

June 7, 2021

Ms. Tanowa Troupe, Secretary
Ohio Power Siting Board
Docketing Division
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3797

Re: Case No. 20-1605-EL-BGN - In the Matter of the Application of Birch Solar 1, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Allen and Auglaize Counties, Ohio.

Response to Seventh Data Request from Staff of the Ohio Power Siting Board

Dear Ms. Troupe:

Attached please find Birch Solar 1, LLC's ("Applicant") Response to the Seventh Data Request from the staff of the Ohio Power Siting Board ("OPSB Staff"). The Applicant provided this response to OPSB Staff on June 7, 2021.

We are available, at your convenience, to answer any questions you may have.

Respectfully submitted,

/s/ Christine M.T. Pirik

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Ms. Tanowa Troupe
Birch Solar 1, LLC
Case No. 20-1605-EL-BGN
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CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to these cases. In addition, the undersigned certifies that a copy of the foregoing document is also being served upon the persons below this 7th day of June, 2021.

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4839-1369-5724 v1 [92234-1]

**BEFORE
THE OHIO POWER SITING BOARD**

In the Matter of the Application of Birch Solar 1,)	
LLC for a Certificate of Environmental)	
Compatibility and Public Need to Construct a Solar-)	Case No: 20-1605-EL-BGN
Powered Electric Generation Facility in Allen and)	
Auglaize Counties, Ohio.)	

**BIRCH SOLAR 1, LLC 'S
RESPONSE TO THE SEVENTH DATA REQUEST
FROM THE STAFF OF THE OHIO POWER SITING BOARD**

On February 12, 2021, as supplemented on March 25 and 31, 2021, and April 5, 2021, Birch Solar 1, LLC (“Applicant”) filed an application (“Application”) with the Ohio Power Siting Board (“OPSB”) proposing to construct a solar-powered electric generation facility in Allen and Auglaize Counties, Ohio.

On May 20, 2021, the Staff of the OPSB (“OPSB Staff”) provided the Applicant with OPSB Staff’s Seventh Data Request. Now comes the Applicant providing the following response to the Seventh Data Request from the OPSB Staff.

1. Clarification regarding the Hydrology and Flood Inundation Study.

Response: As is expected in the development and permitting process, studies may be finalized at the end of permitting in order to incorporate any siting changes requested from the OPSB during the permitting process. Therefore, in normal course of business, studies may produce an internal siting version, which is then finalized by a Professional Engineer based on the completed permit and resubmitted to the OPSB. The Hydrology and Flood Inundation Study, dated December 18, 2020 by Kleinfelder for the Applicant maintained that normal course of business and was submitted not in final form in order to incorporate OPSB changes.

In order to ensure thorough review and for transparency, Attachment 1 is a Final Hydrology and Flood Inundation Study, dated June 3, 2021, prepared under the supervision and direction of a Professional Engineer licensed in the State of Ohio meeting the standards and requirements for engineering services set forth under the Ohio Revised Code.

If siting changes are requested that require this document to be reviewed, an updated Final Study will be resubmitted 30 days before construction.

In regard to the Project's survey, survey services were provided by LW Survey (Ohio Certificate of Authorization No. 03493), under the direction of and certified by Ohio-licensed Professional Land Surveyor ("PLS") Gwen Cunningham (Ohio PLS License No. 8742).

Respectfully submitted,

/s/ Christine M.T. Pirik

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Attachment 1

Hydrology and Floor Inundation Study Kleinfelder June 3, 2021



June 3, 2021

Kleinfelder Project No.: 20211557.001A

Mr. Joshua Larimer

Lightsource bp

400 Montgomery Street, 8th Floor

San Francisco, CA 94104

**SUBJECT: Hydrology and Flood Inundation Study
Ohio Power Siting Board Permit Application Submittal
Birch Solar Farm
Allen and Auglaize Counties, Ohio**

Dear Mr. Larimer:

Kleinfelder submits the attached final Hydrology and Flood Inundation Study for the Birch Solar Farm in support of the formal Ohio Power Siting Board (OPSB) permit application process. A previous version of the Hydrology and Flood Inundation Study, (December 18, 2020), was developed by Kleinfelder for Lightsource bp to use solely for internal siting and decision-making purposes.

The final study was prepared under the supervision and direction of a Professional Engineer licensed in the State of Ohio and meets the standards and requirements for engineering services set forth under the Ohio Revised Code (ORC).

Sincerely,

KLEINFELDER

Dingfang Liu, PhD, PE (OH)
Senior Principal Professional

cc: File





BIRCH SOLAR FARM

HYDROLOGY AND FLOOD INUNDATION STUDY KLEINFELDER PROJECT NO: 20212135.001A

June 3, 2021

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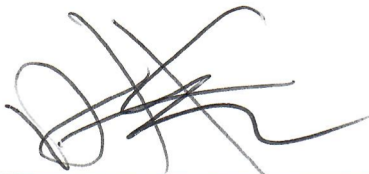
A Report Prepared for:

Lightsource bp

400 Montgomery Street, 8th Floor
San Francisco, CA 94104

**BIRCH SOLAR FARM
HYDROLOGY AND FLOOD INUNDATION STUDY**

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BIRCH SOLAR FARM HYDROLOGY AND FLOOD INUNDATION REPORT

1 EXECUTIVE SUMMARY

Lightsource bp (LSbp) is developing a 300 MW(ac) solar energy facility located in Allen and Auglaize Counties, Ohio. The property is located near Cridersville, Ohio, approximately 1-mile north of the intersection of National Road and State Road 501.

The solar facility will be located on approximately 2,342 acres of property and will include ground-mounted solar photovoltaic (PV) arrays and underground electrical conduits. Ancillary construction will consist of gravel access roads, perimeter fence, and pads for power transformers, inverters, and switchgear.

Kleinfelder performed hydrologic and hydraulic modeling analyses on the 2,342-acre project site, as well as surrounding areas, for a total area of 3,529 acres. The modeling analyses were performed to evaluate the peak flow rates and runoff volumes of the pre-development conditions for the storms listed below:

- 1-year 24-hour
- 2-year 24-hour
- 5-year 24-hour
- 10-year 24-hour
- 25-year 24-hour
- 50-year 24-hour
- 100-year 24-hour

Hydraulic modeling analyses were also conducted to evaluate 100-year 24-hour flood depths and velocities associated with pre-development conditions.

This final study represents the pre-development hydrologic and hydraulic model results for the project area.

2 INTRODUCTION

2.1 PROJECT DESCRIPTION

The proposed solar site is located on approximately 2,342 acres in Allen and Auglaize Counties, Ohio. Refer to **Appendix A** for the area location map. The hydrologic and hydraulic modeling analyses evaluated the site and adjacent areas for a total of 3,529 acres.

The existing topography in the study area contains elevations ranging from approximately 817 to 881 feet – NAVD 88. All elevations listed in this report and provided in appendices are referenced to NAVD 88 unless otherwise noted. Federal Emergency Management Agency (FEMA) Zone AE and A floodplains are present on site, as well as a FEMA floodway.

2.2 DESIGN DATA AND METHODOLOGIES

Based on reviews of the FEMA Flood Insurance Rate Maps (FIRM)¹ for the project area, Twomile Creek, Twomile Creek Tributary 1 and Twomile Creek Tributary 2 are represented as Zone A. Zone A floodplains represent 100-year floodplain boundaries studied by approximate methods and do not contain base flood elevations. A portion of the east project boundary includes the effective floodway and Zone AE for Little Ottawa River. Zone AE floodplains are studied using detailed methods and include base flood elevations. Floodways are also studied using detailed methods and represent areas reserved for flood storage and passage of streamflow. **Appendix B** shows the project boundary with the FEMA 100-year floodplain delineation obtained from FIRM panel 39003C0300E (effective May 4, 2015) and panels 39003C0305D, 39003C0315D, and 39003C0320D (effective May 2, 2013).

The stormwater analyses of the project area were conducted in accordance with the requirements of the Allen County Stormwater Management and Sediment Control Regulations². Rainfall depth data at the project site was obtained from NOAA Atlas 14 Precipitation Frequency Data Server³. **Appendix C** shows the rainfall depth data used for the study area. A Type II, 24-hour rainfall distribution, 24-hour storm duration and average moisture conditions were used for the analyses.

Soil data was obtained from the National Resources Conservation Service (NRCS) Web Soil Survey⁴ database to determine soil type and runoff parameters required by the stormwater model

developed for the study area. **Appendix D** provides the soil types and hydrologic soil groups (HSG) defined in the study area. Soils within the study area are generally classified as somewhat poorly drained and poorly drained. The most common HSG's in the study area are the soil groups B/C, C/D and D. Dual class soil groups were modeled as D soil groups to provide a more conservative analysis.

A LiDAR (Light Detection and Ranging) topographic survey was conducted by LW Survey Company in October 2020. Bare earth LiDAR points were provided to Kleinfelder in .XYZ text format on November 15, 2020. These points were used to create a digital elevation model (DEM) which was used for the onsite hydrologic and hydraulics analyses. An offsite hydrologic analysis was conducted in conjunction with the onsite flood study. Offsite analyses were based on LiDAR available from the Ohio Geographically Referenced Information Program (OGRIP)⁵. OGRIP LiDAR was collected for Allen and Auglaize counties in 2018. Both Allen and Auglaize counties have publicly available topographic data in the form of 1-foot contours. The county datasets were compared to the OGRIP LiDAR at a handful of locations and found to be less precise and generally less accurate than the OGRIP LiDAR.

Land use and cover data were obtained from the 2016 National Land Cover Dataset (NLCD)⁶ and adjusted as needed based on available ESRI aerial imagery dated May 14, 2019. The NRCS TR-55 Table 2-2⁷ was used as reference for the selection of the curve numbers. Composite curve numbers for the study area were calculated using the NRCS soil dataset, TR-55 Table 2-2, land use/land cover data and drainage areas delineated for the pre-development conditions.

Sub-basins were delineated based on the topography described above. Based on each sub-basin's characteristics, the NRCS Velocity Method was selected to calculate the time of concentration for each drainage area. This method assumes that time of concentration is the sum of travel times for segments along the most hydraulically distant flow path. The segments used in the velocity method may be of three types: sheet flow, shallow concentrated, and open channel flow. The travel time during sheet flow is defined by the Manning's kinematic solution as follows:

$$T_L = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5}S^{0.4}}$$

Where: T_L = travel time, hr

n = Manning's roughness coefficient

L = sheet flow length, ft

P_2 = 2-year, 24-hour rainfall, in

S = slope of land surface, ft/ft

Typically, sheet flow becomes shallow concentrated flow after 100 feet and the travel time is the length divided by the average velocity as follows:

$$T_L = \frac{L}{3,600V}$$

Where: T_L = travel time, hr

L = flow length, ft

V = average velocity, ft/s

3,600 = conversion factor, s to hr

To estimate shallow concentrated flow travel time, velocities were developed using the NRCS TR-55 Figure 15-4, in which average velocity is a function of watercourse slope and type of channel.

Open channel flow is assumed to begin where a channel form is visible from field investigation or aerial photographs. The Manning's Equation for open channel flow was used to determine the average velocity as follows:

$$V = \frac{1.49R^{\frac{2}{3}}S^{\frac{1}{2}}}{n}$$

Where: V = average velocity, ft/s

R = hydraulic radius, ft

$R = A/P_w$

A = cross-sectional flow area, ft²

P_w = wetted perimeter, ft

S = channel slope, ft/ft

n = Manning's n value for open channel flow

Average velocity was determined using the bankfull elevation. The open channel travel time is calculated using the flow length divided by the average velocity.

Finally, the time of concentration is obtained from the sum of travel times along all hydraulic segments.

The stormwater analyses were simulated using the computer modeling software HydroCAD Version 10.0⁸. HydroCAD is a computer design program for modeling the hydrology and hydraulics of stormwater runoff. The stormwater analyses calculations follow the Soil Conservation Service Technical Release 20 (TR-20)⁹ procedures.

3 PRE-DEVELOPMENT DRAINAGE AND HYDROLOGY

The pre-development conditions were analyzed to estimate the peak runoff discharge rates and volumes for existing conditions during the design storms specified in Section 1. The pre-development watershed was sub-divided into 30 sub-basins, based on obtained existing conditions topographic data and project boundary. **Appendix F** shows the Pre-Development Drainage Map.

The site is currently used for agriculture and the topography is mild to moderately sloped. The LiDAR DEM includes the stream channels of Twomile Creek, Twomile Creek Tributary 1, Twomile Creek Tributary 2, and Little Ottawa River, which flow through the project area. Twomile Creek and its tributaries flow through the center of the project area and drain into Auglaize River, located west of the site. Little Ottawa River flows north and runs along the eastern most project boundary. Onsite runoff primarily drains to these four streams.

Appendix G provides the detailed curve number calculation tables for the pre-development conditions. Refer to **Appendix E** for the Pre-Development Landuse Map.

Auglaize County provides publicly available culvert and bridge structure data from a county wide stormwater inventory available through the county GIS portal¹⁰. Structure data located in Auglaize County was incorporated into the model from this stormwater inventory database. Structure data was not available for Allen County, therefore dimensions of structures located in Allen County were estimated based on available aerial imagery and best judgement.

Time of concentration was estimated using the NRCS Velocity Method. The pre-development time of concentration calculations can be found in the pre-development hydrologic model inputs and results in **Appendix H** and **Table 3-1**. The peak discharge rates and runoff volumes for each drainage basin can be found in **Tables 3-2** and **3-3**, respectively.

It should be noted that the Allen County stormwater manual states that retention/detention basins must handle the post-development critical storm runoff volume and discharge to pre-development 1-year runoff rates. The critical design storm is determined by the increase in runoff volume from the pre- to post-development condition. This policy may require the implementation of extensive

onsite stormwater management devices. Post-development analyses are not included in this submittal.

Table 3-1: Pre-Development Basin Summary

BASIN	DRAINAGE AREA	COMPOSITE CURVE NUMBER	TIME OF CONCENTRATION
	[ACRE]		[MIN]
B1	1124.6	79	64.6
B2	233.6	77	30.4
B3	41.1	80	56.6
B4	144.4	80	42.8
B5	366.9	80	66.4
B6	113.6	78	49.8
B7	397.3	80	245.1
B8	13.1	80	25.3
B9	33.2	80	41.7
B10	50.4	80	54.3
B11	117.8	76	93.1
B12	22.7	75	79.8
B13	37.1	81	74.5
B14	427.3	78	133.1
B15	60.4	77	104.7
B16	198.3	77	223.3
B17	41.1	80	24.3
B18	82.0	80	46.0
B19	25.5	80	56.5
B20	165.0	80	53.5
B21	36.5	80	83.6
B22	52.3	80	77.3
B23	43.2	80	71.9
B24	22.7	63	22.1
B25	32.3	70	41.0
B26	127.5	76	167.6
B27	21.6	67	30.6
B28	17.1	80	38.3
B29	87.8	80	117.1
B30	1.9	81	14.3

Table 3-2: Pre-Development Discharge Rate Summary

BASIN	1-YEAR, 24-HOUR DISCHARGE	2-YEAR, 24-HOUR DISCHARGE	5-YEAR, 24-HOUR DISCHARGE	10-YEAR, 24-HOUR DISCHARGE	25-YEAR, 24-HOUR DISCHARGE	50-YEAR, 24-HOUR DISCHARGE	100-YEAR, 24-HOUR DISCHARGE
	[CFS]*	[CFS]	[CFS]	[CFS]	[CFS]	[CFS]	[CFS]
B1	295.5	455.1	699.0	919.9	1241.7	1516.2	1811.6
B2	87.6	140.2	221.5	295.8	405.0	498.5	599.7
B3	13.1	19.7	29.8	38.8	51.9	63.1	75.1
B4	56.5	85.2	128.5	167.4	223.9	271.8	323.2
B5	103.9	156.7	236.7	308.7	412.8	501.4	596.7
B6	33.0	51.8	80.6	106.9	145.5	178.5	214.1
B7	40.9	61.2	92.7	121.2	162.9	198.5	236.8
B8	7.4	11.1	16.6	21.6	28.7	34.8	41.3
B9	13.2	19.9	30.0	39.1	52.3	63.5	75.5
B10	16.6	25.0	37.7	49.1	65.7	79.8	95.0
B11	17.6	28.7	46.4	62.7	87.0	108.0	130.7
B12	3.4	5.7	9.4	12.8	17.9	22.4	27.2
B13	10.5	15.6	23.2	30.0	39.8	48.2	57.1
B14	60.0	93.1	144.6	191.4	260.8	320.3	384.7
B15	9.2	14.6	23.0	30.9	42.4	52.4	63.2
B16	17.0	26.5	41.7	55.8	76.7	94.9	114.7
B17	23.9	35.7	53.5	69.5	92.6	112.1	133.3
B18	30.4	45.8	69.1	90.1	120.5	146.4	174.1
B19	8.1	12.3	18.5	24.1	32.3	39.2	46.7
B20	54.7	82.7	124.9	162.9	218.0	264.7	314.9
B21	8.7	13.0	19.7	25.7	34.5	42.0	50.0
B22	13.2	19.9	30.0	39.1	52.4	63.7	75.9
B23	11.5	17.4	26.2	34.2	45.8	55.6	66.2
B24	0.8	3.1	8.1	13.5	22.5	30.9	40.3
B25	4.0	8.0	15.1	21.9	32.5	41.9	52.2
B26	12.2	19.6	31.5	42.6	59.3	73.8	89.5
B27	1.9	4.5	9.5	14.5	22.5	29.7	37.6
B28	7.2	10.9	16.4	21.4	28.6	34.7	41.2
B29	16.1	24.3	36.8	48.1	64.4	78.4	93.3
B30	1.7	2.4	3.6	4.6	6.0	7.3	8.6

*CFS – cubic feet per second

Table 3-3: Pre-Development Runoff Volume Summary

BASIN	1-YEAR, 24-HOUR RUNOFF VOLUME	2-YEAR, 24-HOUR RUNOFF VOLUME	5-YEAR, 24-HOUR RUNOFF VOLUME	10-YEAR, 24-HOUR RUNOFF VOLUME	25-YEAR, 24-HOUR RUNOFF VOLUME	50-YEAR, 24-HOUR RUNOFF VOLUME	100-YEAR, 24-HOUR RUNOFF VOLUME
	[AC-FT]*	[AC-FT]	[AC-FT]	[AC-FT]	[AC-FT]	[AC-FT]	[AC-FT]
B1	55.7	81.0	119.7	154.8	206.3	250.5	298.4
B2	10.0	14.9	22.5	29.4	39.7	48.6	58.3
B3	2.2	3.3	4.6	5.9	7.8	9.5	11.2
B4	7.7	11.0	16.1	20.8	27.5	33.2	39.5
B5	19.5	28.0	41.0	52.7	69.8	84.5	100.3
B6	5.2	7.7	11.5	15.0	20.1	24.5	29.3
B7	21.1	30.3	44.4	57.1	75.6	91.4	108.6
B8	0.7	1.0	1.5	1.9	2.5	3.0	3.6
B9	1.8	2.5	3.7	4.8	6.3	7.6	9.1
B10	2.7	3.9	5.6	7.2	9.6	11.6	13.8
B11	4.7	7.1	10.8	14.2	19.3	23.7	28.5
B12	0.8	1.3	2.0	2.6	3.6	4.4	5.3
B13	2.1	3.0	4.4	5.6	7.3	8.8	10.5
B14	19.7	29.0	43.3	56.3	75.5	92.0	110.0
B15	2.6	3.9	5.8	7.6	10.3	12.6	15.1
B16	8.5	12.6	19.1	25.0	33.7	41.3	49.5
B17	2.2	3.1	4.6	5.9	7.8	9.5	11.2
B18	4.4	6.3	9.2	11.8	15.6	18.9	22.4
B19	1.4	1.9	2.8	3.7	4.8	5.9	7.0
B20	8.8	12.6	18.4	23.7	31.4	38.0	45.1
B21	1.9	2.8	4.1	5.2	6.9	8.4	10.0
B22	2.8	4.0	5.8	7.5	10.0	12.0	14.3
B23	2.3	3.3	4.8	6.2	8.2	9.9	11.8
B24	0.2	0.5	0.9	1.3	2.0	2.7	3.4
B25	0.8	1.3	2.1	2.9	4.1	5.2	6.4
B26	5.1	7.7	11.7	15.4	20.9	25.6	30.8
B27	0.4	0.7	1.2	1.6	2.4	3.1	3.8
B28	0.9	1.3	1.9	2.5	3.3	3.9	4.7
B29	4.7	6.7	9.8	12.6	16.7	20.2	24.0
B30	0.1	0.2	0.2	0.3	0.4	0.5	0.5

*AC-FT – acre feet

4 PRE-DEVELOPMENT FLOOD STUDY

A hydraulic analysis was performed on the existing conditions of the proposed solar project site to determine flooding depths and velocities during the 100-year 24-hour storm.

The pre-development flood analyses were simulated using the computer modeling software HEC-RAS¹¹. HEC-RAS is a computer design program for modeling the hydraulics of river systems. The 2-dimensional (2D) capabilities of HEC-RAS version 5.0.7 were utilized for the solar project site. HEC-RAS 2D is capable of simulating water flow in multiple directions over large terrain.

The topography used in the pre-development flood study is described in Section 2.2.

Variable Manning's 'n' values were utilized to represent variable ground roughness across the site and were estimated based on the aerial adjusted pre-development landuse. Manning's 'n' values range from 0.016 to 0.10. Refer to Table 4-1 for Manning's 'n' values and **Appendix I** for the pre-development Manning's 'n' map.

Table 4-1 Mannings 'n' Values

Mannings 'n'	Mannings Description
0.016	Impervious area / Asphalt
0.03	Low grass / Water body
0.035	Row crops / High grass / Scattered brush with asphalt
0.04	Wetland / Scattered brush
0.10	Woods

A computational mesh made up of 100-foot square mesh cells was generated to conduct the analysis. This mesh size was expected to extract sufficient detail from the terrain and generate reasonable results without overloading the program. Hydraulic breaklines were utilized at locations of hydraulic barriers (berms, roads, etc) and major conveyance locations (ditches, streams, etc). A variable computational time-step based on the Courant number was utilized to increase model efficiency and improve results. A Courant number-based time-step allows the

model to adjust to large inflows or outflows throughout the simulation. The Full Momentum equations were utilized as they provide better results for large changes in flow over short periods of time. The model was run for a simulation time of 72-hours which allows the peak stage to pass through all basins.

Normal depth, flow hydrograph, and precipitation boundary conditions were utilized for the analysis. Normal depth slope boundary conditions were used in locations where water is expected to leave the site and are based on the receiving terrain slope. The precipitation hydrograph is derived from the NRCS rainfall distribution hydrograph. Flow hydrograph boundary conditions, described below, were developed from an offsite runoff analysis.

Using HydroCAD, a hydrologic runoff analysis was conducted on offsite drainage basins that outfall onto the project site. Nine offsite drainage areas were identified that will generate runoff to the HEC-RAS 2D model area. Offsite basin B5 is split into two basins: B5-1 and B5-2. Drainage area B5-2 represents the area that will generate runoff to the southwest boundary of the 2D model area, while basin B5-1 represents the drainage area that will generate runoff to a location on the south boundary of the model. The area in B5-2 also drains to the outlet of basin B5-1, therefore basin B5-1 contains the area in B5-2.

NLCD landuse data, along with USDA web soil survey data, was used to estimate composite curve numbers for the offsite basins. Time of concentration was estimated using the NRCS Velocity Method. **Appendix J** shows the offsite drainage map. **Appendix L** provides the detailed curve number calculation tables for offsite basins. Refer to **Appendix K** for the Offsite Landuse Map. The offsite basin time of concentration calculations can be found in the offsite basin hydrologic model inputs and results in **Appendix M**. The resulting runoff hydrographs were used as boundary conditions to simulate run-on during the appropriate storms.

The Little Ottawa River runs through the eastern most portion of the project area and was studied using detailed methods in the latest FEMA Flood Insurance Study (FIS) (effective 2013). The 2013 FIS lists a peak 100-year discharge for Little Ottawa River at Bowsher Road as 1,400-cfs (cubic feet per second). Bowsher Road is approximately 400-feet downstream of the HEC-RAS 2D model boundary, so the discharge of 1,400-cfs was deemed acceptable for use within the flood model. The Little Ottawa River peak discharge of 1,400-cfs was fitted to the shape of the basin B4 runoff hydrograph in order to create a unique runoff hydrograph for that stream. The drainage area listed in the 2013 FEMA FIS for the Bowsher Road discharge location is 13.1-

square miles and the basin B4 drainage area is approximately 12-square miles, therefore it is assumed the runoff hydrograph of the Little Ottawa River may roughly mimic that of basin B4.

Refer to **Appendix N** for the resulting pre-development flood depth and velocity grids. Maximum flood depths are generally less than 2-feet, with depths reaching up to 12-feet in onsite channels. Velocities generally range from less than 0.1 feet/sec to 5 feet/sec, with isolated areas of higher velocity.

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6 LIMITATIONS

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions, and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee, or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

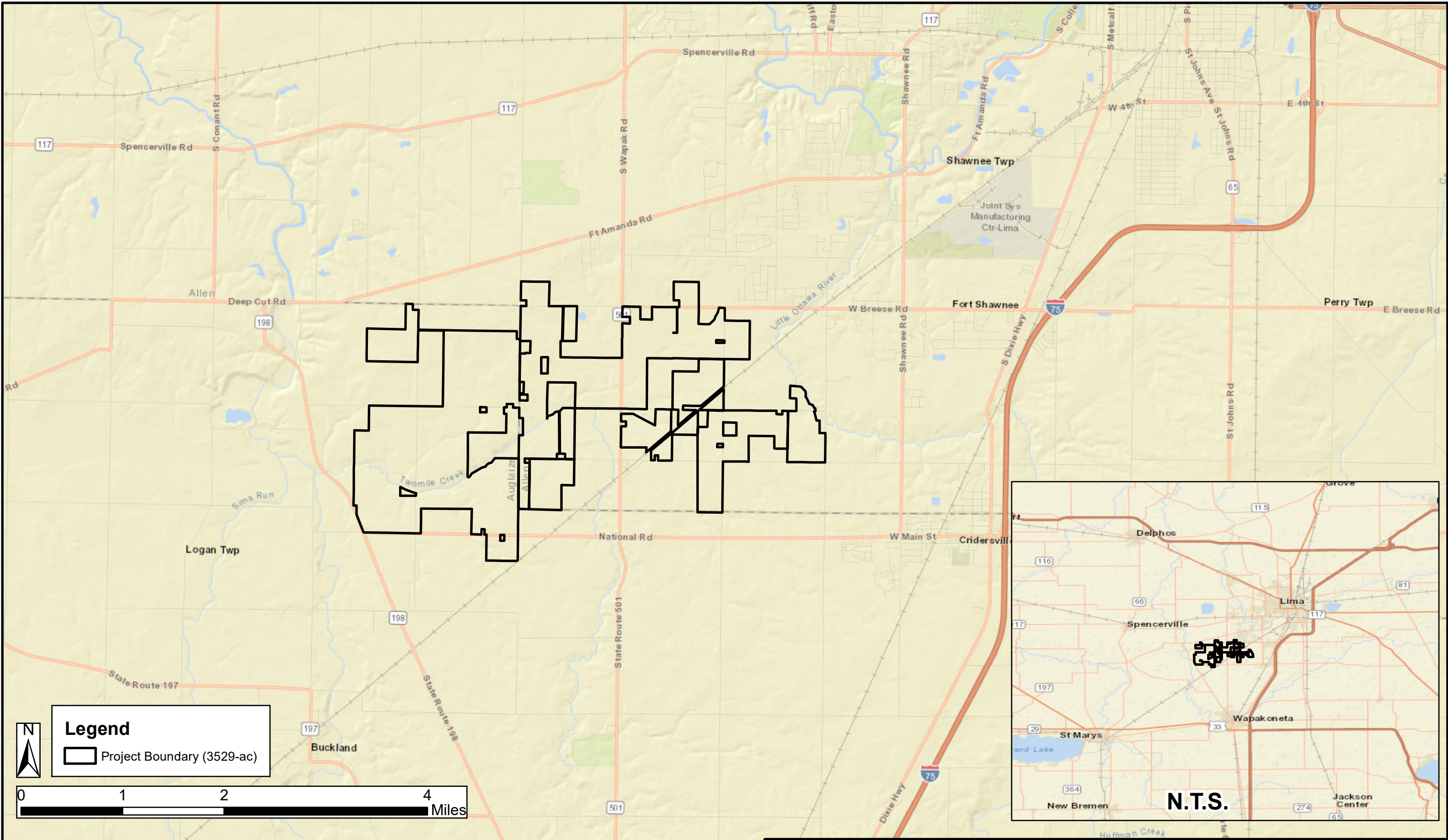
This report may be used only by the Client and the registered design professional in responsible charge and only for the purposes stated for this specific engagement within a reasonable time from its issuance, but in no event later than two (2) years from the date of the report.

The work performed was based on project information provided by Client. If Client does not retain Kleinfelder to review any plans and specifications, including any revisions or modifications to the plans and specifications, Kleinfelder assumes no responsibility for the suitability of our recommendations. In addition, if there are any changes in the field to the plans or specifications, Client must obtain written approval from Kleinfelder's engineer that such changes do not affect our recommendations. Failure to do so will vitiate Kleinfelder's recommendations.

APPENDIX A

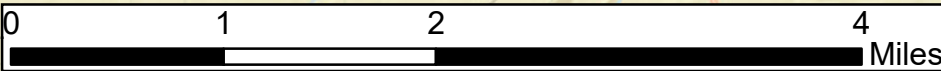
SITE LOCATION MAP

Document Path: \\argzssstor001\GIS_Projects\Staging\KCaracappa\Birch\GIS\Report_Figures\AppA.mxd; Plotted: 10/27/2020, 11:00:52 AM, KCaracappa



Legend

Project Boundary (3529-ac)



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DRAWN: 10/27/2020
DRAWN BY: KC
CHECKED BY: BB
FILE NAME: AppA

Location Map

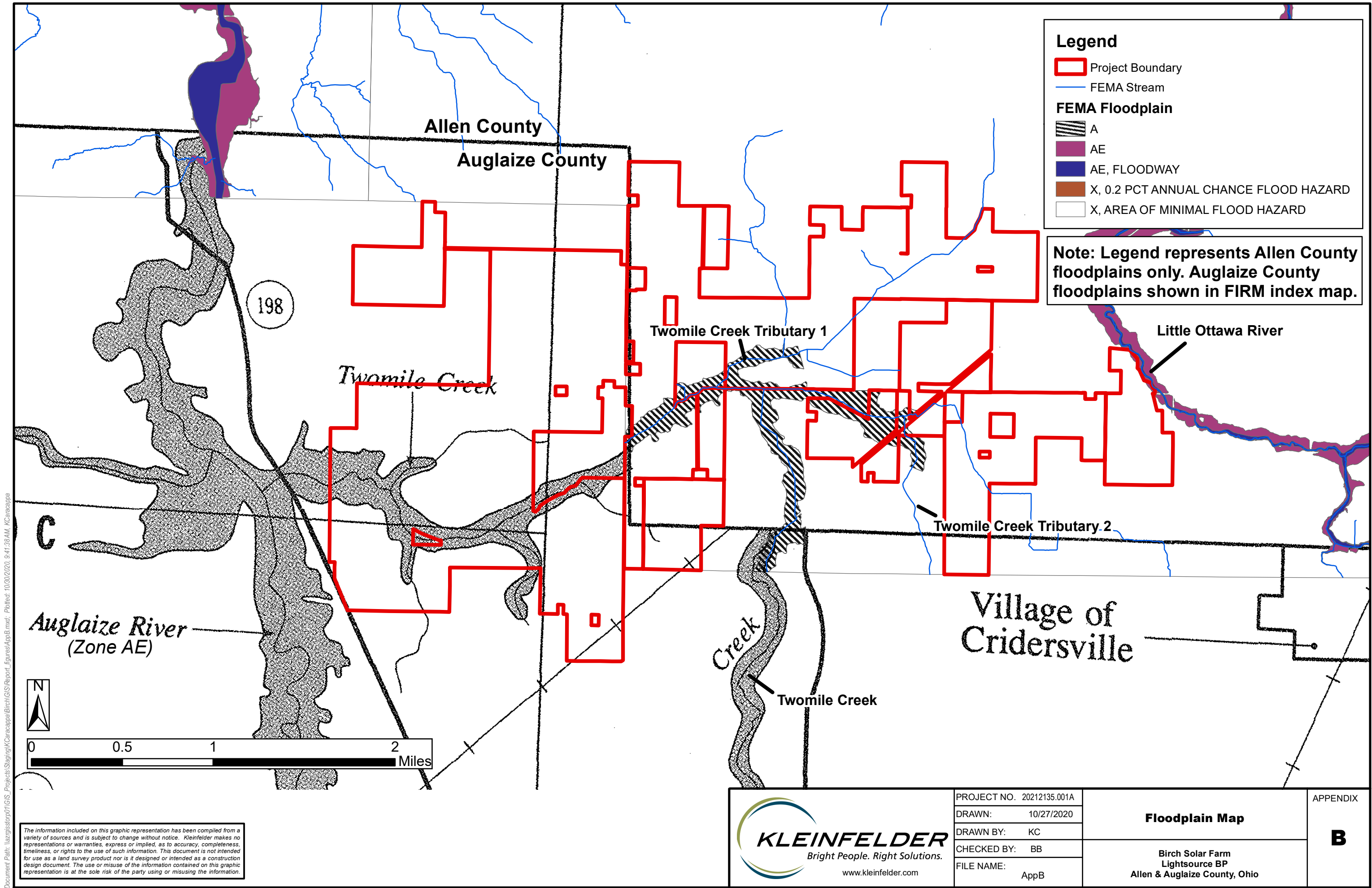
**Birch Solar Farm
Lightsource BP
Allen & Auglaize County, Ohio**

APPENDIX

A

APPENDIX B

FLOODPLAIN MAP



APPENDIX C

PRECIPITATION DATA



NOAA Atlas 14, Volume 2, Version 3
Location name: Lima, Ohio, USA*
Latitude: 40.6695°, Longitude: -84.2119°
Elevation: 833.89 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aerals](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.344 (0.312-0.381)	0.408 (0.370-0.451)	0.487 (0.441-0.537)	0.550 (0.496-0.606)	0.630 (0.566-0.693)	0.693 (0.619-0.760)	0.754 (0.671-0.827)	0.817 (0.723-0.895)	0.902 (0.791-0.989)	0.963 (0.839-1.06)
10-min	0.535 (0.485-0.591)	0.637 (0.577-0.704)	0.757 (0.685-0.835)	0.849 (0.766-0.935)	0.964 (0.865-1.06)	1.05 (0.939-1.15)	1.14 (1.01-1.24)	1.22 (1.08-1.34)	1.33 (1.16-1.45)	1.40 (1.22-1.54)
15-min	0.656 (0.595-0.725)	0.779 (0.706-0.861)	0.929 (0.842-1.02)	1.05 (0.943-1.15)	1.19 (1.07-1.31)	1.30 (1.16-1.43)	1.41 (1.25-1.55)	1.52 (1.34-1.66)	1.66 (1.45-1.81)	1.75 (1.53-1.93)
30-min	0.867 (0.787-0.959)	1.04 (0.945-1.15)	1.27 (1.15-1.40)	1.45 (1.31-1.60)	1.68 (1.51-1.85)	1.86 (1.66-2.04)	2.04 (1.81-2.23)	2.21 (1.96-2.42)	2.45 (2.15-2.69)	2.63 (2.29-2.89)
60-min	1.06 (0.961-1.17)	1.28 (1.16-1.41)	1.60 (1.45-1.76)	1.85 (1.67-2.03)	2.18 (1.96-2.40)	2.45 (2.19-2.69)	2.72 (2.42-2.98)	3.00 (2.66-3.29)	3.39 (2.97-3.72)	3.69 (3.21-4.05)
2-hr	1.24 (1.12-1.37)	1.49 (1.35-1.65)	1.87 (1.69-2.07)	2.18 (1.97-2.40)	2.59 (2.33-2.85)	2.93 (2.63-3.22)	3.29 (2.93-3.61)	3.67 (3.24-4.02)	4.19 (3.67-4.60)	4.61 (4.00-5.07)
3-hr	1.32 (1.20-1.45)	1.59 (1.45-1.76)	1.99 (1.81-2.19)	2.31 (2.10-2.54)	2.76 (2.49-3.03)	3.13 (2.80-3.42)	3.52 (3.14-3.85)	3.93 (3.47-4.30)	4.51 (3.95-4.93)	4.98 (4.31-5.45)
6-hr	1.56 (1.43-1.72)	1.87 (1.71-2.06)	2.33 (2.12-2.56)	2.71 (2.47-2.97)	3.26 (2.94-3.55)	3.71 (3.33-4.04)	4.20 (3.74-4.57)	4.72 (4.18-5.13)	5.48 (4.77-5.96)	6.10 (5.26-6.64)
12-hr	1.79 (1.64-1.97)	2.15 (1.96-2.36)	2.66 (2.43-2.93)	3.10 (2.81-3.39)	3.71 (3.35-4.05)	4.23 (3.79-4.61)	4.79 (4.26-5.21)	5.39 (4.76-5.86)	6.26 (5.46-6.80)	6.98 (6.01-7.57)
24-hr	2.12 (1.97-2.29)	2.54 (2.36-2.75)	3.12 (2.91-3.38)	3.61 (3.35-3.89)	4.29 (3.97-4.62)	4.85 (4.46-5.22)	5.44 (4.98-5.86)	6.07 (5.51-6.54)	6.95 (6.25-7.51)	7.67 (6.83-8.31)
2-day	2.47 (2.30-2.66)	2.95 (2.74-3.17)	3.61 (3.35-3.88)	4.14 (3.85-4.46)	4.90 (4.53-5.27)	5.51 (5.08-5.93)	6.16 (5.64-6.63)	6.83 (6.22-7.38)	7.78 (7.01-8.44)	8.55 (7.62-9.31)
3-day	2.66 (2.49-2.85)	3.17 (2.97-3.40)	3.86 (3.61-4.15)	4.42 (4.13-4.75)	5.20 (4.84-5.58)	5.84 (5.40-6.27)	6.50 (5.98-6.98)	7.18 (6.58-7.73)	8.13 (7.38-8.79)	8.89 (8.00-9.65)
4-day	2.85 (2.68-3.05)	3.39 (3.19-3.63)	4.12 (3.87-4.41)	4.70 (4.41-5.04)	5.51 (5.15-5.90)	6.17 (5.73-6.60)	6.84 (6.33-7.33)	7.53 (6.94-8.08)	8.49 (7.75-9.15)	9.24 (8.38-9.99)
7-day	3.35 (3.14-3.57)	3.99 (3.74-4.24)	4.82 (4.52-5.13)	5.49 (5.14-5.84)	6.43 (6.00-6.84)	7.18 (6.68-7.64)	7.96 (7.37-8.49)	8.77 (8.06-9.38)	9.89 (9.00-10.6)	10.8 (9.72-11.6)
10-day	3.82 (3.60-4.06)	4.53 (4.27-4.82)	5.42 (5.11-5.76)	6.13 (5.77-6.51)	7.10 (6.66-7.54)	7.88 (7.36-8.37)	8.66 (8.06-9.22)	9.47 (8.77-10.1)	10.6 (9.70-11.3)	11.4 (10.4-12.3)
20-day	5.26 (4.99-5.57)	6.21 (5.88-6.57)	7.28 (6.89-7.71)	8.13 (7.68-8.60)	9.24 (8.72-9.79)	10.1 (9.50-10.7)	11.0 (10.3-11.6)	11.8 (11.0-12.5)	12.9 (12.0-13.8)	13.7 (12.7-14.7)
30-day	6.52 (6.19-6.87)	7.67 (7.29-8.09)	8.89 (8.44-9.38)	9.83 (9.32-10.4)	11.0 (10.4-11.6)	11.9 (11.3-12.6)	12.8 (12.0-13.5)	13.6 (12.8-14.4)	14.7 (13.7-15.5)	15.4 (14.3-16.4)
45-day	8.35 (7.96-8.78)	9.80 (9.34-10.3)	11.2 (10.7-11.8)	12.3 (11.8-13.0)	13.7 (13.0-14.4)	14.7 (14.0-15.5)	15.7 (14.8-16.5)	16.6 (15.6-17.5)	17.7 (16.6-18.7)	18.4 (17.3-19.5)
60-day	10.1 (9.63-10.6)	11.8 (11.3-12.4)	13.5 (12.9-14.2)	14.8 (14.1-15.5)	16.4 (15.5-17.2)	17.5 (16.6-18.4)	18.6 (17.6-19.6)	19.6 (18.5-20.7)	20.9 (19.6-22.0)	21.8 (20.4-23.0)

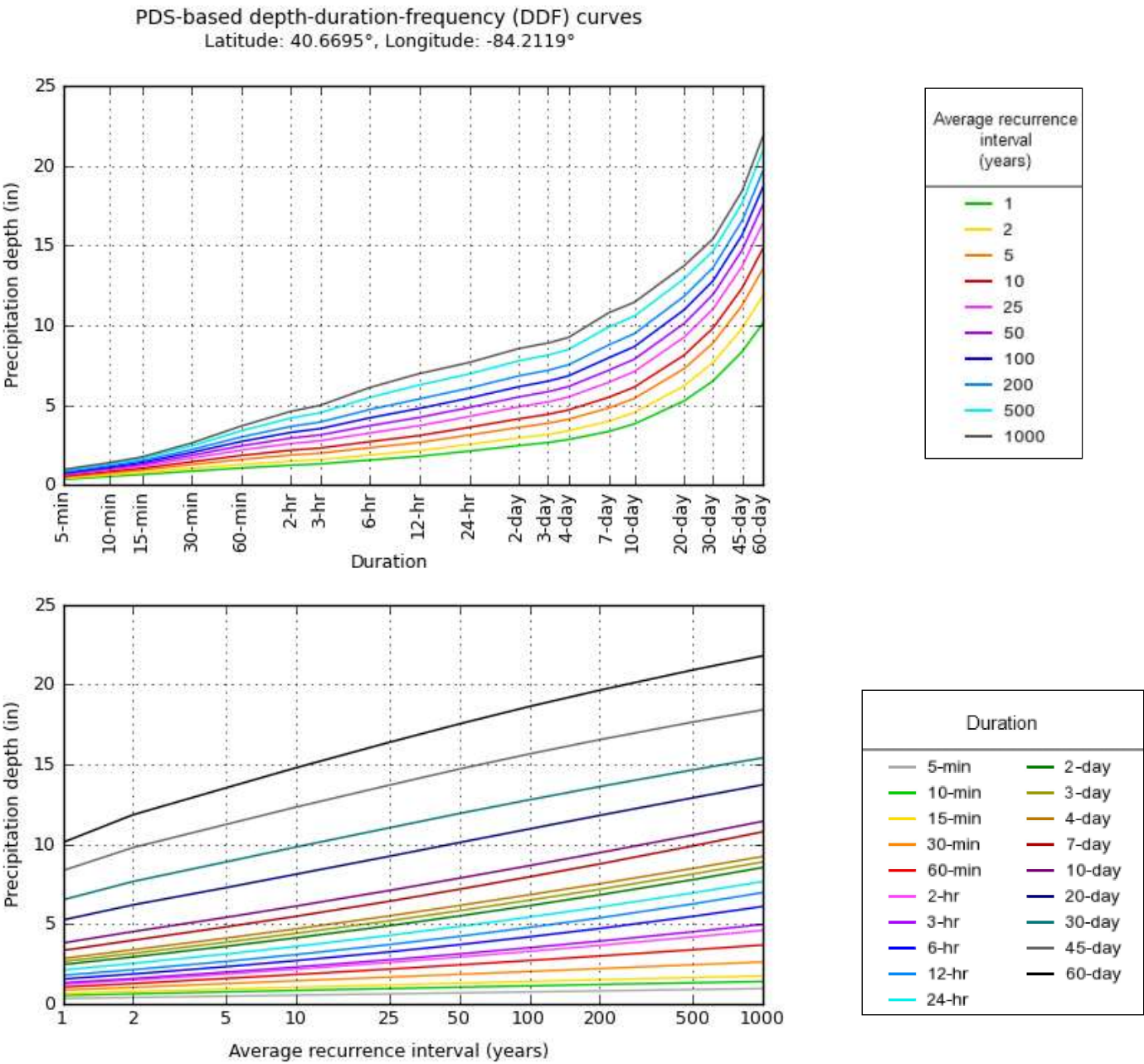
¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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

Please refer to NOAA Atlas 14 document for more information.

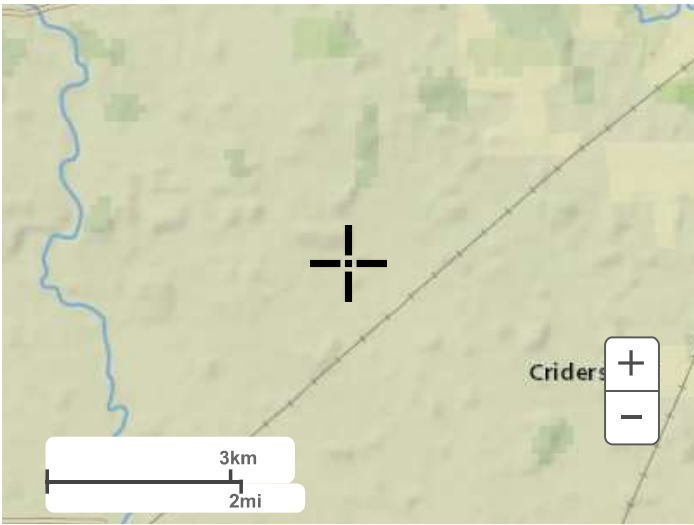
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PF graphical

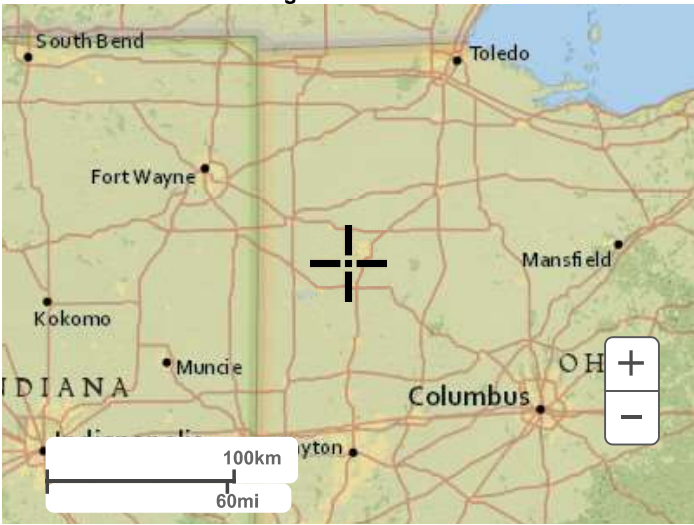


Maps & aerials

Small scale terrain



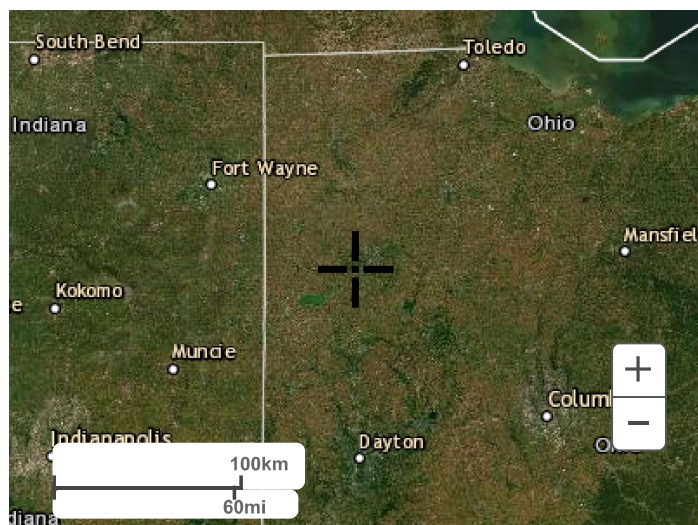
Large scale terrain



Large scale map



Large scale aerial



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APPENDIX D
NRCS SOIL SURVEY REPORT



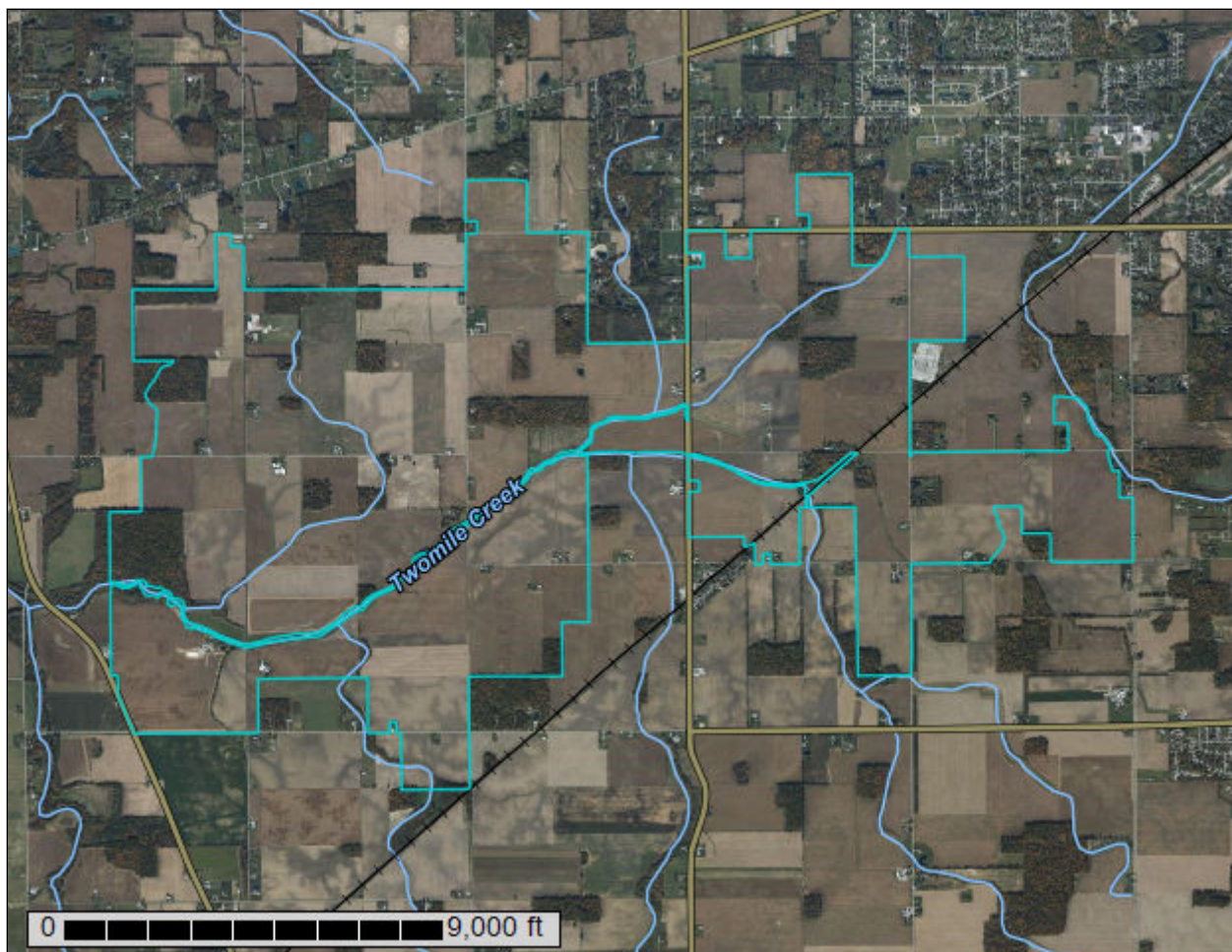
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for **Allen County, Ohio, and Auglaize County, Ohio**



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

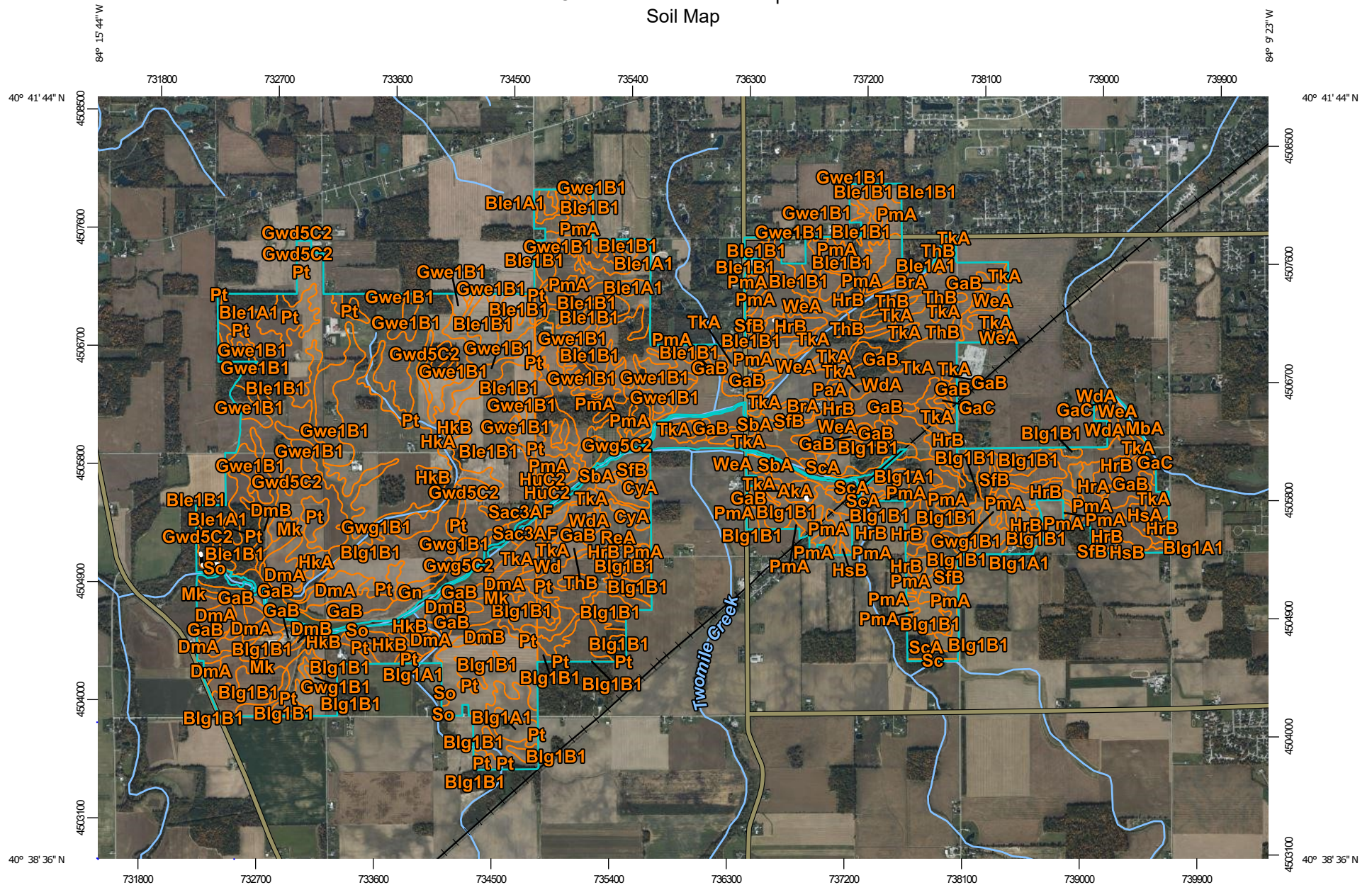
Custom Soil Resource Report

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

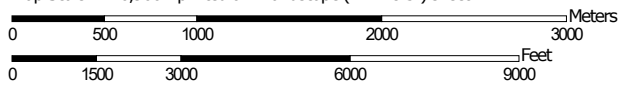
Soil Map

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

Custom Soil Resource Report Soil Map



Map Scale: 1:40,900 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

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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 scales ranging from 1:12,000 to 1:15,800.

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: Allen County, Ohio

Survey Area Data: Version 20, Jun 5, 2020

Soil Survey Area: Auglaize County, Ohio

Survey Area Data: Version 18, Jun 12, 2020

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: Oct 14, 2019—Oct 23, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

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
AkA	Alvada loam, 0 to 1 percent slopes	3.8	0.1%
Ble1A1	Blount silt loam, end moraine, 0 to 2 percent slopes	39.0	0.9%
Ble1B1	Blount silt loam, end moraine, 2 to 4 percent slopes	277.2	6.7%
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	57.1	1.4%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	263.1	6.4%
BrA	Blount-Jenera complex, 0 to 3 percent slopes	6.6	0.2%
CyA	Cygnets loam, 0 to 3 percent slopes	19.0	0.5%
GaB	Gallman loam, 2 to 6 percent slopes	97.3	2.4%
GaC	Gallman loam, 6 to 12 percent slopes	4.6	0.1%
GkB	Glynwood loam, 2 to 6 percent slopes	16.9	0.4%
Gwe1B1	Glynwood silt loam, end moraine, 2 to 6 percent slopes	73.7	1.8%
Gwe5B2	Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded	22.7	0.5%
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	15.8	0.4%
Gwg5B2	Glynwood clay loam, ground moraine, 2 to 6 percent slopes, eroded	10.2	0.2%
Gwg5C2	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	5.1	0.1%
HpB	Houcktown sandy loam, 2 to 4 percent slopes	5.0	0.1%
HrA	Houcktown loam, 0 to 2 percent slopes	8.9	0.2%
HrB	Houcktown loam, 2 to 6 percent slopes	53.9	1.3%
HsA	Houcktown silt loam, 0 to 2 percent slopes	1.7	0.0%

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Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HsB	Houcktown silt loam, 2 to 4 percent slopes	5.4	0.1%
HuC2	Houcktown-Glynwood complex, 6 to 12 percent slopes, eroded	3.9	0.1%
MbA	Medway silt loam, 0 to 2 percent slopes, occasionally flooded	1.6	0.0%
PaA	Patton silty clay loam, loamy substratum, 0 to 1 percent slopes	2.0	0.0%
PmA	Pewamo silty clay loam, 0 to 1 percent slopes	526.2	12.7%
ReA	Rensselaer loam, till substratum, 0 to 1 percent slopes	34.4	0.8%
SbA	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	110.7	2.7%
ScA	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	23.1	0.6%
SfB	Shawtown loam, 2 to 6 percent slopes	23.9	0.6%
ThB	Thackery sandy loam, sandy substratum, 1 to 3 percent slopes	66.2	1.6%
TkA	Thackery loam, sandy substratum, 0 to 2 percent slopes	110.0	2.7%
WdA	Westland clay loam, 0 to 1 percent slopes	247.2	6.0%
WeA	Westland-Rensselaer complex, 0 to 1 percent slopes	69.3	1.7%
Subtotals for Soil Survey Area		2,205.5	53.3%
Totals for Area of Interest		4,138.5	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ble1A1	Blount silt loam, end moraine, 0 to 2 percent slopes	31.5	0.8%
Ble1B1	Blount silt loam, end moraine, 2 to 4 percent slopes	636.5	15.4%
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	18.4	0.4%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	256.9	6.2%
DmA	Digby loam, 0 to 2 percent slopes	60.0	1.4%

Custom Soil Resource Report

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DmB	Digby loam, 2 to 6 percent slopes	22.4	0.5%
GaB	Gallman loam, 2 to 6 percent slopes	55.2	1.3%
Gn	Genesee silt loam, 0 to 2 percent slopes, occasionally flooded	5.0	0.1%
Gwd5C2	Glynwood clay loam, 6 to 12 percent slopes, eroded	10.6	0.3%
Gwe1B1	Glynwood silt loam, end moraine, 2 to 6 percent slopes	178.9	4.3%
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	41.8	1.0%
Gwg5C2	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	17.2	0.4%
HkA	Haskins loam, 0 to 3 percent slopes	11.2	0.3%
HkB	Haskins loam, 2 to 6 percent slopes	22.0	0.5%
Mk	Millgrove clay loam	85.4	2.1%
Pt	Pewamo silty clay loam, 0 to 1 percent slopes	354.8	8.6%
Sac3AF	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	7.3	0.2%
Sc	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	1.4	0.0%
So	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	100.6	2.4%
ThB	Thackery sandy loam, sandy substratum, 1 to 3 percent slopes	2.1	0.1%
TkA	Thackery loam, sandy substratum, 0 to 2 percent slopes	12.3	0.3%
Wd	Westland clay loam, 0 to 1 percent slopes	1.6	0.0%
Subtotals for Soil Survey Area		1,933.0	46.7%
Totals for Area of Interest		4,138.5	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.

Allen County, Ohio

AkA—Alvada loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 5rv6
Elevation: 700 to 1,000 feet
Mean annual precipitation: 32 to 42 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 150 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Alvada and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alvada

Setting

Landform: Drainageways on deltas on lake plains, depressions on lake plains, depressions on deltas on lake plains, flats on lake plains, drainageways on lake plains, depressions on ground moraines, drainageways on ground moraines, drainageways on outwash plains, depressions on outwash plains

Down-slope shape: Concave

Across-slope shape: Linear, concave

Parent material: Loamy and gravelly outwash over till

Typical profile

H1 - 0 to 14 inches: loam

H2 - 14 to 50 inches: clay loam

H5 - 50 to 80 inches: loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 30 percent

Available water capacity: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D

Forage suitability group: Unnamed (G111BYC-1OH)

Other vegetative classification: Unnamed (G111BYC-1OH)

Hydric soil rating: Yes

Minor Components

Somewhat poorly drained soils

Percent of map unit: 10 percent

Landform: Rises on outwash plains, rises on ground moraines, rises on lake plains

Hydric soil rating: No

Surface layer less than 10 inches thick

Percent of map unit:

Landform: Drainageways on ground moraines, drainageways on lake plains, drainageways on deltas on lake plains, flats on lake plains, depressions on lake plains, depressions on outwash plains, depressions on ground moraines, depressions on deltas on lake plains, drainageways on outwash plains

Down-slope shape: Concave

Across-slope shape: Linear, concave

Hydric soil rating: Yes

Clay loam surface layer

Percent of map unit:

Landform: Drainageways on outwash plains, drainageways on ground moraines, drainageways on lake plains, drainageways on deltas on lake plains, flats on lake plains, depressions on lake plains, depressions on outwash plains, depressions on ground moraines, depressions on deltas on lake plains

Down-slope shape: Concave

Across-slope shape: Linear, concave

Hydric soil rating: Yes

Loam till

Percent of map unit:

Landform: Depressions on deltas on lake plains, drainageways on outwash plains, drainageways on ground moraines, drainageways on lake plains, drainageways on deltas on lake plains, flats on lake plains, depressions on lake plains, depressions on outwash plains, depressions on ground moraines

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

Till at 20 to 40 inches

Percent of map unit:

Landform: Flats on lake plains, depressions on ground moraines, depressions on deltas on lake plains, drainageways on outwash plains, drainageways on ground moraines, drainageways on lake plains, drainageways on deltas on lake plains, depressions on lake plains, depressions on outwash plains

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

Silt loam surface layer

Percent of map unit:

Landform: Drainageways on deltas on lake plains, flats on lake plains, depressions on outwash plains, depressions on ground moraines, depressions on deltas on lake plains, drainageways on outwash plains, drainageways on ground moraines, drainageways on lake plains, depressions on lake plains

Down-slope shape: Concave

Across-slope shape: Linear, concave

Hydric soil rating: Yes

Areas underlain with lacustrine silts

Percent of map unit:

Landform: Drainageways on lake plains, drainageways on deltas on lake plains, flats on lake plains, depressions on lake plains, depressions on outwash plains, depressions on ground moraines, depressions on deltas on lake plains, drainageways on outwash plains, drainageways on ground moraines

Down-slope shape: Concave

Across-slope shape: Linear, concave

Hydric soil rating: Yes

Ble1A1—Blount silt loam, end moraine, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2s1j4

Elevation: 700 to 1,300 feet

Mean annual precipitation: 34 to 42 inches

Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Blount, end moraine, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Blount, End Moraine

Setting

Landform: End moraines on till plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 10 inches: silt loam

Bt - 10 to 33 inches: silty clay

BC - 33 to 39 inches: clay loam

Cd - 39 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: 30 to 60 inches to densic material

Drainage class: Somewhat poorly drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 6 to 12 inches

Frequency of flooding: None

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Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: D

Ecological site: F111BY502IN - WET TILL RIDGE

Hydric soil rating: No

Minor Components

Glynwood, end moraine

Percent of map unit: 9 percent

Landform: End moraines on till plains

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Crest, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: F111BY503IN - TILL RIDGE

Hydric soil rating: No

Pewamo, end moraine

Percent of map unit: 6 percent

Landform: End moraines on till plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Ble1B1—Blount silt loam, end moraine, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: 2s1j5

Elevation: 700 to 1,300 feet

Mean annual precipitation: 34 to 42 inches

Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Blount, end moraine, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Blount, End Moraine

Setting

Landform: End moraines on till plains
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 9 inches: silt loam
Bt - 9 to 32 inches: silty clay
BC - 32 to 37 inches: clay loam
Cd - 37 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: 30 to 56 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Minor Components

Glynwood, end moraine

Percent of map unit: 9 percent
Landform: End moraines on till plains
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

Pewamo, end moraine

Percent of map unit: 6 percent
Landform: End moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave

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Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Blg1A1—Blount silt loam, ground moraine, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2skcv

Elevation: 700 to 1,300 feet

Mean annual precipitation: 34 to 42 inches

Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Blount, ground moraine, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Blount, Ground Moraine

Setting

Landform: Ground moraines on till plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 10 inches: silt loam

Bt - 10 to 33 inches: silty clay

BC - 33 to 39 inches: clay loam

Cd - 39 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: 31 to 54 inches to densic material

Drainage class: Somewhat poorly drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 6 to 12 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

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Hydrologic Soil Group: D
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Minor Components

Pewamo, ground moraine

Percent of map unit: 9 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

Glynwood, ground moraine

Percent of map unit: 6 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

Blg1B1—Blount silt loam, ground moraine, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: 2s1j6
Elevation: 700 to 1,300 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Blount, Ground Moraine

Setting

Landform: Ground moraines on till plains
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wisconsin till derived from limestone and shale

Custom Soil Resource Report

Typical profile

Ap - 0 to 9 inches: silt loam
Bt - 9 to 32 inches: silty clay
BC - 32 to 37 inches: clay loam
Cd - 37 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: 30 to 54 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Minor Components

Pewamo, ground moraine

Percent of map unit: 9 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

Glynwood, ground moraine

Percent of map unit: 6 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

BrA—Blount-Jenera complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 5rrx
Elevation: 600 to 1,500 feet
Mean annual precipitation: 27 to 42 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 130 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Blount and similar soils: 55 percent
Jenera and similar soils: 40 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Blount

Setting

Landform: Rises on ground moraines
Landform position (two-dimensional): Shoulder, summit
Parent material: Basal till

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 26 inches: clay loam
H3 - 26 to 52 inches: clay loam
H4 - 52 to 80 inches: clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 30 to 60 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water capacity: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F111BY502IN - WET TILL RIDGE
Forage suitability group: Unnamed (G111BYC-1OH)
Other vegetative classification: Unnamed (G111BYC-1OH)
Hydric soil rating: No

Description of Jenera

Setting

Landform: Rises on ground moraines

Landform position (two-dimensional): Summit, shoulder

Parent material: Stratified loamy and silty glaciolacustrine deposits over basal till

Typical profile

H1 - 0 to 9 inches: fine sandy loam

H2 - 9 to 31 inches: sandy clay loam

H3 - 31 to 44 inches: silty clay loam

H4 - 44 to 80 inches: clay loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 40 to 60 inches to densic material

Drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Available water capacity: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 1

Hydrologic Soil Group: C/D

Ecological site: F111BY102IN - LACUSTRINE FOREST

Forage suitability group: Unnamed (G111BYA-6OH)

Other vegetative classification: Unnamed (G111BYA-6OH)

Hydric soil rating: No

Minor Components

Pewamo

Percent of map unit: 5 percent

Landform: Drainageways on ground moraines, depressions on ground moraines

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Loamy somewhat poorly drained soils

Percent of map unit:

Blount soils with silt loam surface layer

Percent of map unit:

Landform: Flats on ground moraines, flats on end moraines, rises on ground moraines, rises on end moraines

Landform position (two-dimensional): Summit, shoulder

Down-slope shape: Linear

Across-slope shape: Linear

CyA—Cygnet loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 5rrz
Elevation: 650 to 1,250 feet
Mean annual precipitation: 27 to 43 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 130 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cygnet and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cygnet

Setting

Landform: Rises on deltas on lake plains, rises on ground moraines, glacial drainage channels, beach ridges on lake plains
Landform position (two-dimensional): Shoulder, summit
Parent material: Loamy glaciolacustrine deposits over basal till

Typical profile

H1 - 0 to 12 inches: loam
H2 - 12 to 50 inches: clay loam
H4 - 50 to 80 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 40 to 60 inches to densic material
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water capacity: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B/D
Hydric soil rating: No

Minor Components

Alvada soils in depressions and at the margins of map units

Percent of map unit: 10 percent

Landform: Depressions on lake plains

Hydric soil rating: Yes

Moderately well drained soils with till at 60 to 70 inches

Percent of map unit:

Moderately well drained soils with till at 20 to 40 inches

Percent of map unit:

Somewhat poorly drained soils

Percent of map unit:

GaB—Gallman loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 5rs8

Elevation: 800 to 900 feet

Mean annual precipitation: 30 to 40 inches

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 150 to 170 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Gallman and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gallman

Setting

Landform: End moraines, knolls on ground moraines, knolls on outwash plains, knolls on glacial drainage channels

Landform position (two-dimensional): Summit, shoulder, backslope

Parent material: Loamy outwash

Typical profile

H1 - 0 to 10 inches: loam

H2 - 10 to 61 inches: loam

H3 - 61 to 80 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 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 high to high (0.60 to 2.00 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Available water capacity: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F111BY404IN - DRY OUTWASH UPLAND
Hydric soil rating: No

Minor Components

Somewhat poorly drained soils at the base of slopes and in s

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

Darker colored surface layer

Percent of map unit:

Silt loam surface layer

Percent of map unit:

Sandy loam or fine sandy loam surface layer

Percent of map unit:

Till at 60 to 80 inches

Percent of map unit:

Less clay and more sand in the subsoil

Percent of map unit:

Seasonal high water table at 4 to 6 feet

Percent of map unit:

Less rock fragments in the subsoil

Percent of map unit:

Slopes of 0 to 2 percent

Percent of map unit:

Moderately well drained soils

Percent of map unit:

Thinner subsoil

Percent of map unit:

GaC—Gallman loam, 6 to 12 percent slopes

Map Unit Setting

National map unit symbol: 5rs9
Elevation: 800 to 900 feet
Mean annual precipitation: 30 to 40 inches

Custom Soil Resource Report

Mean annual air temperature: 50 to 54 degrees F

Frost-free period: 150 to 170 days

Farmland classification: Not prime farmland

Map Unit Composition

Gallman and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gallman

Setting

Landform: Knolls on glacial drainage channels, knolls on outwash plains

Landform position (two-dimensional): Shoulder, backslope

Parent material: Loamy outwash

Typical profile

H1 - 0 to 8 inches: loam

H2 - 8 to 62 inches: sandy clay loam

H3 - 62 to 80 inches: loamy sand

Properties and qualities

Slope: 6 to 12 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Available water capacity: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: F111BY404IN - DRY OUTWASH UPLAND

Hydric soil rating: No

Minor Components

Till at 60 to 80 inches

Percent of map unit:

Sandy loam surface layer

Percent of map unit:

Seasonal high water table at 4 to 6 feet

Percent of map unit:

Silt loam surface layer

Percent of map unit:

Less rock fragments in the subsoil

Percent of map unit:

GkB—Glynwood loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2v4bq
Elevation: 700 to 1,060 feet
Mean annual precipitation: 34 to 38 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Glynwood

Setting

Landform: End moraines on till plains, ground moraines on till plains
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 9 inches: loam
Bt - 9 to 31 inches: clay
BC - 31 to 35 inches: clay loam
Cd - 35 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 28 to 45 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111BY503IN - TILL RIDGE

Custom Soil Resource Report

Hydric soil rating: No

Minor Components

Rawson

Percent of map unit: 6 percent

Landform: End moraines on till plains, ground moraines on till plains

Landform position (two-dimensional): Shoulder, backslope, summit

Landform position (three-dimensional): Side slope, crest, nose slope

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Ecological site: F111BY503IN - TILL RIDGE

Hydric soil rating: No

Blount

Percent of map unit: 5 percent

Landform: End moraines on till plains, ground moraines on till plains

Landform position (two-dimensional): Summit, backslope, footslope

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F111BY502IN - WET TILL RIDGE

Hydric soil rating: No

Pewamo

Percent of map unit: 4 percent

Landform: Ground moraines on till plains, end moraines on till plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Gwe1B1—Glynwood silt loam, end moraine, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2v4bm

Elevation: 720 to 1,320 feet

Mean annual precipitation: 34 to 42 inches

Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 140 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Glynwood, end moraine, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glynwood, End Moraine

Setting

Landform: End moraines on till plains
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bt - 8 to 29 inches: clay
BC - 29 to 34 inches: clay loam
Cd - 34 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 28 to 45 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

Minor Components

Blount, end moraine

Percent of map unit: 9 percent
Landform: End moraines on till plains
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear, concave
Across-slope shape: Linear
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Pewamo

Percent of map unit: 6 percent
Landform: End moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave

Custom Soil Resource Report

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Gwe5B2—Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t6lj

Elevation: 720 to 1,320 feet

Mean annual precipitation: 34 to 42 inches

Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 140 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Glynwood, end moraine, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glynwood, End Moraine

Setting

Landform: End moraines on till plains

Landform position (two-dimensional): Shoulder, summit

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex

Across-slope shape: Linear, convex

Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 7 inches: clay loam

Bt - 7 to 26 inches: clay

BC - 26 to 30 inches: clay loam

Cd - 30 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: 24 to 42 inches to densic material

Drainage class: Moderately well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

Minor Components

Blount, end moraine

Percent of map unit: 9 percent
Landform: End moraines on till plains
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Pewamo

Percent of map unit: 6 percent
Landform: End moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

Gwg1B1—Glynwood silt loam, ground moraine, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2v4bl
Elevation: 700 to 1,300 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Glynwood, Ground Moraine

Setting

Landform: Ground moraines on till plains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex

Custom Soil Resource Report

Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 9 inches: silt loam
Bt - 9 to 29 inches: clay
BC - 29 to 34 inches: clay loam
Cd - 34 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 28 to 45 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

Minor Components

Blount, ground moraine

Percent of map unit: 9 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear, convex
Across-slope shape: Linear
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Pewamo

Percent of map unit: 6 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

Gwg5B2—Glynwood clay loam, ground moraine, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t6lk
Elevation: 700 to 1,300 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Glynwood, Ground Moraine

Setting

Landform: Ground moraines on till plains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 7 inches: clay loam
Bt - 7 to 25 inches: clay
BC - 25 to 29 inches: clay loam
Cd - 29 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 24 to 42 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D

Custom Soil Resource Report

Ecological site: F111BY503IN - TILL RIDGE

Hydric soil rating: No

Minor Components

Blount, ground moraine

Percent of map unit: 9 percent

Landform: Ground moraines on till plains, end moraines on till plains

Landform position (two-dimensional): Summit, backslope, footslope

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F111BY502IN - WET TILL RIDGE

Hydric soil rating: No

Pewamo

Percent of map unit: 6 percent

Landform: Ground moraines on till plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Gwg5C2—Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2psgr

Elevation: 750 to 1,300 feet

Mean annual precipitation: 34 to 42 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Glynwood and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glynwood

Setting

Landform: Ground moraines

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Clayey till

Custom Soil Resource Report

Typical profile

Ap - 0 to 7 inches: clay loam
Bt - 7 to 24 inches: clay
BC - 24 to 29 inches: clay loam
Cd - 29 to 80 inches: clay loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 24 to 36 inches to densic material
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water capacity: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F111BY503IN - TILL RIDGE
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Minor Components

Blount

Percent of map unit: 8 percent
Landform: Flats on ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111BY502IN - WET TILL RIDGE
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Pewamo

Percent of map unit: 7 percent
Landform: Depressions on till plains
Landform position (two-dimensional): Toeslope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F111BY501IN - TILL DEPRESSION
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: Yes

HpB—Houcktown sandy loam, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: 5rsp
Elevation: 700 to 1,000 feet
Mean annual precipitation: 27 to 42 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Houcktown and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houcktown

Setting

Landform: Knolls on lake plains, knolls on ground moraines, knolls on end moraines
Landform position (two-dimensional): Shoulder, summit, backslope
Parent material: Loamy glaciolacustrine deposits over basal till

Typical profile

H1 - 0 to 10 inches: sandy loam
H2 - 10 to 30 inches: clay loam
H3 - 30 to 48 inches: clay loam
H4 - 48 to 80 inches: clay loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: 40 to 60 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water capacity: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F111BY503IN - TILL RIDGE
Forage suitability group: Unnamed (G111BYA-6OH)
Other vegetative classification: Unnamed (G111BYA-6OH)
Hydric soil rating: No

Minor Components

Alvada

Percent of map unit: 5 percent

Landform: Depressions on lake plains, depressions on ground moraines

Landform position (two-dimensional): Toeslope

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Loam or silt loam surface layer

Percent of map unit:

Less clay in the substratum

Percent of map unit:

Slopes of 4 to 6 percent

Percent of map unit:

Deeper to carbonates

Percent of map unit:

More clay and less sand in the subsoil

Percent of map unit:

Somewhat poorly drained soils with a darker colored surface

Percent of map unit:

Seasonal high water table at 2 to 3.5 feet

Percent of map unit:

HrA—Houcktown loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 5rsq

Elevation: 700 to 1,000 feet

Mean annual precipitation: 27 to 42 inches

Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Houcktown and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houcktown

Setting

Landform: Rises on ground moraines, rises on deltas on lake plains, rises on lake plains, rises on end moraines

Landform position (two-dimensional): Shoulder, summit

Parent material: Loamy glaciolacustrine deposits over basal till

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 35 inches: loam
H3 - 35 to 51 inches: clay loam
H4 - 51 to 80 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 40 to 60 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water capacity: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C/D
Ecological site: F111BY503IN - TILL RIDGE
Forage suitability group: Unnamed (G111BYA-6OH)
Other vegetative classification: Unnamed (G111BYA-6OH)
Hydric soil rating: No

Minor Components

Pewamo

Percent of map unit: 4 percent
Landform: Depressions on ground moraines, depressions on end moraines
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

Rarely flooded areas adjacent to the blanchard river and its

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

Clay loam surface layer

Percent of map unit:

Fine sandy loam or sandy loam surface layer

Percent of map unit:

Silt loam surface layer

Percent of map unit:

Less clay in the substratum

Percent of map unit:

More clay and less sand in the subsoil

Percent of map unit:

Till at 40 to 60 inches

Percent of map unit:

Darker colored surface layer

Percent of map unit:

Somewhat poorly drained soils

Percent of map unit:

Seasonal high water table at 2 to 3.5 feet

Percent of map unit:

HrB—Houcktown loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 5rw8

Elevation: 700 to 1,000 feet

Mean annual precipitation: 27 to 42 inches

Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Houcktown and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houcktown

Setting

Landform: Knolls on deltas on ground moraines, knolls on end moraines, knolls on lake plains, knolls on ground moraines

Landform position (two-dimensional): Summit, shoulder, backslope

Parent material: Loamy glaciolacustrine deposits over basal till

Typical profile

H1 - 0 to 10 inches: loam

H2 - 10 to 30 inches: loam

H3 - 30 to 50 inches: clay loam

H4 - 50 to 80 inches: silt loam

Properties and qualities

Slope: 2 to 6 percent

Depth to restrictive feature: 40 to 60 inches to densic material

Drainage class: Moderately well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F111BY503IN - TILL RIDGE
Forage suitability group: Unnamed (G111BYA-6OH)
Other vegetative classification: Unnamed (G111BYA-6OH)
Hydric soil rating: No

Minor Components

Pewamo

Percent of map unit: 3 percent
Landform: Depressions on lake plains, drainageways on end moraines, drainageways on ground moraines, drainageways on lake plains, depressions on end moraines, depressions on ground moraines
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

Mermill

Percent of map unit: 2 percent
Landform: Depressions on lake plains, drainageways on lake plains
Landform position (two-dimensional): Backslope, shoulder, summit
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

More clay and less sand in the subsoil

Percent of map unit:

Somewhat poorly drained soils

Percent of map unit:

Silt loam surface layer

Percent of map unit:

Fine sandy loam or sandy loam surface layer

Percent of map unit:

Less clay in the substratum

Percent of map unit:

Till at 40 to 60 inches

Percent of map unit:

Seasonal high water table at 2 to 3.5 feet

Percent of map unit:

Clay loam surface layer

Percent of map unit:

Somewhat poorly drained soils with a darker colored surface

Percent of map unit:

HsA—Houcktown silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 5rw9
Elevation: 700 to 1,000 feet
Mean annual precipitation: 27 to 42 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Houcktown and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houcktown

Setting

Landform: Rises on ground moraines, rises on deltas on lake plains, rises on lake plains
Landform position (two-dimensional): Shoulder, summit
Parent material: Loamy glaciolacustrine deposits over basal till

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 30 inches: clay loam
H3 - 30 to 48 inches: silty clay loam
H4 - 48 to 80 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 40 to 60 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C/D
Ecological site: F111BY503IN - TILL RIDGE
Forage suitability group: Unnamed (G111BYA-6OH)
Other vegetative classification: Unnamed (G111BYA-6OH)
Hydric soil rating: No

Minor Components

Alvada

Percent of map unit: 5 percent

Landform: Depressions on lake plains, depressions on ground moraines

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Till at 40 to 60 inches

Percent of map unit:

Somewhat poorly drained soils

Percent of map unit:

Seasonal high water table at 2 to 3.5 feet

Percent of map unit:

Thicker subsoil

Percent of map unit:

Silty clay loam surface layer

Percent of map unit:

Less clay in the substratum

Percent of map unit:

Loam surface layer

Percent of map unit:

More clay and less sand in the subsoil

Percent of map unit:

HsB—Houcktown silt loam, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: 5rwb

Elevation: 700 to 1,000 feet

Mean annual precipitation: 27 to 42 inches

Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Houcktown and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houcktown

Setting

Landform: Knolls on end moraines, knolls on ground moraines

Landform position (two-dimensional): Shoulder, summit, backslope

Parent material: Loamy glaciolacustrine deposits over basal till

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 23 inches: clay loam
H3 - 23 to 44 inches: clay loam
H4 - 44 to 80 inches: clay loam

Properties and qualities

Slope: 2 to 4 percent
Depth to restrictive feature: 40 to 60 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water capacity: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F111BY503IN - TILL RIDGE
Forage suitability group: Unnamed (G111BY000OH)
Other vegetative classification: Unnamed (G111BY000OH)
Hydric soil rating: No

Minor Components

Thicker subsoil

Percent of map unit:

Till at 40 to 60 inches

Percent of map unit:

Loam surface layer

Percent of map unit:

Slopes of less than 2 percent

Percent of map unit:

More clay and less sand in the subsoil

Percent of map unit:

Somewhat poorly drained soils

Percent of map unit:

Silty clay loam surface layer

Percent of map unit:

Less clay in the substratum

Percent of map unit:

HuC2—Houcktown-Glynwood complex, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 5rwc
Elevation: 700 to 1,000 feet
Mean annual precipitation: 27 to 42 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Houcktown and similar soils: 65 percent
Glynwood and similar soils: 25 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houcktown

Setting

Landform: Ground moraines
Landform position (two-dimensional): Shoulder, backslope
Parent material: Loamy glaciolacustrine deposits over basal till

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 30 inches: clay loam
H3 - 30 to 50 inches: silty clay loam
H4 - 50 to 80 inches: silty clay loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 40 to 60 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water capacity: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D
Ecological site: F111BY503IN - TILL RIDGE
Forage suitability group: Unnamed (G111BY000OH)
Other vegetative classification: Unnamed (G111BY000OH)
Hydric soil rating: No

Description of Glynwood

Setting

Landform: Ground moraines

Landform position (two-dimensional): Backslope, shoulder

Parent material: Basal till

Typical profile

H1 - 0 to 8 inches: clay loam

H2 - 8 to 24 inches: silty clay loam

H3 - 24 to 34 inches: silty clay loam

H4 - 34 to 80 inches: silty clay loam

Properties and qualities

Slope: 6 to 12 percent

Depth to restrictive feature: 25 to 50 inches to densic material

Drainage class: Moderately well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Available water capacity: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: D

Ecological site: F111BY503IN - TILL RIDGE

Hydric soil rating: No

Minor Components

Very poorly drained soils

Percent of map unit: 5 percent

Landform: Drainageways on ground moraines

Hydric soil rating: Yes

Severely eroded areas

Percent of map unit: 5 percent

Landform: Ground moraines

Landform position (two-dimensional): Shoulder

Hydric soil rating: No

Seasonal high water table at 2 to 3.5 feet

Percent of map unit:

Thicker subsoil

Percent of map unit:

Glynwood soils with less clay in the substratum

Percent of map unit:

Houcktown soils with more clay in the surface layer

Percent of map unit:

Slopes of 12 to 25 percent

Percent of map unit:

Areas underlain with lacustrine silts

Percent of map unit:

Darker colored surface layer

Percent of map unit:

Slopes of 2 to 6 percent

Percent of map unit:

Till at 40 to 60 inches

Percent of map unit:

Somewhat poorly drained soils

Percent of map unit:

MbA—Medway silt loam, 0 to 2 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 5rt2

Elevation: 900 to 1,100 feet

Mean annual precipitation: 27 to 42 inches

Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Medway and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Medway

Setting

Landform: Flats on flood plains

Parent material: Loamy alluvium

Typical profile

H1 - 0 to 19 inches: silt loam

H2 - 19 to 58 inches: silt loam

H3 - 58 to 80 inches: stratified silt loam to sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)

Custom Soil Resource Report

Depth to water table: About 12 to 24 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water capacity: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F111BY202IN - DRY ALLUVIUM FLOODPLAIN
Hydric soil rating: No

Minor Components

Very poorly drained soils

Percent of map unit: 5 percent
Landform: Backswamps on flood plains
Hydric soil rating: Yes

Surface layer less than 10 inches thick

Percent of map unit:

More sand in the subsoil

Percent of map unit:

Somewhat poorly drained soils

Percent of map unit:

Well drained soils

Percent of map unit:

PaA—Patton silty clay loam, loamy substratum, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 5rt6
Elevation: 800 to 1,000 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Patton

Setting

Landform: Drainageways on ground moraines, depressions on ground moraines
Down-slope shape: Concave
Across-slope shape: Linear, concave

Custom Soil Resource Report

Parent material: Glaciolacustrine deposits

Typical profile

H1 - 0 to 10 inches: silty clay loam

H2 - 10 to 27 inches: silty clay loam

H3 - 27 to 60 inches: stratified silt loam to silty clay loam

H4 - 60 to 80 inches: stratified fine sandy loam to sandy loam to gravelly sandy loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 25 percent

Available water capacity: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D

Ecological site: F111BY101IN - LACUSTRINE FLATWOOD

Hydric soil rating: Yes

Minor Components

Till at 40 to 80 inches

Percent of map unit:

Landform: Depressions on ground moraines, drainageways on ground moraines

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

More clay in the subsoil

Percent of map unit:

Landform: Depressions on ground moraines, drainageways on ground moraines

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

Surface layer less than 10 inches thick

Percent of map unit:

Landform: Depressions on ground moraines, drainageways on ground moraines

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

PmA—Pewamo silty clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2t6lv
Elevation: 700 to 1,300 feet
Mean annual precipitation: 32 to 42 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Pewamo

Setting

Landform: Depressions on till plains, drainageways on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 11 inches: silty clay loam
Btg1 - 11 to 34 inches: silty clay
Btg2 - 34 to 47 inches: silty clay
BCg - 47 to 57 inches: clay loam
Cg - 57 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.5 inches)

Interpretive groups

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

Custom Soil Resource Report

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Minor Components

Blount

Percent of map unit: 9 percent

Landform: Ground moraines on till plains, end moraines on till plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F111BY502IN - WET TILL RIDGE

Hydric soil rating: No

Minster

Percent of map unit: 6 percent

Landform: Depressions on till plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: F111BY101IN - LACUSTRINE FLATWOOD

Hydric soil rating: Yes

ReA—Rensselaer loam, till substratum, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 5rth

Elevation: 780 to 800 feet

Mean annual precipitation: 31 to 41 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 145 to 208 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Rensselaer and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rensselaer

Setting

Landform: Depressions on ground moraines, depressions on lake plains, flats on lake plains, depressions on deltas on lake plains, depressions on glacial drainage channels, drainageways on ground moraines, drainageways on lake plains, drainageways on glacial drainage channels, drainageways on deltas on lake plains

Down-slope shape: Concave

Across-slope shape: Concave, linear

Custom Soil Resource Report

Parent material: Loamy glaciofluvial deposits over basal till

Typical profile

H1 - 0 to 13 inches: loam
H2 - 13 to 38 inches: clay loam
H3 - 38 to 55 inches: sandy clay loam
H4 - 55 to 71 inches: stratified loamy sand to silt loam
H5 - 71 to 80 inches: clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 35 percent
Available water capacity: High (about 11.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: R111BY401IN - WET OUTWASH MOLLISOL
Hydric soil rating: Yes

Minor Components

Somewhat poorly drained soils

Percent of map unit: 10 percent
Landform: Rises on lake plains, rises on ground moraines
Hydric soil rating: No

Silt loam or sandy loam surface layer

Percent of map unit:
Landform: Drainageways on lake plains, drainageways on glacial drainage channels, drainageways on deltas on lake plains, flats on lake plains, depressions on deltas on lake plains, depressions on ground moraines, depressions on lake plains, depressions on glacial drainage channels, drainageways on ground moraines
Down-slope shape: Concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Gravelly strata in the substratum

Percent of map unit:
Landform: Depressions on glacial drainage channels, drainageways on ground moraines, drainageways on lake plains, drainageways on glacial drainage channels, drainageways on deltas on lake plains, flats on lake plains, depressions on deltas on lake plains, depressions on ground moraines, depressions on lake plains
Down-slope shape: Concave
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Surface layer less than 10 inches thick

Percent of map unit:

Landform: Flats on lake plains, depressions on lake plains, depressions on glacial drainage channels, drainageways on ground moraines, drainageways on lake plains, drainageways on glacial drainage channels, drainageways on deltas on lake plains, depressions on deltas on lake plains, depressions on ground moraines

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

More silt and less sand in the subsoil

Percent of map unit:

Landform: Drainageways on deltas on lake plains, flats on lake plains, depressions on ground moraines, depressions on lake plains, depressions on glacial drainage channels, drainageways on ground moraines, drainageways on lake plains, drainageways on glacial drainage channels, depressions on deltas on lake plains

Down-slope shape: Concave

Across-slope shape: Linear, concave

Hydric soil rating: Yes

Till at 40 to 60 inches

Percent of map unit:

Landform: Drainageways on glacial drainage channels, drainageways on deltas on lake plains, flats on lake plains, depressions on deltas on lake plains, depressions on ground moraines, depressions on lake plains, depressions on glacial drainage channels, drainageways on ground moraines, drainageways on lake plains

Down-slope shape: Concave

Across-slope shape: Linear, concave

Hydric soil rating: Yes

SbA—Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2z6cx

Elevation: 640 to 1,150 feet

Mean annual precipitation: 37 to 46 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 165 to 175 days

Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Saranac, frequently flooded, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saranac, Frequently Flooded

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey alluvium

Typical profile

Ap - 0 to 7 inches: silty clay loam
Bg - 7 to 44 inches: silty clay
Cg - 44 to 69 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Available water capacity: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F111BY201IN - WET ALLUVIUM FLOODPLAIN
Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)
Hydric soil rating: Yes

Minor Components

Sloan, occasionally ponded

Percent of map unit: 8 percent
Landform: Depressions on flood-plain steps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F111BY201IN - WET ALLUVIUM FLOODPLAIN
Hydric soil rating: Yes

Shoals, occasionally flooded

Percent of map unit: 7 percent
Landform: Flood-plain steps
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111BY203IN - WET ALLUVIUM FOREST
Hydric soil rating: No

ScA—Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 5rtn

Elevation: 800 to 1,000 feet

Mean annual precipitation: 32 to 42 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Saranac and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saranac

Setting

Landform: Backswamps on flood plains, flats on flood plains

Parent material: Clayey alluvium over basal till

Typical profile

H1 - 0 to 12 inches: silty clay loam

H2 - 12 to 51 inches: silty clay loam

H3 - 51 to 80 inches: clay loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: FrequentNone

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 30 percent

Available water capacity: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Ecological site: F111BY201IN - WET ALLUVIUM FLOODPLAIN

Hydric soil rating: Yes

Minor Components

Knoxdale

Percent of map unit: 5 percent

Landform: Natural levees on flood plains

Ecological site: F111BY204IN - DRY ALLUVIUM FOREST

Hydric soil rating: No

Till at 60 to 80 inches

Percent of map unit:

Landform: Backswamps on flood plains, flats on flood plains

Hydric soil rating: Yes

Surface layer less than 10 inches thick

Percent of map unit:

Landform: Backswamps on flood plains, flats on flood plains

Hydric soil rating: Yes

Soils with lighter colored overwash

Percent of map unit:

Landform: Backswamps on flood plains, flats on flood plains

Hydric soil rating: Yes

Less clay and more sand in the subsoil

Percent of map unit:

Landform: Flats on flood plains, backswamps on flood plains

Hydric soil rating: Yes

SfB—Shawtown loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 5rtq

Elevation: 600 to 1,000 feet

Mean annual precipitation: 27 to 42 inches

Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Shawtown and similar soils: 93 percent

Minor components: 7 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shawtown

Setting

Landform: Knolls on beach ridges on lake plains

Landform position (two-dimensional): Summit, shoulder, backslope

Parent material: Stratified glaciolacustrine deposits over basal till

Typical profile

H1 - 0 to 9 inches: loam
H3 - 9 to 53 inches: gravelly loam
H4 - 53 to 66 inches: gravelly loamy coarse sand
H5 - 66 to 80 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 50 to 70 inches to densic material
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water capacity: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Aurand

Percent of map unit: 2 percent
Landform: Flats on lake plains, beach ridges
Landform position (two-dimensional): Summit, footslope

Lamberjack

Percent of map unit: 2 percent
Landform: Till plains, outwash plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rarely flooded areas adjacent to the blanchard river and its

Percent of map unit: 2 percent
Hydric soil rating: No

Houcktown

Percent of map unit: 1 percent
Landform: Knolls on end moraines, knolls on ground moraines
Landform position (two-dimensional): Shoulder, summit, backslope

Less clay and more sand in the subsoil

Percent of map unit:

Sandy loam or fine sandy loam surface layer

Percent of map unit:

Till below 80 inches

Percent of map unit:

Slopes of 6 to 12 percent

Percent of map unit:

Well drained soils

Percent of map unit:

Slopes of 0 to 2 percent

Percent of map unit:

Till at 40 to 50 inches

Percent of map unit:

ThB—Thackery sandy loam, sandy substratum, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 5rtx

Elevation: 600 to 1,000 feet

Mean annual precipitation: 32 to 42 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Thackery and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Thackery

Setting

Landform: Knolls on stream terraces, knolls on outwash plains

Landform position (two-dimensional): Shoulder, summit, backslope

Landform position (three-dimensional): Riser

Parent material: Outwash

Typical profile

H1 - 0 to 17 inches: sandy loam

H2 - 17 to 58 inches: clay loam

H3 - 58 to 65 inches: clay loam

H3 - 65 to 80 inches: loamy sand

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)

Depth to water table: About 12 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Custom Soil Resource Report

Calcium carbonate, maximum content: 35 percent
Available water capacity: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B/D
Ecological site: F111BY404IN - DRY OUTWASH UPLAND
Hydric soil rating: No

Minor Components

Westland

Percent of map unit: 5 percent
Landform: Depressions on outwash plains
Ecological site: R111BY401IN - WET OUTWASH MOLLISOL
Hydric soil rating: Yes

Somewhat poorly drained soils

Percent of map unit:

Well drained soils

Percent of map unit:

Silt loam or loam surface layer

Percent of map unit:

Till at 60 to 80 inches

Percent of map unit:

TkA—Thackery loam, sandy substratum, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 5rty
Elevation: 600 to 1,000 feet
Mean annual precipitation: 32 to 42 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 150 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Thackery

Setting

Landform: Flats on stream terraces, flats on outwash plains, rises on stream terraces, rises on outwash plains
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Tread
Parent material: Outwash

Custom Soil Resource Report

Typical profile

H1 - 0 to 7 inches: loam
H2 - 7 to 57 inches: clay loam
H3 - 57 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water capacity: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B/D
Ecological site: F111BY404IN - DRY OUTWASH UPLAND
Hydric soil rating: No

Minor Components

Silt loam surface layer

Percent of map unit:

Sandy loam surface layer

Percent of map unit:

Well drained soils

Percent of map unit:

Somewhat poorly drained soils

Percent of map unit:

WdA—Westland clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 5rv4
Elevation: 350 to 1,000 feet
Mean annual precipitation: 36 to 43 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 140 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Westland and similar soils: 90 percent

Custom Soil Resource Report

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Westland

Setting

Landform: Depressions on outwash plains, glacial drainage channels, drainageways on outwash plains

Down-slope shape: Concave

Across-slope shape: Concave, linear

Parent material: Loamy outwash

Typical profile

H1 - 0 to 12 inches: clay loam

H2 - 12 to 47 inches: clay loam

H3 - 47 to 54 inches: loam

H4 - 54 to 80 inches: stratified gravelly loamy coarse sand to very gravelly coarse sand

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 45 percent

Available water capacity: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D

Ecological site: R111BY401IN - WET OUTWASH MOLLISOL

Forage suitability group: Unnamed (G111BYC-1OH)

Other vegetative classification: Unnamed (G111BYC-1OH)

Hydric soil rating: Yes

Minor Components

Somewhat poorly drained soils

Percent of map unit: 10 percent

Landform: Rises on glacial drainage channels, rises on outwash plains

Hydric soil rating: No

Silt loam or loam surface layer

Percent of map unit:

Landform: Drainageways on outwash plains, glacial drainage channels, depressions on outwash plains

Down-slope shape: Concave

Across-slope shape: Linear, concave

Hydric soil rating: Yes

WeA—Westland-Rensselaer complex, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 5rv5
Elevation: 350 to 1,000 feet
Mean annual precipitation: 34 to 44 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 140 to 210 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Westland and similar soils: 50 percent
Rensselaer and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Westland

Setting

Landform: Glacial drainage channels, drainageways on outwash plains, depressions on outwash plains
Down-slope shape: Concave
Across-slope shape: Linear, concave
Parent material: Loamy outwash

Typical profile

H1 - 0 to 10 inches: loam
H2 - 10 to 52 inches: loam
H3 - 52 to 59 inches: gravelly sandy loam
H4 - 59 to 80 inches: stratified gravelly loamy coarse sand to very gravelly coarse sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 45 percent
Available water capacity: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: R111BY401IN - WET OUTWASH MOLLISOL

Custom Soil Resource Report

Hydric soil rating: Yes

Description of Rensselaer

Setting

Landform: Depressions on outwash plains, drainageways on outwash plains, glacial drainage channels

Down-slope shape: Concave

Across-slope shape: Concave, linear

Parent material: Loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 19 inches: loam

H2 - 19 to 38 inches: clay loam

H3 - 38 to 58 inches: loam

H4 - 58 to 80 inches: stratified sand to silt loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: About 0 to 12 inches

Frequency of flooding: None

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 25 percent

Available water capacity: High (about 11.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: B/D

Ecological site: R111BY401IN - WET OUTWASH MOLLISOL

Hydric soil rating: Yes

Minor Components

Somewhat poorly drained soils

Percent of map unit: 5 percent

Landform: Rises on glacial drainage channels, rises on outwash plains

Hydric soil rating: No

Lamberjack

Percent of map unit: 2 percent

Landform: Outwash plains, till plains

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F111BY502IN - WET TILL RIDGE

Hydric soil rating: No

Darroch

Percent of map unit: 2 percent

Landform: Outwash plains, till plains, lake plains

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Rarely flooded areas adjacent to the blanchard river and its

Percent of map unit: 1 percent

Landform: Flood plains

Hydric soil rating: Yes

Fine sandy loam surface layer

Percent of map unit:

Landform: Depressions on outwash plains, drainageways on outwash plains,
glacial drainage channels

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

Clay loam or silty clay loam surface layer

Percent of map unit:

Landform: Depressions on outwash plains, drainageways on outwash plains,
glacial drainage channels

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

Surface layer less than 10 inches thick

Percent of map unit:

Landform: Drainageways on outwash plains, glacial drainage channels,
depressions on outwash plains

Down-slope shape: Concave

Across-slope shape: Linear, concave

Hydric soil rating: Yes

Silt loam surface layer

Percent of map unit:

Landform: Depressions on outwash plains, drainageways on outwash plains,
glacial drainage channels

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

Till at 60 to 80 inches

Percent of map unit:

Landform: Depressions on outwash plains, drainageways on outwash plains,
glacial drainage channels

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

Auglaize County, Ohio

Ble1A1—Blount silt loam, end moraine, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2s1j4
Elevation: 700 to 1,300 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Blount, End Moraine

Setting

Landform: End moraines on till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 10 inches: silt loam
Bt - 10 to 33 inches: silty clay
BC - 33 to 39 inches: clay loam
Cd - 39 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 30 to 60 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: D
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Minor Components

Glynwood, end moraine

Percent of map unit: 9 percent
Landform: End moraines on till plains
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

Pewamo, end moraine

Percent of map unit: 6 percent
Landform: End moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

Ble1B1—Blount silt loam, end moraine, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: 2s1j5
Elevation: 700 to 1,300 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Blount, End Moraine

Setting

Landform: End moraines on till plains
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 9 inches: silt loam
Bt - 9 to 32 inches: silty clay

Custom Soil Resource Report

BC - 32 to 37 inches: clay loam

Cd - 37 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 4 percent

Depth to restrictive feature: 30 to 56 inches to densic material

Drainage class: Somewhat poorly drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 6 to 12 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: D

Ecological site: F111BY502IN - WET TILL RIDGE

Hydric soil rating: No

Minor Components

Glynwood, end moraine

Percent of map unit: 9 percent

Landform: End moraines on till plains

Landform position (two-dimensional): Backslope, summit

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: F111BY503IN - TILL RIDGE

Hydric soil rating: No

Pewamo, end moraine

Percent of map unit: 6 percent

Landform: End moraines on till plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Blg1A1—Blount silt loam, ground moraine, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2skcv

Elevation: 700 to 1,300 feet

Custom Soil Resource Report

Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Blount, Ground Moraine

Setting

Landform: Ground moraines on till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 10 inches: silt loam
Bt - 10 to 33 inches: silty clay
BC - 33 to 39 inches: clay loam
Cd - 39 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 31 to 54 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 6 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: D
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Minor Components

Pewamo, ground moraine

Percent of map unit: 9 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave, linear
Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Glynwood, ground moraine

Percent of map unit: 6 percent

Landform: Ground moraines on till plains

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope, nose slope

Down-slope shape: Convex

Across-slope shape: Linear

Ecological site: F111BY503IN - TILL RIDGE

Hydric soil rating: No

Blg1B1—Blount silt loam, ground moraine, 2 to 4 percent slopes

Map Unit Setting

National map unit symbol: 2s1j6

Elevation: 700 to 1,300 feet

Mean annual precipitation: 34 to 42 inches

Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Blount, ground moraine, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Blount, Ground Moraine

Setting

Landform: Ground moraines on till plains

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 9 inches: silt loam

Bt - 9 to 32 inches: silty clay

BC - 32 to 37 inches: clay loam

Cd - 37 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 4 percent

Depth to restrictive feature: 30 to 54 inches to densic material

Drainage class: Somewhat poorly drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 6 to 12 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Minor Components

Pewamo, ground moraine

Percent of map unit: 9 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

Glynwood, ground moraine

Percent of map unit: 6 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

DmA—Digby loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 5pkh
Elevation: 780 to 900 feet
Mean annual precipitation: 28 to 42 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Digby

Setting

Landform: Outwash terraces, outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Outwash

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 30 inches: sandy clay loam
H3 - 30 to 60 inches: stratified gravelly sand to gravelly sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F111BY403IN - OUTWASH UPLAND
Forage suitability group: Unnamed (G111BYC-1OH)
Other vegetative classification: Unnamed (G111BYC-1OH)
Hydric soil rating: No

Minor Components

Millgrove

Percent of map unit: 5 percent
Landform: Depressions
Ecological site: R111BY401IN - WET OUTWASH MOLLISOL
Hydric soil rating: Yes

Sandy loam surface layer

Percent of map unit: 5 percent

Gallman

Percent of map unit: 5 percent
Landform: Outwash plains, kames, moraines, outwash terraces
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111BY404IN - DRY OUTWASH UPLAND

DmB—Digby loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 5pkj
Elevation: 670 to 1,160 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 146 to 192 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Digby

Setting

Landform: Outwash terraces, outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Outwash

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 30 inches: sandy clay loam
H3 - 30 to 60 inches: stratified gravelly sand to gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B/D
Ecological site: F111BY403IN - OUTWASH UPLAND
Forage suitability group: Unnamed (G111BYC-1OH)
Other vegetative classification: Unnamed (G111BYC-1OH)
Hydric soil rating: No

Minor Components

Gallman

Percent of map unit: 15 percent
Landform: Outwash plains, kames, moraines, outwash terraces
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111BY404IN - DRY OUTWASH UPLAND

GaB—Gallman loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 5pkp
Elevation: 780 to 900 feet
Mean annual precipitation: 28 to 40 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 146 to 170 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Gallman

Setting

Landform: Moraines, outwash terraces, outwash plains, kames
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Outwash

Typical profile

H1 - 0 to 16 inches: loam
H2 - 16 to 68 inches: sandy clay loam
H3 - 68 to 81 inches: coarse sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Custom Soil Resource Report

Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Available water capacity: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F111BY404IN - DRY OUTWASH UPLAND
Hydric soil rating: No

Minor Components

Digby

Percent of map unit: 10 percent
Landform: Outwash terraces, outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111BY403IN - OUTWASH UPLAND

Sandy loam surface layer

Percent of map unit: 5 percent

Gn—Genesee silt loam, 0 to 2 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 2z6ct
Elevation: 520 to 1,280 feet
Mean annual precipitation: 37 to 46 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 145 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Genesee, Occasionally Flooded

Setting

Landform: Natural levees, flood-plain steps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

Ap - 0 to 8 inches: silt loam

Custom Soil Resource Report

Bw - 8 to 32 inches: loam

C - 32 to 79 inches: loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)

Depth to water table: About 30 to 33 inches

Frequency of flooding: OccasionalNone

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Eel, frequently flooded

Percent of map unit: 8 percent

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Sloan, occasionally ponded

Percent of map unit: 7 percent

Landform: Flood-plain steps, depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope, dip

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: Yes

Shoals, occasionally flooded

Percent of map unit: 5 percent

Landform: Flood-plain steps

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Gwd5C2—Glynwood clay loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2psgn
Elevation: 750 to 1,300 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Glynwood

Setting

Landform: End moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey till

Typical profile

Ap - 0 to 7 inches: clay loam
Bt - 7 to 24 inches: clay
BC - 24 to 29 inches: clay loam
Cd - 29 to 80 inches: clay loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 24 to 36 inches to densic material
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Available water capacity: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F111BY503IN - TILL RIDGE
Other vegetative classification: Trees/Timber (Woody Vegetation)

Custom Soil Resource Report

Hydric soil rating: No

Minor Components

Blount

Percent of map unit: 8 percent

Landform: Rises on ground moraines, flats on ground moraines

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F111BY502IN - WET TILL RIDGE

Other vegetative classification: Trees/Timber (Woody Vegetation)

Hydric soil rating: No

Morley

Percent of map unit: 7 percent

Landform: Till plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Linear

Ecological site: F111BY503IN - TILL RIDGE

Other vegetative classification: Trees/Timber (Woody Vegetation)

Hydric soil rating: No

Gwe1B1—Glynwood silt loam, end moraine, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2v4bm

Elevation: 720 to 1,320 feet

Mean annual precipitation: 34 to 42 inches

Mean annual air temperature: 48 to 54 degrees F

Frost-free period: 140 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Glynwood, end moraine, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glynwood, End Moraine

Setting

Landform: End moraines on till plains

Landform position (two-dimensional): Shoulder, summit

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex

Across-slope shape: Linear, convex

Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 8 inches: silt loam

Custom Soil Resource Report

Bt - 8 to 29 inches: clay
BC - 29 to 34 inches: clay loam
Cd - 34 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 28 to 45 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

Minor Components

Blount, end moraine

Percent of map unit: 9 percent
Landform: End moraines on till plains
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear, concave
Across-slope shape: Linear
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Pewamo

Percent of map unit: 6 percent
Landform: End moraines on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

Gwg1B1—Glynwood silt loam, ground moraine, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2v4bl

Custom Soil Resource Report

Elevation: 700 to 1,300 feet
Mean annual precipitation: 34 to 42 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Glynwood, Ground Moraine

Setting

Landform: Ground moraines on till plains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 9 inches: silt loam
Bt - 9 to 29 inches: clay
BC - 29 to 34 inches: clay loam
Cd - 34 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 28 to 45 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

Minor Components

Blount, ground moraine

Percent of map unit: 9 percent
Landform: Ground moraines on till plains
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear, convex
Across-slope shape: Linear

Custom Soil Resource Report

Ecological site: F111BY502IN - WET TILL RIDGE

Hydric soil rating: No

Pewamo

Percent of map unit: 6 percent

Landform: Ground moraines on till plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Gwg5C2—Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2psgr

Elevation: 750 to 1,300 feet

Mean annual precipitation: 34 to 42 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Glynwood and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glynwood

Setting

Landform: Ground moraines

Landform position (two-dimensional): Backslope, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Clayey till

Typical profile

Ap - 0 to 7 inches: clay loam

Bt - 7 to 24 inches: clay

BC - 24 to 29 inches: clay loam

Cd - 29 to 80 inches: clay loam

Properties and qualities

Slope: 6 to 12 percent

Depth to restrictive feature: 24 to 36 inches to densic material

Drainage class: Moderately well drained

Runoff class: Very high

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Available water capacity: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Ecological site: F111BY503IN - TILL RIDGE

Other vegetative classification: Trees/Timber (Woody Vegetation)

Hydric soil rating: No

Minor Components

Blount

Percent of map unit: 8 percent

Landform: Flats on ground moraines

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F111BY502IN - WET TILL RIDGE

Other vegetative classification: Trees/Timber (Woody Vegetation)

Hydric soil rating: No

Pewamo

Percent of map unit: 7 percent

Landform: Depressions on till plains

Landform position (two-dimensional): Toeslope

Down-slope shape: Concave

Across-slope shape: Linear

Ecological site: F111BY501IN - TILL DEPRESSION

Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)

Hydric soil rating: Yes

HkA—Haskins loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2z6cr

Elevation: 660 to 1,130 feet

Mean annual precipitation: 31 to 39 inches

Mean annual air temperature: 46 to 52 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Haskins and similar soils: 82 percent

Minor components: 18 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haskins

Setting

Landform: Ground moraines, lake plains

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 10 inches: loam

Bt - 10 to 36 inches: clay loam

BC - 36 to 52 inches: clay loam

Cd - 52 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 30 to 60 inches to densic material

Drainage class: Somewhat poorly drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Ecological site: F111BY502IN - WET TILL RIDGE

Hydric soil rating: No

Minor Components

Pewamo, frequently ponded

Percent of map unit: 8 percent

Landform: Depressions

Landform position (three-dimensional): Dip

Down-slope shape: Linear, concave

Across-slope shape: Concave, linear

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Blount

Percent of map unit: 6 percent

Landform: Ground moraines, end moraines

Landform position (two-dimensional): Footslope

Custom Soil Resource Report

Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex, concave
Across-slope shape: Linear
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Rawson

Percent of map unit: 4 percent
Landform: End moraines, ground moraines
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F111BY503IN - TILL RIDGE
Hydric soil rating: No

HkB—Haskins loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2z6cs
Elevation: 660 to 1,130 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Haskins

Setting

Landform: Lake plains, ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 8 inches: loam
Bt - 8 to 35 inches: clay loam
BC - 35 to 52 inches: clay loam
Cd - 52 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 30 to 60 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: Medium

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high
(0.01 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C/D

Ecological site: F111BY502IN - WET TILL RIDGE

Hydric soil rating: No

Minor Components

Blount

Percent of map unit: 10 percent

Landform: Ground moraines, end moraines

Landform position (two-dimensional): Summit, footslope

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex, concave

Across-slope shape: Linear

Ecological site: F111BY502IN - WET TILL RIDGE

Hydric soil rating: No

Rawson

Percent of map unit: 7 percent

Landform: End moraines, ground moraines

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Crest, side slope

Down-slope shape: Convex

Across-slope shape: Linear, convex

Ecological site: F111BY503IN - TILL RIDGE

Hydric soil rating: No

Pewamo, frequently ponded

Percent of map unit: 3 percent

Landform: Depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear, concave

Across-slope shape: Concave, linear

Ecological site: F111BY501IN - TILL DEPRESSION

Hydric soil rating: Yes

Mk—Millgrove clay loam

Map Unit Setting

National map unit symbol: 5pky
Elevation: 760 to 1,010 feet
Mean annual precipitation: 28 to 38 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 146 to 198 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Millgrove

Setting

Landform: Stream terraces
Parent material: Outwash

Typical profile

H1 - 0 to 11 inches: clay loam
H2 - 11 to 39 inches: clay loam
H3 - 39 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 25 percent
Available water capacity: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: R111BY401IN - WET OUTWASH MOLLISOL
Hydric soil rating: Yes

Minor Components

Digby

Percent of map unit: 5 percent

Custom Soil Resource Report

Landform: Outwash terraces, outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111BY403IN - OUTWASH UPLAND
Hydric soil rating: No

Digby variant

Percent of map unit: 5 percent
Landform: Outwash plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111BY403IN - OUTWASH UPLAND
Hydric soil rating: No

Frequently flooded areas along st. mary's and auglaize river

Percent of map unit: 3 percent
Landform: Stream terraces
Hydric soil rating: Yes

Free lime in the surface layer

Percent of map unit: 2 percent
Landform: Stream terraces
Hydric soil rating: Yes

Pt—Pewamo silty clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2t6lv
Elevation: 700 to 1,300 feet
Mean annual precipitation: 32 to 42 inches
Mean annual air temperature: 48 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

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

Description of Pewamo

Setting

Landform: Depressions on till plains, drainageways on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Parent material: Wisconsin till derived from limestone and shale

Typical profile

Ap - 0 to 11 inches: silty clay loam
Btg1 - 11 to 34 inches: silty clay
Btg2 - 34 to 47 inches: silty clay
BCg - 47 to 57 inches: clay loam
Cg - 57 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F111BY501IN - TILL DEPRESSION
Hydric soil rating: Yes

Minor Components

Blount

Percent of map unit: 9 percent
Landform: Ground moraines on till plains, end moraines on till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F111BY502IN - WET TILL RIDGE
Hydric soil rating: No

Minster

Percent of map unit: 6 percent
Landform: Depressions on till plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F111BY101IN - LACUSTRINE FLATWOOD
Hydric soil rating: Yes

Sac3AF—Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2z6cx

Elevation: 640 to 1,150 feet

Mean annual precipitation: 37 to 46 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 165 to 175 days

Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Saranac, frequently flooded, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saranac, Frequently Flooded

Setting

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Clayey alluvium

Typical profile

Ap - 0 to 7 inches: silty clay loam

Bg - 7 to 44 inches: silty clay

Cg - 44 to 69 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: FrequentNone

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Available water capacity: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Ecological site: F111BY201IN - WET ALLUVIUM FLOODPLAIN

Other vegetative classification: Mixed/Transitional (Mixed Native Vegetation)

Hydric soil rating: Yes

Minor Components

Sloan, occasionally ponded

Percent of map unit: 8 percent

Landform: Depressions on flood-plain steps

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: F111BY201IN - WET ALLUVIUM FLOODPLAIN

Hydric soil rating: Yes

Shoals, occasionally flooded

Percent of map unit: 7 percent

Landform: Flood-plain steps

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F111BY203IN - WET ALLUVIUM FOREST

Hydric soil rating: No

**Sc—Saranac silty clay loam, till substratum, 0 to 1 percent slopes,
frequently flooded**

Map Unit Setting

National map unit symbol: wg0q

Elevation: 800 to 1,000 feet

Mean annual precipitation: 32 to 42 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: Prime farmland if drained and either protected from flooding
or not frequently flooded during the growing season

Map Unit Composition

Saranac and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saranac

Setting

Landform: Backswamps on flood plains, flats on flood plains

Parent material: Clayey alluvium over basal till

Typical profile

H1 - 0 to 12 inches: silty clay loam

H2 - 12 to 51 inches: silty clay loam

H3 - 51 to 80 inches: clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: FrequentNone
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 30 percent
Available water capacity: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: F111BY201IN - WET ALLUVIUM FLOODPLAIN
Hydric soil rating: Yes

Minor Components

Knoxdale

Percent of map unit: 5 percent
Landform: Natural levees on flood plains
Ecological site: F111BY204IN - DRY ALLUVIUM FOREST
Hydric soil rating: No

Surface layer less than 10 inches thick

Percent of map unit:
Landform: Backswamps on flood plains, flats on flood plains
Hydric soil rating: Yes

Soils with lighter colored overwash

Percent of map unit:
Landform: Backswamps on flood plains, flats on flood plains
Hydric soil rating: Yes

Less clay and more sand in the subsoil

Percent of map unit:
Landform: Backswamps on flood plains, flats on flood plains
Hydric soil rating: Yes

Till at 60 to 80 inches

Percent of map unit:
Landform: Backswamps on flood plains, flats on flood plains
Hydric soil rating: Yes

So—Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2ydcy

Elevation: 520 to 1,340 feet

Mean annual precipitation: 31 to 42 inches

Mean annual air temperature: 46 to 54 degrees F

Frost-free period: 140 to 200 days

Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Sloan, frequently flooded, and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sloan, Frequently Flooded

Setting

Landform: Depressions on flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Loamy alluvium

Typical profile

Ap - 0 to 12 inches: silty clay loam

Bg - 12 to 42 inches: silty clay loam

Cg - 42 to 79 inches: stratified gravelly sandy loam to silty clay loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: FrequentNone

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 5 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: B/D

Ecological site: F111BY201IN - WET ALLUVIUM FLOODPLAIN

Hydric soil rating: Yes

Minor Components

Shoals

Percent of map unit: 6 percent

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: F111BY203IN - WET ALLUVIUM FOREST

Hydric soil rating: No

Sloan, frequently flooded, long duration

Percent of map unit: 4 percent

Landform: Depressions on flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: F111BY201IN - WET ALLUVIUM FLOODPLAIN

Hydric soil rating: Yes

ThB—Thackery sandy loam, sandy substratum, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: wg0s

Elevation: 600 to 1,000 feet

Mean annual precipitation: 32 to 42 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 140 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Thackery and similar soils: 95 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Thackery

Setting

Landform: Knolls on stream terraces, knolls on outwash plains

Landform position (two-dimensional): Shoulder, summit, backslope

Landform position (three-dimensional): Riser

Parent material: Outwash

Typical profile

H1 - 0 to 17 inches: sandy loam

H2 - 17 to 58 inches: clay loam

H3 - 58 to 65 inches: clay loam

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H3 - 65 to 80 inches: loamy sand

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)*

Depth to water table: About 12 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Available water capacity: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 1

Hydrologic Soil Group: B/D

Ecological site: F111BY404IN - DRY OUTWASH UPLAND

Hydric soil rating: No

Minor Components

Westland

Percent of map unit: 5 percent

Landform: Depressions on outwash plains

Ecological site: R111BY401IN - WET OUTWASH MOLLISOL

Hydric soil rating: Yes

Silt loam or loam surface layer

Percent of map unit:

Somewhat poorly drained soils

Percent of map unit:

Till at 60 to 80 inches

Percent of map unit:

Well drained soils

Percent of map unit:

TkA—Thackery loam, sandy substratum, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: wg0t

Elevation: 600 to 1,000 feet

Mean annual precipitation: 32 to 42 inches

Mean annual air temperature: 48 to 55 degrees F

Frost-free period: 150 to 180 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Thackery and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Thackery

Setting

Landform: Flats on stream terraces, flats on outwash plains, rises on stream terraces, rises on outwash plains

Landform position (two-dimensional): Shoulder, summit

Landform position (three-dimensional): Tread

Parent material: Outwash

Typical profile

H1 - 0 to 7 inches: loam

H2 - 7 to 57 inches: clay loam

H3 - 57 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: About 12 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Available water capacity: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 1

Hydrologic Soil Group: B/D

Ecological site: F111BY404IN - DRY OUTWASH UPLAND

Hydric soil rating: No

Minor Components

Sandy loam surface layer

Percent of map unit:

Silt loam surface layer

Percent of map unit:

Well drained soils

Percent of map unit:

Somewhat poorly drained soils

Percent of map unit:

Wd—Westland clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: wg0v
Elevation: 350 to 1,000 feet
Mean annual precipitation: 36 to 43 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 140 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Westland and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Westland

Setting

Landform: Glacial drainage channels, drainageways on outwash plains, depressions on outwash plains
Down-slope shape: Concave
Across-slope shape: Linear, concave
Parent material: Loamy outwash

Typical profile

H1 - 0 to 12 inches: clay loam
H2 - 12 to 47 inches: clay loam
H3 - 47 to 54 inches: loam
H4 - 54 to 80 inches: stratified gravelly loamy coarse sand to very gravelly coarse sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 45 percent
Available water capacity: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: R111BY401IN - WET OUTWASH MOLLISOL
Forage suitability group: Unnamed (G111BYC-1OH)

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Other vegetative classification: Unnamed (G111BYC-1OH)

Hydric soil rating: Yes

Minor Components

Somewhat poorly drained soils

Percent of map unit: 10 percent

Landform: Rises on glacial drainage channels, rises on outwash plains

Hydric soil rating: No

Silt loam or loam surface layer

Percent of map unit:

Landform: Glacial drainage channels, depressions on outwash plains,
drainageways on outwash plains

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

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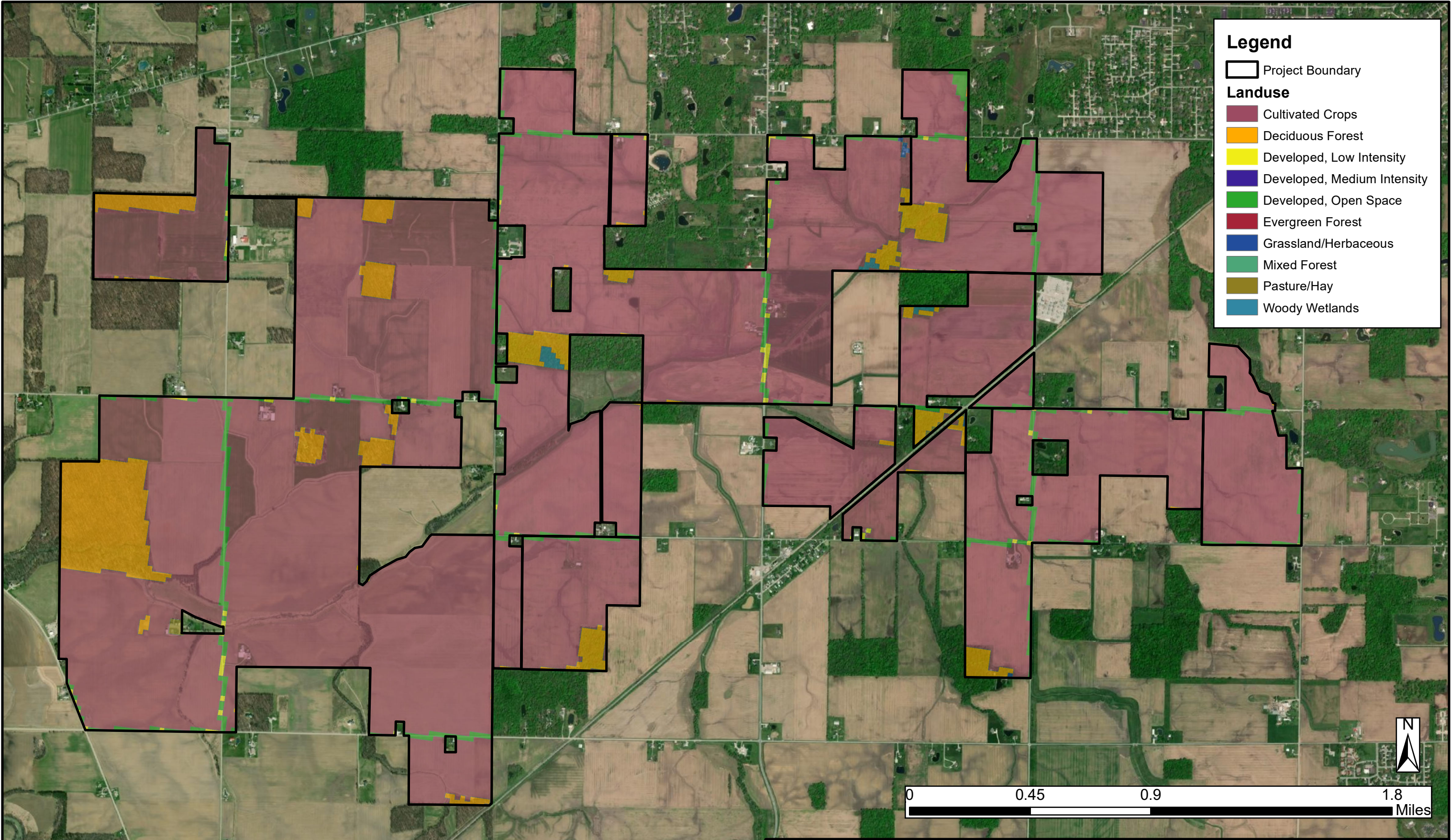
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APPENDIX E

