.12	1.62	**2.86**
14.00	4.46	1.87	0.87
15.00	4.70	2.05	0.55
16.00	4.87	2.18	0.41
17.00	5.00	2.28	0.30
18.00	5.10	2.36	0.24
19.00	5.19	2.43	0.20
20.00	5.26	2.49	0.18
21.00	5.33	2.54	0.16
22.00	5.39	2.59	0.14
23.00	5.45	2.64	0.13
24.00	**5.50**	**2.68**	0.12
25.00	5.50	2.68	0.02
26.00	5.50	2.68	0.00
27.00	5.50	2.68	0.00
28.00	5.50	2.68	0.00
29.00	5.50	2.68	0.00
30.00	5.50	2.68	0.00
31.00	5.50	2.68	0.00
32.00	5.50	2.68	0.00
33.00	5.50	2.68	0.00
34.00	5.50	2.68	0.00
35.00	5.50	2.68	0.00
36.00	5.50	2.68	0.00
37.00	5.50	2.68	0.00
38.00	5.50	2.68	0.00
39.00	5.50	2.68	0.00
40.00	5.50	2.68	0.00
41.00	5.50	2.68	0.00
42.00	5.50	2.68	0.00
43.00	5.50	2.68	0.00
44.00	5.50	2.68	0.00
45.00	5.50	2.68	0.00
46.00	5.50	2.68	0.00
47.00	5.50	2.68	0.00
48.00	5.50	2.68	0.00
49.00	5.50	2.68	0.00
50.00	5.50	2.68	0.00
51.00	5.50	2.68	0.00
52.00	5.50	2.68	0.00
53.00	5.50	2.68	0.00
54.00	5.50	2.68	0.00
55.00	5.50	2.68	0.00
56.00	5.50	2.68	0.00
57.00	5.50	2.68	0.00
58.00	5.50	2.68	0.00
59.00	5.50	2.68	0.00
60.00	5.50	2.68	0.00
61.00	5.50	2.68	0.00
62.00	5.50	2.68	0.00
63.00	5.50	2.68	0.00
64.00	5.50	2.68	0.00
65.00	5.50	2.68	0.00
66.00	5.50	2.68	0.00
67.00	5.50	2.68	0.00
68.00	5.50	2.68	0.00
69.00	5.50	2.68	0.00
70.00	5.50	2.68	0.00
71.00	5.50	2.68	0.00
72.00	5.50	2.68	0.00

Summary for Subcatchment 12:

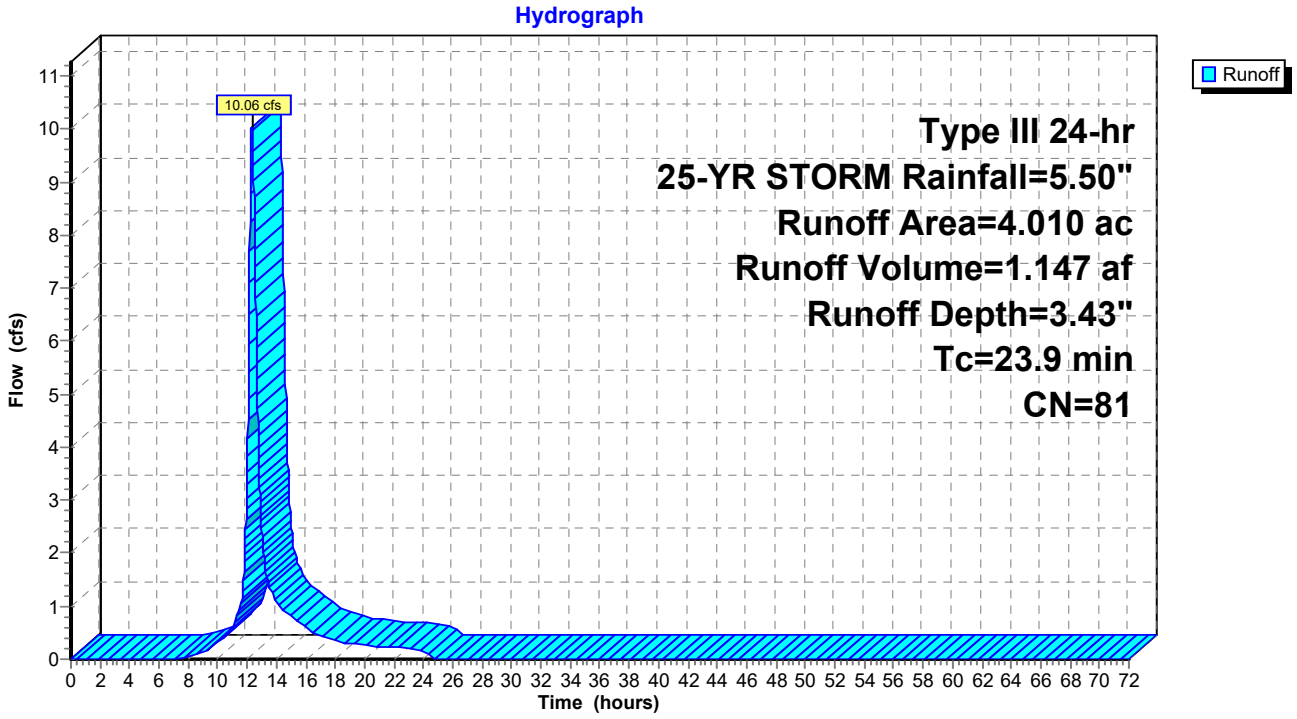
Runoff = 10.06 cfs @ 12.33 hrs, Volume= 1.147 af, Depth= 3.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	4.010	81	
	4.010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.9					**Direct Entry, SCS TR-55**

Subcatchment 12:



Hydrograph for Subcatchment 12:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.01	0.05
9.00	0.80	0.04	0.14
10.00	1.04	0.11	0.31
11.00	1.37	0.25	0.62
12.00	2.75	1.12	**3.54**
13.00	4.12	2.23	**2.43**
14.00	4.46	2.51	1.11
15.00	4.70	2.72	0.81
16.00	4.87	2.87	0.59
17.00	5.00	2.99	0.45
18.00	5.10	3.08	0.35
19.00	5.19	3.15	0.30
20.00	5.26	3.22	0.27
21.00	5.33	3.28	0.24
22.00	5.39	3.34	0.22
23.00	5.45	3.39	0.20
24.00	**5.50**	**3.43**	0.18
25.00	5.50	3.43	0.00
26.00	5.50	3.43	0.00
27.00	5.50	3.43	0.00
28.00	5.50	3.43	0.00
29.00	5.50	3.43	0.00
30.00	5.50	3.43	0.00
31.00	5.50	3.43	0.00
32.00	5.50	3.43	0.00
33.00	5.50	3.43	0.00
34.00	5.50	3.43	0.00
35.00	5.50	3.43	0.00
36.00	5.50	3.43	0.00
37.00	5.50	3.43	0.00
38.00	5.50	3.43	0.00
39.00	5.50	3.43	0.00
40.00	5.50	3.43	0.00
41.00	5.50	3.43	0.00
42.00	5.50	3.43	0.00
43.00	5.50	3.43	0.00
44.00	5.50	3.43	0.00
45.00	5.50	3.43	0.00
46.00	5.50	3.43	0.00
47.00	5.50	3.43	0.00
48.00	5.50	3.43	0.00
49.00	5.50	3.43	0.00
50.00	5.50	3.43	0.00
51.00	5.50	3.43	0.00
52.00	5.50	3.43	0.00
53.00	5.50	3.43	0.00
54.00	5.50	3.43	0.00
55.00	5.50	3.43	0.00
56.00	5.50	3.43	0.00
57.00	5.50	3.43	0.00
58.00	5.50	3.43	0.00
59.00	5.50	3.43	0.00
60.00	5.50	3.43	0.00
61.00	5.50	3.43	0.00
62.00	5.50	3.43	0.00
63.00	5.50	3.43	0.00
64.00	5.50	3.43	0.00
65.00	5.50	3.43	0.00
66.00	5.50	3.43	0.00
67.00	5.50	3.43	0.00
68.00	5.50	3.43	0.00
69.00	5.50	3.43	0.00
70.00	5.50	3.43	0.00
71.00	5.50	3.43	0.00
72.00	5.50	3.43	0.00

Summary for Subcatchment 13:

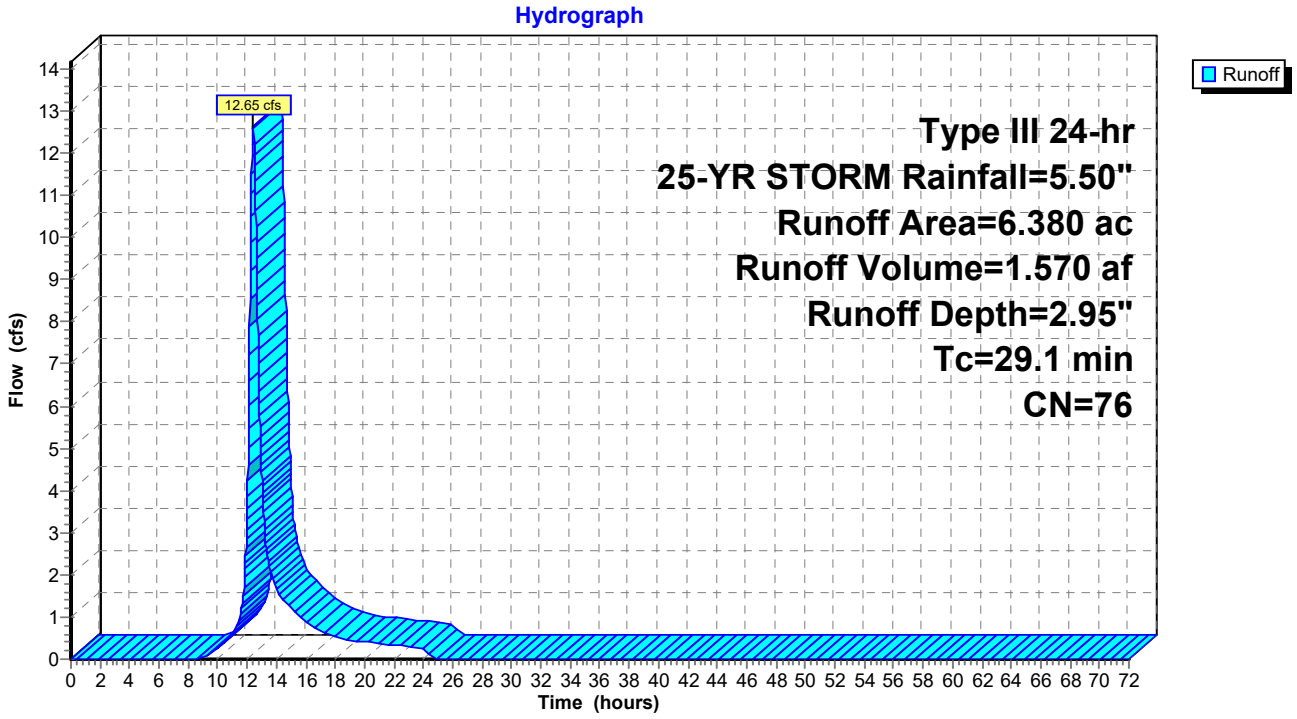
Runoff = 12.65 cfs @ 12.40 hrs, Volume= 1.570 af, Depth= 2.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	6.380	76	
	6.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.1					**Direct Entry, SCS TR-55**

Subcatchment 13:



Hydrograph for Subcatchment 13:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.00	0.00
9.00	0.80	0.01	0.06
10.00	1.04	0.05	0.25
11.00	1.37	0.14	0.63
12.00	2.75	0.85	**3.59**
13.00	4.12	1.83	**4.26**
14.00	4.46	2.10	1.67
15.00	4.70	2.29	1.21
16.00	4.87	2.43	0.90
17.00	5.00	2.54	0.68
18.00	5.10	2.62	0.53
19.00	5.19	2.69	0.45
20.00	5.26	2.75	0.40
21.00	5.33	2.81	0.37
22.00	5.39	2.86	0.33
23.00	5.45	2.91	0.30
24.00	**5.50**	**2.95**	0.27
25.00	5.50	2.95	0.01
26.00	5.50	2.95	0.00
27.00	5.50	2.95	0.00
28.00	5.50	2.95	0.00
29.00	5.50	2.95	0.00
30.00	5.50	2.95	0.00
31.00	5.50	2.95	0.00
32.00	5.50	2.95	0.00
33.00	5.50	2.95	0.00
34.00	5.50	2.95	0.00
35.00	5.50	2.95	0.00
36.00	5.50	2.95	0.00
37.00	5.50	2.95	0.00
38.00	5.50	2.95	0.00
39.00	5.50	2.95	0.00
40.00	5.50	2.95	0.00
41.00	5.50	2.95	0.00
42.00	5.50	2.95	0.00
43.00	5.50	2.95	0.00
44.00	5.50	2.95	0.00
45.00	5.50	2.95	0.00
46.00	5.50	2.95	0.00
47.00	5.50	2.95	0.00
48.00	5.50	2.95	0.00
49.00	5.50	2.95	0.00
50.00	5.50	2.95	0.00
51.00	5.50	2.95	0.00
52.00	5.50	2.95	0.00
53.00	5.50	2.95	0.00
54.00	5.50	2.95	0.00
55.00	5.50	2.95	0.00
56.00	5.50	2.95	0.00
57.00	5.50	2.95	0.00
58.00	5.50	2.95	0.00
59.00	5.50	2.95	0.00
60.00	5.50	2.95	0.00
61.00	5.50	2.95	0.00
62.00	5.50	2.95	0.00
63.00	5.50	2.95	0.00
64.00	5.50	2.95	0.00
65.00	5.50	2.95	0.00
66.00	5.50	2.95	0.00
67.00	5.50	2.95	0.00
68.00	5.50	2.95	0.00
69.00	5.50	2.95	0.00
70.00	5.50	2.95	0.00
71.00	5.50	2.95	0.00
72.00	5.50	2.95	0.00

Summary for Subcatchment 14:

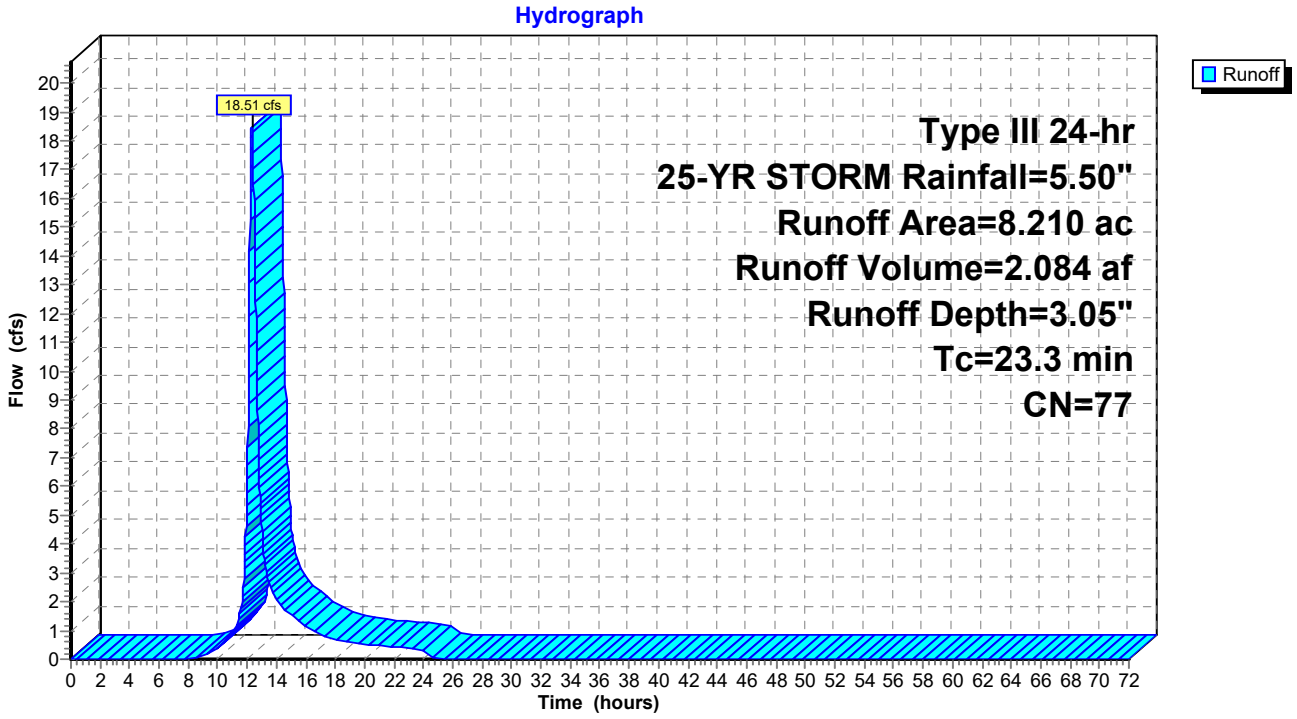
Runoff = 18.51 cfs @ 12.32 hrs, Volume= 2.084 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	8.210	77	
	8.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.3					**Direct Entry, SCS TR-55**

Subcatchment 14:



Hydrograph for Subcatchment 14:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.00	0.00
9.00	0.80	0.01	0.13
10.00	1.04	0.06	0.41
11.00	1.37	0.16	0.95
12.00	2.75	0.90	**6.24**
13.00	4.12	1.91	**4.48**
14.00	4.46	2.18	2.11
15.00	4.70	2.37	1.55
16.00	4.87	2.52	1.14
17.00	5.00	2.62	0.87
18.00	5.10	2.71	0.68
19.00	5.19	2.78	0.58
20.00	5.26	2.84	0.52
21.00	5.33	2.90	0.48
22.00	5.39	2.96	0.43
23.00	5.45	3.00	0.39
24.00	**5.50**	**3.05**	0.35
25.00	5.50	3.05	0.00
26.00	5.50	3.05	0.00
27.00	5.50	3.05	0.00
28.00	5.50	3.05	0.00
29.00	5.50	3.05	0.00
30.00	5.50	3.05	0.00
31.00	5.50	3.05	0.00
32.00	5.50	3.05	0.00
33.00	5.50	3.05	0.00
34.00	5.50	3.05	0.00
35.00	5.50	3.05	0.00
36.00	5.50	3.05	0.00
37.00	5.50	3.05	0.00
38.00	5.50	3.05	0.00
39.00	5.50	3.05	0.00
40.00	5.50	3.05	0.00
41.00	5.50	3.05	0.00
42.00	5.50	3.05	0.00
43.00	5.50	3.05	0.00
44.00	5.50	3.05	0.00
45.00	5.50	3.05	0.00
46.00	5.50	3.05	0.00
47.00	5.50	3.05	0.00
48.00	5.50	3.05	0.00
49.00	5.50	3.05	0.00
50.00	5.50	3.05	0.00
51.00	5.50	3.05	0.00
52.00	5.50	3.05	0.00
53.00	5.50	3.05	0.00
54.00	5.50	3.05	0.00
55.00	5.50	3.05	0.00
56.00	5.50	3.05	0.00
57.00	5.50	3.05	0.00
58.00	5.50	3.05	0.00
59.00	5.50	3.05	0.00
60.00	5.50	3.05	0.00
61.00	5.50	3.05	0.00
62.00	5.50	3.05	0.00
63.00	5.50	3.05	0.00
64.00	5.50	3.05	0.00
65.00	5.50	3.05	0.00
66.00	5.50	3.05	0.00
67.00	5.50	3.05	0.00
68.00	5.50	3.05	0.00
69.00	5.50	3.05	0.00
70.00	5.50	3.05	0.00
71.00	5.50	3.05	0.00
72.00	5.50	3.05	0.00

Summary for Subcatchment 15:

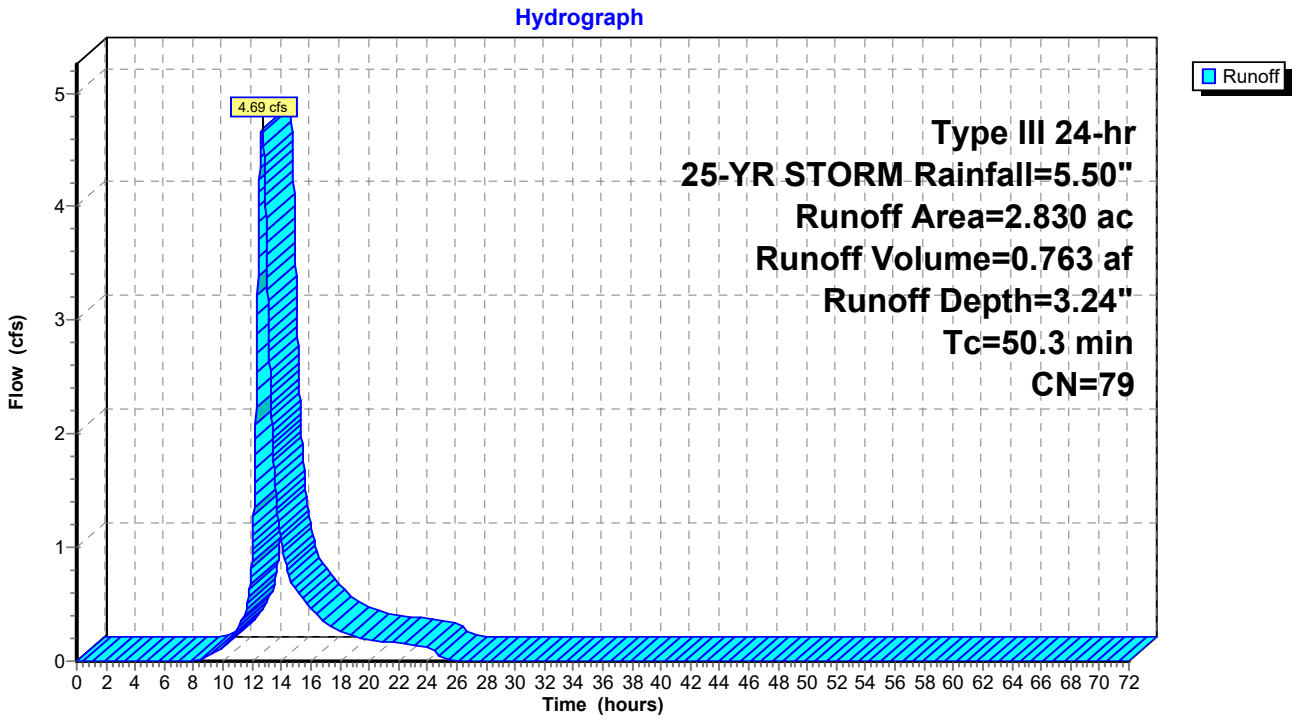
Runoff = 4.69 cfs @ 12.69 hrs, Volume= 0.763 af, Depth= 3.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 25-YR STORM Rainfall=5.50"

	Area (ac)	CN	Description
*	2.830	79	
	2.830		100.00% Pervious Area

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

Subcatchment 15:



Hydrograph for Subcatchment 15:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.11	0.00	0.00
3.00	0.17	0.00	0.00
4.00	0.24	0.00	0.00
5.00	0.31	0.00	0.00
6.00	0.40	0.00	0.00
7.00	0.50	0.00	0.00
8.00	0.63	0.00	0.00
9.00	0.80	0.02	0.04
10.00	1.04	0.08	0.13
11.00	1.37	0.20	0.29
12.00	2.75	1.01	**0.93**
13.00	4.12	2.07	**3.58**
14.00	4.46	2.34	1.04
15.00	4.70	2.54	0.63
16.00	4.87	2.69	0.47
17.00	5.00	2.80	0.34
18.00	5.10	2.89	0.27
19.00	5.19	2.96	0.22
20.00	5.26	3.03	0.19
21.00	5.33	3.09	0.17
22.00	5.39	3.14	0.16
23.00	5.45	3.19	0.14
24.00	**5.50**	**3.24**	0.13
25.00	5.50	3.24	0.03
26.00	5.50	3.24	0.00
27.00	5.50	3.24	0.00
28.00	5.50	3.24	0.00
29.00	5.50	3.24	0.00
30.00	5.50	3.24	0.00
31.00	5.50	3.24	0.00
32.00	5.50	3.24	0.00
33.00	5.50	3.24	0.00
34.00	5.50	3.24	0.00
35.00	5.50	3.24	0.00
36.00	5.50	3.24	0.00
37.00	5.50	3.24	0.00
38.00	5.50	3.24	0.00
39.00	5.50	3.24	0.00
40.00	5.50	3.24	0.00
41.00	5.50	3.24	0.00
42.00	5.50	3.24	0.00
43.00	5.50	3.24	0.00
44.00	5.50	3.24	0.00
45.00	5.50	3.24	0.00
46.00	5.50	3.24	0.00
47.00	5.50	3.24	0.00
48.00	5.50	3.24	0.00
49.00	5.50	3.24	0.00
50.00	5.50	3.24	0.00
51.00	5.50	3.24	0.00
52.00	5.50	3.24	0.00
53.00	5.50	3.24	0.00
54.00	5.50	3.24	0.00
55.00	5.50	3.24	0.00
56.00	5.50	3.24	0.00
57.00	5.50	3.24	0.00
58.00	5.50	3.24	0.00
59.00	5.50	3.24	0.00
60.00	5.50	3.24	0.00
61.00	5.50	3.24	0.00
62.00	5.50	3.24	0.00
63.00	5.50	3.24	0.00
64.00	5.50	3.24	0.00
65.00	5.50	3.24	0.00
66.00	5.50	3.24	0.00
67.00	5.50	3.24	0.00
68.00	5.50	3.24	0.00
69.00	5.50	3.24	0.00
70.00	5.50	3.24	0.00
71.00	5.50	3.24	0.00
72.00	5.50	3.24	0.00

Summary for Pond 01-Pond:

Inflow Area = 2.560 ac, 0.00% Impervious, Inflow Depth = 3.63" for 25-YR STORM event
Inflow = 6.54 cfs @ 12.35 hrs, Volume= 0.774 af
Outflow = 3.99 cfs @ 12.66 hrs, Volume= 0.518 af, Atten= 39%, Lag= 18.7 min
Primary = 3.99 cfs @ 12.66 hrs, Volume= 0.518 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,114.22' @ 12.66 hrs Surf.Area= 0.123 ac Storage= 0.334 af

Plug-Flow detention time= 254.0 min calculated for 0.518 af (67% of inflow)
Center-of-Mass det. time= 156.0 min (984.2 - 828.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,110.00'	0.438 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

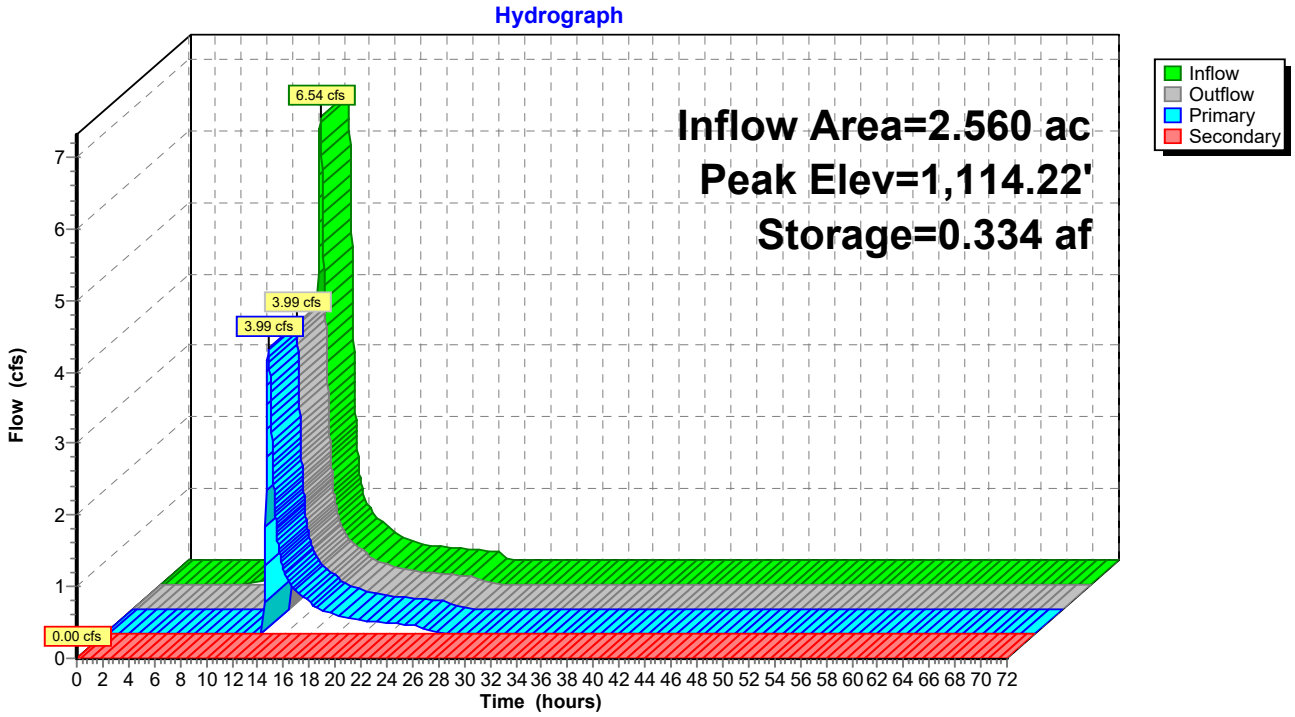
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,110.00	0.044	0.000	0.000
1,111.00	0.058	0.051	0.051
1,112.00	0.075	0.066	0.117
1,113.00	0.094	0.084	0.202
1,114.00	0.117	0.105	0.307
1,115.00	0.144	0.130	0.438

Device	Routing	Invert	Outlet Devices
#1	Primary	1,107.00'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,107.00' / 1,105.00' S= 0.0500 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,113.70'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,114.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,110.00'	**0.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=3.99 cfs @ 12.66 hrs HW=1,114.22' (Free Discharge)
└─**1=Culvert** (Passes 3.99 cfs of 21.64 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 3.99 cfs @ 2.65 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.87 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,110.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 01-Pond:


Hydrograph
Inflow Area=2.560 ac
Peak Elev=1,114.22'
Storage=0.334 af
6.54 cfs
3.99 cfs
3.99 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 01-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,110.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,110.00	0.00	0.00	0.00
4.00	0.00	0.000	1,110.00	0.00	0.00	0.00
6.00	0.00	0.000	1,110.00	0.00	0.00	0.00
8.00	0.05	0.003	1,110.06	0.00	0.00	0.00
10.00	0.23	0.023	1,110.49	0.00	0.00	0.00
12.00	**2.24**	**0.119**	**1,112.01**	**0.00**	**0.00**	0.00
14.00	**0.74**	**0.294**	**1,113.89**	**0.82**	**0.82**	0.00
16.00	0.39	0.287	1,113.82	0.43	0.43	0.00
18.00	0.23	0.283	1,113.78	0.25	0.25	0.00
20.00	0.18	0.281	1,113.77	0.18	0.18	0.00
22.00	0.15	0.280	1,113.76	0.15	0.15	0.00
24.00	0.12	0.279	1,113.75	0.12	0.12	0.00
26.00	0.00	0.274	1,113.70	0.01	0.01	0.00
28.00	0.00	0.273	1,113.69	0.00	0.00	0.00
30.00	0.00	0.272	1,113.69	0.00	0.00	0.00
32.00	0.00	0.271	1,113.68	0.00	0.00	0.00
34.00	0.00	0.271	1,113.67	0.00	0.00	0.00
36.00	0.00	0.270	1,113.67	0.00	0.00	0.00
38.00	0.00	0.269	1,113.66	0.00	0.00	0.00
40.00	0.00	0.268	1,113.65	0.00	0.00	0.00
42.00	0.00	0.268	1,113.65	0.00	0.00	0.00
44.00	0.00	0.267	1,113.64	0.00	0.00	0.00
46.00	0.00	0.266	1,113.63	0.00	0.00	0.00
48.00	0.00	0.265	1,113.63	0.00	0.00	0.00
50.00	0.00	0.265	1,113.62	0.00	0.00	0.00
52.00	0.00	0.264	1,113.61	0.00	0.00	0.00
54.00	0.00	0.263	1,113.61	0.00	0.00	0.00
56.00	0.00	0.262	1,113.60	0.00	0.00	0.00
58.00	0.00	0.262	1,113.59	0.00	0.00	0.00
60.00	0.00	0.261	1,113.58	0.00	0.00	0.00
62.00	0.00	0.260	1,113.58	0.00	0.00	0.00
64.00	0.00	0.259	1,113.57	0.00	0.00	0.00
66.00	0.00	0.259	1,113.56	0.00	0.00	0.00
68.00	0.00	0.258	1,113.56	0.00	0.00	0.00
70.00	0.00	0.257	1,113.55	0.00	0.00	0.00
72.00	0.00	0.257	1,113.54	0.00	0.00	0.00

Summary for Pond 02-Pond:

Inflow Area = 11.560 ac, 0.00% Impervious, Inflow Depth = 3.05" for 25-YR STORM event
Inflow = 24.48 cfs @ 12.37 hrs, Volume= 2.935 af
Outflow = 12.66 cfs @ 12.76 hrs, Volume= 2.017 af, Atten= 48%, Lag= 23.1 min
Primary = 12.66 cfs @ 12.76 hrs, Volume= 2.017 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,045.17' @ 12.76 hrs Surf.Area= 0.269 ac Storage= 1.246 af

Plug-Flow detention time= 248.8 min calculated for 2.016 af (69% of inflow)
Center-of-Mass det. time= 151.3 min (996.1 - 844.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,038.00'	1.483 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

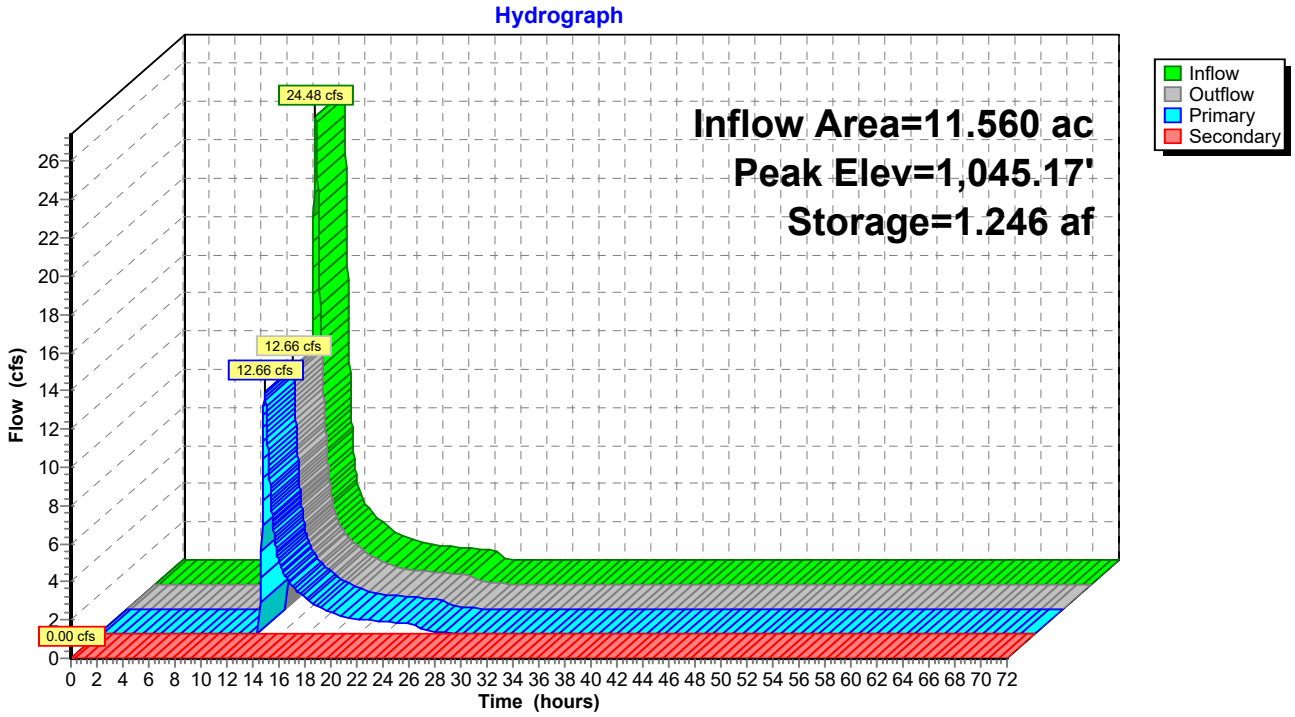
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,038.00	0.092	0.000	0.000
1,039.00	0.112	0.102	0.102
1,040.00	0.133	0.123	0.225
1,041.00	0.156	0.144	0.369
1,042.00	0.181	0.168	0.537
1,043.00	0.207	0.194	0.731
1,044.00	0.235	0.221	0.952
1,045.00	0.264	0.250	1.202
1,046.00	0.297	0.280	1.483

Device	Routing	Invert	Outlet Devices
#1	Primary	1,038.00'	**24.0" Round Culvert** L= 98.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,038.00' / 1,016.00' S= 0.2245 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,044.10'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,045.80'	**40.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,038.00'	**0.5" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=12.65 cfs @ 12.76 hrs HW=1,045.17' (Free Discharge)
└─**1=Culvert** (Passes 12.65 cfs of 37.56 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 12.63 cfs @ 4.25 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 12.87 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,038.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 02-Pond:


Hydrograph
Inflow Area=11.560 ac
Peak Elev=1,045.17'
Storage=1.246 af
24.48 cfs
12.66 cfs
12.66 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 02-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,038.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,038.00	0.00	0.00	0.00
4.00	0.00	0.000	1,038.00	0.00	0.00	0.00
6.00	0.00	0.000	1,038.00	0.00	0.00	0.00
8.00	0.00	0.000	1,038.00	0.00	0.00	0.00
10.00	0.55	0.033	1,038.35	0.00	0.00	0.00
12.00	**7.50**	**0.323**	**1,040.70**	**0.01**	**0.01**	0.00
14.00	**3.04**	**1.093**	**1,044.58**	**3.52**	**3.52**	0.00
16.00	1.63	1.052	1,044.41	1.82	1.82	0.00
18.00	0.97	1.029	1,044.32	1.07	1.07	0.00
20.00	0.74	1.018	1,044.28	0.78	0.78	0.00
22.00	0.61	1.013	1,044.25	0.64	0.64	0.00
24.00	0.49	1.009	1,044.24	0.52	0.52	0.00
26.00	0.00	0.982	1,044.13	0.08	0.08	0.00
28.00	0.00	0.976	1,044.10	0.02	0.02	0.00
30.00	0.00	0.973	1,044.09	0.02	0.02	0.00
32.00	0.00	0.971	1,044.08	0.02	0.02	0.00
34.00	0.00	0.968	1,044.07	0.02	0.02	0.00
36.00	0.00	0.965	1,044.05	0.02	0.02	0.00
38.00	0.00	0.963	1,044.04	0.02	0.02	0.00
40.00	0.00	0.960	1,044.03	0.02	0.02	0.00
42.00	0.00	0.957	1,044.02	0.02	0.02	0.00
44.00	0.00	0.955	1,044.01	0.02	0.02	0.00
46.00	0.00	0.952	1,044.00	0.02	0.02	0.00
48.00	0.00	0.949	1,043.99	0.02	0.02	0.00
50.00	0.00	0.947	1,043.98	0.02	0.02	0.00
52.00	0.00	0.944	1,043.96	0.02	0.02	0.00
54.00	0.00	0.941	1,043.95	0.02	0.02	0.00
56.00	0.00	0.939	1,043.94	0.02	0.02	0.00
58.00	0.00	0.936	1,043.93	0.02	0.02	0.00
60.00	0.00	0.934	1,043.92	0.02	0.02	0.00
62.00	0.00	0.931	1,043.91	0.02	0.02	0.00
64.00	0.00	0.928	1,043.90	0.02	0.02	0.00
66.00	0.00	0.926	1,043.88	0.02	0.02	0.00
68.00	0.00	0.923	1,043.87	0.02	0.02	0.00
70.00	0.00	0.920	1,043.86	0.02	0.02	0.00
72.00	0.00	0.918	1,043.85	0.02	0.02	0.00

Summary for Pond 03-Pond:

Inflow Area = 13.580 ac, 0.00% Impervious, Inflow Depth = 3.43" for 25-YR STORM event
Inflow = 31.92 cfs @ 12.38 hrs, Volume= 3.883 af
Outflow = 24.29 cfs @ 12.60 hrs, Volume= 3.717 af, Atten= 24%, Lag= 12.9 min
Primary = 24.29 cfs @ 12.60 hrs, Volume= 3.717 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,133.08' @ 12.60 hrs Surf.Area= 0.498 ac Storage= 0.945 af

Plug-Flow detention time= 102.3 min calculated for 3.716 af (96% of inflow)
Center-of-Mass det. time= 79.1 min (914.3 - 835.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,131.00'	1.978 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

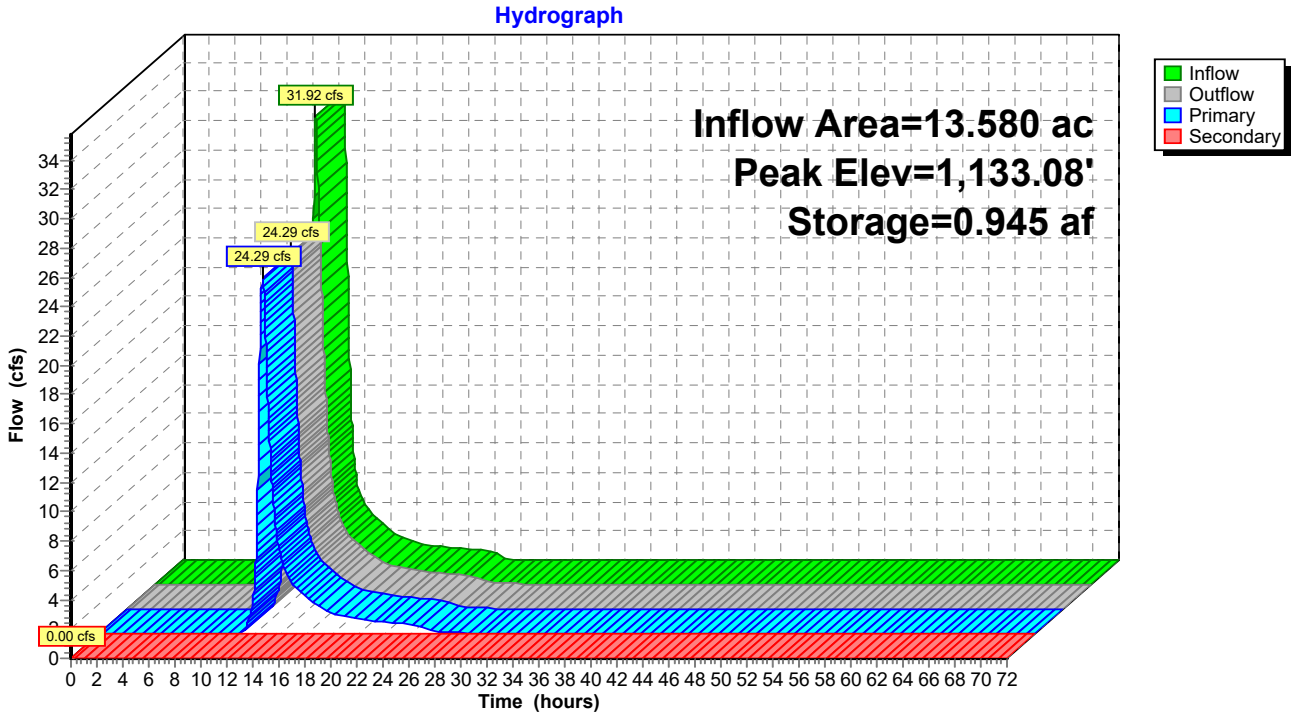
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,131.00	0.410	0.000	0.000
1,132.00	0.451	0.431	0.431
1,133.00	0.494	0.472	0.903
1,134.00	0.537	0.515	1.418
1,135.00	0.583	0.560	1.978

Device	Routing	Invert	Outlet Devices
#1	Primary	1,131.00'	**36.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,131.00' / 1,127.00' S= 0.0800 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Device 1	1,131.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,134.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,131.00'	**0.9" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=24.29 cfs @ 12.60 hrs HW=1,133.08' (Free Discharge)
└─**1=Culvert** (Passes 24.29 cfs of 25.75 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 24.26 cfs @ 5.71 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.03 cfs @ 6.89 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,131.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 03-Pond:


Hydrograph
Inflow Area=13.580 ac
Peak Elev=1,133.08'
Storage=0.945 af
31.92 cfs
24.29 cfs
24.29 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 03-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,131.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,131.00	0.00	0.00	0.00
4.00	0.00	0.000	1,131.00	0.00	0.00	0.00
6.00	0.00	0.000	1,131.00	0.00	0.00	0.00
8.00	0.14	0.005	1,131.01	0.00	0.00	0.00
10.00	1.01	0.086	1,131.21	0.01	0.01	0.00
12.00	**10.20**	**0.430**	**1,132.00**	**3.77**	**3.77**	0.00
14.00	**3.84**	**0.483**	**1,132.12**	**5.27**	**5.27**	0.00
16.00	2.04	0.376	1,131.88	2.44	2.44	0.00
18.00	1.21	0.326	1,131.77	1.43	1.43	0.00
20.00	0.92	0.302	1,131.71	1.00	1.00	0.00
22.00	0.76	0.290	1,131.68	0.82	0.82	0.00
24.00	0.61	0.280	1,131.66	0.67	0.67	0.00
26.00	0.00	0.236	1,131.56	0.16	0.16	0.00
28.00	0.00	0.220	1,131.52	0.05	0.05	0.00
30.00	0.00	0.214	1,131.51	0.03	0.03	0.00
32.00	0.00	0.211	1,131.50	0.02	0.02	0.00
34.00	0.00	0.208	1,131.50	0.01	0.01	0.00
36.00	0.00	0.206	1,131.49	0.01	0.01	0.00
38.00	0.00	0.203	1,131.48	0.01	0.01	0.00
40.00	0.00	0.201	1,131.48	0.01	0.01	0.00
42.00	0.00	0.199	1,131.47	0.01	0.01	0.00
44.00	0.00	0.196	1,131.47	0.01	0.01	0.00
46.00	0.00	0.194	1,131.46	0.01	0.01	0.00
48.00	0.00	0.192	1,131.46	0.01	0.01	0.00
50.00	0.00	0.190	1,131.45	0.01	0.01	0.00
52.00	0.00	0.187	1,131.45	0.01	0.01	0.00
54.00	0.00	0.185	1,131.44	0.01	0.01	0.00
56.00	0.00	0.183	1,131.44	0.01	0.01	0.00
58.00	0.00	0.181	1,131.43	0.01	0.01	0.00
60.00	0.00	0.178	1,131.43	0.01	0.01	0.00
62.00	0.00	0.176	1,131.42	0.01	0.01	0.00
64.00	0.00	0.174	1,131.42	0.01	0.01	0.00
66.00	0.00	0.172	1,131.41	0.01	0.01	0.00
68.00	0.00	0.170	1,131.41	0.01	0.01	0.00
70.00	0.00	0.168	1,131.40	0.01	0.01	0.00
72.00	0.00	0.166	1,131.40	0.01	0.01	0.00

Summary for Pond 04-Pond:

04-Pond

Inflow Area =	1.980 ac,	0.00% Impervious,	Inflow Depth =	3.05"	for 25-YR STORM event
Inflow =	3.89 cfs @	12.45 hrs,	Volume=	0.503 af	
Outflow =	2.04 cfs @	12.86 hrs,	Volume=	0.316 af,	Atten= 47%, Lag= 24.7 min
Primary =	2.04 cfs @	12.86 hrs,	Volume=	0.316 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,109.17' @ 12.86 hrs Surf.Area= 0.088 ac Storage= 0.223 af

Plug-Flow detention time= 250.6 min calculated for 0.316 af (63% of inflow)
Center-of-Mass det. time= 145.0 min (994.3 - 849.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,105.00'	0.303 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

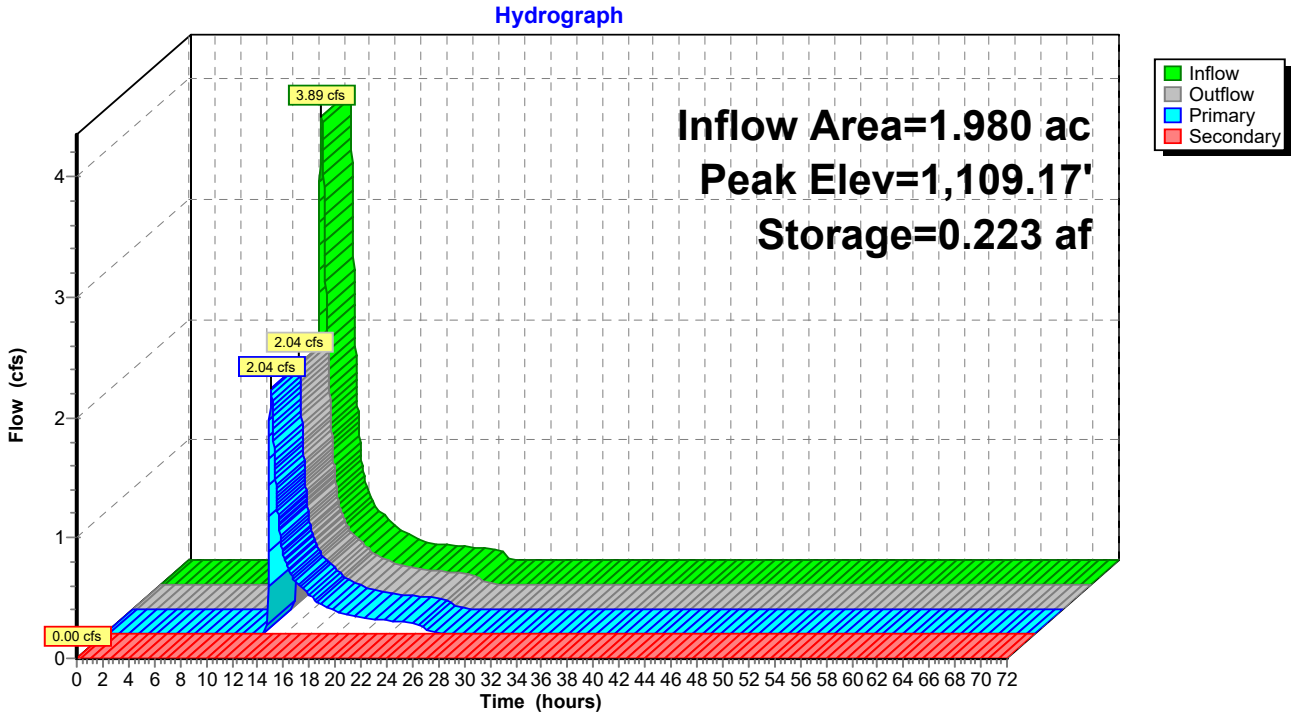
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,105.00	0.023	0.000	0.000
1,106.00	0.036	0.029	0.029
1,107.00	0.051	0.044	0.073
1,108.00	0.067	0.059	0.132
1,109.00	0.085	0.076	0.208
1,110.00	0.105	0.095	0.303

Device	Routing	Invert	Outlet Devices
#1	Primary	1,105.00'	**24.0" Round Culvert** L= 35.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,105.00' / 1,104.50' S= 0.0143 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,108.83'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,109.40'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,105.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=2.04 cfs @ 12.86 hrs HW=1,109.17' (Free Discharge)
└─**1=Culvert** (Passes 2.04 cfs of 26.92 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 2.04 cfs @ 2.06 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.82 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,105.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 04-Pond:


Hydrograph
Inflow Area=1.980 ac
Peak Elev=1,109.17'
Storage=0.223 af
3.89 cfs
2.04 cfs
2.04 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 04-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,105.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,105.00	0.00	0.00	0.00
4.00	0.00	0.000	1,105.00	0.00	0.00	0.00
6.00	0.00	0.000	1,105.00	0.00	0.00	0.00
8.00	0.00	0.000	1,105.00	0.00	0.00	0.00
10.00	0.09	0.005	1,105.21	0.00	0.00	0.00
12.00	**1.05**	**0.050**	**1,106.51**	**0.00**	**0.00**	0.00
14.00	**0.54**	**0.206**	**1,108.98**	**0.60**	**0.60**	0.00
16.00	0.29	0.202	1,108.93	0.31	0.31	0.00
18.00	0.17	0.199	1,108.90	0.18	0.18	0.00
20.00	0.13	0.198	1,108.88	0.13	0.13	0.00
22.00	0.11	0.198	1,108.88	0.11	0.11	0.00
24.00	0.09	0.197	1,108.87	0.09	0.09	0.00
26.00	0.00	0.194	1,108.83	0.01	0.01	0.00
28.00	0.00	0.194	1,108.83	0.00	0.00	0.00
30.00	0.00	0.193	1,108.82	0.00	0.00	0.00
32.00	0.00	0.193	1,108.82	0.00	0.00	0.00
34.00	0.00	0.193	1,108.82	0.00	0.00	0.00
36.00	0.00	0.192	1,108.81	0.00	0.00	0.00
38.00	0.00	0.192	1,108.81	0.00	0.00	0.00
40.00	0.00	0.192	1,108.80	0.00	0.00	0.00
42.00	0.00	0.191	1,108.80	0.00	0.00	0.00
44.00	0.00	0.191	1,108.79	0.00	0.00	0.00
46.00	0.00	0.191	1,108.79	0.00	0.00	0.00
48.00	0.00	0.190	1,108.79	0.00	0.00	0.00
50.00	0.00	0.190	1,108.78	0.00	0.00	0.00
52.00	0.00	0.190	1,108.78	0.00	0.00	0.00
54.00	0.00	0.189	1,108.77	0.00	0.00	0.00
56.00	0.00	0.189	1,108.77	0.00	0.00	0.00
58.00	0.00	0.189	1,108.77	0.00	0.00	0.00
60.00	0.00	0.188	1,108.76	0.00	0.00	0.00
62.00	0.00	0.188	1,108.76	0.00	0.00	0.00
64.00	0.00	0.188	1,108.75	0.00	0.00	0.00
66.00	0.00	0.187	1,108.75	0.00	0.00	0.00
68.00	0.00	0.187	1,108.74	0.00	0.00	0.00
70.00	0.00	0.187	1,108.74	0.00	0.00	0.00
72.00	0.00	0.186	1,108.74	0.00	0.00	0.00

Summary for Pond 05-Pond:

Inflow Area = 4.310 ac, 0.00% Impervious, Inflow Depth = 3.33" for 25-YR STORM event
Inflow = 11.37 cfs @ 12.27 hrs, Volume= 1.197 af
Outflow = 5.76 cfs @ 12.61 hrs, Volume= 0.881 af, Atten= 49%, Lag= 20.2 min
Primary = 5.76 cfs @ 12.61 hrs, Volume= 0.881 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,140.06' @ 12.61 hrs Surf.Area= 0.171 ac Storage= 0.497 af

Plug-Flow detention time= 211.0 min calculated for 0.881 af (74% of inflow)
Center-of-Mass det. time= 121.4 min (952.1 - 830.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,136.00'	0.881 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

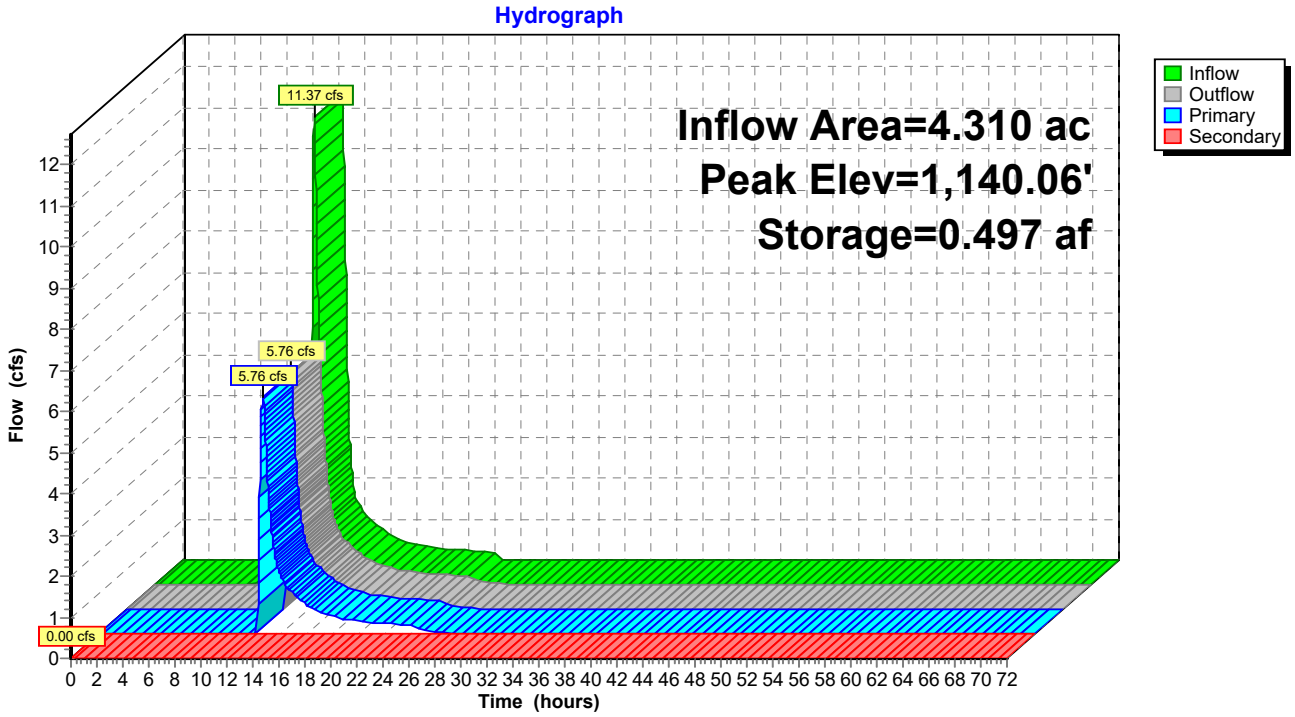
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,136.00	0.078	0.000	0.000
1,137.00	0.099	0.088	0.088
1,138.00	0.121	0.110	0.198
1,139.00	0.144	0.133	0.331
1,140.00	0.169	0.157	0.487
1,141.00	0.196	0.183	0.670
1,142.00	0.225	0.211	0.881

Device	Routing	Invert	Outlet Devices
#1	Primary	1,136.00'	**24.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,136.00' / 1,131.00' S= 0.1000 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Device 1	1,139.00'	**1.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,141.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,136.00'	**0.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.76 cfs @ 12.61 hrs HW=1,140.06' (Free Discharge)
└─**1=Culvert** (Passes 5.76 cfs of 26.44 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 5.75 cfs @ 4.23 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.68 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,136.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 05-Pond:


Hydrograph
Inflow Area=4.310 ac
Peak Elev=1,140.06'
Storage=0.497 af
11.37 cfs
5.76 cfs
5.76 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 05-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,136.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,136.00	0.00	0.00	0.00
4.00	0.00	0.000	1,136.00	0.00	0.00	0.00
6.00	0.00	0.000	1,136.00	0.00	0.00	0.00
8.00	0.04	0.001	1,136.01	0.00	0.00	0.00
10.00	0.31	0.026	1,136.32	0.00	0.00	0.00
12.00	**4.36**	**0.182**	**1,137.86**	**0.00**	**0.00**	0.00
14.00	**1.14**	**0.394**	**1,139.42**	**1.41**	**1.41**	0.00
16.00	0.61	0.371	1,139.27	0.72	0.72	0.00
18.00	0.37	0.359	1,139.19	0.42	0.42	0.00
20.00	0.28	0.353	1,139.15	0.30	0.30	0.00
22.00	0.23	0.350	1,139.13	0.25	0.25	0.00
24.00	0.19	0.348	1,139.12	0.20	0.20	0.00
26.00	0.00	0.335	1,139.03	0.04	0.04	0.00
28.00	0.00	0.332	1,139.01	0.01	0.01	0.00
30.00	0.00	0.331	1,139.00	0.00	0.00	0.00
32.00	0.00	0.330	1,138.99	0.00	0.00	0.00
34.00	0.00	0.329	1,138.99	0.00	0.00	0.00
36.00	0.00	0.329	1,138.98	0.00	0.00	0.00
38.00	0.00	0.328	1,138.98	0.00	0.00	0.00
40.00	0.00	0.327	1,138.97	0.00	0.00	0.00
42.00	0.00	0.327	1,138.97	0.00	0.00	0.00
44.00	0.00	0.326	1,138.97	0.00	0.00	0.00
46.00	0.00	0.325	1,138.96	0.00	0.00	0.00
48.00	0.00	0.325	1,138.96	0.00	0.00	0.00
50.00	0.00	0.324	1,138.95	0.00	0.00	0.00
52.00	0.00	0.323	1,138.95	0.00	0.00	0.00
54.00	0.00	0.323	1,138.94	0.00	0.00	0.00
56.00	0.00	0.322	1,138.94	0.00	0.00	0.00
58.00	0.00	0.321	1,138.93	0.00	0.00	0.00
60.00	0.00	0.321	1,138.93	0.00	0.00	0.00
62.00	0.00	0.320	1,138.92	0.00	0.00	0.00
64.00	0.00	0.319	1,138.92	0.00	0.00	0.00
66.00	0.00	0.319	1,138.91	0.00	0.00	0.00
68.00	0.00	0.318	1,138.91	0.00	0.00	0.00
70.00	0.00	0.317	1,138.90	0.00	0.00	0.00
72.00	0.00	0.317	1,138.90	0.00	0.00	0.00

Summary for Pond 07-Pond:

Inflow Area = 13.810 ac, 0.00% Impervious, Inflow Depth = 2.59" for 25-YR STORM event
Inflow = 21.63 cfs @ 12.52 hrs, Volume= 2.980 af
Outflow = 11.10 cfs @ 12.97 hrs, Volume= 2.140 af, Atten= 49%, Lag= 27.4 min
Primary = 11.10 cfs @ 12.97 hrs, Volume= 2.140 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,134.98' @ 12.97 hrs Surf.Area= 0.308 ac Storage= 1.195 af

Plug-Flow detention time= 250.6 min calculated for 2.140 af (72% of inflow)
Center-of-Mass det. time= 154.6 min (1,020.1 - 865.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,130.00'	1.525 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

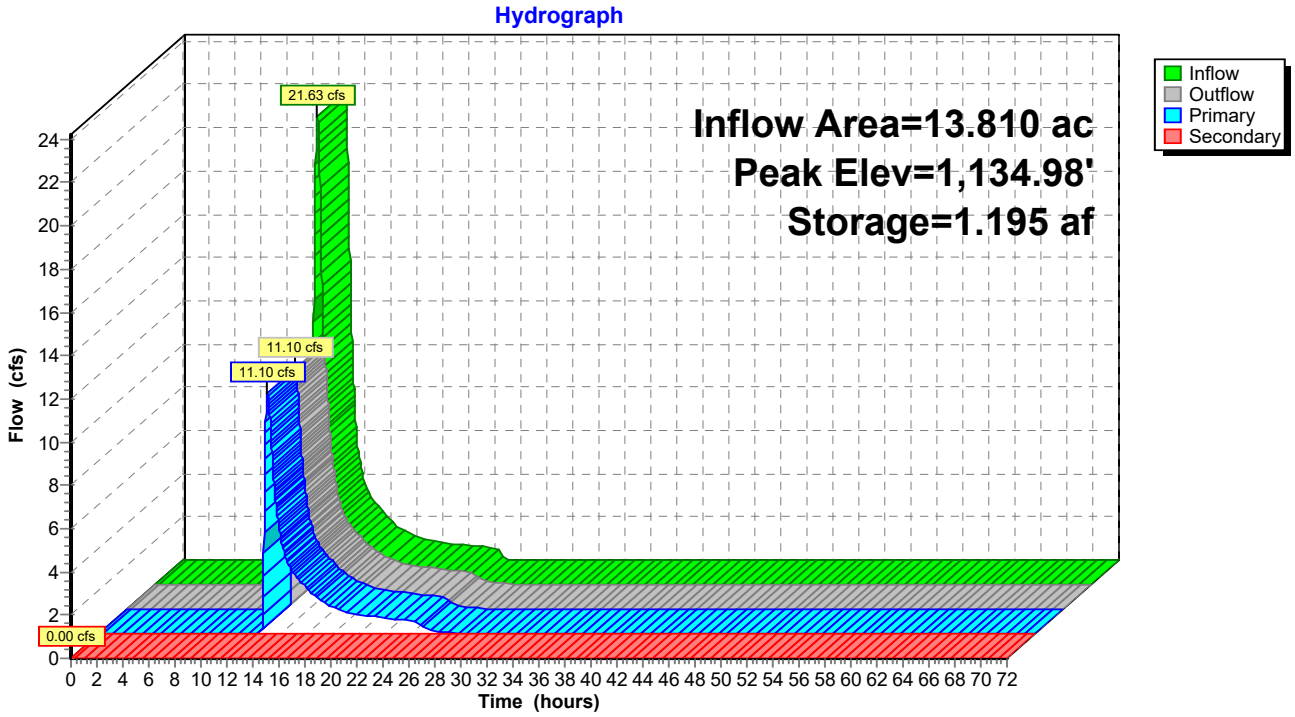
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,130.00	0.176	0.000	0.000
1,131.00	0.200	0.188	0.188
1,132.00	0.226	0.213	0.401
1,133.00	0.252	0.239	0.640
1,134.00	0.280	0.266	0.906
1,135.00	0.309	0.294	1.200
1,136.00	0.340	0.325	1.525

Device	Routing	Invert	Outlet Devices
#1	Primary	1,130.00'	**24.0" Round Culvert X 2.00** L= 380.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,130.00' / 1,069.00' S= 0.1605 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,134.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,135.75'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,130.00'	**0.6" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=11.09 cfs @ 12.97 hrs HW=1,134.98' (Free Discharge)
└─**1=Culvert** (Passes 11.09 cfs of 60.37 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 11.07 cfs @ 4.02 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 10.72 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,130.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 07-Pond:


Hydrograph
Inflow Area=13.810 ac
Peak Elev=1,134.98'
Storage=1.195 af
21.63 cfs
11.10 cfs
11.10 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 07-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,130.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,130.00	0.00	0.00	0.00
4.00	0.00	0.000	1,130.00	0.00	0.00	0.00
6.00	0.00	0.000	1,130.00	0.00	0.00	0.00
8.00	0.00	0.000	1,130.00	0.00	0.00	0.00
10.00	0.20	0.005	1,130.03	0.00	0.00	0.00
12.00	**4.69**	**0.190**	**1,131.01**	**0.01**	**0.01**	0.00
14.00	**3.56**	**1.065**	**1,134.55**	**4.41**	**4.41**	0.00
16.00	1.88	1.004	1,134.34	2.11	2.11	0.00
18.00	1.11	0.975	1,134.24	1.24	1.24	0.00
20.00	0.83	0.960	1,134.19	0.88	0.88	0.00
22.00	0.69	0.953	1,134.17	0.72	0.72	0.00
24.00	0.56	0.948	1,134.15	0.59	0.59	0.00
26.00	0.00	0.917	1,134.04	0.11	0.11	0.00
28.00	0.00	0.908	1,134.01	0.03	0.03	0.00
30.00	0.00	0.905	1,133.99	0.02	0.02	0.00
32.00	0.00	0.901	1,133.98	0.02	0.02	0.00
34.00	0.00	0.898	1,133.97	0.02	0.02	0.00
36.00	0.00	0.895	1,133.96	0.02	0.02	0.00
38.00	0.00	0.892	1,133.95	0.02	0.02	0.00
40.00	0.00	0.889	1,133.94	0.02	0.02	0.00
42.00	0.00	0.886	1,133.93	0.02	0.02	0.00
44.00	0.00	0.883	1,133.92	0.02	0.02	0.00
46.00	0.00	0.880	1,133.91	0.02	0.02	0.00
48.00	0.00	0.877	1,133.89	0.02	0.02	0.00
50.00	0.00	0.874	1,133.88	0.02	0.02	0.00
52.00	0.00	0.871	1,133.87	0.02	0.02	0.00
54.00	0.00	0.868	1,133.86	0.02	0.02	0.00
56.00	0.00	0.864	1,133.85	0.02	0.02	0.00
58.00	0.00	0.861	1,133.84	0.02	0.02	0.00
60.00	0.00	0.858	1,133.83	0.02	0.02	0.00
62.00	0.00	0.855	1,133.82	0.02	0.02	0.00
64.00	0.00	0.852	1,133.81	0.02	0.02	0.00
66.00	0.00	0.849	1,133.80	0.02	0.02	0.00
68.00	0.00	0.846	1,133.78	0.02	0.02	0.00
70.00	0.00	0.843	1,133.77	0.02	0.02	0.00
72.00	0.00	0.840	1,133.76	0.02	0.02	0.00

Summary for Pond 08/10-Pond:

Inflow Area = 34.060 ac, 0.00% Impervious, Inflow Depth = 3.58" for 25-YR STORM event
Inflow = 78.55 cfs @ 12.39 hrs, Volume= 10.163 af
Outflow = 58.54 cfs @ 12.65 hrs, Volume= 8.881 af, Atten= 25%, Lag= 15.5 min
Primary = 58.54 cfs @ 12.65 hrs, Volume= 8.881 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,124.91' @ 12.65 hrs Surf.Area= 1.009 ac Storage= 3.154 af

Plug-Flow detention time= 157.6 min calculated for 8.878 af (87% of inflow)
Center-of-Mass det. time= 101.0 min (934.0 - 833.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,121.00'	5.497 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

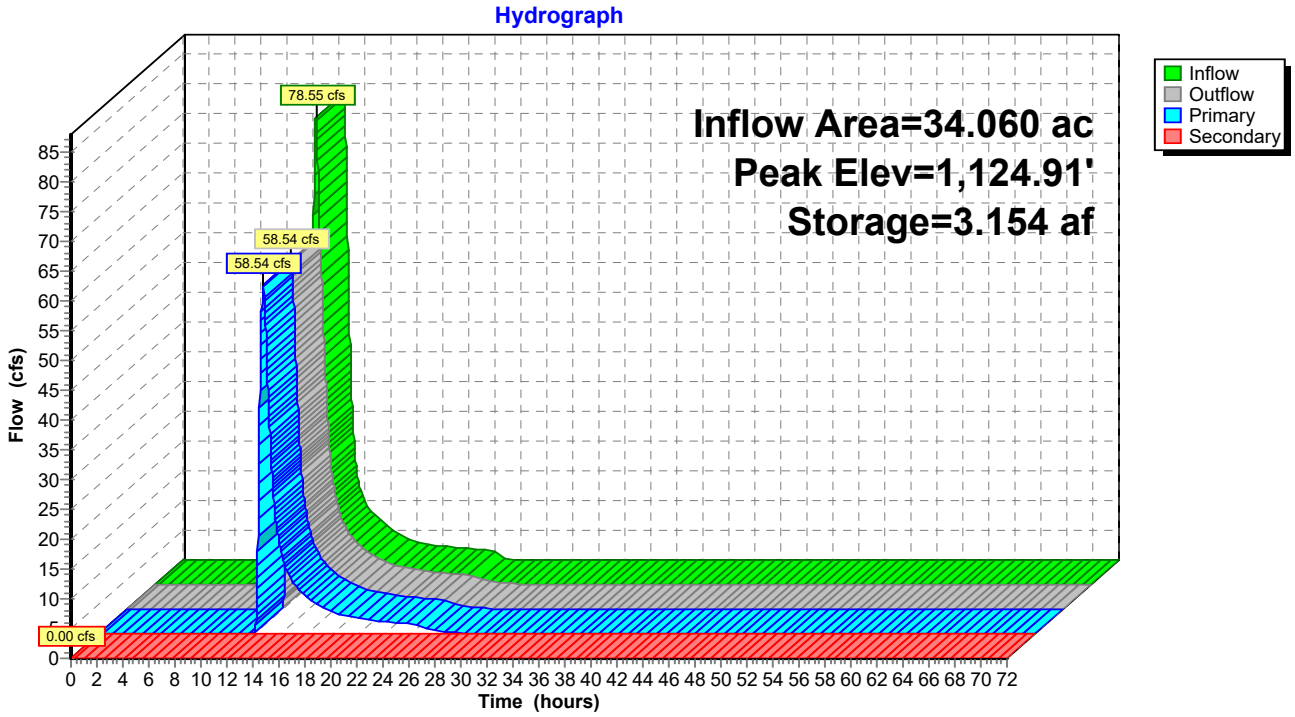
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,121.00	0.609	0.000	0.000
1,122.00	0.709	0.659	0.659
1,123.00	0.810	0.759	1.418
1,124.00	0.913	0.862	2.280
1,125.00	1.018	0.965	3.246
1,126.00	1.125	1.071	4.317
1,127.00	1.234	1.180	5.497

Device	Routing	Invert	Outlet Devices
#1	Primary	1,121.70'	**54.0" Round Culvert** L= 88.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,121.70' / 1,105.00' S= 0.1898 '/' Cc= 0.900 n= 0.012, Flow Area= 15.90 sf
#2	Device 1	1,123.00'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,125.80'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,121.70'	**1.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=58.52 cfs @ 12.65 hrs HW=1,124.91' (Free Discharge)
└─**1=Culvert** (Passes 58.52 cfs of 74.01 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 58.45 cfs @ 6.63 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.07 cfs @ 8.56 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,121.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 08/10-Pond:



Hydrograph for Pond 08/10-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,121.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,121.00	0.00	0.00	0.00
4.00	0.00	0.000	1,121.00	0.00	0.00	0.00
6.00	0.00	0.000	1,121.00	0.00	0.00	0.00
8.00	0.55	0.027	1,121.04	0.00	0.00	0.00
10.00	2.86	0.274	1,121.44	0.00	0.00	0.00
12.00	**26.00**	**1.442**	**1,123.03**	**0.14**	**0.14**	0.00
14.00	**10.06**	**2.106**	**1,123.81**	**13.80**	**13.80**	0.00
16.00	5.28	1.831	1,123.49	6.28	6.28	0.00
18.00	3.12	1.708	1,123.35	3.66	3.66	0.00
20.00	2.34	1.646	1,123.28	2.56	2.56	0.00
22.00	1.94	1.617	1,123.24	2.09	2.09	0.00
24.00	1.55	1.592	1,123.21	1.71	1.71	0.00
26.00	0.00	1.482	1,123.08	0.42	0.42	0.00
28.00	0.00	1.442	1,123.03	0.14	0.14	0.00
30.00	0.00	1.426	1,123.01	0.07	0.07	0.00
32.00	0.00	1.417	1,123.00	0.04	0.04	0.00
34.00	0.00	1.410	1,122.99	0.04	0.04	0.00
36.00	0.00	1.403	1,122.98	0.04	0.04	0.00
38.00	0.00	1.396	1,122.97	0.04	0.04	0.00
40.00	0.00	1.389	1,122.96	0.04	0.04	0.00
42.00	0.00	1.382	1,122.96	0.04	0.04	0.00
44.00	0.00	1.375	1,122.95	0.04	0.04	0.00
46.00	0.00	1.369	1,122.94	0.04	0.04	0.00
48.00	0.00	1.362	1,122.93	0.04	0.04	0.00
50.00	0.00	1.355	1,122.92	0.04	0.04	0.00
52.00	0.00	1.348	1,122.91	0.04	0.04	0.00
54.00	0.00	1.342	1,122.90	0.04	0.04	0.00
56.00	0.00	1.335	1,122.90	0.04	0.04	0.00
58.00	0.00	1.328	1,122.89	0.04	0.04	0.00
60.00	0.00	1.321	1,122.88	0.04	0.04	0.00
62.00	0.00	1.315	1,122.87	0.04	0.04	0.00
64.00	0.00	1.308	1,122.86	0.04	0.04	0.00
66.00	0.00	1.302	1,122.85	0.04	0.04	0.00
68.00	0.00	1.295	1,122.85	0.04	0.04	0.00
70.00	0.00	1.289	1,122.84	0.04	0.04	0.00
72.00	0.00	1.282	1,122.83	0.04	0.04	0.00

