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REPORT

June 2023

VCP Montville LF, LLC

Town of Montville Landfill
Solar PV Development

669 Oakdale Road (CT RT 163)
Montville, CT 06353

Stormwater Report

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STORMWATER REPORT

Applicant/Project Name: VCF Montville LF, LLC
Town of Montville Landfill Solar PV Development

Project Location: 669 Oakdale Road (CT RT 163), Montville, CT 06353

Application Prepared by:
Firm: Weston & Sampson Engineers, Inc.
Registered PE: Rob Bukowski, P.E.

Introduction

Weston & Sampson Engineers, Inc. (Weston & Sampson) has prepared this stormwater report on behalf of VCP Montville LF, LLC (Verogy) to develop a ground mounted solar photovoltaic (PV) array at the closed landfill, located at 669 Oakdale Road (CT RT 163) in Montville, Connecticut.

The existing Town of Montville Landfill covers an area of approximately 8-acres within a property that is approximately 25.5 acres. The site is currently used as a transfer station and is bounded by Oakdale Road (CT RT 163) to the south, the Fox Family Cemetery to the west, Fox Brook and Oxoboxo Brook to the north, and Wheeler Pond to the east.

The capped landfill slopes to all sides at an approximate 30% slope with an un-maintained meadow/brush ground cover. The top of the existing landfill is currently being used as sand/gravel stockpile storage. The landfill is in the southwest section of the property and the transfer station is in the southeast section of the property. The southern entrance and transfer station areas are covered by pavement and broken bituminous asphalt. There is an existing unpaved access road leading from the southern entrance, traversing the landfill cap counterclockwise, which culminates atop the landfill cap.

Wetland delineations performed determined three existing wetlands are onsite. The first is a bordering vegetated wetland north of the landfill and associated with Fox Brook. The second is an isolated vegetated wetland to the southwest of the landfill associated with a low point past the toe of the slope of the landfill and crosses the property line. The third is a bordering vegetated wetland in the southeast corner of the site associated with a natural drainage path draining easterly towards Wheeler Pond.

The proposed project will have minimum impact within the 50-foot upland review area adjacent to on-Site wetlands, with only two small areas of the proposed project within the outermost edges of the upland review area. Stabilization and maintenance of the existing access road, if necessary, will occur within approximately 386 square feet of the upland review area on the western side of the site. Subsurface electrical conduit will run from the eastern side of the access road to above-ground utility poles. There is an area of approximately 531 square feet within the upland review area where the proposed trench will pass through. This disturbance will be temporary as, once the conduit is installed, the area will be stabilized and re-vegetated.

No part of the project area is within a Federal Emergency Management Agency National Flood Hazard Zone. A Zone-A Flood Hazard Zone is associated with Fox Brook to the north of the project area.

Proposed Project

The proposed project includes deploying ground-mounted solar on the existing landfill cap. The total capacity of the proposed ground mounted solar installation is approximately 776 kilowatt (kW) direct current (DC) (600 kW alternating current (AC)).

The on-cap solar PV array is to be supported on precast concrete ballasted foundations and will have a low bearing pressure that is designed to maintain the integrity of the existing engineered landfill cap. Each block will be placed on dense-graded crushed stone to level the blocks to meet the foundation manufacturer's requirements. Panel racking will be installed above the precast concrete ballasted foundations and solar PV

modules will be attached to the racking. The series of PV panels will be connected using above ground cables, cable trays, and conduits that bring the wiring to a central equipment pad located atop the landfill cap directly east of the solar PV array.

A chain link fence is proposed atop the landfill cap to provide security and separation of any unqualified personnel from any electrical conductors, as required by the National Electric Code. The total area of the array within the fence limits is approximately 2.4 acres. The proposed fence will be supported on ballast blocks as opposed to ground-driven poles to protect the existing engineered landfill cap.

A Locus Map of the project location is included as Figure 1 in Attachment A.

Erosion and Sediment Control

The erosion and sediment controls have been designed in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. Straw wattle is proposed as the sediment barrier for perimeter controls. When used on the cap, sandbags will be used to weigh the straw wattle down if needed. Any piercing activities such as driving stakes in the ground to keep straw wattle in place is prohibited while on the landfill cap to not damage the cap. A construction entrance/exit is proposed where the existing access road meets the paved area south of the landfill. A concrete washout basin is proposed near the construction entrance/exit.

Stormwater Analysis

Stormwater runoff patterns for the Town of Montville Landfill will not be altered as part of the proposed project. Existing and proposed peak design flows were assessed using the National Resources Conservation Service (NRCS) Technical Release 20 (TR-20) methodology. HydroCAD® version 10.20-2d stormwater modeling software was used to analyze stormwater conditions. It is a comprehensive hydrodynamic modeling program which analyzes and designs site hydrology, surface drainage systems, and storm drains. It can manage a variety of flow situations such as overland flow, drainage swales, ponds, and piping systems.

The National Resources Conservation Service (NRCS) Web Soil Survey database was used to determine the hydrologic soil group (HSG) for the onsite soils. Stormwater rainfall event data is derived from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Precipitation Frequency data for the site. The 2-, 10-, 25-, and 100- year, 24-hour, Type-III storm events were used to compare post-development conditions to pre-development conditions. The NRCS report and NOAA data are included in Attachment B.

A summary of the analysis is provided below, the full stormwater model and drainage area maps are included in Attachment C.

Existing Stormwater Flow

The Town of Montville Landfill does not have an existing stormwater management system and stormwater currently flows off the landfill cap in all directions via overland flow. The limits of the stormwater analysis for this project include the landfill cap, the southern paved area, the majority of the eastern transfer station area, and the northern meadow/woodlands between the landfill cap and Fox Brook. HSG-A, B, C and D soils are all determined to be onsite, and coverages were accounted for accordingly based on HSG soil boundaries.

Pre-development conditions have been modeled assuming the landfill cap has been maintained as it was designed with meadow coverage.

HSG-D soils are assumed to be consistent with the landfill limit of waste which is assumed to extend to the landfill toe of slope.

Four points of analysis, each with their own drainage area, were analyzed. Figure 2 of Attachment C displays the limits of each drainage area, flow paths, and existing ground covers. A description of each drainage area is below:

- Drainage Area A – Northern portion of the landfill draining northerly towards Fox Brook,
- Drainage Area B – Southwest portion of the landfill draining southwesterly offsite,
- Drainage Area C – Southern portion of the landfill draining southeasterly offsite,
- Drainage Area D – Eastern portion of the landfill draining easterly offsite towards Wheeler Pond

Proposed Stormwater Flow

The stormwater analysis assumes the array concrete ballast blocks and equipment pad will be considered disconnected impervious area in the post-development stormwater model. Figure 3 of Attachment C displays the limits of each drainage area, flow paths, and proposed ground covers. The dimensions of the ballast blocks are assumed to be 2.5-ft wide by 9-ft long. Two ballast blocks will be used for each table with each table consisting of approximately 16 solar PV modules.

Stormwater flow patterns do not change based on the proposed solar PV layout as there are no proposed grading changes. Post-development drainage areas are denoted with a suffix of "1" and are consistent with pre-development drainage areas.

The post-development coverage conditions remain consistent with the pre-development conditions for the majority of the site. The only difference being minor trimming to the woods coverage in the northeast corner of the site, and the addition of the concrete ballast blocks and gravel turnaround areas as unconnected impervious coverage. These changes do not change the overall runoff curve numbers (CN) of the drainage areas.

The time of concentrations (Tc) are consistent from pre- to post- development conditions. All Tcs begin with 100-feet of sheet flow followed by shallow concentrated flow until flow reaches the drainage area boundary.

Peak Discharge Summary

As the overall CN and Tc for each drainage area remain consistent from pre- to post-development conditions, the project results in no changes in peak runoff discharge rate or volume for all design storms. The pre- and post-development conditions comparative table reflecting the HydroCAD results are shown in Table 1 below.

The project considers the following as impervious coverage: the existing access road, the existing paved areas, the existing broken bituminous areas, the proposed gravel turnaround area atop the landfill, the proposed concrete ballast blocks for the array, and the proposed concrete equipment pad.

TABLE 1: PRE-, POST-DEVELOPMENT COMPARATIVE RESULTS							
OFF-SITE SUMMARY		FLOW			VOLUME		
Point of Analysis	24-hour Storm Event	Pre-Development Receiving Peak Runoff (cfs)	Post-Development Recieving Peak Runoff (cfs)	**Difference in Peak Runoff (cfs)**	Pre-Development Receiving Discharge Volume (af)	Post-Development Recieving Discharge Volume (af)	**Difference in Volume (af)**
POA-A Northern Wetland	2	7.73	7.73	0.00	0.610	0.610	0.000
	10	15.14	15.14	0.00	1.177	1.177	0.000
	25	20.05	20.05	0.00	1.560	1.560	0.000
	100	27.70	27.70	0.00	2.170	2.170	0.000
POA-B Offsite - West	2	0.47	0.47	0.00	0.040	0.040	0.000
	10	0.91	0.91	0.00	0.075	0.075	0.000
	25	1.20	1.20	0.00	0.100	0.100	0.000
	100	1.65	1.65	0.00	0.138	0.138	0.000
POA-C Southeast Wetland	2	2.14	2.14	0.00	0.215	0.215	0.000
	10	4.20	4.20	0.00	0.415	0.415	0.000
	25	5.57	5.57	0.00	0.550	0.550	0.000
	100	7.70	7.70	0.00	0.765	0.765	0.000
POA-D Offsite - East	2	6.67	6.67	0.00	0.607	0.607	0.000
	10	12.20	12.20	0.00	1.111	1.111	0.000
	25	15.78	15.78	0.00	1.444	1.444	0.000
	100	21.29	21.29	0.00	1.968	1.968	0.000

Conclusion

The proposed solar PV array located at the Town of Montville Landfill will include minor vegetation trimming within the array area, minor access road improvements, and the implementation of erosion and sediment controls. The analysis shows no change in peak discharge runoff rates for post-development conditions compared to pre-development conditions.

No stormwater management system is proposed as there is no increase in stormwater runoff rate or volume. Similarly, water quality volume calculations and treatment per the 2004 Connecticut Stormwater Quality Manual are not provided for this project.