PRE-DEVELOPMENT LANDUSE MAP



Legend

Project Boundary

Landuse

Cultivated Crops

Deciduous Forest

Developed, Low Intensity

Developed, Medium Intensity

Developed, Open Space

Evergreen Forest

Grassland/Herbaceous


Mixed Forest

Pasture/Hay

Woody Wetlands

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PROJECT NO.	20212135.001A
DRAWN:	10/28/2020
DRAWN BY:	KC
CHECKED BY:	BB
FILE NAME:	AppE

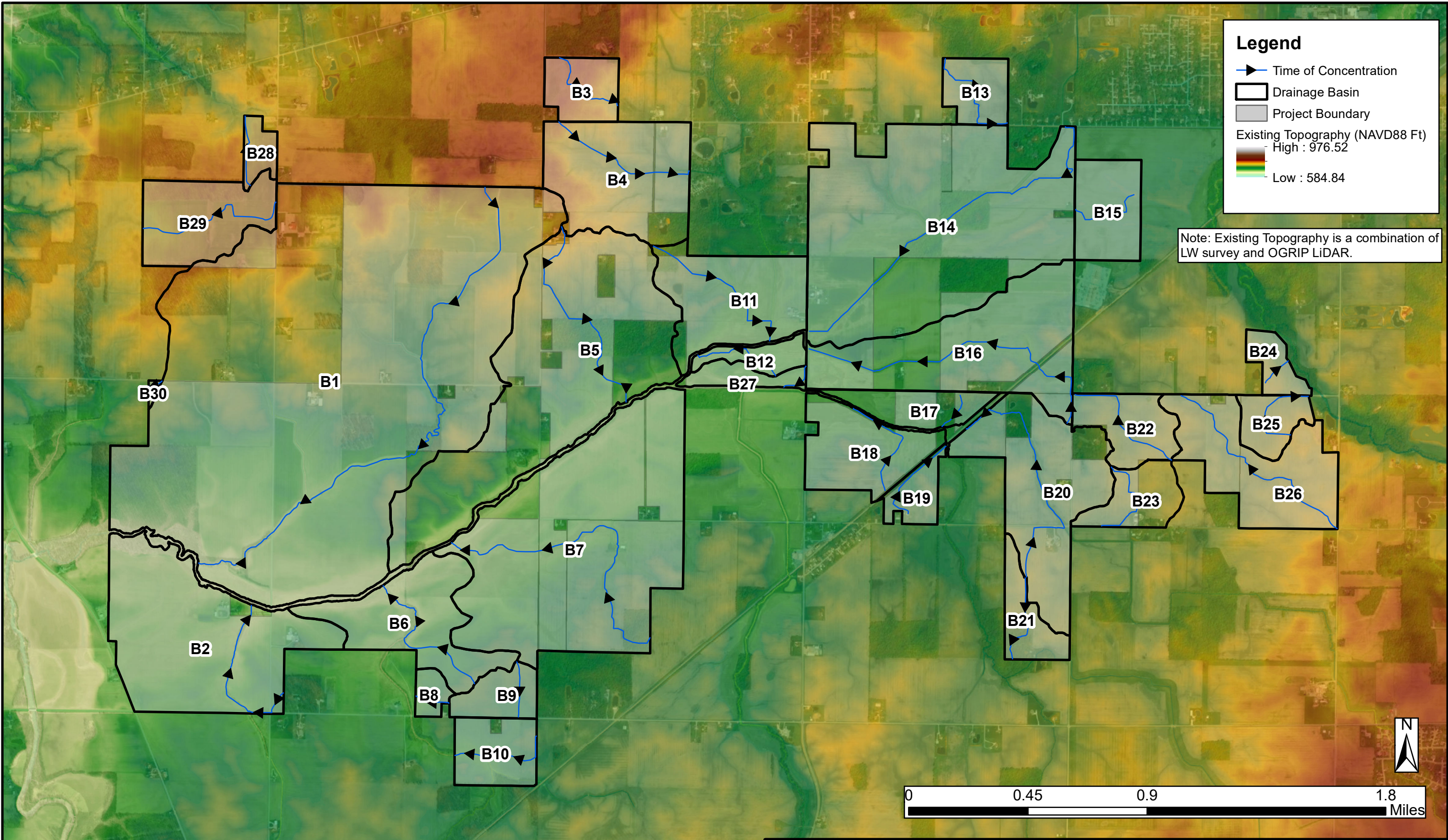
**Pre-Development
Landuse Map**

**Birch Solar Farm
Lightsource BP
Allen & Auglaize County, Ohio**

APPENDIX
E

APPENDIX F
PRE-DEVELOPMENT DRAINAGE MAP

Document Path: \\leigh\kleinfelder.com\FALEIGH-DATA\Working\Civil\LightsourceBP\Brdh\GIS\Report_Figures\AppF.mxd; Plotted: 12/15/2020, 9:01:16 AM, NDePriest



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			DRAWN: 12/15/2020		
			DRAWN BY: KC		
			CHECKED BY: BB		
			FILE NAME: AppF		

APPENDIX G

PRE-DEVELOPMENT CURVE NUMBERS

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B1	21	Developed, Open Space	Blount silt loam, end moraine, 2 to 4 percent slopes	D	11.48	84	964.52
B1	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.28	84	23.22
B1	21	Developed, Open Space	Digby loam, 0 to 2 percent slopes	B/D	1.45	84	121.68
B1	21	Developed, Open Space	Gallman loam, 2 to 6 percent slopes	A	1.21	49	59.18
B1	21	Developed, Open Space	Glywood silt loam, end moraine, 2 to 6 percent slopes	D	10.60	84	890.44
B1	21	Developed, Open Space	Haskins loam, 0 to 3 percent slopes	C/D	0.87	84	73.18
B1	21	Developed, Open Space	Millgrove clay loam	B/D	0.00	84	0.39
B1	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.13	84	11.21
B1	21	Developed, Open Space	Pits, quarry	D	4.74	84	398.03
B1	21	Developed, Open Space	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	0.83	84	69.32
B1	22	Developed, Low Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	6.84	86	588.50
B1	22	Developed, Low Intensity	Gallman loam, 2 to 6 percent slopes	A	0.00	57	0.00
B1	22	Developed, Low Intensity	Glywood silt loam, end moraine, 2 to 6 percent slopes	D	2.38	86	204.90
B1	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.00	86	0.07
B1	22	Developed, Low Intensity	Pits, quarry	D	0.03	86	2.51
B1	22	Developed, Low Intensity	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	0.37	86	31.62
B1	23	Developed, Medium Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.81	87	70.39
B1	24	Developed, High Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	1.56	95	147.88
B1	41	Deciduous Forest	Blount silt loam, end moraine, 2 to 4 percent slopes	D	88.17	79	6,965.48
B1	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	12.62	79	996.96
B1	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.45	79	35.41
B1	41	Deciduous Forest	Digby loam, 0 to 2 percent slopes	B/D	0.39	79	30.91
B1	41	Deciduous Forest	Digby loam, 2 to 6 percent slopes	B/D	2.99	79	236.09
B1	41	Deciduous Forest	Gallman loam, 2 to 6 percent slopes	A	1.33	36	47.76
B1	41	Deciduous Forest	Glywood clay loam, 6 to 12 percent slopes, eroded	D	1.38	79	108.72
B1	41	Deciduous Forest	Glywood silt loam, end moraine, 2 to 6 percent slopes	D	10.19	79	805.11
B1	41	Deciduous Forest	Millgrove clay loam	B/D	2.00	79	158.09
B1	41	Deciduous Forest	Pits, quarry	D	20.71	79	1,636.22
B1	41	Deciduous Forest	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	9.18	79	725.03
B1	71	Grassland/Herbaceous	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.67	84	56.04
B1	81	Pasture/Hay	Blount silt loam, end moraine, 2 to 4 percent slopes	D	1.73	84	145.66
B1	81	Pasture/Hay	Glywood silt loam, end moraine, 2 to 6 percent slopes	D	0.49	84	41.13
B1	82	Cultivated Crops	Blount silt loam, end moraine, 2 to 4 percent slopes	D	395.26	80	31,620.80
B1	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	4.33	80	346.44
B1	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	47.12	80	3,769.83
B1	82	Cultivated Crops	Digby loam, 0 to 2 percent slopes	B/D	35.91	80	2,873.02
B1	82	Cultivated Crops	Digby loam, 2 to 6 percent slopes	B/D	2.98	80	238.74
B1	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	24.80	39	967.20
B1	82	Cultivated Crops	Genesee silt loam, 0 to 2 percent slopes, occasionally flooded	C	3.73	74	276.37
B1	82	Cultivated Crops	Glywood clay loam, 6 to 12 percent slopes, eroded	D	9.15	80	731.72
B1	82	Cultivated Crops	Glywood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	1.36	80	108.47
B1	82	Cultivated Crops	Glywood silt loam, end moraine, 2 to 6 percent slopes	D	146.04	80	11,682.96
B1	82	Cultivated Crops	Glywood silt loam, ground moraine, 2 to 6 percent slopes	D	11.42	80	913.38
B1	82	Cultivated Crops	Haskins loam, 0 to 3 percent slopes	C/D	9.75	80	780.01
B1	82	Cultivated Crops	Haskins loam, 2 to 6 percent slopes	C/D	6.86	80	549.16
B1	82	Cultivated Crops	Millgrove clay loam	B/D	13.06	80	1,045.15
B1	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.50	80	119.77
B1	82	Cultivated Crops	Pits, quarry	D	185.57	80	14,845.60
B1	82	Cultivated Crops	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	29.92	80	2,393.77
SUM:					1,124.64	88	88,908.04
						COMPOSITE CN:	79

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B2	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	5.47	84	459.69
B2	21	Developed, Open Space	Digby loam, 0 to 2 percent slopes	B/D	0.32	84	26.55
B2	21	Developed, Open Space	Haskins loam, 2 to 6 percent slopes	C/D	0.20	84	17.13
B2	21	Developed, Open Space	Millgrove clay loam	B/D	0.28	84	23.16
B2	21	Developed, Open Space	Pits, quarry	D	1.47	84	123.62
B2	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	1.69	86	145.55
B2	22	Developed, Low Intensity	Digby loam, 0 to 2 percent slopes	B/D	0.14	86	11.68
B2	22	Developed, Low Intensity	Haskins loam, 2 to 6 percent slopes	C/D	0.16	86	13.67
B2	22	Developed, Low Intensity	Millgrove clay loam	B/D	0.26	86	22.46
B2	22	Developed, Low Intensity	Pits, quarry	D	0.40	86	34.47
B2	22	Developed, Low Intensity	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	0.17	86	14.42
B2	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.61	79	47.97
B2	41	Deciduous Forest	Gallman loam, 2 to 6 percent slopes	A	2.81	36	101.09
B2	41	Deciduous Forest	Millgrove clay loam	B/D	0.97	79	77.01
B2	41	Deciduous Forest	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	6.60	79	521.45
B2	81	Pasture/Hay	Gallman loam, 2 to 6 percent slopes	A	1.99	49	97.50
B2	81	Pasture/Hay	Millgrove clay loam	B/D	0.01	84	0.98
B2	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	84.84	80	6,787.28
B2	82	Cultivated Crops	Digby loam, 0 to 2 percent slopes	B/D	17.85	80	1,428.39
B2	82	Cultivated Crops	Digby loam, 2 to 6 percent slopes	B/D	2.41	80	193.12
B2	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	15.96	39	622.34
B2	82	Cultivated Crops	Glywood silt loam, ground moraine, 2 to 6 percent slopes	D	9.84	80	787.10
B2	82	Cultivated Crops	Haskins loam, 2 to 6 percent slopes	C/D	3.88	80	310.49
B2	82	Cultivated Crops	Millgrove clay loam	B/D	36.92	80	2,953.76
B2	82	Cultivated Crops	Pits, quarry	D	31.46	80	2,516.81
B2	82	Cultivated Crops	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	6.87	80	549.25
SUM:					233.58	87	17,886.94
						COMPOSITE CN:	77

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B3	21	Developed, Open Space	Blount silt loam, end moraine, 2 to 4 percent slopes	D	1.18	84	98.98
B3	21	Developed, Open Space	Glywood silt loam, end moraine, 2 to 6 percent slopes	D	0.70	84	58.43
B3	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.86	84	72.43
B3	41	Deciduous Forest	Glywood silt loam, end moraine, 2 to 6 percent slopes	D	0.00	79	0.16
B3	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.01	79	0.53
B3	82	Cultivated Crops	Blount silt loam, end moraine, 2 to 4 percent slopes	D	4.65	80	371.61
B3	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	3.49	80	279.33
B3	82	Cultivated Crops	Glywood silt loam, end moraine, 2 to 6 percent slopes	D	15.98	80	1,278.00
B3	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	14.21	80	1,136.91
SUM:					41.07	80	3,296.38
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B6	41	Deciduous Forest	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	0.00	79	0.26
B6	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.43	80	34.26
B6	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	23.04	80	1,843.43
B6	82	Cultivated Crops	Digby loam, 0 to 2 percent slopes	B/D	2.53	80	202.73
B6	82	Cultivated Crops	Digby loam, 2 to 6 percent slopes	B/D	10.55	80	844.32
B6	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	5.71	39	222.52
B6	82	Cultivated Crops	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	4.57	80	365.49
B6	82	Cultivated Crops	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	14.26	80	1,140.98
B6	82	Cultivated Crops	Haskins loam, 2 to 6 percent slopes	C/D	10.78	80	862.63
B6	82	Cultivated Crops	Millgrove clay loam	B/D	9.39	80	751.02
B6	82	Cultivated Crops	Pitts, quarry	D	12.30	80	983.76
B6	82	Cultivated Crops	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	20.07	80	1,605.36
SUM:					113.63		8,856.76
						COMPOSITE CN:	78

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B7	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	2.02	84	169.57
B7	21	Developed, Open Space	Houcktown loam, 2 to 6 percent slopes	C/D	0.86	84	72.64
B7	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.63	84	137.11
B7	21	Developed, Open Space	Rensselaer loam, till substratum, 0 to 1 percent slopes	B/D	0.45	84	38.02
B7	21	Developed, Open Space	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.22	84	18.83
B7	21	Developed, Open Space	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.35	84	29.23
B7	21	Developed, Open Space	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	2.27	84	190.36
B7	21	Developed, Open Space	Thackery sandy loam, sandy substratum, 1 to 3 percent slopes	B/D	1.05	84	88.29
B7	21	Developed, Open Space	Westland clay loam, 0 to 1 percent slopes	B/D	0.02	84	1.90
B7	21	Developed, Open Space	Westland clay loam, 0 to 1 percent slopes	B/D	0.44	84	37.29
B7	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.22	86	18.51
B7	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.01	86	0.61
B7	22	Developed, Low Intensity	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.09	86	7.34
B7	22	Developed, Low Intensity	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.04	86	3.15
B7	22	Developed, Low Intensity	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.26	86	22.29
B7	22	Developed, Low Intensity	Thackery sandy loam, sandy substratum, 1 to 3 percent slopes	B/D	0.41	86	35.08
B7	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	4.80	79	379.03
B7	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	6.29	79	496.68
B7	41	Deciduous Forest	Pits, quarry	D	0.00	79	0.24
B7	41	Deciduous Forest	Rensselaer loam, till substratum, 0 to 1 percent slopes	B/D	0.11	79	8.79
B7	41	Deciduous Forest	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.12	79	9.70
B7	41	Deciduous Forest	Shawtown loam, 2 to 6 percent slopes	C	0.00	73	0.07
B7	71	Grassland/Herbaceous	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.31	84	25.97
B7	71	Grassland/Herbaceous	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	0.65	84	54.49
B7	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	9.05	80	723.69
B7	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	106.86	80	8,549.12
B7	82	Cultivated Crops	Cygneth loam, 0 to 3 percent slopes	B/D	18.96	80	1,516.50
B7	82	Cultivated Crops	Digby loam, 0 to 2 percent slopes	B/D	1.37	80	109.29
B7	82	Cultivated Crops	Digby loam, 2 to 6 percent slopes	B/D	3.49	80	278.87
B7	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	3.56	39	138.72
B7	82	Cultivated Crops	Glynwood clay loam, ground moraine, 2 to 6 percent slopes, eroded	D	3.06	80	244.99
B7	82	Cultivated Crops	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	1.64	80	131.26
B7	82	Cultivated Crops	Haskins loam, 2 to 6 percent slopes	C/D	0.13	80	10.52
B7	82	Cultivated Crops	Houcktown loam, 2 to 6 percent slopes	C/D	2.59	80	207.31
B7	82	Cultivated Crops	Millgrove clay loam	B/D	22.48	80	1,798.46
B7	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	60.43	80	4,834.50
B7	82	Cultivated Crops	Pits, quarry	D	7.24	80	579.22
B7	82	Cultivated Crops	Rensselaer loam, till substratum, 0 to 1 percent slopes	B/D	33.85	80	2,707.70
B7	82	Cultivated Crops	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	3.96	80	316.92
B7	82	Cultivated Crops	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	17.10	80	1,367.79
B7	82	Cultivated Crops	Shawtown loam, 2 to 6 percent slopes	C	7.94	74	587.64
B7	82	Cultivated Crops	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	12.93	90	1,034.05
B7	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	24.68	80	1,974.13
B7	82	Cultivated Crops	Thackery sandy loam, sandy substratum, 1 to 3 percent slopes	B/D	21.79	80	1,743.05
B7	82	Cultivated Crops	Westland clay loam, 0 to 1 percent slopes	B/D	1.55	80	124.25
B7	82	Cultivated Crops	Westland clay loam, 0 to 1 percent slopes	B/D	9.99	80	799.19
B7	95	Emergent Herbaceous Wetlands	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	0.00	98	0.04
SUM:					397.25		31,622.40
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B8	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.24	84	20.41
B8	21	Developed, Open Space	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	0.14	84	11.64
B8	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.10	86	8.52
B8	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	11.29	80	902.97
B8	82	Cultivated Crops	Pits, quarry	D	0.47	80	37.43
B8	82	Cultivated Crops	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	0.83	80	66.76
SUM:					13.07		1,047.73
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B9	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.54	84	45.14
B9	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.09	84	7.15
B9	21	Developed, Open Space	Pits, quarry	D	2.03	84	170.67
B9	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.15	79	12.19
B9	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.57	80	45.86
B9	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	16.46	80	1,316.76
B9	82	Cultivated Crops	Pits, quarry	D	13.37	80	1,069.40
SUM:					33.21		2,667.17
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B10	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.17	84	13.99
B10	21	Developed, Open Space	Pits, quarry	D	1.42	84	119.67
B10	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.06	79	5.03
B10	41	Deciduous Forest	Pits, quarry	D	3.02	79	238.77
B10	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	14.71	80	1,177.18
B10	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	5.45	80	435.83
B10	82	Cultivated Crops	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	1.34	80	107.11
B10	82	Cultivated Crops	Pits, quarry	D	24.27	80	1,941.30
SUM:					50.45		4,038.88
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B11	21	Developed, Open Space	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.16	84	13.14
B11	21	Developed, Open Space	Gallman loam, 2 to 6 percent slopes	A	1.00	49	48.90
B11	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.19	84	16.36
B11	21	Developed, Open Space	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.23	84	19.66
B11	22	Developed, Low Intensity	Gallman loam, 2 to 6 percent slopes	A	0.13	57	7.59
B11	41	Deciduous Forest	Blount silt loam, end moraine, 2 to 4 percent slopes	D	7.75	79	612.33
B11	41	Deciduous Forest	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	0.24	79	19.17
B11	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.54	79	42.71
B11	41	Deciduous Forest	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.08	79	6.18
B11	81	Pasture/Hay	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.00	84	0.01
B11	81	Pasture/Hay	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.02	84	2.03
B11	81	Pasture/Hay	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.00	84	0.22
B11	82	Cultivated Crops	Blount silt loam, end moraine, 2 to 4 percent slopes	D	21.02	80	1,681.78
B11	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	9.90	39	386.07
B11	82	Cultivated Crops	Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded	D	2.57	80	205.28
B11	82	Cultivated Crops	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	1.19	80	94.90
B11	82	Cultivated Crops	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	19.06	80	1,524.70
B11	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	14.43	80	1,154.73
B11	82	Cultivated Crops	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	32.96	80	2,637.17
B11	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	6.27	80	501.86
SUM:					117.76		8,974.79
						COMPOSITE CN:	76

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B12	21	Developed, Open Space	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.10	84	8.47
B12	22	Developed, Low Intensity	Gallman loam, 2 to 6 percent slopes	A	0.11	57	6.27
B12	22	Developed, Low Intensity	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.24	86	20.66
B12	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	4.66	80	372.85
B12	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	2.84	39	110.69
B12	82	Cultivated Crops	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	13.77	80	1,101.60
B12	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.95	80	76.08
SUM:					22.67		1,696.62
						COMPOSITE CN:	75

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B13	21	Developed, Open Space	Blount silt loam, end moraine, 2 to 4 percent slopes	D	3.31	84	278.34
B13	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.36	84	30.38
B13	21	Developed, Open Space	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.01	84	0.58
B13	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.49	84	125.15
B13	22	Developed, Low Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.03	86	2.80
B13	22	Developed, Low Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.02	86	1.70
B13	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.02	86	1.32
B13	41	Deciduous Forest	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.22	79	17.16
B13	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.04	79	3.35
B13	82	Cultivated Crops	Blount silt loam, end moraine, 2 to 4 percent slopes	D	13.22	90	1,057.88
B13	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.11	80	8.89
B13	82	Cultivated Crops	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	2.27	80	181.49
B13	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	16.03	80	1,282.14
SUM:					37.13		2,991.18
						COMPOSITE CN:	81

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B14	21	Developed, Open Space	Blount silt loam, end moraine, 2 to 4 percent slopes	D	3.50	84	293.98
B14	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.46	84	38.76
B14	21	Developed, Open Space	Gallman loam, 2 to 6 percent slopes	A	0.78	49	38.42
B14	21	Developed, Open Space	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.27	84	22.31
B14	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.62	84	135.95
B14	21	Developed, Open Space	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.22	84	18.72
B14	21	Developed, Open Space	Shawtown loam, 2 to 6 percent slopes	C	0.16	79	12.62
B14	21	Developed, Open Space	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.18	84	14.85
B14	21	Developed, Open Space	Thackery sandy loam, sandy substratum, 1 to 3 percent slopes	B/D	0.29	84	24.00
B14	21	Developed, Open Space	Westland clay loam, 0 to 1 percent slopes	B/D	3.54	84	297.45
B14	22	Developed, Low Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	1.86	86	159.62
B14	22	Developed, Low Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.13	86	11.59
B14	22	Developed, Low Intensity	Gallman loam, 2 to 6 percent slopes	A	0.31	57	17.76
B14	22	Developed, Low Intensity	Houcktown loam, 2 to 6 percent slopes	C/D	0.07	86	5.88
B14	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.49	86	41.90
B14	22	Developed, Low Intensity	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.56	86	48.04
B14	22	Developed, Low Intensity	Shawtown loam, 2 to 6 percent slopes	C	0.51	81	41.27
B14	41	Deciduous Forest	Blount-Jenera complex, 0 to 3 percent slopes	C/D	0.52	79	41.21
B14	41	Deciduous Forest	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.01	79	1.17
B14	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	1.10	79	87.09
B14	41	Deciduous Forest	Gallman loam, 2 to 6 percent slopes	A	6.30	36	226.76
B14	41	Deciduous Forest	Houcktown loam, 2 to 6 percent slopes	C/D	2.53	79	200.18
B14	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	6.66	79	526.51
B14	41	Deciduous Forest	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	1.76	79	139.02
B14	41	Deciduous Forest	Thackery sandy loam, sandy substratum, 1 to 3 percent slopes	B/D	9.54	79	754.02
B14	41	Deciduous Forest	Westland clay loam, 0 to 1 percent slopes	B/D	14.28	79	1,127.99
B14	71	Grassland/Herbaceous	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.86	84	72.05
B14	71	Grassland/Herbaceous	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.25	84	21.35
B14	82	Cultivated Crops	Blount-Jenera complex, 0 to 3 percent slopes	C/D	2.37	80	189.63
B14	82	Cultivated Crops	Blount silt loam, end moraine, 2 to 4 percent slopes	D	59.17	80	4,733.25
B14	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	15.90	80	1,271.91
B14	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	17.06	39	665.20
B14	82	Cultivated Crops	Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded	D	1.73	80	138.17
B14	82	Cultivated Crops	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	2.48	80	198.43
B14	82	Cultivated Crops	Houcktown loam, 2 to 6 percent slopes	C/D	13.88	80	1,110.14
B14	82	Cultivated Crops	Patton silty clay loam, loamy substratum, 0 to 1 percent slopes	B/D	1.98	80	158.45
B14	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	59.72	80	4,777.98
B14	82	Cultivated Crops	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	2.86	80	228.96
B14	82	Cultivated Crops	Shawtown loam, 2 to 6 percent slopes	C	4.38	74	324.05
B14	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	30.64	80	2,450.98
B14	82	Cultivated Crops	Thackery sandy loam, sandy substratum, 1 to 3 percent slopes	B/D	33.97	80	2,717.94
B14	82	Cultivated Crops	Westland-Rensselaer complex, 0 to 1 percent slopes	B/D	17.92	80	1,433.83
B14	82	Cultivated Crops	Westland clay loam, 0 to 1 percent slopes	B/D	102.06	80	8,164.72
B14	90	Woody Wetlands	Westland clay loam, 0 to 1 percent slopes	B/D	2.45	98	239.72
SUM:					427.33		33,223.83
						COMPOSITE CN:	78

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B15	21	Developed, Open Space	Thackery sandy loam, sandy substratum, 1 to 3 percent slopes	B/D	0.33	84	27.65
B15	21	Developed, Open Space	Westland clay loam, 0 to 1 percent slopes	B/D	2.11	84	177.61
B15	22	Developed, Low Intensity	Westland clay loam, 0 to 1 percent slopes	B/D	0.00	86	0.14
B15	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	4.49	39	174.97
B15	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	16.34	80	1,306.89
B15	82	Cultivated Crops	Thackery sandy loam, sandy substratum, 1 to 3 percent slopes	B/D	0.88	80	70.12
B15	82	Cultivated Crops	Westland-Rensselaer complex, 0 to 1 percent slopes	B/D	11.69	80	935.42
B15	82	Cultivated Crops	Westland clay loam, 0 to 1 percent slopes	B/D	24.59	80	1,967.19
SUM:					60.43		4,659.99
						COMPOSITE CN:	77

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B20	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.43	84	36.43
B20	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	3.29	84	276.64
B20	21	Developed, Open Space	Glynnwood clay loam, ground moraine, 2 to 6 percent slopes, eroded	D	0.01	84	0.55
B20	21	Developed, Open Space	Glynnwood loam, 2 to 6 percent slopes	D	0.15	84	12.88
B20	21	Developed, Open Space	Glynnwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.61	84	51.23
B20	21	Developed, Open Space	Hocktown loam, 2 to 6 percent slopes	C/D	0.03	84	2.34
B20	21	Developed, Open Space	Hocktown sandy loam, 2 to 4 percent slopes	C/D	0.00	84	0.11
B20	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	5.81	84	487.98
B20	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.56	86	47.76
B20	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.43	86	37.34
B20	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	2.80	79	220.94
B20	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.99	79	77.83
B20	41	Deciduous Forest	Hocktown loam, 2 to 6 percent slopes	C/D	0.40	79	31.24
B20	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	3.99	79	315.46
B20	41	Deciduous Forest	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	0.38	79	30.02
B20	43	Mixed Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.71	79	56.00
B20	43	Mixed Forest	Hocktown loam, 2 to 6 percent slopes	C/D	0.63	79	49.66
B20	43	Mixed Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.85	79	145.87
B20	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.38	84	31.98
B20	71	Grassland/Herbaceous	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.95	84	80.10
B20	81	Pasture/Hay	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.10	84	8.77
B20	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	14.37	80	1,149.31
B20	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	44.83	80	3,586.40
B20	82	Cultivated Crops	Glynnwood clay loam, ground moraine, 2 to 6 percent slopes, eroded	D	2.75	80	220.30
B20	82	Cultivated Crops	Glynnwood loam, 2 to 6 percent slopes	D	1.77	80	141.87
B20	82	Cultivated Crops	Glynnwood silt loam, ground moraine, 2 to 6 percent slopes	D	2.75	80	219.61
B20	82	Cultivated Crops	Hocktown loam, 2 to 6 percent slopes	C/D	5.19	80	415.30
B20	82	Cultivated Crops	Hocktown sandy loam, 2 to 4 percent slopes	C/D	4.31	80	344.41
B20	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	61.72	80	4,937.31
B20	82	Cultivated Crops	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	0.50	80	39.61
B20	82	Cultivated Crops	Shawtown loam, 2 to 6 percent slopes	C	2.35	74	173.67
SUM:					165.02		13,228.92
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B21	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.14	84	11.59
B21	21	Developed, Open Space	Glynnwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.00	84	0.09
B21	21	Developed, Open Space	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	0.06	84	4.86
B21	21	Developed, Open Space	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	0.18	84	15.35
B21	41	Deciduous Forest	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	0.81	79	64.21
B21	41	Deciduous Forest	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	7.22	79	570.73
B21	71	Grassland/Herbaceous	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	0.18	84	14.98
B21	71	Grassland/Herbaceous	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	0.11	84	8.91
B21	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	1.73	80	138.25
B21	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	12.93	80	1,034.49
B21	82	Cultivated Crops	Glynnwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.19	80	15.08
B21	82	Cultivated Crops	Hocktown sandy loam, 2 to 4 percent slopes	C/D	0.69	80	55.11
B21	82	Cultivated Crops	Hocktown silt loam, 2 to 4 percent slopes	C/D	1.29	80	102.98
B21	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	3.89	80	311.24
B21	82	Cultivated Crops	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	0.33	80	26.12
B21	82	Cultivated Crops	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	6.76	80	540.92
SUM:					36.50		2,914.91
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B22	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	1.87	84	157.30
B22	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.24	84	104.14
B22	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.22	86	19.11
B22	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.08	86	6.84
B22	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.00	79	0.08
B22	42	Evergreen Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.04	79	3.37
B22	42	Evergreen Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.18	79	14.20
B22	43	Mixed Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.36	79	28.27
B22	43	Mixed Forest	Hocktown loam, 2 to 6 percent slopes	C/D	0.00	79	0.07
B22	43	Mixed Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.02	79	1.21
B22	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	5.19	80	415.37
B22	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	20.31	80	1,624.80
B22	82	Cultivated Crops	Glynnwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.76	80	61.01
B22	82	Cultivated Crops	Hocktown loam, 2 to 6 percent slopes	C/D	5.40	80	432.24
B22	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	14.02	80	1,121.70
B22	82	Cultivated Crops	Shawtown loam, 2 to 6 percent slopes	C	2.59	74	191.48
B22	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.00	84	0.08
B22	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.00	84	0.01
SUM:					52.29		4,181.28
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B23	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.67	84	56.41
B23	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.25	84	21.40
B23	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.91	84	76.38
B23	22	Developed, Low Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.40	86	34.21
B23	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.00	86	0.21
B23	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.00	86	0.37
B23	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	6.65	80	531.77
B23	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	19.47	80	1,557.82
B23	82	Cultivated Crops	Glynnwood silt loam, ground moraine, 2 to 6 percent slopes	D	3.03	80	242.13
B23	82	Cultivated Crops	Hocktown loam, 2 to 6 percent slopes	C/D	0.42	80	33.30
B23	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	11.37	80	909.33
SUM:					43.17		3,463.33
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B24	21	Developed, Open Space	Gallman loam, 2 to 6 percent slopes	A	0.06	49	3.00
B24	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.62	84	51.85
B24	21	Developed, Open Space	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.19	84	15.71
B24	22	Developed, Low Intensity	Gallman loam, 2 to 6 percent slopes	A	0.01	57	0.45
B24	41	Deciduous Forest	Medway silt loam, 0 to 2 percent slopes, occasionally flooded	B/D	0.09	79	7.38
B24	41	Deciduous Forest	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.01	79	0.61
B24	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	8.36	39	326.02
B24	82	Cultivated Crops	Gallman loam, 6 to 12 percent slopes	B	2.20	61	134.25
B24	82	Cultivated Crops	Medway silt loam, 0 to 2 percent slopes, occasionally flooded	B/D	1.54	80	123.42
B24	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.12	80	89.77
B24	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	1.45	80	116.13
B24	82	Cultivated Crops	Westland-Rensselaer complex, 0 to 1 percent slopes	B/D	6.18	80	494.64
B24	82	Cultivated Crops	Westland clay loam, 0 to 1 percent slopes	B/D	0.83	80	66.12
SUM:					22.66		1,429.35
						COMPOSITE CN:	63

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B25	21	Developed, Open Space	Gallman loam, 2 to 6 percent slopes	A	0.29	49	14.25
B25	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.25	84	105.25
B25	21	Developed, Open Space	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.46	84	38.86
B25	71	Grassland/Herbaceous	Gallman loam, 2 to 6 percent slopes	A	0.01	49	0.37
B25	71	Grassland/Herbaceous	Gallman loam, 6 to 12 percent slopes	B	0.02	69	1.05
B25	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	7.69	39	299.94
B25	82	Cultivated Crops	Gallman loam, 6 to 12 percent slopes	B	0.98	61	59.89
B25	82	Cultivated Crops	Houcktown loam, 0 to 2 percent slopes	C/D	3.73	80	298.73
B25	82	Cultivated Crops	Houcktown loam, 2 to 6 percent slopes	C/D	6.28	80	502.08
B25	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	9.95	80	795.00
B25	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	1.62	80	129.28
B25	82	Cultivated Crops	Houcktown loam, 0 to 2 percent slopes	C/D	0.00	80	0.04
SUM:					32.28		2,245.74
						COMPOSITE CN:	70

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B26	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.20	84	16.91
B26	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.97	84	81.28
B26	21	Developed, Open Space	Gallman loam, 2 to 6 percent slopes	A	0.21	49	10.48
B26	21	Developed, Open Space	Houcktown loam, 0 to 2 percent slopes	C/D	0.10	84	8.25
B26	21	Developed, Open Space	Houcktown loam, 2 to 6 percent slopes	C/D	0.81	84	68.04
B26	21	Developed, Open Space	Houcktown silt loam, 2 to 4 percent slopes	C/D	0.44	84	36.88
B26	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	2.82	84	236.66
B26	21	Developed, Open Space	Shawtown loam, 2 to 6 percent slopes	C	0.74	79	58.85
B26	21	Developed, Open Space	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.05	84	4.49
B26	22	Developed, Low Intensity	Gallman loam, 2 to 6 percent slopes	A	0.04	57	2.21
B26	22	Developed, Low Intensity	Houcktown loam, 2 to 6 percent slopes	C/D	0.05	86	4.62
B26	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.07	86	5.65
B26	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.23	79	18.13
B26	41	Deciduous Forest	Houcktown loam, 0 to 2 percent slopes	C/D	0.02	79	1.90
B26	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.16	79	12.41
B26	71	Grassland/Herbaceous	Gallman loam, 2 to 6 percent slopes	A	0.12	49	6.07
B26	71	Grassland/Herbaceous	Gallman loam, 6 to 12 percent slopes	B	0.01	69	0.71
B26	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	12.00	80	960.11
B26	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	24.69	80	1,975.38
B26	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	11.13	39	434.12
B26	82	Cultivated Crops	Gallman loam, 6 to 12 percent slopes	B	0.14	61	8.44
B26	82	Cultivated Crops	Houcktown loam, 0 to 2 percent slopes	C/D	5.05	80	404.11
B26	82	Cultivated Crops	Houcktown loam, 2 to 6 percent slopes	C/D	9.84	80	786.85
B26	82	Cultivated Crops	Houcktown silt loam, 0 to 2 percent slopes	C/D	1.74	80	139.06
B26	82	Cultivated Crops	Houcktown silt loam, 2 to 4 percent slopes	C/D	0.03	80	2.69
B26	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	49.66	80	3,972.85
B26	82	Cultivated Crops	Shawtown loam, 2 to 6 percent slopes	C	0.93	74	68.99
B26	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	5.23	80	418.63
B26	82	Cultivated Crops	Houcktown loam, 0 to 2 percent slopes	C/D	0.00	80	0.04
SUM:					127.50		9,744.81
						COMPOSITE CN:	76

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B27	21	Developed, Open Space	Gallman loam, 2 to 6 percent slopes	A	0.20	49	10.04
B27	21	Developed, Open Space	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.22	84	18.22
B27	22	Developed, Low Intensity	Gallman loam, 2 to 6 percent slopes	A	0.06	57	3.35
B27	22	Developed, Low Intensity	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.08	86	6.65
B27	22	Developed, Low Intensity	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.02	86	1.74
B27	41	Deciduous Forest	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.47	79	37.40
B27	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	1.09	80	87.11
B27	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	6.66	39	259.73
B27	82	Cultivated Crops	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	10.01	80	800.68
B27	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	2.78	80	222.02
SUM:					21.58		1,446.94
						COMPOSITE CN:	67

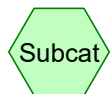
DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B28	21	Developed, Open Space	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.97	84	81.11
B28	22	Developed, Low Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.00	86	0.32
B28	41	Deciduous Forest	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.06	79	4.92
B28	82	Cultivated Crops	Blount silt loam, end moraine, 2 to 4 percent slopes	D	15.11	80	1,209.06
B28	82	Cultivated Crops	Glynwood clay loam, 6 to 12 percent slopes, eroded	D	0.03	80	2.70
B28	82	Cultivated Crops	Pits, quarry	D	0.90	80	71.86
SUM:					17.08		1,369.97
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B29	21	Developed, Open Space	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.49	84	41.14
B29	22	Developed, Low Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.30	86	25.43
B29	23	Developed, Medium Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.08	87	7.00
B29	41	Deciduous Forest	Blount silt loam, end moraine, 2 to 4 percent slopes	D	3.29	79	260.15
B29	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	10.05	79	793.87
B29	41	Deciduous Forest	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.13	79	9.95
B29	41	Deciduous Forest	Pits, quarry	D	2.14	79	168.72
B29	82	Cultivated Crops	Blount silt loam, end moraine, 2 to 4 percent slopes	D	37.59	80	3,007.58
B29	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	4.43	80	354.74
B29	82	Cultivated Crops	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.31	80	25.16
B29	82	Cultivated Crops	Pits, quarry	D	29.03	80	2,322.02
SUM:					87.84		7,015.76
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B30	21	Developed, Open Space	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.39	84	33.02
B30	21	Developed, Open Space	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.00	84	0.02
B30	82	Cultivated Crops	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.47	80	37.97
B30	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.07	80	5.66
B30	82	Cultivated Crops	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	1.00	80	80.28
SUM:					1.94		156.95
						COMPOSITE CN:	81

APPENDIX H

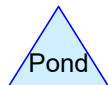
PRE-DEVELOPMENT HYDROCAD REPORT



Subcat



Reach



Pond



Link

Routing Diagram for Birch_Onsite

Prepared by ITS, Printed 12/14/2020

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Birch_Onsite

Prepared by ITS

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1,124.640	79	(B1)
1,596.830	80	(B10, B17, B18, B19, B20, B21, B22, B23, B28, B29, B3, B4, B5, B7, B8, B9)
245.260	76	(B11, B26)
22.670	75	(B12)
39.070	81	(B13, B30)
540.960	78	(B14, B6)
492.260	77	(B15, B16, B2)
22.660	63	(B24)
32.280	70	(B25)
21.580	67	(B27)
4,138.210	79	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
4,138.210	Other	B1, B10, B11, B12, B13, B14, B15, B16, B17, B18, B19, B2, B20, B21, B22, B23, B24, B25, B26, B27, B28, B29, B3, B30, B4, B5, B6, B7, B8, B9
4,138.210		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	4,138.210	4,138.210		B1, B10, B11, B12, B13, B14, B15, B16, B17, B18, B19, B2, B20, B21, B22, B23, B24, B25, B26, B27, B28, B29, B3, B30, B4, B5, B6, B7, B8, B9
0.000	0.000	0.000	0.000	4,138.210	4,138.210	TOTAL AREA	

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Pipe Listing (selected 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	B1	0.00	0.00	56.0	0.0535	0.011	24.0	0.0	0.0
2	B1	0.00	0.00	47.0	0.0021	0.011	24.0	0.0	0.0
3	B1	0.00	0.00	40.0	0.0025	0.011	24.0	0.0	0.0
4	B1	0.00	0.00	45.0	0.0156	0.011	24.0	0.0	0.0
5	B10	0.00	0.00	34.0	0.0029	0.011	24.0	0.0	0.0
6	B11	0.00	0.00	69.0	0.0277	0.022	24.0	0.0	0.0
7	B11	0.00	0.00	24.0	0.0165	0.022	24.0	0.0	0.0
8	B13	0.00	0.00	35.0	0.0751	0.011	24.0	0.0	0.0
9	B16	0.00	0.00	41.0	0.0073	0.011	24.0	0.0	0.0
10	B16	0.00	0.00	35.0	0.0028	0.011	24.0	0.0	0.0
11	B16	0.00	0.00	42.0	0.0024	0.011	24.0	0.0	0.0
12	B2	0.00	0.00	62.0	0.0032	0.011	24.0	0.0	0.0
13	B2	0.00	0.00	42.0	0.0047	0.011	24.0	0.0	0.0
14	B2	0.00	0.00	44.0	0.0160	0.011	24.0	0.0	0.0
15	B20	0.00	0.00	94.0	0.0032	0.011	24.0	0.0	0.0
16	B20	0.00	0.00	61.0	0.0016	0.011	24.0	0.0	0.0
17	B20	0.00	0.00	43.0	0.0023	0.011	24.0	0.0	0.0
18	B4	0.00	0.00	43.0	0.0323	0.011	24.0	0.0	0.0
19	B6	0.00	0.00	31.0	0.0032	0.011	24.0	0.0	0.0
20	B7	0.00	0.00	27.0	0.0372	0.011	24.0	0.0	0.0

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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentB1:	Runoff Area=1,124.640 ac 0.00% Impervious Runoff Depth=0.59" Flow Length=12,505' Tc=64.6 min CN=79 Runoff=295.46 cfs 55.679 af
SubcatchmentB10:	Runoff Area=50.450 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=2,208' Tc=54.3 min CN=80 Runoff=16.59 cfs 2.678 af
SubcatchmentB11:	Runoff Area=117.760 ac 0.00% Impervious Runoff Depth=0.48" Flow Length=3,512' Tc=93.1 min CN=76 Runoff=17.61 cfs 4.679 af
SubcatchmentB12:	Runoff Area=22.670 ac 0.00% Impervious Runoff Depth=0.44" Flow Length=1,883' Tc=79.8 min CN=75 Runoff=3.41 cfs 0.834 af
SubcatchmentB13:	Runoff Area=37.130 ac 0.00% Impervious Runoff Depth=0.68" Flow Length=2,542' Tc=74.5 min CN=81 Runoff=10.49 cfs 2.110 af
SubcatchmentB14:	Runoff Area=427.330 ac 0.00% Impervious Runoff Depth=0.55" Flow Length=7,680' Tc=133.1 min CN=78 Runoff=59.97 cfs 19.698 af
SubcatchmentB15:	Runoff Area=60.430 ac 0.00% Impervious Runoff Depth=0.51" Flow Length=1,617' Tc=104.7 min CN=77 Runoff=9.17 cfs 2.589 af
SubcatchmentB16:	Runoff Area=198.250 ac 0.00% Impervious Runoff Depth=0.51" Flow Length=6,834' Tc=223.3 min CN=77 Runoff=16.98 cfs 8.493 af
SubcatchmentB17:	Runoff Area=41.100 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=789' Tc=24.3 min CN=80 Runoff=23.88 cfs 2.182 af
SubcatchmentB18:	Runoff Area=81.990 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=2,386' Tc=46.0 min CN=80 Runoff=30.43 cfs 4.352 af
SubcatchmentB19:	Runoff Area=25.480 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=2,008' Tc=56.5 min CN=80 Runoff=8.12 cfs 1.353 af
SubcatchmentB2:	Runoff Area=233.580 ac 0.00% Impervious Runoff Depth=0.51" Flow Length=3,410' Tc=30.4 min CN=77 Runoff=87.60 cfs 10.007 af
SubcatchmentB20:	Runoff Area=165.020 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=5,408' Tc=53.5 min CN=80 Runoff=54.74 cfs 8.760 af
SubcatchmentB21:	Runoff Area=36.500 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=1,868' Tc=83.6 min CN=80 Runoff=8.65 cfs 1.938 af
SubcatchmentB22:	Runoff Area=52.290 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=2,743' Tc=77.3 min CN=80 Runoff=13.21 cfs 2.776 af
SubcatchmentB23:	Runoff Area=43.170 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=2,125' Tc=71.9 min CN=80 Runoff=11.53 cfs 2.292 af

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Type II 24-hr 1-year 24hr Rainfall=2.12"

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SubcatchmentB24:	Runoff Area=22.660 ac 0.00% Impervious Runoff Depth=0.13" Flow Length=657' Tc=22.1 min CN=63 Runoff=0.84 cfs 0.248 af
SubcatchmentB25:	Runoff Area=32.280 ac 0.00% Impervious Runoff Depth=0.29" Flow Length=1,923' Tc=41.0 min CN=70 Runoff=4.04 cfs 0.773 af
SubcatchmentB26:	Runoff Area=127.500 ac 0.00% Impervious Runoff Depth=0.48" Flow Length=4,618' Tc=167.6 min CN=76 Runoff=12.23 cfs 5.066 af
SubcatchmentB27:	Runoff Area=21.580 ac 0.00% Impervious Runoff Depth=0.21" Flow Length=746' Tc=30.6 min CN=67 Runoff=1.93 cfs 0.382 af
SubcatchmentB28:	Runoff Area=17.080 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=1,454' Tc=38.3 min CN=80 Runoff=7.24 cfs 0.907 af
SubcatchmentB29:	Runoff Area=87.840 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=3,349' Tc=117.1 min CN=80 Runoff=16.11 cfs 4.663 af
SubcatchmentB3:	Runoff Area=41.070 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=1,918' Tc=56.6 min CN=80 Runoff=13.09 cfs 2.180 af
SubcatchmentB30:	Runoff Area=1.940 ac 0.00% Impervious Runoff Depth=0.68" Flow Length=303' Tc=14.3 min CN=81 Runoff=1.67 cfs 0.110 af
SubcatchmentB4:	Runoff Area=144.430 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=2,984' Tc=42.8 min CN=80 Runoff=56.45 cfs 7.667 af
SubcatchmentB5:	Runoff Area=366.880 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=4,701' Tc=66.4 min CN=80 Runoff=103.87 cfs 19.475 af
SubcatchmentB6:	Runoff Area=113.630 ac 0.00% Impervious Runoff Depth=0.55" Flow Length=3,466' Tc=49.8 min CN=78 Runoff=33.04 cfs 5.238 af
SubcatchmentB7:	Runoff Area=397.250 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=6,733' Tc=245.1 min CN=80 Runoff=40.90 cfs 21.087 af
SubcatchmentB8:	Runoff Area=13.070 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=814' Tc=25.3 min CN=80 Runoff=7.39 cfs 0.694 af
SubcatchmentB9:	Runoff Area=33.210 ac 0.00% Impervious Runoff Depth=0.64" Flow Length=1,128' Tc=41.7 min CN=80 Runoff=13.23 cfs 1.763 af

Total Runoff Area = 4,138.210 ac Runoff Volume = 200.669 af Average Runoff Depth = 0.58"
100.00% Pervious = 4,138.210 ac 0.00% Impervious = 0.000 ac

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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B1:

Runoff = 295.46 cfs @ 12.74 hrs, Volume= 55.679 af, Depth= 0.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 1,124.640	79	
1,124.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	100	0.0050	0.08		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
8.5	656	0.0203	1.28		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
9.4	4,083	0.0048	7.25	362.50	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.0	56	0.0535	19.68	61.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.2	94	0.0085	9.65	482.39	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	47	0.0021	3.90	12.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
12.3	3,705	0.0023	5.02	250.93	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	40	0.0025	4.26	13.37	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.4	1,819	0.0020	4.71	282.81	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
0.1	45	0.0156	10.63	33.39	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.1	1,860	0.0023	5.05	303.28	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
64.6	12,505	Total			

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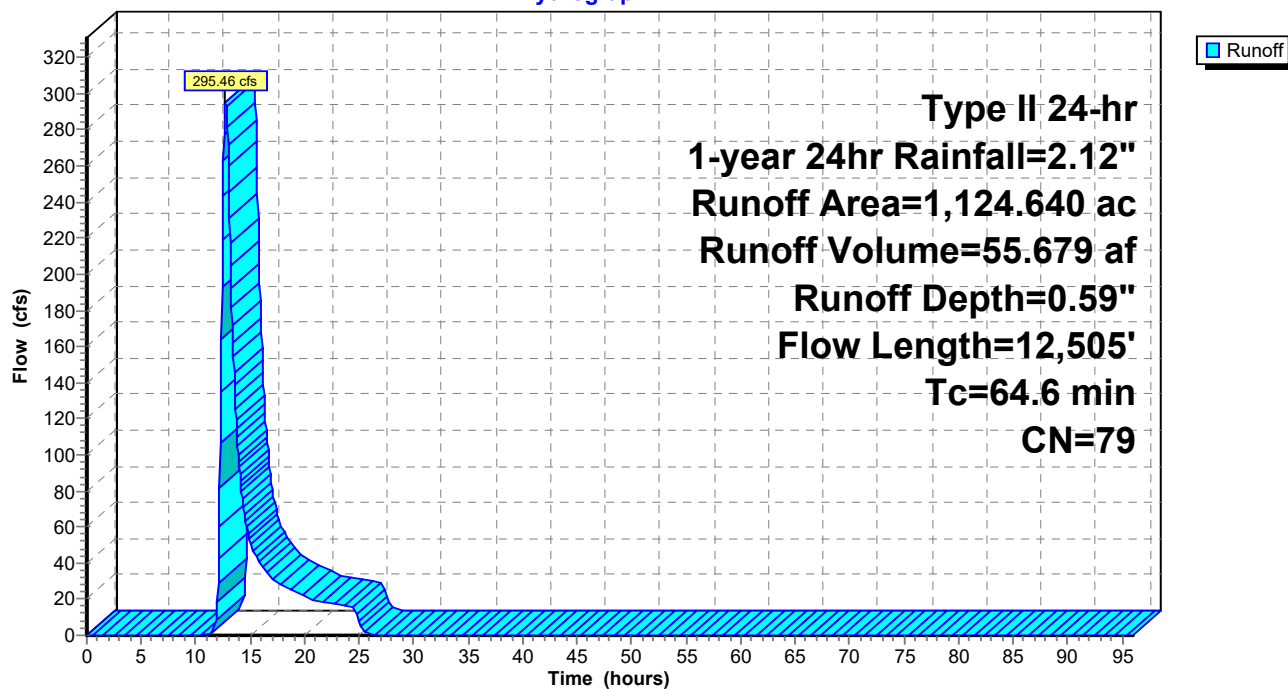
Type II 24-hr 1-year 24hr Rainfall=2.12"

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Subcatchment B1:

Hydrograph



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Summary for Subcatchment B10:

Runoff = 16.59 cfs @ 12.60 hrs, Volume= 2.678 af, Depth= 0.64"

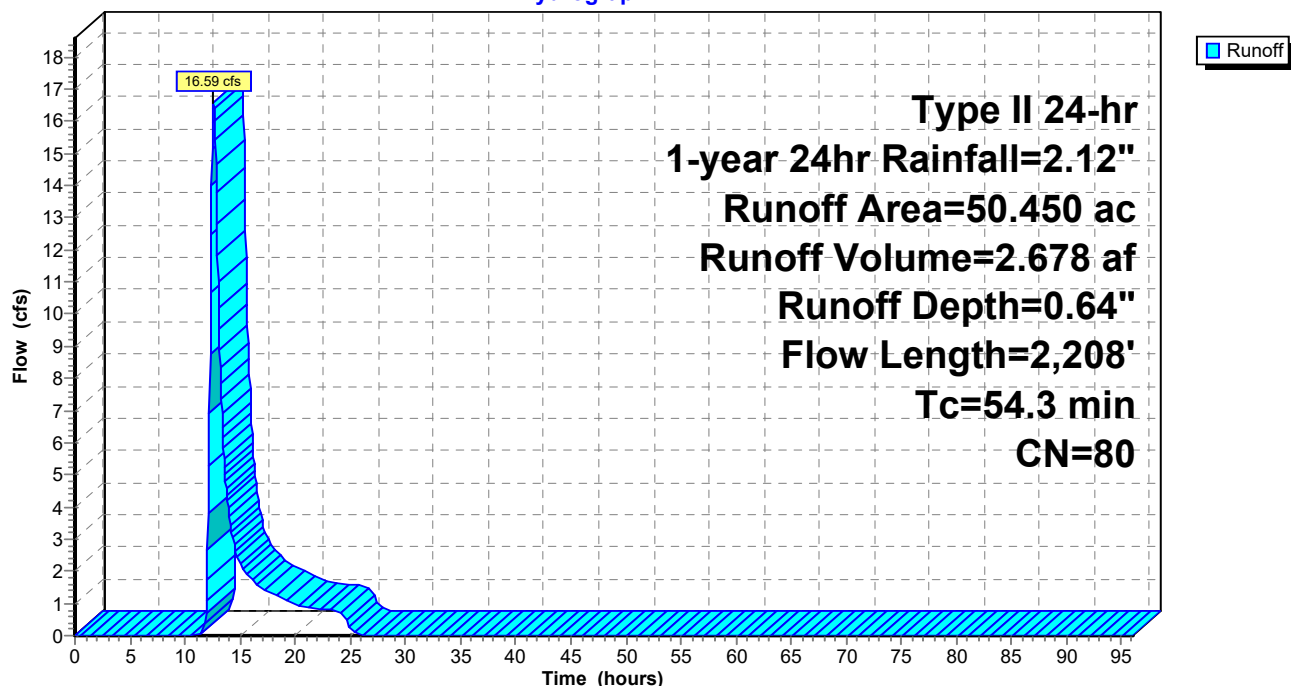
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 50.450	80	
50.450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.1	100	0.0040	0.07		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
28.3	1,408	0.0085	0.83		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	72	0.0014	4.57	243.51	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
0.1	34	0.0029	4.58	14.40	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	594	0.0024	3.94	105.08	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
54.3	2,208	Total			

Subcatchment B10:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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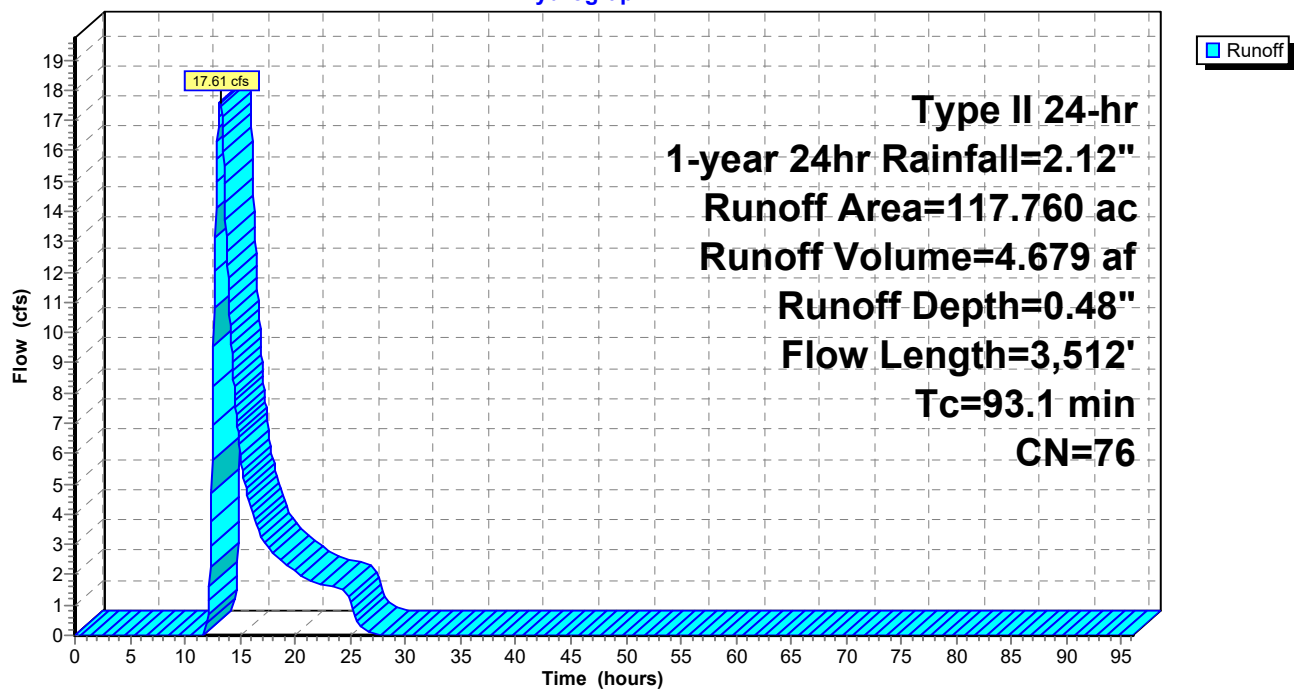
Summary for Subcatchment B11:

Runoff = 17.61 cfs @ 13.16 hrs, Volume= 4.679 af, Depth= 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 117.760	76	
117.760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7	100	0.0070	0.05		Sheet Flow, SH-WOODS Woods: Light underbrush n= 0.400 P2= 2.54"
50.0	2,516	0.0087	0.84		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.2	413	0.0017	1.33	4.44	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.2	69	0.0277	7.08	22.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.0	14	0.0073	7.97	332.27	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
0.1	24	0.0165	5.47	17.17	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.9	376	0.0053	6.79	283.12	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
93.1	3,512	Total			

Subcatchment B11:**Hydrograph**

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Summary for Subcatchment B12:

Runoff = 3.41 cfs @ 13.03 hrs, Volume= 0.834 af, Depth= 0.44"

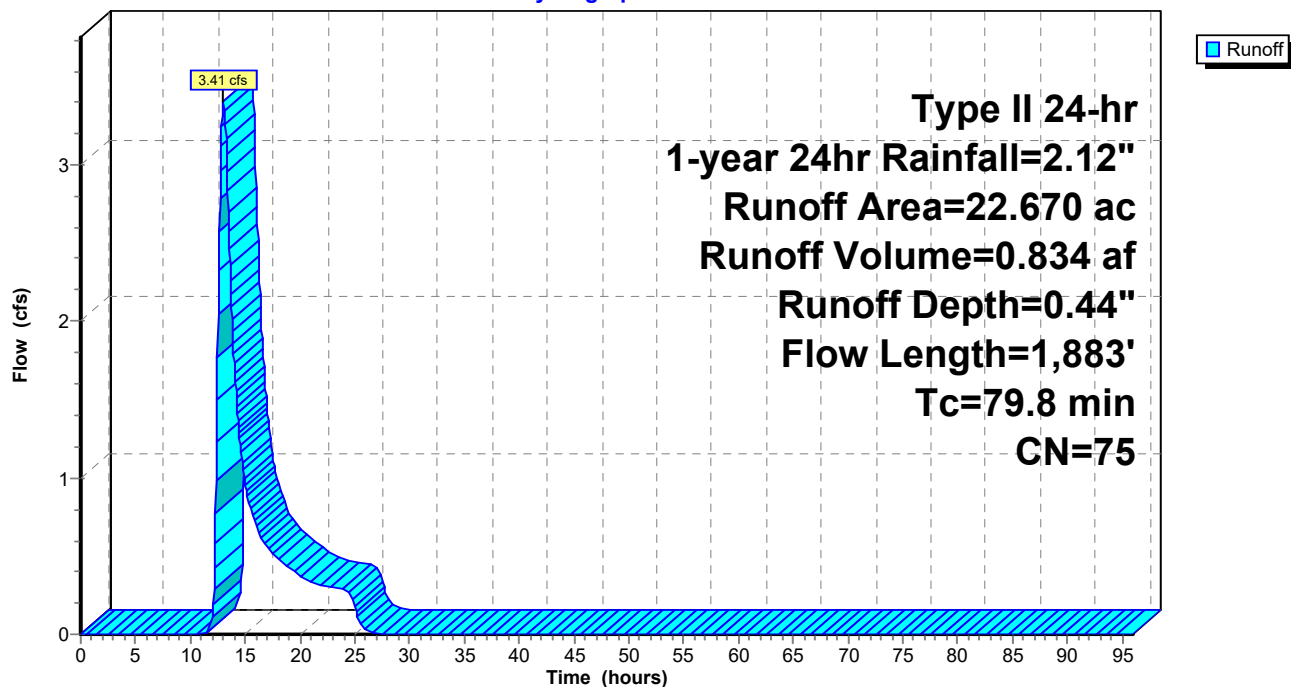
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 22.670	75	
22.670		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
67.4	1,783	0.0024	0.44		Shallow Concentrated Flow, SH-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
79.8	1,883	Total			

Subcatchment B12:

Hydrograph



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Summary for Subcatchment B13:

Runoff = 10.49 cfs @ 12.86 hrs, Volume= 2.110 af, Depth= 0.68"

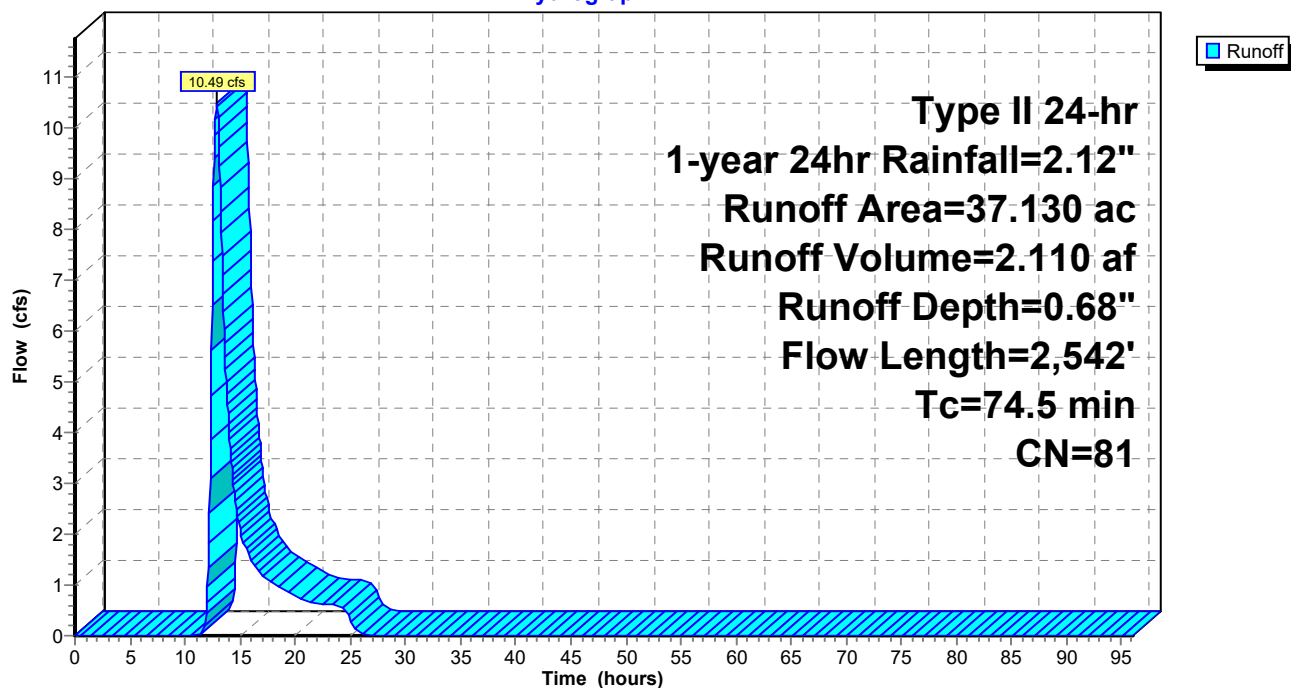
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 37.130	81	
37.130		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	100	0.0280	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
50.7	1,836	0.0045	0.60		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
13.2	571	0.0005	0.72	2.41	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.0	35	0.0751	23.32	73.27	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
74.5	2,542	Total			

Subcatchment B13:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B14:

Runoff = 59.97 cfs @ 13.76 hrs, Volume= 19.698 af, Depth= 0.55"

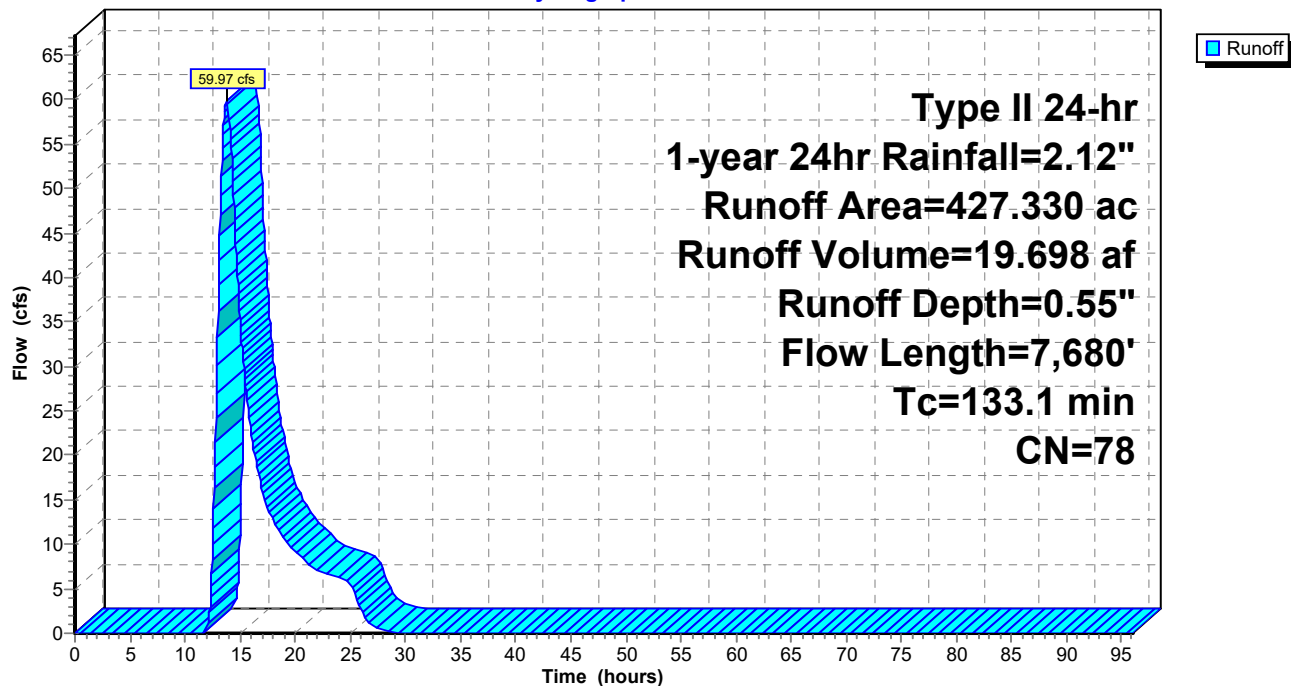
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 427.330	78	
427.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
95.6	2,475	0.0023	0.43		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
25.3	5,105	0.0010	3.37	336.93	Parabolic Channel, DITCH W=50.00' D=3.00' Area=100.0 sf Perim=50.5' n= 0.022
133.1	7,680	Total			

Subcatchment B14:

Hydrograph



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Summary for Subcatchment B15:

Runoff = 9.17 cfs @ 13.38 hrs, Volume= 2.589 af, Depth= 0.51"

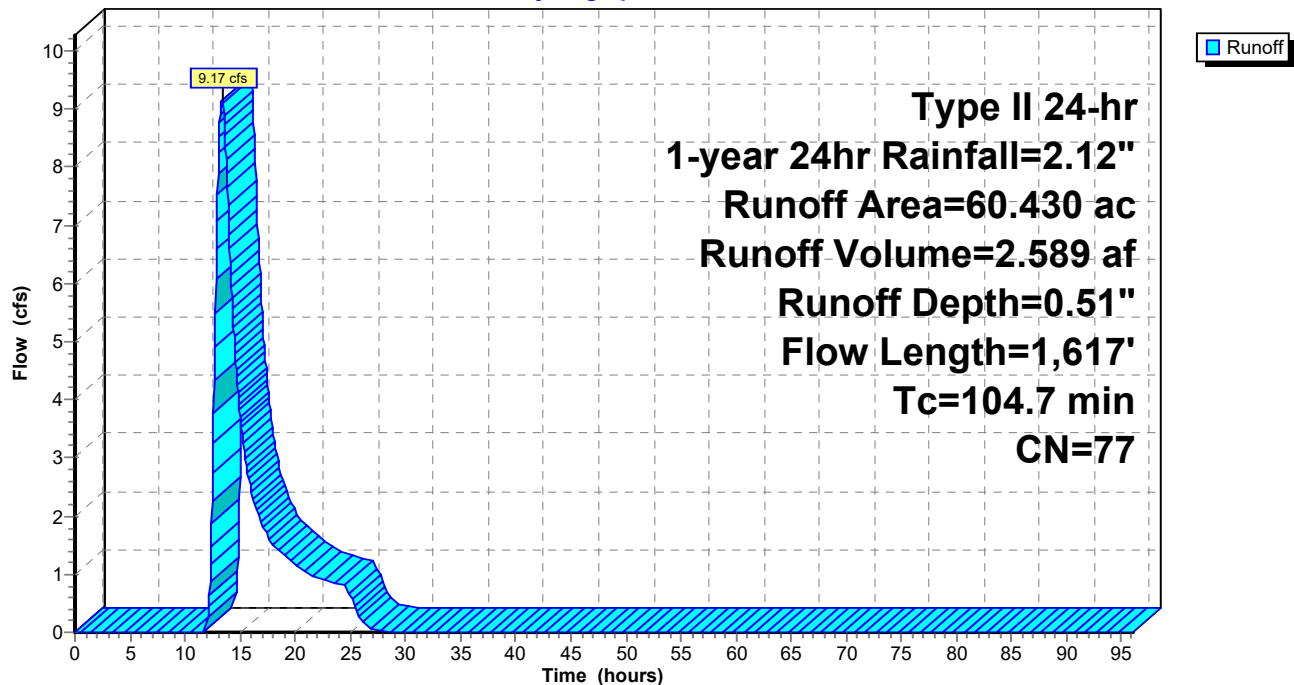
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 60.430	77	
60.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0250	0.15		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
93.6	1,517	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
104.7	1,617	Total			

Subcatchment B15:

Hydrograph



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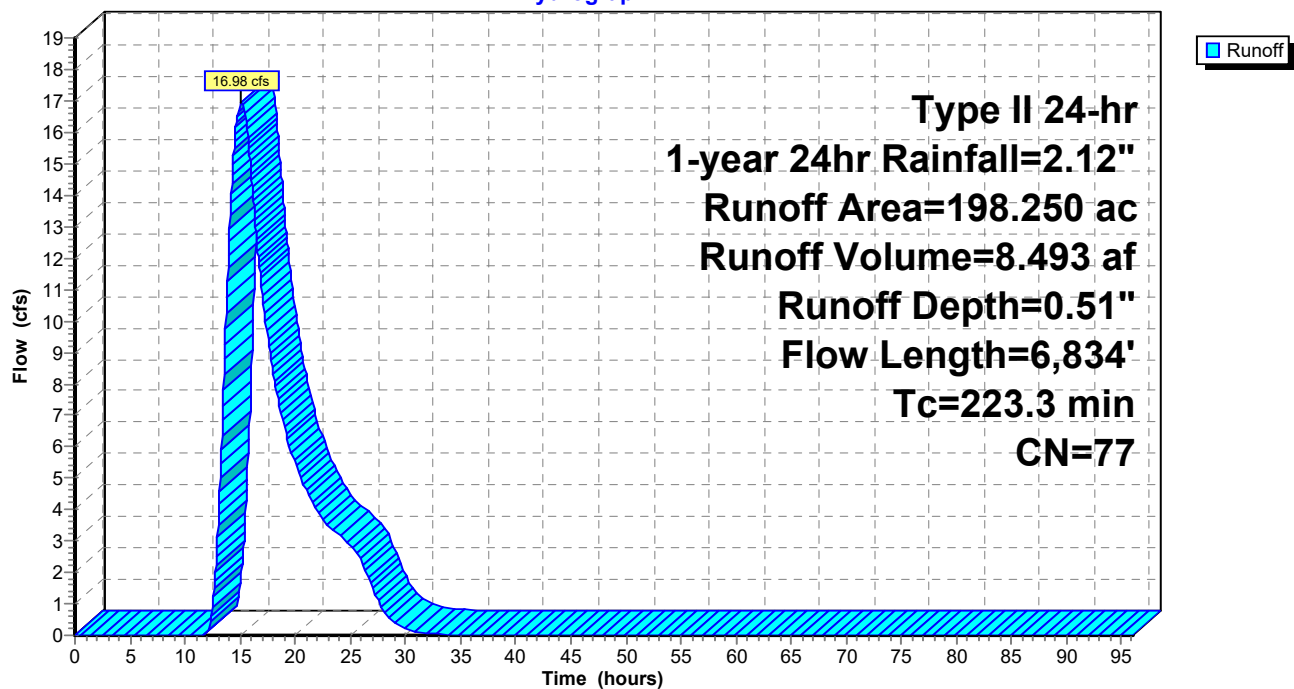
Summary for Subcatchment B16:

Runoff = 16.98 cfs @ 15.13 hrs, Volume= 8.493 af, Depth= 0.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 198.250	77	
198.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
14.5	512	0.0043	0.59		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	41	0.0073	7.27	22.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
37.0	1,056	0.0028	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	35	0.0028	4.50	14.15	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
145.4	2,355	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.3	705	0.0045	5.16	68.76	Parabolic Channel, DITCH W=10.00' D=2.00' Area=13.3 sf Perim=11.0' n= 0.022
0.2	42	0.0024	4.17	13.10	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
9.3	1,988	0.0012	3.58	143.17	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
223.3	6,834	Total			

Subcatchment B16:**Hydrograph**

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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B17:

Runoff = 23.88 cfs @ 12.20 hrs, Volume= 2.182 af, Depth= 0.64"

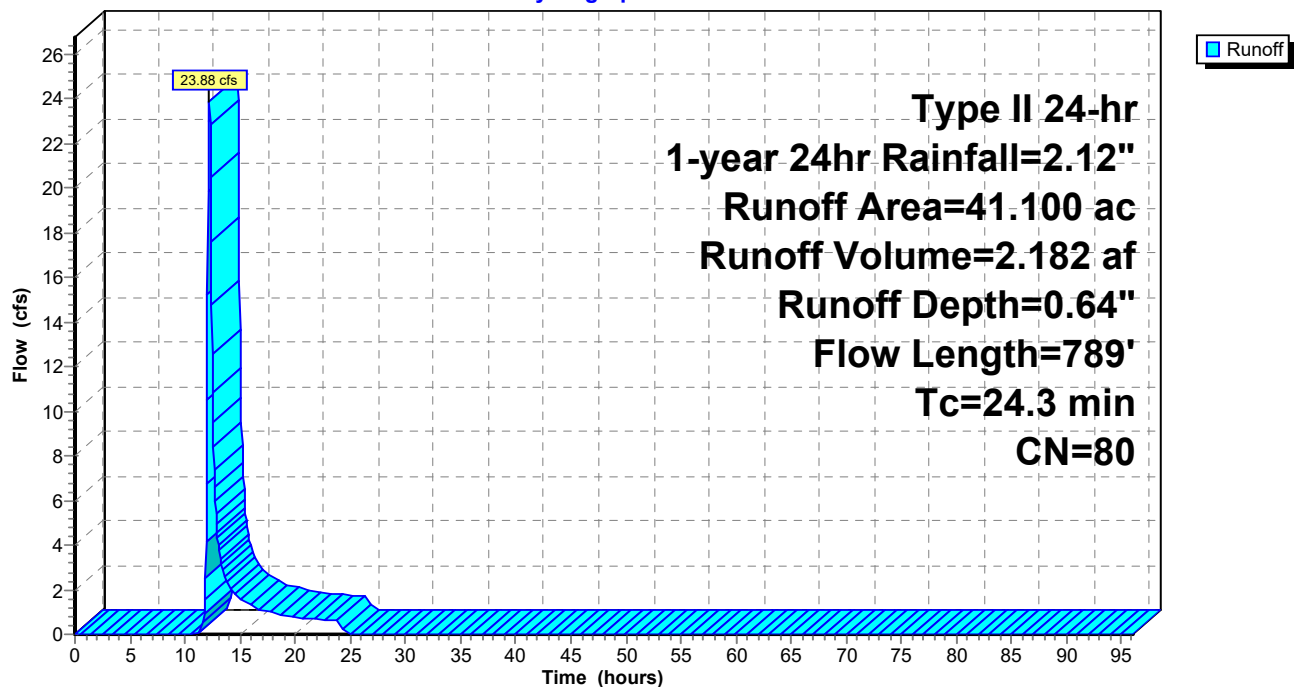
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 41.100	80	
41.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
10.3	689	0.0154	1.12		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
24.3	789	Total			

Subcatchment B17:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B18:

Runoff = 30.43 cfs @ 12.49 hrs, Volume= 4.352 af, Depth= 0.64"

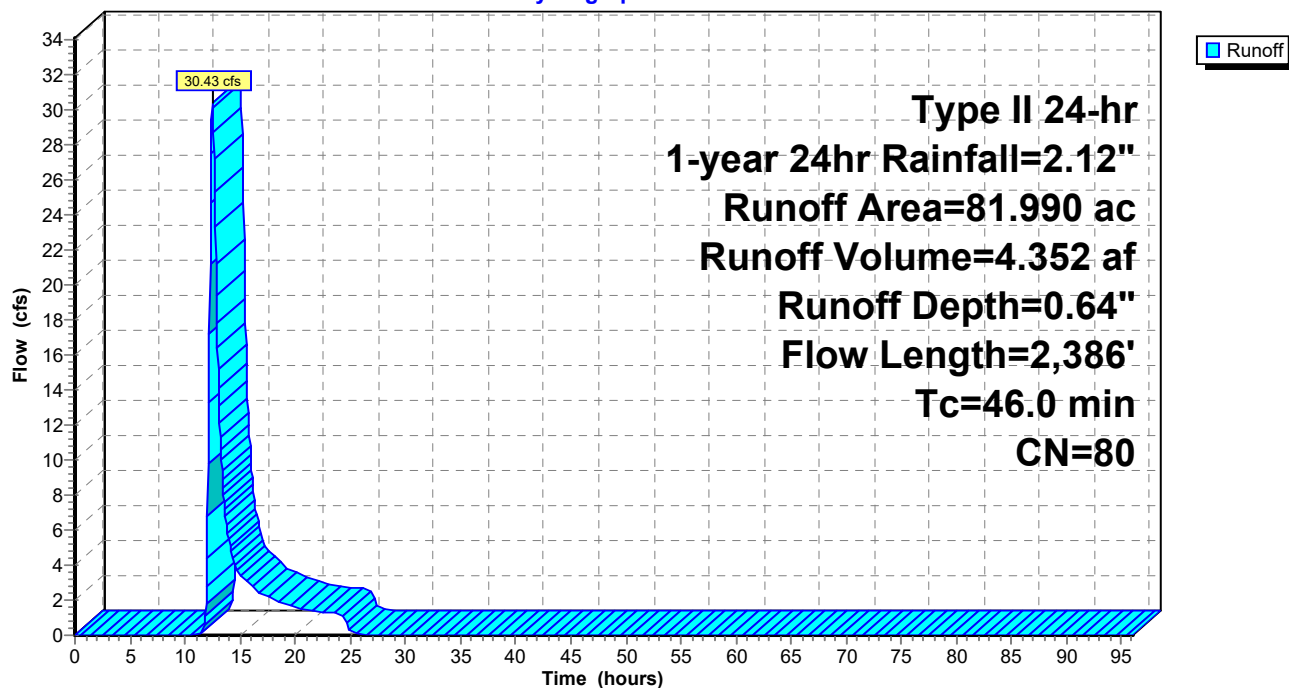
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 81.990	80	
81.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0300	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.6	1,156	0.0076	0.78		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
11.1	1,130	0.0011	1.70	22.69	Parabolic Channel, DITCH W=20.00' D=1.00' Area=13.3 sf Perim=20.1' n= 0.022
46.0	2,386	Total			

Subcatchment B18:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B19:

Runoff = 8.12 cfs @ 12.62 hrs, Volume= 1.353 af, Depth= 0.64"

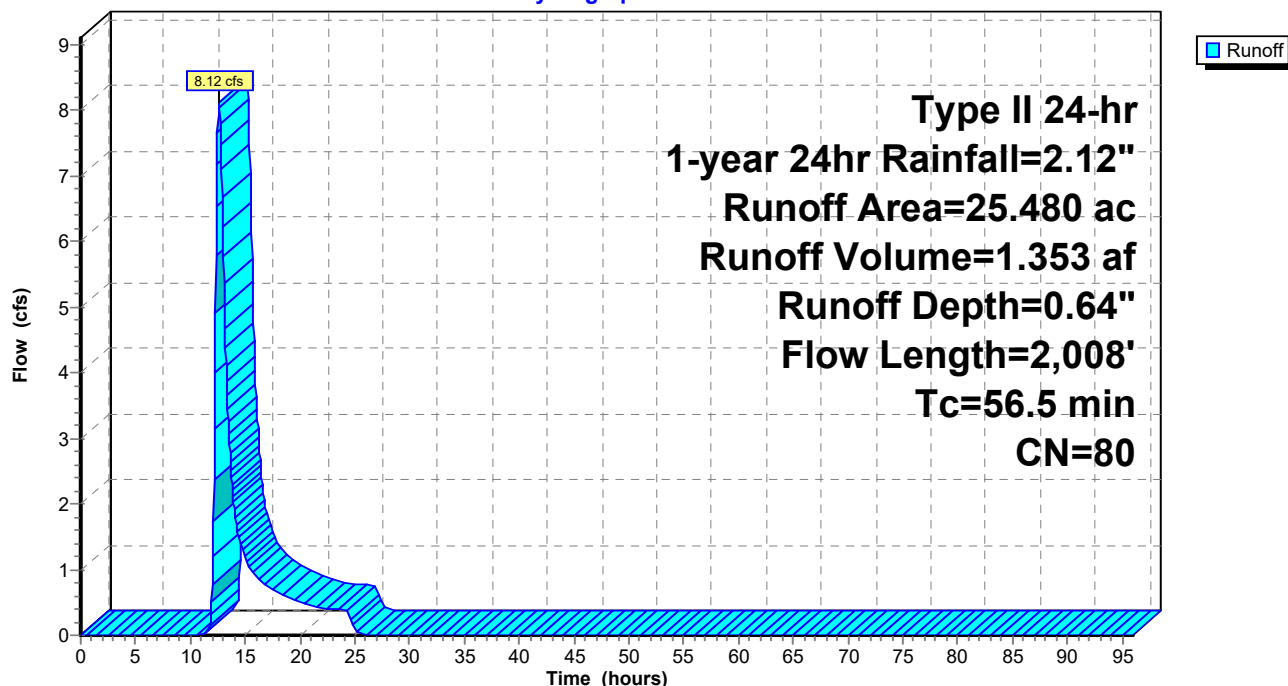
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 25.480	80	
25.480		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0180	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
19.0	999	0.0095	0.88		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
24.8	909	0.0046	0.61		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
56.5	2,008	Total			

Subcatchment B19:

Hydrograph



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Summary for Subcatchment B2:

Runoff = 87.60 cfs @ 12.29 hrs, Volume= 10.007 af, Depth= 0.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 233.580	77	
233.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	100	0.0106	0.11		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
3.4	210	0.0133	1.04		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
4.2	178	0.0051	0.71		Shallow Concentrated Flow, SCF-OPEN SPACE Nearly Bare & Untilled Kv= 10.0 fps
0.2	62	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	409	0.0169	13.17	87.83	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.011
5.2	1,987	0.0038	6.37	254.77	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	42	0.0047	5.83	18.33	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	218	0.0041	6.62	264.64	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	44	0.0160	10.76	33.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	160	0.0050	5.69	151.67	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
30.4	3,410	Total			

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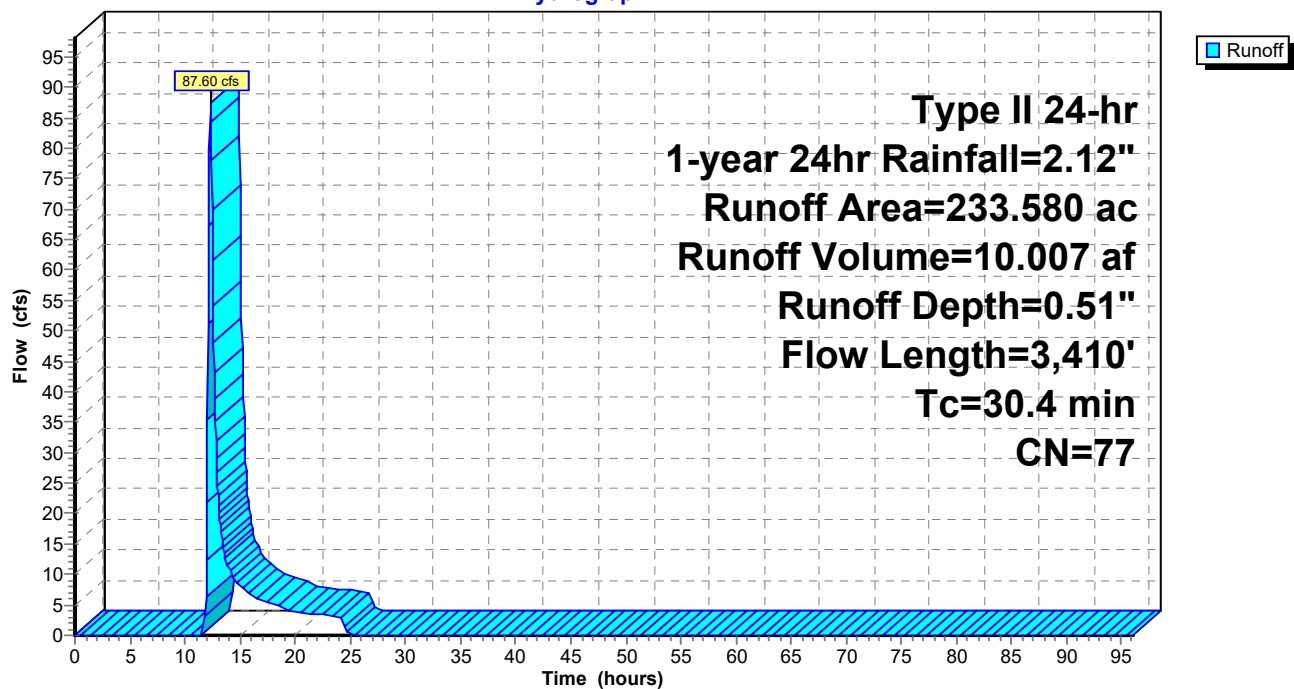
Type II 24-hr 1-year 24hr Rainfall=2.12"

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Subcatchment B2:

Hydrograph



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Summary for Subcatchment B20:

Runoff = 54.74 cfs @ 12.58 hrs, Volume= 8.760 af, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 165.020	80	
165.020		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.3	1,262	0.0079	0.80		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	94	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.8	167	0.0294	1.54		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	61	0.0016	3.40	10.69	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	2,712	0.0014	7.73	309.28	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.011
0.2	43	0.0023	4.08	12.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	969	0.0007	2.77	138.43	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
53.5	5,408	Total			

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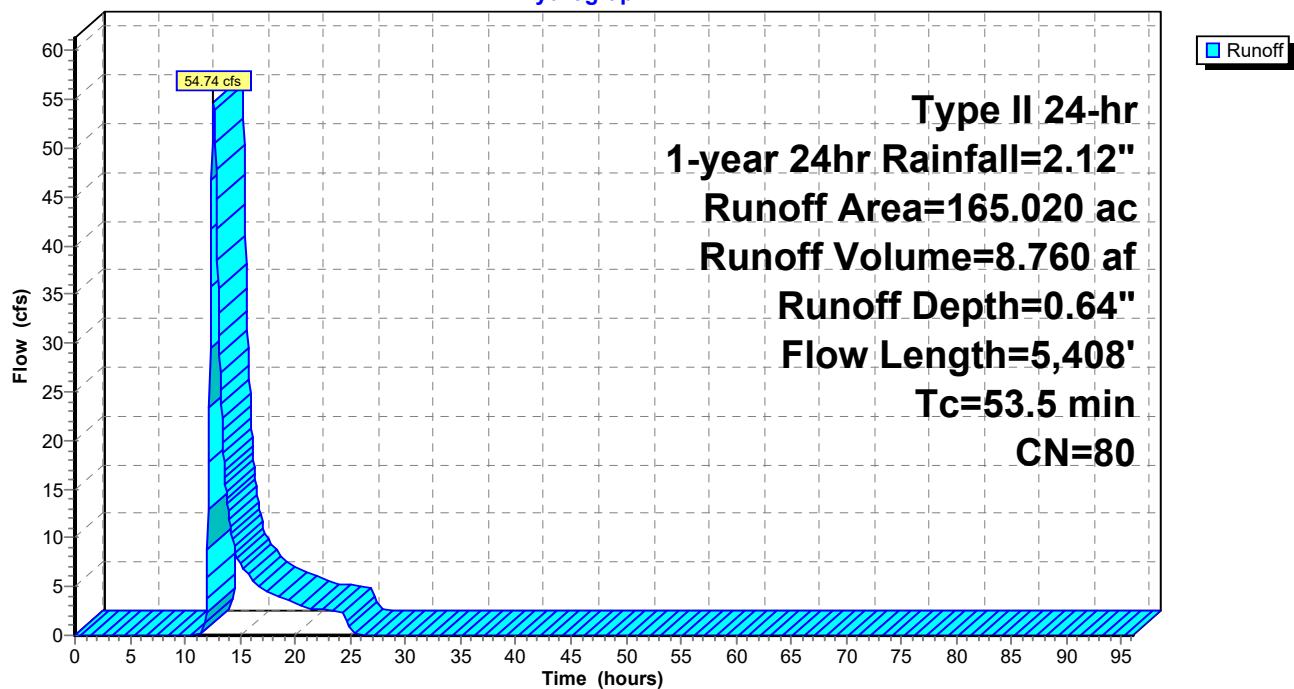
Type II 24-hr 1-year 24hr Rainfall=2.12"

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Subcatchment B20:

Hydrograph



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Summary for Subcatchment B21:

Runoff = 8.65 cfs @ 13.01 hrs, Volume= 1.938 af, Depth= 0.64"

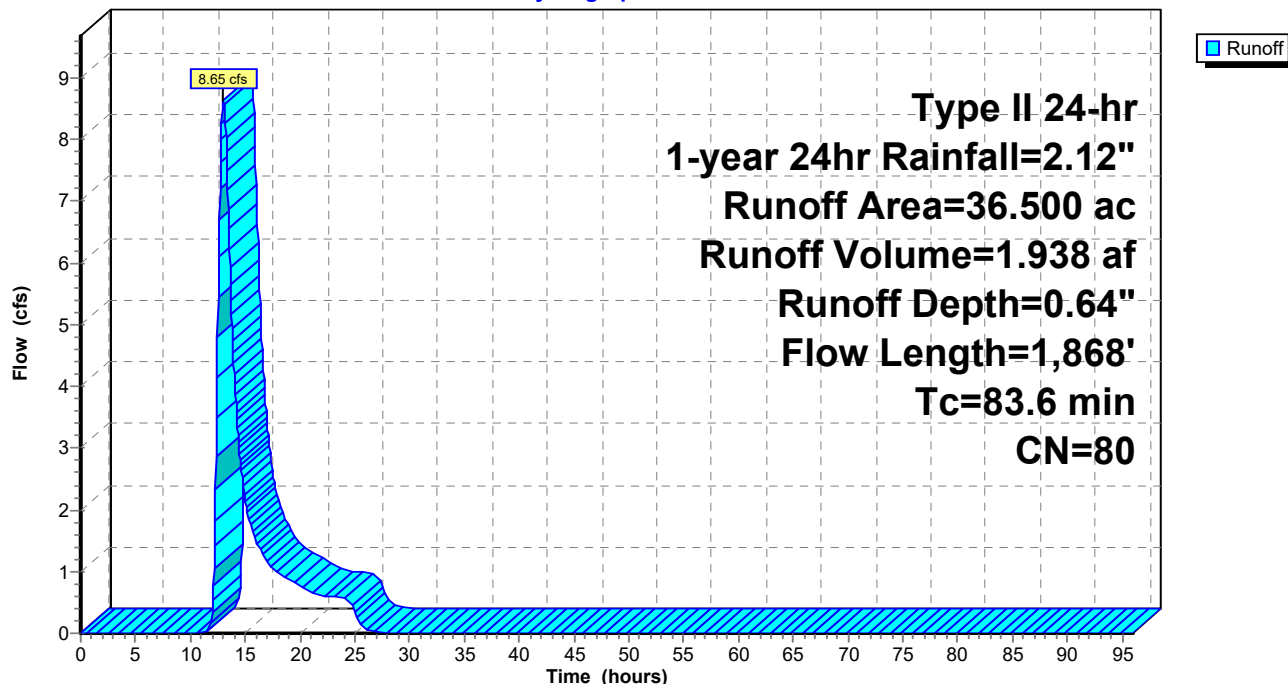
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 36.500	80	
36.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
25.9	1,010	0.0052	0.65		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
43.3	758	0.0034	0.29		Shallow Concentrated Flow, SCF-WOODS Woodland Kv= 5.0 fps
83.6	1,868	Total			

Subcatchment B21:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B22:

Runoff = 13.21 cfs @ 12.94 hrs, Volume= 2.776 af, Depth= 0.64"

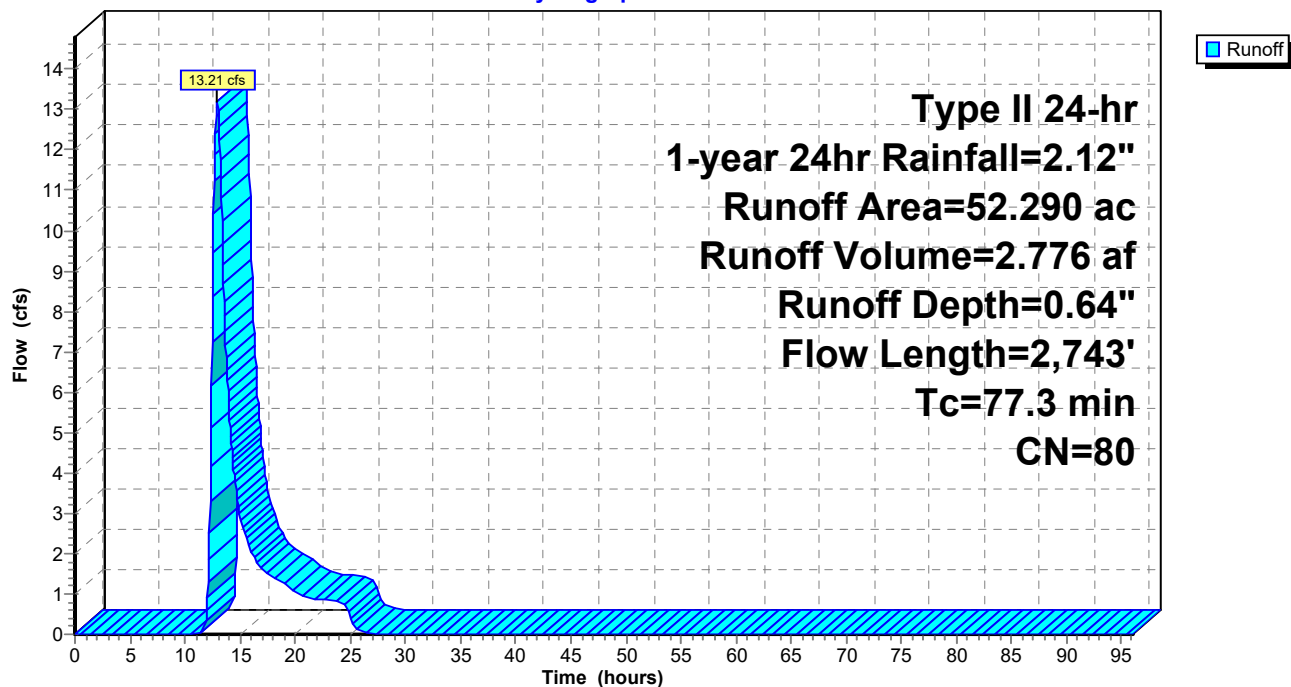
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 52.290	80	
52.290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
64.3	2,643	0.0058	0.69		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
77.3	2,743	Total			

Subcatchment B22:

Hydrograph



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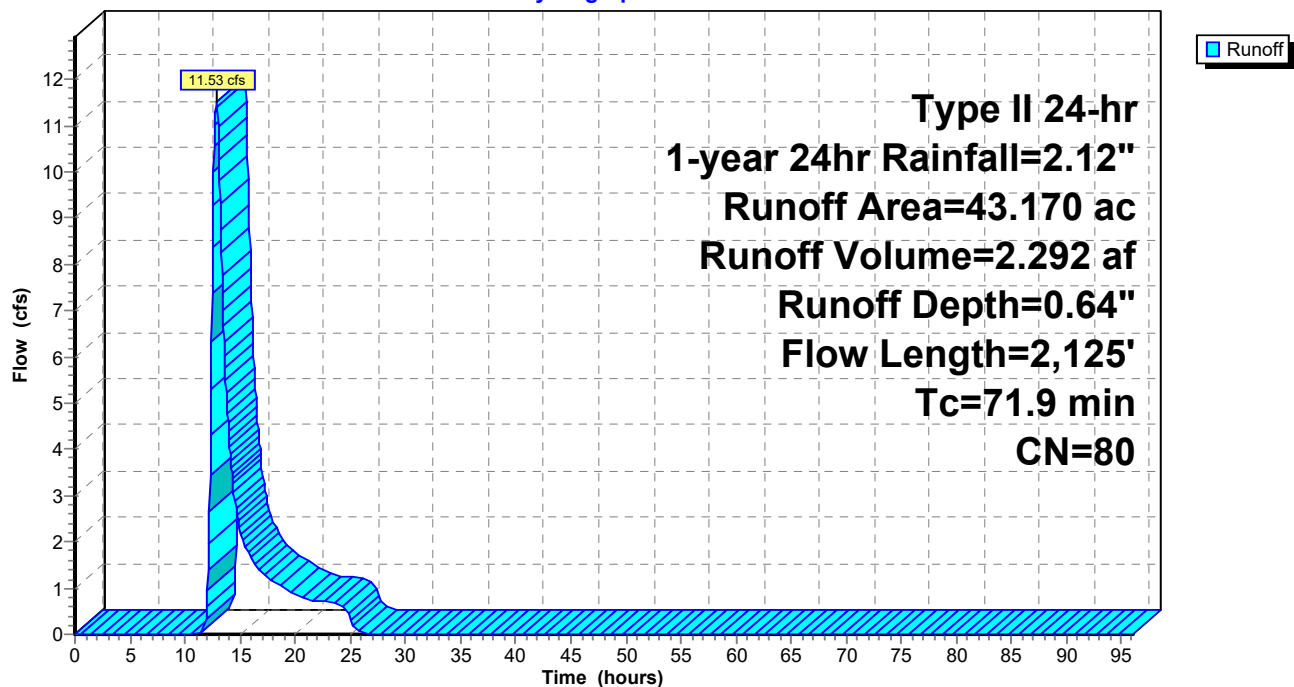
Summary for Subcatchment B23:

Runoff = 11.53 cfs @ 12.85 hrs, Volume= 2.292 af, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 43.170	80	
43.170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	100	0.0100	0.10		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
55.9	2,025	0.0045	0.60		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
71.9	2,125	Total			

Subcatchment B23:**Hydrograph**

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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B24:

Runoff = 0.84 cfs @ 12.31 hrs, Volume= 0.248 af, Depth= 0.13"

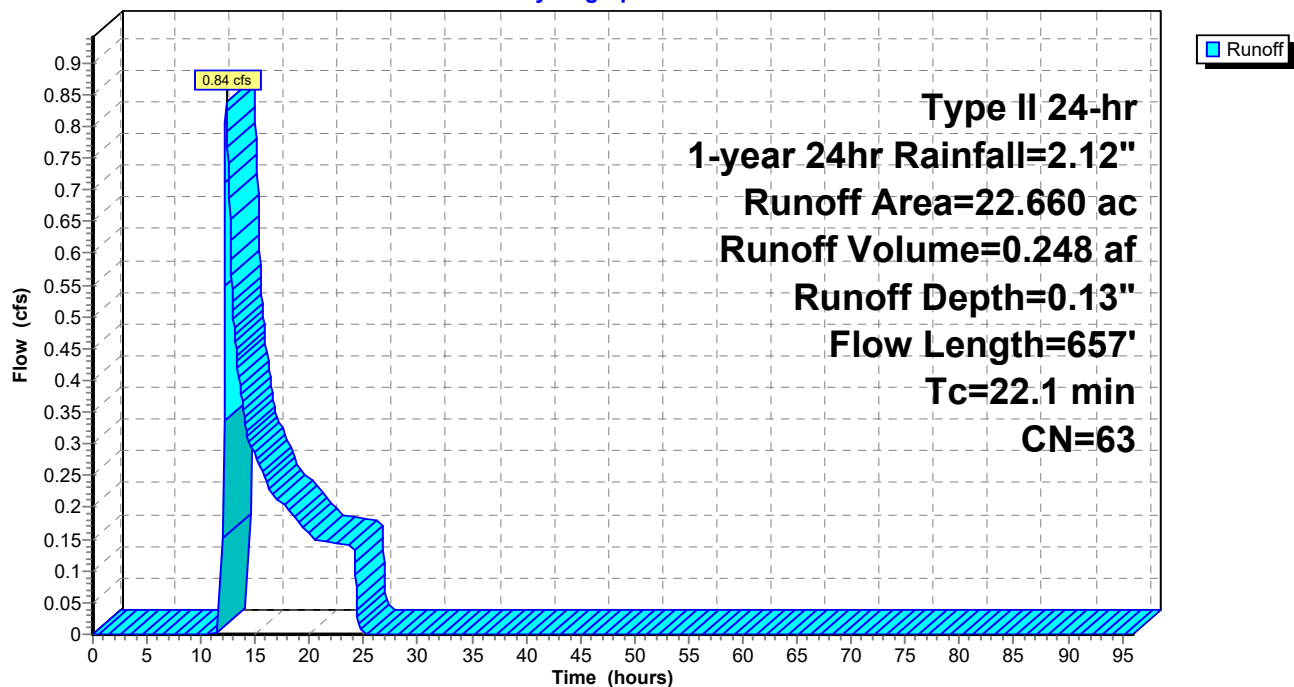
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 22.660	63	
22.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
7.7	557	0.0181	1.21		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
22.1	657	Total			

Subcatchment B24:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B25:

Runoff = 4.04 cfs @ 12.50 hrs, Volume= 0.773 af, Depth= 0.29"

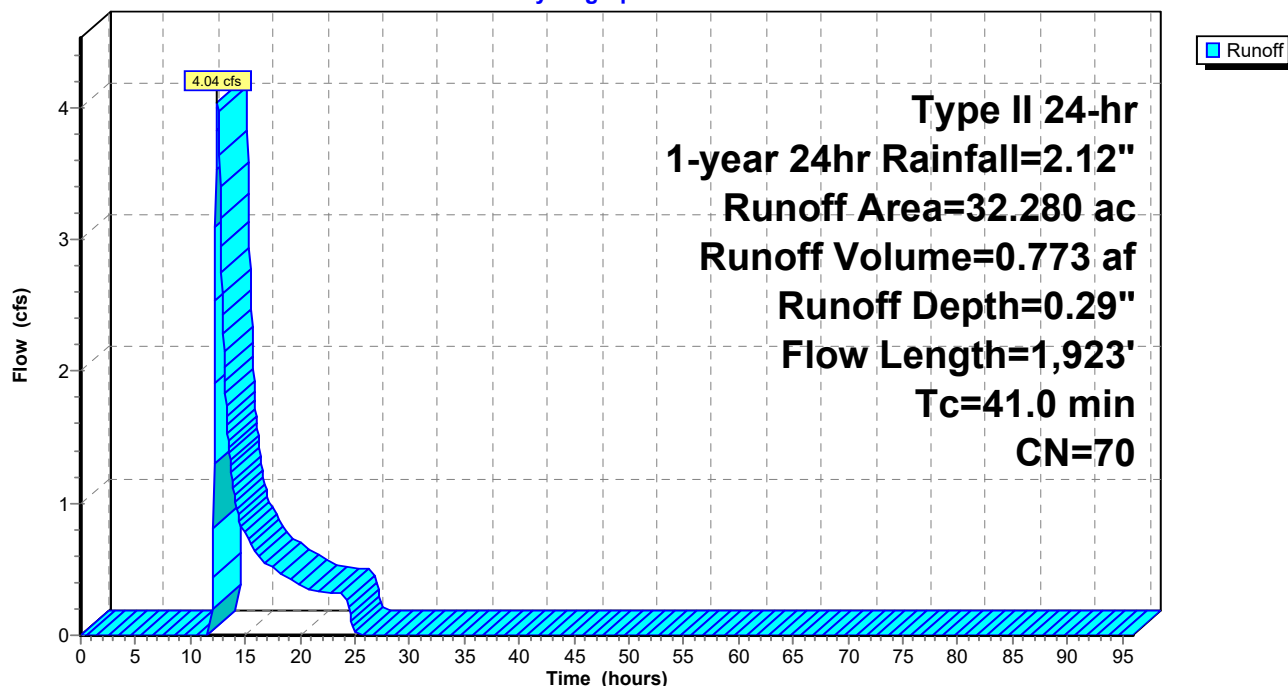
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 32.280	70	
32.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0230	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
27.0	1,311	0.0081	0.81		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.5	512	0.0047	3.47	23.16	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.022
41.0	1,923	Total			

Subcatchment B25:

Hydrograph



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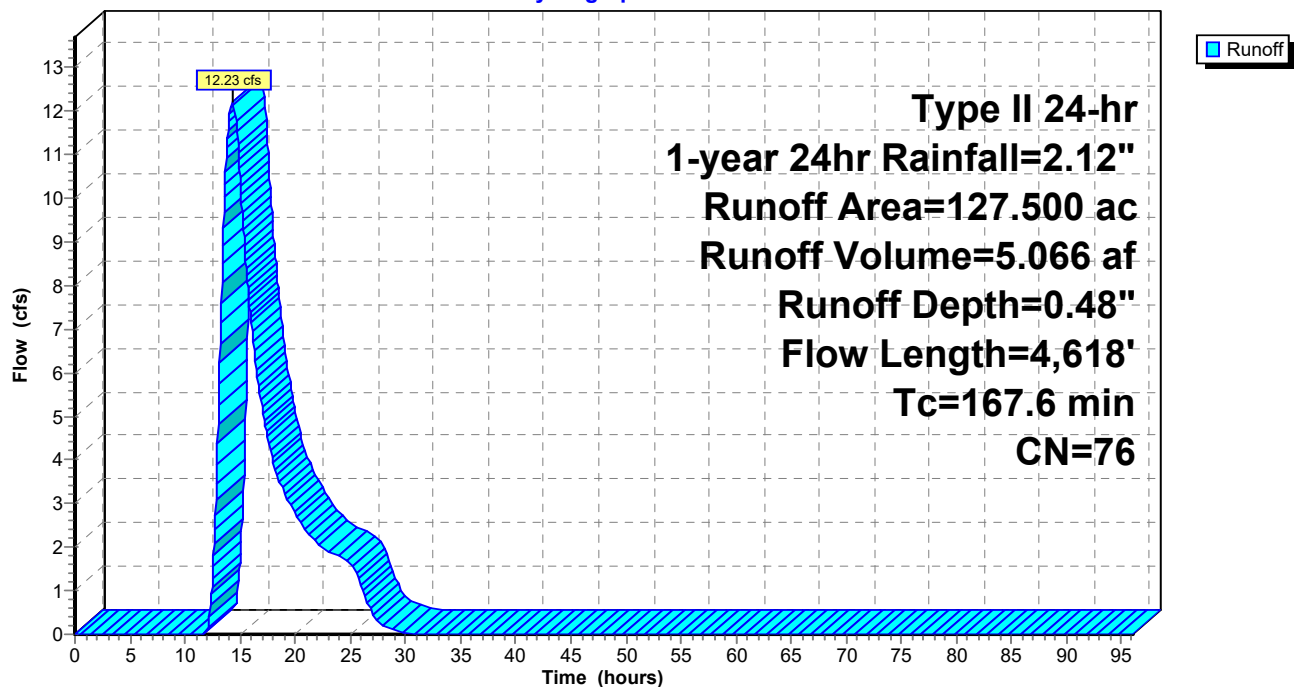
Summary for Subcatchment B26:

Runoff = 12.23 cfs @ 14.33 hrs, Volume= 5.066 af, Depth= 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 127.500	76	
127.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
155.4	4,518	0.0029	0.48		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
167.6	4,618	Total			

Subcatchment B26:**Hydrograph**

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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B27:

Runoff = 1.93 cfs @ 12.37 hrs, Volume= 0.382 af, Depth= 0.21"

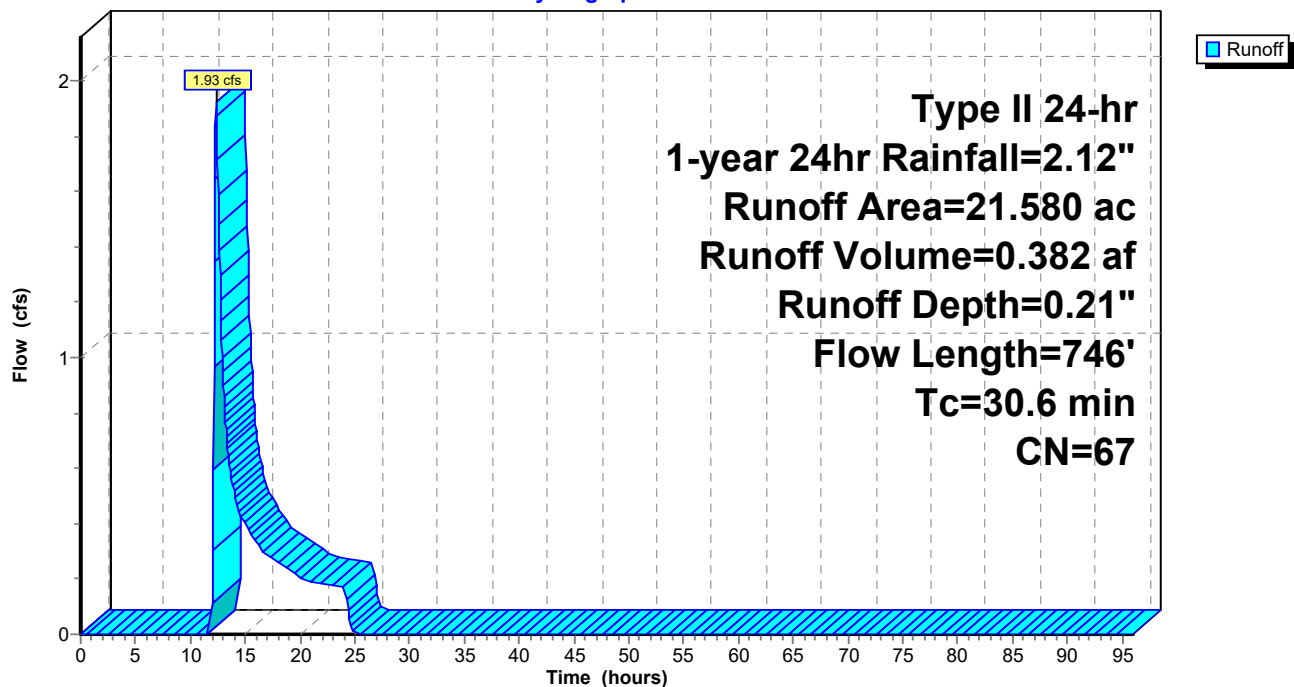
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 21.580	67	
21.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
18.9	646	0.0040	0.57		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
30.6	746	Total			

Subcatchment B27:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B28:

Runoff = 7.24 cfs @ 12.38 hrs, Volume= 0.907 af, Depth= 0.64"

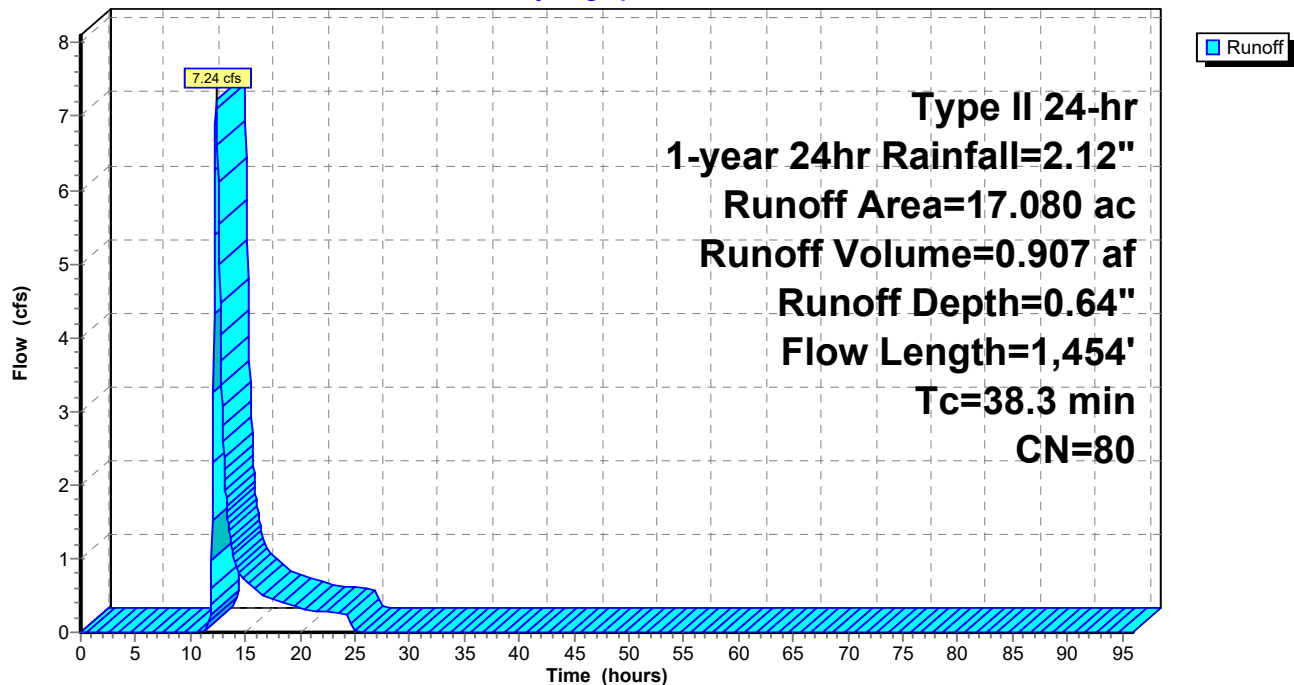
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 17.080	80	
17.080		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.6	1,354	0.0089	0.85		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
38.3	1,454	Total			

Subcatchment B28:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B29:

Runoff = 16.11 cfs @ 13.42 hrs, Volume= 4.663 af, Depth= 0.64"

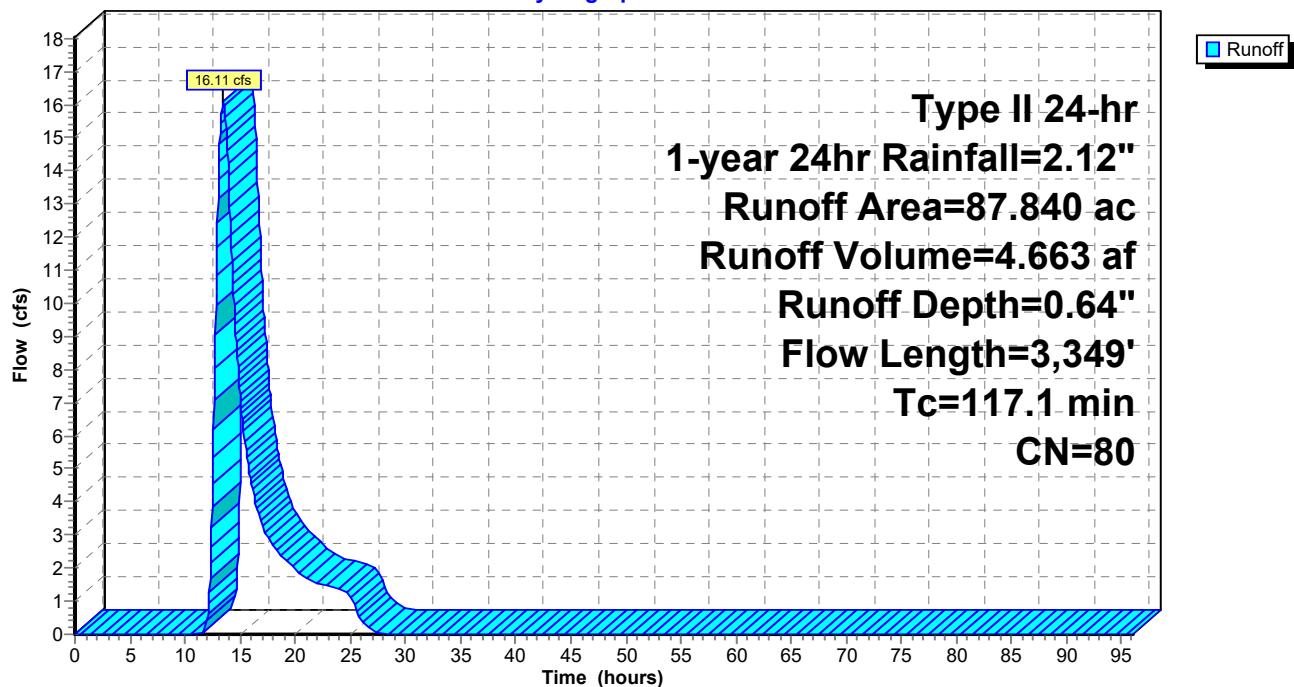
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 87.840	80	
87.840		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
104.7	3,249	0.0033	0.52		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
117.1	3,349	Total			

Subcatchment B29:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B3:

Runoff = 13.09 cfs @ 12.63 hrs, Volume= 2.180 af, Depth= 0.64"

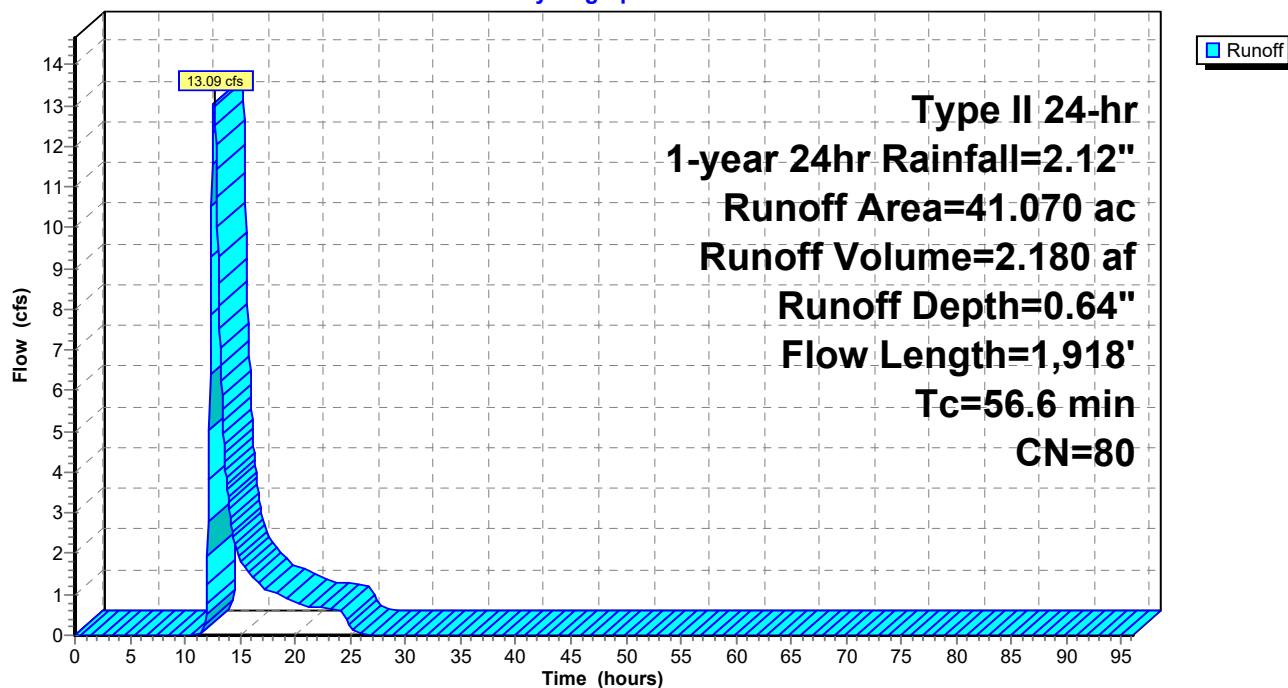
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 41.070	80	
41.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.0	100	0.0030	0.06		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
29.2	1,561	0.0098	0.89		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
1.4	257	0.0093	3.13	20.85	Parabolic Channel, DITCH W=20.00' D=0.50' Area=6.7 sf Perim=20.0' n= 0.022
56.6	1,918	Total			

Subcatchment B3:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B30:

Runoff = 1.67 cfs @ 12.07 hrs, Volume= 0.110 af, Depth= 0.68"