Summary for Pond 09-Pond:

Inflow Area = 16.030 ac, 0.00% Impervious, Inflow Depth = 3.33" for 25-YR STORM event
Inflow = 22.03 cfs @ 12.96 hrs, Volume= 4.453 af
Outflow = 12.62 cfs @ 13.64 hrs, Volume= 3.143 af, Atten= 43%, Lag= 41.1 min
Primary = 12.62 cfs @ 13.64 hrs, Volume= 3.143 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,150.31' @ 13.64 hrs Surf.Area= 0.552 ac Storage= 1.918 af

Plug-Flow detention time= 249.0 min calculated for 3.142 af (71% of inflow)
Center-of-Mass det. time= 154.6 min (1,033.5 - 878.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,145.00'	3.685 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

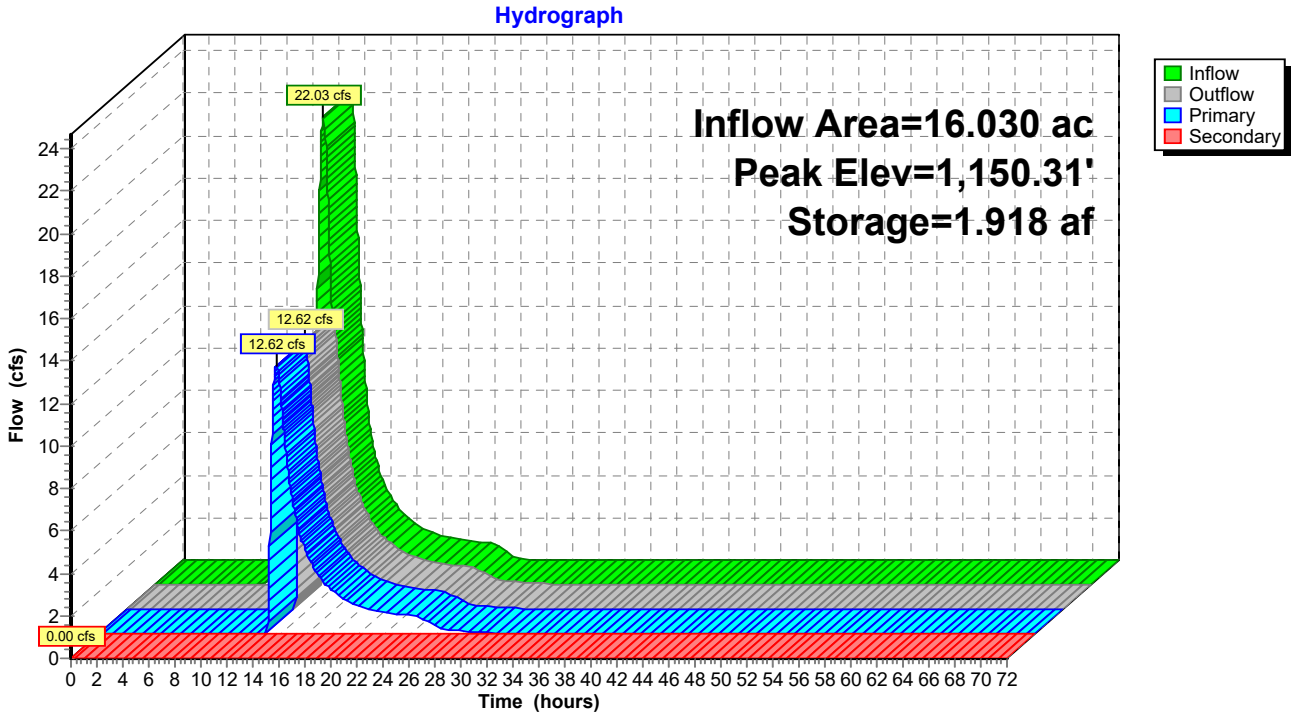
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,145.00	0.180	0.000	0.000
1,146.00	0.246	0.213	0.213
1,147.00	0.313	0.279	0.493
1,148.00	0.382	0.347	0.840
1,149.00	0.454	0.418	1.258
1,150.00	0.528	0.491	1.749
1,151.00	0.604	0.566	2.315
1,152.00	0.683	0.643	2.958
1,153.00	0.770	0.726	3.685

Device	Routing	Invert	Outlet Devices
#1	Primary	1,145.00'	**24.0" Round Culvert** L= 112.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,145.00' / 1,130.00' S= 0.1339 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,149.25'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,152.00'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,145.00'	**0.6" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=12.61 cfs @ 13.64 hrs HW=1,150.31' (Free Discharge)
└─**1=Culvert** (Passes 12.61 cfs of 31.41 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 12.59 cfs @ 4.25 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 11.07 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,145.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 09-Pond:


Hydrograph
Inflow Area=16.030 ac
Peak Elev=1,150.31'
Storage=1.918 af
22.03 cfs
12.62 cfs
12.62 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 09-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,145.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,145.00	0.00	0.00	0.00
4.00	0.00	0.000	1,145.00	0.00	0.00	0.00
6.00	0.00	0.000	1,145.00	0.00	0.00	0.00
8.00	0.03	0.000	1,145.00	0.00	0.00	0.00
10.00	0.65	0.043	1,145.23	0.00	0.00	0.00
12.00	**3.67**	**0.305**	**1,146.36**	**0.01**	**0.01**	0.00
14.00	**8.79**	**1.874**	**1,150.23**	**11.10**	**11.10**	0.00
16.00	3.02	1.618	1,149.75	3.77	3.77	0.00
18.00	1.69	1.535	1,149.58	2.02	2.02	0.00
20.00	1.15	1.494	1,149.50	1.31	1.31	0.00
22.00	0.94	1.476	1,149.46	1.03	1.03	0.00
24.00	0.77	1.463	1,149.44	0.85	0.85	0.00
26.00	0.05	1.422	1,149.35	0.36	0.36	0.00
28.00	0.00	1.391	1,149.29	0.11	0.11	0.00
30.00	0.00	1.379	1,149.26	0.05	0.05	0.00
32.00	0.00	1.374	1,149.25	0.02	0.02	0.00
34.00	0.00	1.370	1,149.24	0.02	0.02	0.00
36.00	0.00	1.367	1,149.24	0.02	0.02	0.00
38.00	0.00	1.364	1,149.23	0.02	0.02	0.00
40.00	0.00	1.361	1,149.22	0.02	0.02	0.00
42.00	0.00	1.358	1,149.22	0.02	0.02	0.00
44.00	0.00	1.354	1,149.21	0.02	0.02	0.00
46.00	0.00	1.351	1,149.20	0.02	0.02	0.00
48.00	0.00	1.348	1,149.19	0.02	0.02	0.00
50.00	0.00	1.345	1,149.19	0.02	0.02	0.00
52.00	0.00	1.342	1,149.18	0.02	0.02	0.00
54.00	0.00	1.338	1,149.17	0.02	0.02	0.00
56.00	0.00	1.335	1,149.17	0.02	0.02	0.00
58.00	0.00	1.332	1,149.16	0.02	0.02	0.00
60.00	0.00	1.329	1,149.15	0.02	0.02	0.00
62.00	0.00	1.326	1,149.15	0.02	0.02	0.00
64.00	0.00	1.323	1,149.14	0.02	0.02	0.00
66.00	0.00	1.319	1,149.13	0.02	0.02	0.00
68.00	0.00	1.316	1,149.13	0.02	0.02	0.00
70.00	0.00	1.313	1,149.12	0.02	0.02	0.00
72.00	0.00	1.310	1,149.11	0.02	0.02	0.00

Summary for Pond 11-Pond:

Inflow Area = 2.820 ac, 0.00% Impervious, Inflow Depth = 2.68" for 25-YR STORM event
Inflow = 4.00 cfs @ 12.66 hrs, Volume= 0.630 af
Outflow = 0.85 cfs @ 14.02 hrs, Volume= 0.299 af, Atten= 79%, Lag= 81.7 min
Primary = 0.85 cfs @ 14.02 hrs, Volume= 0.299 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,191.69' @ 14.02 hrs Surf.Area= 0.149 ac Storage= 0.366 af

Plug-Flow detention time= 339.7 min calculated for 0.299 af (47% of inflow)
Center-of-Mass det. time= 215.9 min (1,089.1 - 873.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,188.00'	0.587 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

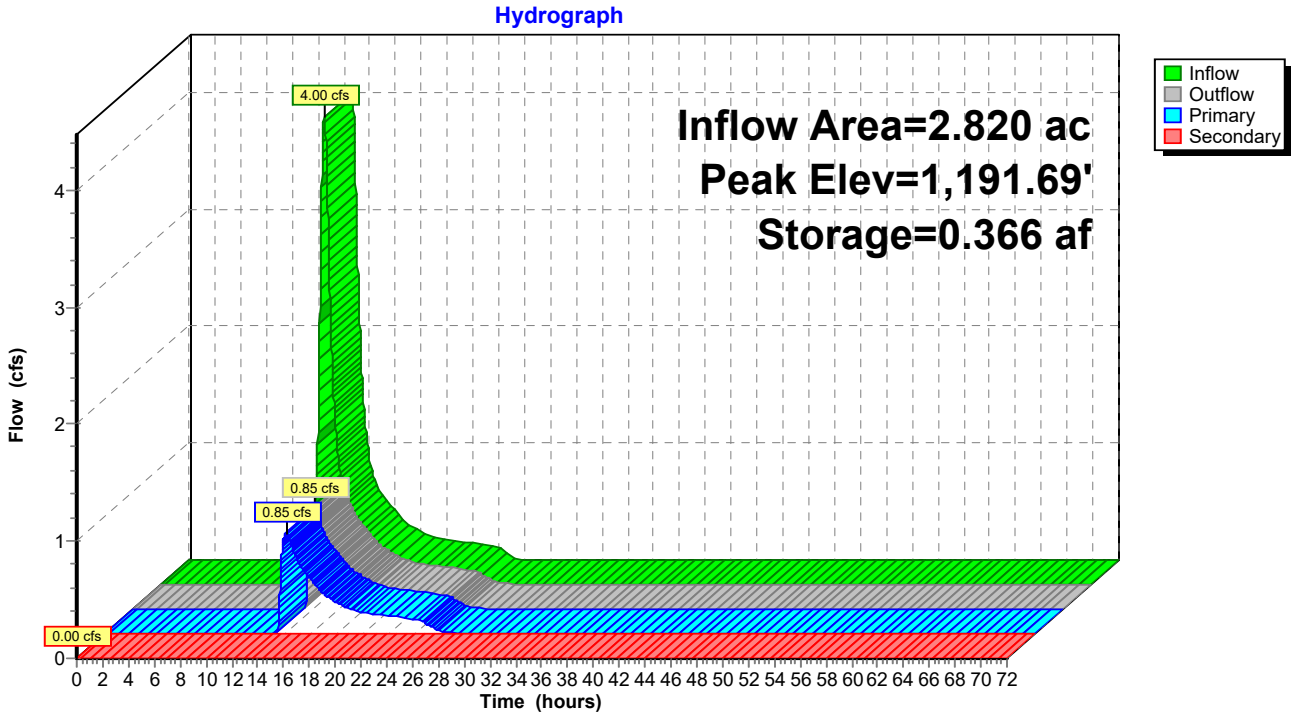
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,188.00	0.053	0.000	0.000
1,189.00	0.077	0.065	0.065
1,190.00	0.102	0.089	0.154
1,191.00	0.129	0.116	0.270
1,192.00	0.158	0.143	0.414
1,193.00	0.189	0.173	0.587

Device	Routing	Invert	Outlet Devices
#1	Primary	1,188.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,188.00' / 1,185.00' S= 0.0652 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,191.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,192.00'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,188.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=0.85 cfs @ 14.02 hrs HW=1,191.69' (Free Discharge)
└─**1=Culvert** (Passes 0.85 cfs of 14.59 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.85 cfs @ 1.50 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.24 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,188.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 11-Pond:


Hydrograph
Inflow Area=2.820 ac
Peak Elev=1,191.69'
Storage=0.366 af
4.00 cfs
0.85 cfs
0.85 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 11-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,188.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,188.00	0.00	0.00	0.00
4.00	0.00	0.000	1,188.00	0.00	0.00	0.00
6.00	0.00	0.000	1,188.00	0.00	0.00	0.00
8.00	0.00	0.000	1,188.00	0.00	0.00	0.00
10.00	0.04	0.001	1,188.02	0.00	0.00	0.00
12.00	**0.71**	0.035	1,188.58	0.00	0.00	0.00
14.00	**0.87**	**0.366**	**1,191.69**	**0.85**	**0.85**	0.00
16.00	0.41	**0.356**	**1,191.63**	**0.46**	**0.46**	0.00
18.00	0.24	0.351	1,191.59	0.27	0.27	0.00
20.00	0.18	0.348	1,191.57	0.18	0.18	0.00
22.00	0.14	0.347	1,191.56	0.15	0.15	0.00
24.00	0.12	0.346	1,191.55	0.12	0.12	0.00
26.00	0.00	0.340	1,191.51	0.03	0.03	0.00
28.00	0.00	0.338	1,191.50	0.00	0.00	0.00
30.00	0.00	0.338	1,191.50	0.00	0.00	0.00
32.00	0.00	0.337	1,191.50	0.00	0.00	0.00
34.00	0.00	0.337	1,191.49	0.00	0.00	0.00
36.00	0.00	0.337	1,191.49	0.00	0.00	0.00
38.00	0.00	0.337	1,191.49	0.00	0.00	0.00
40.00	0.00	0.336	1,191.49	0.00	0.00	0.00
42.00	0.00	0.336	1,191.48	0.00	0.00	0.00
44.00	0.00	0.336	1,191.48	0.00	0.00	0.00
46.00	0.00	0.335	1,191.48	0.00	0.00	0.00
48.00	0.00	0.335	1,191.48	0.00	0.00	0.00
50.00	0.00	0.335	1,191.48	0.00	0.00	0.00
52.00	0.00	0.334	1,191.47	0.00	0.00	0.00
54.00	0.00	0.334	1,191.47	0.00	0.00	0.00
56.00	0.00	0.334	1,191.47	0.00	0.00	0.00
58.00	0.00	0.333	1,191.47	0.00	0.00	0.00
60.00	0.00	0.333	1,191.46	0.00	0.00	0.00
62.00	0.00	0.333	1,191.46	0.00	0.00	0.00
64.00	0.00	0.332	1,191.46	0.00	0.00	0.00
66.00	0.00	0.332	1,191.46	0.00	0.00	0.00
68.00	0.00	0.332	1,191.45	0.00	0.00	0.00
70.00	0.00	0.331	1,191.45	0.00	0.00	0.00
72.00	0.00	0.331	1,191.45	0.00	0.00	0.00

Summary for Pond 13-Pond:

Inflow Area = 6.380 ac, 0.00% Impervious, Inflow Depth = 2.95" for 25-YR STORM event
Inflow = 12.65 cfs @ 12.40 hrs, Volume= 1.570 af
Outflow = 5.94 cfs @ 12.85 hrs, Volume= 1.050 af, Atten= 53%, Lag= 26.7 min
Primary = 5.94 cfs @ 12.85 hrs, Volume= 1.050 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,146.32' @ 12.85 hrs Surf.Area= 0.222 ac Storage= 0.688 af

Plug-Flow detention time= 255.4 min calculated for 1.050 af (67% of inflow)
Center-of-Mass det. time= 154.0 min (1,003.3 - 849.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,141.00'	0.849 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

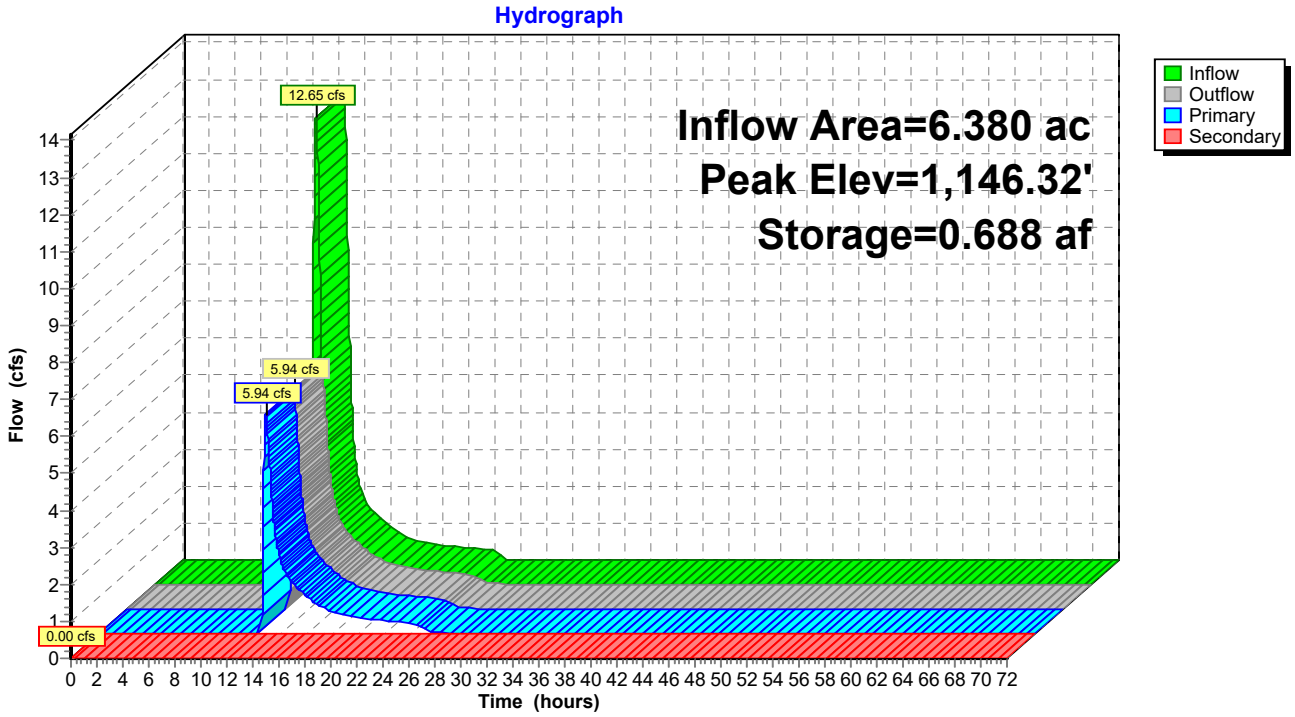
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,141.00	0.044	0.000	0.000
1,142.00	0.075	0.060	0.060
1,143.00	0.106	0.090	0.150
1,144.00	0.139	0.123	0.272
1,145.00	0.173	0.156	0.428
1,146.00	0.210	0.191	0.620
1,147.00	0.248	0.229	0.849

Device	Routing	Invert	Outlet Devices
#1	Primary	1,142.00'	**18.0" Round Culvert** L= 270.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,142.00' / 1,058.00' S= 0.3111 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,145.65'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,146.80'	**35.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,142.00'	**0.4" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.93 cfs @ 12.85 hrs HW=1,146.32' (Free Discharge)
└─**1=Culvert** (Passes 5.93 cfs of 16.07 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 5.93 cfs @ 3.10 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.98 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,141.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 13-Pond:


Hydrograph
Inflow Area=6.380 ac
Peak Elev=1,146.32'
Storage=0.688 af
12.65 cfs
5.94 cfs
5.94 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 13-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,141.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,141.00	0.00	0.00	0.00
4.00	0.00	0.000	1,141.00	0.00	0.00	0.00
6.00	0.00	0.000	1,141.00	0.00	0.00	0.00
8.00	0.00	0.000	1,141.00	0.00	0.00	0.00
10.00	0.25	0.014	1,141.28	0.00	0.00	0.00
12.00	**3.59**	**0.156**	**1,143.05**	**0.00**	**0.00**	0.00
14.00	**1.67**	**0.616**	**1,145.98**	**1.98**	**1.98**	0.00
16.00	0.90	0.591	1,145.86	1.00	1.00	0.00
18.00	0.53	0.579	1,145.80	0.59	0.59	0.00
20.00	0.40	0.572	1,145.77	0.43	0.43	0.00
22.00	0.33	0.569	1,145.75	0.35	0.35	0.00
24.00	0.27	0.567	1,145.74	0.28	0.28	0.00
26.00	0.00	0.553	1,145.67	0.04	0.04	0.00
28.00	0.00	0.549	1,145.65	0.01	0.01	0.00
30.00	0.00	0.548	1,145.64	0.01	0.01	0.00
32.00	0.00	0.546	1,145.64	0.01	0.01	0.00
34.00	0.00	0.545	1,145.63	0.01	0.01	0.00
36.00	0.00	0.544	1,145.62	0.01	0.01	0.00
38.00	0.00	0.542	1,145.62	0.01	0.01	0.00
40.00	0.00	0.541	1,145.61	0.01	0.01	0.00
42.00	0.00	0.540	1,145.60	0.01	0.01	0.00
44.00	0.00	0.538	1,145.60	0.01	0.01	0.00
46.00	0.00	0.537	1,145.59	0.01	0.01	0.00
48.00	0.00	0.536	1,145.58	0.01	0.01	0.00
50.00	0.00	0.534	1,145.58	0.01	0.01	0.00
52.00	0.00	0.533	1,145.57	0.01	0.01	0.00
54.00	0.00	0.532	1,145.56	0.01	0.01	0.00
56.00	0.00	0.531	1,145.56	0.01	0.01	0.00
58.00	0.00	0.529	1,145.55	0.01	0.01	0.00
60.00	0.00	0.528	1,145.54	0.01	0.01	0.00
62.00	0.00	0.527	1,145.54	0.01	0.01	0.00
64.00	0.00	0.525	1,145.53	0.01	0.01	0.00
66.00	0.00	0.524	1,145.52	0.01	0.01	0.00
68.00	0.00	0.523	1,145.52	0.01	0.01	0.00
70.00	0.00	0.521	1,145.51	0.01	0.01	0.00
72.00	0.00	0.520	1,145.50	0.01	0.01	0.00

Summary for Pond 14-Pond:

Inflow Area = 8.210 ac, 0.00% Impervious, Inflow Depth = 3.05" for 25-YR STORM event
Inflow = 18.51 cfs @ 12.32 hrs, Volume= 2.084 af
Outflow = 8.57 cfs @ 12.72 hrs, Volume= 1.485 af, Atten= 54%, Lag= 24.0 min
Primary = 8.57 cfs @ 12.72 hrs, Volume= 1.485 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,153.84' @ 12.72 hrs Surf.Area= 0.340 ac Storage= 0.888 af

Plug-Flow detention time= 224.6 min calculated for 1.485 af (71% of inflow)
Center-of-Mass det. time= 130.0 min (971.5 - 841.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,150.00'	1.323 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

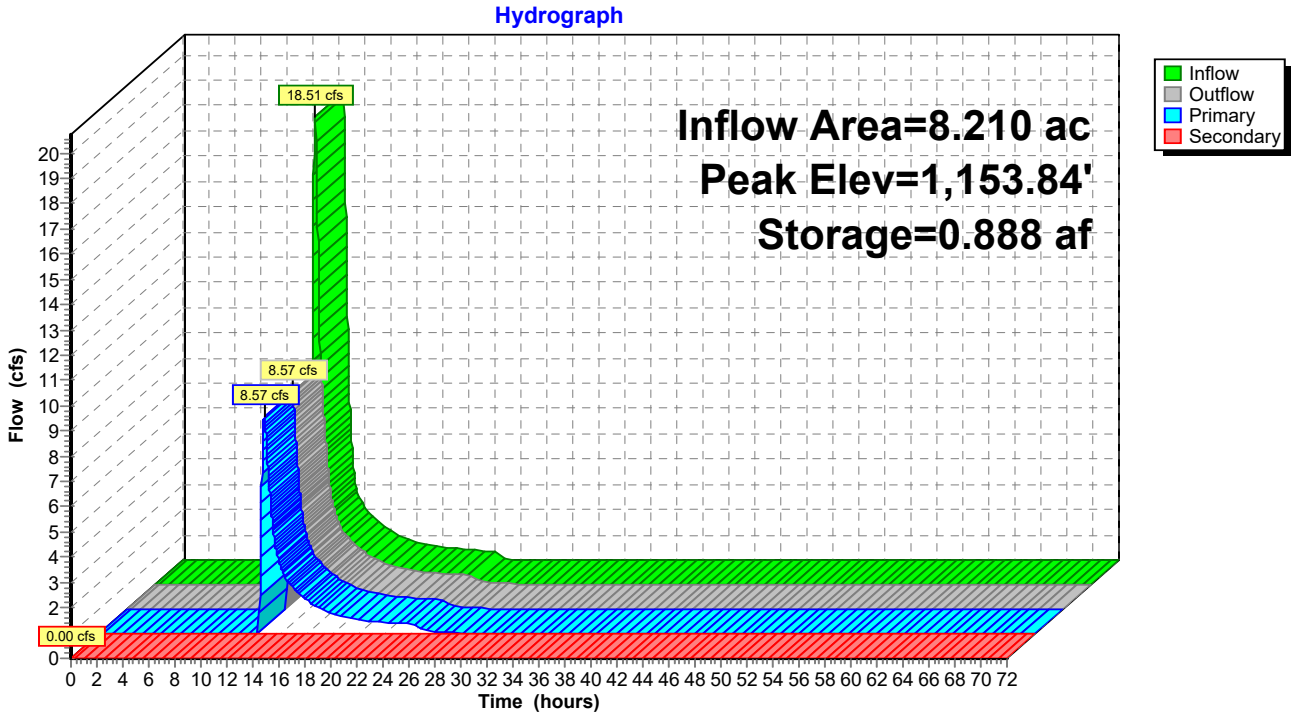
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,150.00	0.127	0.000	0.000
1,151.00	0.180	0.153	0.153
1,152.00	0.235	0.208	0.361
1,153.00	0.291	0.263	0.624
1,154.00	0.349	0.320	0.944
1,155.00	0.409	0.379	1.323

Device	Routing	Invert	Outlet Devices
#1	Primary	1,150.00'	**24.0" Round Culvert** L= 52.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,150.00' / 1,143.00' S= 0.1346 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,153.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,154.50'	**30.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,150.00'	**0.4" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=8.56 cfs @ 12.72 hrs HW=1,153.84' (Free Discharge)
└─**1=Culvert** (Passes 8.56 cfs of 25.48 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 8.56 cfs @ 3.61 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.41 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,150.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 14-Pond:


Hydrograph
Inflow Area=8.210 ac
Peak Elev=1,153.84'
Storage=0.888 af
18.51 cfs
8.57 cfs
8.57 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 14-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,150.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,150.00	0.00	0.00	0.00
4.00	0.00	0.000	1,150.00	0.00	0.00	0.00
6.00	0.00	0.000	1,150.00	0.00	0.00	0.00
8.00	0.00	0.000	1,150.00	0.00	0.00	0.00
10.00	0.41	0.025	1,150.19	0.00	0.00	0.00
12.00	**6.24**	**0.250**	**1,151.50**	**0.01**	**0.01**	0.00
14.00	**2.11**	**0.744**	**1,153.40**	**2.63**	**2.63**	0.00
16.00	1.14	0.700	1,153.25	1.33	1.33	0.00
18.00	0.68	0.677	1,153.18	0.79	0.79	0.00
20.00	0.52	0.667	1,153.14	0.56	0.56	0.00
22.00	0.43	0.661	1,153.13	0.46	0.46	0.00
24.00	0.35	0.656	1,153.11	0.38	0.38	0.00
26.00	0.00	0.633	1,153.03	0.08	0.08	0.00
28.00	0.00	0.626	1,153.01	0.02	0.02	0.00
30.00	0.00	0.624	1,153.00	0.01	0.01	0.00
32.00	0.00	0.623	1,153.00	0.01	0.01	0.00
34.00	0.00	0.621	1,152.99	0.01	0.01	0.00
36.00	0.00	0.620	1,152.99	0.01	0.01	0.00
38.00	0.00	0.619	1,152.98	0.01	0.01	0.00
40.00	0.00	0.618	1,152.98	0.01	0.01	0.00
42.00	0.00	0.617	1,152.97	0.01	0.01	0.00
44.00	0.00	0.615	1,152.97	0.01	0.01	0.00
46.00	0.00	0.614	1,152.97	0.01	0.01	0.00
48.00	0.00	0.613	1,152.96	0.01	0.01	0.00
50.00	0.00	0.612	1,152.96	0.01	0.01	0.00
52.00	0.00	0.611	1,152.95	0.01	0.01	0.00
54.00	0.00	0.610	1,152.95	0.01	0.01	0.00
56.00	0.00	0.608	1,152.95	0.01	0.01	0.00
58.00	0.00	0.607	1,152.94	0.01	0.01	0.00
60.00	0.00	0.606	1,152.94	0.01	0.01	0.00
62.00	0.00	0.605	1,152.93	0.01	0.01	0.00
64.00	0.00	0.604	1,152.93	0.01	0.01	0.00
66.00	0.00	0.602	1,152.93	0.01	0.01	0.00
68.00	0.00	0.601	1,152.92	0.01	0.01	0.00
70.00	0.00	0.600	1,152.92	0.01	0.01	0.00
72.00	0.00	0.599	1,152.91	0.01	0.01	0.00

Summary for Pond 15-Pond:

Inflow Area = 2.830 ac, 0.00% Impervious, Inflow Depth = 3.24" for 25-YR STORM event
Inflow = 4.69 cfs @ 12.69 hrs, Volume= 0.763 af
Outflow = 2.78 cfs @ 13.17 hrs, Volume= 0.485 af, Atten= 41%, Lag= 28.9 min
Primary = 2.78 cfs @ 13.17 hrs, Volume= 0.485 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,200.91' @ 13.17 hrs Surf.Area= 5,245 sf Storage= 14,522 cf

Plug-Flow detention time= 232.8 min calculated for 0.485 af (64% of inflow)
Center-of-Mass det. time= 128.3 min (989.7 - 861.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,197.00'	20,760 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

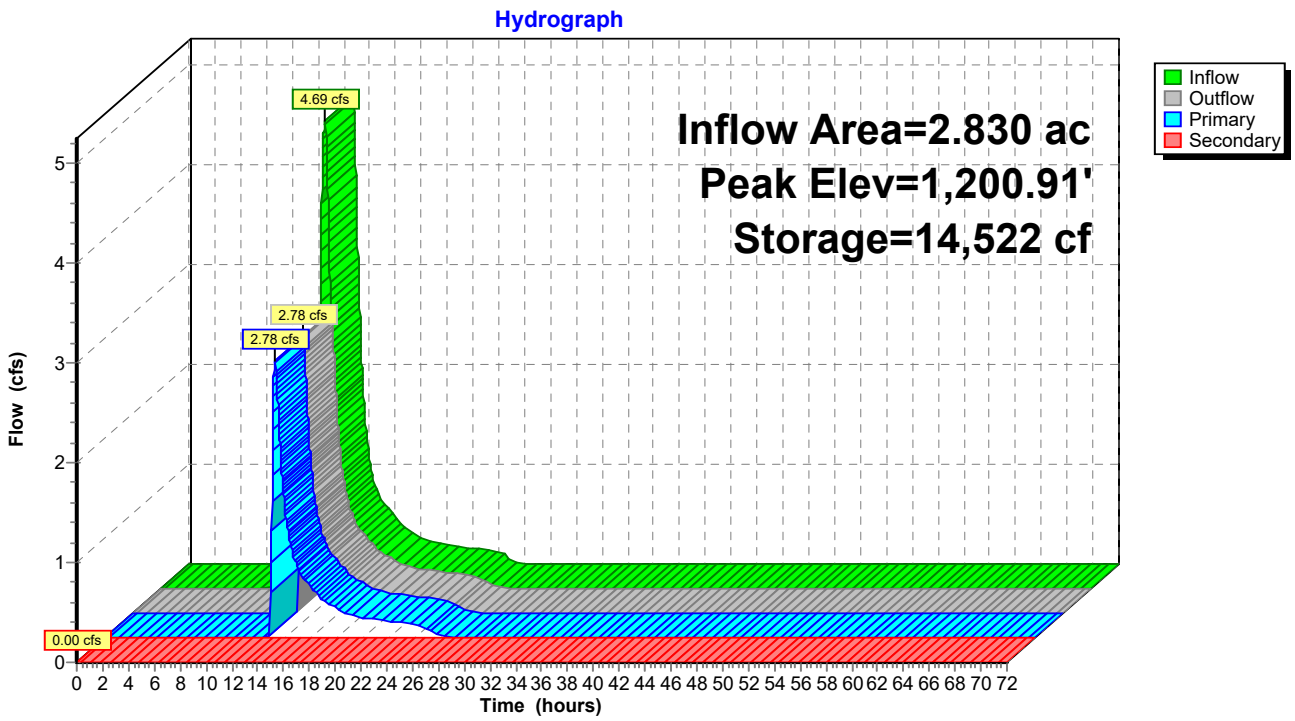
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,197.00	2,331	0	0
1,198.00	2,984	2,658	2,658
1,199.00	3,701	3,343	6,000
1,200.00	4,479	4,090	10,090
1,201.00	5,319	4,899	14,989
1,202.00	6,222	5,771	20,760

Device	Routing	Invert	Outlet Devices
#1	Primary	1,197.00'	**18.0" Round Culvert** L= 70.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,197.00' / 1,196.00' S= 0.0143 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,200.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,201.50'	**30.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,197.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=2.77 cfs @ 13.17 hrs HW=1,200.91' (Free Discharge)
└─**1=Culvert** (Passes 2.77 cfs of 15.13 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 2.77 cfs @ 2.31 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.51 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,197.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 15-Pond:


Hydrograph
Inflow Area=2.830 ac
Peak Elev=1,200.91'
Storage=14,522 cf
4.69 cfs
2.78 cfs
2.78 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 15-Pond:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	1,197.00	0.00	0.00	**0.00**
2.00	0.00	0	1,197.00	0.00	0.00	0.00
4.00	0.00	0	1,197.00	0.00	0.00	0.00
6.00	0.00	0	1,197.00	0.00	0.00	0.00
8.00	0.00	2	1,197.00	0.00	0.00	0.00
10.00	0.13	373	1,197.16	0.00	0.00	0.00
12.00	**0.93**	**2,783**	**1,198.04**	**0.00**	**0.00**	0.00
14.00	**1.04**	**13,653**	**1,200.74**	**1.23**	**1.23**	0.00
16.00	0.47	13,103	1,200.63	0.51	0.51	0.00
18.00	0.27	12,896	1,200.59	0.29	0.29	0.00
20.00	0.19	12,787	1,200.57	0.20	0.20	0.00
22.00	0.16	12,743	1,200.56	0.16	0.16	0.00
24.00	0.13	12,707	1,200.56	0.13	0.13	0.00
26.00	0.00	12,476	1,200.51	0.02	0.02	0.00
28.00	0.00	12,431	1,200.50	0.00	0.00	0.00
30.00	0.00	12,417	1,200.50	0.00	0.00	0.00
32.00	0.00	12,403	1,200.49	0.00	0.00	0.00
34.00	0.00	12,388	1,200.49	0.00	0.00	0.00
36.00	0.00	12,374	1,200.49	0.00	0.00	0.00
38.00	0.00	12,360	1,200.48	0.00	0.00	0.00
40.00	0.00	12,346	1,200.48	0.00	0.00	0.00
42.00	0.00	12,332	1,200.48	0.00	0.00	0.00
44.00	0.00	12,318	1,200.48	0.00	0.00	0.00
46.00	0.00	12,304	1,200.47	0.00	0.00	0.00
48.00	0.00	12,290	1,200.47	0.00	0.00	0.00
50.00	0.00	12,276	1,200.47	0.00	0.00	0.00
52.00	0.00	12,262	1,200.46	0.00	0.00	0.00
54.00	0.00	12,248	1,200.46	0.00	0.00	0.00
56.00	0.00	12,234	1,200.46	0.00	0.00	0.00
58.00	0.00	12,219	1,200.46	0.00	0.00	0.00
60.00	0.00	12,205	1,200.45	0.00	0.00	0.00
62.00	0.00	12,191	1,200.45	0.00	0.00	0.00
64.00	0.00	12,177	1,200.45	0.00	0.00	0.00
66.00	0.00	12,163	1,200.44	0.00	0.00	0.00
68.00	0.00	12,149	1,200.44	0.00	0.00	0.00
70.00	0.00	12,135	1,200.44	0.00	0.00	0.00
72.00	0.00	12,121	1,200.44	0.00	0.00	0.00

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment01: Runoff Area=2.560 ac 0.00% Impervious Runoff Depth=4.37"
Tc=26.0 min CN=83 Runoff=7.83 cfs 0.932 af

Subcatchment02: Runoff Area=11.560 ac 0.00% Impervious Runoff Depth=3.74"
Tc=26.9 min CN=77 Runoff=30.08 cfs 3.605 af

Subcatchment03: Runoff Area=13.580 ac 0.00% Impervious Runoff Depth=4.16"
Tc=27.7 min CN=81 Runoff=38.55 cfs 4.706 af

Subcatchment04: Runoff Area=1.980 ac 0.00% Impervious Runoff Depth=3.74"
Tc=31.8 min CN=77 Runoff=4.77 cfs 0.617 af

Subcatchment05: Runoff Area=4.310 ac 0.00% Impervious Runoff Depth=4.05"
Tc=19.9 min CN=80 Runoff=13.79 cfs 1.456 af

Subcatchment07: Runoff Area=13.810 ac 0.00% Impervious Runoff Depth=3.24"
Tc=36.0 min CN=72 Runoff=27.19 cfs 3.729 af

Subcatchment08: Runoff Area=17.260 ac 0.00% Impervious Runoff Depth=4.37"
Tc=24.5 min CN=83 Runoff=54.21 cfs 6.286 af

Subcatchment09: Runoff Area=16.030 ac 0.00% Impervious Runoff Depth=4.05"
Tc=71.9 min CN=80 Runoff=26.76 cfs 5.414 af

Subcatchment10: Runoff Area=16.800 ac 0.00% Impervious Runoff Depth=4.26"
Tc=35.2 min CN=82 Runoff=43.81 cfs 5.970 af

Subcatchment11: Runoff Area=2.820 ac 0.00% Impervious Runoff Depth=3.34"
Tc=46.9 min CN=73 Runoff=5.00 cfs 0.785 af

Subcatchment12: Runoff Area=4.010 ac 0.00% Impervious Runoff Depth=4.16"
Tc=23.9 min CN=81 Runoff=12.15 cfs 1.390 af

Subcatchment13: Runoff Area=6.380 ac 0.00% Impervious Runoff Depth=3.64"
Tc=29.1 min CN=76 Runoff=15.60 cfs 1.935 af

Subcatchment14: Runoff Area=8.210 ac 0.00% Impervious Runoff Depth=3.74"
Tc=23.3 min CN=77 Runoff=22.74 cfs 2.560 af

Subcatchment15: Runoff Area=2.830 ac 0.00% Impervious Runoff Depth=3.95"
Tc=50.3 min CN=79 Runoff=5.72 cfs 0.931 af

Pond 01-Pond: Peak Elev=1,114.37' Storage=0.352 af Inflow=7.83 cfs 0.932 af
Primary=5.95 cfs 0.676 af Secondary=0.00 cfs 0.000 af Outflow=5.95 cfs 0.676 af

Pond 02-Pond: Peak Elev=1,045.52' Storage=1.343 af Inflow=30.08 cfs 3.605 af
Primary=20.24 cfs 2.687 af Secondary=0.00 cfs 0.000 af Outflow=20.24 cfs 2.687 af

Pond 03-Pond: Peak Elev=1,133.31' Storage=1.057 af Inflow=38.55 cfs 4.706 af
Primary=30.12 cfs 4.540 af Secondary=0.00 cfs 0.000 af Outflow=30.12 cfs 4.540 af

Pond 04-Pond: Peak Elev=1,109.30' Storage=0.235 af Inflow=4.77 cfs 0.617 af
Primary=3.44 cfs 0.431 af Secondary=0.00 cfs 0.000 af Outflow=3.44 cfs 0.431 af

Pond 05-Pond: Peak Elev=1,140.35' Storage=0.549 af Inflow=13.79 cfs 1.456 af
Primary=8.42 cfs 1.139 af Secondary=0.00 cfs 0.000 af Outflow=8.42 cfs 1.139 af

Pond 07-Pond: Peak Elev=1,135.33' Storage=1.304 af Inflow=27.19 cfs 3.729 af
Primary=18.20 cfs 2.889 af Secondary=0.00 cfs 0.000 af Outflow=18.20 cfs 2.889 af

Pond 08/10-Pond: Peak Elev=1,125.20' Storage=3.449 af Inflow=94.33 cfs 12.256 af
Primary=74.80 cfs 10.974 af Secondary=0.00 cfs 0.000 af Outflow=74.80 cfs 10.974 af

Pond 09-Pond: Peak Elev=1,150.59' Storage=2.074 af Inflow=26.76 cfs 5.414 af
Primary=18.43 cfs 4.104 af Secondary=0.00 cfs 0.000 af Outflow=18.43 cfs 4.104 af

Pond 11-Pond: Peak Elev=1,191.83' Storage=0.387 af Inflow=5.00 cfs 0.785 af
Primary=1.97 cfs 0.454 af Secondary=0.00 cfs 0.000 af Outflow=1.97 cfs 0.454 af

Pond 13-Pond: Peak Elev=1,146.57' Storage=0.745 af Inflow=15.60 cfs 1.935 af
Primary=9.89 cfs 1.415 af Secondary=0.00 cfs 0.000 af Outflow=9.89 cfs 1.415 af

Pond 14-Pond: Peak Elev=1,154.11' Storage=0.981 af Inflow=22.74 cfs 2.560 af
Primary=13.43 cfs 1.961 af Secondary=0.00 cfs 0.000 af Outflow=13.43 cfs 1.961 af

Pond 15-Pond: Peak Elev=1,201.05' Storage=15,248 cf Inflow=5.72 cfs 0.931 af
Primary=4.36 cfs 0.653 af Secondary=0.00 cfs 0.000 af Outflow=4.36 cfs 0.653 af

Total Runoff Area = 122.140 ac Runoff Volume = 40.317 af Average Runoff Depth = 3.96"
100.00% Pervious = 122.140 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 01:

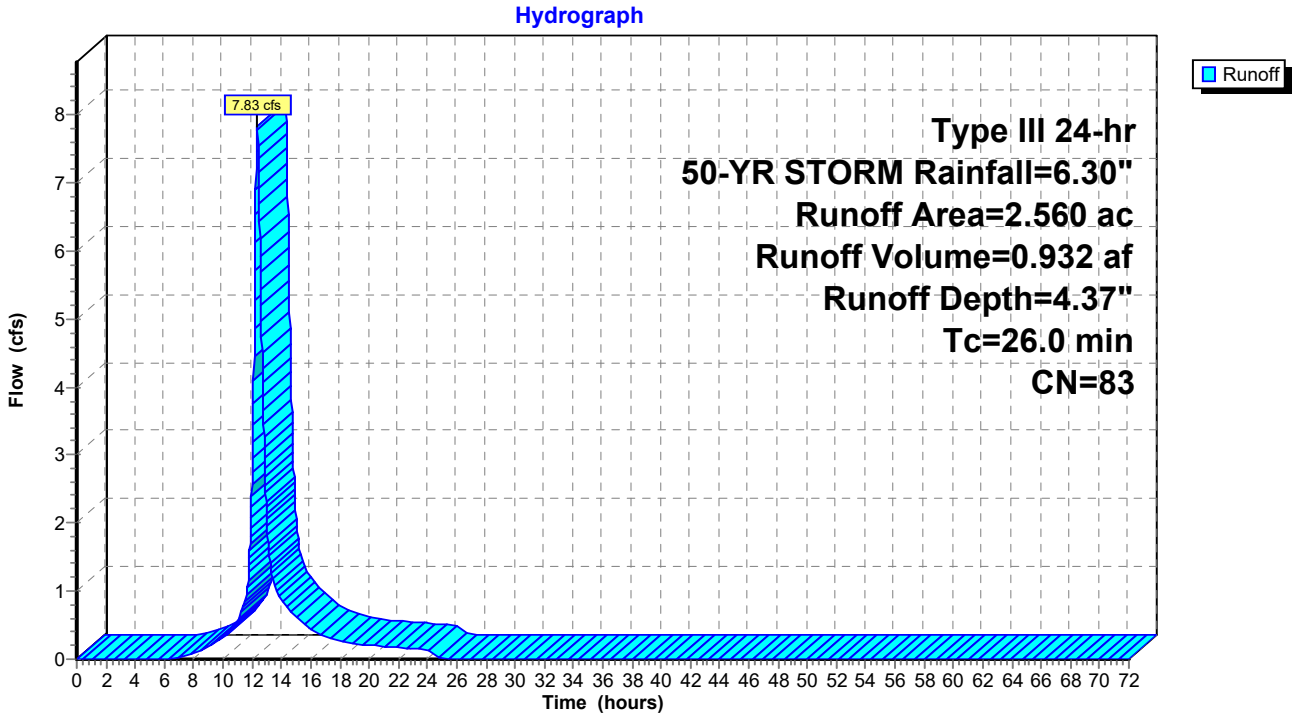
Runoff = 7.83 cfs @ 12.35 hrs, Volume= 0.932 af, Depth= 4.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	2.560	83	
	2.560		100.00% Pervious Area

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

Subcatchment 01:



Hydrograph for Subcatchment 01:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.01	0.03
8.00	0.72	0.04	0.08
9.00	0.92	0.10	0.17
10.00	1.19	0.22	0.31
11.00	1.58	0.42	0.57
12.00	3.15	1.57	**2.75**
13.00	4.72	2.93	**2.06**
14.00	5.11	3.27	0.86
15.00	5.38	3.52	0.63
16.00	5.58	3.70	0.46
17.00	5.73	3.84	0.34
18.00	5.85	3.95	0.27
19.00	5.94	4.04	0.23
20.00	6.03	4.12	0.21
21.00	6.11	4.19	0.19
22.00	6.18	4.26	0.17
23.00	6.24	4.32	0.15
24.00	**6.30**	**4.37**	0.14
25.00	6.30	4.37	0.00
26.00	6.30	4.37	0.00
27.00	6.30	4.37	0.00
28.00	6.30	4.37	0.00
29.00	6.30	4.37	0.00
30.00	6.30	4.37	0.00
31.00	6.30	4.37	0.00
32.00	6.30	4.37	0.00
33.00	6.30	4.37	0.00
34.00	6.30	4.37	0.00
35.00	6.30	4.37	0.00
36.00	6.30	4.37	0.00
37.00	6.30	4.37	0.00
38.00	6.30	4.37	0.00
39.00	6.30	4.37	0.00
40.00	6.30	4.37	0.00
41.00	6.30	4.37	0.00
42.00	6.30	4.37	0.00
43.00	6.30	4.37	0.00
44.00	6.30	4.37	0.00
45.00	6.30	4.37	0.00
46.00	6.30	4.37	0.00
47.00	6.30	4.37	0.00
48.00	6.30	4.37	0.00
49.00	6.30	4.37	0.00
50.00	6.30	4.37	0.00
51.00	6.30	4.37	0.00
52.00	6.30	4.37	0.00
53.00	6.30	4.37	0.00
54.00	6.30	4.37	0.00
55.00	6.30	4.37	0.00
56.00	6.30	4.37	0.00
57.00	6.30	4.37	0.00
58.00	6.30	4.37	0.00
59.00	6.30	4.37	0.00
60.00	6.30	4.37	0.00
61.00	6.30	4.37	0.00
62.00	6.30	4.37	0.00
63.00	6.30	4.37	0.00
64.00	6.30	4.37	0.00
65.00	6.30	4.37	0.00
66.00	6.30	4.37	0.00
67.00	6.30	4.37	0.00
68.00	6.30	4.37	0.00
69.00	6.30	4.37	0.00
70.00	6.30	4.37	0.00
71.00	6.30	4.37	0.00
72.00	6.30	4.37	0.00

Summary for Subcatchment 02:

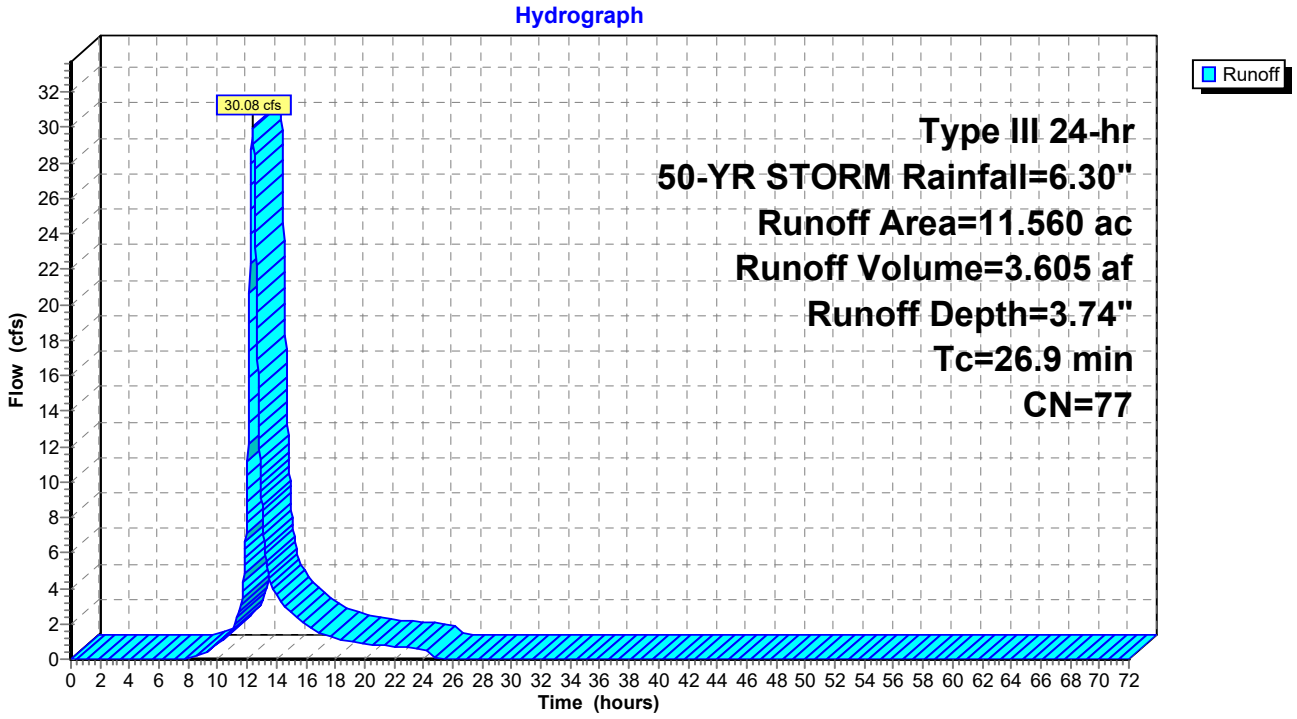
Runoff = 30.08 cfs @ 12.37 hrs, Volume= 3.605 af, Depth= 3.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	11.560	77	
	11.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9					**Direct Entry, SCS TR-55**

Subcatchment 02:



Hydrograph for Subcatchment 02:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.00
8.00	0.72	0.00	0.07
9.00	0.92	0.03	0.33
10.00	1.19	0.10	0.83
11.00	1.58	0.24	1.76
12.00	3.15	1.18	**9.57**
13.00	4.72	2.39	**8.73**
14.00	5.11	2.71	3.62
15.00	5.38	2.95	2.63
16.00	5.58	3.12	1.94
17.00	5.73	3.24	1.46
18.00	5.85	3.35	1.15
19.00	5.94	3.43	0.97
20.00	6.03	3.50	0.87
21.00	6.11	3.57	0.79
22.00	6.18	3.64	0.72
23.00	6.24	3.69	0.65
24.00	**6.30**	**3.74**	0.58
25.00	6.30	3.74	0.01
26.00	6.30	3.74	0.00
27.00	6.30	3.74	0.00
28.00	6.30	3.74	0.00
29.00	6.30	3.74	0.00
30.00	6.30	3.74	0.00
31.00	6.30	3.74	0.00
32.00	6.30	3.74	0.00
33.00	6.30	3.74	0.00
34.00	6.30	3.74	0.00
35.00	6.30	3.74	0.00
36.00	6.30	3.74	0.00
37.00	6.30	3.74	0.00
38.00	6.30	3.74	0.00
39.00	6.30	3.74	0.00
40.00	6.30	3.74	0.00
41.00	6.30	3.74	0.00
42.00	6.30	3.74	0.00
43.00	6.30	3.74	0.00
44.00	6.30	3.74	0.00
45.00	6.30	3.74	0.00
46.00	6.30	3.74	0.00
47.00	6.30	3.74	0.00
48.00	6.30	3.74	0.00
49.00	6.30	3.74	0.00
50.00	6.30	3.74	0.00
51.00	6.30	3.74	0.00
52.00	6.30	3.74	0.00
53.00	6.30	3.74	0.00
54.00	6.30	3.74	0.00
55.00	6.30	3.74	0.00
56.00	6.30	3.74	0.00
57.00	6.30	3.74	0.00
58.00	6.30	3.74	0.00
59.00	6.30	3.74	0.00
60.00	6.30	3.74	0.00
61.00	6.30	3.74	0.00
62.00	6.30	3.74	0.00
63.00	6.30	3.74	0.00
64.00	6.30	3.74	0.00
65.00	6.30	3.74	0.00
66.00	6.30	3.74	0.00
67.00	6.30	3.74	0.00
68.00	6.30	3.74	0.00
69.00	6.30	3.74	0.00
70.00	6.30	3.74	0.00
71.00	6.30	3.74	0.00
72.00	6.30	3.74	0.00

Summary for Subcatchment 03:

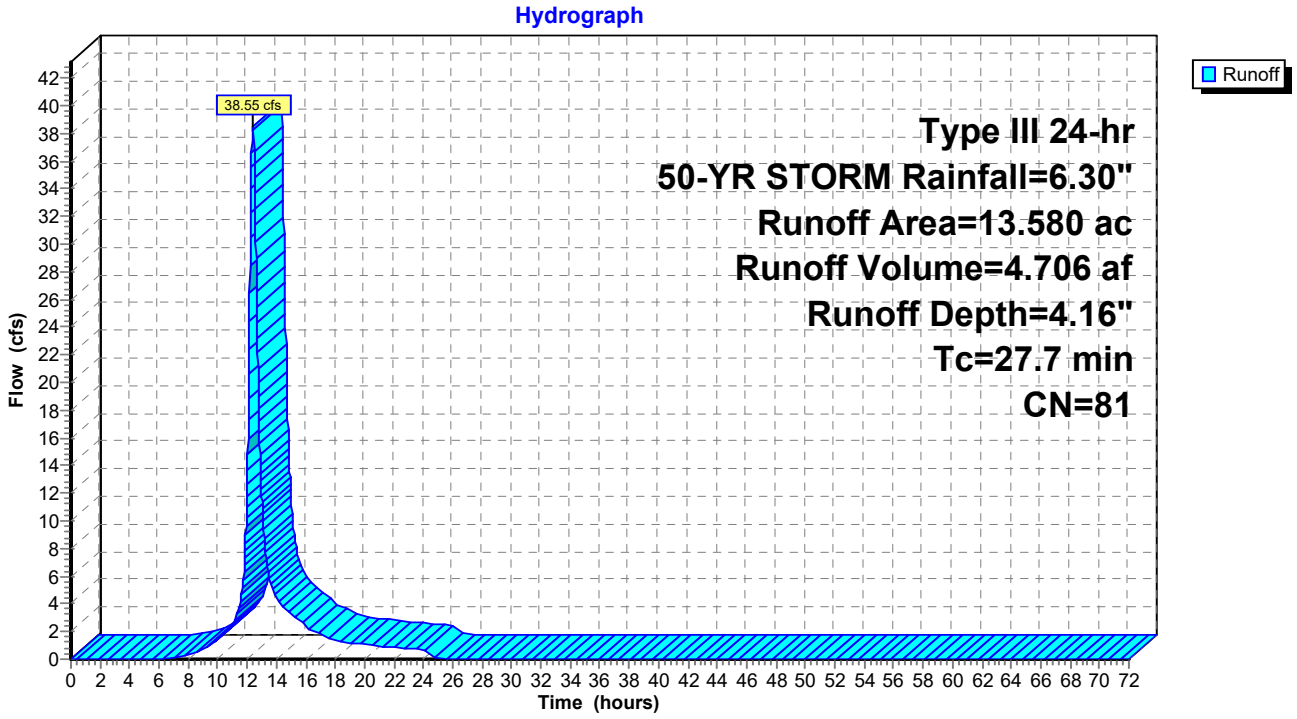
Runoff = 38.55 cfs @ 12.38 hrs, Volume= 4.706 af, Depth= 4.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	13.580	81	
	13.580		100.00% Pervious Area

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

Subcatchment 03:



Hydrograph for Subcatchment 03:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.07
8.00	0.72	0.02	0.29
9.00	0.92	0.07	0.70
10.00	1.19	0.17	1.39
11.00	1.58	0.35	2.64
12.00	3.15	1.43	**12.68**
13.00	4.72	2.74	**11.35**
14.00	5.11	3.08	4.53
15.00	5.38	3.33	3.27
16.00	5.58	3.50	2.40
17.00	5.73	3.64	1.80
18.00	5.85	3.74	1.42
19.00	5.94	3.83	1.19
20.00	6.03	3.91	1.07
21.00	6.11	3.98	0.97
22.00	6.18	4.05	0.89
23.00	6.24	4.11	0.80
24.00	**6.30**	**4.16**	0.71
25.00	6.30	4.16	0.01
26.00	6.30	4.16	0.00
27.00	6.30	4.16	0.00
28.00	6.30	4.16	0.00
29.00	6.30	4.16	0.00
30.00	6.30	4.16	0.00
31.00	6.30	4.16	0.00
32.00	6.30	4.16	0.00
33.00	6.30	4.16	0.00
34.00	6.30	4.16	0.00
35.00	6.30	4.16	0.00
36.00	6.30	4.16	0.00
37.00	6.30	4.16	0.00
38.00	6.30	4.16	0.00
39.00	6.30	4.16	0.00
40.00	6.30	4.16	0.00
41.00	6.30	4.16	0.00
42.00	6.30	4.16	0.00
43.00	6.30	4.16	0.00
44.00	6.30	4.16	0.00
45.00	6.30	4.16	0.00
46.00	6.30	4.16	0.00
47.00	6.30	4.16	0.00
48.00	6.30	4.16	0.00
49.00	6.30	4.16	0.00
50.00	6.30	4.16	0.00
51.00	6.30	4.16	0.00
52.00	6.30	4.16	0.00
53.00	6.30	4.16	0.00
54.00	6.30	4.16	0.00
55.00	6.30	4.16	0.00
56.00	6.30	4.16	0.00
57.00	6.30	4.16	0.00
58.00	6.30	4.16	0.00
59.00	6.30	4.16	0.00
60.00	6.30	4.16	0.00
61.00	6.30	4.16	0.00
62.00	6.30	4.16	0.00
63.00	6.30	4.16	0.00
64.00	6.30	4.16	0.00
65.00	6.30	4.16	0.00
66.00	6.30	4.16	0.00
67.00	6.30	4.16	0.00
68.00	6.30	4.16	0.00
69.00	6.30	4.16	0.00
70.00	6.30	4.16	0.00
71.00	6.30	4.16	0.00
72.00	6.30	4.16	0.00

Summary for Subcatchment 04:

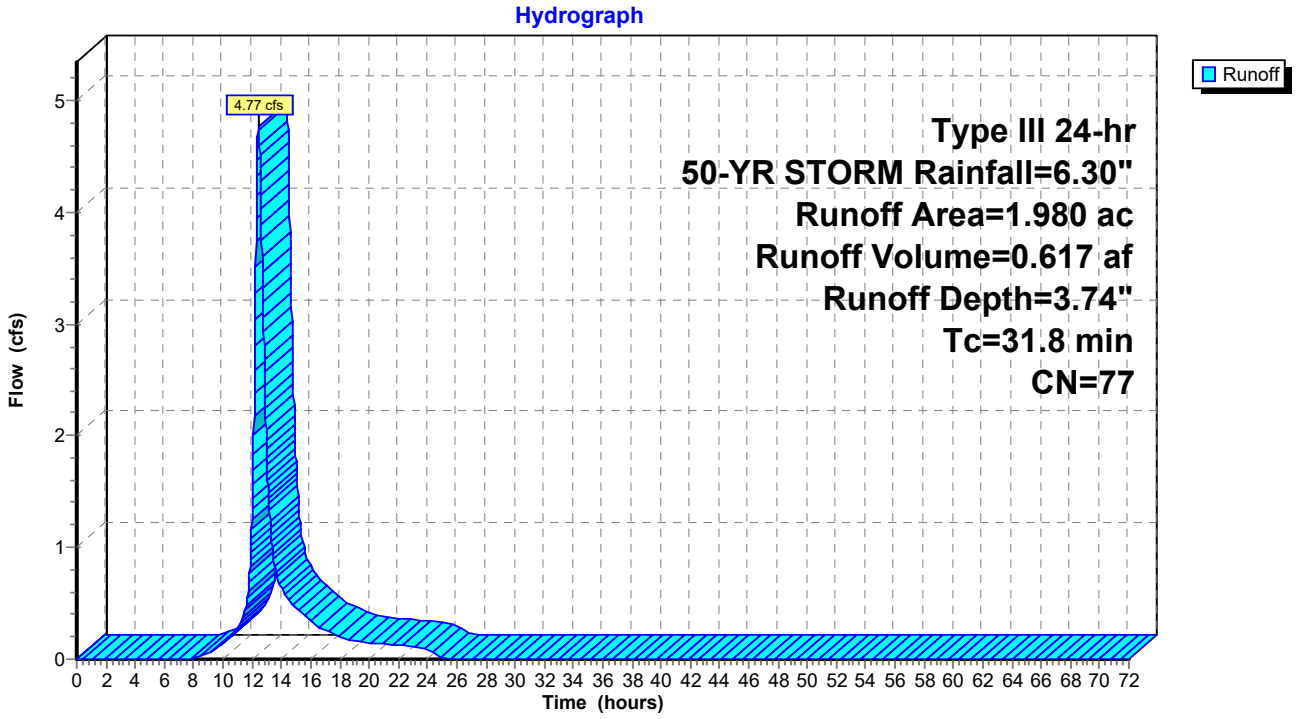
Runoff = 4.77 cfs @ 12.44 hrs, Volume= 0.617 af, Depth= 3.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	1.980	77	
	1.980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.8					**Direct Entry, SCS TR-55**

Subcatchment 04:



Hydrograph for Subcatchment 04:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.00
8.00	0.72	0.00	0.01
9.00	0.92	0.03	0.05
10.00	1.19	0.10	0.13
11.00	1.58	0.24	0.29
12.00	3.15	1.18	**1.34**
13.00	4.72	2.39	**1.80**
14.00	5.11	2.71	0.64
15.00	5.38	2.95	0.46
16.00	5.58	3.12	0.34
17.00	5.73	3.24	0.26
18.00	5.85	3.35	0.20
19.00	5.94	3.43	0.17
20.00	6.03	3.50	0.15
21.00	6.11	3.57	0.14
22.00	6.18	3.64	0.12
23.00	6.24	3.69	0.11
24.00	**6.30**	**3.74**	0.10
25.00	6.30	3.74	0.00
26.00	6.30	3.74	0.00
27.00	6.30	3.74	0.00
28.00	6.30	3.74	0.00
29.00	6.30	3.74	0.00
30.00	6.30	3.74	0.00
31.00	6.30	3.74	0.00
32.00	6.30	3.74	0.00
33.00	6.30	3.74	0.00
34.00	6.30	3.74	0.00
35.00	6.30	3.74	0.00
36.00	6.30	3.74	0.00
37.00	6.30	3.74	0.00
38.00	6.30	3.74	0.00
39.00	6.30	3.74	0.00
40.00	6.30	3.74	0.00
41.00	6.30	3.74	0.00
42.00	6.30	3.74	0.00
43.00	6.30	3.74	0.00
44.00	6.30	3.74	0.00
45.00	6.30	3.74	0.00
46.00	6.30	3.74	0.00
47.00	6.30	3.74	0.00
48.00	6.30	3.74	0.00
49.00	6.30	3.74	0.00
50.00	6.30	3.74	0.00
51.00	6.30	3.74	0.00
52.00	6.30	3.74	0.00
53.00	6.30	3.74	0.00
54.00	6.30	3.74	0.00
55.00	6.30	3.74	0.00
56.00	6.30	3.74	0.00
57.00	6.30	3.74	0.00
58.00	6.30	3.74	0.00
59.00	6.30	3.74	0.00
60.00	6.30	3.74	0.00
61.00	6.30	3.74	0.00
62.00	6.30	3.74	0.00
63.00	6.30	3.74	0.00
64.00	6.30	3.74	0.00
65.00	6.30	3.74	0.00
66.00	6.30	3.74	0.00
67.00	6.30	3.74	0.00
68.00	6.30	3.74	0.00
69.00	6.30	3.74	0.00
70.00	6.30	3.74	0.00
71.00	6.30	3.74	0.00
72.00	6.30	3.74	0.00

Summary for Subcatchment 05:

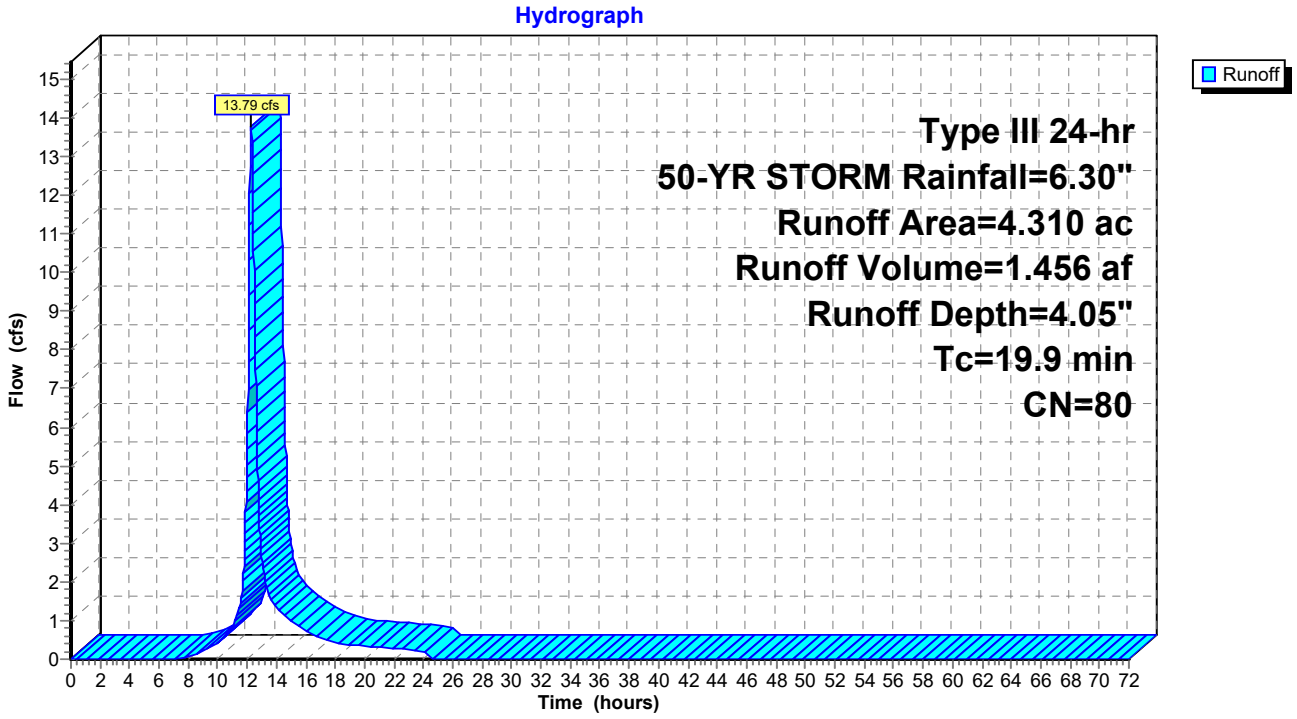
Runoff = 13.79 cfs @ 12.27 hrs, Volume= 1.456 af, Depth= 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	4.310	80	
	4.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9					**Direct Entry, SCS TR-55**

Subcatchment 05:



Hydrograph for Subcatchment 05:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.01
8.00	0.72	0.02	0.08
9.00	0.92	0.06	0.21
10.00	1.19	0.15	0.44
11.00	1.58	0.32	0.85
12.00	3.15	1.36	**5.42**
13.00	4.72	2.65	**2.62**
14.00	5.11	2.99	1.35
15.00	5.38	3.23	0.99
16.00	5.58	3.41	0.72
17.00	5.73	3.54	0.55
18.00	5.85	3.64	0.43
19.00	5.94	3.73	0.37
20.00	6.03	3.81	0.33
21.00	6.11	3.88	0.30
22.00	6.18	3.94	0.28
23.00	6.24	4.00	0.25
24.00	**6.30**	**4.05**	0.22
25.00	6.30	4.05	0.00
26.00	6.30	4.05	0.00
27.00	6.30	4.05	0.00
28.00	6.30	4.05	0.00
29.00	6.30	4.05	0.00
30.00	6.30	4.05	0.00
31.00	6.30	4.05	0.00
32.00	6.30	4.05	0.00
33.00	6.30	4.05	0.00
34.00	6.30	4.05	0.00
35.00	6.30	4.05	0.00
36.00	6.30	4.05	0.00
37.00	6.30	4.05	0.00
38.00	6.30	4.05	0.00
39.00	6.30	4.05	0.00
40.00	6.30	4.05	0.00
41.00	6.30	4.05	0.00
42.00	6.30	4.05	0.00
43.00	6.30	4.05	0.00
44.00	6.30	4.05	0.00
45.00	6.30	4.05	0.00
46.00	6.30	4.05	0.00
47.00	6.30	4.05	0.00
48.00	6.30	4.05	0.00
49.00	6.30	4.05	0.00
50.00	6.30	4.05	0.00
51.00	6.30	4.05	0.00
52.00	6.30	4.05	0.00
53.00	6.30	4.05	0.00
54.00	6.30	4.05	0.00
55.00	6.30	4.05	0.00
56.00	6.30	4.05	0.00
57.00	6.30	4.05	0.00
58.00	6.30	4.05	0.00
59.00	6.30	4.05	0.00
60.00	6.30	4.05	0.00
61.00	6.30	4.05	0.00
62.00	6.30	4.05	0.00
63.00	6.30	4.05	0.00
64.00	6.30	4.05	0.00
65.00	6.30	4.05	0.00
66.00	6.30	4.05	0.00
67.00	6.30	4.05	0.00
68.00	6.30	4.05	0.00
69.00	6.30	4.05	0.00
70.00	6.30	4.05	0.00
71.00	6.30	4.05	0.00
72.00	6.30	4.05	0.00

Summary for Subcatchment 07:

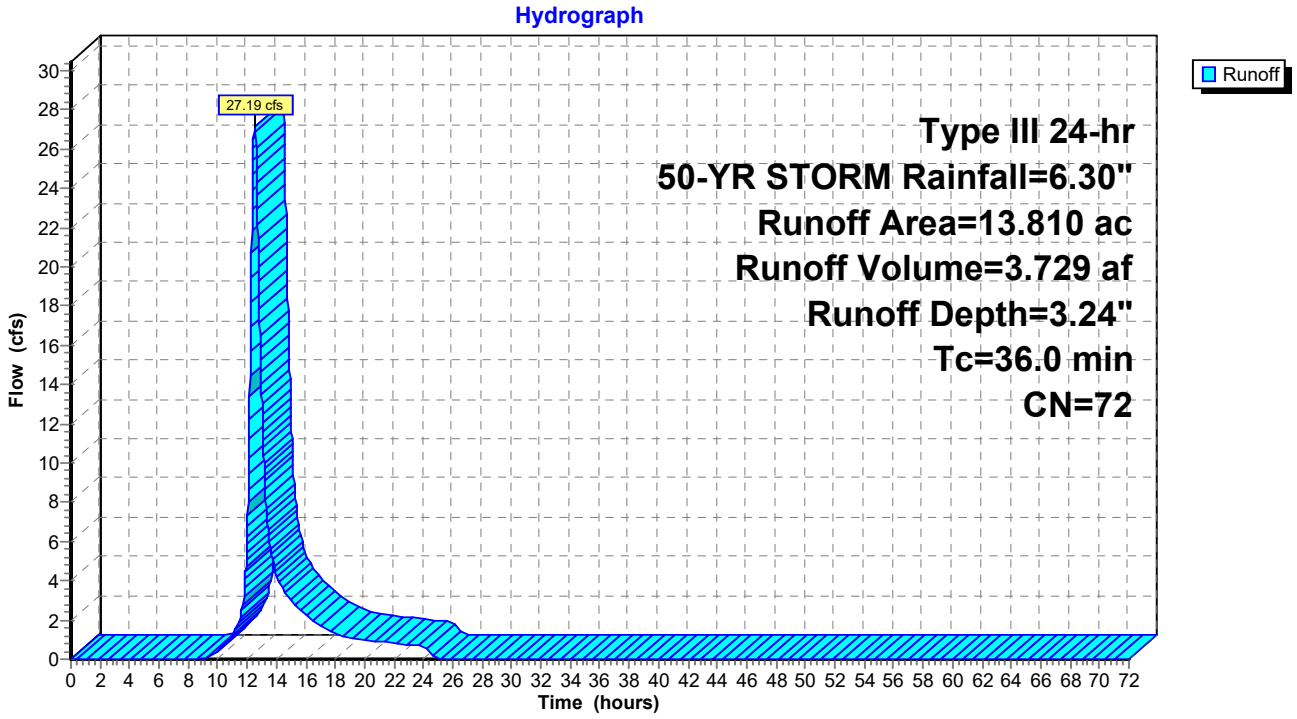
Runoff = 27.19 cfs @ 12.51 hrs, Volume= 3.729 af, Depth= 3.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	13.810	72	
	13.810		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.0					**Direct Entry, SCS TR-55**

Subcatchment 07:



Hydrograph for Subcatchment 07:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.00
8.00	0.72	0.00	0.00
9.00	0.92	0.00	0.05
10.00	1.19	0.04	0.45
11.00	1.58	0.14	1.27
12.00	3.15	0.90	**6.30**
13.00	4.72	1.99	**13.00**
14.00	5.11	2.28	4.31
15.00	5.38	2.50	3.03
16.00	5.58	2.65	2.26
17.00	5.73	2.77	1.68
18.00	5.85	2.87	1.33
19.00	5.94	2.95	1.10
20.00	6.03	3.02	0.99
21.00	6.11	3.08	0.90
22.00	6.18	3.14	0.82
23.00	6.24	3.19	0.74
24.00	**6.30**	**3.24**	0.66
25.00	6.30	3.24	0.04
26.00	6.30	3.24	0.00
27.00	6.30	3.24	0.00
28.00	6.30	3.24	0.00
29.00	6.30	3.24	0.00
30.00	6.30	3.24	0.00
31.00	6.30	3.24	0.00
32.00	6.30	3.24	0.00
33.00	6.30	3.24	0.00
34.00	6.30	3.24	0.00
35.00	6.30	3.24	0.00
36.00	6.30	3.24	0.00
37.00	6.30	3.24	0.00
38.00	6.30	3.24	0.00
39.00	6.30	3.24	0.00
40.00	6.30	3.24	0.00
41.00	6.30	3.24	0.00
42.00	6.30	3.24	0.00
43.00	6.30	3.24	0.00
44.00	6.30	3.24	0.00
45.00	6.30	3.24	0.00
46.00	6.30	3.24	0.00
47.00	6.30	3.24	0.00
48.00	6.30	3.24	0.00
49.00	6.30	3.24	0.00
50.00	6.30	3.24	0.00
51.00	6.30	3.24	0.00
52.00	6.30	3.24	0.00
53.00	6.30	3.24	0.00
54.00	6.30	3.24	0.00
55.00	6.30	3.24	0.00
56.00	6.30	3.24	0.00
57.00	6.30	3.24	0.00
58.00	6.30	3.24	0.00
59.00	6.30	3.24	0.00
60.00	6.30	3.24	0.00
61.00	6.30	3.24	0.00
62.00	6.30	3.24	0.00
63.00	6.30	3.24	0.00
64.00	6.30	3.24	0.00
65.00	6.30	3.24	0.00
66.00	6.30	3.24	0.00
67.00	6.30	3.24	0.00
68.00	6.30	3.24	0.00
69.00	6.30	3.24	0.00
70.00	6.30	3.24	0.00
71.00	6.30	3.24	0.00
72.00	6.30	3.24	0.00