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Attachment A - Locus Map

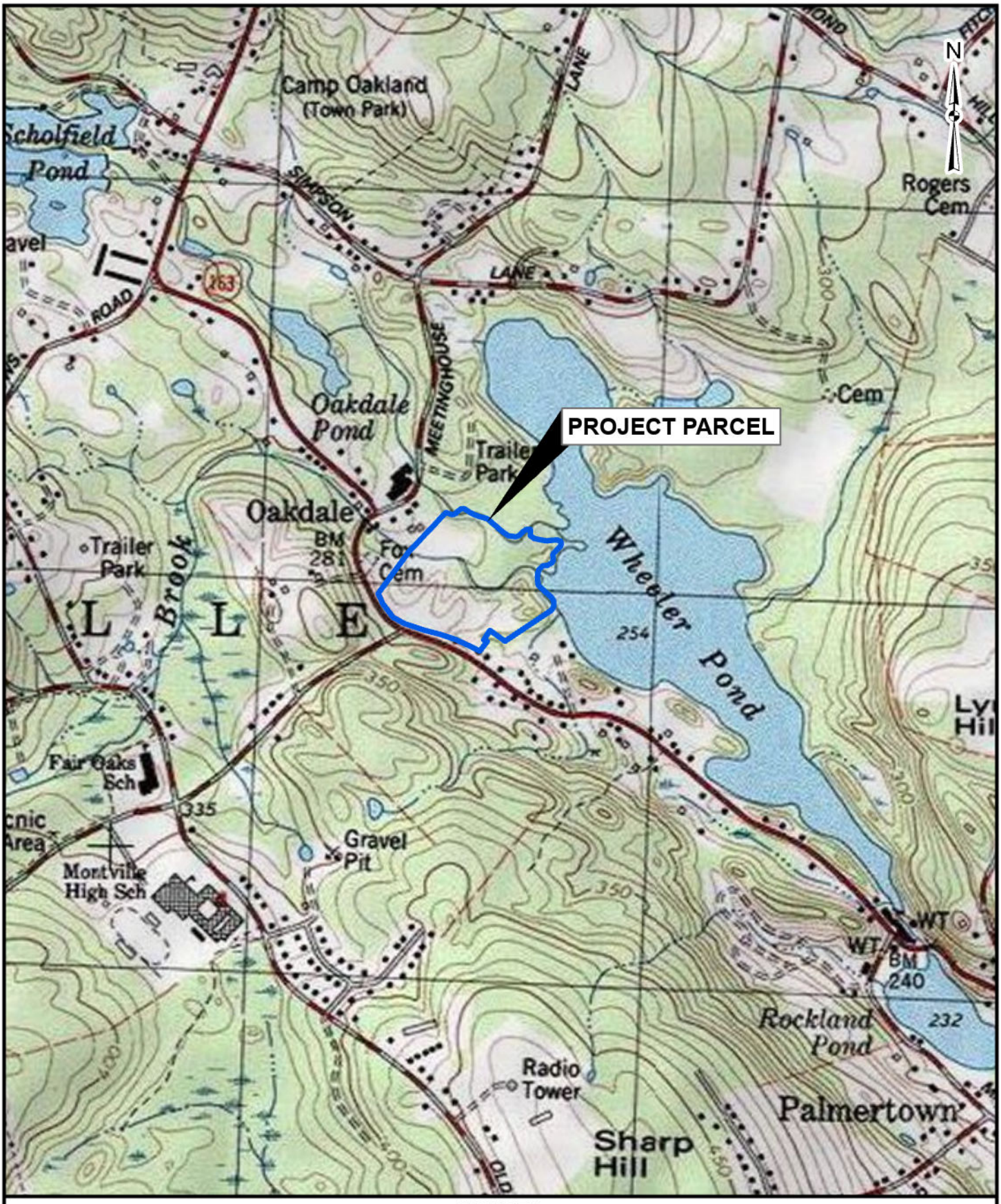


FIGURE 1
TOWN OF MONTVILLE LANDFILL SOLAR PV DEVELOPMENT
669 OAKDALE ROAD (CT RT 163), MONTVILLE, CT 06353
VCP MONTVILLE LF, LLC

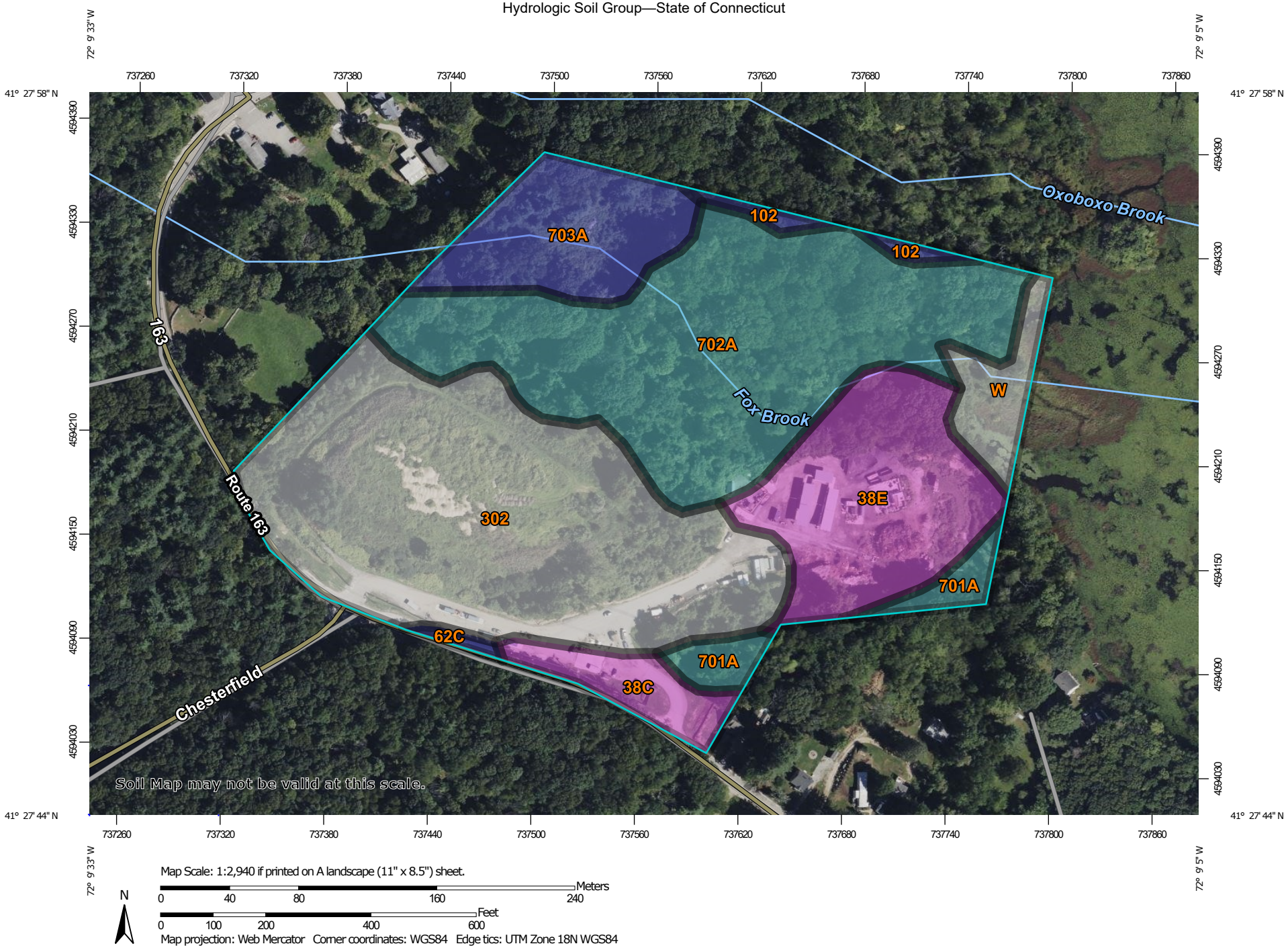
LOCUS MAP

2,000 0 2,000

Scale In Feet

Weston & Sampson

Attachment B - NRCS Web Soil Survey Map & Report: Hydrologic Soils Group,
FEMA FIRMette,
NOAA Atlas 14 Rainfall Data



Map Scale: 1:2,940 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

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

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 22, Sep 12, 2022

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

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
38C	Hinckley loamy sand, 3 to 15 percent slopes	A	0.9	3.5%
38E	Hinckley loamy sand, 15 to 45 percent slopes	A	3.6	14.0%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B	0.1	0.4%
102	Pootatuck fine sandy loam	B	0.3	1.1%
302	Dumps		8.9	34.9%
701A	Ninigret fine sandy loam, 0 to 3 percent slopes	C	0.7	2.8%
702A	Tisbury silt loam, 0 to 3 percent slopes	C	7.9	31.1%
703A	Haven silt loam, 0 to 3 percent slopes	B	2.2	8.8%
W	Water		0.8	3.3%
Totals for Area of Interest			**25.4**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

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

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

National Flood Hazard Layer FIRMette

FEMA

72°9'43"W 41°28'3"N

72°9'5"W 41°27'36"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/26/2023 at 1:02 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

NOAA Atlas 14, Volume 10, Version 3
Location name: Montville, Connecticut, USA*
Latitude: 41.4635°, Longitude: -72.1574°
Elevation: 288 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