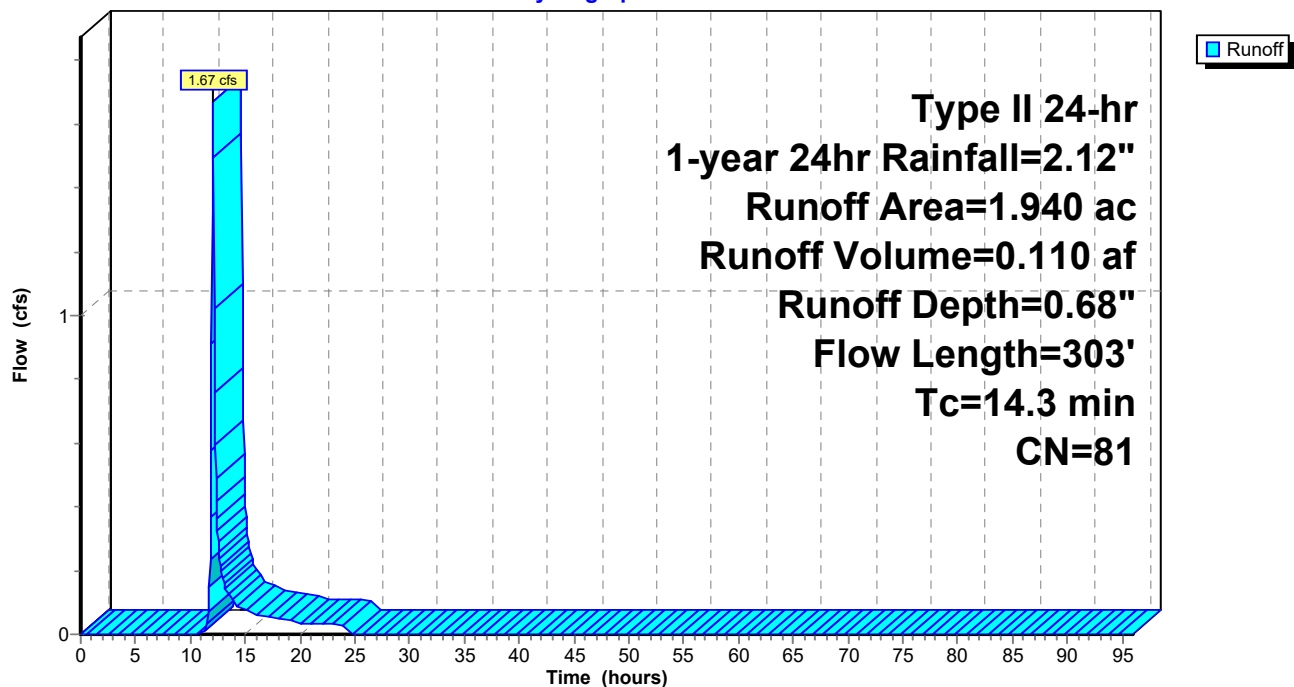
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 1.940	81	
1.940		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
2.6	203	0.0202	1.28		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
14.3	303	Total			

Subcatchment B30:

Hydrograph



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Type II 24-hr 1-year 24hr Rainfall=2.12"

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Summary for Subcatchment B4:

Runoff = 56.45 cfs @ 12.44 hrs, Volume= 7.667 af, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 144.430	80	
144.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0330	0.21		Sheet Flow, SH-OPEN SPACE Range n= 0.130 P2= 2.54"
10.7	749	0.0167	1.16		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.8	904	0.0065	2.59	5.17	Parabolic Channel, DITCH W=6.00' D=0.50' Area=2.0 sf Perim=6.1' n= 0.022
15.8	497	0.0034	0.52		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	43	0.0323	15.29	48.05	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	691	0.0081	4.60	46.03	Parabolic Channel, DITCH W=15.00' D=1.00' Area=10.0 sf Perim=15.2' n= 0.022
42.8	2,984	Total			

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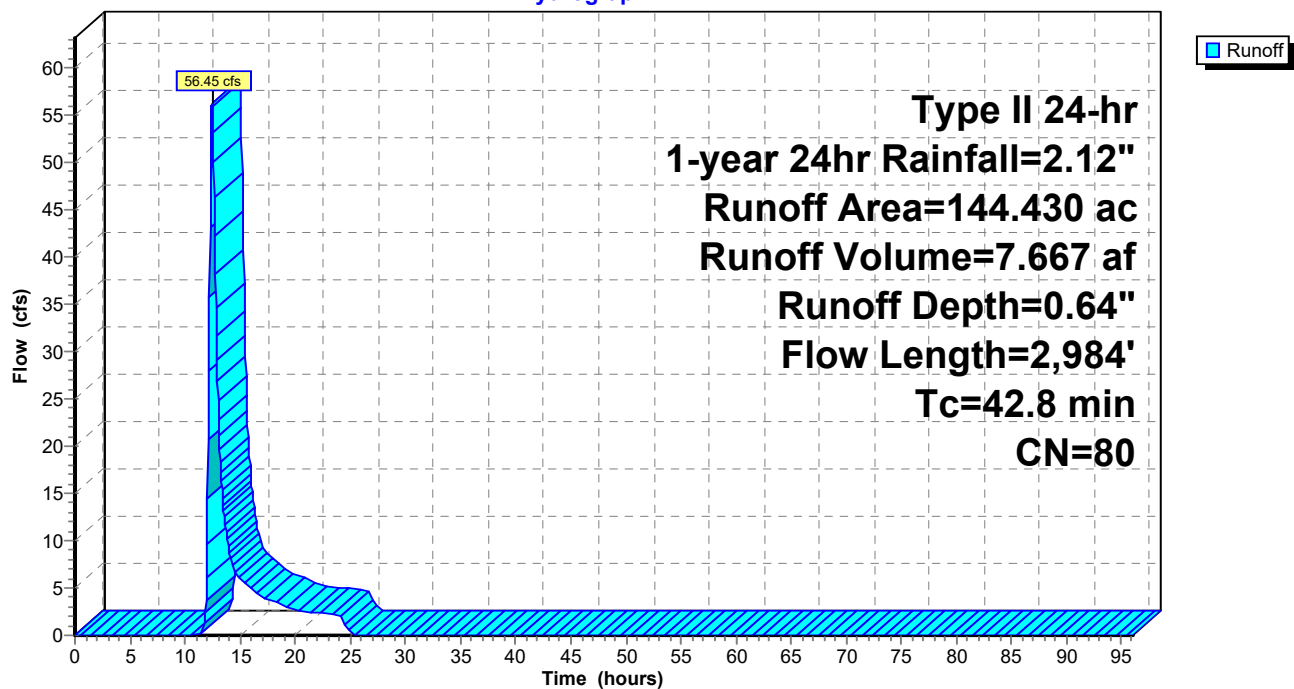
Type II 24-hr 1-year 24hr Rainfall=2.12"

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Subcatchment B4:

Hydrograph



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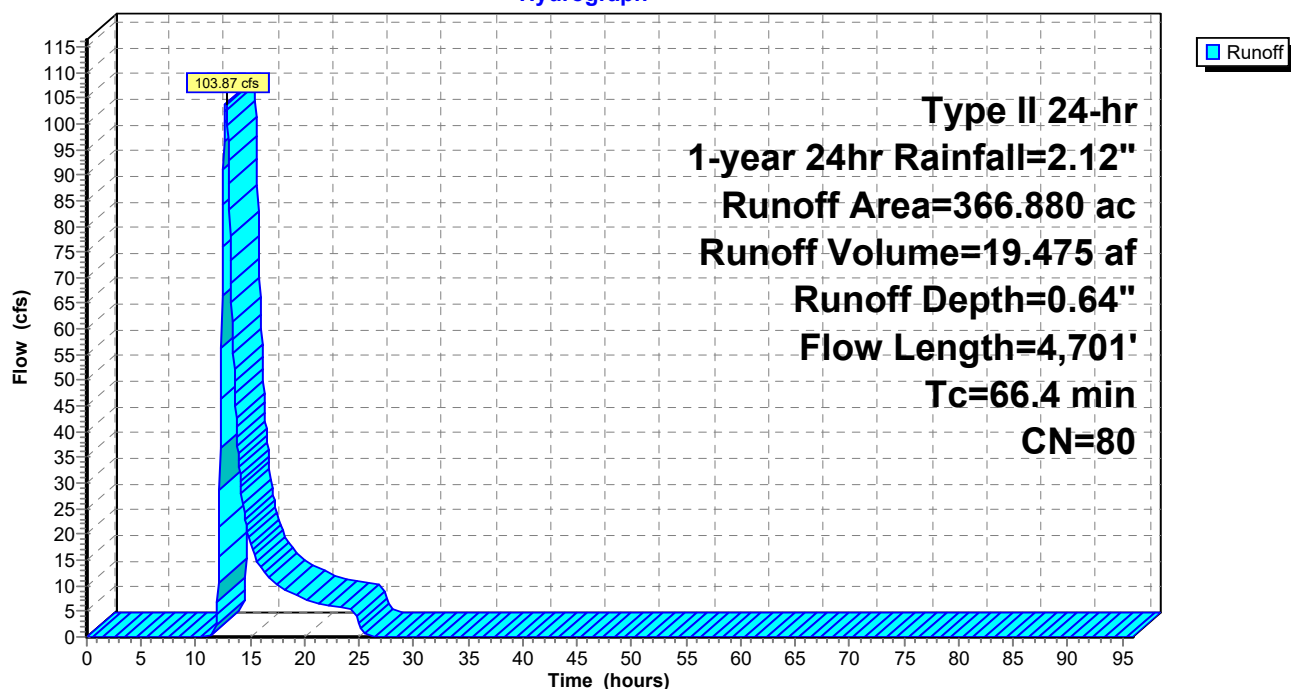
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Summary for Subcatchment B5:

Runoff = 103.87 cfs @ 12.76 hrs, Volume= 19.475 af, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description			
* 366.880	80				
366.880		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.0330	0.17		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.0	1,682	0.0144	1.08		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
10.1	1,605	0.0067	2.65	8.82	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
19.5	751	0.0051	0.64		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.9	563	0.0066	9.91	528.71	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
66.4	4,701	Total			

Subcatchment B5:**Hydrograph**

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Type II 24-hr 1-year 24hr Rainfall=2.12"

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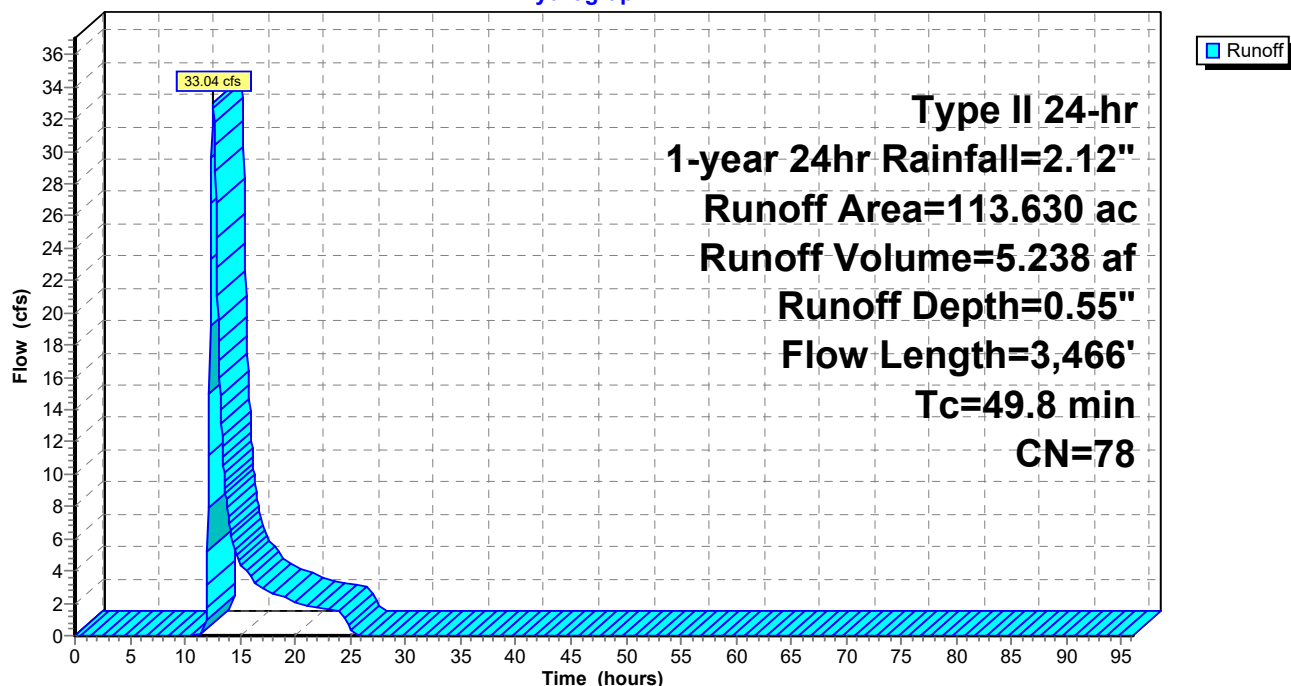
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Summary for Subcatchment B6:

Runoff = 33.04 cfs @ 12.55 hrs, Volume= 5.238 af, Depth= 0.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description			
* 113.630	78				
113.630		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
31.0	1,798	0.0115	0.97		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
3.0	959	0.0022	5.31	247.62	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
0.1	31	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.7	578	0.0026	5.77	269.19	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
49.8	3,466	Total			

Subcatchment B6:**Hydrograph**

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Type II 24-hr 1-year 24hr Rainfall=2.12"

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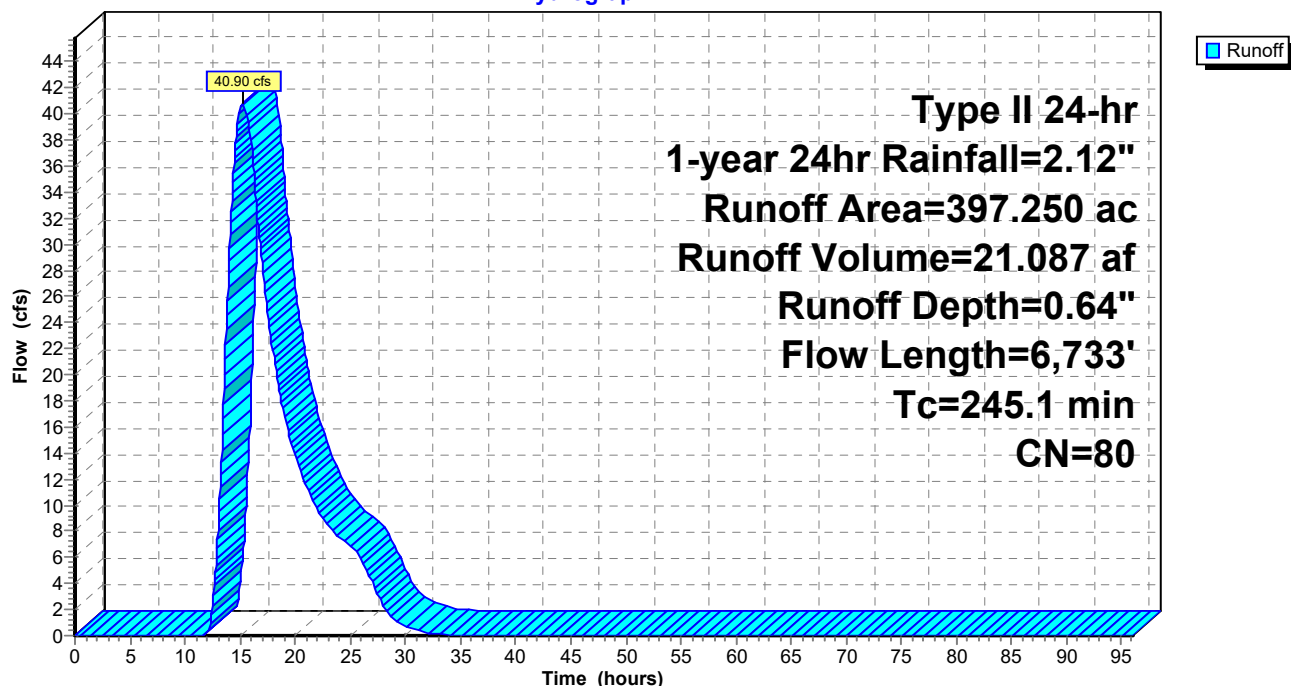
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Summary for Subcatchment B7:

Runoff = 40.90 cfs @ 15.24 hrs, Volume= 21.087 af, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description			
* 397.250	80				
397.250		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	100	0.0070	0.09		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
85.3	3,055	0.0044	0.60		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	27	0.0372	16.41	51.57	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
139.3	2,913	0.0015	0.35		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.0	638	0.0042	5.21	139.01	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
245.1	6,733	Total			

Subcatchment B7:**Hydrograph**

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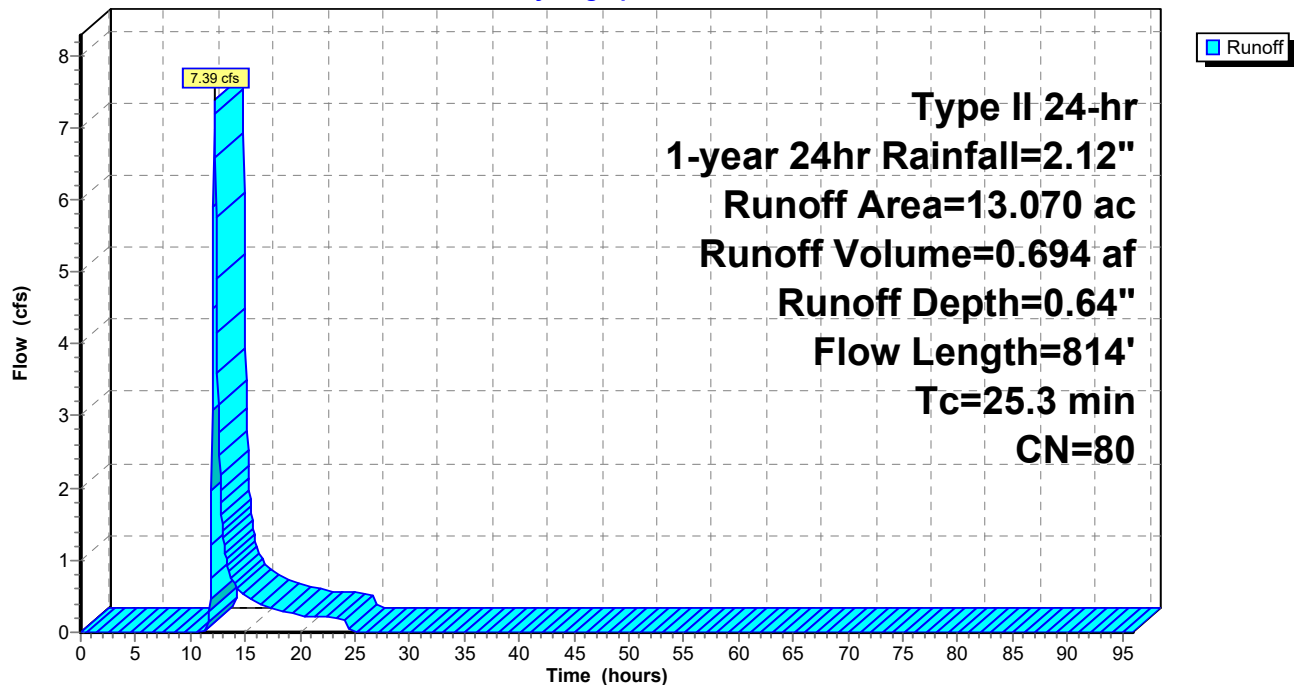
Summary for Subcatchment B8:

Runoff = 7.39 cfs @ 12.21 hrs, Volume= 0.694 af, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 13.070	80	
13.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
11.3	714	0.0136	1.05		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
25.3	814	Total			

Subcatchment B8:**Hydrograph**

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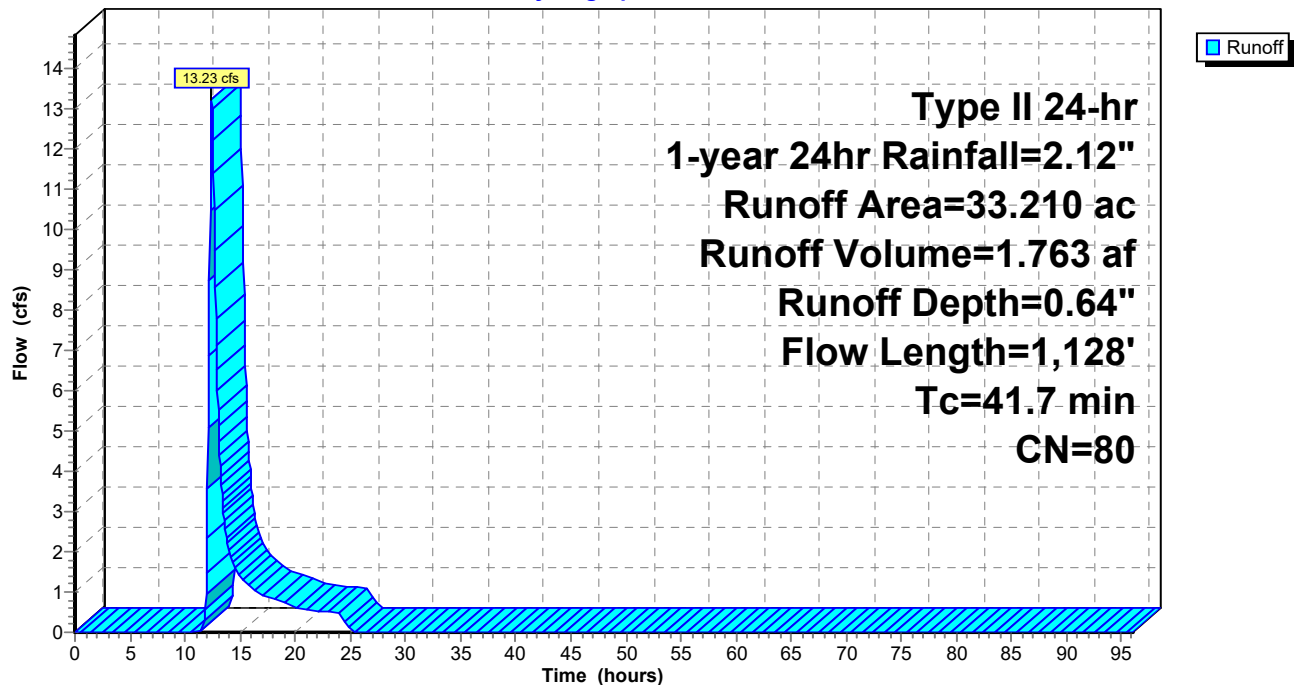
Summary for Subcatchment B9:

Runoff = 13.23 cfs @ 12.43 hrs, Volume= 1.763 af, Depth= 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year 24hr Rainfall=2.12"

Area (ac)	CN	Description
* 33.210	80	
33.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.5	100	0.0080	0.10		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.2	1,028	0.0062	0.71		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
41.7	1,128	Total			

Subcatchment B9:**Hydrograph**

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentB1:	Runoff Area=1,124.640 ac 0.00% Impervious Runoff Depth=0.86" Flow Length=12,505' Tc=64.6 min CN=79 Runoff=455.14 cfs 81.005 af
SubcatchmentB10:	Runoff Area=50.450 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=2,208' Tc=54.3 min CN=80 Runoff=24.99 cfs 3.854 af
SubcatchmentB11:	Runoff Area=117.760 ac 0.00% Impervious Runoff Depth=0.72" Flow Length=3,512' Tc=93.1 min CN=76 Runoff=28.72 cfs 7.055 af
SubcatchmentB12:	Runoff Area=22.670 ac 0.00% Impervious Runoff Depth=0.67" Flow Length=1,883' Tc=79.8 min CN=75 Runoff=5.67 cfs 1.273 af
SubcatchmentB13:	Runoff Area=37.130 ac 0.00% Impervious Runoff Depth=0.97" Flow Length=2,542' Tc=74.5 min CN=81 Runoff=15.55 cfs 3.004 af
SubcatchmentB14:	Runoff Area=427.330 ac 0.00% Impervious Runoff Depth=0.81" Flow Length=7,680' Tc=133.1 min CN=78 Runoff=93.10 cfs 28.986 af
SubcatchmentB15:	Runoff Area=60.430 ac 0.00% Impervious Runoff Depth=0.77" Flow Length=1,617' Tc=104.7 min CN=77 Runoff=14.55 cfs 3.855 af
SubcatchmentB16:	Runoff Area=198.250 ac 0.00% Impervious Runoff Depth=0.77" Flow Length=6,834' Tc=223.3 min CN=77 Runoff=26.50 cfs 12.647 af
SubcatchmentB17:	Runoff Area=41.100 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=789' Tc=24.3 min CN=80 Runoff=35.70 cfs 3.140 af
SubcatchmentB18:	Runoff Area=81.990 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=2,386' Tc=46.0 min CN=80 Runoff=45.83 cfs 6.263 af
SubcatchmentB19:	Runoff Area=25.480 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=2,008' Tc=56.5 min CN=80 Runoff=12.25 cfs 1.946 af
SubcatchmentB2:	Runoff Area=233.580 ac 0.00% Impervious Runoff Depth=0.77" Flow Length=3,410' Tc=30.4 min CN=77 Runoff=140.23 cfs 14.901 af
SubcatchmentB20:	Runoff Area=165.020 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=5,408' Tc=53.5 min CN=80 Runoff=82.69 cfs 12.605 af
SubcatchmentB21:	Runoff Area=36.500 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=1,868' Tc=83.6 min CN=80 Runoff=13.03 cfs 2.788 af
SubcatchmentB22:	Runoff Area=52.290 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=2,743' Tc=77.3 min CN=80 Runoff=19.87 cfs 3.994 af
SubcatchmentB23:	Runoff Area=43.170 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=2,125' Tc=71.9 min CN=80 Runoff=17.38 cfs 3.298 af

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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SubcatchmentB24:	Runoff Area=22.660 ac 0.00% Impervious Runoff Depth=0.26" Flow Length=657' Tc=22.1 min CN=63 Runoff=3.06 cfs 0.486 af
SubcatchmentB25:	Runoff Area=32.280 ac 0.00% Impervious Runoff Depth=0.47" Flow Length=1,923' Tc=41.0 min CN=70 Runoff=8.04 cfs 1.276 af
SubcatchmentB26:	Runoff Area=127.500 ac 0.00% Impervious Runoff Depth=0.72" Flow Length=4,618' Tc=167.6 min CN=76 Runoff=19.59 cfs 7.638 af
SubcatchmentB27:	Runoff Area=21.580 ac 0.00% Impervious Runoff Depth=0.37" Flow Length=746' Tc=30.6 min CN=67 Runoff=4.53 cfs 0.671 af
SubcatchmentB28:	Runoff Area=17.080 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=1,454' Tc=38.3 min CN=80 Runoff=10.89 cfs 1.305 af
SubcatchmentB29:	Runoff Area=87.840 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=3,349' Tc=117.1 min CN=80 Runoff=24.31 cfs 6.710 af
SubcatchmentB3:	Runoff Area=41.070 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=1,918' Tc=56.6 min CN=80 Runoff=19.71 cfs 3.137 af
SubcatchmentB30:	Runoff Area=1.940 ac 0.00% Impervious Runoff Depth=0.97" Flow Length=303' Tc=14.3 min CN=81 Runoff=2.44 cfs 0.157 af
SubcatchmentB4:	Runoff Area=144.430 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=2,984' Tc=42.8 min CN=80 Runoff=85.16 cfs 11.033 af
SubcatchmentB5:	Runoff Area=366.880 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=4,701' Tc=66.4 min CN=80 Runoff=156.66 cfs 28.025 af
SubcatchmentB6:	Runoff Area=113.630 ac 0.00% Impervious Runoff Depth=0.81" Flow Length=3,466' Tc=49.8 min CN=78 Runoff=51.78 cfs 7.708 af
SubcatchmentB7:	Runoff Area=397.250 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=6,733' Tc=245.1 min CN=80 Runoff=61.19 cfs 30.345 af
SubcatchmentB8:	Runoff Area=13.070 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=814' Tc=25.3 min CN=80 Runoff=11.06 cfs 0.998 af
SubcatchmentB9:	Runoff Area=33.210 ac 0.00% Impervious Runoff Depth=0.92" Flow Length=1,128' Tc=41.7 min CN=80 Runoff=19.92 cfs 2.537 af

Total Runoff Area = 4,138.210 ac Runoff Volume = 292.641 af Average Runoff Depth = 0.85"
100.00% Pervious = 4,138.210 ac 0.00% Impervious = 0.000 ac

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B1:

Runoff = 455.14 cfs @ 12.72 hrs, Volume= 81.005 af, Depth= 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 1,124.640	79	
1,124.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	100	0.0050	0.08		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
8.5	656	0.0203	1.28		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
9.4	4,083	0.0048	7.25	362.50	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.0	56	0.0535	19.68	61.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.2	94	0.0085	9.65	482.39	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	47	0.0021	3.90	12.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
12.3	3,705	0.0023	5.02	250.93	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	40	0.0025	4.26	13.37	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.4	1,819	0.0020	4.71	282.81	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
0.1	45	0.0156	10.63	33.39	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.1	1,860	0.0023	5.05	303.28	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
64.6	12,505	Total			

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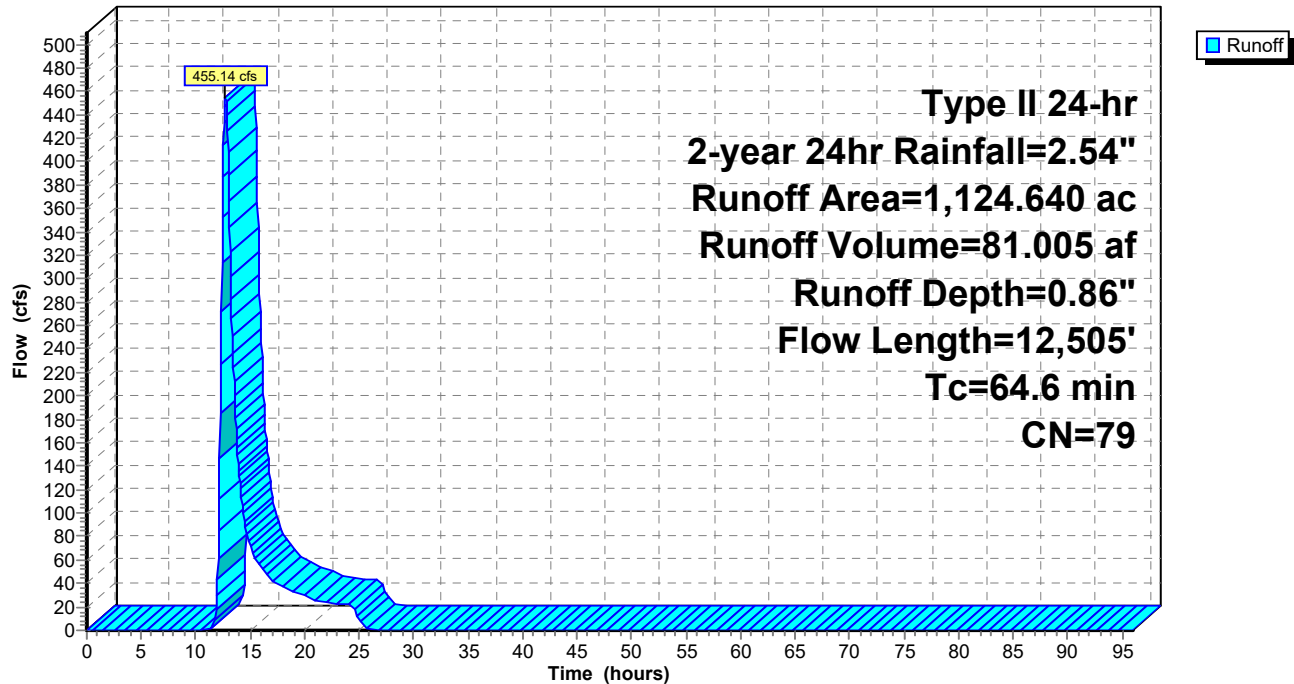
Type II 24-hr 2-year 24hr Rainfall=2.54"

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Subcatchment B1:

Hydrograph



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Summary for Subcatchment B10:

Runoff = 24.99 cfs @ 12.59 hrs, Volume= 3.854 af, Depth= 0.92"

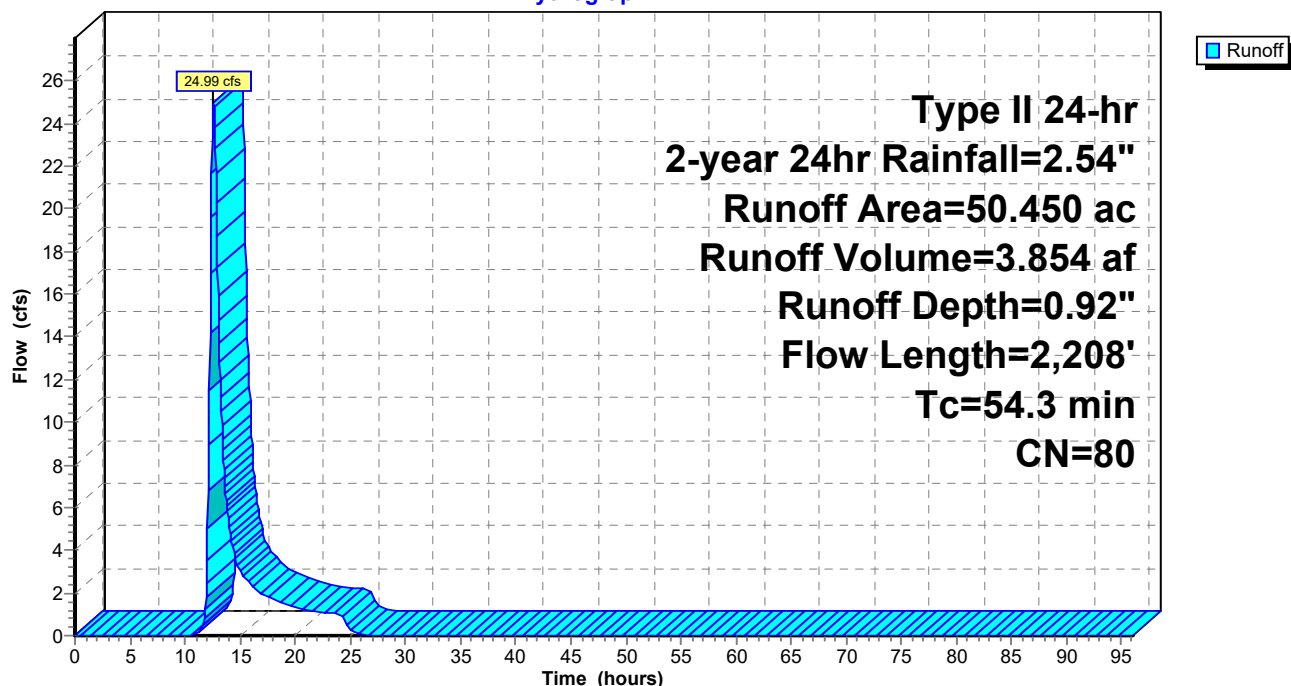
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 50.450	80	
50.450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.1	100	0.0040	0.07		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
28.3	1,408	0.0085	0.83		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	72	0.0014	4.57	243.51	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
0.1	34	0.0029	4.58	14.40	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	594	0.0024	3.94	105.08	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
54.3	2,208	Total			

Subcatchment B10:

Hydrograph



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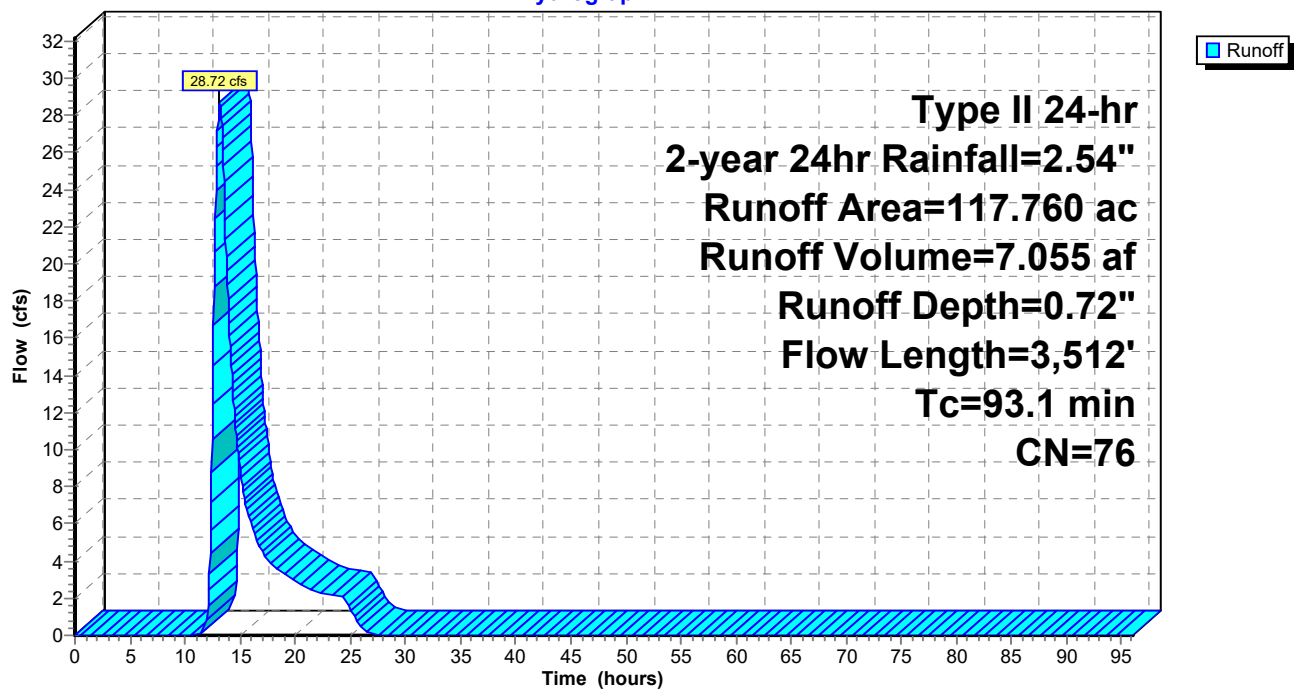
Summary for Subcatchment B11:

Runoff = 28.72 cfs @ 13.15 hrs, Volume= 7.055 af, Depth= 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 117.760	76	
117.760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7	100	0.0070	0.05		Sheet Flow, SH-WOODS Woods: Light underbrush n= 0.400 P2= 2.54"
50.0	2,516	0.0087	0.84		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.2	413	0.0017	1.33	4.44	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.2	69	0.0277	7.08	22.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.0	14	0.0073	7.97	332.27	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
0.1	24	0.0165	5.47	17.17	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.9	376	0.0053	6.79	283.12	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
93.1	3,512	Total			

Subcatchment B11:**Hydrograph**

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B12:

Runoff = 5.67 cfs @ 12.99 hrs, Volume= 1.273 af, Depth= 0.67"

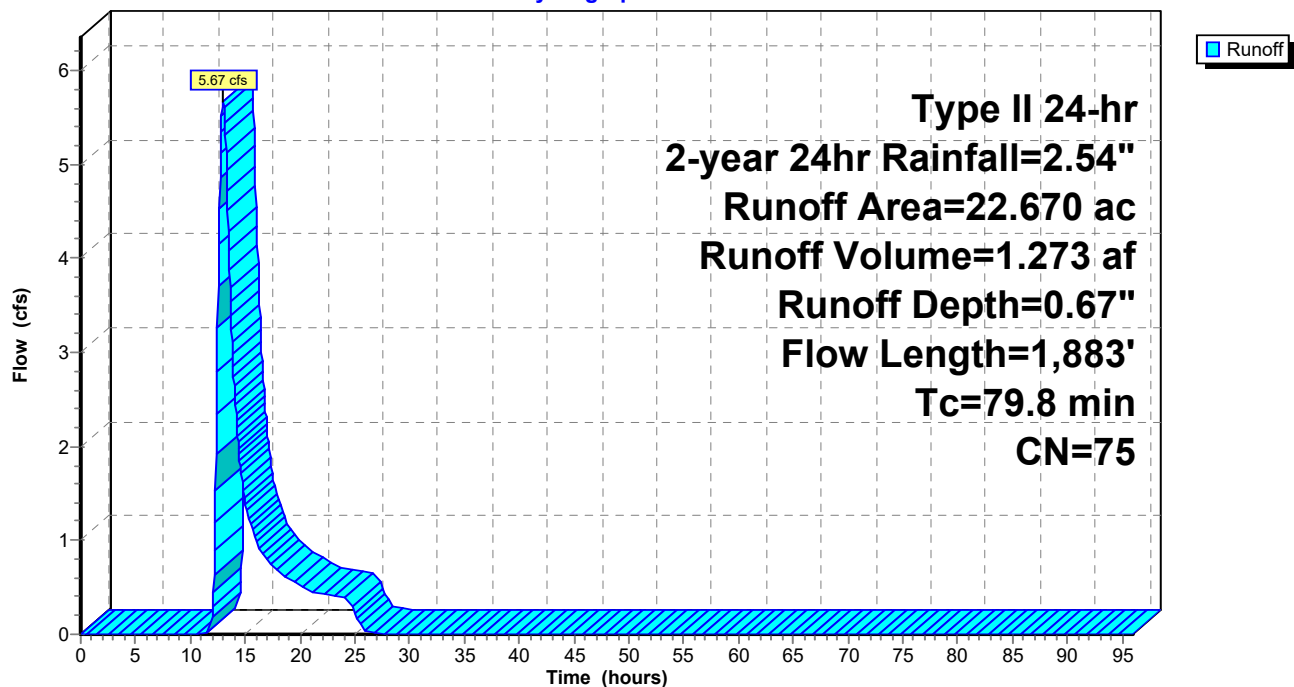
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 22.670	75	
22.670		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
67.4	1,783	0.0024	0.44		Shallow Concentrated Flow, SH-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
79.8	1,883	Total			

Subcatchment B12:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B13:

Runoff = 15.55 cfs @ 12.85 hrs, Volume= 3.004 af, Depth= 0.97"

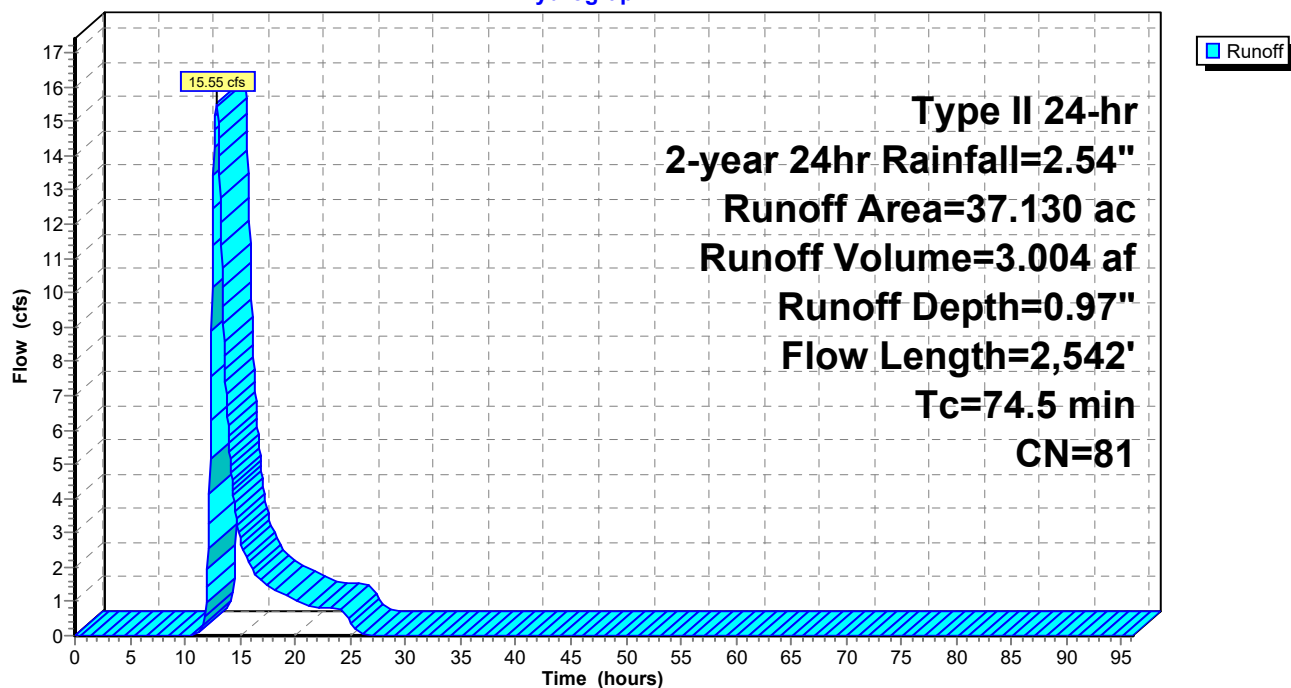
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 37.130	81	
37.130		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	100	0.0280	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
50.7	1,836	0.0045	0.60		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
13.2	571	0.0005	0.72	2.41	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.0	35	0.0751	23.32	73.27	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
74.5	2,542	Total			

Subcatchment B13:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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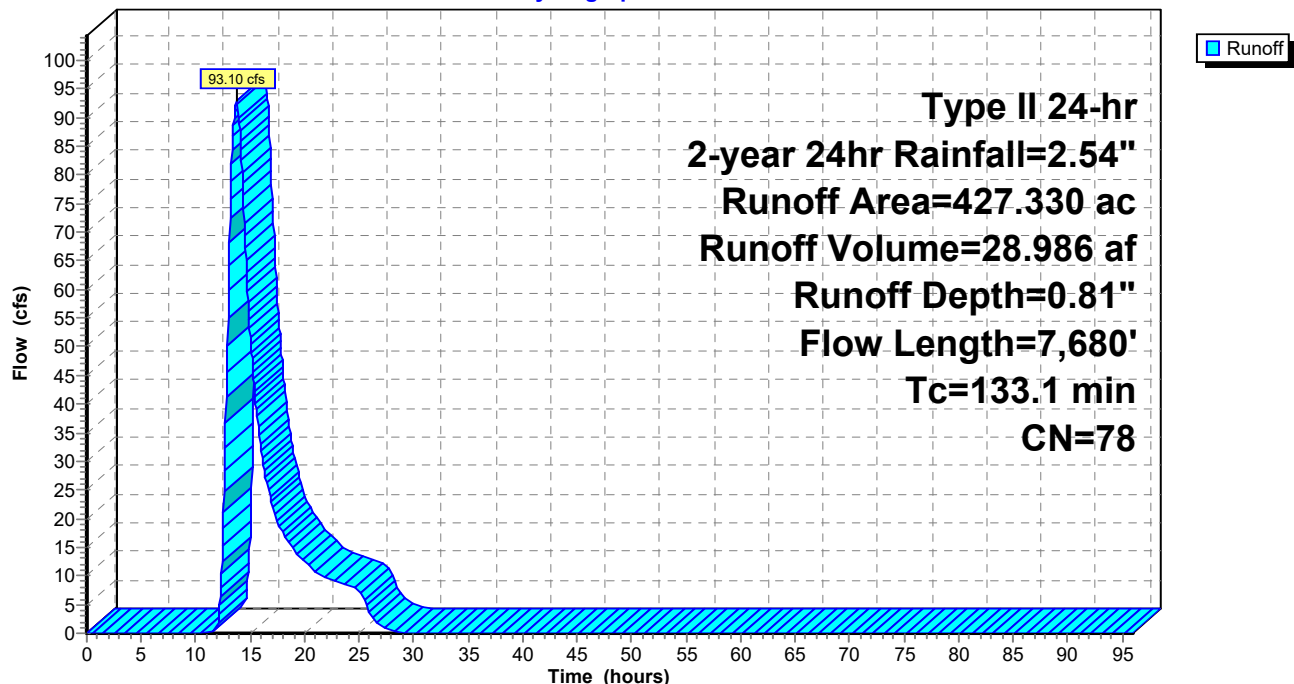
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Summary for Subcatchment B14:

Runoff = 93.10 cfs @ 13.74 hrs, Volume= 28.986 af, Depth= 0.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description			
* 427.330	78				
427.330		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
95.6	2,475	0.0023	0.43		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
25.3	5,105	0.0010	3.37	336.93	Parabolic Channel, DITCH W=50.00' D=3.00' Area=100.0 sf Perim=50.5' n= 0.022
133.1	7,680	Total			

Subcatchment B14:**Hydrograph**

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B15:

Runoff = 14.55 cfs @ 13.34 hrs, Volume= 3.855 af, Depth= 0.77"

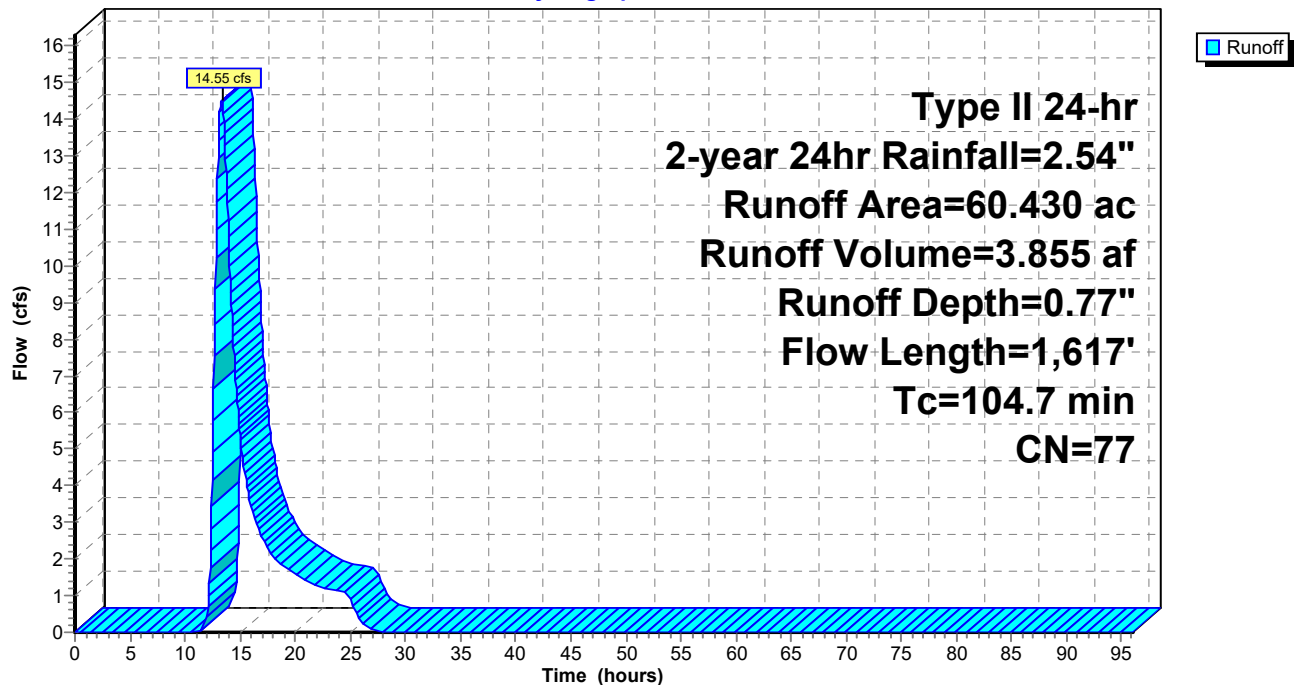
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 60.430	77	
60.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0250	0.15		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
93.6	1,517	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
104.7	1,617	Total			

Subcatchment B15:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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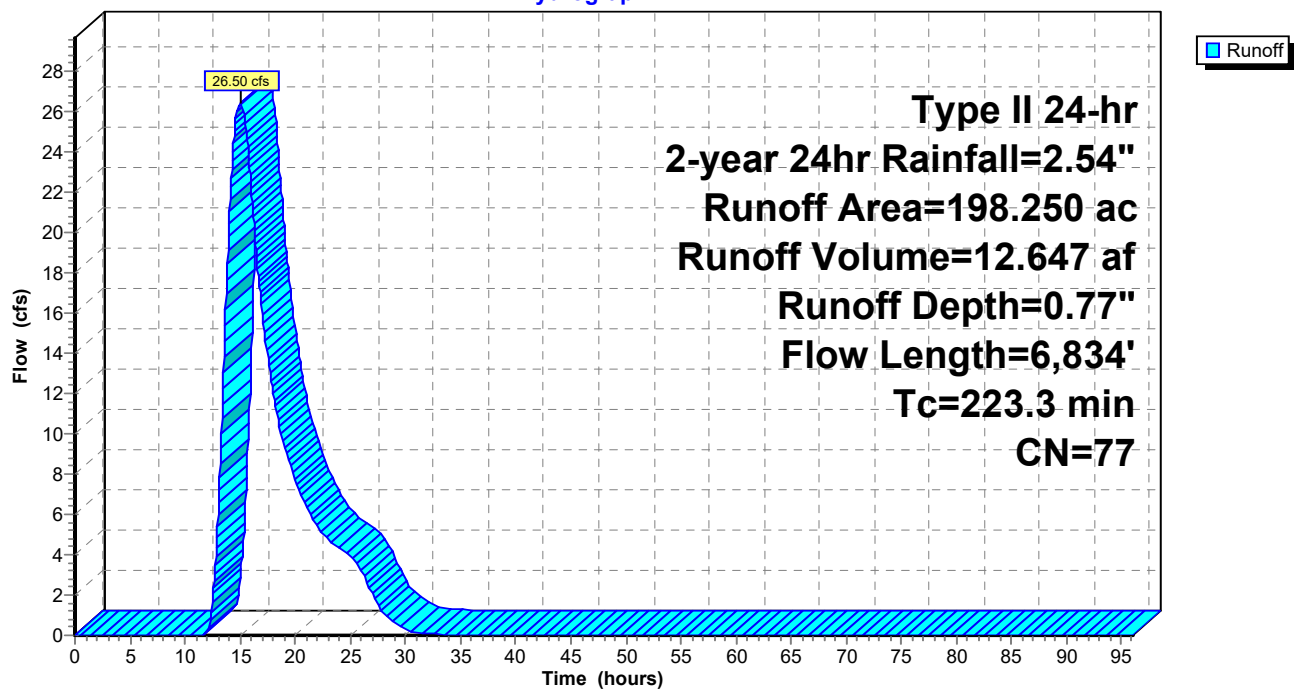
Summary for Subcatchment B16:

Runoff = 26.50 cfs @ 15.09 hrs, Volume= 12.647 af, Depth= 0.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 198.250	77	
198.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
14.5	512	0.0043	0.59		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	41	0.0073	7.27	22.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
37.0	1,056	0.0028	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	35	0.0028	4.50	14.15	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
145.4	2,355	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.3	705	0.0045	5.16	68.76	Parabolic Channel, DITCH W=10.00' D=2.00' Area=13.3 sf Perim=11.0' n= 0.022
0.2	42	0.0024	4.17	13.10	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
9.3	1,988	0.0012	3.58	143.17	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
223.3	6,834	Total			

Subcatchment B16:**Hydrograph**

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B17:

Runoff = 35.70 cfs @ 12.19 hrs, Volume= 3.140 af, Depth= 0.92"

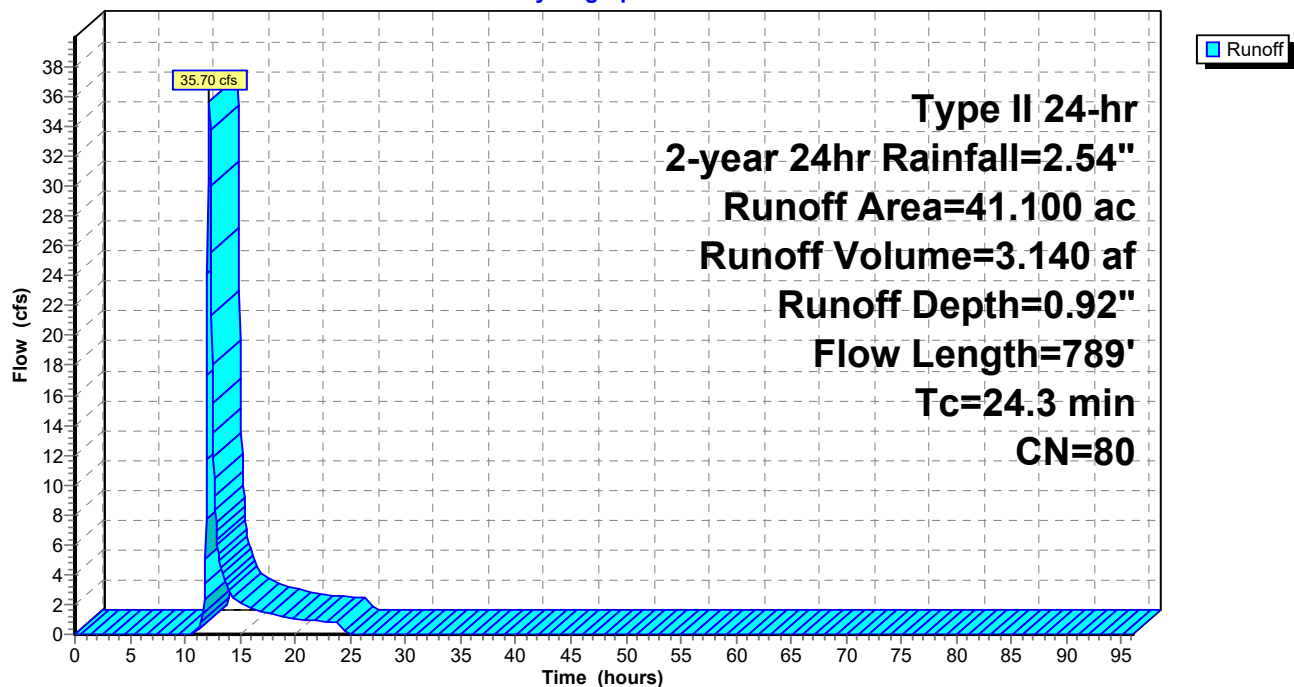
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 41.100	80	
41.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
10.3	689	0.0154	1.12		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
24.3	789	Total			

Subcatchment B17:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B18:

Runoff = 45.83 cfs @ 12.47 hrs, Volume= 6.263 af, Depth= 0.92"

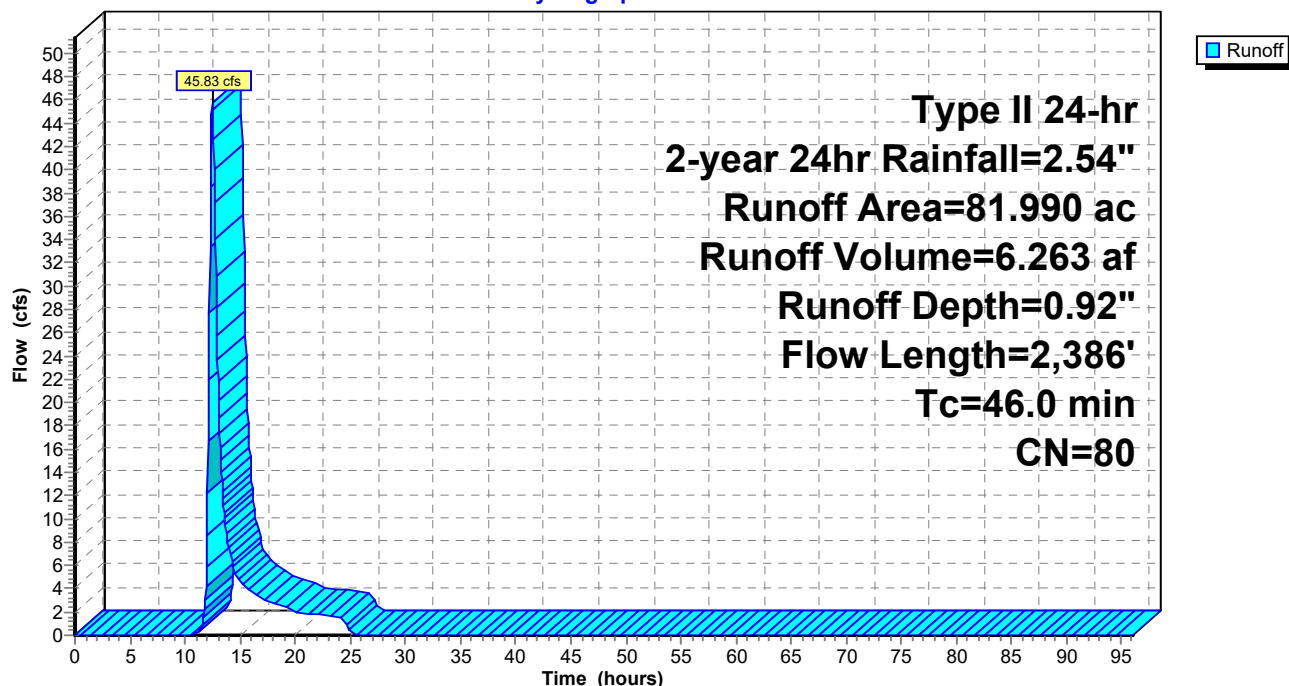
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 81.990	80	
81.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0300	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.6	1,156	0.0076	0.78		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
11.1	1,130	0.0011	1.70	22.69	Parabolic Channel, DITCH W=20.00' D=1.00' Area=13.3 sf Perim=20.1' n= 0.022
46.0	2,386	Total			

Subcatchment B18:

Hydrograph



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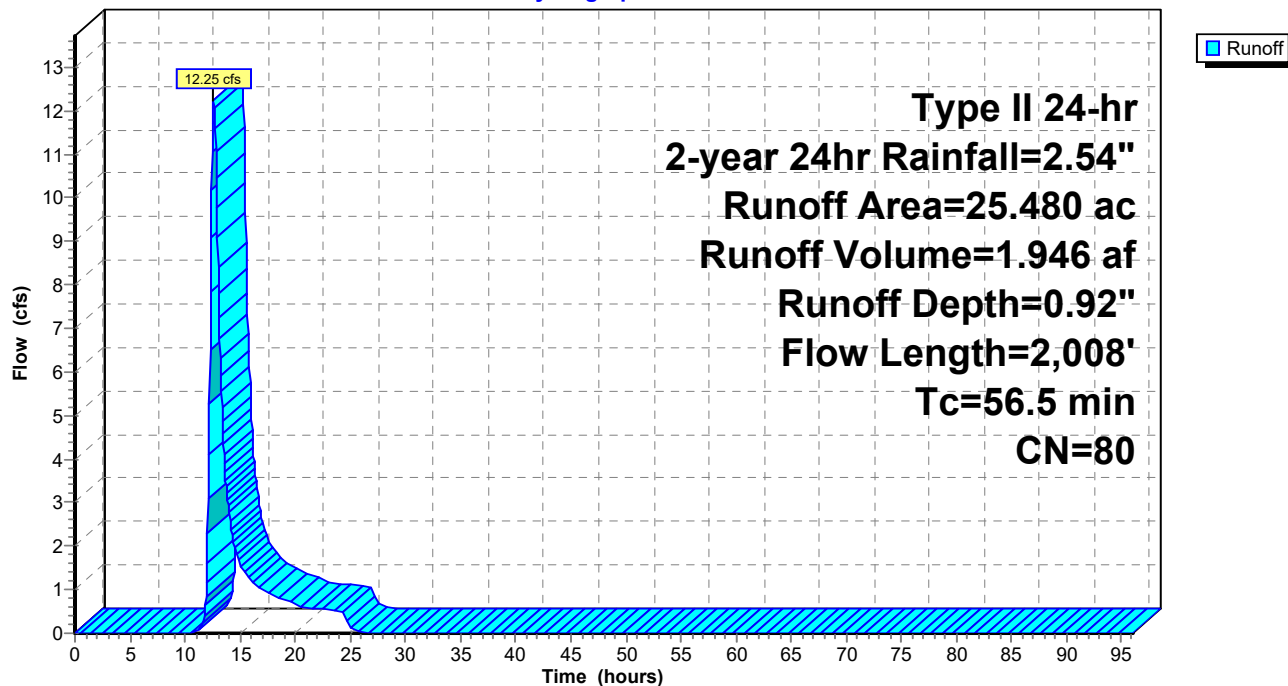
Summary for Subcatchment B19:

Runoff = 12.25 cfs @ 12.61 hrs, Volume= 1.946 af, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 25.480	80	
25.480		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0180	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
19.0	999	0.0095	0.88		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
24.8	909	0.0046	0.61		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
56.5	2,008	Total			

Subcatchment B19:**Hydrograph**

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Summary for Subcatchment B2:

Runoff = 140.23 cfs @ 12.27 hrs, Volume= 14.901 af, Depth= 0.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 233.580	77	
233.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	100	0.0106	0.11		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
3.4	210	0.0133	1.04		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
4.2	178	0.0051	0.71		Shallow Concentrated Flow, SCF-OPEN SPACE Nearly Bare & Untilled Kv= 10.0 fps
0.2	62	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	409	0.0169	13.17	87.83	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.011
5.2	1,987	0.0038	6.37	254.77	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	42	0.0047	5.83	18.33	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	218	0.0041	6.62	264.64	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	44	0.0160	10.76	33.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	160	0.0050	5.69	151.67	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
30.4	3,410	Total			

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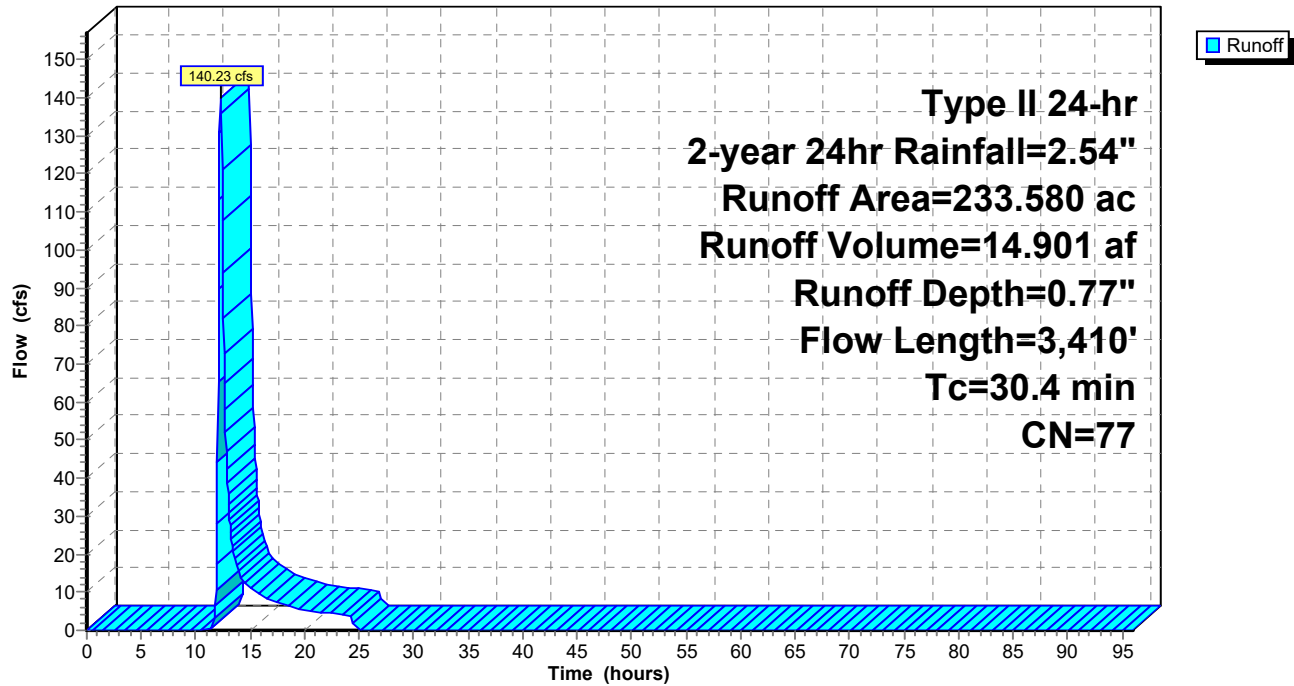
Type II 24-hr 2-year 24hr Rainfall=2.54"

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Subcatchment B2:

Hydrograph



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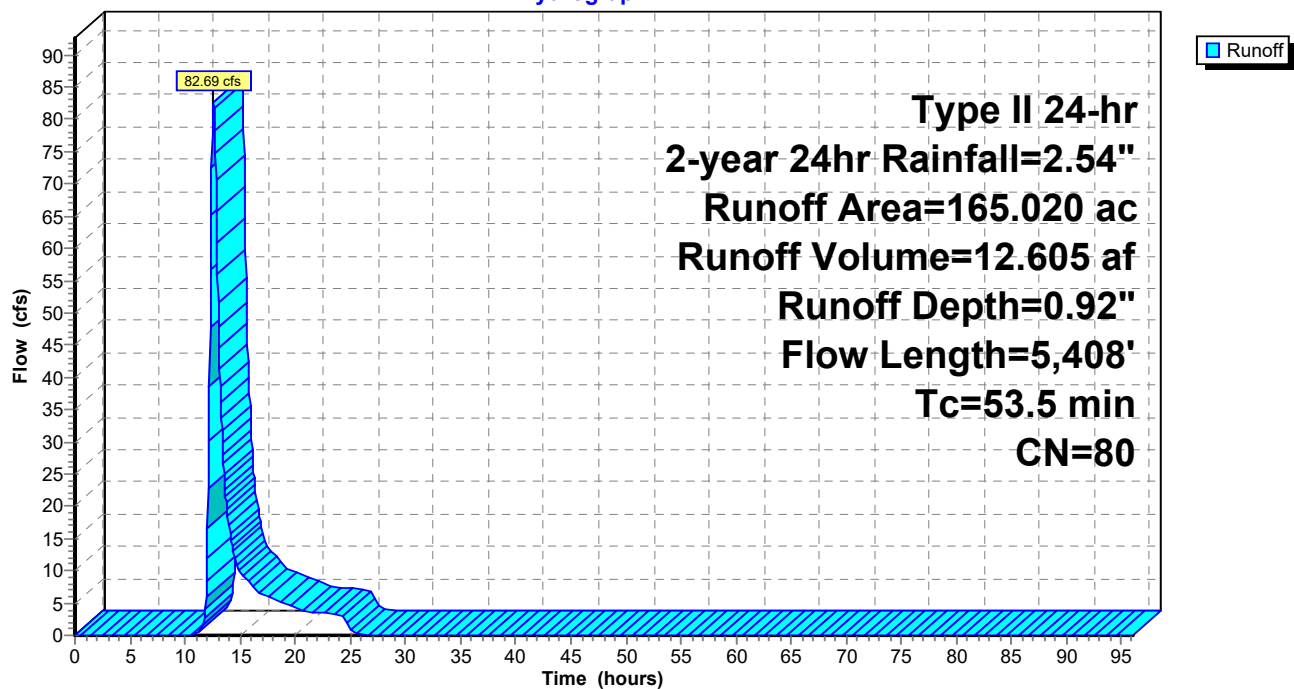
Summary for Subcatchment B20:

Runoff = 82.69 cfs @ 12.57 hrs, Volume= 12.605 af, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 165.020	80	
165.020		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.3	1,262	0.0079	0.80		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	94	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.8	167	0.0294	1.54		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	61	0.0016	3.40	10.69	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	2,712	0.0014	7.73	309.28	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.011
0.2	43	0.0023	4.08	12.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	969	0.0007	2.77	138.43	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
53.5	5,408	Total			

Subcatchment B20:**Hydrograph**

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Summary for Subcatchment B21:

Runoff = 13.03 cfs @ 12.98 hrs, Volume= 2.788 af, Depth= 0.92"

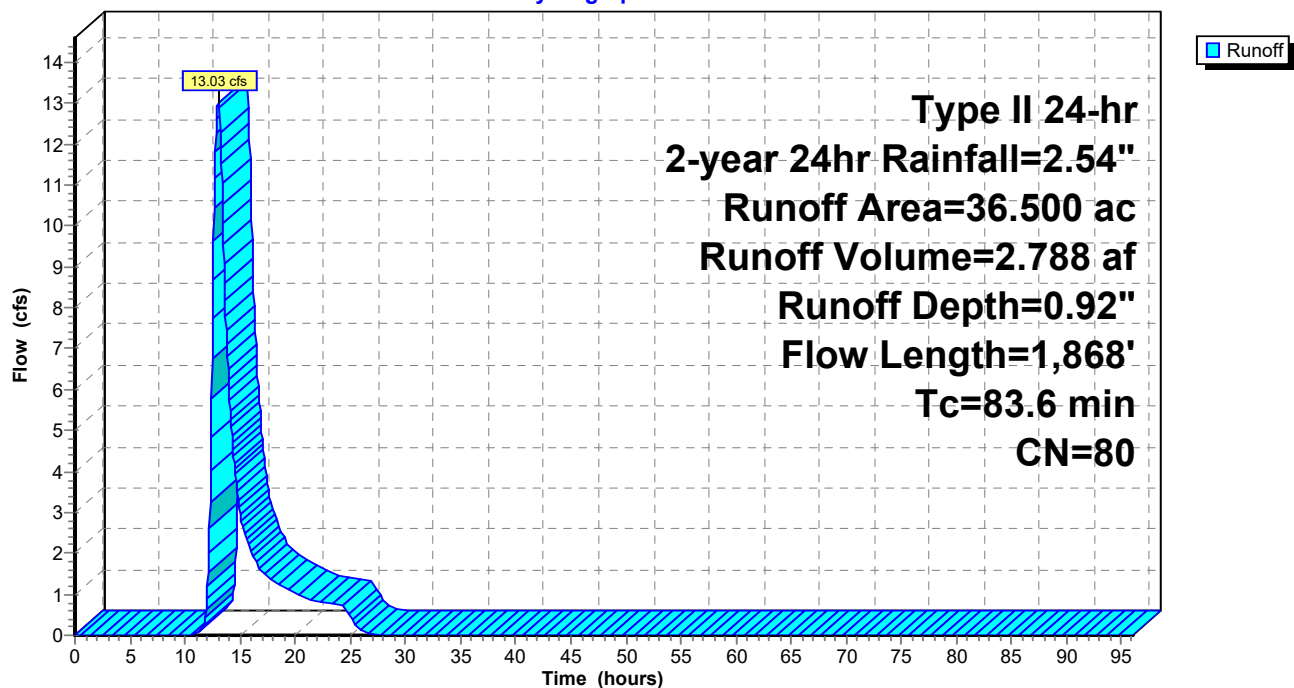
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 36.500	80	
36.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
25.9	1,010	0.0052	0.65		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
43.3	758	0.0034	0.29		Shallow Concentrated Flow, SCF-WOODS Woodland Kv= 5.0 fps
83.6	1,868	Total			

Subcatchment B21:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B22:

Runoff = 19.87 cfs @ 12.92 hrs, Volume= 3.994 af, Depth= 0.92"

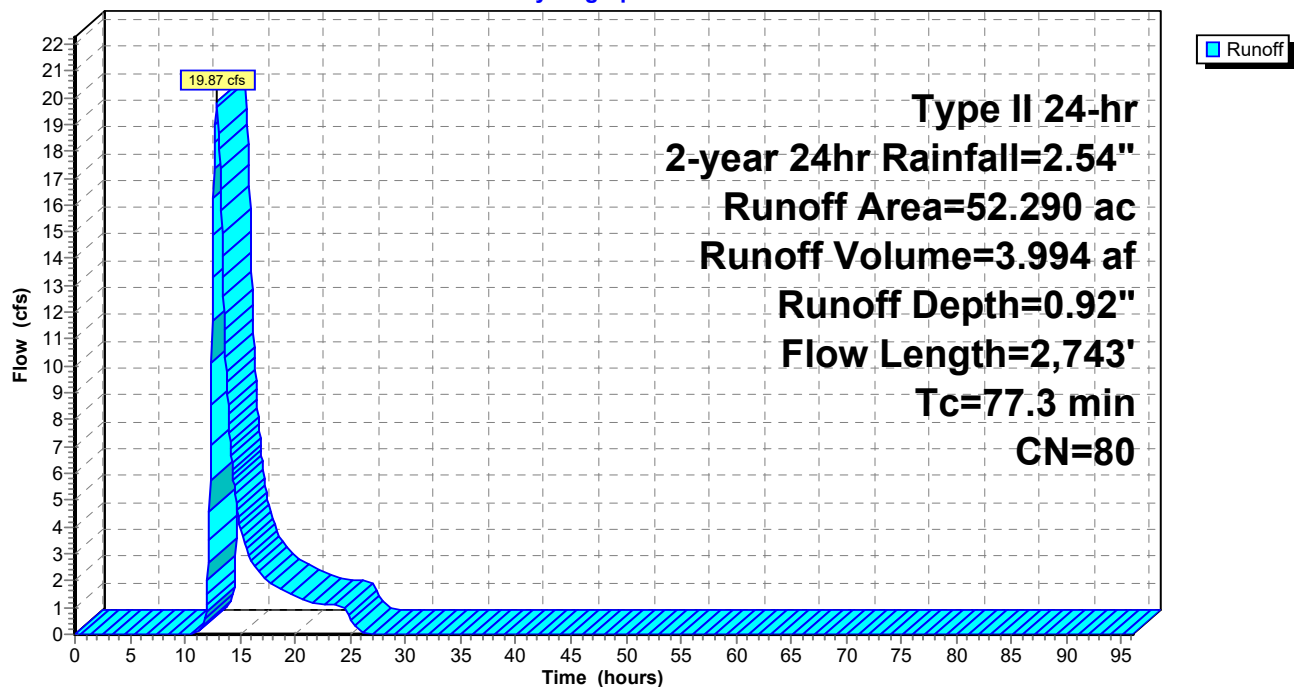
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 52.290	80	
52.290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
64.3	2,643	0.0058	0.69		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
77.3	2,743	Total			

Subcatchment B22:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B23:

Runoff = 17.38 cfs @ 12.83 hrs, Volume= 3.298 af, Depth= 0.92"

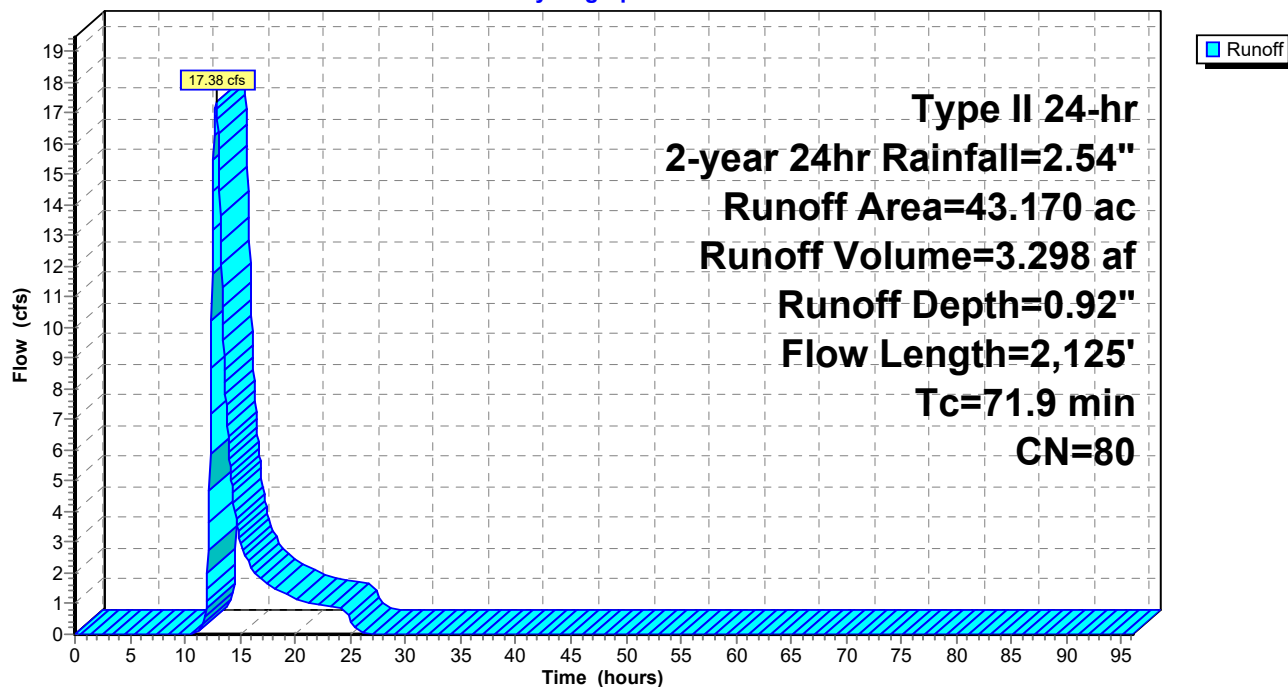
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 43.170	80	
43.170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	100	0.0100	0.10		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
55.9	2,025	0.0045	0.60		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
71.9	2,125	Total			

Subcatchment B23:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B24:

Runoff = 3.06 cfs @ 12.23 hrs, Volume= 0.486 af, Depth= 0.26"

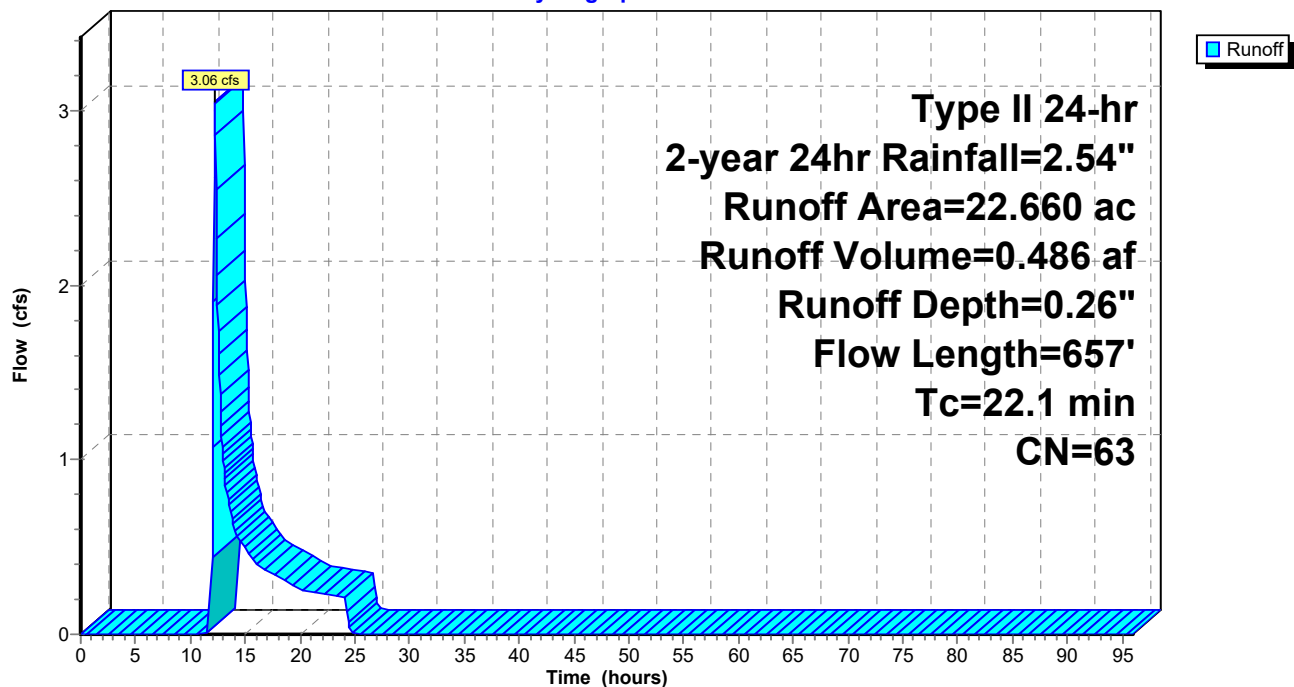
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 22.660	63	
22.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
7.7	557	0.0181	1.21		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
22.1	657	Total			

Subcatchment B24:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B25:

Runoff = 8.04 cfs @ 12.46 hrs, Volume= 1.276 af, Depth= 0.47"

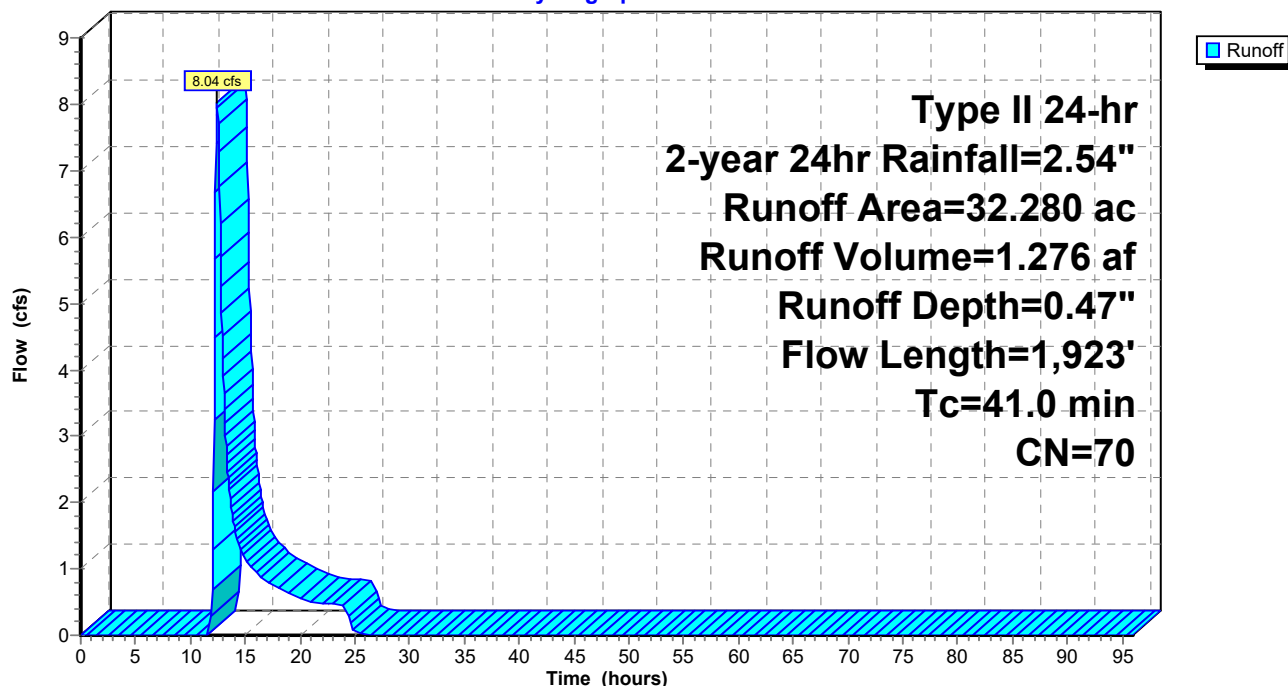
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 32.280	70	
32.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0230	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
27.0	1,311	0.0081	0.81		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.5	512	0.0047	3.47	23.16	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.022
41.0	1,923	Total			

Subcatchment B25:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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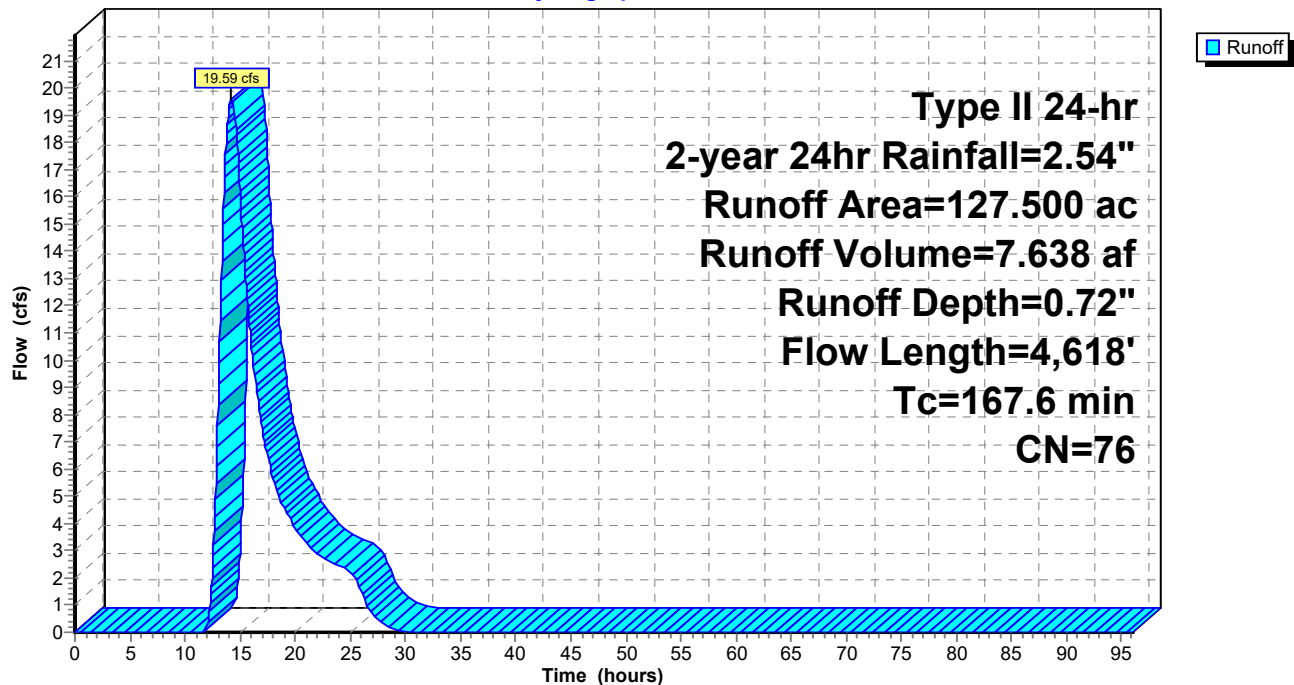
Summary for Subcatchment B26:

Runoff = 19.59 cfs @ 14.21 hrs, Volume= 7.638 af, Depth= 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 127.500	76	
127.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
155.4	4,518	0.0029	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
167.6	4,618	Total			

Subcatchment B26:**Hydrograph**

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B27:

Runoff = 4.53 cfs @ 12.33 hrs, Volume= 0.671 af, Depth= 0.37"

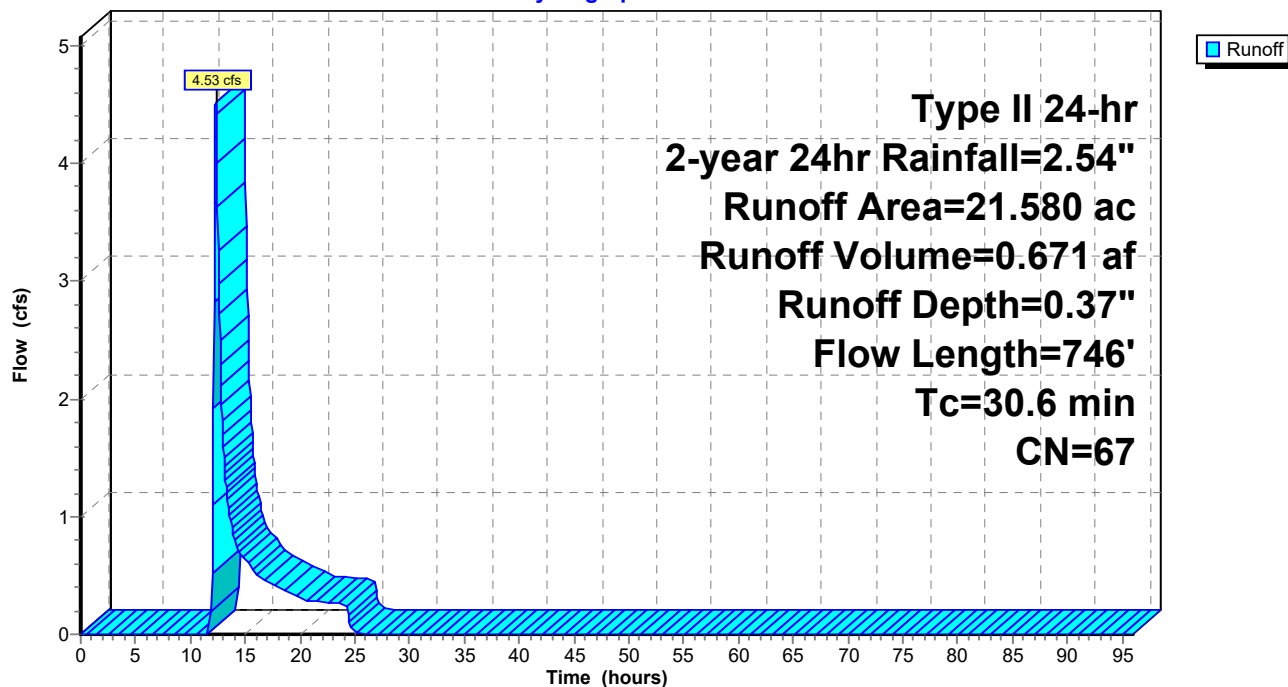
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 21.580	67	
21.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
18.9	646	0.0040	0.57		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
30.6	746	Total			

Subcatchment B27:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B28:

Runoff = 10.89 cfs @ 12.37 hrs, Volume= 1.305 af, Depth= 0.92"

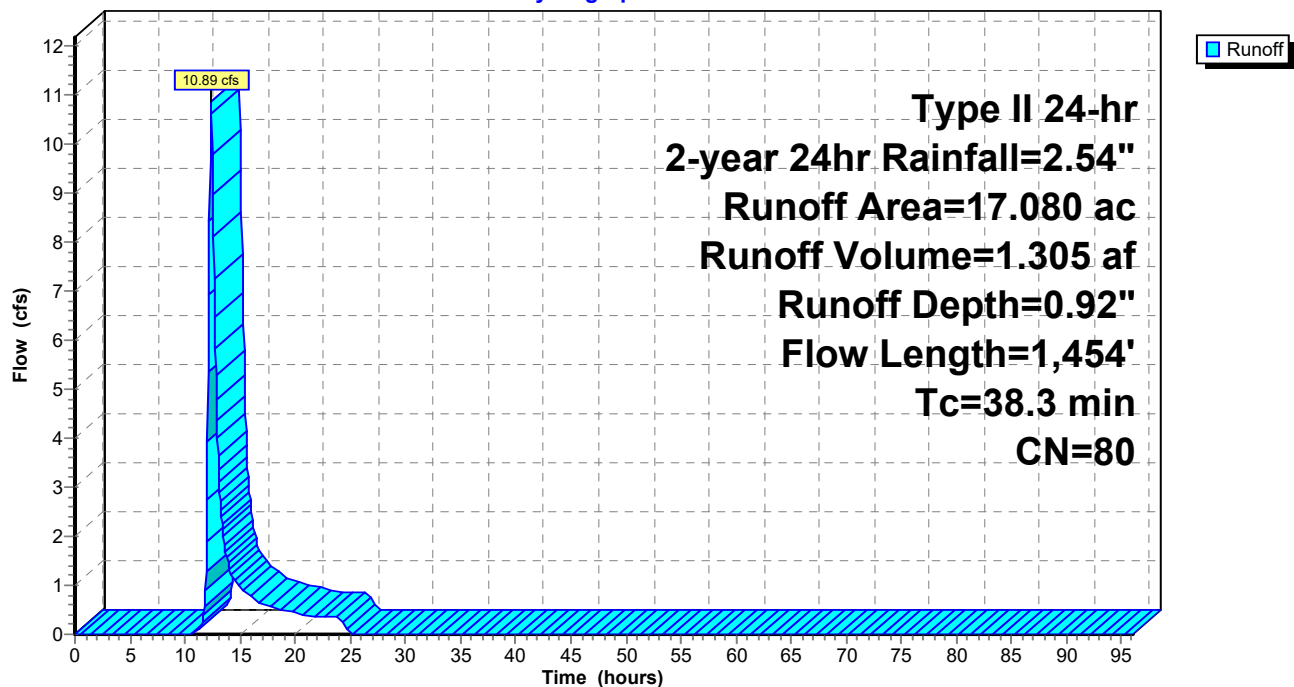
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 17.080	80	
17.080		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.6	1,354	0.0089	0.85		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
38.3	1,454	Total			

Subcatchment B28:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B29:

Runoff = 24.31 cfs @ 13.41 hrs, Volume= 6.710 af, Depth= 0.92"

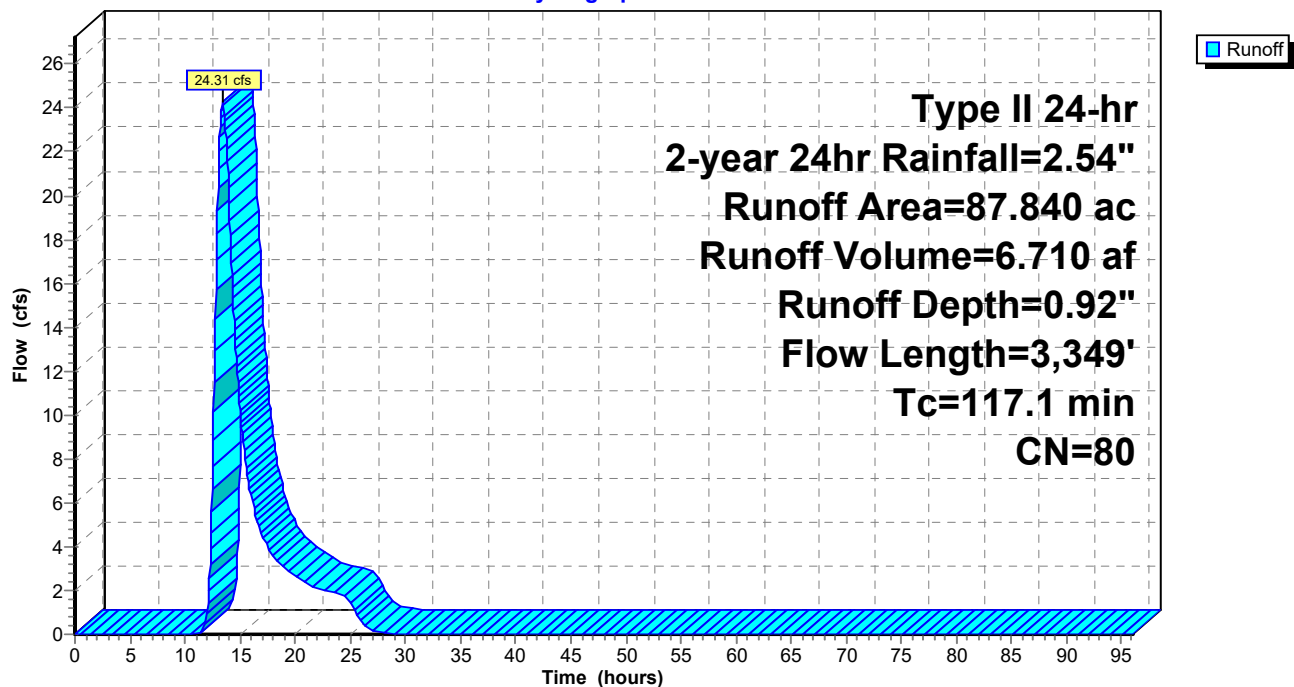
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 87.840	80	
87.840		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
104.7	3,249	0.0033	0.52		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
117.1	3,349	Total			

Subcatchment B29:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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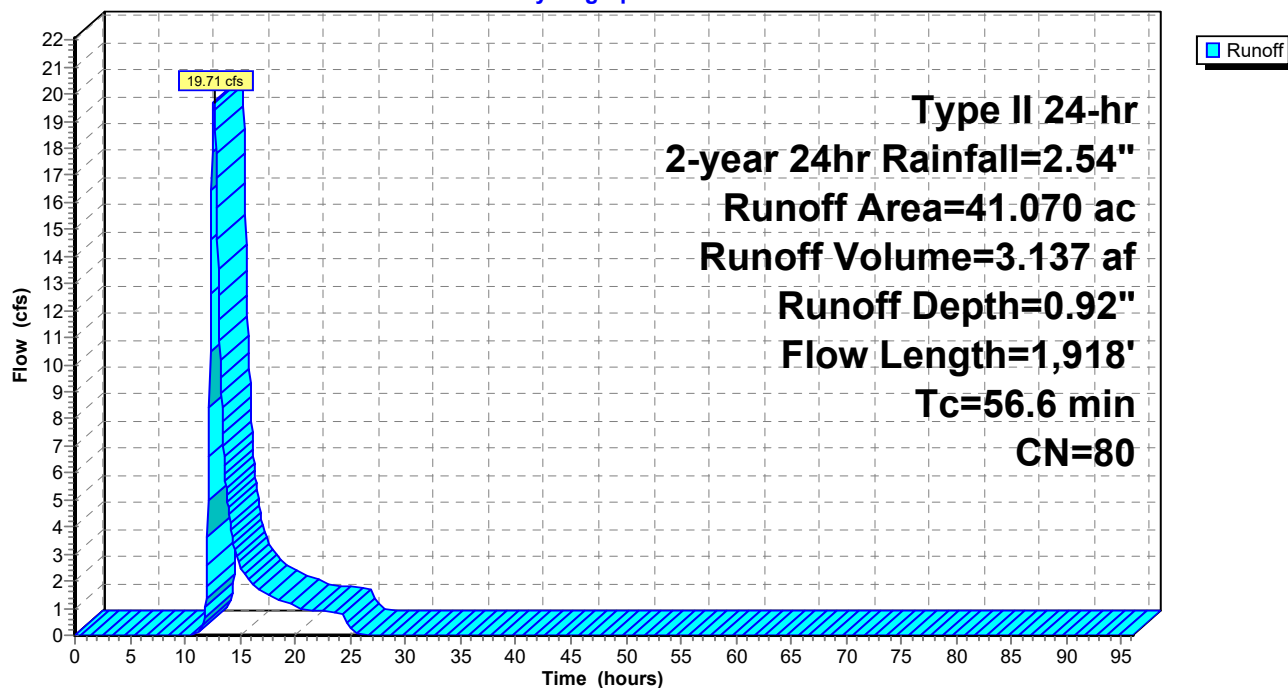
Summary for Subcatchment B3:

Runoff = 19.71 cfs @ 12.62 hrs, Volume= 3.137 af, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 41.070	80	
41.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.0	100	0.0030	0.06		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
29.2	1,561	0.0098	0.89		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
1.4	257	0.0093	3.13	20.85	Parabolic Channel, DITCH W=20.00' D=0.50' Area=6.7 sf Perim=20.0' n= 0.022
56.6	1,918	Total			

Subcatchment B3:**Hydrograph**

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B30:

Runoff = 2.44 cfs @ 12.07 hrs, Volume= 0.157 af, Depth= 0.97"

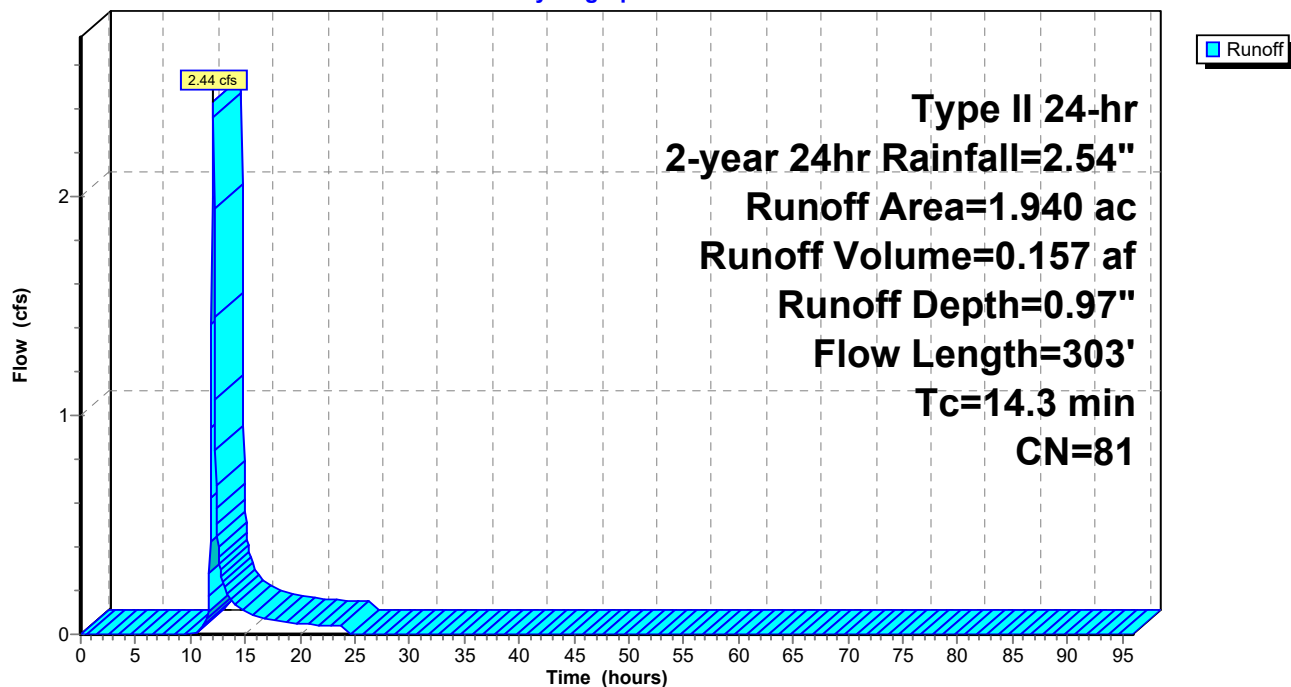
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 1.940	81	
1.940		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
2.6	203	0.0202	1.28		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
14.3	303	Total			

Subcatchment B30:

Hydrograph



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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B4:

Runoff = 85.16 cfs @ 12.42 hrs, Volume= 11.033 af, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 144.430	80	
144.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0330	0.21		Sheet Flow, SH-OPEN SPACE Range n= 0.130 P2= 2.54"
10.7	749	0.0167	1.16		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.8	904	0.0065	2.59	5.17	Parabolic Channel, DITCH W=6.00' D=0.50' Area=2.0 sf Perim=6.1' n= 0.022
15.8	497	0.0034	0.52		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	43	0.0323	15.29	48.05	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	691	0.0081	4.60	46.03	Parabolic Channel, DITCH W=15.00' D=1.00' Area=10.0 sf Perim=15.2' n= 0.022
42.8	2,984	Total			

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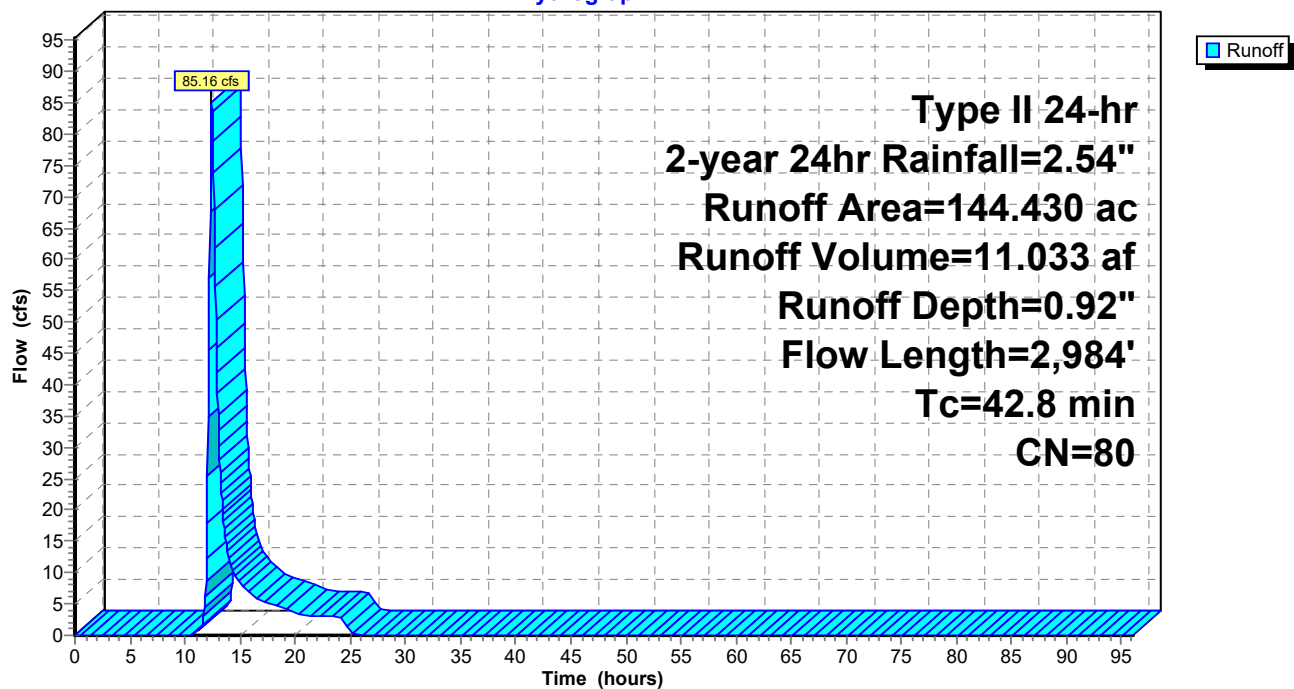
Type II 24-hr 2-year 24hr Rainfall=2.54"

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Subcatchment B4:

Hydrograph



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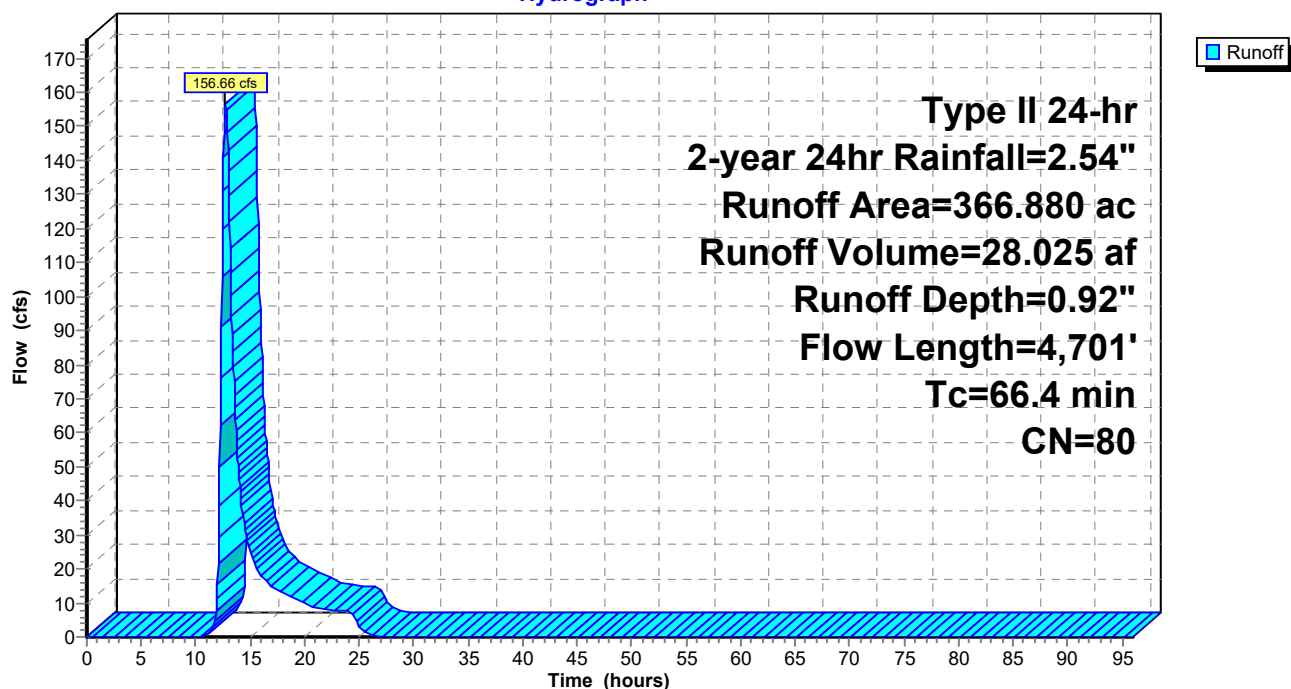
Summary for Subcatchment B5:

Runoff = 156.66 cfs @ 12.75 hrs, Volume= 28.025 af, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 366.880	80	
366.880		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.0330	0.17		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.0	1,682	0.0144	1.08		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
10.1	1,605	0.0067	2.65	8.82	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
19.5	751	0.0051	0.64		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.9	563	0.0066	9.91	528.71	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
66.4	4,701	Total			

Subcatchment B5:**Hydrograph**

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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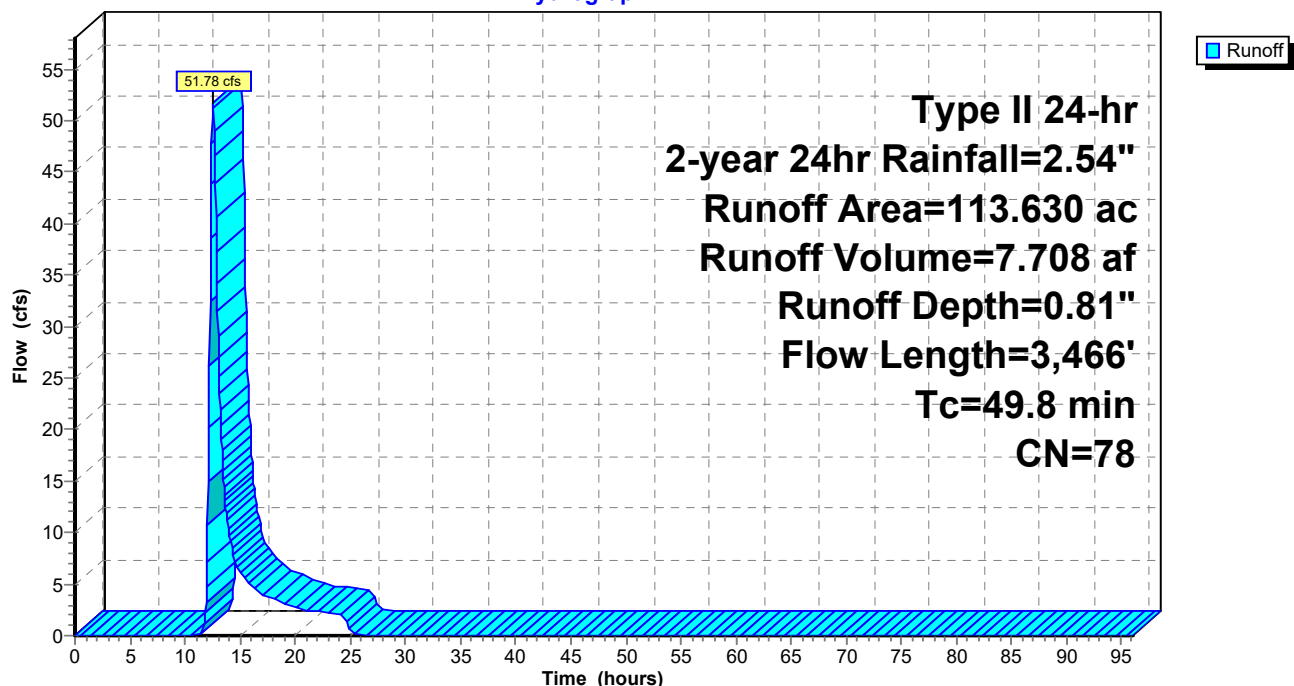
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Summary for Subcatchment B6:

Runoff = 51.78 cfs @ 12.54 hrs, Volume= 7.708 af, Depth= 0.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description			
* 113.630	78				
113.630		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
31.0	1,798	0.0115	0.97		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
3.0	959	0.0022	5.31	247.62	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
0.1	31	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.7	578	0.0026	5.77	269.19	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
49.8	3,466	Total			

Subcatchment B6:**Hydrograph**

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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Summary for Subcatchment B7:

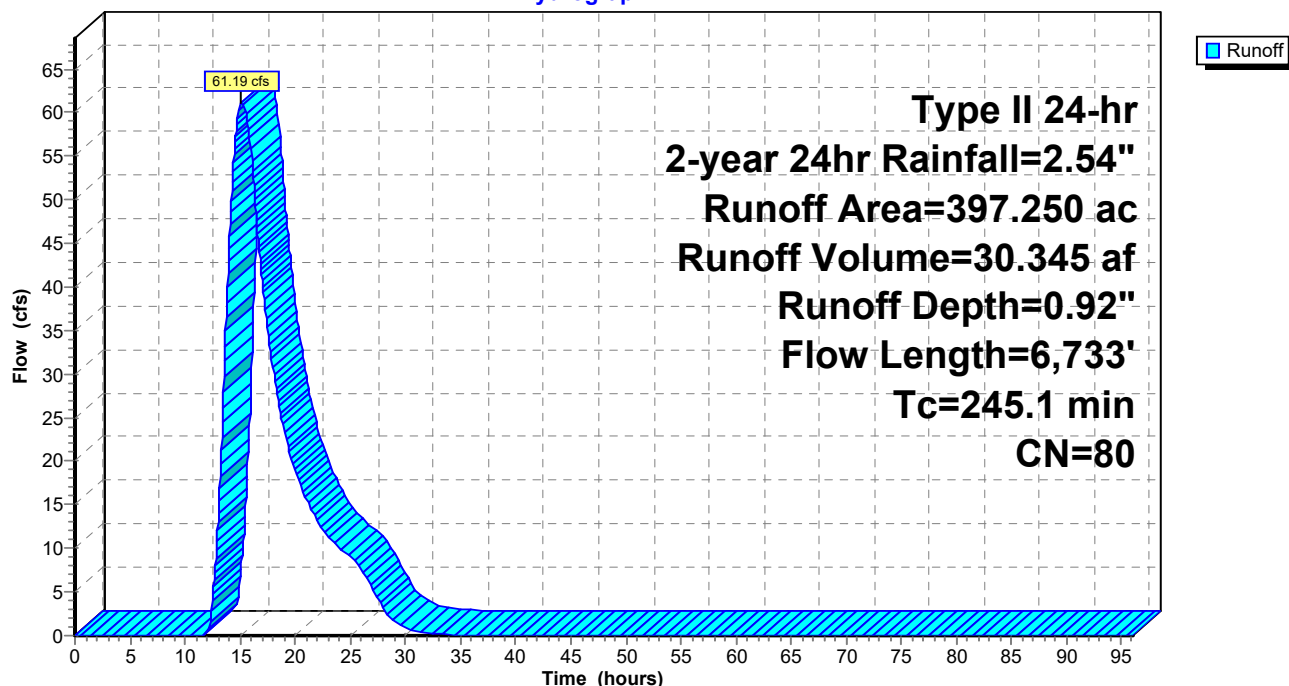
Runoff = 61.19 cfs @ 15.00 hrs, Volume= 30.345 af, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description			
* 397.250	80				
397.250		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	100	0.0070	0.09		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
85.3	3,055	0.0044	0.60		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	27	0.0372	16.41	51.57	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
139.3	2,913	0.0015	0.35		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.0	638	0.0042	5.21	139.01	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
245.1	6,733	Total			

Subcatchment B7:

Hydrograph



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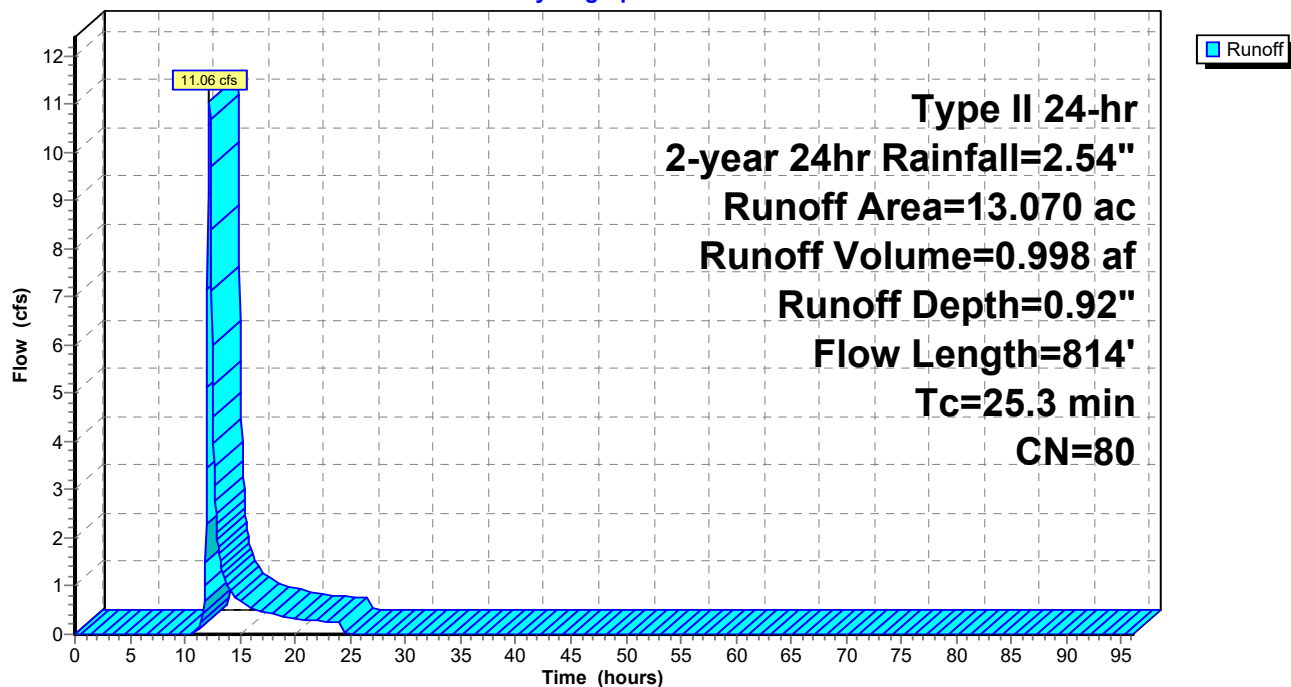
Summary for Subcatchment B8:

Runoff = 11.06 cfs @ 12.20 hrs, Volume= 0.998 af, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 13.070	80	
13.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
11.3	714	0.0136	1.05		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
25.3	814	Total			

Subcatchment B8:**Hydrograph**

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Type II 24-hr 2-year 24hr Rainfall=2.54"

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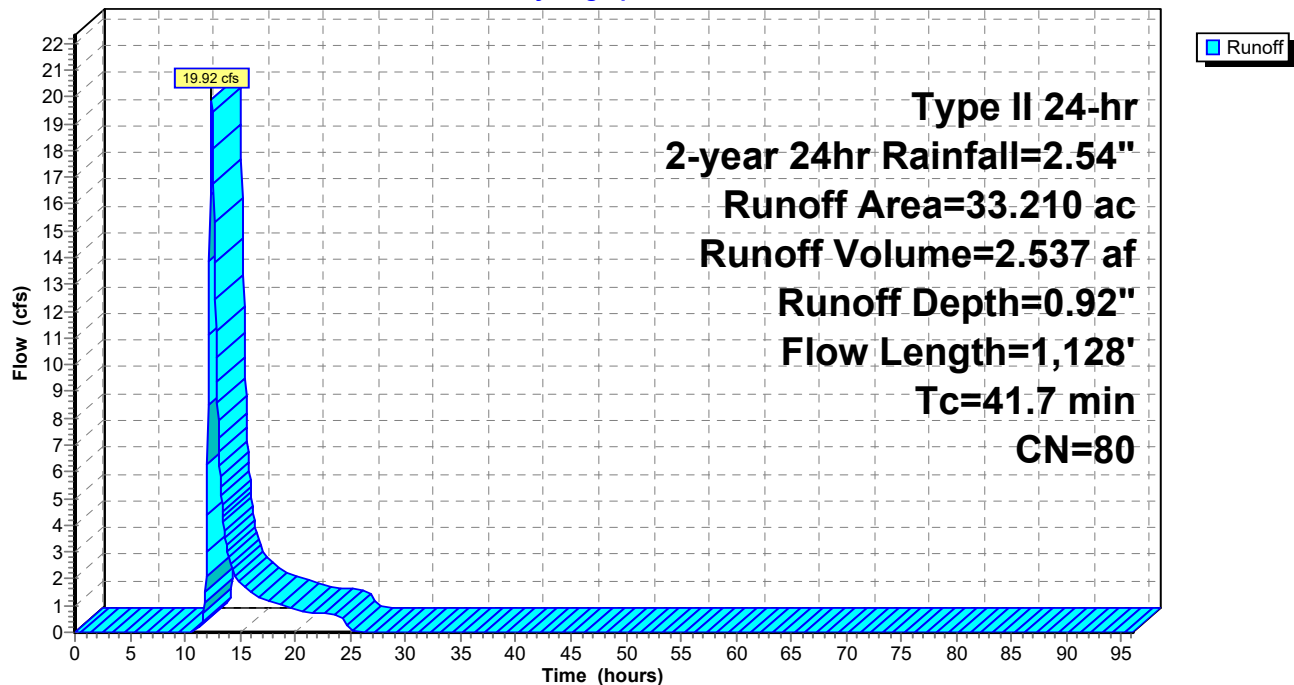
Summary for Subcatchment B9:

Runoff = 19.92 cfs @ 12.41 hrs, Volume= 2.537 af, Depth= 0.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year 24hr Rainfall=2.54"

Area (ac)	CN	Description
* 33.210	80	
33.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.5	100	0.0080	0.10		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.2	1,028	0.0062	0.71		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
41.7	1,128	Total			