Summary for Subcatchment 08:

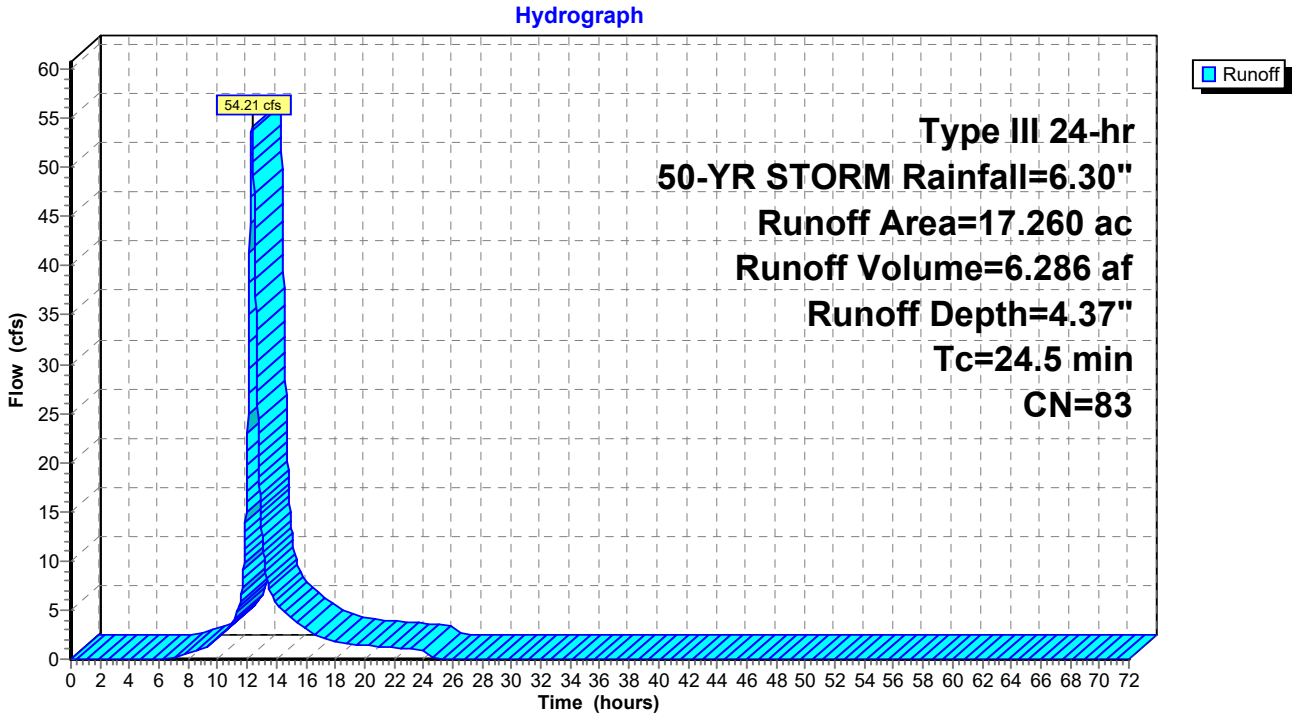
Runoff = 54.21 cfs @ 12.33 hrs, Volume= 6.286 af, Depth= 4.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	17.260	83	
	17.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5					**Direct Entry, SCS TR-55**

Subcatchment 08:



Hydrograph for Subcatchment 08:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.02
7.00	0.57	0.01	0.22
8.00	0.72	0.04	0.54
9.00	0.92	0.10	1.15
10.00	1.19	0.22	2.12
11.00	1.58	0.42	3.86
12.00	3.15	1.57	**19.72**
13.00	4.72	2.93	**13.07**
14.00	5.11	3.27	5.76
15.00	5.38	3.52	4.19
16.00	5.58	3.70	3.05
17.00	5.73	3.84	2.31
18.00	5.85	3.95	1.81
19.00	5.94	4.04	1.53
20.00	6.03	4.12	1.38
21.00	6.11	4.19	1.25
22.00	6.18	4.26	1.14
23.00	6.24	4.32	1.03
24.00	**6.30**	**4.37**	0.91
25.00	6.30	4.37	0.01
26.00	6.30	4.37	0.00
27.00	6.30	4.37	0.00
28.00	6.30	4.37	0.00
29.00	6.30	4.37	0.00
30.00	6.30	4.37	0.00
31.00	6.30	4.37	0.00
32.00	6.30	4.37	0.00
33.00	6.30	4.37	0.00
34.00	6.30	4.37	0.00
35.00	6.30	4.37	0.00
36.00	6.30	4.37	0.00
37.00	6.30	4.37	0.00
38.00	6.30	4.37	0.00
39.00	6.30	4.37	0.00
40.00	6.30	4.37	0.00
41.00	6.30	4.37	0.00
42.00	6.30	4.37	0.00
43.00	6.30	4.37	0.00
44.00	6.30	4.37	0.00
45.00	6.30	4.37	0.00
46.00	6.30	4.37	0.00
47.00	6.30	4.37	0.00
48.00	6.30	4.37	0.00
49.00	6.30	4.37	0.00
50.00	6.30	4.37	0.00
51.00	6.30	4.37	0.00
52.00	6.30	4.37	0.00
53.00	6.30	4.37	0.00
54.00	6.30	4.37	0.00
55.00	6.30	4.37	0.00
56.00	6.30	4.37	0.00
57.00	6.30	4.37	0.00
58.00	6.30	4.37	0.00
59.00	6.30	4.37	0.00
60.00	6.30	4.37	0.00
61.00	6.30	4.37	0.00
62.00	6.30	4.37	0.00
63.00	6.30	4.37	0.00
64.00	6.30	4.37	0.00
65.00	6.30	4.37	0.00
66.00	6.30	4.37	0.00
67.00	6.30	4.37	0.00
68.00	6.30	4.37	0.00
69.00	6.30	4.37	0.00
70.00	6.30	4.37	0.00
71.00	6.30	4.37	0.00
72.00	6.30	4.37	0.00

Summary for Subcatchment 09:

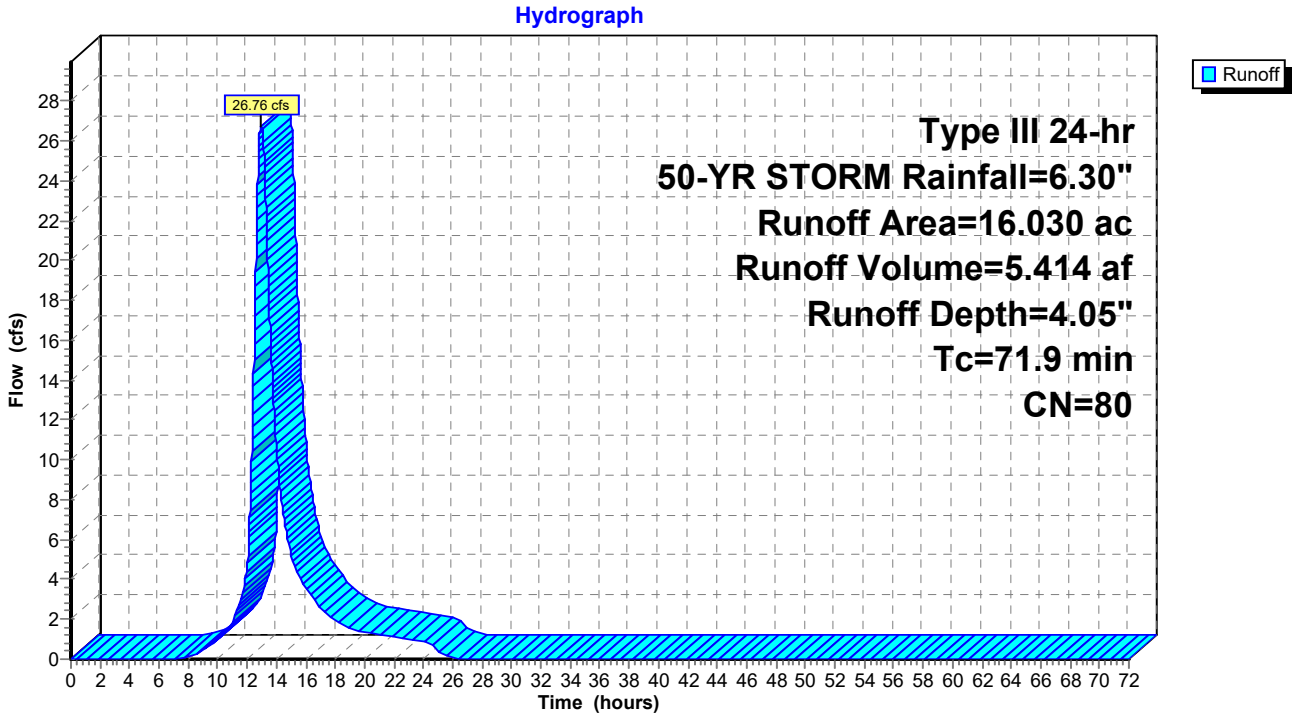
Runoff = 26.76 cfs @ 12.95 hrs, Volume= 5.414 af, Depth= 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	16.030	80	
	16.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
71.9					**Direct Entry, SCS TR-55**

Subcatchment 09:



Hydrograph for Subcatchment 09:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.00
8.00	0.72	0.02	0.12
9.00	0.92	0.06	0.41
10.00	1.19	0.15	0.98
11.00	1.58	0.32	1.93
12.00	3.15	1.36	**4.72**
13.00	4.72	2.65	**26.70**
14.00	5.11	2.99	10.50
15.00	5.38	3.23	5.26
16.00	5.58	3.41	3.56
17.00	5.73	3.54	2.56
18.00	5.85	3.64	1.98
19.00	5.94	3.73	1.56
20.00	6.03	3.81	1.35
21.00	6.11	3.88	1.22
22.00	6.18	3.94	1.11
23.00	6.24	4.00	1.00
24.00	**6.30**	**4.05**	0.90
25.00	6.30	4.05	0.43
26.00	6.30	4.05	0.06
27.00	6.30	4.05	0.01
28.00	6.30	4.05	0.00
29.00	6.30	4.05	0.00
30.00	6.30	4.05	0.00
31.00	6.30	4.05	0.00
32.00	6.30	4.05	0.00
33.00	6.30	4.05	0.00
34.00	6.30	4.05	0.00
35.00	6.30	4.05	0.00
36.00	6.30	4.05	0.00
37.00	6.30	4.05	0.00
38.00	6.30	4.05	0.00
39.00	6.30	4.05	0.00
40.00	6.30	4.05	0.00
41.00	6.30	4.05	0.00
42.00	6.30	4.05	0.00
43.00	6.30	4.05	0.00
44.00	6.30	4.05	0.00
45.00	6.30	4.05	0.00
46.00	6.30	4.05	0.00
47.00	6.30	4.05	0.00
48.00	6.30	4.05	0.00
49.00	6.30	4.05	0.00
50.00	6.30	4.05	0.00
51.00	6.30	4.05	0.00
52.00	6.30	4.05	0.00
53.00	6.30	4.05	0.00
54.00	6.30	4.05	0.00
55.00	6.30	4.05	0.00
56.00	6.30	4.05	0.00
57.00	6.30	4.05	0.00
58.00	6.30	4.05	0.00
59.00	6.30	4.05	0.00
60.00	6.30	4.05	0.00
61.00	6.30	4.05	0.00
62.00	6.30	4.05	0.00
63.00	6.30	4.05	0.00
64.00	6.30	4.05	0.00
65.00	6.30	4.05	0.00
66.00	6.30	4.05	0.00
67.00	6.30	4.05	0.00
68.00	6.30	4.05	0.00
69.00	6.30	4.05	0.00
70.00	6.30	4.05	0.00
71.00	6.30	4.05	0.00
72.00	6.30	4.05	0.00

Summary for Subcatchment 10:

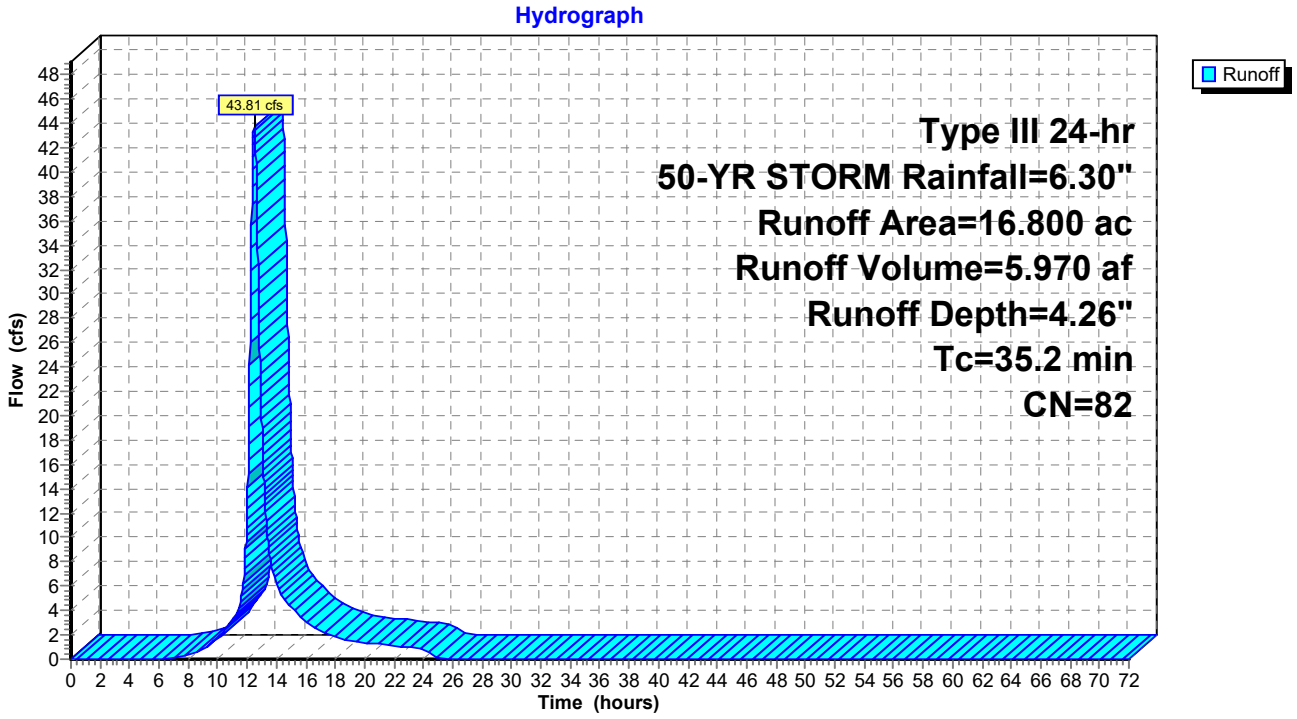
Runoff = 43.81 cfs @ 12.48 hrs, Volume= 5.970 af, Depth= 4.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	16.800	82	
	16.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
35.2					**Direct Entry, SCS TR-55**

Subcatchment 10:



Hydrograph for Subcatchment 10:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.01	0.11
8.00	0.72	0.03	0.39
9.00	0.92	0.09	0.89
10.00	1.19	0.19	1.75
11.00	1.58	0.39	3.23
12.00	3.15	1.50	**12.32**
13.00	4.72	2.83	**18.97**
14.00	5.11	3.18	6.06
15.00	5.38	3.42	4.23
16.00	5.58	3.60	3.13
17.00	5.73	3.74	2.32
18.00	5.85	3.85	1.83
19.00	5.94	3.93	1.50
20.00	6.03	4.01	1.36
21.00	6.11	4.09	1.23
22.00	6.18	4.15	1.12
23.00	6.24	4.21	1.01
24.00	**6.30**	**4.26**	0.90
25.00	6.30	4.26	0.05
26.00	6.30	4.26	0.00
27.00	6.30	4.26	0.00
28.00	6.30	4.26	0.00
29.00	6.30	4.26	0.00
30.00	6.30	4.26	0.00
31.00	6.30	4.26	0.00
32.00	6.30	4.26	0.00
33.00	6.30	4.26	0.00
34.00	6.30	4.26	0.00
35.00	6.30	4.26	0.00
36.00	6.30	4.26	0.00
37.00	6.30	4.26	0.00
38.00	6.30	4.26	0.00
39.00	6.30	4.26	0.00
40.00	6.30	4.26	0.00
41.00	6.30	4.26	0.00
42.00	6.30	4.26	0.00
43.00	6.30	4.26	0.00
44.00	6.30	4.26	0.00
45.00	6.30	4.26	0.00
46.00	6.30	4.26	0.00
47.00	6.30	4.26	0.00
48.00	6.30	4.26	0.00
49.00	6.30	4.26	0.00
50.00	6.30	4.26	0.00
51.00	6.30	4.26	0.00
52.00	6.30	4.26	0.00
53.00	6.30	4.26	0.00
54.00	6.30	4.26	0.00
55.00	6.30	4.26	0.00
56.00	6.30	4.26	0.00
57.00	6.30	4.26	0.00
58.00	6.30	4.26	0.00
59.00	6.30	4.26	0.00
60.00	6.30	4.26	0.00
61.00	6.30	4.26	0.00
62.00	6.30	4.26	0.00
63.00	6.30	4.26	0.00
64.00	6.30	4.26	0.00
65.00	6.30	4.26	0.00
66.00	6.30	4.26	0.00
67.00	6.30	4.26	0.00
68.00	6.30	4.26	0.00
69.00	6.30	4.26	0.00
70.00	6.30	4.26	0.00
71.00	6.30	4.26	0.00
72.00	6.30	4.26	0.00

Summary for Subcatchment 11:

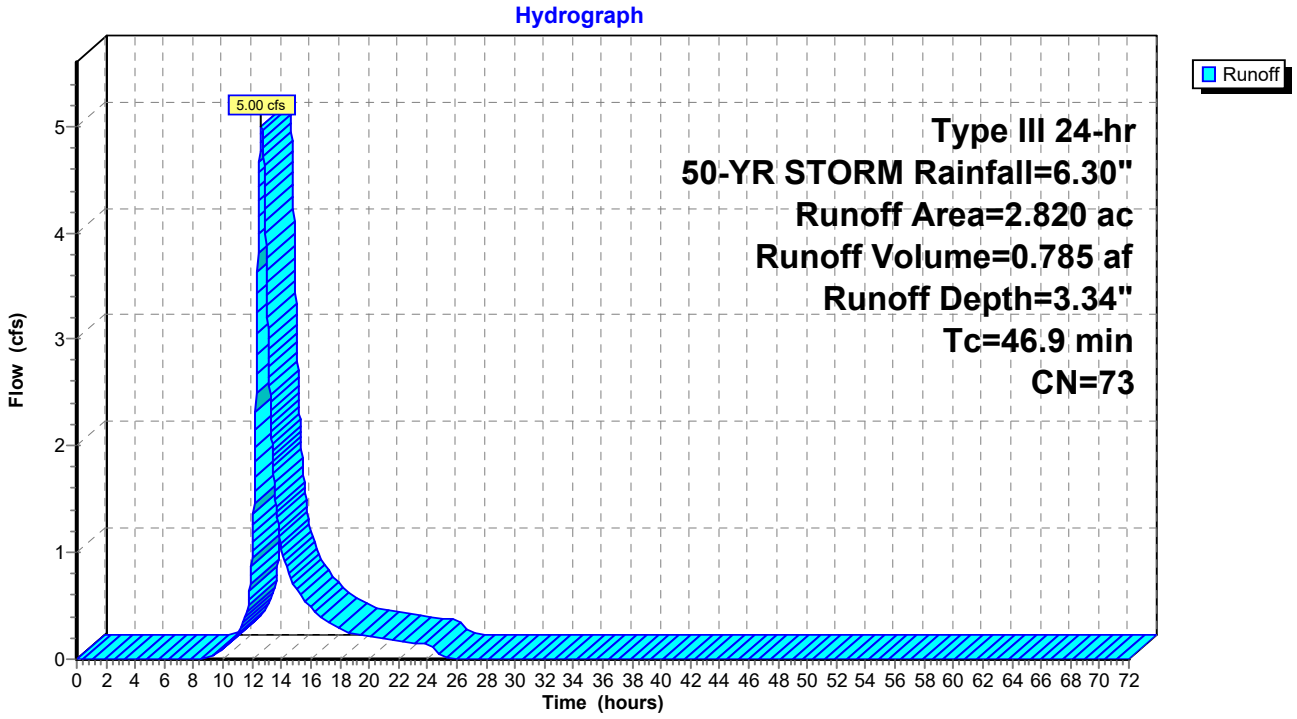
Runoff = 5.00 cfs @ 12.66 hrs, Volume= 0.785 af, Depth= 3.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	2.820	73	
	2.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
46.9					**Direct Entry, SCS TR-55**

Subcatchment 11:



Hydrograph for Subcatchment 11:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.00
8.00	0.72	0.00	0.00
9.00	0.92	0.01	0.01
10.00	1.19	0.05	0.09
11.00	1.58	0.15	0.25
12.00	3.15	0.95	**0.96**
13.00	4.72	2.07	**3.53**
14.00	5.11	2.37	1.05
15.00	5.38	2.58	0.66
16.00	5.58	2.75	0.50
17.00	5.73	2.87	0.36
18.00	5.85	2.96	0.29
19.00	5.94	3.04	0.23
20.00	6.03	3.11	0.21
21.00	6.11	3.18	0.19
22.00	6.18	3.24	0.17
23.00	6.24	3.29	0.16
24.00	**6.30**	**3.34**	0.14
25.00	6.30	3.34	0.02
26.00	6.30	3.34	0.00
27.00	6.30	3.34	0.00
28.00	6.30	3.34	0.00
29.00	6.30	3.34	0.00
30.00	6.30	3.34	0.00
31.00	6.30	3.34	0.00
32.00	6.30	3.34	0.00
33.00	6.30	3.34	0.00
34.00	6.30	3.34	0.00
35.00	6.30	3.34	0.00
36.00	6.30	3.34	0.00
37.00	6.30	3.34	0.00
38.00	6.30	3.34	0.00
39.00	6.30	3.34	0.00
40.00	6.30	3.34	0.00
41.00	6.30	3.34	0.00
42.00	6.30	3.34	0.00
43.00	6.30	3.34	0.00
44.00	6.30	3.34	0.00
45.00	6.30	3.34	0.00
46.00	6.30	3.34	0.00
47.00	6.30	3.34	0.00
48.00	6.30	3.34	0.00
49.00	6.30	3.34	0.00
50.00	6.30	3.34	0.00
51.00	6.30	3.34	0.00
52.00	6.30	3.34	0.00
53.00	6.30	3.34	0.00
54.00	6.30	3.34	0.00
55.00	6.30	3.34	0.00
56.00	6.30	3.34	0.00
57.00	6.30	3.34	0.00
58.00	6.30	3.34	0.00
59.00	6.30	3.34	0.00
60.00	6.30	3.34	0.00
61.00	6.30	3.34	0.00
62.00	6.30	3.34	0.00
63.00	6.30	3.34	0.00
64.00	6.30	3.34	0.00
65.00	6.30	3.34	0.00
66.00	6.30	3.34	0.00
67.00	6.30	3.34	0.00
68.00	6.30	3.34	0.00
69.00	6.30	3.34	0.00
70.00	6.30	3.34	0.00
71.00	6.30	3.34	0.00
72.00	6.30	3.34	0.00

Summary for Subcatchment 12:

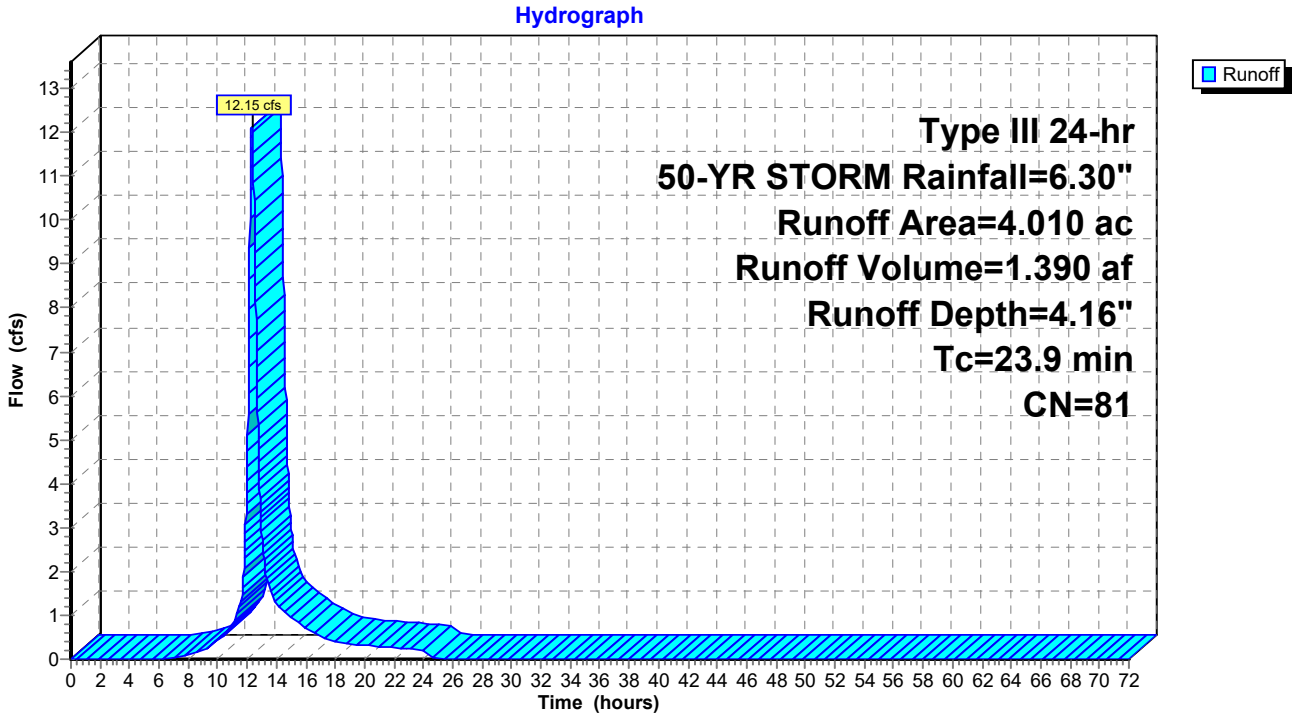
Runoff = 12.15 cfs @ 12.33 hrs, Volume= 1.390 af, Depth= 4.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	4.010	81	
	4.010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.9					**Direct Entry, SCS TR-55**

Subcatchment 12:



Hydrograph for Subcatchment 12:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.02
8.00	0.72	0.02	0.09
9.00	0.92	0.07	0.21
10.00	1.19	0.17	0.42
11.00	1.58	0.35	0.81
12.00	3.15	1.43	**4.38**
13.00	4.72	2.74	**2.88**
14.00	5.11	3.08	1.30
15.00	5.38	3.33	0.95
16.00	5.58	3.50	0.69
17.00	5.73	3.64	0.53
18.00	5.85	3.74	0.41
19.00	5.94	3.83	0.35
20.00	6.03	3.91	0.31
21.00	6.11	3.98	0.29
22.00	6.18	4.05	0.26
23.00	6.24	4.11	0.23
24.00	**6.30**	**4.16**	0.21
25.00	6.30	4.16	0.00
26.00	6.30	4.16	0.00
27.00	6.30	4.16	0.00
28.00	6.30	4.16	0.00
29.00	6.30	4.16	0.00
30.00	6.30	4.16	0.00
31.00	6.30	4.16	0.00
32.00	6.30	4.16	0.00
33.00	6.30	4.16	0.00
34.00	6.30	4.16	0.00
35.00	6.30	4.16	0.00
36.00	6.30	4.16	0.00
37.00	6.30	4.16	0.00
38.00	6.30	4.16	0.00
39.00	6.30	4.16	0.00
40.00	6.30	4.16	0.00
41.00	6.30	4.16	0.00
42.00	6.30	4.16	0.00
43.00	6.30	4.16	0.00
44.00	6.30	4.16	0.00
45.00	6.30	4.16	0.00
46.00	6.30	4.16	0.00
47.00	6.30	4.16	0.00
48.00	6.30	4.16	0.00
49.00	6.30	4.16	0.00
50.00	6.30	4.16	0.00
51.00	6.30	4.16	0.00
52.00	6.30	4.16	0.00
53.00	6.30	4.16	0.00
54.00	6.30	4.16	0.00
55.00	6.30	4.16	0.00
56.00	6.30	4.16	0.00
57.00	6.30	4.16	0.00
58.00	6.30	4.16	0.00
59.00	6.30	4.16	0.00
60.00	6.30	4.16	0.00
61.00	6.30	4.16	0.00
62.00	6.30	4.16	0.00
63.00	6.30	4.16	0.00
64.00	6.30	4.16	0.00
65.00	6.30	4.16	0.00
66.00	6.30	4.16	0.00
67.00	6.30	4.16	0.00
68.00	6.30	4.16	0.00
69.00	6.30	4.16	0.00
70.00	6.30	4.16	0.00
71.00	6.30	4.16	0.00
72.00	6.30	4.16	0.00

Summary for Subcatchment 13:

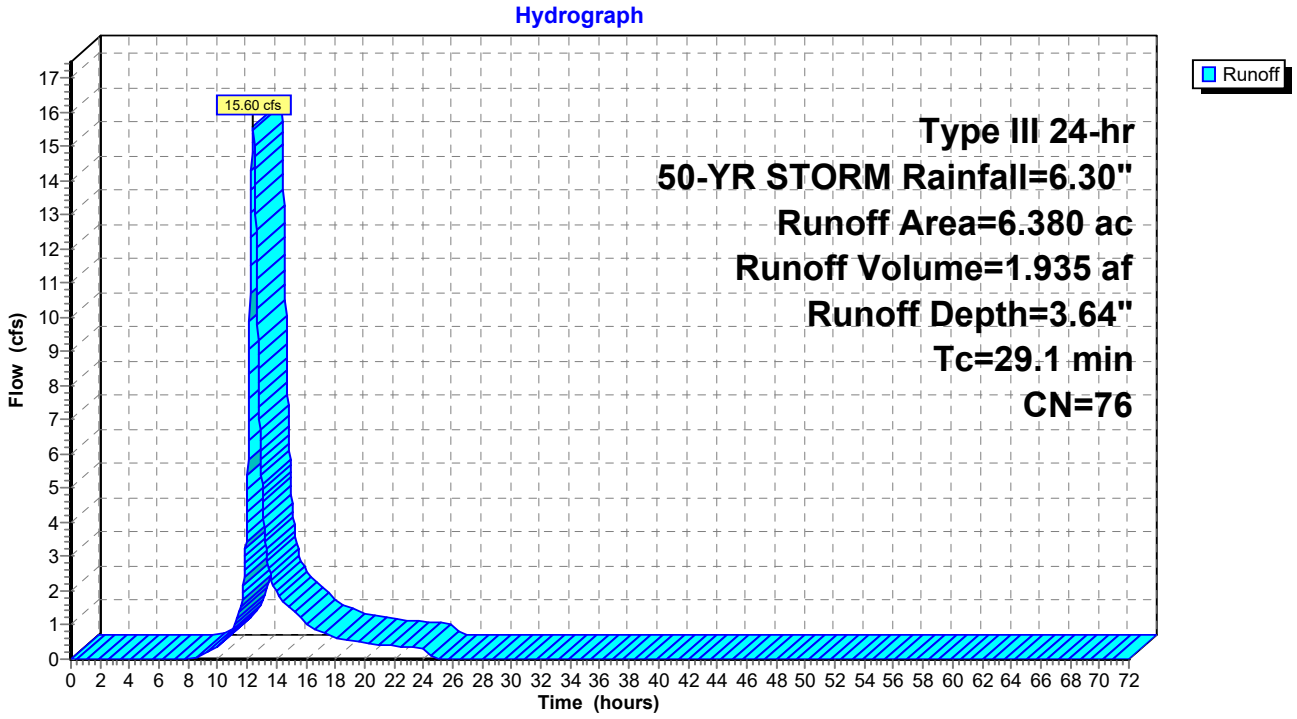
Runoff = 15.60 cfs @ 12.40 hrs, Volume= 1.935 af, Depth= 3.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	6.380	76	
	6.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.1					**Direct Entry, SCS TR-55**

Subcatchment 13:



Hydrograph for Subcatchment 13:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.00
8.00	0.72	0.00	0.01
9.00	0.92	0.02	0.15
10.00	1.19	0.08	0.40
11.00	1.58	0.22	0.88
12.00	3.15	1.12	**4.62**
13.00	4.72	2.31	**5.14**
14.00	5.11	2.63	2.00
15.00	5.38	2.85	1.45
16.00	5.58	3.02	1.07
17.00	5.73	3.15	0.80
18.00	5.85	3.25	0.63
19.00	5.94	3.33	0.53
20.00	6.03	3.41	0.48
21.00	6.11	3.47	0.43
22.00	6.18	3.53	0.40
23.00	6.24	3.59	0.36
24.00	**6.30**	**3.64**	0.32
25.00	6.30	3.64	0.01
26.00	6.30	3.64	0.00
27.00	6.30	3.64	0.00
28.00	6.30	3.64	0.00
29.00	6.30	3.64	0.00
30.00	6.30	3.64	0.00
31.00	6.30	3.64	0.00
32.00	6.30	3.64	0.00
33.00	6.30	3.64	0.00
34.00	6.30	3.64	0.00
35.00	6.30	3.64	0.00
36.00	6.30	3.64	0.00
37.00	6.30	3.64	0.00
38.00	6.30	3.64	0.00
39.00	6.30	3.64	0.00
40.00	6.30	3.64	0.00
41.00	6.30	3.64	0.00
42.00	6.30	3.64	0.00
43.00	6.30	3.64	0.00
44.00	6.30	3.64	0.00
45.00	6.30	3.64	0.00
46.00	6.30	3.64	0.00
47.00	6.30	3.64	0.00
48.00	6.30	3.64	0.00
49.00	6.30	3.64	0.00
50.00	6.30	3.64	0.00
51.00	6.30	3.64	0.00
52.00	6.30	3.64	0.00
53.00	6.30	3.64	0.00
54.00	6.30	3.64	0.00
55.00	6.30	3.64	0.00
56.00	6.30	3.64	0.00
57.00	6.30	3.64	0.00
58.00	6.30	3.64	0.00
59.00	6.30	3.64	0.00
60.00	6.30	3.64	0.00
61.00	6.30	3.64	0.00
62.00	6.30	3.64	0.00
63.00	6.30	3.64	0.00
64.00	6.30	3.64	0.00
65.00	6.30	3.64	0.00
66.00	6.30	3.64	0.00
67.00	6.30	3.64	0.00
68.00	6.30	3.64	0.00
69.00	6.30	3.64	0.00
70.00	6.30	3.64	0.00
71.00	6.30	3.64	0.00
72.00	6.30	3.64	0.00

Summary for Subcatchment 14:

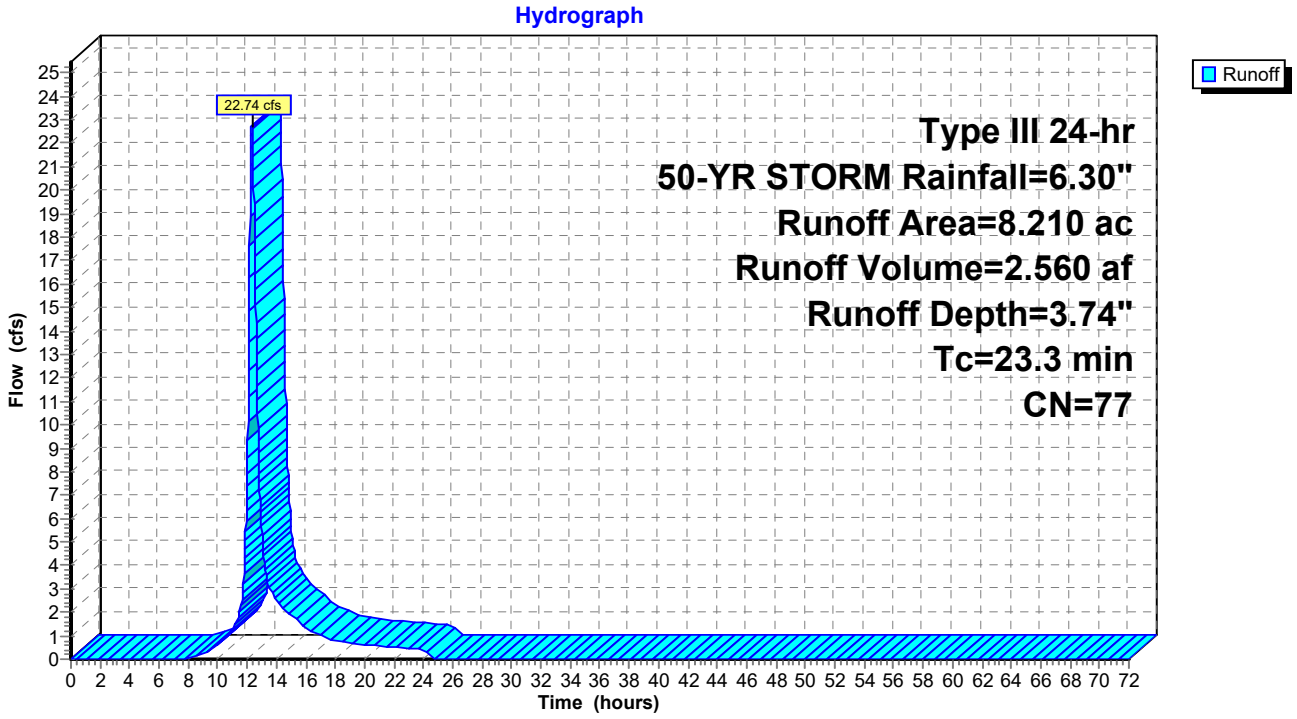
Runoff = 22.74 cfs @ 12.32 hrs, Volume= 2.560 af, Depth= 3.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	8.210	77	
	8.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.3					**Direct Entry, SCS TR-55**

Subcatchment 14:



Hydrograph for Subcatchment 14:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.00
8.00	0.72	0.00	0.05
9.00	0.92	0.03	0.25
10.00	1.19	0.10	0.61
11.00	1.58	0.24	1.30
12.00	3.15	1.18	**7.93**
13.00	4.72	2.39	**5.38**
14.00	5.11	2.71	2.52
15.00	5.38	2.95	1.84
16.00	5.58	3.12	1.35
17.00	5.73	3.24	1.03
18.00	5.85	3.35	0.81
19.00	5.94	3.43	0.68
20.00	6.03	3.50	0.62
21.00	6.11	3.57	0.56
22.00	6.18	3.64	0.51
23.00	6.24	3.69	0.46
24.00	**6.30**	**3.74**	0.41
25.00	6.30	3.74	0.00
26.00	6.30	3.74	0.00
27.00	6.30	3.74	0.00
28.00	6.30	3.74	0.00
29.00	6.30	3.74	0.00
30.00	6.30	3.74	0.00
31.00	6.30	3.74	0.00
32.00	6.30	3.74	0.00
33.00	6.30	3.74	0.00
34.00	6.30	3.74	0.00
35.00	6.30	3.74	0.00
36.00	6.30	3.74	0.00
37.00	6.30	3.74	0.00
38.00	6.30	3.74	0.00
39.00	6.30	3.74	0.00
40.00	6.30	3.74	0.00
41.00	6.30	3.74	0.00
42.00	6.30	3.74	0.00
43.00	6.30	3.74	0.00
44.00	6.30	3.74	0.00
45.00	6.30	3.74	0.00
46.00	6.30	3.74	0.00
47.00	6.30	3.74	0.00
48.00	6.30	3.74	0.00
49.00	6.30	3.74	0.00
50.00	6.30	3.74	0.00
51.00	6.30	3.74	0.00
52.00	6.30	3.74	0.00
53.00	6.30	3.74	0.00
54.00	6.30	3.74	0.00
55.00	6.30	3.74	0.00
56.00	6.30	3.74	0.00
57.00	6.30	3.74	0.00
58.00	6.30	3.74	0.00
59.00	6.30	3.74	0.00
60.00	6.30	3.74	0.00
61.00	6.30	3.74	0.00
62.00	6.30	3.74	0.00
63.00	6.30	3.74	0.00
64.00	6.30	3.74	0.00
65.00	6.30	3.74	0.00
66.00	6.30	3.74	0.00
67.00	6.30	3.74	0.00
68.00	6.30	3.74	0.00
69.00	6.30	3.74	0.00
70.00	6.30	3.74	0.00
71.00	6.30	3.74	0.00
72.00	6.30	3.74	0.00

Summary for Subcatchment 15:

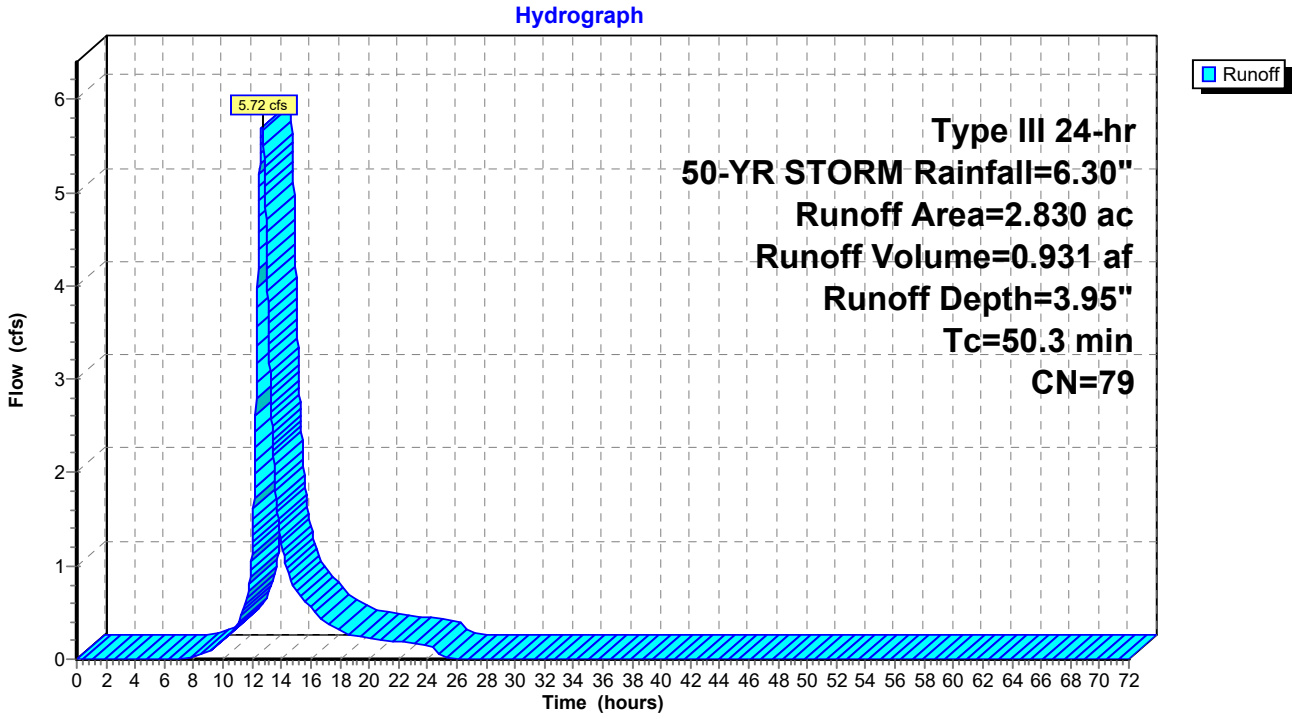
Runoff = 5.72 cfs @ 12.68 hrs, Volume= 0.931 af, Depth= 3.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 50-YR STORM Rainfall=6.30"

	Area (ac)	CN	Description
*	2.830	79	
	2.830		100.00% Pervious Area

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

Subcatchment 15:



Hydrograph for Subcatchment 15:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.19	0.00	0.00
4.00	0.27	0.00	0.00
5.00	0.36	0.00	0.00
6.00	0.45	0.00	0.00
7.00	0.57	0.00	0.00
8.00	0.72	0.01	0.02
9.00	0.92	0.05	0.08
10.00	1.19	0.13	0.19
11.00	1.58	0.29	0.39
12.00	3.15	1.30	**1.19**
13.00	4.72	2.57	**4.32**
14.00	5.11	2.90	1.24
15.00	5.38	3.13	0.74
16.00	5.58	3.31	0.55
17.00	5.73	3.44	0.40
18.00	5.85	3.54	0.32
19.00	5.94	3.63	0.25
20.00	6.03	3.71	0.23
21.00	6.11	3.78	0.21
22.00	6.18	3.84	0.19
23.00	6.24	3.90	0.17
24.00	**6.30**	**3.95**	0.15
25.00	6.30	3.95	0.03
26.00	6.30	3.95	0.00
27.00	6.30	3.95	0.00
28.00	6.30	3.95	0.00
29.00	6.30	3.95	0.00
30.00	6.30	3.95	0.00
31.00	6.30	3.95	0.00
32.00	6.30	3.95	0.00
33.00	6.30	3.95	0.00
34.00	6.30	3.95	0.00
35.00	6.30	3.95	0.00
36.00	6.30	3.95	0.00
37.00	6.30	3.95	0.00
38.00	6.30	3.95	0.00
39.00	6.30	3.95	0.00
40.00	6.30	3.95	0.00
41.00	6.30	3.95	0.00
42.00	6.30	3.95	0.00
43.00	6.30	3.95	0.00
44.00	6.30	3.95	0.00
45.00	6.30	3.95	0.00
46.00	6.30	3.95	0.00
47.00	6.30	3.95	0.00
48.00	6.30	3.95	0.00
49.00	6.30	3.95	0.00
50.00	6.30	3.95	0.00
51.00	6.30	3.95	0.00
52.00	6.30	3.95	0.00
53.00	6.30	3.95	0.00
54.00	6.30	3.95	0.00
55.00	6.30	3.95	0.00
56.00	6.30	3.95	0.00
57.00	6.30	3.95	0.00
58.00	6.30	3.95	0.00
59.00	6.30	3.95	0.00
60.00	6.30	3.95	0.00
61.00	6.30	3.95	0.00
62.00	6.30	3.95	0.00
63.00	6.30	3.95	0.00
64.00	6.30	3.95	0.00
65.00	6.30	3.95	0.00
66.00	6.30	3.95	0.00
67.00	6.30	3.95	0.00
68.00	6.30	3.95	0.00
69.00	6.30	3.95	0.00
70.00	6.30	3.95	0.00
71.00	6.30	3.95	0.00
72.00	6.30	3.95	0.00

Summary for Pond 01-Pond:

Inflow Area = 2.560 ac, 0.00% Impervious, Inflow Depth = 4.37" for 50-YR STORM event
Inflow = 7.83 cfs @ 12.35 hrs, Volume= 0.932 af
Outflow = 5.95 cfs @ 12.56 hrs, Volume= 0.676 af, Atten= 24%, Lag= 12.7 min
Primary = 5.95 cfs @ 12.56 hrs, Volume= 0.676 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,114.37' @ 12.56 hrs Surf.Area= 0.127 ac Storage= 0.352 af

Plug-Flow detention time= 216.3 min calculated for 0.676 af (72% of inflow)
Center-of-Mass det. time= 126.6 min (949.5 - 822.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,110.00'	0.438 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

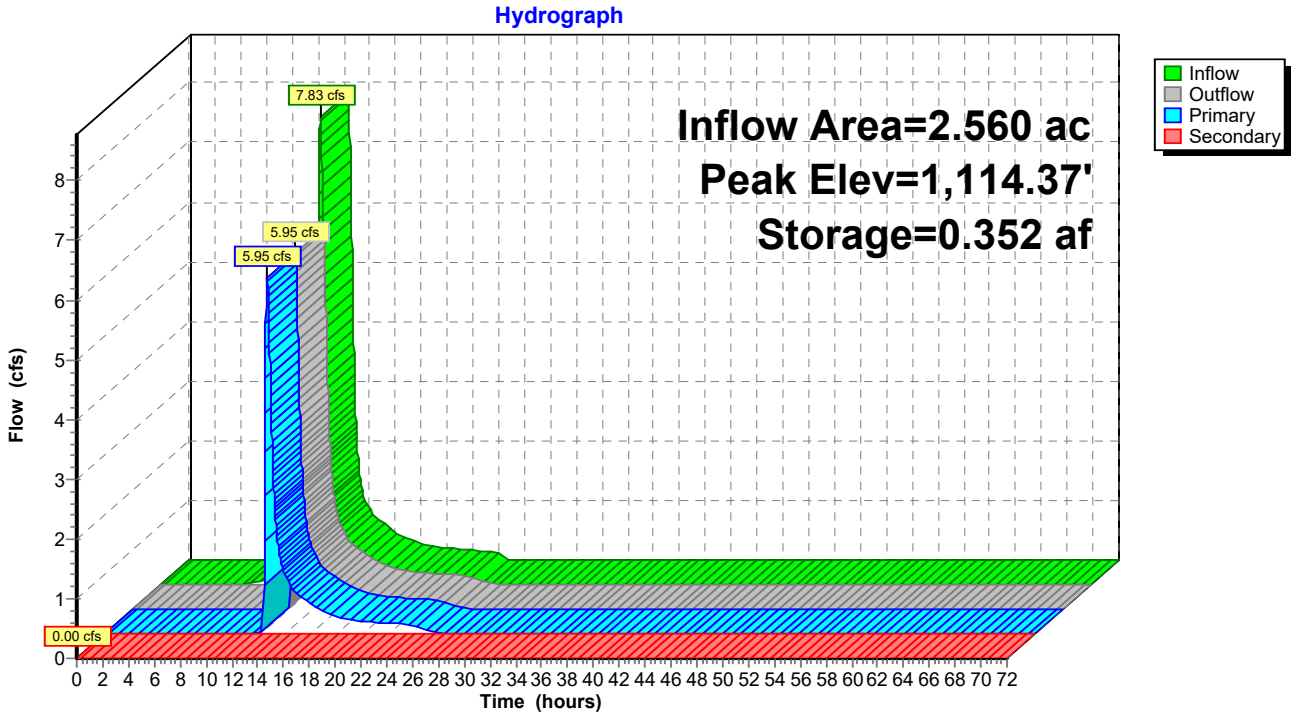
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,110.00	0.044	0.000	0.000
1,111.00	0.058	0.051	0.051
1,112.00	0.075	0.066	0.117
1,113.00	0.094	0.084	0.202
1,114.00	0.117	0.105	0.307
1,115.00	0.144	0.130	0.438

Device	Routing	Invert	Outlet Devices
#1	Primary	1,107.00'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,107.00' / 1,105.00' S= 0.0500 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,113.70'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,114.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,110.00'	**0.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.94 cfs @ 12.56 hrs HW=1,114.37' (Free Discharge)
└─**1=Culvert** (Passes 5.94 cfs of 21.89 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 5.94 cfs @ 3.11 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 10.05 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,110.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 01-Pond:


Hydrograph
Inflow Area=2.560 ac
Peak Elev=1,114.37'
Storage=0.352 af
7.83 cfs
5.95 cfs
5.95 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 01-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,110.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,110.00	0.00	0.00	0.00
4.00	0.00	0.000	1,110.00	0.00	0.00	0.00
6.00	0.00	0.000	1,110.00	0.00	0.00	0.00
8.00	0.08	0.006	1,110.13	0.00	0.00	0.00
10.00	0.31	0.035	1,110.71	0.00	0.00	0.00
12.00	**2.75**	**0.155**	**1,112.48**	**0.00**	**0.00**	0.00
14.00	**0.86**	**0.296**	**1,113.90**	**0.95**	**0.95**	0.00
16.00	0.46	0.288	1,113.83	0.50	0.50	0.00
18.00	0.27	0.284	1,113.79	0.29	0.29	0.00
20.00	0.21	0.282	1,113.77	0.21	0.21	0.00
22.00	0.17	0.281	1,113.76	0.18	0.18	0.00
24.00	0.14	0.280	1,113.76	0.14	0.14	0.00
26.00	0.00	0.274	1,113.70	0.01	0.01	0.00
28.00	0.00	0.273	1,113.69	0.00	0.00	0.00
30.00	0.00	0.272	1,113.69	0.00	0.00	0.00
32.00	0.00	0.271	1,113.68	0.00	0.00	0.00
34.00	0.00	0.271	1,113.67	0.00	0.00	0.00
36.00	0.00	0.270	1,113.67	0.00	0.00	0.00
38.00	0.00	0.269	1,113.66	0.00	0.00	0.00
40.00	0.00	0.268	1,113.65	0.00	0.00	0.00
42.00	0.00	0.268	1,113.65	0.00	0.00	0.00
44.00	0.00	0.267	1,113.64	0.00	0.00	0.00
46.00	0.00	0.266	1,113.63	0.00	0.00	0.00
48.00	0.00	0.265	1,113.63	0.00	0.00	0.00
50.00	0.00	0.265	1,113.62	0.00	0.00	0.00
52.00	0.00	0.264	1,113.61	0.00	0.00	0.00
54.00	0.00	0.263	1,113.61	0.00	0.00	0.00
56.00	0.00	0.262	1,113.60	0.00	0.00	0.00
58.00	0.00	0.262	1,113.59	0.00	0.00	0.00
60.00	0.00	0.261	1,113.59	0.00	0.00	0.00
62.00	0.00	0.260	1,113.58	0.00	0.00	0.00
64.00	0.00	0.259	1,113.57	0.00	0.00	0.00
66.00	0.00	0.259	1,113.56	0.00	0.00	0.00
68.00	0.00	0.258	1,113.56	0.00	0.00	0.00
70.00	0.00	0.257	1,113.55	0.00	0.00	0.00
72.00	0.00	0.257	1,113.54	0.00	0.00	0.00

Summary for Pond 02-Pond:

Inflow Area = 11.560 ac, 0.00% Impervious, Inflow Depth = 3.74" for 50-YR STORM event
Inflow = 30.08 cfs @ 12.37 hrs, Volume= 3.605 af
Outflow = 20.24 cfs @ 12.64 hrs, Volume= 2.687 af, Atten= 33%, Lag= 16.5 min
Primary = 20.24 cfs @ 12.64 hrs, Volume= 2.687 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,045.52' @ 12.64 hrs Surf.Area= 0.281 ac Storage= 1.343 af

Plug-Flow detention time= 208.3 min calculated for 2.687 af (75% of inflow)
Center-of-Mass det. time= 120.2 min (959.1 - 838.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,038.00'	1.483 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

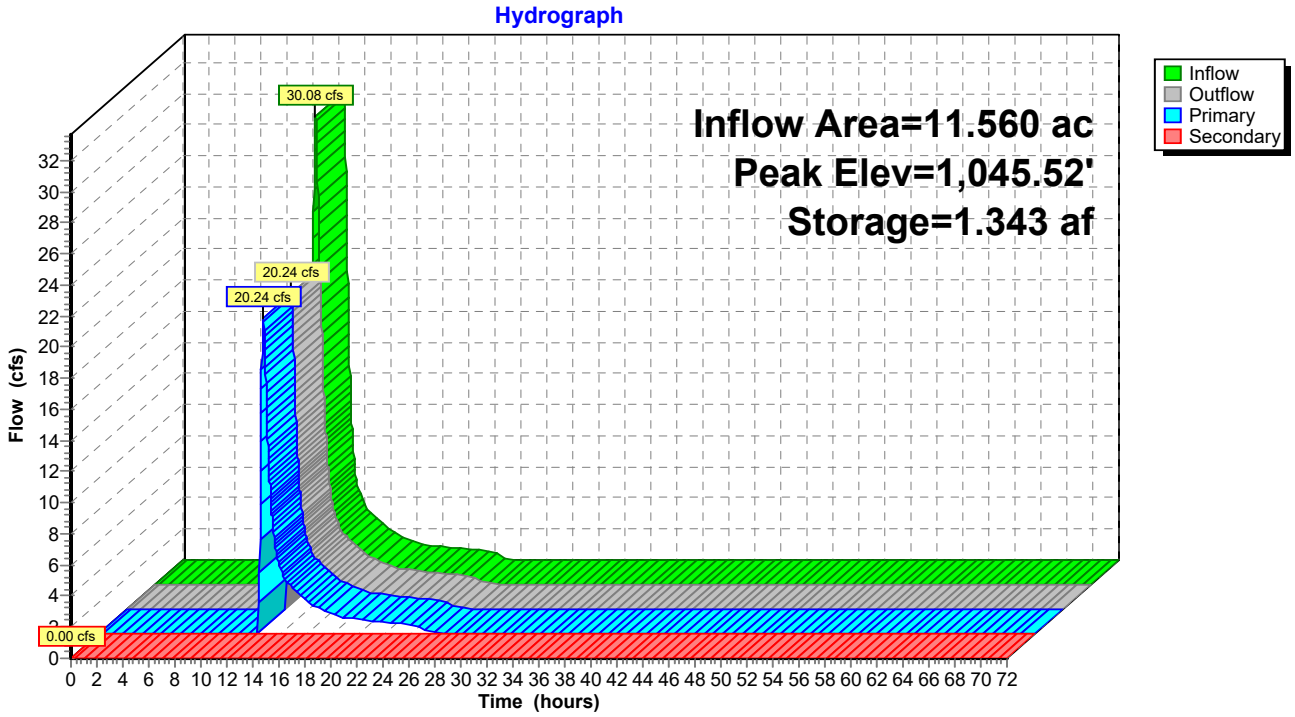
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,038.00	0.092	0.000	0.000
1,039.00	0.112	0.102	0.102
1,040.00	0.133	0.123	0.225
1,041.00	0.156	0.144	0.369
1,042.00	0.181	0.168	0.537
1,043.00	0.207	0.194	0.731
1,044.00	0.235	0.221	0.952
1,045.00	0.264	0.250	1.202
1,046.00	0.297	0.280	1.483

Device	Routing	Invert	Outlet Devices
#1	Primary	1,038.00'	**24.0" Round Culvert** L= 98.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,038.00' / 1,016.00' S= 0.2245 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,044.10'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,045.80'	**40.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,038.00'	**0.5" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=20.23 cfs @ 12.64 hrs HW=1,045.52' (Free Discharge)
└─**1=Culvert** (Passes 20.23 cfs of 38.62 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 20.21 cfs @ 5.25 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 13.18 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,038.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 02-Pond:


Hydrograph
Inflow Area=11.560 ac
Peak Elev=1,045.52'
Storage=1.343 af
30.08 cfs
20.24 cfs
20.24 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 02-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,038.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,038.00	0.00	0.00	0.00
4.00	0.00	0.000	1,038.00	0.00	0.00	0.00
6.00	0.00	0.000	1,038.00	0.00	0.00	0.00
8.00	0.07	0.001	1,038.01	0.00	0.00	0.00
10.00	0.83	0.062	1,038.63	0.01	0.01	0.00
12.00	**9.57**	**0.451**	**1,041.51**	**0.01**	**0.01**	0.00
14.00	**3.62**	**1.107**	**1,044.63**	**4.16**	**4.16**	0.00
16.00	1.94	1.061	1,044.45	2.16	2.16	0.00
18.00	1.15	1.035	1,044.34	1.27	1.27	0.00
20.00	0.87	1.024	1,044.30	0.92	0.92	0.00
22.00	0.72	1.018	1,044.27	0.76	0.76	0.00
24.00	0.58	1.012	1,044.25	0.61	0.61	0.00
26.00	0.00	0.983	1,044.13	0.08	0.08	0.00
28.00	0.00	0.976	1,044.10	0.02	0.02	0.00
30.00	0.00	0.973	1,044.09	0.02	0.02	0.00
32.00	0.00	0.971	1,044.08	0.02	0.02	0.00
34.00	0.00	0.968	1,044.07	0.02	0.02	0.00
36.00	0.00	0.965	1,044.05	0.02	0.02	0.00
38.00	0.00	0.963	1,044.04	0.02	0.02	0.00
40.00	0.00	0.960	1,044.03	0.02	0.02	0.00
42.00	0.00	0.957	1,044.02	0.02	0.02	0.00
44.00	0.00	0.955	1,044.01	0.02	0.02	0.00
46.00	0.00	0.952	1,044.00	0.02	0.02	0.00
48.00	0.00	0.949	1,043.99	0.02	0.02	0.00
50.00	0.00	0.947	1,043.98	0.02	0.02	0.00
52.00	0.00	0.944	1,043.96	0.02	0.02	0.00
54.00	0.00	0.942	1,043.95	0.02	0.02	0.00
56.00	0.00	0.939	1,043.94	0.02	0.02	0.00
58.00	0.00	0.936	1,043.93	0.02	0.02	0.00
60.00	0.00	0.934	1,043.92	0.02	0.02	0.00
62.00	0.00	0.931	1,043.91	0.02	0.02	0.00
64.00	0.00	0.928	1,043.90	0.02	0.02	0.00
66.00	0.00	0.926	1,043.89	0.02	0.02	0.00
68.00	0.00	0.923	1,043.87	0.02	0.02	0.00
70.00	0.00	0.920	1,043.86	0.02	0.02	0.00
72.00	0.00	0.918	1,043.85	0.02	0.02	0.00

Summary for Pond 03-Pond:

Inflow Area = 13.580 ac, 0.00% Impervious, Inflow Depth = 4.16" for 50-YR STORM event
Inflow = 38.55 cfs @ 12.38 hrs, Volume= 4.706 af
Outflow = 30.12 cfs @ 12.58 hrs, Volume= 4.540 af, Atten= 22%, Lag= 12.1 min
Primary = 30.12 cfs @ 12.58 hrs, Volume= 4.540 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,133.31' @ 12.58 hrs Surf.Area= 0.507 ac Storage= 1.057 af

Plug-Flow detention time= 90.2 min calculated for 4.539 af (96% of inflow)
Center-of-Mass det. time= 70.7 min (900.5 - 829.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,131.00'	1.978 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

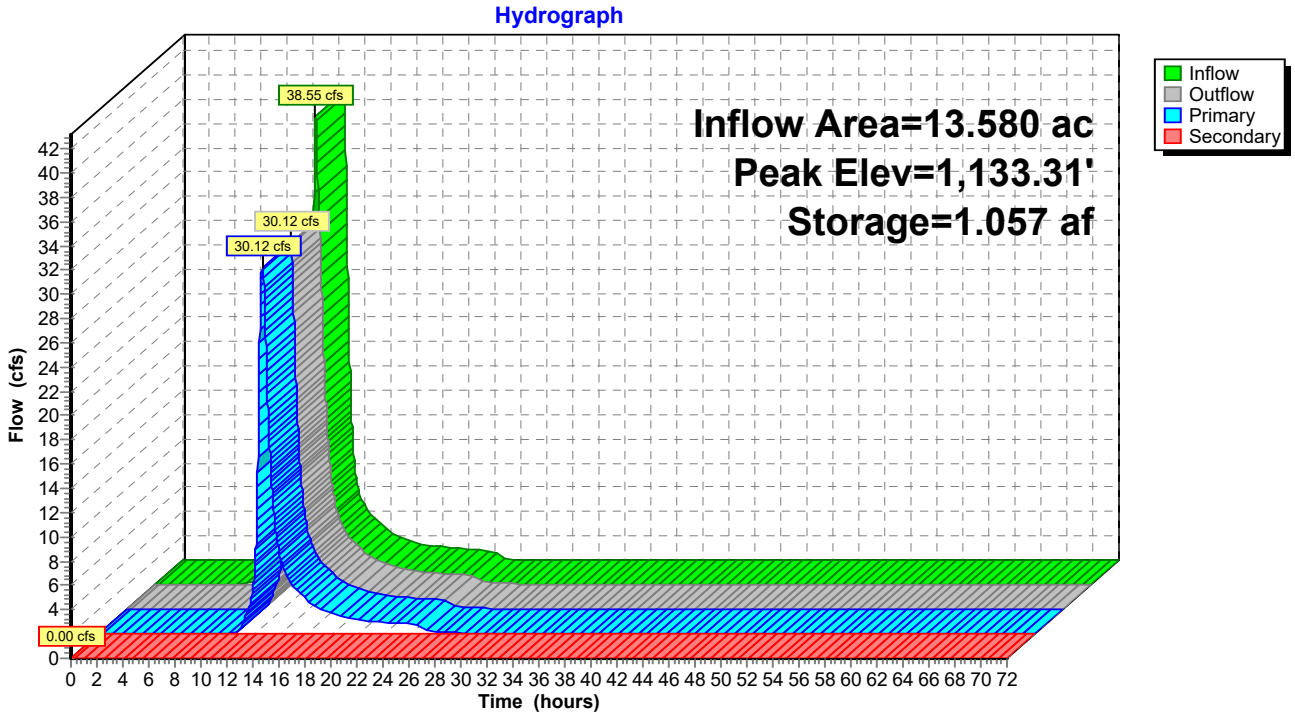
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,131.00	0.410	0.000	0.000
1,132.00	0.451	0.431	0.431
1,133.00	0.494	0.472	0.903
1,134.00	0.537	0.515	1.418
1,135.00	0.583	0.560	1.978

Device	Routing	Invert	Outlet Devices
#1	Primary	1,131.00'	**36.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,131.00' / 1,127.00' S= 0.0800 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Device 1	1,131.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,134.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,131.00'	**0.9" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=30.16 cfs @ 12.58 hrs HW=1,133.31' (Free Discharge)
└─**1=Culvert** (Inlet Controls 30.16 cfs @ 5.17 fps)
  ├─**2=Sharp-Crested Rectangular Weir** (Passes < 30.22 cfs potential flow)
  └─**4=Orifice/Grate** (Passes < 0.03 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,131.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 03-Pond:


Hydrograph
Inflow Area=13.580 ac
Peak Elev=1,133.31'
Storage=1.057 af
38.55 cfs
30.12 cfs
30.12 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 03-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,131.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,131.00	0.00	0.00	0.00
4.00	0.00	0.000	1,131.00	0.00	0.00	0.00
6.00	0.00	0.000	1,131.00	0.00	0.00	0.00
8.00	0.29	0.015	1,131.04	0.00	0.00	0.00
10.00	1.39	0.137	1,131.33	0.01	0.01	0.00
12.00	**12.68**	**0.495**	**1,132.14**	**5.61**	**5.61**	0.00
14.00	**4.53**	**0.510**	**1,132.17**	**6.08**	**6.08**	0.00
16.00	2.40	0.393	1,131.92	2.84	2.84	0.00
18.00	1.42	0.338	1,131.79	1.66	1.66	0.00
20.00	1.07	0.312	1,131.73	1.17	1.17	0.00
22.00	0.89	0.299	1,131.70	0.95	0.95	0.00
24.00	0.71	0.288	1,131.68	0.78	0.78	0.00
26.00	0.00	0.237	1,131.56	0.18	0.18	0.00
28.00	0.00	0.221	1,131.52	0.06	0.06	0.00
30.00	0.00	0.214	1,131.51	0.03	0.03	0.00
32.00	0.00	0.211	1,131.50	0.02	0.02	0.00
34.00	0.00	0.208	1,131.50	0.01	0.01	0.00
36.00	0.00	0.206	1,131.49	0.01	0.01	0.00
38.00	0.00	0.204	1,131.48	0.01	0.01	0.00
40.00	0.00	0.201	1,131.48	0.01	0.01	0.00
42.00	0.00	0.199	1,131.47	0.01	0.01	0.00
44.00	0.00	0.197	1,131.47	0.01	0.01	0.00
46.00	0.00	0.194	1,131.46	0.01	0.01	0.00
48.00	0.00	0.192	1,131.46	0.01	0.01	0.00
50.00	0.00	0.190	1,131.45	0.01	0.01	0.00
52.00	0.00	0.187	1,131.45	0.01	0.01	0.00
54.00	0.00	0.185	1,131.44	0.01	0.01	0.00
56.00	0.00	0.183	1,131.44	0.01	0.01	0.00
58.00	0.00	0.181	1,131.43	0.01	0.01	0.00
60.00	0.00	0.179	1,131.43	0.01	0.01	0.00
62.00	0.00	0.176	1,131.42	0.01	0.01	0.00
64.00	0.00	0.174	1,131.42	0.01	0.01	0.00
66.00	0.00	0.172	1,131.41	0.01	0.01	0.00
68.00	0.00	0.170	1,131.41	0.01	0.01	0.00
70.00	0.00	0.168	1,131.40	0.01	0.01	0.00
72.00	0.00	0.166	1,131.40	0.01	0.01	0.00

Summary for Pond 04-Pond:

04-Pond

Inflow Area =	1.980 ac,	0.00% Impervious,	Inflow Depth =	3.74"	for 50-YR STORM event
Inflow =	4.77 cfs @	12.44 hrs,	Volume=	0.617 af	
Outflow =	3.44 cfs @	12.70 hrs,	Volume=	0.431 af,	Atten= 28%, Lag= 15.9 min
Primary =	3.44 cfs @	12.70 hrs,	Volume=	0.431 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,109.30' @ 12.70 hrs Surf.Area= 0.091 ac Storage= 0.235 af

Plug-Flow detention time= 208.0 min calculated for 0.431 af (70% of inflow)
Center-of-Mass det. time= 112.3 min (955.7 - 843.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,105.00'	0.303 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

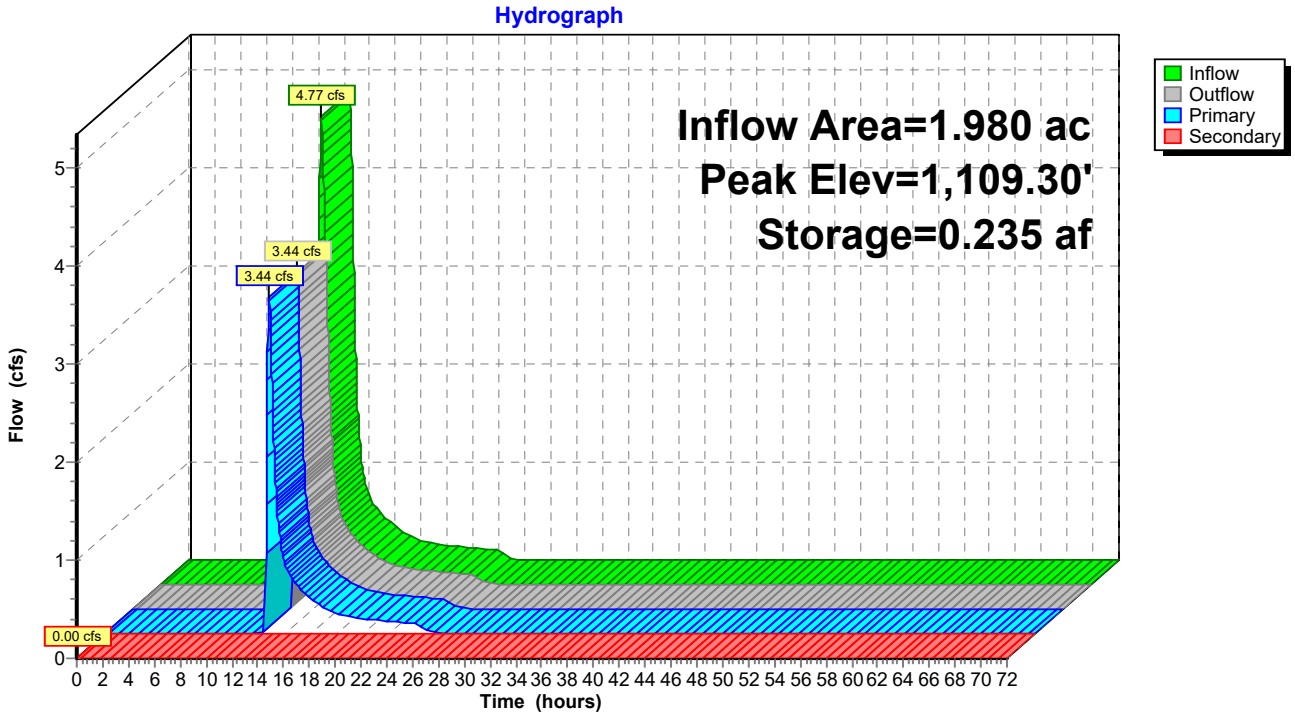
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,105.00	0.023	0.000	0.000
1,106.00	0.036	0.029	0.029
1,107.00	0.051	0.044	0.073
1,108.00	0.067	0.059	0.132
1,109.00	0.085	0.076	0.208
1,110.00	0.105	0.095	0.303

Device	Routing	Invert	Outlet Devices
#1	Primary	1,105.00'	**24.0" Round Culvert** L= 35.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,105.00' / 1,104.50' S= 0.0143 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,108.83'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,109.40'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,105.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=3.43 cfs @ 12.70 hrs HW=1,109.30' (Free Discharge)
└─**1=Culvert** (Passes 3.43 cfs of 27.49 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 3.43 cfs @ 2.50 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.98 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,105.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 04-Pond:


Hydrograph
Inflow Area=1.980 ac
Peak Elev=1,109.30'
Storage=0.235 af
4.77 cfs
3.44 cfs
3.44 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 04-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,105.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,105.00	0.00	0.00	0.00
4.00	0.00	0.000	1,105.00	0.00	0.00	0.00
6.00	0.00	0.000	1,105.00	0.00	0.00	0.00
8.00	0.01	0.000	1,105.01	0.00	0.00	0.00
10.00	0.13	0.010	1,105.39	0.00	0.00	0.00
12.00	**1.34**	**0.070**	**1,106.95**	**0.00**	**0.00**	0.00
14.00	**0.64**	**0.208**	**1,109.00**	**0.70**	**0.70**	0.00
16.00	0.34	0.203	1,108.94	0.37	0.37	0.00
18.00	0.20	0.200	1,108.91	0.21	0.21	0.00
20.00	0.15	0.199	1,108.89	0.16	0.16	0.00
22.00	0.12	0.198	1,108.88	0.13	0.13	0.00
24.00	0.10	0.197	1,108.87	0.10	0.10	0.00
26.00	0.00	0.194	1,108.83	0.01	0.01	0.00
28.00	0.00	0.194	1,108.83	0.00	0.00	0.00
30.00	0.00	0.193	1,108.82	0.00	0.00	0.00
32.00	0.00	0.193	1,108.82	0.00	0.00	0.00
34.00	0.00	0.193	1,108.82	0.00	0.00	0.00
36.00	0.00	0.192	1,108.81	0.00	0.00	0.00
38.00	0.00	0.192	1,108.81	0.00	0.00	0.00
40.00	0.00	0.192	1,108.80	0.00	0.00	0.00
42.00	0.00	0.191	1,108.80	0.00	0.00	0.00
44.00	0.00	0.191	1,108.79	0.00	0.00	0.00
46.00	0.00	0.191	1,108.79	0.00	0.00	0.00
48.00	0.00	0.190	1,108.79	0.00	0.00	0.00
50.00	0.00	0.190	1,108.78	0.00	0.00	0.00
52.00	0.00	0.190	1,108.78	0.00	0.00	0.00
54.00	0.00	0.189	1,108.77	0.00	0.00	0.00
56.00	0.00	0.189	1,108.77	0.00	0.00	0.00
58.00	0.00	0.189	1,108.77	0.00	0.00	0.00
60.00	0.00	0.188	1,108.76	0.00	0.00	0.00
62.00	0.00	0.188	1,108.76	0.00	0.00	0.00
64.00	0.00	0.188	1,108.75	0.00	0.00	0.00
66.00	0.00	0.187	1,108.75	0.00	0.00	0.00
68.00	0.00	0.187	1,108.74	0.00	0.00	0.00
70.00	0.00	0.187	1,108.74	0.00	0.00	0.00
72.00	0.00	0.186	1,108.74	0.00	0.00	0.00