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

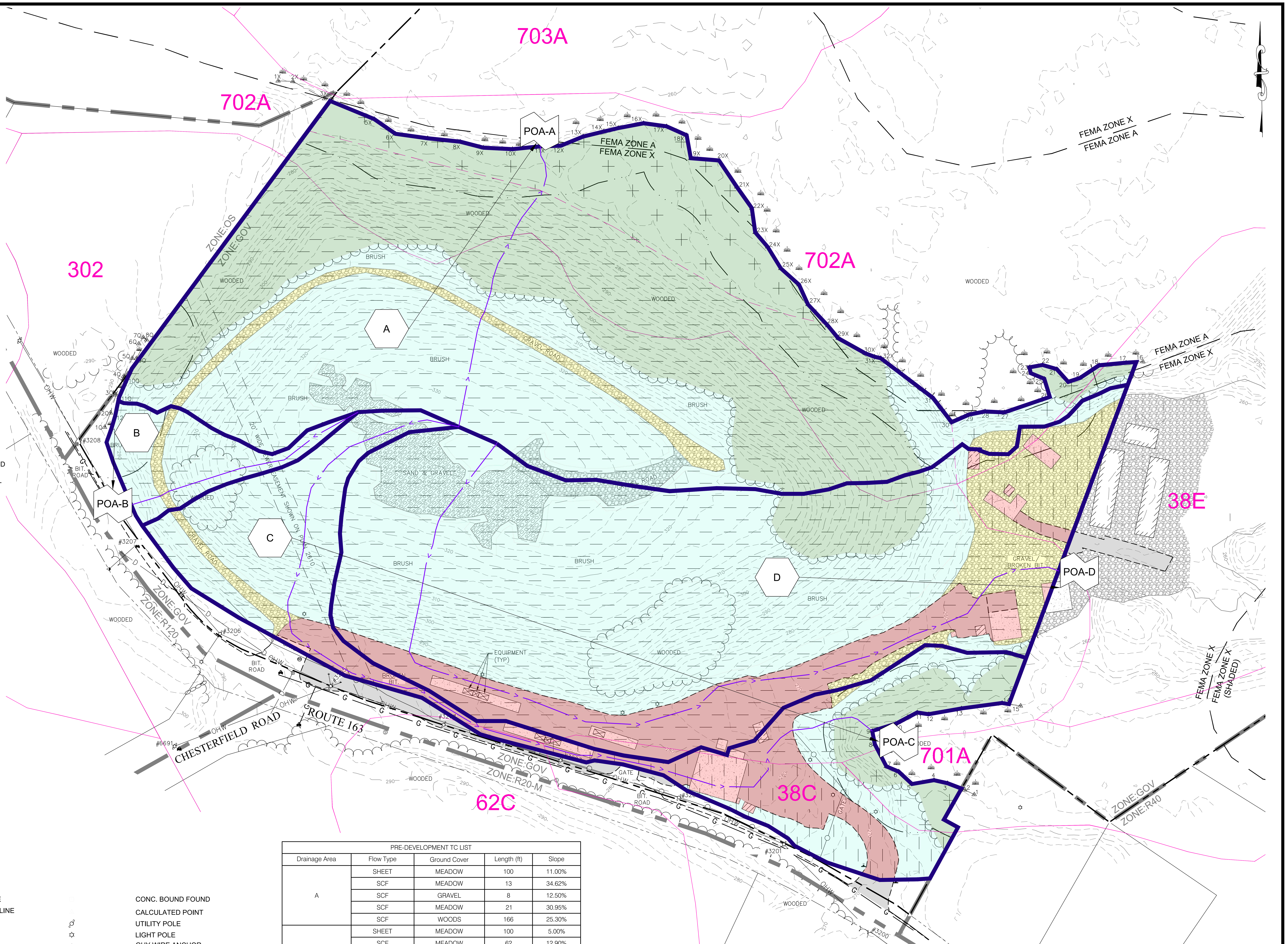
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.340** (0.264-0.427)	**0.406** (0.316-0.510)	**0.515** (0.398-0.647)	**0.605** (0.466-0.765)	**0.729** (0.544-0.956)	**0.822** (0.602-1.10)	**0.920** (0.654-1.27)	**1.03** (0.693-1.44)	**1.19** (0.772-1.72)	**1.32** (0.836-1.94)
10-min	**0.481** (0.374-0.604)	**0.575** (0.447-0.723)	**0.729** (0.564-0.919)	**0.856** (0.659-1.08)	**1.03** (0.770-1.36)	**1.16** (0.851-1.56)	**1.30** (0.926-1.80)	**1.46** (0.983-2.04)	**1.69** (1.09-2.43)	**1.87** (1.18-2.74)
15-min	**0.566** (0.440-0.711)	**0.677** (0.526-0.851)	**0.858** (0.664-1.08)	**1.01** (0.776-1.28)	**1.21** (0.906-1.59)	**1.37** (1.00-1.83)	**1.53** (1.09-2.11)	**1.72** (1.16-2.40)	**1.98** (1.28-2.86)	**2.20** (1.39-3.22)
30-min	**0.795** (0.618-0.998)	**0.950** (0.738-1.19)	**1.20** (0.932-1.52)	**1.41** (1.09-1.79)	**1.70** (1.27-2.24)	**1.92** (1.40-2.56)	**2.15** (1.53-2.96)	**2.41** (1.62-3.37)	**2.78** (1.80-4.00)	**3.08** (1.95-4.51)
60-min	**1.02** (0.795-1.28)	**1.22** (0.950-1.54)	**1.55** (1.20-1.95)	**1.82** (1.40-2.30)	**2.19** (1.64-2.88)	**2.47** (1.81-3.30)	**2.77** (1.96-3.81)	**3.10** (2.08-4.33)	**3.57** (2.32-5.14)	**3.96** (2.51-5.80)
2-hr	**1.34** (1.05-1.68)	**1.60** (1.25-2.00)	**2.03** (1.58-2.54)	**2.38** (1.84-2.99)	**2.86** (2.15-3.73)	**3.22** (2.37-4.28)	**3.60** (2.58-4.94)	**4.05** (2.74-5.62)	**4.70** (3.06-6.71)	**5.24** (3.33-7.61)
3-hr	**1.56** (1.23-1.94)	**1.86** (1.46-2.31)	**2.35** (1.84-2.92)	**2.75** (2.14-3.44)	**3.31** (2.50-4.30)	**3.72** (2.75-4.92)	**4.16** (3.00-5.69)	**4.68** (3.17-6.46)	**5.44** (3.55-7.73)	**6.09** (3.88-8.78)
6-hr	**1.99** (1.58-2.45)	**2.36** (1.87-2.92)	**2.97** (2.34-3.68)	**3.48** (2.72-4.32)	**4.17** (3.17-5.38)	**4.69** (3.49-6.16)	**5.24** (3.80-7.11)	**5.89** (4.01-8.07)	**6.85** (4.49-9.64)	**7.66** (4.90-11.0)
12-hr	**2.46** (1.97-3.02)	**2.92** (2.33-3.58)	**3.67** (2.92-4.52)	**4.30** (3.39-5.30)	**5.15** (3.94-6.59)	**5.79** (4.33-7.54)	**6.47** (4.70-8.69)	**7.26** (4.97-9.86)	**8.42** (5.54-11.7)	**9.39** (6.02-13.3)
24-hr	**2.89** (2.32-3.52)	**3.45** (2.77-4.20)	**4.36** (3.49-5.33)	**5.12** (4.07-6.28)	**6.17** (4.74-7.84)	**6.94** (5.23-8.98)	**7.78** (5.69-10.4)	**8.74** (6.01-11.8)	**10.2** (6.72-14.1)	**11.4** (7.33-16.0)
2-day	**3.24** (2.62-3.92)	**3.91** (3.16-4.73)	**5.00** (4.03-6.07)	**5.91** (4.73-7.20)	**7.16** (5.55-9.05)	**8.08** (6.14-10.4)	**9.08** (6.70-12.1)	**10.3** (7.10-13.7)	**12.1** (8.00-16.5)	**13.6** (8.80-18.9)
3-day	**3.52** (2.86-4.24)	**4.24** (3.45-5.12)	**5.43** (4.39-6.56)	**6.41** (5.16-7.78)	**7.77** (6.04-9.77)	**8.77** (6.68-11.2)	**9.85** (7.30-13.0)	**11.2** (7.73-14.8)	**13.1** (8.72-17.9)	**14.8** (9.60-20.5)
4-day	**3.78** (3.08-4.54)	**4.54** (3.70-5.46)	**5.79** (4.70-6.98)	**6.83** (5.51-8.25)	**8.25** (6.44-10.3)	**9.31** (7.11-11.9)	**10.4** (7.76-13.8)	**11.8** (8.20-15.6)	**13.9** (9.24-18.8)	**15.7** (10.2-21.6)
7-day	**4.51** (3.70-5.38)	**5.35** (4.38-6.39)	**6.72** (5.49-8.05)	**7.86** (6.37-9.44)	**9.42** (7.39-11.7)	**10.6** (8.12-13.4)	**11.8** (8.81-15.4)	**13.3** (9.28-17.5)	**15.5** (10.4-20.9)	**17.4** (11.3-23.8)
10-day	**5.23** (4.31-6.22)	**6.11** (5.03-7.28)	**7.55** (6.19-9.01)	**8.74** (7.12-10.5)	**10.4** (8.16-12.8)	**11.6** (8.93-14.6)	**12.9** (9.61-16.7)	**14.4** (10.1-18.8)	**16.6** (11.2-22.3)	**18.5** (12.1-25.1)
20-day	**7.45** (6.18-8.80)	**8.38** (6.95-9.91)	**9.92** (8.19-11.8)	**11.2** (9.18-13.3)	**12.9** (10.2-15.8)	**14.3** (11.0-17.7)	**15.6** (11.6-19.8)	**17.1** (12.0-22.1)	**19.1** (12.8-25.2)	**20.6** (13.5-27.7)
30-day	**9.29** (7.75-10.9)	**10.3** (8.55-12.1)	**11.9** (9.83-14.0)	**13.2** (10.9-15.6)	**15.0** (11.9-18.2)	**16.4** (12.6-20.1)	**17.8** (13.2-22.2)	**19.1** (13.5-24.6)	**20.9** (14.1-27.5)	**22.2** (14.6-29.7)
45-day	**11.6** (9.69-13.6)	**12.6** (10.5-14.8)	**14.3** (11.9-16.7)	**15.6** (12.9-18.4)	**17.5** (13.9-21.1)	**19.0** (14.7-23.2)	**20.5** (15.1-25.3)	**21.7** (15.4-27.8)	**23.3** (15.8-30.5)	**24.3** (16.0-32.4)
60-day	**13.5** (11.3-15.7)	**14.5** (12.2-17.0)	**16.3** (13.6-19.1)	**17.7** (14.7-20.8)	**19.7** (15.7-23.6)	**21.3** (16.5-25.8)	**22.8** (16.8-28.0)	**24.0** (17.1-30.5)	**25.5** (17.3-33.2)	**26.3** (17.4-34.9)

[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.

Attachment C - Drainage Area Maps & HydroCAD Reports



NOTES:

1. BASEMAPPING DERIVED FROM SURVEY PROVIDED BY NORTHEAST SURVEY CONSULTANTS ENTITLED "PLAN OF LAND IN MONTVILLE, CT, 669 ROUTE 163, PREPARED FOR VEROGY" AND DATED 4-4-2023.
2. SOIL DATA PROVIDED BY NATIONAL RESOURCE CONSERVATION SERVICE (NRCS) WEB SOIL SURVEY.
3. SOIL GEOGRAPHIC INFORMATION SYSTEM (GIS) DATA DERIVED FROM CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION GIS OPEN DATA WEBSITE SOIL SURVEY GEOGRAPHIC DATABASE SOILS (SSURGO).
4. HYDROLOGIC SOIL GROUP (HSG) D SOILS ASSUMED TO BE WITHIN THE FOOTPRINT OF THE LIMIT OF WASTE WHICH IS ASSUMED TO EXTEND TO LANDFILL TOE OF SLOPE.