Subcatchment B9:**Hydrograph**

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Type II 24-hr 5-year 24hr Rainfall=3.12"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentB1:	Runoff Area=1,124.640 ac 0.00% Impervious Runoff Depth=1.28" Flow Length=12,505' Tc=64.6 min CN=79 Runoff=698.98 cfs 119.675 af
SubcatchmentB10:	Runoff Area=50.450 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=2,208' Tc=54.3 min CN=80 Runoff=37.72 cfs 5.637 af
SubcatchmentB11:	Runoff Area=117.760 ac 0.00% Impervious Runoff Depth=1.10" Flow Length=3,512' Tc=93.1 min CN=76 Runoff=46.40 cfs 10.762 af
SubcatchmentB12:	Runoff Area=22.670 ac 0.00% Impervious Runoff Depth=1.04" Flow Length=1,883' Tc=79.8 min CN=75 Runoff=9.35 cfs 1.965 af
SubcatchmentB13:	Runoff Area=37.130 ac 0.00% Impervious Runoff Depth=1.41" Flow Length=2,542' Tc=74.5 min CN=81 Runoff=23.17 cfs 4.352 af
SubcatchmentB14:	Runoff Area=427.330 ac 0.00% Impervious Runoff Depth=1.22" Flow Length=7,680' Tc=133.1 min CN=78 Runoff=144.55 cfs 43.269 af
SubcatchmentB15:	Runoff Area=60.430 ac 0.00% Impervious Runoff Depth=1.15" Flow Length=1,617' Tc=104.7 min CN=77 Runoff=23.01 cfs 5.816 af
SubcatchmentB16:	Runoff Area=198.250 ac 0.00% Impervious Runoff Depth=1.15" Flow Length=6,834' Tc=223.3 min CN=77 Runoff=41.66 cfs 19.081 af
SubcatchmentB17:	Runoff Area=41.100 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=789' Tc=24.3 min CN=80 Runoff=53.50 cfs 4.592 af
SubcatchmentB18:	Runoff Area=81.990 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=2,386' Tc=46.0 min CN=80 Runoff=69.14 cfs 9.160 af
SubcatchmentB19:	Runoff Area=25.480 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=2,008' Tc=56.5 min CN=80 Runoff=18.50 cfs 2.847 af
SubcatchmentB2:	Runoff Area=233.580 ac 0.00% Impervious Runoff Depth=1.15" Flow Length=3,410' Tc=30.4 min CN=77 Runoff=221.50 cfs 22.482 af
SubcatchmentB20:	Runoff Area=165.020 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=5,408' Tc=53.5 min CN=80 Runoff=124.90 cfs 18.437 af
SubcatchmentB21:	Runoff Area=36.500 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=1,868' Tc=83.6 min CN=80 Runoff=19.71 cfs 4.078 af
SubcatchmentB22:	Runoff Area=52.290 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=2,743' Tc=77.3 min CN=80 Runoff=30.00 cfs 5.842 af
SubcatchmentB23:	Runoff Area=43.170 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=2,125' Tc=71.9 min CN=80 Runoff=26.21 cfs 4.823 af

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Type II 24-hr 5-year 24hr Rainfall=3.12"

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SubcatchmentB24:	Runoff Area=22.660 ac 0.00% Impervious Runoff Depth=0.48" Flow Length=657' Tc=22.1 min CN=63 Runoff=8.06 cfs 0.914 af
SubcatchmentB25:	Runoff Area=32.280 ac 0.00% Impervious Runoff Depth=0.78" Flow Length=1,923' Tc=41.0 min CN=70 Runoff=15.06 cfs 2.103 af
SubcatchmentB26:	Runoff Area=127.500 ac 0.00% Impervious Runoff Depth=1.10" Flow Length=4,618' Tc=167.6 min CN=76 Runoff=31.50 cfs 11.652 af
SubcatchmentB27:	Runoff Area=21.580 ac 0.00% Impervious Runoff Depth=0.65" Flow Length=746' Tc=30.6 min CN=67 Runoff=9.47 cfs 1.161 af
SubcatchmentB28:	Runoff Area=17.080 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=1,454' Tc=38.3 min CN=80 Runoff=16.40 cfs 1.908 af
SubcatchmentB29:	Runoff Area=87.840 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=3,349' Tc=117.1 min CN=80 Runoff=36.80 cfs 9.814 af
SubcatchmentB3:	Runoff Area=41.070 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=1,918' Tc=56.6 min CN=80 Runoff=29.76 cfs 4.589 af
SubcatchmentB30:	Runoff Area=1.940 ac 0.00% Impervious Runoff Depth=1.41" Flow Length=303' Tc=14.3 min CN=81 Runoff=3.57 cfs 0.227 af
SubcatchmentB4:	Runoff Area=144.430 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=2,984' Tc=42.8 min CN=80 Runoff=128.48 cfs 16.136 af
SubcatchmentB5:	Runoff Area=366.880 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=4,701' Tc=66.4 min CN=80 Runoff=236.67 cfs 40.990 af
SubcatchmentB6:	Runoff Area=113.630 ac 0.00% Impervious Runoff Depth=1.22" Flow Length=3,466' Tc=49.8 min CN=78 Runoff=80.60 cfs 11.506 af
SubcatchmentB7:	Runoff Area=397.250 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=6,733' Tc=245.1 min CN=80 Runoff=92.68 cfs 44.383 af
SubcatchmentB8:	Runoff Area=13.070 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=814' Tc=25.3 min CN=80 Runoff=16.59 cfs 1.460 af
SubcatchmentB9:	Runoff Area=33.210 ac 0.00% Impervious Runoff Depth=1.34" Flow Length=1,128' Tc=41.7 min CN=80 Runoff=30.03 cfs 3.710 af

Total Runoff Area = 4,138.210 ac Runoff Volume = 433.372 af Average Runoff Depth = 1.26"
100.00% Pervious = 4,138.210 ac 0.00% Impervious = 0.000 ac

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Type II 24-hr 5-year 24hr Rainfall=3.12"

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Summary for Subcatchment B1:

Runoff = 698.98 cfs @ 12.71 hrs, Volume= 119.675 af, Depth= 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 1,124.640	79	
1,124.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	100	0.0050	0.08		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
8.5	656	0.0203	1.28		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
9.4	4,083	0.0048	7.25	362.50	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.0	56	0.0535	19.68	61.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.2	94	0.0085	9.65	482.39	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	47	0.0021	3.90	12.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
12.3	3,705	0.0023	5.02	250.93	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	40	0.0025	4.26	13.37	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.4	1,819	0.0020	4.71	282.81	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
0.1	45	0.0156	10.63	33.39	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.1	1,860	0.0023	5.05	303.28	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
64.6	12,505	Total			

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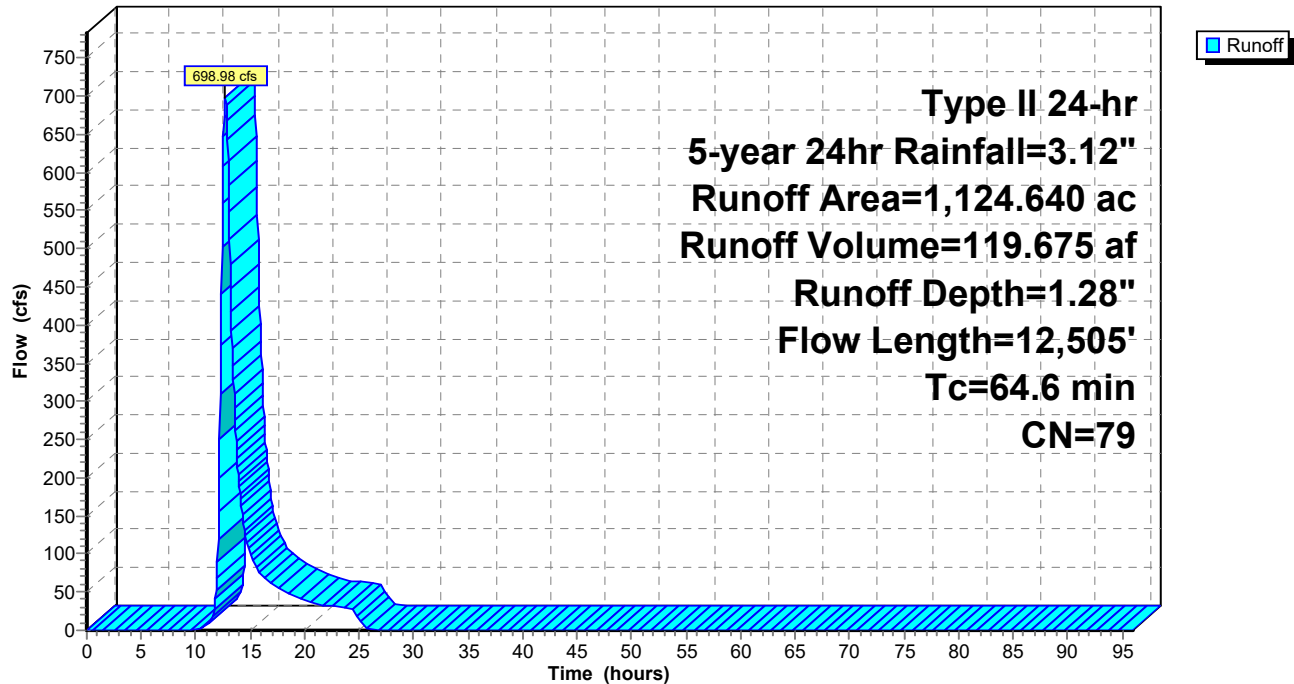
Type II 24-hr 5-year 24hr Rainfall=3.12"

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Subcatchment B1:

Hydrograph



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Summary for Subcatchment B10:

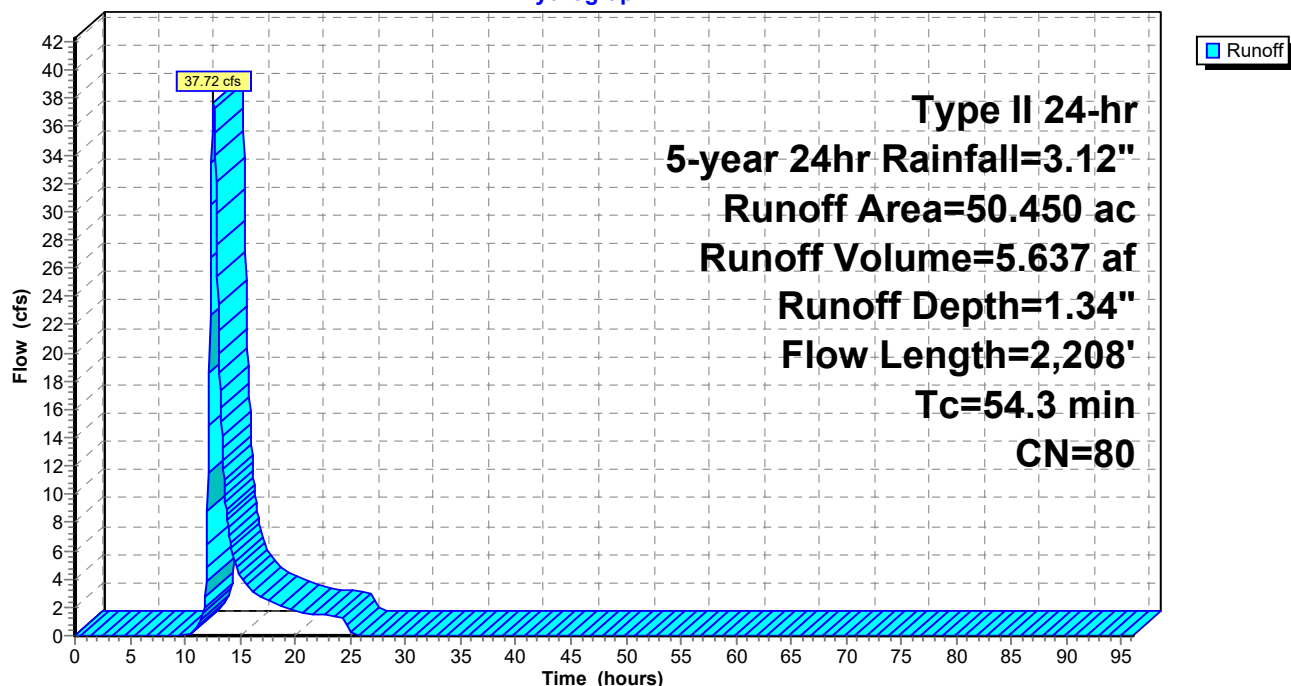
Runoff = 37.72 cfs @ 12.58 hrs, Volume= 5.637 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description			
* 50.450	80				
50.450		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.1	100	0.0040	0.07		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
28.3	1,408	0.0085	0.83		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	72	0.0014	4.57	243.51	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
0.1	34	0.0029	4.58	14.40	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	594	0.0024	3.94	105.08	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
54.3	2,208	Total			

Subcatchment B10:

Hydrograph



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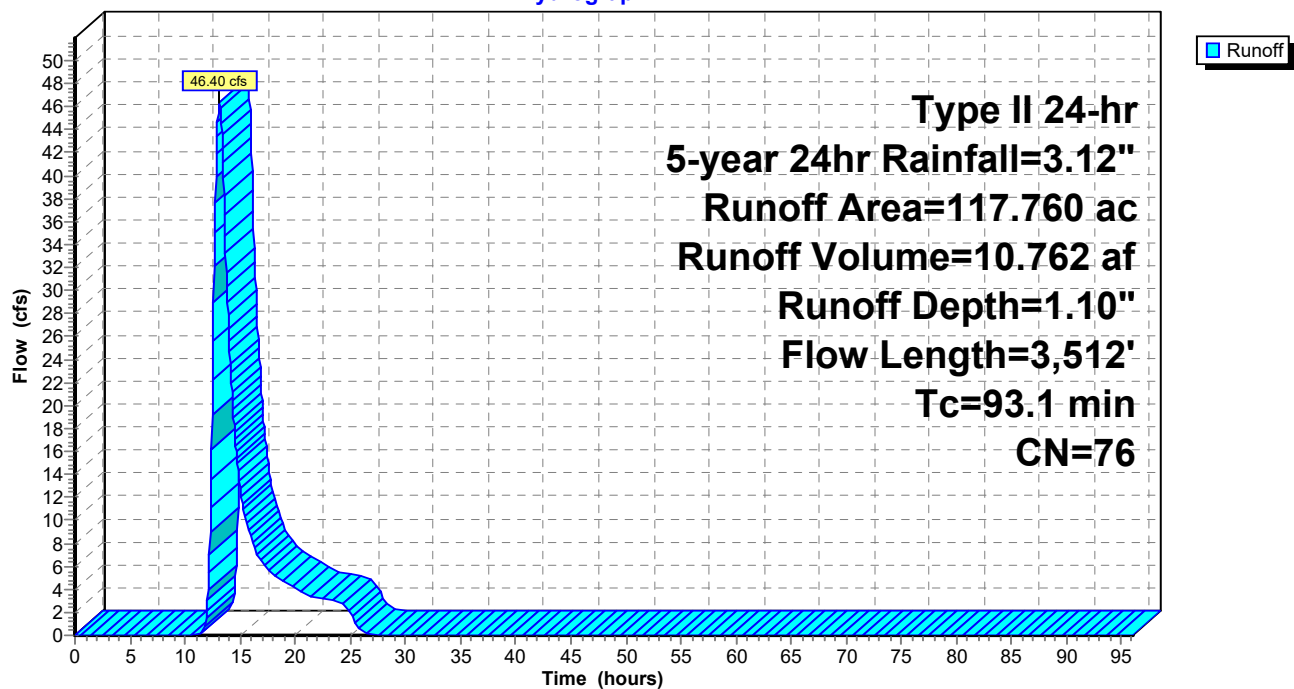
Summary for Subcatchment B11:

Runoff = 46.40 cfs @ 13.13 hrs, Volume= 10.762 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 117.760	76	
117.760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7	100	0.0070	0.05		Sheet Flow, SH-WOODS Woods: Light underbrush n= 0.400 P2= 2.54"
50.0	2,516	0.0087	0.84		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.2	413	0.0017	1.33	4.44	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.2	69	0.0277	7.08	22.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.0	14	0.0073	7.97	332.27	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
0.1	24	0.0165	5.47	17.17	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.9	376	0.0053	6.79	283.12	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
93.1	3,512	Total			

Subcatchment B11:**Hydrograph**

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Summary for Subcatchment B12:

Runoff = 9.35 cfs @ 12.95 hrs, Volume= 1.965 af, Depth= 1.04"

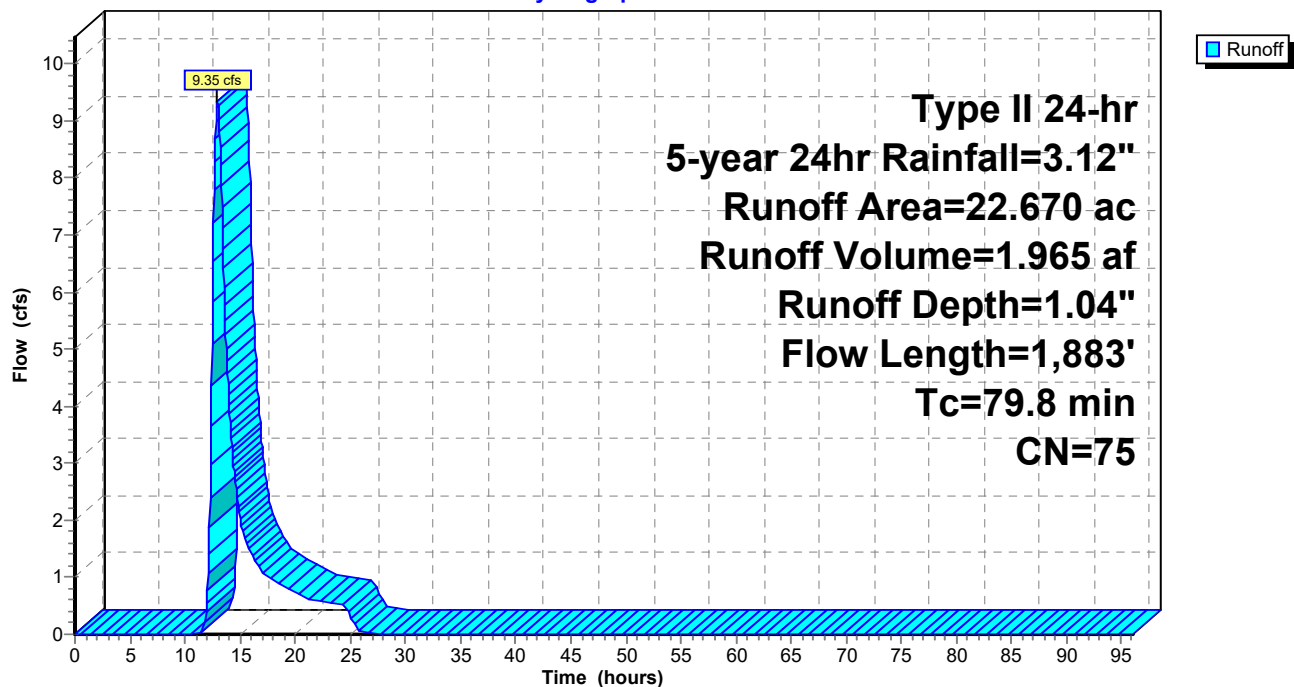
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 22.670	75	
22.670		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
67.4	1,783	0.0024	0.44		Shallow Concentrated Flow, SH-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
79.8	1,883	Total			

Subcatchment B12:

Hydrograph



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Summary for Subcatchment B13:

Runoff = 23.17 cfs @ 12.84 hrs, Volume= 4.352 af, Depth= 1.41"

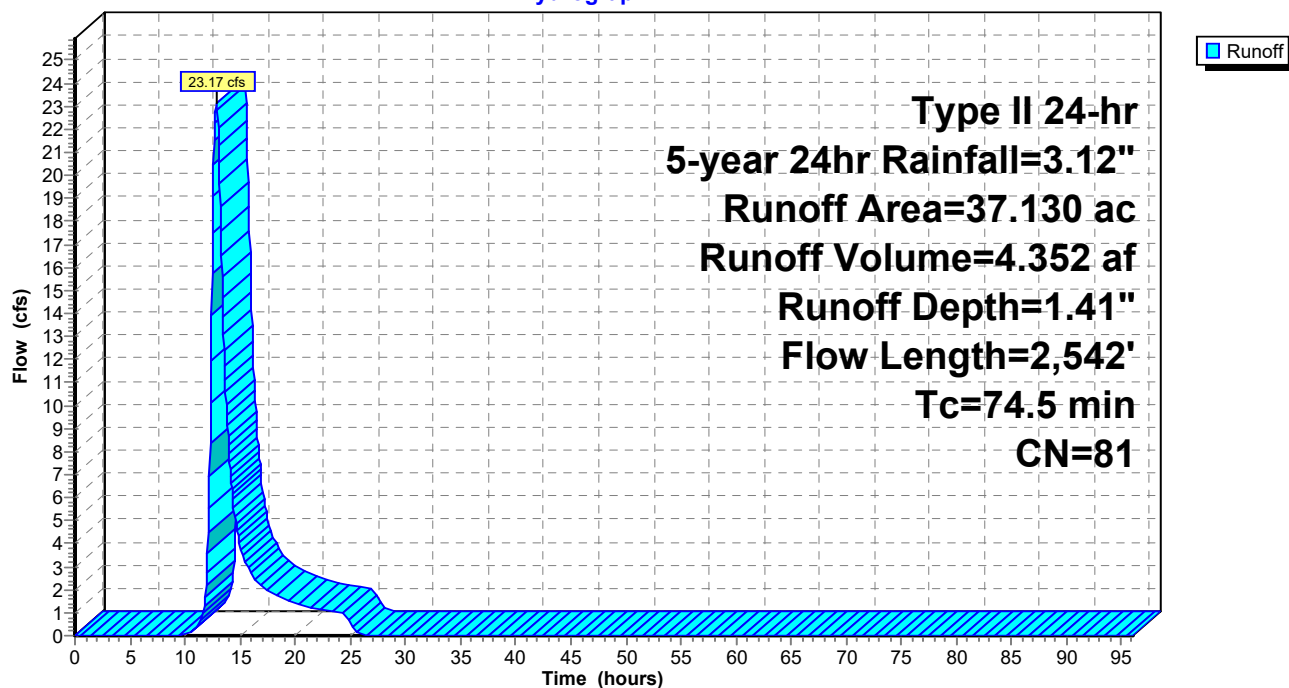
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 37.130	81	
37.130		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	100	0.0280	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
50.7	1,836	0.0045	0.60		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
13.2	571	0.0005	0.72	2.41	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.0	35	0.0751	23.32	73.27	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
74.5	2,542	Total			

Subcatchment B13:

Hydrograph



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Summary for Subcatchment B14:

Runoff = 144.55 cfs @ 13.73 hrs, Volume= 43.269 af, Depth= 1.22"

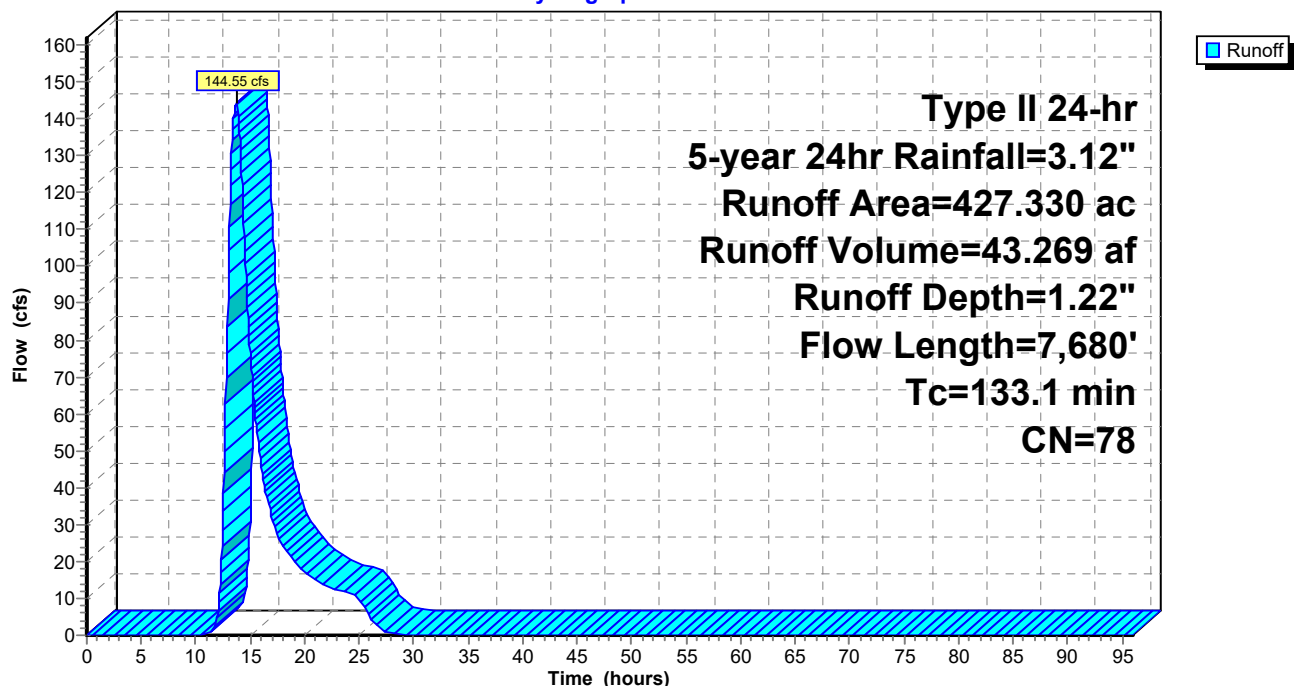
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 427.330	78	
427.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
95.6	2,475	0.0023	0.43		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
25.3	5,105	0.0010	3.37	336.93	Parabolic Channel, DITCH W=50.00' D=3.00' Area=100.0 sf Perim=50.5' n= 0.022
133.1	7,680	Total			

Subcatchment B14:

Hydrograph



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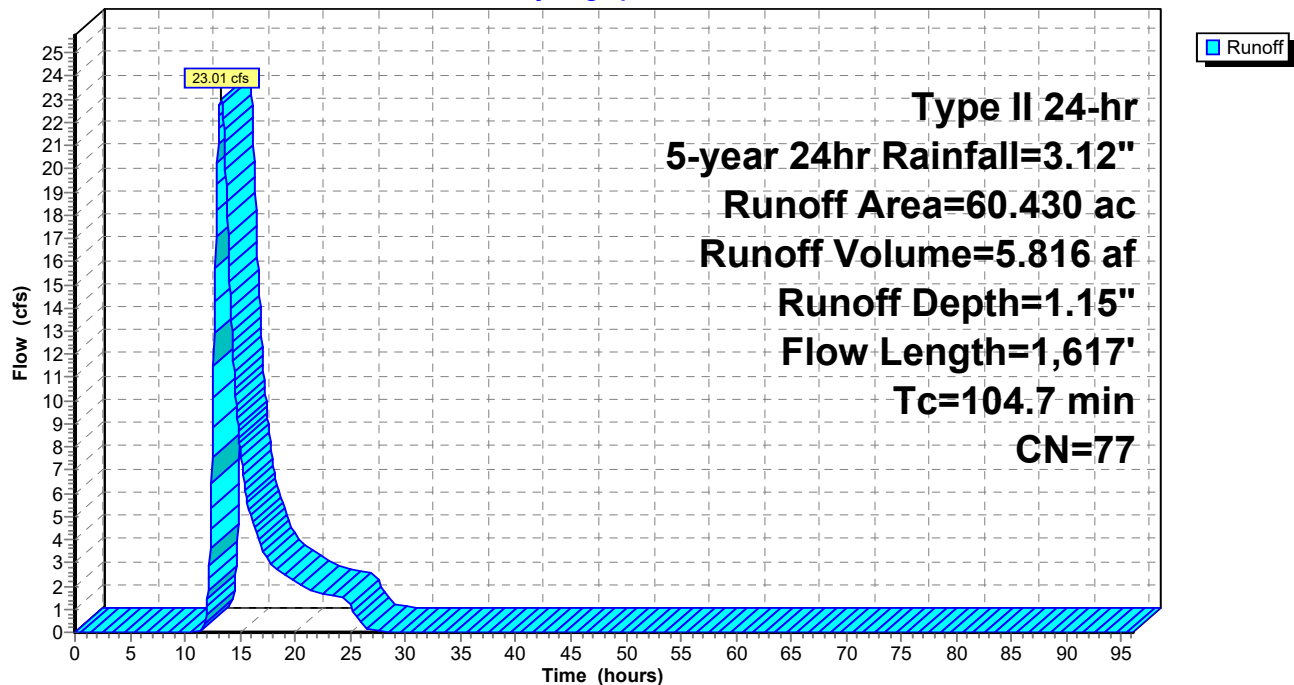
Summary for Subcatchment B15:

Runoff = 23.01 cfs @ 13.29 hrs, Volume= 5.816 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 60.430	77	
60.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0250	0.15		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
93.6	1,517	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
104.7	1,617	Total			

Subcatchment B15:**Hydrograph**

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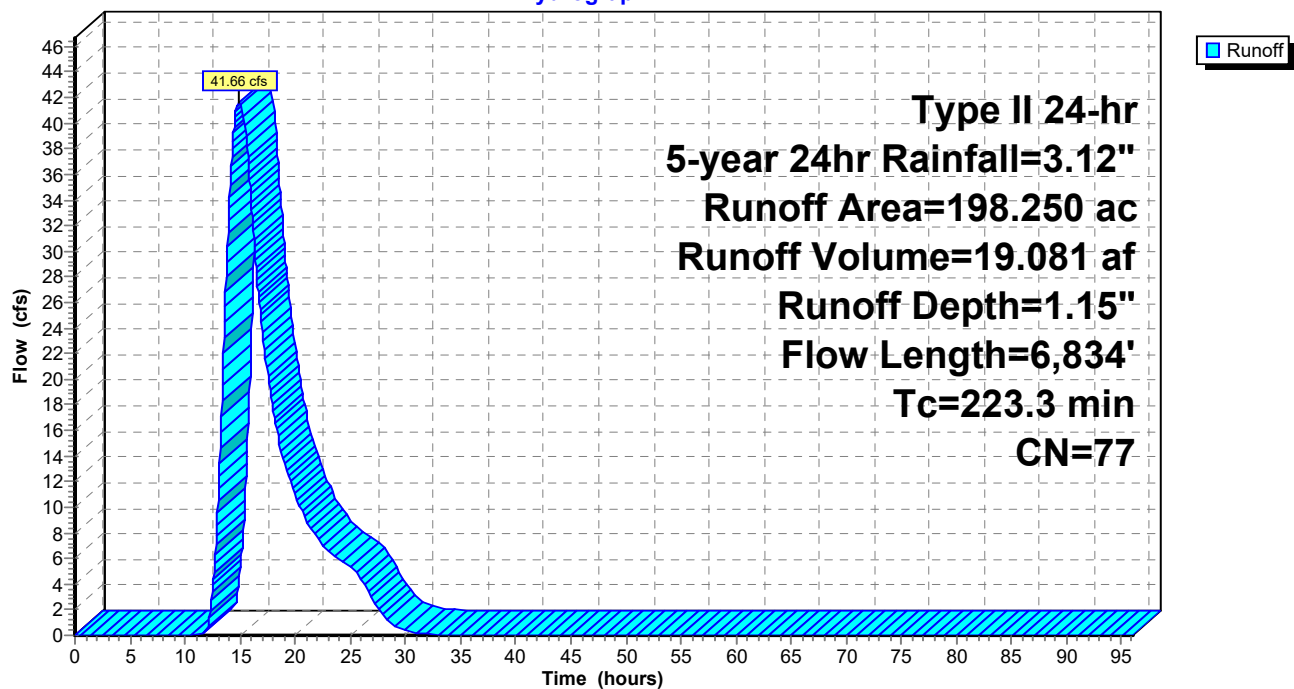
Summary for Subcatchment B16:

Runoff = 41.66 cfs @ 14.90 hrs, Volume= 19.081 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 198.250	77	
198.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
14.5	512	0.0043	0.59		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	41	0.0073	7.27	22.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
37.0	1,056	0.0028	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	35	0.0028	4.50	14.15	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
145.4	2,355	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.3	705	0.0045	5.16	68.76	Parabolic Channel, DITCH W=10.00' D=2.00' Area=13.3 sf Perim=11.0' n= 0.022
0.2	42	0.0024	4.17	13.10	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
9.3	1,988	0.0012	3.58	143.17	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
223.3	6,834	Total			

Subcatchment B16:**Hydrograph**

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Summary for Subcatchment B17:

Runoff = 53.50 cfs @ 12.19 hrs, Volume= 4.592 af, Depth= 1.34"

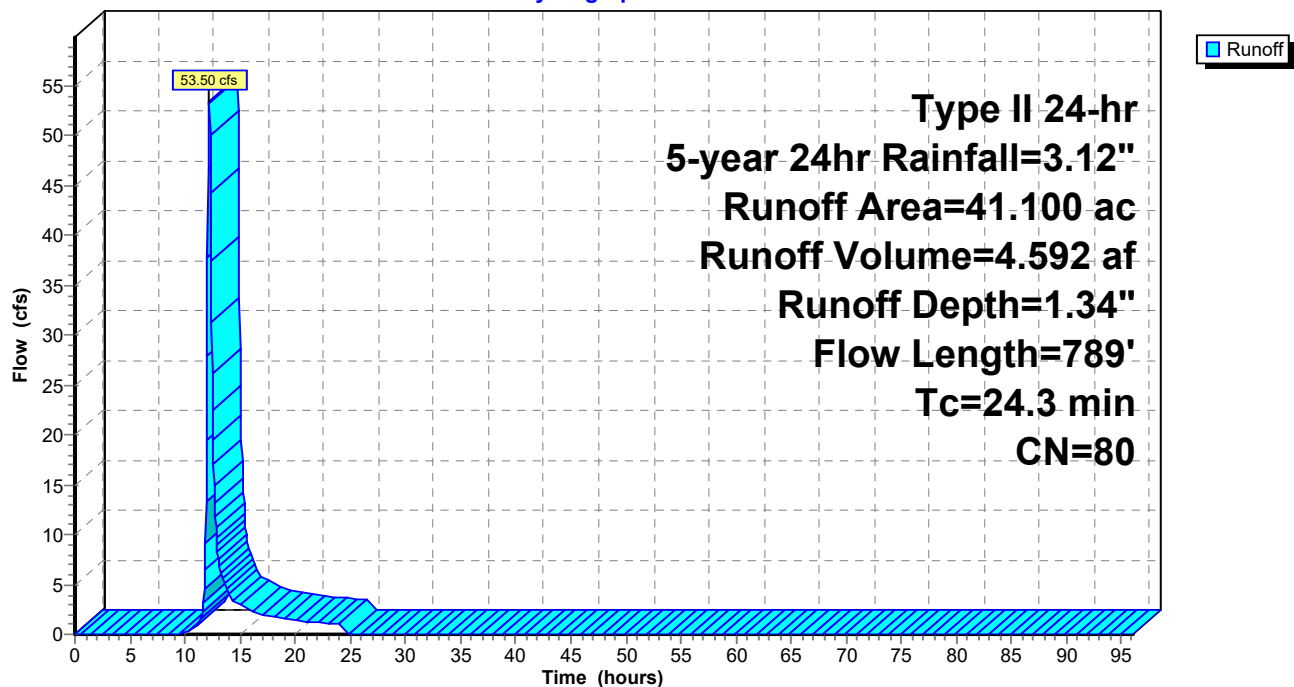
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 41.100	80	
41.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
10.3	689	0.0154	1.12		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
24.3	789	Total			

Subcatchment B17:

Hydrograph



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Summary for Subcatchment B18:

Runoff = 69.14 cfs @ 12.46 hrs, Volume= 9.160 af, Depth= 1.34"

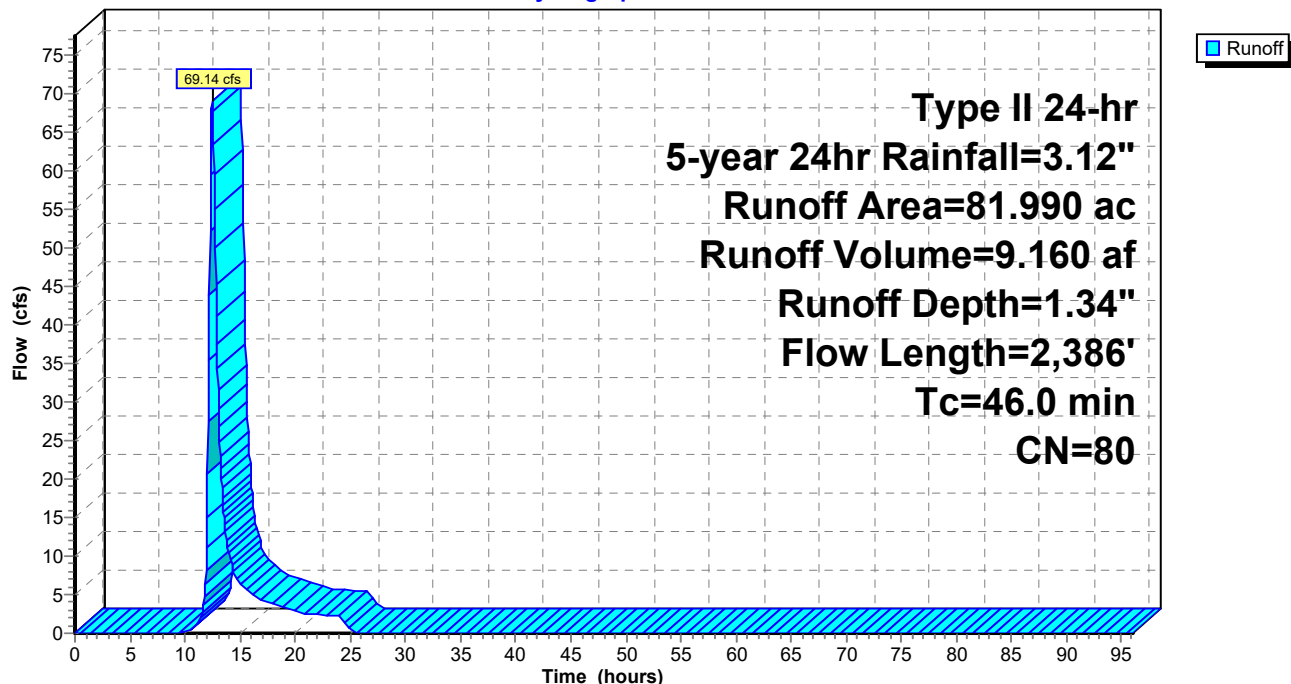
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 81.990	80	
81.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0300	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.6	1,156	0.0076	0.78		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
11.1	1,130	0.0011	1.70	22.69	Parabolic Channel, DITCH W=20.00' D=1.00' Area=13.3 sf Perim=20.1' n= 0.022
46.0	2,386	Total			

Subcatchment B18:

Hydrograph



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Summary for Subcatchment B19:

Runoff = 18.50 cfs @ 12.60 hrs, Volume= 2.847 af, Depth= 1.34"

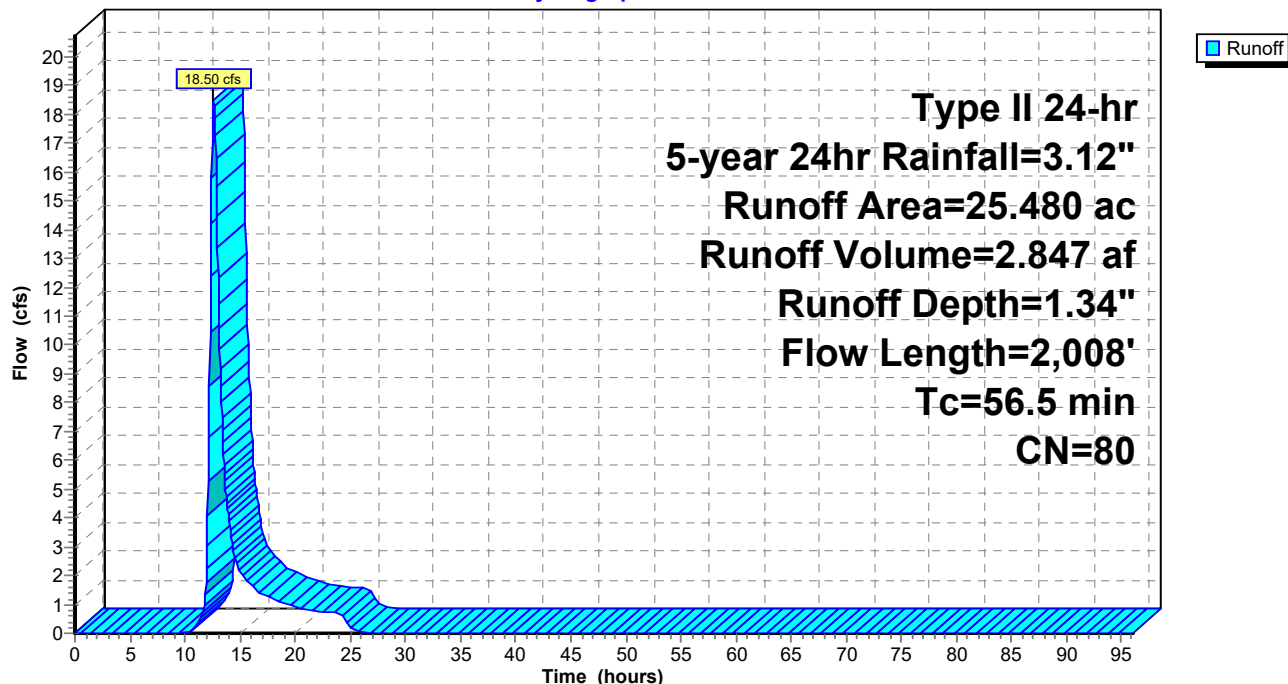
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 25.480	80	
25.480		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0180	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
19.0	999	0.0095	0.88		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
24.8	909	0.0046	0.61		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
56.5	2,008	Total			

Subcatchment B19:

Hydrograph



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Summary for Subcatchment B2:

Runoff = 221.50 cfs @ 12.26 hrs, Volume= 22.482 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 233.580	77	
233.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	100	0.0106	0.11		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
3.4	210	0.0133	1.04		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
4.2	178	0.0051	0.71		Shallow Concentrated Flow, SCF-OPEN SPACE Nearly Bare & Untilled Kv= 10.0 fps
0.2	62	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	409	0.0169	13.17	87.83	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.011
5.2	1,987	0.0038	6.37	254.77	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	42	0.0047	5.83	18.33	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	218	0.0041	6.62	264.64	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	44	0.0160	10.76	33.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	160	0.0050	5.69	151.67	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
30.4	3,410	Total			

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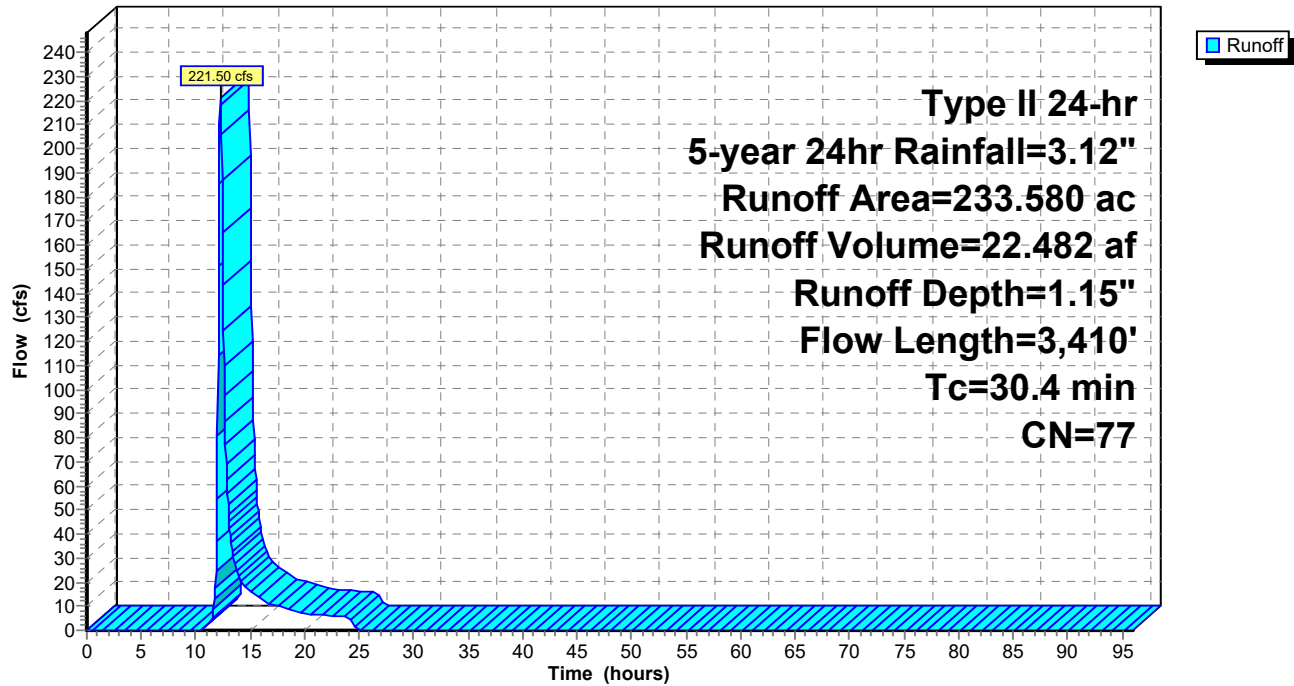
Type II 24-hr 5-year 24hr Rainfall=3.12"

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Subcatchment B2:

Hydrograph



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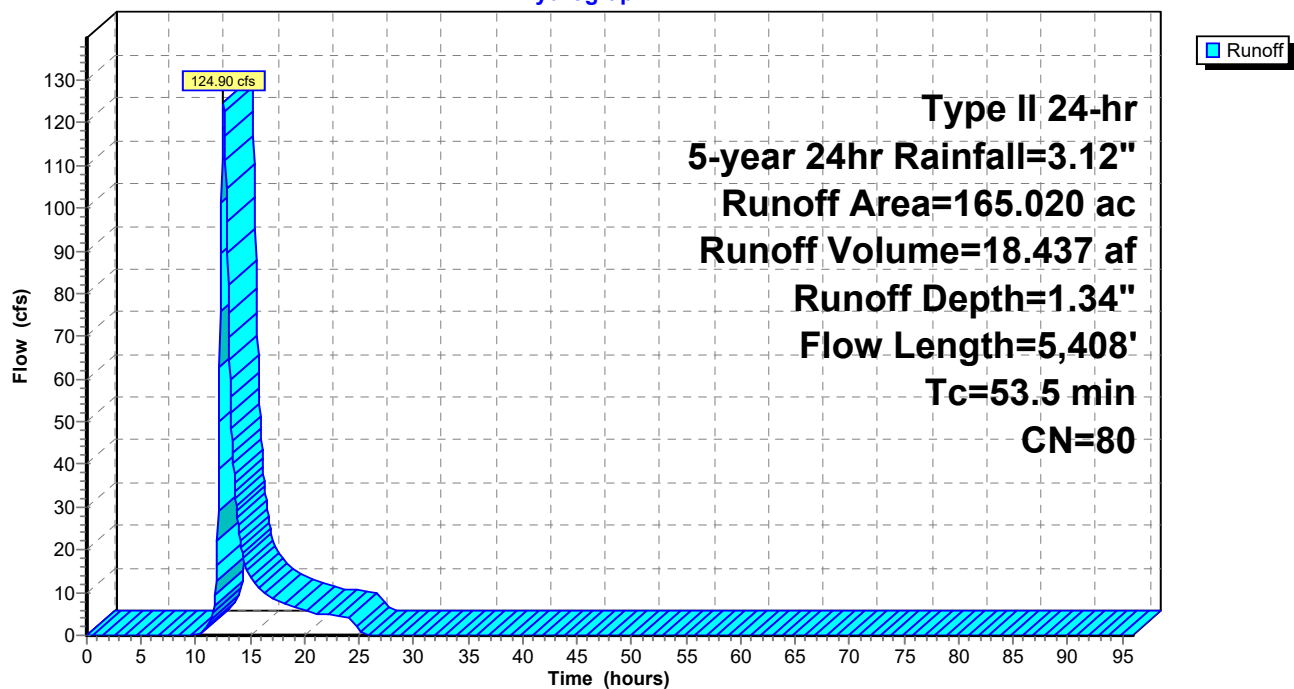
Summary for Subcatchment B20:

Runoff = 124.90 cfs @ 12.56 hrs, Volume= 18.437 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 165.020	80	
165.020		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.3	1,262	0.0079	0.80		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	94	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.8	167	0.0294	1.54		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	61	0.0016	3.40	10.69	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	2,712	0.0014	7.73	309.28	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.011
0.2	43	0.0023	4.08	12.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	969	0.0007	2.77	138.43	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
53.5	5,408	Total			

Subcatchment B20:**Hydrograph**

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Type II 24-hr 5-year 24hr Rainfall=3.12"

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Summary for Subcatchment B21:

Runoff = 19.71 cfs @ 12.96 hrs, Volume= 4.078 af, Depth= 1.34"

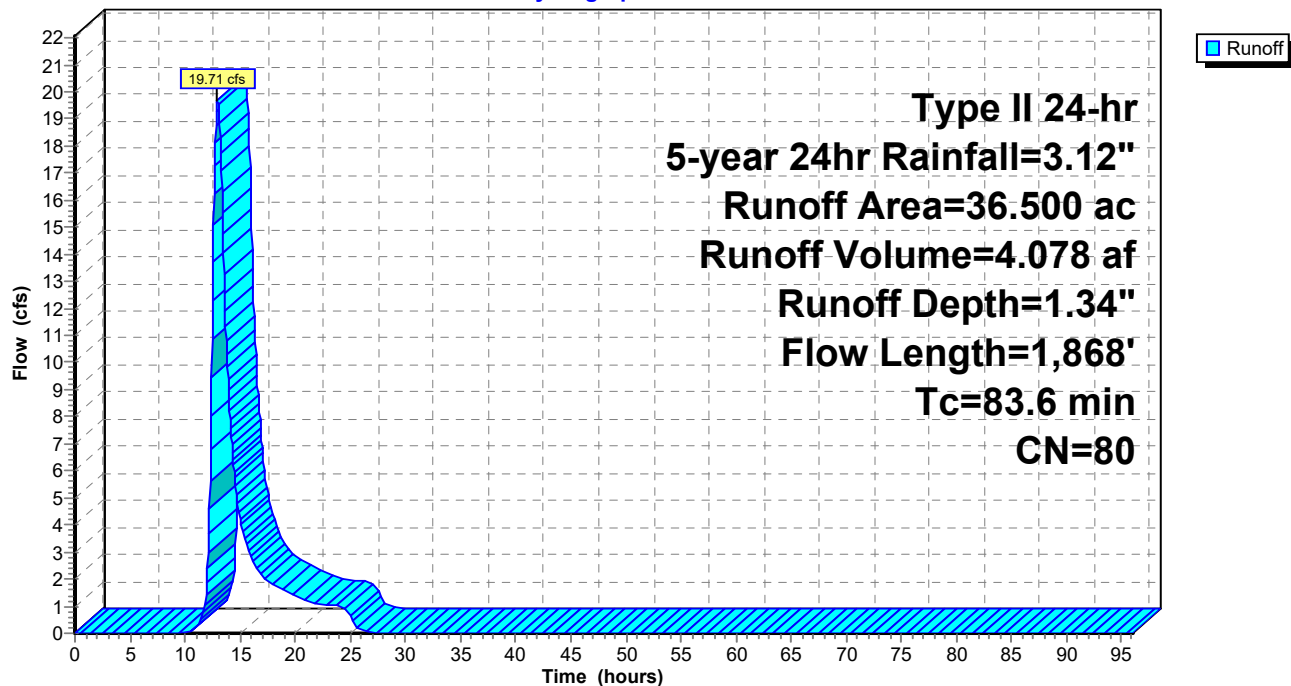
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 36.500	80	
36.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
25.9	1,010	0.0052	0.65		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
43.3	758	0.0034	0.29		Shallow Concentrated Flow, SCF-WOODS Woodland Kv= 5.0 fps
83.6	1,868	Total			

Subcatchment B21:

Hydrograph



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Type II 24-hr 5-year 24hr Rainfall=3.12"

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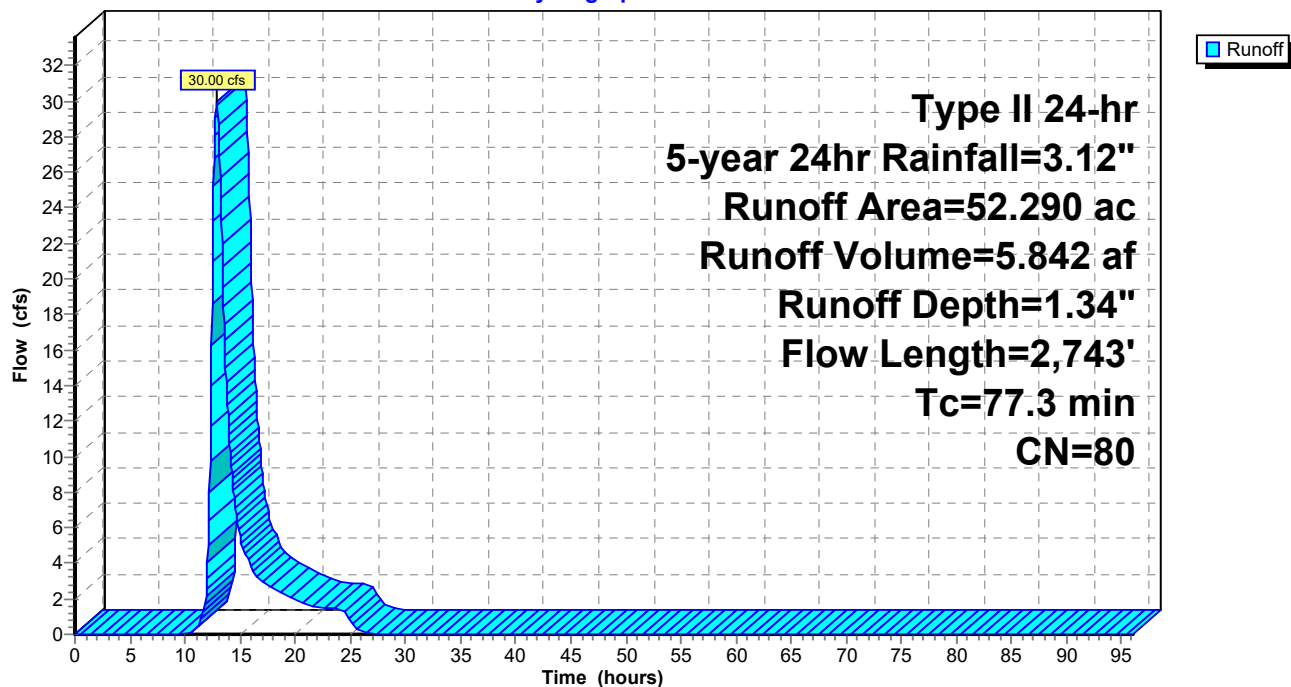
Summary for Subcatchment B22:

Runoff = 30.00 cfs @ 12.89 hrs, Volume= 5.842 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 52.290	80	
52.290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
64.3	2,643	0.0058	0.69		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
77.3	2,743	Total			

Subcatchment B22:**Hydrograph**

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Type II 24-hr 5-year 24hr Rainfall=3.12"

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Summary for Subcatchment B23:

Runoff = 26.21 cfs @ 12.82 hrs, Volume= 4.823 af, Depth= 1.34"

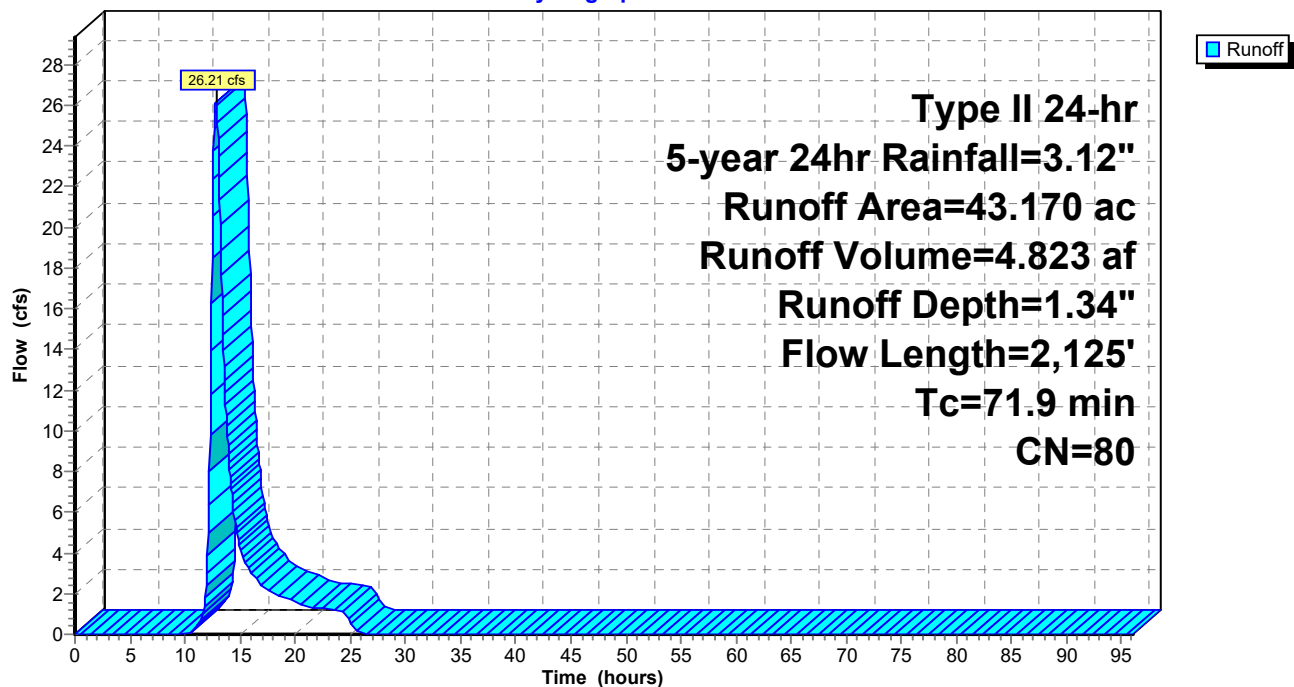
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 43.170	80	
43.170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	100	0.0100	0.10		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
55.9	2,025	0.0045	0.60		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
71.9	2,125	Total			

Subcatchment B23:

Hydrograph



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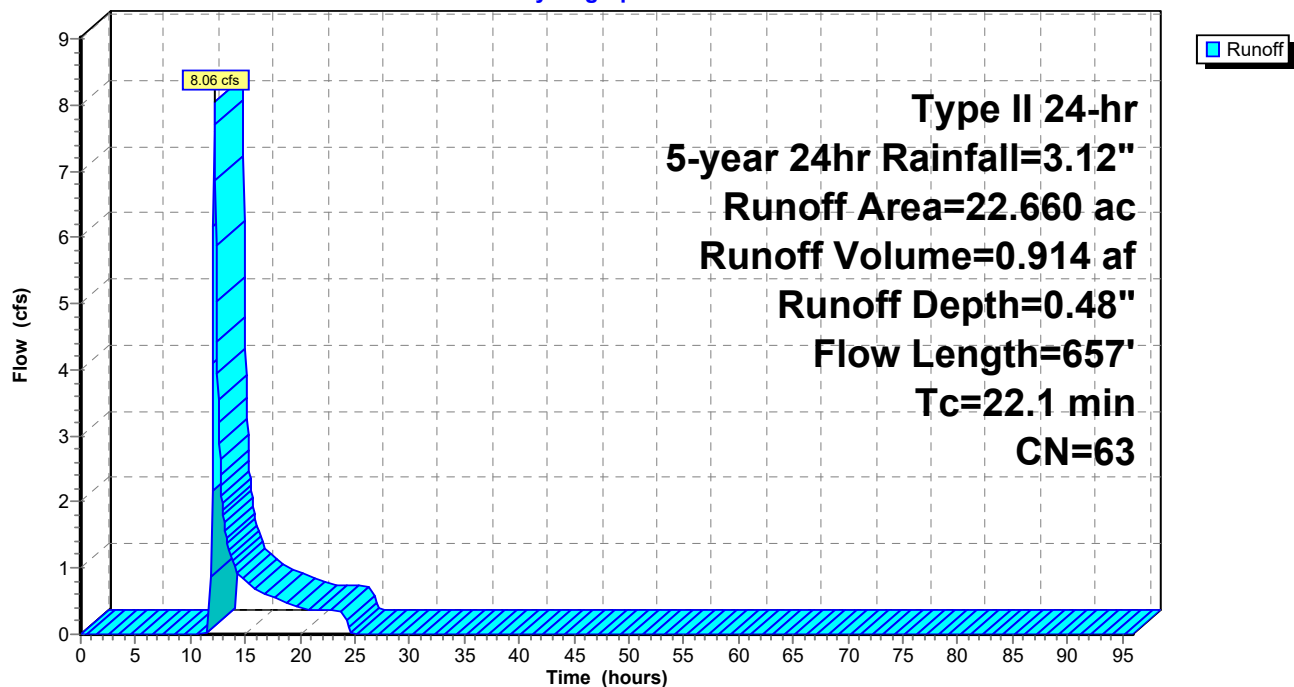
Summary for Subcatchment B24:

Runoff = 8.06 cfs @ 12.20 hrs, Volume= 0.914 af, Depth= 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 22.660	63	
22.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
7.7	557	0.0181	1.21		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
22.1	657	Total			

Subcatchment B24:**Hydrograph**

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Type II 24-hr 5-year 24hr Rainfall=3.12"

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Summary for Subcatchment B25:

Runoff = 15.06 cfs @ 12.43 hrs, Volume= 2.103 af, Depth= 0.78"

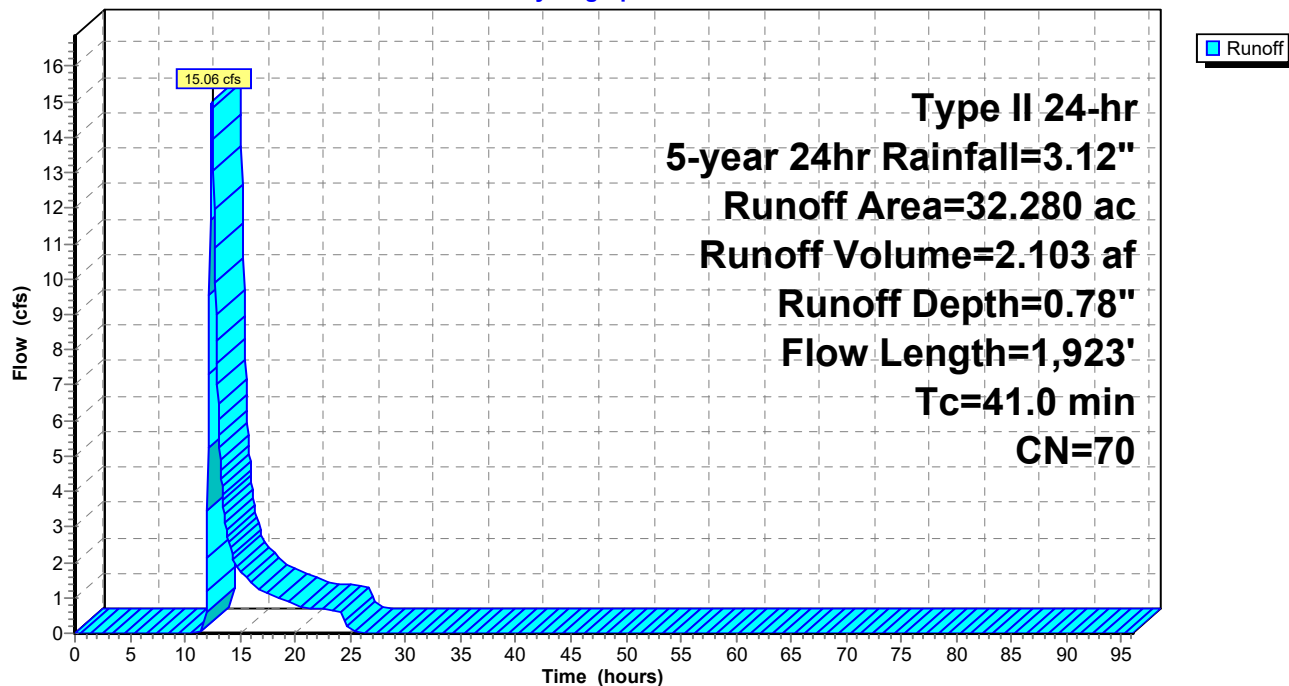
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 32.280	70	
32.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0230	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
27.0	1,311	0.0081	0.81		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.5	512	0.0047	3.47	23.16	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.022
41.0	1,923	Total			

Subcatchment B25:

Hydrograph



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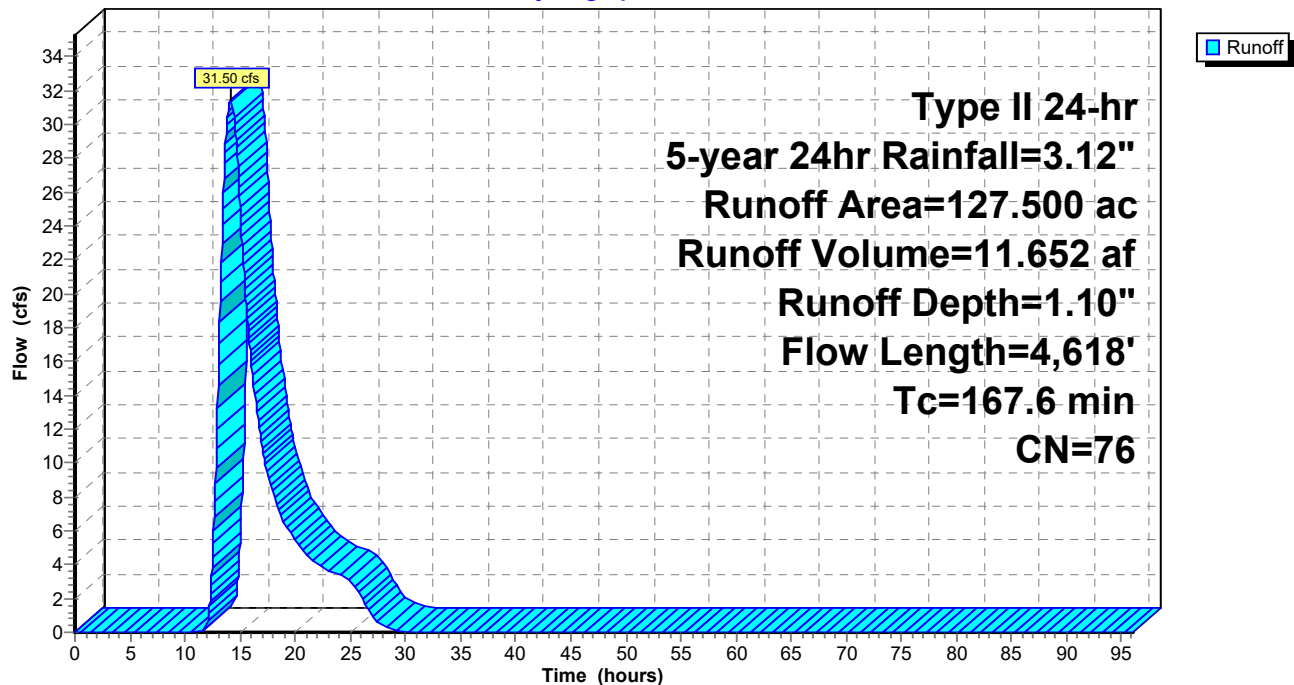
Summary for Subcatchment B26:

Runoff = 31.50 cfs @ 14.14 hrs, Volume= 11.652 af, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 127.500	76	
127.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
155.4	4,518	0.0029	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
167.6	4,618	Total			

Subcatchment B26:**Hydrograph**

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Type II 24-hr 5-year 24hr Rainfall=3.12"

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Summary for Subcatchment B27:

Runoff = 9.47 cfs @ 12.30 hrs, Volume= 1.161 af, Depth= 0.65"

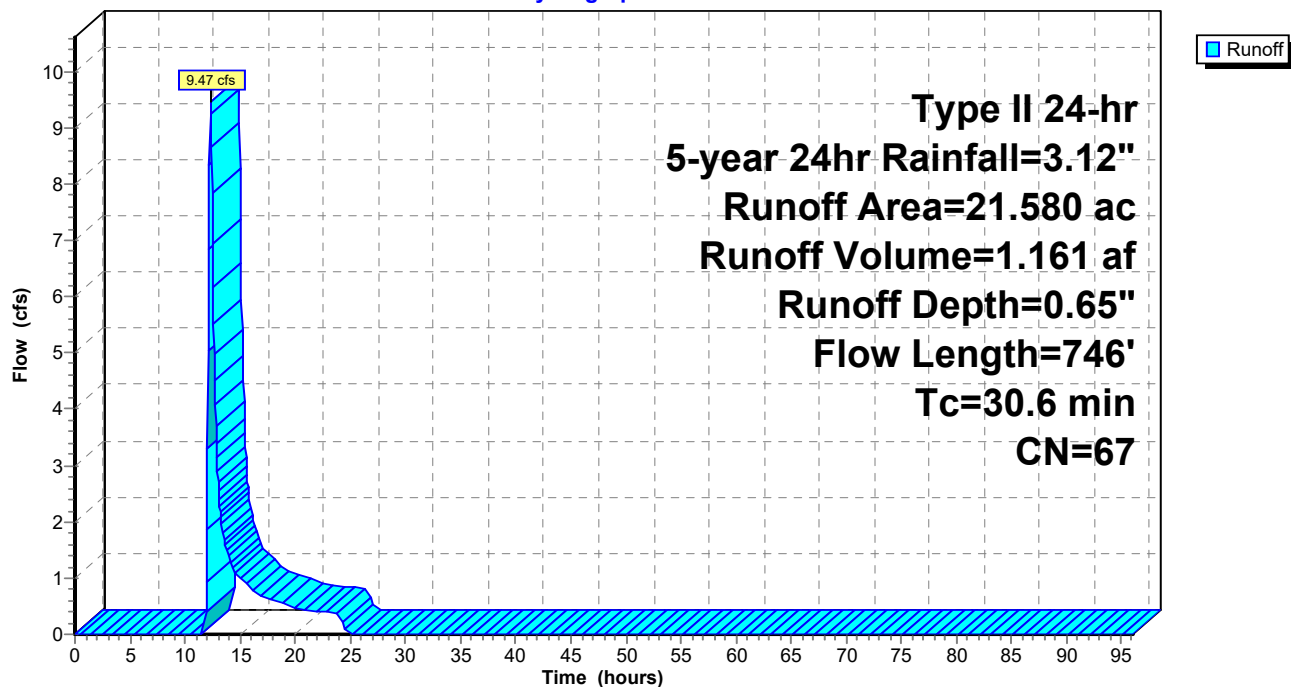
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 21.580	67	
21.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
18.9	646	0.0040	0.57		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
30.6	746	Total			

Subcatchment B27:

Hydrograph



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Type II 24-hr 5-year 24hr Rainfall=3.12"

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Summary for Subcatchment B28:

Runoff = 16.40 cfs @ 12.36 hrs, Volume= 1.908 af, Depth= 1.34"

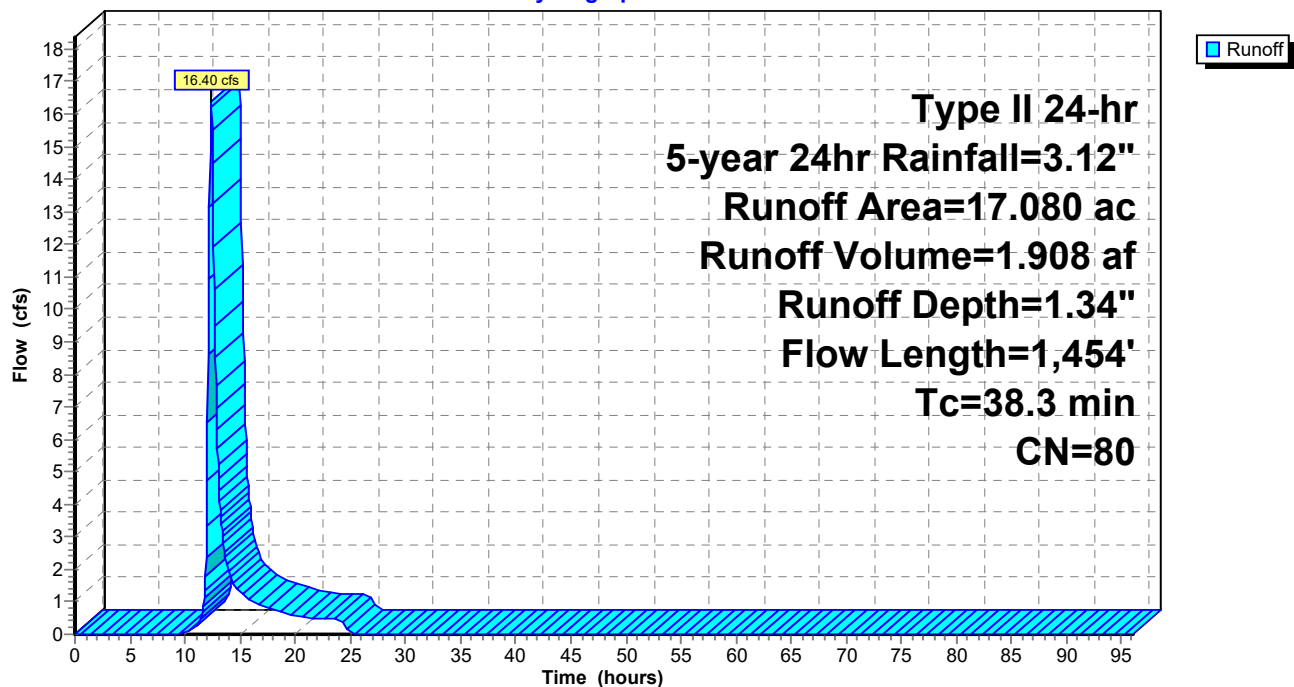
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 17.080	80	
17.080		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.6	1,354	0.0089	0.85		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
38.3	1,454	Total			

Subcatchment B28:

Hydrograph



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Type II 24-hr 5-year 24hr Rainfall=3.12"

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Summary for Subcatchment B29:

Runoff = 36.80 cfs @ 13.40 hrs, Volume= 9.814 af, Depth= 1.34"

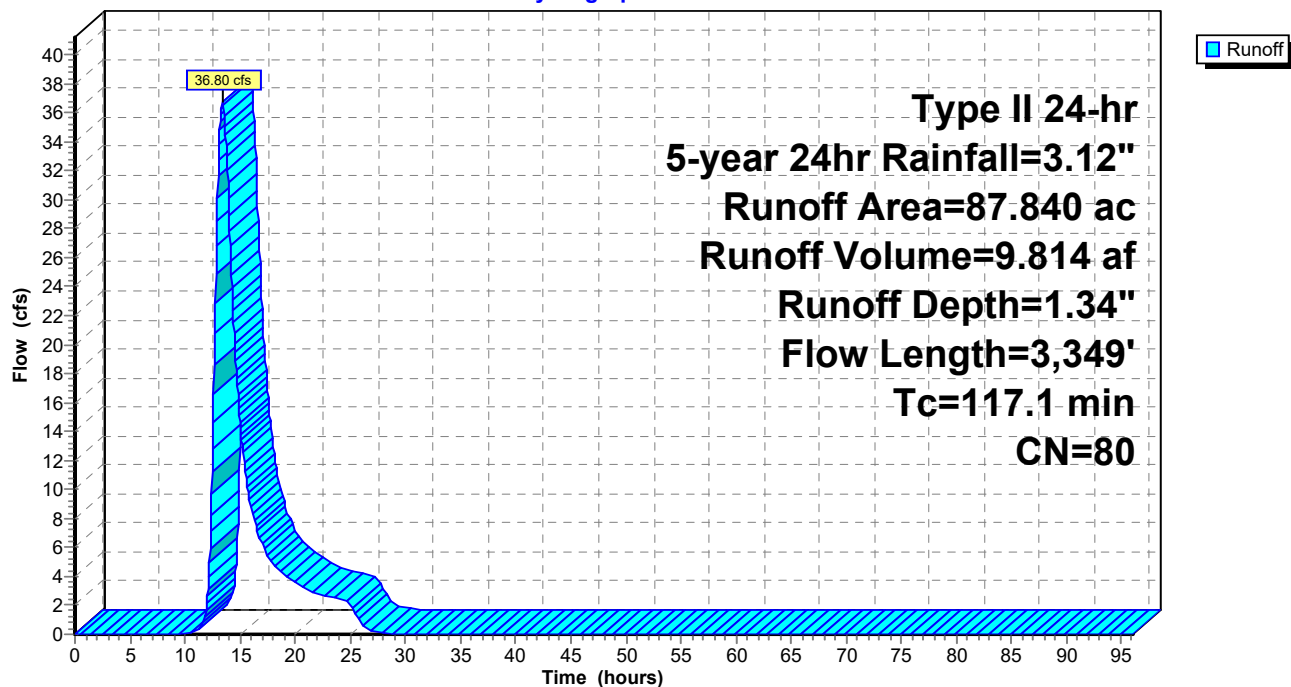
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 87.840	80	
87.840		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
104.7	3,249	0.0033	0.52		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
117.1	3,349	Total			

Subcatchment B29:

Hydrograph



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Type II 24-hr 5-year 24hr Rainfall=3.12"

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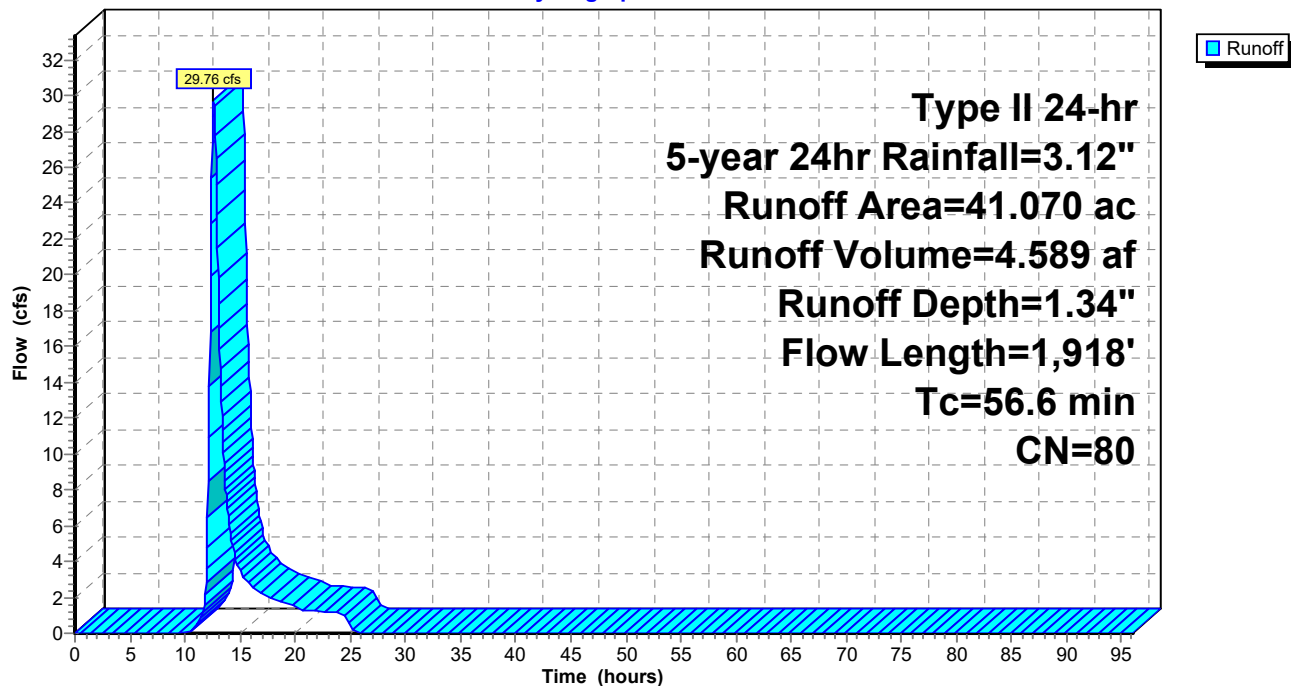
Summary for Subcatchment B3:

Runoff = 29.76 cfs @ 12.60 hrs, Volume= 4.589 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 41.070	80	
41.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.0	100	0.0030	0.06		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
29.2	1,561	0.0098	0.89		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
1.4	257	0.0093	3.13	20.85	Parabolic Channel, DITCH W=20.00' D=0.50' Area=6.7 sf Perim=20.0' n= 0.022
56.6	1,918	Total			

Subcatchment B3:**Hydrograph**

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Summary for Subcatchment B30:

Runoff = 3.57 cfs @ 12.07 hrs, Volume= 0.227 af, Depth= 1.41"

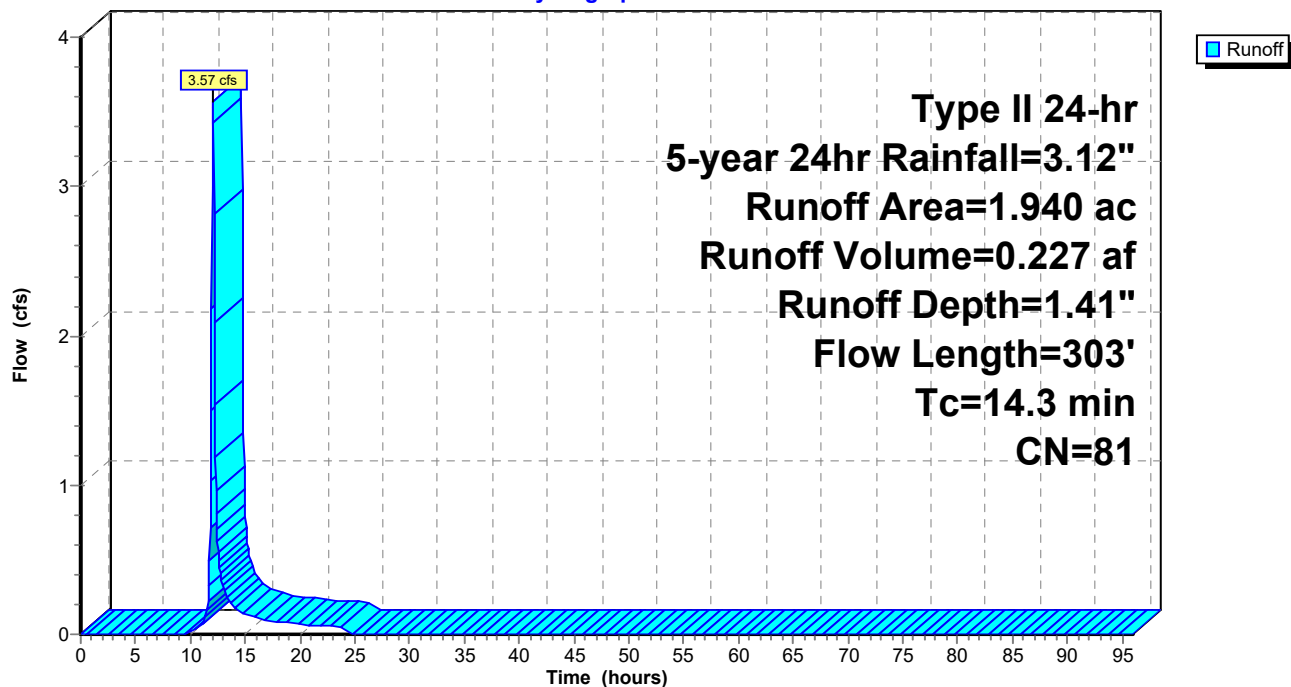
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 1.940	81	
1.940		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
2.6	203	0.0202	1.28		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
14.3	303	Total			

Subcatchment B30:

Hydrograph



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Summary for Subcatchment B4:

Runoff = 128.48 cfs @ 12.41 hrs, Volume= 16.136 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 144.430	80	
144.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0330	0.21		Sheet Flow, SH-OPEN SPACE Range n= 0.130 P2= 2.54"
10.7	749	0.0167	1.16		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.8	904	0.0065	2.59	5.17	Parabolic Channel, DITCH W=6.00' D=0.50' Area=2.0 sf Perim=6.1' n= 0.022
15.8	497	0.0034	0.52		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	43	0.0323	15.29	48.05	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	691	0.0081	4.60	46.03	Parabolic Channel, DITCH W=15.00' D=1.00' Area=10.0 sf Perim=15.2' n= 0.022
42.8	2,984	Total			

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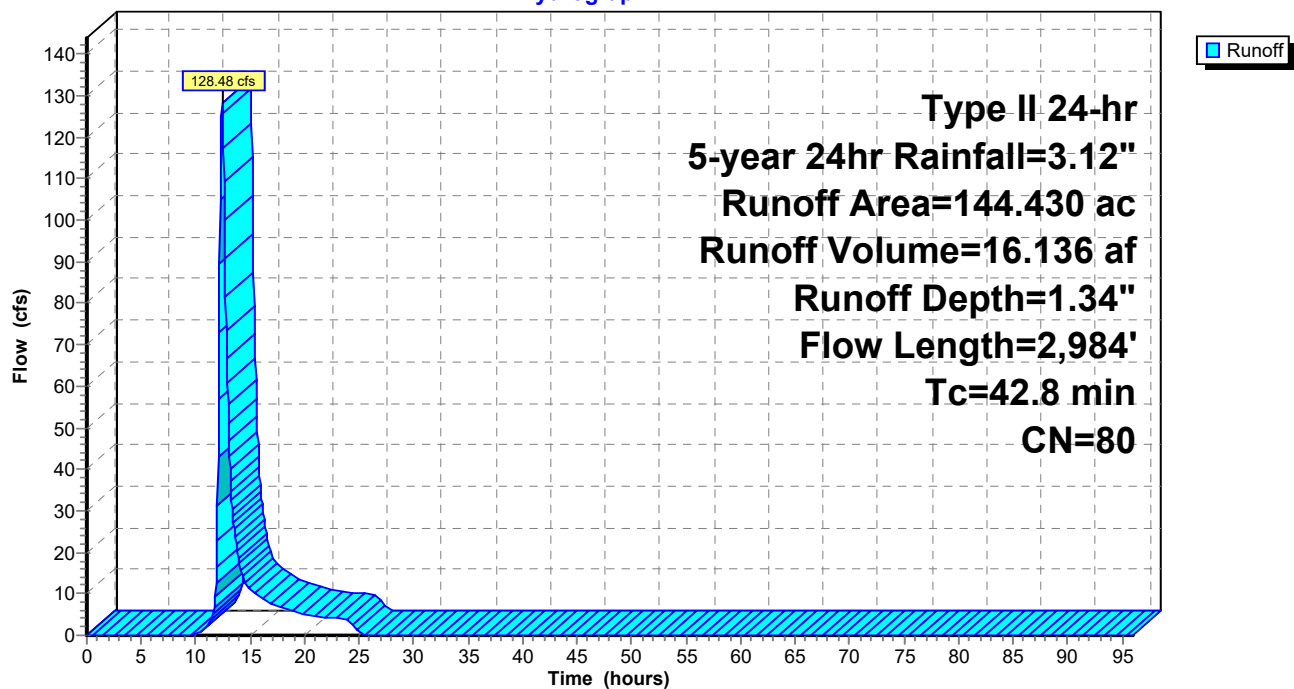
Type II 24-hr 5-year 24hr Rainfall=3.12"

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Subcatchment B4:

Hydrograph



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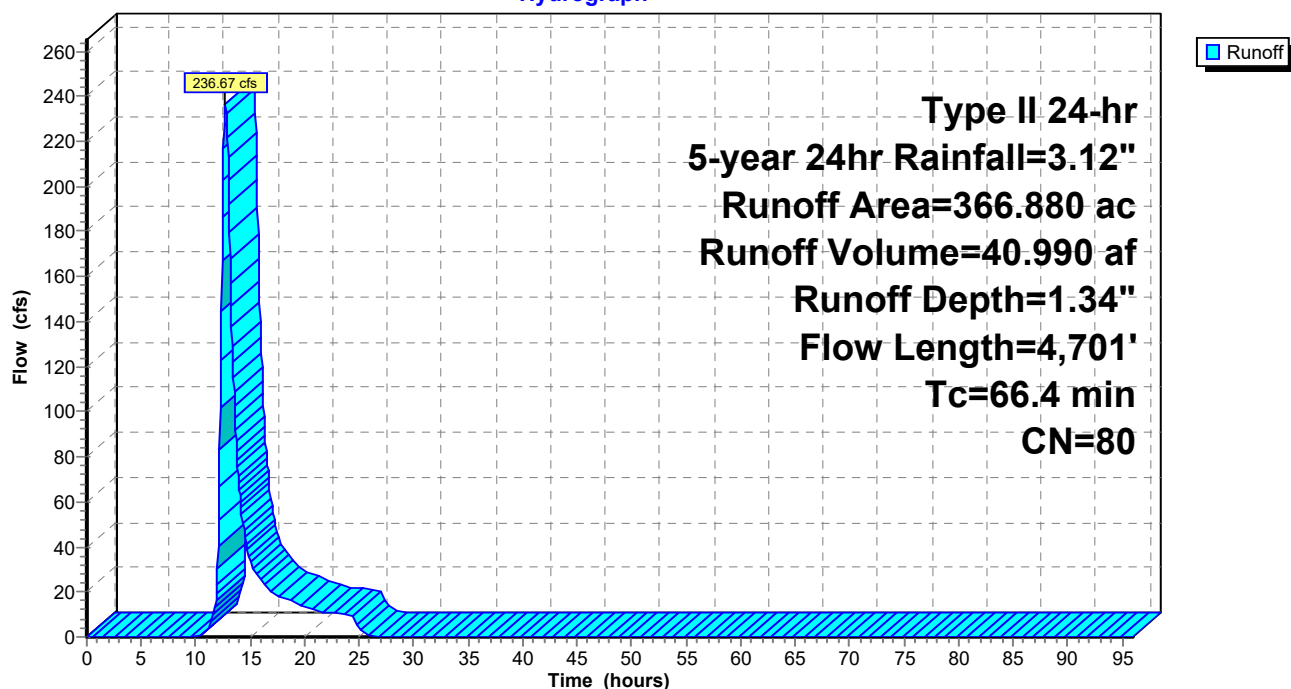
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Summary for Subcatchment B5:

Runoff = 236.67 cfs @ 12.74 hrs, Volume= 40.990 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description			
* 366.880	80				
366.880		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.0330	0.17		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.0	1,682	0.0144	1.08		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
10.1	1,605	0.0067	2.65	8.82	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
19.5	751	0.0051	0.64		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.9	563	0.0066	9.91	528.71	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
66.4	4,701	Total			

Subcatchment B5:**Hydrograph**

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Type II 24-hr 5-year 24hr Rainfall=3.12"

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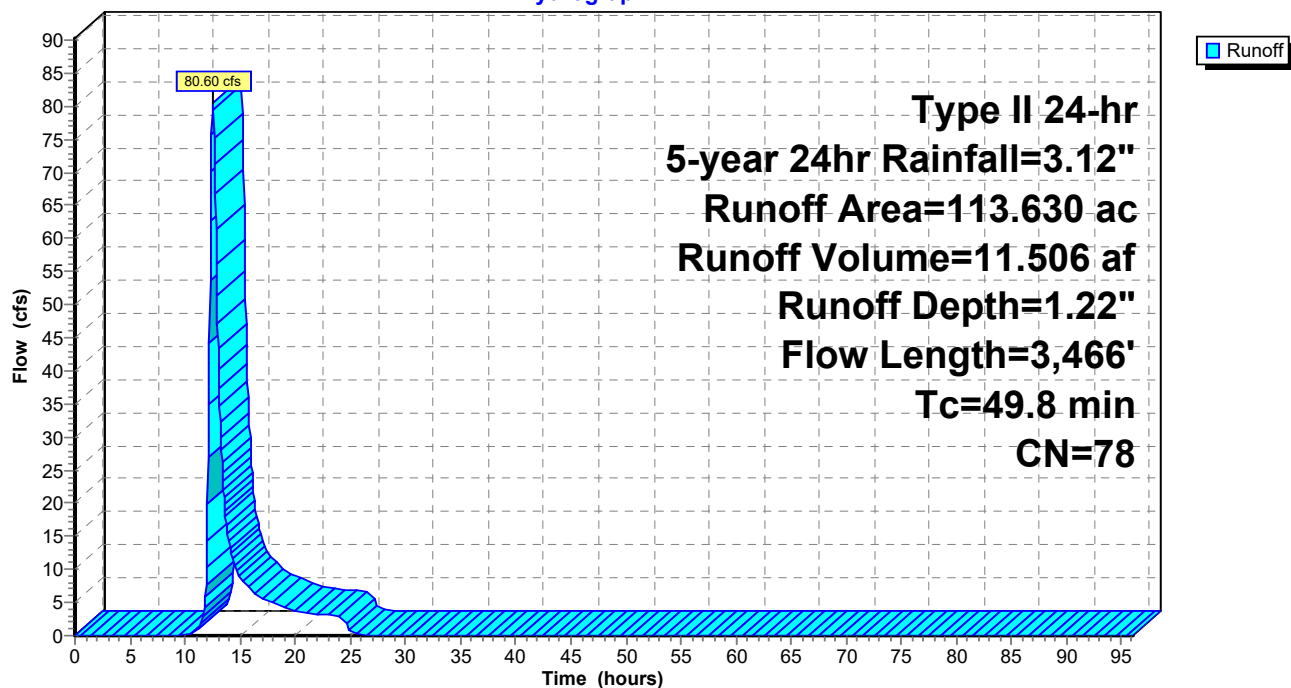
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Summary for Subcatchment B6:

Runoff = 80.60 cfs @ 12.52 hrs, Volume= 11.506 af, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description			
* 113.630	78				
113.630		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
31.0	1,798	0.0115	0.97		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
3.0	959	0.0022	5.31	247.62	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
0.1	31	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.7	578	0.0026	5.77	269.19	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
49.8	3,466	Total			

Subcatchment B6:**Hydrograph**

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Type II 24-hr 5-year 24hr Rainfall=3.12"

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Summary for Subcatchment B7:

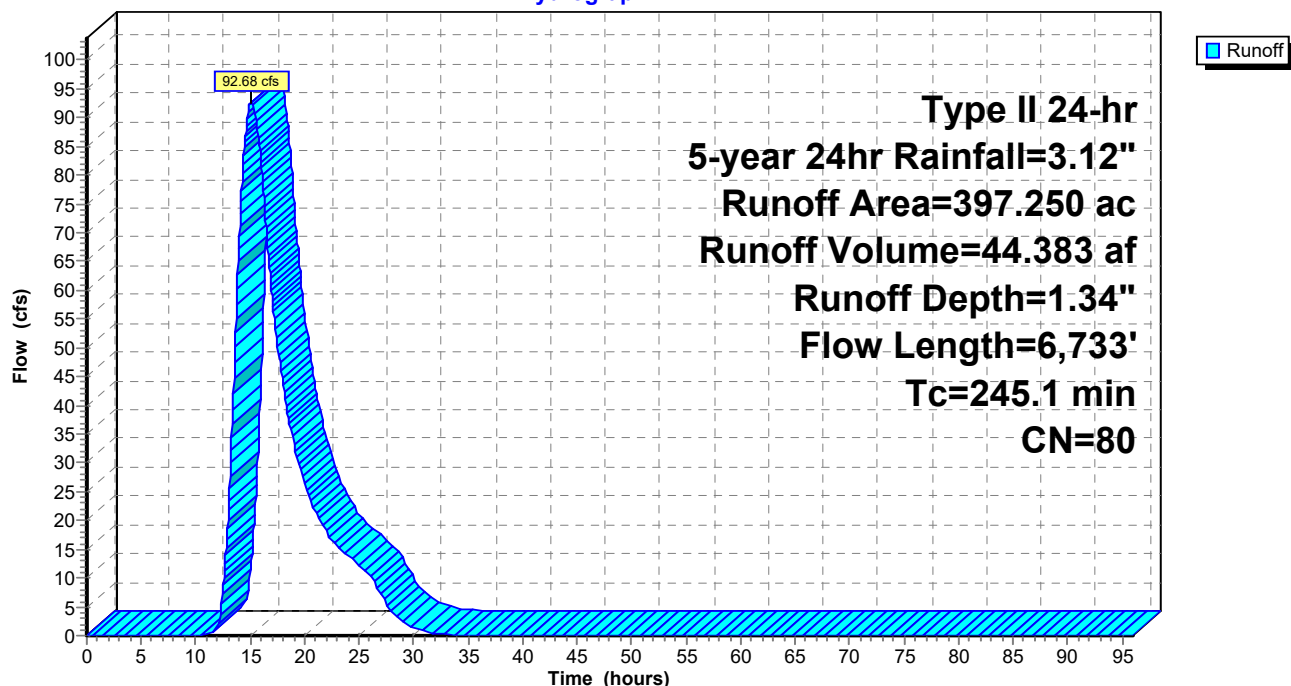
Runoff = 92.68 cfs @ 15.01 hrs, Volume= 44.383 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description			
* 397.250	80				
397.250		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	100	0.0070	0.09		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
85.3	3,055	0.0044	0.60		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	27	0.0372	16.41	51.57	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
139.3	2,913	0.0015	0.35		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.0	638	0.0042	5.21	139.01	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
245.1	6,733	Total			

Subcatchment B7:

Hydrograph



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Type II 24-hr 5-year 24hr Rainfall=3.12"

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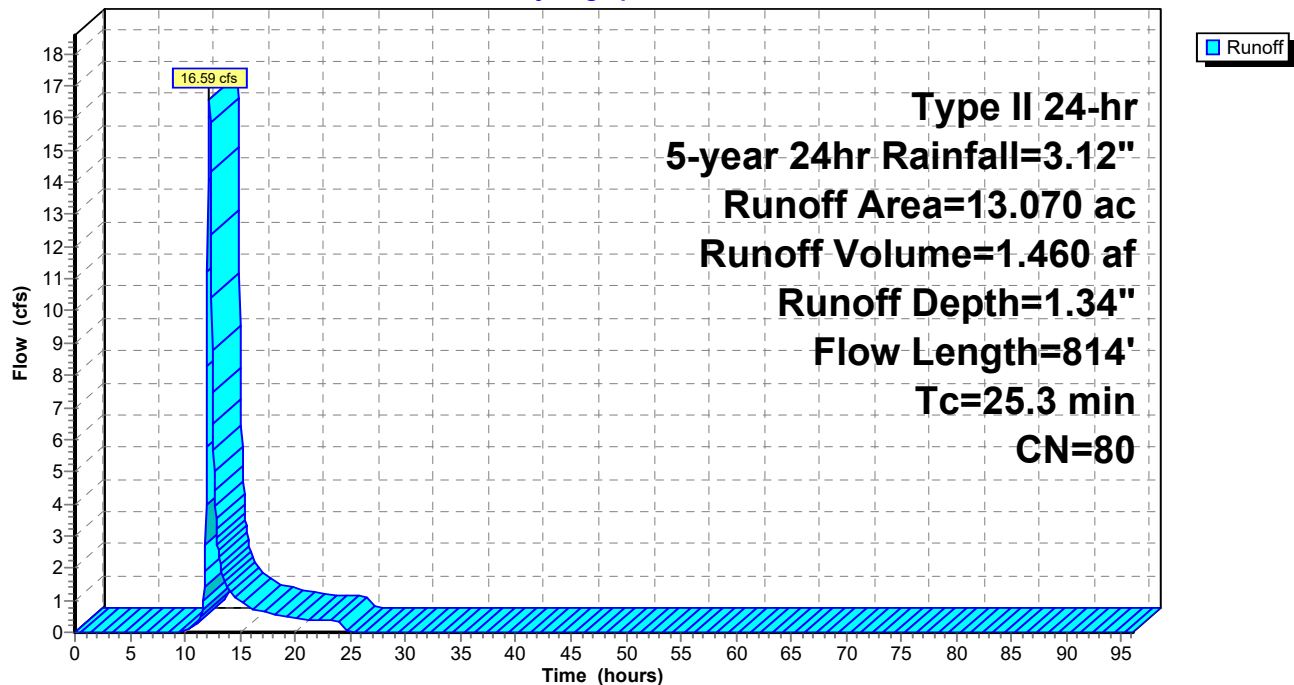
Summary for Subcatchment B8:

Runoff = 16.59 cfs @ 12.20 hrs, Volume= 1.460 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 13.070	80	
13.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
11.3	714	0.0136	1.05		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
25.3	814	Total			

Subcatchment B8:**Hydrograph**

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Type II 24-hr 5-year 24hr Rainfall=3.12"

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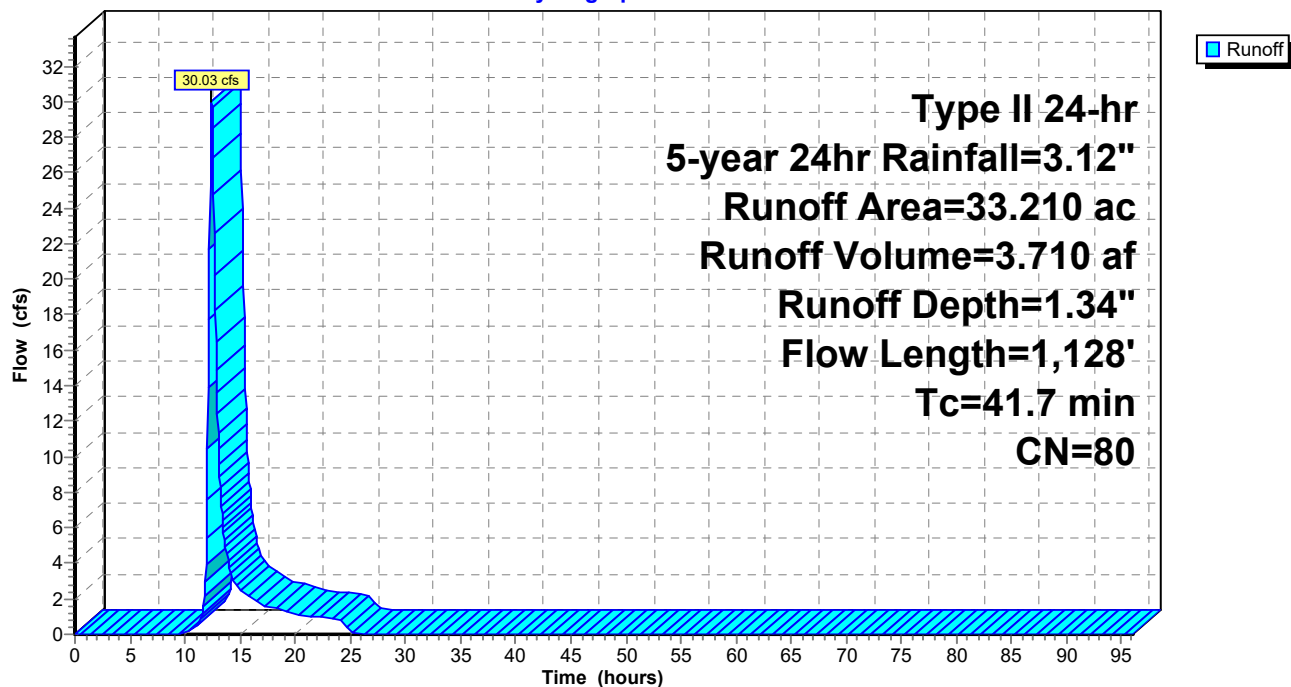
Summary for Subcatchment B9:

Runoff = 30.03 cfs @ 12.40 hrs, Volume= 3.710 af, Depth= 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-year 24hr Rainfall=3.12"

Area (ac)	CN	Description
* 33.210	80	
33.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.5	100	0.0080	0.10		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.2	1,028	0.0062	0.71		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
41.7	1,128	Total			

Subcatchment B9:**Hydrograph**

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentB1:	Runoff Area=1,124.640 ac 0.00% Impervious Runoff Depth=1.65" Flow Length=12,505' Tc=64.6 min CN=79 Runoff=919.86 cfs 154.816 af
SubcatchmentB10:	Runoff Area=50.450 ac 0.00% Impervious Runoff Depth=1.72" Flow Length=2,208' Tc=54.3 min CN=80 Runoff=49.13 cfs 7.248 af
SubcatchmentB11:	Runoff Area=117.760 ac 0.00% Impervious Runoff Depth=1.45" Flow Length=3,512' Tc=93.1 min CN=76 Runoff=62.73 cfs 14.187 af
SubcatchmentB12:	Runoff Area=22.670 ac 0.00% Impervious Runoff Depth=1.38" Flow Length=1,883' Tc=79.8 min CN=75 Runoff=12.78 cfs 2.607 af
SubcatchmentB13:	Runoff Area=37.130 ac 0.00% Impervious Runoff Depth=1.80" Flow Length=2,542' Tc=74.5 min CN=81 Runoff=29.99 cfs 5.563 af
SubcatchmentB14:	Runoff Area=427.330 ac 0.00% Impervious Runoff Depth=1.58" Flow Length=7,680' Tc=133.1 min CN=78 Runoff=191.43 cfs 56.317 af
SubcatchmentB15:	Runoff Area=60.430 ac 0.00% Impervious Runoff Depth=1.51" Flow Length=1,617' Tc=104.7 min CN=77 Runoff=30.86 cfs 7.618 af
SubcatchmentB16:	Runoff Area=198.250 ac 0.00% Impervious Runoff Depth=1.51" Flow Length=6,834' Tc=223.3 min CN=77 Runoff=55.76 cfs 24.991 af
SubcatchmentB17:	Runoff Area=41.100 ac 0.00% Impervious Runoff Depth=1.72" Flow Length=789' Tc=24.3 min CN=80 Runoff=69.47 cfs 5.905 af
SubcatchmentB18:	Runoff Area=81.990 ac 0.00% Impervious Runoff Depth=1.72" Flow Length=2,386' Tc=46.0 min CN=80 Runoff=90.12 cfs 11.780 af
SubcatchmentB19:	Runoff Area=25.480 ac 0.00% Impervious Runoff Depth=1.72" Flow Length=2,008' Tc=56.5 min CN=80 Runoff=24.13 cfs 3.661 af
SubcatchmentB2:	Runoff Area=233.580 ac 0.00% Impervious Runoff Depth=1.51" Flow Length=3,410' Tc=30.4 min CN=77 Runoff=295.82 cfs 29.445 af
SubcatchmentB20:	Runoff Area=165.020 ac 0.00% Impervious Runoff Depth=1.72" Flow Length=5,408' Tc=53.5 min CN=80 Runoff=162.88 cfs 23.709 af
SubcatchmentB21:	Runoff Area=36.500 ac 0.00% Impervious Runoff Depth=1.72" Flow Length=1,868' Tc=83.6 min CN=80 Runoff=25.73 cfs 5.244 af
SubcatchmentB22:	Runoff Area=52.290 ac 0.00% Impervious Runoff Depth=1.72" Flow Length=2,743' Tc=77.3 min CN=80 Runoff=39.14 cfs 7.513 af
SubcatchmentB23:	Runoff Area=43.170 ac 0.00% Impervious Runoff Depth=1.72" Flow Length=2,125' Tc=71.9 min CN=80 Runoff=34.19 cfs 6.202 af

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SubcatchmentB24: Runoff Area=22.660 ac 0.00% Impervious Runoff Depth=0.71"
Flow Length=657' Tc=22.1 min CN=63 Runoff=13.54 cfs 1.348 af

SubcatchmentB25: Runoff Area=32.280 ac 0.00% Impervious Runoff Depth=1.08"
Flow Length=1,923' Tc=41.0 min CN=70 Runoff=21.94 cfs 2.896 af

SubcatchmentB26: Runoff Area=127.500 ac 0.00% Impervious Runoff Depth=1.45"
Flow Length=4,618' Tc=167.6 min CN=76 Runoff=42.61 cfs 15.360 af

SubcatchmentB27: Runoff Area=21.580 ac 0.00% Impervious Runoff Depth=0.91"
Flow Length=746' Tc=30.6 min CN=67 Runoff=14.53 cfs 1.641 af

SubcatchmentB28: Runoff Area=17.080 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=1,454' Tc=38.3 min CN=80 Runoff=21.36 cfs 2.454 af

SubcatchmentB29: Runoff Area=87.840 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=3,349' Tc=117.1 min CN=80 Runoff=48.07 cfs 12.620 af

SubcatchmentB3: Runoff Area=41.070 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=1,918' Tc=56.6 min CN=80 Runoff=38.80 cfs 5.901 af

SubcatchmentB30: Runoff Area=1.940 ac 0.00% Impervious Runoff Depth=1.80"
Flow Length=303' Tc=14.3 min CN=81 Runoff=4.59 cfs 0.291 af

SubcatchmentB4: Runoff Area=144.430 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=2,984' Tc=42.8 min CN=80 Runoff=167.43 cfs 20.751 af

SubcatchmentB5: Runoff Area=366.880 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=4,701' Tc=66.4 min CN=80 Runoff=308.69 cfs 52.711 af

SubcatchmentB6: Runoff Area=113.630 ac 0.00% Impervious Runoff Depth=1.58"
Flow Length=3,466' Tc=49.8 min CN=78 Runoff=106.91 cfs 14.975 af

SubcatchmentB7: Runoff Area=397.250 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=6,733' Tc=245.1 min CN=80 Runoff=121.24 cfs 57.074 af

SubcatchmentB8: Runoff Area=13.070 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=814' Tc=25.3 min CN=80 Runoff=21.55 cfs 1.878 af

SubcatchmentB9: Runoff Area=33.210 ac 0.00% Impervious Runoff Depth=1.72"
Flow Length=1,128' Tc=41.7 min CN=80 Runoff=39.12 cfs 4.771 af

Total Runoff Area = 4,138.210 ac Runoff Volume = 561.479 af Average Runoff Depth = 1.63"
100.00% Pervious = 4,138.210 ac 0.00% Impervious = 0.000 ac

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Summary for Subcatchment B1:

Runoff = 919.86 cfs @ 12.70 hrs, Volume= 154.816 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 1,124.640	79	
1,124.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	100	0.0050	0.08		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
8.5	656	0.0203	1.28		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
9.4	4,083	0.0048	7.25	362.50	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.0	56	0.0535	19.68	61.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.2	94	0.0085	9.65	482.39	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	47	0.0021	3.90	12.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
12.3	3,705	0.0023	5.02	250.93	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	40	0.0025	4.26	13.37	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.4	1,819	0.0020	4.71	282.81	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
0.1	45	0.0156	10.63	33.39	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.1	1,860	0.0023	5.05	303.28	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
64.6	12,505	Total			

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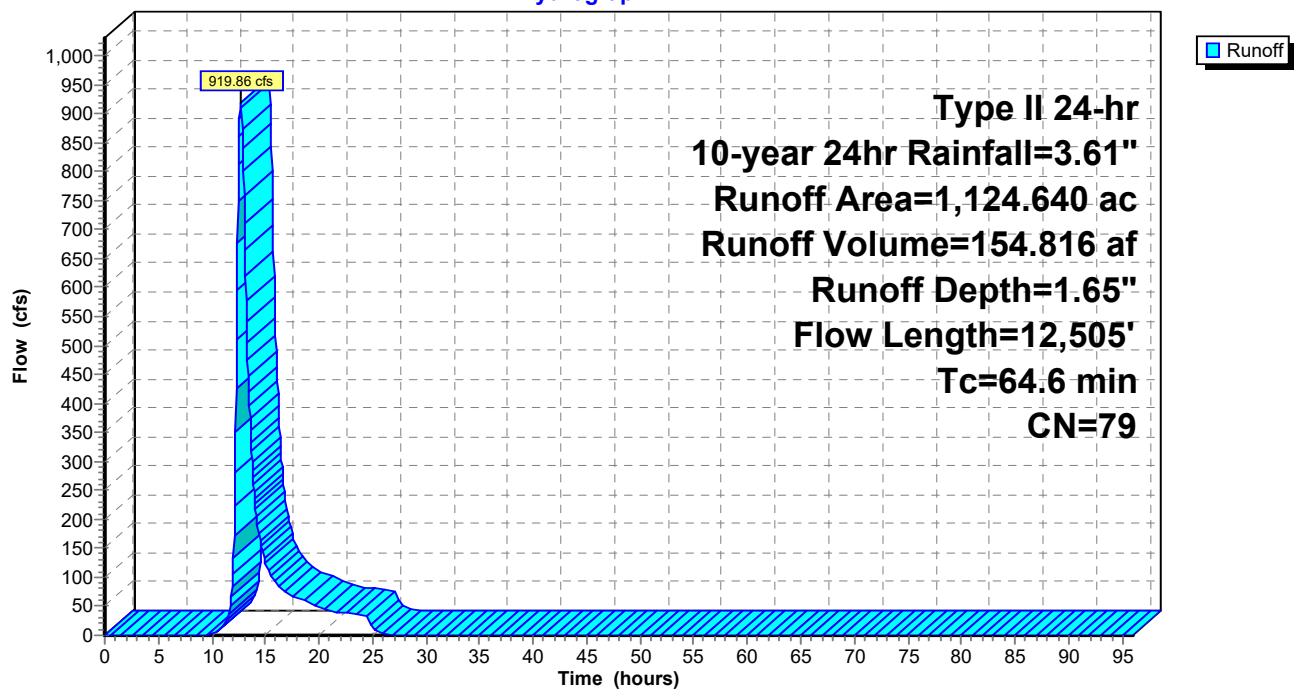
Type II 24-hr 10-year 24hr Rainfall=3.61"

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Subcatchment B1:

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Summary for Subcatchment B10:

Runoff = 49.13 cfs @ 12.57 hrs, Volume= 7.248 af, Depth= 1.72"

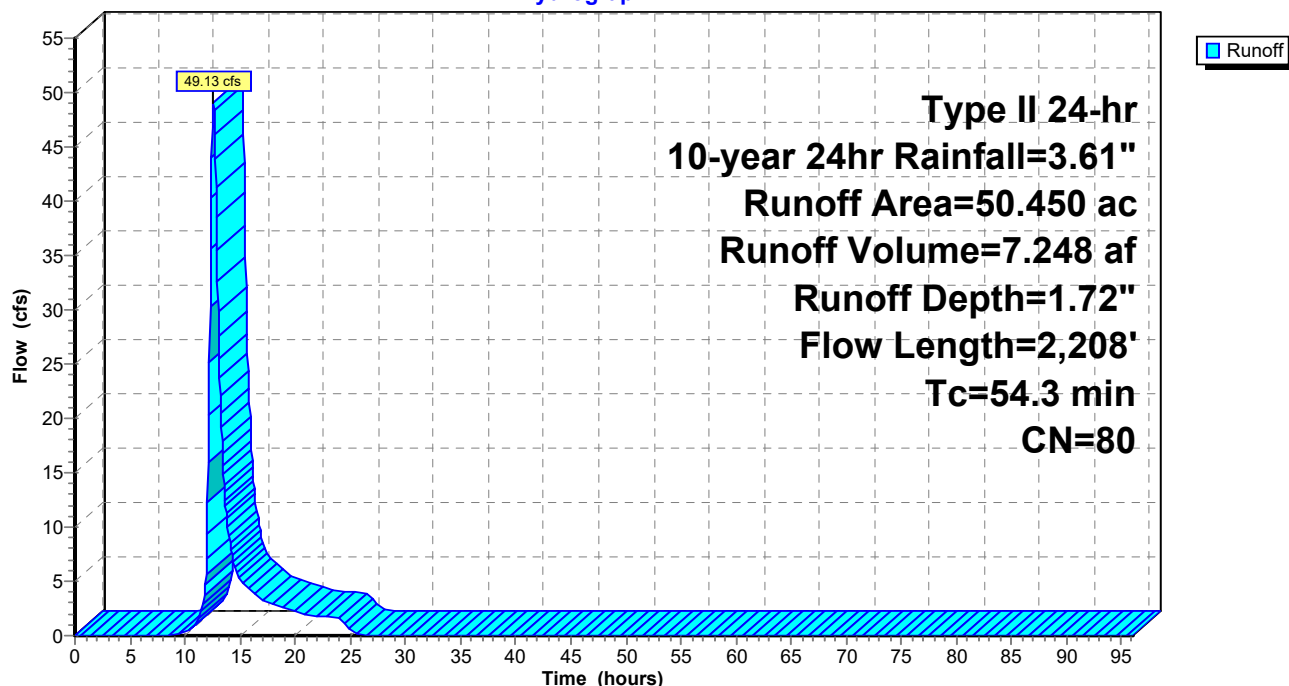
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 50.450	80	
50.450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.1	100	0.0040	0.07		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
28.3	1,408	0.0085	0.83		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	72	0.0014	4.57	243.51	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
0.1	34	0.0029	4.58	14.40	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	594	0.0024	3.94	105.08	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
54.3	2,208	Total			

Subcatchment B10:

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Summary for Subcatchment B11:

Runoff = 62.73 cfs @ 13.12 hrs, Volume= 14.187 af, Depth= 1.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 117.760	76	
117.760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7	100	0.0070	0.05		Sheet Flow, SH-WOODS Woods: Light underbrush n= 0.400 P2= 2.54"
50.0	2,516	0.0087	0.84		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.2	413	0.0017	1.33	4.44	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.2	69	0.0277	7.08	22.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.0	14	0.0073	7.97	332.27	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
0.1	24	0.0165	5.47	17.17	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.9	376	0.0053	6.79	283.12	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
93.1	3,512	Total			

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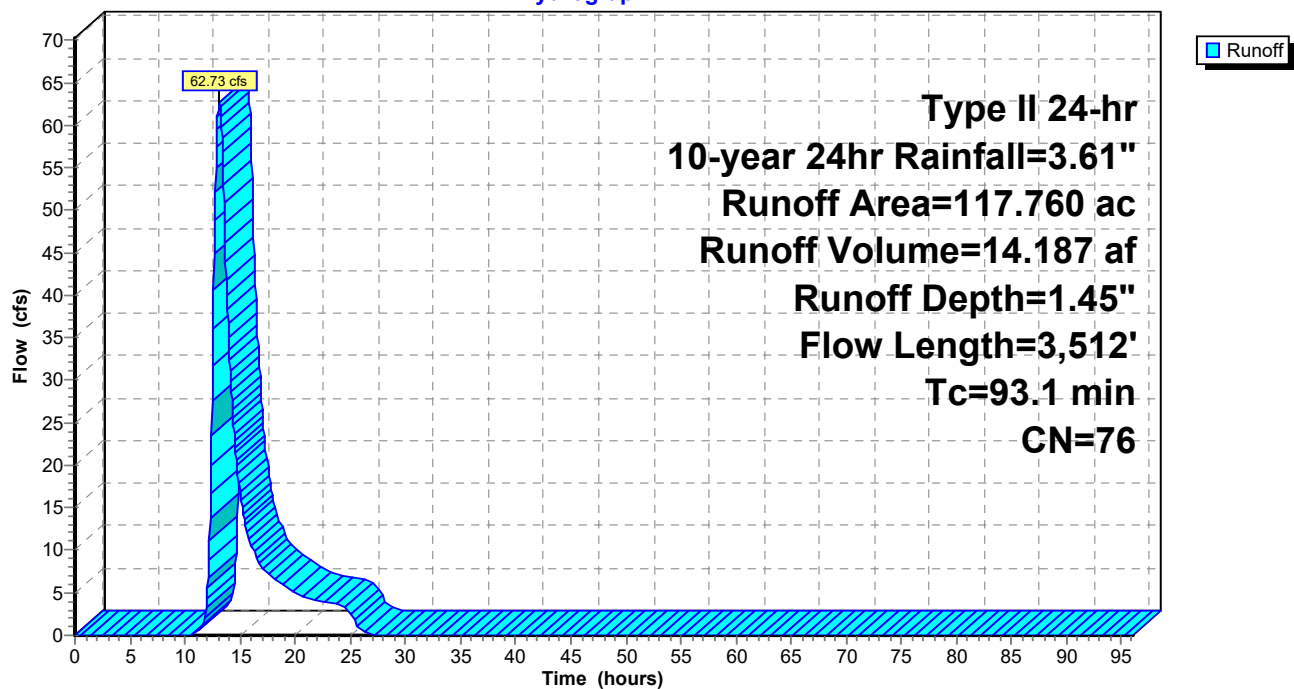
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Subcatchment B11:

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Summary for Subcatchment B12:

Runoff = 12.78 cfs @ 12.93 hrs, Volume= 2.607 af, Depth= 1.38"

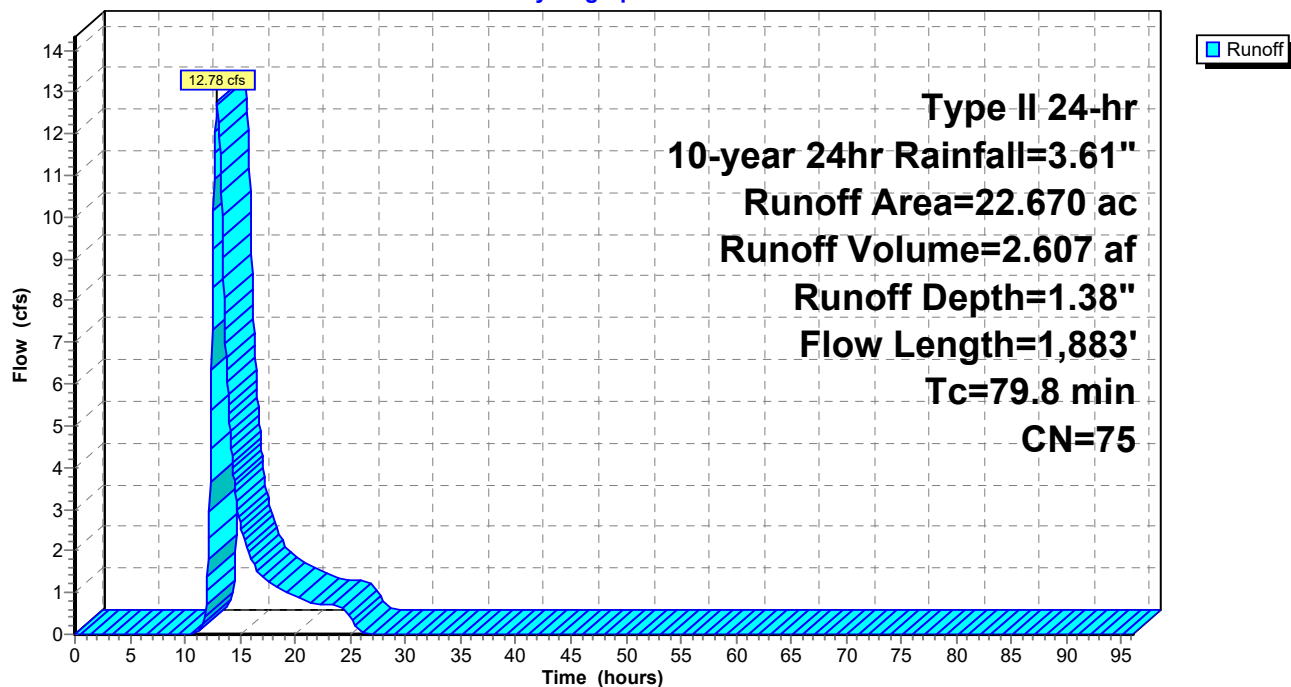
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 22.670	75	
22.670		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
67.4	1,783	0.0024	0.44		Shallow Concentrated Flow, SH-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
79.8	1,883	Total			

Subcatchment B12:

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Summary for Subcatchment B13:

Runoff = 29.99 cfs @ 12.83 hrs, Volume= 5.563 af, Depth= 1.80"