Summary for Pond 05-Pond:

Inflow Area = 4.310 ac, 0.00% Impervious, Inflow Depth = 4.05" for 50-YR STORM event
Inflow = 13.79 cfs @ 12.27 hrs, Volume= 1.456 af
Outflow = 8.42 cfs @ 12.54 hrs, Volume= 1.139 af, Atten= 39%, Lag= 15.9 min
Primary = 8.42 cfs @ 12.54 hrs, Volume= 1.139 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,140.35' @ 12.54 hrs Surf.Area= 0.179 ac Storage= 0.549 af

Plug-Flow detention time= 182.2 min calculated for 1.139 af (78% of inflow)
Center-of-Mass det. time= 101.9 min (926.9 - 825.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,136.00'	0.881 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

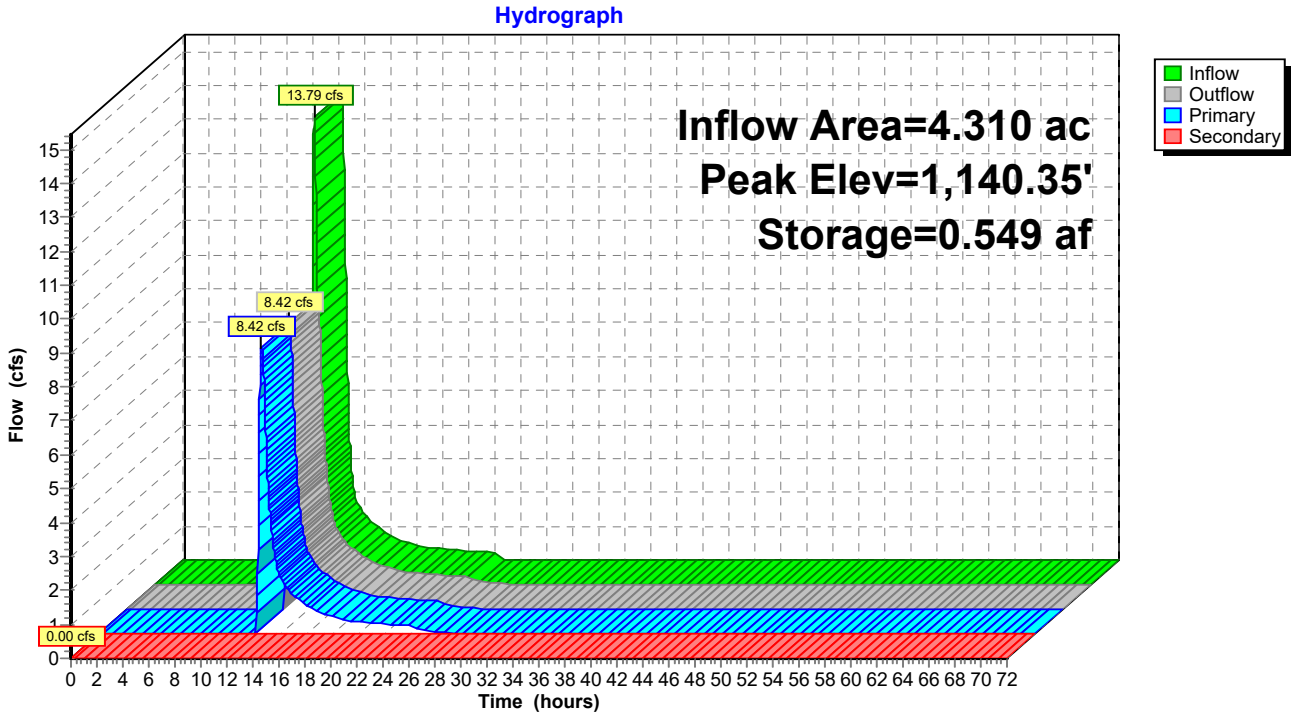
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,136.00	0.078	0.000	0.000
1,137.00	0.099	0.088	0.088
1,138.00	0.121	0.110	0.198
1,139.00	0.144	0.133	0.331
1,140.00	0.169	0.157	0.487
1,141.00	0.196	0.183	0.670
1,142.00	0.225	0.211	0.881

Device	Routing	Invert	Outlet Devices
#1	Primary	1,136.00'	**24.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,136.00' / 1,131.00' S= 0.1000 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Device 1	1,139.00'	**1.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,141.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,136.00'	**0.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=8.41 cfs @ 12.54 hrs HW=1,140.35' (Free Discharge)
└─**1=Culvert** (Passes 8.41 cfs of 27.69 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 8.41 cfs @ 5.06 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 10.03 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,136.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 05-Pond:


Hydrograph
Inflow Area=4.310 ac
Peak Elev=1,140.35'
Storage=0.549 af
13.79 cfs
8.42 cfs
8.42 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 05-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,136.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,136.00	0.00	0.00	0.00
4.00	0.00	0.000	1,136.00	0.00	0.00	0.00
6.00	0.00	0.000	1,136.00	0.00	0.00	0.00
8.00	0.08	0.004	1,136.05	0.00	0.00	0.00
10.00	0.44	0.042	1,136.50	0.00	0.00	0.00
12.00	**5.42**	**0.243**	**1,138.36**	**0.00**	**0.00**	0.00
14.00	**1.35**	**0.401**	**1,139.47**	**1.66**	**1.66**	0.00
16.00	0.72	0.375	1,139.30	0.83	0.83	0.00
18.00	0.43	0.362	1,139.21	0.49	0.49	0.00
20.00	0.33	0.356	1,139.17	0.36	0.36	0.00
22.00	0.28	0.353	1,139.15	0.29	0.29	0.00
24.00	0.22	0.350	1,139.13	0.24	0.24	0.00
26.00	0.00	0.336	1,139.03	0.04	0.04	0.00
28.00	0.00	0.332	1,139.01	0.01	0.01	0.00
30.00	0.00	0.331	1,139.00	0.00	0.00	0.00
32.00	0.00	0.330	1,138.99	0.00	0.00	0.00
34.00	0.00	0.329	1,138.99	0.00	0.00	0.00
36.00	0.00	0.329	1,138.98	0.00	0.00	0.00
38.00	0.00	0.328	1,138.98	0.00	0.00	0.00
40.00	0.00	0.327	1,138.98	0.00	0.00	0.00
42.00	0.00	0.327	1,138.97	0.00	0.00	0.00
44.00	0.00	0.326	1,138.97	0.00	0.00	0.00
46.00	0.00	0.325	1,138.96	0.00	0.00	0.00
48.00	0.00	0.325	1,138.96	0.00	0.00	0.00
50.00	0.00	0.324	1,138.95	0.00	0.00	0.00
52.00	0.00	0.323	1,138.95	0.00	0.00	0.00
54.00	0.00	0.323	1,138.94	0.00	0.00	0.00
56.00	0.00	0.322	1,138.94	0.00	0.00	0.00
58.00	0.00	0.321	1,138.93	0.00	0.00	0.00
60.00	0.00	0.321	1,138.93	0.00	0.00	0.00
62.00	0.00	0.320	1,138.92	0.00	0.00	0.00
64.00	0.00	0.319	1,138.92	0.00	0.00	0.00
66.00	0.00	0.319	1,138.91	0.00	0.00	0.00
68.00	0.00	0.318	1,138.91	0.00	0.00	0.00
70.00	0.00	0.317	1,138.90	0.00	0.00	0.00
72.00	0.00	0.317	1,138.90	0.00	0.00	0.00

Summary for Pond 07-Pond:

Inflow Area = 13.810 ac, 0.00% Impervious, Inflow Depth = 3.24" for 50-YR STORM event
Inflow = 27.19 cfs @ 12.51 hrs, Volume= 3.729 af
Outflow = 18.20 cfs @ 12.83 hrs, Volume= 2.889 af, Atten= 33%, Lag= 19.0 min
Primary = 18.20 cfs @ 12.83 hrs, Volume= 2.889 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,135.33' @ 12.83 hrs Surf.Area= 0.319 ac Storage= 1.304 af

Plug-Flow detention time= 204.1 min calculated for 2.888 af (77% of inflow)
Center-of-Mass det. time= 120.9 min (980.0 - 859.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,130.00'	1.525 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

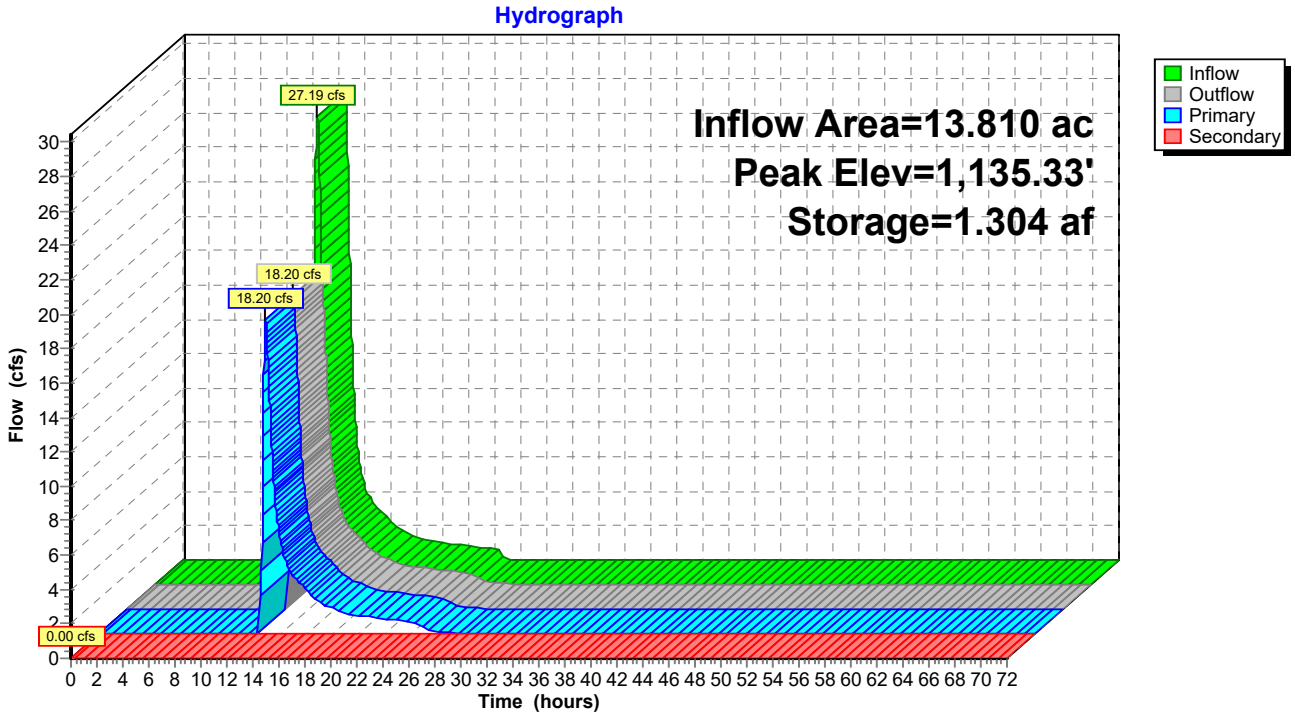
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,130.00	0.176	0.000	0.000
1,131.00	0.200	0.188	0.188
1,132.00	0.226	0.213	0.401
1,133.00	0.252	0.239	0.640
1,134.00	0.280	0.266	0.906
1,135.00	0.309	0.294	1.200
1,136.00	0.340	0.325	1.525

Device	Routing	Invert	Outlet Devices
#1	Primary	1,130.00'	**24.0" Round Culvert X 2.00** L= 380.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,130.00' / 1,069.00' S= 0.1605 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,134.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,135.75'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,130.00'	**0.6" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=18.19 cfs @ 12.83 hrs HW=1,135.33' (Free Discharge)
└─**1=Culvert** (Passes 18.19 cfs of 62.95 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 18.17 cfs @ 5.00 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 11.09 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,130.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 07-Pond:


Hydrograph
Inflow Area=13.810 ac
Peak Elev=1,135.33'
Storage=1.304 af
27.19 cfs
18.20 cfs
18.20 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 07-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,130.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,130.00	0.00	0.00	0.00
4.00	0.00	0.000	1,130.00	0.00	0.00	0.00
6.00	0.00	0.000	1,130.00	0.00	0.00	0.00
8.00	0.00	0.000	1,130.00	0.00	0.00	0.00
10.00	0.45	0.019	1,130.11	0.00	0.00	0.00
12.00	**6.30**	**0.292**	**1,131.50**	**0.01**	**0.01**	0.00
14.00	**4.31**	**1.085**	**1,134.62**	**5.28**	**5.28**	0.00
16.00	2.26	1.016	1,134.38	2.52	2.52	0.00
18.00	1.33	0.983	1,134.27	1.48	1.48	0.00
20.00	0.99	0.967	1,134.22	1.04	1.04	0.00
22.00	0.82	0.960	1,134.19	0.86	0.86	0.00
24.00	0.66	0.953	1,134.17	0.71	0.71	0.00
26.00	0.00	0.918	1,134.04	0.12	0.12	0.00
28.00	0.00	0.908	1,134.01	0.03	0.03	0.00
30.00	0.00	0.905	1,134.00	0.02	0.02	0.00
32.00	0.00	0.902	1,133.98	0.02	0.02	0.00
34.00	0.00	0.899	1,133.97	0.02	0.02	0.00
36.00	0.00	0.895	1,133.96	0.02	0.02	0.00
38.00	0.00	0.892	1,133.95	0.02	0.02	0.00
40.00	0.00	0.889	1,133.94	0.02	0.02	0.00
42.00	0.00	0.886	1,133.93	0.02	0.02	0.00
44.00	0.00	0.883	1,133.92	0.02	0.02	0.00
46.00	0.00	0.880	1,133.91	0.02	0.02	0.00
48.00	0.00	0.877	1,133.90	0.02	0.02	0.00
50.00	0.00	0.874	1,133.88	0.02	0.02	0.00
52.00	0.00	0.871	1,133.87	0.02	0.02	0.00
54.00	0.00	0.868	1,133.86	0.02	0.02	0.00
56.00	0.00	0.865	1,133.85	0.02	0.02	0.00
58.00	0.00	0.862	1,133.84	0.02	0.02	0.00
60.00	0.00	0.859	1,133.83	0.02	0.02	0.00
62.00	0.00	0.855	1,133.82	0.02	0.02	0.00
64.00	0.00	0.852	1,133.81	0.02	0.02	0.00
66.00	0.00	0.849	1,133.80	0.02	0.02	0.00
68.00	0.00	0.846	1,133.78	0.02	0.02	0.00
70.00	0.00	0.843	1,133.77	0.02	0.02	0.00
72.00	0.00	0.840	1,133.76	0.02	0.02	0.00

Summary for Pond 08/10-Pond:

Inflow Area = 34.060 ac, 0.00% Impervious, Inflow Depth = 4.32" for 50-YR STORM event
Inflow = 94.33 cfs @ 12.39 hrs, Volume= 12.256 af
Outflow = 74.80 cfs @ 12.61 hrs, Volume= 10.974 af, Atten= 21%, Lag= 13.4 min
Primary = 74.80 cfs @ 12.61 hrs, Volume= 10.974 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,125.20' @ 12.61 hrs Surf.Area= 1.039 ac Storage= 3.449 af

Plug-Flow detention time= 139.3 min calculated for 10.974 af (90% of inflow)
Center-of-Mass det. time= 89.1 min (916.8 - 827.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,121.00'	5.497 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

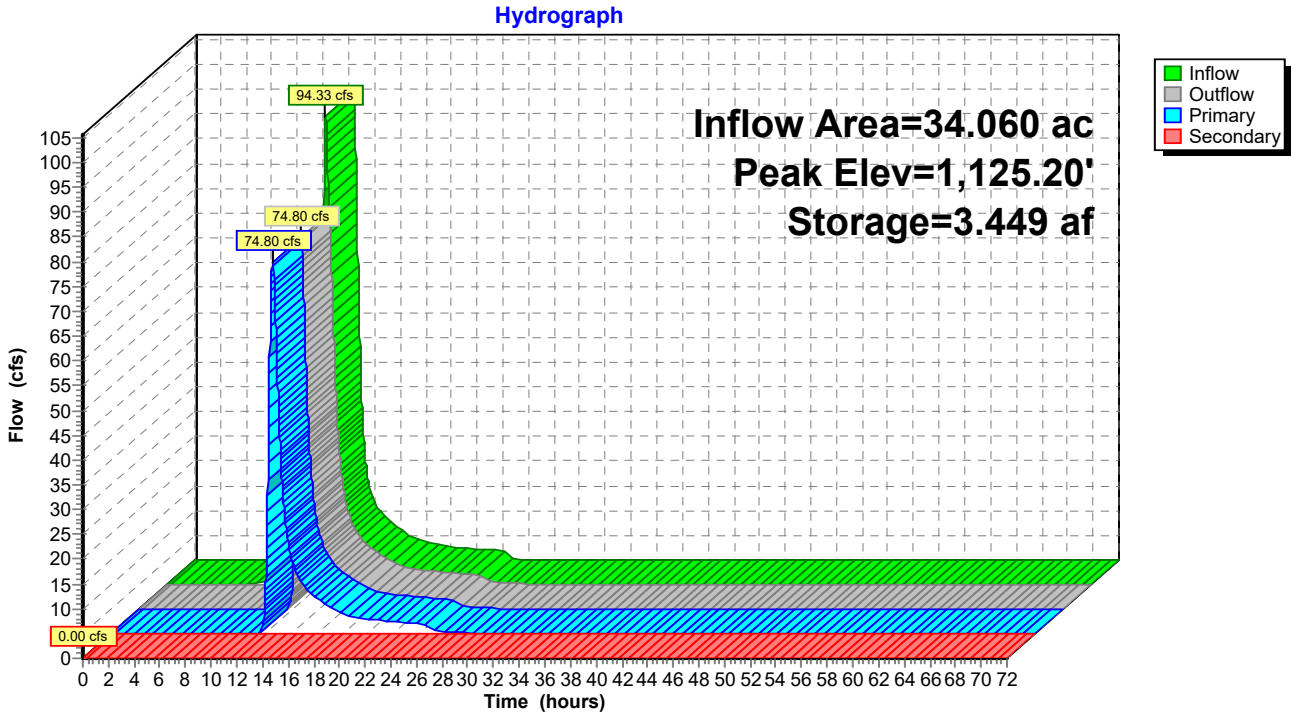
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,121.00	0.609	0.000	0.000
1,122.00	0.709	0.659	0.659
1,123.00	0.810	0.759	1.418
1,124.00	0.913	0.862	2.280
1,125.00	1.018	0.965	3.246
1,126.00	1.125	1.071	4.317
1,127.00	1.234	1.180	5.497

Device	Routing	Invert	Outlet Devices
#1	Primary	1,121.70'	**54.0" Round Culvert** L= 88.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,121.70' / 1,105.00' S= 0.1898 '/' Cc= 0.900 n= 0.012, Flow Area= 15.90 sf
#2	Device 1	1,123.00'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,125.80'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,121.70'	**1.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=74.77 cfs @ 12.61 hrs HW=1,125.20' (Free Discharge)
└─**1=Culvert** (Passes 74.77 cfs of 84.45 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 74.70 cfs @ 7.45 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.07 cfs @ 8.94 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,121.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 08/10-Pond:



Hydrograph for Pond 08/10-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,121.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,121.00	0.00	0.00	0.00
4.00	0.00	0.000	1,121.00	0.00	0.00	0.00
6.00	0.02	0.000	1,121.00	0.00	0.00	0.00
8.00	0.94	0.062	1,121.10	0.00	0.00	0.00
10.00	3.87	0.419	1,121.65	0.00	0.00	0.00
12.00	**32.04**	**1.851**	**1,123.52**	**6.75**	**6.75**	0.00
14.00	**11.82**	**2.172**	**1,123.88**	**15.89**	**15.89**	0.00
16.00	6.18	1.872	1,123.54	7.28	7.28	0.00
18.00	3.64	1.737	1,123.38	4.25	4.25	0.00
20.00	2.74	1.670	1,123.30	2.98	2.98	0.00
22.00	2.26	1.638	1,123.27	2.43	2.43	0.00
24.00	1.81	1.610	1,123.23	1.98	1.98	0.00
26.00	0.00	1.486	1,123.08	0.46	0.46	0.00
28.00	0.00	1.444	1,123.03	0.15	0.15	0.00
30.00	0.00	1.426	1,123.01	0.07	0.07	0.00
32.00	0.00	1.417	1,123.00	0.04	0.04	0.00
34.00	0.00	1.410	1,122.99	0.04	0.04	0.00
36.00	0.00	1.403	1,122.98	0.04	0.04	0.00
38.00	0.00	1.396	1,122.97	0.04	0.04	0.00
40.00	0.00	1.390	1,122.96	0.04	0.04	0.00
42.00	0.00	1.383	1,122.96	0.04	0.04	0.00
44.00	0.00	1.376	1,122.95	0.04	0.04	0.00
46.00	0.00	1.369	1,122.94	0.04	0.04	0.00
48.00	0.00	1.362	1,122.93	0.04	0.04	0.00
50.00	0.00	1.355	1,122.92	0.04	0.04	0.00
52.00	0.00	1.349	1,122.91	0.04	0.04	0.00
54.00	0.00	1.342	1,122.90	0.04	0.04	0.00
56.00	0.00	1.335	1,122.90	0.04	0.04	0.00
58.00	0.00	1.329	1,122.89	0.04	0.04	0.00
60.00	0.00	1.322	1,122.88	0.04	0.04	0.00
62.00	0.00	1.315	1,122.87	0.04	0.04	0.00
64.00	0.00	1.309	1,122.86	0.04	0.04	0.00
66.00	0.00	1.302	1,122.85	0.04	0.04	0.00
68.00	0.00	1.296	1,122.85	0.04	0.04	0.00
70.00	0.00	1.289	1,122.84	0.04	0.04	0.00
72.00	0.00	1.282	1,122.83	0.04	0.04	0.00

Summary for Pond 09-Pond:

Inflow Area = 16.030 ac, 0.00% Impervious, Inflow Depth = 4.05" for 50-YR STORM event
Inflow = 26.76 cfs @ 12.95 hrs, Volume= 5.414 af
Outflow = 18.43 cfs @ 13.47 hrs, Volume= 4.104 af, Atten= 31%, Lag= 31.4 min
Primary = 18.43 cfs @ 13.47 hrs, Volume= 4.104 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,150.59' @ 13.47 hrs Surf.Area= 0.573 ac Storage= 2.074 af

Plug-Flow detention time= 213.2 min calculated for 4.103 af (76% of inflow)
Center-of-Mass det. time= 128.4 min (1,001.7 - 873.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,145.00'	3.685 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

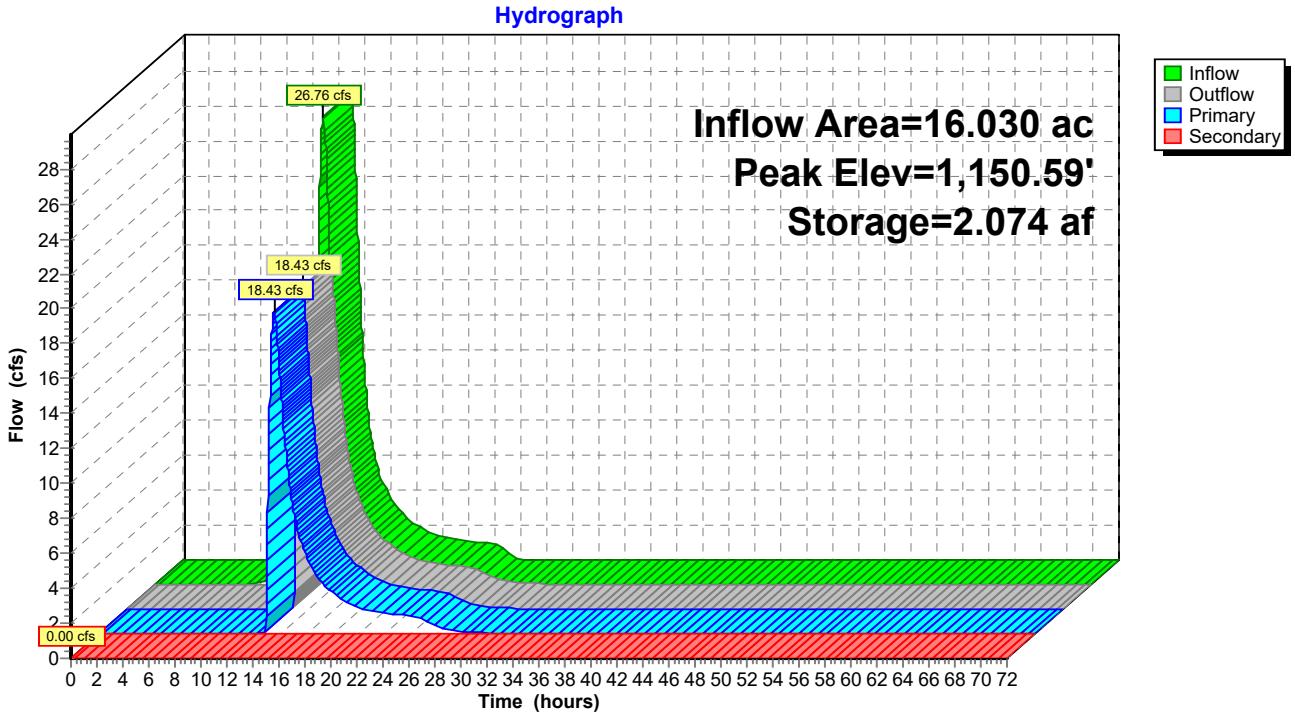
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,145.00	0.180	0.000	0.000
1,146.00	0.246	0.213	0.213
1,147.00	0.313	0.279	0.493
1,148.00	0.382	0.347	0.840
1,149.00	0.454	0.418	1.258
1,150.00	0.528	0.491	1.749
1,151.00	0.604	0.566	2.315
1,152.00	0.683	0.643	2.958
1,153.00	0.770	0.726	3.685

Device	Routing	Invert	Outlet Devices
#1	Primary	1,145.00'	**24.0" Round Culvert** L= 112.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,145.00' / 1,130.00' S= 0.1339 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,149.25'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,152.00'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,145.00'	**0.6" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=18.42 cfs @ 13.47 hrs HW=1,150.59' (Free Discharge)
└─**1=Culvert** (Passes 18.42 cfs of 32.41 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 18.40 cfs @ 5.03 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 11.36 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,145.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 09-Pond:


Hydrograph
Inflow Area=16.030 ac
Peak Elev=1,150.59'
Storage=2.074 af
26.76 cfs
18.43 cfs
18.43 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 09-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,145.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,145.00	0.00	0.00	0.00
4.00	0.00	0.000	1,145.00	0.00	0.00	0.00
6.00	0.00	0.000	1,145.00	0.00	0.00	0.00
8.00	0.12	0.004	1,145.02	0.00	0.00	0.00
10.00	0.98	0.078	1,145.40	0.01	0.01	0.00
12.00	**4.72**	**0.432**	**1,146.80**	**0.01**	**0.01**	0.00
14.00	**10.50**	**1.957**	**1,150.38**	**14.01**	**14.01**	0.00
16.00	3.56	1.645	1,149.80	4.39	4.39	0.00
18.00	1.98	1.552	1,149.62	2.35	2.35	0.00
20.00	1.35	1.507	1,149.53	1.53	1.53	0.00
22.00	1.11	1.487	1,149.49	1.19	1.19	0.00
24.00	0.90	1.473	1,149.46	0.99	0.99	0.00
26.00	0.06	1.426	1,149.36	0.40	0.40	0.00
28.00	0.00	1.392	1,149.29	0.12	0.12	0.00
30.00	0.00	1.379	1,149.26	0.05	0.05	0.00
32.00	0.00	1.374	1,149.25	0.02	0.02	0.00
34.00	0.00	1.371	1,149.24	0.02	0.02	0.00
36.00	0.00	1.367	1,149.24	0.02	0.02	0.00
38.00	0.00	1.364	1,149.23	0.02	0.02	0.00
40.00	0.00	1.361	1,149.22	0.02	0.02	0.00
42.00	0.00	1.358	1,149.22	0.02	0.02	0.00
44.00	0.00	1.355	1,149.21	0.02	0.02	0.00
46.00	0.00	1.351	1,149.20	0.02	0.02	0.00
48.00	0.00	1.348	1,149.20	0.02	0.02	0.00
50.00	0.00	1.345	1,149.19	0.02	0.02	0.00
52.00	0.00	1.342	1,149.18	0.02	0.02	0.00
54.00	0.00	1.339	1,149.18	0.02	0.02	0.00
56.00	0.00	1.335	1,149.17	0.02	0.02	0.00
58.00	0.00	1.332	1,149.16	0.02	0.02	0.00
60.00	0.00	1.329	1,149.15	0.02	0.02	0.00
62.00	0.00	1.326	1,149.15	0.02	0.02	0.00
64.00	0.00	1.323	1,149.14	0.02	0.02	0.00
66.00	0.00	1.320	1,149.13	0.02	0.02	0.00
68.00	0.00	1.316	1,149.13	0.02	0.02	0.00
70.00	0.00	1.313	1,149.12	0.02	0.02	0.00
72.00	0.00	1.310	1,149.11	0.02	0.02	0.00

Summary for Pond 11-Pond:

Inflow Area = 2.820 ac, 0.00% Impervious, Inflow Depth = 3.34" for 50-YR STORM event
Inflow = 5.00 cfs @ 12.66 hrs, Volume= 0.785 af
Outflow = 1.97 cfs @ 13.38 hrs, Volume= 0.454 af, Atten= 61%, Lag= 43.2 min
Primary = 1.97 cfs @ 13.38 hrs, Volume= 0.454 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,191.83' @ 13.38 hrs Surf.Area= 0.153 ac Storage= 0.387 af

Plug-Flow detention time= 265.7 min calculated for 0.454 af (58% of inflow)
Center-of-Mass det. time= 154.0 min (1,020.8 - 866.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,188.00'	0.587 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

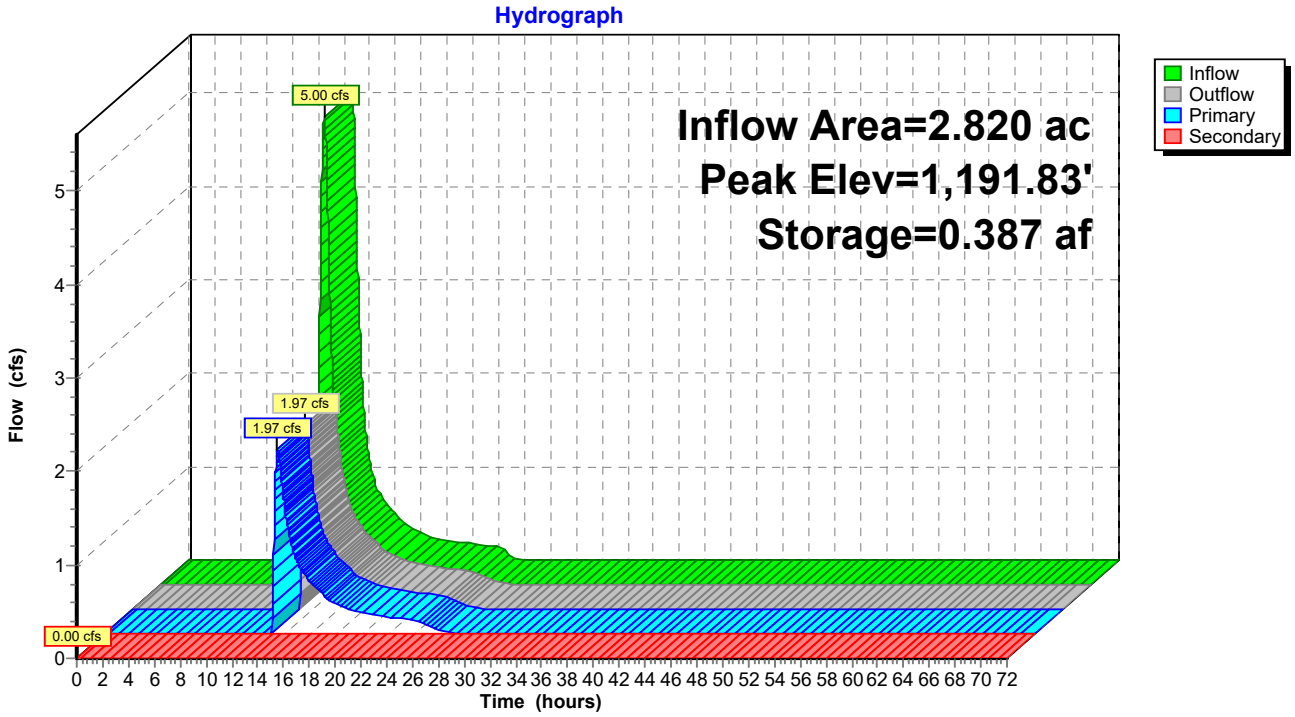
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,188.00	0.053	0.000	0.000
1,189.00	0.077	0.065	0.065
1,190.00	0.102	0.089	0.154
1,191.00	0.129	0.116	0.270
1,192.00	0.158	0.143	0.414
1,193.00	0.189	0.173	0.587

Device	Routing	Invert	Outlet Devices
#1	Primary	1,188.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,188.00' / 1,185.00' S= 0.0652 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,191.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,192.00'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,188.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=1.96 cfs @ 13.38 hrs HW=1,191.83' (Free Discharge)
└─**1=Culvert** (Passes 1.96 cfs of 14.93 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 1.96 cfs @ 2.03 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.41 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,188.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 11-Pond:


Hydrograph
Inflow Area=2.820 ac
Peak Elev=1,191.83'
Storage=0.387 af
Inflow
Outflow
Primary
Secondary
5.00 cfs
1.97 cfs
1.97 cfs
0.00 cfs
Flow (cfs)
Time (hours)

Hydrograph for Pond 11-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,188.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,188.00	0.00	0.00	0.00
4.00	0.00	0.000	1,188.00	0.00	0.00	0.00
6.00	0.00	0.000	1,188.00	0.00	0.00	0.00
8.00	0.00	0.000	1,188.00	0.00	0.00	0.00
10.00	0.09	0.004	1,188.08	0.00	0.00	0.00
12.00	**0.96**	**0.054**	**1,188.85**	**0.00**	**0.00**	0.00
14.00	**1.05**	**0.375**	**1,191.75**	**1.27**	**1.27**	0.00
16.00	0.50	0.359	1,191.64	0.55	0.55	0.00
18.00	0.29	0.352	1,191.60	0.31	0.31	0.00
20.00	0.21	0.349	1,191.58	0.22	0.22	0.00
22.00	0.17	0.348	1,191.57	0.18	0.18	0.00
24.00	0.14	0.347	1,191.56	0.15	0.15	0.00
26.00	0.00	0.340	1,191.51	0.03	0.03	0.00
28.00	0.00	0.338	1,191.50	0.00	0.00	0.00
30.00	0.00	0.338	1,191.50	0.00	0.00	0.00
32.00	0.00	0.337	1,191.50	0.00	0.00	0.00
34.00	0.00	0.337	1,191.49	0.00	0.00	0.00
36.00	0.00	0.337	1,191.49	0.00	0.00	0.00
38.00	0.00	0.337	1,191.49	0.00	0.00	0.00
40.00	0.00	0.336	1,191.49	0.00	0.00	0.00
42.00	0.00	0.336	1,191.48	0.00	0.00	0.00
44.00	0.00	0.336	1,191.48	0.00	0.00	0.00
46.00	0.00	0.335	1,191.48	0.00	0.00	0.00
48.00	0.00	0.335	1,191.48	0.00	0.00	0.00
50.00	0.00	0.335	1,191.48	0.00	0.00	0.00
52.00	0.00	0.334	1,191.47	0.00	0.00	0.00
54.00	0.00	0.334	1,191.47	0.00	0.00	0.00
56.00	0.00	0.334	1,191.47	0.00	0.00	0.00
58.00	0.00	0.333	1,191.47	0.00	0.00	0.00
60.00	0.00	0.333	1,191.46	0.00	0.00	0.00
62.00	0.00	0.333	1,191.46	0.00	0.00	0.00
64.00	0.00	0.332	1,191.46	0.00	0.00	0.00
66.00	0.00	0.332	1,191.46	0.00	0.00	0.00
68.00	0.00	0.332	1,191.45	0.00	0.00	0.00
70.00	0.00	0.331	1,191.45	0.00	0.00	0.00
72.00	0.00	0.331	1,191.45	0.00	0.00	0.00

Summary for Pond 13-Pond:

Inflow Area = 6.380 ac, 0.00% Impervious, Inflow Depth = 3.64" for 50-YR STORM event
Inflow = 15.60 cfs @ 12.40 hrs, Volume= 1.935 af
Outflow = 9.89 cfs @ 12.72 hrs, Volume= 1.415 af, Atten= 37%, Lag= 19.0 min
Primary = 9.89 cfs @ 12.72 hrs, Volume= 1.415 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,146.57' @ 12.72 hrs Surf.Area= 0.231 ac Storage= 0.745 af

Plug-Flow detention time= 211.2 min calculated for 1.415 af (73% of inflow)
Center-of-Mass det. time= 121.1 min (964.4 - 843.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,141.00'	0.849 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

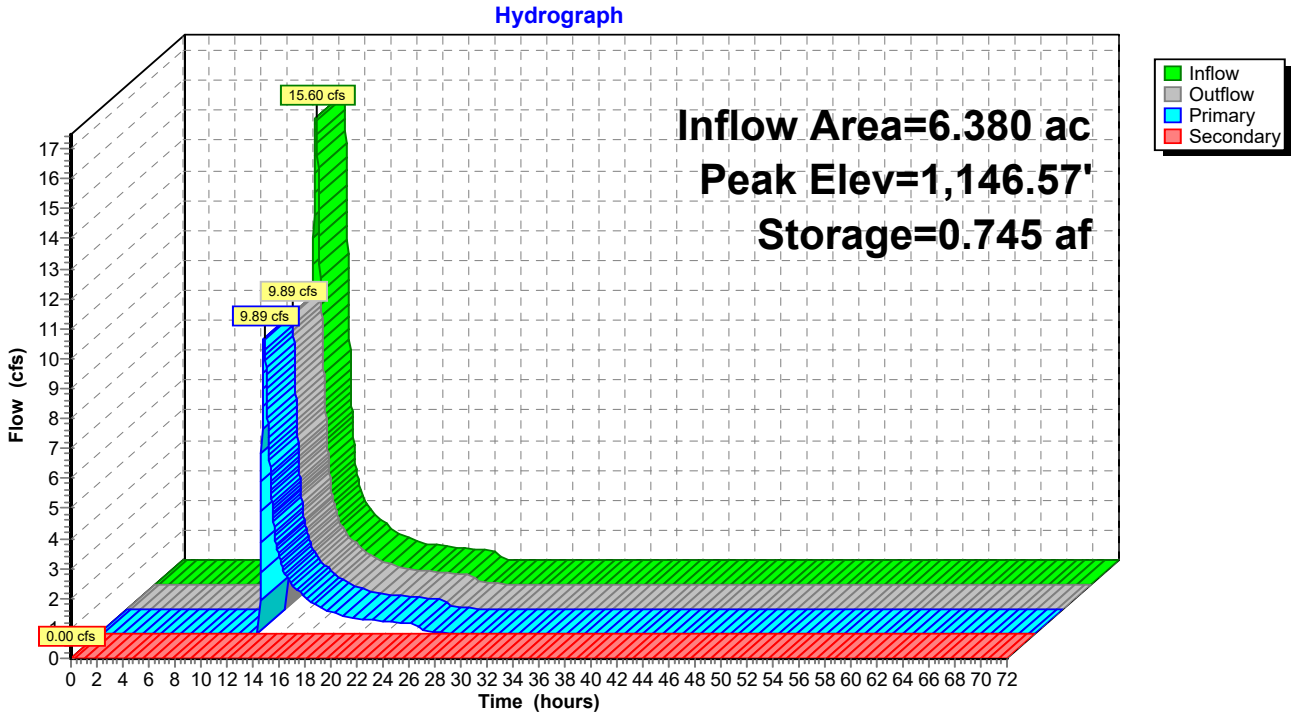
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,141.00	0.044	0.000	0.000
1,142.00	0.075	0.060	0.060
1,143.00	0.106	0.090	0.150
1,144.00	0.139	0.123	0.272
1,145.00	0.173	0.156	0.428
1,146.00	0.210	0.191	0.620
1,147.00	0.248	0.229	0.849

Device	Routing	Invert	Outlet Devices
#1	Primary	1,142.00'	**18.0" Round Culvert** L= 270.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,142.00' / 1,058.00' S= 0.3111 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,145.65'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,146.80'	**35.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,142.00'	**0.4" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=9.88 cfs @ 12.72 hrs HW=1,146.57' (Free Discharge)
└─**1=Culvert** (Passes 9.88 cfs of 16.62 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 9.88 cfs @ 3.83 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 10.27 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,141.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 13-Pond:


Hydrograph
Inflow Area=6.380 ac
Peak Elev=1,146.57'
Storage=0.745 af
15.60 cfs
9.89 cfs
9.89 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 13-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,141.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,141.00	0.00	0.00	0.00
4.00	0.00	0.000	1,141.00	0.00	0.00	0.00
6.00	0.00	0.000	1,141.00	0.00	0.00	0.00
8.00	0.01	0.000	1,141.00	0.00	0.00	0.00
10.00	0.40	0.028	1,141.53	0.00	0.00	0.00
12.00	**4.62**	**0.221**	**1,143.61**	**0.01**	**0.01**	0.00
14.00	**2.00**	**0.624**	**1,146.02**	**2.34**	**2.34**	0.00
16.00	1.07	0.596	1,145.89	1.19	1.19	0.00
18.00	0.63	0.582	1,145.82	0.70	0.70	0.00
20.00	0.48	0.575	1,145.78	0.50	0.50	0.00
22.00	0.40	0.572	1,145.77	0.41	0.41	0.00
24.00	0.32	0.569	1,145.75	0.34	0.34	0.00
26.00	0.00	0.553	1,145.67	0.04	0.04	0.00
28.00	0.00	0.549	1,145.65	0.01	0.01	0.00
30.00	0.00	0.548	1,145.64	0.01	0.01	0.00
32.00	0.00	0.546	1,145.64	0.01	0.01	0.00
34.00	0.00	0.545	1,145.63	0.01	0.01	0.00
36.00	0.00	0.544	1,145.62	0.01	0.01	0.00
38.00	0.00	0.542	1,145.62	0.01	0.01	0.00
40.00	0.00	0.541	1,145.61	0.01	0.01	0.00
42.00	0.00	0.540	1,145.60	0.01	0.01	0.00
44.00	0.00	0.538	1,145.60	0.01	0.01	0.00
46.00	0.00	0.537	1,145.59	0.01	0.01	0.00
48.00	0.00	0.536	1,145.58	0.01	0.01	0.00
50.00	0.00	0.535	1,145.58	0.01	0.01	0.00
52.00	0.00	0.533	1,145.57	0.01	0.01	0.00
54.00	0.00	0.532	1,145.56	0.01	0.01	0.00
56.00	0.00	0.531	1,145.56	0.01	0.01	0.00
58.00	0.00	0.529	1,145.55	0.01	0.01	0.00
60.00	0.00	0.528	1,145.54	0.01	0.01	0.00
62.00	0.00	0.527	1,145.54	0.01	0.01	0.00
64.00	0.00	0.525	1,145.53	0.01	0.01	0.00
66.00	0.00	0.524	1,145.52	0.01	0.01	0.00
68.00	0.00	0.523	1,145.52	0.01	0.01	0.00
70.00	0.00	0.521	1,145.51	0.01	0.01	0.00
72.00	0.00	0.520	1,145.50	0.01	0.01	0.00

Summary for Pond 14-Pond:

Inflow Area = 8.210 ac, 0.00% Impervious, Inflow Depth = 3.74" for 50-YR STORM event
Inflow = 22.74 cfs @ 12.32 hrs, Volume= 2.560 af
Outflow = 13.43 cfs @ 12.63 hrs, Volume= 1.961 af, Atten= 41%, Lag= 18.5 min
Primary = 13.43 cfs @ 12.63 hrs, Volume= 1.961 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,154.11' @ 12.63 hrs Surf.Area= 0.355 ac Storage= 0.981 af

Plug-Flow detention time= 189.8 min calculated for 1.961 af (77% of inflow)
Center-of-Mass det. time= 106.4 min (941.9 - 835.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,150.00'	1.323 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

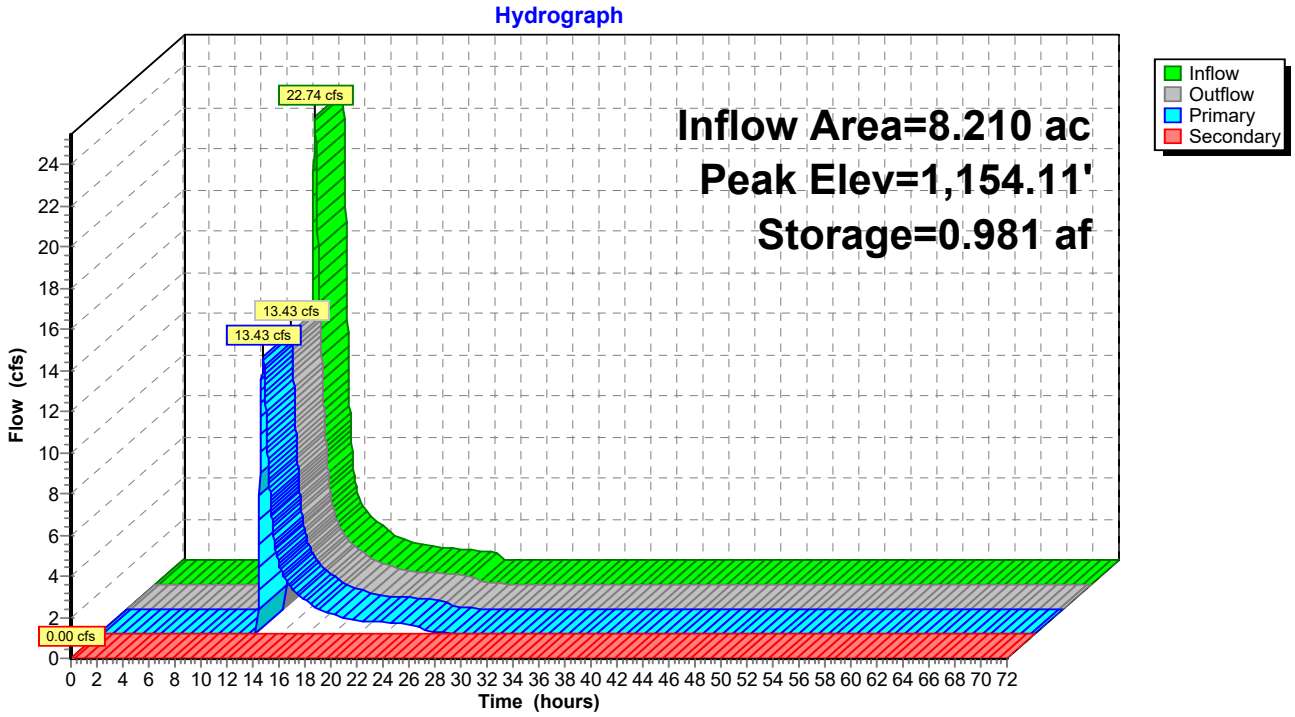
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,150.00	0.127	0.000	0.000
1,151.00	0.180	0.153	0.153
1,152.00	0.235	0.208	0.361
1,153.00	0.291	0.263	0.624
1,154.00	0.349	0.320	0.944
1,155.00	0.409	0.379	1.323

Device	Routing	Invert	Outlet Devices
#1	Primary	1,150.00'	**24.0" Round Culvert** L= 52.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,150.00' / 1,143.00' S= 0.1346 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,153.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,154.50'	**30.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,150.00'	**0.4" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=13.42 cfs @ 12.63 hrs HW=1,154.10' (Free Discharge)
└─**1=Culvert** (Passes 13.42 cfs of 26.65 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 13.41 cfs @ 4.37 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.74 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,150.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 14-Pond:


Hydrograph
Inflow Area=8.210 ac
Peak Elev=1,154.11'
Storage=0.981 af
22.74 cfs
13.43 cfs
13.43 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 14-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,150.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,150.00	0.00	0.00	0.00
4.00	0.00	0.000	1,150.00	0.00	0.00	0.00
6.00	0.00	0.000	1,150.00	0.00	0.00	0.00
8.00	0.05	0.001	1,150.01	0.00	0.00	0.00
10.00	0.61	0.047	1,150.35	0.00	0.00	0.00
12.00	**7.93**	**0.347**	**1,151.94**	**0.01**	**0.01**	0.00
14.00	**2.52**	**0.758**	**1,153.44**	**3.11**	**3.11**	0.00
16.00	1.35	0.709	1,153.28	1.56	1.56	0.00
18.00	0.81	0.683	1,153.20	0.92	0.92	0.00
20.00	0.62	0.671	1,153.16	0.66	0.66	0.00
22.00	0.51	0.666	1,153.14	0.54	0.54	0.00
24.00	0.41	0.660	1,153.12	0.44	0.44	0.00
26.00	0.00	0.634	1,153.03	0.08	0.08	0.00
28.00	0.00	0.626	1,153.01	0.02	0.02	0.00
30.00	0.00	0.624	1,153.00	0.01	0.01	0.00
32.00	0.00	0.623	1,153.00	0.01	0.01	0.00
34.00	0.00	0.622	1,152.99	0.01	0.01	0.00
36.00	0.00	0.620	1,152.99	0.01	0.01	0.00
38.00	0.00	0.619	1,152.98	0.01	0.01	0.00
40.00	0.00	0.618	1,152.98	0.01	0.01	0.00
42.00	0.00	0.617	1,152.97	0.01	0.01	0.00
44.00	0.00	0.616	1,152.97	0.01	0.01	0.00
46.00	0.00	0.614	1,152.97	0.01	0.01	0.00
48.00	0.00	0.613	1,152.96	0.01	0.01	0.00
50.00	0.00	0.612	1,152.96	0.01	0.01	0.00
52.00	0.00	0.611	1,152.95	0.01	0.01	0.00
54.00	0.00	0.610	1,152.95	0.01	0.01	0.00
56.00	0.00	0.608	1,152.95	0.01	0.01	0.00
58.00	0.00	0.607	1,152.94	0.01	0.01	0.00
60.00	0.00	0.606	1,152.94	0.01	0.01	0.00
62.00	0.00	0.605	1,152.93	0.01	0.01	0.00
64.00	0.00	0.604	1,152.93	0.01	0.01	0.00
66.00	0.00	0.602	1,152.93	0.01	0.01	0.00
68.00	0.00	0.601	1,152.92	0.01	0.01	0.00
70.00	0.00	0.600	1,152.92	0.01	0.01	0.00
72.00	0.00	0.599	1,152.91	0.01	0.01	0.00

Summary for Pond 15-Pond:

Inflow Area = 2.830 ac, 0.00% Impervious, Inflow Depth = 3.95" for 50-YR STORM event
Inflow = 5.72 cfs @ 12.68 hrs, Volume= 0.931 af
Outflow = 4.36 cfs @ 12.99 hrs, Volume= 0.653 af, Atten= 24%, Lag= 18.7 min
Primary = 4.36 cfs @ 12.99 hrs, Volume= 0.653 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,201.05' @ 12.99 hrs Surf.Area= 5,363 sf Storage= 15,248 cf

Plug-Flow detention time= 197.0 min calculated for 0.653 af (70% of inflow)
Center-of-Mass det. time= 102.1 min (957.8 - 855.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,197.00'	20,760 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

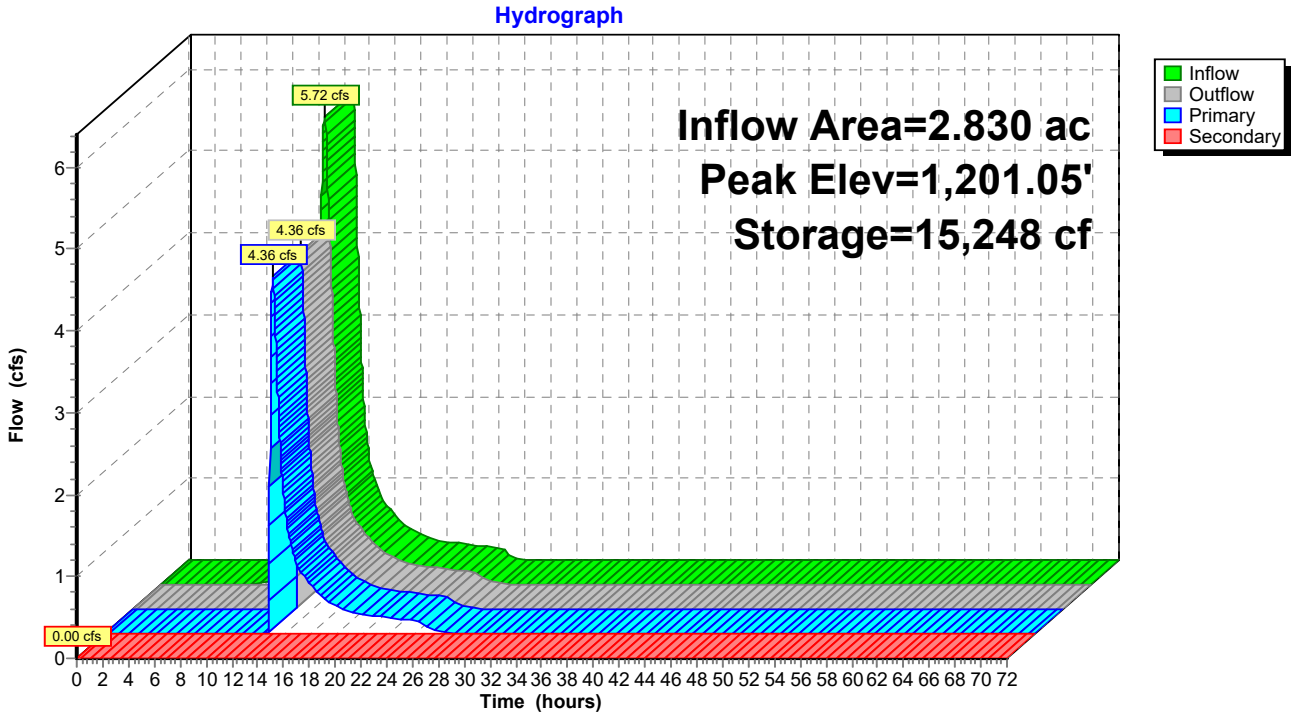
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,197.00	2,331	0	0
1,198.00	2,984	2,658	2,658
1,199.00	3,701	3,343	6,000
1,200.00	4,479	4,090	10,090
1,201.00	5,319	4,899	14,989
1,202.00	6,222	5,771	20,760

Device	Routing	Invert	Outlet Devices
#1	Primary	1,197.00'	**18.0" Round Culvert** L= 70.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,197.00' / 1,196.00' S= 0.0143 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,200.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,201.50'	**30.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,197.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=4.36 cfs @ 12.99 hrs HW=1,201.05' (Free Discharge)
└─**1=Culvert** (Passes 4.36 cfs of 15.45 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 4.35 cfs @ 2.75 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.68 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,197.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 15-Pond:


Hydrograph
Inflow Area=2.830 ac
Peak Elev=1,201.05'
Storage=15,248 cf
5.72 cfs
4.36 cfs
4.36 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 15-Pond:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	1,197.00	0.00	0.00	**0.00**
2.00	0.00	0	1,197.00	0.00	0.00	0.00
4.00	0.00	0	1,197.00	0.00	0.00	0.00
6.00	0.00	0	1,197.00	0.00	0.00	0.00
8.00	0.02	27	1,197.01	0.00	0.00	0.00
10.00	0.19	675	1,197.28	0.00	0.00	0.00
12.00	**1.19**	**3,914**	**1,198.40**	**0.00**	**0.00**	0.00
14.00	**1.24**	**13,795**	**1,200.77**	**1.46**	**1.46**	0.00
16.00	0.55	13,181	1,200.65	0.59	0.59	0.00
18.00	0.32	12,948	1,200.60	0.34	0.34	0.00
20.00	0.23	12,830	1,200.58	0.24	0.24	0.00
22.00	0.19	12,778	1,200.57	0.19	0.19	0.00
24.00	0.15	12,735	1,200.56	0.16	0.16	0.00
26.00	0.00	12,482	1,200.51	0.02	0.02	0.00
28.00	0.00	12,431	1,200.50	0.00	0.00	0.00
30.00	0.00	12,417	1,200.50	0.00	0.00	0.00
32.00	0.00	12,403	1,200.49	0.00	0.00	0.00
34.00	0.00	12,389	1,200.49	0.00	0.00	0.00
36.00	0.00	12,375	1,200.49	0.00	0.00	0.00
38.00	0.00	12,361	1,200.48	0.00	0.00	0.00
40.00	0.00	12,347	1,200.48	0.00	0.00	0.00
42.00	0.00	12,333	1,200.48	0.00	0.00	0.00
44.00	0.00	12,318	1,200.48	0.00	0.00	0.00
46.00	0.00	12,304	1,200.47	0.00	0.00	0.00
48.00	0.00	12,290	1,200.47	0.00	0.00	0.00
50.00	0.00	12,276	1,200.47	0.00	0.00	0.00
52.00	0.00	12,262	1,200.46	0.00	0.00	0.00
54.00	0.00	12,248	1,200.46	0.00	0.00	0.00
56.00	0.00	12,234	1,200.46	0.00	0.00	0.00
58.00	0.00	12,220	1,200.46	0.00	0.00	0.00
60.00	0.00	12,206	1,200.45	0.00	0.00	0.00
62.00	0.00	12,192	1,200.45	0.00	0.00	0.00
64.00	0.00	12,178	1,200.45	0.00	0.00	0.00
66.00	0.00	12,164	1,200.44	0.00	0.00	0.00
68.00	0.00	12,150	1,200.44	0.00	0.00	0.00
70.00	0.00	12,136	1,200.44	0.00	0.00	0.00
72.00	0.00	12,122	1,200.44	0.00	0.00	0.00

Time span=0.00-72.00 hrs, dt=0.02 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment01: Runoff Area=2.560 ac 0.00% Impervious Runoff Depth=5.03"
Tc=26.0 min CN=83 Runoff=8.97 cfs 1.073 af

Subcatchment02: Runoff Area=11.560 ac 0.00% Impervious Runoff Depth=4.37"
Tc=26.9 min CN=77 Runoff=35.04 cfs 4.206 af

Subcatchment03: Runoff Area=13.580 ac 0.00% Impervious Runoff Depth=4.81"
Tc=27.7 min CN=81 Runoff=44.38 cfs 5.438 af

Subcatchment04: Runoff Area=1.980 ac 0.00% Impervious Runoff Depth=4.37"
Tc=31.8 min CN=77 Runoff=5.56 cfs 0.720 af

Subcatchment05: Runoff Area=4.310 ac 0.00% Impervious Runoff Depth=4.69"
Tc=19.9 min CN=80 Runoff=15.92 cfs 1.686 af

Subcatchment07: Runoff Area=13.810 ac 0.00% Impervious Runoff Depth=3.83"
Tc=36.0 min CN=72 Runoff=32.18 cfs 4.407 af

Subcatchment08: Runoff Area=17.260 ac 0.00% Impervious Runoff Depth=5.03"
Tc=24.5 min CN=83 Runoff=62.08 cfs 7.232 af

Subcatchment09: Runoff Area=16.030 ac 0.00% Impervious Runoff Depth=4.69"
Tc=71.9 min CN=80 Runoff=30.93 cfs 6.271 af

Subcatchment10: Runoff Area=16.800 ac 0.00% Impervious Runoff Depth=4.92"
Tc=35.2 min CN=82 Runoff=50.30 cfs 6.883 af

Subcatchment11: Runoff Area=2.820 ac 0.00% Impervious Runoff Depth=3.94"
Tc=46.9 min CN=73 Runoff=5.90 cfs 0.925 af

Subcatchment12: Runoff Area=4.010 ac 0.00% Impervious Runoff Depth=4.81"
Tc=23.9 min CN=81 Runoff=13.99 cfs 1.606 af

Subcatchment13: Runoff Area=6.380 ac 0.00% Impervious Runoff Depth=4.26"
Tc=29.1 min CN=76 Runoff=18.24 cfs 2.263 af

Subcatchment14: Runoff Area=8.210 ac 0.00% Impervious Runoff Depth=4.37"
Tc=23.3 min CN=77 Runoff=26.50 cfs 2.987 af

Subcatchment15: Runoff Area=2.830 ac 0.00% Impervious Runoff Depth=4.58"
Tc=50.3 min CN=79 Runoff=6.62 cfs 1.081 af

Pond 01-Pond: Peak Elev=1,114.47' Storage=0.366 af Inflow=8.97 cfs 1.073 af
Primary=7.56 cfs 0.816 af Secondary=0.00 cfs 0.000 af Outflow=7.56 cfs 0.816 af

Pond 02-Pond: Peak Elev=1,045.78' Storage=1.419 af Inflow=35.04 cfs 4.206 af
Primary=26.85 cfs 3.288 af Secondary=0.00 cfs 0.000 af Outflow=26.85 cfs 3.288 af

Pond 03-Pond: Peak Elev=1,133.52' Storage=1.163 af Inflow=44.38 cfs 5.438 af
Primary=34.17 cfs 5.272 af Secondary=0.00 cfs 0.000 af Outflow=34.17 cfs 5.272 af

Pond 04-Pond: Peak Elev=1,109.40' Storage=0.244 af Inflow=5.56 cfs 0.720 af
Primary=4.62 cfs 0.534 af Secondary=0.00 cfs 0.000 af Outflow=4.62 cfs 0.534 af

Pond 05-Pond: Peak Elev=1,140.58' Storage=0.591 af Inflow=15.92 cfs 1.686 af
Primary=10.71 cfs 1.369 af Secondary=0.00 cfs 0.000 af Outflow=10.71 cfs 1.369 af

Pond 07-Pond: Peak Elev=1,135.60' Storage=1.390 af Inflow=32.18 cfs 4.407 af
Primary=24.58 cfs 3.566 af Secondary=0.00 cfs 0.000 af Outflow=24.58 cfs 3.566 af

Pond 08/10-Pond: Peak Elev=1,125.42' Storage=3.678 af Inflow=108.19 cfs 14.114 af
Primary=88.34 cfs 12.832 af Secondary=0.00 cfs 0.000 af Outflow=88.34 cfs 12.832 af

Pond 09-Pond: Peak Elev=1,150.80' Storage=2.198 af Inflow=30.93 cfs 6.271 af
Primary=23.53 cfs 4.961 af Secondary=0.00 cfs 0.000 af Outflow=23.53 cfs 4.961 af

Pond 11-Pond: Peak Elev=1,191.95' Storage=0.406 af Inflow=5.90 cfs 0.925 af
Primary=3.21 cfs 0.594 af Secondary=0.00 cfs 0.000 af Outflow=3.21 cfs 0.594 af

Pond 13-Pond: Peak Elev=1,146.75' Storage=0.789 af Inflow=18.24 cfs 2.263 af
Primary=13.39 cfs 1.743 af Secondary=0.00 cfs 0.000 af Outflow=13.39 cfs 1.743 af

Pond 14-Pond: Peak Elev=1,154.31' Storage=1.056 af Inflow=26.50 cfs 2.987 af
Primary=17.77 cfs 2.388 af Secondary=0.00 cfs 0.000 af Outflow=17.77 cfs 2.388 af

Pond 15-Pond: Peak Elev=1,201.15' Storage=15,785 cf Inflow=6.62 cfs 1.081 af
Primary=5.67 cfs 0.803 af Secondary=0.00 cfs 0.000 af Outflow=5.67 cfs 0.803 af

Total Runoff Area = 122.140 ac Runoff Volume = 46.776 af Average Runoff Depth = 4.60"
100.00% Pervious = 122.140 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 01:

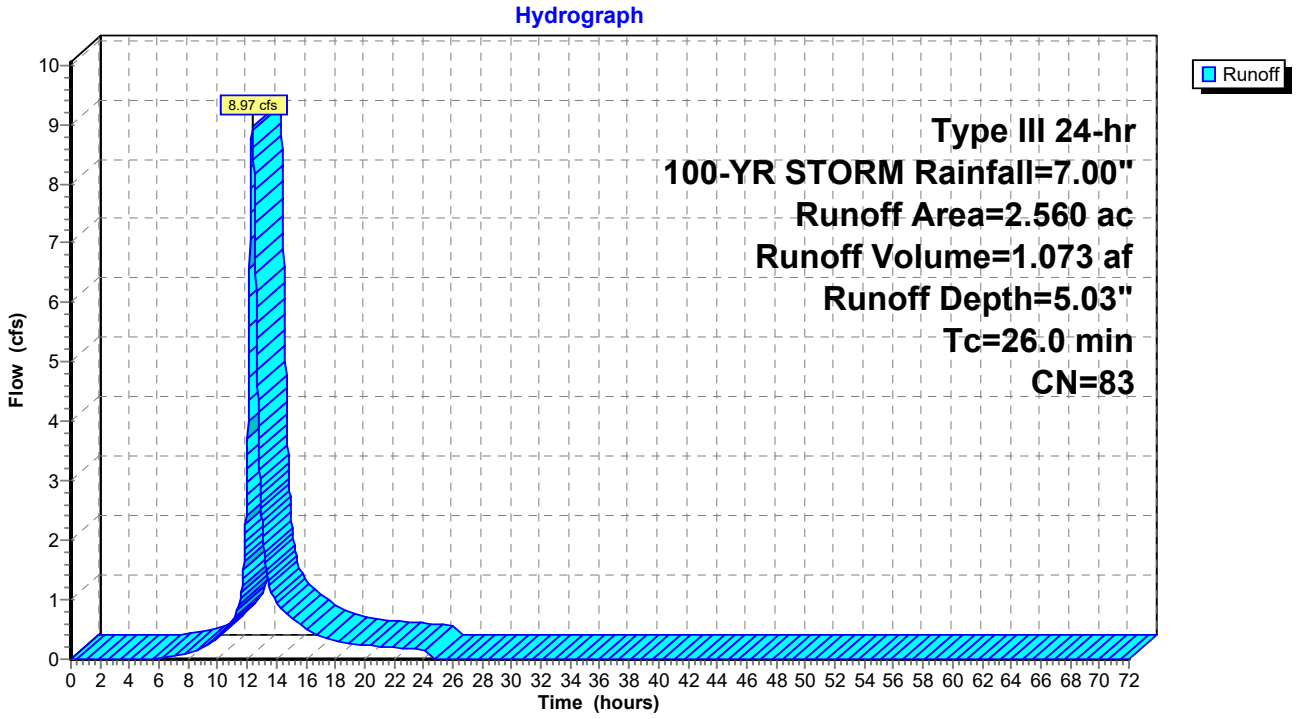
Runoff = 8.97 cfs @ 12.35 hrs, Volume= 1.073 af, Depth= 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	2.560	83	
	2.560		100.00% Pervious Area

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

Subcatchment 01:



Hydrograph for Subcatchment 01:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.01
7.00	0.63	0.02	0.05
8.00	0.80	0.06	0.11
9.00	1.02	0.14	0.21
10.00	1.32	0.28	0.38
11.00	1.75	0.53	0.68
12.00	3.50	1.86	**3.20**
13.00	5.25	3.40	**2.33**
14.00	5.68	3.79	0.97
15.00	5.98	4.07	0.71
16.00	6.20	4.28	0.51
17.00	6.37	4.43	0.39
18.00	6.50	4.55	0.30
19.00	6.60	4.65	0.26
20.00	6.70	4.74	0.23
21.00	6.79	4.83	0.21
22.00	6.87	4.90	0.19
23.00	6.94	4.97	0.17
24.00	**7.00**	**5.03**	0.15
25.00	7.00	5.03	0.00
26.00	7.00	5.03	0.00
27.00	7.00	5.03	0.00
28.00	7.00	5.03	0.00
29.00	7.00	5.03	0.00
30.00	7.00	5.03	0.00
31.00	7.00	5.03	0.00
32.00	7.00	5.03	0.00
33.00	7.00	5.03	0.00
34.00	7.00	5.03	0.00
35.00	7.00	5.03	0.00
36.00	7.00	5.03	0.00
37.00	7.00	5.03	0.00
38.00	7.00	5.03	0.00
39.00	7.00	5.03	0.00
40.00	7.00	5.03	0.00
41.00	7.00	5.03	0.00
42.00	7.00	5.03	0.00
43.00	7.00	5.03	0.00
44.00	7.00	5.03	0.00
45.00	7.00	5.03	0.00
46.00	7.00	5.03	0.00
47.00	7.00	5.03	0.00
48.00	7.00	5.03	0.00
49.00	7.00	5.03	0.00
50.00	7.00	5.03	0.00
51.00	7.00	5.03	0.00
52.00	7.00	5.03	0.00
53.00	7.00	5.03	0.00
54.00	7.00	5.03	0.00
55.00	7.00	5.03	0.00
56.00	7.00	5.03	0.00
57.00	7.00	5.03	0.00
58.00	7.00	5.03	0.00
59.00	7.00	5.03	0.00
60.00	7.00	5.03	0.00
61.00	7.00	5.03	0.00
62.00	7.00	5.03	0.00
63.00	7.00	5.03	0.00
64.00	7.00	5.03	0.00
65.00	7.00	5.03	0.00
66.00	7.00	5.03	0.00
67.00	7.00	5.03	0.00
68.00	7.00	5.03	0.00
69.00	7.00	5.03	0.00
70.00	7.00	5.03	0.00
71.00	7.00	5.03	0.00
72.00	7.00	5.03	0.00

Summary for Subcatchment 02:

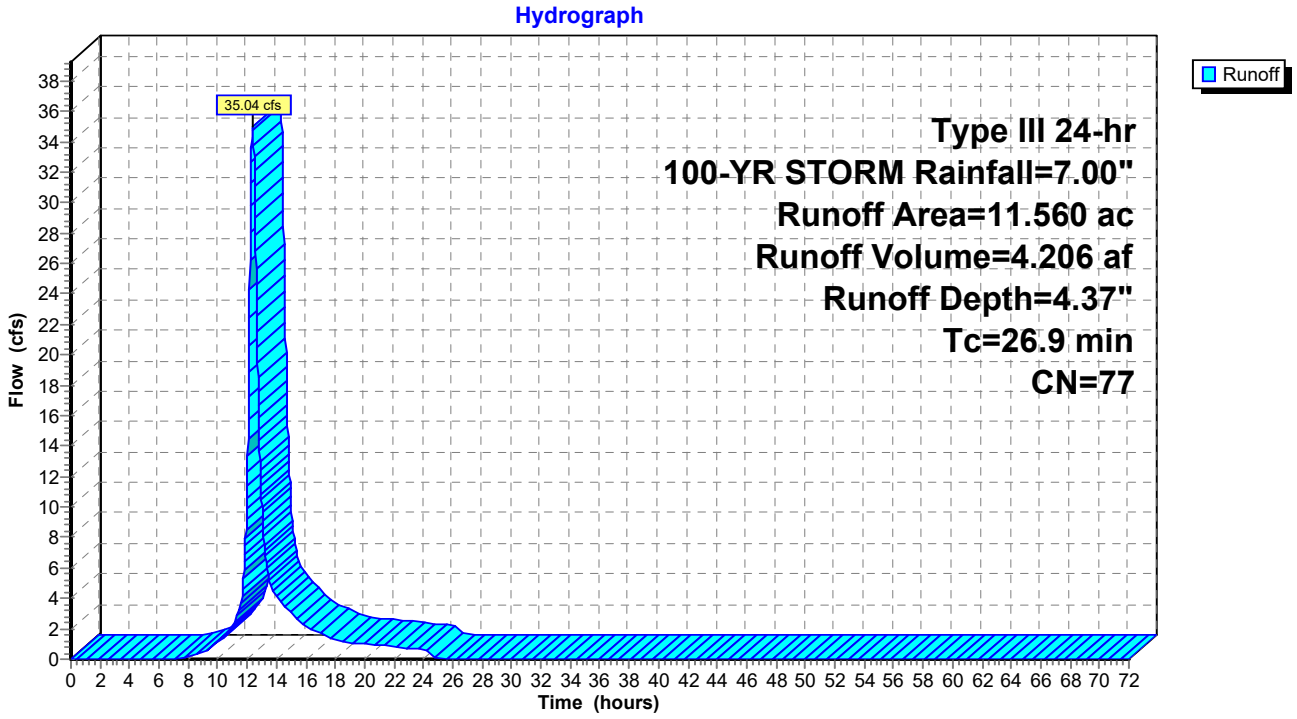
Runoff = 35.04 cfs @ 12.37 hrs, Volume= 4.206 af, Depth= 4.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	11.560	77	
	11.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9					**Direct Entry, SCS TR-55**

Subcatchment 02:



Hydrograph for Subcatchment 02:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.00	0.00
8.00	0.80	0.01	0.16
9.00	1.02	0.05	0.50
10.00	1.32	0.14	1.10
11.00	1.75	0.32	2.20
12.00	3.50	1.43	**11.43**
13.00	5.25	2.83	**10.03**
14.00	5.68	3.20	4.13
15.00	5.98	3.46	3.00
16.00	6.20	3.66	2.20
17.00	6.37	3.80	1.66
18.00	6.50	3.92	1.31
19.00	6.60	4.01	1.10
20.00	6.70	4.10	0.99
21.00	6.79	4.17	0.90
22.00	6.87	4.24	0.82
23.00	6.94	4.31	0.74
24.00	**7.00**	**4.37**	0.66
25.00	7.00	4.37	0.01
26.00	7.00	4.37	0.00
27.00	7.00	4.37	0.00
28.00	7.00	4.37	0.00
29.00	7.00	4.37	0.00
30.00	7.00	4.37	0.00
31.00	7.00	4.37	0.00
32.00	7.00	4.37	0.00
33.00	7.00	4.37	0.00
34.00	7.00	4.37	0.00
35.00	7.00	4.37	0.00
36.00	7.00	4.37	0.00
37.00	7.00	4.37	0.00
38.00	7.00	4.37	0.00
39.00	7.00	4.37	0.00
40.00	7.00	4.37	0.00
41.00	7.00	4.37	0.00
42.00	7.00	4.37	0.00
43.00	7.00	4.37	0.00
44.00	7.00	4.37	0.00
45.00	7.00	4.37	0.00
46.00	7.00	4.37	0.00
47.00	7.00	4.37	0.00
48.00	7.00	4.37	0.00
49.00	7.00	4.37	0.00
50.00	7.00	4.37	0.00
51.00	7.00	4.37	0.00
52.00	7.00	4.37	0.00
53.00	7.00	4.37	0.00
54.00	7.00	4.37	0.00
55.00	7.00	4.37	0.00
56.00	7.00	4.37	0.00
57.00	7.00	4.37	0.00
58.00	7.00	4.37	0.00
59.00	7.00	4.37	0.00
60.00	7.00	4.37	0.00
61.00	7.00	4.37	0.00
62.00	7.00	4.37	0.00
63.00	7.00	4.37	0.00
64.00	7.00	4.37	0.00
65.00	7.00	4.37	0.00
66.00	7.00	4.37	0.00
67.00	7.00	4.37	0.00
68.00	7.00	4.37	0.00
69.00	7.00	4.37	0.00
70.00	7.00	4.37	0.00
71.00	7.00	4.37	0.00
72.00	7.00	4.37	0.00