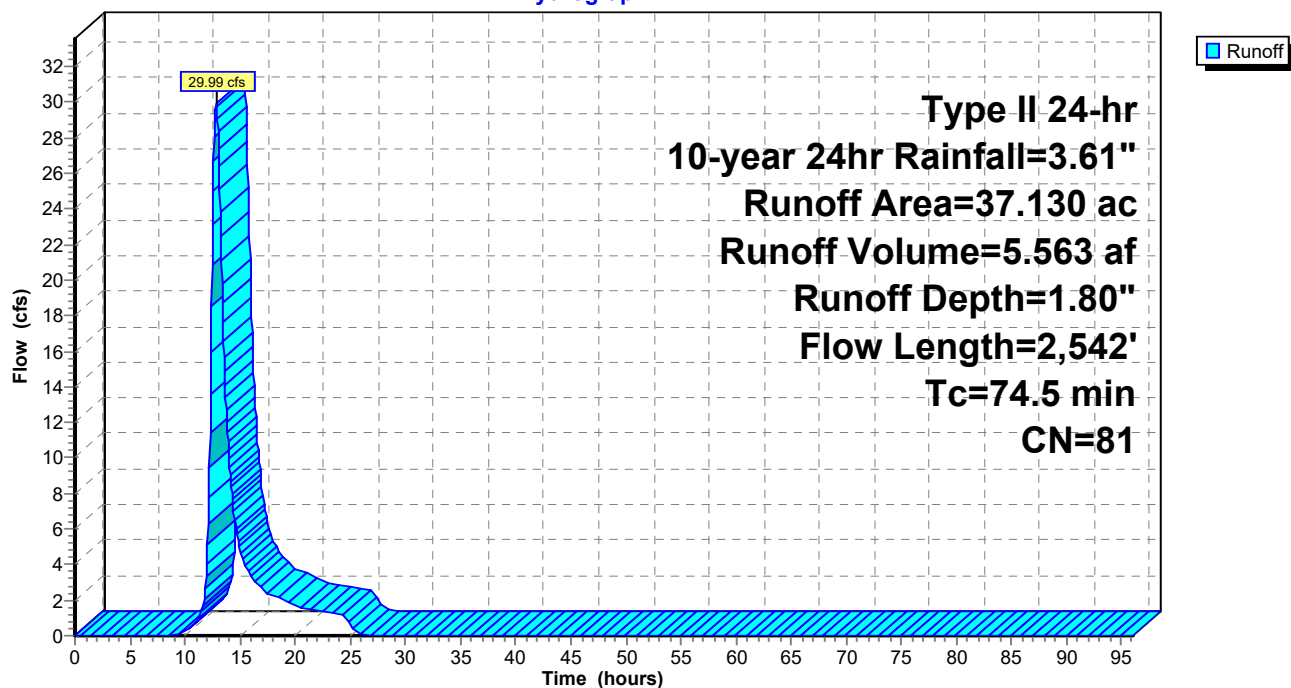
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 37.130	81	
37.130		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	100	0.0280	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
50.7	1,836	0.0045	0.60		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
13.2	571	0.0005	0.72	2.41	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.0	35	0.0751	23.32	73.27	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
74.5	2,542	Total			

Subcatchment B13:

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Summary for Subcatchment B14:

Runoff = 191.43 cfs @ 13.69 hrs, Volume= 56.317 af, Depth= 1.58"

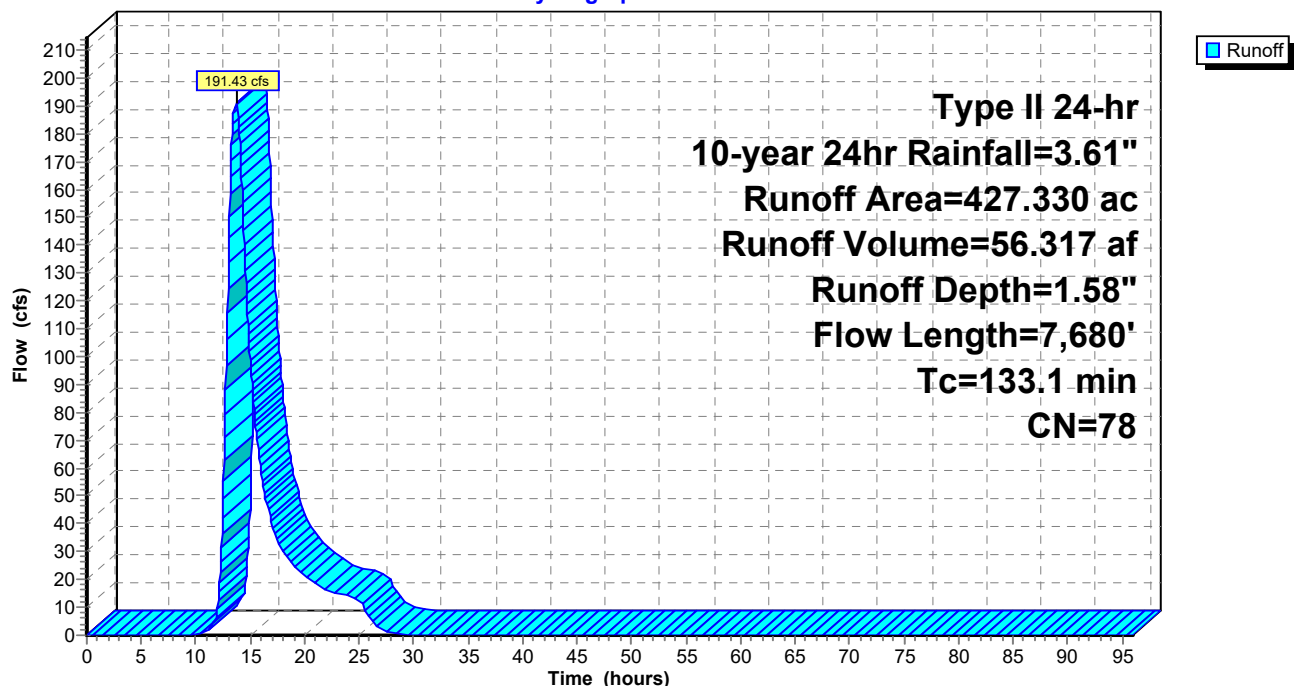
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 427.330	78	
427.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
95.6	2,475	0.0023	0.43		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
25.3	5,105	0.0010	3.37	336.93	Parabolic Channel, DITCH W=50.00' D=3.00' Area=100.0 sf Perim=50.5' n= 0.022
133.1	7,680	Total			

Subcatchment B14:

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Summary for Subcatchment B15:

Runoff = 30.86 cfs @ 13.26 hrs, Volume= 7.618 af, Depth= 1.51"

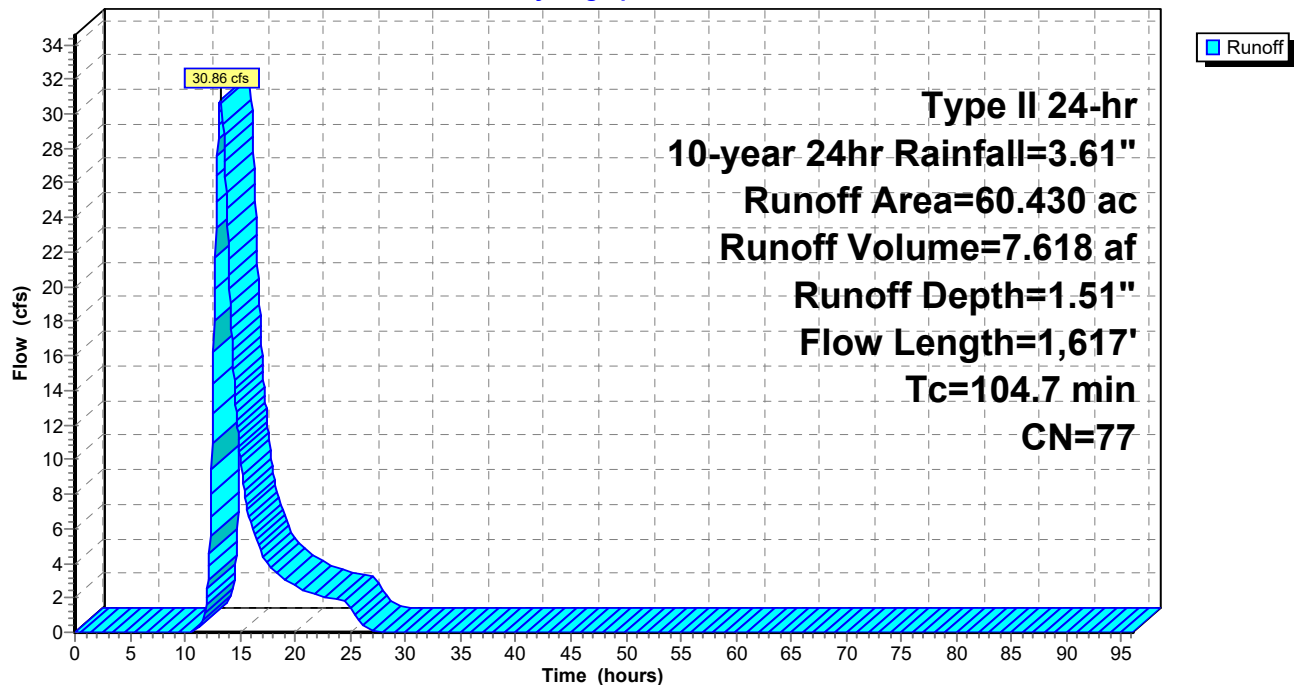
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 60.430	77	
60.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0250	0.15		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
93.6	1,517	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
104.7	1,617	Total			

Subcatchment B15:

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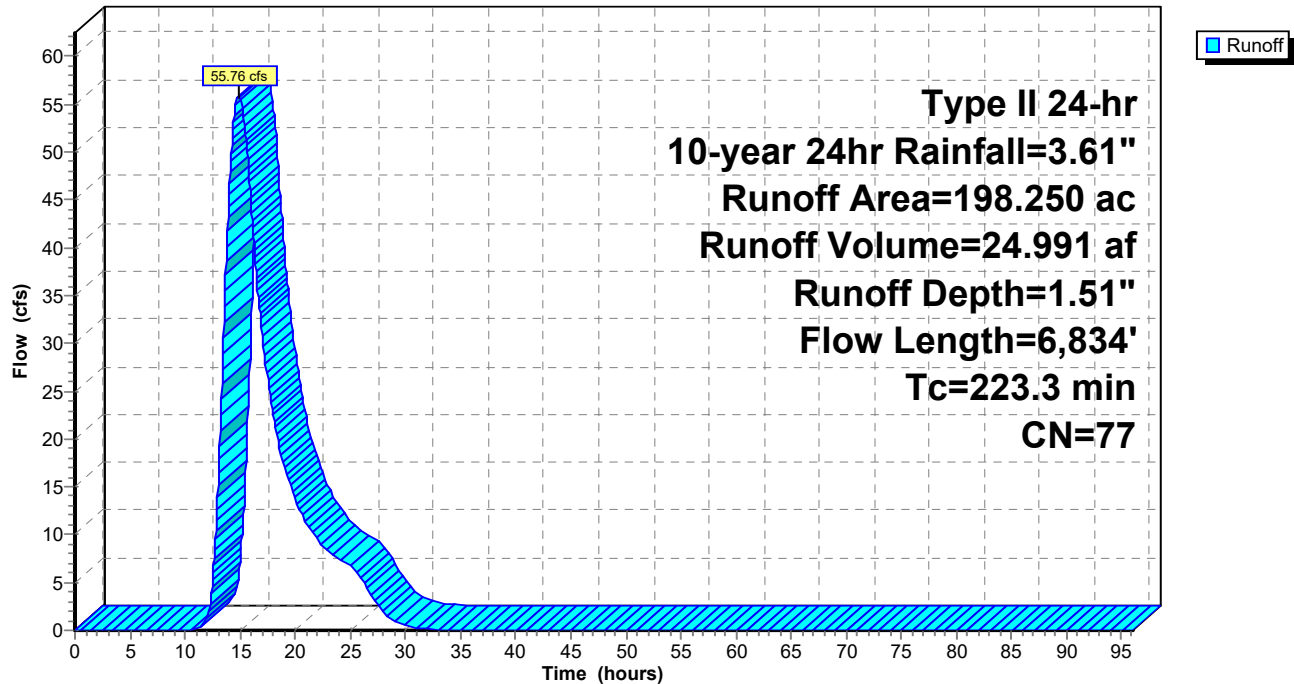
Summary for Subcatchment B16:

Runoff = 55.76 cfs @ 14.88 hrs, Volume= 24.991 af, Depth= 1.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 198.250	77	
198.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
14.5	512	0.0043	0.59		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	41	0.0073	7.27	22.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
37.0	1,056	0.0028	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	35	0.0028	4.50	14.15	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
145.4	2,355	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.3	705	0.0045	5.16	68.76	Parabolic Channel, DITCH W=10.00' D=2.00' Area=13.3 sf Perim=11.0' n= 0.022
0.2	42	0.0024	4.17	13.10	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
9.3	1,988	0.0012	3.58	143.17	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
223.3	6,834	Total			

Subcatchment B16:**Hydrograph**

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Type II 24-hr 10-year 24hr Rainfall=3.61"

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Summary for Subcatchment B17:

Runoff = 69.47 cfs @ 12.18 hrs, Volume= 5.905 af, Depth= 1.72"

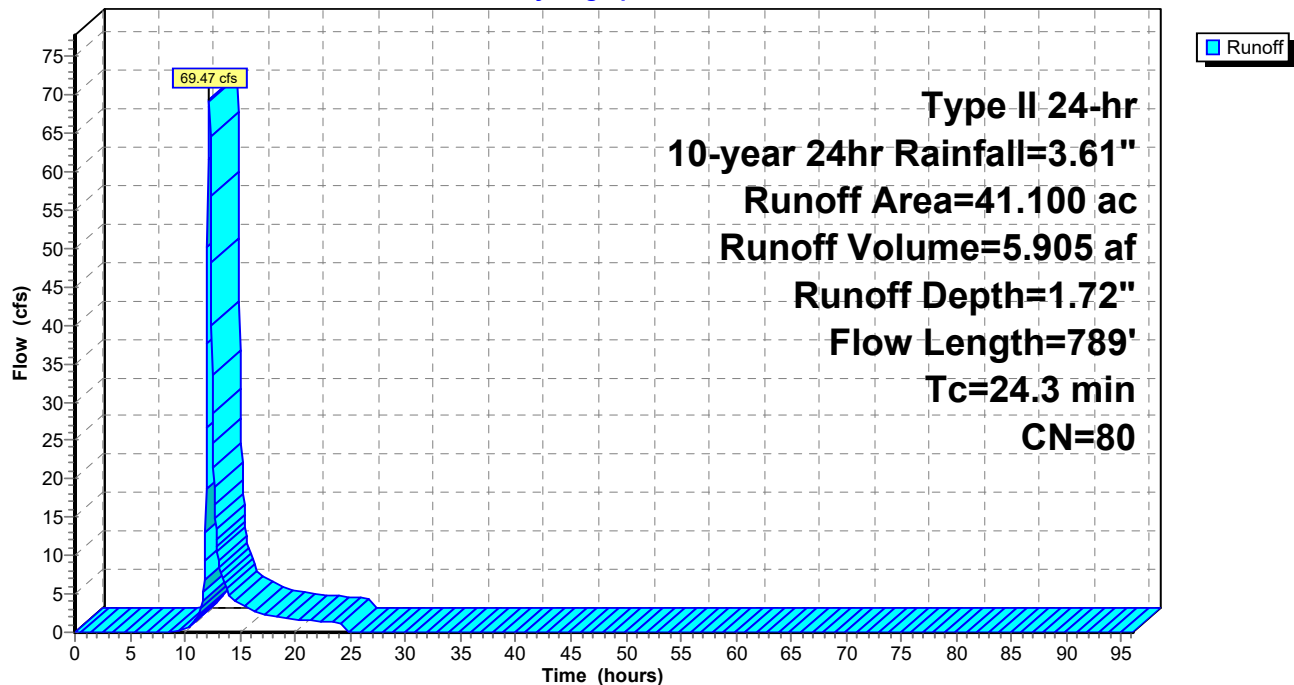
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 41.100	80	
41.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
10.3	689	0.0154	1.12		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
24.3	789	Total			

Subcatchment B17:

Hydrograph



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Type II 24-hr 10-year 24hr Rainfall=3.61"

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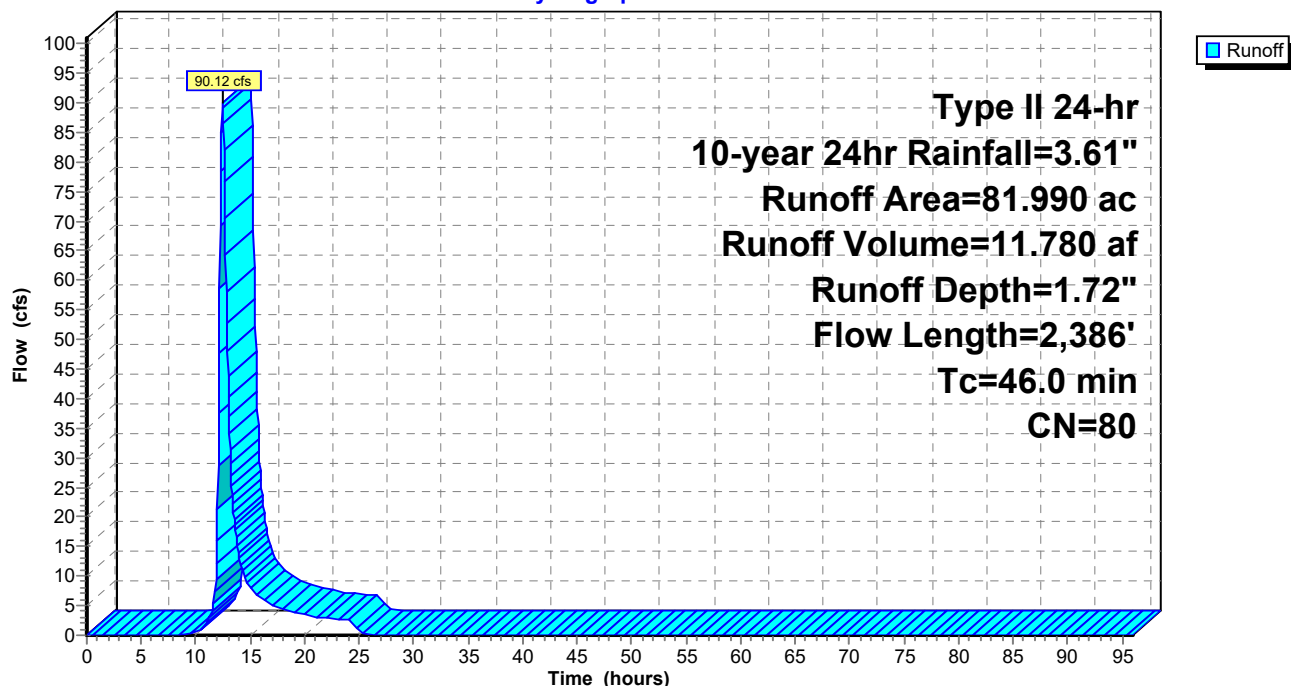
Summary for Subcatchment B18:

Runoff = 90.12 cfs @ 12.45 hrs, Volume= 11.780 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 81.990	80	
81.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0300	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.6	1,156	0.0076	0.78		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
11.1	1,130	0.0011	1.70	22.69	Parabolic Channel, DITCH W=20.00' D=1.00' Area=13.3 sf Perim=20.1' n= 0.022
46.0	2,386	Total			

Subcatchment B18:**Hydrograph**

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Summary for Subcatchment B19:

Runoff = 24.13 cfs @ 12.59 hrs, Volume= 3.661 af, Depth= 1.72"

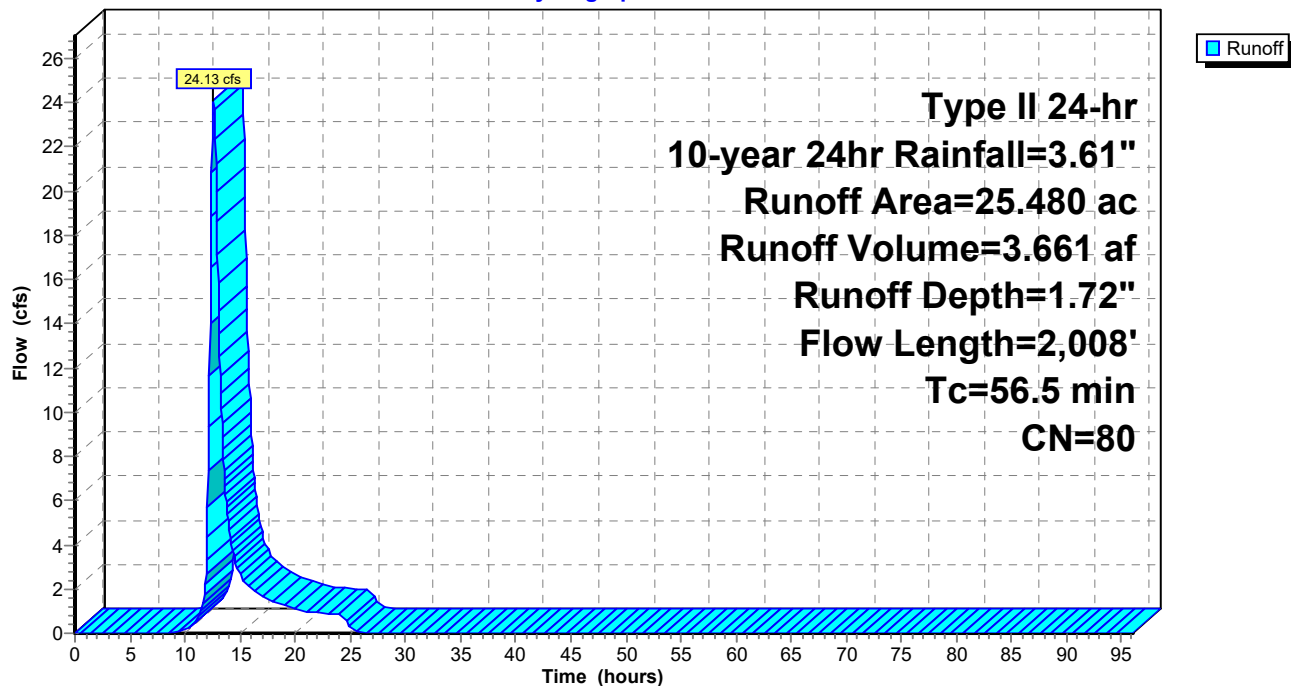
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 25.480	80	
25.480		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0180	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
19.0	999	0.0095	0.88		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
24.8	909	0.0046	0.61		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
56.5	2,008	Total			

Subcatchment B19:

Hydrograph



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Type II 24-hr 10-year 24hr Rainfall=3.61"

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Summary for Subcatchment B2:

Runoff = 295.82 cfs @ 12.26 hrs, Volume= 29.445 af, Depth= 1.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 233.580	77	
233.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	100	0.0106	0.11		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
3.4	210	0.0133	1.04		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
4.2	178	0.0051	0.71		Shallow Concentrated Flow, SCF-OPEN SPACE Nearly Bare & Untilled Kv= 10.0 fps
0.2	62	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	409	0.0169	13.17	87.83	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.011
5.2	1,987	0.0038	6.37	254.77	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	42	0.0047	5.83	18.33	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	218	0.0041	6.62	264.64	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	44	0.0160	10.76	33.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	160	0.0050	5.69	151.67	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
30.4	3,410	Total			

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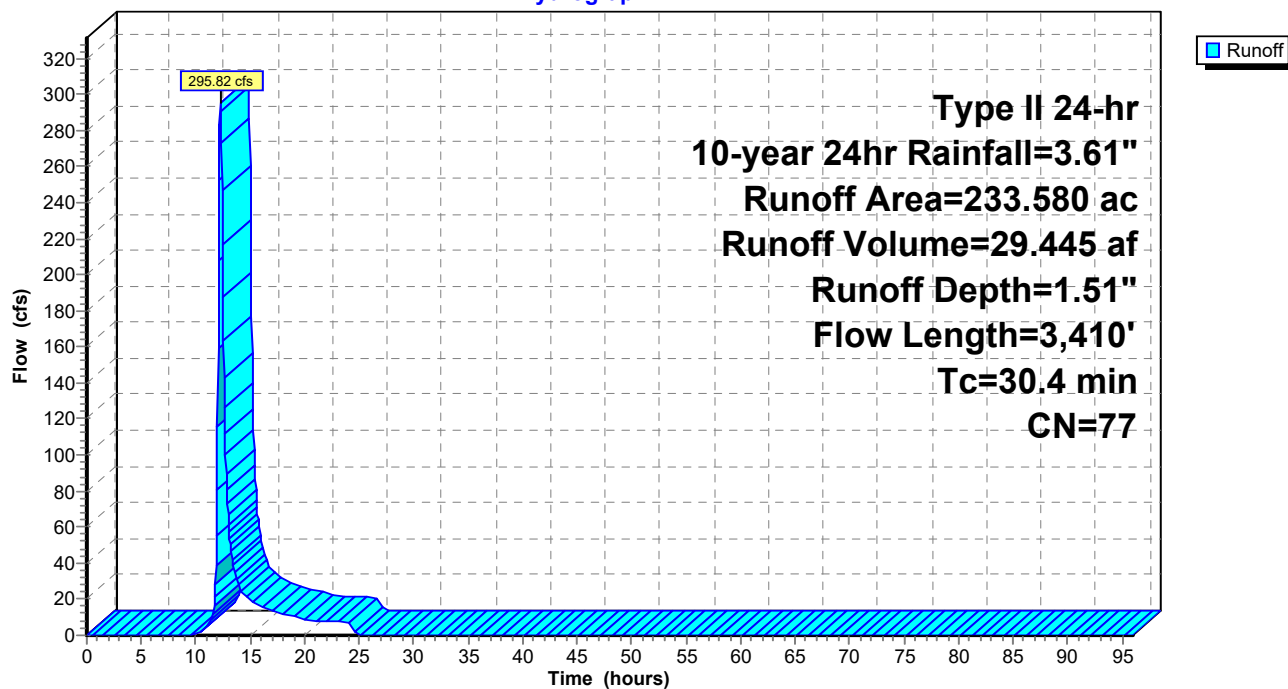
Type II 24-hr 10-year 24hr Rainfall=3.61"

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Subcatchment B2:

Hydrograph



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Summary for Subcatchment B20:

Runoff = 162.88 cfs @ 12.55 hrs, Volume= 23.709 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description			
* 165.020	80				
165.020		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.3	1,262	0.0079	0.80		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	94	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.8	167	0.0294	1.54		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	61	0.0016	3.40	10.69	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	2,712	0.0014	7.73	309.28	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.011
0.2	43	0.0023	4.08	12.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	969	0.0007	2.77	138.43	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
53.5	5,408	Total			

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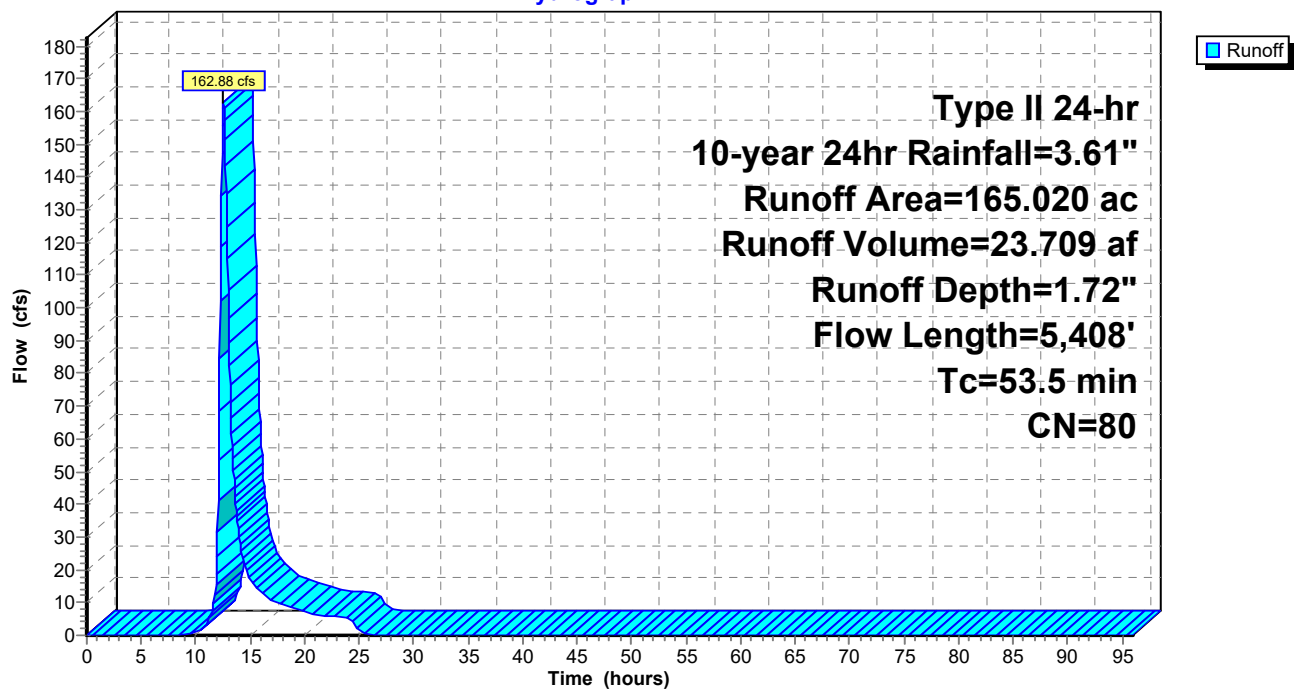
Type II 24-hr 10-year 24hr Rainfall=3.61"

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Subcatchment B20:

Hydrograph



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Summary for Subcatchment B21:

Runoff = 25.73 cfs @ 12.94 hrs, Volume= 5.244 af, Depth= 1.72"

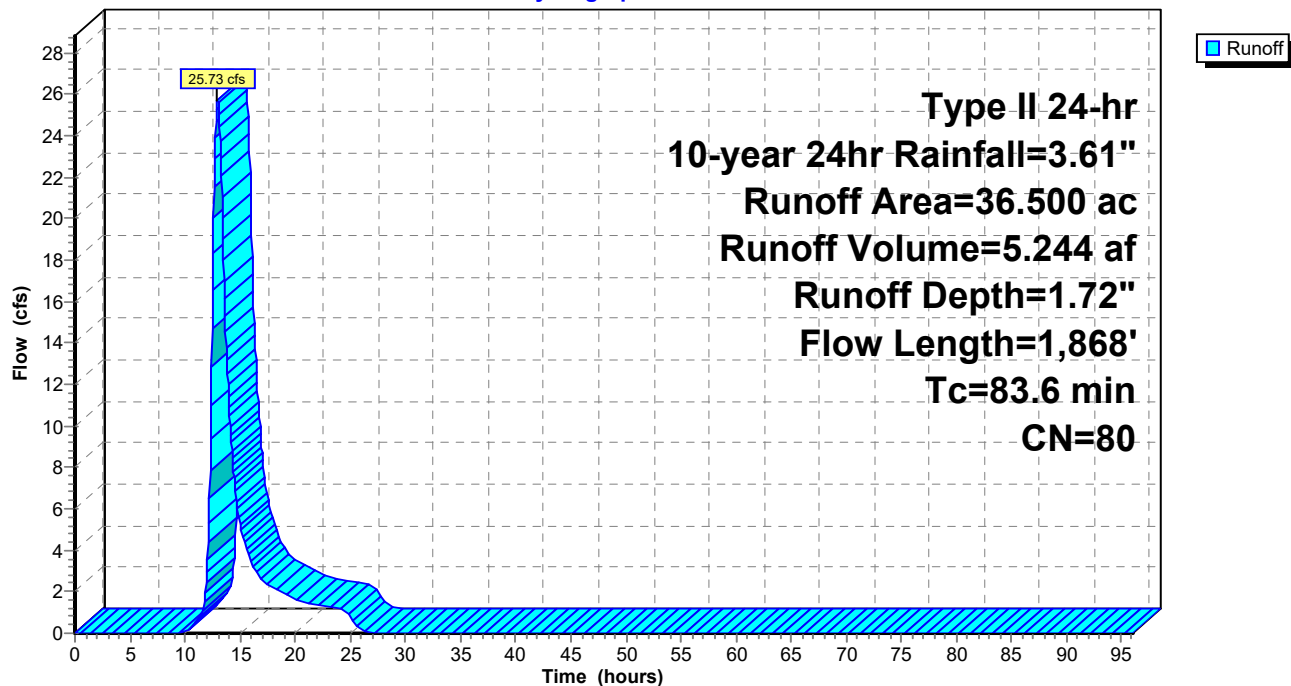
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 36.500	80	
36.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
25.9	1,010	0.0052	0.65		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
43.3	758	0.0034	0.29		Shallow Concentrated Flow, SCF-WOODS Woodland Kv= 5.0 fps
83.6	1,868	Total			

Subcatchment B21:

Hydrograph



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Type II 24-hr 10-year 24hr Rainfall=3.61"

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Summary for Subcatchment B22:

Runoff = 39.14 cfs @ 12.87 hrs, Volume= 7.513 af, Depth= 1.72"

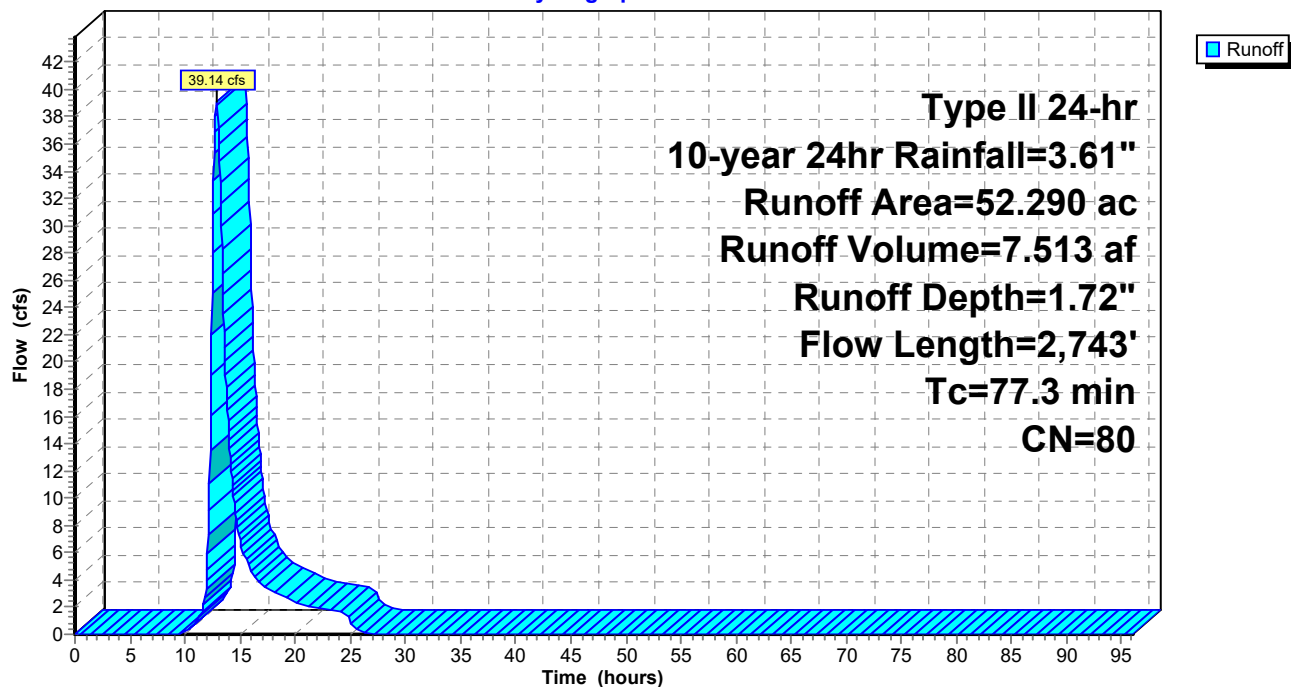
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 52.290	80	
52.290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
64.3	2,643	0.0058	0.69		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
77.3	2,743	Total			

Subcatchment B22:

Hydrograph



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Summary for Subcatchment B23:

Runoff = 34.19 cfs @ 12.80 hrs, Volume= 6.202 af, Depth= 1.72"

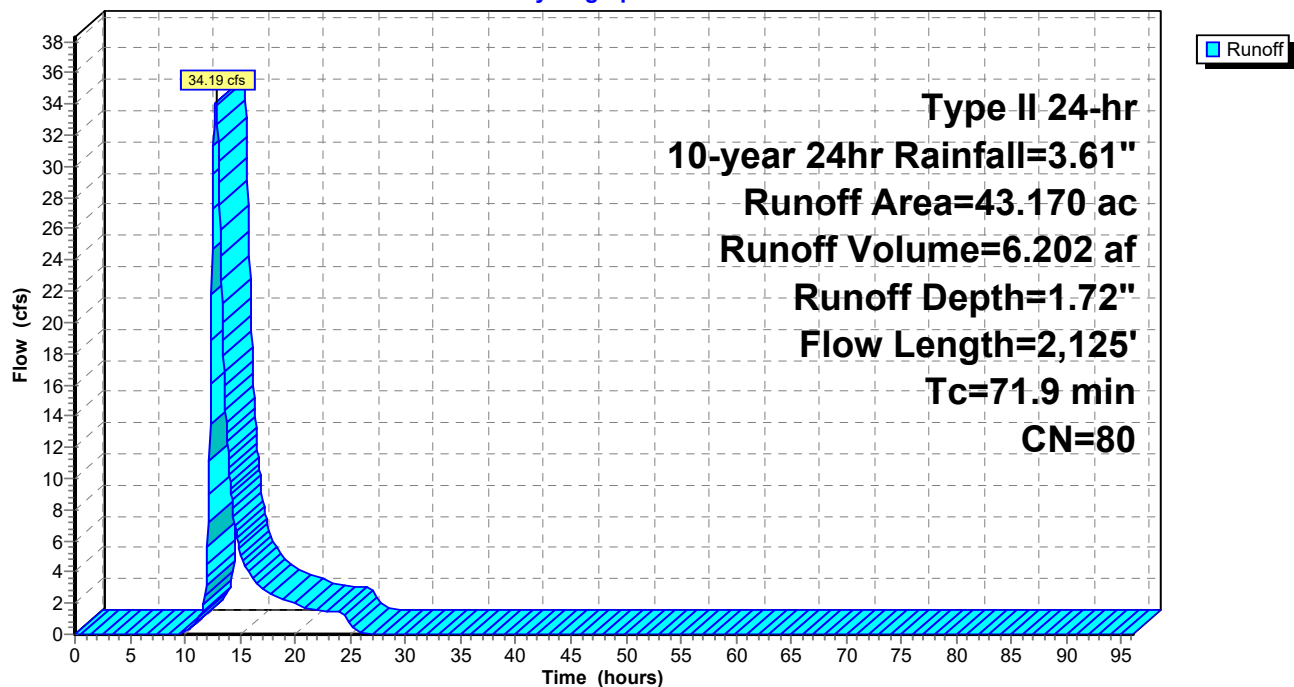
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 43.170	80	
43.170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	100	0.0100	0.10		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
55.9	2,025	0.0045	0.60		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
71.9	2,125	Total			

Subcatchment B23:

Hydrograph



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Summary for Subcatchment B24:

Runoff = 13.54 cfs @ 12.19 hrs, Volume= 1.348 af, Depth= 0.71"

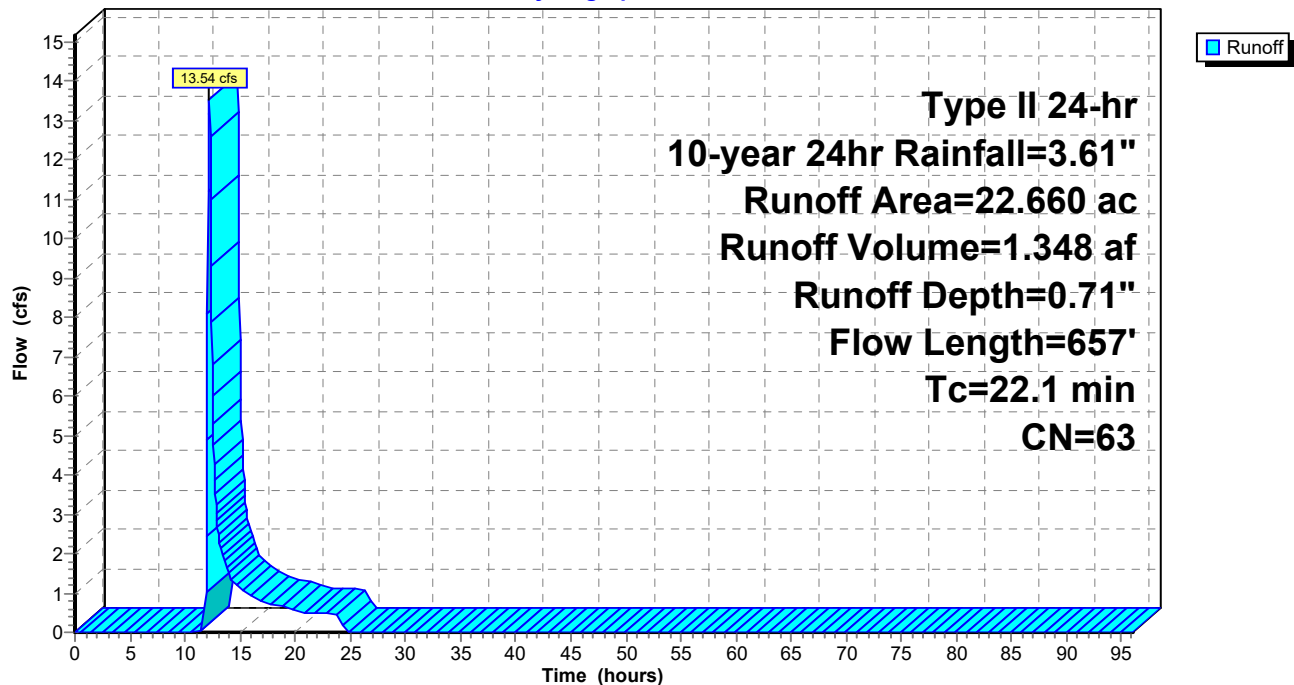
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 22.660	63	
22.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
7.7	557	0.0181	1.21		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
22.1	657	Total			

Subcatchment B24:

Hydrograph



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Type II 24-hr 10-year 24hr Rainfall=3.61"

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Summary for Subcatchment B25:

Runoff = 21.94 cfs @ 12.42 hrs, Volume= 2.896 af, Depth= 1.08"

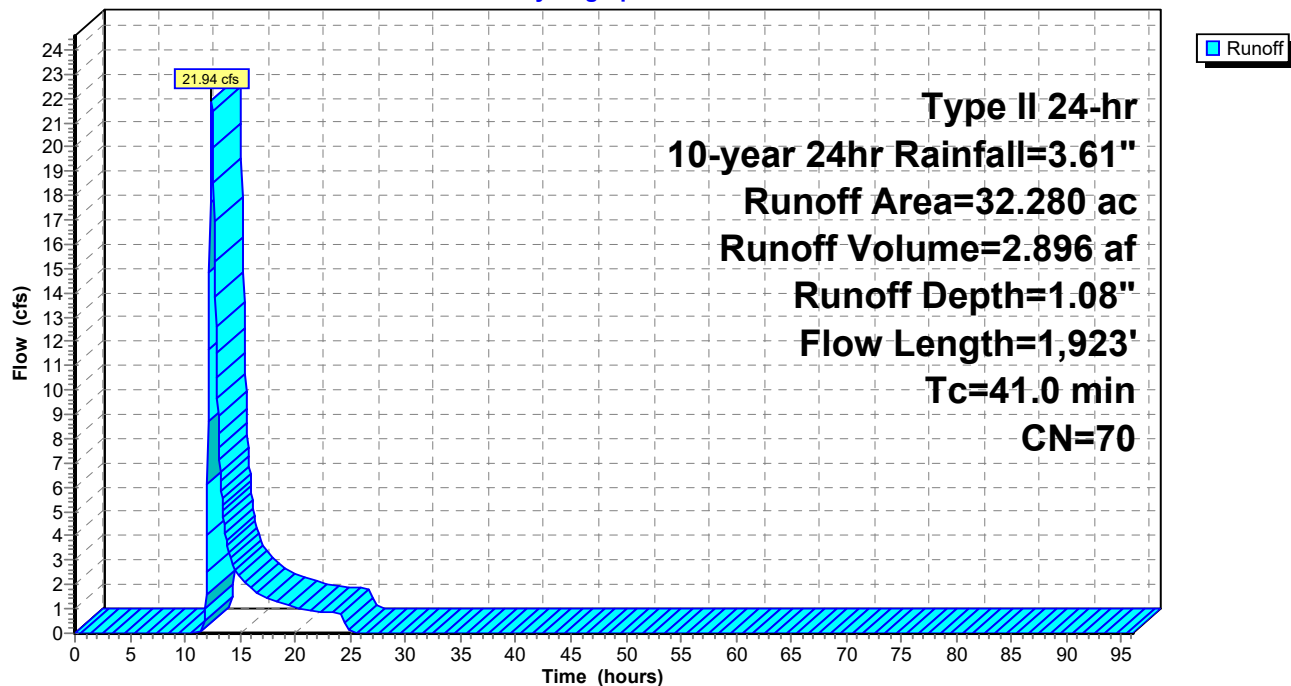
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 32.280	70	
32.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0230	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
27.0	1,311	0.0081	0.81		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.5	512	0.0047	3.47	23.16	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.022
41.0	1,923	Total			

Subcatchment B25:

Hydrograph



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Summary for Subcatchment B26:

Runoff = 42.61 cfs @ 14.09 hrs, Volume= 15.360 af, Depth= 1.45"

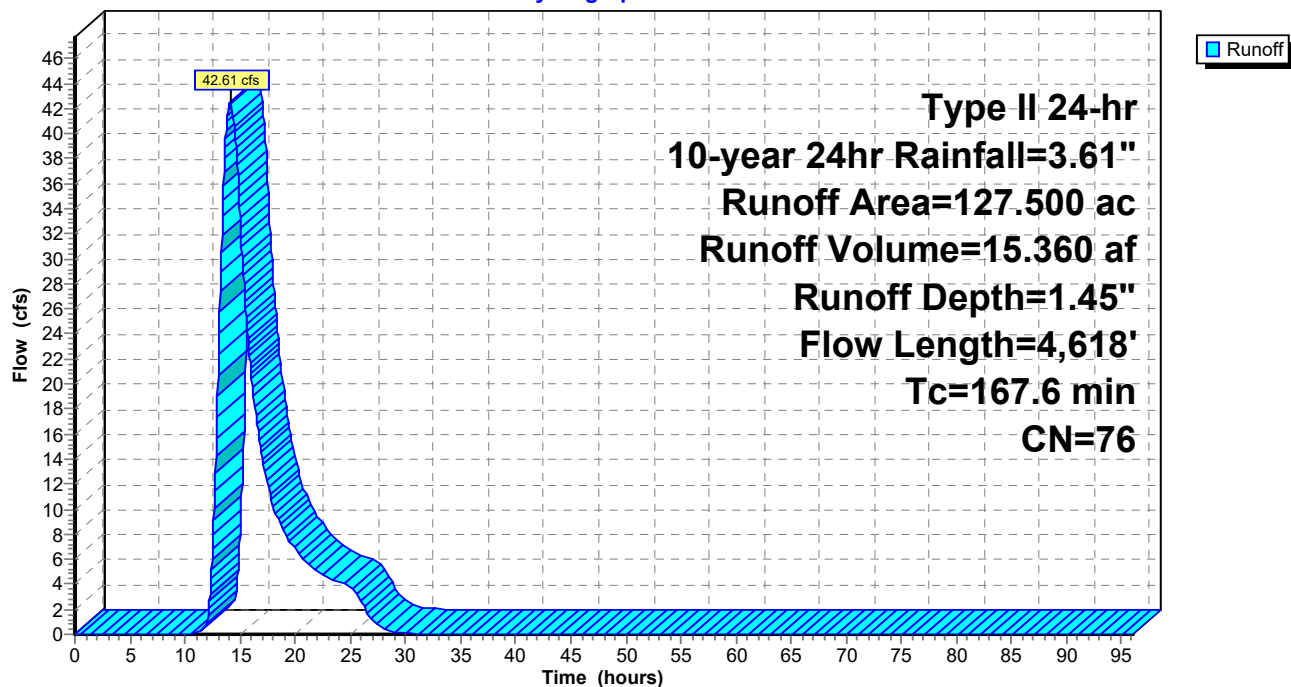
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 127.500	76	
127.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
155.4	4,518	0.0029	0.48		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
167.6	4,618	Total			

Subcatchment B26:

Hydrograph



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Summary for Subcatchment B27:

Runoff = 14.53 cfs @ 12.29 hrs, Volume= 1.641 af, Depth= 0.91"

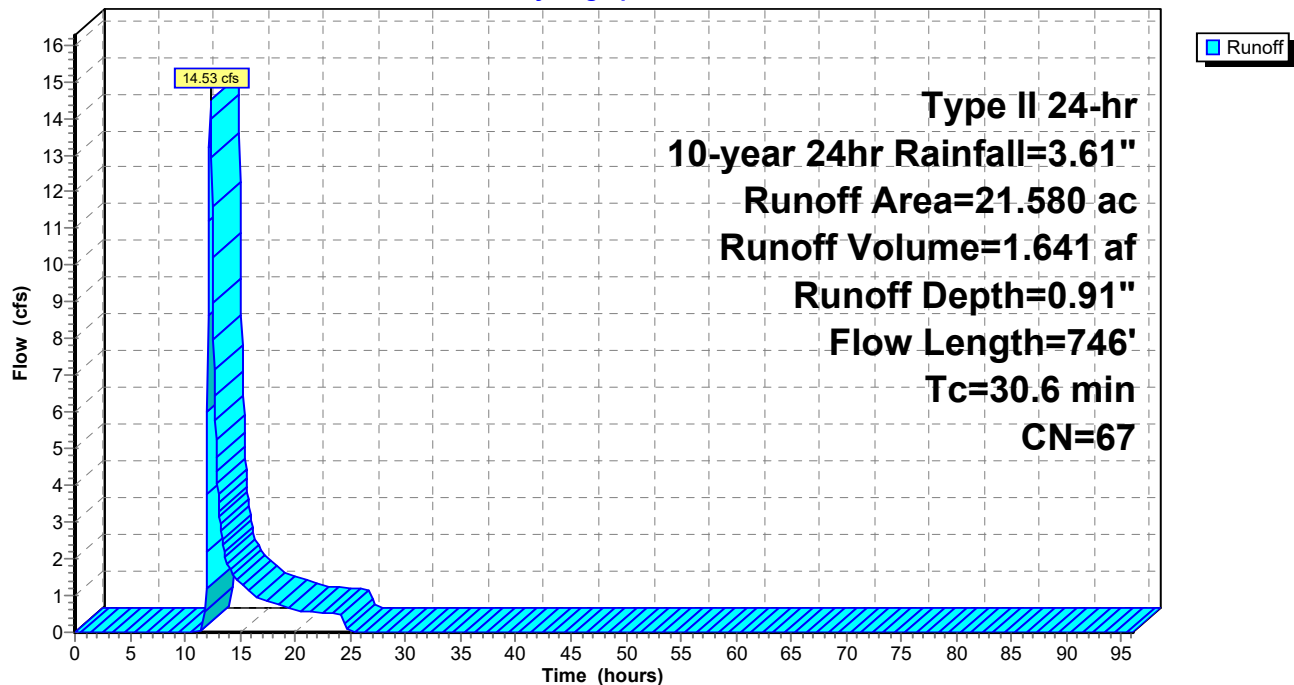
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 21.580	67	
21.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
18.9	646	0.0040	0.57		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
30.6	746	Total			

Subcatchment B27:

Hydrograph



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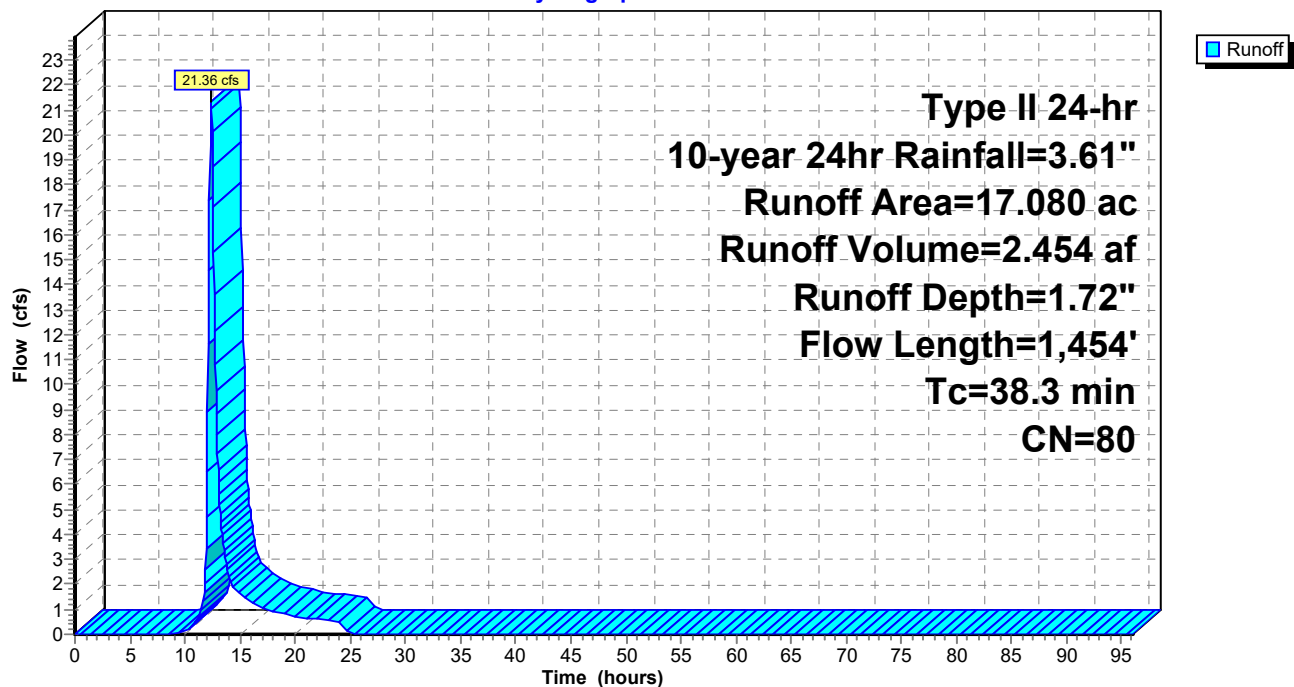
Summary for Subcatchment B28:

Runoff = 21.36 cfs @ 12.35 hrs, Volume= 2.454 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 17.080	80	
17.080		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.6	1,354	0.0089	0.85		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
38.3	1,454	Total			

Subcatchment B28:**Hydrograph**

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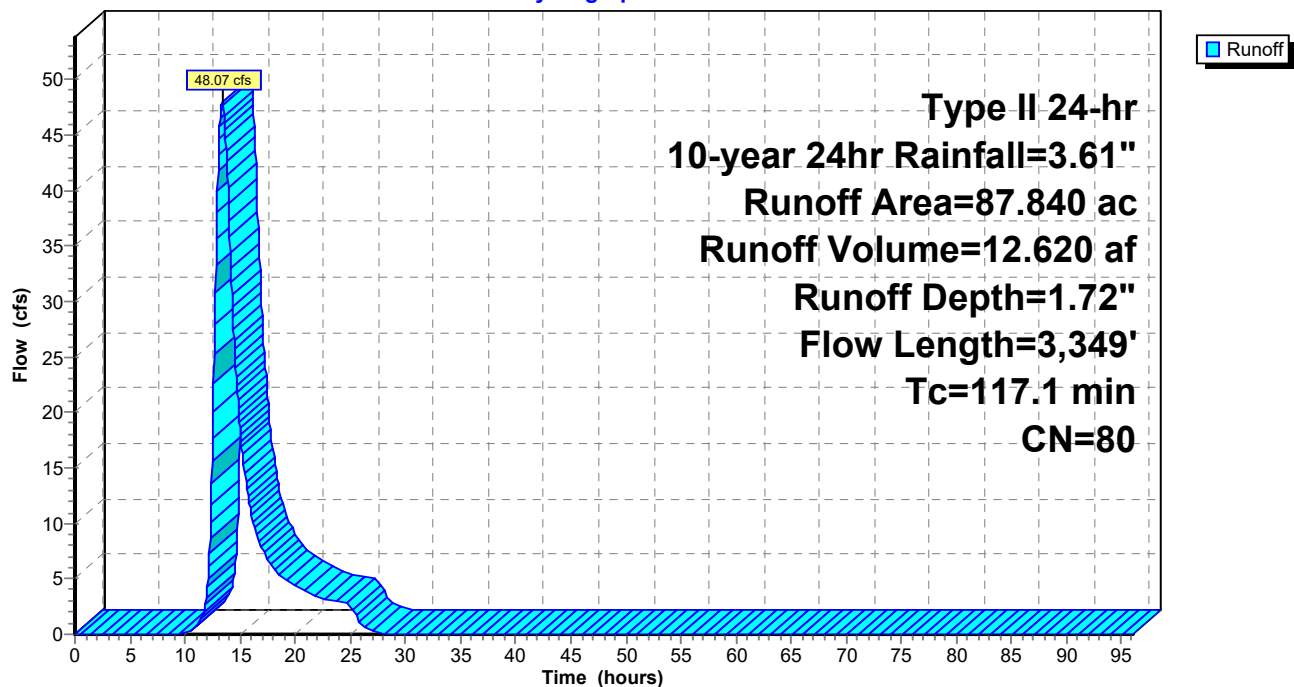
Summary for Subcatchment B29:

Runoff = 48.07 cfs @ 13.39 hrs, Volume= 12.620 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 87.840	80	
87.840		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
104.7	3,249	0.0033	0.52		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
117.1	3,349	Total			

Subcatchment B29:**Hydrograph**

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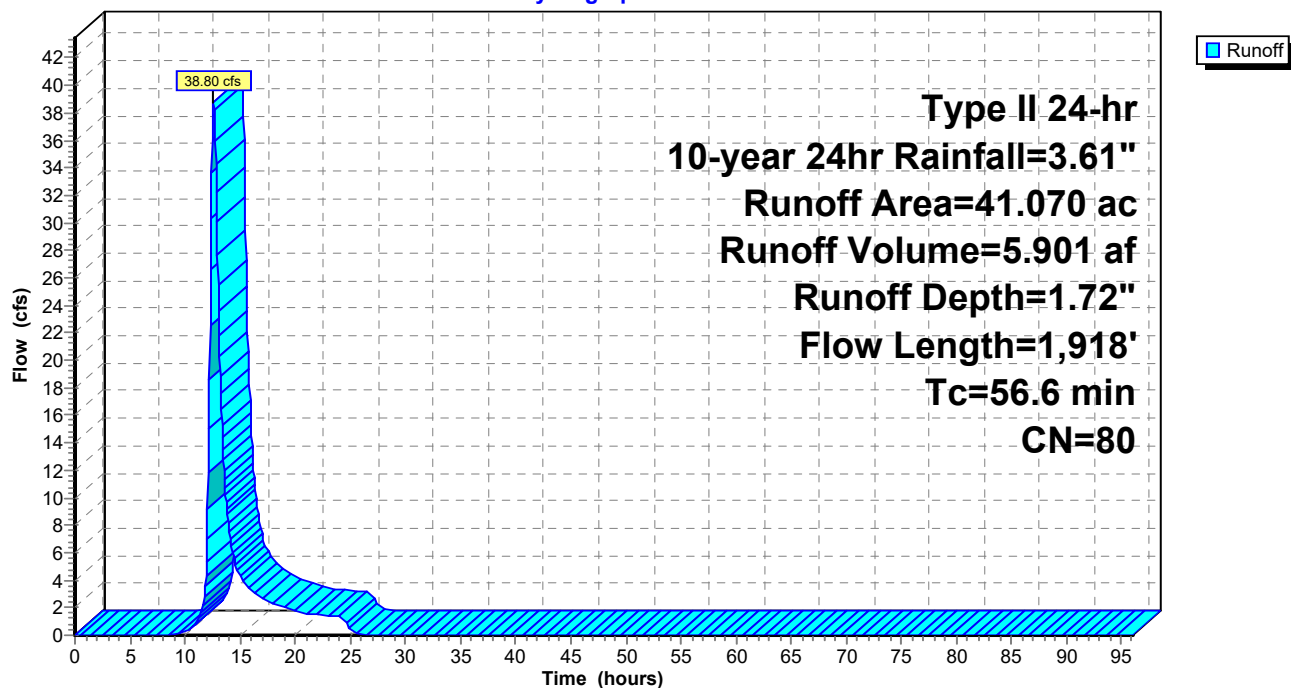
Summary for Subcatchment B3:

Runoff = 38.80 cfs @ 12.59 hrs, Volume= 5.901 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 41.070	80	
41.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.0	100	0.0030	0.06		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
29.2	1,561	0.0098	0.89		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
1.4	257	0.0093	3.13	20.85	Parabolic Channel, DITCH W=20.00' D=0.50' Area=6.7 sf Perim=20.0' n= 0.022
56.6	1,918	Total			

Subcatchment B3:**Hydrograph**

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Type II 24-hr 10-year 24hr Rainfall=3.61"

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Summary for Subcatchment B30:

Runoff = 4.59 cfs @ 12.06 hrs, Volume= 0.291 af, Depth= 1.80"

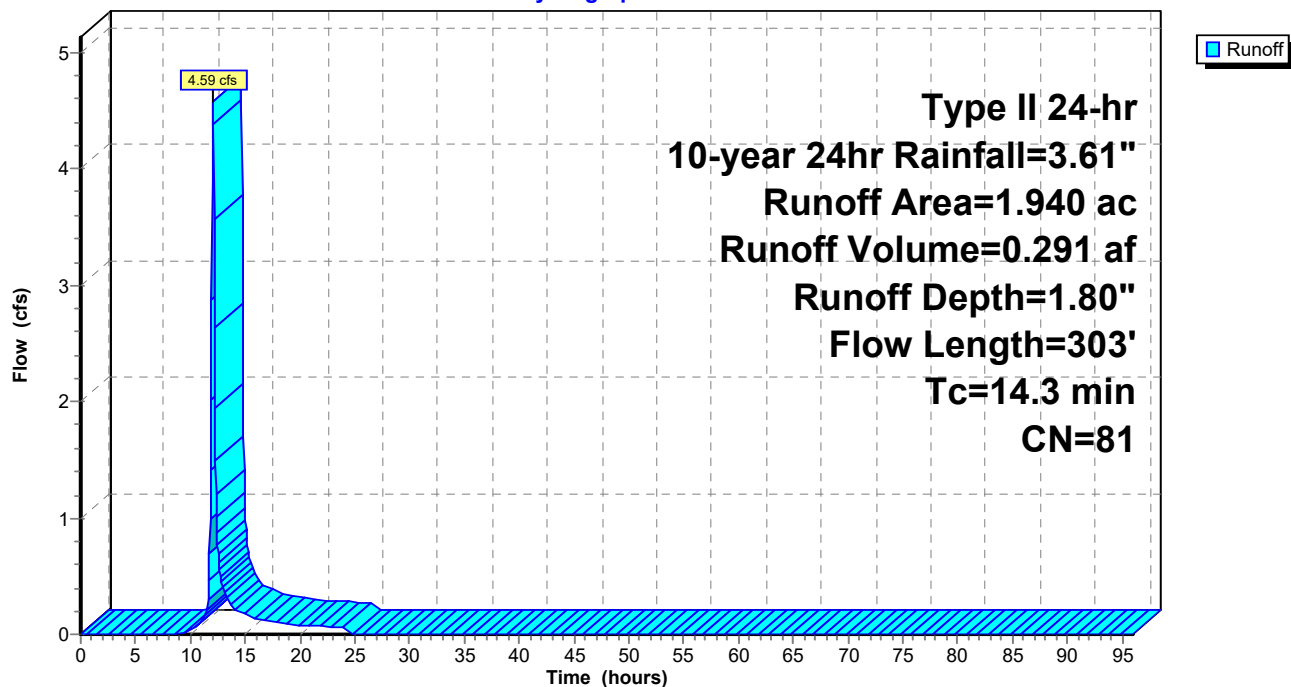
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 1.940	81	
1.940		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
2.6	203	0.0202	1.28		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
14.3	303	Total			

Subcatchment B30:

Hydrograph



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Type II 24-hr 10-year 24hr Rainfall=3.61"

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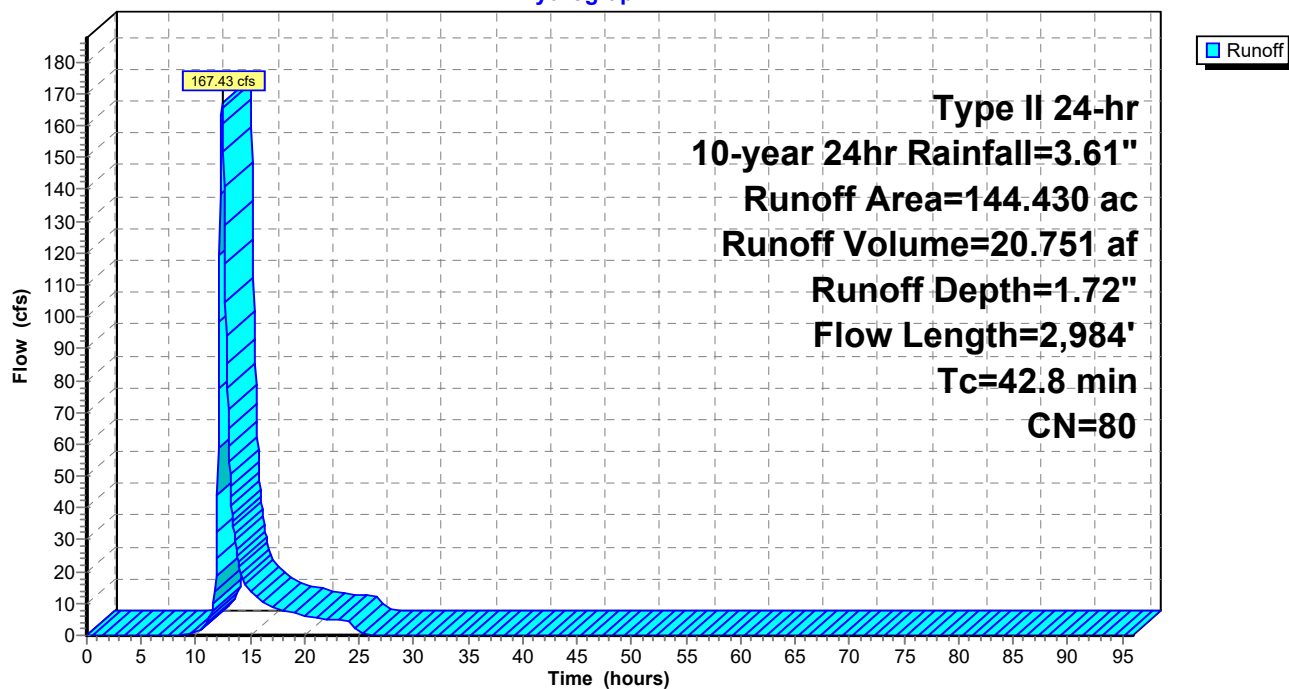
Summary for Subcatchment B4:

Runoff = 167.43 cfs @ 12.41 hrs, Volume= 20.751 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 144.430	80	
144.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0330	0.21		Sheet Flow, SH-OPEN SPACE Range n= 0.130 P2= 2.54"
10.7	749	0.0167	1.16		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.8	904	0.0065	2.59	5.17	Parabolic Channel, DITCH W=6.00' D=0.50' Area=2.0 sf Perim=6.1' n= 0.022
15.8	497	0.0034	0.52		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	43	0.0323	15.29	48.05	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	691	0.0081	4.60	46.03	Parabolic Channel, DITCH W=15.00' D=1.00' Area=10.0 sf Perim=15.2' n= 0.022
42.8	2,984	Total			

Subcatchment B4:**Hydrograph**

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Type II 24-hr 10-year 24hr Rainfall=3.61"

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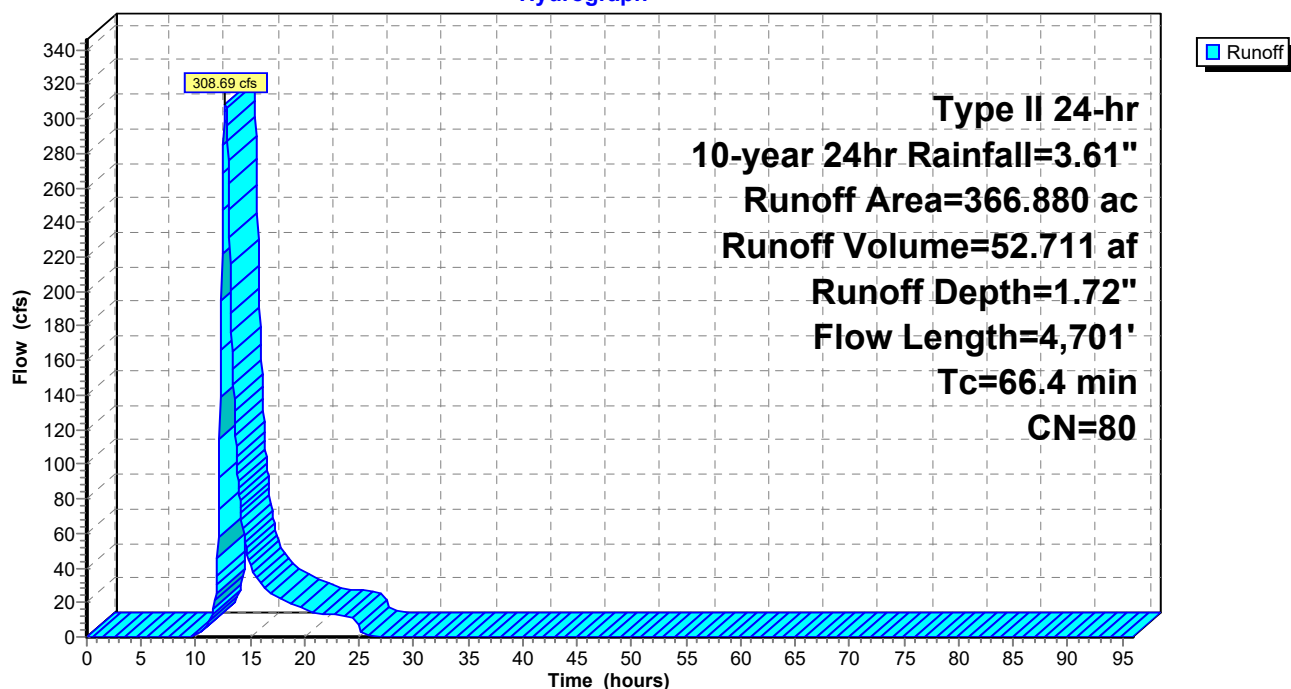
Summary for Subcatchment B5:

Runoff = 308.69 cfs @ 12.73 hrs, Volume= 52.711 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 366.880	80	
366.880		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.0330	0.17		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.0	1,682	0.0144	1.08		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
10.1	1,605	0.0067	2.65	8.82	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
19.5	751	0.0051	0.64		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.9	563	0.0066	9.91	528.71	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
66.4	4,701	Total			

Subcatchment B5:**Hydrograph**

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Type II 24-hr 10-year 24hr Rainfall=3.61"

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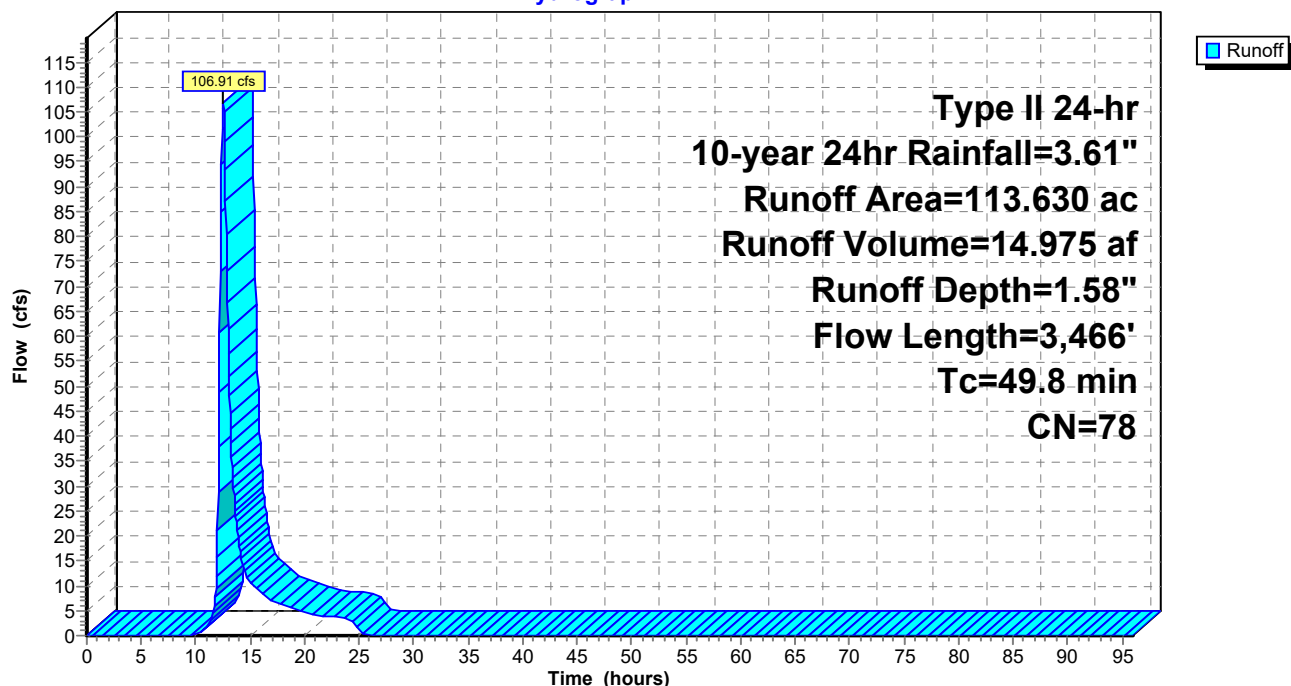
Summary for Subcatchment B6:

Runoff = 106.91 cfs @ 12.51 hrs, Volume= 14.975 af, Depth= 1.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 113.630	78	
113.630		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
31.0	1,798	0.0115	0.97		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
3.0	959	0.0022	5.31	247.62	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
0.1	31	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.7	578	0.0026	5.77	269.19	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
49.8	3,466	Total			

Subcatchment B6:**Hydrograph**

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Summary for Subcatchment B7:

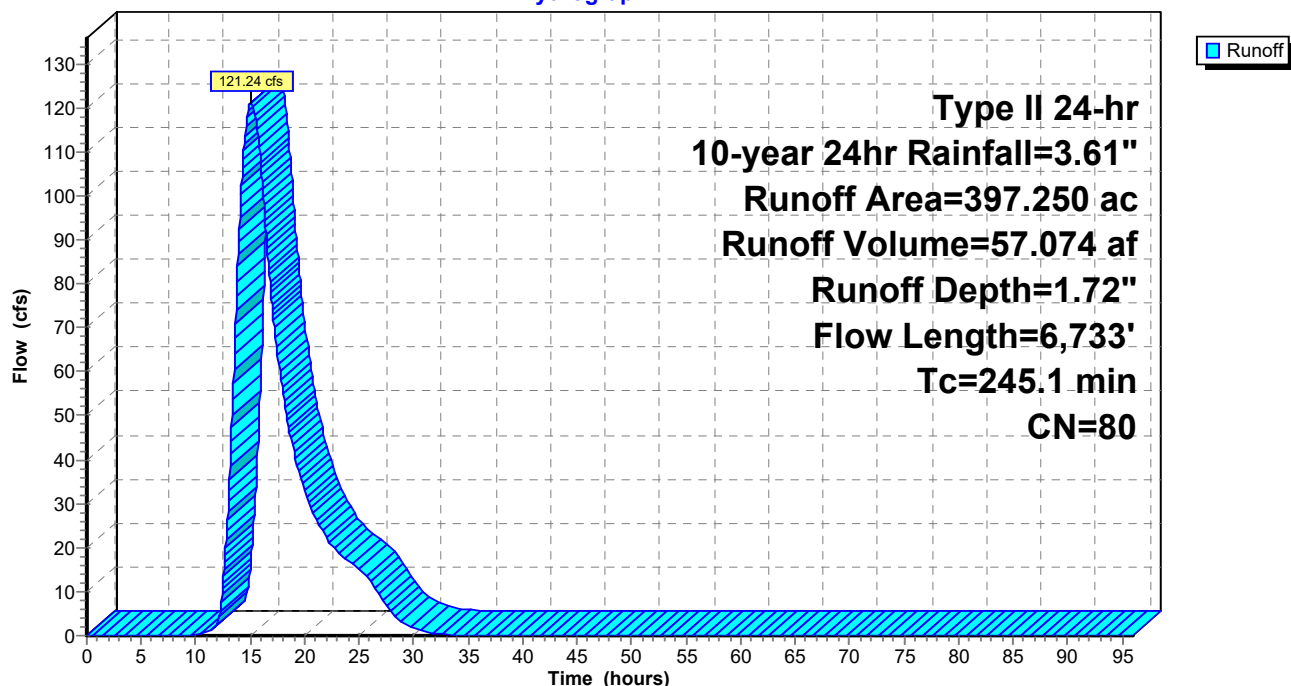
Runoff = 121.24 cfs @ 15.00 hrs, Volume= 57.074 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description			
* 397.250	80				
397.250		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	100	0.0070	0.09		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
85.3	3,055	0.0044	0.60		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	27	0.0372	16.41	51.57	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
139.3	2,913	0.0015	0.35		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.0	638	0.0042	5.21	139.01	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
245.1	6,733	Total			

Subcatchment B7:

Hydrograph



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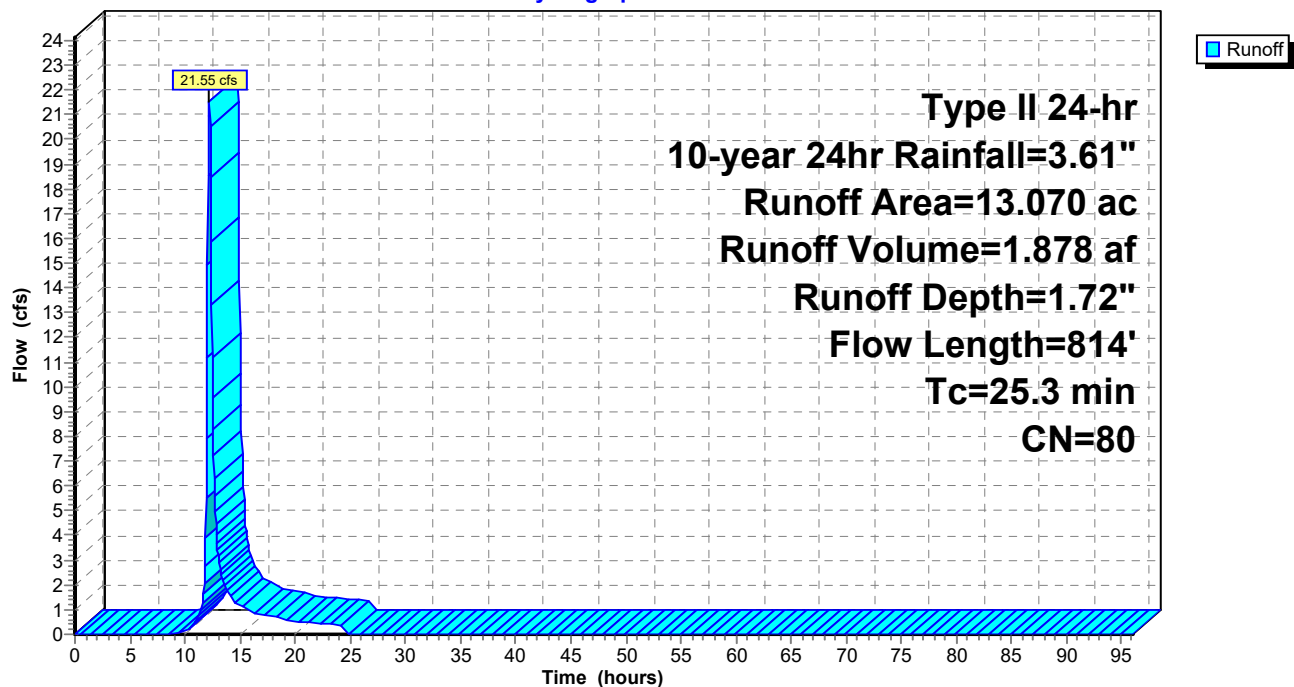
Summary for Subcatchment B8:

Runoff = 21.55 cfs @ 12.19 hrs, Volume= 1.878 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 13.070	80	
13.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
11.3	714	0.0136	1.05		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
25.3	814	Total			

Subcatchment B8:**Hydrograph**

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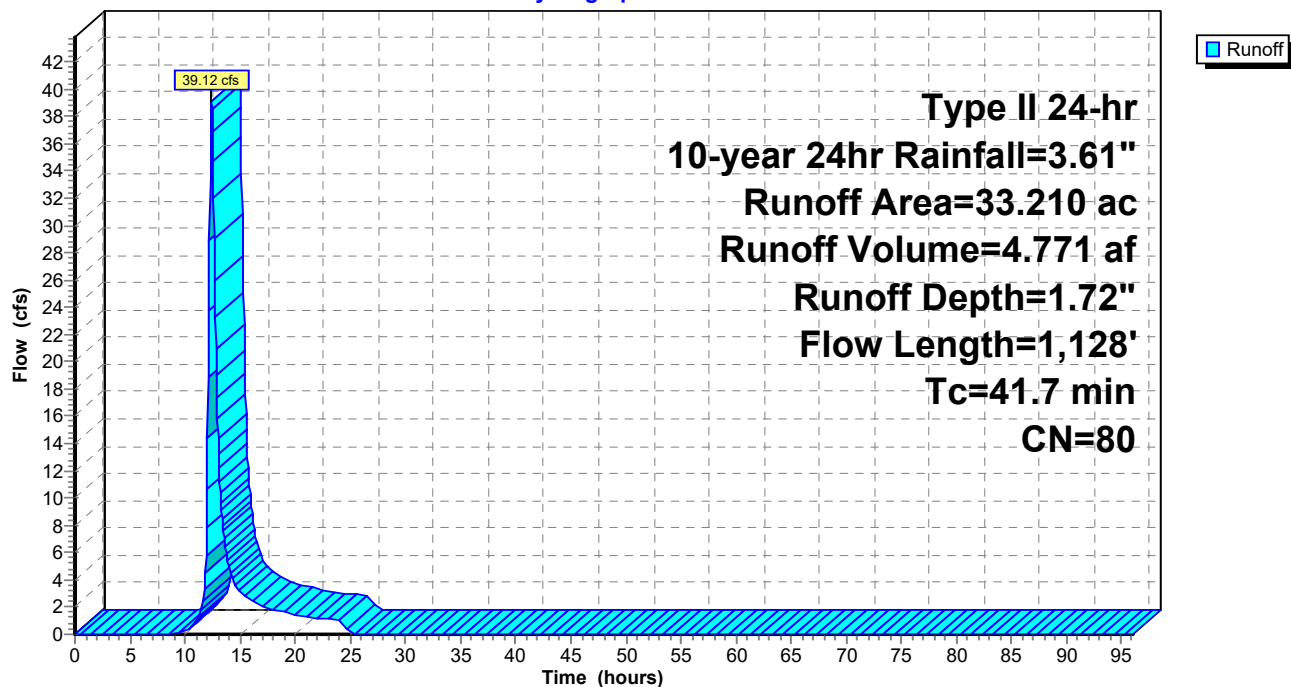
Summary for Subcatchment B9:

Runoff = 39.12 cfs @ 12.40 hrs, Volume= 4.771 af, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year 24hr Rainfall=3.61"

Area (ac)	CN	Description
* 33.210	80	
33.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.5	100	0.0080	0.10		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.2	1,028	0.0062	0.71		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
41.7	1,128	Total			

Subcatchment B9:**Hydrograph**

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentB1:	Runoff Area=1,124.640 ac 0.00% Impervious Runoff Depth=2.20" Flow Length=12,505' Tc=64.6 min CN=79 Runoff=1,241.74 cfs 206.312 af
SubcatchmentB10:	Runoff Area=50.450 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=2,208' Tc=54.3 min CN=80 Runoff=65.73 cfs 9.601 af
SubcatchmentB11:	Runoff Area=117.760 ac 0.00% Impervious Runoff Depth=1.96" Flow Length=3,512' Tc=93.1 min CN=76 Runoff=86.99 cfs 19.269 af
SubcatchmentB12:	Runoff Area=22.670 ac 0.00% Impervious Runoff Depth=1.89" Flow Length=1,883' Tc=79.8 min CN=75 Runoff=17.91 cfs 3.565 af
SubcatchmentB13:	Runoff Area=37.130 ac 0.00% Impervious Runoff Depth=2.37" Flow Length=2,542' Tc=74.5 min CN=81 Runoff=39.82 cfs 7.325 af
SubcatchmentB14:	Runoff Area=427.330 ac 0.00% Impervious Runoff Depth=2.12" Flow Length=7,680' Tc=133.1 min CN=78 Runoff=260.79 cfs 75.516 af
SubcatchmentB15:	Runoff Area=60.430 ac 0.00% Impervious Runoff Depth=2.04" Flow Length=1,617' Tc=104.7 min CN=77 Runoff=42.42 cfs 10.280 af
SubcatchmentB16:	Runoff Area=198.250 ac 0.00% Impervious Runoff Depth=2.04" Flow Length=6,834' Tc=223.3 min CN=77 Runoff=76.65 cfs 33.724 af
SubcatchmentB17:	Runoff Area=41.100 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=789' Tc=24.3 min CN=80 Runoff=92.55 cfs 7.821 af
SubcatchmentB18:	Runoff Area=81.990 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=2,386' Tc=46.0 min CN=80 Runoff=120.54 cfs 15.603 af
SubcatchmentB19:	Runoff Area=25.480 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=2,008' Tc=56.5 min CN=80 Runoff=32.29 cfs 4.849 af
SubcatchmentB2:	Runoff Area=233.580 ac 0.00% Impervious Runoff Depth=2.04" Flow Length=3,410' Tc=30.4 min CN=77 Runoff=404.95 cfs 39.734 af
SubcatchmentB20:	Runoff Area=165.020 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=5,408' Tc=53.5 min CN=80 Runoff=217.95 cfs 31.404 af
SubcatchmentB21:	Runoff Area=36.500 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=1,868' Tc=83.6 min CN=80 Runoff=34.48 cfs 6.946 af
SubcatchmentB22:	Runoff Area=52.290 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=2,743' Tc=77.3 min CN=80 Runoff=52.43 cfs 9.951 af
SubcatchmentB23:	Runoff Area=43.170 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=2,125' Tc=71.9 min CN=80 Runoff=45.77 cfs 8.215 af

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SubcatchmentB24:	Runoff Area=22.660 ac 0.00% Impervious Runoff Depth=1.08" Flow Length=657' Tc=22.1 min CN=63 Runoff=22.53 cfs 2.039 af
SubcatchmentB25:	Runoff Area=32.280 ac 0.00% Impervious Runoff Depth=1.53" Flow Length=1,923' Tc=41.0 min CN=70 Runoff=32.51 cfs 4.107 af
SubcatchmentB26:	Runoff Area=127.500 ac 0.00% Impervious Runoff Depth=1.96" Flow Length=4,618' Tc=167.6 min CN=76 Runoff=59.31 cfs 20.863 af
SubcatchmentB27:	Runoff Area=21.580 ac 0.00% Impervious Runoff Depth=1.33" Flow Length=746' Tc=30.6 min CN=67 Runoff=22.51 cfs 2.387 af
SubcatchmentB28:	Runoff Area=17.080 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=1,454' Tc=38.3 min CN=80 Runoff=28.55 cfs 3.250 af
SubcatchmentB29:	Runoff Area=87.840 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=3,349' Tc=117.1 min CN=80 Runoff=64.43 cfs 16.716 af
SubcatchmentB3:	Runoff Area=41.070 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=1,918' Tc=56.6 min CN=80 Runoff=51.93 cfs 7.816 af
SubcatchmentB30:	Runoff Area=1.940 ac 0.00% Impervious Runoff Depth=2.37" Flow Length=303' Tc=14.3 min CN=81 Runoff=6.04 cfs 0.383 af
SubcatchmentB4:	Runoff Area=144.430 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=2,984' Tc=42.8 min CN=80 Runoff=223.87 cfs 27.486 af
SubcatchmentB5:	Runoff Area=366.880 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=4,701' Tc=66.4 min CN=80 Runoff=412.77 cfs 69.819 af
SubcatchmentB6:	Runoff Area=113.630 ac 0.00% Impervious Runoff Depth=2.12" Flow Length=3,466' Tc=49.8 min CN=78 Runoff=145.46 cfs 20.080 af
SubcatchmentB7:	Runoff Area=397.250 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=6,733' Tc=245.1 min CN=80 Runoff=162.91 cfs 75.598 af
SubcatchmentB8:	Runoff Area=13.070 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=814' Tc=25.3 min CN=80 Runoff=28.72 cfs 2.487 af
SubcatchmentB9:	Runoff Area=33.210 ac 0.00% Impervious Runoff Depth=2.28" Flow Length=1,128' Tc=41.7 min CN=80 Runoff=52.31 cfs 6.320 af

Total Runoff Area = 4,138.210 ac Runoff Volume = 749.466 af Average Runoff Depth = 2.17"
100.00% Pervious = 4,138.210 ac 0.00% Impervious = 0.000 ac

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Summary for Subcatchment B1:

Runoff = 1,241.74 cfs @ 12.69 hrs, Volume= 206.312 af, Depth= 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 1,124.640	79	
1,124.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	100	0.0050	0.08		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
8.5	656	0.0203	1.28		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
9.4	4,083	0.0048	7.25	362.50	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.0	56	0.0535	19.68	61.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.2	94	0.0085	9.65	482.39	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	47	0.0021	3.90	12.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
12.3	3,705	0.0023	5.02	250.93	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	40	0.0025	4.26	13.37	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.4	1,819	0.0020	4.71	282.81	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
0.1	45	0.0156	10.63	33.39	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.1	1,860	0.0023	5.05	303.28	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
64.6	12,505	Total			

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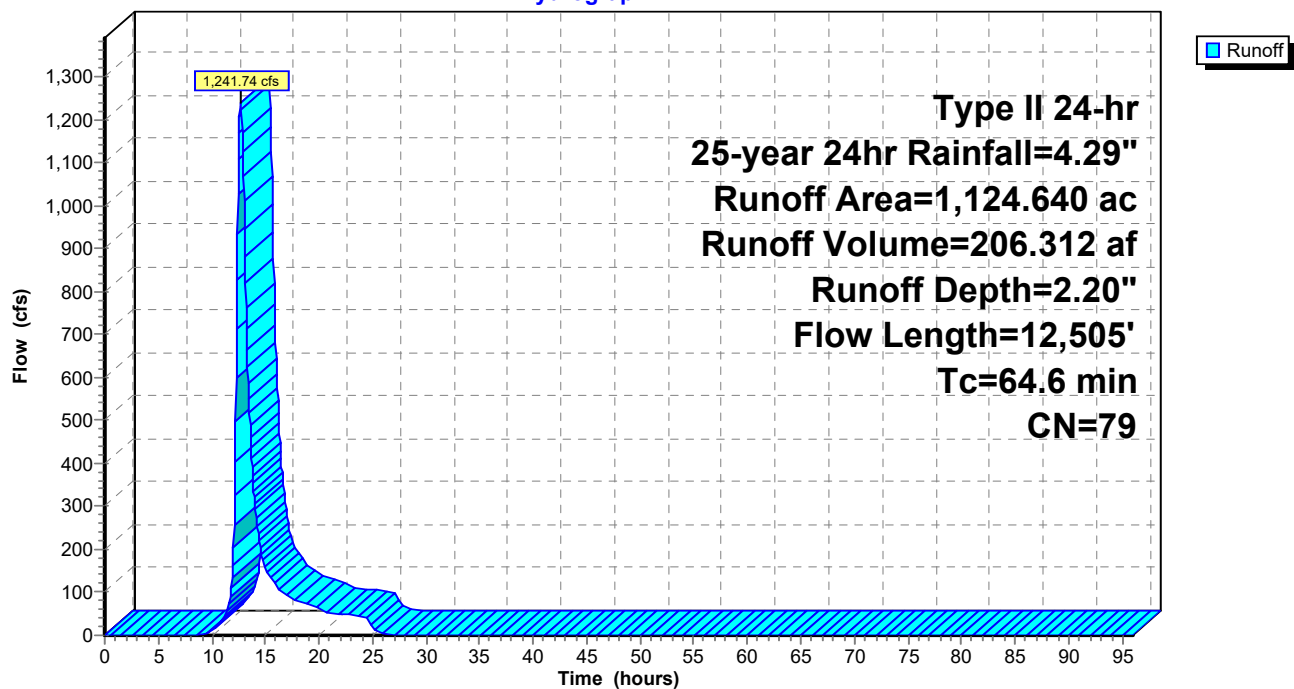
Type II 24-hr 25-year 24hr Rainfall=4.29"

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Subcatchment B1:

Hydrograph



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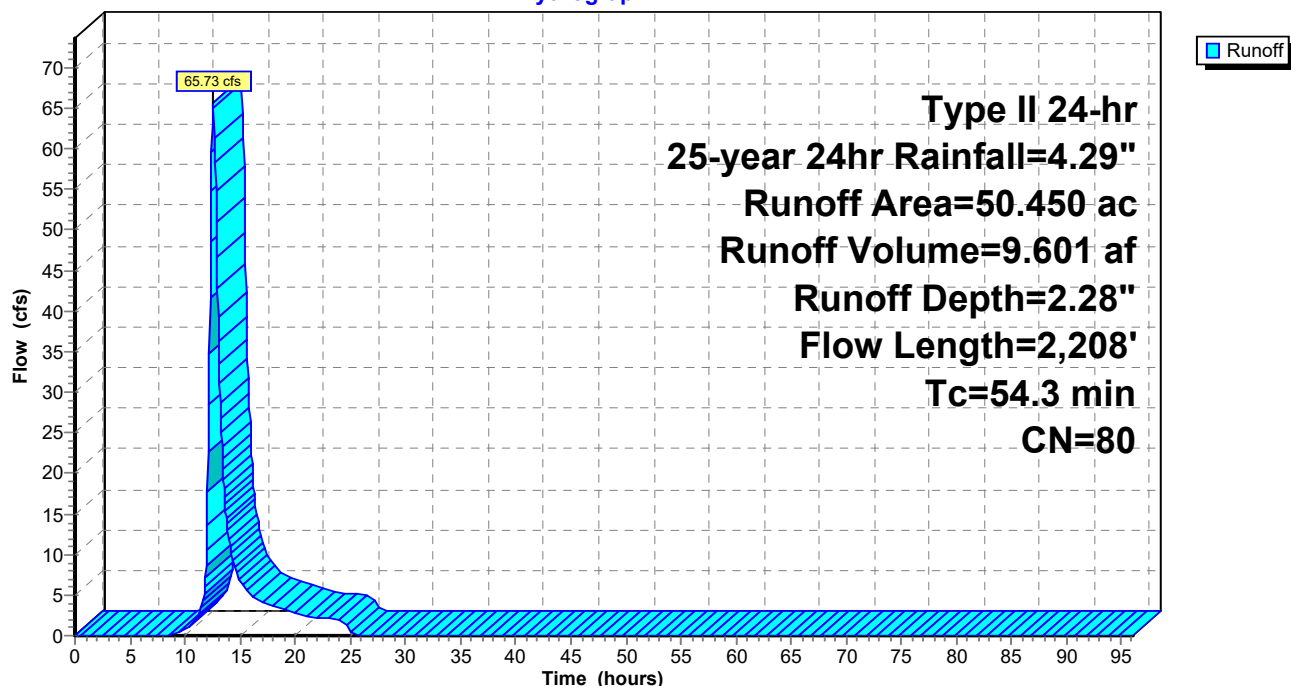
Summary for Subcatchment B10:

Runoff = 65.73 cfs @ 12.56 hrs, Volume= 9.601 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 50.450	80	
50.450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.1	100	0.0040	0.07		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
28.3	1,408	0.0085	0.83		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	72	0.0014	4.57	243.51	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
0.1	34	0.0029	4.58	14.40	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	594	0.0024	3.94	105.08	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
54.3	2,208	Total			

Subcatchment B10:**Hydrograph**

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Summary for Subcatchment B11:

Runoff = 86.99 cfs @ 13.10 hrs, Volume= 19.269 af, Depth= 1.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 117.760	76	
117.760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7	100	0.0070	0.05		Sheet Flow, SH-WOODS Woods: Light underbrush n= 0.400 P2= 2.54"
50.0	2,516	0.0087	0.84		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.2	413	0.0017	1.33	4.44	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.2	69	0.0277	7.08	22.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.0	14	0.0073	7.97	332.27	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
0.1	24	0.0165	5.47	17.17	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.9	376	0.0053	6.79	283.12	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
93.1	3,512	Total			

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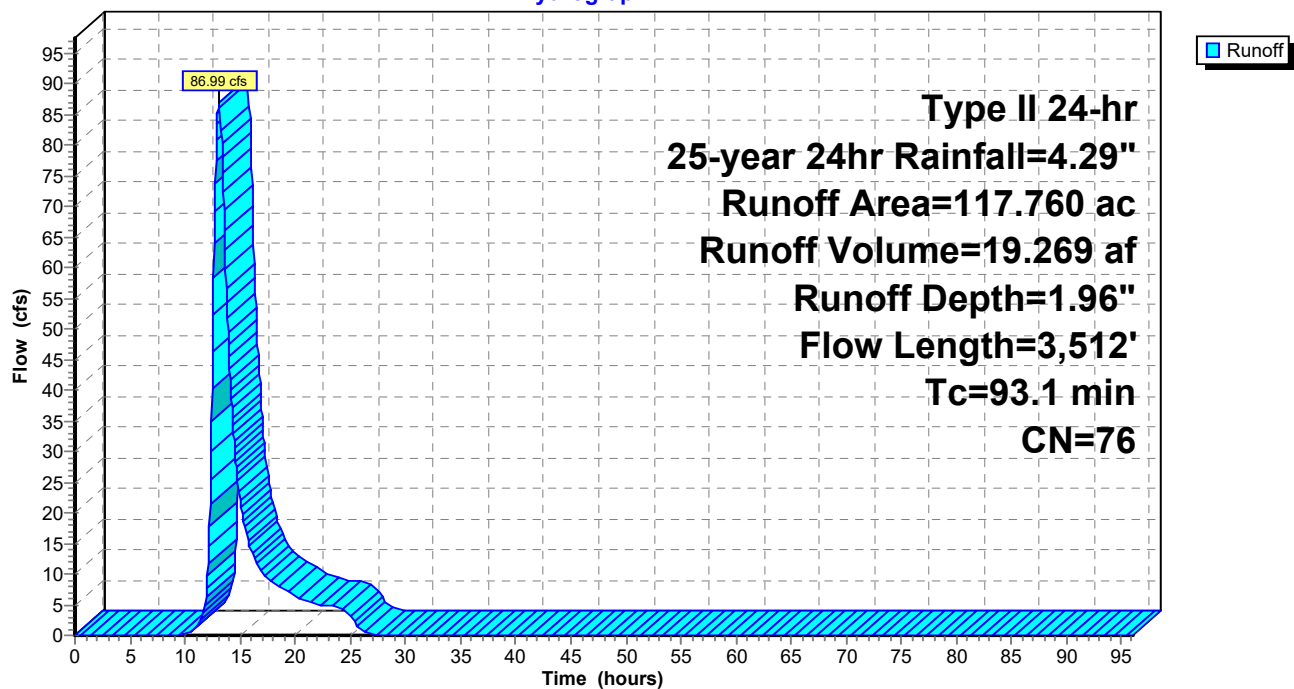
Type II 24-hr 25-year 24hr Rainfall=4.29"

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Subcatchment B11:

Hydrograph



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Summary for Subcatchment B12:

Runoff = 17.91 cfs @ 12.90 hrs, Volume= 3.565 af, Depth= 1.89"

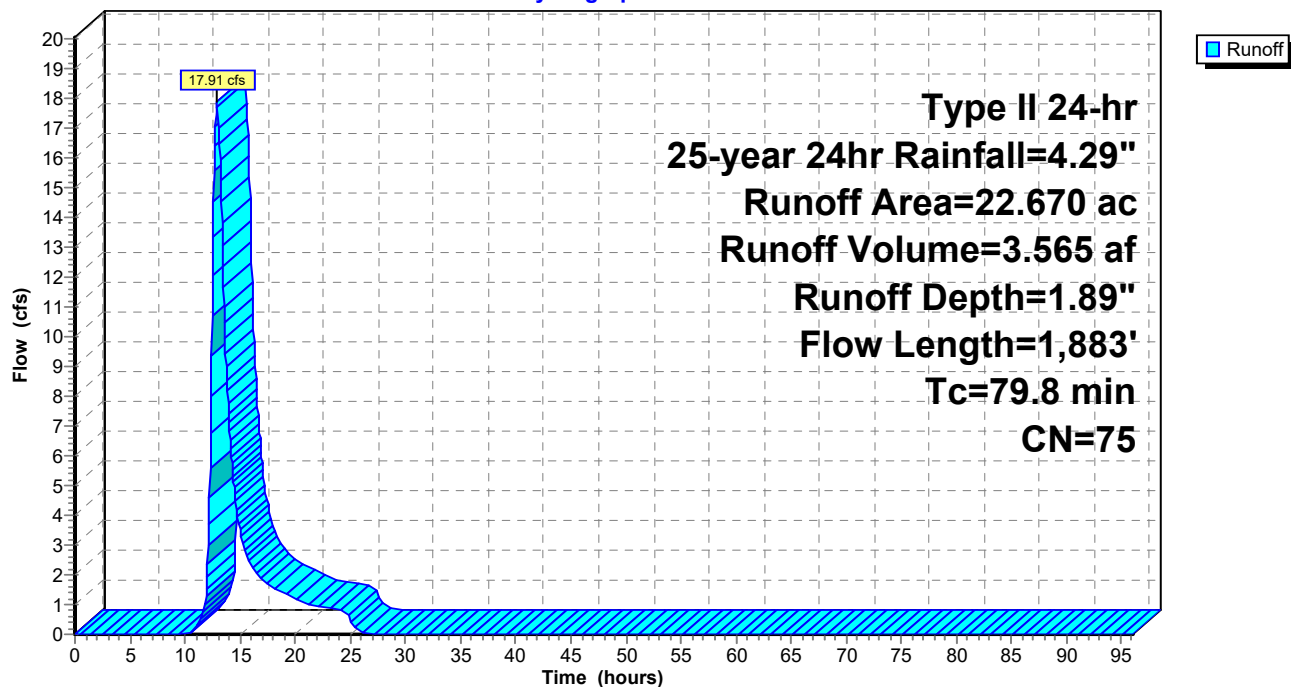
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 22.670	75	
22.670		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
67.4	1,783	0.0024	0.44		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
79.8	1,883	Total			

Subcatchment B12:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B13:

Runoff = 39.82 cfs @ 12.82 hrs, Volume= 7.325 af, Depth= 2.37"

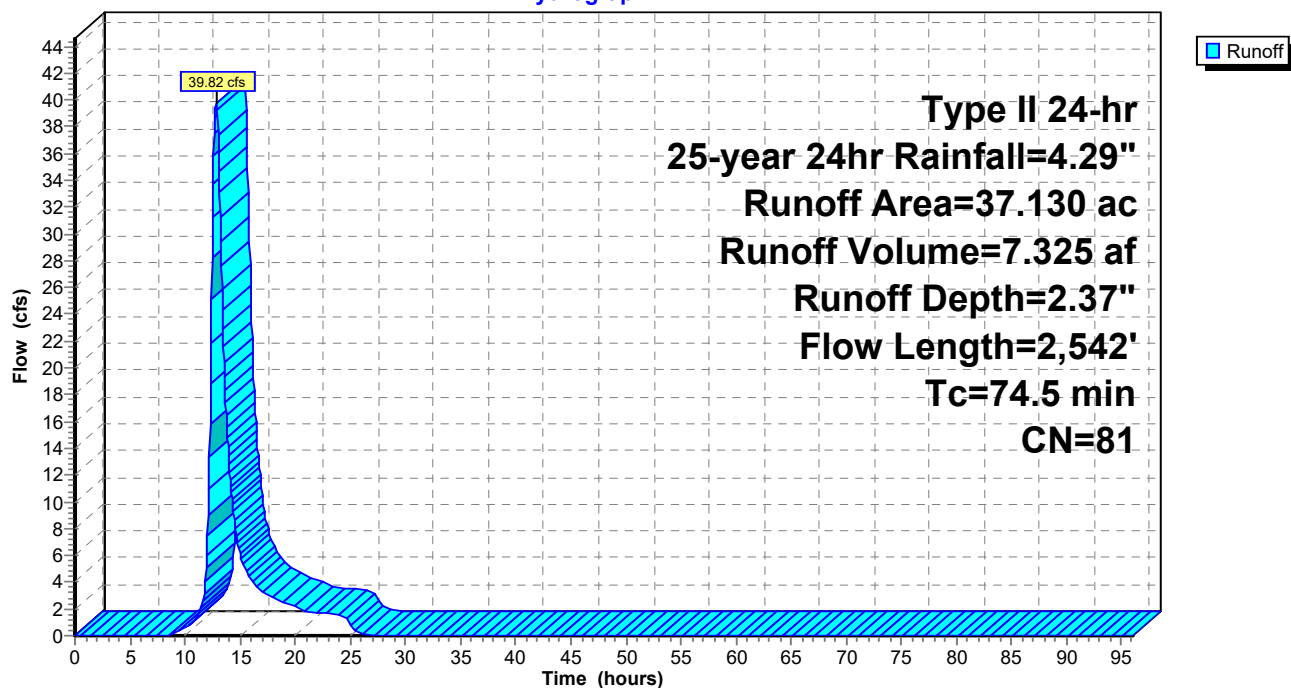
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 37.130	81	
37.130		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	100	0.0280	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
50.7	1,836	0.0045	0.60		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
13.2	571	0.0005	0.72	2.41	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.0	35	0.0751	23.32	73.27	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
74.5	2,542	Total			

Subcatchment B13:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B14:

Runoff = 260.79 cfs @ 13.62 hrs, Volume= 75.516 af, Depth= 2.12"

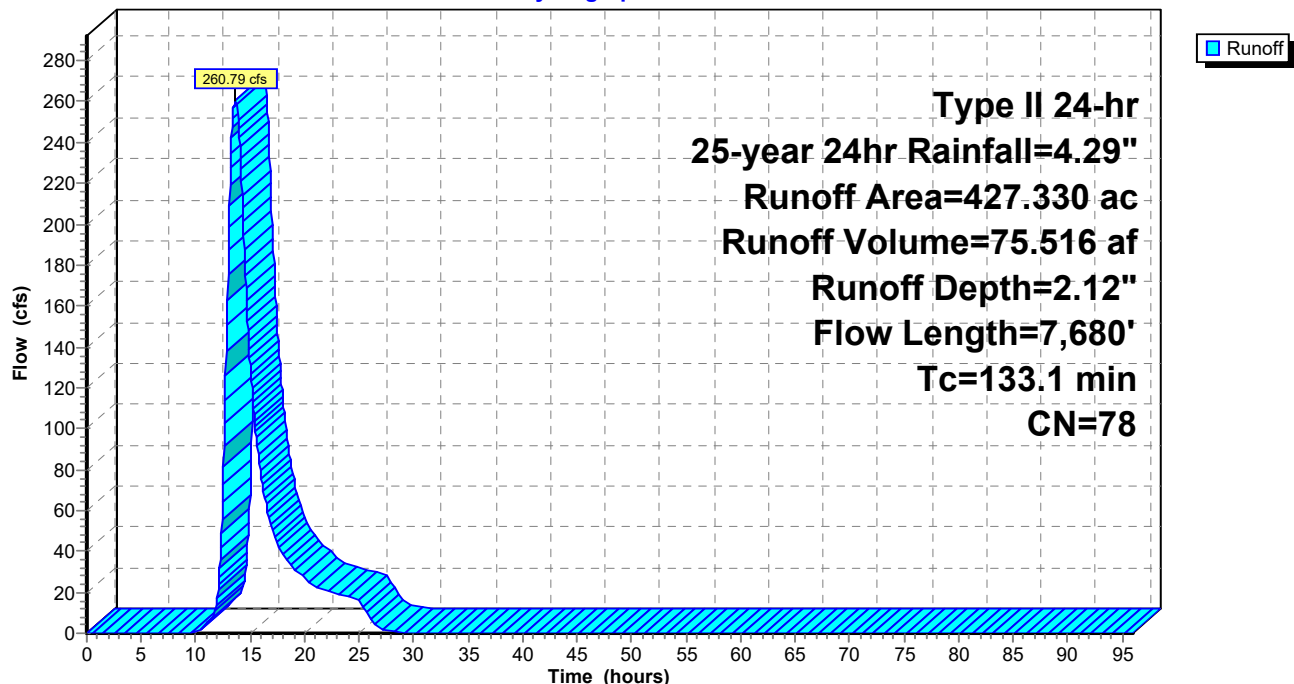
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 427.330	78	
427.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
95.6	2,475	0.0023	0.43		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
25.3	5,105	0.0010	3.37	336.93	Parabolic Channel, DITCH W=50.00' D=3.00' Area=100.0 sf Perim=50.5' n= 0.022
133.1	7,680	Total			

Subcatchment B14:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B15:

Runoff = 42.42 cfs @ 13.24 hrs, Volume= 10.280 af, Depth= 2.04"

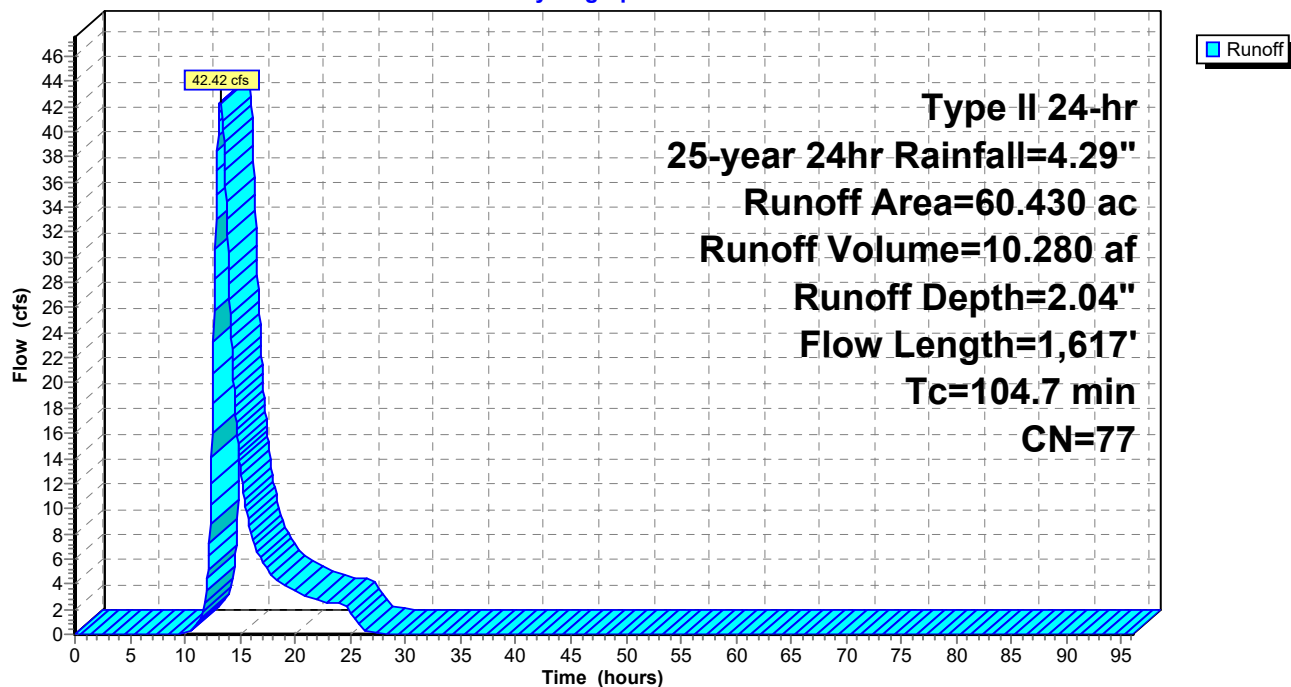
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 60.430	77	
60.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0250	0.15		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
93.6	1,517	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
104.7	1,617	Total			

Subcatchment B15:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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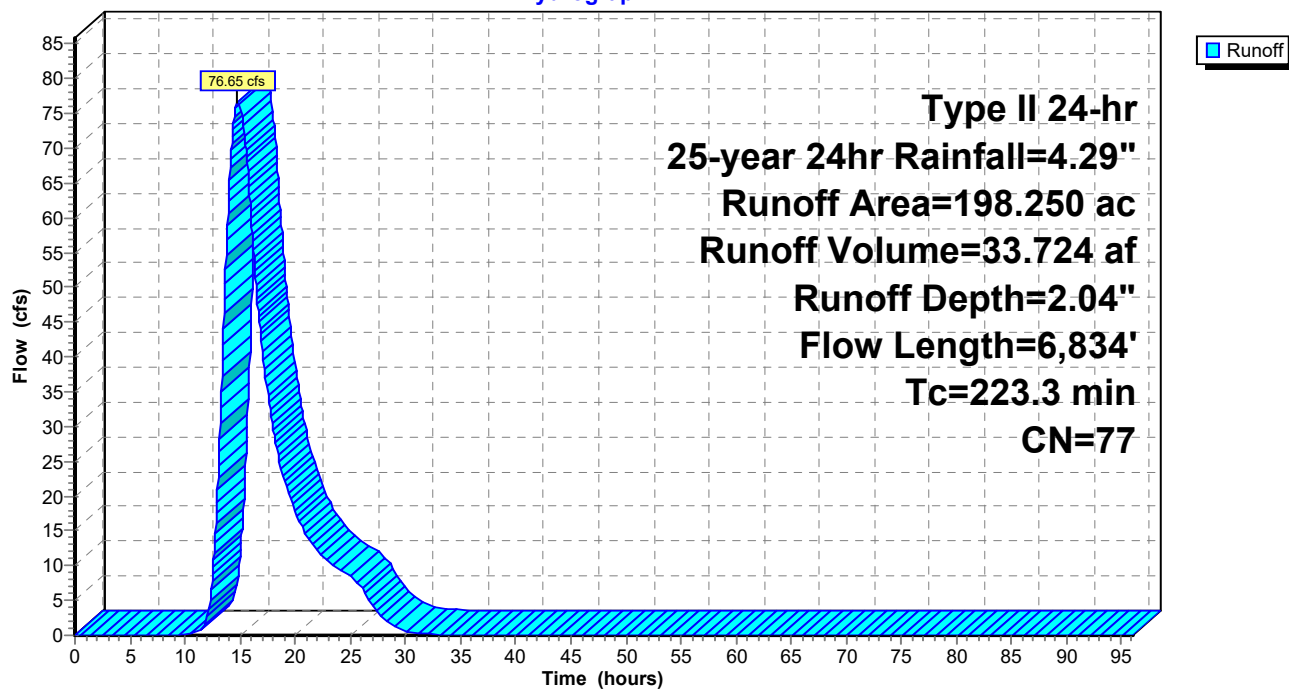
Summary for Subcatchment B16:

Runoff = 76.65 cfs @ 14.70 hrs, Volume= 33.724 af, Depth= 2.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 198.250	77	
198.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
14.5	512	0.0043	0.59		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	41	0.0073	7.27	22.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
37.0	1,056	0.0028	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	35	0.0028	4.50	14.15	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
145.4	2,355	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.3	705	0.0045	5.16	68.76	Parabolic Channel, DITCH W=10.00' D=2.00' Area=13.3 sf Perim=11.0' n= 0.022
0.2	42	0.0024	4.17	13.10	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
9.3	1,988	0.0012	3.58	143.17	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
223.3	6,834	Total			

Subcatchment B16:**Hydrograph**

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Type II 24-hr 25-year 24hr Rainfall=4.29"

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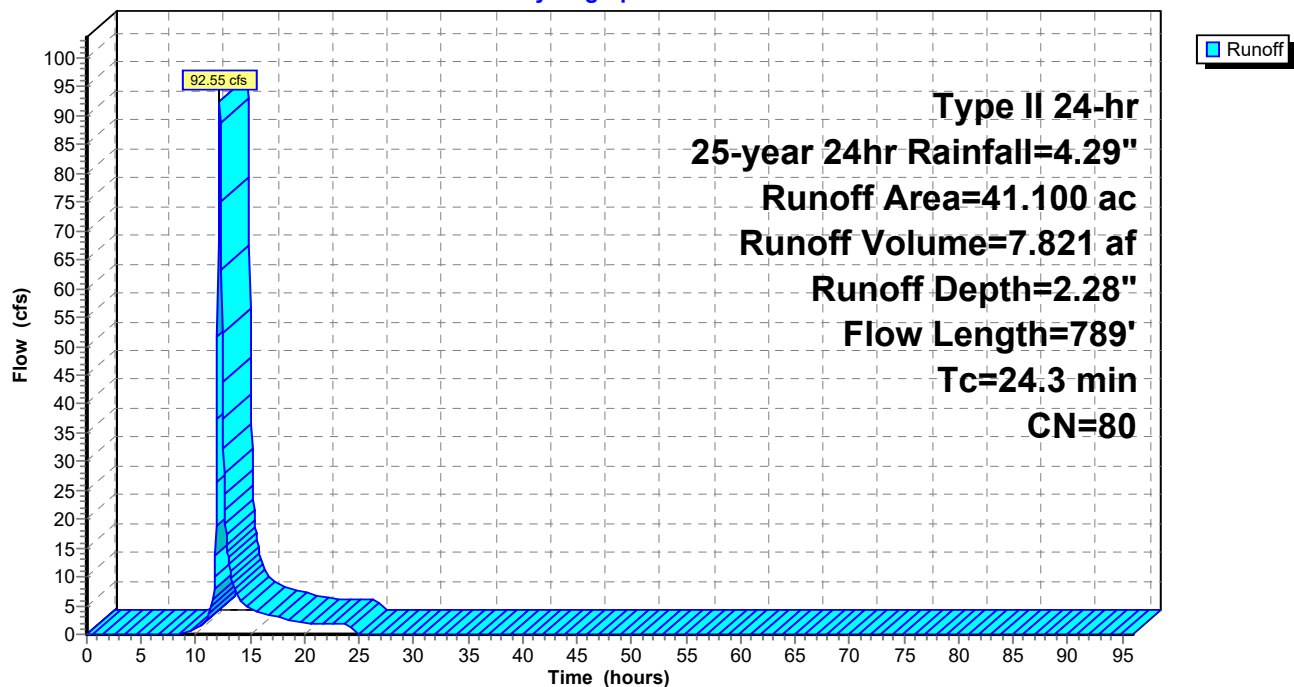
Summary for Subcatchment B17:

Runoff = 92.55 cfs @ 12.18 hrs, Volume= 7.821 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 41.100	80	
41.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
10.3	689	0.0154	1.12		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
24.3	789	Total			

Subcatchment B17:**Hydrograph**

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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B18:

Runoff = 120.54 cfs @ 12.45 hrs, Volume= 15.603 af, Depth= 2.28"

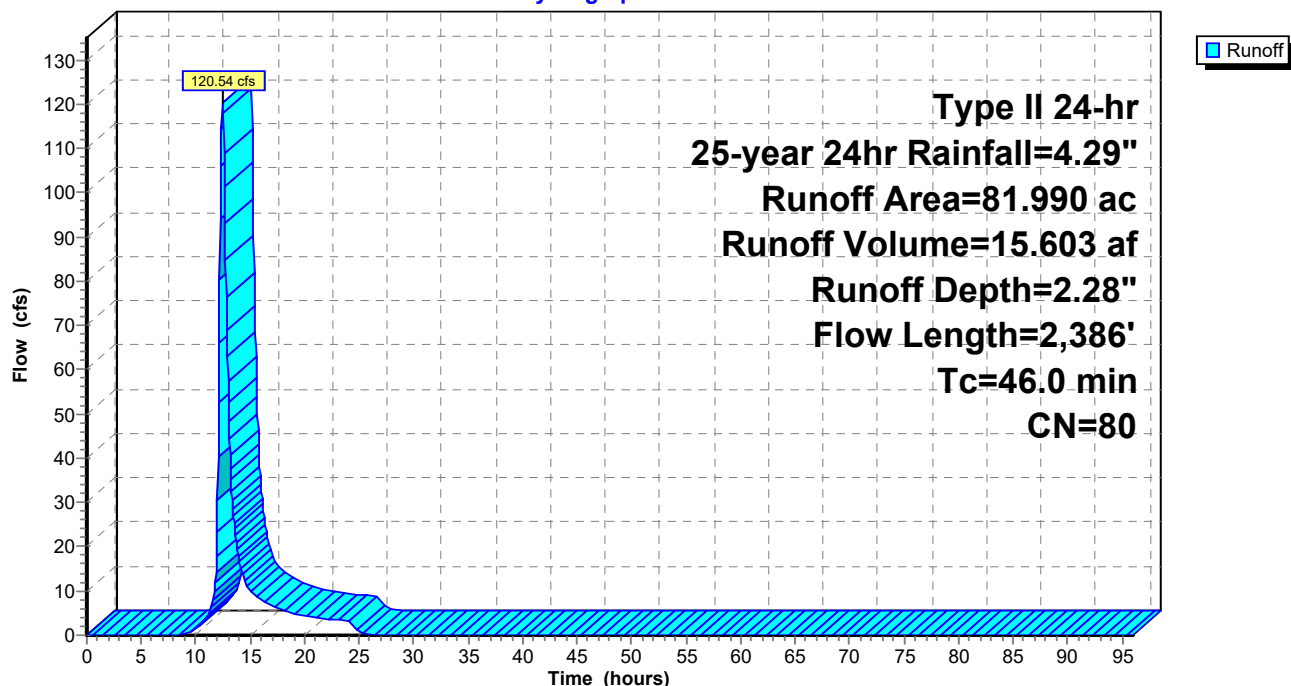
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 81.990	80	
81.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0300	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.6	1,156	0.0076	0.78		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
11.1	1,130	0.0011	1.70	22.69	Parabolic Channel, DITCH W=20.00' D=1.00' Area=13.3 sf Perim=20.1' n= 0.022
46.0	2,386	Total			

Subcatchment B18:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B19:

Runoff = 32.29 cfs @ 12.59 hrs, Volume= 4.849 af, Depth= 2.28"

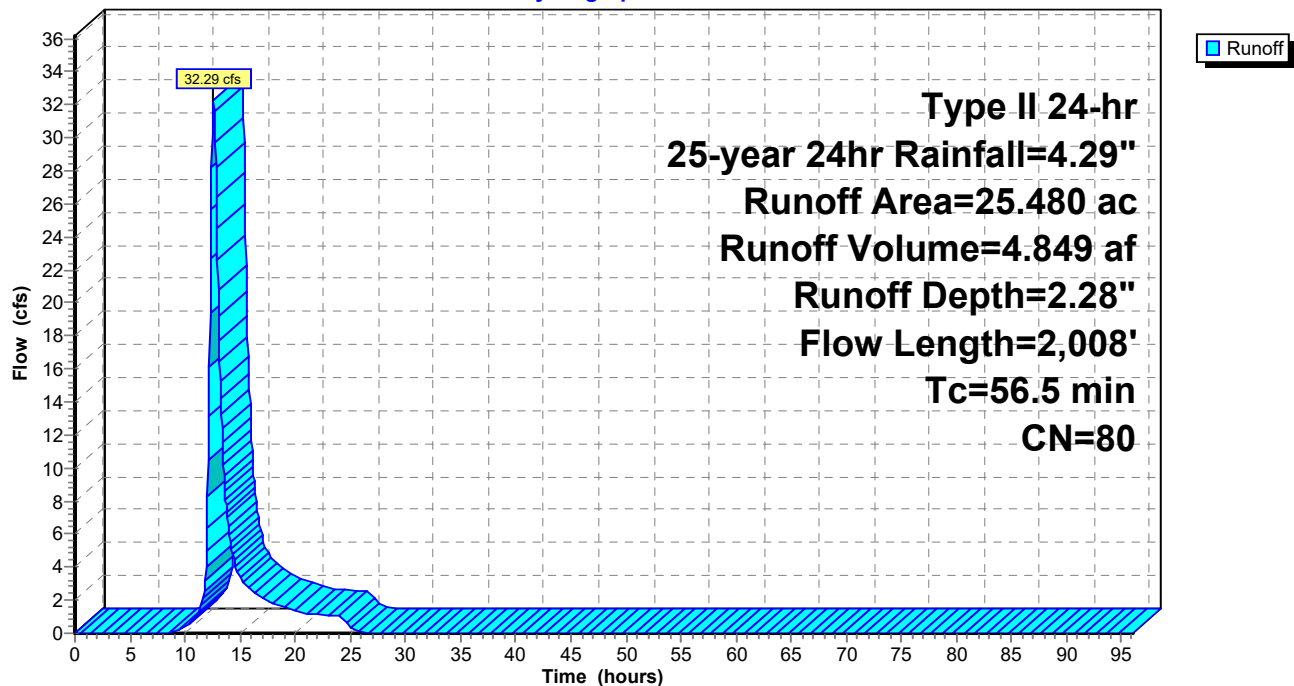
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 25.480	80	
25.480		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0180	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
19.0	999	0.0095	0.88		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
24.8	909	0.0046	0.61		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
56.5	2,008	Total			

Subcatchment B19:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B2:

Runoff = 404.95 cfs @ 12.26 hrs, Volume= 39.734 af, Depth= 2.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 233.580	77	
233.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	100	0.0106	0.11		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
3.4	210	0.0133	1.04		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
4.2	178	0.0051	0.71		Shallow Concentrated Flow, SCF-OPEN SPACE Nearly Bare & Untilled Kv= 10.0 fps
0.2	62	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	409	0.0169	13.17	87.83	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.011
5.2	1,987	0.0038	6.37	254.77	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	42	0.0047	5.83	18.33	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	218	0.0041	6.62	264.64	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	44	0.0160	10.76	33.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	160	0.0050	5.69	151.67	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
30.4	3,410	Total			

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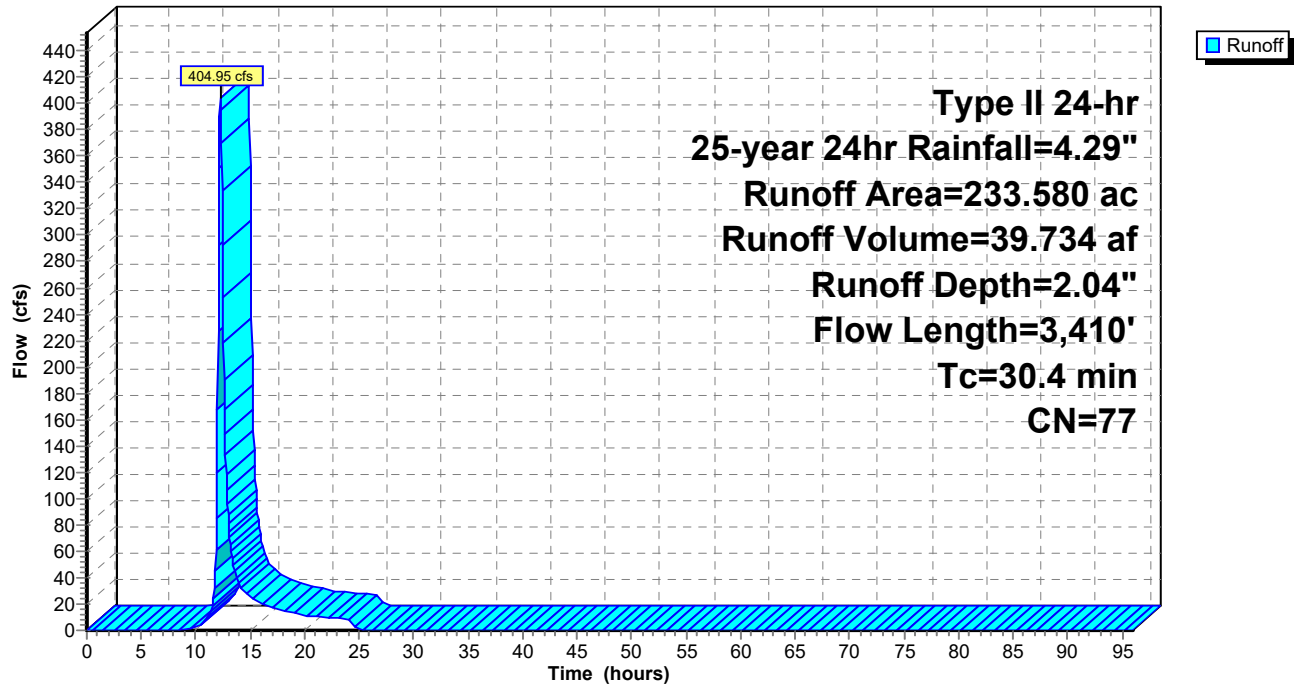
Type II 24-hr 25-year 24hr Rainfall=4.29"

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Subcatchment B2:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B20:

Runoff = 217.95 cfs @ 12.55 hrs, Volume= 31.404 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 165.020	80	
165.020		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.3	1,262	0.0079	0.80		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	94	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.8	167	0.0294	1.54		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	61	0.0016	3.40	10.69	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	2,712	0.0014	7.73	309.28	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.011
0.2	43	0.0023	4.08	12.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	969	0.0007	2.77	138.43	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
53.5	5,408	Total			

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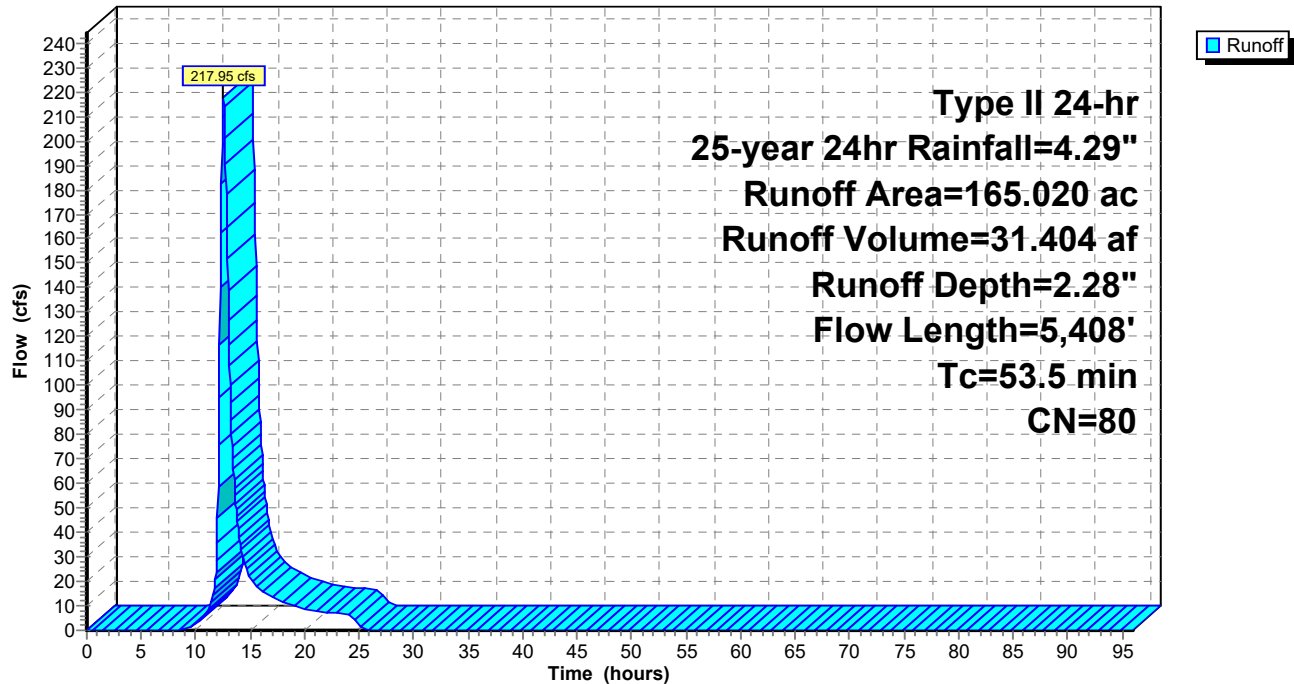
Type II 24-hr 25-year 24hr Rainfall=4.29"

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Subcatchment B20:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B21:

Runoff = 34.48 cfs @ 12.93 hrs, Volume= 6.946 af, Depth= 2.28"

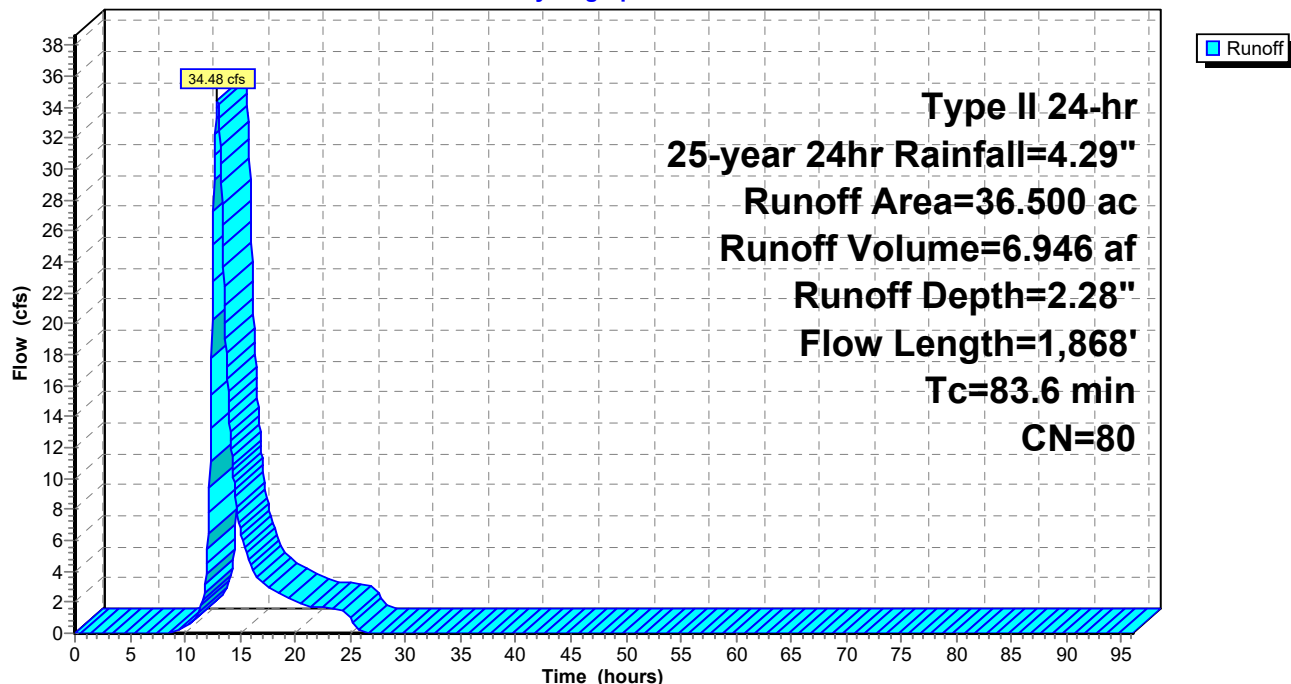
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 36.500	80	
36.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
25.9	1,010	0.0052	0.65		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
43.3	758	0.0034	0.29		Shallow Concentrated Flow, SCF-WOODS Woodland Kv= 5.0 fps
83.6	1,868	Total			

Subcatchment B21:

Hydrograph



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Summary for Subcatchment B22:

Runoff = 52.43 cfs @ 12.85 hrs, Volume= 9.951 af, Depth= 2.28"

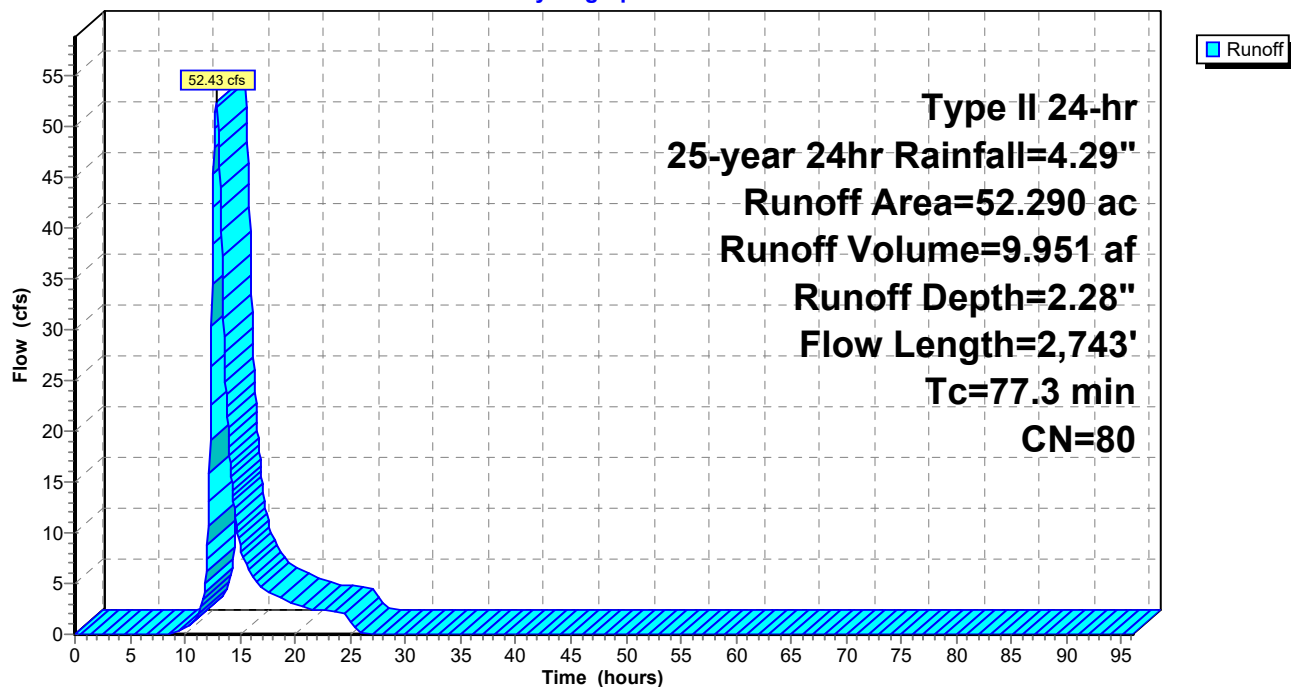
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 52.290	80	
52.290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
64.3	2,643	0.0058	0.69		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
77.3	2,743	Total			

Subcatchment B22:

Hydrograph



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Summary for Subcatchment B23:

Runoff = 45.77 cfs @ 12.79 hrs, Volume= 8.215 af, Depth= 2.28"

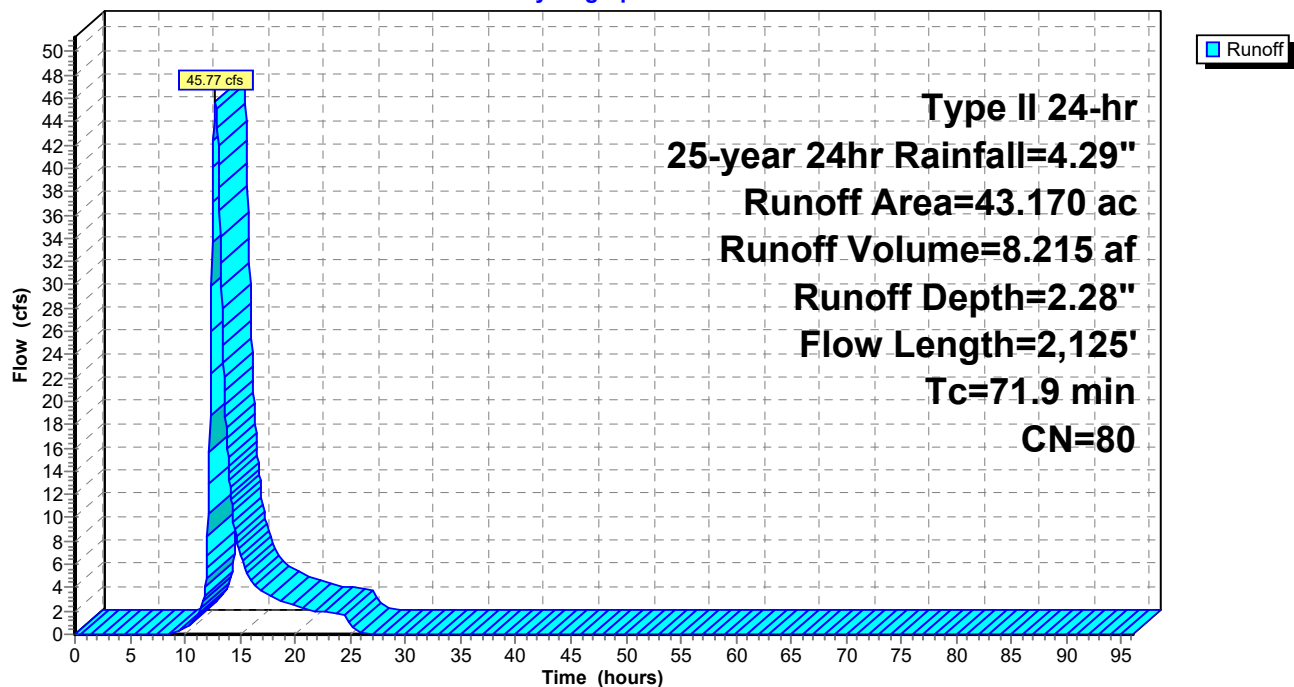
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 43.170	80	
43.170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	100	0.0100	0.10		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
55.9	2,025	0.0045	0.60		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
71.9	2,125	Total			

Subcatchment B23:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B24:

Runoff = 22.53 cfs @ 12.18 hrs, Volume= 2.039 af, Depth= 1.08"

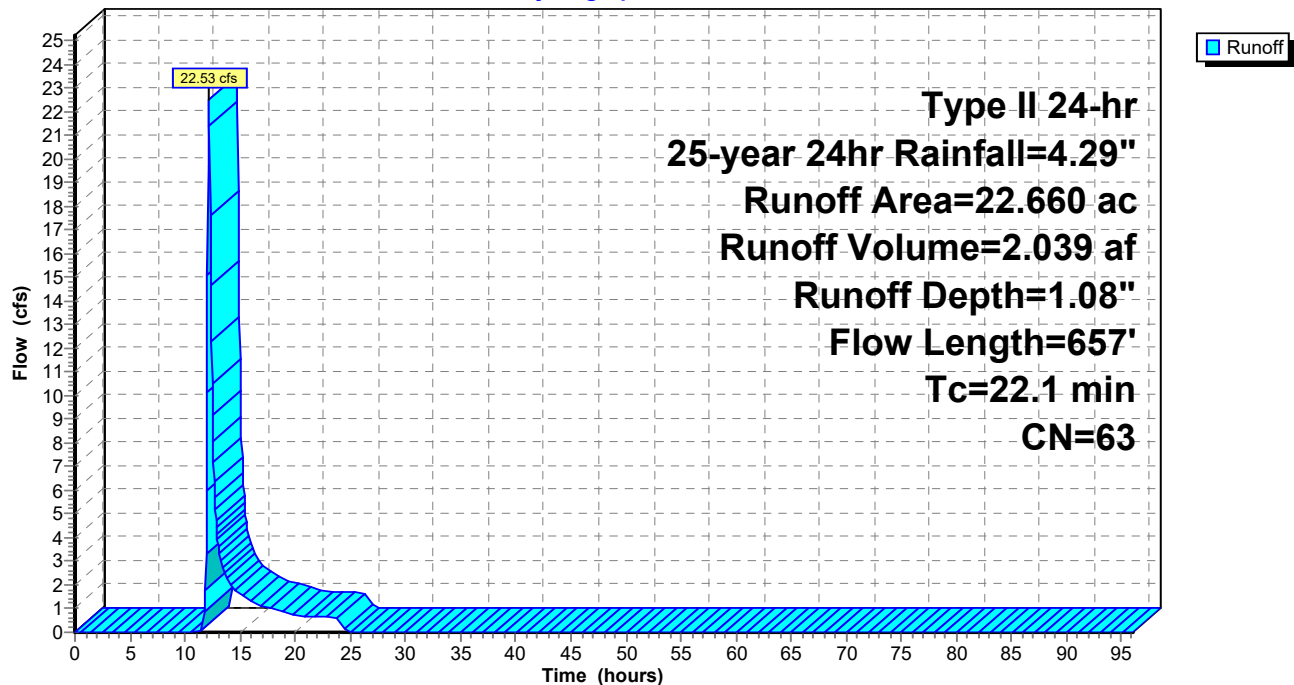
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 22.660	63	
22.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
7.7	557	0.0181	1.21		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
22.1	657	Total			

Subcatchment B24:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B25:

Runoff = 32.51 cfs @ 12.41 hrs, Volume= 4.107 af, Depth= 1.53"

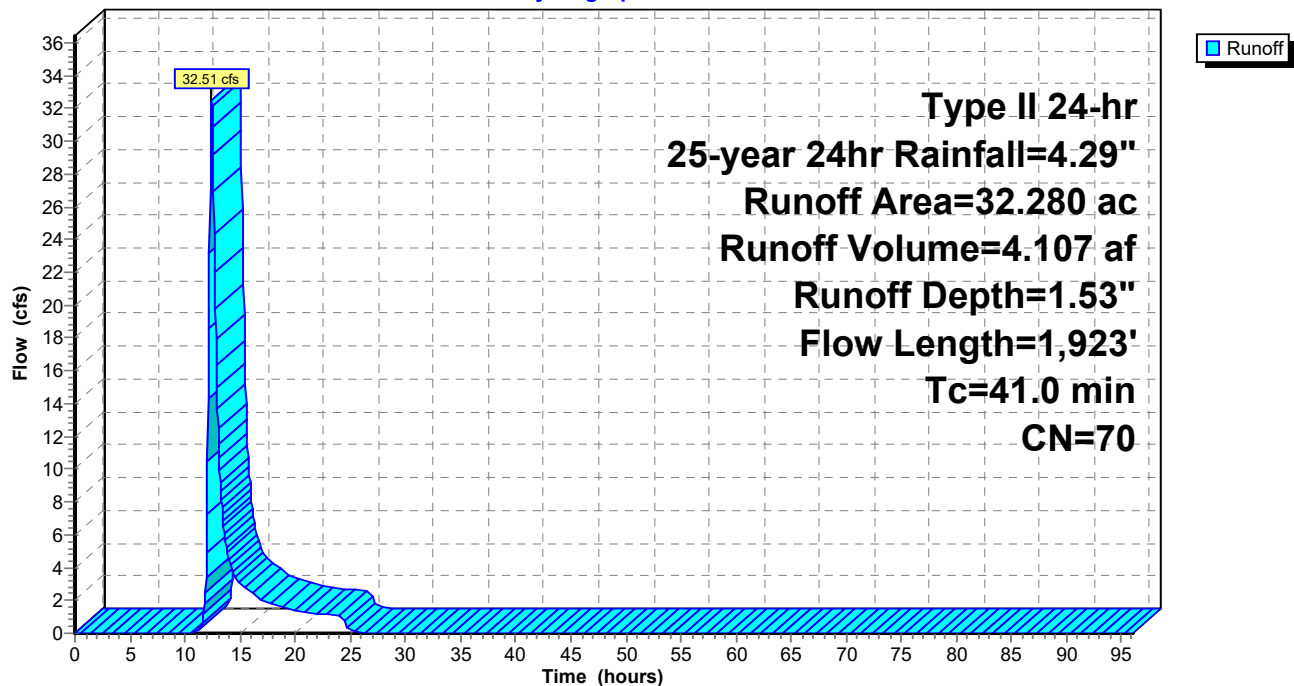
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 32.280	70	
32.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0230	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
27.0	1,311	0.0081	0.81		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.5	512	0.0047	3.47	23.16	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.022
41.0	1,923	Total			

Subcatchment B25:

Hydrograph



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Summary for Subcatchment B26:

Runoff = 59.31 cfs @ 14.01 hrs, Volume= 20.863 af, Depth= 1.96"

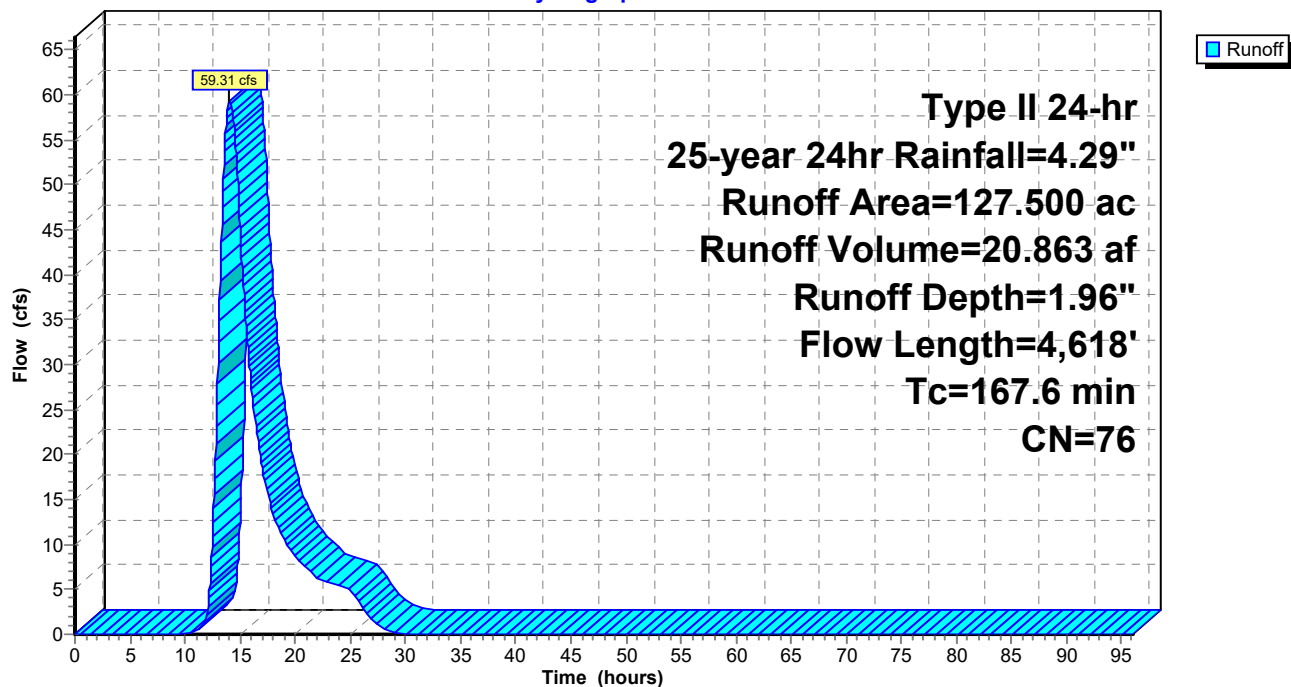
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 127.500	76	
127.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
155.4	4,518	0.0029	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
167.6	4,618	Total			

Subcatchment B26:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B27:

Runoff = 22.51 cfs @ 12.27 hrs, Volume= 2.387 af, Depth= 1.33"

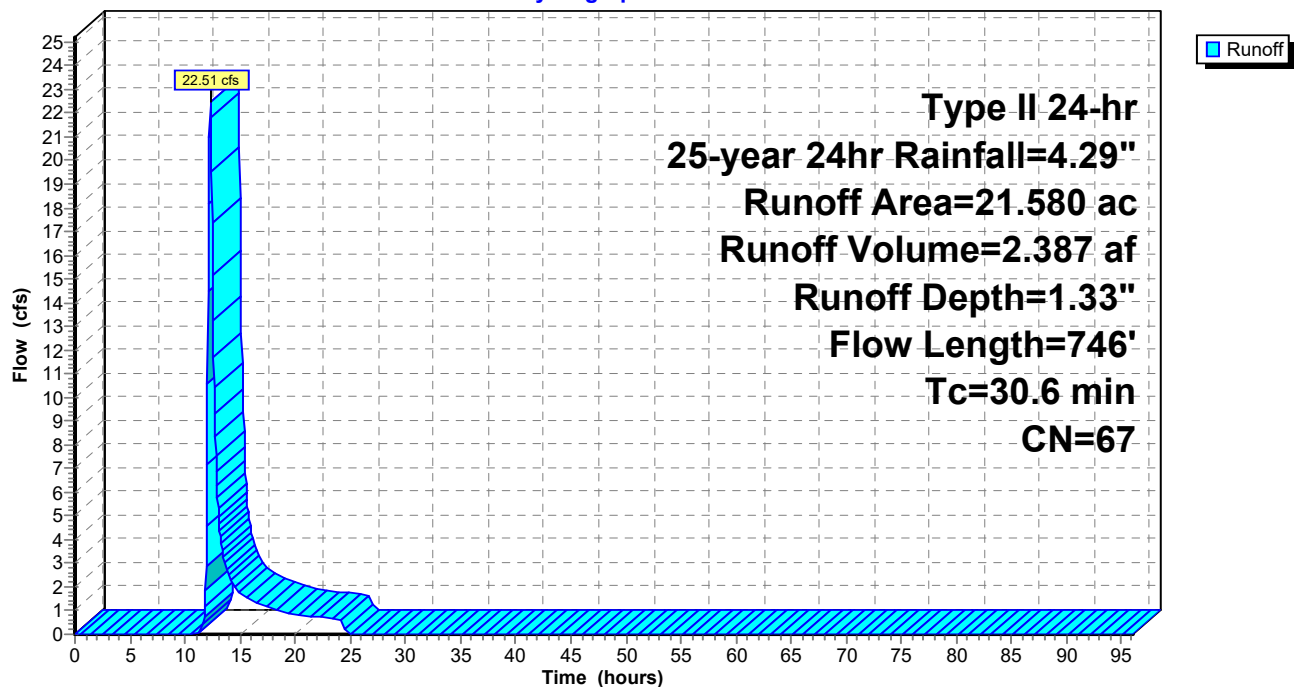
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 21.580	67	
21.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
18.9	646	0.0040	0.57		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
30.6	746	Total			

Subcatchment B27:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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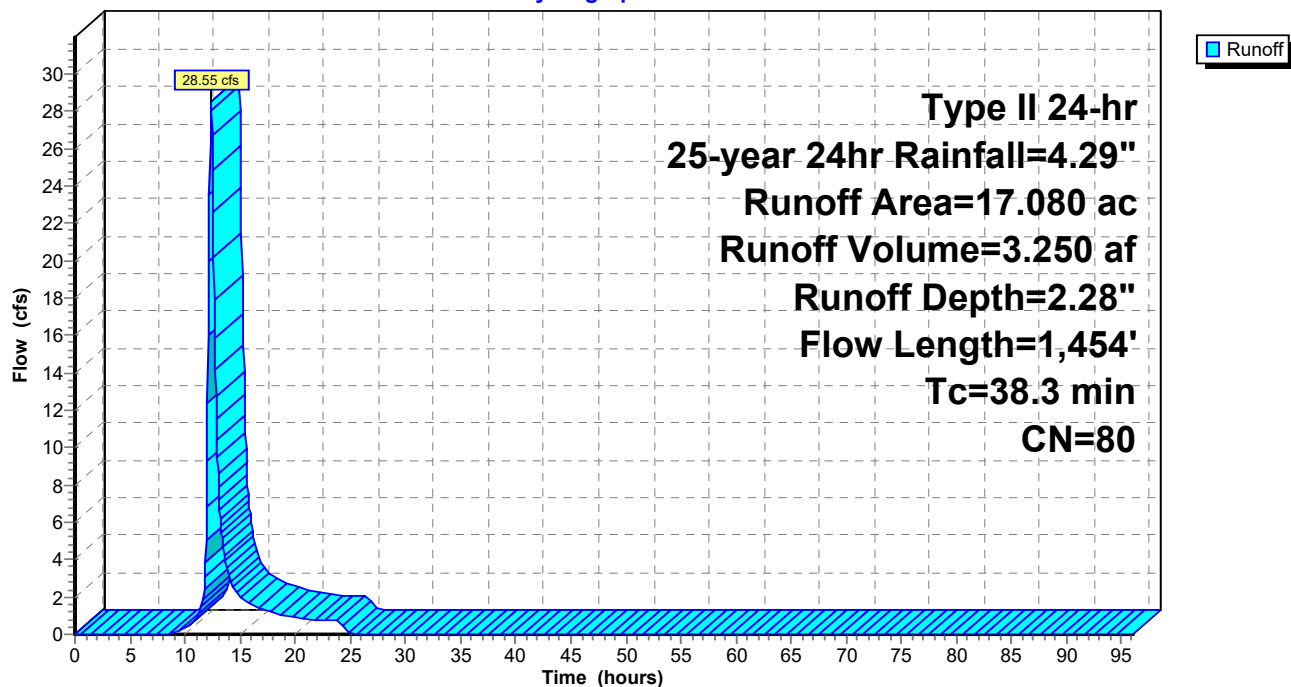
Summary for Subcatchment B28:

Runoff = 28.55 cfs @ 12.35 hrs, Volume= 3.250 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 17.080	80	
17.080		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.6	1,354	0.0089	0.85		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
38.3	1,454	Total			

Subcatchment B28:**Hydrograph**

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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B29:

Runoff = 64.43 cfs @ 13.39 hrs, Volume= 16.716 af, Depth= 2.28"

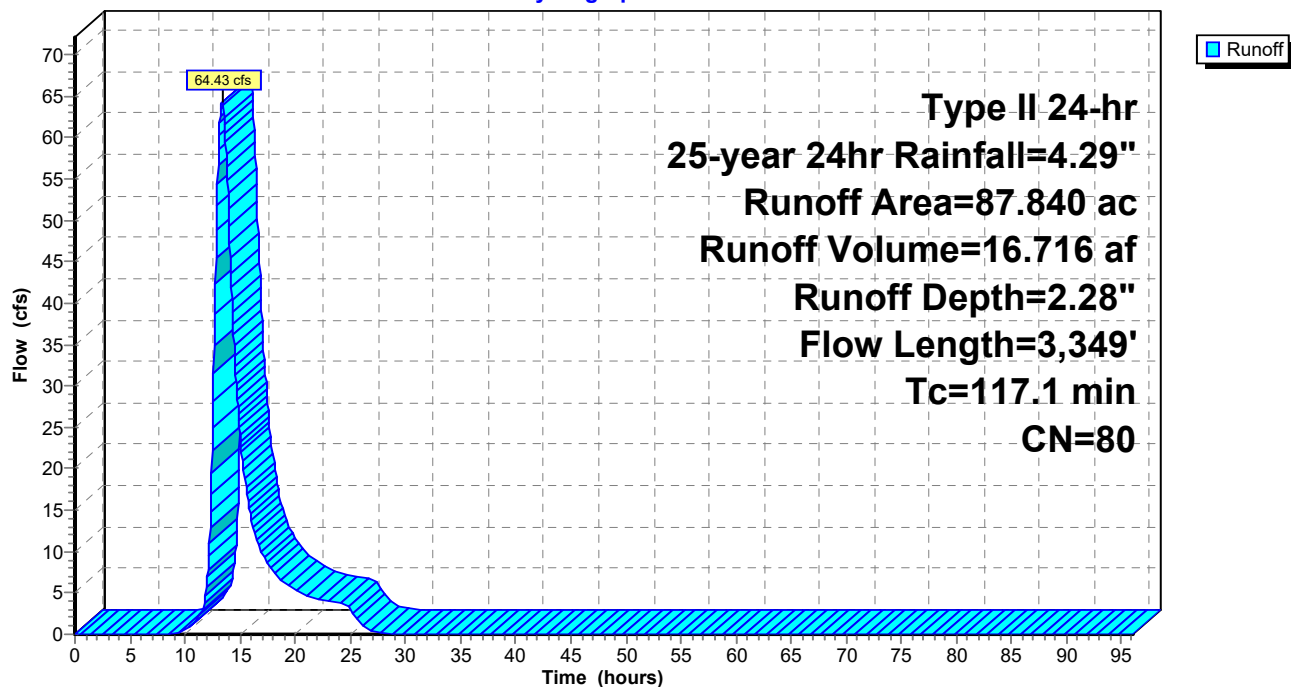
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 87.840	80	
87.840		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
104.7	3,249	0.0033	0.52		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
117.1	3,349	Total			

Subcatchment B29:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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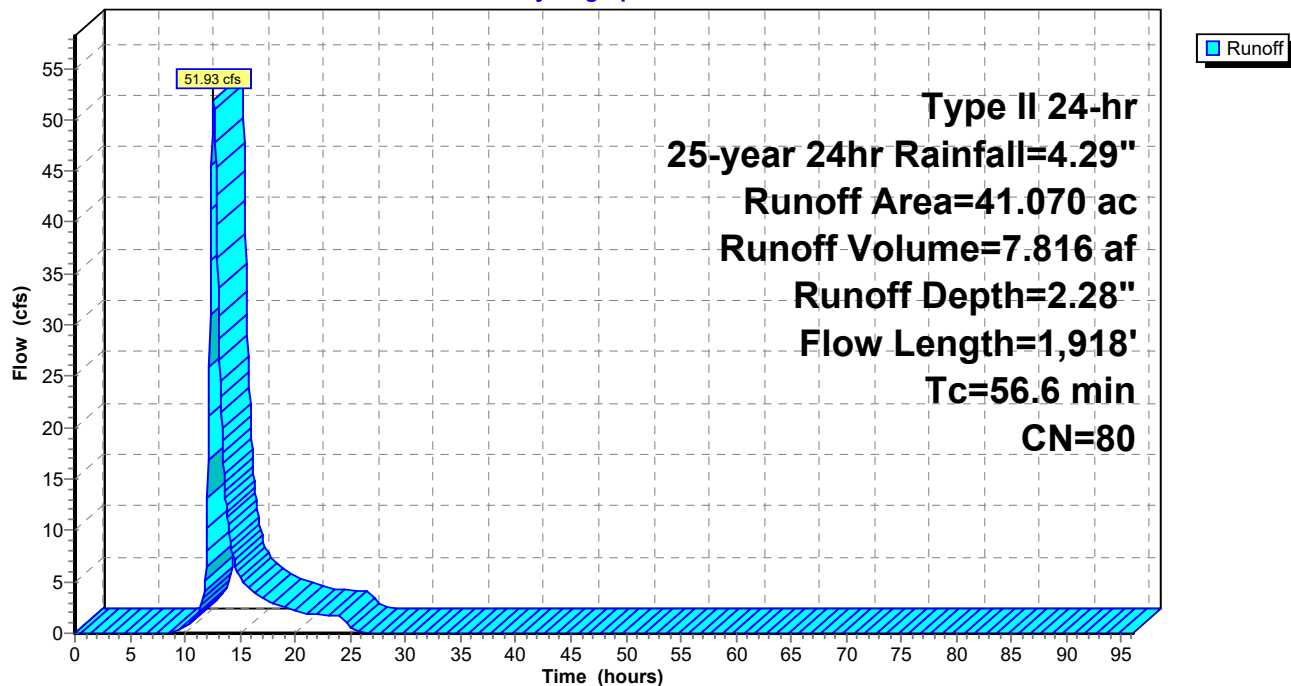
Summary for Subcatchment B3:

Runoff = 51.93 cfs @ 12.59 hrs, Volume= 7.816 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 41.070	80	
41.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.0	100	0.0030	0.06		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
29.2	1,561	0.0098	0.89		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
1.4	257	0.0093	3.13	20.85	Parabolic Channel, DITCH W=20.00' D=0.50' Area=6.7 sf Perim=20.0' n= 0.022
56.6	1,918	Total			

Subcatchment B3:**Hydrograph**

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Type II 24-hr 25-year 24hr Rainfall=4.29"

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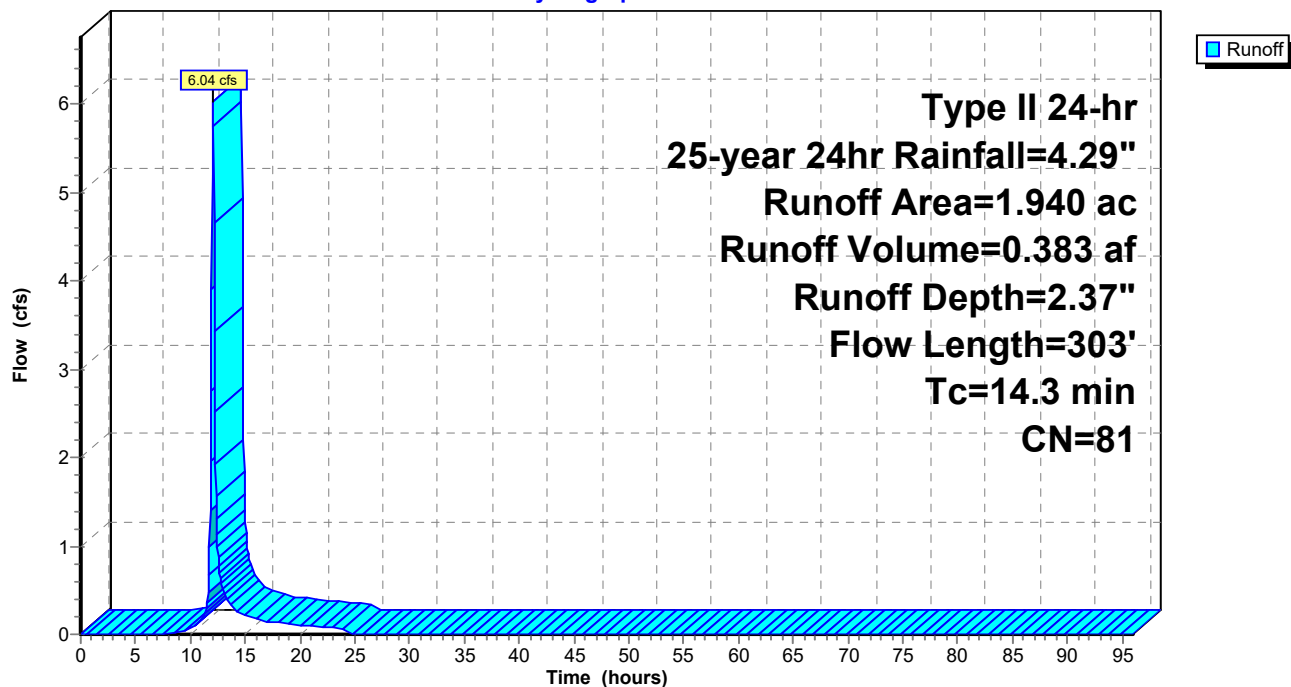
Summary for Subcatchment B30:

Runoff = 6.04 cfs @ 12.06 hrs, Volume= 0.383 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 1.940	81	
1.940		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
2.6	203	0.0202	1.28		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
14.3	303	Total			

Subcatchment B30:**Hydrograph**

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Summary for Subcatchment B4:

Runoff = 223.87 cfs @ 12.41 hrs, Volume= 27.486 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 144.430	80	
144.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0330	0.21		Sheet Flow, SH-OPEN SPACE Range n= 0.130 P2= 2.54"
10.7	749	0.0167	1.16		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.8	904	0.0065	2.59	5.17	Parabolic Channel, DITCH W=6.00' D=0.50' Area=2.0 sf Perim=6.1' n= 0.022
15.8	497	0.0034	0.52		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	43	0.0323	15.29	48.05	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	691	0.0081	4.60	46.03	Parabolic Channel, DITCH W=15.00' D=1.00' Area=10.0 sf Perim=15.2' n= 0.022
42.8	2,984	Total			

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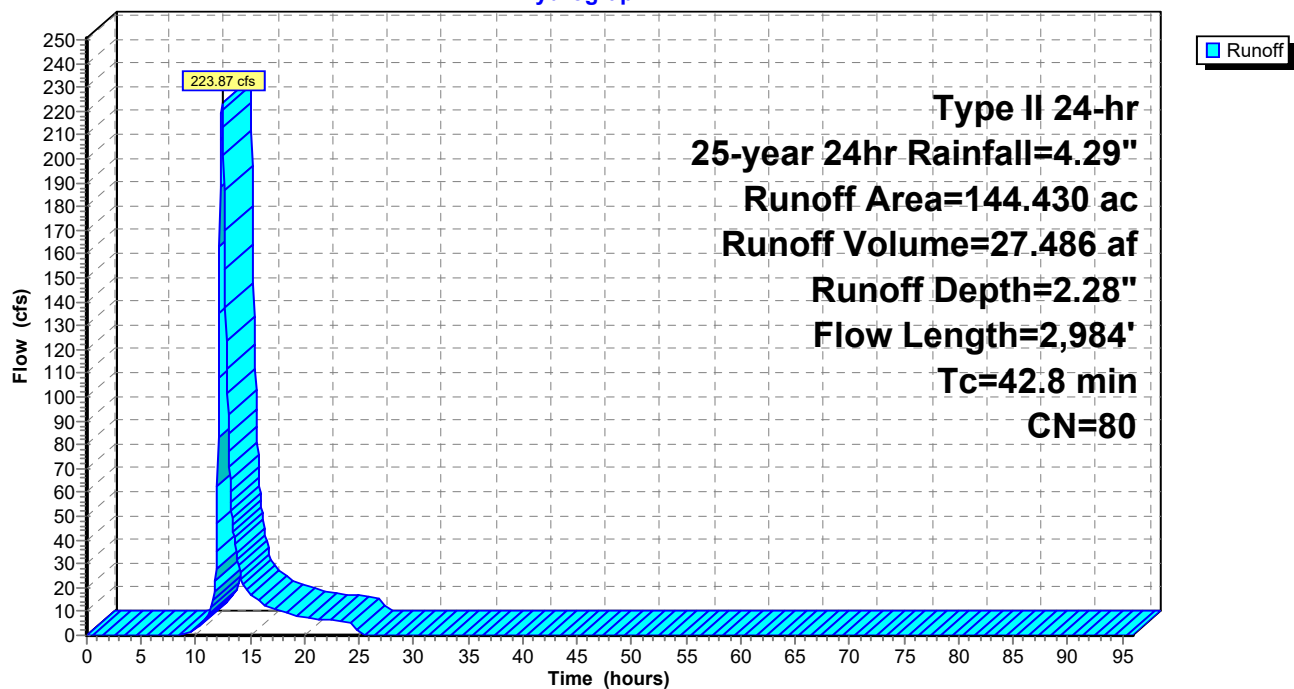
Type II 24-hr 25-year 24hr Rainfall=4.29"

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Subcatchment B4:

Hydrograph



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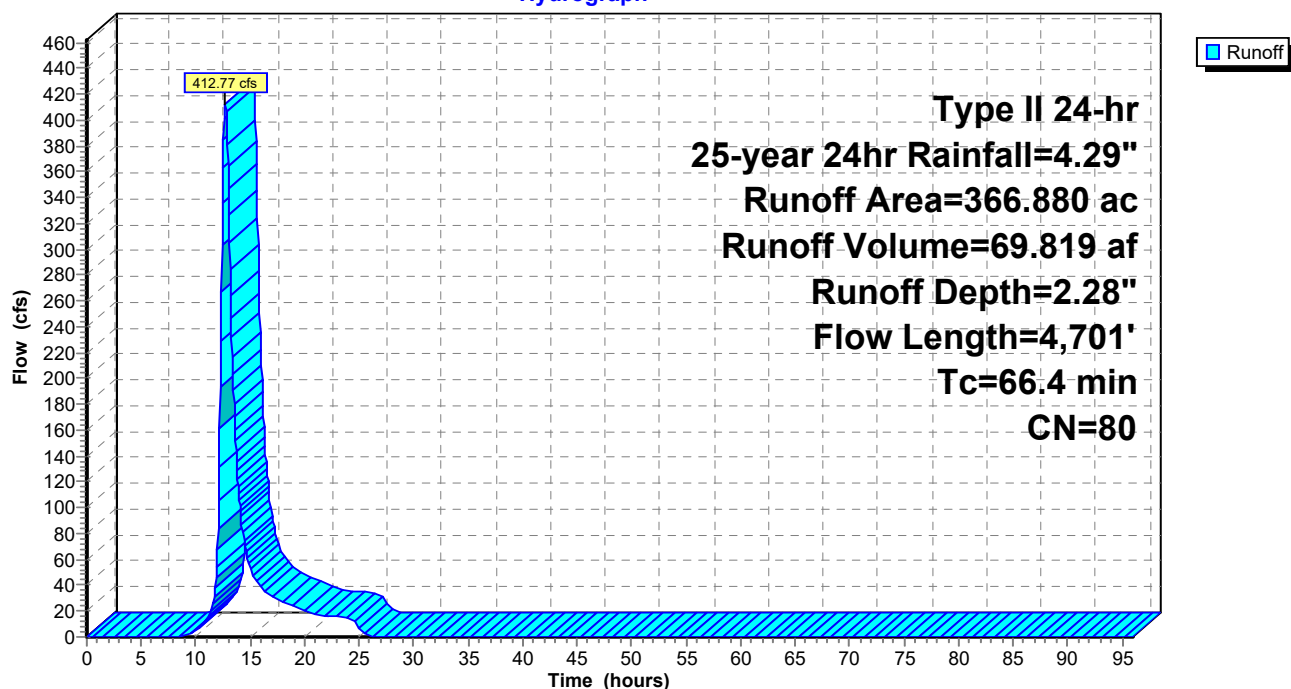
Summary for Subcatchment B5:

Runoff = 412.77 cfs @ 12.72 hrs, Volume= 69.819 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 366.880	80	
366.880		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.0330	0.17		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.0	1,682	0.0144	1.08		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
10.1	1,605	0.0067	2.65	8.82	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
19.5	751	0.0051	0.64		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.9	563	0.0066	9.91	528.71	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
66.4	4,701	Total			

Subcatchment B5:**Hydrograph**

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Type II 24-hr 25-year 24hr Rainfall=4.29"

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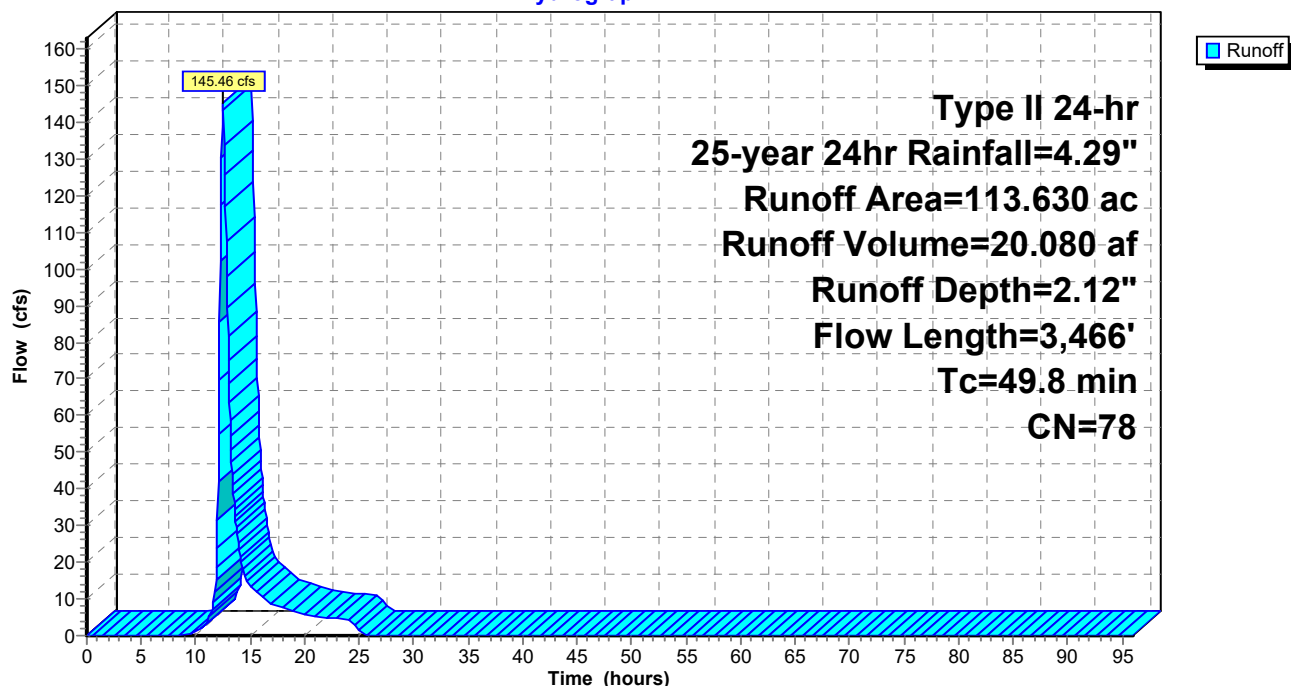
Summary for Subcatchment B6:

Runoff = 145.46 cfs @ 12.50 hrs, Volume= 20.080 af, Depth= 2.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 113.630	78	
113.630		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
31.0	1,798	0.0115	0.97		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
3.0	959	0.0022	5.31	247.62	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
0.1	31	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.7	578	0.0026	5.77	269.19	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
49.8	3,466	Total			

Subcatchment B6:**Hydrograph**

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Type II 24-hr 25-year 24hr Rainfall=4.29"

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Summary for Subcatchment B7:

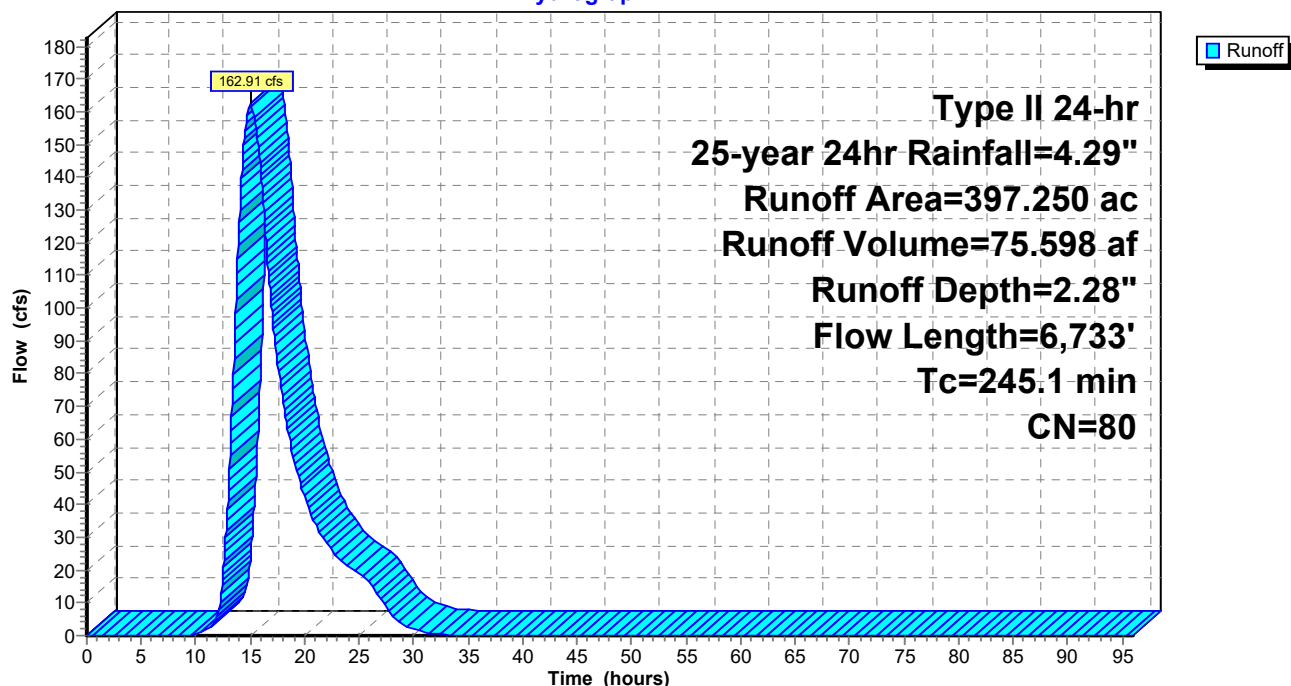
Runoff = 162.91 cfs @ 14.99 hrs, Volume= 75.598 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description			
* 397.250	80				
397.250		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	100	0.0070	0.09		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
85.3	3,055	0.0044	0.60		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	27	0.0372	16.41	51.57	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
139.3	2,913	0.0015	0.35		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.0	638	0.0042	5.21	139.01	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
245.1	6,733	Total			

Subcatchment B7:

Hydrograph



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Type II 24-hr 25-year 24hr Rainfall=4.29"

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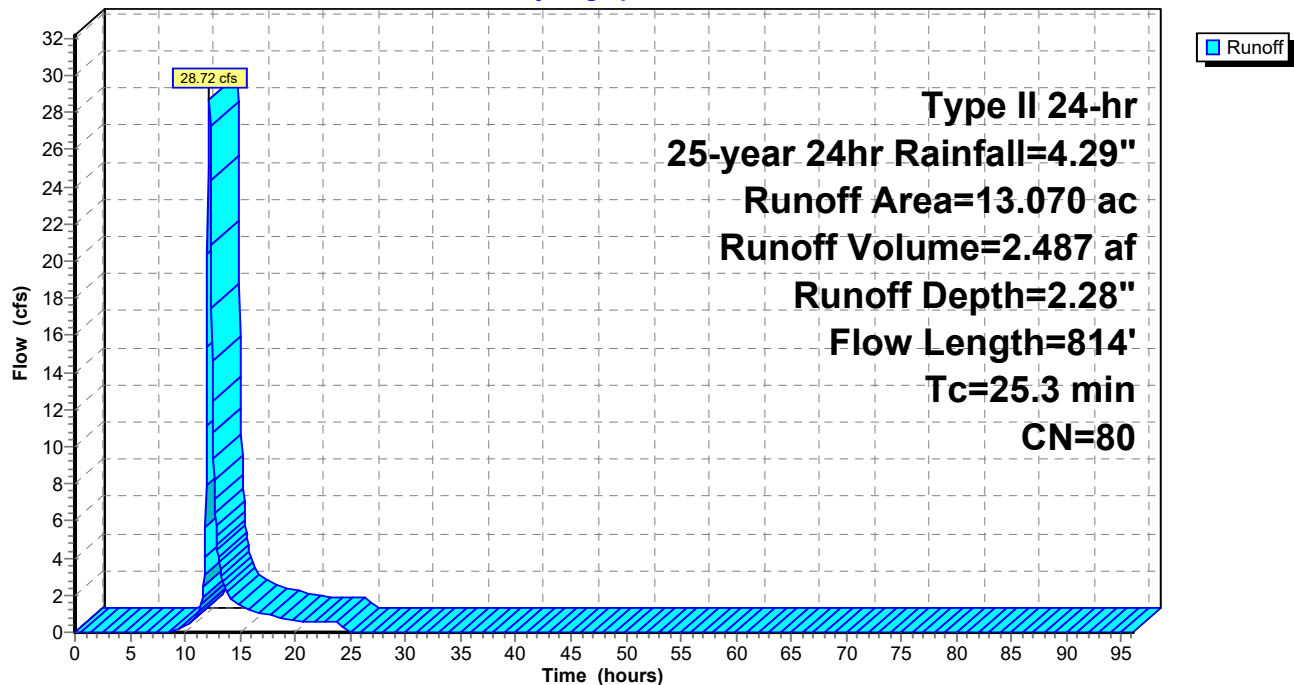
Summary for Subcatchment B8:

Runoff = 28.72 cfs @ 12.19 hrs, Volume= 2.487 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 13.070	80	
13.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
11.3	714	0.0136	1.05		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
25.3	814	Total			

Subcatchment B8:**Hydrograph**

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Type II 24-hr 25-year 24hr Rainfall=4.29"

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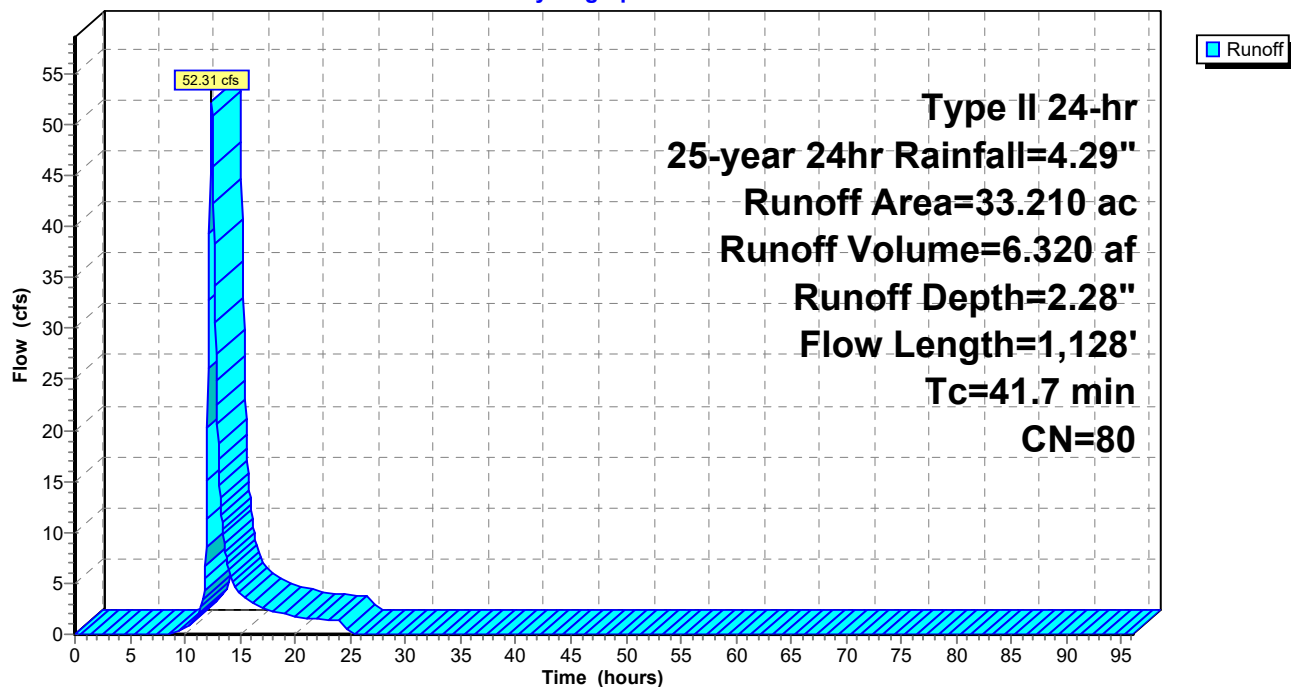
Summary for Subcatchment B9:

Runoff = 52.31 cfs @ 12.39 hrs, Volume= 6.320 af, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-year 24hr Rainfall=4.29"

Area (ac)	CN	Description
* 33.210	80	
33.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.5	100	0.0080	0.10		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.2	1,028	0.0062	0.71		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
41.7	1,128	Total			

Subcatchment B9:**Hydrograph**

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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentB1:	Runoff Area=1,124.640 ac 0.00% Impervious Runoff Depth=2.67" Flow Length=12,505' Tc=64.6 min CN=79 Runoff=1,516.16 cfs 250.511 af
SubcatchmentB10:	Runoff Area=50.450 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=2,208' Tc=54.3 min CN=80 Runoff=79.84 cfs 11.614 af
SubcatchmentB11:	Runoff Area=117.760 ac 0.00% Impervious Runoff Depth=2.41" Flow Length=3,512' Tc=93.1 min CN=76 Runoff=107.95 cfs 23.674 af
SubcatchmentB12:	Runoff Area=22.670 ac 0.00% Impervious Runoff Depth=2.33" Flow Length=1,883' Tc=79.8 min CN=75 Runoff=22.37 cfs 4.398 af
SubcatchmentB13:	Runoff Area=37.130 ac 0.00% Impervious Runoff Depth=2.85" Flow Length=2,542' Tc=74.5 min CN=81 Runoff=48.15 cfs 8.828 af
SubcatchmentB14:	Runoff Area=427.330 ac 0.00% Impervious Runoff Depth=2.58" Flow Length=7,680' Tc=133.1 min CN=78 Runoff=320.33 cfs 92.048 af
SubcatchmentB15:	Runoff Area=60.430 ac 0.00% Impervious Runoff Depth=2.50" Flow Length=1,617' Tc=104.7 min CN=77 Runoff=52.38 cfs 12.580 af
SubcatchmentB16:	Runoff Area=198.250 ac 0.00% Impervious Runoff Depth=2.50" Flow Length=6,834' Tc=223.3 min CN=77 Runoff=94.92 cfs 41.269 af
SubcatchmentB17:	Runoff Area=41.100 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=789' Tc=24.3 min CN=80 Runoff=112.10 cfs 9.461 af
SubcatchmentB18:	Runoff Area=81.990 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=2,386' Tc=46.0 min CN=80 Runoff=146.36 cfs 18.874 af
SubcatchmentB19:	Runoff Area=25.480 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=2,008' Tc=56.5 min CN=80 Runoff=39.22 cfs 5.866 af
SubcatchmentB2:	Runoff Area=233.580 ac 0.00% Impervious Runoff Depth=2.50" Flow Length=3,410' Tc=30.4 min CN=77 Runoff=498.54 cfs 48.624 af
SubcatchmentB20:	Runoff Area=165.020 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=5,408' Tc=53.5 min CN=80 Runoff=264.70 cfs 37.988 af
SubcatchmentB21:	Runoff Area=36.500 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=1,868' Tc=83.6 min CN=80 Runoff=41.97 cfs 8.402 af
SubcatchmentB22:	Runoff Area=52.290 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=2,743' Tc=77.3 min CN=80 Runoff=63.73 cfs 12.037 af
SubcatchmentB23:	Runoff Area=43.170 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=2,125' Tc=71.9 min CN=80 Runoff=55.62 cfs 9.938 af

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Type II 24-hr 50-year 24hr Rainfall=4.85"

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SubcatchmentB24:	Runoff Area=22.660 ac 0.00% Impervious Runoff Depth=1.41" Flow Length=657' Tc=22.1 min CN=63 Runoff=30.91 cfs 2.672 af
SubcatchmentB25:	Runoff Area=32.280 ac 0.00% Impervious Runoff Depth=1.93" Flow Length=1,923' Tc=41.0 min CN=70 Runoff=41.87 cfs 5.180 af
SubcatchmentB26:	Runoff Area=127.500 ac 0.00% Impervious Runoff Depth=2.41" Flow Length=4,618' Tc=167.6 min CN=76 Runoff=73.76 cfs 25.632 af
SubcatchmentB27:	Runoff Area=21.580 ac 0.00% Impervious Runoff Depth=1.70" Flow Length=746' Tc=30.6 min CN=67 Runoff=29.66 cfs 3.056 af
SubcatchmentB28:	Runoff Area=17.080 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=1,454' Tc=38.3 min CN=80 Runoff=34.65 cfs 3.932 af
SubcatchmentB29:	Runoff Area=87.840 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=3,349' Tc=117.1 min CN=80 Runoff=78.35 cfs 20.221 af
SubcatchmentB3:	Runoff Area=41.070 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=1,918' Tc=56.6 min CN=80 Runoff=63.08 cfs 9.454 af
SubcatchmentB30:	Runoff Area=1.940 ac 0.00% Impervious Runoff Depth=2.85" Flow Length=303' Tc=14.3 min CN=81 Runoff=7.26 cfs 0.461 af
SubcatchmentB4:	Runoff Area=144.430 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=2,984' Tc=42.8 min CN=80 Runoff=271.77 cfs 33.248 af
SubcatchmentB5:	Runoff Area=366.880 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=4,701' Tc=66.4 min CN=80 Runoff=501.44 cfs 84.456 af
SubcatchmentB6:	Runoff Area=113.630 ac 0.00% Impervious Runoff Depth=2.58" Flow Length=3,466' Tc=49.8 min CN=78 Runoff=178.46 cfs 24.476 af
SubcatchmentB7:	Runoff Area=397.250 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=6,733' Tc=245.1 min CN=80 Runoff=198.47 cfs 91.447 af
SubcatchmentB8:	Runoff Area=13.070 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=814' Tc=25.3 min CN=80 Runoff=34.79 cfs 3.009 af
SubcatchmentB9:	Runoff Area=33.210 ac 0.00% Impervious Runoff Depth=2.76" Flow Length=1,128' Tc=41.7 min CN=80 Runoff=63.50 cfs 7.645 af

Total Runoff Area = 4,138.210 ac Runoff Volume = 911.001 af Average Runoff Depth = 2.64"
100.00% Pervious = 4,138.210 ac 0.00% Impervious = 0.000 ac

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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B1:

Runoff = 1,516.16 cfs @ 12.69 hrs, Volume= 250.511 af, Depth= 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 1,124.640	79	
1,124.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	100	0.0050	0.08		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
8.5	656	0.0203	1.28		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
9.4	4,083	0.0048	7.25	362.50	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.0	56	0.0535	19.68	61.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.2	94	0.0085	9.65	482.39	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	47	0.0021	3.90	12.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
12.3	3,705	0.0023	5.02	250.93	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	40	0.0025	4.26	13.37	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.4	1,819	0.0020	4.71	282.81	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
0.1	45	0.0156	10.63	33.39	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.1	1,860	0.0023	5.05	303.28	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
64.6	12,505	Total			

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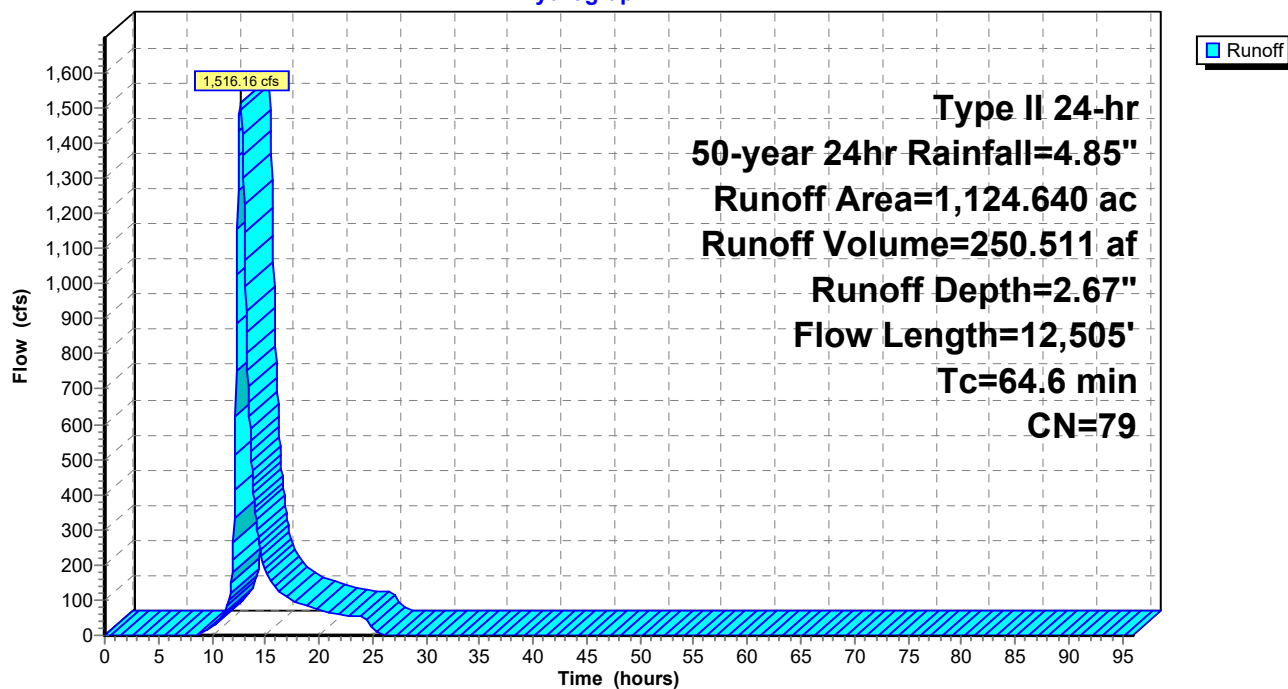
Type II 24-hr 50-year 24hr Rainfall=4.85"

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Subcatchment B1:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B10:

Runoff = 79.84 cfs @ 12.55 hrs, Volume= 11.614 af, Depth= 2.76"

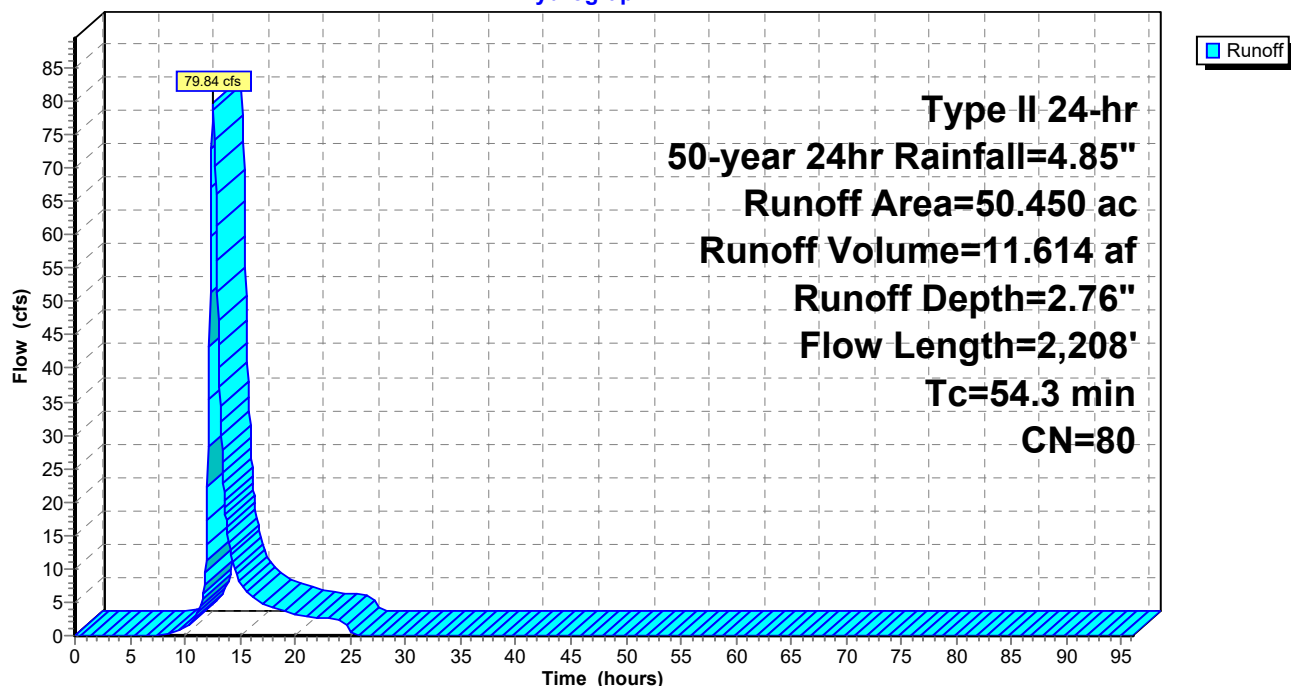
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 50.450	80	
50.450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.1	100	0.0040	0.07		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
28.3	1,408	0.0085	0.83		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	72	0.0014	4.57	243.51	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
0.1	34	0.0029	4.58	14.40	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	594	0.0024	3.94	105.08	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
54.3	2,208	Total			

Subcatchment B10:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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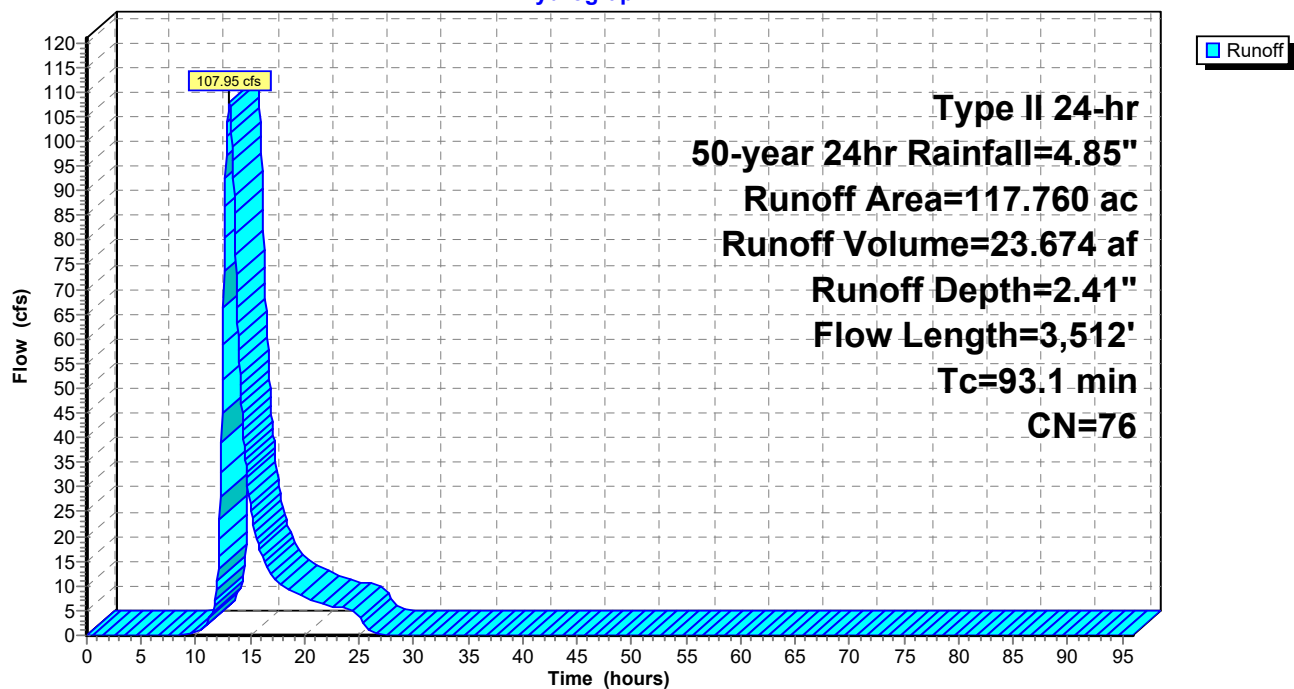
Summary for Subcatchment B11:

Runoff = 107.95 cfs @ 13.09 hrs, Volume= 23.674 af, Depth= 2.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 117.760	76	
117.760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7	100	0.0070	0.05		Sheet Flow, SH-WOODS Woods: Light underbrush n= 0.400 P2= 2.54"
50.0	2,516	0.0087	0.84		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.2	413	0.0017	1.33	4.44	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.2	69	0.0277	7.08	22.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.0	14	0.0073	7.97	332.27	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
0.1	24	0.0165	5.47	17.17	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.9	376	0.0053	6.79	283.12	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
93.1	3,512	Total			

Subcatchment B11:**Hydrograph**

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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B12:

Runoff = 22.37 cfs @ 12.89 hrs, Volume= 4.398 af, Depth= 2.33"

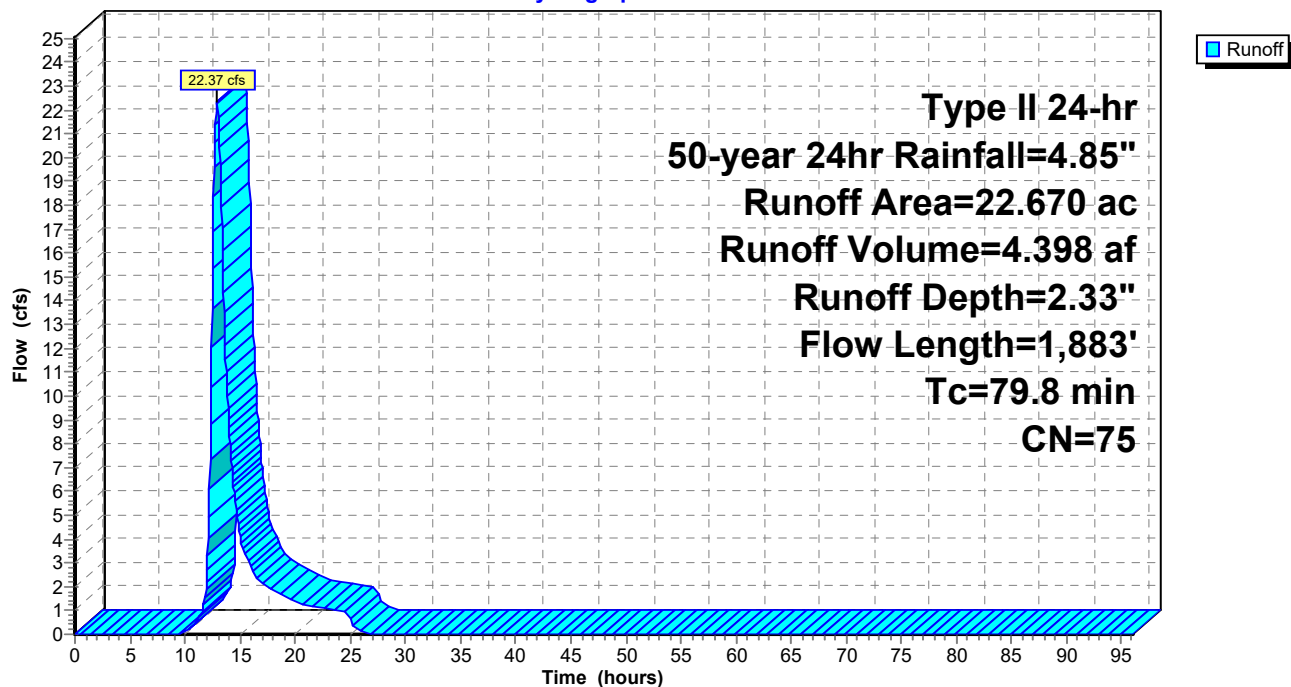
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 22.670	75	
22.670		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
67.4	1,783	0.0024	0.44		Shallow Concentrated Flow, SH-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
79.8	1,883	Total			

Subcatchment B12:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B13:

Runoff = 48.15 cfs @ 12.82 hrs, Volume= 8.828 af, Depth= 2.85"

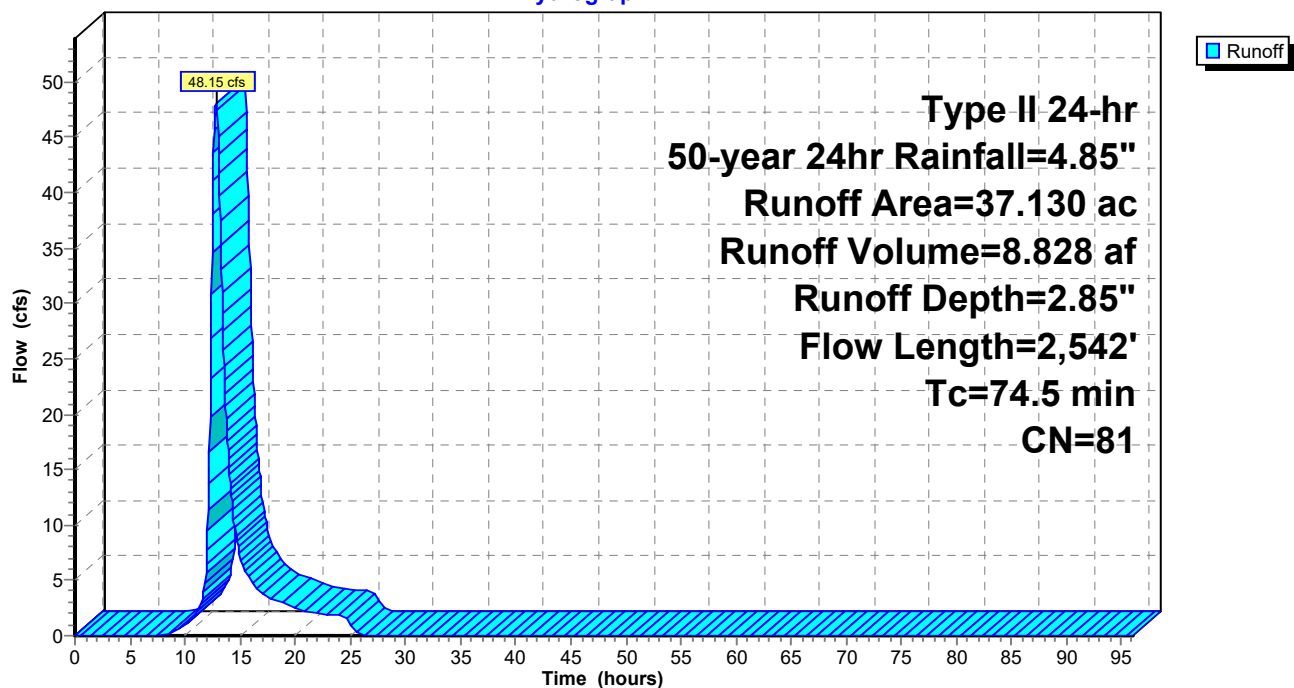
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 37.130	81	
37.130		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	100	0.0280	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
50.7	1,836	0.0045	0.60		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
13.2	571	0.0005	0.72	2.41	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.0	35	0.0751	23.32	73.27	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
74.5	2,542	Total			

Subcatchment B13:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B14:

Runoff = 320.33 cfs @ 13.61 hrs, Volume= 92.048 af, Depth= 2.58"

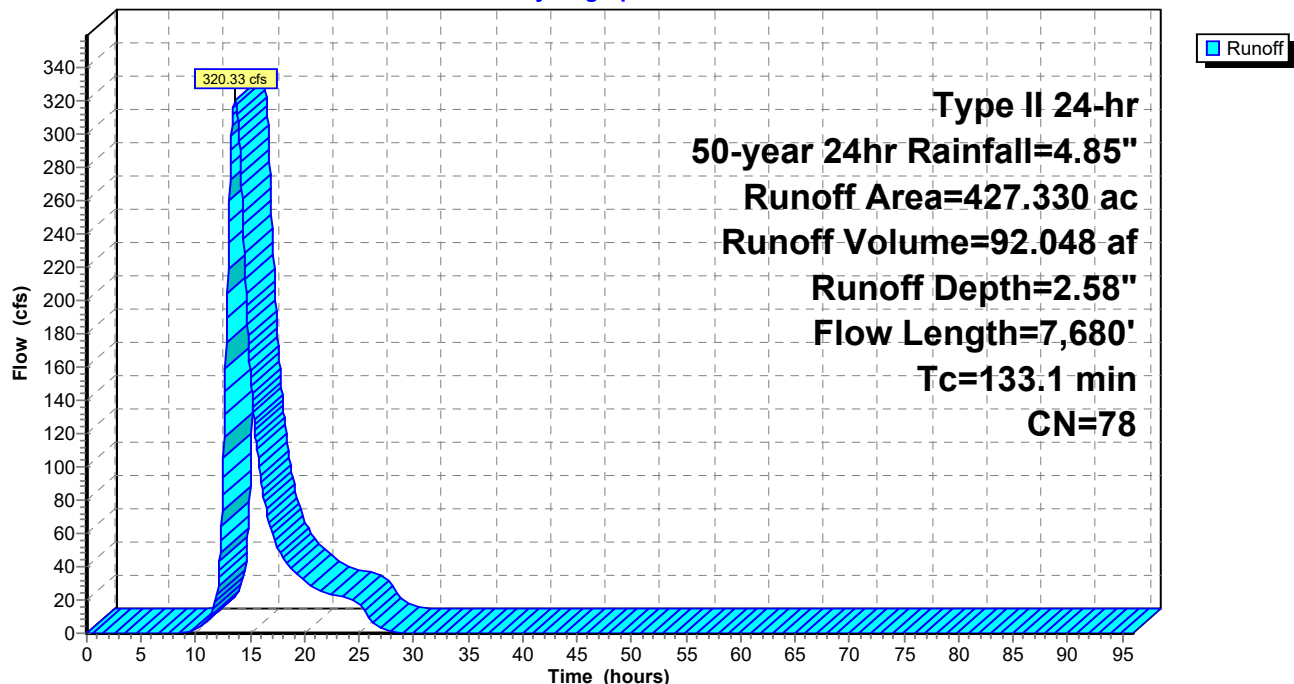
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 427.330	78	
427.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
95.6	2,475	0.0023	0.43		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
25.3	5,105	0.0010	3.37	336.93	Parabolic Channel, DITCH W=50.00' D=3.00' Area=100.0 sf Perim=50.5' n= 0.022
133.1	7,680	Total			

Subcatchment B14:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B15:

Runoff = 52.38 cfs @ 13.23 hrs, Volume= 12.580 af, Depth= 2.50"

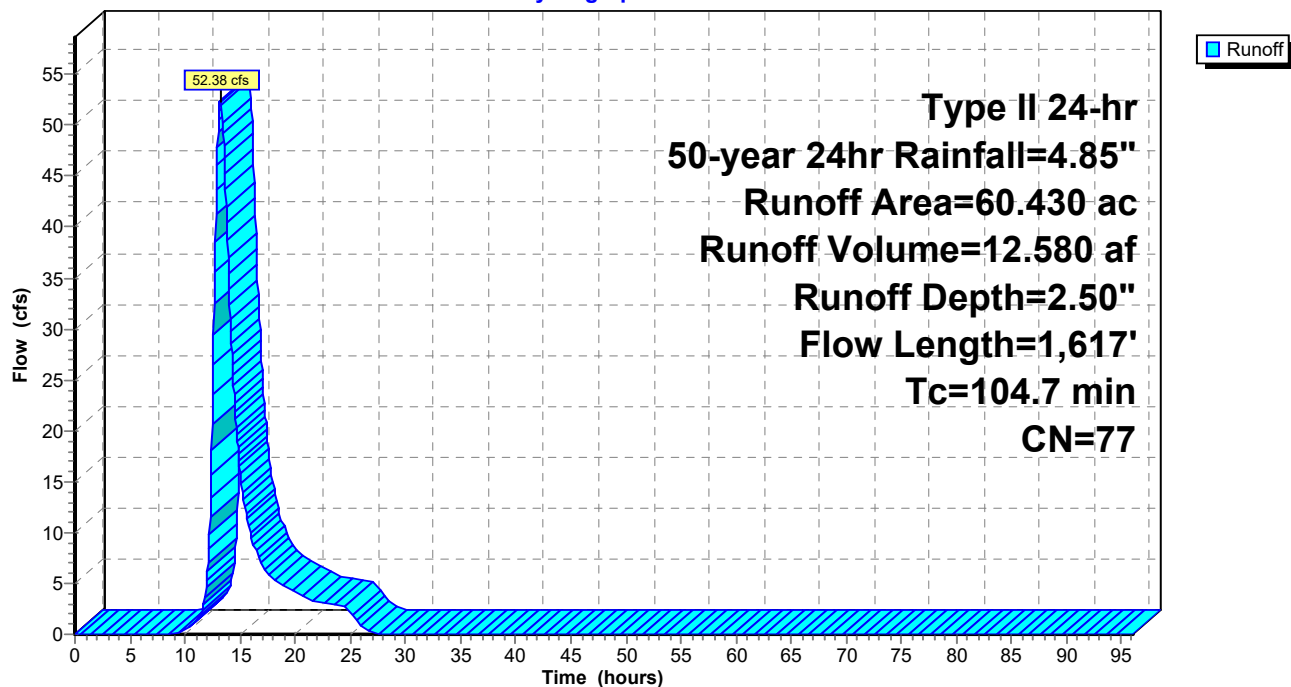
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 60.430	77	
60.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0250	0.15		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
93.6	1,517	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
104.7	1,617	Total			

Subcatchment B15:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B16:

Runoff = 94.92 cfs @ 14.67 hrs, Volume= 41.269 af, Depth= 2.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 198.250	77	
198.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
14.5	512	0.0043	0.59		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	41	0.0073	7.27	22.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
37.0	1,056	0.0028	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	35	0.0028	4.50	14.15	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
145.4	2,355	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.3	705	0.0045	5.16	68.76	Parabolic Channel, DITCH W=10.00' D=2.00' Area=13.3 sf Perim=11.0' n= 0.022
0.2	42	0.0024	4.17	13.10	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
9.3	1,988	0.0012	3.58	143.17	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
223.3	6,834	Total			

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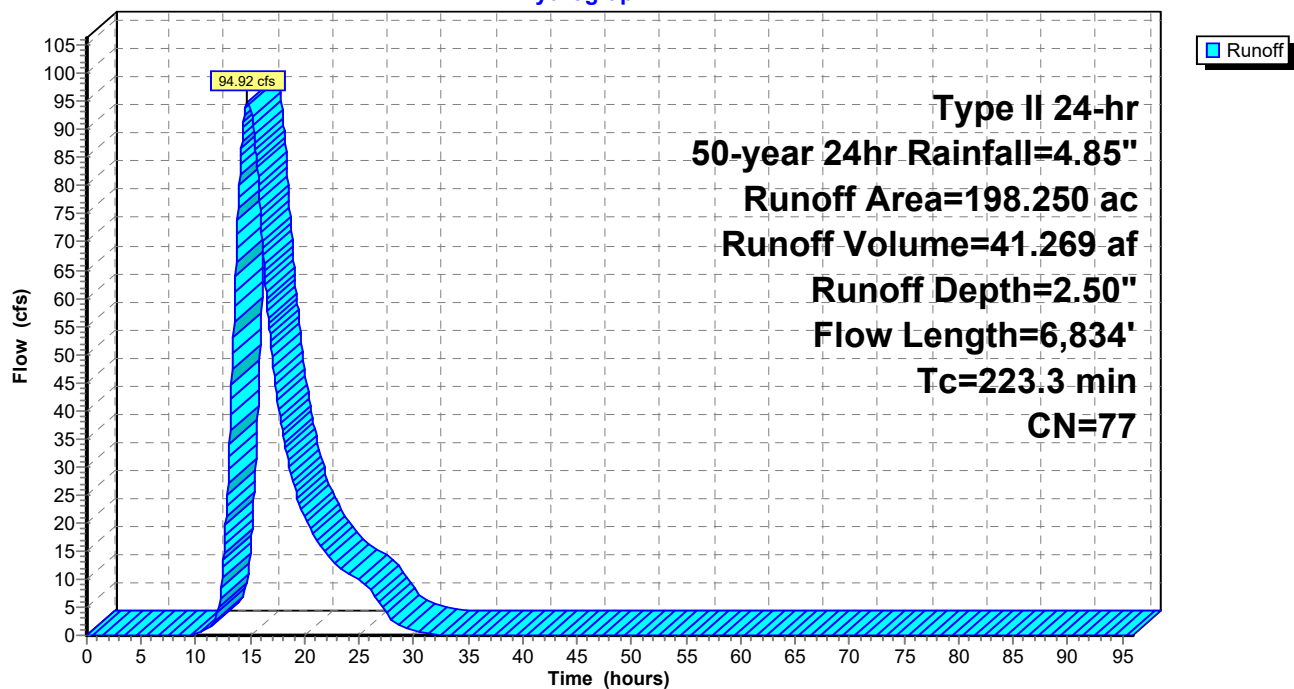
Type II 24-hr 50-year 24hr Rainfall=4.85"

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Subcatchment B16:

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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B17:

Runoff = 112.10 cfs @ 12.18 hrs, Volume= 9.461 af, Depth= 2.76"

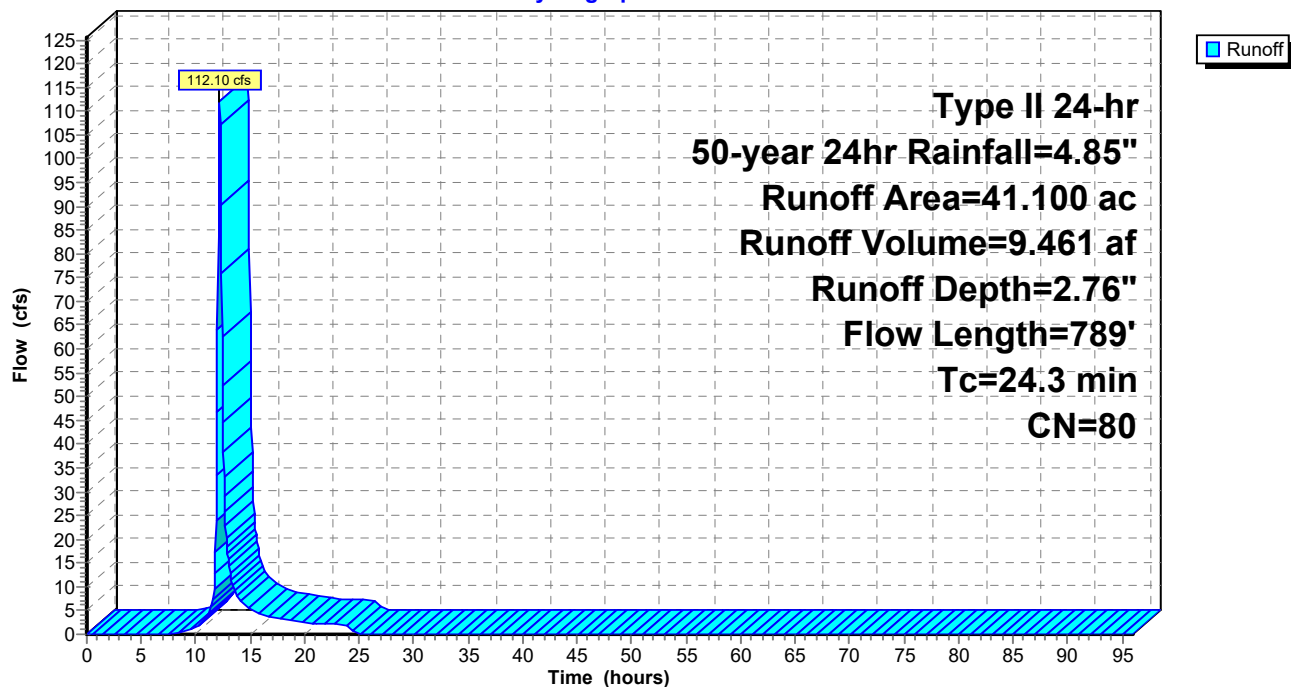
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 41.100	80	
41.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
10.3	689	0.0154	1.12		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
24.3	789	Total			

Subcatchment B17:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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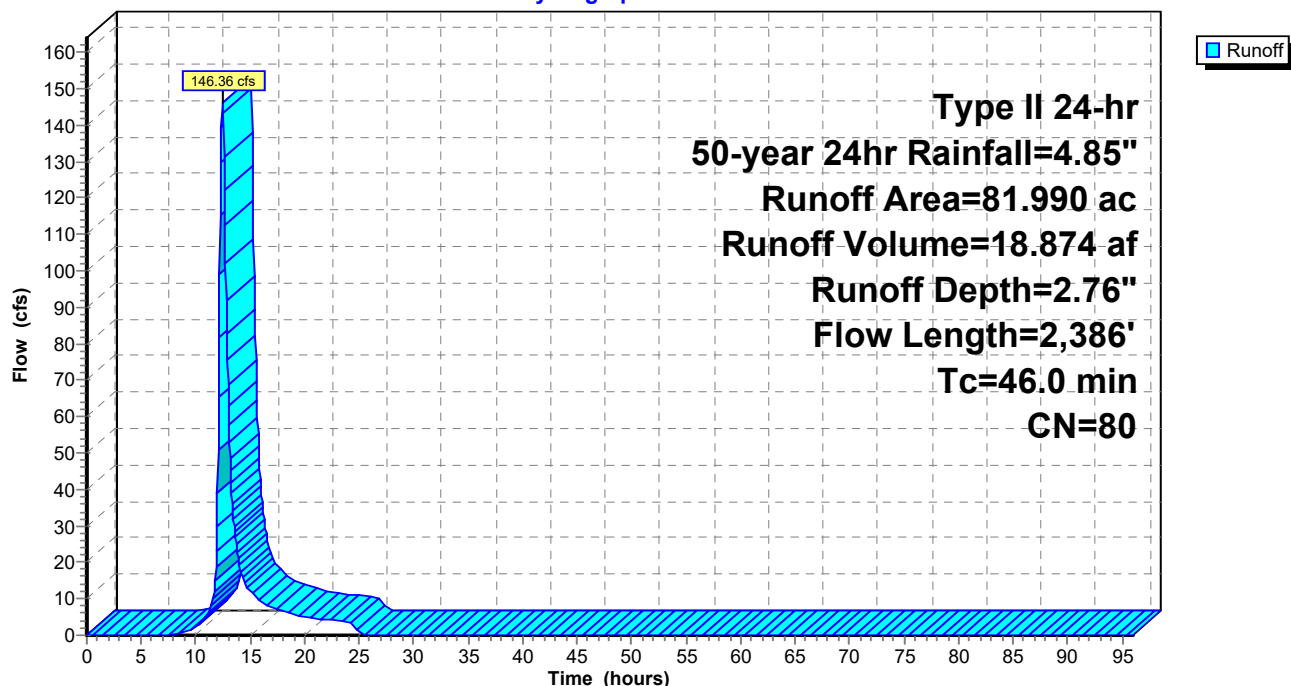
Summary for Subcatchment B18:

Runoff = 146.36 cfs @ 12.44 hrs, Volume= 18.874 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 81.990	80	
81.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0300	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.6	1,156	0.0076	0.78		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
11.1	1,130	0.0011	1.70	22.69	Parabolic Channel, DITCH W=20.00' D=1.00' Area=13.3 sf Perim=20.1' n= 0.022
46.0	2,386	Total			

Subcatchment B18:**Hydrograph**

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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B19:

Runoff = 39.22 cfs @ 12.58 hrs, Volume= 5.866 af, Depth= 2.76"

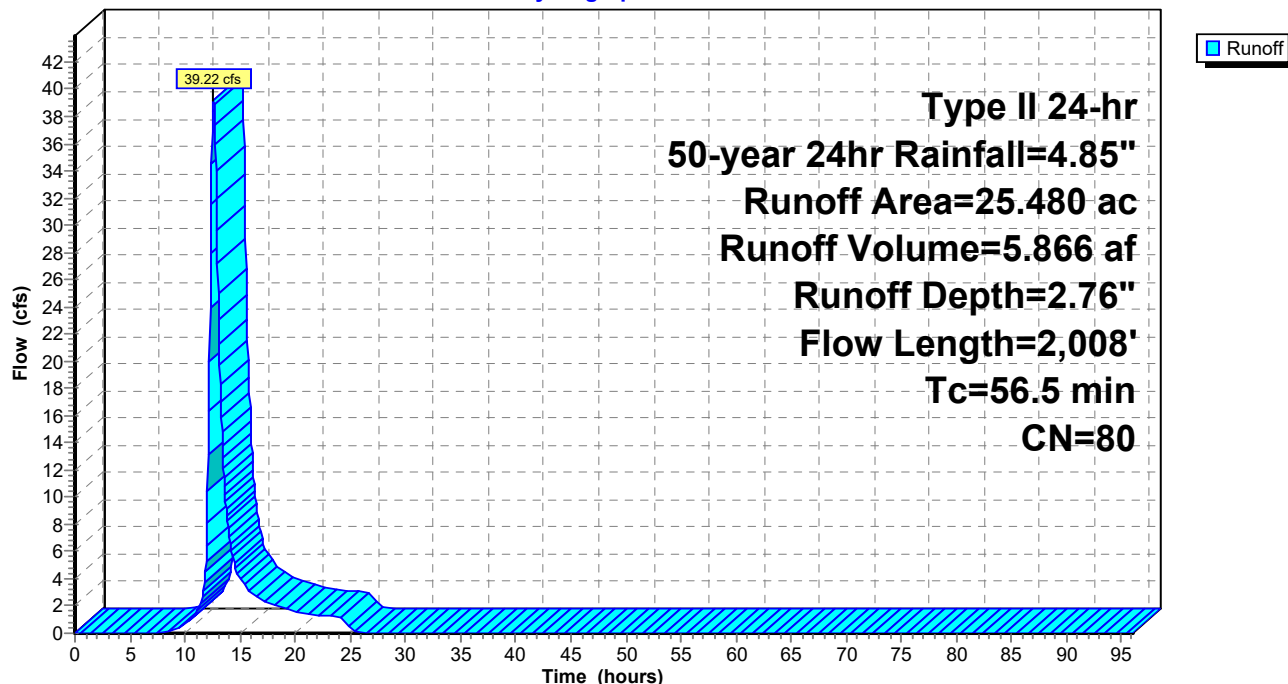
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 25.480	80	
25.480		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0180	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
19.0	999	0.0095	0.88		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
24.8	909	0.0046	0.61		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
56.5	2,008	Total			

Subcatchment B19:

Hydrograph



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Summary for Subcatchment B2:

Runoff = 498.54 cfs @ 12.25 hrs, Volume= 48.624 af, Depth= 2.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 233.580	77	
233.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	100	0.0106	0.11		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
3.4	210	0.0133	1.04		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
4.2	178	0.0051	0.71		Shallow Concentrated Flow, SCF-OPEN SPACE Nearly Bare & Untilled Kv= 10.0 fps
0.2	62	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	409	0.0169	13.17	87.83	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.011
5.2	1,987	0.0038	6.37	254.77	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	42	0.0047	5.83	18.33	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	218	0.0041	6.62	264.64	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	44	0.0160	10.76	33.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	160	0.0050	5.69	151.67	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
30.4	3,410	Total			

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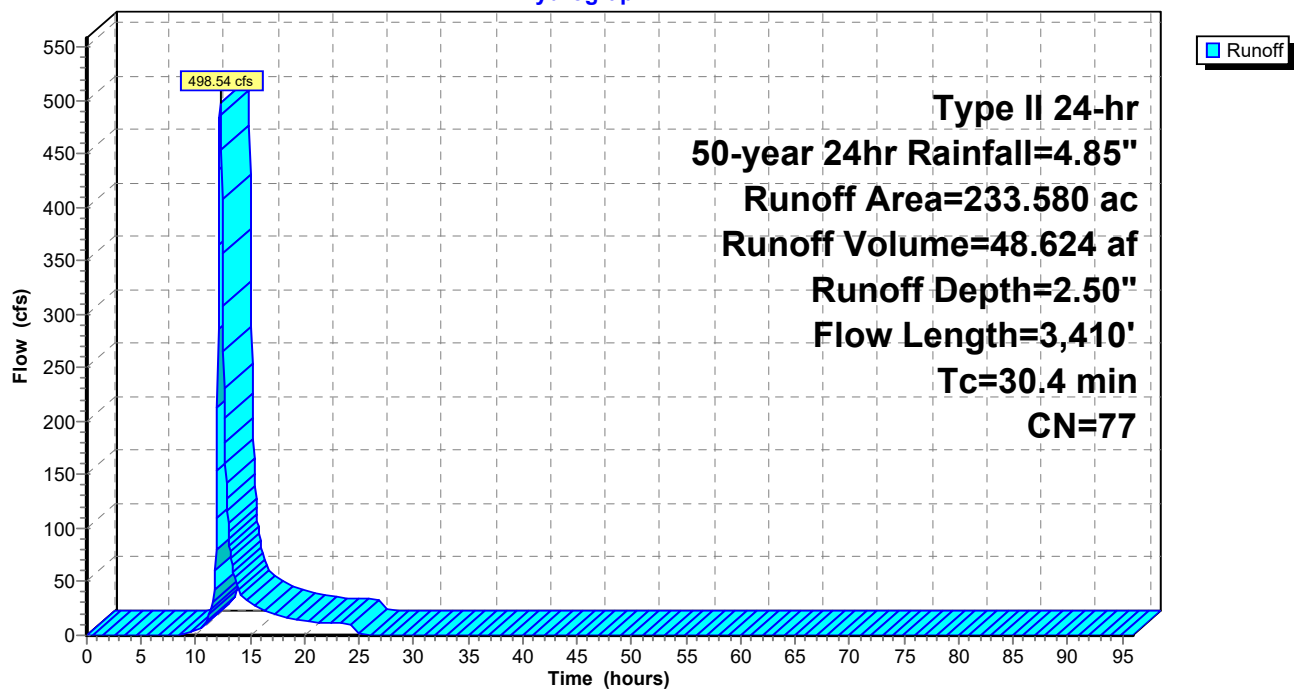
Type II 24-hr 50-year 24hr Rainfall=4.85"

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Subcatchment B2:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B20:

Runoff = 264.70 cfs @ 12.54 hrs, Volume= 37.988 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 165.020	80	
165.020		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.3	1,262	0.0079	0.80		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	94	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.8	167	0.0294	1.54		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	61	0.0016	3.40	10.69	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	2,712	0.0014	7.73	309.28	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.011
0.2	43	0.0023	4.08	12.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	969	0.0007	2.77	138.43	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
53.5	5,408	Total			

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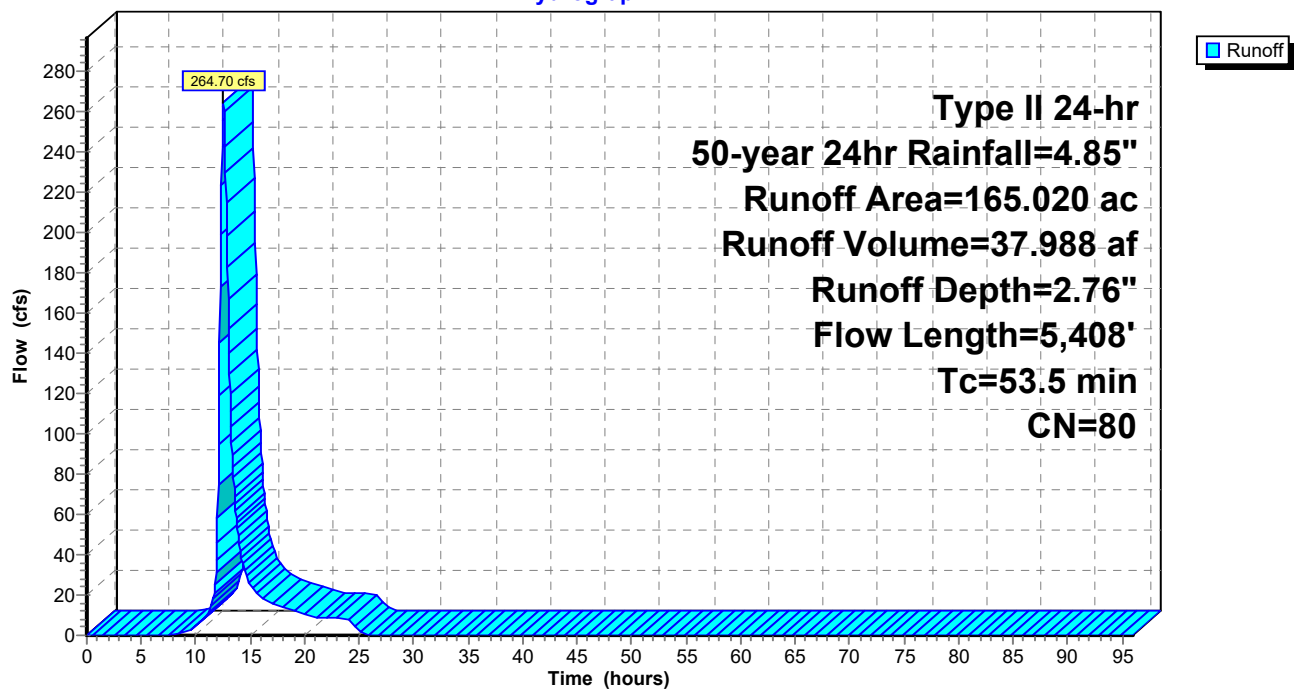
Type II 24-hr 50-year 24hr Rainfall=4.85"

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Subcatchment B20:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B21:

Runoff = 41.97 cfs @ 12.92 hrs, Volume= 8.402 af, Depth= 2.76"

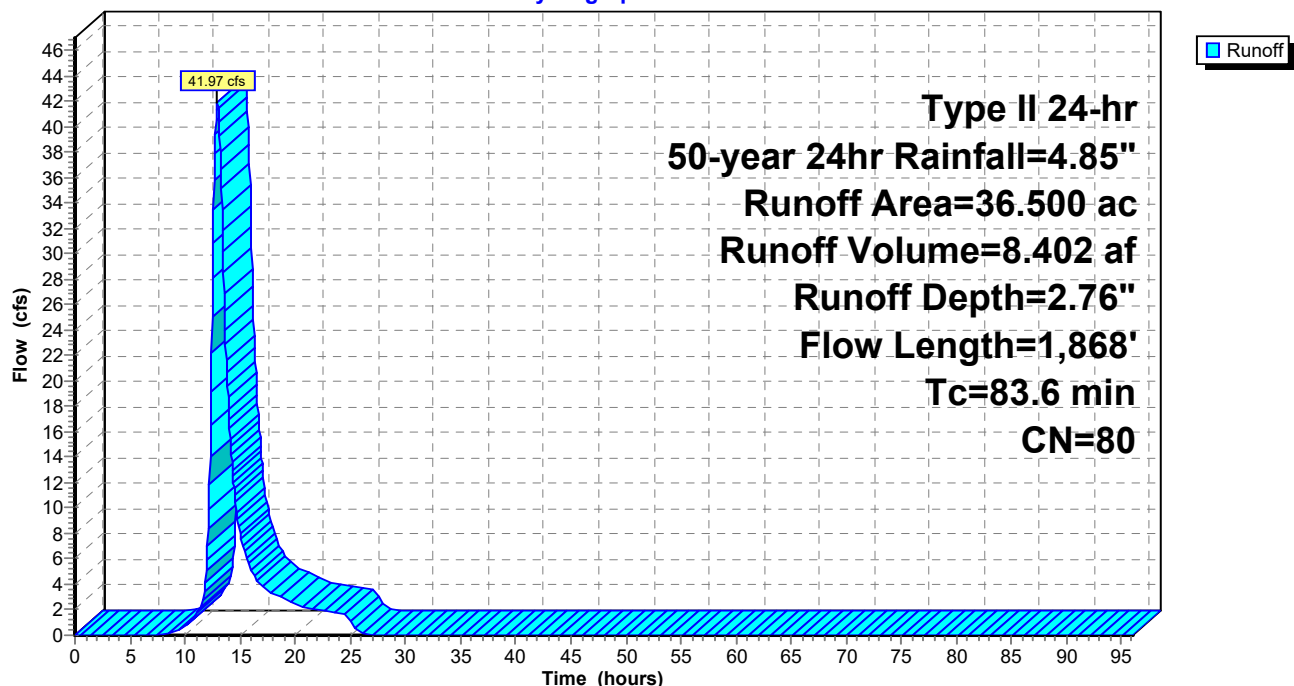
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 36.500	80	
36.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
25.9	1,010	0.0052	0.65		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
43.3	758	0.0034	0.29		Shallow Concentrated Flow, SCF-WOODS Woodland Kv= 5.0 fps
83.6	1,868	Total			

Subcatchment B21:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B22:

Runoff = 63.73 cfs @ 12.84 hrs, Volume= 12.037 af, Depth= 2.76"

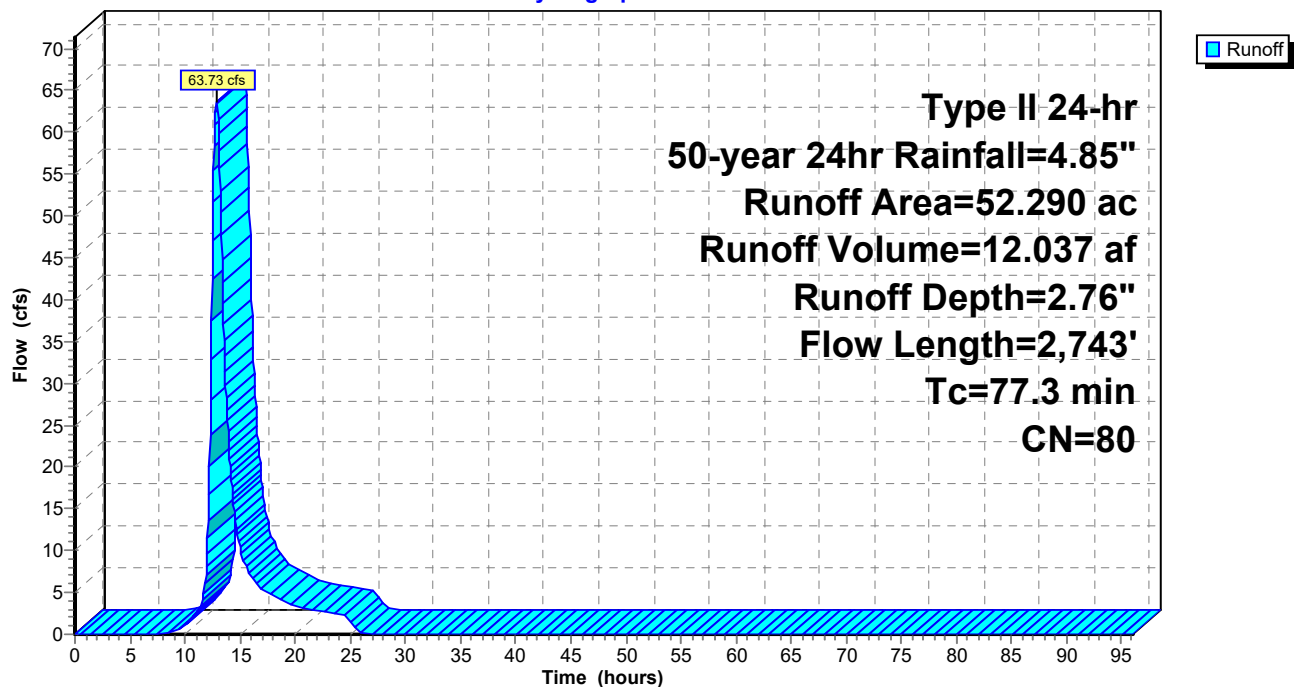
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 52.290	80	
52.290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
64.3	2,643	0.0058	0.69		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
77.3	2,743	Total			

Subcatchment B22:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B23:

Runoff = 55.62 cfs @ 12.78 hrs, Volume= 9.938 af, Depth= 2.76"

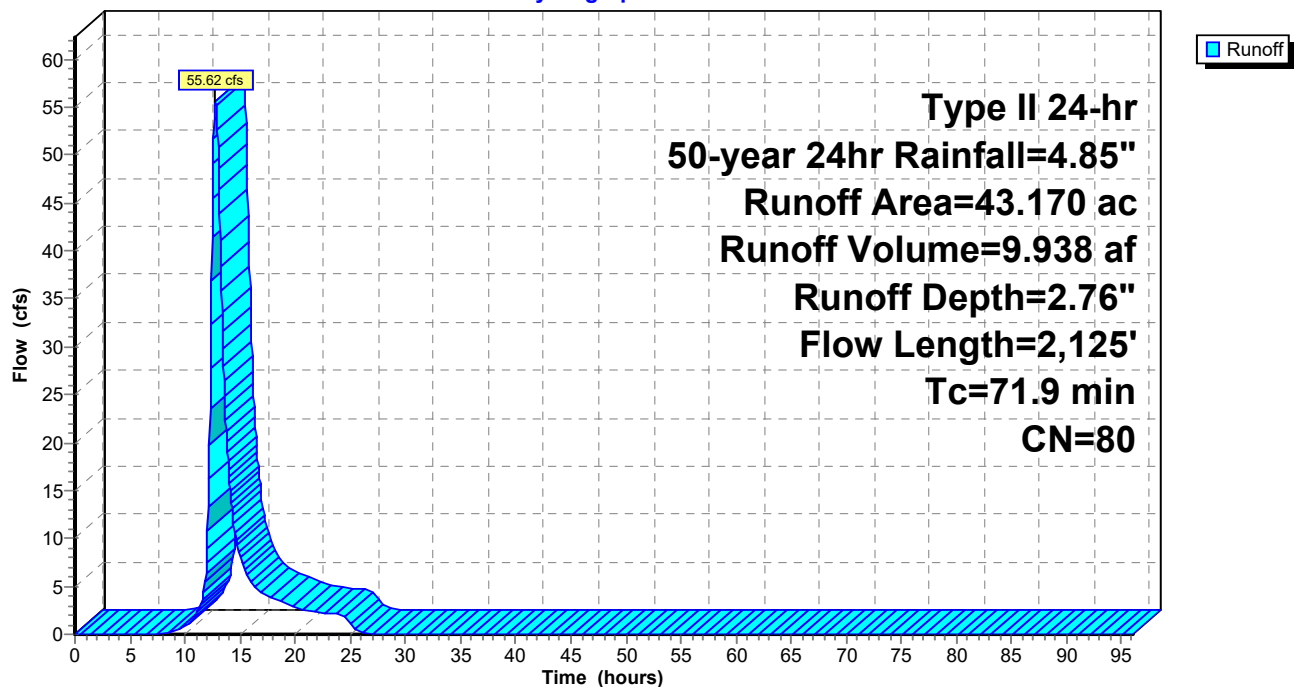
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 43.170	80	
43.170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	100	0.0100	0.10		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
55.9	2,025	0.0045	0.60		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
71.9	2,125	Total			

Subcatchment B23:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B24:

Runoff = 30.91 cfs @ 12.17 hrs, Volume= 2.672 af, Depth= 1.41"

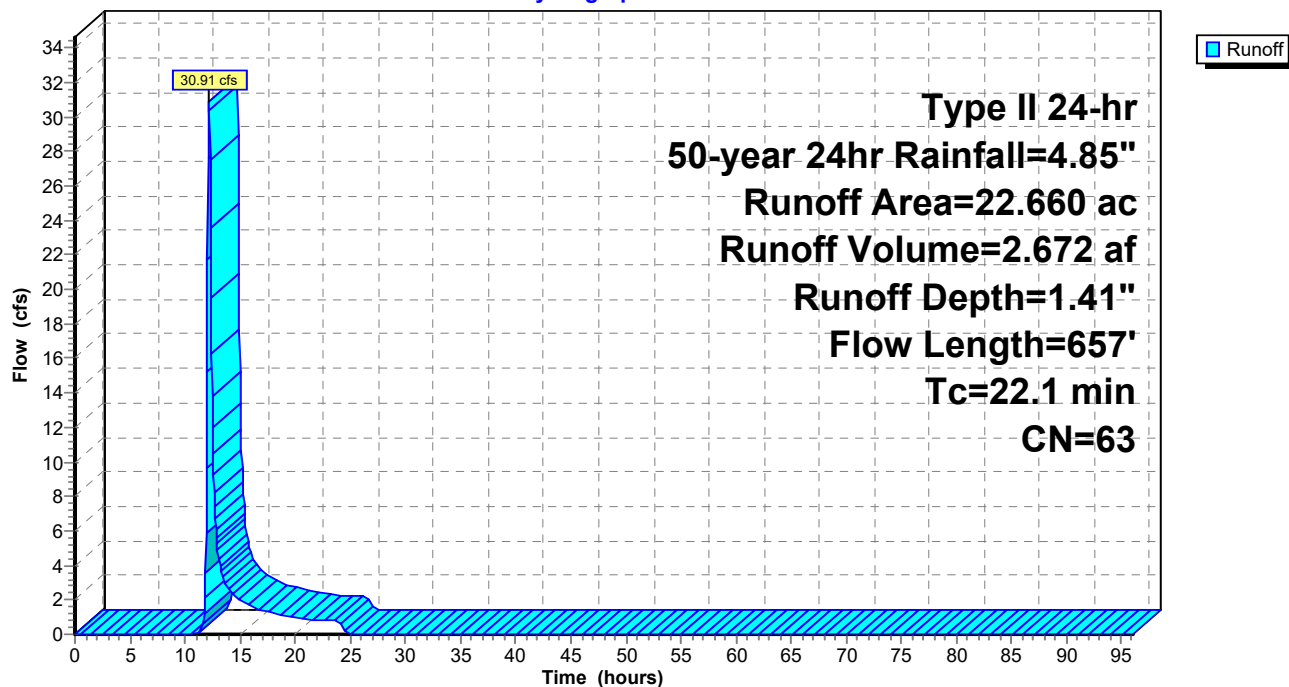
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 22.660	63	
22.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
7.7	557	0.0181	1.21		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
22.1	657	Total			