Summary for Subcatchment 03:

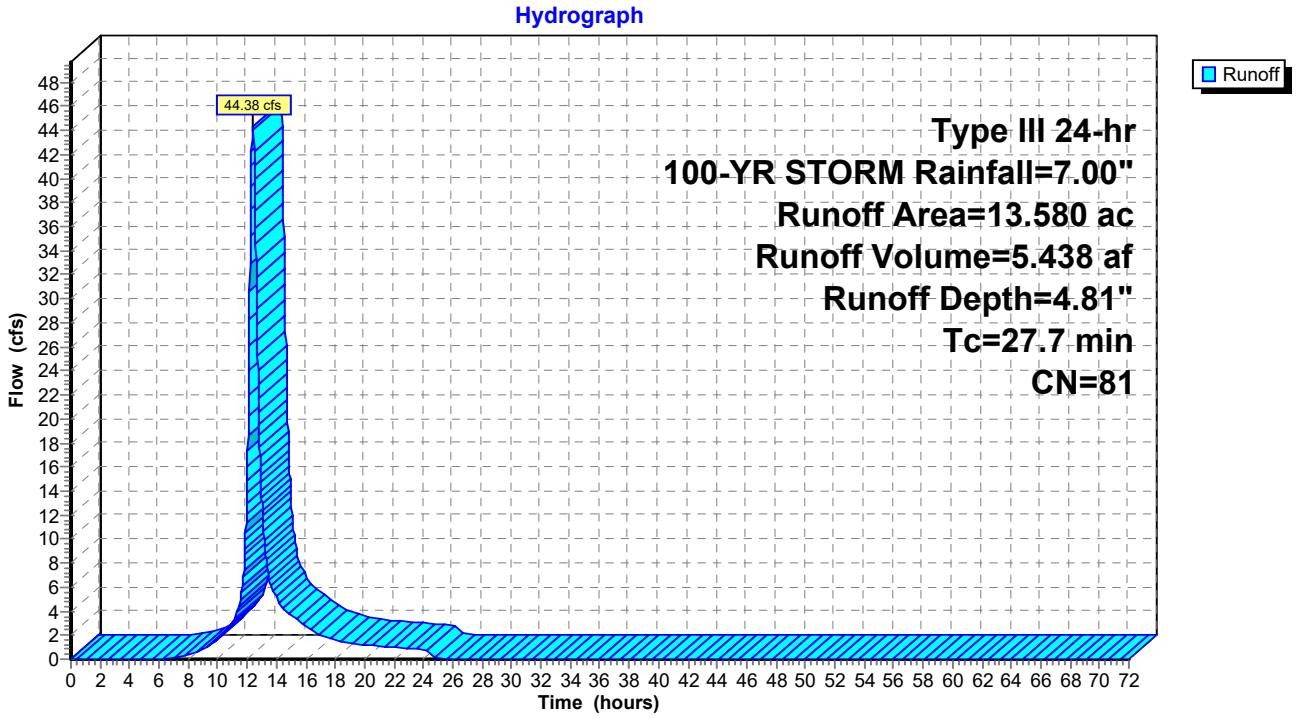
Runoff = 44.38 cfs @ 12.38 hrs, Volume= 5.438 af, Depth= 4.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	13.580	81	
	13.580		100.00% Pervious Area

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

Subcatchment 03:



Hydrograph for Subcatchment 03:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.01	0.15
8.00	0.80	0.04	0.43
9.00	1.02	0.10	0.92
10.00	1.32	0.23	1.75
11.00	1.75	0.45	3.20
12.00	3.50	1.71	**14.89**
13.00	5.25	3.21	**12.92**
14.00	5.68	3.59	5.13
15.00	5.98	3.87	3.70
16.00	6.20	4.07	2.71
17.00	6.37	4.22	2.04
18.00	6.50	4.34	1.60
19.00	6.60	4.44	1.34
20.00	6.70	4.53	1.21
21.00	6.79	4.61	1.10
22.00	6.87	4.68	1.00
23.00	6.94	4.75	0.90
24.00	**7.00**	**4.81**	0.80
25.00	7.00	4.81	0.01
26.00	7.00	4.81	0.00
27.00	7.00	4.81	0.00
28.00	7.00	4.81	0.00
29.00	7.00	4.81	0.00
30.00	7.00	4.81	0.00
31.00	7.00	4.81	0.00
32.00	7.00	4.81	0.00
33.00	7.00	4.81	0.00
34.00	7.00	4.81	0.00
35.00	7.00	4.81	0.00
36.00	7.00	4.81	0.00
37.00	7.00	4.81	0.00
38.00	7.00	4.81	0.00
39.00	7.00	4.81	0.00
40.00	7.00	4.81	0.00
41.00	7.00	4.81	0.00
42.00	7.00	4.81	0.00
43.00	7.00	4.81	0.00
44.00	7.00	4.81	0.00
45.00	7.00	4.81	0.00
46.00	7.00	4.81	0.00
47.00	7.00	4.81	0.00
48.00	7.00	4.81	0.00
49.00	7.00	4.81	0.00
50.00	7.00	4.81	0.00
51.00	7.00	4.81	0.00
52.00	7.00	4.81	0.00
53.00	7.00	4.81	0.00
54.00	7.00	4.81	0.00
55.00	7.00	4.81	0.00
56.00	7.00	4.81	0.00
57.00	7.00	4.81	0.00
58.00	7.00	4.81	0.00
59.00	7.00	4.81	0.00
60.00	7.00	4.81	0.00
61.00	7.00	4.81	0.00
62.00	7.00	4.81	0.00
63.00	7.00	4.81	0.00
64.00	7.00	4.81	0.00
65.00	7.00	4.81	0.00
66.00	7.00	4.81	0.00
67.00	7.00	4.81	0.00
68.00	7.00	4.81	0.00
69.00	7.00	4.81	0.00
70.00	7.00	4.81	0.00
71.00	7.00	4.81	0.00
72.00	7.00	4.81	0.00

Summary for Subcatchment 04:

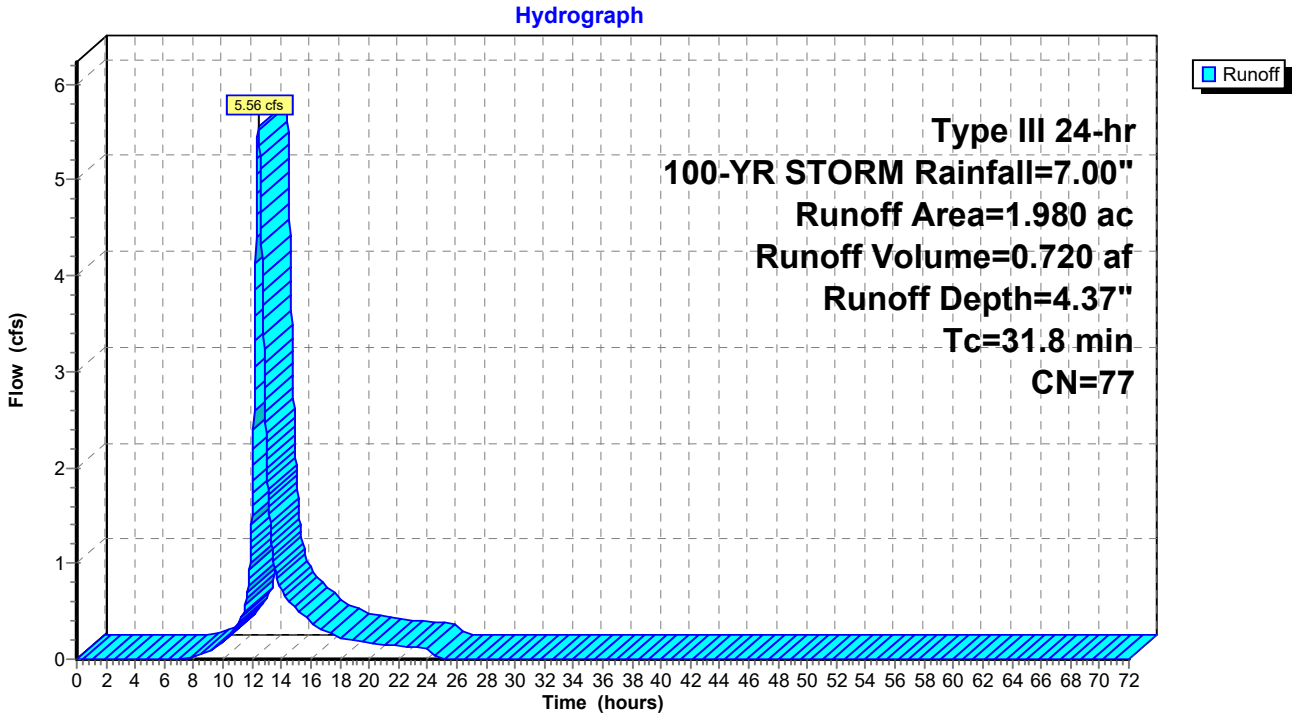
Runoff = 5.56 cfs @ 12.44 hrs, Volume= 0.720 af, Depth= 4.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	1.980	77	
	1.980		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.8					**Direct Entry, SCS TR-55**

Subcatchment 04:



Hydrograph for Subcatchment 04:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.00	0.00
8.00	0.80	0.01	0.02
9.00	1.02	0.05	0.08
10.00	1.32	0.14	0.18
11.00	1.75	0.32	0.36
12.00	3.50	1.43	**1.61**
13.00	5.25	2.83	**2.08**
14.00	5.68	3.20	0.74
15.00	5.98	3.46	0.52
16.00	6.20	3.66	0.39
17.00	6.37	3.80	0.29
18.00	6.50	3.92	0.23
19.00	6.60	4.01	0.19
20.00	6.70	4.10	0.17
21.00	6.79	4.17	0.16
22.00	6.87	4.24	0.14
23.00	6.94	4.31	0.13
24.00	**7.00**	**4.37**	0.11
25.00	7.00	4.37	0.00
26.00	7.00	4.37	0.00
27.00	7.00	4.37	0.00
28.00	7.00	4.37	0.00
29.00	7.00	4.37	0.00
30.00	7.00	4.37	0.00
31.00	7.00	4.37	0.00
32.00	7.00	4.37	0.00
33.00	7.00	4.37	0.00
34.00	7.00	4.37	0.00
35.00	7.00	4.37	0.00
36.00	7.00	4.37	0.00
37.00	7.00	4.37	0.00
38.00	7.00	4.37	0.00
39.00	7.00	4.37	0.00
40.00	7.00	4.37	0.00
41.00	7.00	4.37	0.00
42.00	7.00	4.37	0.00
43.00	7.00	4.37	0.00
44.00	7.00	4.37	0.00
45.00	7.00	4.37	0.00
46.00	7.00	4.37	0.00
47.00	7.00	4.37	0.00
48.00	7.00	4.37	0.00
49.00	7.00	4.37	0.00
50.00	7.00	4.37	0.00
51.00	7.00	4.37	0.00
52.00	7.00	4.37	0.00
53.00	7.00	4.37	0.00
54.00	7.00	4.37	0.00
55.00	7.00	4.37	0.00
56.00	7.00	4.37	0.00
57.00	7.00	4.37	0.00
58.00	7.00	4.37	0.00
59.00	7.00	4.37	0.00
60.00	7.00	4.37	0.00
61.00	7.00	4.37	0.00
62.00	7.00	4.37	0.00
63.00	7.00	4.37	0.00
64.00	7.00	4.37	0.00
65.00	7.00	4.37	0.00
66.00	7.00	4.37	0.00
67.00	7.00	4.37	0.00
68.00	7.00	4.37	0.00
69.00	7.00	4.37	0.00
70.00	7.00	4.37	0.00
71.00	7.00	4.37	0.00
72.00	7.00	4.37	0.00

Summary for Subcatchment 05:

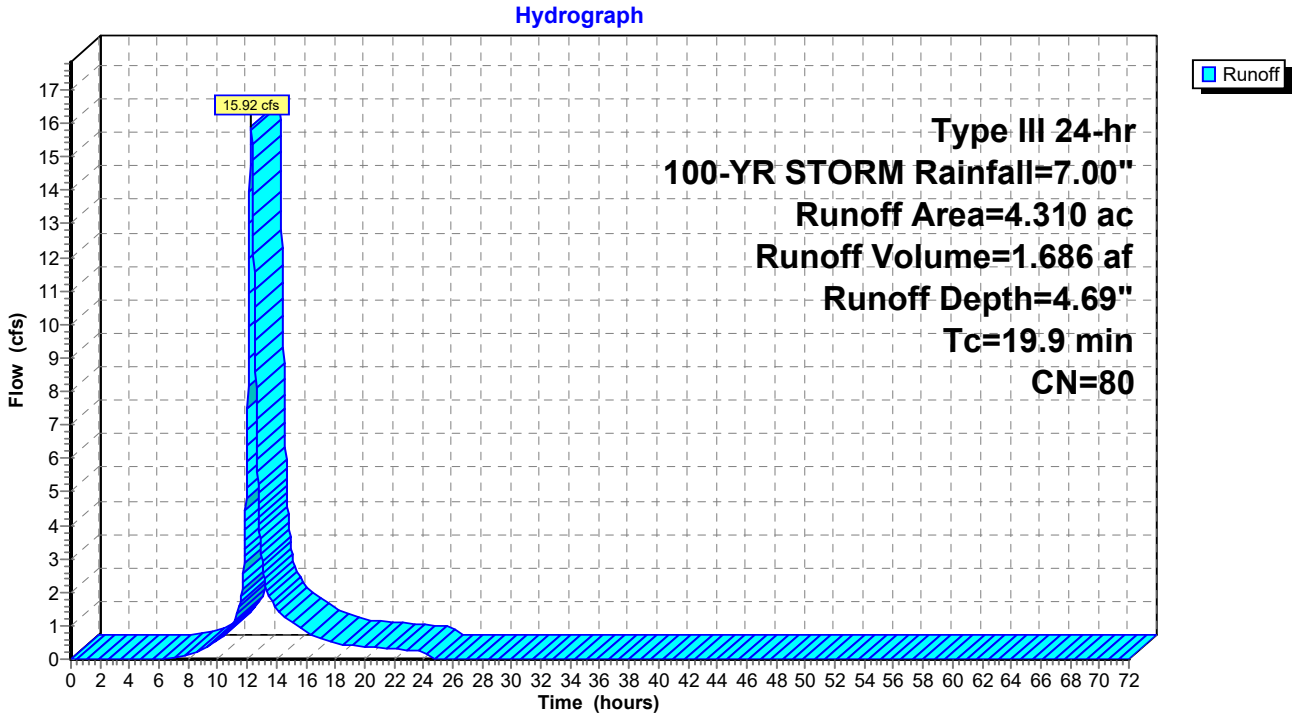
Runoff = 15.92 cfs @ 12.27 hrs, Volume= 1.686 af, Depth= 4.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	4.310	80	
	4.310		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9					**Direct Entry, SCS TR-55**

Subcatchment 05:



Hydrograph for Subcatchment 05:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.01	0.04
8.00	0.80	0.03	0.13
9.00	1.02	0.09	0.29
10.00	1.32	0.20	0.55
11.00	1.75	0.42	1.04
12.00	3.50	1.64	**6.36**
13.00	5.25	3.11	**2.98**
14.00	5.68	3.49	1.53
15.00	5.98	3.76	1.12
16.00	6.20	3.96	0.81
17.00	6.37	4.11	0.62
18.00	6.50	4.23	0.49
19.00	6.60	4.33	0.42
20.00	6.70	4.42	0.38
21.00	6.79	4.50	0.34
22.00	6.87	4.57	0.31
23.00	6.94	4.64	0.28
24.00	**7.00**	**4.69**	0.25
25.00	7.00	4.69	0.00
26.00	7.00	4.69	0.00
27.00	7.00	4.69	0.00
28.00	7.00	4.69	0.00
29.00	7.00	4.69	0.00
30.00	7.00	4.69	0.00
31.00	7.00	4.69	0.00
32.00	7.00	4.69	0.00
33.00	7.00	4.69	0.00
34.00	7.00	4.69	0.00
35.00	7.00	4.69	0.00
36.00	7.00	4.69	0.00
37.00	7.00	4.69	0.00
38.00	7.00	4.69	0.00
39.00	7.00	4.69	0.00
40.00	7.00	4.69	0.00
41.00	7.00	4.69	0.00
42.00	7.00	4.69	0.00
43.00	7.00	4.69	0.00
44.00	7.00	4.69	0.00
45.00	7.00	4.69	0.00
46.00	7.00	4.69	0.00
47.00	7.00	4.69	0.00
48.00	7.00	4.69	0.00
49.00	7.00	4.69	0.00
50.00	7.00	4.69	0.00
51.00	7.00	4.69	0.00
52.00	7.00	4.69	0.00
53.00	7.00	4.69	0.00
54.00	7.00	4.69	0.00
55.00	7.00	4.69	0.00
56.00	7.00	4.69	0.00
57.00	7.00	4.69	0.00
58.00	7.00	4.69	0.00
59.00	7.00	4.69	0.00
60.00	7.00	4.69	0.00
61.00	7.00	4.69	0.00
62.00	7.00	4.69	0.00
63.00	7.00	4.69	0.00
64.00	7.00	4.69	0.00
65.00	7.00	4.69	0.00
66.00	7.00	4.69	0.00
67.00	7.00	4.69	0.00
68.00	7.00	4.69	0.00
69.00	7.00	4.69	0.00
70.00	7.00	4.69	0.00
71.00	7.00	4.69	0.00
72.00	7.00	4.69	0.00

Summary for Subcatchment 07:

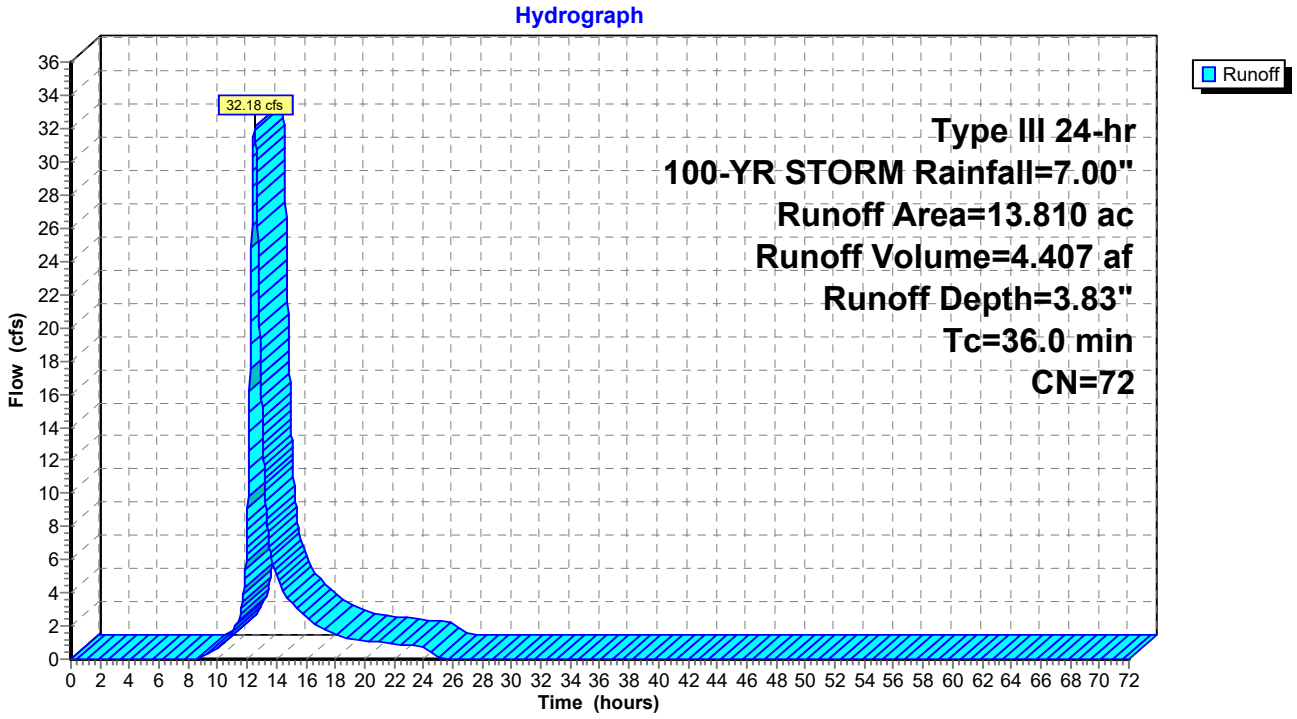
Runoff = 32.18 cfs @ 12.51 hrs, Volume= 4.407 af, Depth= 3.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	13.810	72	
	13.810		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.0					**Direct Entry, SCS TR-55**

Subcatchment 07:



Hydrograph for Subcatchment 07:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.00	0.00
8.00	0.80	0.00	0.00
9.00	1.02	0.01	0.17
10.00	1.32	0.07	0.70
11.00	1.75	0.19	1.69
12.00	3.50	1.12	**7.78**
13.00	5.25	2.39	**15.18**
14.00	5.68	2.73	4.97
15.00	5.98	2.98	3.48
16.00	6.20	3.16	2.59
17.00	6.37	3.30	1.93
18.00	6.50	3.40	1.53
19.00	6.60	3.49	1.26
20.00	6.70	3.57	1.13
21.00	6.79	3.65	1.03
22.00	6.87	3.71	0.94
23.00	6.94	3.78	0.85
24.00	**7.00**	**3.83**	0.76
25.00	7.00	3.83	0.05
26.00	7.00	3.83	0.00
27.00	7.00	3.83	0.00
28.00	7.00	3.83	0.00
29.00	7.00	3.83	0.00
30.00	7.00	3.83	0.00
31.00	7.00	3.83	0.00
32.00	7.00	3.83	0.00
33.00	7.00	3.83	0.00
34.00	7.00	3.83	0.00
35.00	7.00	3.83	0.00
36.00	7.00	3.83	0.00
37.00	7.00	3.83	0.00
38.00	7.00	3.83	0.00
39.00	7.00	3.83	0.00
40.00	7.00	3.83	0.00
41.00	7.00	3.83	0.00
42.00	7.00	3.83	0.00
43.00	7.00	3.83	0.00
44.00	7.00	3.83	0.00
45.00	7.00	3.83	0.00
46.00	7.00	3.83	0.00
47.00	7.00	3.83	0.00
48.00	7.00	3.83	0.00
49.00	7.00	3.83	0.00
50.00	7.00	3.83	0.00
51.00	7.00	3.83	0.00
52.00	7.00	3.83	0.00
53.00	7.00	3.83	0.00
54.00	7.00	3.83	0.00
55.00	7.00	3.83	0.00
56.00	7.00	3.83	0.00
57.00	7.00	3.83	0.00
58.00	7.00	3.83	0.00
59.00	7.00	3.83	0.00
60.00	7.00	3.83	0.00
61.00	7.00	3.83	0.00
62.00	7.00	3.83	0.00
63.00	7.00	3.83	0.00
64.00	7.00	3.83	0.00
65.00	7.00	3.83	0.00
66.00	7.00	3.83	0.00
67.00	7.00	3.83	0.00
68.00	7.00	3.83	0.00
69.00	7.00	3.83	0.00
70.00	7.00	3.83	0.00
71.00	7.00	3.83	0.00
72.00	7.00	3.83	0.00

Summary for Subcatchment 08:

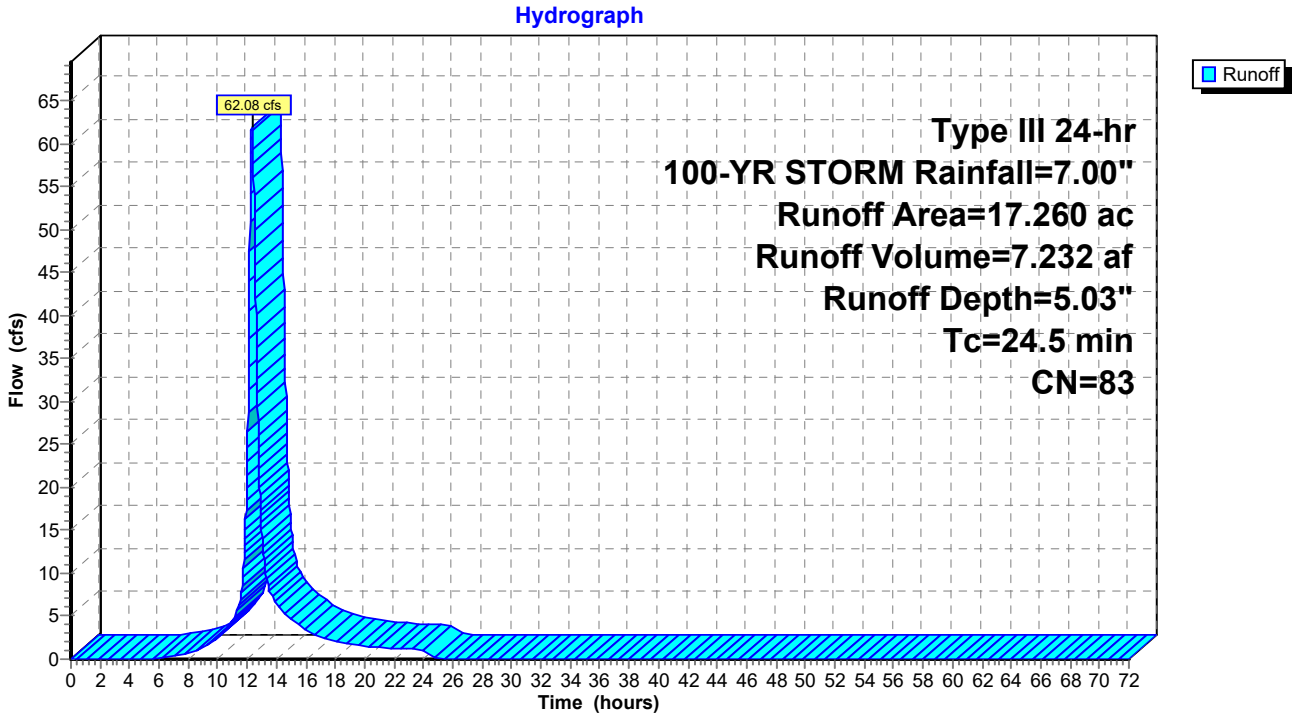
Runoff = 62.08 cfs @ 12.33 hrs, Volume= 7.232 af, Depth= 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	17.260	83	
	17.260		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5					**Direct Entry, SCS TR-55**

Subcatchment 08:



Hydrograph for Subcatchment 08:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.09
7.00	0.63	0.02	0.35
8.00	0.80	0.06	0.75
9.00	1.02	0.14	1.47
10.00	1.32	0.28	2.61
11.00	1.75	0.53	4.62
12.00	3.50	1.86	**22.94**
13.00	5.25	3.40	**14.80**
14.00	5.68	3.79	6.50
15.00	5.98	4.07	4.72
16.00	6.20	4.28	3.44
17.00	6.37	4.43	2.60
18.00	6.50	4.55	2.04
19.00	6.60	4.65	1.72
20.00	6.70	4.74	1.55
21.00	6.79	4.83	1.41
22.00	6.87	4.90	1.28
23.00	6.94	4.97	1.15
24.00	**7.00**	**5.03**	1.03
25.00	7.00	5.03	0.01
26.00	7.00	5.03	0.00
27.00	7.00	5.03	0.00
28.00	7.00	5.03	0.00
29.00	7.00	5.03	0.00
30.00	7.00	5.03	0.00
31.00	7.00	5.03	0.00
32.00	7.00	5.03	0.00
33.00	7.00	5.03	0.00
34.00	7.00	5.03	0.00
35.00	7.00	5.03	0.00
36.00	7.00	5.03	0.00
37.00	7.00	5.03	0.00
38.00	7.00	5.03	0.00
39.00	7.00	5.03	0.00
40.00	7.00	5.03	0.00
41.00	7.00	5.03	0.00
42.00	7.00	5.03	0.00
43.00	7.00	5.03	0.00
44.00	7.00	5.03	0.00
45.00	7.00	5.03	0.00
46.00	7.00	5.03	0.00
47.00	7.00	5.03	0.00
48.00	7.00	5.03	0.00
49.00	7.00	5.03	0.00
50.00	7.00	5.03	0.00
51.00	7.00	5.03	0.00
52.00	7.00	5.03	0.00
53.00	7.00	5.03	0.00
54.00	7.00	5.03	0.00
55.00	7.00	5.03	0.00
56.00	7.00	5.03	0.00
57.00	7.00	5.03	0.00
58.00	7.00	5.03	0.00
59.00	7.00	5.03	0.00
60.00	7.00	5.03	0.00
61.00	7.00	5.03	0.00
62.00	7.00	5.03	0.00
63.00	7.00	5.03	0.00
64.00	7.00	5.03	0.00
65.00	7.00	5.03	0.00
66.00	7.00	5.03	0.00
67.00	7.00	5.03	0.00
68.00	7.00	5.03	0.00
69.00	7.00	5.03	0.00
70.00	7.00	5.03	0.00
71.00	7.00	5.03	0.00
72.00	7.00	5.03	0.00

Summary for Subcatchment 09:

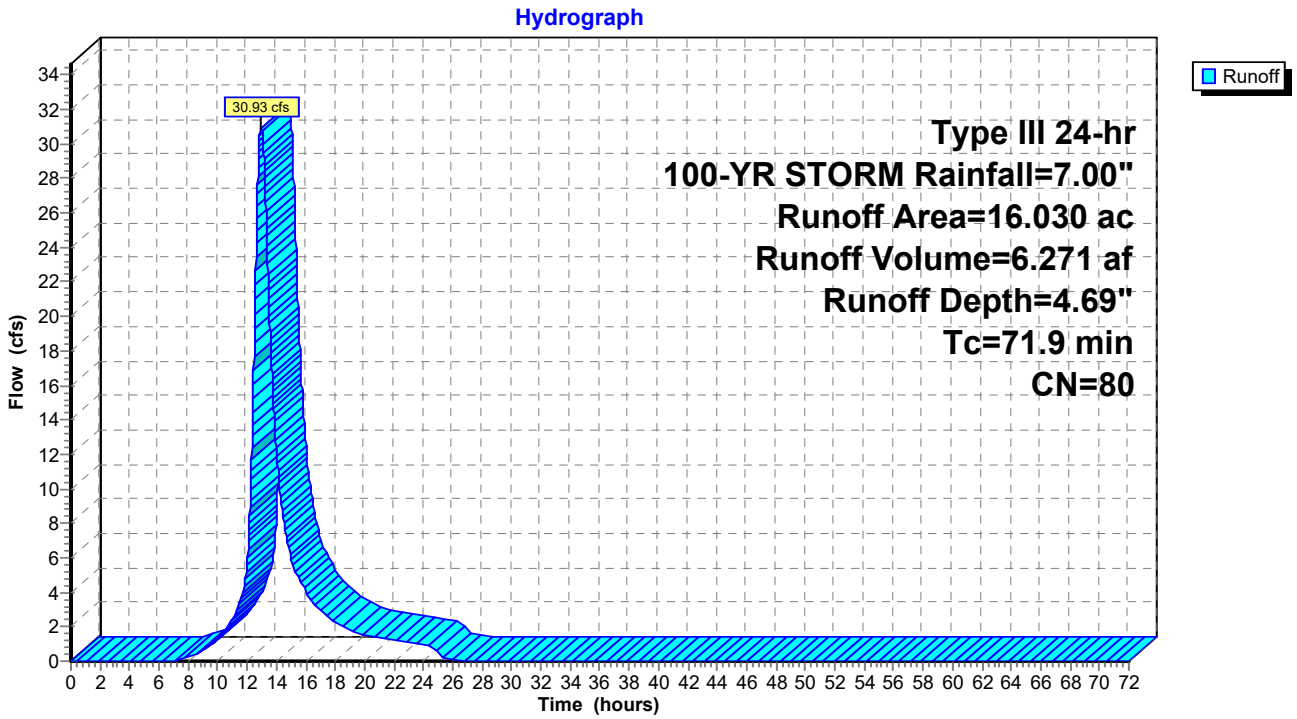
Runoff = 30.93 cfs @ 12.95 hrs, Volume= 6.271 af, Depth= 4.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	16.030	80	
	16.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
71.9					**Direct Entry, SCS TR-55**

Subcatchment 09:



Hydrograph for Subcatchment 09:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.01	0.03
8.00	0.80	0.03	0.22
9.00	1.02	0.09	0.59
10.00	1.32	0.20	1.29
11.00	1.75	0.42	2.41
12.00	3.50	1.64	**5.67**
13.00	5.25	3.11	**30.84**
14.00	5.68	3.49	12.01
15.00	5.98	3.76	5.98
16.00	6.20	3.96	4.04
17.00	6.37	4.11	2.89
18.00	6.50	4.23	2.24
19.00	6.60	4.33	1.76
20.00	6.70	4.42	1.53
21.00	6.79	4.50	1.37
22.00	6.87	4.57	1.25
23.00	6.94	4.64	1.13
24.00	**7.00**	**4.69**	1.02
25.00	7.00	4.69	0.49
26.00	7.00	4.69	0.06
27.00	7.00	4.69	0.01
28.00	7.00	4.69	0.00
29.00	7.00	4.69	0.00
30.00	7.00	4.69	0.00
31.00	7.00	4.69	0.00
32.00	7.00	4.69	0.00
33.00	7.00	4.69	0.00
34.00	7.00	4.69	0.00
35.00	7.00	4.69	0.00
36.00	7.00	4.69	0.00
37.00	7.00	4.69	0.00
38.00	7.00	4.69	0.00
39.00	7.00	4.69	0.00
40.00	7.00	4.69	0.00
41.00	7.00	4.69	0.00
42.00	7.00	4.69	0.00
43.00	7.00	4.69	0.00
44.00	7.00	4.69	0.00
45.00	7.00	4.69	0.00
46.00	7.00	4.69	0.00
47.00	7.00	4.69	0.00
48.00	7.00	4.69	0.00
49.00	7.00	4.69	0.00
50.00	7.00	4.69	0.00
51.00	7.00	4.69	0.00
52.00	7.00	4.69	0.00
53.00	7.00	4.69	0.00
54.00	7.00	4.69	0.00
55.00	7.00	4.69	0.00
56.00	7.00	4.69	0.00
57.00	7.00	4.69	0.00
58.00	7.00	4.69	0.00
59.00	7.00	4.69	0.00
60.00	7.00	4.69	0.00
61.00	7.00	4.69	0.00
62.00	7.00	4.69	0.00
63.00	7.00	4.69	0.00
64.00	7.00	4.69	0.00
65.00	7.00	4.69	0.00
66.00	7.00	4.69	0.00
67.00	7.00	4.69	0.00
68.00	7.00	4.69	0.00
69.00	7.00	4.69	0.00
70.00	7.00	4.69	0.00
71.00	7.00	4.69	0.00
72.00	7.00	4.69	0.00

Summary for Subcatchment 10:

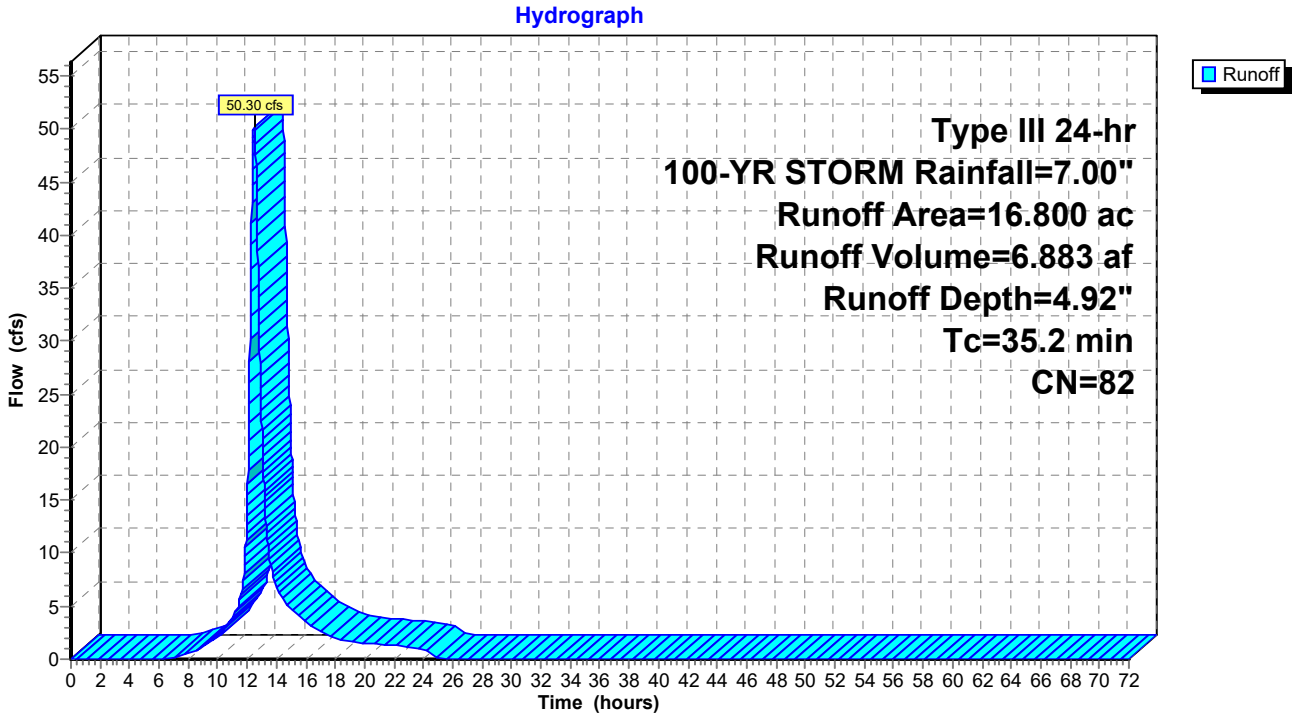
Runoff = 50.30 cfs @ 12.48 hrs, Volume= 6.883 af, Depth= 4.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	16.800	82	
	16.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
35.2					**Direct Entry, SCS TR-55**

Subcatchment 10:



Hydrograph for Subcatchment 10:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.02
7.00	0.63	0.02	0.22
8.00	0.80	0.05	0.57
9.00	1.02	0.12	1.17
10.00	1.32	0.25	2.18
11.00	1.75	0.49	3.90
12.00	3.50	1.78	**14.46**
13.00	5.25	3.30	**21.60**
14.00	5.68	3.69	6.85
15.00	5.98	3.97	4.77
16.00	6.20	4.17	3.53
17.00	6.37	4.33	2.61
18.00	6.50	4.45	2.06
19.00	6.60	4.55	1.69
20.00	6.70	4.63	1.53
21.00	6.79	4.72	1.38
22.00	6.87	4.79	1.26
23.00	6.94	4.86	1.14
24.00	**7.00**	**4.92**	1.01
25.00	7.00	4.92	0.06
26.00	7.00	4.92	0.00
27.00	7.00	4.92	0.00
28.00	7.00	4.92	0.00
29.00	7.00	4.92	0.00
30.00	7.00	4.92	0.00
31.00	7.00	4.92	0.00
32.00	7.00	4.92	0.00
33.00	7.00	4.92	0.00
34.00	7.00	4.92	0.00
35.00	7.00	4.92	0.00
36.00	7.00	4.92	0.00
37.00	7.00	4.92	0.00
38.00	7.00	4.92	0.00
39.00	7.00	4.92	0.00
40.00	7.00	4.92	0.00
41.00	7.00	4.92	0.00
42.00	7.00	4.92	0.00
43.00	7.00	4.92	0.00
44.00	7.00	4.92	0.00
45.00	7.00	4.92	0.00
46.00	7.00	4.92	0.00
47.00	7.00	4.92	0.00
48.00	7.00	4.92	0.00
49.00	7.00	4.92	0.00
50.00	7.00	4.92	0.00
51.00	7.00	4.92	0.00
52.00	7.00	4.92	0.00
53.00	7.00	4.92	0.00
54.00	7.00	4.92	0.00
55.00	7.00	4.92	0.00
56.00	7.00	4.92	0.00
57.00	7.00	4.92	0.00
58.00	7.00	4.92	0.00
59.00	7.00	4.92	0.00
60.00	7.00	4.92	0.00
61.00	7.00	4.92	0.00
62.00	7.00	4.92	0.00
63.00	7.00	4.92	0.00
64.00	7.00	4.92	0.00
65.00	7.00	4.92	0.00
66.00	7.00	4.92	0.00
67.00	7.00	4.92	0.00
68.00	7.00	4.92	0.00
69.00	7.00	4.92	0.00
70.00	7.00	4.92	0.00
71.00	7.00	4.92	0.00
72.00	7.00	4.92	0.00

Summary for Subcatchment 11:

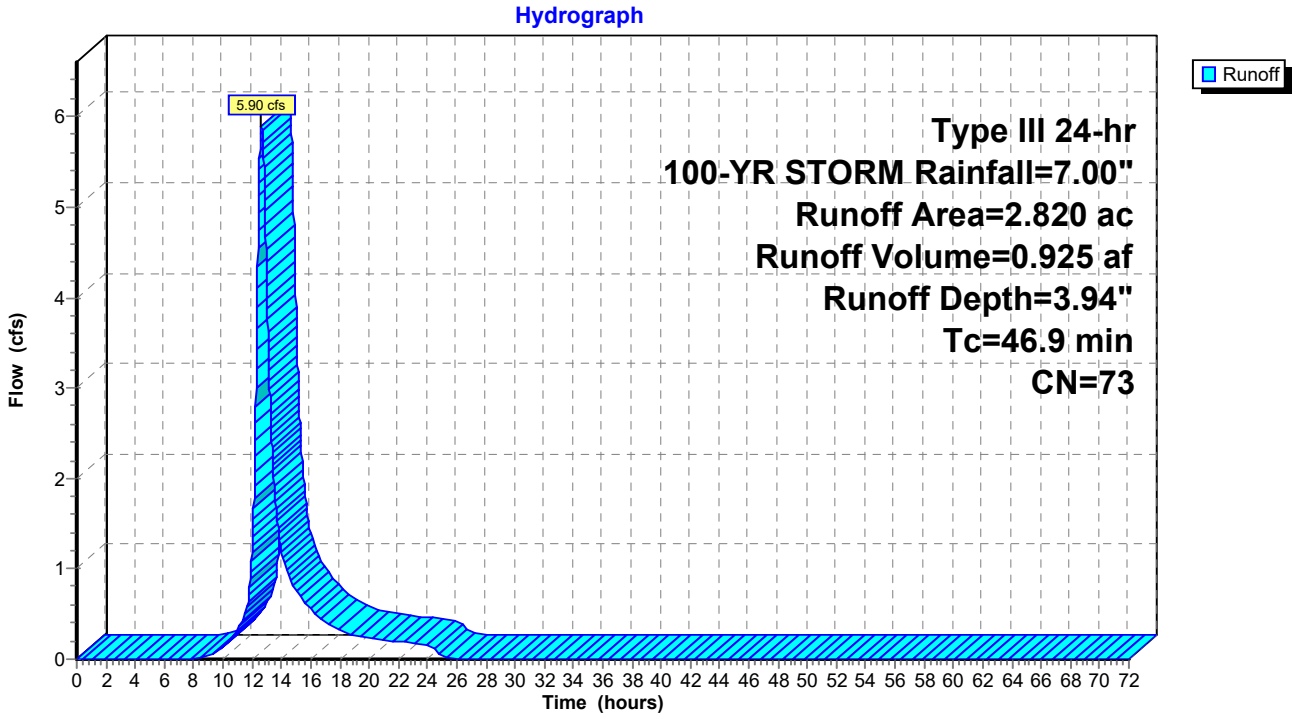
Runoff = 5.90 cfs @ 12.66 hrs, Volume= 0.925 af, Depth= 3.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	2.820	73	
	2.820		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
46.9					**Direct Entry, SCS TR-55**

Subcatchment 11:



Hydrograph for Subcatchment 11:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.00	0.00
8.00	0.80	0.00	0.00
9.00	1.02	0.02	0.04
10.00	1.32	0.08	0.14
11.00	1.75	0.22	0.33
12.00	3.50	1.18	**1.19**
13.00	5.25	2.48	**4.13**
14.00	5.68	2.82	1.21
15.00	5.98	3.07	0.76
16.00	6.20	3.26	0.57
17.00	6.37	3.40	0.42
18.00	6.50	3.50	0.33
19.00	6.60	3.60	0.27
20.00	6.70	3.68	0.24
21.00	6.79	3.75	0.22
22.00	6.87	3.82	0.20
23.00	6.94	3.88	0.18
24.00	**7.00**	**3.94**	0.16
25.00	7.00	3.94	0.03
26.00	7.00	3.94	0.00
27.00	7.00	3.94	0.00
28.00	7.00	3.94	0.00
29.00	7.00	3.94	0.00
30.00	7.00	3.94	0.00
31.00	7.00	3.94	0.00
32.00	7.00	3.94	0.00
33.00	7.00	3.94	0.00
34.00	7.00	3.94	0.00
35.00	7.00	3.94	0.00
36.00	7.00	3.94	0.00
37.00	7.00	3.94	0.00
38.00	7.00	3.94	0.00
39.00	7.00	3.94	0.00
40.00	7.00	3.94	0.00
41.00	7.00	3.94	0.00
42.00	7.00	3.94	0.00
43.00	7.00	3.94	0.00
44.00	7.00	3.94	0.00
45.00	7.00	3.94	0.00
46.00	7.00	3.94	0.00
47.00	7.00	3.94	0.00
48.00	7.00	3.94	0.00
49.00	7.00	3.94	0.00
50.00	7.00	3.94	0.00
51.00	7.00	3.94	0.00
52.00	7.00	3.94	0.00
53.00	7.00	3.94	0.00
54.00	7.00	3.94	0.00
55.00	7.00	3.94	0.00
56.00	7.00	3.94	0.00
57.00	7.00	3.94	0.00
58.00	7.00	3.94	0.00
59.00	7.00	3.94	0.00
60.00	7.00	3.94	0.00
61.00	7.00	3.94	0.00
62.00	7.00	3.94	0.00
63.00	7.00	3.94	0.00
64.00	7.00	3.94	0.00
65.00	7.00	3.94	0.00
66.00	7.00	3.94	0.00
67.00	7.00	3.94	0.00
68.00	7.00	3.94	0.00
69.00	7.00	3.94	0.00
70.00	7.00	3.94	0.00
71.00	7.00	3.94	0.00
72.00	7.00	3.94	0.00

Summary for Subcatchment 12:

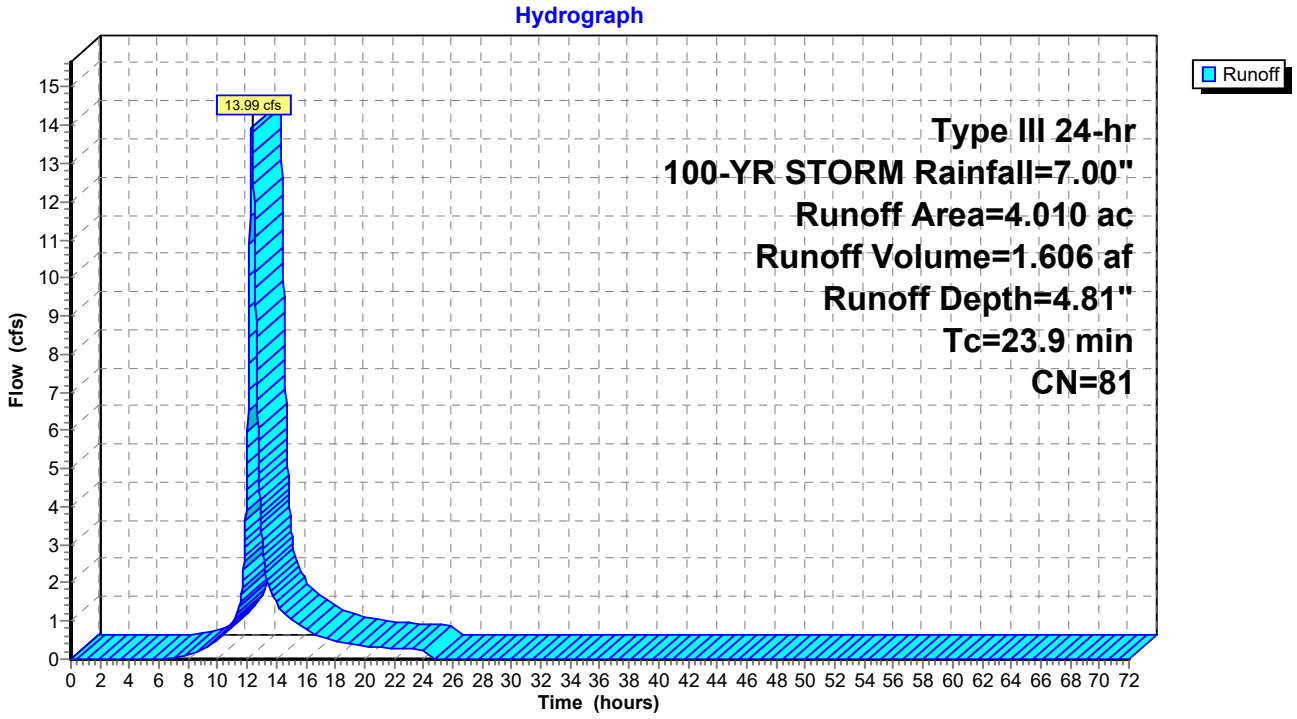
Runoff = 13.99 cfs @ 12.32 hrs, Volume= 1.606 af, Depth= 4.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	4.010	81	
	4.010		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.9					**Direct Entry, SCS TR-55**

Subcatchment 12:



Hydrograph for Subcatchment 12:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.01	0.05
8.00	0.80	0.04	0.13
9.00	1.02	0.10	0.28
10.00	1.32	0.23	0.53
11.00	1.75	0.45	0.98
12.00	3.50	1.71	**5.14**
13.00	5.25	3.21	**3.27**
14.00	5.68	3.59	1.48
15.00	5.98	3.87	1.07
16.00	6.20	4.07	0.78
17.00	6.37	4.22	0.59
18.00	6.50	4.34	0.46
19.00	6.60	4.44	0.39
20.00	6.70	4.53	0.35
21.00	6.79	4.61	0.32
22.00	6.87	4.68	0.29
23.00	6.94	4.75	0.26
24.00	**7.00**	**4.81**	0.23
25.00	7.00	4.81	0.00
26.00	7.00	4.81	0.00
27.00	7.00	4.81	0.00
28.00	7.00	4.81	0.00
29.00	7.00	4.81	0.00
30.00	7.00	4.81	0.00
31.00	7.00	4.81	0.00
32.00	7.00	4.81	0.00
33.00	7.00	4.81	0.00
34.00	7.00	4.81	0.00
35.00	7.00	4.81	0.00
36.00	7.00	4.81	0.00
37.00	7.00	4.81	0.00
38.00	7.00	4.81	0.00
39.00	7.00	4.81	0.00
40.00	7.00	4.81	0.00
41.00	7.00	4.81	0.00
42.00	7.00	4.81	0.00
43.00	7.00	4.81	0.00
44.00	7.00	4.81	0.00
45.00	7.00	4.81	0.00
46.00	7.00	4.81	0.00
47.00	7.00	4.81	0.00
48.00	7.00	4.81	0.00
49.00	7.00	4.81	0.00
50.00	7.00	4.81	0.00
51.00	7.00	4.81	0.00
52.00	7.00	4.81	0.00
53.00	7.00	4.81	0.00
54.00	7.00	4.81	0.00
55.00	7.00	4.81	0.00
56.00	7.00	4.81	0.00
57.00	7.00	4.81	0.00
58.00	7.00	4.81	0.00
59.00	7.00	4.81	0.00
60.00	7.00	4.81	0.00
61.00	7.00	4.81	0.00
62.00	7.00	4.81	0.00
63.00	7.00	4.81	0.00
64.00	7.00	4.81	0.00
65.00	7.00	4.81	0.00
66.00	7.00	4.81	0.00
67.00	7.00	4.81	0.00
68.00	7.00	4.81	0.00
69.00	7.00	4.81	0.00
70.00	7.00	4.81	0.00
71.00	7.00	4.81	0.00
72.00	7.00	4.81	0.00

Summary for Subcatchment 13:

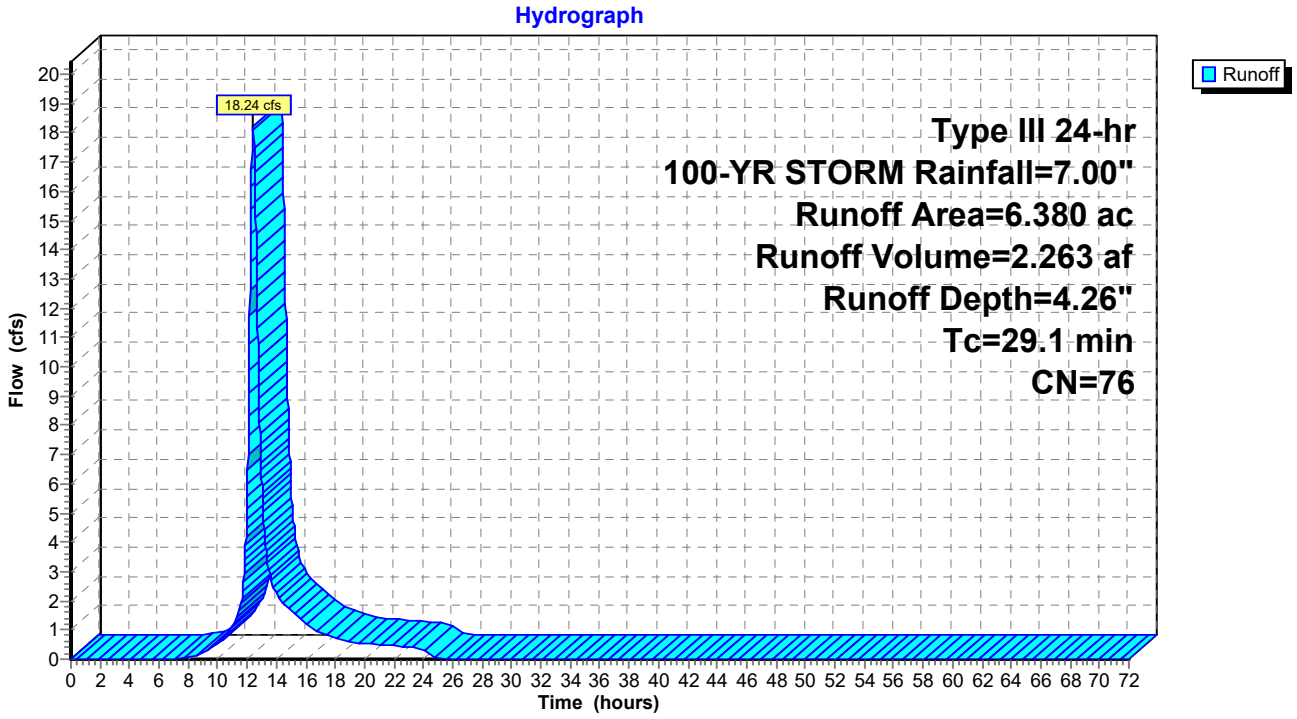
Runoff = 18.24 cfs @ 12.40 hrs, Volume= 2.263 af, Depth= 4.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	6.380	76	
	6.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.1					**Direct Entry, SCS TR-55**

Subcatchment 13:



Hydrograph for Subcatchment 13:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.00	0.00
8.00	0.80	0.01	0.06
9.00	1.02	0.04	0.23
10.00	1.32	0.12	0.54
11.00	1.75	0.29	1.12
12.00	3.50	1.37	**5.55**
13.00	5.25	2.74	**5.93**
14.00	5.68	3.10	2.29
15.00	5.98	3.36	1.65
16.00	6.20	3.56	1.22
17.00	6.37	3.70	0.91
18.00	6.50	3.81	0.72
19.00	6.60	3.91	0.60
20.00	6.70	3.99	0.54
21.00	6.79	4.07	0.49
22.00	6.87	4.14	0.45
23.00	6.94	4.20	0.41
24.00	**7.00**	**4.26**	0.36
25.00	7.00	4.26	0.01
26.00	7.00	4.26	0.00
27.00	7.00	4.26	0.00
28.00	7.00	4.26	0.00
29.00	7.00	4.26	0.00
30.00	7.00	4.26	0.00
31.00	7.00	4.26	0.00
32.00	7.00	4.26	0.00
33.00	7.00	4.26	0.00
34.00	7.00	4.26	0.00
35.00	7.00	4.26	0.00
36.00	7.00	4.26	0.00
37.00	7.00	4.26	0.00
38.00	7.00	4.26	0.00
39.00	7.00	4.26	0.00
40.00	7.00	4.26	0.00
41.00	7.00	4.26	0.00
42.00	7.00	4.26	0.00
43.00	7.00	4.26	0.00
44.00	7.00	4.26	0.00
45.00	7.00	4.26	0.00
46.00	7.00	4.26	0.00
47.00	7.00	4.26	0.00
48.00	7.00	4.26	0.00
49.00	7.00	4.26	0.00
50.00	7.00	4.26	0.00
51.00	7.00	4.26	0.00
52.00	7.00	4.26	0.00
53.00	7.00	4.26	0.00
54.00	7.00	4.26	0.00
55.00	7.00	4.26	0.00
56.00	7.00	4.26	0.00
57.00	7.00	4.26	0.00
58.00	7.00	4.26	0.00
59.00	7.00	4.26	0.00
60.00	7.00	4.26	0.00
61.00	7.00	4.26	0.00
62.00	7.00	4.26	0.00
63.00	7.00	4.26	0.00
64.00	7.00	4.26	0.00
65.00	7.00	4.26	0.00
66.00	7.00	4.26	0.00
67.00	7.00	4.26	0.00
68.00	7.00	4.26	0.00
69.00	7.00	4.26	0.00
70.00	7.00	4.26	0.00
71.00	7.00	4.26	0.00
72.00	7.00	4.26	0.00

Summary for Subcatchment 14:

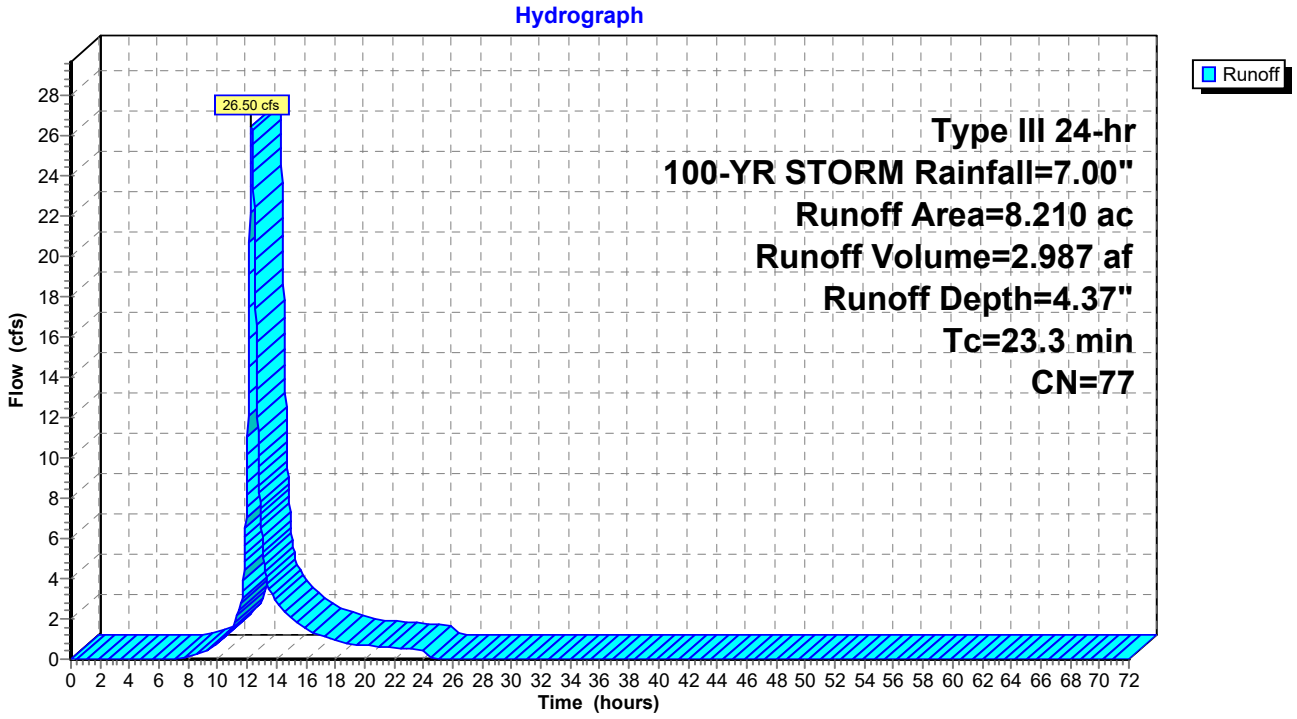
Runoff = 26.50 cfs @ 12.32 hrs, Volume= 2.987 af, Depth= 4.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	8.210	77	
	8.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.3					**Direct Entry, SCS TR-55**

Subcatchment 14:



Hydrograph for Subcatchment 14:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.00	0.00
8.00	0.80	0.01	0.12
9.00	1.02	0.05	0.37
10.00	1.32	0.14	0.81
11.00	1.75	0.32	1.62
12.00	3.50	1.43	**9.46**
13.00	5.25	2.83	**6.17**
14.00	5.68	3.20	2.87
15.00	5.98	3.46	2.10
16.00	6.20	3.66	1.53
17.00	6.37	3.80	1.17
18.00	6.50	3.92	0.91
19.00	6.60	4.01	0.77
20.00	6.70	4.10	0.70
21.00	6.79	4.17	0.64
22.00	6.87	4.24	0.58
23.00	6.94	4.31	0.52
24.00	**7.00**	**4.37**	0.46
25.00	7.00	4.37	0.00
26.00	7.00	4.37	0.00
27.00	7.00	4.37	0.00
28.00	7.00	4.37	0.00
29.00	7.00	4.37	0.00
30.00	7.00	4.37	0.00
31.00	7.00	4.37	0.00
32.00	7.00	4.37	0.00
33.00	7.00	4.37	0.00
34.00	7.00	4.37	0.00
35.00	7.00	4.37	0.00
36.00	7.00	4.37	0.00
37.00	7.00	4.37	0.00
38.00	7.00	4.37	0.00
39.00	7.00	4.37	0.00
40.00	7.00	4.37	0.00
41.00	7.00	4.37	0.00
42.00	7.00	4.37	0.00
43.00	7.00	4.37	0.00
44.00	7.00	4.37	0.00
45.00	7.00	4.37	0.00
46.00	7.00	4.37	0.00
47.00	7.00	4.37	0.00
48.00	7.00	4.37	0.00
49.00	7.00	4.37	0.00
50.00	7.00	4.37	0.00
51.00	7.00	4.37	0.00
52.00	7.00	4.37	0.00
53.00	7.00	4.37	0.00
54.00	7.00	4.37	0.00
55.00	7.00	4.37	0.00
56.00	7.00	4.37	0.00
57.00	7.00	4.37	0.00
58.00	7.00	4.37	0.00
59.00	7.00	4.37	0.00
60.00	7.00	4.37	0.00
61.00	7.00	4.37	0.00
62.00	7.00	4.37	0.00
63.00	7.00	4.37	0.00
64.00	7.00	4.37	0.00
65.00	7.00	4.37	0.00
66.00	7.00	4.37	0.00
67.00	7.00	4.37	0.00
68.00	7.00	4.37	0.00
69.00	7.00	4.37	0.00
70.00	7.00	4.37	0.00
71.00	7.00	4.37	0.00
72.00	7.00	4.37	0.00

Summary for Subcatchment 15:

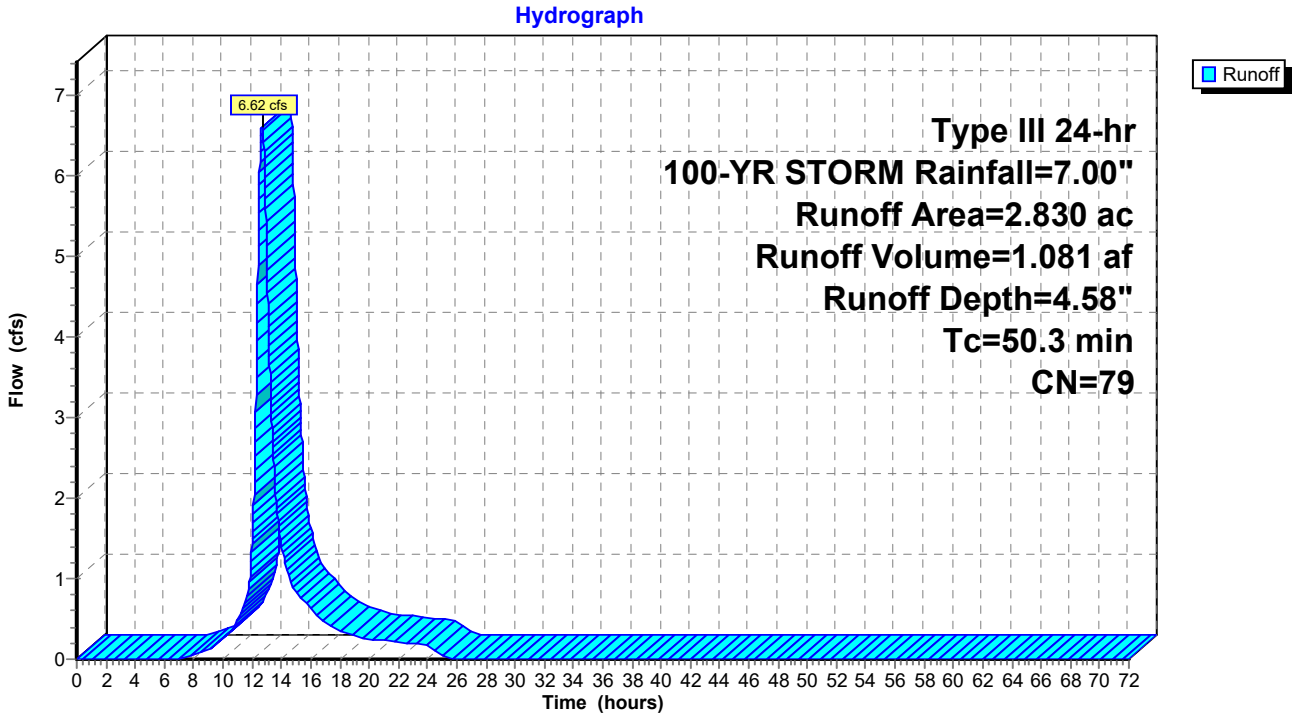
Runoff = 6.62 cfs @ 12.68 hrs, Volume= 1.081 af, Depth= 4.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Type III 24-hr 100-YR STORM Rainfall=7.00"

	Area (ac)	CN	Description
*	2.830	79	
	2.830		100.00% Pervious Area

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

Subcatchment 15:



Hydrograph for Subcatchment 15:

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.14	0.00	0.00
3.00	0.22	0.00	0.00
4.00	0.30	0.00	0.00
5.00	0.40	0.00	0.00
6.00	0.50	0.00	0.00
7.00	0.63	0.00	0.00
8.00	0.80	0.02	0.04
9.00	1.02	0.08	0.12
10.00	1.32	0.18	0.25
11.00	1.75	0.38	0.48
12.00	3.50	1.57	**1.43**
13.00	5.25	3.02	**4.98**
14.00	5.68	3.39	1.41
15.00	5.98	3.66	0.84
16.00	6.20	3.86	0.62
17.00	6.37	4.01	0.45
18.00	6.50	4.13	0.36
19.00	6.60	4.22	0.29
20.00	6.70	4.31	0.26
21.00	6.79	4.39	0.23
22.00	6.87	4.46	0.21
23.00	6.94	4.53	0.19
24.00	**7.00**	**4.58**	0.17
25.00	7.00	4.58	0.04
26.00	7.00	4.58	0.00
27.00	7.00	4.58	0.00
28.00	7.00	4.58	0.00
29.00	7.00	4.58	0.00
30.00	7.00	4.58	0.00
31.00	7.00	4.58	0.00
32.00	7.00	4.58	0.00
33.00	7.00	4.58	0.00
34.00	7.00	4.58	0.00
35.00	7.00	4.58	0.00
36.00	7.00	4.58	0.00
37.00	7.00	4.58	0.00
38.00	7.00	4.58	0.00
39.00	7.00	4.58	0.00
40.00	7.00	4.58	0.00
41.00	7.00	4.58	0.00
42.00	7.00	4.58	0.00
43.00	7.00	4.58	0.00
44.00	7.00	4.58	0.00
45.00	7.00	4.58	0.00
46.00	7.00	4.58	0.00
47.00	7.00	4.58	0.00
48.00	7.00	4.58	0.00
49.00	7.00	4.58	0.00
50.00	7.00	4.58	0.00
51.00	7.00	4.58	0.00
52.00	7.00	4.58	0.00
53.00	7.00	4.58	0.00
54.00	7.00	4.58	0.00
55.00	7.00	4.58	0.00
56.00	7.00	4.58	0.00
57.00	7.00	4.58	0.00
58.00	7.00	4.58	0.00
59.00	7.00	4.58	0.00
60.00	7.00	4.58	0.00
61.00	7.00	4.58	0.00
62.00	7.00	4.58	0.00
63.00	7.00	4.58	0.00
64.00	7.00	4.58	0.00
65.00	7.00	4.58	0.00
66.00	7.00	4.58	0.00
67.00	7.00	4.58	0.00
68.00	7.00	4.58	0.00
69.00	7.00	4.58	0.00
70.00	7.00	4.58	0.00
71.00	7.00	4.58	0.00
72.00	7.00	4.58	0.00

Summary for Pond 01-Pond:

Inflow Area = 2.560 ac, 0.00% Impervious, Inflow Depth = 5.03" for 100-YR STORM event
Inflow = 8.97 cfs @ 12.35 hrs, Volume= 1.073 af
Outflow = 7.56 cfs @ 12.51 hrs, Volume= 0.816 af, Atten= 16%, Lag= 9.6 min
Primary = 7.56 cfs @ 12.51 hrs, Volume= 0.816 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,114.47' @ 12.51 hrs Surf.Area= 0.130 ac Storage= 0.366 af

Plug-Flow detention time= 193.7 min calculated for 0.816 af (76% of inflow)
Center-of-Mass det. time= 110.2 min (929.2 - 819.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,110.00'	0.438 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

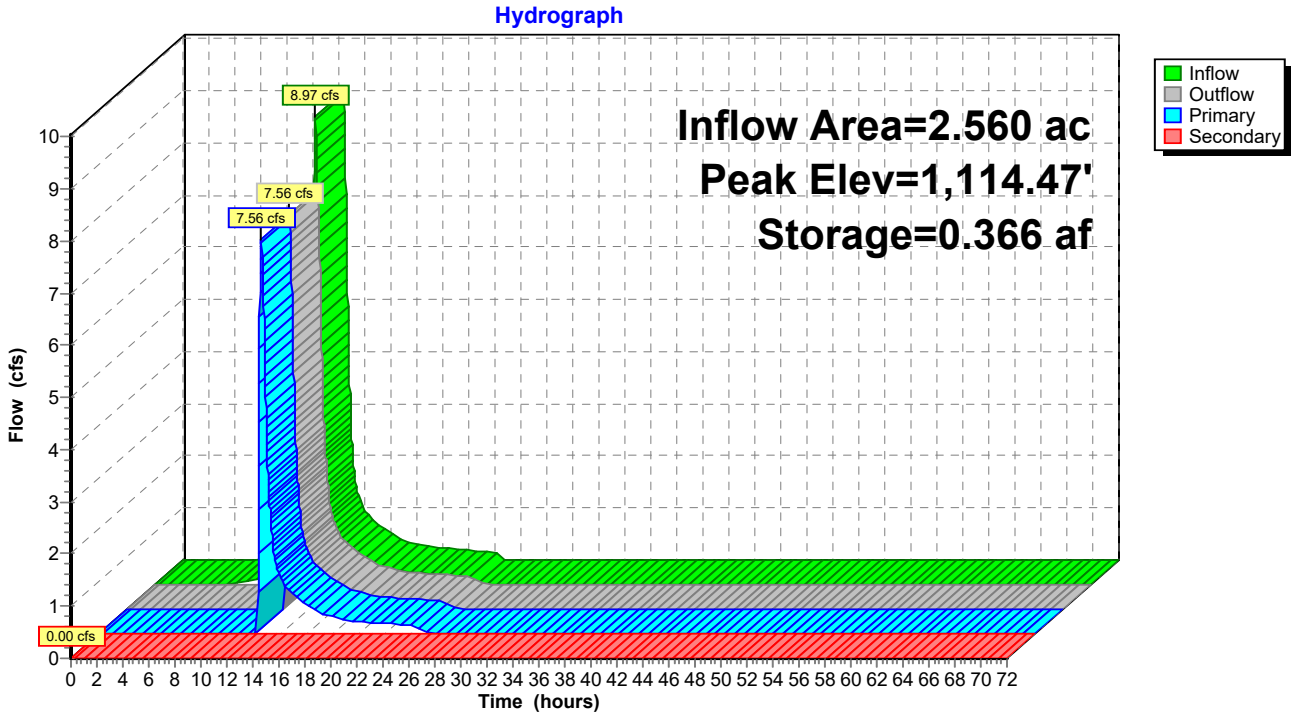
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,110.00	0.044	0.000	0.000
1,111.00	0.058	0.051	0.051
1,112.00	0.075	0.066	0.117
1,113.00	0.094	0.084	0.202
1,114.00	0.117	0.105	0.307
1,115.00	0.144	0.130	0.438

Device	Routing	Invert	Outlet Devices
#1	Primary	1,107.00'	**18.0" Round Culvert** L= 40.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,107.00' / 1,105.00' S= 0.0500 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,113.70'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,114.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,110.00'	**0.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=7.55 cfs @ 12.51 hrs HW=1,114.47' (Free Discharge)
└─**1=Culvert** (Passes 7.55 cfs of 22.06 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 7.54 cfs @ 3.42 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 10.17 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,110.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 01-Pond:


Hydrograph
Inflow Area=2.560 ac
Peak Elev=1,114.47'
Storage=0.366 af
8.97 cfs
7.56 cfs
7.56 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 01-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,110.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,110.00	0.00	0.00	0.00
4.00	0.00	0.000	1,110.00	0.00	0.00	0.00
6.00	0.01	0.000	1,110.01	0.00	0.00	0.00
8.00	0.11	0.009	1,110.20	0.00	0.00	0.00
10.00	0.38	0.046	1,110.91	0.00	0.00	0.00
12.00	**3.20**	**0.190**	**1,112.87**	**0.00**	**0.00**	0.00
14.00	**0.97**	**0.298**	**1,113.92**	**1.07**	**1.07**	0.00
16.00	0.51	0.290	1,113.84	0.56	0.56	0.00
18.00	0.30	0.285	1,113.80	0.33	0.33	0.00
20.00	0.23	0.282	1,113.78	0.24	0.24	0.00
22.00	0.19	0.281	1,113.77	0.20	0.20	0.00
24.00	0.15	0.280	1,113.76	0.16	0.16	0.00
26.00	0.00	0.274	1,113.70	0.01	0.01	0.00
28.00	0.00	0.273	1,113.69	0.00	0.00	0.00
30.00	0.00	0.272	1,113.69	0.00	0.00	0.00
32.00	0.00	0.271	1,113.68	0.00	0.00	0.00
34.00	0.00	0.271	1,113.67	0.00	0.00	0.00
36.00	0.00	0.270	1,113.67	0.00	0.00	0.00
38.00	0.00	0.269	1,113.66	0.00	0.00	0.00
40.00	0.00	0.268	1,113.65	0.00	0.00	0.00
42.00	0.00	0.268	1,113.65	0.00	0.00	0.00
44.00	0.00	0.267	1,113.64	0.00	0.00	0.00
46.00	0.00	0.266	1,113.63	0.00	0.00	0.00
48.00	0.00	0.265	1,113.63	0.00	0.00	0.00
50.00	0.00	0.265	1,113.62	0.00	0.00	0.00
52.00	0.00	0.264	1,113.61	0.00	0.00	0.00
54.00	0.00	0.263	1,113.61	0.00	0.00	0.00
56.00	0.00	0.262	1,113.60	0.00	0.00	0.00
58.00	0.00	0.262	1,113.59	0.00	0.00	0.00
60.00	0.00	0.261	1,113.59	0.00	0.00	0.00
62.00	0.00	0.260	1,113.58	0.00	0.00	0.00
64.00	0.00	0.259	1,113.57	0.00	0.00	0.00
66.00	0.00	0.259	1,113.56	0.00	0.00	0.00
68.00	0.00	0.258	1,113.56	0.00	0.00	0.00
70.00	0.00	0.257	1,113.55	0.00	0.00	0.00
72.00	0.00	0.257	1,113.54	0.00	0.00	0.00

Summary for Pond 02-Pond:

Inflow Area = 11.560 ac, 0.00% Impervious, Inflow Depth = 4.37" for 100-YR STORM event
Inflow = 35.04 cfs @ 12.37 hrs, Volume= 4.206 af
Outflow = 26.85 cfs @ 12.58 hrs, Volume= 3.288 af, Atten= 23%, Lag= 12.8 min
Primary = 26.85 cfs @ 12.58 hrs, Volume= 3.288 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,045.78' @ 12.58 hrs Surf.Area= 0.290 ac Storage= 1.419 af

Plug-Flow detention time= 183.0 min calculated for 3.287 af (78% of inflow)
Center-of-Mass det. time= 103.2 min (937.7 - 834.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,038.00'	1.483 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

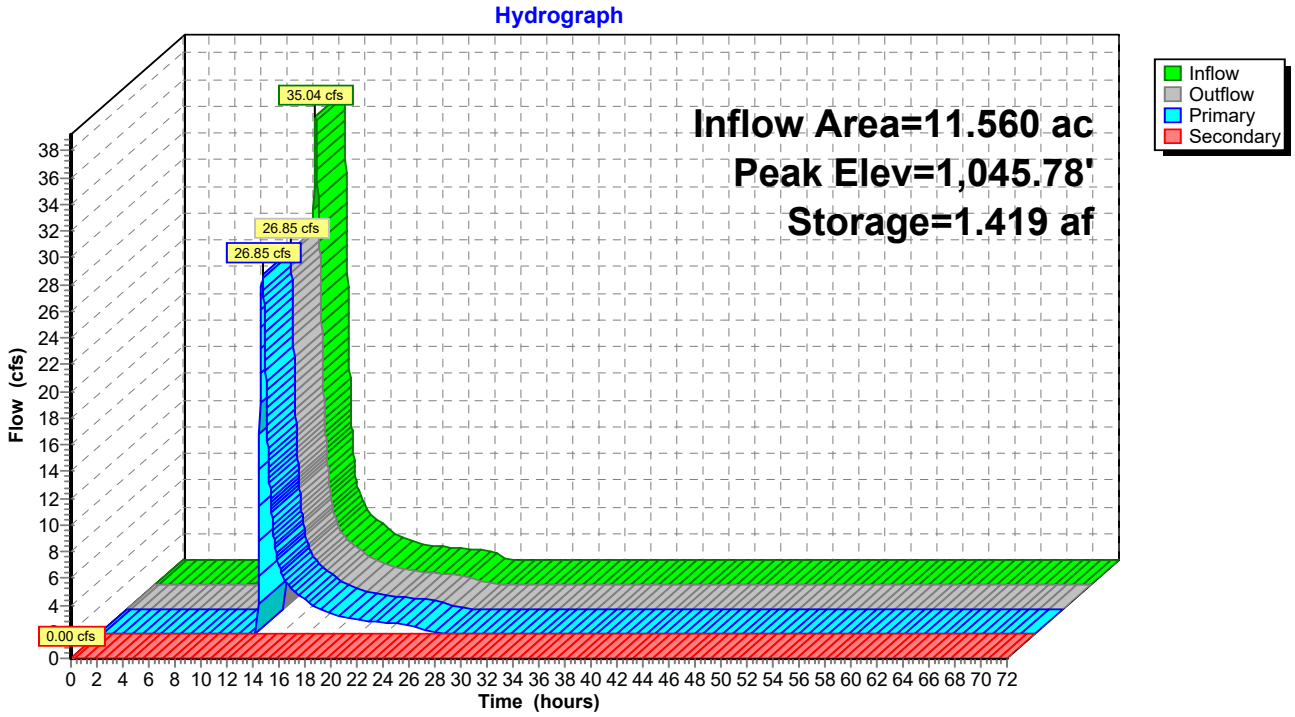
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,038.00	0.092	0.000	0.000
1,039.00	0.112	0.102	0.102
1,040.00	0.133	0.123	0.225
1,041.00	0.156	0.144	0.369
1,042.00	0.181	0.168	0.537
1,043.00	0.207	0.194	0.731
1,044.00	0.235	0.221	0.952
1,045.00	0.264	0.250	1.202
1,046.00	0.297	0.280	1.483

Device	Routing	Invert	Outlet Devices
#1	Primary	1,038.00'	**24.0" Round Culvert** L= 98.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,038.00' / 1,016.00' S= 0.2245 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,044.10'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,045.80'	**40.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,038.00'	**0.5" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=26.85 cfs @ 12.58 hrs HW=1,045.78' (Free Discharge)
└─**1=Culvert** (Passes 26.85 cfs of 39.39 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 26.83 cfs @ 5.99 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 13.41 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,038.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 02-Pond:


Hydrograph
Inflow Area=11.560 ac
Peak Elev=1,045.78'
Storage=1.419 af
35.04 cfs
26.85 cfs
26.85 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 02-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,038.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,038.00	0.00	0.00	0.00
4.00	0.00	0.000	1,038.00	0.00	0.00	0.00
6.00	0.00	0.000	1,038.00	0.00	0.00	0.00
8.00	0.16	0.005	1,038.06	0.00	0.00	0.00
10.00	1.10	0.094	1,038.93	0.01	0.01	0.00
12.00	**11.43**	**0.574**	**1,042.20**	**0.01**	**0.01**	0.00
14.00	**4.13**	**1.118**	**1,044.67**	**4.71**	**4.71**	0.00
16.00	2.20	1.068	1,044.48	2.43	2.43	0.00
18.00	1.31	1.040	1,044.37	1.44	1.44	0.00
20.00	0.99	1.028	1,044.32	1.04	1.04	0.00
22.00	0.82	1.021	1,044.29	0.86	0.86	0.00
24.00	0.66	1.015	1,044.26	0.69	0.69	0.00
26.00	0.00	0.983	1,044.13	0.09	0.09	0.00
28.00	0.00	0.976	1,044.10	0.02	0.02	0.00
30.00	0.00	0.974	1,044.09	0.02	0.02	0.00
32.00	0.00	0.971	1,044.08	0.02	0.02	0.00
34.00	0.00	0.968	1,044.07	0.02	0.02	0.00
36.00	0.00	0.965	1,044.06	0.02	0.02	0.00
38.00	0.00	0.963	1,044.04	0.02	0.02	0.00
40.00	0.00	0.960	1,044.03	0.02	0.02	0.00
42.00	0.00	0.958	1,044.02	0.02	0.02	0.00
44.00	0.00	0.955	1,044.01	0.02	0.02	0.00
46.00	0.00	0.952	1,044.00	0.02	0.02	0.00
48.00	0.00	0.950	1,043.99	0.02	0.02	0.00
50.00	0.00	0.947	1,043.98	0.02	0.02	0.00
52.00	0.00	0.944	1,043.96	0.02	0.02	0.00
54.00	0.00	0.942	1,043.95	0.02	0.02	0.00
56.00	0.00	0.939	1,043.94	0.02	0.02	0.00
58.00	0.00	0.936	1,043.93	0.02	0.02	0.00
60.00	0.00	0.934	1,043.92	0.02	0.02	0.00
62.00	0.00	0.931	1,043.91	0.02	0.02	0.00
64.00	0.00	0.928	1,043.90	0.02	0.02	0.00
66.00	0.00	0.926	1,043.89	0.02	0.02	0.00
68.00	0.00	0.923	1,043.87	0.02	0.02	0.00
70.00	0.00	0.921	1,043.86	0.02	0.02	0.00
72.00	0.00	0.918	1,043.85	0.02	0.02	0.00

Summary for Pond 03-Pond:

Inflow Area = 13.580 ac, 0.00% Impervious, Inflow Depth = 4.81" for 100-YR STORM event
Inflow = 44.38 cfs @ 12.38 hrs, Volume= 5.438 af
Outflow = 34.17 cfs @ 12.59 hrs, Volume= 5.272 af, Atten= 23%, Lag= 12.6 min
Primary = 34.17 cfs @ 12.59 hrs, Volume= 5.272 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,133.52' @ 12.59 hrs Surf.Area= 0.516 ac Storage= 1.163 af

Plug-Flow detention time= 82.4 min calculated for 5.270 af (97% of inflow)
Center-of-Mass det. time= 65.4 min (891.0 - 825.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,131.00'	1.978 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

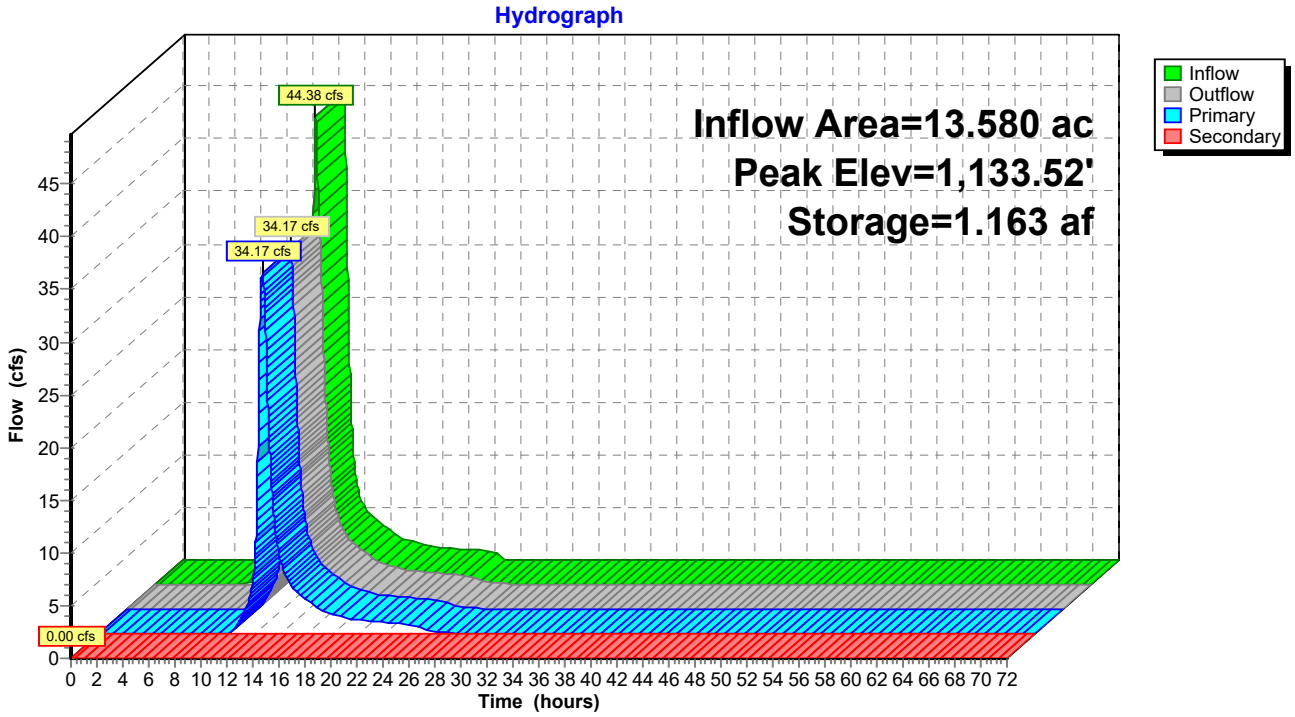
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,131.00	0.410	0.000	0.000
1,132.00	0.451	0.431	0.431
1,133.00	0.494	0.472	0.903
1,134.00	0.537	0.515	1.418
1,135.00	0.583	0.560	1.978

Device	Routing	Invert	Outlet Devices
#1	Primary	1,131.00'	**36.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,131.00' / 1,127.00' S= 0.0800 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Device 1	1,131.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,134.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,131.00'	**0.9" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=34.16 cfs @ 12.59 hrs HW=1,133.51' (Free Discharge)
└─**1=Culvert** (Inlet Controls 34.16 cfs @ 5.40 fps)
  ├─**2=Sharp-Crested Rectangular Weir** (Passes < 36.26 cfs potential flow)
  └─**4=Orifice/Grate** (Passes < 0.03 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,131.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 03-Pond:


Hydrograph
Inflow Area=13.580 ac
Peak Elev=1,133.52'
Storage=1.163 af
44.38 cfs
34.17 cfs
34.17 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 03-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,131.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,131.00	0.00	0.00	0.00
4.00	0.00	0.000	1,131.00	0.00	0.00	0.00
6.00	0.00	0.000	1,131.00	0.00	0.00	0.00
8.00	0.43	0.029	1,131.07	0.00	0.00	0.00
10.00	1.75	0.189	1,131.45	0.01	0.01	0.00
12.00	**14.89**	**0.542**	**1,132.24**	**7.09**	**7.09**	0.00
14.00	**5.13**	**0.532**	**1,132.22**	**6.78**	**6.78**	0.00
16.00	2.71	0.407	1,131.95	3.19	3.19	0.00
18.00	1.60	0.349	1,131.82	1.87	1.87	0.00
20.00	1.21	0.320	1,131.75	1.31	1.31	0.00
22.00	1.00	0.306	1,131.72	1.07	1.07	0.00
24.00	0.80	0.294	1,131.69	0.88	0.88	0.00
26.00	0.00	0.239	1,131.57	0.19	0.19	0.00
28.00	0.00	0.221	1,131.53	0.06	0.06	0.00
30.00	0.00	0.215	1,131.51	0.03	0.03	0.00
32.00	0.00	0.211	1,131.50	0.02	0.02	0.00
34.00	0.00	0.208	1,131.50	0.01	0.01	0.00
36.00	0.00	0.206	1,131.49	0.01	0.01	0.00
38.00	0.00	0.204	1,131.48	0.01	0.01	0.00
40.00	0.00	0.201	1,131.48	0.01	0.01	0.00
42.00	0.00	0.199	1,131.47	0.01	0.01	0.00
44.00	0.00	0.197	1,131.47	0.01	0.01	0.00
46.00	0.00	0.194	1,131.46	0.01	0.01	0.00
48.00	0.00	0.192	1,131.46	0.01	0.01	0.00
50.00	0.00	0.190	1,131.45	0.01	0.01	0.00
52.00	0.00	0.188	1,131.45	0.01	0.01	0.00
54.00	0.00	0.185	1,131.44	0.01	0.01	0.00
56.00	0.00	0.183	1,131.44	0.01	0.01	0.00
58.00	0.00	0.181	1,131.43	0.01	0.01	0.00
60.00	0.00	0.179	1,131.43	0.01	0.01	0.00
62.00	0.00	0.176	1,131.42	0.01	0.01	0.00
64.00	0.00	0.174	1,131.42	0.01	0.01	0.00
66.00	0.00	0.172	1,131.41	0.01	0.01	0.00
68.00	0.00	0.170	1,131.41	0.01	0.01	0.00
70.00	0.00	0.168	1,131.40	0.01	0.01	0.00
72.00	0.00	0.166	1,131.40	0.01	0.01	0.00

Summary for Pond 04-Pond:

04-Pond

Inflow Area =	1.980 ac,	0.00% Impervious,	Inflow Depth =	4.37"	for 100-YR STORM event
Inflow =	5.56 cfs @	12.44 hrs,	Volume=	0.720 af	
Outflow =	4.62 cfs @	12.63 hrs,	Volume=	0.534 af,	Atten= 17%, Lag= 11.4 min
Primary =	4.62 cfs @	12.63 hrs,	Volume=	0.534 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,109.40' @ 12.63 hrs Surf.Area= 0.093 ac Storage= 0.244 af

Plug-Flow detention time= 183.3 min calculated for 0.534 af (74% of inflow)
Center-of-Mass det. time= 95.0 min (934.1 - 839.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,105.00'	0.303 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

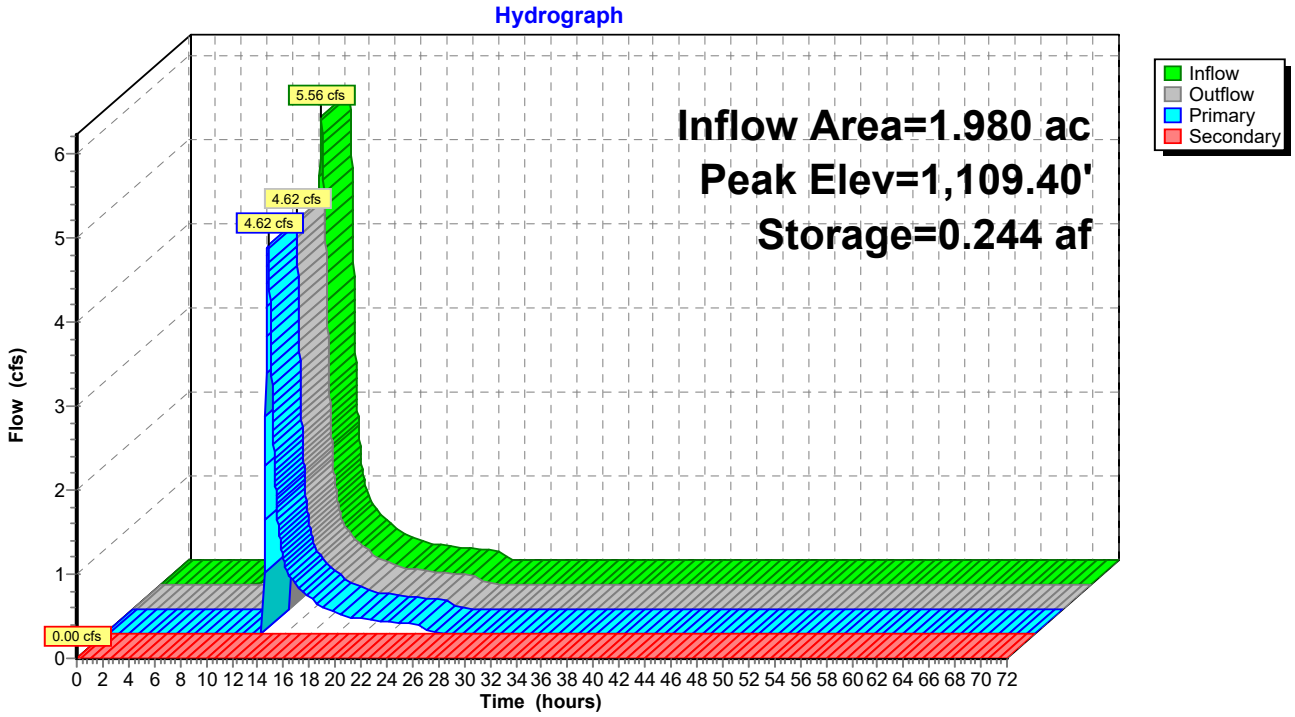
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,105.00	0.023	0.000	0.000
1,106.00	0.036	0.029	0.029
1,107.00	0.051	0.044	0.073
1,108.00	0.067	0.059	0.132
1,109.00	0.085	0.076	0.208
1,110.00	0.105	0.095	0.303

Device	Routing	Invert	Outlet Devices
#1	Primary	1,105.00'	**24.0" Round Culvert** L= 35.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,105.00' / 1,104.50' S= 0.0143 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,108.83'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,109.40'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,105.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=4.61 cfs @ 12.63 hrs HW=1,109.40' (Free Discharge)
└─**1=Culvert** (Passes 4.61 cfs of 27.89 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 4.61 cfs @ 2.81 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 10.09 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,105.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 04-Pond:


Hydrograph
Inflow Area=1.980 ac
Peak Elev=1,109.40'
Storage=0.244 af
5.56 cfs
4.62 cfs
4.62 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 04-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,105.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,105.00	0.00	0.00	0.00
4.00	0.00	0.000	1,105.00	0.00	0.00	0.00
6.00	0.00	0.000	1,105.00	0.00	0.00	0.00
8.00	0.02	0.001	1,105.03	0.00	0.00	0.00
10.00	0.18	0.015	1,105.57	0.00	0.00	0.00
12.00	**1.61**	**0.090**	**1,107.32**	**0.00**	**0.00**	0.00
14.00	**0.74**	**0.209**	**1,109.01**	**0.80**	**0.80**	0.00
16.00	0.39	0.204	1,108.95	0.41	0.41	0.00
18.00	0.23	0.201	1,108.91	0.24	0.24	0.00
20.00	0.17	0.199	1,108.90	0.18	0.18	0.00
22.00	0.14	0.199	1,108.89	0.15	0.15	0.00
24.00	0.11	0.198	1,108.88	0.12	0.12	0.00
26.00	0.00	0.194	1,108.83	0.01	0.01	0.00
28.00	0.00	0.194	1,108.83	0.00	0.00	0.00
30.00	0.00	0.193	1,108.82	0.00	0.00	0.00
32.00	0.00	0.193	1,108.82	0.00	0.00	0.00
34.00	0.00	0.193	1,108.82	0.00	0.00	0.00
36.00	0.00	0.192	1,108.81	0.00	0.00	0.00
38.00	0.00	0.192	1,108.81	0.00	0.00	0.00
40.00	0.00	0.192	1,108.80	0.00	0.00	0.00
42.00	0.00	0.191	1,108.80	0.00	0.00	0.00
44.00	0.00	0.191	1,108.79	0.00	0.00	0.00
46.00	0.00	0.191	1,108.79	0.00	0.00	0.00
48.00	0.00	0.190	1,108.79	0.00	0.00	0.00
50.00	0.00	0.190	1,108.78	0.00	0.00	0.00
52.00	0.00	0.190	1,108.78	0.00	0.00	0.00
54.00	0.00	0.189	1,108.77	0.00	0.00	0.00
56.00	0.00	0.189	1,108.77	0.00	0.00	0.00
58.00	0.00	0.189	1,108.77	0.00	0.00	0.00
60.00	0.00	0.188	1,108.76	0.00	0.00	0.00
62.00	0.00	0.188	1,108.76	0.00	0.00	0.00
64.00	0.00	0.188	1,108.75	0.00	0.00	0.00
66.00	0.00	0.187	1,108.75	0.00	0.00	0.00
68.00	0.00	0.187	1,108.74	0.00	0.00	0.00
70.00	0.00	0.187	1,108.74	0.00	0.00	0.00
72.00	0.00	0.186	1,108.74	0.00	0.00	0.00

Summary for Pond 05-Pond:

Inflow Area = 4.310 ac, 0.00% Impervious, Inflow Depth = 4.69" for 100-YR STORM event
Inflow = 15.92 cfs @ 12.27 hrs, Volume= 1.686 af
Outflow = 10.71 cfs @ 12.49 hrs, Volume= 1.369 af, Atten= 33%, Lag= 13.4 min
Primary = 10.71 cfs @ 12.49 hrs, Volume= 1.369 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,140.58' @ 12.49 hrs Surf.Area= 0.185 ac Storage= 0.591 af

Plug-Flow detention time= 164.5 min calculated for 1.369 af (81% of inflow)
Center-of-Mass det. time= 90.9 min (911.8 - 820.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,136.00'	0.881 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

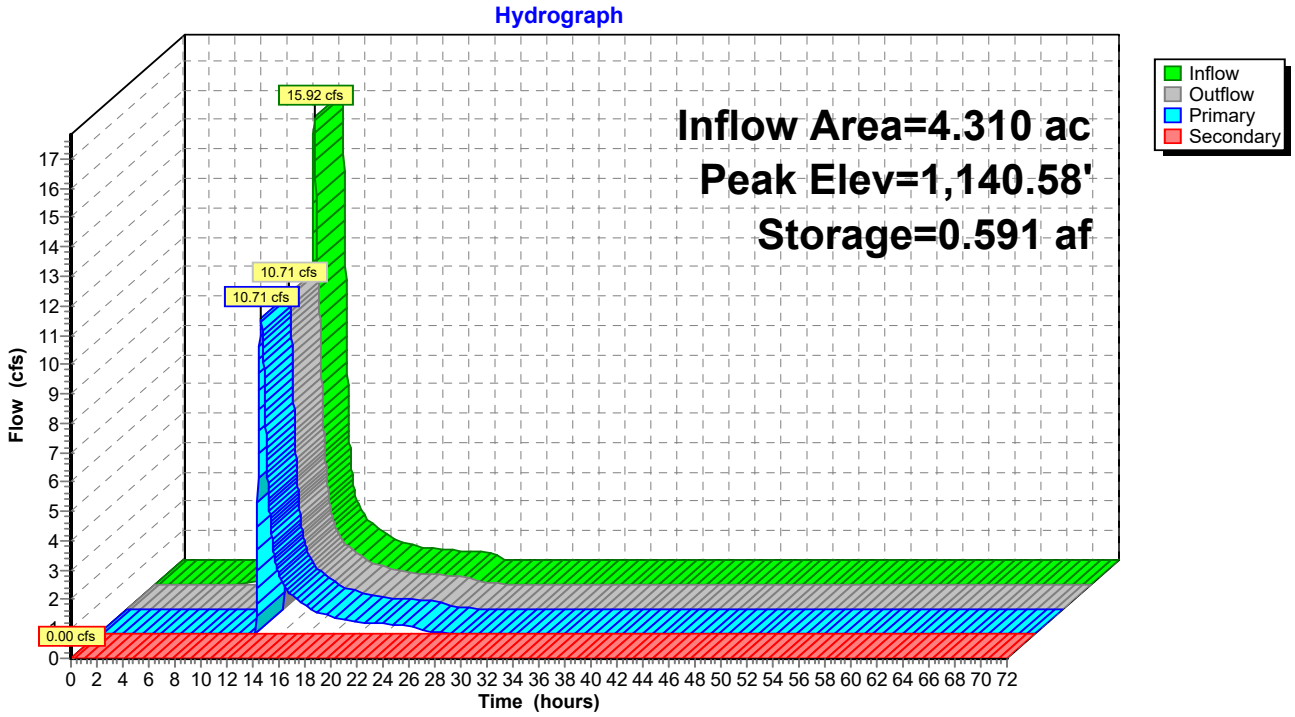
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,136.00	0.078	0.000	0.000
1,137.00	0.099	0.088	0.088
1,138.00	0.121	0.110	0.198
1,139.00	0.144	0.133	0.331
1,140.00	0.169	0.157	0.487
1,141.00	0.196	0.183	0.670
1,142.00	0.225	0.211	0.881

Device	Routing	Invert	Outlet Devices
#1	Primary	1,136.00'	**24.0" Round Culvert** L= 50.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,136.00' / 1,131.00' S= 0.1000 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf
#2	Device 1	1,139.00'	**1.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,141.50'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,136.00'	**0.3" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=10.71 cfs @ 12.49 hrs HW=1,140.58' (Free Discharge)
└─**1=Culvert** (Passes 10.71 cfs of 28.64 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 10.70 cfs @ 5.71 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 10.30 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,136.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 05-Pond:


Hydrograph
Inflow Area=4.310 ac
Peak Elev=1,140.58'
Storage=0.591 af
15.92 cfs
10.71 cfs
10.71 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 05-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,136.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,136.00	0.00	0.00	0.00
4.00	0.00	0.000	1,136.00	0.00	0.00	0.00
6.00	0.00	0.000	1,136.00	0.00	0.00	0.00
8.00	0.13	0.008	1,136.10	0.00	0.00	0.00
10.00	0.55	0.058	1,136.68	0.00	0.00	0.00
12.00	**6.36**	**0.301**	**1,138.78**	**0.00**	**0.00**	0.00
14.00	**1.53**	**0.407**	**1,139.51**	**1.86**	**1.86**	0.00
16.00	0.81	0.379	1,139.32	0.94	0.94	0.00
18.00	0.49	0.365	1,139.23	0.56	0.56	0.00
20.00	0.38	0.358	1,139.18	0.40	0.40	0.00
22.00	0.31	0.354	1,139.16	0.33	0.33	0.00
24.00	0.25	0.351	1,139.14	0.27	0.27	0.00
26.00	0.00	0.336	1,139.03	0.05	0.05	0.00
28.00	0.00	0.332	1,139.01	0.01	0.01	0.00
30.00	0.00	0.331	1,139.00	0.00	0.00	0.00
32.00	0.00	0.330	1,138.99	0.00	0.00	0.00
34.00	0.00	0.329	1,138.99	0.00	0.00	0.00
36.00	0.00	0.329	1,138.98	0.00	0.00	0.00
38.00	0.00	0.328	1,138.98	0.00	0.00	0.00
40.00	0.00	0.327	1,138.98	0.00	0.00	0.00
42.00	0.00	0.327	1,138.97	0.00	0.00	0.00
44.00	0.00	0.326	1,138.97	0.00	0.00	0.00
46.00	0.00	0.325	1,138.96	0.00	0.00	0.00
48.00	0.00	0.325	1,138.96	0.00	0.00	0.00
50.00	0.00	0.324	1,138.95	0.00	0.00	0.00
52.00	0.00	0.323	1,138.95	0.00	0.00	0.00
54.00	0.00	0.323	1,138.94	0.00	0.00	0.00
56.00	0.00	0.322	1,138.94	0.00	0.00	0.00
58.00	0.00	0.321	1,138.93	0.00	0.00	0.00
60.00	0.00	0.321	1,138.93	0.00	0.00	0.00
62.00	0.00	0.320	1,138.92	0.00	0.00	0.00
64.00	0.00	0.319	1,138.92	0.00	0.00	0.00
66.00	0.00	0.319	1,138.91	0.00	0.00	0.00
68.00	0.00	0.318	1,138.91	0.00	0.00	0.00
70.00	0.00	0.317	1,138.91	0.00	0.00	0.00
72.00	0.00	0.317	1,138.90	0.00	0.00	0.00

Summary for Pond 07-Pond:

Inflow Area = 13.810 ac, 0.00% Impervious, Inflow Depth = 3.83" for 100-YR STORM event
Inflow = 32.18 cfs @ 12.51 hrs, Volume= 4.407 af
Outflow = 24.58 cfs @ 12.75 hrs, Volume= 3.566 af, Atten= 24%, Lag= 14.6 min
Primary = 24.58 cfs @ 12.75 hrs, Volume= 3.566 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,135.60' @ 12.75 hrs Surf.Area= 0.327 ac Storage= 1.390 af

Plug-Flow detention time= 178.4 min calculated for 3.566 af (81% of inflow)
Center-of-Mass det. time= 102.6 min (956.9 - 854.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,130.00'	1.525 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

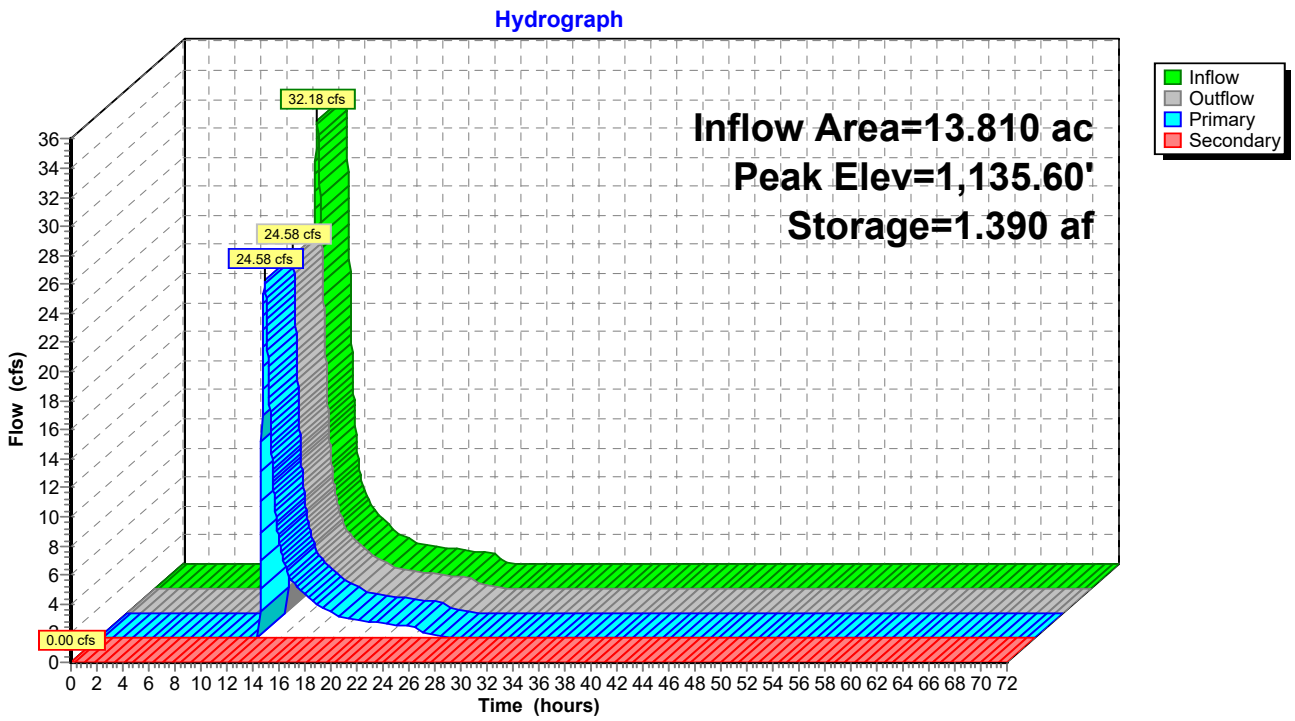
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,130.00	0.176	0.000	0.000
1,131.00	0.200	0.188	0.188
1,132.00	0.226	0.213	0.401
1,133.00	0.252	0.239	0.640
1,134.00	0.280	0.266	0.906
1,135.00	0.309	0.294	1.200
1,136.00	0.340	0.325	1.525

Device	Routing	Invert	Outlet Devices
#1	Primary	1,130.00'	**24.0" Round Culvert X 2.00** L= 380.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,130.00' / 1,069.00' S= 0.1605 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,134.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,135.75'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,130.00'	**0.6" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=24.56 cfs @ 12.75 hrs HW=1,135.59' (Free Discharge)
└─**1=Culvert** (Passes 24.56 cfs of 64.85 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 24.54 cfs @ 5.74 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 11.36 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,130.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 07-Pond:


Hydrograph
Inflow Area=13.810 ac
Peak Elev=1,135.60'
Storage=1.390 af
32.18 cfs
24.58 cfs
24.58 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 07-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,130.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,130.00	0.00	0.00	0.00
4.00	0.00	0.000	1,130.00	0.00	0.00	0.00
6.00	0.00	0.000	1,130.00	0.00	0.00	0.00
8.00	0.00	0.000	1,130.00	0.00	0.00	0.00
10.00	0.70	0.038	1,130.21	0.00	0.00	0.00
12.00	**7.78**	**0.394**	**1,131.97**	**0.01**	**0.01**	0.00
14.00	**4.97**	**1.101**	**1,134.67**	**6.04**	**6.04**	0.00
16.00	2.59	1.026	1,134.42	2.88	2.88	0.00
18.00	1.53	0.990	1,134.30	1.69	1.69	0.00
20.00	1.13	0.973	1,134.24	1.19	1.19	0.00
22.00	0.94	0.965	1,134.21	0.98	0.98	0.00
24.00	0.76	0.957	1,134.18	0.81	0.81	0.00
26.00	0.00	0.919	1,134.05	0.13	0.13	0.00
28.00	0.00	0.909	1,134.01	0.03	0.03	0.00
30.00	0.00	0.905	1,134.00	0.02	0.02	0.00
32.00	0.00	0.902	1,133.98	0.02	0.02	0.00
34.00	0.00	0.899	1,133.97	0.02	0.02	0.00
36.00	0.00	0.896	1,133.96	0.02	0.02	0.00
38.00	0.00	0.892	1,133.95	0.02	0.02	0.00
40.00	0.00	0.889	1,133.94	0.02	0.02	0.00
42.00	0.00	0.886	1,133.93	0.02	0.02	0.00
44.00	0.00	0.883	1,133.92	0.02	0.02	0.00
46.00	0.00	0.880	1,133.91	0.02	0.02	0.00
48.00	0.00	0.877	1,133.90	0.02	0.02	0.00
50.00	0.00	0.874	1,133.88	0.02	0.02	0.00
52.00	0.00	0.871	1,133.87	0.02	0.02	0.00
54.00	0.00	0.868	1,133.86	0.02	0.02	0.00
56.00	0.00	0.865	1,133.85	0.02	0.02	0.00
58.00	0.00	0.862	1,133.84	0.02	0.02	0.00
60.00	0.00	0.859	1,133.83	0.02	0.02	0.00
62.00	0.00	0.856	1,133.82	0.02	0.02	0.00
64.00	0.00	0.853	1,133.81	0.02	0.02	0.00
66.00	0.00	0.850	1,133.80	0.02	0.02	0.00
68.00	0.00	0.846	1,133.79	0.02	0.02	0.00
70.00	0.00	0.843	1,133.77	0.02	0.02	0.00
72.00	0.00	0.840	1,133.76	0.02	0.02	0.00

Summary for Pond 08/10-Pond:

Inflow Area = 34.060 ac, 0.00% Impervious, Inflow Depth = 4.97" for 100-YR STORM event
Inflow = 108.19 cfs @ 12.38 hrs, Volume= 14.114 af
Outflow = 88.34 cfs @ 12.59 hrs, Volume= 12.832 af, Atten= 18%, Lag= 12.3 min
Primary = 88.34 cfs @ 12.59 hrs, Volume= 12.832 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,125.42' @ 12.59 hrs Surf.Area= 1.063 ac Storage= 3.678 af

Plug-Flow detention time= 127.0 min calculated for 12.832 af (91% of inflow)
Center-of-Mass det. time= 81.7 min (905.4 - 823.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,121.00'	5.497 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

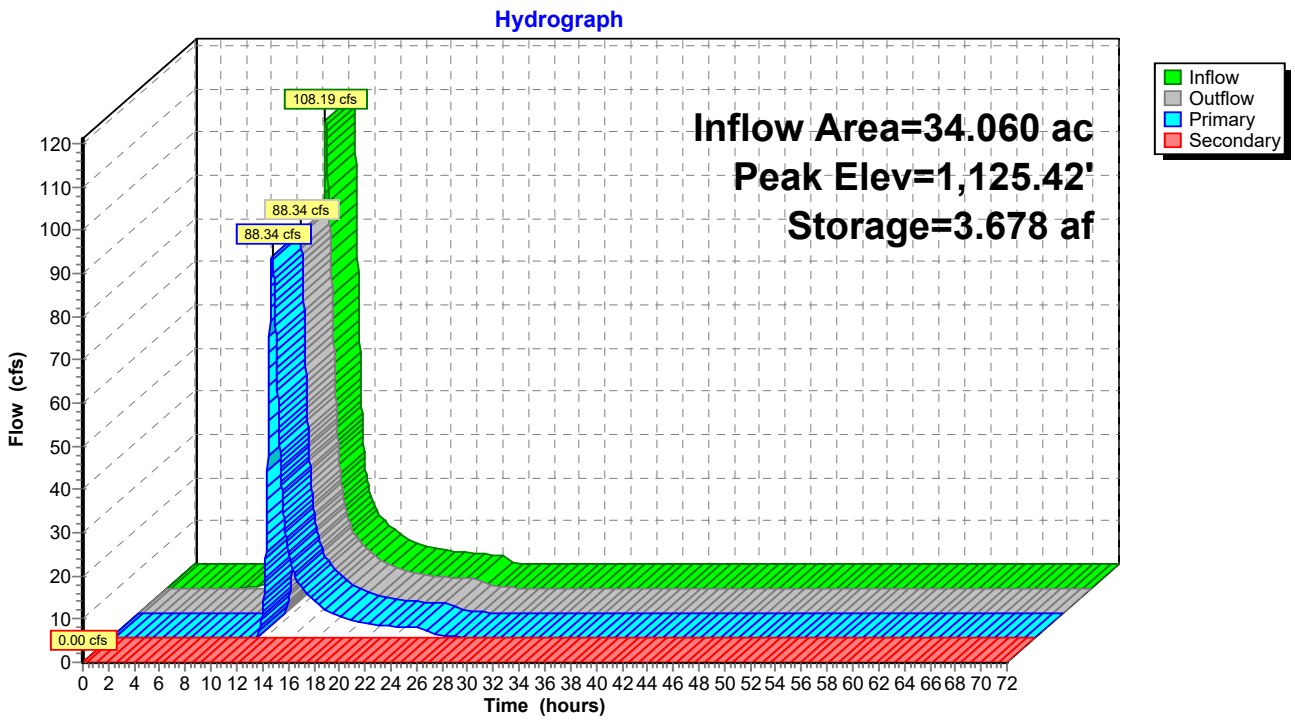
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,121.00	0.609	0.000	0.000
1,122.00	0.709	0.659	0.659
1,123.00	0.810	0.759	1.418
1,124.00	0.913	0.862	2.280
1,125.00	1.018	0.965	3.246
1,126.00	1.125	1.071	4.317
1,127.00	1.234	1.180	5.497

Device	Routing	Invert	Outlet Devices
#1	Primary	1,121.70'	**54.0" Round Culvert** L= 88.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,121.70' / 1,105.00' S= 0.1898 '/' Cc= 0.900 n= 0.012, Flow Area= 15.90 sf
#2	Device 1	1,123.00'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,125.80'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,121.70'	**1.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=88.30 cfs @ 12.59 hrs HW=1,125.42' (Free Discharge)
└─**1=Culvert** (Passes 88.30 cfs of 92.18 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 88.22 cfs @ 8.09 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.07 cfs @ 9.22 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,121.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 08/10-Pond:



Hydrograph for Pond 08/10-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,121.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,121.00	0.00	0.00	0.00
4.00	0.00	0.000	1,121.00	0.00	0.00	0.00
6.00	0.12	0.002	1,121.00	0.00	0.00	0.00
8.00	1.31	0.105	1,121.17	0.00	0.00	0.00
10.00	4.79	0.563	1,121.86	0.01	0.01	0.00
12.00	**37.40**	**2.110**	**1,123.81**	**13.94**	**13.94**	0.00
14.00	**13.36**	**2.225**	**1,123.94**	**17.69**	**17.69**	0.00
16.00	6.97	1.907	1,123.58	8.15	8.15	0.00
18.00	4.10	1.762	1,123.41	4.75	4.75	0.00
20.00	3.08	1.690	1,123.33	3.34	3.34	0.00
22.00	2.54	1.656	1,123.29	2.72	2.72	0.00
24.00	2.04	1.626	1,123.25	2.23	2.23	0.00
26.00	0.00	1.490	1,123.09	0.49	0.49	0.00
28.00	0.00	1.445	1,123.03	0.15	0.15	0.00
30.00	0.00	1.427	1,123.01	0.08	0.08	0.00
32.00	0.00	1.418	1,123.00	0.04	0.04	0.00
34.00	0.00	1.411	1,122.99	0.04	0.04	0.00
36.00	0.00	1.404	1,122.98	0.04	0.04	0.00
38.00	0.00	1.397	1,122.97	0.04	0.04	0.00
40.00	0.00	1.390	1,122.96	0.04	0.04	0.00
42.00	0.00	1.383	1,122.96	0.04	0.04	0.00
44.00	0.00	1.376	1,122.95	0.04	0.04	0.00
46.00	0.00	1.369	1,122.94	0.04	0.04	0.00
48.00	0.00	1.363	1,122.93	0.04	0.04	0.00
50.00	0.00	1.356	1,122.92	0.04	0.04	0.00
52.00	0.00	1.349	1,122.91	0.04	0.04	0.00
54.00	0.00	1.342	1,122.91	0.04	0.04	0.00
56.00	0.00	1.336	1,122.90	0.04	0.04	0.00
58.00	0.00	1.329	1,122.89	0.04	0.04	0.00
60.00	0.00	1.322	1,122.88	0.04	0.04	0.00
62.00	0.00	1.316	1,122.87	0.04	0.04	0.00
64.00	0.00	1.309	1,122.86	0.04	0.04	0.00
66.00	0.00	1.302	1,122.86	0.04	0.04	0.00
68.00	0.00	1.296	1,122.85	0.04	0.04	0.00
70.00	0.00	1.289	1,122.84	0.04	0.04	0.00
72.00	0.00	1.283	1,122.83	0.04	0.04	0.00

Summary for Pond 09-Pond:

Inflow Area = 16.030 ac, 0.00% Impervious, Inflow Depth = 4.69" for 100-YR STORM event
Inflow = 30.93 cfs @ 12.95 hrs, Volume= 6.271 af
Outflow = 23.53 cfs @ 13.38 hrs, Volume= 4.961 af, Atten= 24%, Lag= 26.1 min
Primary = 23.53 cfs @ 13.38 hrs, Volume= 4.961 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,150.80' @ 13.38 hrs Surf.Area= 0.589 ac Storage= 2.198 af

Plug-Flow detention time= 192.2 min calculated for 4.961 af (79% of inflow)
Center-of-Mass det. time= 113.5 min (982.6 - 869.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,145.00'	3.685 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

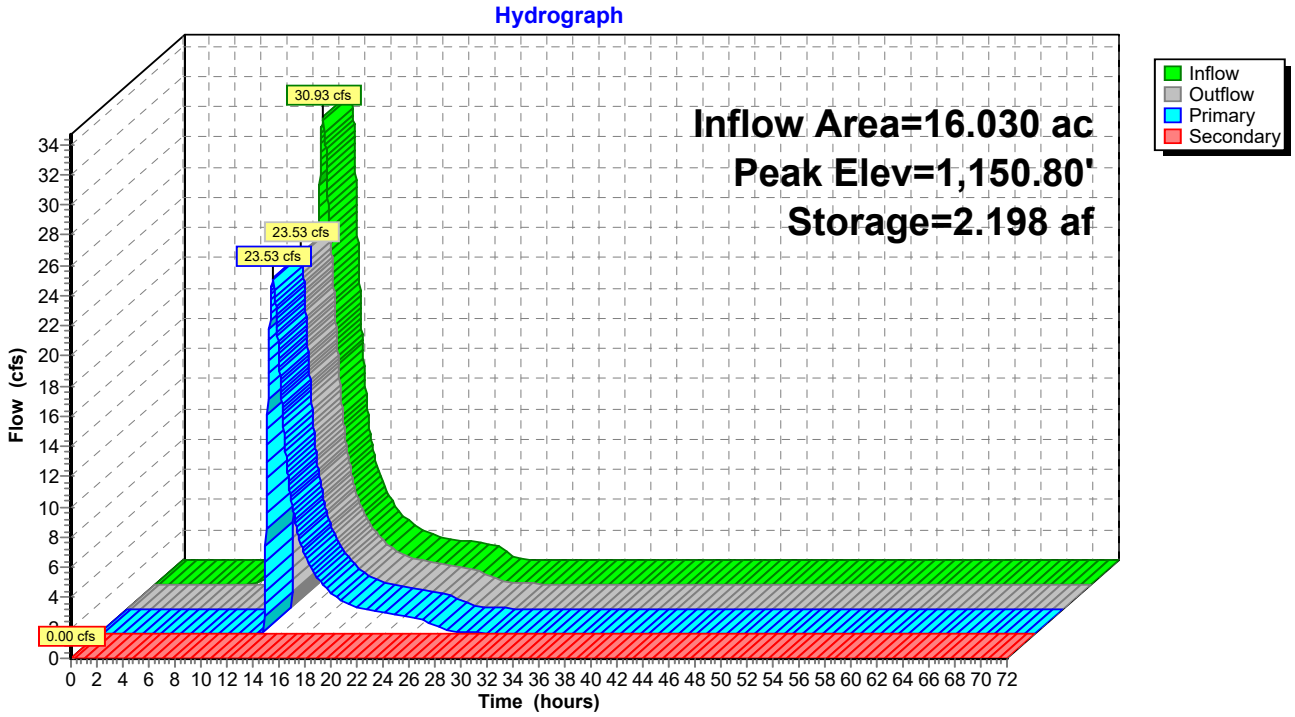
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,145.00	0.180	0.000	0.000
1,146.00	0.246	0.213	0.213
1,147.00	0.313	0.279	0.493
1,148.00	0.382	0.347	0.840
1,149.00	0.454	0.418	1.258
1,150.00	0.528	0.491	1.749
1,151.00	0.604	0.566	2.315
1,152.00	0.683	0.643	2.958
1,153.00	0.770	0.726	3.685

Device	Routing	Invert	Outlet Devices
#1	Primary	1,145.00'	**24.0" Round Culvert** L= 112.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,145.00' / 1,130.00' S= 0.1339 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,149.25'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,152.00'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,145.00'	**0.6" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=23.52 cfs @ 13.38 hrs HW=1,150.80' (Free Discharge)
└─**1=Culvert** (Passes 23.52 cfs of 33.15 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 23.50 cfs @ 5.62 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.02 cfs @ 11.57 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,145.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 09-Pond:


Hydrograph
Inflow Area=16.030 ac
Peak Elev=1,150.80'
Storage=2.198 af
30.93 cfs
23.53 cfs
23.53 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 09-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,145.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,145.00	0.00	0.00	0.00
4.00	0.00	0.000	1,145.00	0.00	0.00	0.00
6.00	0.00	0.000	1,145.00	0.00	0.00	0.00
8.00	0.22	0.010	1,145.05	0.00	0.00	0.00
10.00	1.29	0.116	1,145.58	0.01	0.01	0.00
12.00	**5.67**	**0.556**	**1,147.20**	**0.01**	**0.01**	0.00
14.00	**12.01**	**2.018**	**1,150.49**	**16.26**	**16.26**	0.00
16.00	4.04	1.666	1,149.84	4.94	4.94	0.00
18.00	2.24	1.566	1,149.65	2.63	2.63	0.00
20.00	1.53	1.518	1,149.55	1.71	1.71	0.00
22.00	1.25	1.497	1,149.50	1.35	1.35	0.00
24.00	1.02	1.482	1,149.47	1.11	1.11	0.00
26.00	0.06	1.430	1,149.37	0.44	0.44	0.00
28.00	0.00	1.393	1,149.29	0.13	0.13	0.00
30.00	0.00	1.380	1,149.26	0.05	0.05	0.00
32.00	0.00	1.374	1,149.25	0.02	0.02	0.00
34.00	0.00	1.371	1,149.24	0.02	0.02	0.00
36.00	0.00	1.368	1,149.24	0.02	0.02	0.00
38.00	0.00	1.364	1,149.23	0.02	0.02	0.00
40.00	0.00	1.361	1,149.22	0.02	0.02	0.00
42.00	0.00	1.358	1,149.22	0.02	0.02	0.00
44.00	0.00	1.355	1,149.21	0.02	0.02	0.00
46.00	0.00	1.352	1,149.20	0.02	0.02	0.00
48.00	0.00	1.348	1,149.20	0.02	0.02	0.00
50.00	0.00	1.345	1,149.19	0.02	0.02	0.00
52.00	0.00	1.342	1,149.18	0.02	0.02	0.00
54.00	0.00	1.339	1,149.18	0.02	0.02	0.00
56.00	0.00	1.336	1,149.17	0.02	0.02	0.00
58.00	0.00	1.332	1,149.16	0.02	0.02	0.00
60.00	0.00	1.329	1,149.16	0.02	0.02	0.00
62.00	0.00	1.326	1,149.15	0.02	0.02	0.00
64.00	0.00	1.323	1,149.14	0.02	0.02	0.00
66.00	0.00	1.320	1,149.13	0.02	0.02	0.00
68.00	0.00	1.317	1,149.13	0.02	0.02	0.00
70.00	0.00	1.313	1,149.12	0.02	0.02	0.00
72.00	0.00	1.310	1,149.11	0.02	0.02	0.00

Summary for Pond 11-Pond:

Inflow Area = 2.820 ac, 0.00% Impervious, Inflow Depth = 3.94" for 100-YR STORM event
Inflow = 5.90 cfs @ 12.66 hrs, Volume= 0.925 af
Outflow = 3.21 cfs @ 13.16 hrs, Volume= 0.594 af, Atten= 46%, Lag= 30.1 min
Primary = 3.21 cfs @ 13.16 hrs, Volume= 0.594 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,191.95' @ 13.16 hrs Surf.Area= 0.157 ac Storage= 0.406 af

Plug-Flow detention time= 228.8 min calculated for 0.594 af (64% of inflow)
Center-of-Mass det. time= 124.4 min (986.5 - 862.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,188.00'	0.587 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

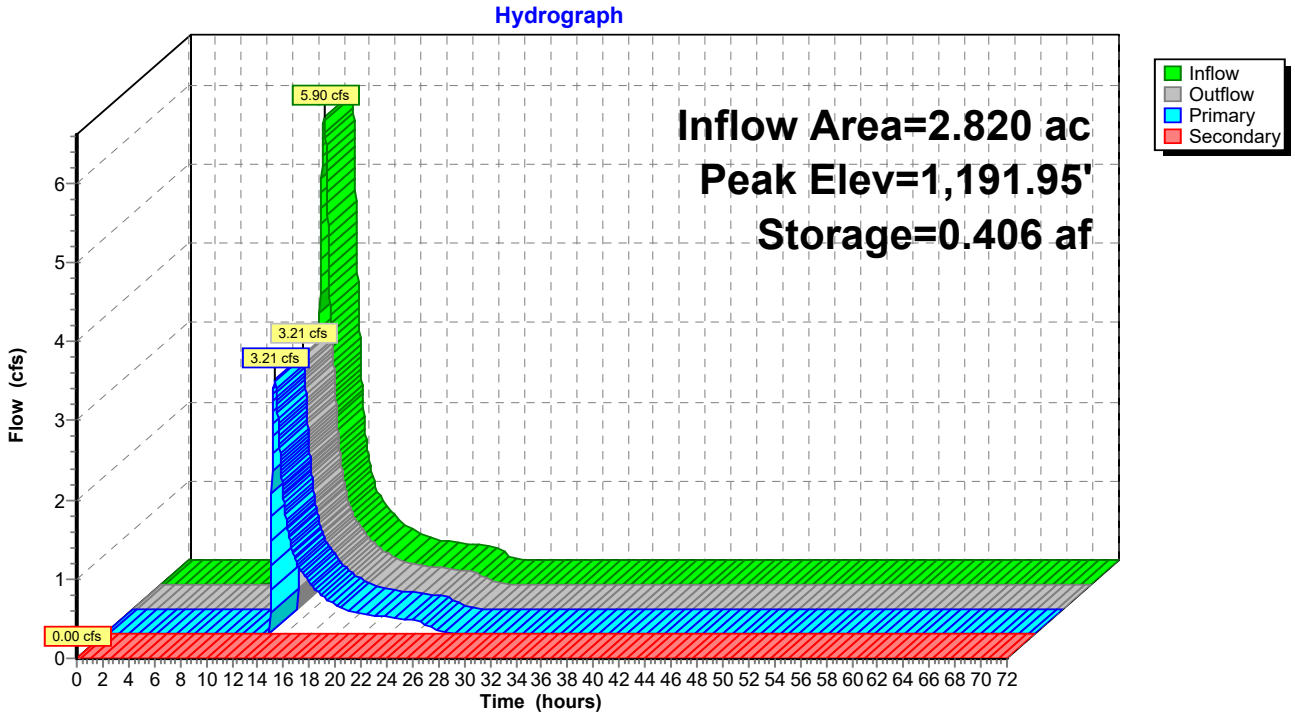
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,188.00	0.053	0.000	0.000
1,189.00	0.077	0.065	0.065
1,190.00	0.102	0.089	0.154
1,191.00	0.129	0.116	0.270
1,192.00	0.158	0.143	0.414
1,193.00	0.189	0.173	0.587

Device	Routing	Invert	Outlet Devices
#1	Primary	1,188.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,188.00' / 1,185.00' S= 0.0652 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,191.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,192.00'	**20.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,188.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=3.21 cfs @ 13.16 hrs HW=1,191.95' (Free Discharge)
└─**1=Culvert** (Passes 3.21 cfs of 15.22 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 3.20 cfs @ 2.44 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.56 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,188.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 11-Pond:


Hydrograph
Inflow Area=2.820 ac
Peak Elev=1,191.95'
Storage=0.406 af
5.90 cfs
3.21 cfs
3.21 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 11-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,188.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,188.00	0.00	0.00	0.00
4.00	0.00	0.000	1,188.00	0.00	0.00	0.00
6.00	0.00	0.000	1,188.00	0.00	0.00	0.00
8.00	0.00	0.000	1,188.00	0.00	0.00	0.00
10.00	0.14	0.008	1,188.14	0.00	0.00	0.00
12.00	**1.19**	**0.073**	**1,189.11**	**0.00**	**0.00**	0.00
14.00	**1.21**	**0.379**	**1,191.77**	**1.48**	**1.48**	0.00
16.00	0.57	0.361	1,191.66	0.62	0.62	0.00
18.00	0.33	0.354	1,191.61	0.36	0.36	0.00
20.00	0.24	0.350	1,191.58	0.25	0.25	0.00
22.00	0.20	0.349	1,191.57	0.21	0.21	0.00
24.00	0.16	0.347	1,191.56	0.17	0.17	0.00
26.00	0.00	0.340	1,191.51	0.03	0.03	0.00
28.00	0.00	0.338	1,191.50	0.00	0.00	0.00
30.00	0.00	0.338	1,191.50	0.00	0.00	0.00
32.00	0.00	0.338	1,191.50	0.00	0.00	0.00
34.00	0.00	0.337	1,191.49	0.00	0.00	0.00
36.00	0.00	0.337	1,191.49	0.00	0.00	0.00
38.00	0.00	0.337	1,191.49	0.00	0.00	0.00
40.00	0.00	0.336	1,191.49	0.00	0.00	0.00
42.00	0.00	0.336	1,191.48	0.00	0.00	0.00
44.00	0.00	0.336	1,191.48	0.00	0.00	0.00
46.00	0.00	0.335	1,191.48	0.00	0.00	0.00
48.00	0.00	0.335	1,191.48	0.00	0.00	0.00
50.00	0.00	0.335	1,191.48	0.00	0.00	0.00
52.00	0.00	0.334	1,191.47	0.00	0.00	0.00
54.00	0.00	0.334	1,191.47	0.00	0.00	0.00
56.00	0.00	0.334	1,191.47	0.00	0.00	0.00
58.00	0.00	0.333	1,191.47	0.00	0.00	0.00
60.00	0.00	0.333	1,191.46	0.00	0.00	0.00
62.00	0.00	0.333	1,191.46	0.00	0.00	0.00
64.00	0.00	0.332	1,191.46	0.00	0.00	0.00
66.00	0.00	0.332	1,191.46	0.00	0.00	0.00
68.00	0.00	0.332	1,191.45	0.00	0.00	0.00
70.00	0.00	0.331	1,191.45	0.00	0.00	0.00
72.00	0.00	0.331	1,191.45	0.00	0.00	0.00

Summary for Pond 13-Pond:

Inflow Area = 6.380 ac, 0.00% Impervious, Inflow Depth = 4.26" for 100-YR STORM event
Inflow = 18.24 cfs @ 12.40 hrs, Volume= 2.263 af
Outflow = 13.39 cfs @ 12.64 hrs, Volume= 1.743 af, Atten= 27%, Lag= 14.8 min
Primary = 13.39 cfs @ 12.64 hrs, Volume= 1.743 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,146.75' @ 12.64 hrs Surf.Area= 0.239 ac Storage= 0.789 af

Plug-Flow detention time= 185.8 min calculated for 1.743 af (77% of inflow)
Center-of-Mass det. time= 103.4 min (942.3 - 838.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,141.00'	0.849 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

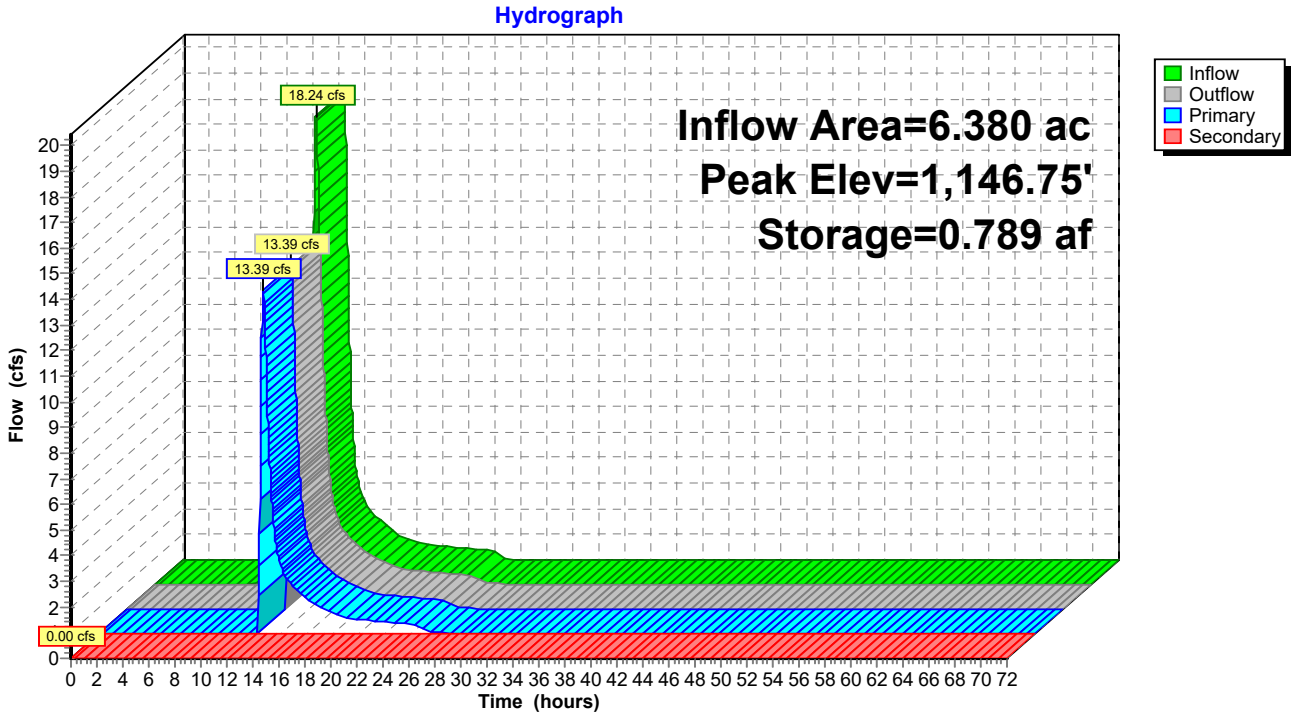
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,141.00	0.044	0.000	0.000
1,142.00	0.075	0.060	0.060
1,143.00	0.106	0.090	0.150
1,144.00	0.139	0.123	0.272
1,145.00	0.173	0.156	0.428
1,146.00	0.210	0.191	0.620
1,147.00	0.248	0.229	0.849

Device	Routing	Invert	Outlet Devices
#1	Primary	1,142.00'	**18.0" Round Culvert** L= 270.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,142.00' / 1,058.00' S= 0.3111 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,145.65'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,146.80'	**35.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,142.00'	**0.4" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=13.38 cfs @ 12.64 hrs HW=1,146.75' (Free Discharge)
└─**1=Culvert** (Passes 13.38 cfs of 17.02 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 13.37 cfs @ 4.36 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 10.48 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,141.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 13-Pond:


Hydrograph
Inflow Area=6.380 ac
Peak Elev=1,146.75'
Storage=0.789 af
18.24 cfs
13.39 cfs
13.39 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 13-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,141.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,141.00	0.00	0.00	0.00
4.00	0.00	0.000	1,141.00	0.00	0.00	0.00
6.00	0.00	0.000	1,141.00	0.00	0.00	0.00
8.00	0.06	0.001	1,141.03	0.00	0.00	0.00
10.00	0.54	0.043	1,141.77	0.00	0.00	0.00
12.00	**5.55**	**0.284**	**1,144.08**	**0.01**	**0.01**	0.00
14.00	**2.29**	**0.630**	**1,146.05**	**2.65**	**2.65**	0.00
16.00	1.22	0.601	1,145.91	1.35	1.35	0.00
18.00	0.72	0.585	1,145.83	0.79	0.79	0.00
20.00	0.54	0.578	1,145.80	0.57	0.57	0.00
22.00	0.45	0.574	1,145.78	0.47	0.47	0.00
24.00	0.36	0.571	1,145.76	0.38	0.38	0.00
26.00	0.00	0.553	1,145.67	0.05	0.05	0.00
28.00	0.00	0.549	1,145.65	0.01	0.01	0.00
30.00	0.00	0.548	1,145.64	0.01	0.01	0.00
32.00	0.00	0.546	1,145.64	0.01	0.01	0.00
34.00	0.00	0.545	1,145.63	0.01	0.01	0.00
36.00	0.00	0.544	1,145.62	0.01	0.01	0.00
38.00	0.00	0.542	1,145.62	0.01	0.01	0.00
40.00	0.00	0.541	1,145.61	0.01	0.01	0.00
42.00	0.00	0.540	1,145.60	0.01	0.01	0.00
44.00	0.00	0.539	1,145.60	0.01	0.01	0.00
46.00	0.00	0.537	1,145.59	0.01	0.01	0.00
48.00	0.00	0.536	1,145.58	0.01	0.01	0.00
50.00	0.00	0.535	1,145.58	0.01	0.01	0.00
52.00	0.00	0.533	1,145.57	0.01	0.01	0.00
54.00	0.00	0.532	1,145.56	0.01	0.01	0.00
56.00	0.00	0.531	1,145.56	0.01	0.01	0.00
58.00	0.00	0.529	1,145.55	0.01	0.01	0.00
60.00	0.00	0.528	1,145.54	0.01	0.01	0.00
62.00	0.00	0.527	1,145.54	0.01	0.01	0.00
64.00	0.00	0.525	1,145.53	0.01	0.01	0.00
66.00	0.00	0.524	1,145.52	0.01	0.01	0.00
68.00	0.00	0.523	1,145.52	0.01	0.01	0.00
70.00	0.00	0.522	1,145.51	0.01	0.01	0.00
72.00	0.00	0.520	1,145.50	0.01	0.01	0.00

Summary for Pond 14-Pond:

Inflow Area = 8.210 ac, 0.00% Impervious, Inflow Depth = 4.37" for 100-YR STORM event
Inflow = 26.50 cfs @ 12.32 hrs, Volume= 2.987 af
Outflow = 17.77 cfs @ 12.57 hrs, Volume= 2.388 af, Atten= 33%, Lag= 15.3 min
Primary = 17.77 cfs @ 12.57 hrs, Volume= 2.388 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,154.31' @ 12.57 hrs Surf.Area= 0.368 ac Storage= 1.056 af

Plug-Flow detention time= 170.2 min calculated for 2.388 af (80% of inflow)
Center-of-Mass det. time= 93.3 min (924.4 - 831.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,150.00'	1.323 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

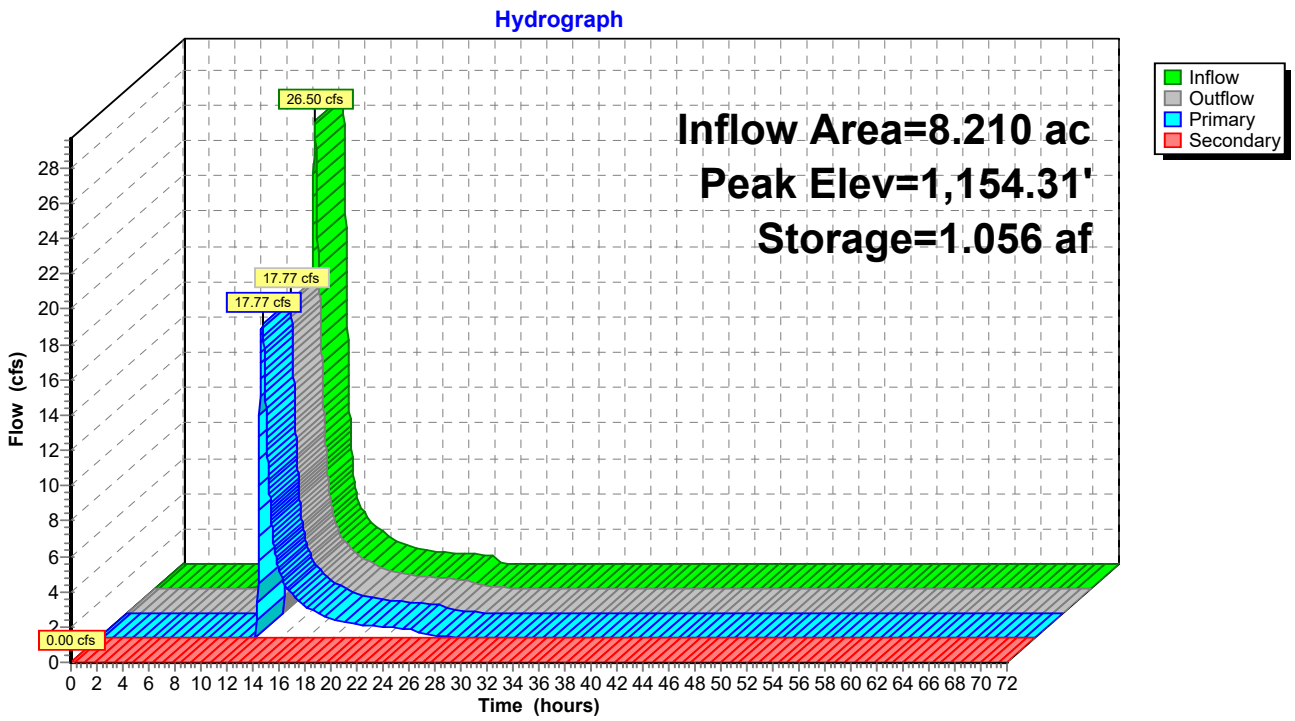
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
1,150.00	0.127	0.000	0.000
1,151.00	0.180	0.153	0.153
1,152.00	0.235	0.208	0.361
1,153.00	0.291	0.263	0.624
1,154.00	0.349	0.320	0.944
1,155.00	0.409	0.379	1.323

Device	Routing	Invert	Outlet Devices
#1	Primary	1,150.00'	**24.0" Round Culvert** L= 52.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,150.00' / 1,143.00' S= 0.1346 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Device 1	1,153.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,154.50'	**30.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,150.00'	**0.4" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=17.76 cfs @ 12.57 hrs HW=1,154.31' (Free Discharge)
└─**1=Culvert** (Passes 17.76 cfs of 27.52 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 17.75 cfs @ 4.94 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.01 cfs @ 9.98 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,150.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 14-Pond:


Hydrograph
Inflow Area=8.210 ac
Peak Elev=1,154.31'
Storage=1.056 af
26.50 cfs
17.77 cfs
17.77 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 14-Pond:

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	1,150.00	0.00	0.00	**0.00**
2.00	0.00	0.000	1,150.00	0.00	0.00	0.00
4.00	0.00	0.000	1,150.00	0.00	0.00	0.00
6.00	0.00	0.000	1,150.00	0.00	0.00	0.00
8.00	0.12	0.004	1,150.03	0.00	0.00	0.00
10.00	0.81	0.071	1,150.50	0.00	0.00	0.00
12.00	**9.46**	**0.440**	**1,152.32**	**0.01**	**0.01**	0.00
14.00	**2.87**	**0.770**	**1,153.48**	**3.51**	**3.51**	0.00
16.00	1.53	0.716	1,153.31	1.77	1.77	0.00
18.00	0.91	0.688	1,153.22	1.04	1.04	0.00
20.00	0.70	0.675	1,153.17	0.75	0.75	0.00
22.00	0.58	0.669	1,153.15	0.61	0.61	0.00
24.00	0.46	0.663	1,153.13	0.50	0.50	0.00
26.00	0.00	0.635	1,153.04	0.09	0.09	0.00
28.00	0.00	0.626	1,153.01	0.03	0.03	0.00
30.00	0.00	0.624	1,153.00	0.01	0.01	0.00
32.00	0.00	0.623	1,153.00	0.01	0.01	0.00
34.00	0.00	0.622	1,152.99	0.01	0.01	0.00
36.00	0.00	0.620	1,152.99	0.01	0.01	0.00
38.00	0.00	0.619	1,152.98	0.01	0.01	0.00
40.00	0.00	0.618	1,152.98	0.01	0.01	0.00
42.00	0.00	0.617	1,152.98	0.01	0.01	0.00
44.00	0.00	0.616	1,152.97	0.01	0.01	0.00
46.00	0.00	0.614	1,152.97	0.01	0.01	0.00
48.00	0.00	0.613	1,152.96	0.01	0.01	0.00
50.00	0.00	0.612	1,152.96	0.01	0.01	0.00
52.00	0.00	0.611	1,152.95	0.01	0.01	0.00
54.00	0.00	0.610	1,152.95	0.01	0.01	0.00
56.00	0.00	0.608	1,152.95	0.01	0.01	0.00
58.00	0.00	0.607	1,152.94	0.01	0.01	0.00
60.00	0.00	0.606	1,152.94	0.01	0.01	0.00
62.00	0.00	0.605	1,152.93	0.01	0.01	0.00
64.00	0.00	0.604	1,152.93	0.01	0.01	0.00
66.00	0.00	0.603	1,152.93	0.01	0.01	0.00
68.00	0.00	0.601	1,152.92	0.01	0.01	0.00
70.00	0.00	0.600	1,152.92	0.01	0.01	0.00
72.00	0.00	0.599	1,152.91	0.01	0.01	0.00

Summary for Pond 15-Pond:

Inflow Area = 2.830 ac, 0.00% Impervious, Inflow Depth = 4.58" for 100-YR STORM event
Inflow = 6.62 cfs @ 12.68 hrs, Volume= 1.081 af
Outflow = 5.67 cfs @ 12.91 hrs, Volume= 0.803 af, Atten= 14%, Lag= 13.6 min
Primary = 5.67 cfs @ 12.91 hrs, Volume= 0.803 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.02 hrs
Peak Elev= 1,201.15' @ 12.91 hrs Surf.Area= 5,452 sf Storage= 15,785 cf

Plug-Flow detention time= 175.8 min calculated for 0.803 af (74% of inflow)
Center-of-Mass det. time= 88.0 min (939.5 - 851.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,197.00'	20,760 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