Subcatchment B24:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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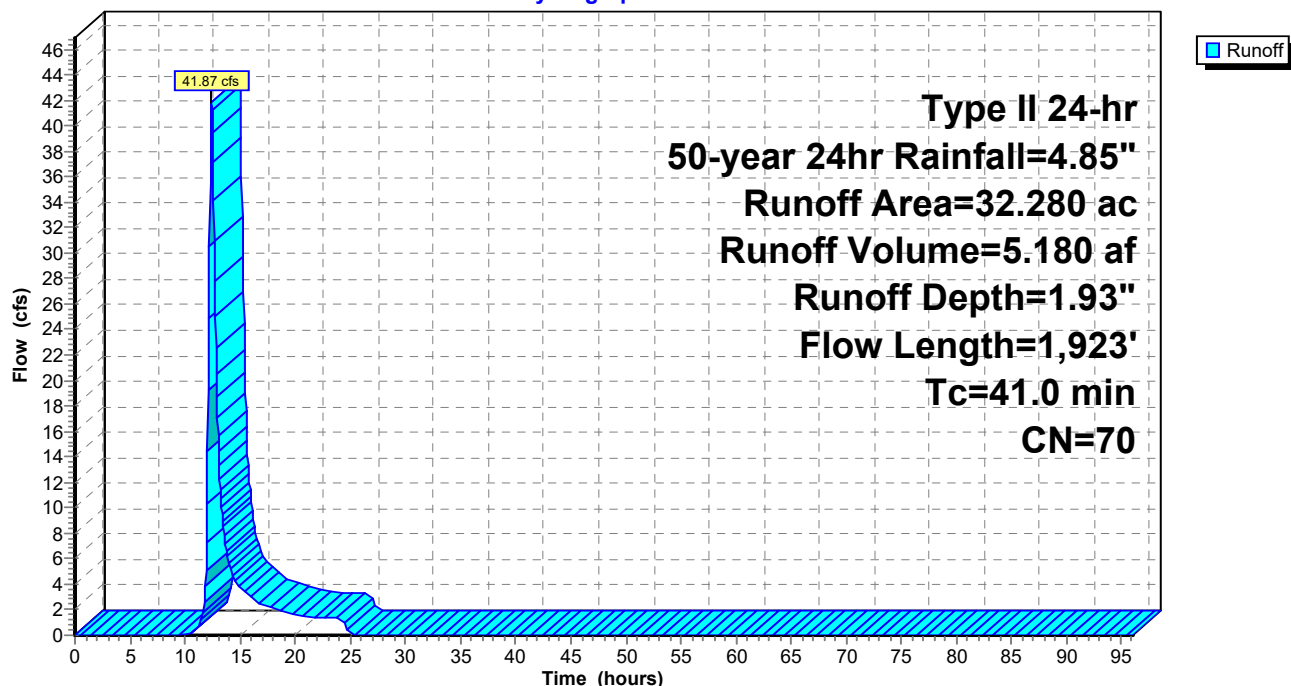
Summary for Subcatchment B25:

Runoff = 41.87 cfs @ 12.40 hrs, Volume= 5.180 af, Depth= 1.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 32.280	70	
32.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0230	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
27.0	1,311	0.0081	0.81		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.5	512	0.0047	3.47	23.16	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.022
41.0	1,923	Total			

Subcatchment B25:**Hydrograph**

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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B26:

Runoff = 73.76 cfs @ 14.00 hrs, Volume= 25.632 af, Depth= 2.41"

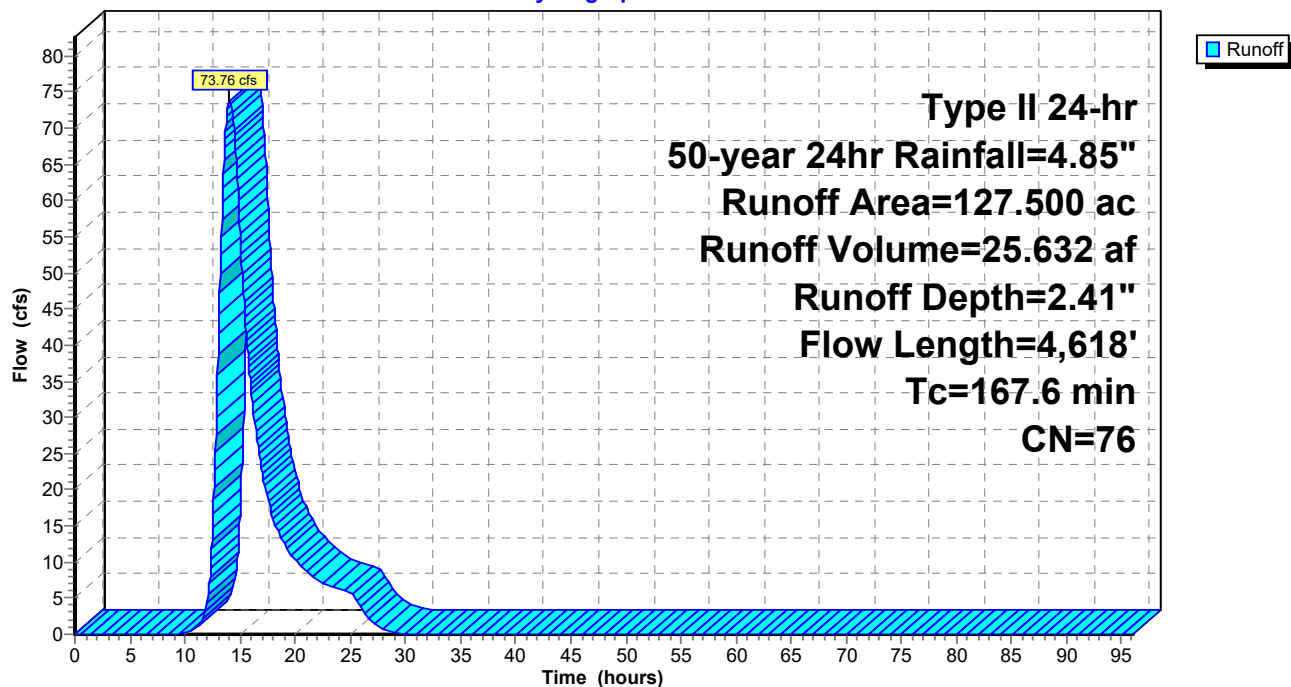
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 127.500	76	
127.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
155.4	4,518	0.0029	0.48		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
167.6	4,618	Total			

Subcatchment B26:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B27:

Runoff = 29.66 cfs @ 12.27 hrs, Volume= 3.056 af, Depth= 1.70"

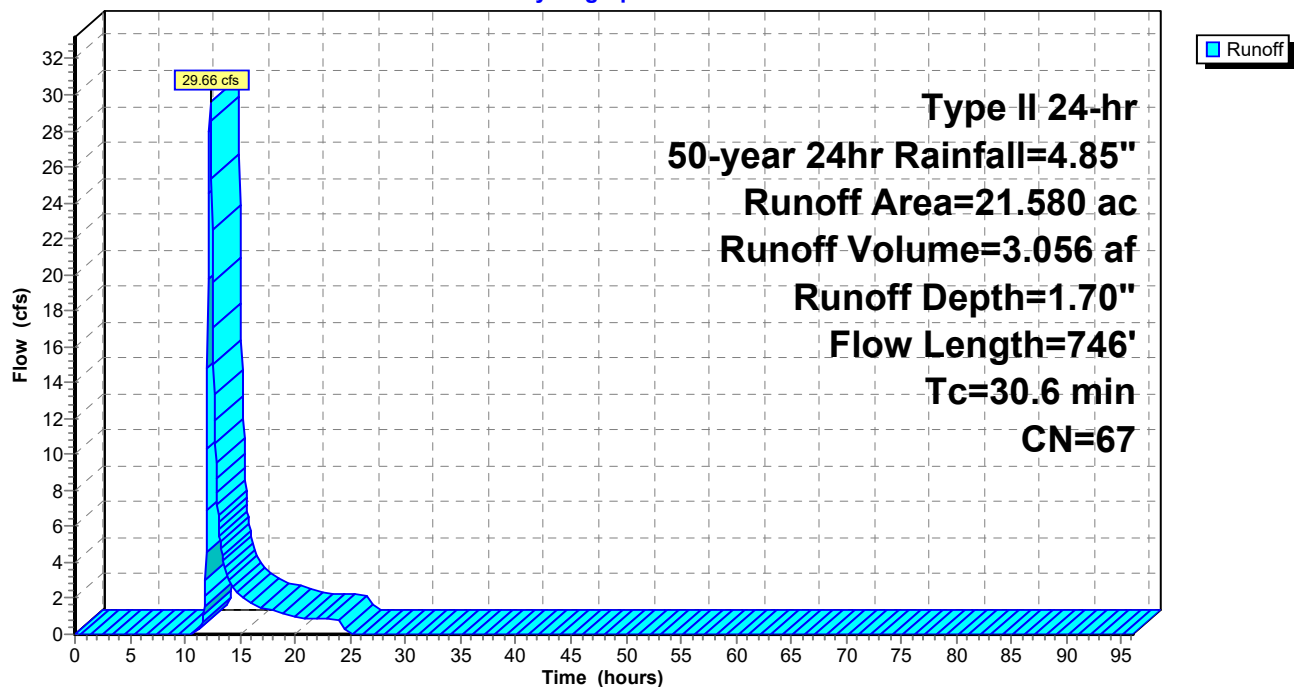
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 21.580	67	
21.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
18.9	646	0.0040	0.57		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
30.6	746	Total			

Subcatchment B27:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B28:

Runoff = 34.65 cfs @ 12.35 hrs, Volume= 3.932 af, Depth= 2.76"

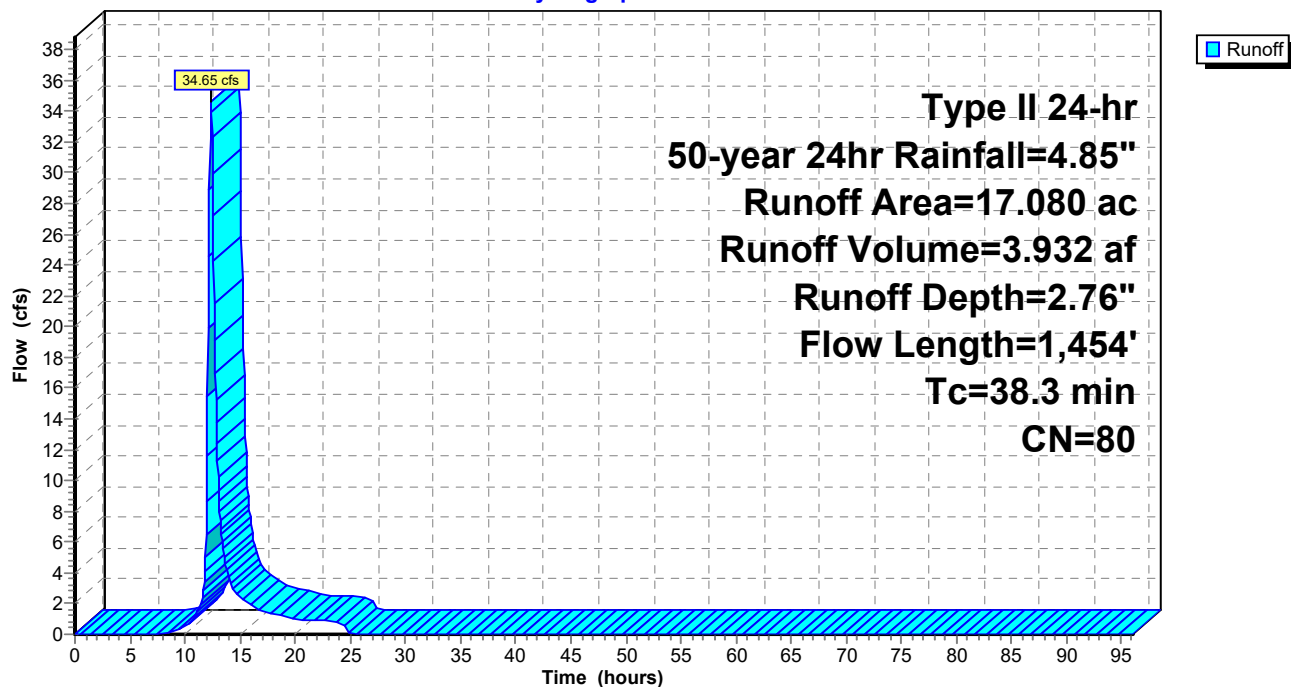
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 17.080	80	
17.080		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.6	1,354	0.0089	0.85		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
38.3	1,454	Total			

Subcatchment B28:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B29:

Runoff = 78.35 cfs @ 13.39 hrs, Volume= 20.221 af, Depth= 2.76"

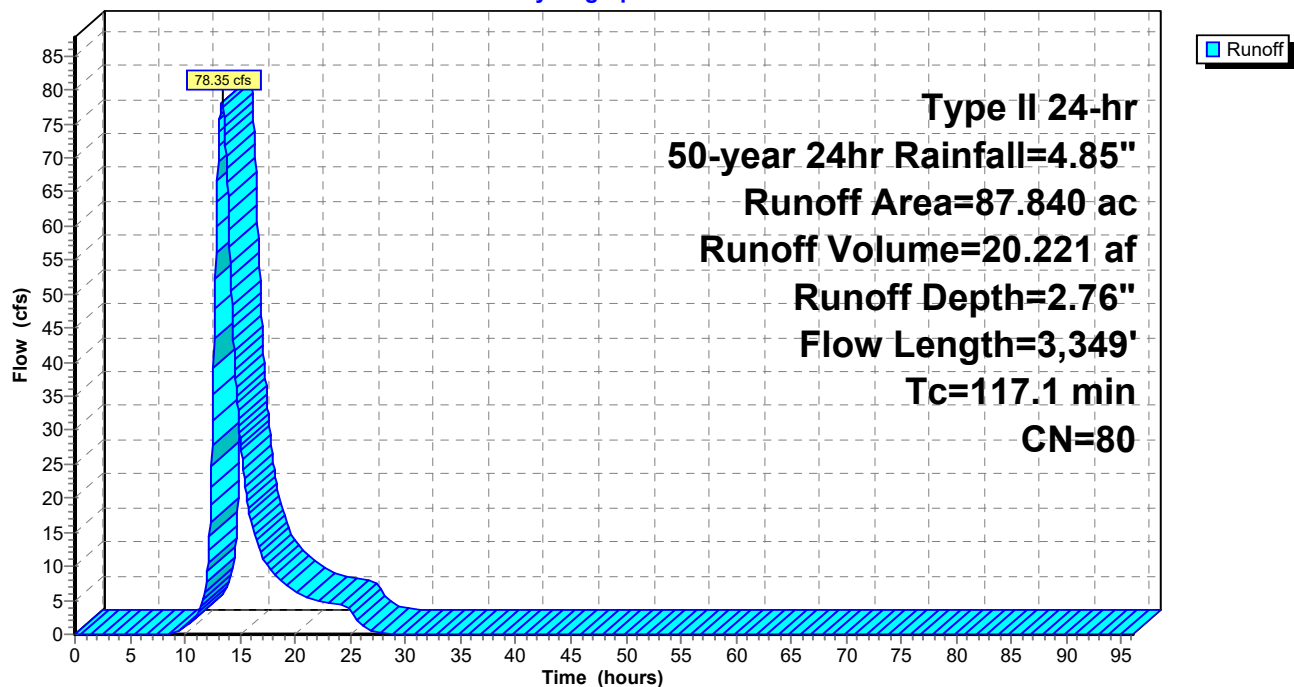
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 87.840	80	
87.840		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
104.7	3,249	0.0033	0.52		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
117.1	3,349	Total			

Subcatchment B29:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B3:

Runoff = 63.08 cfs @ 12.58 hrs, Volume= 9.454 af, Depth= 2.76"

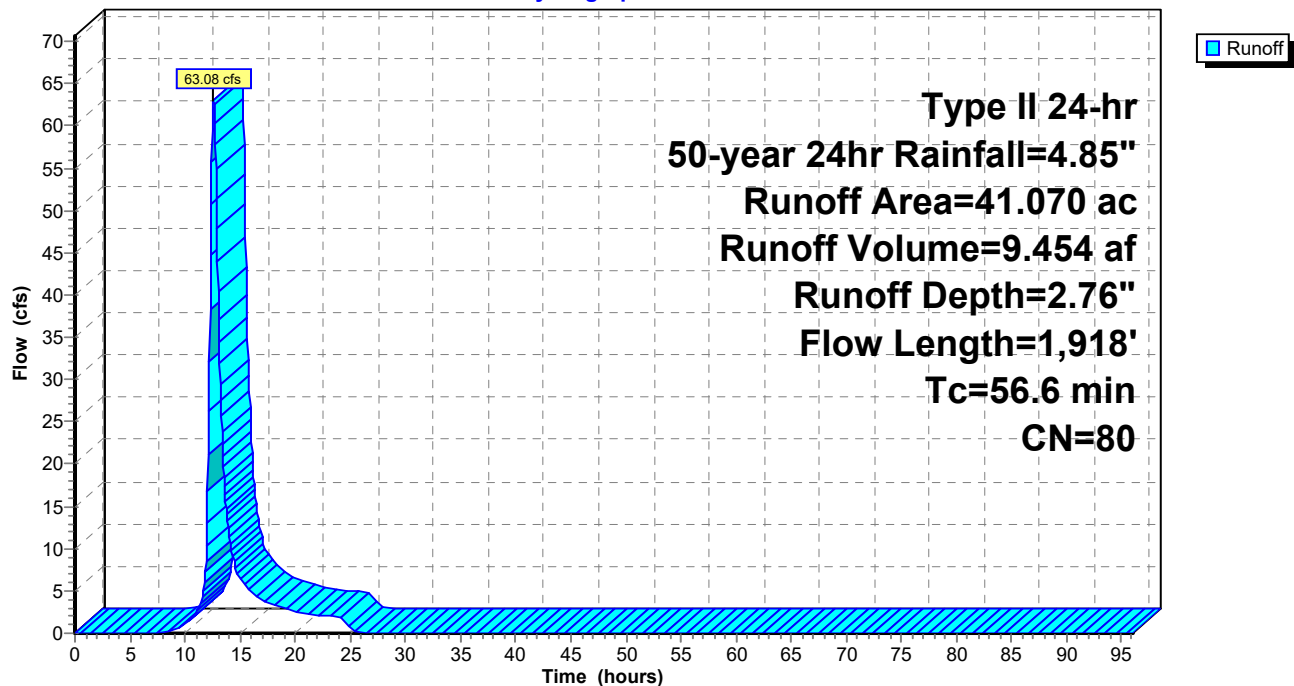
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 41.070	80	
41.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.0	100	0.0030	0.06		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
29.2	1,561	0.0098	0.89		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
1.4	257	0.0093	3.13	20.85	Parabolic Channel, DITCH W=20.00' D=0.50' Area=6.7 sf Perim=20.0' n= 0.022
56.6	1,918	Total			

Subcatchment B3:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B30:

Runoff = 7.26 cfs @ 12.06 hrs, Volume= 0.461 af, Depth= 2.85"

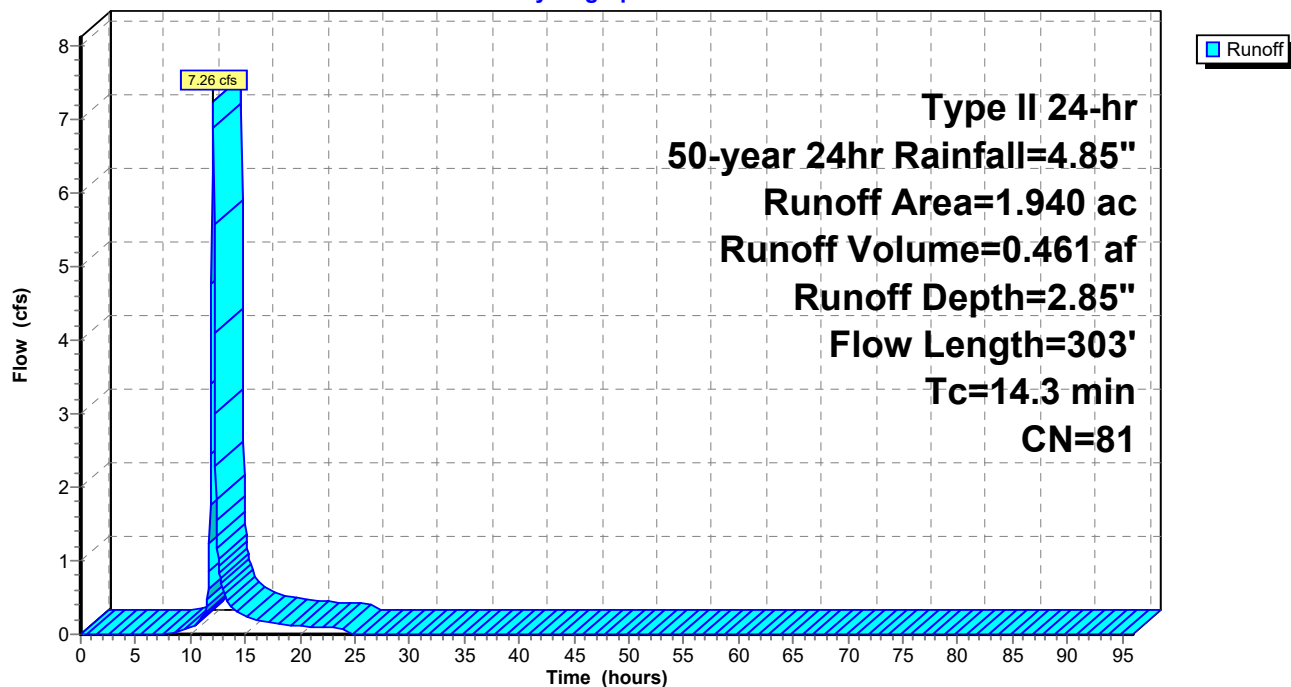
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 1.940	81	
1.940		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
2.6	203	0.0202	1.28		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
14.3	303	Total			

Subcatchment B30:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B4:

Runoff = 271.77 cfs @ 12.40 hrs, Volume= 33.248 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 144.430	80	
144.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0330	0.21		Sheet Flow, SH-OPEN SPACE Range n= 0.130 P2= 2.54"
10.7	749	0.0167	1.16		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.8	904	0.0065	2.59	5.17	Parabolic Channel, DITCH W=6.00' D=0.50' Area=2.0 sf Perim=6.1' n= 0.022
15.8	497	0.0034	0.52		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	43	0.0323	15.29	48.05	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	691	0.0081	4.60	46.03	Parabolic Channel, DITCH W=15.00' D=1.00' Area=10.0 sf Perim=15.2' n= 0.022
42.8	2,984	Total			

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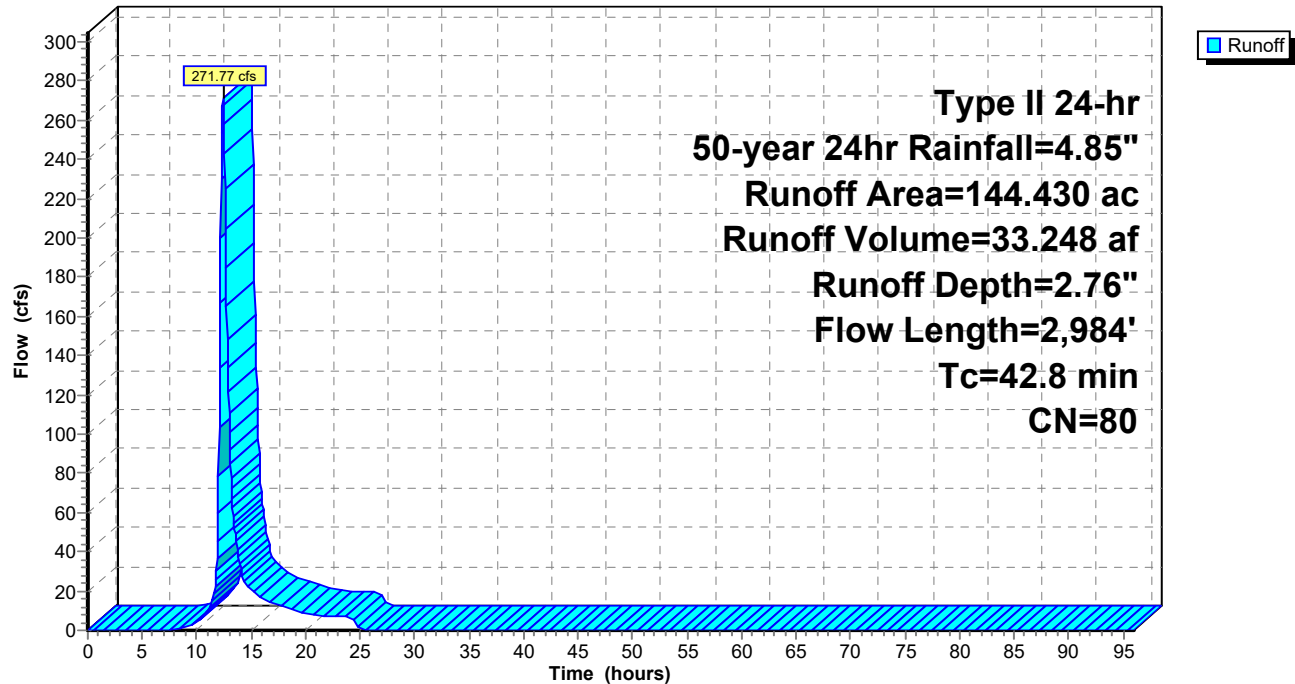
Type II 24-hr 50-year 24hr Rainfall=4.85"

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Subcatchment B4:

Hydrograph



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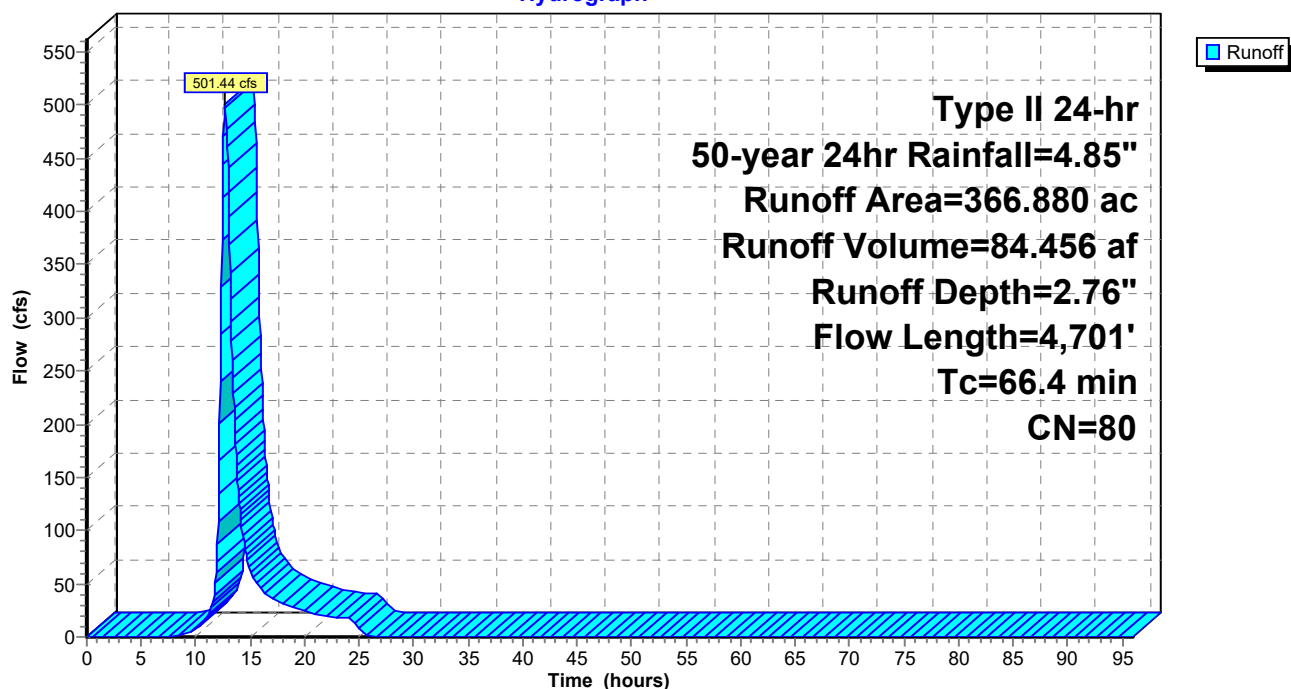
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Summary for Subcatchment B5:

Runoff = 501.44 cfs @ 12.71 hrs, Volume= 84.456 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description			
* 366.880	80				
366.880		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.0330	0.17		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.0	1,682	0.0144	1.08		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
10.1	1,605	0.0067	2.65	8.82	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
19.5	751	0.0051	0.64		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.9	563	0.0066	9.91	528.71	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
66.4	4,701	Total			

Subcatchment B5:**Hydrograph**

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Type II 24-hr 50-year 24hr Rainfall=4.85"

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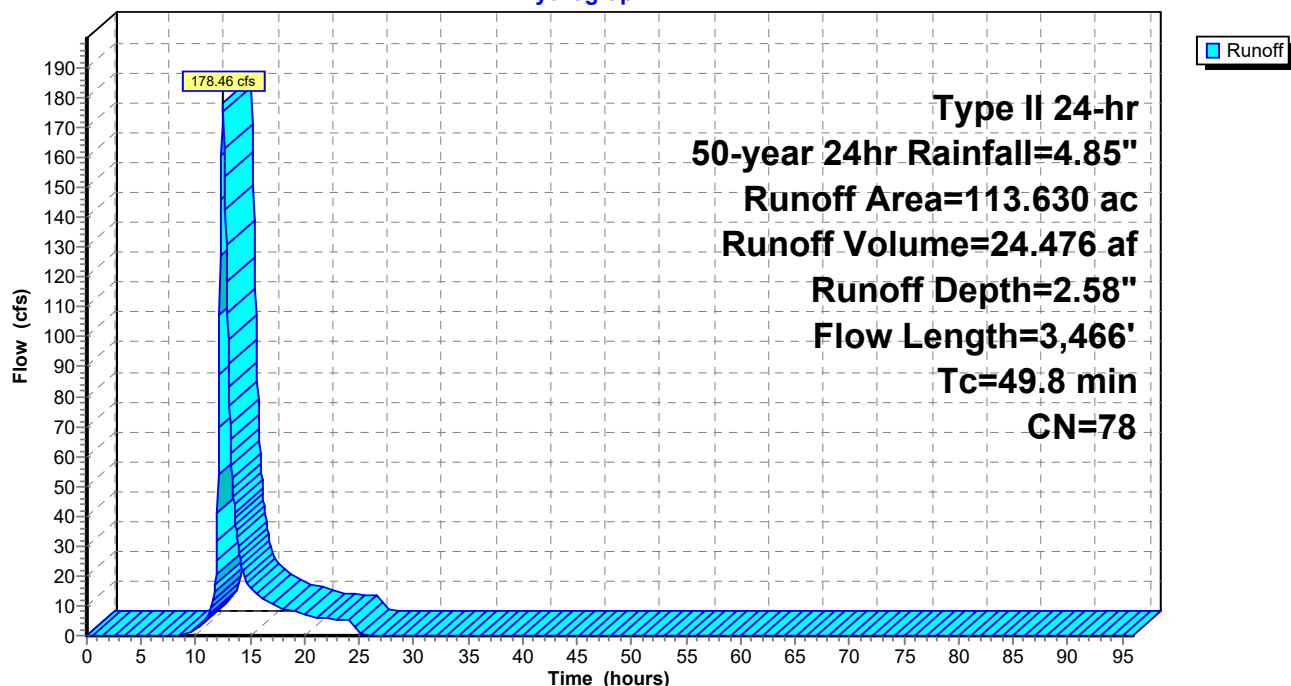
Summary for Subcatchment B6:

Runoff = 178.46 cfs @ 12.49 hrs, Volume= 24.476 af, Depth= 2.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 113.630	78	
113.630		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
31.0	1,798	0.0115	0.97		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
3.0	959	0.0022	5.31	247.62	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
0.1	31	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.7	578	0.0026	5.77	269.19	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
49.8	3,466	Total			

Subcatchment B6:**Hydrograph**

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Type II 24-hr 50-year 24hr Rainfall=4.85"

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Summary for Subcatchment B7:

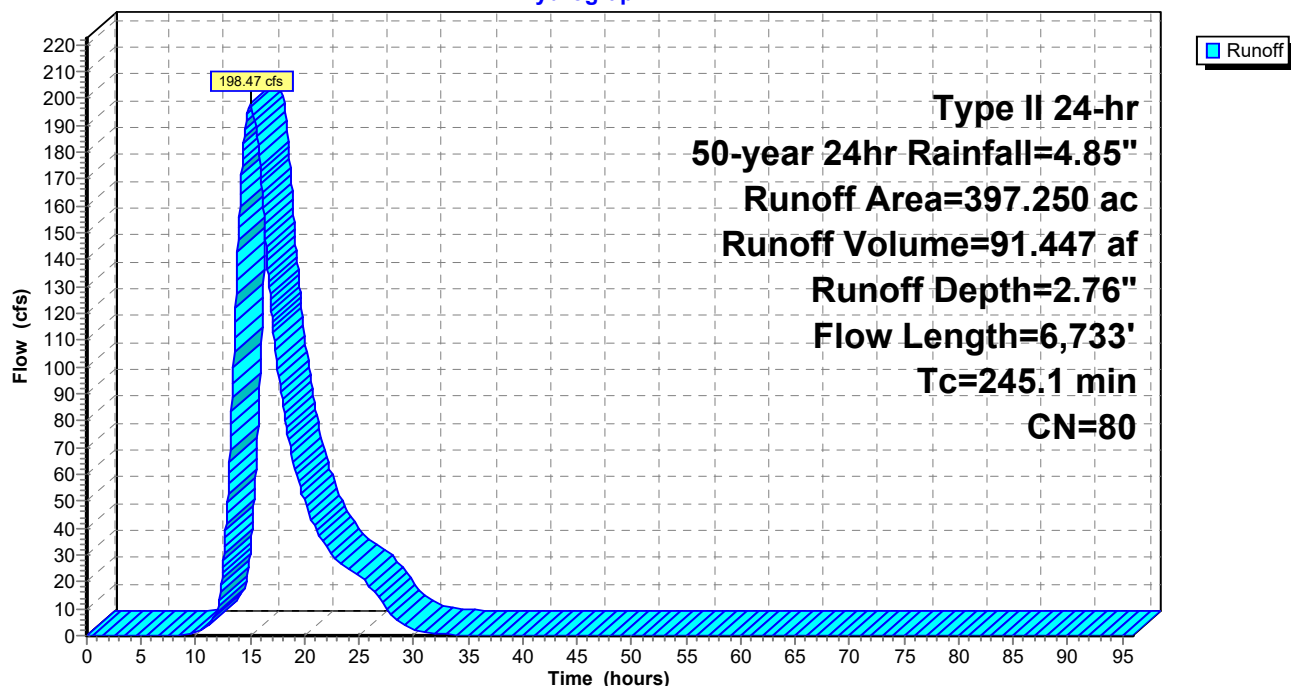
Runoff = 198.47 cfs @ 14.99 hrs, Volume= 91.447 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description			
* 397.250	80				
397.250		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	100	0.0070	0.09		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
85.3	3,055	0.0044	0.60		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	27	0.0372	16.41	51.57	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
139.3	2,913	0.0015	0.35		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.0	638	0.0042	5.21	139.01	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
245.1	6,733	Total			

Subcatchment B7:

Hydrograph



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Type II 24-hr 50-year 24hr Rainfall=4.85"

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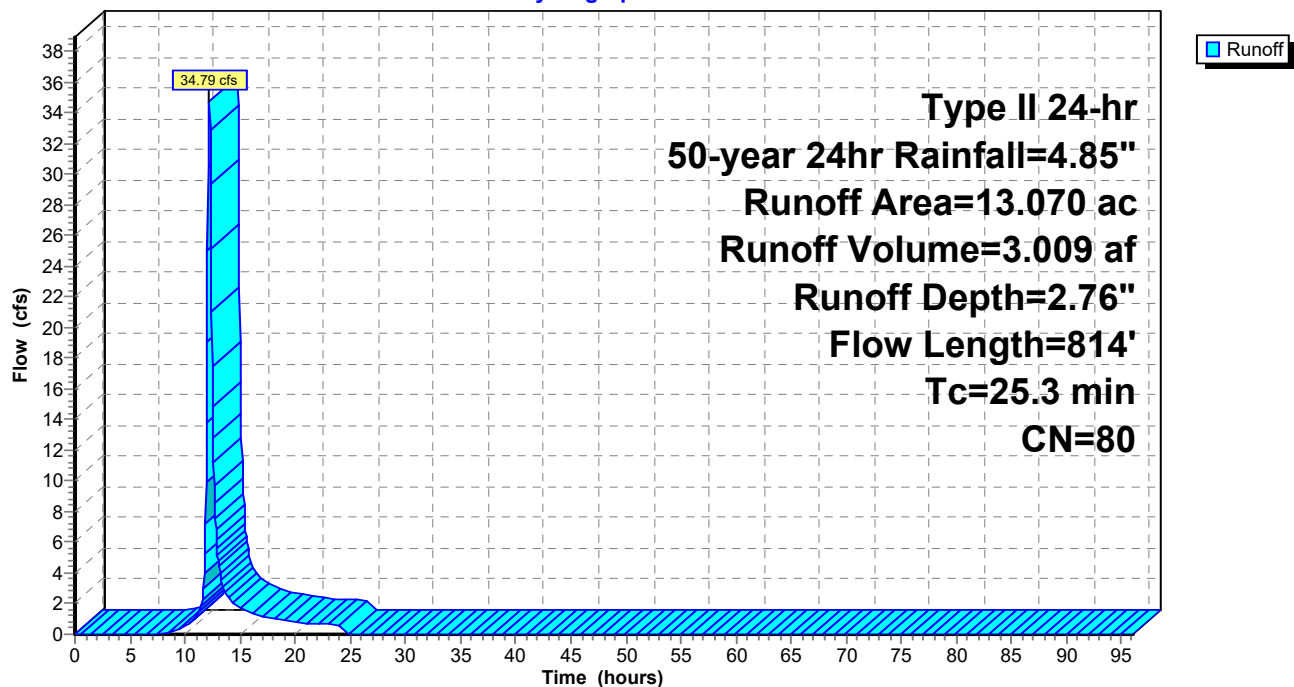
Summary for Subcatchment B8:

Runoff = 34.79 cfs @ 12.19 hrs, Volume= 3.009 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 13.070	80	
13.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
11.3	714	0.0136	1.05		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
25.3	814	Total			

Subcatchment B8:**Hydrograph**

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Type II 24-hr 50-year 24hr Rainfall=4.85"

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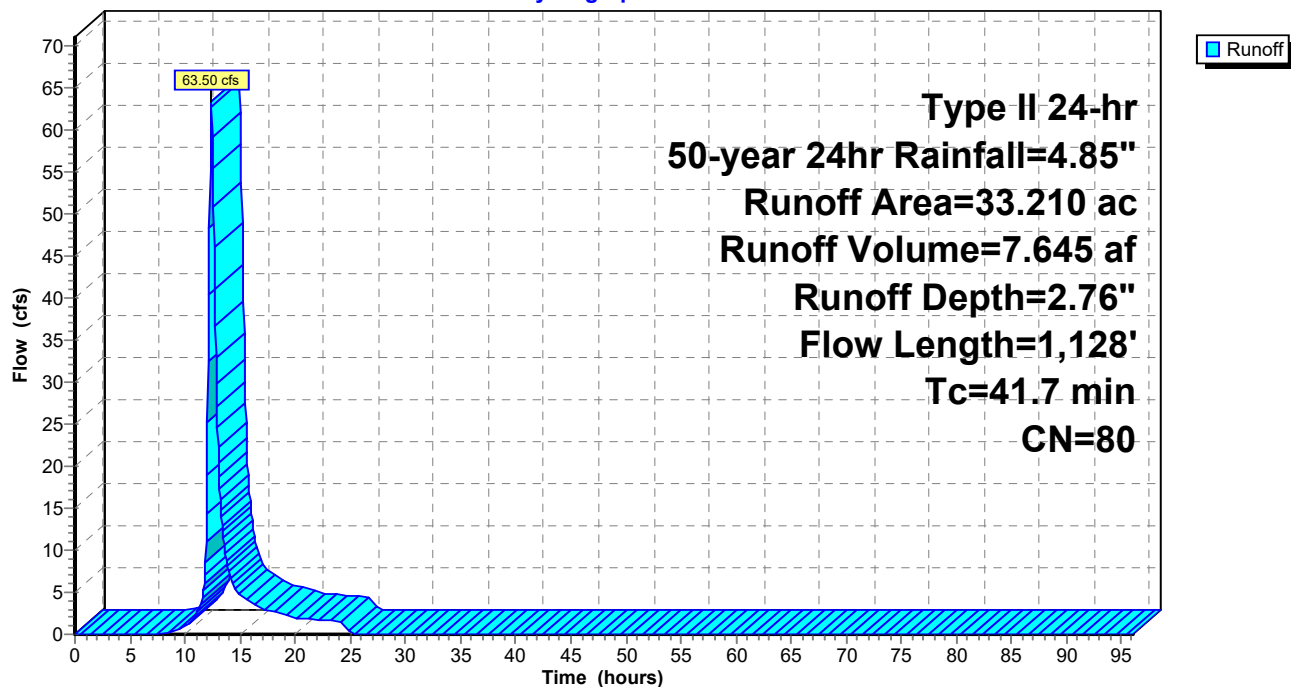
Summary for Subcatchment B9:

Runoff = 63.50 cfs @ 12.39 hrs, Volume= 7.645 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-year 24hr Rainfall=4.85"

Area (ac)	CN	Description
* 33.210	80	
33.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.5	100	0.0080	0.10		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.2	1,028	0.0062	0.71		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
41.7	1,128	Total			

Subcatchment B9:**Hydrograph**

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentB1:	Runoff Area=1,124.640 ac 0.00% Impervious Runoff Depth=3.18" Flow Length=12,505' Tc=64.6 min CN=79 Runoff=1,811.55 cfs 298.404 af
SubcatchmentB10:	Runoff Area=50.450 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=2,208' Tc=54.3 min CN=80 Runoff=94.99 cfs 13.790 af
SubcatchmentB11:	Runoff Area=117.760 ac 0.00% Impervious Runoff Depth=2.90" Flow Length=3,512' Tc=93.1 min CN=76 Runoff=130.74 cfs 28.482 af
SubcatchmentB12:	Runoff Area=22.670 ac 0.00% Impervious Runoff Depth=2.81" Flow Length=1,883' Tc=79.8 min CN=75 Runoff=27.23 cfs 5.310 af
SubcatchmentB13:	Runoff Area=37.130 ac 0.00% Impervious Runoff Depth=3.38" Flow Length=2,542' Tc=74.5 min CN=81 Runoff=57.08 cfs 10.450 af
SubcatchmentB14:	Runoff Area=427.330 ac 0.00% Impervious Runoff Depth=3.09" Flow Length=7,680' Tc=133.1 min CN=78 Runoff=384.68 cfs 110.003 af
SubcatchmentB15:	Runoff Area=60.430 ac 0.00% Impervious Runoff Depth=3.00" Flow Length=1,617' Tc=104.7 min CN=77 Runoff=63.15 cfs 15.083 af
SubcatchmentB16:	Runoff Area=198.250 ac 0.00% Impervious Runoff Depth=3.00" Flow Length=6,834' Tc=223.3 min CN=77 Runoff=114.73 cfs 49.482 af
SubcatchmentB17:	Runoff Area=41.100 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=789' Tc=24.3 min CN=80 Runoff=133.30 cfs 11.234 af
SubcatchmentB18:	Runoff Area=81.990 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=2,386' Tc=46.0 min CN=80 Runoff=174.08 cfs 22.411 af
SubcatchmentB19:	Runoff Area=25.480 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=2,008' Tc=56.5 min CN=80 Runoff=46.66 cfs 6.965 af
SubcatchmentB2:	Runoff Area=233.580 ac 0.00% Impervious Runoff Depth=3.00" Flow Length=3,410' Tc=30.4 min CN=77 Runoff=599.69 cfs 58.300 af
SubcatchmentB20:	Runoff Area=165.020 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=5,408' Tc=53.5 min CN=80 Runoff=314.88 cfs 45.106 af
SubcatchmentB21:	Runoff Area=36.500 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=1,868' Tc=83.6 min CN=80 Runoff=49.97 cfs 9.977 af
SubcatchmentB22:	Runoff Area=52.290 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=2,743' Tc=77.3 min CN=80 Runoff=75.88 cfs 14.293 af
SubcatchmentB23:	Runoff Area=43.170 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=2,125' Tc=71.9 min CN=80 Runoff=66.21 cfs 11.800 af

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SubcatchmentB24:	Runoff Area=22.660 ac 0.00% Impervious Runoff Depth=1.79" Flow Length=657' Tc=22.1 min CN=63 Runoff=40.32 cfs 3.389 af
SubcatchmentB25:	Runoff Area=32.280 ac 0.00% Impervious Runoff Depth=2.37" Flow Length=1,923' Tc=41.0 min CN=70 Runoff=52.22 cfs 6.370 af
SubcatchmentB26:	Runoff Area=127.500 ac 0.00% Impervious Runoff Depth=2.90" Flow Length=4,618' Tc=167.6 min CN=76 Runoff=89.51 cfs 30.837 af
SubcatchmentB27:	Runoff Area=21.580 ac 0.00% Impervious Runoff Depth=2.12" Flow Length=746' Tc=30.6 min CN=67 Runoff=37.63 cfs 3.805 af
SubcatchmentB28:	Runoff Area=17.080 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=1,454' Tc=38.3 min CN=80 Runoff=41.19 cfs 4.669 af
SubcatchmentB29:	Runoff Area=87.840 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=3,349' Tc=117.1 min CN=80 Runoff=93.30 cfs 24.010 af
SubcatchmentB3:	Runoff Area=41.070 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=1,918' Tc=56.6 min CN=80 Runoff=75.07 cfs 11.226 af
SubcatchmentB30:	Runoff Area=1.940 ac 0.00% Impervious Runoff Depth=3.38" Flow Length=303' Tc=14.3 min CN=81 Runoff=8.56 cfs 0.546 af
SubcatchmentB4:	Runoff Area=144.430 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=2,984' Tc=42.8 min CN=80 Runoff=323.16 cfs 39.478 af
SubcatchmentB5:	Runoff Area=366.880 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=4,701' Tc=66.4 min CN=80 Runoff=596.67 cfs 100.282 af
SubcatchmentB6:	Runoff Area=113.630 ac 0.00% Impervious Runoff Depth=3.09" Flow Length=3,466' Tc=49.8 min CN=78 Runoff=214.08 cfs 29.250 af
SubcatchmentB7:	Runoff Area=397.250 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=6,733' Tc=245.1 min CN=80 Runoff=236.78 cfs 108.583 af
SubcatchmentB8:	Runoff Area=13.070 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=814' Tc=25.3 min CN=80 Runoff=41.30 cfs 3.573 af
SubcatchmentB9:	Runoff Area=33.210 ac 0.00% Impervious Runoff Depth=3.28" Flow Length=1,128' Tc=41.7 min CN=80 Runoff=75.51 cfs 9.078 af

Total Runoff Area = 4,138.210 ac Runoff Volume = 1,086.185 af Average Runoff Depth = 3.15"
100.00% Pervious = 4,138.210 ac 0.00% Impervious = 0.000 ac

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B1:

Runoff = 1,811.55 cfs @ 12.69 hrs, Volume= 298.404 af, Depth= 3.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 1,124.640	79	
1,124.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	100	0.0050	0.08		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
8.5	656	0.0203	1.28		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
9.4	4,083	0.0048	7.25	362.50	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.0	56	0.0535	19.68	61.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.2	94	0.0085	9.65	482.39	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	47	0.0021	3.90	12.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
12.3	3,705	0.0023	5.02	250.93	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
0.2	40	0.0025	4.26	13.37	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.4	1,819	0.0020	4.71	282.81	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
0.1	45	0.0156	10.63	33.39	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
6.1	1,860	0.0023	5.05	303.28	Parabolic Channel, DITCH W=30.00' D=3.00' Area=60.0 sf Perim=30.8' n= 0.022
64.6	12,505	Total			

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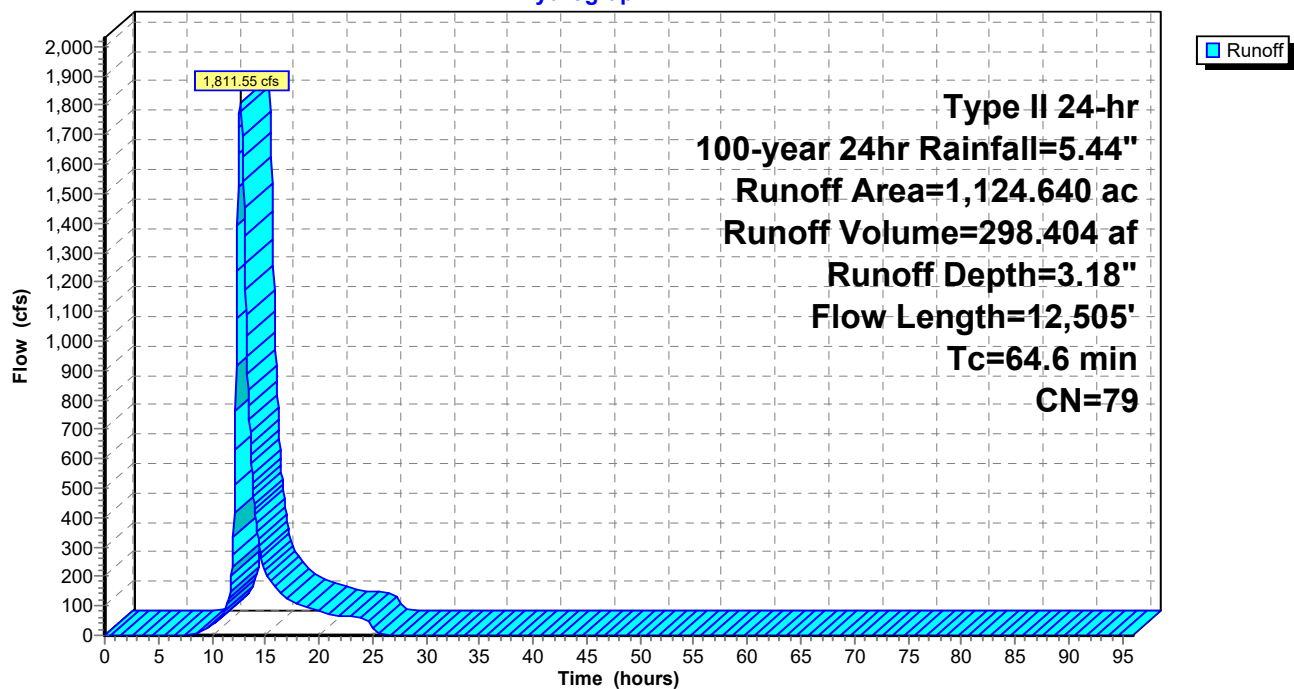
Type II 24-hr 100-year 24hr Rainfall=5.44"

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Subcatchment B1:

Hydrograph



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Summary for Subcatchment B10:

Runoff = 94.99 cfs @ 12.54 hrs, Volume= 13.790 af, Depth= 3.28"

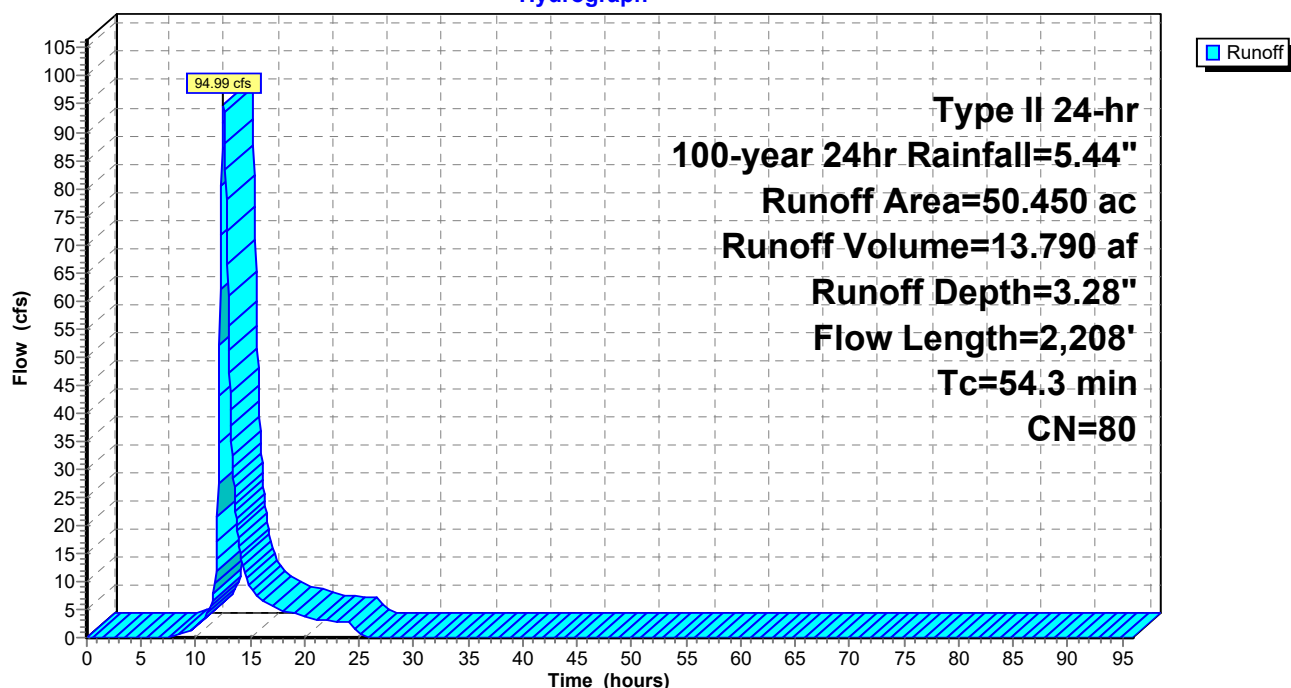
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 50.450	80	
50.450		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.1	100	0.0040	0.07		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
28.3	1,408	0.0085	0.83		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	72	0.0014	4.57	243.51	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
0.1	34	0.0029	4.58	14.40	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	594	0.0024	3.94	105.08	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
54.3	2,208	Total			

Subcatchment B10:

Hydrograph



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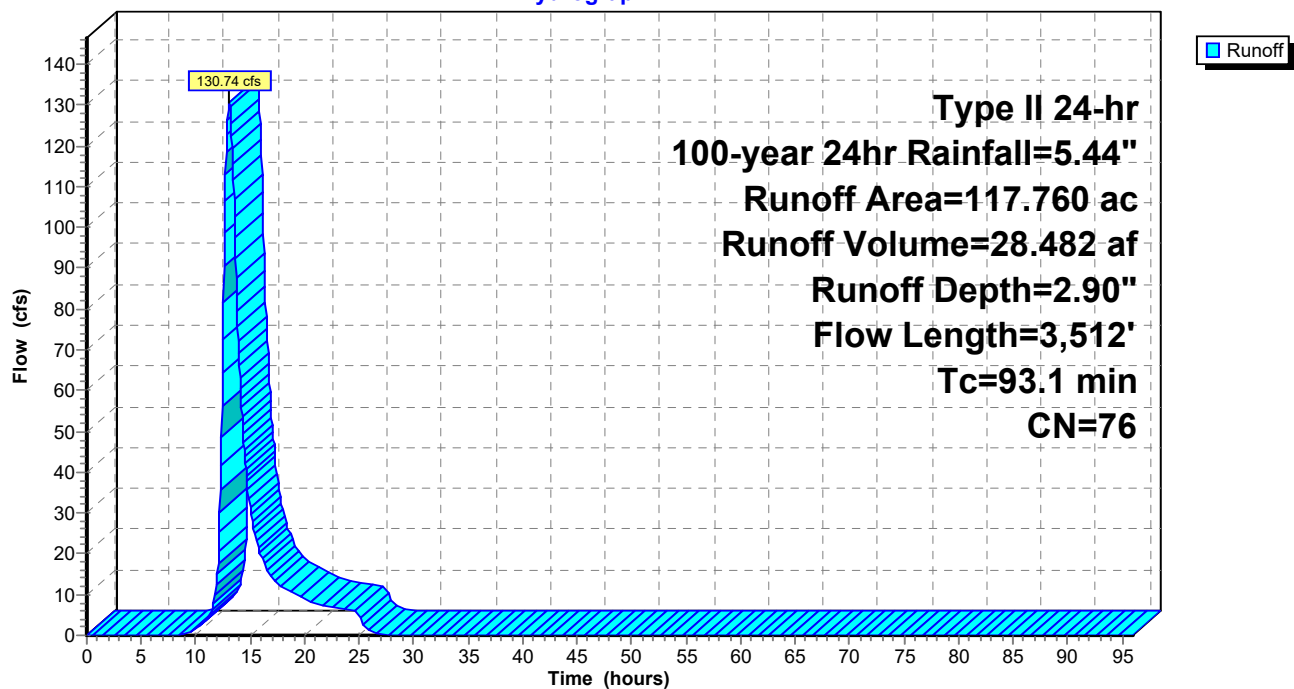
Summary for Subcatchment B11:

Runoff = 130.74 cfs @ 13.08 hrs, Volume= 28.482 af, Depth= 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 117.760	76	
117.760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
36.7	100	0.0070	0.05		Sheet Flow, SH-WOODS Woods: Light underbrush n= 0.400 P2= 2.54"
50.0	2,516	0.0087	0.84		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.2	413	0.0017	1.33	4.44	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.2	69	0.0277	7.08	22.25	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.0	14	0.0073	7.97	332.27	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
0.1	24	0.0165	5.47	17.17	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.022
0.9	376	0.0053	6.79	283.12	Parabolic Channel, DITCH W=25.00' D=2.50' Area=41.7 sf Perim=25.7' n= 0.022
93.1	3,512	Total			

Subcatchment B11:**Hydrograph**

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Summary for Subcatchment B12:

Runoff = 27.23 cfs @ 12.88 hrs, Volume= 5.310 af, Depth= 2.81"

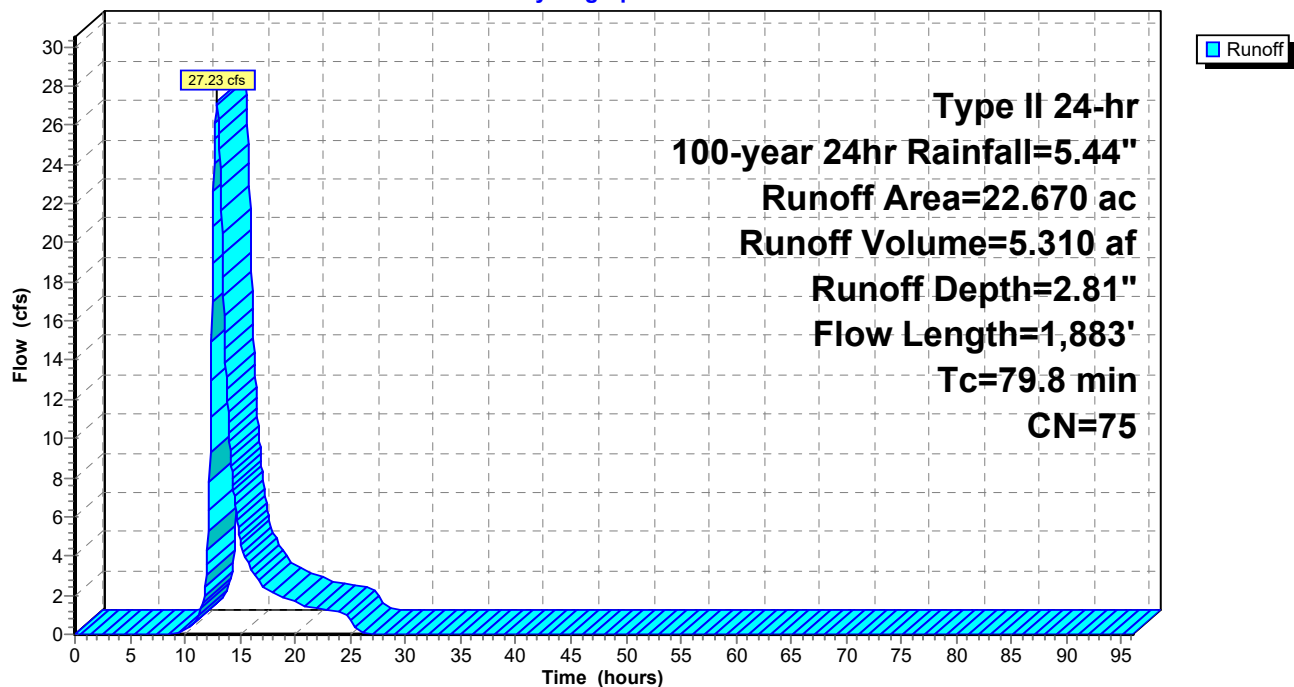
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 22.670	75	
22.670		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
67.4	1,783	0.0024	0.44		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
79.8	1,883	Total			

Subcatchment B12:

Hydrograph



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Summary for Subcatchment B13:

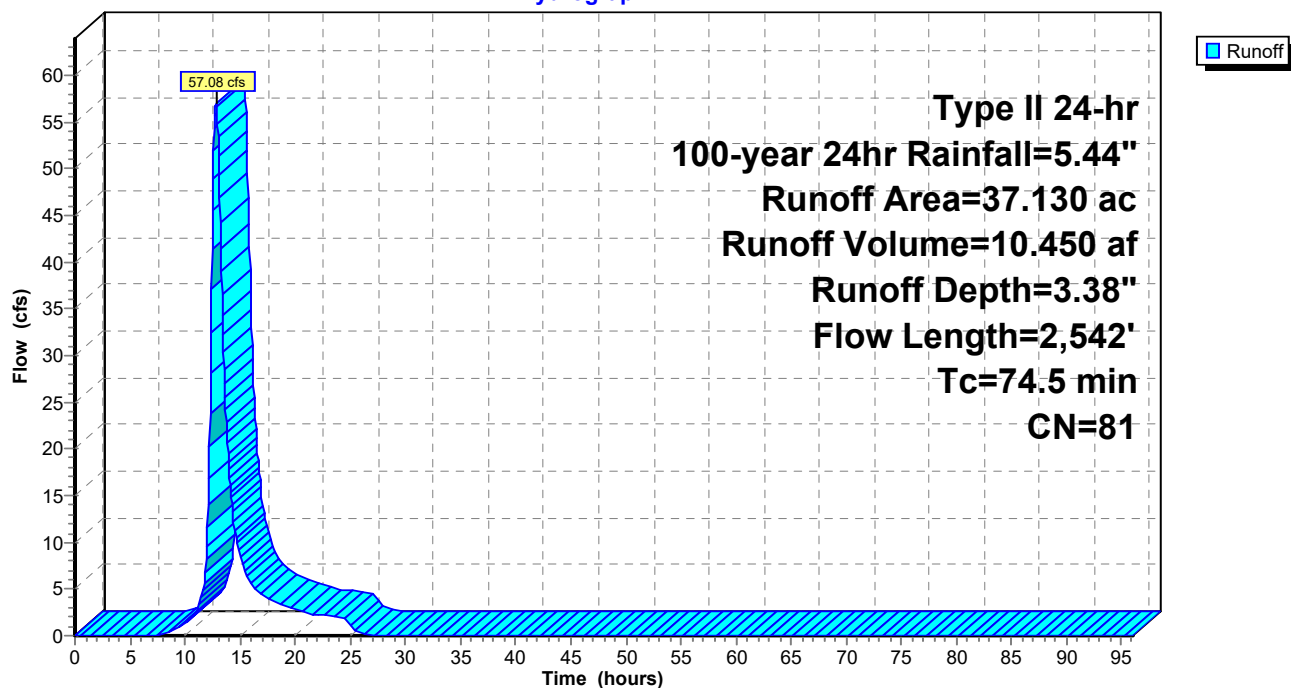
Runoff = 57.08 cfs @ 12.81 hrs, Volume= 10.450 af, Depth= 3.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description			
* 37.130	81				
37.130		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	100	0.0280	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
50.7	1,836	0.0045	0.60		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
13.2	571	0.0005	0.72	2.41	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.0	35	0.0751	23.32	73.27	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
74.5	2,542	Total			

Subcatchment B13:

Hydrograph



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Summary for Subcatchment B14:

Runoff = 384.68 cfs @ 13.60 hrs, Volume= 110.003 af, Depth= 3.09"

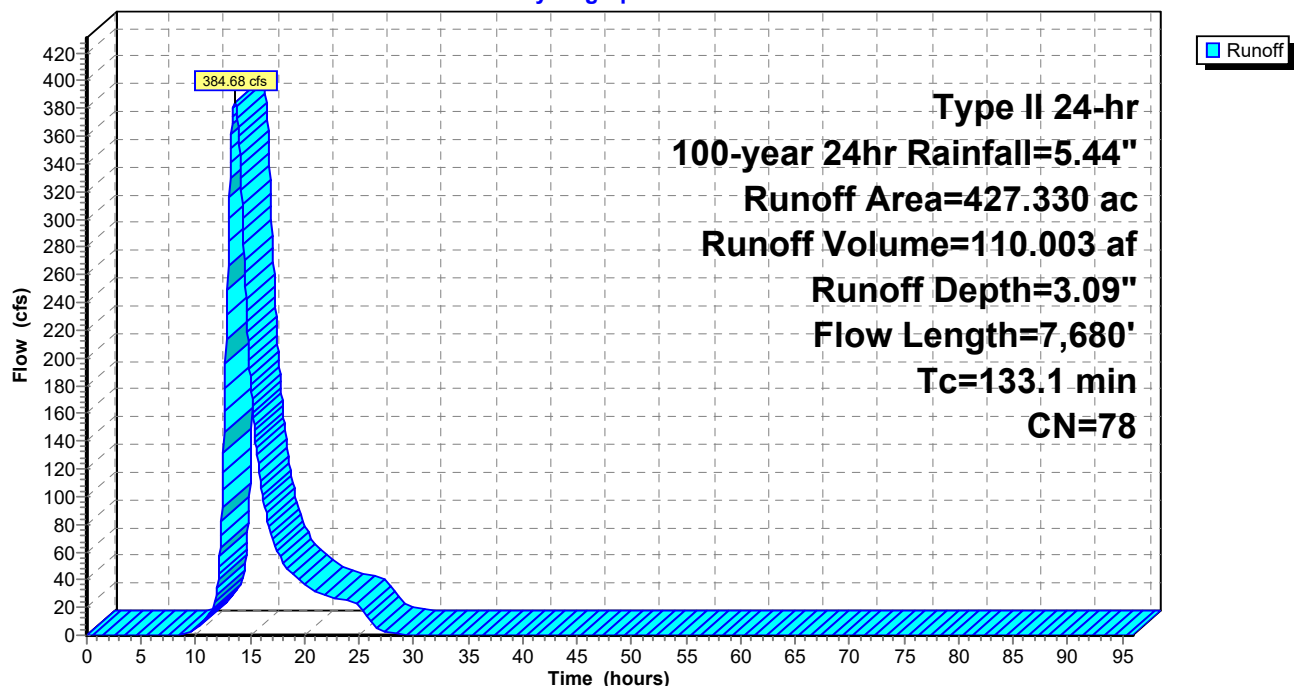
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 427.330	78	
427.330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
95.6	2,475	0.0023	0.43		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
25.3	5,105	0.0010	3.37	336.93	Parabolic Channel, DITCH W=50.00' D=3.00' Area=100.0 sf Perim=50.5' n= 0.022
133.1	7,680	Total			

Subcatchment B14:

Hydrograph



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Summary for Subcatchment B15:

Runoff = 63.15 cfs @ 13.20 hrs, Volume= 15.083 af, Depth= 3.00"

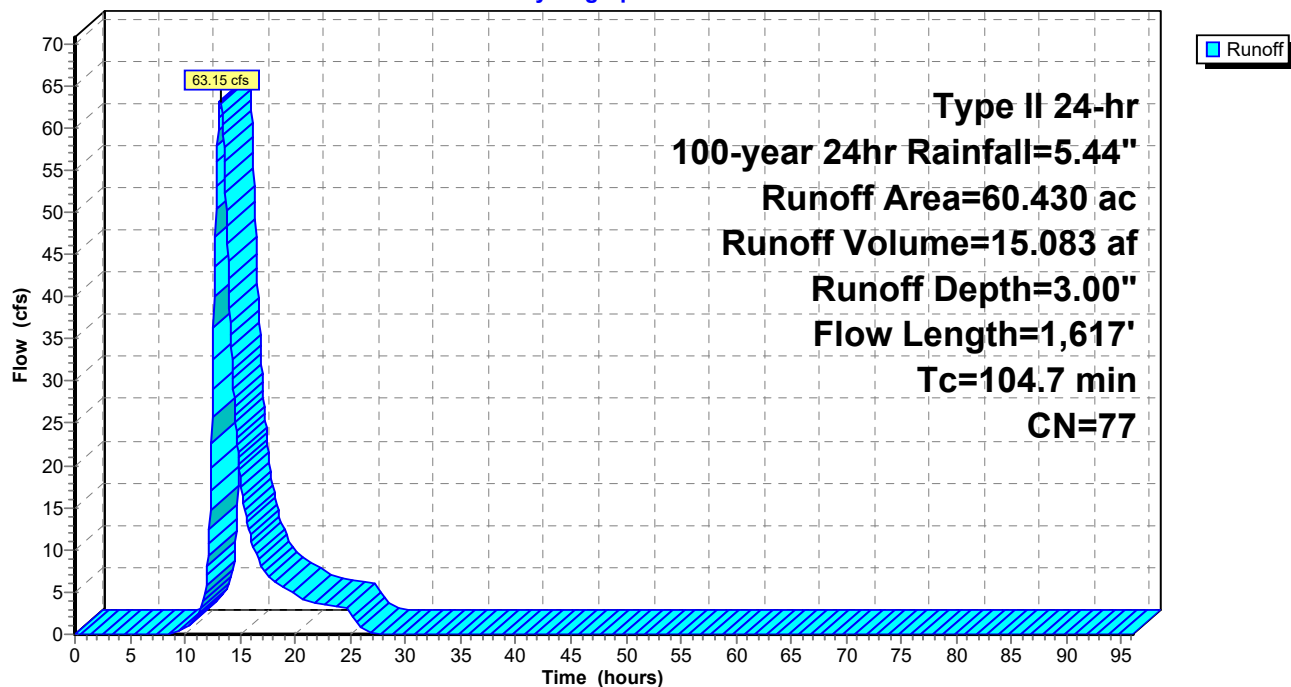
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 60.430	77	
60.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0250	0.15		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
93.6	1,517	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
104.7	1,617	Total			

Subcatchment B15:

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Summary for Subcatchment B16:

Runoff = 114.73 cfs @ 14.67 hrs, Volume= 49.482 af, Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description			
* 198.250	77				
198.250		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
14.5	512	0.0043	0.59		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	41	0.0073	7.27	22.84	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
37.0	1,056	0.0028	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.1	35	0.0028	4.50	14.15	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
145.4	2,355	0.0009	0.27		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.3	705	0.0045	5.16	68.76	Parabolic Channel, DITCH W=10.00' D=2.00' Area=13.3 sf Perim=11.0' n= 0.022
0.2	42	0.0024	4.17	13.10	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
9.3	1,988	0.0012	3.58	143.17	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
223.3	6,834	Total			

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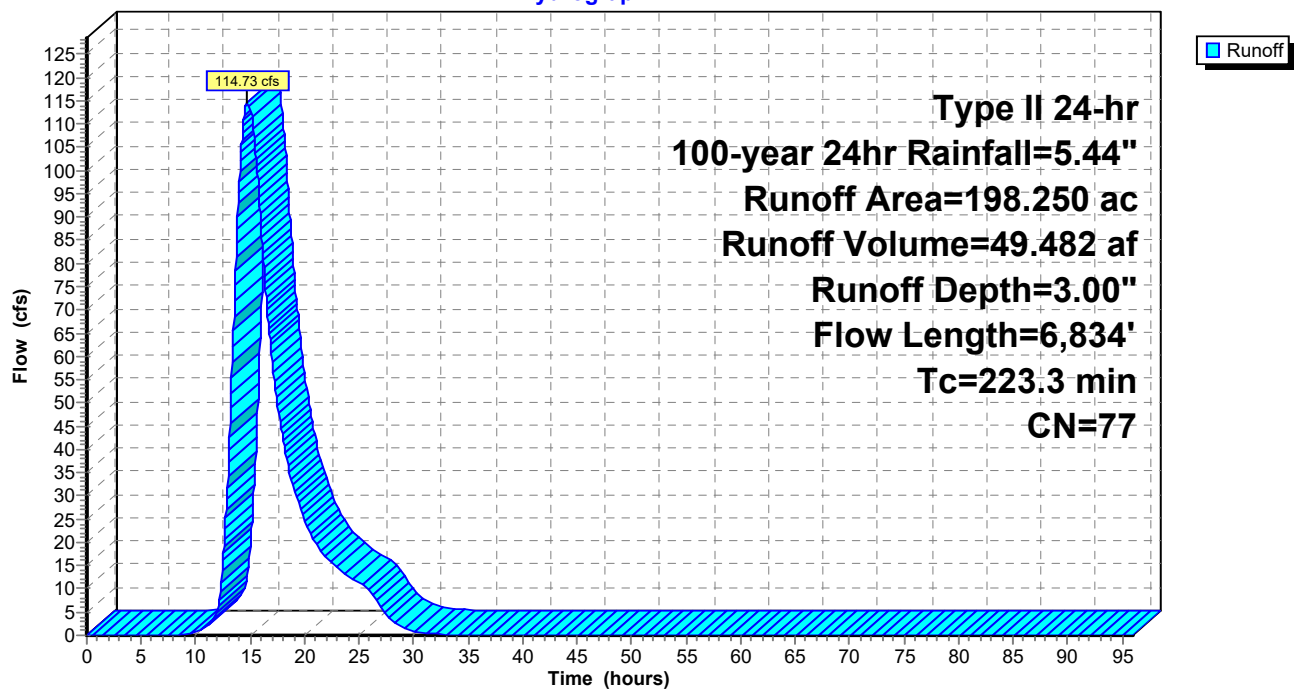
Type II 24-hr 100-year 24hr Rainfall=5.44"

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Subcatchment B16:

Hydrograph



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Summary for Subcatchment B17:

Runoff = 133.30 cfs @ 12.17 hrs, Volume= 11.234 af, Depth= 3.28"

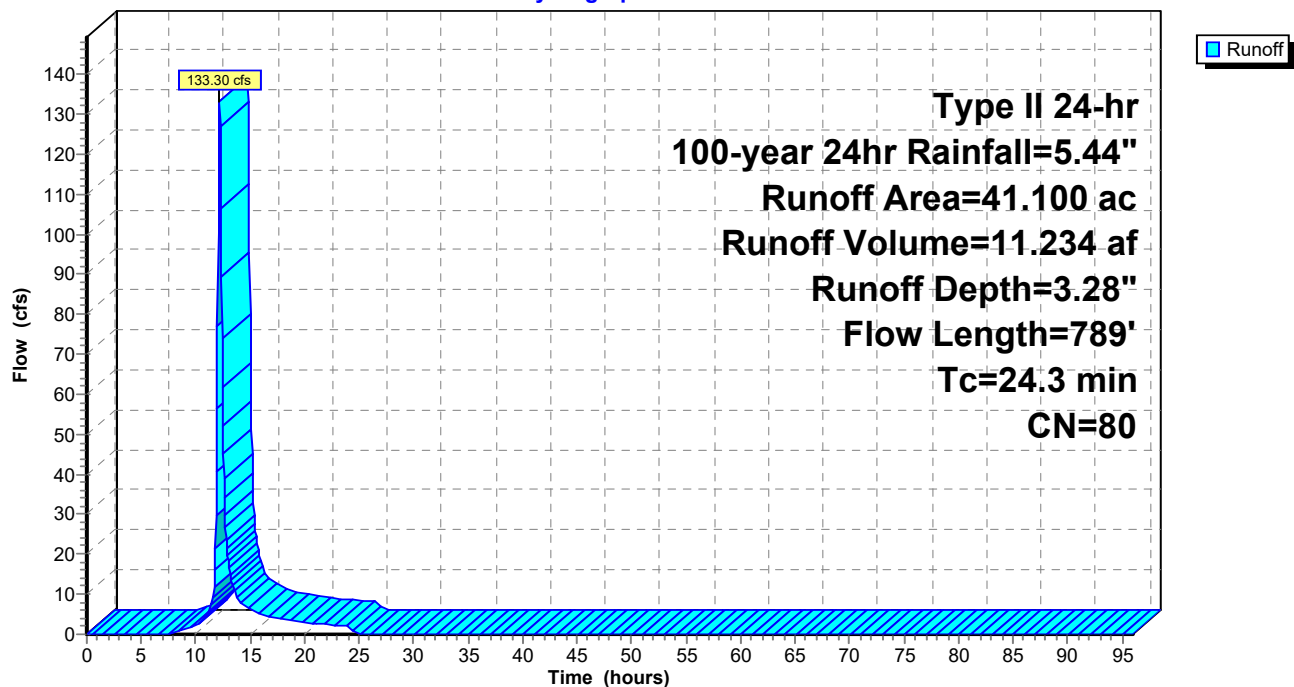
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 41.100	80	
41.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
10.3	689	0.0154	1.12		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
24.3	789	Total			

Subcatchment B17:

Hydrograph



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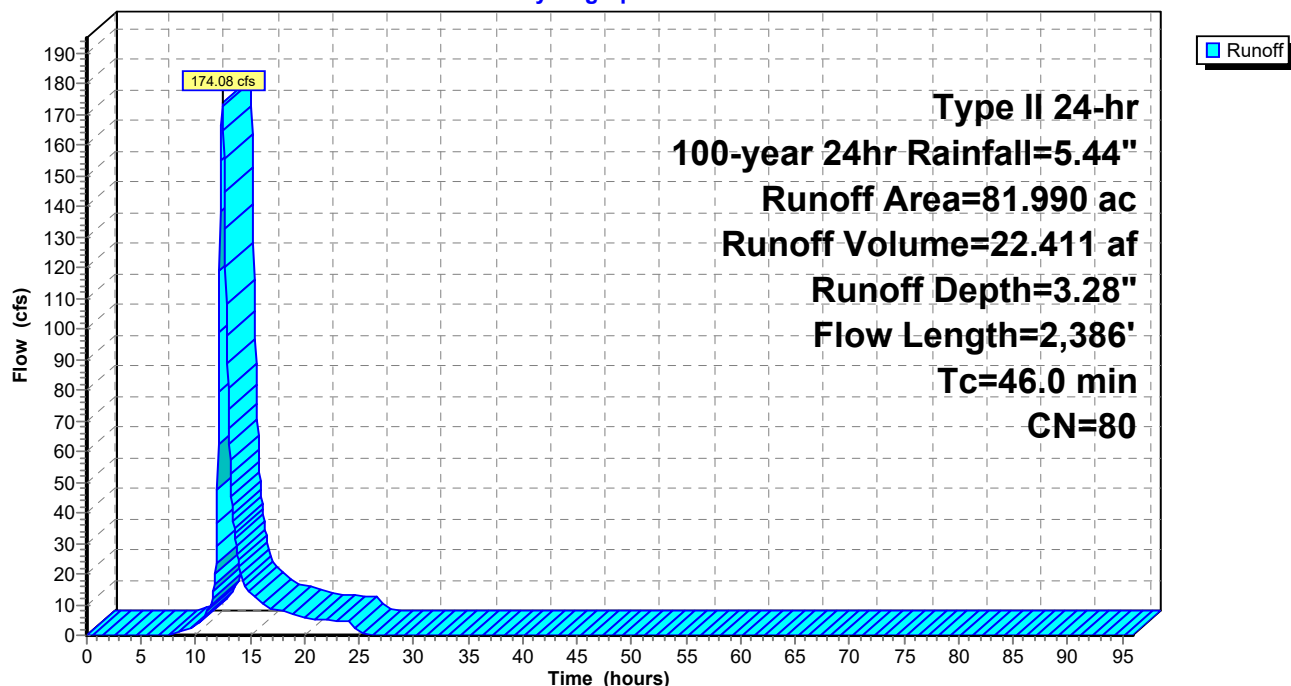
Summary for Subcatchment B18:

Runoff = 174.08 cfs @ 12.44 hrs, Volume= 22.411 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 81.990	80	
81.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0300	0.16		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.6	1,156	0.0076	0.78		Shallow Concentrated Flow, SH-CROPS Cultivated Straight Rows Kv= 9.0 fps
11.1	1,130	0.0011	1.70	22.69	Parabolic Channel, DITCH W=20.00' D=1.00' Area=13.3 sf Perim=20.1' n= 0.022
46.0	2,386	Total			

Subcatchment B18:**Hydrograph**

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B19:

Runoff = 46.66 cfs @ 12.58 hrs, Volume= 6.965 af, Depth= 3.28"

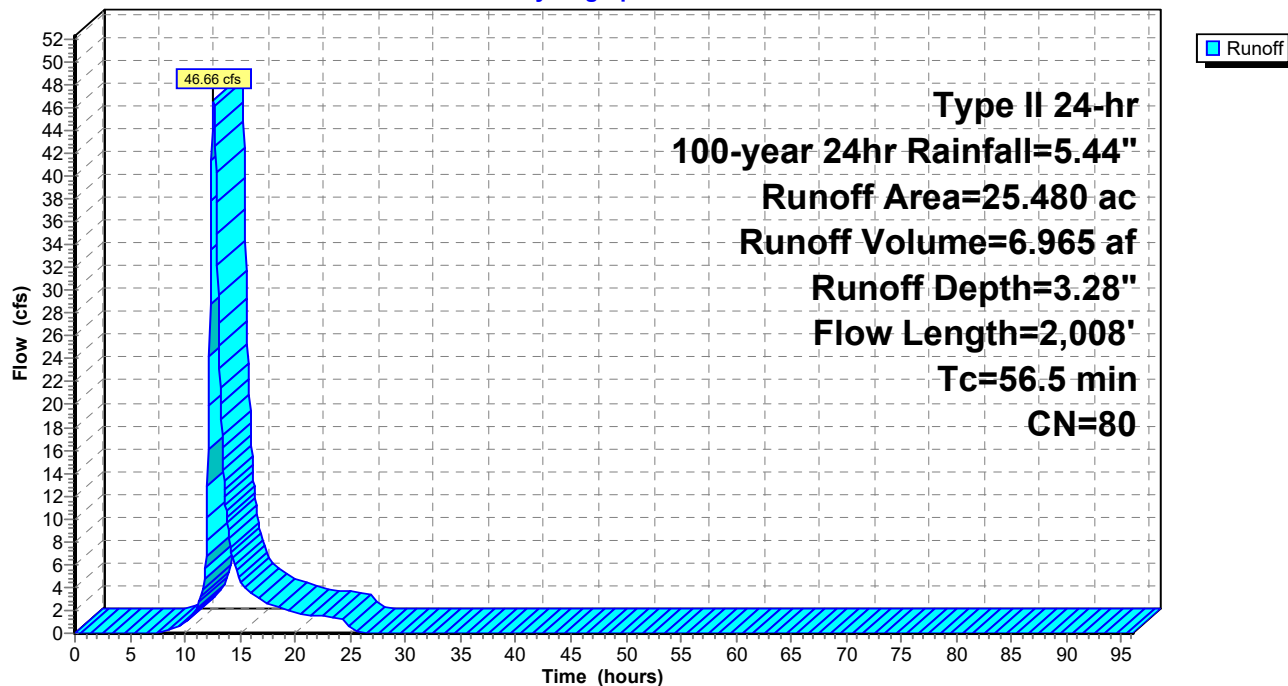
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 25.480	80	
25.480		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	100	0.0180	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
19.0	999	0.0095	0.88		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
24.8	909	0.0046	0.61		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
56.5	2,008	Total			

Subcatchment B19:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B2:

Runoff = 599.69 cfs @ 12.25 hrs, Volume= 58.300 af, Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 233.580	77	
233.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	100	0.0106	0.11		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
3.4	210	0.0133	1.04		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
4.2	178	0.0051	0.71		Shallow Concentrated Flow, SCF-OPEN SPACE Nearly Bare & Untilled Kv= 10.0 fps
0.2	62	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	409	0.0169	13.17	87.83	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.011
5.2	1,987	0.0038	6.37	254.77	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	42	0.0047	5.83	18.33	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	218	0.0041	6.62	264.64	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.1	44	0.0160	10.76	33.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.5	160	0.0050	5.69	151.67	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
30.4	3,410	Total			

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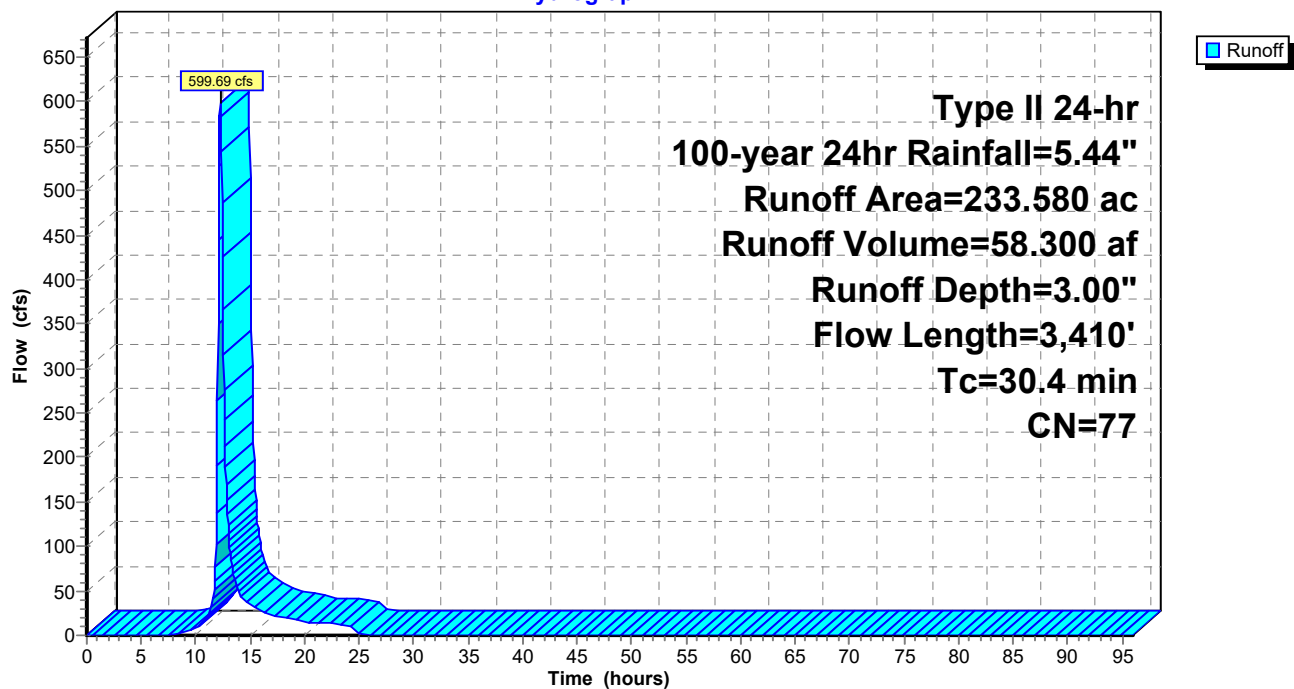
Type II 24-hr 100-year 24hr Rainfall=5.44"

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Subcatchment B2:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B20:

Runoff = 314.88 cfs @ 12.54 hrs, Volume= 45.106 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 165.020	80	
165.020		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.3	1,262	0.0079	0.80		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	94	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.8	167	0.0294	1.54		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.3	61	0.0016	3.40	10.69	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	2,712	0.0014	7.73	309.28	Parabolic Channel, DITCH W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.011
0.2	43	0.0023	4.08	12.82	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.8	969	0.0007	2.77	138.43	Parabolic Channel, DITCH W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
53.5	5,408	Total			

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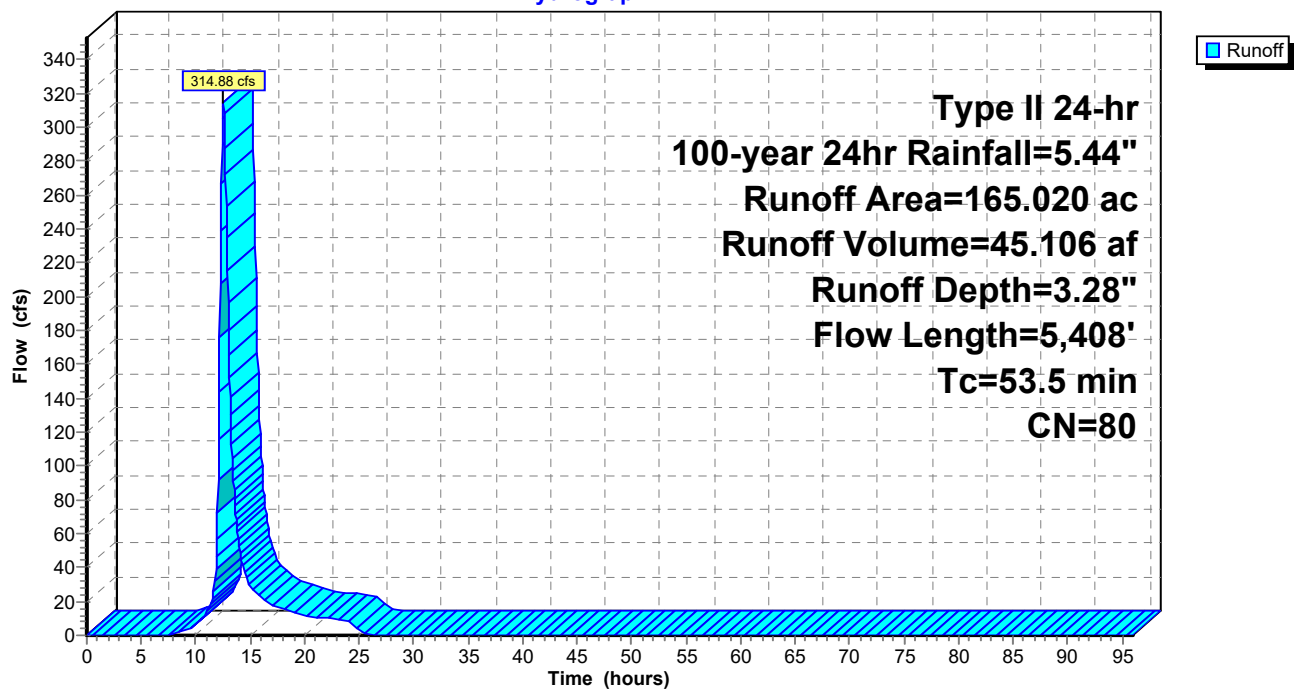
Type II 24-hr 100-year 24hr Rainfall=5.44"

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Subcatchment B20:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B21:

Runoff = 49.97 cfs @ 12.92 hrs, Volume= 9.977 af, Depth= 3.28"

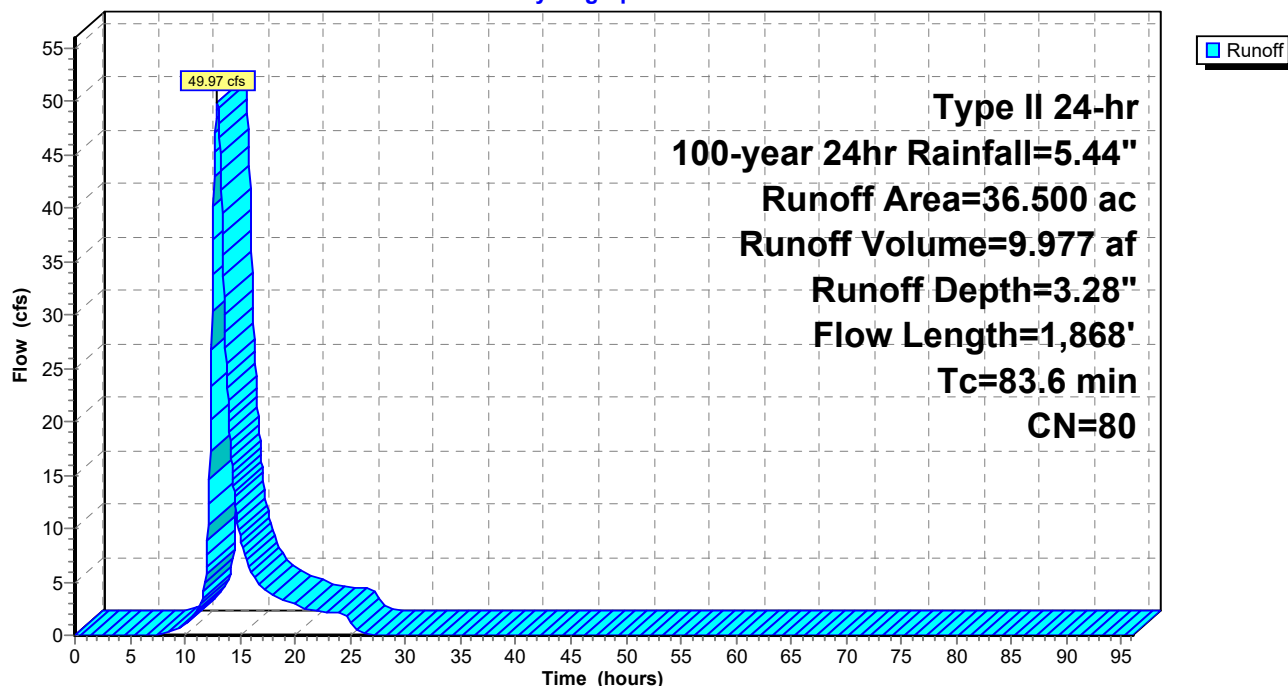
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 36.500	80	
36.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
25.9	1,010	0.0052	0.65		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
43.3	758	0.0034	0.29		Shallow Concentrated Flow, SCF-WOODS Woodland Kv= 5.0 fps
83.6	1,868	Total			

Subcatchment B21:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B22:

Runoff = 75.88 cfs @ 12.83 hrs, Volume= 14.293 af, Depth= 3.28"

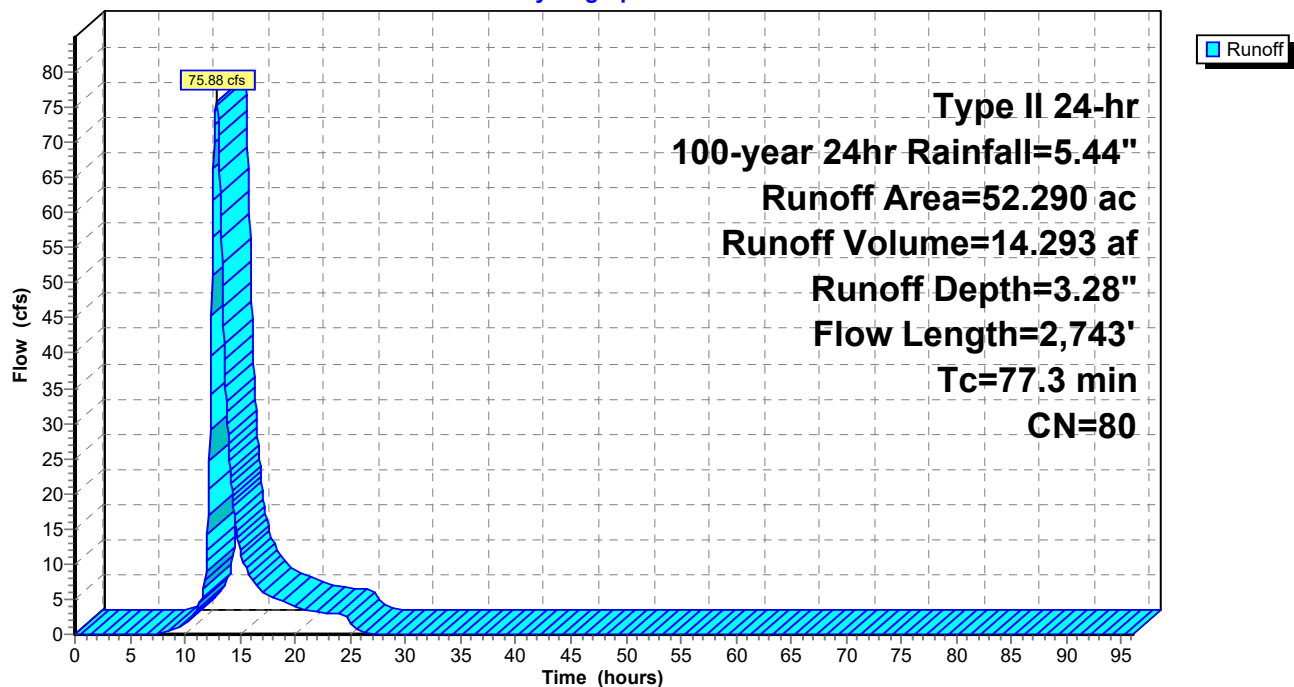
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 52.290	80	
52.290		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	100	0.0170	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
64.3	2,643	0.0058	0.69		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
77.3	2,743	Total			

Subcatchment B22:

Hydrograph



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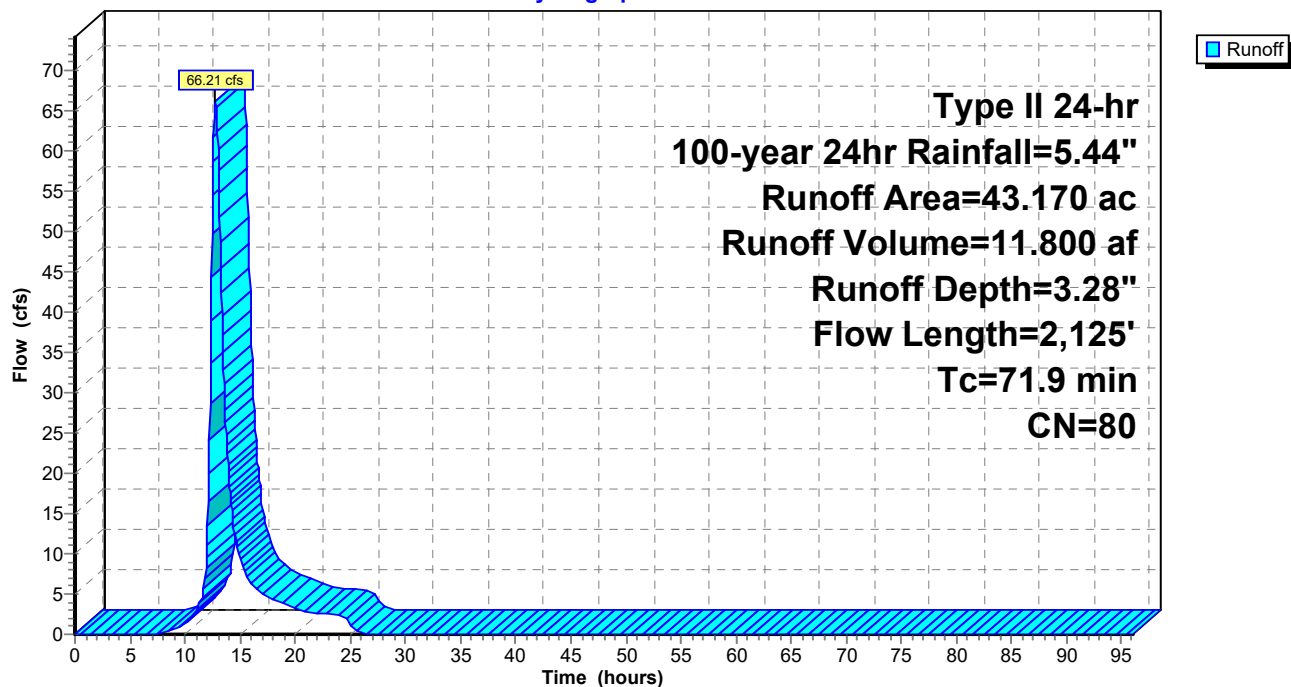
Summary for Subcatchment B23:

Runoff = 66.21 cfs @ 12.77 hrs, Volume= 11.800 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 43.170	80	
43.170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.0	100	0.0100	0.10		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
55.9	2,025	0.0045	0.60		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
71.9	2,125	Total			

Subcatchment B23:**Hydrograph**

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B24:

Runoff = 40.32 cfs @ 12.17 hrs, Volume= 3.389 af, Depth= 1.79"

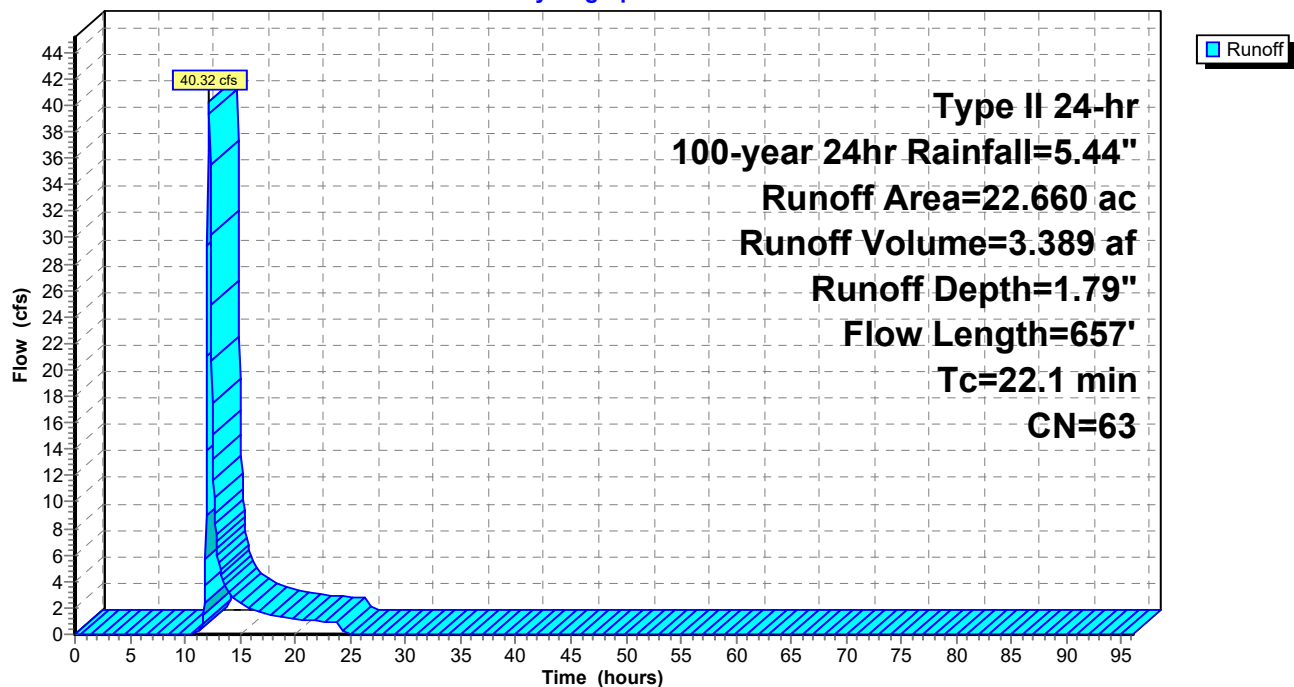
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 22.660	63	
22.660		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0130	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
7.7	557	0.0181	1.21		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
22.1	657	Total			

Subcatchment B24:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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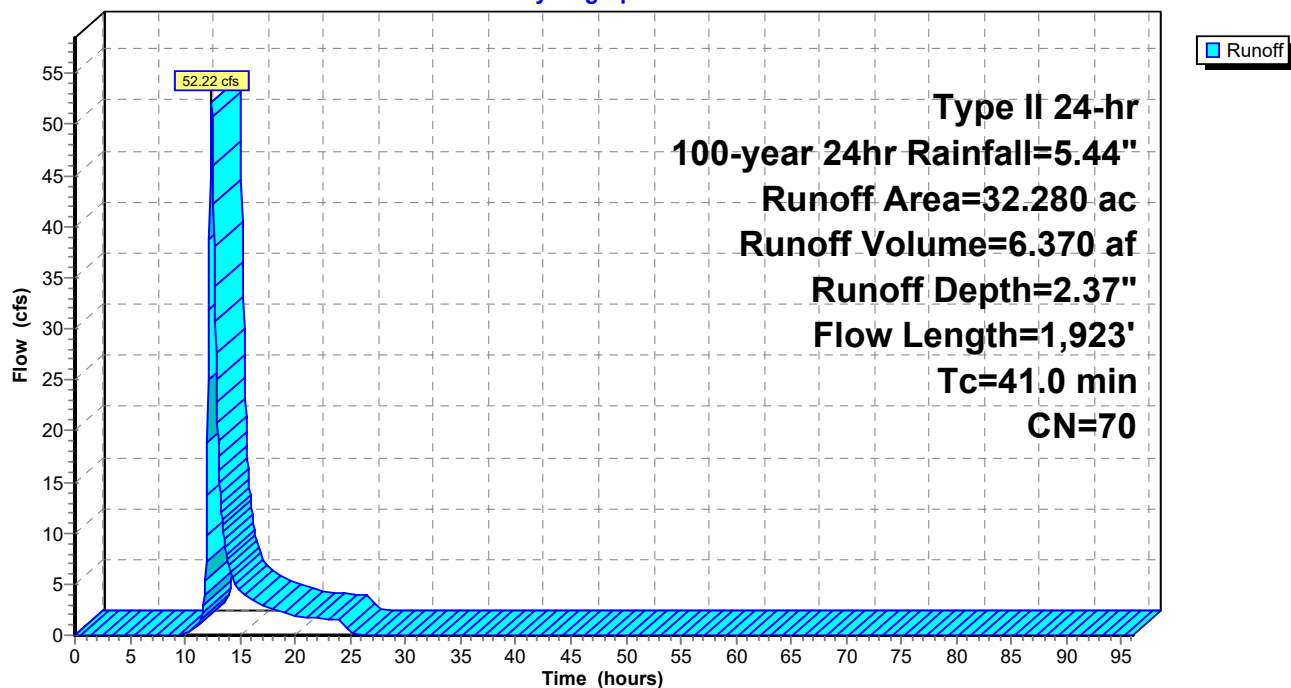
Summary for Subcatchment B25:

Runoff = 52.22 cfs @ 12.39 hrs, Volume= 6.370 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 32.280	70	
32.280		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.5	100	0.0230	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
27.0	1,311	0.0081	0.81		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.5	512	0.0047	3.47	23.16	Parabolic Channel, DITCH W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.022
41.0	1,923	Total			

Subcatchment B25:**Hydrograph**

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B26:

Runoff = 89.51 cfs @ 13.99 hrs, Volume= 30.837 af, Depth= 2.90"

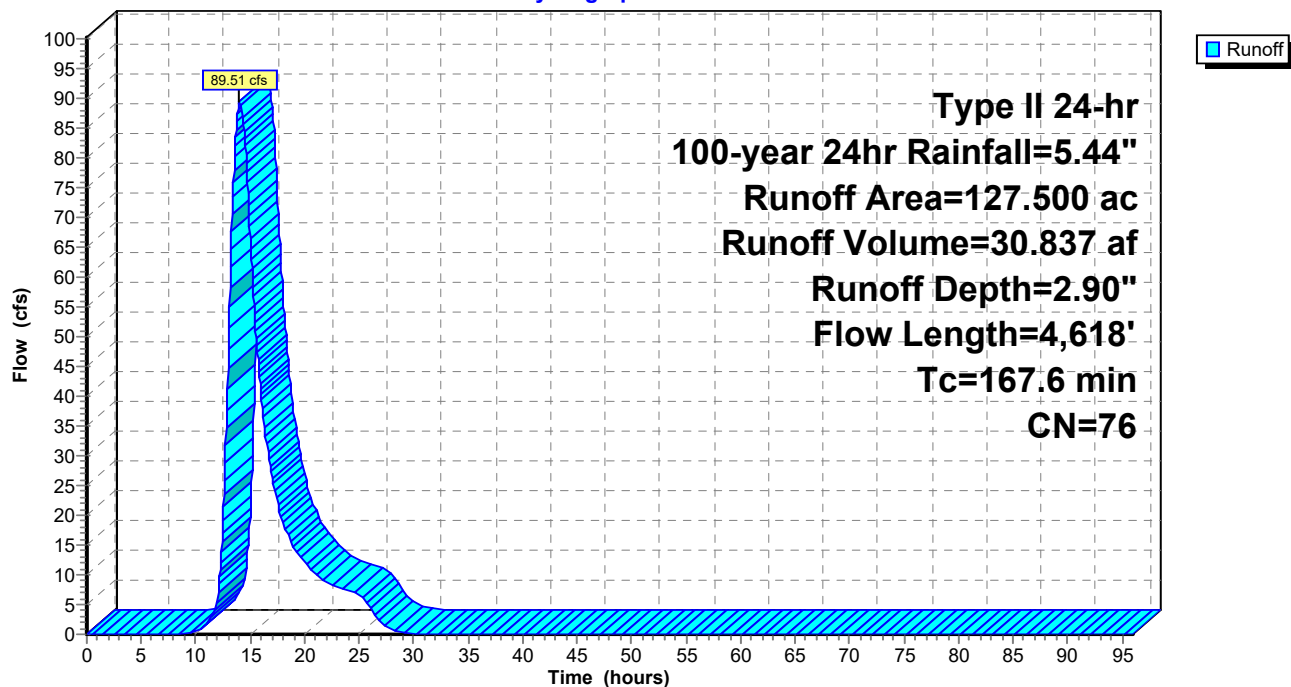
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 127.500	76	
127.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0200	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
155.4	4,518	0.0029	0.48		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
167.6	4,618	Total			

Subcatchment B26:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B27:

Runoff = 37.63 cfs @ 12.27 hrs, Volume= 3.805 af, Depth= 2.12"

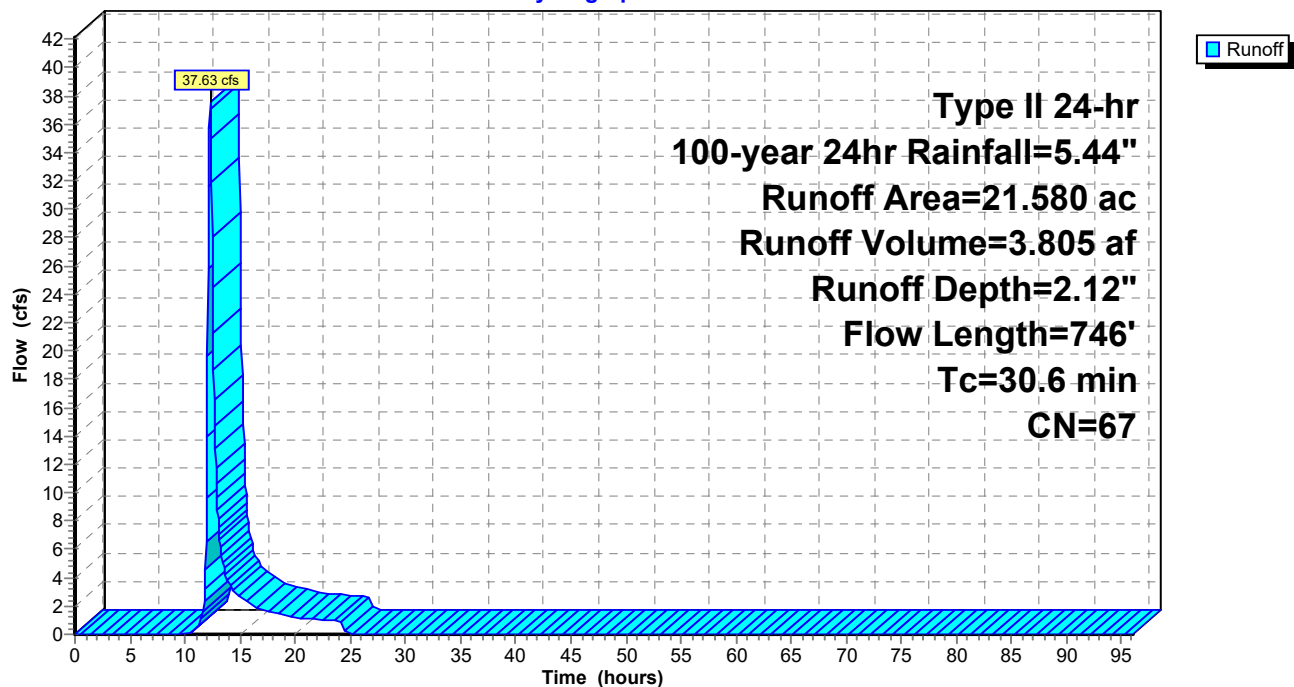
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 21.580	67	
21.580		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
18.9	646	0.0040	0.57		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
30.6	746	Total			

Subcatchment B27:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B28:

Runoff = 41.19 cfs @ 12.34 hrs, Volume= 4.669 af, Depth= 3.28"

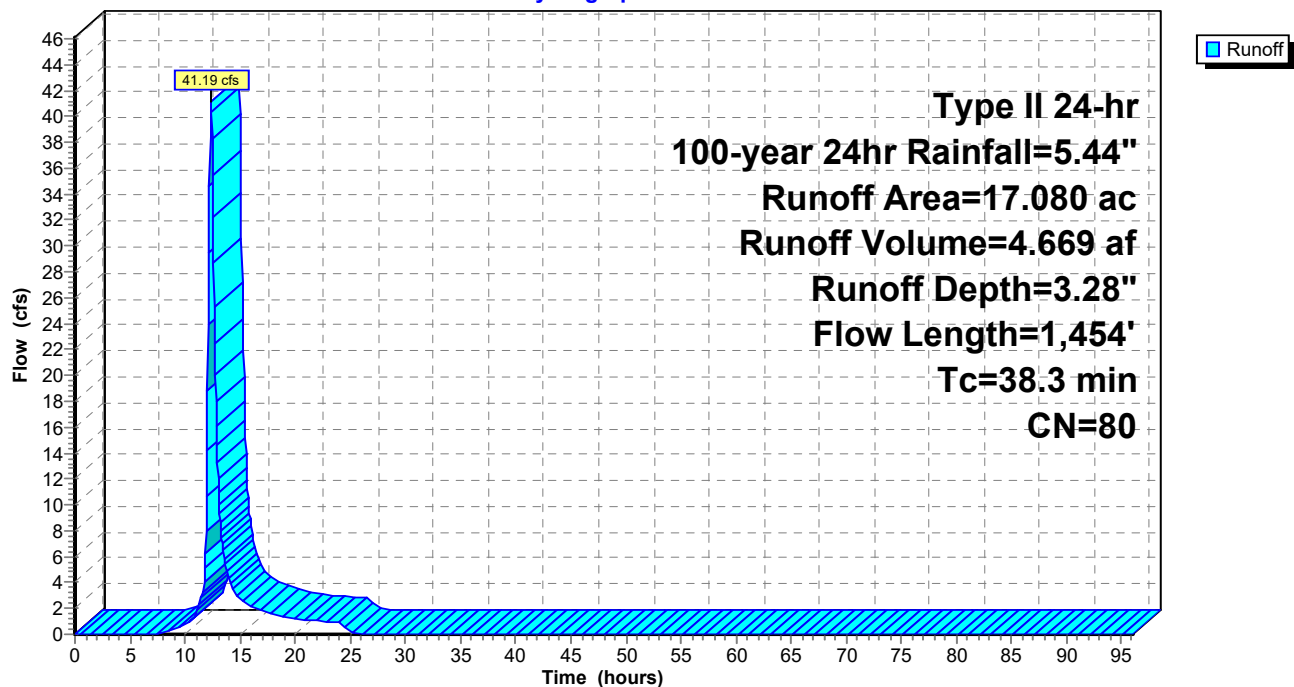
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 17.080	80	
17.080		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.6	1,354	0.0089	0.85		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
38.3	1,454	Total			

Subcatchment B28:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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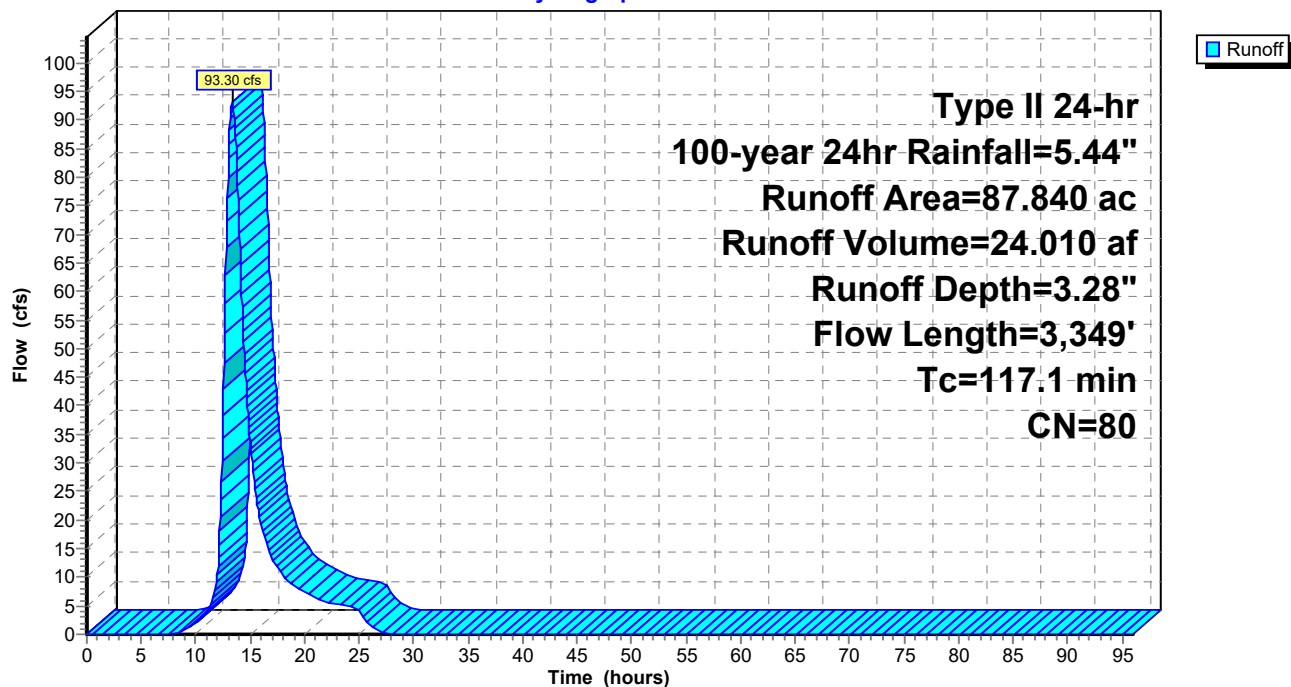
Summary for Subcatchment B29:

Runoff = 93.30 cfs @ 13.38 hrs, Volume= 24.010 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 87.840	80	
87.840		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0190	0.13		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
104.7	3,249	0.0033	0.52		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
117.1	3,349	Total			

Subcatchment B29:**Hydrograph**

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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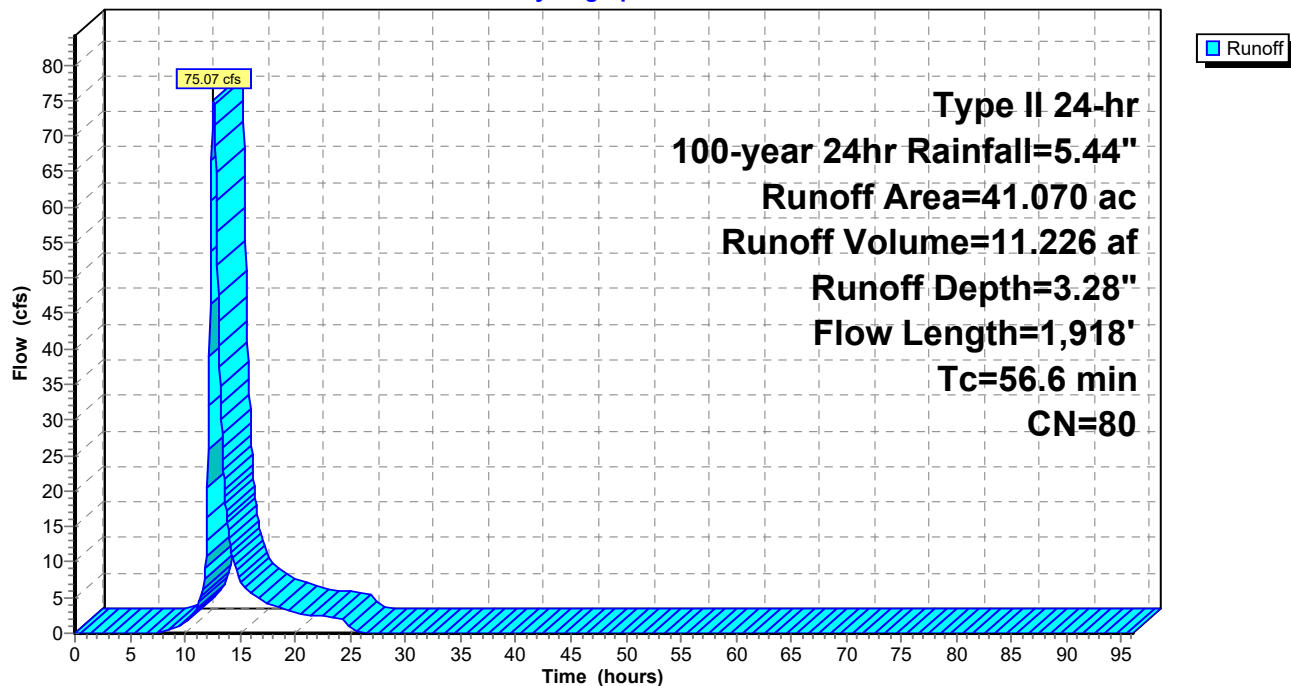
Summary for Subcatchment B3:

Runoff = 75.07 cfs @ 12.57 hrs, Volume= 11.226 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 41.070	80	
41.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.0	100	0.0030	0.06		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
29.2	1,561	0.0098	0.89		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
1.4	257	0.0093	3.13	20.85	Parabolic Channel, DITCH W=20.00' D=0.50' Area=6.7 sf Perim=20.0' n= 0.022
56.6	1,918	Total			

Subcatchment B3:**Hydrograph**

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B30:

Runoff = 8.56 cfs @ 12.06 hrs, Volume= 0.546 af, Depth= 3.38"

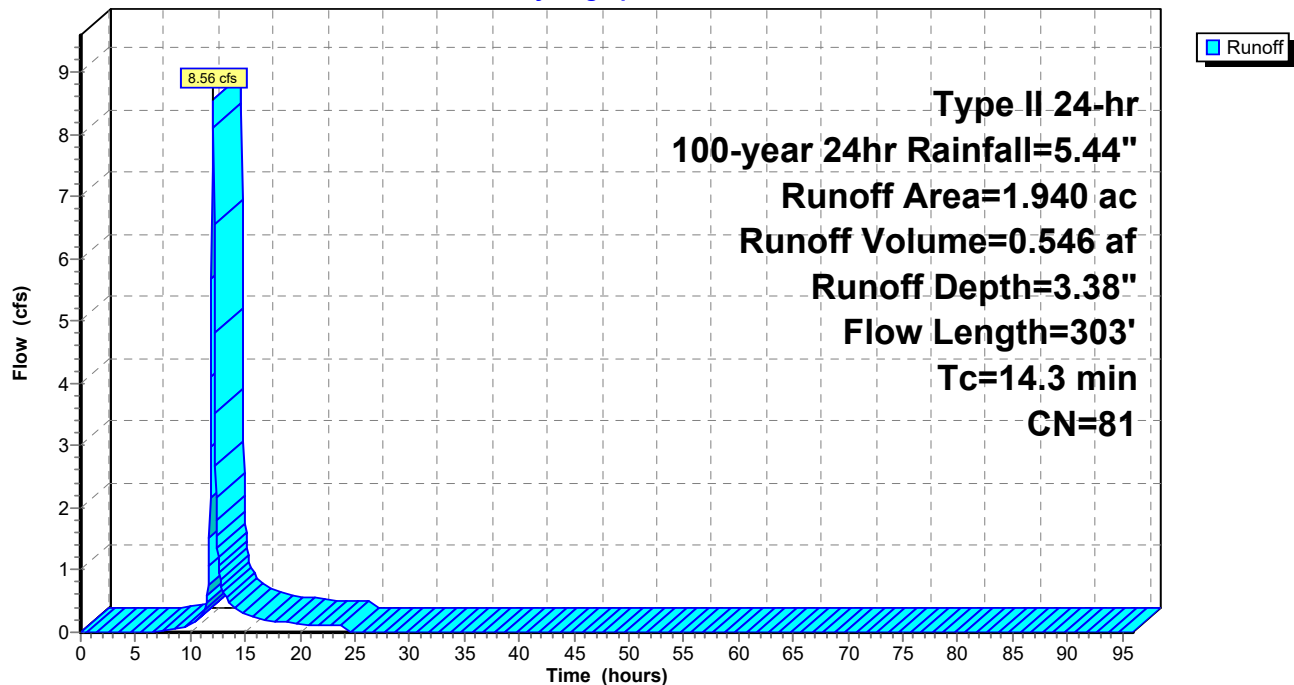
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 1.940	81	
1.940		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0220	0.14		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
2.6	203	0.0202	1.28		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
14.3	303	Total			