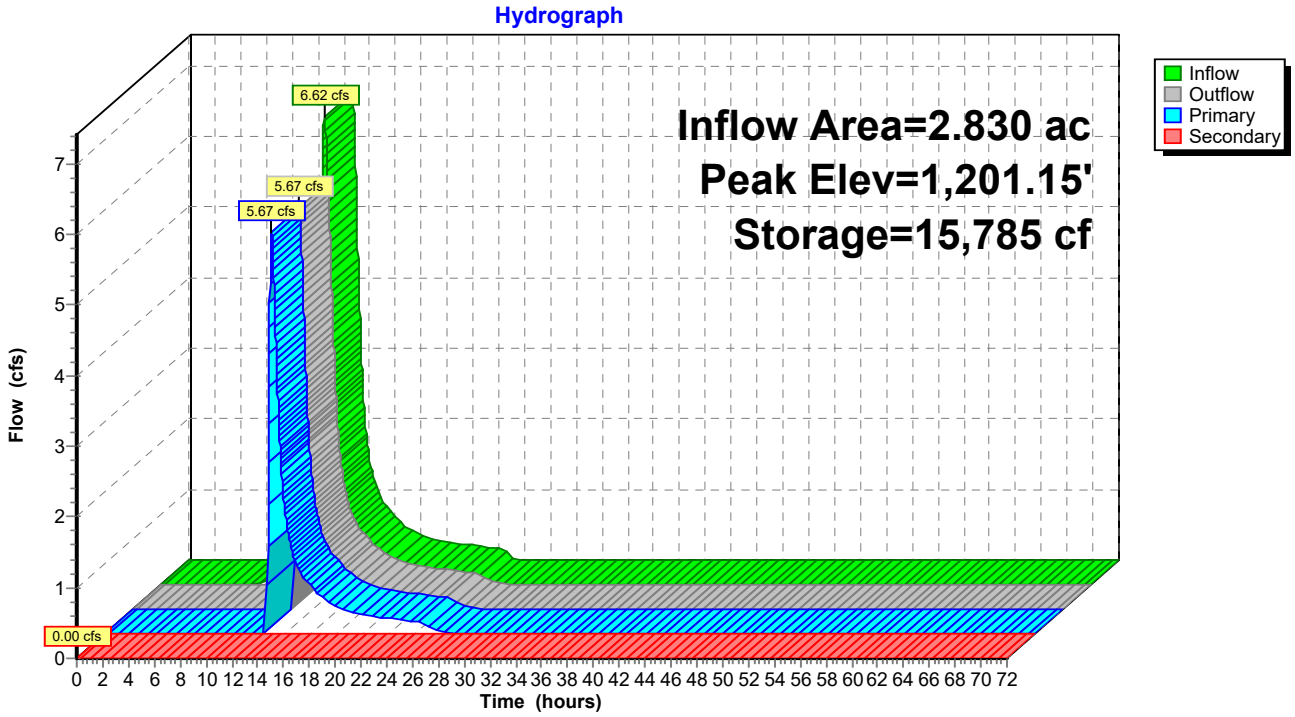
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,197.00	2,331	0	0
1,198.00	2,984	2,658	2,658
1,199.00	3,701	3,343	6,000
1,200.00	4,479	4,090	10,090
1,201.00	5,319	4,899	14,989
1,202.00	6,222	5,771	20,760

Device	Routing	Invert	Outlet Devices
#1	Primary	1,197.00'	**18.0" Round Culvert** L= 70.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,197.00' / 1,196.00' S= 0.0143 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	1,200.50'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 0.5' Crest Height
#3	Secondary	1,201.50'	**30.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#4	Device 1	1,197.00'	**0.2" Vert. Orifice/Grate** C= 0.600

Primary OutFlow Max=5.67 cfs @ 12.91 hrs HW=1,201.15' (Free Discharge)
└─**1=Culvert** (Passes 5.67 cfs of 15.68 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 5.67 cfs @ 3.05 fps)
  └─**4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 9.80 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=1,197.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 15-Pond:


Hydrograph
Inflow Area=2.830 ac
Peak Elev=1,201.15'
Storage=15,785 cf
6.62 cfs
5.67 cfs
5.67 cfs
0.00 cfs
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Hydrograph for Pond 15-Pond:

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	1,197.00	0.00	0.00	**0.00**
2.00	0.00	0	1,197.00	0.00	0.00	0.00
4.00	0.00	0	1,197.00	0.00	0.00	0.00
6.00	0.00	0	1,197.00	0.00	0.00	0.00
8.00	0.04	80	1,197.03	0.00	0.00	0.00
10.00	0.25	1,002	1,197.41	0.00	0.00	0.00
12.00	**1.43**	**5,004**	**1,198.72**	**0.00**	**0.00**	0.00
14.00	**1.41**	**13,913**	**1,200.79**	**1.65**	**1.65**	0.00
16.00	0.62	13,243	1,200.66	0.67	0.67	0.00
18.00	0.36	12,989	1,200.61	0.38	0.38	0.00
20.00	0.26	12,867	1,200.59	0.27	0.27	0.00
22.00	0.21	12,809	1,200.58	0.22	0.22	0.00
24.00	0.17	12,760	1,200.57	0.18	0.18	0.00
26.00	0.00	12,486	1,200.51	0.03	0.03	0.00
28.00	0.00	12,432	1,200.50	0.00	0.00	0.00
30.00	0.00	12,418	1,200.50	0.00	0.00	0.00
32.00	0.00	12,403	1,200.49	0.00	0.00	0.00
34.00	0.00	12,389	1,200.49	0.00	0.00	0.00
36.00	0.00	12,375	1,200.49	0.00	0.00	0.00
38.00	0.00	12,361	1,200.48	0.00	0.00	0.00
40.00	0.00	12,347	1,200.48	0.00	0.00	0.00
42.00	0.00	12,333	1,200.48	0.00	0.00	0.00
44.00	0.00	12,319	1,200.48	0.00	0.00	0.00
46.00	0.00	12,305	1,200.47	0.00	0.00	0.00
48.00	0.00	12,291	1,200.47	0.00	0.00	0.00
50.00	0.00	12,277	1,200.47	0.00	0.00	0.00
52.00	0.00	12,263	1,200.46	0.00	0.00	0.00
54.00	0.00	12,248	1,200.46	0.00	0.00	0.00
56.00	0.00	12,234	1,200.46	0.00	0.00	0.00
58.00	0.00	12,220	1,200.46	0.00	0.00	0.00
60.00	0.00	12,206	1,200.45	0.00	0.00	0.00
62.00	0.00	12,192	1,200.45	0.00	0.00	0.00
64.00	0.00	12,178	1,200.45	0.00	0.00	0.00
66.00	0.00	12,164	1,200.44	0.00	0.00	0.00
68.00	0.00	12,150	1,200.44	0.00	0.00	0.00
70.00	0.00	12,136	1,200.44	0.00	0.00	0.00
72.00	0.00	12,122	1,200.44	0.00	0.00	0.00

Appendix D

Curve Number

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 1 — **Total Drainage Area:** 2.56 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69	1.78	79	0.30	84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36		60	0.35	73	0.13	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:					**2.13**		**0.43**	

Calculated Total Drainage Area: 2.56 Ac
Calculated Composite Curve Number: 79

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 2 — **Total Drainage Area:** 11.56 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	2.66	69	4.19	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition	0.12	36	3.52	60	1.07	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:	**0.12**		**6.18**		**5.26**			

Calculated Total Drainage Area: 11.56 Ac
Calculated Composite Curve Number: 70

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 3 — **Total Drainage Area:** 13.58 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69	11.83	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.57	60	1.18	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.57**		**13.01**			

Calculated Total Drainage Area: 13.58 Ac
Calculated Composite Curve Number: 78

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 4 — **Total Drainage Area:** 1.98 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98	0.08	98		98	0.05	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	1.44	69		79	0.21	84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.12	60		73	0.08	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**1.64**				**0.34**	

Calculated Total Drainage Area: 1.98 Ac
Calculated Composite Curve Number: 73

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 5 | **Total Drainage Area:** 4.31 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69	2.46	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36		60	1.85	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:					4.31			

Calculated Total Drainage Area: 4.31 Ac
Calculated Composite Curve Number: 77

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 7 | **Total Drainage Area:** 13.81 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69		79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition	0.46	36	8.19	60	2.30	73	2.86	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:	**0.46**		**8.19**		**2.30**		**2.86**	

Calculated Total Drainage Area: 13.81 Ac
Calculated Composite Curve Number: 66

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 8 | **Total Drainage Area:** 17.26 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69	11.41	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.01	60	5.77	73	0.07	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.01**		**17.18**		**0.07**	

Calculated Total Drainage Area: 17.26 Ac
Calculated Composite Curve Number: 77

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 9 — **Total Drainage Area:** 16.03 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	2.61	69	4.31	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	1.13	60	7.75	73	0.23	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**3.74**		**12.06**		**0.23**	

Calculated Total Drainage Area: 16.03 Ac
Calculated Composite Curve Number: 74

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 10 **Total Drainage Area:** 16.80 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	1.33	69	11.45	79	0.07	84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	1.18	60	2.46	73	0.31	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**2.51**		**13.91**		**0.38**	

Calculated Total Drainage Area: 16.80 Ac
Calculated Composite Curve Number: 77

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 11 — **Total Drainage Area:** 2.82 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69		79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	2.75	60	0.07	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**2.75**		**0.07**			

Calculated Total Drainage Area: 2.82 Ac
Calculated Composite Curve Number: 61

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 12 — **Total Drainage Area:** 4.01 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	0.04	69	2.77	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.46	60	0.74	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.50**		**3.51**			

Calculated Total Drainage Area: 4.01 Ac
Calculated Composite Curve Number: 76

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 13 — **Total Drainage Area:** 6.38 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69		79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	2.69	60	3.56	73	0.13	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**2.69**		**3.56**		**0.13**	

Calculated Total Drainage Area: 6.38 Ac
Calculated Composite Curve Number: 68

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 14 | **Total Drainage Area:** 8.21 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	0.09	69	2.24	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	4.89	60	0.99	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**4.98**		**3.23**			

Calculated Total Drainage Area: 8.21 Ac
Calculated Composite Curve Number: 67

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Pre-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 15 | **Total Drainage Area:** 2.83 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	0.66	69	2.01	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.02	60	0.14	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.68**		**2.15**			

Calculated Total Drainage Area: 2.83 Ac
Calculated Composite Curve Number: 77

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 1 | **Total Drainage Area:** 2.56 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74	1.55	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98	0.39	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69	0.25	79	0.04	84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36		60	0.22	73	0.11	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:					**0.47**		**2.09**	

Calculated Total Drainage Area: 2.56 Ac
Calculated Composite Curve Number: 83

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 2 — **Total Drainage Area:** 11.56 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61	3.16	74	3.21	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98	0.77	98	0.95	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	0.27	69	0.19	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition	0.12	36	1.98	60	0.91	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:	**0.12**		**2.25**		**5.03**		**4.16**	

Calculated Total Drainage Area: 11.56 Ac
Calculated Composite Curve Number: 77

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 3 | **Total Drainage Area:** 13.58 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74	7.96	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98	1.79	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69	2.25	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.57	60	1.01	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.57**		**3.26**		**9.75**	

Calculated Total Drainage Area: 13.58 Ac
Calculated Composite Curve Number: 81

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 4 — **Total Drainage Area:** 1.98 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61	1.02	74		80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98	0.08	98	0.14	98	0.05	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	0.28	69		79	0.21	84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.12	60		73	0.08	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.48**		**1.16**		**0.34**	

Calculated Total Drainage Area: 1.98 Ac
Calculated Composite Curve Number: 77

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 5 | **Total Drainage Area:** 4.31 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74	2.18	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98	0.34	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69	0.57	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36		60	1.22	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:					1.79		2.52	

Calculated Total Drainage Area: 4.31 Ac
Calculated Composite Curve Number: 80

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 7 — **Total Drainage Area:** 13.81 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61	3.34	74	1.58	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98	0.88	98	0.42	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69		79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition	0.46	36	3.97	60	2.21	73	0.95	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:	**0.46**		**3.97**		**6.43**		**2.95**	

Calculated Total Drainage Area: 13.81 Ac
Calculated Composite Curve Number: 72

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 8 | **Total Drainage Area:** 17.26 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61		74	11.33	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98	3.11	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69	0.18	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.01	60	2.56	73	0.07	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.01**		**2.74**		**14.51**	

Calculated Total Drainage Area: 17.26 Ac
Calculated Composite Curve Number: 83

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 9 — **Total Drainage Area:** 16.03 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61	1.88	74	9.63	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98	0.13	98	1.73	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	0.92	69		79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.81	60	0.70	73	0.23	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**1.73**		**2.71**		**11.59**	

Calculated Total Drainage Area: 16.03 Ac
Calculated Composite Curve Number: 80

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 10 — **Total Drainage Area:** 16.80 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61	1.97	74	10.35	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98	0.28	98	2.72	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69	0.02	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.26	60	0.96	73	0.24	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.26**		**3.23**		**13.31**	

Calculated Total Drainage Area: 16.80 Ac
Calculated Composite Curve Number: 82

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 11 — **Total Drainage Area:** 2.82 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61	1.32	74	0.06	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98	0.37	98		98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69		79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	1.06	60	0.01	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**1.06**		**1.70**		**0.06**	

Calculated Total Drainage Area: 2.82 Ac
Calculated Composite Curve Number: 73

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 12 — **Total Drainage Area:** 4.01 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61	0.32	74	2.56	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98	0.01	98	0.53	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69	0.30	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.17	60	0.12	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.17**		**0.75**		**3.09**	

Calculated Total Drainage Area: 4.01 Ac
Calculated Composite Curve Number: 81

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 13 — **Total Drainage Area:** 6.38 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61	1.43	74	1.55	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98	0.43	98	0.17	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49		69		79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.83	60	1.87	73	0.10	79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.83**		**3.73**		**1.82**	

Calculated Total Drainage Area: 6.38 Ac
Calculated Composite Curve Number: 76

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 14 — **Total Drainage Area:** 8.21 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61	3.02	74	0.97	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98	0.83	98	0.13	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	0.09	69	1.96	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	1.04	60	0.17	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**1.13**		**5.98**		**1.10**	

Calculated Total Drainage Area: 8.21 Ac
Calculated Composite Curve Number: 77

Composite SCS Curve Number

PROJECT: Solar - Litchfield
SCENARIO: Post-development
DATE: 8/12/2020
PREPARED BY: Kari Nunley

Drainage Area: 15 — **Total Drainage Area:** 2.83 Ac

Cover Description	Hydrologic Soil Group A Area (Ac)	A CN	B Area (Ac)	B CN	C Area (Ac)	C CN	D Area (Ac)	D CN
Open space (lawns, parks, golf courses, cemeteries, etc.):								
Poor condition (grass cover < 50%)		68		79		86		89
Fair condition (grass cover 50% to 75%)		49		69		79		84
Good condition (grass cover > 75%)		39		61	0.07	74	1.53	80
Impervious areas:								
Paved parking lots, roofs, driveways, etc. (excluding R/W)		98		98		98		98
Paved streets and roads; curbs and storm sewers (excluding		98		98		98	0.22	98
Paved streets and roads; open ditches (including R/W)		83		89		92		93
Gravel streets and roads (including R/W)		76		85		89		91
Dirt streets and roads (including R/W)		72		82		87		89
Woods-grass combonation (orchard or tree farm)								
Fair hydrologic condition		43		65		76		82
Good hydrologic condition		32		58		72		79
Urban districts:								
Commercial and business		89		92		94		95
Industrial		81		88		91		93
Residential districts by average lot size:								
1/8 acre or less (town houses)		77		85		90		92
1/4 acre		61		75		83		87
1/3 acre		57		72		81		86
1/2 acre		54		70		80		85
1 acre		51		68		79		84
2 acres		46		65		77		82
Pasture, grassland or range:								
Poor hydrologic condition		68		79		86		89
Fair hydrologic condition		49	0.59	69	0.26	79		84
Good hydrologic condition		39		61		74		80
Woods:								
Poor hydrologic condition		45		66		77		83
Fair hydrologic condition		36	0.02	60	0.14	73		79
Good hydrologic condition		30		55		70		77
Developing urban areas:								
Newly graded areas (pervious areas only, no vegetation)		77		86		91		94
Substation Pad with 6" of Loose Washed Stone		49		69		79		84
Cultivated Agricultural Areas:								
Fallow Bare Soil Crop residue Cover Good Hydrolic Condition		74		83		88		90
Total HSG Areas:			**0.61**		**0.47**		**1.75**	

Calculated Total Drainage Area: 2.83 Ac
Calculated Composite Curve Number: 79

Appendix E

Time of Concentration

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	1
TOTAL BASIN LENGTH:	479.0 ft
TOTAL ELEVATION UP:	1154.50
TOTAL ELEVATION DOWN:	1111.01
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	21.32	30.3 mins.
Shallow Concentrated Flow	179.0	22.17	0.5 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**479.0**	**43.49**	**30.9 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Woods		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1154.50		
Elevation Down (ft)	1133.18		
Land Slope (ft/ft)	0.071		
Time Of Concentration (Mins)	30.33		
Total Sheet Flow Tc (Minutes):			**30.3 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	179.0 ft		
Elevation Up (ft)	1133.18		
Elevation Down (ft)	1111.01		
Watercourse Slope (ft/ft)	0.124		
Average Velocity (ft/Sec)	5.7		
Time Of Concentration (Mins)	0.53		
Total Shallow Concentrated Tc (Mins):			**0.5 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**30.9 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	2
TOTAL BASIN LENGTH:	1281.4 ft
TOTAL ELEVATION UP:	1151.98
TOTAL ELEVATION DOWN:	1028.12
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	25.59	28.2 mins.
Shallow Concentrated Flow	981.4	98.27	3.2 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**1281.4**	**123.86**	**31.4 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1151.98		
Elevation Down (ft)	1126.39		
Land Slope (ft/ft)	0.085		
Time Of Concentration (Mins)	28.19		
Total Sheet Flow Tc (Minutes):			**28.2 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	981.4 ft		
Elevation Up (ft)	1126.39		
Elevation Down (ft)	1028.12		
Watercourse Slope (ft/ft)	0.100		
Average Velocity (ft/Sec)	5.1		
Time Of Concentration (Mins)	3.20		
Total Shallow Concentrated Tc (Mins):			**3.2 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**31.4 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	3
TOTAL BASIN LENGTH:	1093.1 ft
TOTAL ELEVATION UP:	1199.49
TOTAL ELEVATION DOWN:	1114.25
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	22.86	29.5 mins.
Shallow Concentrated Flow	793.1	62.38	2.9 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**1093.1**	**85.24**	**32.4 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1199.49		
Elevation Down (ft)	1176.63		
Land Slope (ft/ft)	0.076		
Time Of Concentration (Mins)	29.49		
Total Sheet Flow Tc (Minutes):			**29.5 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	793.1 ft		
Elevation Up (ft)	1176.63		
Elevation Down (ft)	1114.25		
Watercourse Slope (ft/ft)	0.079		
Average Velocity (ft/Sec)	4.5		
Time Of Concentration (Mins)	2.92		
Total Shallow Concentrated Tc (Mins):			**2.9 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**32.4 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	4
TOTAL BASIN LENGTH:	388.1 ft
TOTAL ELEVATION UP:	1124.30
TOTAL ELEVATION DOWN:	1105.59
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	12.65	37.4 mins.
Shallow Concentrated Flow	88.1	6.06	0.3 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**388.1**	**18.71**	**37.7 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1124.30		
Elevation Down (ft)	1111.65		
Land Slope (ft/ft)	0.042		
Time Of Concentration (Mins)	37.37		
Total Sheet Flow Tc (Minutes):			**37.4 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	88.1 ft		
Elevation Up (ft)	1111.65		
Elevation Down (ft)	1105.59		
Watercourse Slope (ft/ft)	0.069		
Average Velocity (ft/Sec)	4.2		
Time Of Concentration (Mins)	0.35		
Total Shallow Concentrated Tc (Mins):			**0.3 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**37.7 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	FID 5
TOTAL BASIN LENGTH:	479.8 ft
TOTAL ELEVATION UP:	1181.40
TOTAL ELEVATION DOWN:	1132.50
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	230.3	19.80	22.7 mins.
Shallow Concentrated Flow	249.5	29.10	0.8 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**479.8**	**48.90**	**23.5 mins.**

NOTES:
This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	230.3		
Elevation Up (ft)	1181.40		
Elevation Down (ft)	1161.60		
Land Slope (ft/ft)	0.086		
Time Of Concentration (Mins)	22.75		
Total Sheet Flow Tc (Minutes):			**22.7 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	249.5 ft		
Elevation Up (ft)	1161.60		
Elevation Down (ft)	1132.50		
Watercourse Slope (ft/ft)	0.117		
Average Velocity (ft/Sec)	5.5		
Time Of Concentration (Mins)	0.75		
Total Shallow Concentrated Tc (Mins):			**0.8 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**23.5 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	7
TOTAL BASIN LENGTH:	1505.9 ft
TOTAL ELEVATION UP:	1206.40
TOTAL ELEVATION DOWN:	1050.60
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	278.4	9.40	38.5 mins.
Shallow Concentrated Flow	1227.5	146.40	3.7 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**1505.9**	**155.80**	**42.1 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	278.4		
Elevation Up (ft)	1206.40		
Elevation Down (ft)	1197.00		
Land Slope (ft/ft)	0.034		
Time Of Concentration (Mins)	38.47		
Total Sheet Flow Tc (Minutes):			**38.5 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	1227.5 ft		
Elevation Up (ft)	1197.00		
Elevation Down (ft)	1050.60		
Watercourse Slope (ft/ft)	0.119		
Average Velocity (ft/Sec)	5.6		
Time Of Concentration (Mins)	3.67		
Total Shallow Concentrated Tc (Mins):			**3.7 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**42.1 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	8
TOTAL BASIN LENGTH:	817.6 ft
TOTAL ELEVATION UP:	1207.60
TOTAL ELEVATION DOWN:	1103.10
TOTAL ACRES:	4.63

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	280.1	22.20	27.5 mins.
Shallow Concentrated Flow	537.5	82.30	1.4 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**817.6**	**104.50**	**28.9 mins.**

NOTES:
This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	280.1		
Elevation Up (ft)	1207.60		
Elevation Down (ft)	1185.40		
Land Slope (ft/ft)	0.079		
Time Of Concentration (Mins)	27.48		
Total Sheet Flow Tc (Minutes):			**27.5 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	537.5 ft		
Elevation Up (ft)	1185.40		
Elevation Down (ft)	1103.10		
Watercourse Slope (ft/ft)	0.153		
Average Velocity (ft/Sec)	6.3		
Time Of Concentration (Mins)	1.42		
Total Shallow Concentrated Tc (Mins):			**1.4 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**28.9 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	9
TOTAL BASIN LENGTH:	1656.6 ft
TOTAL ELEVATION UP:	1222.37
TOTAL ELEVATION DOWN:	1124.57
TOTAL ACRES:	7.97

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	1.93	79.3 mins.
Shallow Concentrated Flow	1356.6	95.87	5.3 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**1656.6**	**97.80**	**84.5 mins.**

NOTES:
This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1222.37		
Elevation Down (ft)	1220.44		
Land Slope (ft/ft)	0.006		
Time Of Concentration (Mins)	79.28		
Total Sheet Flow Tc (Minutes):			**79.3 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	1356.6 ft		
Elevation Up (ft)	1220.44		
Elevation Down (ft)	1124.57		
Watercourse Slope (ft/ft)	0.071		
Average Velocity (ft/Sec)	4.3		
Time Of Concentration (Mins)	5.27		
Total Shallow Concentrated Tc (Mins):			**5.3 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**84.5 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	10
TOTAL BASIN LENGTH:	1050.8 ft
TOTAL ELEVATION UP:	1204.08
TOTAL ELEVATION DOWN:	1112.35
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	283.7	9.65	38.9 mins.
Shallow Concentrated Flow	767.1	82.08	2.4 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**1050.8**	**91.73**	**41.4 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	283.7		
Elevation Up (ft)	1204.08		
Elevation Down (ft)	1194.43		
Land Slope (ft/ft)	0.034		
Time Of Concentration (Mins)	38.94		
Total Sheet Flow Tc (Minutes):			**38.9 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	767.1 ft		
Elevation Up (ft)	1194.43		
Elevation Down (ft)	1112.35		
Watercourse Slope (ft/ft)	0.107		
Average Velocity (ft/Sec)	5.3		
Time Of Concentration (Mins)	2.42		
Total Shallow Concentrated Tc (Mins):			**2.4 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**41.4 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	11
TOTAL BASIN LENGTH:	520.1 ft
TOTAL ELEVATION UP:	1208.49
TOTAL ELEVATION DOWN:	1160.73
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	248.0	2.72	55.0 mins.
Shallow Concentrated Flow	272.1	45.04	0.7 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**520.1**	**47.76**	**55.7 mins.**

NOTES:
This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	248		
Elevation Up (ft)	1208.49		
Elevation Down (ft)	1205.77		
Land Slope (ft/ft)	0.011		
Time Of Concentration (Mins)	55.00		
Total Sheet Flow Tc (Minutes):			**55.0 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	272.1 ft		
Elevation Up (ft)	1205.77		
Elevation Down (ft)	1160.73		
Watercourse Slope (ft/ft)	0.166		
Average Velocity (ft/Sec)	6.6		
Time Of Concentration (Mins)	0.69		
Total Shallow Concentrated Tc (Mins):			**0.7 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**55.7 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	12
TOTAL BASIN LENGTH:	445.7 ft
TOTAL ELEVATION UP:	1206.11
TOTAL ELEVATION DOWN:	1166.81
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	225.5	11.39	27.7 mins.
Shallow Concentrated Flow	220.2	27.91	0.6 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**445.7**	**39.30**	**28.3 mins.**

NOTES:
This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	225.5		
Elevation Up (ft)	1206.11		
Elevation Down (ft)	1194.72		
Land Slope (ft/ft)	0.051		
Time Of Concentration (Mins)	27.67		
Total Sheet Flow Tc (Minutes):			**27.7 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	220.2 ft		
Elevation Up (ft)	1194.72		
Elevation Down (ft)	1166.81		
Watercourse Slope (ft/ft)	0.127		
Average Velocity (ft/Sec)	5.7		
Time Of Concentration (Mins)	0.64		
Total Shallow Concentrated Tc (Mins):			**0.6 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**28.3 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	13
TOTAL BASIN LENGTH:	941.8 ft
TOTAL ELEVATION UP:	1206.11
TOTAL ELEVATION DOWN:	1116.12
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	293.2	17.07	32.2 mins.
Shallow Concentrated Flow	648.6	72.92	2.0 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**941.8**	**89.99**	**34.2 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	293.2		
Elevation Up (ft)	1206.11		
Elevation Down (ft)	1189.04		
Land Slope (ft/ft)	0.058		
Time Of Concentration (Mins)	32.25		
Total Sheet Flow Tc (Minutes):			**32.2 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	648.6 ft		
Elevation Up (ft)	1189.04		
Elevation Down (ft)	1116.12		
Watercourse Slope (ft/ft)	0.112		
Average Velocity (ft/Sec)	5.4		
Time Of Concentration (Mins)	2.00		
Total Shallow Concentrated Tc (Mins):			**2.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**34.2 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	14
TOTAL BASIN LENGTH:	742.6 ft
TOTAL ELEVATION UP:	1214.27
TOTAL ELEVATION DOWN:	1134.57
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	31.01	26.1 mins.
Shallow Concentrated Flow	442.6	48.69	1.4 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**742.6**	**79.70**	**27.5 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1214.27		
Elevation Down (ft)	1183.26		
Land Slope (ft/ft)	0.103		
Time Of Concentration (Mins)	26.11		
Total Sheet Flow Tc (Minutes):			**26.1 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	442.6 ft		
Elevation Up (ft)	1183.26		
Elevation Down (ft)	1134.57		
Watercourse Slope (ft/ft)	0.110		
Average Velocity (ft/Sec)	5.4		
Time Of Concentration (Mins)	1.38		
Total Shallow Concentrated Tc (Mins):			**1.4 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**27.5 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	15
TOTAL BASIN LENGTH:	806.2 ft
TOTAL ELEVATION UP:	1222.79
TOTAL ELEVATION DOWN:	1189.64
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	4.37	57.2 mins.
Shallow Concentrated Flow	506.2	28.78	2.2 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**806.2**	**33.15**	**59.4 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.41		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1222.79		
Elevation Down (ft)	1218.42		
Land Slope (ft/ft)	0.015		
Time Of Concentration (Mins)	57.17		
Total Sheet Flow Tc (Minutes):			**57.2 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	506.2 ft		
Elevation Up (ft)	1218.42		
Elevation Down (ft)	1189.64		
Watercourse Slope (ft/ft)	0.057		
Average Velocity (ft/Sec)	3.8		
Time Of Concentration (Mins)	2.19		
Total Shallow Concentrated Tc (Mins):			**2.2 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Existing
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**59.4 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed
DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	1
TOTAL BASIN LENGTH:	479.0 ft
TOTAL ELEVATION UP:	1154.50
TOTAL ELEVATION DOWN:	1111.01
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	21.32	25.5 mins.
Shallow Concentrated Flow	179.0	22.17	0.5 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**479.0**	**43.49**	**26.0 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1154.50		
Elevation Down (ft)	1133.18		
Land Slope (ft/ft)	0.071		
Time Of Concentration (Mins)	25.49		
Total Sheet Flow Tc (Minutes):			**25.5 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	179.0 ft		
Elevation Up (ft)	1133.18		
Elevation Down (ft)	1111.01		
Watercourse Slope (ft/ft)	0.124		
Average Velocity (ft/Sec)	5.7		
Time Of Concentration (Mins)	0.53		
Total Shallow Concentrated Tc (Mins):			**0.5 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**26.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	2
TOTAL BASIN LENGTH:	1281.4 ft
TOTAL ELEVATION UP:	1151.98
TOTAL ELEVATION DOWN:	1028.12
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	25.59	23.7 mins.
Shallow Concentrated Flow	981.4	98.27	3.2 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**1281.4**	**123.86**	**26.9 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1151.98		
Elevation Down (ft)	1126.39		
Land Slope (ft/ft)	0.085		
Time Of Concentration (Mins)	23.70		
Total Sheet Flow Tc (Minutes):			**23.7 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	981.4 ft		
Elevation Up (ft)	1126.39		
Elevation Down (ft)	1028.12		
Watercourse Slope (ft/ft)	0.100		
Average Velocity (ft/Sec)	5.1		
Time Of Concentration (Mins)	3.20		
Total Shallow Concentrated Tc (Mins):			**3.2 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**26.9 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	3
TOTAL BASIN LENGTH:	1093.1 ft
TOTAL ELEVATION UP:	1199.49
TOTAL ELEVATION DOWN:	1114.25
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	22.86	24.8 mins.
Shallow Concentrated Flow	793.1	62.38	2.9 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**1093.1**	**85.24**	**27.7 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1199.49		
Elevation Down (ft)	1176.63		
Land Slope (ft/ft)	0.076		
Time Of Concentration (Mins)	24.79		
Total Sheet Flow Tc (Minutes):			**24.8 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	793.1 ft		
Elevation Up (ft)	1176.63		
Elevation Down (ft)	1114.25		
Watercourse Slope (ft/ft)	0.079		
Average Velocity (ft/Sec)	4.5		
Time Of Concentration (Mins)	2.92		
Total Shallow Concentrated Tc (Mins):			**2.9 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**27.7 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	4
TOTAL BASIN LENGTH:	388.1 ft
TOTAL ELEVATION UP:	1124.30
TOTAL ELEVATION DOWN:	1105.59
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	12.65	31.4 mins.
Shallow Concentrated Flow	88.1	6.06	0.3 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**388.1**	**18.71**	**31.8 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1124.30		
Elevation Down (ft)	1111.65		
Land Slope (ft/ft)	0.042		
Time Of Concentration (Mins)	31.41		
Total Sheet Flow Tc (Minutes):			**31.4 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	88.1 ft		
Elevation Up (ft)	1111.65		
Elevation Down (ft)	1105.59		
Watercourse Slope (ft/ft)	0.069		
Average Velocity (ft/Sec)	4.2		
Time Of Concentration (Mins)	0.35		
Total Shallow Concentrated Tc (Mins):			**0.3 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**31.8 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	FID 5
TOTAL BASIN LENGTH:	479.8 ft
TOTAL ELEVATION UP:	1181.40
TOTAL ELEVATION DOWN:	1132.50
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	230.3	19.80	19.1 mins.
Shallow Concentrated Flow	249.5	29.10	0.8 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**479.8**	**48.90**	**19.9 mins.**

NOTES:
This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	230.3		
Elevation Up (ft)	1181.40		
Elevation Down (ft)	1161.60		
Land Slope (ft/ft)	0.086		
Time Of Concentration (Mins)	19.12		
Total Sheet Flow Tc (Minutes):			**19.1 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	249.5 ft		
Elevation Up (ft)	1161.60		
Elevation Down (ft)	1132.50		
Watercourse Slope (ft/ft)	0.117		
Average Velocity (ft/Sec)	5.5		
Time Of Concentration (Mins)	0.75		
Total Shallow Concentrated Tc (Mins):			**0.8 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**19.9 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	7
TOTAL BASIN LENGTH:	1505.9 ft
TOTAL ELEVATION UP:	1206.40
TOTAL ELEVATION DOWN:	1050.60
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	278.4	9.40	32.3 mins.
Shallow Concentrated Flow	1227.5	146.40	3.7 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**1505.9**	**155.80**	**36.0 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	278.4		
Elevation Up (ft)	1206.40		
Elevation Down (ft)	1197.00		
Land Slope (ft/ft)	0.034		
Time Of Concentration (Mins)	32.34		
Total Sheet Flow Tc (Minutes):			**32.3 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	1227.5 ft		
Elevation Up (ft)	1197.00		
Elevation Down (ft)	1050.60		
Watercourse Slope (ft/ft)	0.119		
Average Velocity (ft/Sec)	5.6		
Time Of Concentration (Mins)	3.67		
Total Shallow Concentrated Tc (Mins):			**3.7 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**36.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	8
TOTAL BASIN LENGTH:	817.6 ft
TOTAL ELEVATION UP:	1207.60
TOTAL ELEVATION DOWN:	1103.10
TOTAL ACRES:	4.63

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	280.1	22.20	23.1 mins.
Shallow Concentrated Flow	537.5	82.30	1.4 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**817.6**	**104.50**	**24.5 mins.**

NOTES:
This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	280.1		
Elevation Up (ft)	1207.60		
Elevation Down (ft)	1185.40		
Land Slope (ft/ft)	0.079		
Time Of Concentration (Mins)	23.10		
Total Sheet Flow Tc (Minutes):			**23.1 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	537.5 ft		
Elevation Up (ft)	1185.40		
Elevation Down (ft)	1103.10		
Watercourse Slope (ft/ft)	0.153		
Average Velocity (ft/Sec)	6.3		
Time Of Concentration (Mins)	1.42		
Total Shallow Concentrated Tc (Mins):			**1.4 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**24.5 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	9
TOTAL BASIN LENGTH:	1656.6 ft
TOTAL ELEVATION UP:	1222.37
TOTAL ELEVATION DOWN:	1124.57
TOTAL ACRES:	7.97

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	1.93	66.6 mins.
Shallow Concentrated Flow	1356.6	95.87	5.3 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**1656.6**	**97.80**	**71.9 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1222.37		
Elevation Down (ft)	1220.44		
Land Slope (ft/ft)	0.006		
Time Of Concentration (Mins)	66.64		
Total Sheet Flow Tc (Minutes):			**66.6 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	1356.6 ft		
Elevation Up (ft)	1220.44		
Elevation Down (ft)	1124.57		
Watercourse Slope (ft/ft)	0.071		
Average Velocity (ft/Sec)	4.3		
Time Of Concentration (Mins)	5.27		
Total Shallow Concentrated Tc (Mins):			**5.3 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**71.9 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	10
TOTAL BASIN LENGTH:	1050.8 ft
TOTAL ELEVATION UP:	1204.08
TOTAL ELEVATION DOWN:	1112.35
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	283.7	9.65	32.7 mins.
Shallow Concentrated Flow	767.1	82.08	2.4 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**1050.8**	**91.73**	**35.2 mins.**

NOTES:
This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	283.7		
Elevation Up (ft)	1204.08		
Elevation Down (ft)	1194.43		
Land Slope (ft/ft)	0.034		
Time Of Concentration (Mins)	32.74		
Total Sheet Flow Tc (Minutes):			**32.7 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	767.1 ft		
Elevation Up (ft)	1194.43		
Elevation Down (ft)	1112.35		
Watercourse Slope (ft/ft)	0.107		
Average Velocity (ft/Sec)	5.3		
Time Of Concentration (Mins)	2.42		
Total Shallow Concentrated Tc (Mins):			**2.4 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**35.2 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	11
TOTAL BASIN LENGTH:	520.1 ft
TOTAL ELEVATION UP:	1208.49
TOTAL ELEVATION DOWN:	1160.73
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	248.0	2.72	46.2 mins.
Shallow Concentrated Flow	272.1	45.04	0.7 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**520.1**	**47.76**	**46.9 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	248		
Elevation Up (ft)	1208.49		
Elevation Down (ft)	1205.77		
Land Slope (ft/ft)	0.011		
Time Of Concentration (Mins)	46.23		
Total Sheet Flow Tc (Minutes):			**46.2 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	272.1 ft		
Elevation Up (ft)	1205.77		
Elevation Down (ft)	1160.73		
Watercourse Slope (ft/ft)	0.166		
Average Velocity (ft/Sec)	6.6		
Time Of Concentration (Mins)	0.69		
Total Shallow Concentrated Tc (Mins):			**0.7 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**46.9 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	12
TOTAL BASIN LENGTH:	445.7 ft
TOTAL ELEVATION UP:	1206.11
TOTAL ELEVATION DOWN:	1166.81
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	225.5	11.39	23.3 mins.
Shallow Concentrated Flow	220.2	27.91	0.6 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**445.7**	**39.30**	**23.9 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	225.5		
Elevation Up (ft)	1206.11		
Elevation Down (ft)	1194.72		
Land Slope (ft/ft)	0.051		
Time Of Concentration (Mins)	23.26		
Total Sheet Flow Tc (Minutes):			**23.3 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	220.2 ft		
Elevation Up (ft)	1194.72		
Elevation Down (ft)	1166.81		
Watercourse Slope (ft/ft)	0.127		
Average Velocity (ft/Sec)	5.7		
Time Of Concentration (Mins)	0.64		
Total Shallow Concentrated Tc (Mins):			**0.6 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**23.9 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	13
TOTAL BASIN LENGTH:	941.8 ft
TOTAL ELEVATION UP:	1206.11
TOTAL ELEVATION DOWN:	1116.12
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	293.2	17.07	27.1 mins.
Shallow Concentrated Flow	648.6	72.92	2.0 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**941.8**	**89.99**	**29.1 mins.**

NOTES:

This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	293.2		
Elevation Up (ft)	1206.11		
Elevation Down (ft)	1189.04		
Land Slope (ft/ft)	0.058		
Time Of Concentration (Mins)	27.11		
Total Sheet Flow Tc (Minutes):			**27.1 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	648.6 ft		
Elevation Up (ft)	1189.04		
Elevation Down (ft)	1116.12		
Watercourse Slope (ft/ft)	0.112		
Average Velocity (ft/Sec)	5.4		
Time Of Concentration (Mins)	2.00		
Total Shallow Concentrated Tc (Mins):			**2.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed
DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**29.1 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	14
TOTAL BASIN LENGTH:	742.6 ft
TOTAL ELEVATION UP:	1214.27
TOTAL ELEVATION DOWN:	1134.57
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	31.01	21.9 mins.
Shallow Concentrated Flow	442.6	48.69	1.4 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**742.6**	**79.70**	**23.3 mins.**

NOTES:
This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1214.27		
Elevation Down (ft)	1183.26		
Land Slope (ft/ft)	0.103		
Time Of Concentration (Mins)	21.95		
Total Sheet Flow Tc (Minutes):			**21.9 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	442.6 ft		
Elevation Up (ft)	1183.26		
Elevation Down (ft)	1134.57		
Watercourse Slope (ft/ft)	0.110		
Average Velocity (ft/Sec)	5.4		
Time Of Concentration (Mins)	1.38		
Total Shallow Concentrated Tc (Mins):			**1.4 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**23.3 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

Drainage Area Information

DRAINAGE AREA ID:	15
TOTAL BASIN LENGTH:	806.2 ft
TOTAL ELEVATION UP:	1222.79
TOTAL ELEVATION DOWN:	1189.64
TOTAL ACRES:	28.08

Drainage Area Tc Summary Data

Flow Type	Length (ft)	Elev. Diff.	Tc
Sheet Flow	300.0	4.37	48.1 mins.
Shallow Concentrated Flow	506.2	28.78	2.2 mins.
Channel Flow - Rectangular	0.0	0.00	0.0 mins.
Channel Flow - Triangular	0.0	0.00	0.0 mins.
Channel Flow - Trapezoidal	0.0	0.00	0.0 mins.
Channel Flow - Circular	0.0	0.00	0.0 mins.
Basin Totals	**806.2**	**33.15**	**50.3 mins.**

NOTES:
This time of concentration calculation is based on survey data, aerial photography, and field investigation.

1. SHEET FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Grass		
Manning's "n"	0.33		
2- Year, 24- Hr. Rain Fall (In)	3.51		
Flow Length (ft)	300		
Elevation Up (ft)	1222.79		
Elevation Down (ft)	1218.42		
Land Slope (ft/ft)	0.015		
Time Of Concentration (Mins)	48.06		
Total Sheet Flow Tc (Minutes):			**48.1 min.**

2. SHALLOW CONCENTRATED FLOW

	Segment #1	Segment #2	Segment #3
Surface Description	Unpaved		
Flow Length (ft)	506.2 ft		
Elevation Up (ft)	1218.42		
Elevation Down (ft)	1189.64		
Watercourse Slope (ft/ft)	0.057		
Average Velocity (ft/Sec)	3.8		
Time Of Concentration (Mins)	2.19		
Total Shallow Concentrated Tc (Mins):			**2.2 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

3. CHANNEL FLOW - RECTANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Area (Sq. ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wetted Perimeter (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Radius (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Rectangular Channel Tc (Mins):	**0.0 mins.**

4. CHANNEL FLOW - TRIANGULAR CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Top Width (ft)									
Depth (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Triangular Channel Tc	**0.0 min.**

Time of Concentration Worksheet
SCS TR-55 Method

PROJECT: Stonington
SCENARIO: Proposed

DATE: 08/13/20
PREPARED BY: Rachel Sills

5. CHANNEL FLOW - TRAPEZOIDAL CHANNEL

	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Bottom Width (ft)									
Depth (ft)									
Side Slopes (?H:1V) (ft)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Trapezoidal Channel Tc	**0.0 min.**

6. CHANNEL FLOW - CIRCULAR CHANNEL (Gravity Flow)

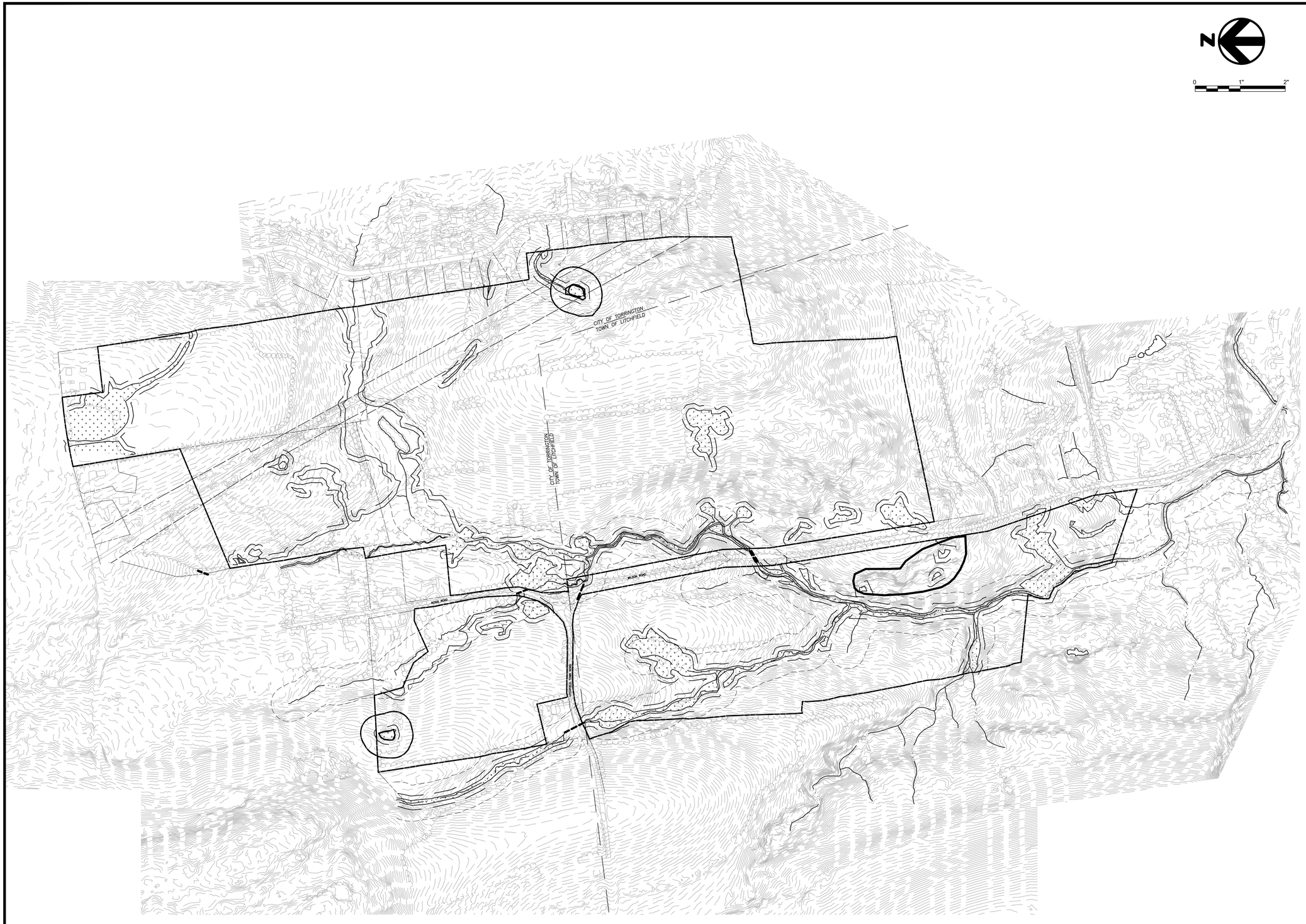
	Segment #1	Segment #2	Segment #3	Segment #4	Segment #5	Segment #6	Segment #7	Segment #8	Segment #9
Surface Description									
Pipe Diameter (In)									
Area (Sq. ft)									
Wetted Perimeter (ft)									
Hydraulic Radius (ft)									
Flow Length (ft)									
Elevation Up (ft)									
Elevation Down (ft)									
Channel Slope (ft/ft)									
Manning's "n"									
Average Velocity (ft/Sec)									
Time Of Concentration (Mins)									
								Total Circular Channel Tc (Mins):	**0.0 min.**

7. Total Basin Time of Concentration (Mintues)

Total Basin Tc (Mins):	**50.3 min.**

Appendix F

Map of Wetlands



HDR

SILICON RANCH

NOT FOR CONSTRUCTION

LITCHFIELD SOLAR

2-298 ROSSI RD
TORRINGTON, CT 06790, USA

LAT: 41.794157°N
LON: 73.168028°W

LITCHFIELD, CT

REV. NO	DESCRIPTION	DATE
1	RE-ISSUED FOR PERMIT	01/29/21
0	ISSUED FOR PERMIT	09/30/20

SHEET TITLE:

WETLAND EXHIBIT

PROJ. MGR.	PROJ. ENGR.	DATE:
WK	MB	09/30/20
DRAWN BY: NC	CHECKED BY: CP	SCALE: 1"=250'

DRAWING NO.

EXHIBIT

Appendix G

Erosion and Sediment Control Calculations

RISER SEDIMENT BASIN CALCULATIONS			
SRC Litchfield			
HDR PROJECT NO.:	-		
DATE: 9/28/2020		BY:	NC
REVISED:		RVW:	DB

Riser Sediment Basin : Pond-1 **Scenario:** E&SC

Drainage Area Characteristics		
Total drainage area (TDA)[1]	2.56	ac
Disturbed area (DA)	2.56	ac
Time of Concentration (T_c)	26.0	min
10 Yr Storm Rainfall Intensity (I)[4]	0.2	in/hr

Required Storage Volume		
10 Yr Peak Flow (Q_{10})	2.02	cfs
Req'd Sediment Storage Volume[3]	16.84	cf
Req'd Basin Storage Volume (V_s)[5]	3,717	cf
Total Basin Storage Volume[5]	3,734	cf

Design Criteria		
Bottom Elevation	1110.00	msl
Depth of Sediment Storage Volume	0.50	ft
Depth of Flow Over Riser	0.36	ft
Depth of Wet Storage Volume (Min 2 ft)	2.50	
Runoff Depth from Hydrographs (V_r)	2.53	inch

Basin Size

Elev. (msl)	Depth (ft)	Area (sf)	Cumulative Volume (cf)
1110.00	0.00	1,909	0
1111.00	1.00	2,541	2,217
1112.00	2.00	3,270	5,115
1113.00	3.00	4,109	8,797
1114.00	4.00	5,086	13,386
1115.00	5.00	6,259	19,048

Basin Configuration			
Bottom Elevation	1110.00	msl	
Sediment Storage Elevation	1110.50	msl	
Riser Crest	1112.50	msl	
Emergency Spillway	1114.50	msl	
Top of Berm	1115.00	msl	OK
Highwater elevation (10-yr) from Hydrograph	1112.86	msl	

Basin Size Check		
Storage Volume Provided Below Riser Crest	7,321	cf

Q10/DA Ratio	0.79		
Qo/Qi Ratio from Figure SB-13	0.09		
Outflow rate (Qo)	0.18	cfs	
Release rate	45	csm	
Storage in watershed (Vs) from Figure DB-6	0.40	inch	

Average annual erosion[7]	1	tons/ac	Figure SB-1
Delivery Ratio[8]	0.37		Figure SB-12
Trap Efficiency[5]	0.80		
Sediment Density[16]	90	lbs/cu.ft	Figure SB-2

Required Riser Diameter 25

Barrel				
Riser Diameter[9]	30	in	Riser Flow as Weir[13]	5.26 cfs
Barrel Diameter (15 in min)[5]	18	in	Riser Flow as Orifice[14]	14.18 cfs
Barrel Invert Elevation	127.20	msl		
Barrel Length	40.00	ft	Barrel Flow as Orifice[14]	267.26 cfs
Barrel Manning's N[10]	0.025		Barrel Flow as Pipe[15]	205.55 cfs
Sharp Crested Weir Coefficient (C)[11]	3.1			
Orifice Coefficient (C)[12]	0.6		Controlling Flow through Riser and Barrel Spillway	5.26 cfs

Emergency Spillway Design		
Spillway Length	20	ft

Notes

1. See attached drainage area map.
2. Entire area is denuded. Rational coefficient for smooth bare packed soil is 0.45.
3. Volume required is calculated using volume equation from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

$$V = \frac{(DA)(A)(DR)(TE)(2{,}000\text{lbs./ton})}{(\gamma)(43{,}560\text{sq.ft./ac})}$$

4. Rainfall intensity at project location was acquired from the NOAA website, http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.
5. From Section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
6. Design Elevations from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
7. Obtained from Figure SB-1 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
8. Obtained from Figure SB-12 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
9. Riser cross-sectional area is required to be more than 2 times the barrel cross-sectional area.
10. Use 0.025 for CMP and 0.012 for RCP.
11. 3.1 for corrugated metal pipe risers
12. 0.6 for corrugated metal pipe risers
13. Weir equation: $Q = CLH^{1.5}$ (see note 11)
14. Orifice equation: $Q = CA\,(2gH)^{0.5}$ (see note 12)
15. Pipe Flow equation: $Q = a\left[\frac{2gh}{1 + K_m + K_p L}\right]^{0.5}$
16. Obtained from Figure SB-2 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

RISER SEDIMENT BASIN CALCULATIONS			
SRC Litchfield			
HDR PROJECT NO.:	-		
DATE: 9/16/2020		BY:	NC
REVISED:		RVW:	DB

Riser Sediment Basin : Pond-2

Scenario: E&SC

Drainage Area Characteristics		
Total drainage area (TDA)[1]	11.57	ac
Disturbed area (DA)	11.57	ac
Time of Concentration (T_c)	31.4	min
10 Yr Storm Rainfall Intensity (I)[4]	0.2	in/hr

Required Storage Volume		
10 Yr Peak Flow (Q_{10})	5.61	cfs
Req'd Sediment Storage Volume[3]	76.10	cf
Req'd Basin Storage Volume (V_s)[5]	39,899	cf
Total Basin Storage Volume[5]	39,975	cf

Design Criteria		
Bottom Elevation	1038.00	msl
Depth of Sediment Storage Volume	0.50	ft
Depth of Flow Over Riser	0.20	ft
Depth of Wet Storage Volume (Min 2 ft)	7.00	
Runoff Depth from Hydrographs (V_r)	1.80	inch

Basin Size			
Elev. (msl)	Depth (ft)	Area (sf)	Cumulative Volume (cf)
1038.00	0.00	2,587	0
1039.00	1.00	3,358	2,964
1040.00	2.00	4,190	6,730
1041.00	3.00	5,092	11,364
1042.00	4.00	6,066	16,936
1043.00	5.00	7,116	23,520
1044.00	6.00	8,251	31,197
1045.00	7.00	9,480	40,055
1046.00	8.00	10,859	50,217

Basin Configuration		
Bottom Elevation	1038.00	msl
Sediment Storage Elevation	1038.50	msl
Riser Crest	1045.00	msl
Emergency Spillway	1045.50	msl
Top of Berm	1046.00	msl
Highwater elevation (10-yr) from Hydrograph	1045.20	msl

Raise berm

Basin Size Check		
Storage Volume Provided Below Riser Crest	40,725	cf

Q10/DA Ratio	0.48		
Qo/Qi Ratio from Figure SB-13	0.09		
Outflow rate (Qo)	0.50	cfs	
Release rate	28	csm	
Storage in watershed (Vs) from Figure DB-6	0.95	inch	

Average annual erosion[7]	1	tons/ac	Figure SB-1
Delivery Ratio[8]	0.37		Figure SB-12
Trap Efficiency[5]	0.80		
Sediment Density[16]	90	lbs/cu.ft	Figure SB-2

Required Riser Diameter 25

Barrel				
Riser Diameter[9]	30	in	Riser Flow as Weir[13]	2.18 cfs
Barrel Diameter (15 in min)[5]	18	in	Riser Flow as Orifice[14]	10.57 cfs
Barrel Invert Elevation	127.20	msl		
Barrel Length	54.00	ft	Barrel Flow as Orifice[14]	257.74 cfs
Barrel Manning's N[10]	0.025		Barrel Flow as Pipe[15]	180.89 cfs
Sharp Crested Weir Coefficient (C)[11]	3.1			
Orifice Coefficient (C)[12]	0.6		Controlling Flow through Riser and Barrel Spillway	2.18 cfs

Emergency Spillway Design		
Spillway Length	40	ft

Notes

1. See attached drainage area map.
2. Entire area is denuded. Rational coefficient for smooth bare packed soil is 0.45.
3. Volume required is calculated using volume equation from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

$$V = \frac{(DA)(A)(DR)(TE)(2{,}000\text{lbs./ton})}{(\gamma)(43{,}560\text{sq.ft./ac})}$$

4. Rainfall intensity at project location was acquired from the NOAA website, http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.
5. From Section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
6. Design Elevations from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
7. Obtained from Figure SB-1 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
8. Obtained from Figure SB-12 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
9. Riser cross-sectional area is required to be more than 2 times the barrel cross-sectional area.
10. Use 0.025 for CMP and 0.012 for RCP.
11. 3.1 for corrugated metal pipe risers
12. 0.6 for corrugated metal pipe risers
13. Weir equation: $Q = CLH^{1.5}$ (see note 11)
14. Orifice equation: $Q = CA\,(2gH)^{0.5}$ (see note 12)
15. Pipe Flow equation: $Q = a\left[\frac{2gh}{1 + K_m + K_p L}\right]^{0.5}$
16. Obtained from Figure SB-2 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

RISER SEDIMENT BASIN CALCULATIONS			
SRC Litchfield			
HDR PROJECT NO.:	-		
DATE:	9/16/2020	BY:	NC
REVISED:	09/28/20	RVW:	DB

Riser Sediment Basin : Pond-3

Scenario: E&SC

Drainage Area Characteristics		
Total drainage area (TDA)[1]	13.57	ac
Disturbed area (DA)	13.57	ac
Time of Concentration (T_c)	32.4	min
10 Yr Storm Rainfall Intensity (I)[4]	0.2	in/hr

Required Storage Volume		
10 Yr Peak Flow (Q_{10})	21.27	cfs
Req'd Sediment Storage Volume[3]	84.44	cf
Req'd Basin Storage Volume (V_s)[5]	66,500	cf
Total Basin Storage Volume[5]	66,584	cf

Design Criteria		
Bottom Elevation	1131.00	msl
Depth of Sediment Storage Volume	0.50	ft
Depth of Flow Over Riser	0.10	ft
Depth of Wet Storage Volume (Min 2 ft)	3.50	
Runoff Depth from Hydrographs (V_r)	2.44	inch

Basin Size			
Elev. (msl)	Depth (ft)	Area (sf)	Cumulative Volume (cf)
1131.00	0.00	17,875	0
1132.00	1.00	19,658	18,759
1133.00	2.00	21,501	39,332
1134.00	3.00	23,407	61,779
1135.00	4.00	25,376	86,164

Basin Configuration		
Bottom Elevation	1131.00	msl
Sediment Storage Elevation	1131.50	msl
Riser Crest	1134.50	msl
Emergency Spillway	1134.50	msl
Top of Berm	1135.00	msl
Highwater elevation (10-yr) from Hydrograph	1134.60	msl

Raise berm

Basin Size Check		
Storage Volume Provided Below Riser Crest	73,750	cf

Q10/DA Ratio	1.57		
Qo/Qi Ratio from Figure SB-13	0.09		
Outflow rate (Qo)	1.91	cfs	
Release rate	90	csm	
Storage in watershed (Vs) from Figure DB-6	1.35	inch	

Average annual erosion[7]	1	tons/ac	Figure SB-1
Delivery Ratio[8]	0.35		Figure SB-12
Trap Efficiency[5]	0.80		
Sediment Density[16]	90	lbs/cu.ft	Figure SB-2

Required Riser Diameter 34

Barrel				
Riser Diameter[9]	36	in	Riser Flow as Weir[13]	0.92 cfs
Barrel Diameter (15 in min)[5]	24	in	Riser Flow as Orifice[14]	10.76 cfs
Barrel Invert Elevation	1131.00	msl		
Barrel Length	60.00	ft	Barrel Flow as Orifice[14]	23.92 cfs
Barrel Manning's N[10]	0.014		Barrel Flow as Pipe[15]	23.55 cfs
Sharp Crested Weir Coefficient (C)[11]	3.1			
Orifice Coefficient (C)[12]	0.6		Controlling Flow through Riser and Barrel Spillway	0.92 cfs

Emergency Spillway Design		
Minimum Allowable Spillway Length	20	ft

Notes

1. See attached drainage area map.
2. Entire area is denuded. Rational coefficient for smooth bare packed soil is 0.45.
3. Volume required is calculated using volume equation from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

$$V = \frac{(DA)(A)(DR)(TE)(2{,}000\text{lbs./ton})}{(\gamma)(43{,}560\text{sq.ft./ac})}$$

4. Rainfall intensity at project location was acquired from the NOAA website, http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.
5. From Section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
6. Design Elevations from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
7. Obtained from Figure SB-1 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
8. Obtained from Figure SB-12 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
9. Riser cross-sectional area is required to be more than 2 times the barrel cross-sectional area.
10. Use 0.025 for CMP and 0.012 for RCP.
11. 3.1 for corrugated metal pipe risers
12. 0.6 for corrugated metal pipe risers
13. Weir equation: $Q = CLH^{1.5}$ (see note 11)
14. Orifice equation: $Q = CA\,(2gH)^{0.5}$ (see note 12)
15. Pipe Flow equation: $Q = a\left[\frac{2gh}{1 + K_m + K_p L}\right]^{0.5}$
16. Obtained from Figure SB-2 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

RISER SEDIMENT BASIN CALCULATIONS			
SRC Litchfield			
HDR PROJECT NO.:	-		
DATE: 9/16/2020		BY:	NC
REVISED:		RVW:	DB

Riser Sediment Basin : Pond-4

Scenario: E&SC

Drainage Area Characteristics		
Total drainage area (TDA)[1]	1.98	ac
Disturbed area (DA)	1.98	ac
Time of Concentration (T_c)	37.7	min
10 Yr Storm Rainfall Intensity (I)[4]	0.2	in/hr

Required Storage Volume		
10 Yr Peak Flow (Q_{10})	2.38	cfs
Req'd Sediment Storage Volume[3]	12.67	cf
Req'd Basin Storage Volume (V_s)[5]	8,050	cf
Total Basin Storage Volume[5]	8,063	cf

Design Criteria		
Bottom Elevation	1105.00	msl
Depth of Sediment Storage Volume	0.50	ft
Depth of Flow Over Riser	0.18	ft
Depth of Wet Storage Volume (Min 2 ft)	2.00	
Runoff Depth from Hydrographs (V_r)	2.03	inch

Basin Size			
Elev. (msl)	Depth (ft)	Area (sf)	Cumulative Volume (cf)
1105.00	0.00	1,005	0
1106.00	1.00	1,578	1,281
1107.00	2.00	2,209	3,165
1108.00	3.00	2,914	5,719
1109.00	4.00	3,691	9,014
1110.00	5.00	4,572	13,137

Basin Configuration		
Bottom Elevation	1105.00	msl
Sediment Storage Elevation	1105.50	msl
Riser Crest	1108.83	msl
Emergency Spillway	1109.40	msl
Top of Berm	1110.00	msl
Highwater elevation (10-yr) from Hydrograph	1109.01	msl

Raise berm

Basin Size Check		
Storage Volume Provided Below Riser Crest	8,529	cf

Q10/DA Ratio	1.20		
Qo/Qi Ratio from Figure SB-13	0.09		
Outflow rate (Qo)	0.21	cfs	
Release rate	69	csm	
Storage in watershed (Vs) from Figure DB-6	1.12	inch	

Average annual erosion[7]	1	tons/ac	Figure SB-1
Delivery Ratio[8]	0.36		Figure SB-12
Trap Efficiency[5]	0.80		
Sediment Density[16]	90	lbs/cu.ft	Figure SB-2

Required Riser Diameter 25

Barrel				
Riser Diameter[9]	30	in	Riser Flow as Weir[13]	1.86 cfs
Barrel Diameter (15 in min)[5]	18	in	Riser Flow as Orifice[14]	10.03 cfs
Barrel Invert Elevation	128.20	msl		
Barrel Length	75.00	ft	Barrel Flow as Orifice[14]	266.43 cfs
Barrel Manning's N[10]	0.012		Barrel Flow as Pipe[15]	249.61 cfs
Sharp Crested Weir Coefficient (C)[11]	3.1			
Orifice Coefficient (C)[12]	0.6		Controlling Flow through Riser and Barrel Spillway	1.86 cfs

Emergency Spillway Design		
Minimum Allowable Spillway Length	20	ft

Notes

1. See attached drainage area map.
2. Entire area is denuded. Rational coefficient for smooth bare packed soil is 0.45.
3. Volume required is calculated using volume equation from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

$$V = \frac{(DA)(A)(DR)(TE)(2{,}000\text{lbs./ton})}{(\gamma)(43{,}560\text{sq.ft./ac})}$$

4. Rainfall intensity at project location was acquired from the NOAA website, http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.
5. From Section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
6. Design Elevations from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
7. Obtained from Figure SB-1 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
8. Obtained from Figure SB-12 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
9. Riser cross-sectional area is required to be more than 2 times the barrel cross-sectional area.
10. Use 0.025 for CMP and 0.012 for RCP.
11. 3.1 for corrugated metal pipe risers
12. 0.6 for corrugated metal pipe risers
13. Weir equation: $Q = CLH^{1.5}$ (see note 11)
14. Orifice equation: $Q = CA\,(2gH)^{0.5}$ (see note 12)
15. Pipe Flow equation: $Q = a\left[\frac{2gh}{1 + K_m + K_p L}\right]^{0.5}$
16. Obtained from Figure SB-2 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

RISER SEDIMENT BASIN CALCULATIONS			
SRC Litchfield			
HDR PROJECT NO.:	-		
DATE: 9/16/2020		BY:	NC
REVISED:		RVW:	DB

Riser Sediment Basin : Pond-5

Scenario: E&SC

Drainage Area Characteristics		
Total drainage area (TDA)[1]	4.31	ac
Disturbed area (DA)	4.31	ac
Time of Concentration (T_c)	23.5	min
10 Yr Storm Rainfall Intensity (I)[4]	0.2	in/hr

Required Storage Volume		
10 Yr Peak Flow (Q_{10})	6.63	cfs
Req'd Sediment Storage Volume[3]	26.82	cf
Req'd Basin Storage Volume (V_s)[5]	21,121	cf
Total Basin Storage Volume[5]	21,148	cf

Design Criteria		
Bottom Elevation	1136.00	msl
Depth of Sediment Storage Volume	0.50	ft
Depth of Flow Over Riser	0.20	ft
Depth of Wet Storage Volume (Min 2 ft)	5.00	
Runoff Depth from Hydrographs (V_r)	2.36	inch

Basin Size			
Elev. (msl)	Depth (ft)	Area (sf)	Cumulative Volume (cf)
1136.00	0.00	3,388	0
1137.00	1.00	4,291	3,831
1138.00	2.00	5,254	8,595
1139.00	3.00	6,281	14,355
1140.00	4.00	7,373	21,175
1141.00	5.00	8,539	29,124
1142.00	6.00	9,800	38,287

Basin Configuration		
Bottom Elevation	1136.00	msl
Sediment Storage Elevation	1136.50	msl
Riser Crest	1141.00	msl
Emergency Spillway	1141.50	msl
Top of Berm	1142.00	msl
Highwater elevation (10-yr) from Hydrograph	1141.20	msl

Raise berm

Basin Size Check		
Storage Volume Provided Below Riser Crest	29,264	cf

Q10/DA Ratio	1.54		
Qo/Qi Ratio from Figure SB-13	0.08		
Outflow rate (Qo)	0.53	cfs	
Release rate	79	csm	
Storage in watershed (Vs) from Figure DB-6	1.35	inch	

Average annual erosion[7]	1	tons/ac	Figure SB-1
Delivery Ratio[8]	0.35		Figure SB-12
Trap Efficiency[5]	0.80		
Sediment Density[16]	90	lbs/cu.ft	Figure SB-2

Required Riser Diameter 24

Barrel				
Riser Diameter[9]	24	in	Riser Flow as Weir[13]	1.74 cfs
Barrel Diameter (15 in min)[5]	15	in	Riser Flow as Orifice[14]	6.76 cfs
Barrel Invert Elevation	1136.00	msl		
Barrel Length	65.00	ft	Barrel Flow as Orifice[14]	13.05 cfs
Barrel Manning's N[10]	0.025		Barrel Flow as Pipe[15]	7.89 cfs
Sharp Crested Weir Coefficient (C)[11]	3.1			
Orifice Coefficient (C)[12]	0.6		Controlling Flow through Riser and Barrel Spillway	1.74 cfs

Emergency Spillway Design		
Minimum Allowable Spillway Length	20	ft

Notes

1. See attached drainage area map.
2. Entire area is denuded. Rational coefficient for smooth bare packed soil is 0.45.
3. Volume required is calculated using volume equation from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

$$V = \frac{(DA)(A)(DR)(TE)(2{,}000\text{lbs./ton})}{(\gamma)(43{,}560\text{sq.ft./ac})}$$

4. Rainfall intensity at project location was acquired from the NOAA website, http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.
5. From Section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
6. Design Elevations from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
7. Obtained from Figure SB-1 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
8. Obtained from Figure SB-12 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
9. Riser cross-sectional area is required to be more than 2 times the barrel cross-sectional area.
10. Use 0.025 for CMP and 0.012 for RCP.
11. 3.1 for corrugated metal pipe risers
12. 0.6 for corrugated metal pipe risers
13. Weir equation: $Q = CLH^{1.5}$ (see note 11)
14. Orifice equation: $Q = CA\,(2gH)^{0.5}$ (see note 12)
15. Pipe Flow equation: $Q = a\left[\frac{2gh}{1 + K_m + K_p L}\right]^{0.5}$
16. Obtained from Figure SB-2 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

RISER SEDIMENT BASIN CALCULATIONS			
SRC Litchfield			
HDR PROJECT NO.:	-		
DATE: 9/16/2020		BY:	NC
REVISED:		RVW:	DB

Riser Sediment Basin : Pond-7

Scenario: E&SC

Drainage Area Characteristics		
Total drainage area (TDA)[1]	13.81	ac
Disturbed area (DA)	13.81	ac
Time of Concentration (T_c)	42.1	min
10 Yr Storm Rainfall Intensity (I)[4]	0.2	in/hr

Required Storage Volume		
10 Yr Peak Flow (Q_{10})	11.19	cfs
Req'd Sediment Storage Volume[3]	90.84	cf
Req'd Basin Storage Volume (V_s)[5]	39,102	cf
Total Basin Storage Volume[5]	39,192	cf

Design Criteria		
Bottom Elevation	1131.50	msl
Depth of Storage Volume	0.50	ft
Depth of Flow Over Riser	0.20	ft
Depth of Wet Storage Volume (Min 2 ft)	3.50	
Runoff Depth from Hydrographs (V_r)	1.51	inch

Basin Size

Elev. (msl)	Depth (ft)	Area (sf)	Cumulative Volume (cf)
1131.50	0.00	9,280	0
1132.00	0.50	9,846	4,781
1133.00	1.50	10,994	15,196
1134.00	2.50	12,206	26,790
1135.00	3.50	13,481	39,628
1136.00	4.50	14,819	53,773

Basin Configuration		
Bottom Elevation	1131.50	msl
Depth of Sediment Storage Volume	1132.00	msl
Riser Crest	1135.00	msl
Emergency Spillway	1135.75	msl
Top of Berm	1136.00	msl
Highwater elevation (10-yr) from Hydrograph	1135.20	msl

Raise berm

Basin Size Check		
Storage Volume Provided Below Riser Crest	39,780	cf

Q10/DA Ratio	0.81	
Qo/Qi Ratio from Figure SB-13	0.11	
Outflow rate (Qo)	1.23	cfs
Release rate	57	csm
Storage in watershed (Vs) from Figure DB-6	0.78	inch

Average annual erosion[7]	1	tons/ac	Figure SB-1
Delivery Ratio[8]	0.37		Figure SB-12
Trap Efficiency[5]	0.80		
Sediment Density[16]	90	lbs/cu.ft	Figure SB-2

Required Riser Diameter 24

Barrel				
Riser Diameter[9]	24	in	Riser Flow as Weir[13]	1.74 cfs
Barrel Diameter (15 in min)[5]	15	in	Riser Flow as Orifice[14]	6.76 cfs
Barrel Invert Elevation	1131.50	msl		
Barrel Length	80.00	ft	Barrel Flow as Orifice[14]	11.25 cfs
Barrel Manning's N[10]	0.025		Barrel Flow as Pipe[15]	6.29 cfs
Sharp Crested Weir Coefficient (C)[11]	3.1			
Orifice Coefficient (C)[12]	0.6		Controlling Flow through Riser and Barrel Spillway	1.74 cfs

Emergency Spillway Design		
Minimum Allowable Spillway Length	20	ft

Notes

1. See attached drainage area map.
2. Entire area is denuded. Rational coefficient for smooth bare packed soil is 0.45.
3. Volume required is calculated using volume equation from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

$$V = \frac{(DA)(A)(DR)(TE)(2{,}000\text{lbs./ton})}{(\gamma)(43{,}560\text{sq.ft./ac})}$$

4. Rainfall intensity at project location was acquired from the NOAA website, http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.
5. From Section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
6. Design Elevations from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
7. Obtained from Figure SB-1 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
8. Obtained from Figure SB-12 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
9. Riser cross-sectional area is required to be more than 2 times the barrel cross-sectional area.
10. Use 0.025 for CMP and 0.012 for RCP.
11. 3.1 for corrugated metal pipe risers
12. 0.6 for corrugated metal pipe risers
13. Weir equation: $Q = CLH^{1.5}$ (see note 11)
14. Orifice equation: $Q = CA\,(2gH)^{0.5}$ (see note 12)
15. Pipe Flow equation: $Q = a\left[\frac{2gh}{1 + K_m + K_p L}\right]^{0.5}$
16. Obtained from Figure SB-2 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

RISER SEDIMENT BASIN CALCULATIONS			
SRC Litchfield			
HDR PROJECT NO.:	-		
DATE:	9/16/2020	BY:	NC
REVISED:	09/28/20	RVW:	DB

Riser Sediment Basin : Pond 8/10

Scenario: E&SC

Drainage Area Characteristics		
Total drainage area (TDA)[1]	34.06	ac
Disturbed area (DA)	34.06	ac
Time of Concentration (T_c)	41.4	min
10 Yr Storm Rainfall Intensity (I)[4]	0.2	in/hr

Required Storage Volume		
10 Yr Peak Flow (Q_{10})	50.00	cfs
Req'd Sediment Storage Volume[3]	211.93	cf
Req'd Basin Storage Volume (V_s)[5]	160,729	cf
Total Basin Storage Volume[5]	160,941	cf

Design Criteria		
Bottom Elevation	1121.70	msl
Depth of Storage Volume	0.50	ft
Depth of Flow Over Riser	0.10	ft
Depth of Wet Storage Volume (Min 2 ft)	3.80	
Runoff Depth from Hydrographs (V_r)	2.36	inch

Basin Size			
Elev. (msl)	Depth (ft)	Area (sf)	Cumulative Volume (cf)
1121.00	-0.70	26,530	0
1122.00	1.00	30,877	28,676
1123.00	2.00	35,293	61,737
1124.00	3.00	39,788	99,255
1125.00	4.00	44,351	141,303
1126.00	5.00	49,000	187,959
1127.00	6.00	53,734	239,308

Basin Configuration		
Bottom Elevation	1121.70	msl
Depth of Sediment Storage Volume	1122.20	msl
Riser Crest	1125.50	msl
Emergency Spillway	1125.80	msl
Top of Berm	1126.00	msl
Highwater elevation (10-yr) from Hydrograph	1125.60	msl

Raise berm

Basin Size Check		
Storage Volume Provided Below Riser Crest	162,754	cf

Q10/DA Ratio	1.47	
Qo/Qi Ratio from Figure SB-13	0.09	
Outflow rate (Qo)	4.50	cfs
Release rate	85	csm
Storage in watershed (Vs) from Figure DB-6	1.30	inch

Average annual erosion[7]	1	tons/ac	Figure SB-1
Delivery Ratio[8]	0.35		Figure SB-12
Trap Efficiency[5]	0.80		
Sediment Density[16]	90	lbs/cu.ft	Figure SB-2

Required Riser Diameter 76

Barrel				
Riser Diameter[9]	80	in	Riser Flow as Weir[13]	2.05 cfs
Barrel Diameter (15 in min)[5]	54	in	Riser Flow as Orifice[14]	53.15 cfs
Barrel Invert Elevation	122.00	msl		
Barrel Length	88.00	ft	Barrel Flow as Orifice[14]	2423.51 cfs
Barrel Manning's N[10]	0.025		Barrel Flow as Pipe[15]	2200.03 cfs
Sharp Crested Weir Coefficient (C)[11]	3.1			
Orifice Coefficient (C)[12]	0.6		Controlling Flow through Riser and Barrel Spillway	2.05 cfs

Emergency Spillway Design		
Minimum Allowable Spillway Length	50	ft

Notes

1. See attached drainage area map.
2. Entire area is denuded. Rational coefficient for smooth bare packed soil is 0.45.
3. Volume required is calculated using volume equation from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

$$V = \frac{(DA)(A)(DR)(TE)(2{,}000\text{lbs./ton})}{(\gamma)(43{,}560\text{sq.ft./ac})}$$

4. Rainfall intensity at project location was acquired from the NOAA website, http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.
5. From Section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
6. Design Elevations from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
7. Obtained from Figure SB-1 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
8. Obtained from Figure SB-12 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
9. Riser cross-sectional area is required to be more than 2 times the barrel cross-sectional area.
10. Use 0.025 for CMP and 0.012 for RCP.
11. 3.1 for corrugated metal pipe risers
12. 0.6 for corrugated metal pipe risers
13. Weir equation: $Q = CLH^{1.5}$ (see note 11)
14. Orifice equation: $Q = CA\,(2gH)^{0.5}$ (see note 12)
15. Pipe Flow equation: $Q = a\left[\frac{2gh}{1 + K_m + K_p L}\right]^{0.5}$
16. Obtained from Figure SB-2 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

RISER SEDIMENT BASIN CALCULATIONS			
SRC Litchfield			
HDR PROJECT NO.:	-		
DATE: 9/16/2020		BY:	NC
REVISED:		RVW:	DB

Riser Sediment Basin : Pond-9

Scenario: E&SC

Drainage Area Characteristics		
Total drainage area (TDA)[1]	18.86	ac
Disturbed area (DA)	18.86	ac
Time of Concentration (T_c)	84.5	min
10 Yr Storm Rainfall Intensity (I)[4]	0.2	in/hr

Required Storage Volume		
10 Yr Peak Flow (Q_{10})	12.62	cfs
Req'd Sediment Storage Volume[3]	110.65	cf
Req'd Basin Storage Volume (V_s)[5]	68,462	cf
Total Basin Storage Volume[5]	68,572	cf

Design Criteria		
Bottom Elevation	1145.00	msl
Depth of Sediment Storage Volume	0.50	ft
Depth of Flow Over Riser	1.20	ft
Depth of Wet Storage Volume (Min 2 ft)	5.00	
Runoff Depth from Hydrographs (V_r)	2.08	inch

Basin Size			
Elev. (msl)	Depth (ft)	Area (sf)	Cumulative Volume (cf)
1145.00	0.00	7,848	0
1146.00	1.00	10,697	9,236
1147.00	2.00	13,633	21,371
1148.00	3.00	16,651	36,488
1149.00	4.00	19,766	54,674
1150.00	5.00	22,978	76,026
1151.00	6.00	26,303	100,648
1152.00	7.00	29,758	128,661
1153.00	8.00	33,522	160,282

Basin Configuration		
Bottom Elevation	1145.00	msl
Sediment Storage Elevation	1145.50	msl
Riser Crest	1150.00	msl
Emergency Spillway	1152.00	msl
Top of Berm	1153.00	msl
Highwater elevation (10-yr) from Hydrograph	1151.20	msl

OK

Basin Size Check		
Storage Volume Provided Below Riser Crest	76,026	cf

Q10/DA Ratio	0.67		
Qo/Qi Ratio from Figure SB-13	0.22		
Outflow rate (Qo)	2.78	cfs	
Release rate	94	csm	
Storage in watershed (Vs) from Figure DB-6	1.00	inch	

Average annual erosion[7]	1	tons/ac	Figure SB-1
Delivery Ratio[8]	0.33		Figure SB-12
Trap Efficiency[5]	0.80		
Sediment Density[16]	90	lbs/cu.ft	Figure SB-2

Required Riser Diameter 25

Barrel				
Riser Diameter[9]	30	in	Riser Flow as Weir[13]	32.01 cfs
Barrel Diameter (15 in min)[5]	18	in	Riser Flow as Orifice[14]	25.89 cfs
Barrel Invert Elevation	1145.00	msl		
Barrel Length	85.00	ft	Barrel Flow as Orifice[14]	21.27 cfs
Barrel Manning's N[10]	0.025		Barrel Flow as Pipe[15]	12.75 cfs
Sharp Crested Weir Coefficient (C)[11]	3.1			
Orifice Coefficient (C)[12]	0.6		Controlling Flow through Riser and Barrel Spillway	12.75 cfs

Emergency Spillway Design		
Minimum Allowable Spillway Length	60	ft

Notes

1. See attached drainage area map.
2. Entire area is denuded. Rational coefficient for smooth bare packed soil is 0.45.
3. Volume required is calculated using volume equation from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

$$V = \frac{(DA)(A)(DR)(TE)(2{,}000\text{lbs./ton})}{(\gamma)(43{,}560\text{sq.ft./ac})}$$

4. Rainfall intensity at project location was acquired from the NOAA website, http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.
5. From Section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
6. Design Elevations from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
7. Obtained from Figure SB-1 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
8. Obtained from Figure SB-12 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
9. Riser cross-sectional area is required to be more than 2 times the barrel cross-sectional area.
10. Use 0.025 for CMP and 0.012 for RCP.
11. 3.1 for corrugated metal pipe risers
12. 0.6 for corrugated metal pipe risers
13. Weir equation: $Q = CLH^{1.5}$ (see note 11)
14. Orifice equation: $Q = CA\,(2gH)^{0.5}$ (see note 12)
15. Pipe Flow equation: $Q = a\left[\frac{2gh}{1 + K_m + K_p L}\right]^{0.5}$
16. Obtained from Figure SB-2 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

RISER SEDIMENT BASIN CALCULATIONS			
SRC Litchfield			
HDR PROJECT NO.:	-		
DATE: 9/16/2020		BY:	NC
REVISED:		RVW:	DB

Riser Sediment Basin : Pond-13

Scenario: E&SC

Drainage Area Characteristics		
Total drainage area (TDA)[1]	6.38	ac
Disturbed area (DA)	6.38	ac
Time of Concentration (T_c)	34.2	min
10 Yr Storm Rainfall Intensity (I)[4]	0.2	in/hr

Required Storage Volume		
10 Yr Peak Flow (Q_{10})	6.37	cfs
Req'd Sediment Storage Volume[3]	37.43	cf
Req'd Basin Storage Volume (V_s)[5]	18,064	cf
Total Basin Storage Volume[5]	18,102	cf

Design Criteria		
Bottom Elevation	1142.00	msl
Depth of Sediment Storage Volume	0.50	ft
Depth of Flow Over Riser	0.10	ft
Depth of Wet Storage Volume (Min 2 ft)	4.50	
Runoff Depth from Hydrographs (V_r)	1.65	inch

Basin Size			
Elev. (msl)	Depth (ft)	Area (sf)	Cumulative Volume (cf)
1142.00	0.00	3,246	0
1143.00	1.00	4,621	3,913
1144.00	2.00	6,051	9,233
1145.00	3.00	7,553	16,021
1146.00	4.00	9,127	24,348
1147.00	5.00	10,814	34,307

Basin Configuration		
Bottom Elevation	1142.00	msl
Sediment Storage Elevation	1142.50	msl
Riser Crest	1146.50	msl
Emergency Spillway	1146.60	msl
Top of Berm	1147.00	msl
Highwater elevation (10-yr) from Hydrograph	1146.60	msl

Raise berm

Basin Size Check		
Storage Volume Provided Below Riser Crest	28,523	cf

Q10/DA Ratio	1.00		
Qo/Qi Ratio from Figure SB-13	0.14		
Outflow rate (Qo)	0.89	cfs	
Release rate	89	csm	
Storage in watershed (Vs) from Figure DB-6	0.78	inch	

Average annual erosion[7]	1	tons/ac	Figure SB-1
Delivery Ratio[8]	0.33		Figure SB-12
Trap Efficiency[5]	0.80		
Sediment Density[16]	90	lbs/cu.ft	Figure SB-2

Required Riser Diameter 25

Barrel				
Riser Diameter[9]	24	in	Riser Flow as Weir[13]	0.62 cfs
Barrel Diameter (15 in min)[5]	18	in	Riser Flow as Orifice[14]	4.78 cfs
Barrel Invert Elevation	1142.00	msl		
Barrel Length	147.00	ft	Barrel Flow as Orifice[14]	16.70 cfs
Barrel Manning's N[10]	0.025		Barrel Flow as Pipe[15]	8.06 cfs
Sharp Crested Weir Coefficient (C)[11]	3.1			
Orifice Coefficient (C)[12]	0.6		Controlling Flow through Riser and Barrel Spillway	0.62 cfs

Emergency Spillway Design		
Minimum Allowable Spillway Length	35	ft

Notes

1. See attached drainage area map.
2. Entire area is denuded. Rational coefficient for smooth bare packed soil is 0.45.
3. Volume required is calculated using volume equation from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

$$V = \frac{(DA)(A)(DR)(TE)(2{,}000\text{lbs./ton})}{(\gamma)(43{,}560\text{sq.ft./ac})}$$

4. Rainfall intensity at project location was acquired from the NOAA website, http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html.
5. From Section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
6. Design Elevations from section 5-11 - 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
7. Obtained from Figure SB-1 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
8. Obtained from Figure SB-12 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.
9. Riser cross-sectional area is required to be more than 2 times the barrel cross-sectional area.
10. Use 0.025 for CMP and 0.012 for RCP.
11. 3.1 for corrugated metal pipe risers
12. 0.6 for corrugated metal pipe risers
13. Weir equation: $Q = CLH^{1.5}$ (see note 11)
14. Orifice equation: $Q = CA\,(2gH)^{0.5}$ (see note 12)
15. Pipe Flow equation: $Q = a\left[\frac{2gh}{1 + K_m + K_p L}\right]^{0.5}$
16. Obtained from Figure SB-2 from 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

Appendix H

Culvert and Ditch Calculations

Litchfield Solar Array Facility
Litchfield, CT
SRC

9/29/2020

Culvert Calculations

Storm Event: 50-yr
Min. Openness Ratio (OR) Required: 0.25

Rainfall (in.):	25-yr	50-yr	100-yr
	5.5	6.3	7.0

Culvert	Type	Drainage Area	CN	Est. Peak Flow Q 25 (cfs)	Est. Peak Flow Q 50-yr (cfs)	Est. Peak Flow Q 100-yr (cfs)	Length (ft)	Shape	Span (ft)	Rise (ft)		Area (sf)	Open Area (sf)	OR (Open Area) / Length	Rise/ Span (0.30 min)	Req'd Cover (in)	US Inv.	Min. Roadway Elev.	TOW Elev. (+6")	Ex Stream Slope (%)	Arch Req'd
C-1	New	11.51	80.4	28.13	34.03	N/A	16	Arch (Bottomless)	6	2.292	2' - 3.5"	13.752	13.75	0.86	0.38	12.00	1194.76	1198.05	1198.55	8.40	Yes
C-2	New	3.97	79.5	13.85	16.82	N/A	71	Arch (Bottomless)	6	3.167	3' - 2"	19.00	19.00	0.27	0.53	12.00	N/A	N/A	N/A	12.2	Yes
C-3	New	276.79	75.0	299.96	372.42	437.21	20	Arch (Bottomless)	15	4.625	4'-7.5"	69.38	69.38	3.47	0.31	24.00	1109.61	1116.24	1116.74	3.7	Yes

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	28.13	2	738	138,698	------	------	------	CULVERT C-1
2	SCS Runoff	13.85	2	726	47,338	------	------	------	CULVERT C-2
3	SCS Runoff	299.96	2	778	2,860,308	------	------	------	CULVERT C-3

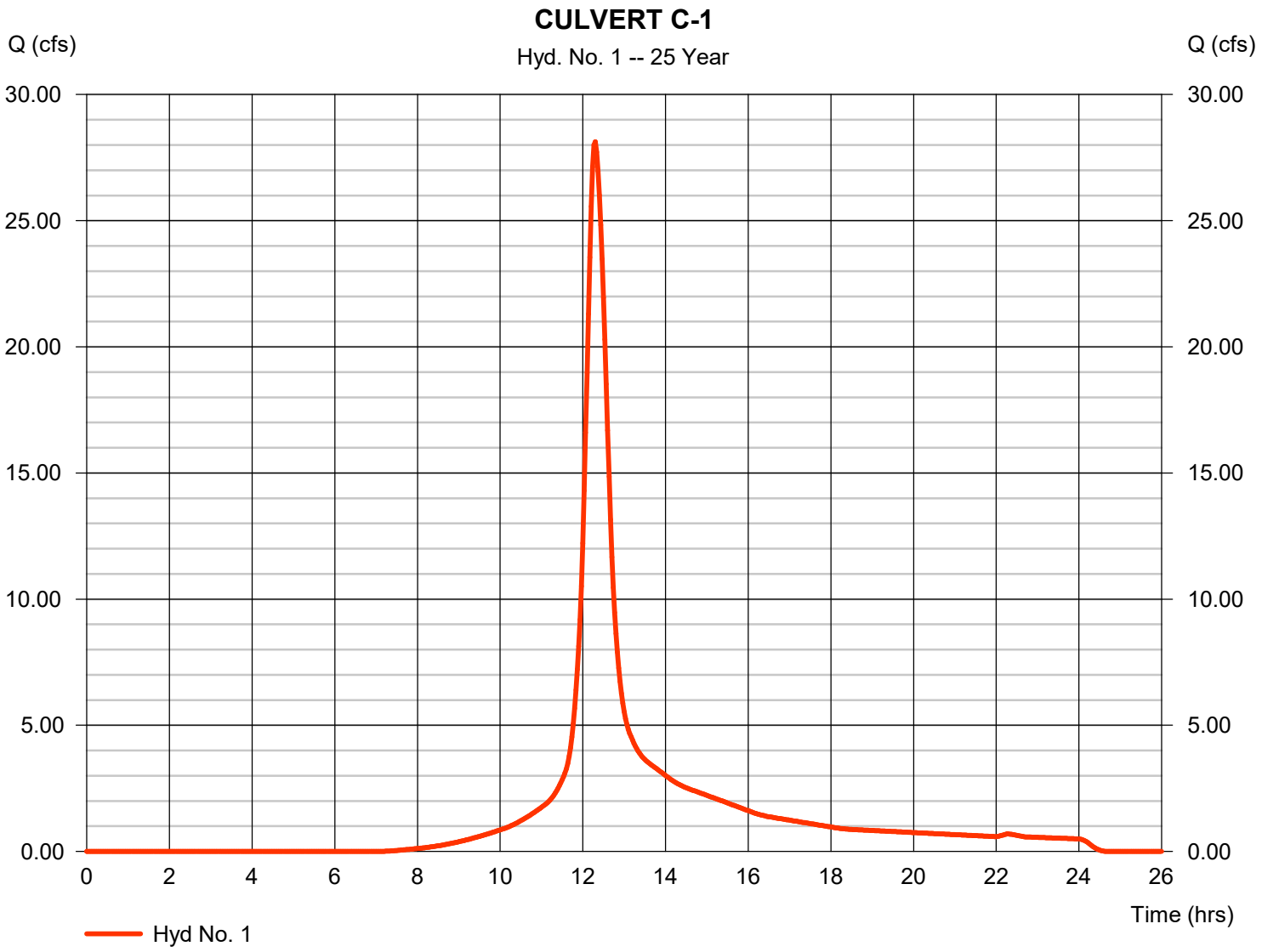
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Tuesday, 09 / 29 / 2020

Hyd. No. 1

CULVERT C-1

Hydrograph type	= SCS Runoff	Peak discharge	= 28.13 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.30 hrs
Time interval	= 2 min	Hyd. volume	= 138,698 cuft
Drainage area	= 11.510 ac	Curve number	= 80.4
Basin Slope	= 2.7 %	Hydraulic length	= 1403 ft
Tc method	= LAG	Time of conc. (Tc)	= 25.00 min
Total precip.	= 5.50 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



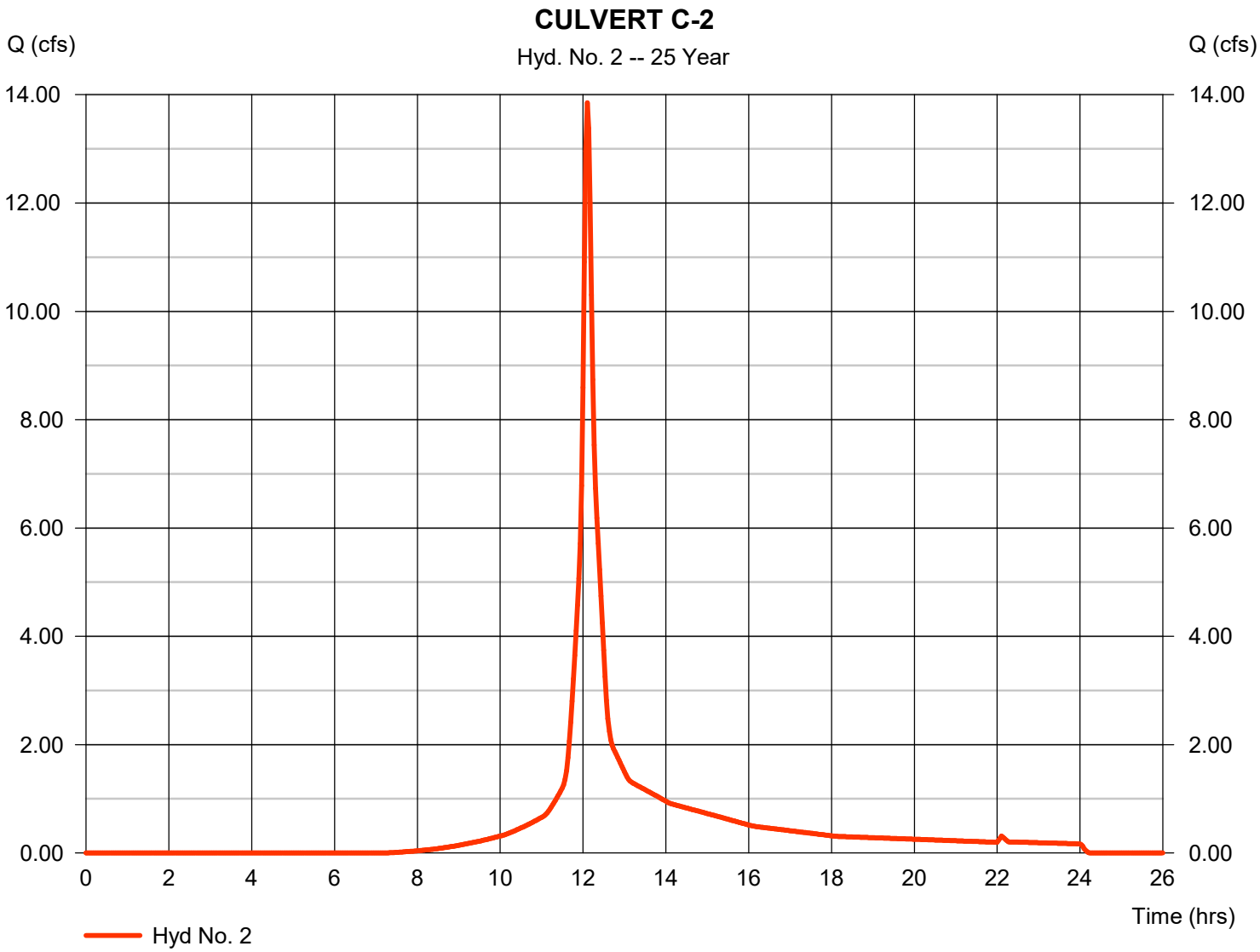
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Tuesday, 09 / 29 / 2020

Hyd. No. 2

CULVERT C-2

Hydrograph type	= SCS Runoff	Peak discharge	= 13.85 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 47,338 cuft
Drainage area	= 3.970 ac	Curve number	= 79.5
Basin Slope	= 8.1 %	Hydraulic length	= 538 ft
Tc method	= LAG	Time of conc. (Tc)	= 6.93 min
Total precip.	= 5.50 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



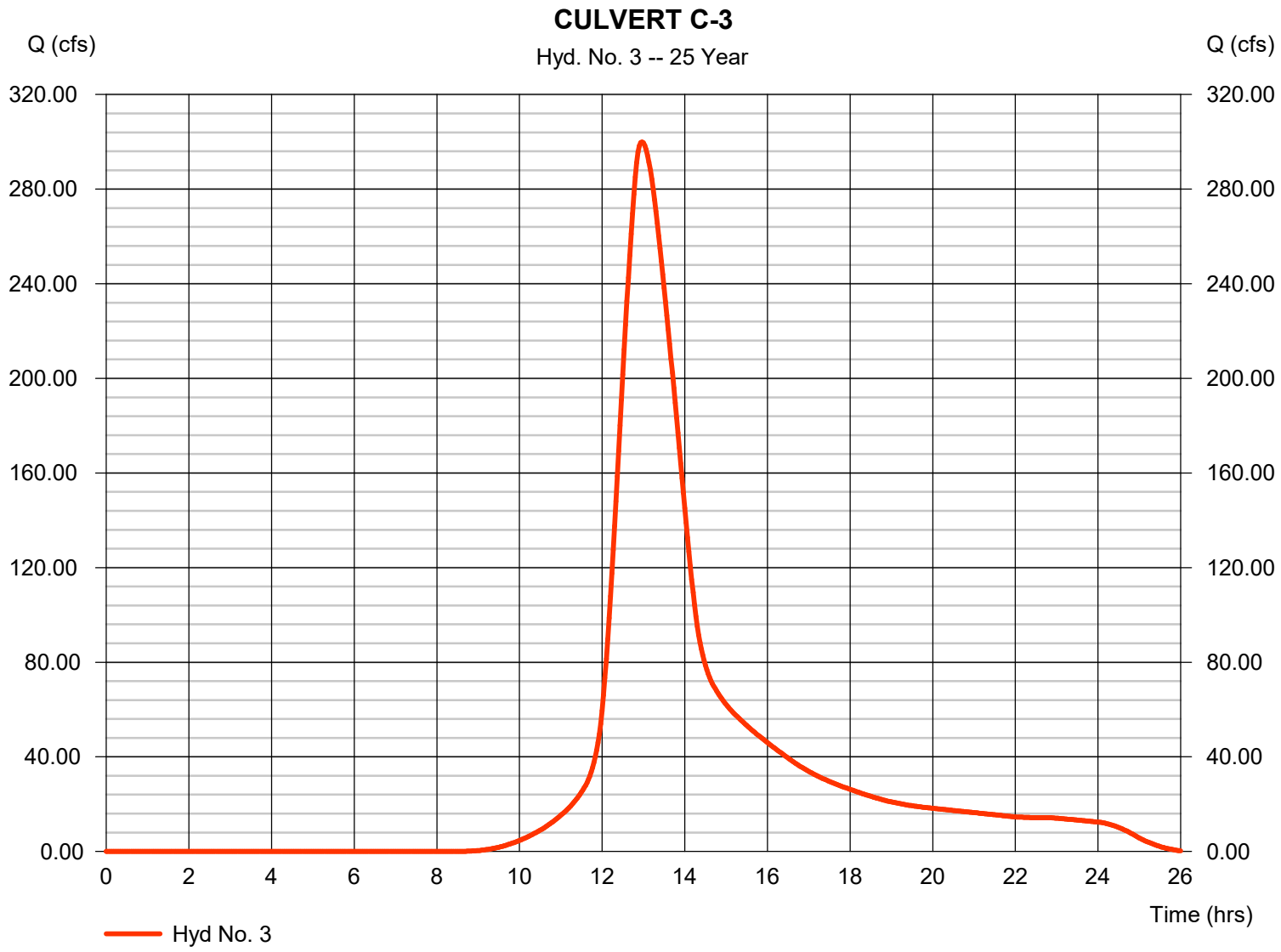
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Tuesday, 09 / 29 / 2020

Hyd. No. 3

CULVERT C-3

Hydrograph type	= SCS Runoff	Peak discharge	= 299.96 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.97 hrs
Time interval	= 2 min	Hyd. volume	= 2,860,308 cuft
Drainage area	= 276.790 ac	Curve number	= 75
Basin Slope	= 3.1 %	Hydraulic length	= 5798 ft
Tc method	= LAG	Time of conc. (Tc)	= 85.67 min
Total precip.	= 5.50 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	34.03	2	738	168,419	------	------	------	CULVERT C-1
2	SCS Runoff	16.82	2	726	57,655	------	------	------	CULVERT C-2
3	SCS Runoff	372.42	2	778	3,538,866	------	------	------	CULVERT C-3

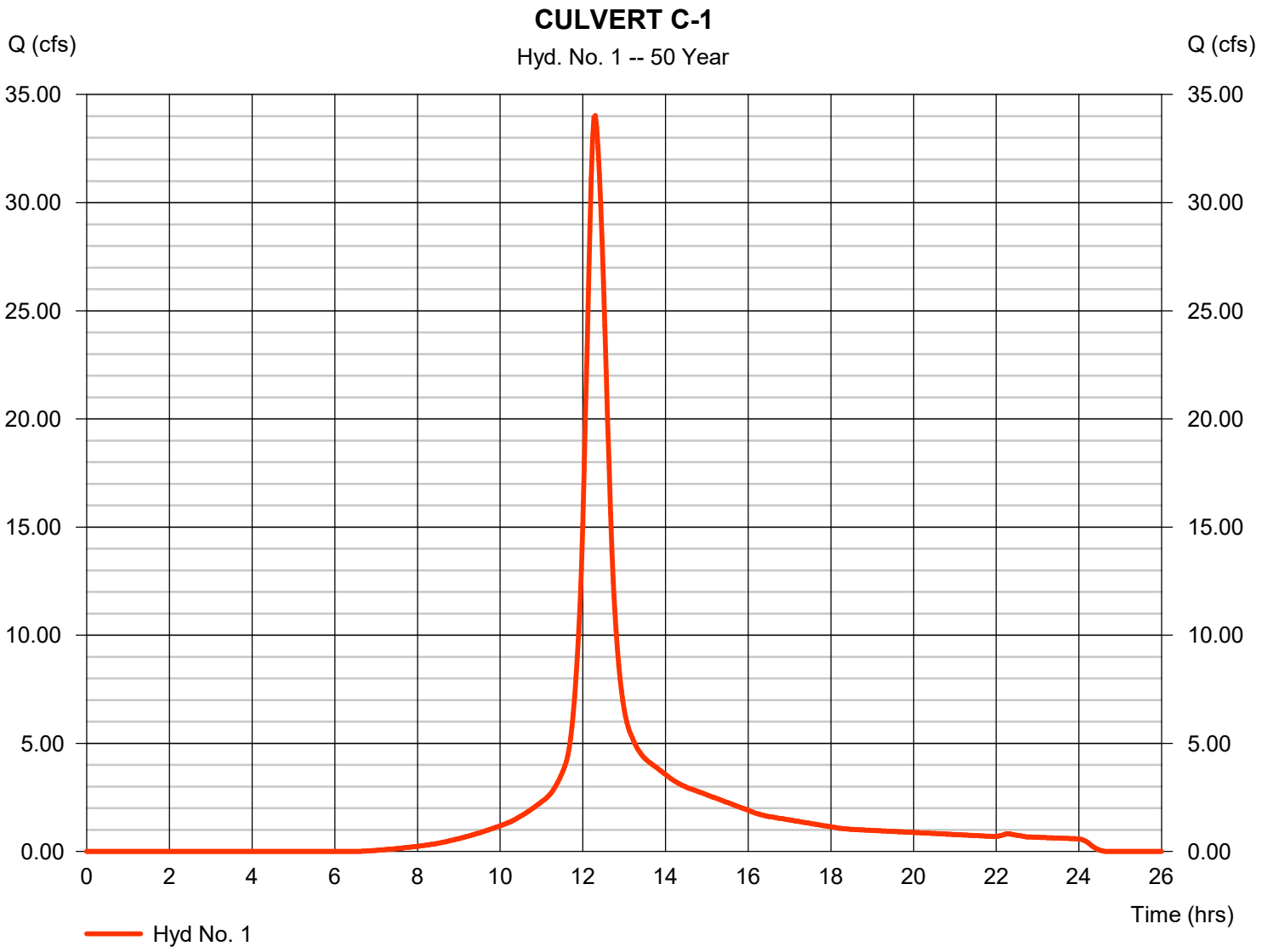
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Tuesday, 09 / 29 / 2020

Hyd. No. 1

CULVERT C-1

Hydrograph type	= SCS Runoff	Peak discharge	= 34.03 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.30 hrs
Time interval	= 2 min	Hyd. volume	= 168,419 cuft
Drainage area	= 11.510 ac	Curve number	= 80.4
Basin Slope	= 2.7 %	Hydraulic length	= 1403 ft
Tc method	= LAG	Time of conc. (Tc)	= 25.00 min
Total precip.	= 6.30 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



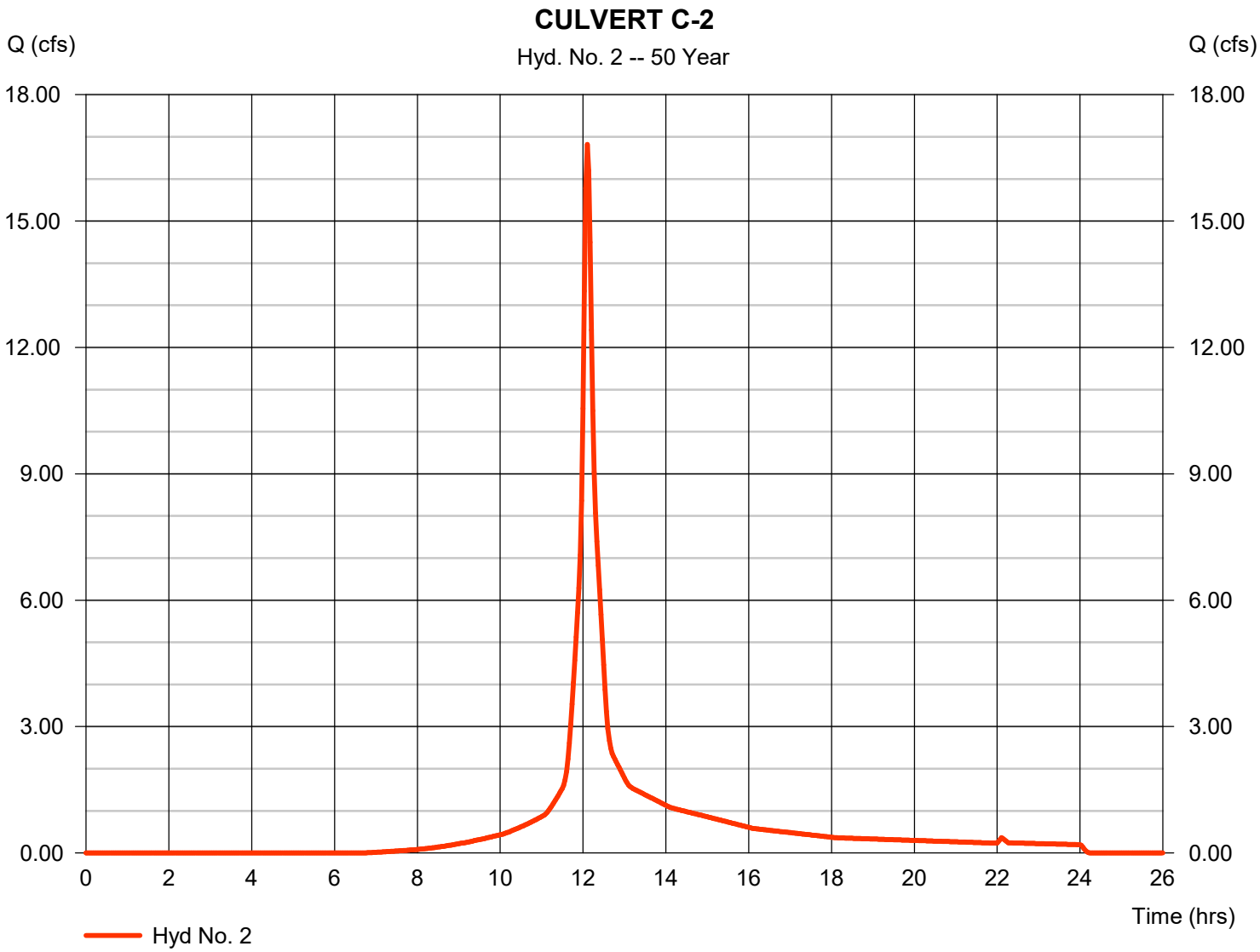
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Tuesday, 09 / 29 / 2020

Hyd. No. 2

CULVERT C-2

Hydrograph type	= SCS Runoff	Peak discharge	= 16.82 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 57,655 cuft
Drainage area	= 3.970 ac	Curve number	= 79.5
Basin Slope	= 8.1 %	Hydraulic length	= 538 ft
Tc method	= LAG	Time of conc. (Tc)	= 6.93 min
Total precip.	= 6.30 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



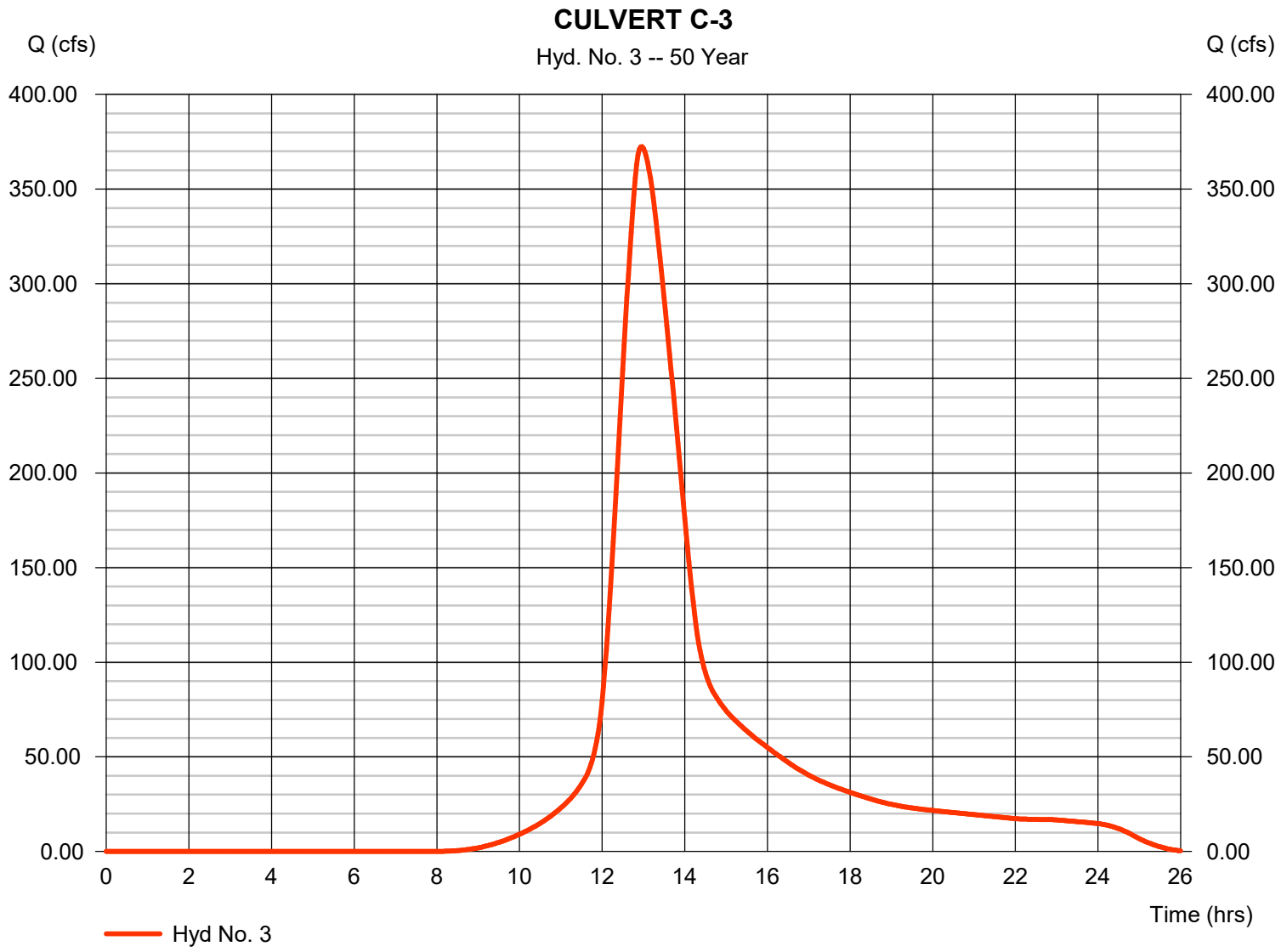
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Tuesday, 09 / 29 / 2020

Hyd. No. 3

CULVERT C-3

Hydrograph type	= SCS Runoff	Peak discharge	= 372.42 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.97 hrs
Time interval	= 2 min	Hyd. volume	= 3,538,866 cuft
Drainage area	= 276.790 ac	Curve number	= 75
Basin Slope	= 3.1 %	Hydraulic length	= 5798 ft
Tc method	= LAG	Time of conc. (Tc)	= 85.67 min
Total precip.	= 6.30 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	39.23	2	738	194,892	------	------	------	CULVERT C-1
2	SCS Runoff	19.43	2	726	66,858	------	------	------	CULVERT C-2
3	SCS Runoff	437.21	2	776	4,149,079	------	------	------	CULVERT C-3

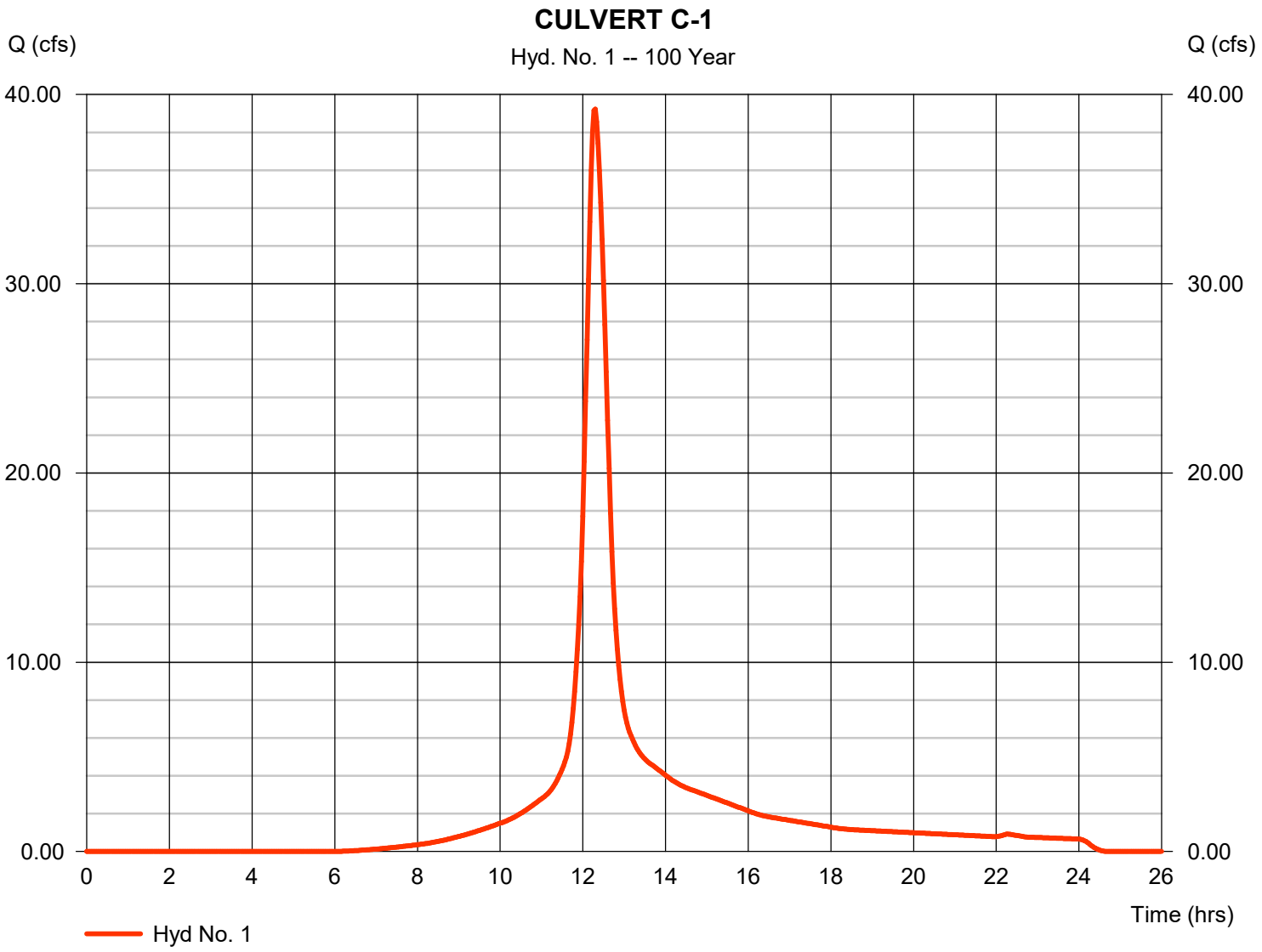
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Tuesday, 09 / 29 / 2020

Hyd. No. 1

CULVERT C-1

Hydrograph type	= SCS Runoff	Peak discharge	= 39.23 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.30 hrs
Time interval	= 2 min	Hyd. volume	= 194,892 cuft
Drainage area	= 11.510 ac	Curve number	= 80.4
Basin Slope	= 2.7 %	Hydraulic length	= 1403 ft
Tc method	= LAG	Time of conc. (Tc)	= 25.00 min
Total precip.	= 7.00 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



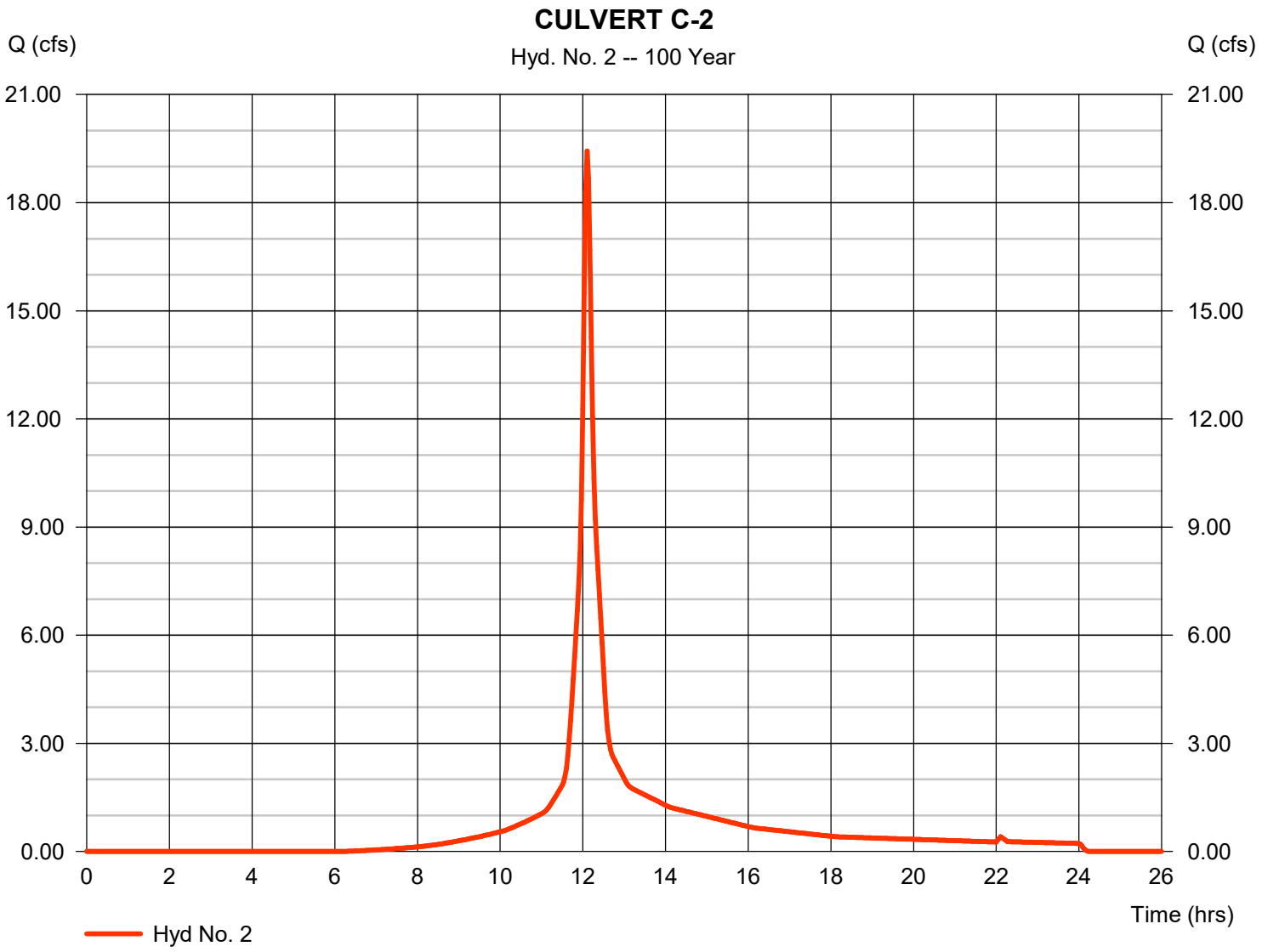
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Tuesday, 09 / 29 / 2020

Hyd. No. 2

CULVERT C-2

Hydrograph type	= SCS Runoff	Peak discharge	= 19.43 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 66,858 cuft
Drainage area	= 3.970 ac	Curve number	= 79.5
Basin Slope	= 8.1 %	Hydraulic length	= 538 ft
Tc method	= LAG	Time of conc. (Tc)	= 6.93 min
Total precip.	= 7.00 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



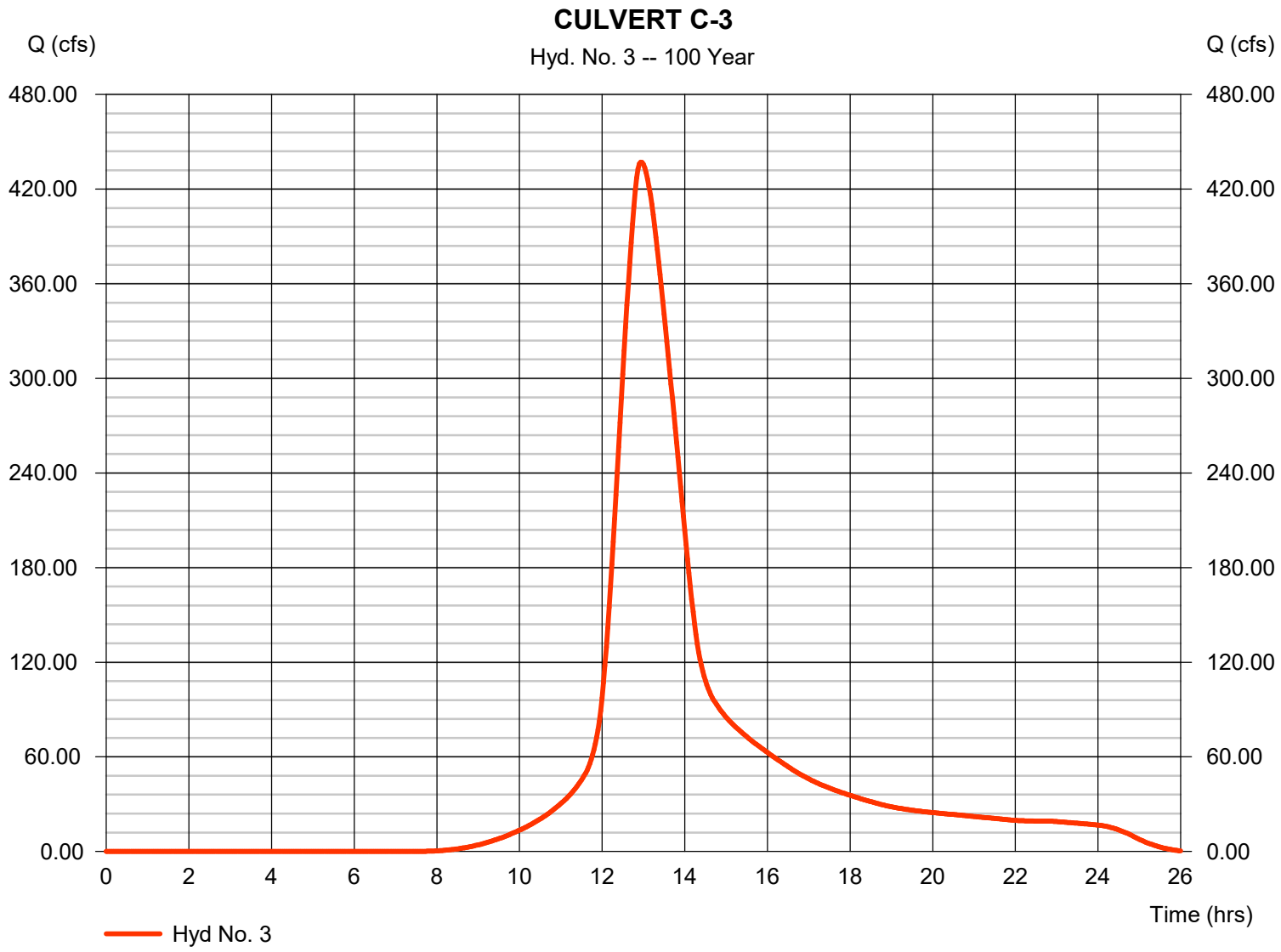
Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2018 by Autodesk, Inc. v2018.3 Tuesday, 09 / 29 / 2020

Hyd. No. 3

CULVERT C-3

Hydrograph type	= SCS Runoff	Peak discharge	= 437.21 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.93 hrs
Time interval	= 2 min	Hyd. volume	= 4,149,079 cuft
Drainage area	= 276.790 ac	Curve number	= 75
Basin Slope	= 3.1 %	Hydraulic length	= 5798 ft
Tc method	= LAG	Time of conc. (Tc)	= 85.67 min
Total precip.	= 7.00 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	0.0000	0.0000	0.0000	--------
2	69.8703	13.1000	0.8658	--------
3	0.0000	0.0000	0.0000	--------
5	79.2597	14.6000	0.8369	--------
10	88.2351	15.5000	0.8279	--------
25	102.6072	16.5000	0.8217	--------
50	114.8193	17.2000	0.8199	--------
100	127.1596	17.8000	0.8186	--------

File name: SampleFHA.idf

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5.69	4.61	3.89	3.38	2.99	2.69	2.44	2.24	2.07	1.93	1.81	1.70
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.57	5.43	4.65	4.08	3.65	3.30	3.02	2.79	2.59	2.42	2.27	2.15
10	7.24	6.04	5.21	4.59	4.12	3.74	3.43	3.17	2.95	2.77	2.60	2.46
25	8.25	6.95	6.03	5.34	4.80	4.38	4.02	3.73	3.48	3.26	3.07	2.91
50	9.04	7.65	6.66	5.92	5.34	4.87	4.49	4.16	3.88	3.65	3.44	3.25
100	9.83	8.36	7.30	6.50	5.87	5.36	4.94	4.59	4.29	4.03	3.80	3.60

Tc = time in minutes. Values may exceed 60.

Precip. file name: Sample.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	0.00	2.20	0.00	3.30	4.25	5.50	6.30	7.00
SCS 6-Hr	0.00	1.80	0.00	0.00	2.60	0.00	0.00	0.00
Huff-1st	0.00	1.55	0.00	2.75	4.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	1.75	0.00	2.80	3.90	0.00	0.00	0.00

HY-8 Culvert Analysis Report

Water Surface Profile Plot for Culvert: CULV C-1

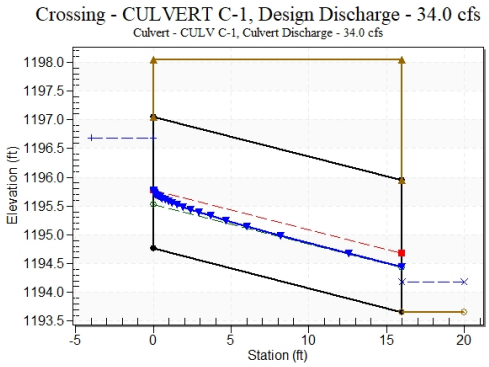


Table 1 - Culvert Summary Table: CULV C-1

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
10.00	10.00	1195.53	0.768	0.0*	1-S2n	0.340	0.445	0.340	0.262	4.990	6.306
12.40	12.40	1195.65	0.890	0.0*	1-S2n	0.390	0.514	0.390	0.296	5.403	6.769
14.81	14.81	1195.77	1.006	0.0*	1-S2n	0.438	0.578	0.438	0.327	5.764	7.167
17.21	17.21	1195.88	1.116	0.0*	1-S2n	0.484	0.640	0.484	0.356	6.084	7.519
19.61	19.61	1195.99	1.231	0.0*	1-S2n	0.528	0.698	0.528	0.383	6.370	7.836
22.02	22.02	1196.11	1.350	0.0*	1-S2n	0.571	0.755	0.574	0.408	6.611	8.126
24.42	24.42	1196.23	1.468	0.0*	1-S2n	0.613	0.810	0.613	0.433	6.883	8.388
26.82	26.82	1196.35	1.587	0.065	1-S2n	0.654	0.863	0.654	0.455	7.109	8.634
29.22	29.22	1196.47	1.705	0.173	1-S2n	0.694	0.913	0.694	0.477	7.322	8.863
31.63	31.63	1196.58	1.819	0.284	1-S2n	0.733	0.962	0.738	0.498	7.480	9.079
34.03	34.03	1196.69	1.927	0.398	1-S2n	0.773	1.011	0.779	0.518	7.644	9.278

* Full Flow Headwater elevation is below inlet invert.

****

Straight Culvert

Inlet Elevation (invert): 1194.76 ft, Outlet Elevation (invert): 1193.66 ft

Culvert Length: 16.04 ft, Culvert Slope: 0.0687

****

Site Data - CULV C-1

Site Data Option: Culvert Invert Data

Inlet Station: 0.00 ft

Inlet Elevation: 1194.76 ft

Outlet Station: 16.00 ft

Outlet Elevation: 1193.66 ft

Number of Barrels: 1

Culvert Data Summary - CULV C-1

Barrel Shape: Arch, Open Bottom

Barrel Span: 6.00 ft

Barrel Rise: 2.29 ft

Barrel Material: Corrugated Steel

Embedment: 0.00 in

Barrel Manning's n: 0.0350 (top and sides)

Manning's n: 0.0350 (bottom)

Culvert Type: Straight

Inlet Configuration: Thin Edge Projecting

Inlet Depression: None

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 10 cfs

Design Flow: 34.03 cfs

Maximum Flow: 34.03 cfs

Table 2 - Summary of Culvert Flows at Crossing: CULVERT C-1

Headwater Elevation (ft)	Total Discharge (cfs)	CULV C-1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
1195.53	10.00	10.00	0.00	1
1195.65	12.40	12.40	0.00	1
1195.77	14.81	14.81	0.00	1
1195.88	17.21	17.21	0.00	1
1195.99	19.61	19.61	0.00	1
1196.11	22.02	22.02	0.00	1
1196.23	24.42	24.42	0.00	1
1196.35	26.82	26.82	0.00	1
1196.47	29.22	29.22	0.00	1
1196.58	31.63	31.63	0.00	1
1196.69	34.03	34.03	0.00	1
1198.05	63.22	63.22	0.00	Overtopping

Table 3 - Downstream Channel Rating Curve (Crossing: CULVERT C-1)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s)	Shear (psf)	Froude Number
10.00	1193.92	0.26	6.31	1.37	2.35
12.40	1193.96	0.30	6.77	1.55	2.39
14.81	1193.99	0.33	7.17	1.72	2.43
17.21	1194.02	0.36	7.52	1.87	2.45
19.61	1194.04	0.38	7.84	2.01	2.48
22.02	1194.07	0.41	8.13	2.14	2.50
24.42	1194.09	0.43	8.39	2.27	2.52
26.82	1194.12	0.46	8.63	2.39	2.54
29.22	1194.14	0.48	8.86	2.50	2.55
31.63	1194.16	0.50	9.08	2.61	2.57
34.03	1194.18	0.52	9.28	2.72	2.58

Tailwater Channel Data - CULVERT C-1

Tailwater Channel Option: Trapezoidal Channel

Bottom Width: 5.00 ft

Side Slope (H:V): 4.00 (_:1)

Channel Slope: 0.0840

Channel Manning's n: 0.0250

Channel Invert Elevation: 1193.66 ft

Roadway Data for Crossing: CULVERT C-1

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 200.00 ft

Crest Elevation: 1198.05 ft

Roadway Surface: Gravel

Roadway Top Width: 16.00 ft

Water Surface Profile Plot for Culvert: CULV C-2

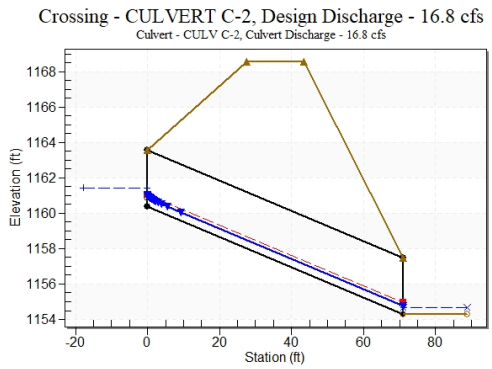


Table 4 - Culvert Summary Table: CULV C-2

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
10.00	10.00	1161.12	0.725	0.0*	1-S2n	0.311	0.442	0.311	0.262	5.371	6.306
10.68	10.68	1161.16	0.757	0.0*	1-S2n	0.325	0.462	0.325	0.272	5.491	6.446
11.36	11.36	1161.19	0.789	0.0*	1-S2n	0.337	0.481	0.337	0.282	5.631	6.577
12.05	12.05	1161.22	0.821	0.0*	1-S2n	0.349	0.500	0.349	0.291	5.761	6.705
12.73	12.73	1161.25	0.851	0.0*	1-S2n	0.361	0.519	0.361	0.301	5.883	6.827
13.41	13.41	1161.28	0.882	0.0*	1-S2n	0.374	0.538	0.374	0.310	5.996	6.943
14.09	14.09	1161.31	0.912	0.0*	1-S2n	0.386	0.556	0.386	0.318	6.103	7.055
14.77	14.77	1161.34	0.941	0.0*	1-S2n	0.398	0.574	0.398	0.327	6.203	7.162
15.46	15.46	1161.37	0.970	0.0*	1-S2n	0.410	0.591	0.410	0.335	6.304	7.265
16.14	16.14	1161.40	0.998	0.0*	1-S2n	0.421	0.608	0.421	0.344	6.411	7.366
16.82	16.82	1161.43	1.026	0.0*	1-S2n	0.432	0.626	0.432	0.352	6.513	7.464

* Full Flow Headwater elevation is below inlet invert.

****

Straight Culvert

Inlet Elevation (invert): 1160.40 ft, Outlet Elevation (invert): 1154.31 ft

Culvert Length: 71.26 ft, Culvert Slope: 0.0858

****

Site Data - CULV C-2

Site Data Option: Culvert Invert Data

Inlet Station: 0.00 ft

Inlet Elevation: 1160.40 ft

Outlet Station: 71.00 ft

Outlet Elevation: 1154.31 ft

Number of Barrels: 1

Culvert Data Summary - CULV C-2

Barrel Shape: Arch, Open Bottom

Barrel Span: 6.00 ft

Barrel Rise: 3.17 ft

Barrel Material: Corrugated Steel

Embedment: 0.00 in

Barrel Manning's n: 0.0350 (top and sides)

Manning's n: 0.0350 (bottom)

Culvert Type: Straight

Inlet Configuration: Thin Edge Projecting

Inlet Depression: None

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 10 cfs

Design Flow: 16.82 cfs

Maximum Flow: 16.82 cfs

Table 5 - Summary of Culvert Flows at Crossing: CULVERT C-2

Headwater Elevation (ft)	Total Discharge (cfs)	CULV C-2 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
1161.12	10.00	10.00	0.00	1
1161.16	10.68	10.68	0.00	1
1161.19	11.36	11.36	0.00	1
1161.22	12.05	12.05	0.00	1
1161.25	12.73	12.73	0.00	1
1161.28	13.41	13.41	0.00	1
1161.31	14.09	14.09	0.00	1
1161.34	14.77	14.77	0.00	1
1161.37	15.46	15.46	0.00	1
1161.40	16.14	16.14	0.00	1
1161.43	16.82	16.82	0.00	1
1168.59	170.97	170.97	0.00	Overtopping

Table 6 - Downstream Channel Rating Curve (Crossing: CULVERT C-2)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s)	Shear (psf)	Froude Number
10.00	1154.57	0.26	6.31	1.37	2.35
10.68	1154.58	0.27	6.45	1.43	2.36
11.36	1154.59	0.28	6.58	1.48	2.38
12.05	1154.60	0.29	6.71	1.53	2.39
12.73	1154.61	0.30	6.83	1.58	2.40
13.41	1154.62	0.31	6.94	1.62	2.41
14.09	1154.63	0.32	7.05	1.67	2.42
14.77	1154.64	0.33	7.16	1.71	2.42
15.46	1154.65	0.34	7.27	1.76	2.43
16.14	1154.65	0.34	7.37	1.80	2.44
16.82	1154.66	0.35	7.46	1.84	2.45

Tailwater Channel Data - CULVERT C-2

Tailwater Channel Option: Trapezoidal Channel

Bottom Width: 5.00 ft

Side Slope (H:V): 4.00 (_:1)

Channel Slope: 0.0840

Channel Manning's n: 0.0250

Channel Invert Elevation: 1154.31 ft

Roadway Data for Crossing: CULVERT C-2

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 200.00 ft

Crest Elevation: 1168.59 ft

Roadway Surface: Gravel

Roadway Top Width: 16.00 ft

Water Surface Profile Plot for Culvert: CULV C-3

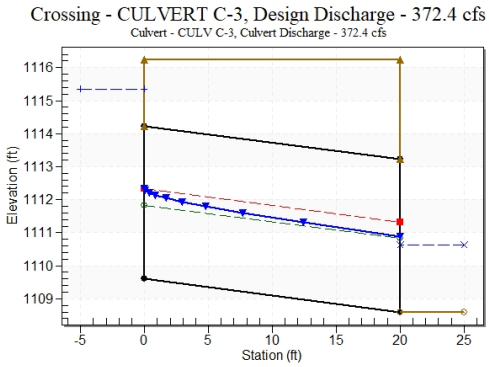


Table 7 - Culvert Summary Table: CULV C-3

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
299.96	299.96	1114.38	4.766	2.677	5-S2n	1.879	2.361	1.929	1.849	11.273	6.346
313.69	313.69	1114.56	4.945	2.873	5-S2n	1.944	2.434	1.995	1.883	11.442	6.417
327.41	327.41	1114.74	5.128	3.072	5-S2n	2.009	2.504	2.061	1.915	11.602	6.486
341.13	341.13	1114.92	5.313	3.275	5-S2n	2.075	2.572	2.128	1.946	11.753	6.553
354.86	354.86	1115.11	5.498	3.483	5-S2n	2.141	2.639	2.196	1.977	11.900	6.618
372.42	372.42	1115.34	5.734	3.756	5-S2n	2.225	2.723	2.282	2.015	12.079	6.699
382.31	382.31	1115.48	5.867	3.913	5-S2n	2.273	2.770	2.331	2.036	12.177	6.743
396.03	396.03	1115.66	6.052	4.134	5-S2n	2.340	2.834	2.399	2.065	12.308	6.803
409.76	409.76	1115.85	6.237	4.361	5-S2n	2.407	2.898	2.468	2.093	12.435	6.861
423.48	423.48	1116.03	6.422	4.592	5-S2n	2.475	2.961	2.537	2.120	12.558	6.918
437.21	436.41	1116.26	6.648	4.815	5-S2n	2.541	3.020	2.602	2.147	12.671	6.973

****
Straight Culvert
Inlet Elevation (invert): 1109.61 ft, Outlet Elevation (invert): 1108.60 ft
Culvert Length: 20.03 ft, Culvert Slope: 0.0505
****

Site Data - CULV C-3

Site Data Option: Culvert Invert Data
Inlet Station: 0.00 ft
Inlet Elevation: 1109.61 ft
Outlet Station: 20.00 ft
Outlet Elevation: 1108.60 ft
Number of Barrels: 1

Culvert Data Summary - CULV C-3

Barrel Shape: Arch, Open Bottom
Barrel Span: 15.00 ft
Barrel Rise: 4.63 ft
Barrel Material: Corrugated Steel
Embedment: 0.00 in
Barrel Manning's n: 0.0350 (top and sides)
Manning's n: 0.0350 (bottom)
Culvert Type: Straight
Inlet Configuration: Thin Edge Projecting
Inlet Depression: None

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 299.96 cfs

Design Flow: 372.42 cfs

Maximum Flow: 437.21 cfs

Table 8 - Summary of Culvert Flows at Crossing: CULVERT C-3

Headwater Elevation (ft)	Total Discharge (cfs)	CULV C-3 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
1114.38	299.96	299.96	0.00	1
1114.56	313.69	313.69	0.00	1
1114.74	327.41	327.41	0.00	1
1114.92	341.13	341.13	0.00	1
1115.11	354.86	354.86	0.00	1
1115.34	372.42	372.42	0.00	1
1115.48	382.31	382.31	0.00	1
1115.66	396.03	396.03	0.00	1
1115.85	409.76	409.76	0.00	1
1116.03	423.48	423.48	0.00	1
1116.26	437.21	436.41	0.35	23
1116.25	435.96	435.96	0.00	Overtopping

Table 9 - Downstream Channel Rating Curve (Crossing: CULVERT C-3)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s)	Shear (psf)	Froude Number
299.96	1110.45	1.85	6.35	3.46	1.13
313.69	1110.48	1.88	6.42	3.52	1.13
327.41	1110.51	1.91	6.49	3.58	1.13
341.13	1110.55	1.95	6.55	3.64	1.14
354.86	1110.58	1.98	6.62	3.70	1.14
372.42	1110.62	2.02	6.70	3.77	1.14
382.31	1110.64	2.04	6.74	3.81	1.15
396.03	1110.66	2.06	6.80	3.87	1.15
409.76	1110.69	2.09	6.86	3.92	1.15
423.48	1110.72	2.12	6.92	3.97	1.15
437.21	1110.75	2.15	6.97	4.02	1.16

Tailwater Channel Data - CULVERT C-3

Tailwater Channel Option: Trapezoidal Channel

Bottom Width: 3.00 ft

Side Slope (H:V): 12.20 (_:1)

Channel Slope: 0.0300

Channel Manning's n: 0.0400

Channel Invert Elevation: 1108.60 ft

Roadway Data for Crossing: CULVERT C-3

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 170.00 ft

Crest Elevation: 1116.25 ft

Roadway Surface: Gravel

Roadway Top Width: 20.00 ft

Drainage Area	10-yr Peak Q	Slope	Channel Type	Side Slopes	Bottom Width (ft)	Depth	10-yr Normal Depth (in)
1	5.24	0.0074	Trap	3	1	1	8.7
2	19.02	0.0448	Trap	3	1	1	10.1
3	25.37	0.0356	Trap	3	2	1	10.6
4	3.02	0.0065	Trap	3	1	1	6.9
5	8.99	0.0371	Trap	3	1	1	7.6
7	16.28	0.0048	Trap	3	1	1.5	15.3
8	36.33	0.0511	Trap	3	2	1	11.5
9	19.77	0.0336	Trap	3	1	1	11
10	29.09	0.0332	Trap	3	2	1	11.5
11	3.03	0.0249	Trap	3	1	1	5
12	8	0.0181	Trap	3	1	1	8.5
13	9.76	0.0952	Trap	3	1	1	6.4
14	14.38	0.0417	Trap	3	1	1	9.1
15	3.69	0.0390	Trap	3	1	1	5

Worksheet for DA-1 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.007
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	5.24

Results	
Normal Depth	8.7
Flow Area	2.3
Wetted Perimeter	5.6
Hydraulic Radius	4.9
Top Width	5.33
Critical Depth	6.9
Critical Slope	0.020
Velocity	2.29
Velocity Head	0.08
Specific Energy	0.80
Froude Number	0.617
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	0.00
Upstream Velocity	0.00
Normal Depth	8.7
Critical Depth	6.9
Channel Slope	0.007
Critical Slope	0.020

Worksheet for DA-2 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.045
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	19.02

Results	
Normal Depth	10.1
Flow Area	3.0
Wetted Perimeter	6.3
Hydraulic Radius	5.7
Top Width	6.07
Critical Depth	12.6
Critical Slope	0.017
Velocity	6.36
Velocity Head	0.63
Specific Energy	1.47
Froude Number	1.599
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	10.1
Critical Depth	12.6
Channel Slope	0.045
Critical Slope	0.017

Worksheet for DA-3 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.036
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	2.00
Discharge	25.37

Results	
Normal Depth	10.6
Flow Area	4.1
Wetted Perimeter	7.6
Hydraulic Radius	6.5
Top Width	7.29
Critical Depth	12.8
Critical Slope	0.016
Velocity	6.20
Velocity Head	0.60
Specific Energy	1.48
Froude Number	1.458
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	10.6
Critical Depth	12.8
Channel Slope	0.036
Critical Slope	0.016

Worksheet for DA-4 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.007
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	3.02

Results	
Normal Depth	6.9
Flow Area	1.6
Wetted Perimeter	4.6
Hydraulic Radius	4.0
Top Width	4.44
Critical Depth	5.2
Critical Slope	0.021
Velocity	1.93
Velocity Head	0.06
Specific Energy	0.63
Froude Number	0.575
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	6.9
Critical Depth	5.2
Channel Slope	0.007
Critical Slope	0.021

Worksheet for DA-5 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.037
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	8.99

Results	
Normal Depth	7.6
Flow Area	1.8
Wetted Perimeter	5.0
Hydraulic Radius	4.4
Top Width	4.80
Critical Depth	8.9
Critical Slope	0.018
Velocity	4.89
Velocity Head	0.37
Specific Energy	1.01
Froude Number	1.392
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	7.6
Critical Depth	8.9
Channel Slope	0.037
Critical Slope	0.018

Worksheet for DA-7 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.005
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	16.28

Results	
Normal Depth	15.3
Flow Area	6.1
Wetted Perimeter	9.1
Hydraulic Radius	8.1
Top Width	8.65
Critical Depth	11.7
Critical Slope	0.017
Velocity	2.65
Velocity Head	0.11
Specific Energy	1.38
Froude Number	0.554
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	15.3
Critical Depth	11.7
Channel Slope	0.005
Critical Slope	0.017

Worksheet for DA-8 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.051
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	2.00
Discharge	36.33

Results	
Normal Depth	11.5
Flow Area	4.7
Wetted Perimeter	8.1
Hydraulic Radius	7.0
Top Width	7.75
Critical Depth	15.2
Critical Slope	0.015
Velocity	7.78
Velocity Head	0.94
Specific Energy	1.90
Froude Number	1.768
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	11.5
Critical Depth	15.2
Channel Slope	0.051
Critical Slope	0.015

Worksheet for DA-9 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.034
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	19.77

Results	
Normal Depth	11.0
Flow Area	3.4
Wetted Perimeter	6.8
Hydraulic Radius	6.1
Top Width	6.50
Critical Depth	12.8
Critical Slope	0.016
Velocity	5.76
Velocity Head	0.52
Specific Energy	1.43
Froude Number	1.397
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	11.0
Critical Depth	12.8
Channel Slope	0.034
Critical Slope	0.016

Worksheet for DA-10 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.033
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	2.00
Discharge	29.09

Results	
Normal Depth	11.5
Flow Area	4.6
Wetted Perimeter	8.0
Hydraulic Radius	6.9
Top Width	7.73
Critical Depth	13.6
Critical Slope	0.016
Velocity	6.26
Velocity Head	0.61
Specific Energy	1.56
Froude Number	1.424
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	11.5
Critical Depth	13.6
Channel Slope	0.033
Critical Slope	0.016

Worksheet for DA-11 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.025
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	3.03

Results	
Normal Depth	5.0
Flow Area	1.0
Wetted Perimeter	3.7
Hydraulic Radius	3.1
Top Width	3.52
Critical Depth	5.3
Critical Slope	0.021
Velocity	3.18
Velocity Head	0.16
Specific Energy	0.58
Froude Number	1.080
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	5.0
Critical Depth	5.3
Channel Slope	0.025
Critical Slope	0.021

Worksheet for DA-12 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.018
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	8.00

Results	
Normal Depth	8.5
Flow Area	2.2
Wetted Perimeter	5.5
Hydraulic Radius	4.8
Top Width	5.24
Critical Depth	8.4
Critical Slope	0.019
Velocity	3.62
Velocity Head	0.20
Specific Energy	0.91
Froude Number	0.985
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	8.5
Critical Depth	8.4
Channel Slope	0.018
Critical Slope	0.019

Worksheet for DA-13 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.095
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	9.76

Results	
Normal Depth	6.4
Flow Area	1.4
Wetted Perimeter	4.4
Hydraulic Radius	3.8
Top Width	4.19
Critical Depth	9.3
Critical Slope	0.018
Velocity	7.09
Velocity Head	0.78
Specific Energy	1.31
Froude Number	2.179
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	6.4
Critical Depth	9.3
Channel Slope	0.095
Critical Slope	0.018

Worksheet for DA-14 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.042
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	14.38

Results	
Normal Depth	9.1
Flow Area	2.5
Wetted Perimeter	5.8
Hydraulic Radius	5.2
Top Width	5.57
Critical Depth	11.1
Critical Slope	0.017
Velocity	5.76
Velocity Head	0.52
Specific Energy	1.28
Froude Number	1.515
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	9.1
Critical Depth	11.1
Channel Slope	0.042
Critical Slope	0.017

Worksheet for DA-15 Ditch

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.039
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	1.00
Discharge	3.69

Results	
Normal Depth	5.0
Flow Area	0.9
Wetted Perimeter	3.6
Hydraulic Radius	3.1
Top Width	3.49
Critical Depth	5.8
Critical Slope	0.021
Velocity	3.96
Velocity Head	0.24
Specific Energy	0.66
Froude Number	1.349
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	5.0
Critical Depth	5.8
Channel Slope	0.039
Critical Slope	0.021

Litchfield Solar Array Facility
Litchfield, CT
SRC

Water Quality Calculations

WQV = (1")(R)(A)/12

I = % Impervious Cover
R = Volumetric Runoff Coeff. = 0.05 + 0.009 (I)
A = Site Area (Ac)

Pond Trib Area	Area (A) (ac)	Impervious Area (ac)	Imp. Cover (I) (%)	Vol. Runoff Coeff. (R)	Required WQV (Ac-ft)	Provided WQV (Ac-ft)	Pond Stage Elev.
1	2.56	0.39	0.15	0.051	0.011	0.160	1112.50
2	11.56	1.72	0.15	0.051	0.049	0.427	1042.25
3	13.58	1.79	0.13	0.051	0.058	0.215	1131.50
4	1.98	0.27	0.14	0.051	0.008	0.195	1108.83
5	4.31	0.34	0.08	0.051	0.018	0.174	1139.00
7	13.81	1.3	0.09	0.051	0.06	0.906	1134.00
8/10	34.06	6.11	0.18	0.052	0.15	0.973	1123.00
9	16.03	1.86	0.12	0.051	0.07	0.666	1147.50
11	2.82	0.37	0.13	0.051	0.01	0.342	1191.50
13	6.38	0.6	0.09	0.051	0.03	0.228	1145.50
14	8.21	0.96	0.12	0.051	0.03	0.624	1153.00
15	2.83	0.22	0.08	0.051	0.01	0.356	1200.50