Subcatchment B30:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B4:

Runoff = 323.16 cfs @ 12.40 hrs, Volume= 39.478 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 144.430	80	
144.430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	100	0.0330	0.21		Sheet Flow, SH-OPEN SPACE Range n= 0.130 P2= 2.54"
10.7	749	0.0167	1.16		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
5.8	904	0.0065	2.59	5.17	Parabolic Channel, DITCH W=6.00' D=0.50' Area=2.0 sf Perim=6.1' n= 0.022
15.8	497	0.0034	0.52		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	43	0.0323	15.29	48.05	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.5	691	0.0081	4.60	46.03	Parabolic Channel, DITCH W=15.00' D=1.00' Area=10.0 sf Perim=15.2' n= 0.022
42.8	2,984	Total			

Birch_Onsite

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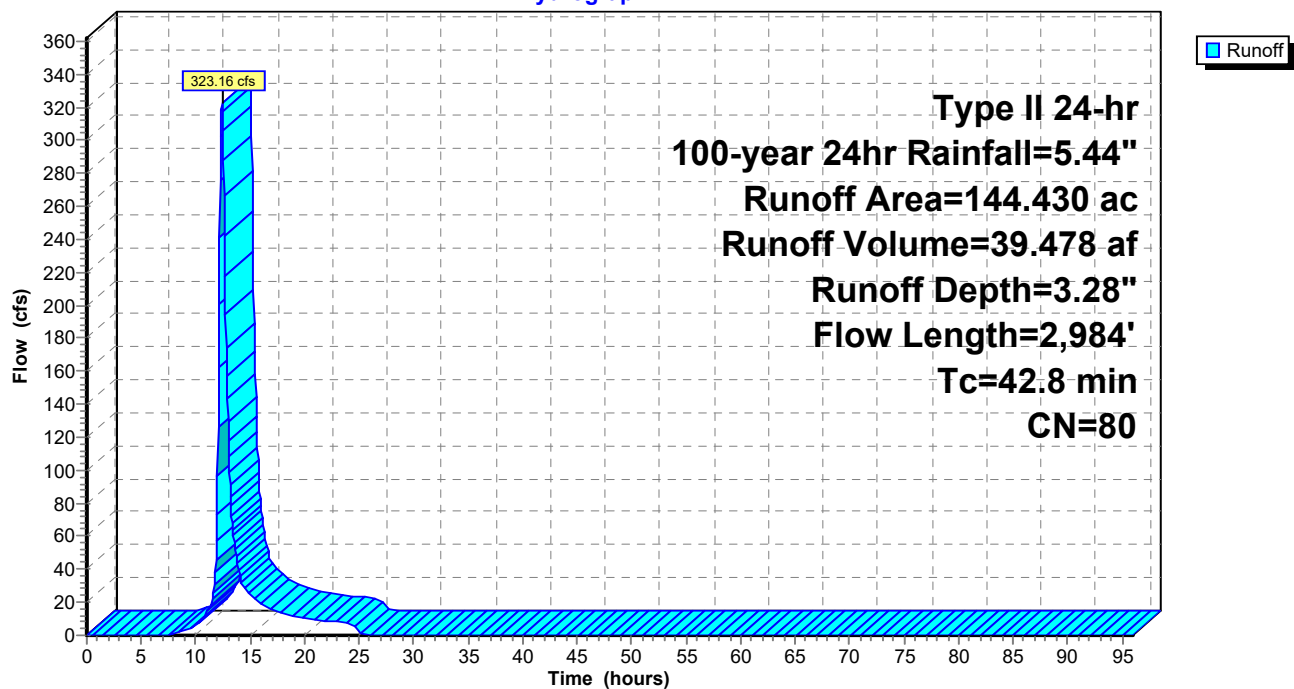
Type II 24-hr 100-year 24hr Rainfall=5.44"

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Subcatchment B4:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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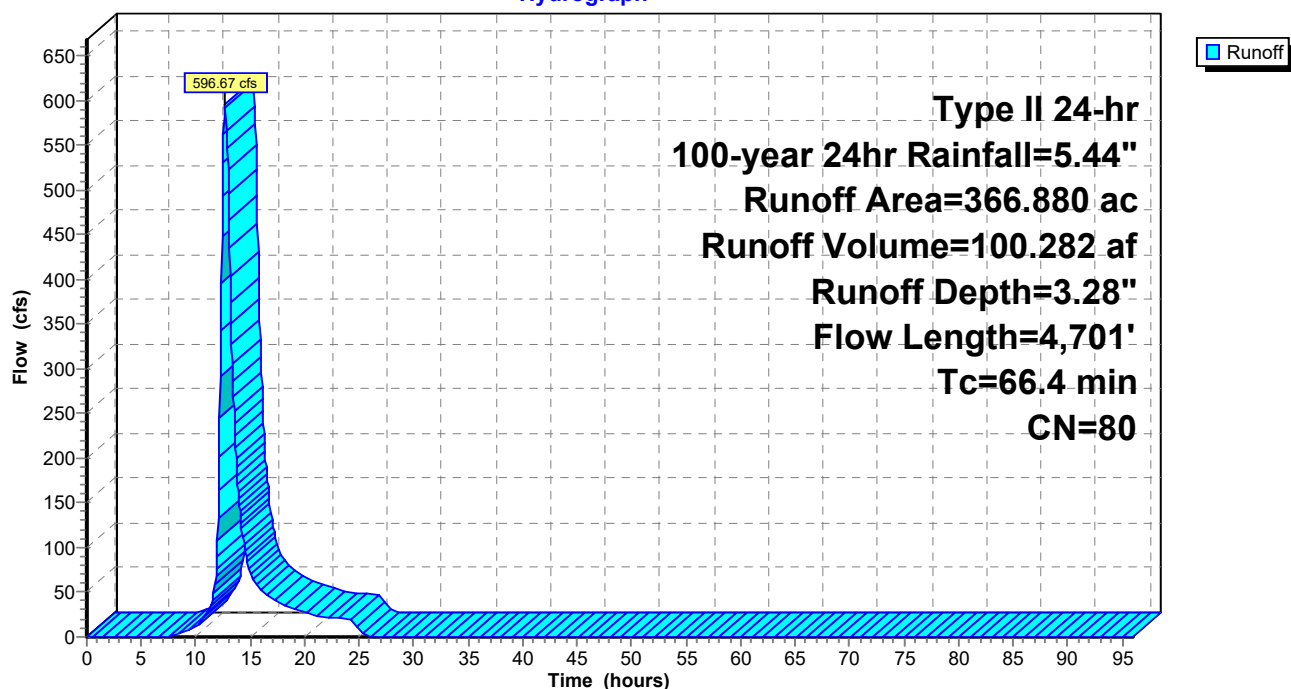
Summary for Subcatchment B5:

Runoff = 596.67 cfs @ 12.71 hrs, Volume= 100.282 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 366.880	80	
366.880		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.0330	0.17		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
26.0	1,682	0.0144	1.08		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
10.1	1,605	0.0067	2.65	8.82	Parabolic Channel, DITCH W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
19.5	751	0.0051	0.64		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.9	563	0.0066	9.91	528.71	Parabolic Channel, DITCH W=20.00' D=4.00' Area=53.3 sf Perim=22.0' n= 0.022
66.4	4,701	Total			

Subcatchment B5:**Hydrograph**

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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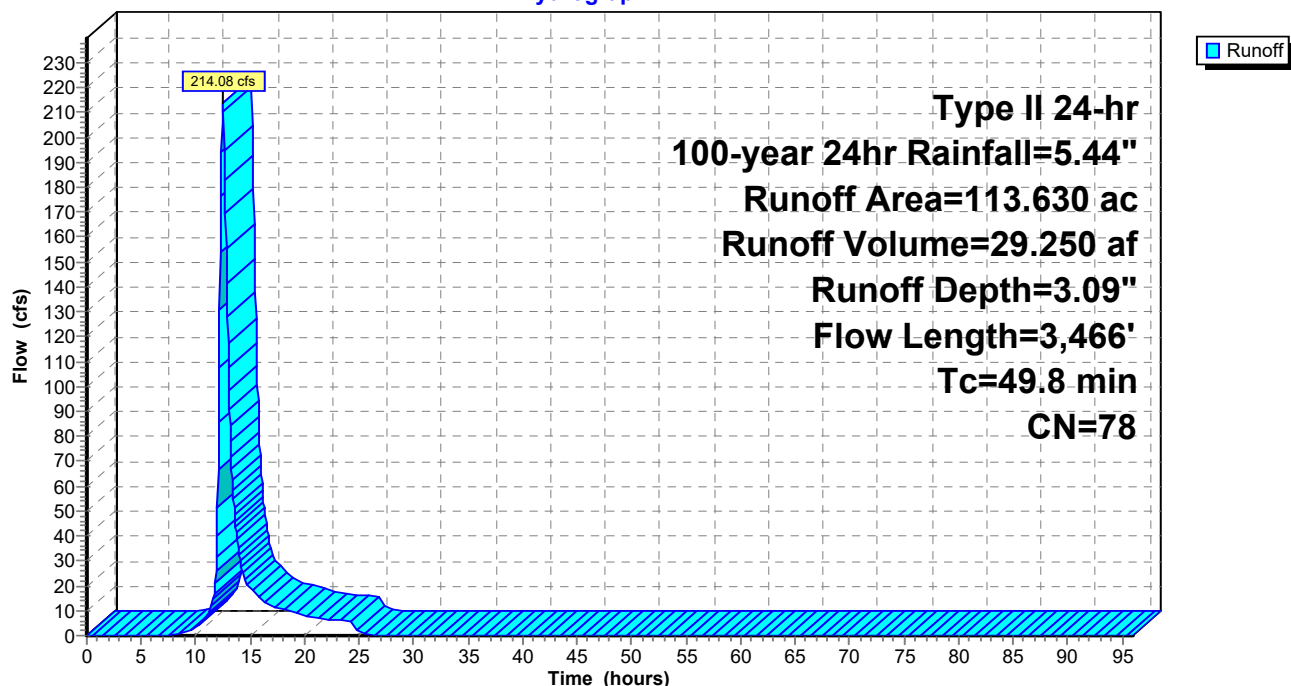
Summary for Subcatchment B6:

Runoff = 214.08 cfs @ 12.49 hrs, Volume= 29.250 af, Depth= 3.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 113.630	78	
113.630		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
31.0	1,798	0.0115	0.97		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
3.0	959	0.0022	5.31	247.62	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
0.1	31	0.0032	4.81	15.12	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.7	578	0.0026	5.77	269.19	Parabolic Channel, DITCH W=20.00' D=3.50' Area=46.7 sf Perim=21.5' n= 0.022
49.8	3,466	Total			

Subcatchment B6:**Hydrograph**

Birch_Onsite

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B7:

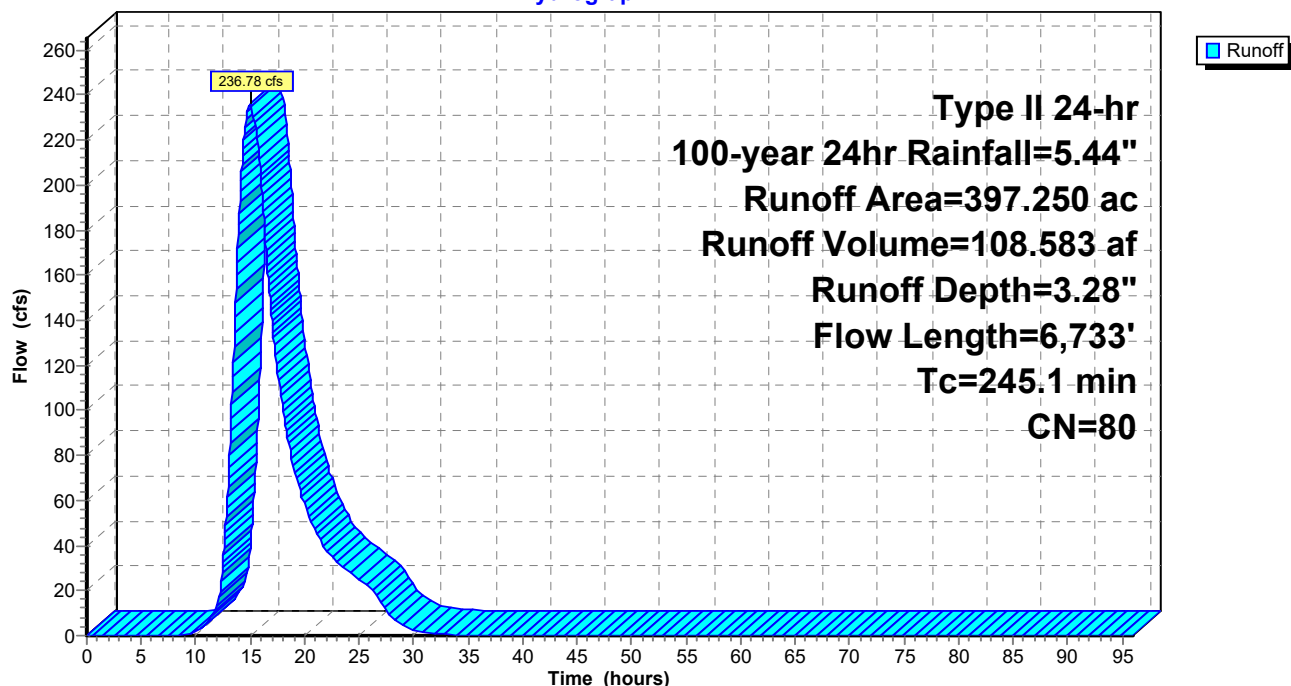
Runoff = 236.78 cfs @ 14.98 hrs, Volume= 108.583 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description			
* 397.250	80				
397.250		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5	100	0.0070	0.09		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
85.3	3,055	0.0044	0.60		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
0.0	27	0.0372	16.41	51.57	Pipe Channel, CULVERT 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
139.3	2,913	0.0015	0.35		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
2.0	638	0.0042	5.21	139.01	Parabolic Channel, DITCH W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.022
245.1	6,733	Total			

Subcatchment B7:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B8:

Runoff = 41.30 cfs @ 12.19 hrs, Volume= 3.573 af, Depth= 3.28"

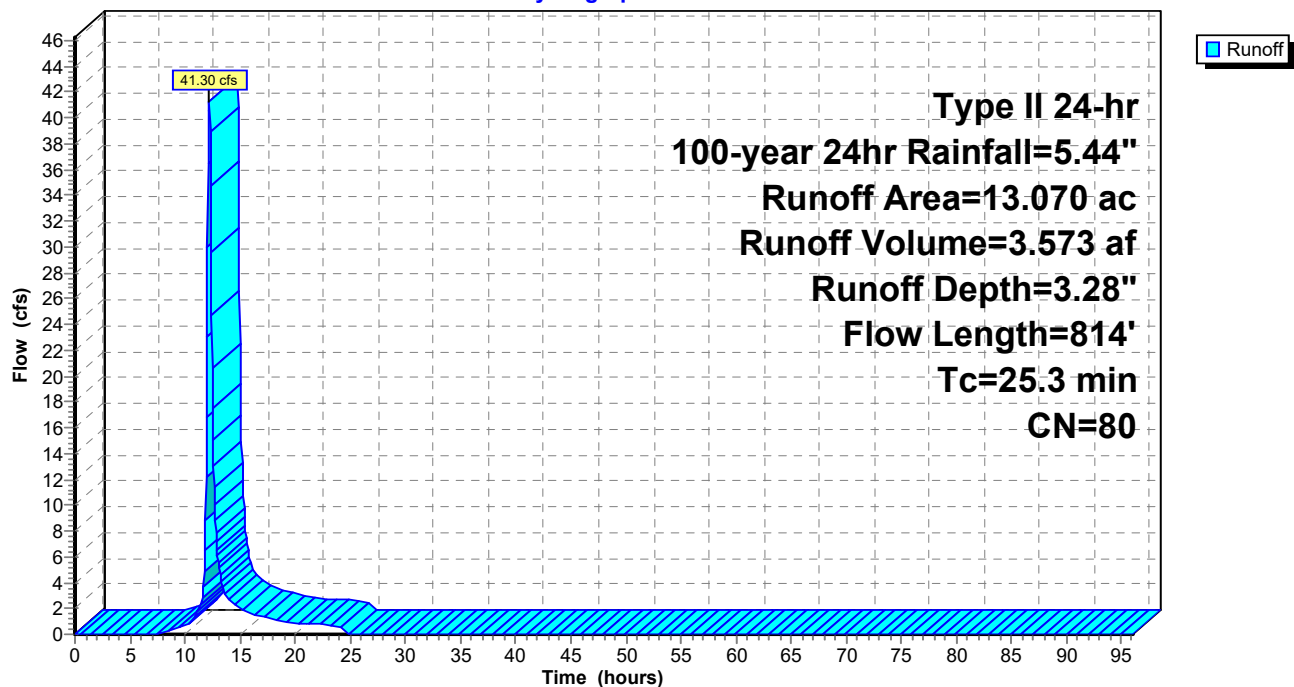
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 13.070	80	
13.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0140	0.12		Sheet Flow, SH-CROPS
					Cultivated: Residue>20% n= 0.170 P2= 2.54"
11.3	714	0.0136	1.05		Shallow Concentrated Flow, SCF-CROPS
					Cultivated Straight Rows Kv= 9.0 fps
25.3	814	Total			

Subcatchment B8:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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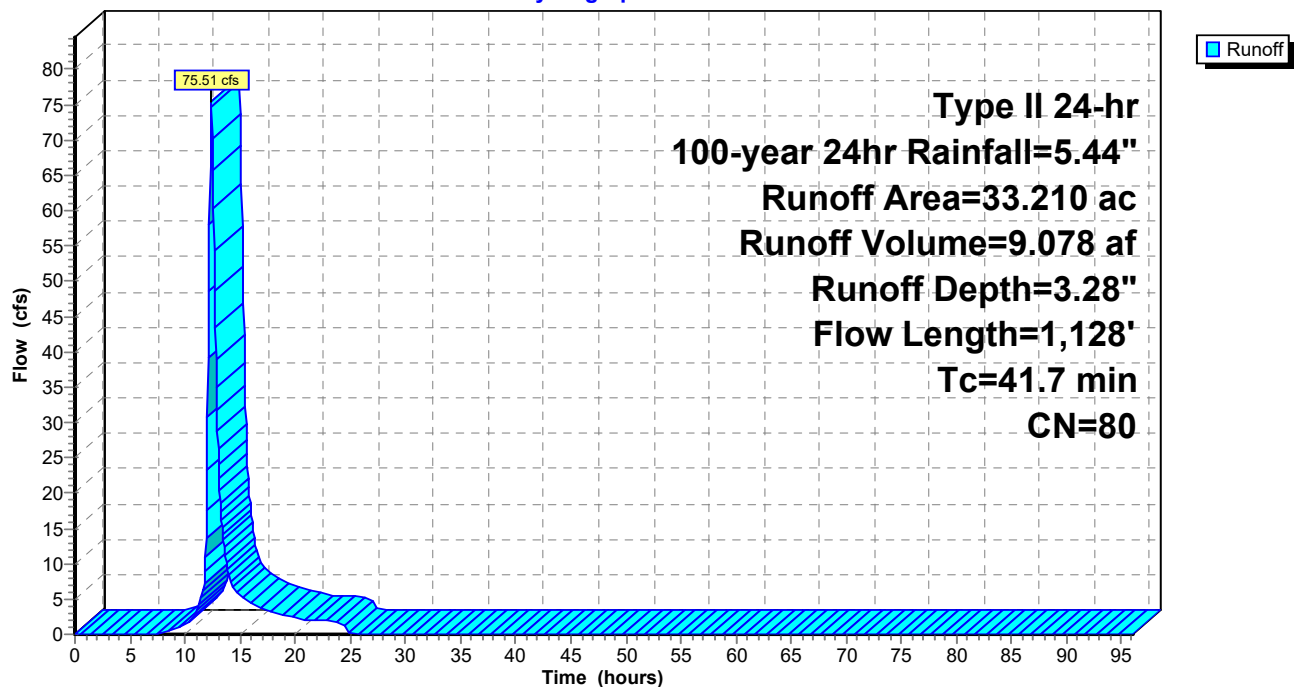
Summary for Subcatchment B9:

Runoff = 75.51 cfs @ 12.38 hrs, Volume= 9.078 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

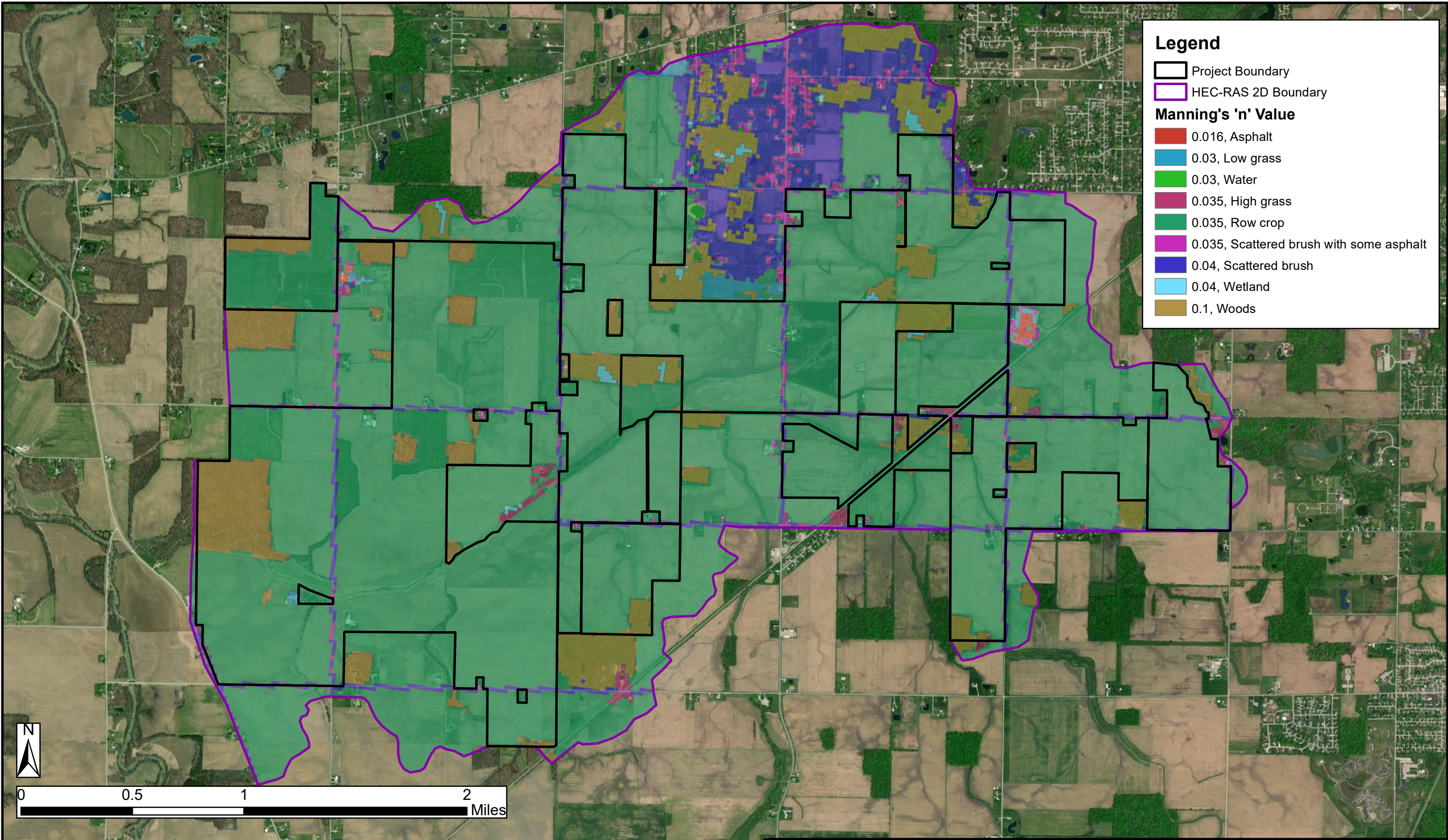
Area (ac)	CN	Description
* 33.210	80	
33.210		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.5	100	0.0080	0.10		Sheet Flow, SH-CROPS Cultivated: Residue>20% n= 0.170 P2= 2.54"
24.2	1,028	0.0062	0.71		Shallow Concentrated Flow, SCF-CROPS Cultivated Straight Rows Kv= 9.0 fps
41.7	1,128	Total			

Subcatchment B9:**Hydrograph**

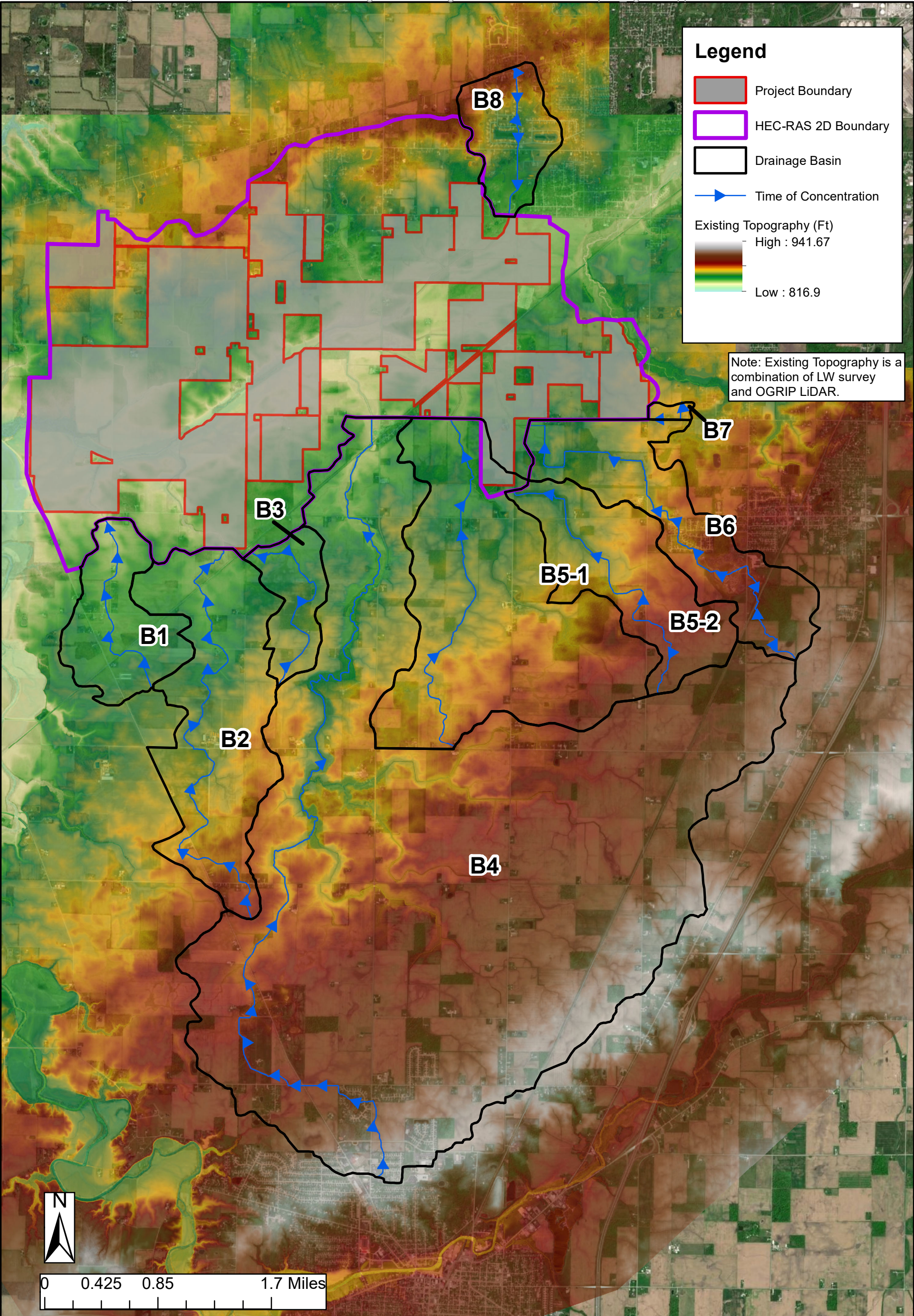
APPENDIX I
PRE-DEVELOPMENT MANNINGS MAP

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		DRAWN: 10/22/2020		
		DRAWN BY: KC		
		CHECKED BY: BB	<div>Birch Solar Farm Lightsource BP Allen & Auglaize County, Ohio</div>	
		FILE NAME: Appl		

APPENDIX J
OFFSITE DRAINAGE MAP



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DRAWN BY:	KC
CHECKED BY:	BB
FILE NAME:	AppJ

Offsite Drainage Map

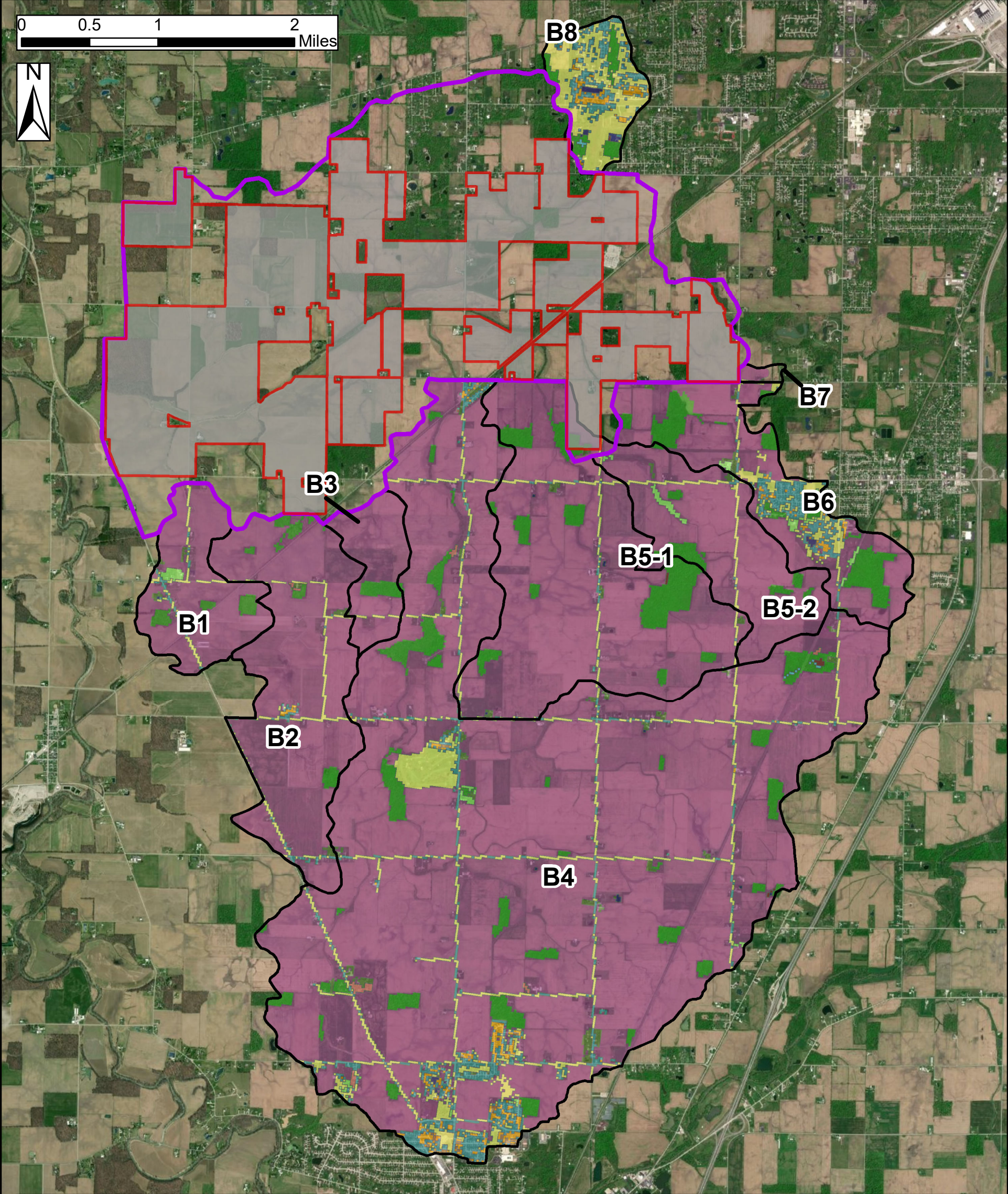
Birch Solar Project
LightsourceBP
Allen and Auglaize Counties, Ohio

APPENDIX

J

APPENDIX K

OFFSITE LANDUSE MAP



Legend

- Project Boundary

HEC-RAS 2D Boundary

Drainage Basin
- Landuse**

Cultivated Crops

Deciduous Forest

Developed, High Intensity

Developed, Low Intensity

Developed, Medium Intensity

Developed, Open Space


Emergent Herbaceous Wetlands

Grassland/Herbaceous

Mixed Forest

Pasture/Hay

Water Body

Woody Wetlands
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| DRAWN BY: | KC |
| CHECKED BY: | BB |
| FILE NAME: | AppK |
- Offsite Landuse Map
- Birch Solar Project
LightsourceBP
Allen and Auglaize Counties, Ohio
- APPENDIX
- K

APPENDIX L
OFFSITE CURVE NUMBERS

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B1	11	Water Body	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.05	98	5.28
B1	11	Water Body	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.17	98	16.52
B1	21	Developed, Open Space	Digby loam, 2 to 6 percent slopes	B/D	0.30	84	24.90
B1	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	8.10	84	680.42
B1	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	5.67	84	476.39
B1	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	7.93	84	665.86
B1	21	Developed, Open Space	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.60	84	50.82
B1	22	Developed, Low Intensity	Digby loam, 2 to 6 percent slopes	B/D	0.02	86	1.64
B1	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	2.09	86	179.74
B1	22	Developed, Low Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	1.44	86	123.80
B1	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	4.78	86	411.44
B1	22	Developed, Low Intensity	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.49	86	42.35
B1	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	15.30	79	1,208.42
B1	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.72	79	57.06
B1	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	9.55	79	754.84
B1	71	Grassland/Herbaceous	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.62	84	135.77
B1	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.12	84	10.31
B1	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	1.37	84	114.73
B1	71	Grassland/Herbaceous	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	1.26	84	106.11
B1	81	Pasture/Hay	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	2.48	84	208.74
B1	81	Pasture/Hay	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.80	84	66.95
B1	81	Pasture/Hay	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	4.52	84	379.36
B1	82	Cultivated Crops	Digby loam, 2 to 6 percent slopes	B/D	12.24	80	979.15
B1	82	Cultivated Crops	Haskins loam, 2 to 6 percent slopes	C/D	2.72	80	217.32
B1	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	150.23	80	12,018.17
B1	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	38.84	80	3,107.10
B1	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	219.54	80	17,562.84
B1	82	Cultivated Crops	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	18.94	80	1,515.24

SUM:					511.89		41,121.27
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B2	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	13.36	84	1,122.25
B2	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.45	84	37.88
B2	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	27.62	84	2,319.70
B2	21	Developed, Open Space	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.87	84	72.66
B2	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	3.44	86	296.20
B2	22	Developed, Low Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.01	86	1.21
B2	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	9.48	86	814.97
B2	22	Developed, Low Intensity	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.43	86	37.27
B2	23	Developed, Medium Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.37	87	32.18
B2	23	Developed, Medium Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	2.30	87	199.99
B2	24	Developed, High Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.22	95	21.13
B2	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	14.58	79	1,151.95
B2	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	1.05	79	83.29
B2	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	20.44	79	1,614.70
B2	43	Mixed Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.18	79	93.40
B2	43	Mixed Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.15	79	12.01

B2	71	Grassland/Herbaceous	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.86	84	71.92
B2	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	4.64	84	390.11
B2	71	Grassland/Herbaceous	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	1.08	84	90.38
B2	81	Pasture/Hay	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.21	84	17.43
B2	82	Cultivated Crops	Haskins loam, 0 to 3 percent slopes	C/D	0.92	80	73.26
B2	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	418.60	80	33,487.89
B2	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	22.95	80	1,836.05
B2	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	609.20	80	48,735.72
B2	82	Cultivated Crops	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	0.03	80	2.58
B2	82	Cultivated Crops	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	53.25	80	4,260.16
SUM:					1,207.69		96,876.29

COMPOSITE CN: 80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B3	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	2.32	84	194.85
B3	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	1.12	84	94.24
B3	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	12.22	79	965.41
B3	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	2.71	79	213.87
B3	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	5.46	79	431.60
B3	71	Grassland/Herbaceous	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.04	84	3.12
B3	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.47	84	39.21
B3	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	99.05	80	7,923.67
B3	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	36.16	80	2,892.44
B3	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	113.81	80	9,104.62
B3	82	Cultivated Crops	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	2.46	80	196.46
SUM:					275.80		22,059.49

COMPOSITE CN: 80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B4	11	Water Body	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.30	98	127.66
B4	11	Water Body	Blount silt loam, end moraine, 0 to 2 percent slopes	D	0.25	98	24.63
B4	11	Water Body	Blount silt loam, end moraine, 2 to 4 percent slopes	D	1.43	98	139.82
B4	11	Water Body	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	1.24	98	121.97
B4	11	Water Body	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.22	98	21.79
B4	21	Developed, Open Space	Millgrove clay loam	B/D	0.67	84	56.17
B4	21	Developed, Open Space	Shoals silt loam, 0 to 2 percent slopes, occasionally flooded	B/D	7.21	84	605.41
B4	21	Developed, Open Space	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	16.75	84	1,407.29
B4	21	Developed, Open Space	Haskins loam, 0 to 3 percent slopes	C/D	0.25	84	20.59
B4	21	Developed, Open Space	Haskins loam, 2 to 6 percent slopes	C/D	1.37	84	114.95
B4	21	Developed, Open Space	Minster silty clay loam, till substratum, 0 to 1 percent slopes	C/D	5.33	84	447.96
B4	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	71.26	84	5,985.48
B4	21	Developed, Open Space	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.33	84	28.09
B4	21	Developed, Open Space	Blount silt loam, end moraine, 0 to 2 percent slopes	D	52.21	84	4,385.54
B4	21	Developed, Open Space	Blount silt loam, end moraine, 2 to 4 percent slopes	D	37.21	84	3,125.95
B4	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	12.80	84	1,075.27
B4	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	126.38	84	10,615.68
B4	21	Developed, Open Space	Glynwood clay loam, 6 to 12 percent slopes, eroded	D	0.16	84	13.56
B4	21	Developed, Open Space	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	21.84	84	1,834.68
B4	21	Developed, Open Space	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.12	84	10.49

B4	21	Developed, Open Space	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	42.79	84	3,594.28
B4	22	Developed, Low Intensity	Shoals silt loam, 0 to 2 percent slopes, occasionally flooded	B/D	1.73	86	148.70
B4	22	Developed, Low Intensity	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	2.37	86	203.82
B4	22	Developed, Low Intensity	Minster silty clay loam, till substratum, 0 to 1 percent slopes	C/D	1.23	86	106.02
B4	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	35.27	86	3,033.40
B4	22	Developed, Low Intensity	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.58	86	49.69
B4	22	Developed, Low Intensity	Blount silt loam, end moraine, 0 to 2 percent slopes	D	92.08	86	7,918.47
B4	22	Developed, Low Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	32.06	86	2,756.81
B4	22	Developed, Low Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	8.31	86	714.65
B4	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	49.02	86	4,215.58
B4	22	Developed, Low Intensity	Glynwood clay loam, 6 to 12 percent slopes, eroded	D	0.00	86	0.17
B4	22	Developed, Low Intensity	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	3.97	86	341.58
B4	22	Developed, Low Intensity	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	1.00	86	86.23
B4	22	Developed, Low Intensity	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	10.97	86	943.34
B4	23	Developed, Medium Intensity	Minster silty clay loam, till substratum, 0 to 1 percent slopes	C/D	0.22	87	19.35
B4	23	Developed, Medium Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	16.24	87	1,413.28
B4	23	Developed, Medium Intensity	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.03	87	2.24
B4	23	Developed, Medium Intensity	Blount silt loam, end moraine, 0 to 2 percent slopes	D	31.58	87	2,747.86
B4	23	Developed, Medium Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	9.40	87	818.13
B4	23	Developed, Medium Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	3.28	87	285.51
B4	23	Developed, Medium Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	3.42	87	297.51
B4	23	Developed, Medium Intensity	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	0.18	87	15.80
B4	23	Developed, Medium Intensity	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.45	87	39.08
B4	23	Developed, Medium Intensity	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.22	87	19.35
B4	24	Developed, High Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.37	95	129.87
B4	24	Developed, High Intensity	Blount silt loam, end moraine, 0 to 2 percent slopes	D	4.69	95	445.17
B4	24	Developed, High Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	1.70	95	161.96
B4	24	Developed, High Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.90	95	85.83
B4	24	Developed, High Intensity	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	0.02	95	1.68
B4	41	Deciduous Forest	Digby loam, 2 to 6 percent slopes	B/D	1.62	79	128.23
B4	41	Deciduous Forest	Shoals silt loam, 0 to 2 percent slopes, occasionally flooded	B/D	65.90	79	5,206.05
B4	41	Deciduous Forest	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	1.85	79	145.95
B4	41	Deciduous Forest	Haskins loam, 0 to 3 percent slopes	C/D	0.39	79	31.13
B4	41	Deciduous Forest	Haskins loam, 2 to 6 percent slopes	C/D	2.74	79	216.46
B4	41	Deciduous Forest	Houcktown loam, 2 to 6 percent slopes	C/D	0.08	79	6.37
B4	41	Deciduous Forest	Minster silty clay loam, till substratum, 0 to 1 percent slopes	C/D	16.68	79	1,317.60
B4	41	Deciduous Forest	Muskego muck	C/D	1.17	79	92.22
B4	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	47.51	79	3,752.98
B4	41	Deciduous Forest	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	2.56	79	201.90
B4	41	Deciduous Forest	Blount silt loam, end moraine, 0 to 2 percent slopes	D	6.39	79	504.96
B4	41	Deciduous Forest	Blount silt loam, end moraine, 2 to 4 percent slopes	D	24.19	79	1,910.78
B4	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	23.12	79	1,826.24
B4	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	98.17	79	7,755.19
B4	41	Deciduous Forest	Glynwood clay loam, 6 to 12 percent slopes, eroded	D	0.46	79	35.97
B4	41	Deciduous Forest	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	15.19	79	1,199.98
B4	41	Deciduous Forest	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.27	79	21.03
B4	41	Deciduous Forest	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	3.53	79	278.94
B4	43	Mixed Forest	Shoals silt loam, 0 to 2 percent slopes, occasionally flooded	B/D	1.77	79	139.98
B4	43	Mixed Forest	Haskins loam, 0 to 3 percent slopes	C/D	0.00	79	0.02

B4	43	Mixed Forest	Minster silty clay loam, till substratum, 0 to 1 percent slopes	C/D	1.65	79	130.65
B4	43	Mixed Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	2.13	79	167.88
B4	43	Mixed Forest	Blount silt loam, end moraine, 0 to 2 percent slopes	D	1.51	79	119.03
B4	43	Mixed Forest	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.94	79	74.23
B4	43	Mixed Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	4.23	79	333.90
B4	43	Mixed Forest	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	0.01	79	0.56
B4	71	Grassland/Herbaceous	Shoals silt loam, 0 to 2 percent slopes, occasionally flooded	B/D	0.03	84	2.90
B4	71	Grassland/Herbaceous	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	0.75	84	63.29
B4	71	Grassland/Herbaceous	Haskins loam, 0 to 3 percent slopes	C/D	0.00	84	0.21
B4	71	Grassland/Herbaceous	Haskins loam, 2 to 6 percent slopes	C/D	0.08	84	7.09
B4	71	Grassland/Herbaceous	Minster silty clay loam, till substratum, 0 to 1 percent slopes	C/D	1.16	84	97.77
B4	71	Grassland/Herbaceous	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	4.99	84	419.38
B4	71	Grassland/Herbaceous	Blount silt loam, end moraine, 0 to 2 percent slopes	D	10.29	84	864.06
B4	71	Grassland/Herbaceous	Blount silt loam, end moraine, 2 to 4 percent slopes	D	2.27	84	190.53
B4	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	3.31	84	278.23
B4	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	29.03	84	2,438.41
B4	71	Grassland/Herbaceous	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	1.81	84	151.80
B4	71	Grassland/Herbaceous	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.60	84	50.81
B4	71	Grassland/Herbaceous	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	2.53	84	212.27
B4	81	Pasture/Hay	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	3.52	84	295.35
B4	81	Pasture/Hay	Minster silty clay loam, till substratum, 0 to 1 percent slopes	C/D	0.09	84	7.72
B4	81	Pasture/Hay	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.92	84	77.51
B4	81	Pasture/Hay	Blount silt loam, end moraine, 0 to 2 percent slopes	D	1.81	84	151.80
B4	81	Pasture/Hay	Blount silt loam, end moraine, 2 to 4 percent slopes	D	3.58	84	300.99
B4	81	Pasture/Hay	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	1.68	84	141.44
B4	81	Pasture/Hay	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	0.00	84	0.13
B4	81	Pasture/Hay	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.12	84	10.07
B4	81	Pasture/Hay	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	1.46	84	122.80
B4	82	Cultivated Crops	Digby loam, 2 to 6 percent slopes	B/D	4.91	80	392.78
B4	82	Cultivated Crops	Millgrove clay loam	B/D	13.33	80	1,066.32
B4	82	Cultivated Crops	Shoals silt loam, 0 to 2 percent slopes, occasionally flooded	B/D	218.55	80	17,483.81
B4	82	Cultivated Crops	Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded	B/D	55.97	80	4,477.72
B4	82	Cultivated Crops	Shawtown loam, 2 to 6 percent slopes	C	1.29	74	95.55
B4	82	Cultivated Crops	Haskins loam, 0 to 3 percent slopes	C/D	27.72	80	2,217.23
B4	82	Cultivated Crops	Haskins loam, 2 to 6 percent slopes	C/D	28.78	80	2,302.18
B4	82	Cultivated Crops	Houcktown loam, 2 to 6 percent slopes	C/D	1.63	80	130.36
B4	82	Cultivated Crops	Minster silty clay loam, till substratum, 0 to 1 percent slopes	C/D	49.11	80	3,929.11
B4	82	Cultivated Crops	Muskego muck	C/D	2.63	80	210.49
B4	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1470.07	80	117,605.76
B4	82	Cultivated Crops	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	34.29	80	2,742.97
B4	82	Cultivated Crops	Blount silt loam, end moraine, 0 to 2 percent slopes	D	405.92	80	32,473.62
B4	82	Cultivated Crops	Blount silt loam, end moraine, 2 to 4 percent slopes	D	405.82	80	32,465.61
B4	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	509.19	80	40,735.20
B4	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	2607.40	80	208,591.95
B4	82	Cultivated Crops	Del Rey silt loam, till substratum, 0 to 3 percent slopes	D	46.17	80	3,693.79
B4	82	Cultivated Crops	Glynwood clay loam, 6 to 12 percent slopes, eroded	D	4.10	80	327.76
B4	82	Cultivated Crops	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	197.85	80	15,828.39
B4	82	Cultivated Crops	Glynwood loam, 2 to 6 percent slopes	D	1.56	80	124.69
B4	82	Cultivated Crops	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	30.12	80	2,409.45

B4	82	Cultivated Crops	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	441.19	80	35,294.93
B4	90	Woody Wetlands	Minster silty clay loam, till substratum, 0 to 1 percent slopes	C/D	1.91	98	187.47
B4	90	Woody Wetlands	Muskego muck	C/D	0.53	98	52.25
B4	95	Emergent Herbaceous Wetlands	Minster silty clay loam, till substratum, 0 to 1 percent slopes	C/D	0.35	98	34.57
B4	95	Emergent Herbaceous Wetlands	Muskego muck	C/D	1.43	98	139.77
B4	95	Emergent Herbaceous Wetlands	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.74	98	72.69
B4	95	Emergent Herbaceous Wetlands	Saranac silty clay loam, 0 to 2 percent slopes, frequently flooded	C/D	0.14	98	13.32
B4	95	Emergent Herbaceous Wetlands	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.15	98	14.48
B4	95	Emergent Herbaceous Wetlands	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.09	98	8.47
SUM:					7,670.44		617,363.82
COMPOSITE CN:							80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B5-1	11	Water Body	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.31	98	30.16
B5-1	11	Water Body	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.58	98	57.02
B5-1	21	Developed, Open Space	Shoals silt loam, till substratum, 0 to 1 percent slopes, occasionally flooded	B/D	0.14	84	11.56
B5-1	21	Developed, Open Space	Haskins loam, 0 to 3 percent slopes	C/D	1.94	84	163.09
B5-1	21	Developed, Open Space	Haskins loam, 2 to 6 percent slopes	C/D	1.00	84	84.32
B5-1	21	Developed, Open Space	Houcktown loam, 2 to 6 percent slopes	C/D	0.12	84	9.67
B5-1	21	Developed, Open Space	Houcktown silt loam, 2 to 4 percent slopes	C/D	0.11	84	8.86
B5-1	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	19.40	84	1,629.76
B5-1	21	Developed, Open Space	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	1.71	84	143.85
B5-1	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	5.67	84	476.57
B5-1	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	29.93	84	2,514.23
B5-1	21	Developed, Open Space	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	5.14	84	431.95
B5-1	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	2.26	86	194.78
B5-1	22	Developed, Low Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	2.01	86	172.99
B5-1	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	4.50	86	387.22
B5-1	22	Developed, Low Intensity	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.77	86	66.13
B5-1	41	Deciduous Forest	Digby loam, 2 to 6 percent slopes	B/D	2.63	79	207.99
B5-1	41	Deciduous Forest	Haskins loam, 0 to 3 percent slopes	C/D	0.74	79	58.13
B5-1	41	Deciduous Forest	Haskins loam, 2 to 6 percent slopes	C/D	1.29	79	102.22
B5-1	41	Deciduous Forest	Houcktown silt loam, 2 to 4 percent slopes	C/D	1.17	79	92.38
B5-1	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	80.70	79	6,375.26
B5-1	41	Deciduous Forest	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	24.74	79	1,954.17
B5-1	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	10.94	79	864.58
B5-1	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	107.06	79	8,457.89
B5-1	41	Deciduous Forest	Glynwood clay loam, ground moraine, 2 to 6 percent slopes, eroded	D	0.00	79	0.01
B5-1	41	Deciduous Forest	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	2.08	79	163.96
B5-1	71	Grassland/Herbaceous	Haskins loam, 0 to 3 percent slopes	C/D	1.52	84	127.30
B5-1	71	Grassland/Herbaceous	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	4.06	84	340.78
B5-1	71	Grassland/Herbaceous	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	1.33	84	111.50
B5-1	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.49	84	41.29
B5-1	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	5.87	84	492.89
B5-1	81	Pasture/Hay	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	9.67	84	812.42
B5-1	81	Pasture/Hay	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	1.55	84	130.51
B5-1	81	Pasture/Hay	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.20	84	16.80
B5-1	81	Pasture/Hay	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.11	84	8.90
B5-1	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	A	3.47	39	135.45

B5-1	82	Cultivated Crops	Digby loam, 0 to 2 percent slopes	B/D	1.35	80	107.81
B5-1	82	Cultivated Crops	Digby loam, 2 to 6 percent slopes	B/D	2.17	80	173.22
B5-1	82	Cultivated Crops	Millgrove clay loam	B/D	0.58	80	46.07
B5-1	82	Cultivated Crops	Shoals silt loam, till substratum, 0 to 1 percent slopes, occasionally flooded	B/D	3.18	80	254.23
B5-1	82	Cultivated Crops	Haskins loam, 0 to 3 percent slopes	C/D	35.79	80	2,862.90
B5-1	82	Cultivated Crops	Haskins loam, 2 to 6 percent slopes	C/D	59.98	80	4,798.25
B5-1	82	Cultivated Crops	Houcktown loam, 2 to 6 percent slopes	C/D	0.96	80	77.05
B5-1	82	Cultivated Crops	Houcktown sandy loam, 2 to 4 percent slopes	C/D	4.20	80	336.27
B5-1	82	Cultivated Crops	Houcktown silt loam, 2 to 4 percent slopes	C/D	2.48	95	235.26
B5-1	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	770.61	80	61,649.01
B5-1	82	Cultivated Crops	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	38.37	80	3,069.44
B5-1	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	191.97	80	15,357.98
B5-1	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	1037.96	80	83,037.05
B5-1	82	Cultivated Crops	Del Rey silt loam, till substratum, 0 to 3 percent slopes	D	15.04	80	1,203.11
B5-1	82	Cultivated Crops	Glynwood clay loam, ground moraine, 2 to 6 percent slopes, eroded	D	3.84	80	307.24
B5-1	82	Cultivated Crops	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	2.78	80	222.09
B5-1	82	Cultivated Crops	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	103.49	80	8,279.45
B5-1	95	Emergent Herbaceous Wetlands	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.66	98	64.47
B5-1	95	Emergent Herbaceous Wetlands	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.45	98	44.50
SUM:					2,611.07		209,001.99
COMPOSITE CN:							80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B5-2	21	Developed, Open Space	Haskins loam, 0 to 3 percent slopes	C/D	0.21	84	17.29
B5-2	21	Developed, Open Space	Haskins loam, 2 to 6 percent slopes	C/D	0.54	84	45.35
B5-2	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	7.71	84	647.26
B5-2	21	Developed, Open Space	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	0.69	84	57.65
B5-2	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	1.27	84	106.87
B5-2	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	12.73	84	1,069.06
B5-2	21	Developed, Open Space	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	2.97	84	249.11
B5-2	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.78	86	67.32
B5-2	22	Developed, Low Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.35	86	30.15
B5-2	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.47	86	40.44
B5-2	41	Deciduous Forest	Digby loam, 2 to 6 percent slopes	B/D	0.63	79	49.80
B5-2	41	Deciduous Forest	Haskins loam, 0 to 3 percent slopes	C/D	0.74	79	58.13
B5-2	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	15.87	79	1,253.93
B5-2	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	2.76	79	218.34
B5-2	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	24.23	79	1,913.83
B5-2	41	Deciduous Forest	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	1.55	79	122.77
B5-2	71	Grassland/Herbaceous	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	2.03	84	170.36
B5-2	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	1.00	84	83.71
B5-2	81	Pasture/Hay	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	9.67	84	812.42
B5-2	81	Pasture/Hay	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	1.55	84	130.18
B5-2	81	Pasture/Hay	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.20	84	16.80
B5-2	81	Pasture/Hay	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.11	84	8.90
B5-2	82	Cultivated Crops	Digby loam, 0 to 2 percent slopes	B/D	1.35	80	107.81
B5-2	82	Cultivated Crops	Digby loam, 2 to 6 percent slopes	B/D	0.35	80	28.37
B5-2	82	Cultivated Crops	Millgrove clay loam	B/D	0.58	80	46.07
B5-2	82	Cultivated Crops	Haskins loam, 0 to 3 percent slopes	C/D	15.04	80	1,203.02

B5-2	82	Cultivated Crops	Haskins loam, 2 to 6 percent slopes	C/D	17.99	80	1,438.90
B5-2	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	210.07	80	16,805.57
B5-2	82	Cultivated Crops	Saranac silty clay loam, till substratum, 0 to 1 percent slopes, frequently flooded	C/D	5.51	80	440.62
B5-2	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	72.59	80	5,807.12
B5-2	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	293.26	80	23,461.03
B5-2	82	Cultivated Crops	Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded	D	2.78	80	222.09
B5-2	82	Cultivated Crops	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	43.79	80	3,503.25
				SUM:	751.34		60,233.52
						COMPOSITE CN:	80

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B6	11	Water Body	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.51	98	148.14
B6	11	Water Body	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.39	98	37.94
B6	11	Water Body	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.10	98	10.06
B6	21	Developed, Open Space	Shawtown loam, 2 to 6 percent slopes	C	0.59	79	46.39
B6	21	Developed, Open Space	Houcktown loam, 0 to 2 percent slopes	C/D	0.01	84	1.15
B6	21	Developed, Open Space	Houcktown loam, 2 to 6 percent slopes	C/D	0.04	84	3.73
B6	21	Developed, Open Space	Houcktown sandy loam, 2 to 4 percent slopes	C/D	0.09	84	7.78
B6	21	Developed, Open Space	Houcktown silt loam, 2 to 4 percent slopes	C/D	0.32	84	26.56
B6	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	25.96	84	2,180.35
B6	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	4.14	84	347.74
B6	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	35.85	84	3,011.26
B6	21	Developed, Open Space	Glynwood loam, 2 to 6 percent slopes	D	1.56	84	130.79
B6	21	Developed, Open Space	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	6.59	84	553.54
B6	22	Developed, Low Intensity	Houcktown sandy loam, 2 to 4 percent slopes	C/D	0.43	86	36.84
B6	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	20.38	86	1,752.52
B6	22	Developed, Low Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	2.47	86	212.82
B6	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	39.96	86	3,436.88
B6	22	Developed, Low Intensity	Glynwood loam, 2 to 6 percent slopes	D	0.24	86	20.53
B6	22	Developed, Low Intensity	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	6.86	86	589.56
B6	23	Developed, Medium Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	3.07	87	266.71
B6	23	Developed, Medium Intensity	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.13	87	11.48
B6	23	Developed, Medium Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	7.62	87	663.13
B6	23	Developed, Medium Intensity	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	1.16	87	100.78
B6	24	Developed, High Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.41	95	38.88
B6	24	Developed, High Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.04	95	3.38
B6	41	Deciduous Forest	Alvada loam, 0 to 1 percent slopes	B/D	0.01	79	0.56
B6	41	Deciduous Forest	Shawtown loam, 2 to 6 percent slopes	C	0.21	73	15.42
B6	41	Deciduous Forest	Haskins loam, 0 to 3 percent slopes	C/D	0.56	79	44.39
B6	41	Deciduous Forest	Houcktown loam, 2 to 6 percent slopes	C/D	0.82	79	65.00
B6	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	62.60	79	4,945.06
B6	41	Deciduous Forest	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	14.60	79	1,153.18
B6	41	Deciduous Forest	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	62.82	79	4,962.88
B6	41	Deciduous Forest	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	2.94	79	232.46
B6	71	Grassland/Herbaceous	Houcktown sandy loam, 2 to 4 percent slopes	C/D	0.67	84	56.50
B6	71	Grassland/Herbaceous	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	2.41	84	202.82
B6	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.95	84	79.61
B6	71	Grassland/Herbaceous	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	4.06	84	341.40
B6	71	Grassland/Herbaceous	Glynwood loam, 2 to 6 percent slopes	D	0.44	84	36.90

B6	81	Pasture/Hay	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	3.28	84	275.43
B6	81	Pasture/Hay	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	1.20	84	101.02
B6	81	Pasture/Hay	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	8.48	84	712.00
B6	81	Pasture/Hay	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	0.64	84	53.74
B6	82	Cultivated Crops	Alvada loam, 0 to 1 percent slopes	B/D	5.83	80	466.61
B6	82	Cultivated Crops	Shawtown loam, 2 to 6 percent slopes	C	7.50	74	554.71
B6	82	Cultivated Crops	Haskins loam, 0 to 3 percent slopes	C/D	5.78	95	548.98
B6	82	Cultivated Crops	Houcktown loam, 0 to 2 percent slopes	C/D	0.00	80	0.20
B6	82	Cultivated Crops	Houcktown loam, 2 to 6 percent slopes	C/D	4.82	80	385.61
B6	82	Cultivated Crops	Houcktown sandy loam, 2 to 4 percent slopes	C/D	3.11	80	249.06
B6	82	Cultivated Crops	Houcktown silt loam, 2 to 4 percent slopes	C/D	1.22	80	97.75
B6	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	166.55	80	13,323.82
B6	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	65.70	80	5,255.98
B6	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	224.33	80	17,946.17
B6	82	Cultivated Crops	Glynwood clay loam, ground moraine, 2 to 6 percent slopes, eroded	D	1.59	80	127.39
B6	82	Cultivated Crops	Glynwood loam, 2 to 6 percent slopes	D	17.04	80	1,363.53
B6	82	Cultivated Crops	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	D	21.54	80	1,722.81
B6	90	Woody Wetlands	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.00	98	0.05
SUM:					851.62		68,959.98
COMPOSITE CN:							81

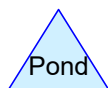
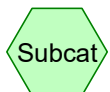
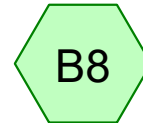
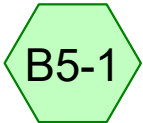
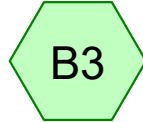
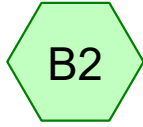
DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B7	21	Developed, Open Space	Gallman loam, 2 to 6 percent slopes	B	0.27	69	18.39
B7	21	Developed, Open Space	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.23	84	19.55
B7	21	Developed, Open Space	Houcktown loam, 2 to 6 percent slopes	C/D	0.21	84	17.45
B7	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	2.29	84	192.53
B7	21	Developed, Open Space	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	0.21	84	17.80
B7	21	Developed, Open Space	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.48	84	40.60
B7	22	Developed, Low Intensity	Houcktown loam, 2 to 6 percent slopes	C/D	0.06	86	5.38
B7	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.14	86	12.44
B7	22	Developed, Low Intensity	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.08	86	6.92
B7	82	Cultivated Crops	Gallman loam, 2 to 6 percent slopes	B	2.72	61	165.76
B7	82	Cultivated Crops	Gallman silt loam, 0 to 2 percent slopes	B	0.00	61	0.20
B7	82	Cultivated Crops	Alvada loam, 0 to 1 percent slopes	B/D	0.07	80	5.47
B7	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	7.17	80	573.73
B7	82	Cultivated Crops	Shawtown loam, 2 to 6 percent slopes	C	1.13	74	83.91
B7	82	Cultivated Crops	Houcktown loam, 2 to 6 percent slopes	C/D	4.04	80	323.14
B7	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	3.29	80	263.27
B7	82	Cultivated Crops	Blount silt loam, ground moraine, 0 to 2 percent slopes	D	1.85	80	147.93
B7	82	Cultivated Crops	Blount silt loam, ground moraine, 2 to 4 percent slopes	D	0.53	80	42.02
					24.78		1,936.49
COMPOSITE CN:							78

DRAINAGE AREA ID	LU CODE	LAND USE DESCRIPTION	SOILS	HSG	AREA (ACRES)	CN	CN*AREA
B8	11	Water Body	Blount-Jenera complex, 0 to 3 percent slopes	C/D	0.06	98	6.16
B8	11	Water Body	Houcktown loam, 2 to 6 percent slopes	C/D	0.34	98	33.15
B8	11	Water Body	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	2.24	98	220.00
B8	11	Water Body	Blount silt loam, end moraine, 0 to 2 percent slopes	D	1.54	98	151.23
B8	11	Water Body	Blount silt loam, end moraine, 2 to 4 percent slopes	D	2.32	98	227.18

B8	11	Water Body	Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded	D	0.16	98	16.06
B8	21	Developed, Open Space	Gallman loam, 2 to 6 percent slopes	B	1.18	69	81.31
B8	21	Developed, Open Space	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	4.55	84	382.55
B8	21	Developed, Open Space	Westland clay loam, 0 to 1 percent slopes	B/D	2.76	84	232.22
B8	21	Developed, Open Space	Blount-Jenera complex, 0 to 3 percent slopes	C/D	1.23	84	103.23
B8	21	Developed, Open Space	Houcktown loam, 0 to 2 percent slopes	C/D	2.05	84	171.98
B8	21	Developed, Open Space	Houcktown loam, 2 to 6 percent slopes	C/D	1.37	84	115.19
B8	21	Developed, Open Space	Houcktown silt loam, 2 to 4 percent slopes	C/D	0.65	84	54.29
B8	21	Developed, Open Space	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	54.97	84	4,617.39
B8	21	Developed, Open Space	Blount silt loam, end moraine, 0 to 2 percent slopes	D	9.13	84	766.61
B8	21	Developed, Open Space	Blount silt loam, end moraine, 2 to 4 percent slopes	D	102.92	84	8,644.90
B8	21	Developed, Open Space	Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded	D	17.09	84	1,435.59
B8	21	Developed, Open Space	Glynwood loam, 2 to 6 percent slopes	D	2.50	84	209.94
B8	21	Developed, Open Space	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	15.07	84	1,265.96
B8	22	Developed, Low Intensity	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.00	86	0.03
B8	22	Developed, Low Intensity	Westland clay loam, 0 to 1 percent slopes	B/D	0.06	86	5.04
B8	22	Developed, Low Intensity	Blount-Jenera complex, 0 to 3 percent slopes	C/D	0.89	86	76.95
B8	22	Developed, Low Intensity	Houcktown loam, 2 to 6 percent slopes	C/D	1.98	86	170.02
B8	22	Developed, Low Intensity	Houcktown silt loam, 2 to 4 percent slopes	C/D	0.57	86	48.92
B8	22	Developed, Low Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	19.80	86	1,702.41
B8	22	Developed, Low Intensity	Blount silt loam, end moraine, 0 to 2 percent slopes	D	4.83	86	414.97
B8	22	Developed, Low Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	33.72	86	2,900.21
B8	22	Developed, Low Intensity	Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded	D	9.08	86	780.92
B8	22	Developed, Low Intensity	Glynwood loam, 2 to 6 percent slopes	D	0.37	86	31.61
B8	22	Developed, Low Intensity	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	4.78	86	411.28
B8	23	Developed, Medium Intensity	Houcktown loam, 2 to 6 percent slopes	C/D	1.36	87	118.39
B8	23	Developed, Medium Intensity	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	7.22	87	628.53
B8	23	Developed, Medium Intensity	Blount silt loam, end moraine, 0 to 2 percent slopes	D	0.51	87	44.77
B8	23	Developed, Medium Intensity	Blount silt loam, end moraine, 2 to 4 percent slopes	D	7.31	87	636.06
B8	23	Developed, Medium Intensity	Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded	D	5.62	87	488.91
B8	23	Developed, Medium Intensity	Glynwood loam, 2 to 6 percent slopes	D	0.52	87	45.00
B8	23	Developed, Medium Intensity	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.32	87	27.71
B8	41	Deciduous Forest	Gallman loam, 2 to 6 percent slopes	B	0.11	60	6.53
B8	41	Deciduous Forest	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.86	79	68.08
B8	41	Deciduous Forest	Westland clay loam, 0 to 1 percent slopes	B/D	4.60	79	363.47
B8	41	Deciduous Forest	Houcktown loam, 2 to 6 percent slopes	C/D	0.29	79	22.81
B8	41	Deciduous Forest	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	11.28	79	890.94
B8	41	Deciduous Forest	Blount silt loam, end moraine, 0 to 2 percent slopes	D	2.92	79	230.33
B8	41	Deciduous Forest	Blount silt loam, end moraine, 2 to 4 percent slopes	D	21.89	79	1,729.32
B8	41	Deciduous Forest	Glynwood clay loam, end moraine, 2 to 6 percent slopes, eroded	D	0.23	79	18.39
B8	41	Deciduous Forest	Glynwood silt loam, end moraine, 2 to 6 percent slopes	D	0.06	79	5.12
B8	81	Pasture/Hay	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.22	84	18.68
B8	82	Cultivated Crops	Thackery loam, sandy substratum, 0 to 2 percent slopes	B/D	0.27	80	21.56
B8	82	Cultivated Crops	Westland clay loam, 0 to 1 percent slopes	B/D	0.11	80	8.67
B8	82	Cultivated Crops	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.00	80	0.09
B8	82	Cultivated Crops	Blount silt loam, end moraine, 2 to 4 percent slopes	D	0.01	80	1.10
B8	90	Woody Wetlands	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	1.33	98	130.76
B8	95	Emergent Herbaceous Wetlands	Pewamo silty clay loam, 0 to 1 percent slopes	C/D	0.41	98	40.50
B8	95	Emergent Herbaceous Wetlands	Blount silt loam, end moraine, 0 to 2 percent slopes	D	0.03	98	3.08

SUM:			365.71		30,826.10
COMPOSITE CN:					84

APPENDIX M
OFFSITE HYDROCAD REPORT



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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
13,028.230	80	(B1, B2, B3, B4, B5-1, B5-2)
851.620	81	(B6)
24.780	78	(B7)
365.710	84	(B8)
14,270.340	80	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
14,270.340	Other	B1, B2, B3, B4, B5-1, B5-2, B6, B7, B8
14,270.340		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	14,270.340	14,270.340		B1, B2, B3, B4, B5-1, B5-2, B6, B7, B8
0.000	0.000	0.000	0.000	14,270.340	14,270.340	TOTAL AREA	

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Pipe Listing (selected 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	B1	0.00	0.00	49.0	0.0046	0.011	24.0	0.0	0.0
2	B1	0.00	0.00	45.0	0.0235	0.011	24.0	0.0	0.0
3	B1	0.00	0.00	66.0	0.0040	0.011	24.0	0.0	0.0
4	B1	0.00	0.00	66.0	0.0025	0.011	24.0	0.0	0.0
5	B2	0.00	0.00	46.0	0.0046	0.011	24.0	0.0	0.0
6	B2	0.00	0.00	58.0	0.0007	0.011	24.0	0.0	0.0
7	B2	0.00	0.00	64.0	0.0041	0.011	24.0	0.0	0.0
8	B2	0.00	0.00	55.0	0.0088	0.011	24.0	0.0	0.0
9	B2	0.00	0.00	32.0	0.0126	0.011	24.0	0.0	0.0
10	B2	0.00	0.00	38.0	0.0228	0.011	24.0	0.0	0.0
11	B2	0.00	0.00	68.0	0.0212	0.011	24.0	0.0	0.0
12	B3	0.00	0.00	51.0	0.0021	0.011	24.0	0.0	0.0
13	B3	0.00	0.00	46.0	0.0001	0.011	24.0	0.0	0.0
14	B4	0.00	0.00	51.0	0.0013	0.011	24.0	0.0	0.0
15	B4	0.00	0.00	92.0	0.0044	0.011	24.0	0.0	0.0
16	B4	0.00	0.00	34.0	0.0365	0.011	24.0	0.0	0.0
17	B4	0.00	0.00	33.0	0.0069	0.011	24.0	0.0	0.0
18	B4	0.00	0.00	32.0	0.0049	0.011	24.0	0.0	0.0
19	B4	0.00	0.00	31.0	0.0229	0.011	24.0	0.0	0.0
20	B4	0.00	0.00	48.0	0.0276	0.011	24.0	0.0	0.0
21	B4	0.00	0.00	28.0	0.0095	0.011	24.0	0.0	0.0
22	B4	0.00	0.00	55.0	0.0029	0.011	24.0	0.0	0.0
23	B4	0.00	0.00	46.0	0.0055	0.011	24.0	0.0	0.0
24	B4	0.00	0.00	90.0	0.0001	0.011	24.0	0.0	0.0
25	B5-1	0.00	0.00	45.0	0.0042	0.011	24.0	0.0	0.0
26	B5-1	0.00	0.00	51.0	0.0056	0.011	24.0	0.0	0.0
27	B5-2	0.00	0.00	53.0	0.0134	0.011	24.0	0.0	0.0
28	B5-2	0.00	0.00	68.0	0.0051	0.011	24.0	0.0	0.0
29	B6	0.00	0.00	63.0	0.0033	0.011	24.0	0.0	0.0
30	B6	0.00	0.00	61.0	0.0160	0.011	24.0	0.0	0.0
31	B6	0.00	0.00	52.0	0.0001	0.011	24.0	0.0	0.0
32	B6	0.00	0.00	134.0	0.0366	0.011	24.0	0.0	0.0
33	B6	0.00	0.00	60.0	0.0075	0.011	24.0	0.0	0.0
34	B6	0.00	0.00	59.0	0.0198	0.011	24.0	0.0	0.0
35	B6	0.00	0.00	56.0	0.0172	0.011	24.0	0.0	0.0
36	B6	0.00	0.00	47.0	0.0131	0.011	24.0	0.0	0.0
37	B6	0.00	0.00	55.0	0.0266	0.011	24.0	0.0	0.0
38	B6	0.00	0.00	122.0	0.0010	0.011	24.0	0.0	0.0
39	B6	0.00	0.00	108.0	0.0001	0.011	24.0	0.0	0.0
40	B7	0.00	0.00	39.0	0.0072	0.011	24.0	0.0	0.0
41	B8	0.00	0.00	50.0	0.0165	0.011	24.0	0.0	0.0

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Pipe Listing (selected nodes) (continued)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
42	B8	0.00	0.00	61.0	0.0474	0.011	24.0	0.0	0.0

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentB1: Runoff Area=511.890 ac 0.00% Impervious Runoff Depth=3.28"
Flow Length=8,622' Tc=176.3 min CN=80 Runoff=395.83 cfs 139.919 af

SubcatchmentB2: Runoff Area=1,207.690 ac 0.00% Impervious Runoff Depth=3.28"
Flow Length=21,499' Tc=448.9 min CN=80 Runoff=441.53 cfs 330.107 af

SubcatchmentB3: Runoff Area=275.800 ac 0.00% Impervious Runoff Depth=3.28"
Flow Length=8,934' Tc=244.7 min CN=80 Runoff=164.44 cfs 75.387 af

SubcatchmentB4: Runoff Area=7,670.440 ac 0.00% Impervious Runoff Depth=3.28"
Flow Length=44,006' Tc=301.8 min CN=80 Runoff=3,889.29 cfs 2,096.621 af

SubcatchmentB5-1: Runoff Area=2,611.070 ac 0.00% Impervious Runoff Depth=3.28"
Flow Length=15,649' Tc=445.6 min CN=80 Runoff=960.41 cfs 713.704 af

SubcatchmentB5-2: Runoff Area=751.340 ac 0.00% Impervious Runoff Depth=3.28"
Flow Length=13,571' Tc=169.5 min CN=80 Runoff=600.77 cfs 205.370 af

SubcatchmentB6: Runoff Area=851.620 ac 0.00% Impervious Runoff Depth=3.38"
Flow Length=19,746' Tc=210.1 min CN=81 Runoff=594.60 cfs 239.675 af

SubcatchmentB7: Runoff Area=24.780 ac 0.00% Impervious Runoff Depth=3.09"
Flow Length=2,151' Tc=69.2 min CN=78 Runoff=36.74 cfs 6.379 af

SubcatchmentB8: Runoff Area=365.710 ac 0.00% Impervious Runoff Depth=3.68"
Flow Length=6,223' Tc=59.4 min CN=84 Runoff=723.90 cfs 112.007 af

Total Runoff Area = 14,270.340 ac Runoff Volume = 3,919.169 af Average Runoff Depth = 3.30"
100.00% Pervious = 14,270.340 ac 0.00% Impervious = 0.000 ac

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B1:

Runoff = 395.83 cfs @ 14.25 hrs, Volume= 139.919 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 511.890	80	
511.890		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	1,830	0.0020	5.82	349.14	Parabolic Channel, W=20.00' D=4.50' Area=60.0 sf Perim=22.4' n= 0.022 Earth, clean & straight
20.4	100	0.0055	0.08		Sheet Flow, Cultivated Crops Cultivated: Residue>20% n= 0.170 P2= 2.54"
45.2	1,966	0.0065	0.73		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
5.3	326	0.0012	1.03	0.68	Parabolic Channel, W=2.00' D=0.50' Area=0.7 sf Perim=2.3' n= 0.022
0.1	49	0.0046	5.77	18.13	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
92.4	1,996	0.0016	0.36		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
0.1	45	0.0235	13.05	40.98	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011 Concrete pipe, straight & clean
3.4	1,532	0.0033	7.47	448.48	Parabolic Channel, Ditch W=20.00' D=4.50' Area=60.0 sf Perim=22.4' n= 0.022
0.2	66	0.0040	5.38	16.91	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.3	66	0.0025	4.26	13.37	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
3.7	646	0.0005	2.91	174.57	Parabolic Channel, Ditch W=20.00' D=4.50' Area=60.0 sf Perim=22.4' n= 0.022
176.3	8,622	Total			

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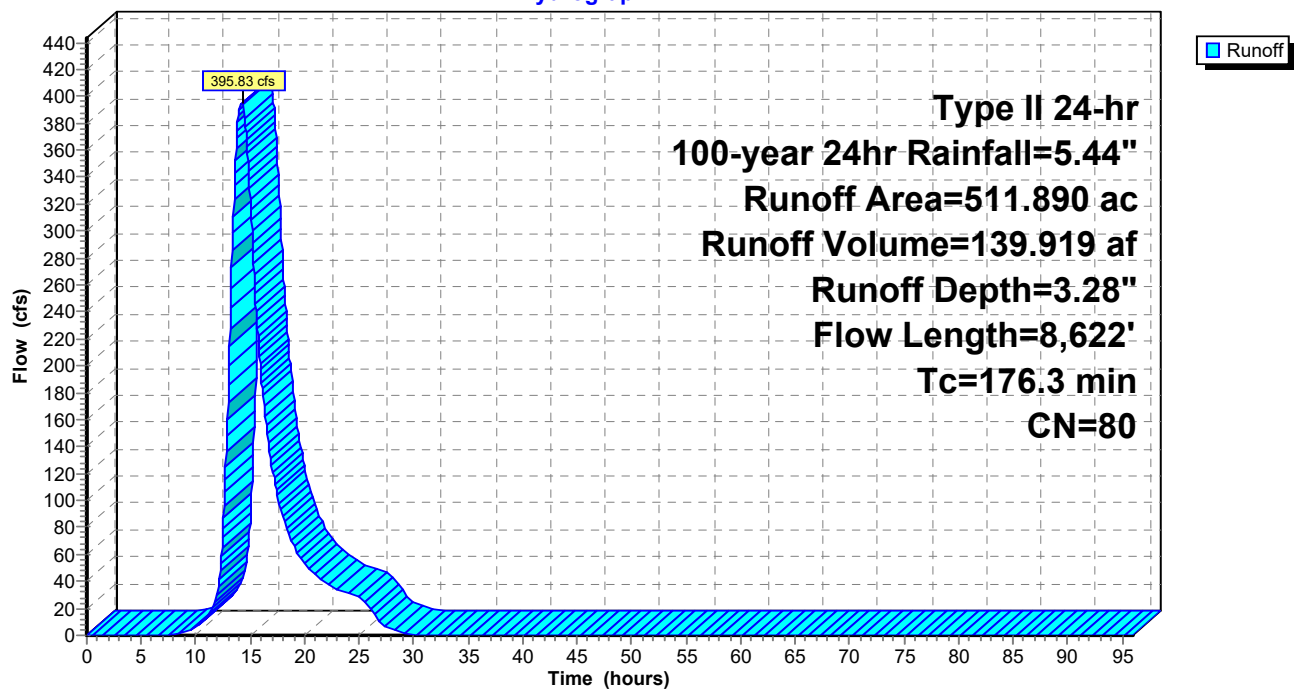
Type II 24-hr 100-year 24hr Rainfall=5.44"

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Subcatchment B1:

Hydrograph



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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B2:

Runoff = 441.53 cfs @ 17.47 hrs, Volume= 330.107 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 1,207.690	80	
1,207.690		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	2,253	0.0014	3.87	154.64	Parabolic Channel, Ditch W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
12.7	100	0.0178	0.13		Sheet Flow, Cultivated Crops Cultivated: Residue>20% n= 0.170 P2= 2.54"
35.1	1,420	0.0056	0.67		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
0.1	46	0.0046	5.77	18.13	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
81.5	2,329	0.0028	0.48		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
0.4	58	0.0007	2.25	7.07	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
55.4	1,554	0.0027	0.47		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
0.2	64	0.0041	5.45	17.12	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
205.5	5,086	0.0021	0.41		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
0.1	55	0.0088	7.98	25.08	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
21.0	2,513	0.0015	1.99	39.85	Parabolic Channel, Cultivated Crops W=30.00' D=1.00' Area=20.0 sf Perim=30.1' n= 0.022 Earth, clean & straight
0.1	32	0.0126	9.55	30.01	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
8.3	2,830	0.0030	5.66	226.37	Parabolic Channel, Ditch W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
9.1	1,866	0.0011	3.43	137.07	Parabolic Channel, Ditch W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.0	38	0.0228	12.85	40.37	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
9.6	1,187	0.0004	2.07	82.66	Parabolic Channel, Ditch

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022

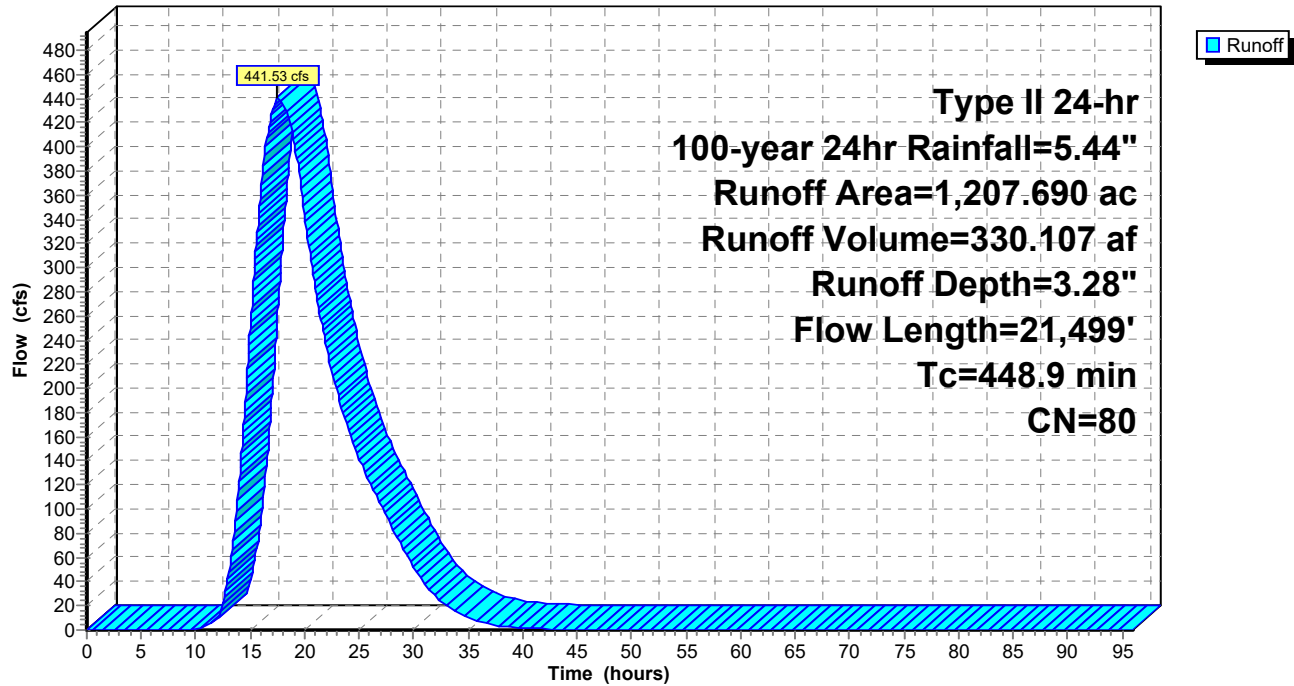
0.1 68 0.0212 12.39 38.93 **Pipe Channel, Culvert**

24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
n= 0.011

448.9 21,499 Total

Subcatchment B2:

Hydrograph



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Summary for Subcatchment B3:

Runoff = 164.44 cfs @ 14.96 hrs, Volume= 75.387 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 275.800	80	
275.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
172.9	4,941	0.0028	0.48		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
17.9	100	0.0076	0.09		Sheet Flow, Cultivated Crops Cultivated: Residue>20% n= 0.170 P2= 2.54"
43.7	1,844	0.0061	0.70		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
0.2	51	0.0021	3.90	12.25	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
2.9	1,092	0.0038	6.37	254.77	Parabolic Channel, Ditch W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
6.2	860	0.0005	2.31	92.42	Parabolic Channel, Ditch W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
0.9	46	0.0001	0.85	2.67	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
244.7	8,934	Total			

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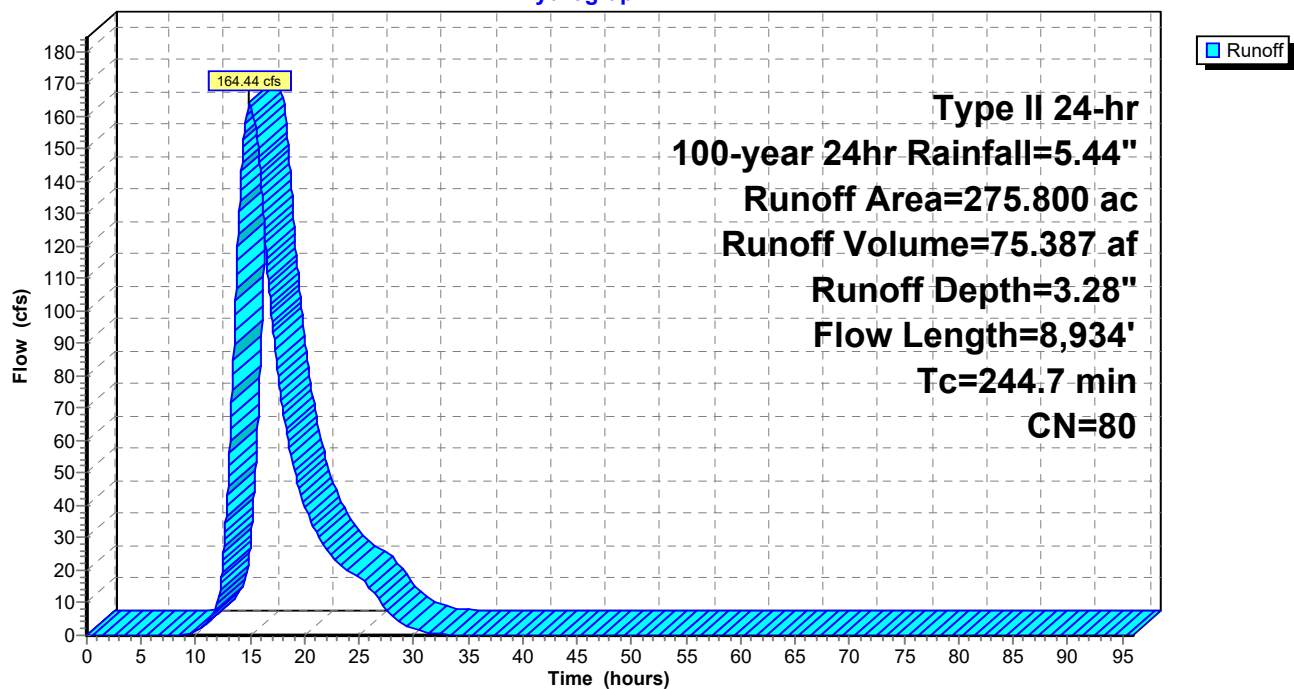
Type II 24-hr 100-year 24hr Rainfall=5.44"

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Subcatchment B3:

Hydrograph



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Summary for Subcatchment B4:

Runoff = 3,889.29 cfs @ 15.76 hrs, Volume= 2,096.621 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 7,670.440	80	
7,670.440		100.00% Pervious Area

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
49.2	14,748	0.0012	4.99	499.16	Parabolic Channel, Ditch W=30.00' D=5.00' Area=100.0 sf Perim=32.1' n= 0.022
18.6	100	0.0054	0.09		Sheet Flow, Developed, Open Space Grass: Short n= 0.150 P2= 2.54"
52.1	2,180	0.0060	0.70		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
0.3	51	0.0013	3.07	9.64	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
33.8	1,359	0.0045	0.67		Shallow Concentrated Flow, Developed, Low Intensity Nearly Bare & Untilled Kv= 10.0 fps
1.5	327	0.0050	3.63	48.39	Parabolic Channel, Ditch W=20.00' D=1.00' Area=13.3 sf Perim=20.1' n= 0.022
9.0	1,343	0.0059	2.48	8.28	Parabolic Channel, Ditch W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
0.3	92	0.0044	5.65	17.73	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
5.1	563	0.0032	1.83	6.10	Parabolic Channel, Ditch W=10.00' D=0.50' Area=3.3 sf Perim=10.1' n= 0.022
32.6	1,422	0.0002	0.73	14.55	Parabolic Channel, Ditch W=30.00' D=1.00' Area=20.0 sf Perim=30.1' n= 0.022
20.3	2,866	0.0021	2.36	47.15	Parabolic Channel, Ditch W=30.00' D=1.00' Area=20.0 sf Perim=30.1' n= 0.022
2.0	548	0.0077	4.51	90.29	Parabolic Channel, Ditch W=30.00' D=1.00' Area=20.0 sf Perim=30.1' n= 0.022
0.1	94	0.0087	13.44	1,344.04	Parabolic Channel, Ditch W=30.00' D=5.00' Area=100.0 sf Perim=32.1' n= 0.022
4.3	1,493	0.0016	5.76	576.38	Parabolic Channel, Ditch W=30.00' D=5.00' Area=100.0 sf Perim=32.1' n= 0.022
0.1	86	0.0051	10.29	1,029.05	Parabolic Channel, Ditch W=30.00' D=5.00' Area=100.0 sf Perim=32.1' n= 0.022
10.7	3,593	0.0015	5.58	558.08	Parabolic Channel, Ditch W=30.00' D=5.00' Area=100.0 sf Perim=32.1' n= 0.022
42.6	11,658	0.0010	4.56	455.67	Parabolic Channel, Ditch W=30.00' D=5.00' Area=100.0 sf Perim=32.1' n= 0.022
0.0	34	0.0365	16.26	51.08	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.1	33	0.0069	7.07	22.21	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.1	32	0.0049	5.96	18.71	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.0	31	0.0229	12.88	40.46	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.1	48	0.0276	14.14	44.42	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'

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Type II 24-hr 100-year 24hr Rainfall=5.44"

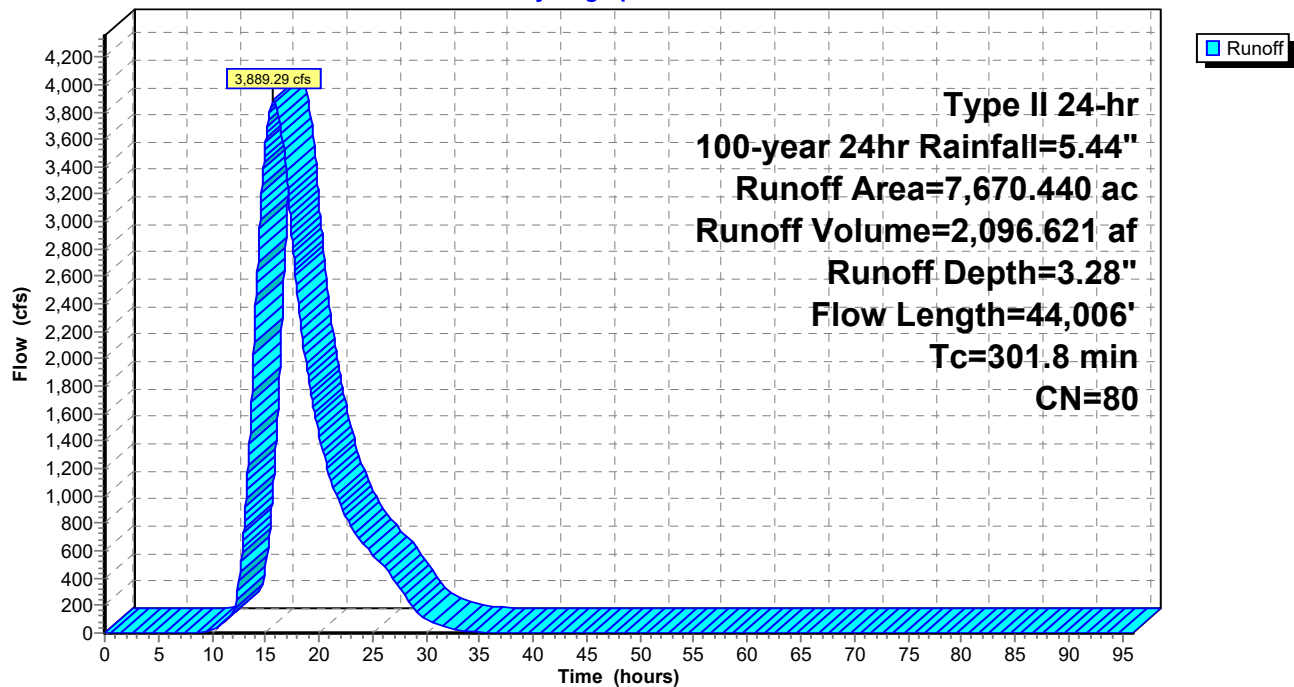
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n= 0.011

0.1	28	0.0095	8.29	26.06	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.2	55	0.0029	4.58	14.40	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.1	46	0.0055	6.31	19.83	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
16.7	1,086	0.0117	1.08		Shallow Concentrated Flow, Developed, Low Intensity Nearly Bare & Untilled Kv= 10.0 fps
1.8	90	0.0001	0.85	2.67	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011

301.8 44,006 Total

Subcatchment B4:**Hydrograph**

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B5-1:

Runoff = 960.41 cfs @ 17.80 hrs, Volume= 713.704 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 2,611.070	80	
2,611.070		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0198	0.14		Sheet Flow, Cultivated Crops Cultivated: Residue>20% n= 0.170 P2= 2.54"
12.3	3,314	0.0019	4.50	180.15	Parabolic Channel, Ditch W=20.00' D=3.00' Area=40.0 sf Perim=21.1' n= 0.022
330.6	9,779	0.0030	0.49		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
52.2	1,292	0.0021	0.41		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
0.1	45	0.0042	5.52	17.33	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
38.1	1,068	0.0027	0.47		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
0.1	51	0.0056	6.37	20.01	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
445.6	15,649	Total			

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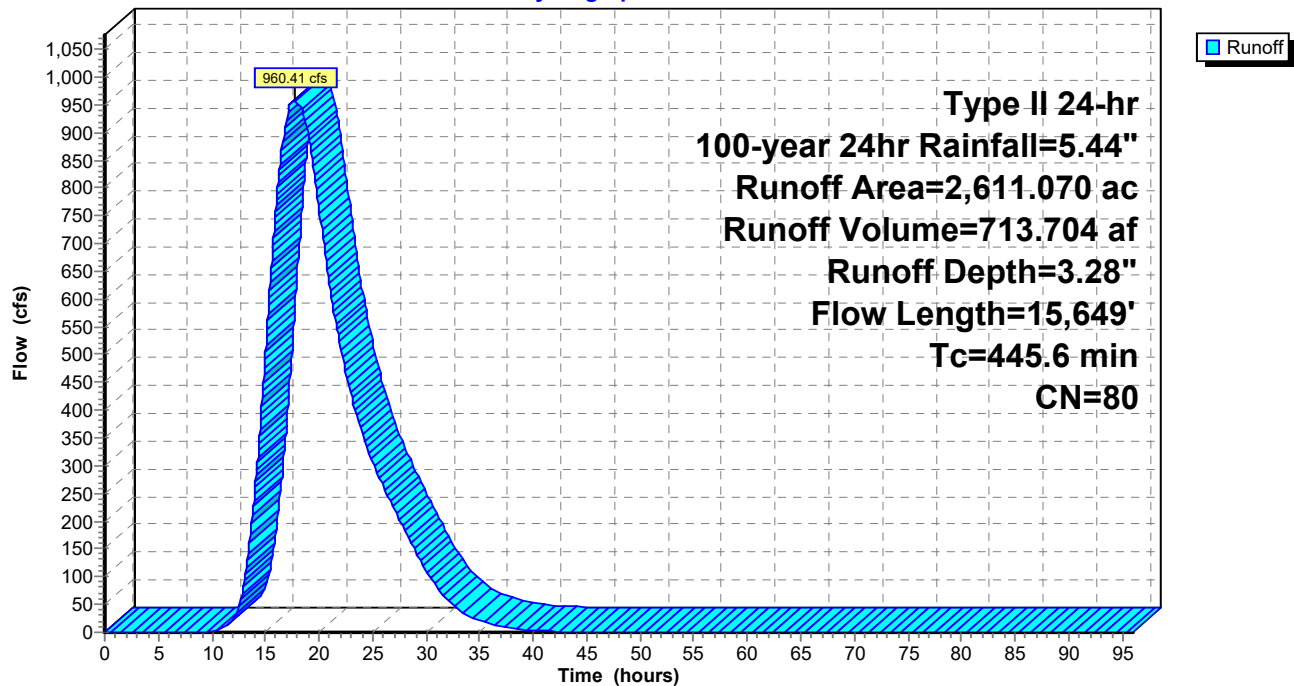
Type II 24-hr 100-year 24hr Rainfall=5.44"

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Subcatchment B5-1:

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B5-2:

Runoff = 600.77 cfs @ 14.10 hrs, Volume= 205.370 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description			
* 751.340	80				
751.340		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	2,950	0.0010	4.35	289.86	Parabolic Channel, Ditch W=20.00' D=5.00' Area=66.7 sf Perim=23.0' n= 0.022
0.1	53	0.0134	9.85	30.95	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
91.7	3,569	0.0052	0.65		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
28.0	2,888	0.0052	1.72	17.16	Parabolic Channel, Grass/Pasture W=30.00' D=0.50' Area=10.0 sf Perim=30.0' n= 0.030 Earth, grassed & winding
7.7	3,943	0.0039	8.59	572.42	Parabolic Channel, Ditch W=20.00' D=5.00' Area=66.7 sf Perim=23.0' n= 0.022
30.5	100	0.0020	0.05		Sheet Flow, Cultivated Crops Cultivated: Residue>20% n= 0.170 P2= 2.54"
0.2	68	0.0051	6.08	19.09	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
169.5	13,571	Total			

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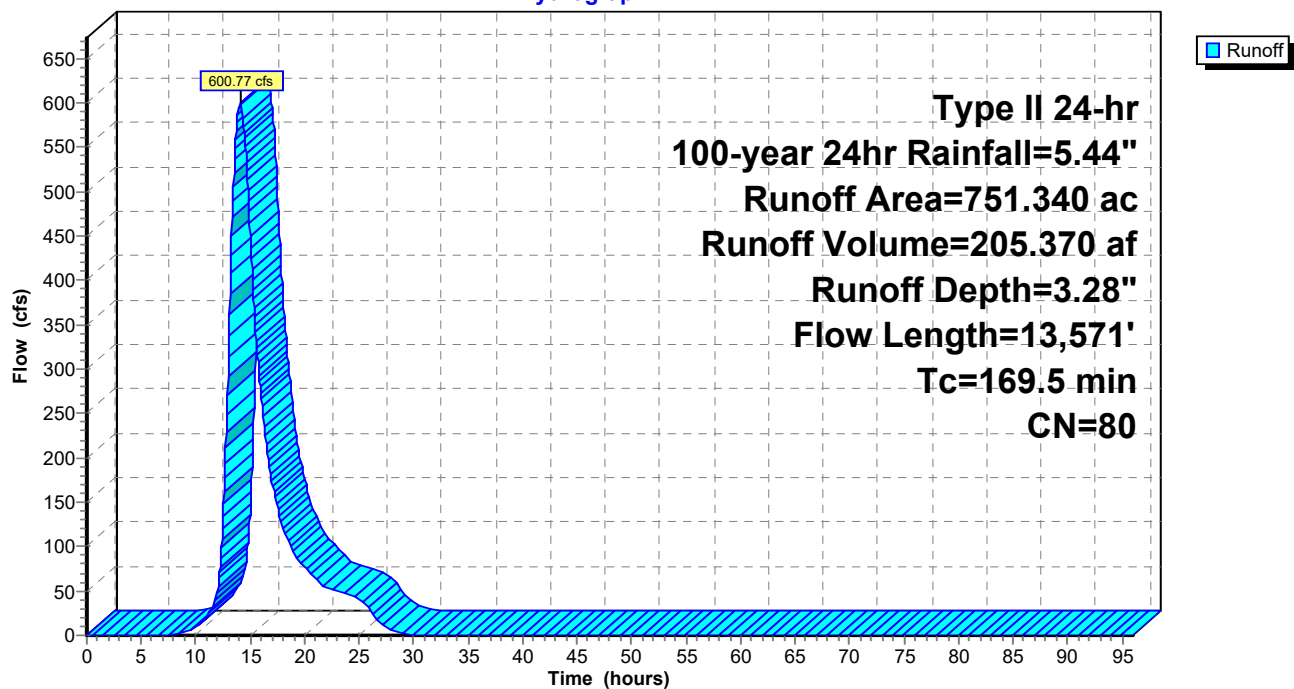
Type II 24-hr 100-year 24hr Rainfall=5.44"

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Subcatchment B5-2:

Hydrograph



Birch_Offsite*Type II 24-hr 100-year 24hr Rainfall=5.44"*

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Summary for Subcatchment B6:

Runoff = 594.60 cfs @ 14.69 hrs, Volume= 239.675 af, Depth= 3.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Type II 24-hr 100-year 24hr Rainfall=5.44"

	Area (ac)	CN	Description
*	851.620	81	
	851.620		100.00% Pervious Area

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.5	5,196	0.0019	5.99	399.54	Parabolic Channel, Ditch W=20.00' D=5.00' Area=66.7 sf Perim=23.0' n= 0.022
12.0	100	0.0205	0.14		Sheet Flow, Cultivated Crops Cultivated: Residue>20% n= 0.170 P2= 2.54"
58.2	2,667	0.0072	0.76		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
3.1	313	0.0033	1.70	1.13	Parabolic Channel, Ditch W=2.00' D=0.50' Area=0.7 sf Perim=2.3' n= 0.022
0.2	63	0.0033	4.89	15.36	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
37.0	1,414	0.0050	0.64		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
0.1	61	0.0160	10.76	33.82	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.3	145	0.0064	8.37	418.58	Parabolic Channel, Ditch W=25.00' D=3.00' Area=50.0 sf Perim=25.9' n= 0.022
9.1	296	0.0013	0.54		Shallow Concentrated Flow, Water Grassed Waterway Kv= 15.0 fps
10.0	271	0.0009	0.45		Shallow Concentrated Flow, Water Grassed Waterway Kv= 15.0 fps
7.2	2,220	0.0014	5.14	342.96	Parabolic Channel, Ditch W=20.00' D=5.00' Area=66.7 sf Perim=23.0' n= 0.022
0.5	252	0.0045	9.22	614.88	Parabolic Channel, Ditch W=20.00' D=5.00' Area=66.7 sf Perim=23.0' n= 0.022
1.0	52	0.0001	0.85	2.67	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
0.1	134	0.0366	16.28	51.15	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
24.8	631	0.0008	0.42		Shallow Concentrated Flow, Water Grassed Waterway Kv= 15.0 fps
0.1	60	0.0075	7.37	23.15	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
1.7	586	0.0018	5.83	388.88	Parabolic Channel, Ditch W=20.00' D=5.00' Area=66.7 sf Perim=23.0' n= 0.022
0.1	59	0.0198	11.97	37.62	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
3.4	1,367	0.0024	6.74	449.04	Parabolic Channel, Ditch W=20.00' D=5.00' Area=66.7 sf Perim=23.0' n= 0.022
0.1	56	0.0172	11.16	35.06	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
8.2	3,010	0.0020	6.15	409.92	Parabolic Channel, Ditch W=20.00' D=5.00' Area=66.7 sf Perim=23.0' n= 0.022
0.1	47	0.0131	9.74	30.60	Pipe Channel, Culvert

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Type II 24-hr 100-year 24hr Rainfall=5.44"

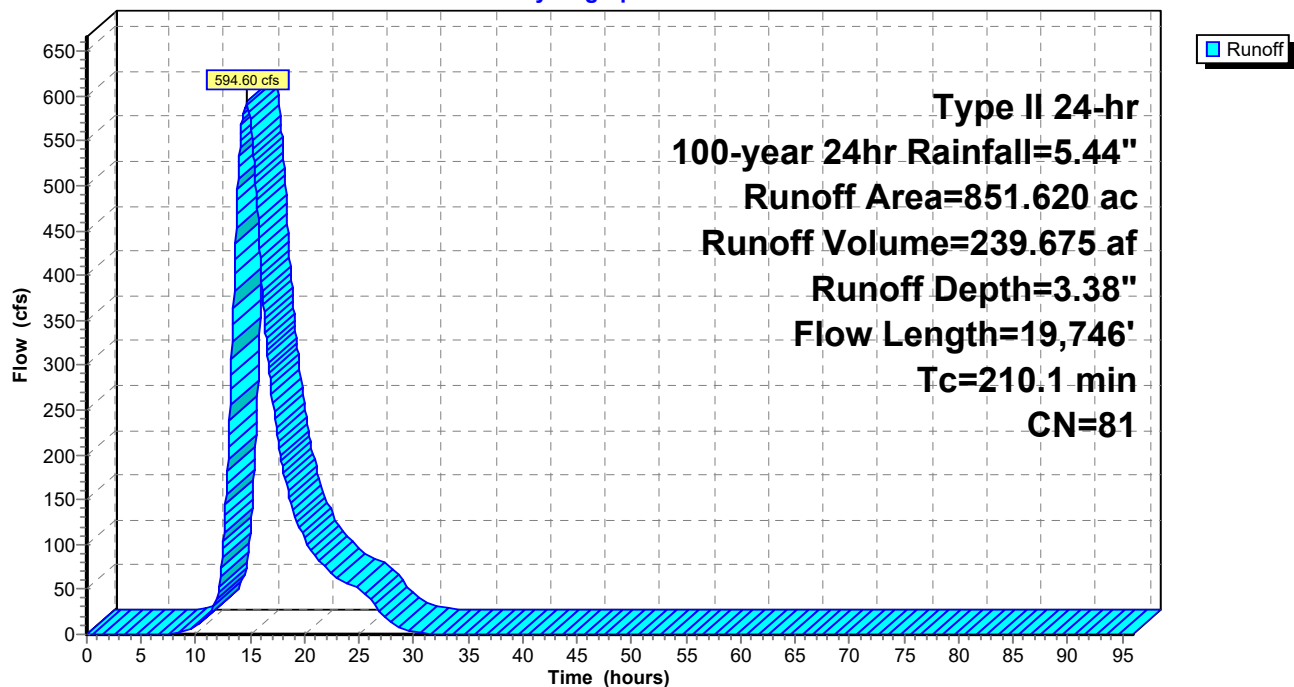
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24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'

15.3	461	0.0101	0.50	n= 0.011	Shallow Concentrated Flow, Deciduous Forest
					Woodland Kv= 5.0 fps
0.1	55	0.0266	13.88	43.60	Pipe Channel, Culvert
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.011
0.8	122	0.0010	2.69	8.45	Pipe Channel, Culvert
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.011
2.1	108	0.0001	0.85	2.67	Pipe Channel, Culvert
					24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50'
					n= 0.011

210.1 19,746 Total

Subcatchment B6:**Hydrograph**

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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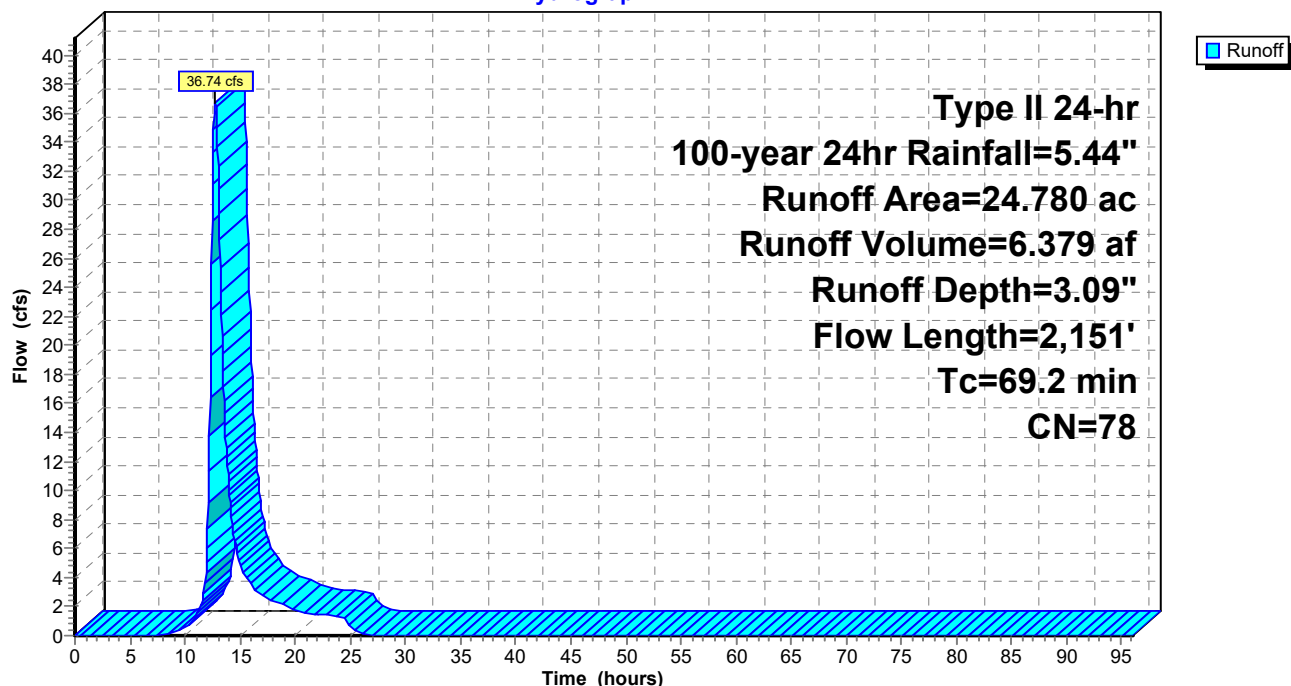
Summary for Subcatchment B7:

Runoff = 36.74 cfs @ 12.73 hrs, Volume= 6.379 af, Depth= 3.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

Area (ac)	CN	Description
* 24.780	78	
24.780		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.8	100	0.0067	0.09		Sheet Flow, Cultivated Crops Cultivated: Residue>20% n= 0.170 P2= 2.54"
18.9	815	0.0064	0.72		Shallow Concentrated Flow, Cultivated Crops Cultivated Straight Rows Kv= 9.0 fps
21.1	405	0.0001	0.32	0.53	Parabolic Channel, Ditch W=5.00' D=0.50' Area=1.7 sf Perim=5.1' n= 0.022
0.1	39	0.0072	7.22	22.69	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
10.3	792	0.0016	1.28	2.13	Parabolic Channel, Ditch W=5.00' D=0.50' Area=1.7 sf Perim=5.1' n= 0.022
69.2	2,151	Total			

Subcatchment B7:**Hydrograph**

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Type II 24-hr 100-year 24hr Rainfall=5.44"

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Summary for Subcatchment B8:

Runoff = 723.90 cfs @ 12.60 hrs, Volume= 112.007 af, Depth= 3.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year 24hr Rainfall=5.44"

	Area (ac)	CN	Description			
*	365.710	84				
	365.710		100.00% Pervious Area			
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	18.6	2,734	0.0003	2.45	204.38	Parabolic Channel, Ditch W=25.00' D=5.00' Area=83.3 sf Perim=27.5' n= 0.022
	0.1	50	0.0165	10.93	34.34	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
	10.0	518	0.0075	0.87		Shallow Concentrated Flow, Developed, Open Space Nearly Bare & Untilled Kv= 10.0 fps
	4.4	876	0.0041	3.29	54.85	Parabolic Channel, Ditch W=25.00' D=1.00' Area=16.7 sf Perim=25.1' n= 0.022
	0.1	61	0.0474	18.53	58.21	Pipe Channel, Culvert 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.011
	9.4	100	0.0294	0.18		Sheet Flow, Developed, Low Intensity Grass: Short n= 0.150 P2= 2.54"
	12.8	530	0.0097	0.69		Shallow Concentrated Flow, Developed, Low Intensity Short Grass Pasture Kv= 7.0 fps
	4.0	1,354	0.0133	5.58	18.62	Parabolic Channel, Ditch W=5.00' D=1.00' Area=3.3 sf Perim=5.5' n= 0.022
	59.4	6,223	Total			

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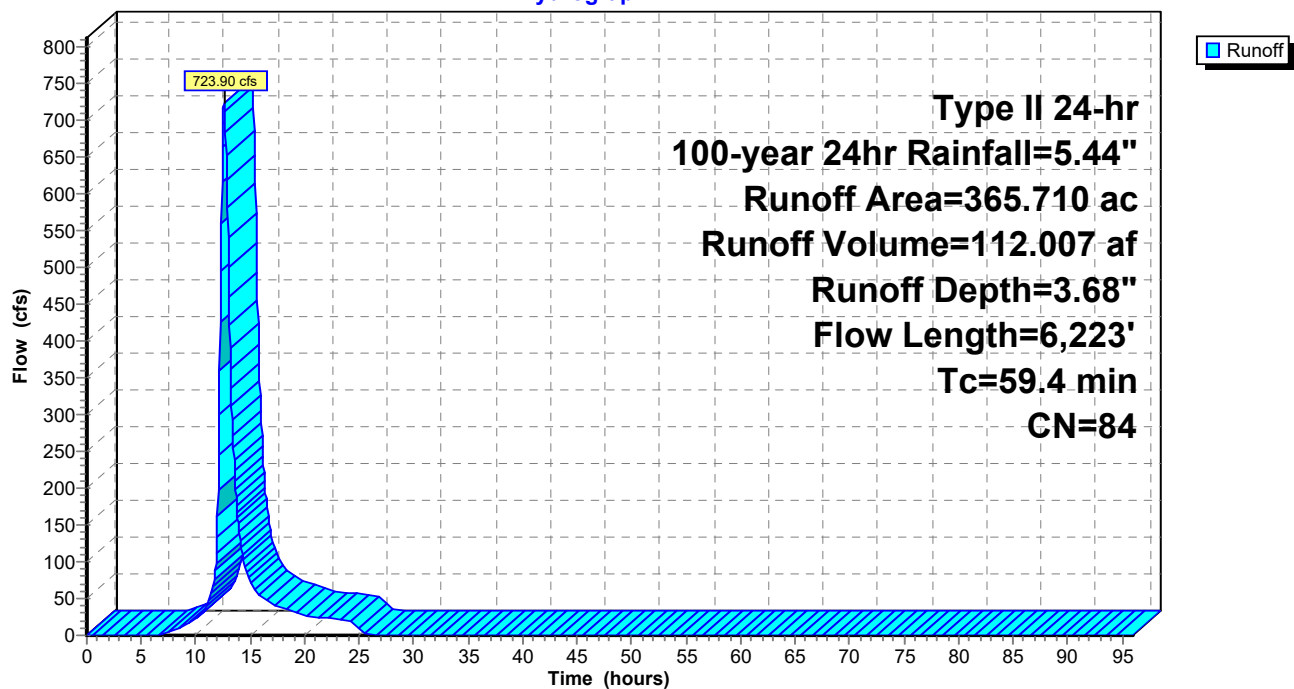
Type II 24-hr 100-year 24hr Rainfall=5.44"

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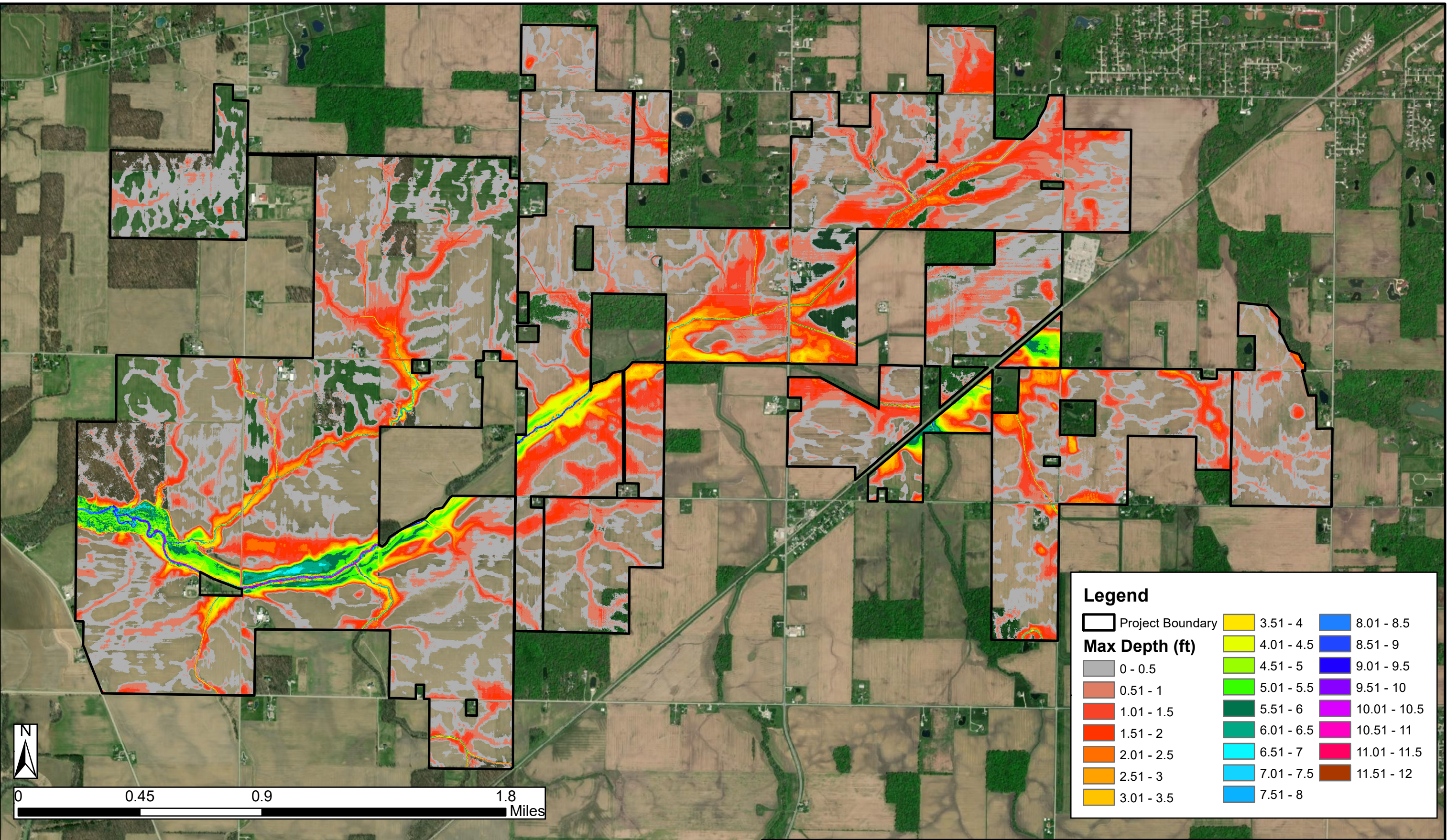
Subcatchment B8:

Hydrograph



APPENDIX N
PRE-DEVELOPMENT FLOOD MAPS

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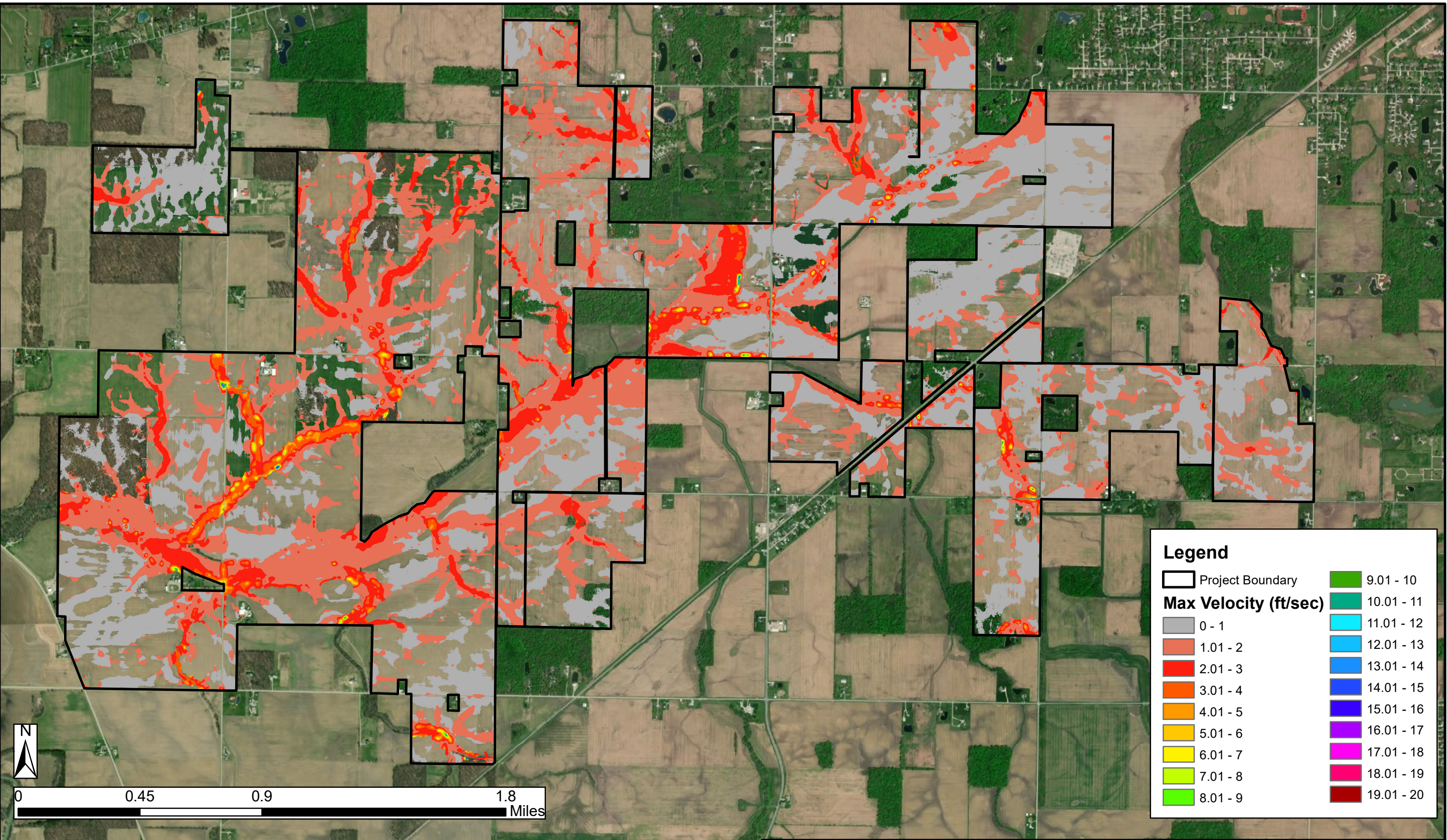
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PROJECT NO.	20212135.001A
DRAWN:	12/14/2020
DRAWN BY:	KC
CHECKED BY:	BB
FILE NAME:	AppN_depth100

Pre-Development Max 100-year, 24-hour Flood Depth Map
Birch Solar Farm Lightsource BP Allen & Auglaize County, Ohio

APPENDIX
N

Document Path: \\argzssr001\GIS_Projects\Staging\KCaracappa\Birch\GIS\Report_Figures\AppN_velocity100.mxd; Plotted: 12/14/2020, 2:15:14 PM, KCaracappa



Legend

Project Boundary

0 - 1

1.01 - 2

2.01 - 3

3.01 - 4

4.01 - 5

5.01 - 6

6.01 - 7

7.01 - 8

8.01 - 9

9.01 - 10

10.01 - 11

11.01 - 12

12.01 - 13

13.01 - 14

14.01 - 15

15.01 - 16

16.01 - 17

17.01 - 18

18.01 - 19

19.01 - 20

Max Velocity (ft/sec)

0 - 1

1.01 - 2

2.01 - 3

3.01 - 4

4.01 - 5

5.01 - 6

6.01 - 7

7.01 - 8

8.01 - 9

9.01 - 10

10.01 - 11

11.01 - 12

12.01 - 13

13.01 - 14

14.01 - 15

15.01 - 16

16.01 - 17


17.01 - 18

18.01 - 19

19.01 - 20

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PROJECT NO. 20212135.001A

DRAWN: 12/14/2020

DRAWN BY: KC

CHECKED BY: BB

FILE NAME: AppN_velocity100

**Pre-Development
Max 100-year, 24-hour
Flood Velocity Map**

Birch Solar Farm
Lightsource BP
Allen & Auglaize County, Ohio

APPENDIX

N

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

6/7/2021 11:24:49 AM

in

Case No(s). 20-1605-EL-BGN

Summary: Response to Seventh Data Request from Staff of the Ohio Power Siting Board electronically filed by Christine M.T. Pirik on behalf of Birch Solar 1, LLC