LEGEND DRAINAGE AREA MAP:

HYDROLOGY:

- FLOW PATH / TIME OF CONCENTRATION
- SUBBASIN LABEL
- POINT OF ANALYSIS
- BASIN BMP
- MEADOW
- WOODLAND
- GRAVEL
- IMPERVIOUS
- WATERSHED BOUNDARY
- NRCS SOIL BOUNDARY
- ASSUMED HSG-D SOIL BOUNDARY
- 922B NRCS SOIL MAP UNIT
- HYDROLOGIC SOIL GROUP A
- HYDROLOGIC SOIL GROUP B
- HYDROLOGIC SOIL GROUP C
- HYDROLOGIC SOIL GROUP D

EXISTING LEGEND:

- LOCUS PROPERTY LINE
- ABUTTERS PROPERTY LINE
- EASEMENT LINE
- 2' CONTOUR LINE
- CHAIN LINK FENCE
- WETLAND LINE
- 50' UPLAND REVIEW AREA
- TREE LINE
- TREE LINE
- FEMA FLOOD ZONE LINE
- ZONING LINE
- OVERHEAD WIRES
- BURIED GAS LINE
- BURIED DRAINAGE LINE
- CONC. BOUND FOUND
- CALCULATED POINT
- UTILITY POLE
- LIGHT POLE
- GUY WIRE ANCHOR
- CATCH BASIN
- MANHOLE
- WETLAND FLAG WITH IDENTIFIER
- SIGN POST
- GAS VALVE
- CONCRETE PAD
- GRAVEL
- SAND AND GRAVEL
- PAVEMENT
- STRUCTURE

PRE-DEVELOPMENT TC LIST				
Drainage Area	Flow Type	Ground Cover	Length (ft)	Slope
A	SHEET	MEADOW	100	11.00%
	SCF	MEADOW	13	34.62%
	SCF	GRAVEL	8	12.50%
	SCF	MEADOW	21	30.95%
	SCF	WOODS	166	25.30%
B	SHEET	MEADOW	100	5.00%
	SCF	MEADOW	62	12.90%
	SCF	MEADOW	51	33.33%
	SCF	GRAVEL	10	10.00%
	SCF	MEADOW	31	29.03%
C	SHEET	MEADOW	100	3.00%
	SCF	MEADOW	126	7.94%
	SCF	MEADOW	80	33.75%
	SCF	PAVEMENT	607	2.64%
	SCF	MEADOW	44	11.36%
	SCF	WOODS	44	25.00%
D	SHEET	MEADOW	100	6.00%
	SCF	MEADOW	73	17.81%
	SCF	MEADOW	64	42.19%
	SCF	PAVEMENT	634	3.94%
	SCF	GRAVEL	94	0.53%

Soil Data		
Map Unit Symbol	Map Unit Name	HSG Rating
38C	Hinckley loamy sand, 3 to 15 percent slopes	A
38E	Hinckley loamy sand, 15 to 45 percent slopes	A
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B
302	Dumps	D
701A	Ninigret fine sandy loam, 0 to 3 percent slopes	C
702A	Tisbury silt loam, 0 to 3 percent slopes	C

50 25 0 50 100
SCALE: 1"=50'

NOT FOR CONSTRUCTION

Project:
TOWN OF MONTVILLE LANDFILL SOLAR PV DEVELOPMENT
669 ROUTE 163
MONTVILLE, CT 06353

Weston & Sampson
WESTON & SAMPSON ENGINEERS, INC.
712 BROOK STREET, SUITE 103
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860.513.1473 800.SAMPSON
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150 TRUMBULL STREET
4TH FLOOR
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TEL: (860) 288-7215
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Revisions:

No.	Date	Description
0	06/06/2023	ISSUED FOR PERMITTING

Seal:

Issued For:
PERMITTING

Scale:	AS SHOWN
Date Created:	06/06/2023
Drawn By:	NVG
Reviewed By:	MRC
Approved By:	RJB
W&S Project No.:	ENG23-1066
W&S File No.:	Verogy Montville

Drawing Title:
PRE- DEVELOPMENT DRAINAGE AREA MAP

Sheet Number:
FIG 2

NOTES:

1. BASEMAPPING DERIVED FROM SURVEY PROVIDED BY NORTHEAST SURVEY CONSULTANTS ENTITILED "PLAN OF LAND IN MONTVILLE, CT, 669 ROUTE 163, PREPARED FOR VEROGY" AND DATED 4-4-2023.
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- POINT OF ANALYSIS
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- 922B NRCS SOIL MAP UNIT
- HYDROLOGIC SOIL GROUP A
- HYDROLOGIC SOIL GROUP B
- HYDROLOGIC SOIL GROUP C
- HYDROLOGIC SOIL GROUP D

PROPOSED LEGEND:

- LIMIT OF WORK
- SEDIMENT BARRIER
- FENCE
- ELECTRIC CONDUIT
- OVERHEAD ELECTRIC
- SOLAR PV RACK
- UTILITY POLE
- ACCESS ROAD (4 / C-502)

EXISTING LEGEND:

- LOCUS PROPERTY LINE
- ABUTTERS PROPERTY LINE
- EASEMENT LINE
- 2' CONTOUR LINE
- CHAIN LINK FENCE
- WETLAND LINE
- 50' UPLAND REVIEW AREA
- TREE LINE
- TREE LINE
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- GAS VALVE
- CONCRETE PAD
- GRAVEL
- SAND AND GRAVEL
- PAVEMENT
- STRUCTURE

POST-DEVELOPMENT TC LIST				
Drainage Area	Flow Type	Ground Cover	Length (ft)	Slope
A1	SHEET	MEADOW	100	11.00%
	SCF	MEADOW	13	34.62%
	SCF	GRAVEL	8	12.50%
	SCF	MEADOW	21	30.95%
	SCF	WOODS	166	25.30%
B1	SHEET	MEADOW	100	5.00%
	SCF	MEADOW	62	12.90%
	SCF	MEADOW	51	33.33%
	SCF	GRAVEL	10	10.00%
	SCF	MEADOW	31	29.03%
C1	SHEET	MEADOW	100	3.00%
	SCF	MEADOW	126	7.94%
	SCF	MEADOW	80	33.75%
	SCF	PAVEMENT	607	2.64%
	SCF	MEADOW	44	11.36%
	SCF	WOODS	44	25.00%
D1	SHEET	MEADOW	100	6.00%
	SCF	MEADOW	73	17.81%
	SCF	MEADOW	64	42.19%
	SCF	PAVEMENT	634	3.94%
	SCF	GRAVEL	94	0.53%

Soil Data		
Map Unit Symbol	Map Unit Name	HSG Rating
38C	Hinckley loamy sand, 3 to 15 percent slopes	A
38E	Hinckley loamy sand, 15 to 45 percent slopes	A
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B
302	Dumps	D
701A	Ninigret fine sandy loam, 0 to 3 percent slopes	C
702A	Tisbury silt loam, 0 to 3 percent slopes	C

SCALE: 1"=50'

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W&S Project No.:	ENG23-1066
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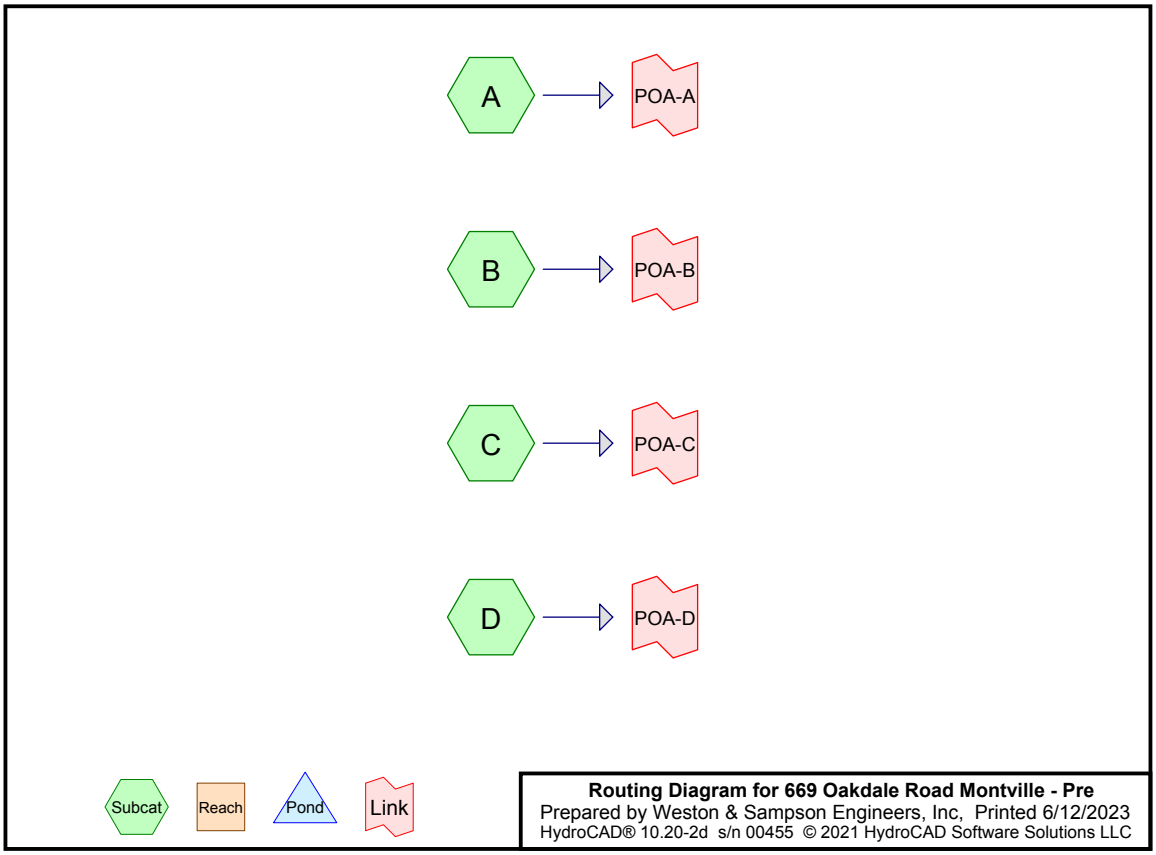
Drawing Title:

POST- DEVELOPMENT DRAINAGE AREA MAP

Sheet Number:

FIG 3



Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-yr	Type III 24-hr		Default	24.00	1	3.45	2
2	10-yr	Type III 24-hr		Default	24.00	1	5.12	2
3	25-yr	Type III 24-hr		Default	24.00	1	6.17	2
4	100-yr	Type III 24-hr		Default	24.00	1	7.78	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.231	76	Gravel roads, HSG A (D)
0.043	89	Gravel roads, HSG C (A, D)
0.432	91	Gravel roads, HSG D (A, B, C, D)
0.229	30	Meadow, non-grazed, HSG A (A, C, D)
0.114	71	Meadow, non-grazed, HSG C (A, C, D)
5.644	78	Meadow, non-grazed, HSG D (A, B, C, D)
0.357	98	Paved parking, HSG A (C, D)
0.014	98	Paved parking, HSG B (C)
0.008	98	Paved parking, HSG C (D)
0.819	98	Paved parking, HSG D (C, D)
0.023	36	Woods, Fair, HSG A (A, C)
0.842	73	Woods, Fair, HSG C (A, C)
2.528	79	Woods, Fair, HSG D (A, C, D)
11.283	**79**	**TOTAL AREA**

Summary for Subcatchment A:

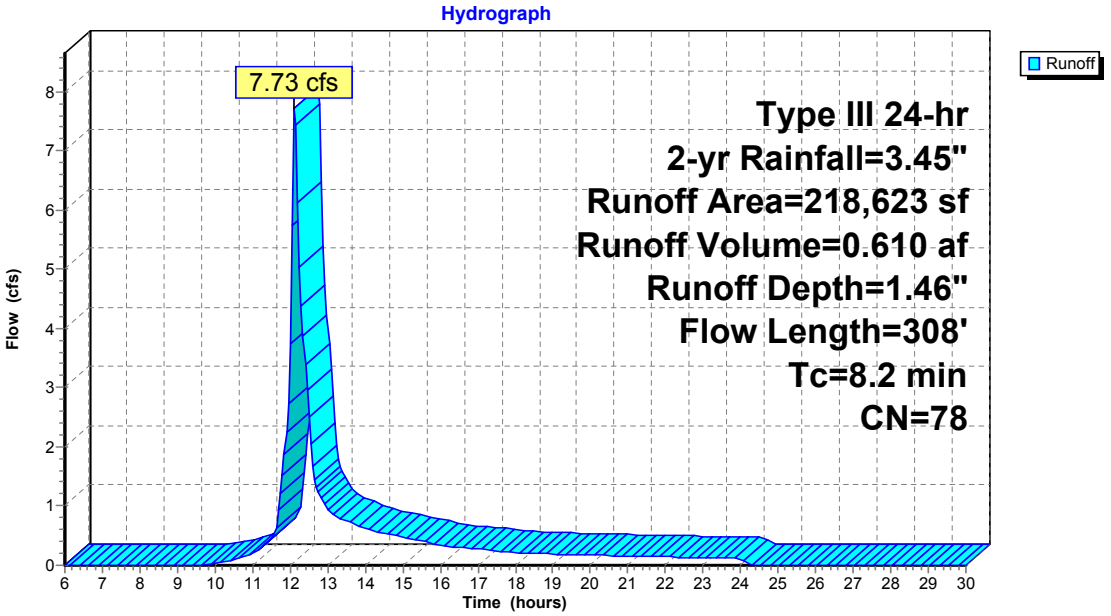
Runoff = 7.73 cfs @ 12.12 hrs, Volume= 0.610 af, Depth= 1.46"
Routed to Link POA-A :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
13,906	78	Meadow, non-grazed, HSG D
1,075	71	Meadow, non-grazed, HSG C
670	30	Meadow, non-grazed, HSG A
66,841	78	Meadow, non-grazed, HSG D
1,720	71	Meadow, non-grazed, HSG C
92,438	79	Woods, Fair, HSG D
33,692	73	Woods, Fair, HSG C
662	36	Woods, Fair, HSG A
6,666	91	Gravel roads, HSG D
953	89	Gravel roads, HSG C
218,623	78	Weighted Average
218,623		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.1	13	0.3462	4.12		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	8	0.1250	5.69		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	21	0.3095	3.89		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
1.1	166	0.2530	2.51		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
8.2	308	Total			

Subcatchment A:



Summary for Subcatchment B:

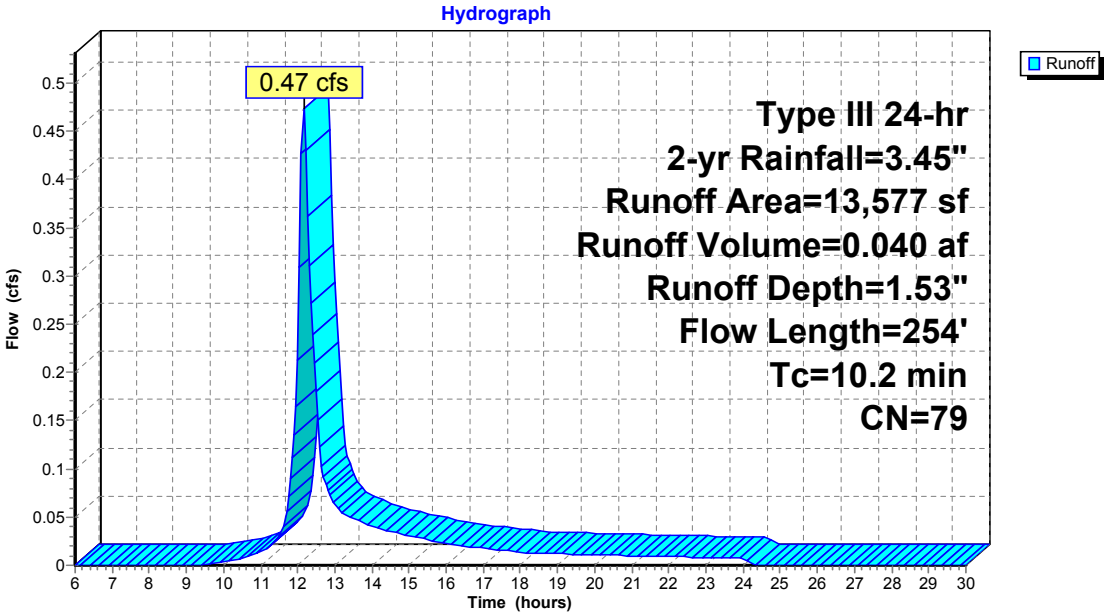
Runoff = 0.47 cfs @ 12.15 hrs, Volume= 0.040 af, Depth= 1.53"
Routed to Link POA-B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
3,577	78	Meadow, non-grazed, HSG D
8,878	78	Meadow, non-grazed, HSG D
1,122	91	Gravel roads, HSG D
13,577	79	Weighted Average
13,577		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0500	0.17		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	62	0.1290	2.51		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	51	0.3333	4.04		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	31	0.2903	3.77		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
10.2	254	Total			

Subcatchment B:



Summary for Subcatchment C:

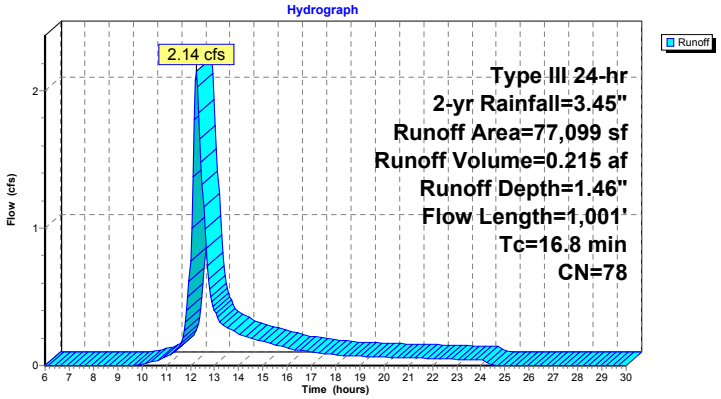
Runoff = 2.14 cfs @ 12.24 hrs, Volume= 0.215 af, Depth= 1.46"
Routed to Link POA-C :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
13,937	78	Meadow, non-grazed, HSG D
1,693	71	Meadow, non-grazed, HSG C
8,141	30	Meadow, non-grazed, HSG A
18,914	78	Meadow, non-grazed, HSG D
7,463	79	Woods, Fair, HSG D
2,986	73	Woods, Fair, HSG C
336	36	Woods, Fair, HSG A
2,453	91	Gravel roads, HSG D
8,413	98	Paved parking, HSG D
620	98	Paved parking, HSG B
12,143	98	Paved parking, HSG A
77,099	78	Weighted Average
55,923		72.53% Pervious Area
21,176		27.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0300	0.14		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
1.1	126	0.0794	1.97		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	80	0.3375	4.07		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
3.1	607	0.0264	3.30		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
0.3	44	0.1136	2.36		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	44	0.2500	2.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
16.8	1,001	Total			

Subcatchment C:



Summary for Subcatchment D:

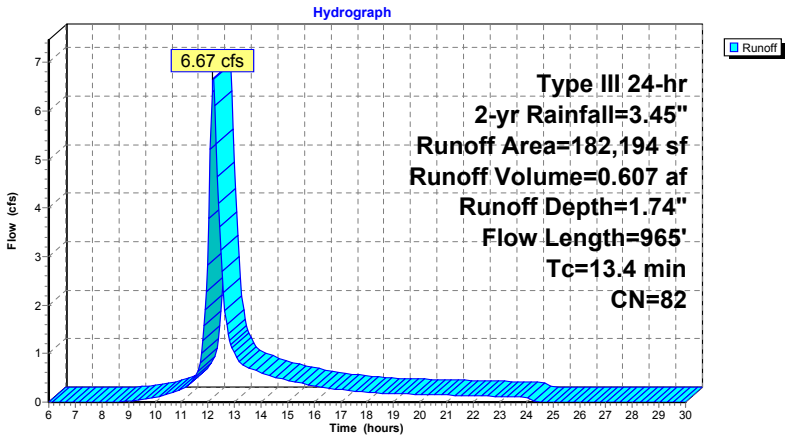
Runoff = 6.67 cfs @ 12.19 hrs, Volume= 0.607 af, Depth= 1.74"
Routed to Link POA-D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
38,983	78	Meadow, non-grazed, HSG D
0	71	Meadow, non-grazed, HSG C
1,146	30	Meadow, non-grazed, HSG A
80,797	78	Meadow, non-grazed, HSG D
489	71	Meadow, non-grazed, HSG C
10,224	79	Woods, Fair, HSG D
0	73	Woods, Fair, HSG C
8,558	91	Gravel roads, HSG D
940	89	Gravel roads, HSG C
10,060	76	Gravel roads, HSG A
27,271	98	Paved parking, HSG D
329	98	Paved parking, HSG C
3,397	98	Paved parking, HSG A
182,194	82	Weighted Average
151,197		82.99% Pervious Area
30,997		17.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0600	0.19		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	73	0.1781	2.95		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	64	0.4219	4.55		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
2.6	634	0.0394	4.03		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
1.3	94	0.0053	1.17		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
13.4	965	Total			

Subcatchment D:

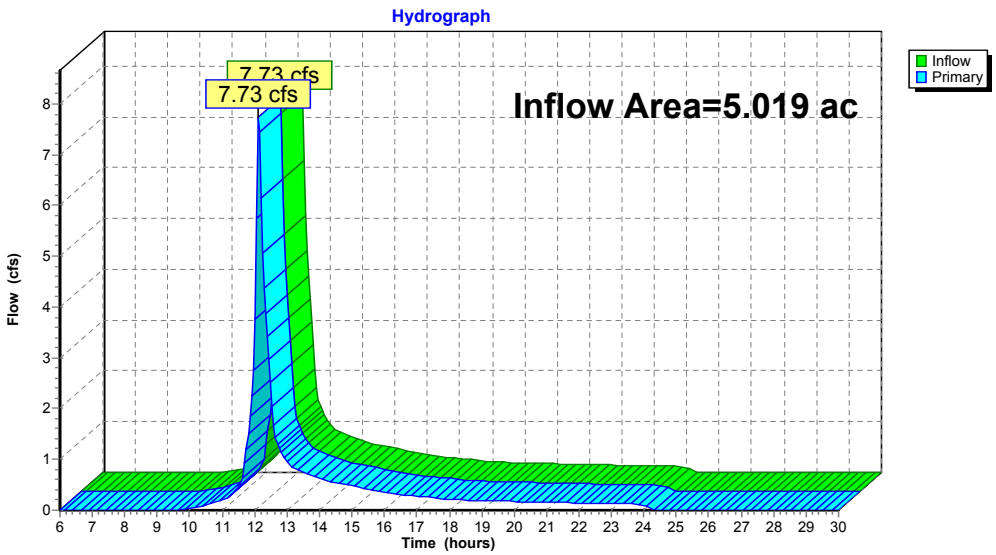


Summary for Link POA-A:

Inflow Area = 5.019 ac, 0.00% Impervious, Inflow Depth = 1.46" for 2-yr event
Inflow = 7.73 cfs @ 12.12 hrs, Volume= 0.610 af
Primary = 7.73 cfs @ 12.12 hrs, Volume= 0.610 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-A:

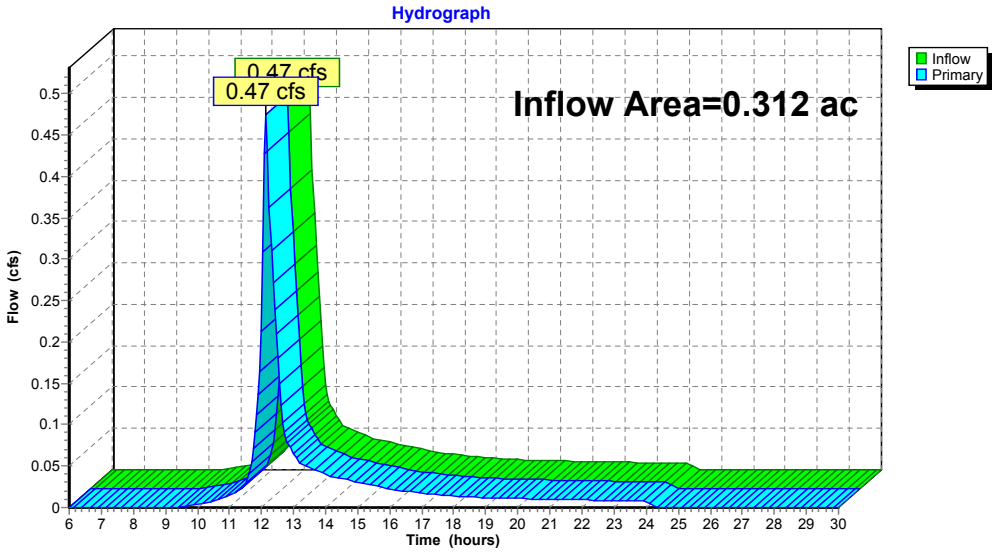


Summary for Link POA-B:

Inflow Area = 0.312 ac, 0.00% Impervious, Inflow Depth = 1.53" for 2-yr event
Inflow = 0.47 cfs @ 12.15 hrs, Volume= 0.040 af
Primary = 0.47 cfs @ 12.15 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-B:

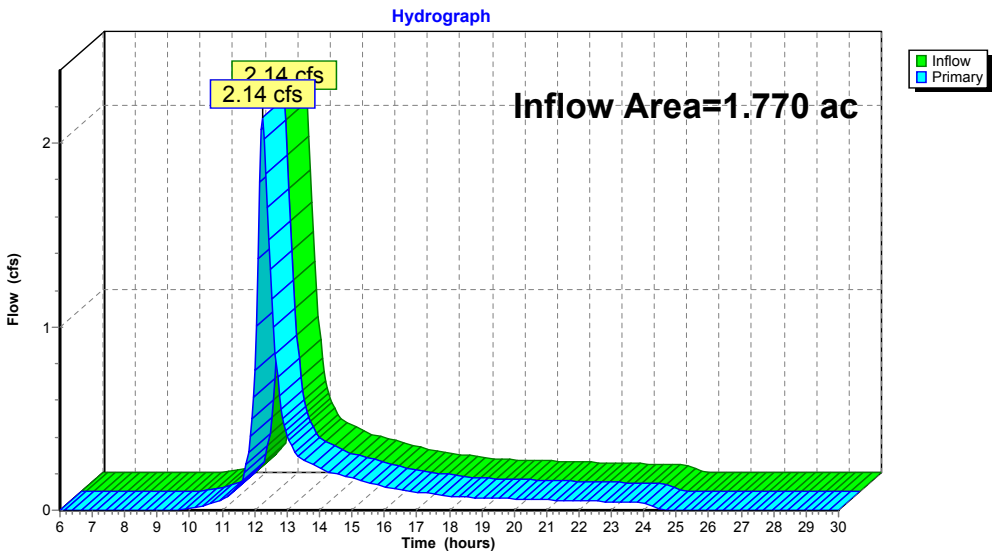


Summary for Link POA-C:

Inflow Area = 1.770 ac, 27.47% Impervious, Inflow Depth = 1.46" for 2-yr event
Inflow = 2.14 cfs @ 12.24 hrs, Volume= 0.215 af
Primary = 2.14 cfs @ 12.24 hrs, Volume= 0.215 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-C:

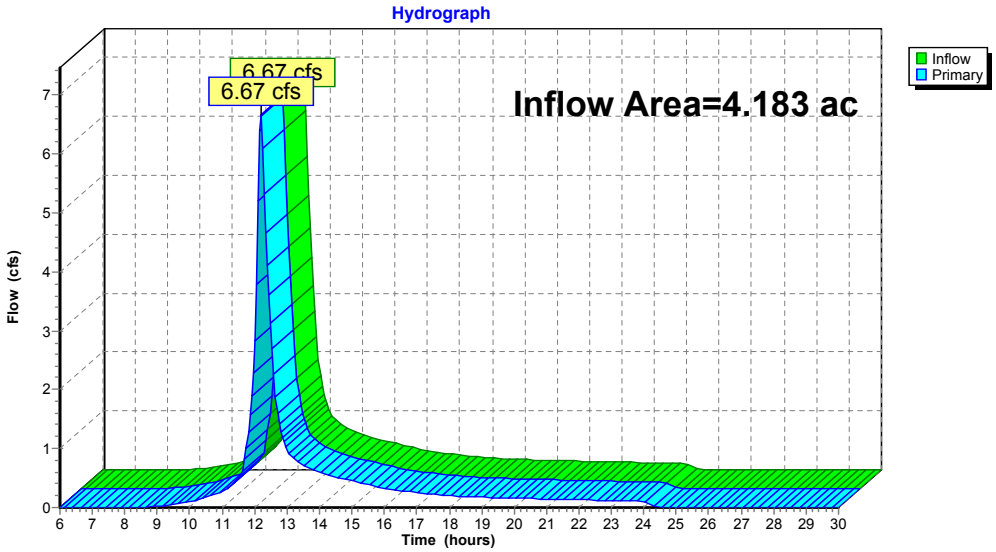


Summary for Link POA-D:

Inflow Area = 4.183 ac, 17.01% Impervious, Inflow Depth = 1.74" for 2-yr event
Inflow = 6.67 cfs @ 12.19 hrs, Volume= 0.607 af
Primary = 6.67 cfs @ 12.19 hrs, Volume= 0.607 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-D:



Summary for Subcatchment A:

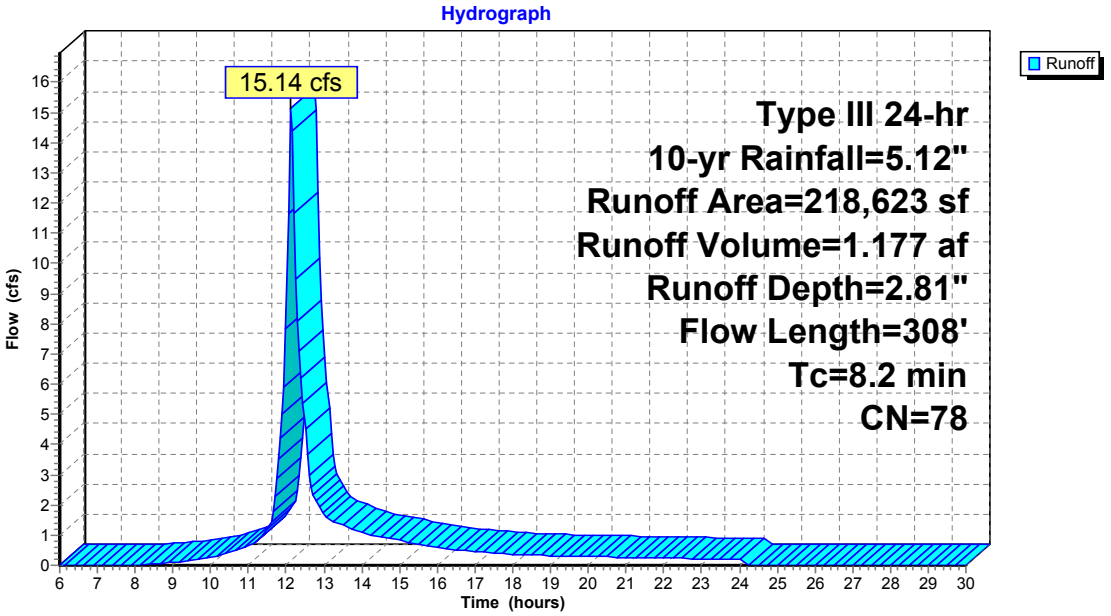
Runoff = 15.14 cfs @ 12.12 hrs, Volume= 1.177 af, Depth= 2.81"
Routed to Link POA-A :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.12"

Area (sf)	CN	Description
13,906	78	Meadow, non-grazed, HSG D
1,075	71	Meadow, non-grazed, HSG C
670	30	Meadow, non-grazed, HSG A
66,841	78	Meadow, non-grazed, HSG D
1,720	71	Meadow, non-grazed, HSG C
92,438	79	Woods, Fair, HSG D
33,692	73	Woods, Fair, HSG C
662	36	Woods, Fair, HSG A
6,666	91	Gravel roads, HSG D
953	89	Gravel roads, HSG C
218,623	78	Weighted Average
218,623		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.1	13	0.3462	4.12		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	8	0.1250	5.69		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	21	0.3095	3.89		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
1.1	166	0.2530	2.51		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
8.2	308	Total			

Subcatchment A:



Summary for Subcatchment B:

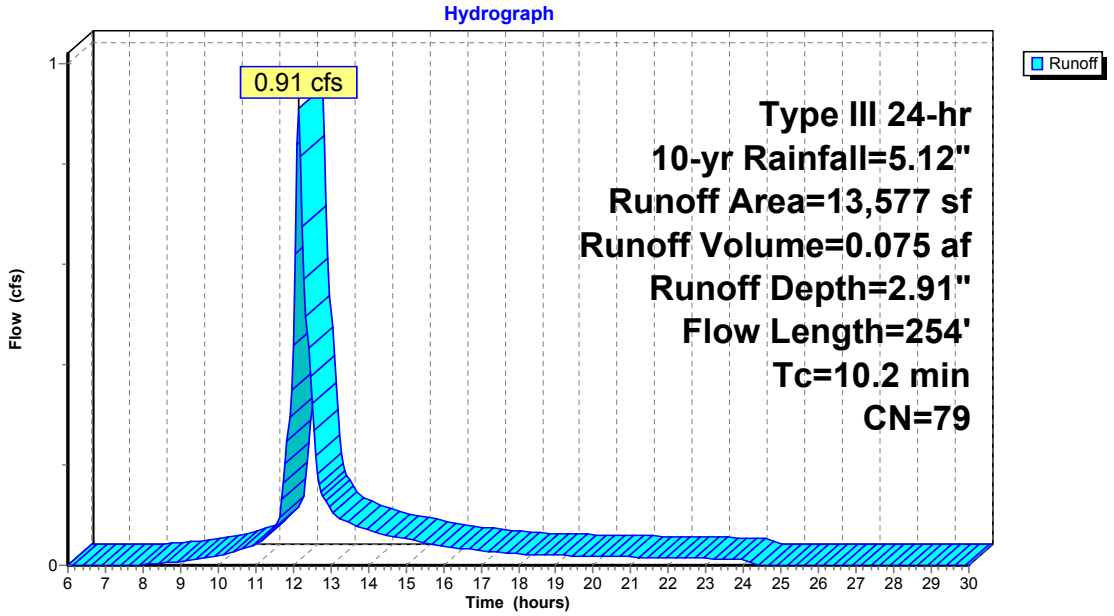
Runoff = 0.91 cfs @ 12.15 hrs, Volume= 0.075 af, Depth= 2.91"
Routed to Link POA-B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.12"

Area (sf)	CN	Description
3,577	78	Meadow, non-grazed, HSG D
8,878	78	Meadow, non-grazed, HSG D
1,122	91	Gravel roads, HSG D
13,577	79	Weighted Average
13,577		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0500	0.17		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	62	0.1290	2.51		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	51	0.3333	4.04		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	31	0.2903	3.77		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
10.2	254	Total			

Subcatchment B:



Summary for Subcatchment C:

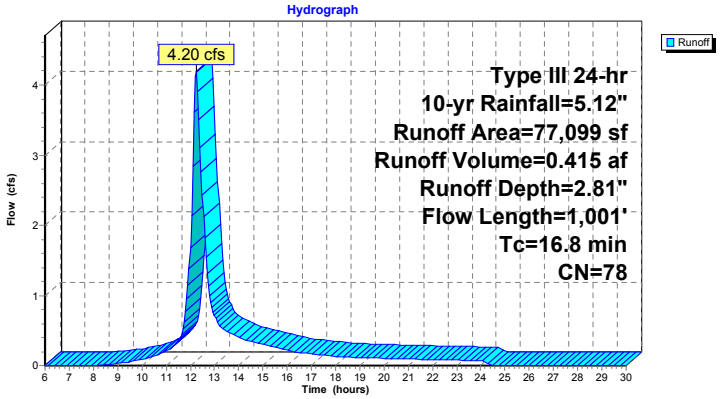
Runoff = 4.20 cfs @ 12.23 hrs, Volume= 0.415 af, Depth= 2.81"
Routed to Link POA-C :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.12"

Area (sf)	CN	Description
13,937	78	Meadow, non-grazed, HSG D
1,693	71	Meadow, non-grazed, HSG C
8,141	30	Meadow, non-grazed, HSG A
18,914	78	Meadow, non-grazed, HSG D
7,463	79	Woods, Fair, HSG D
2,986	73	Woods, Fair, HSG C
336	36	Woods, Fair, HSG A
2,453	91	Gravel roads, HSG D
8,413	98	Paved parking, HSG D
620	98	Paved parking, HSG B
12,143	98	Paved parking, HSG A
77,099	78	Weighted Average
55,923		72.53% Pervious Area
21,176		27.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0300	0.14		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
1.1	126	0.0794	1.97		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	80	0.3375	4.07		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
3.1	607	0.0264	3.30		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
0.3	44	0.1136	2.36		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	44	0.2500	2.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
16.8	1,001	Total			

Subcatchment C:



Summary for Subcatchment D:

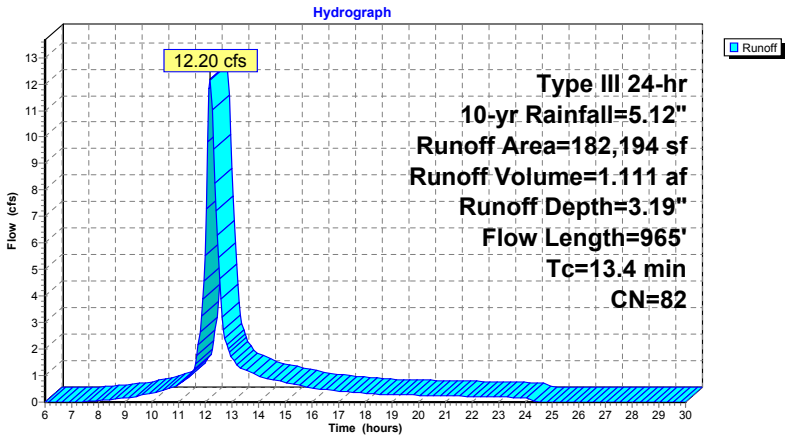
Runoff = 12.20 cfs @ 12.19 hrs, Volume= 1.111 af, Depth= 3.19"
Routed to Link POA-D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.12"

Area (sf)	CN	Description
38,983	78	Meadow, non-grazed, HSG D
0	71	Meadow, non-grazed, HSG C
1,146	30	Meadow, non-grazed, HSG A
80,797	78	Meadow, non-grazed, HSG D
489	71	Meadow, non-grazed, HSG C
10,224	79	Woods, Fair, HSG D
0	73	Woods, Fair, HSG C
8,558	91	Gravel roads, HSG D
940	89	Gravel roads, HSG C
10,060	76	Gravel roads, HSG A
27,271	98	Paved parking, HSG D
329	98	Paved parking, HSG C
3,397	98	Paved parking, HSG A
182,194	82	Weighted Average
151,197		82.99% Pervious Area
30,997		17.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0600	0.19		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	73	0.1781	2.95		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	64	0.4219	4.55		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
2.6	634	0.0394	4.03		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
1.3	94	0.0053	1.17		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
13.4	965	Total			

Subcatchment D:

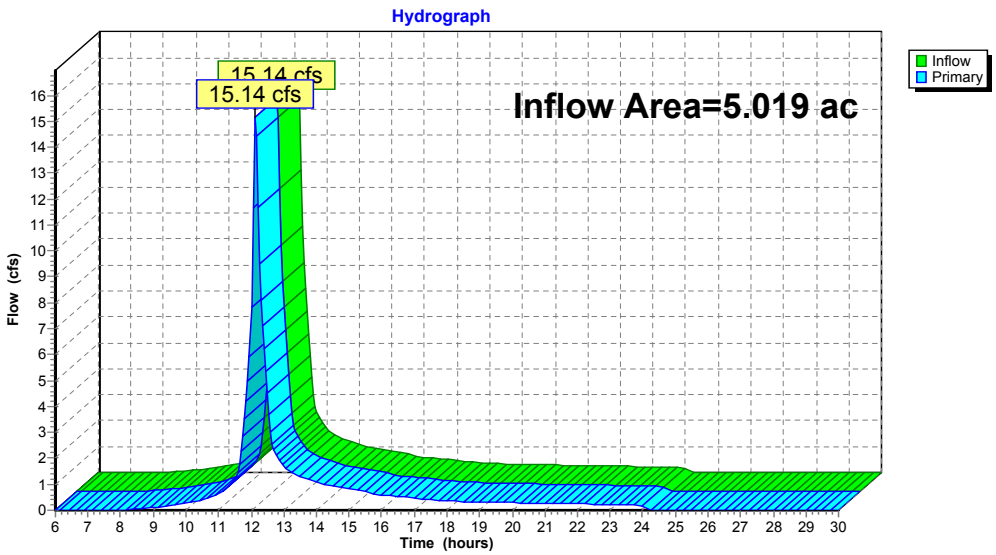


Summary for Link POA-A:

Inflow Area = 5.019 ac, 0.00% Impervious, Inflow Depth = 2.81" for 10-yr event
Inflow = 15.14 cfs @ 12.12 hrs, Volume= 1.177 af
Primary = 15.14 cfs @ 12.12 hrs, Volume= 1.177 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-A:

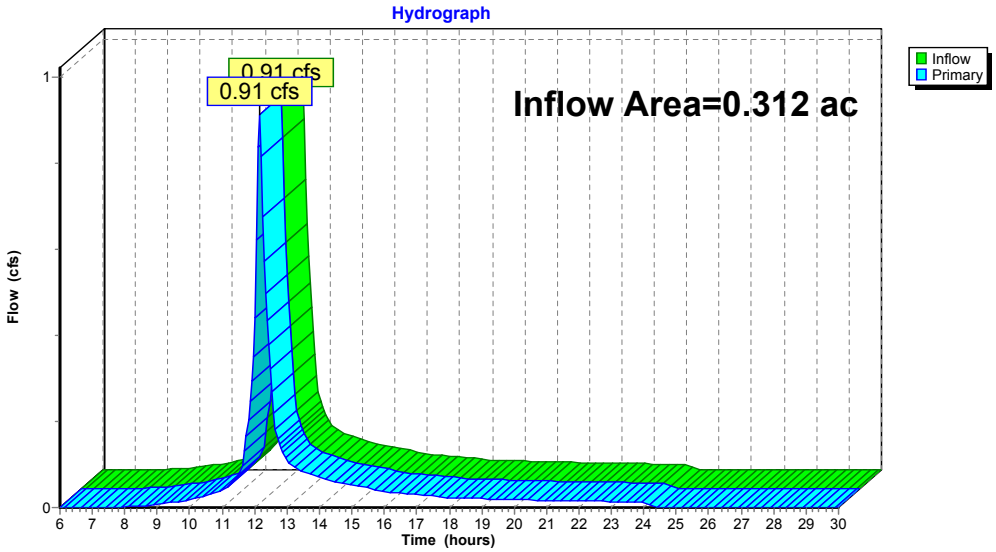


Summary for Link POA-B:

Inflow Area = 0.312 ac, 0.00% Impervious, Inflow Depth = 2.91" for 10-yr event
Inflow = 0.91 cfs @ 12.15 hrs, Volume= 0.075 af
Primary = 0.91 cfs @ 12.15 hrs, Volume= 0.075 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-B:

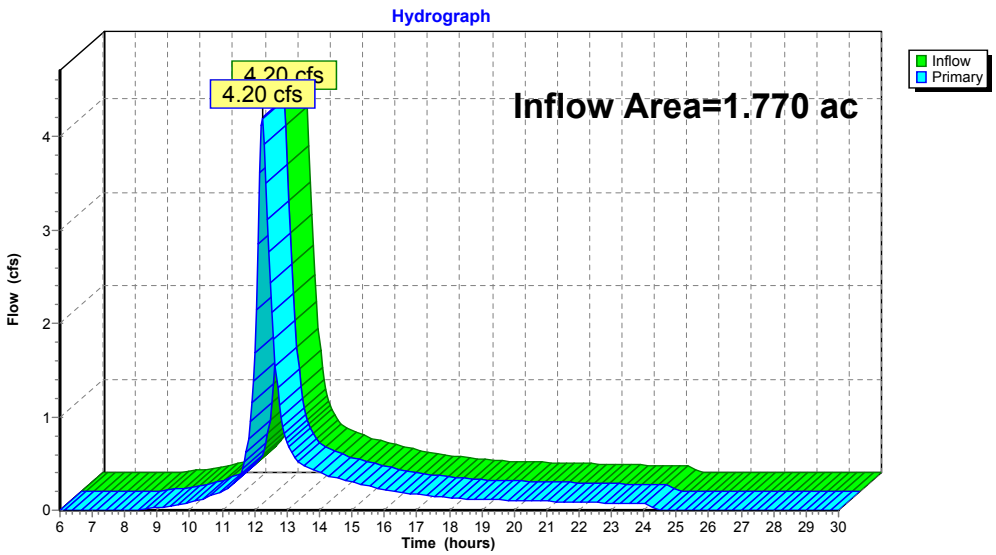


Summary for Link POA-C:

Inflow Area = 1.770 ac, 27.47% Impervious, Inflow Depth = 2.81" for 10-yr event
Inflow = 4.20 cfs @ 12.23 hrs, Volume= 0.415 af
Primary = 4.20 cfs @ 12.23 hrs, Volume= 0.415 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-C:

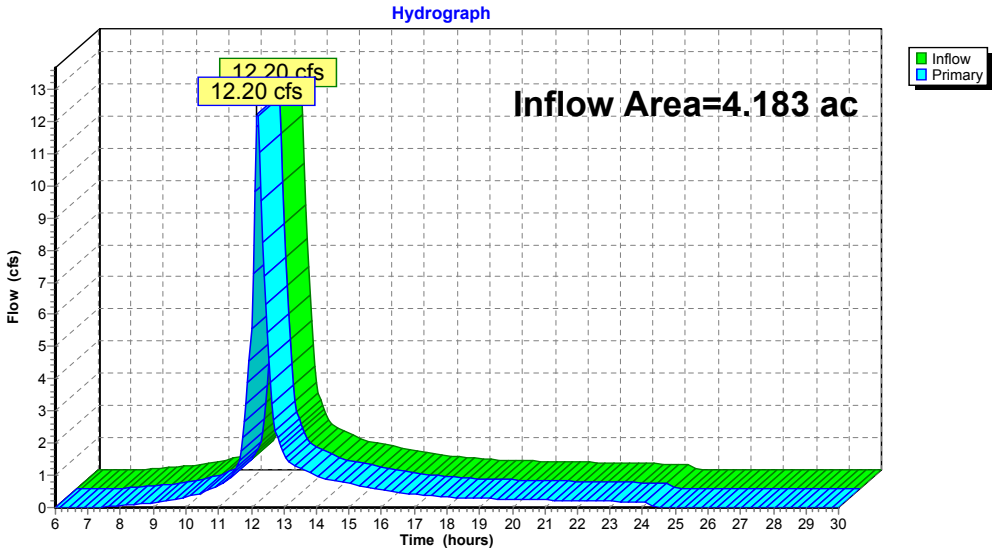


Summary for Link POA-D:

Inflow Area = 4.183 ac, 17.01% Impervious, Inflow Depth = 3.19" for 10-yr event
Inflow = 12.20 cfs @ 12.19 hrs, Volume= 1.111 af
Primary = 12.20 cfs @ 12.19 hrs, Volume= 1.111 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-D:



Summary for Subcatchment A:

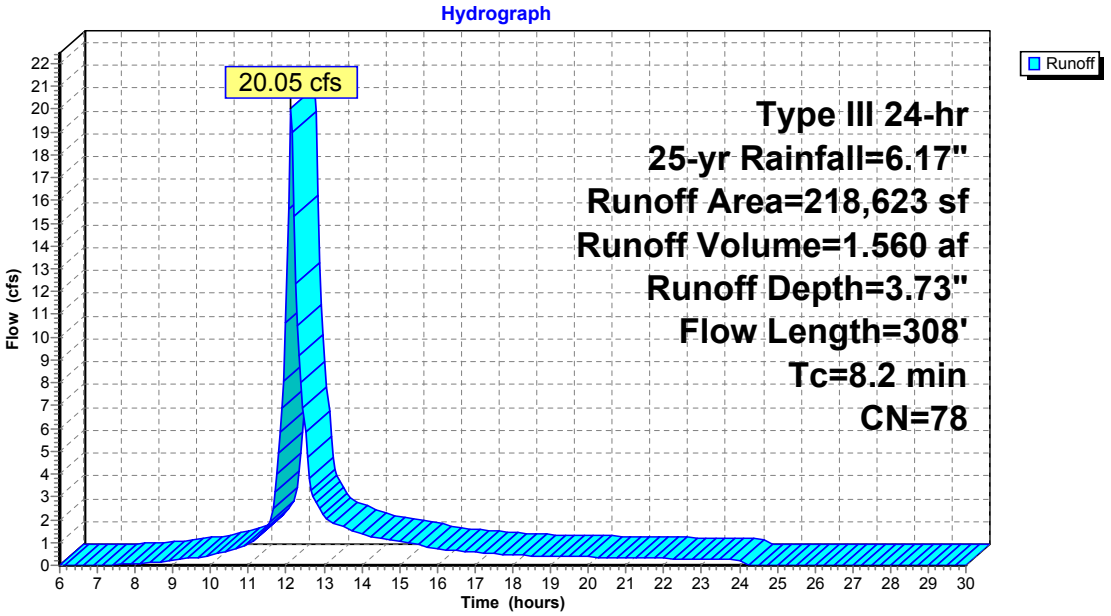
Runoff = 20.05 cfs @ 12.12 hrs, Volume= 1.560 af, Depth= 3.73"
Routed to Link POA-A :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
13,906	78	Meadow, non-grazed, HSG D
1,075	71	Meadow, non-grazed, HSG C
670	30	Meadow, non-grazed, HSG A
66,841	78	Meadow, non-grazed, HSG D
1,720	71	Meadow, non-grazed, HSG C
92,438	79	Woods, Fair, HSG D
33,692	73	Woods, Fair, HSG C
662	36	Woods, Fair, HSG A
6,666	91	Gravel roads, HSG D
953	89	Gravel roads, HSG C
218,623	78	Weighted Average
218,623		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.1	13	0.3462	4.12		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	8	0.1250	5.69		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	21	0.3095	3.89		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
1.1	166	0.2530	2.51		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
8.2	308	Total			

Subcatchment A:



Summary for Subcatchment B:

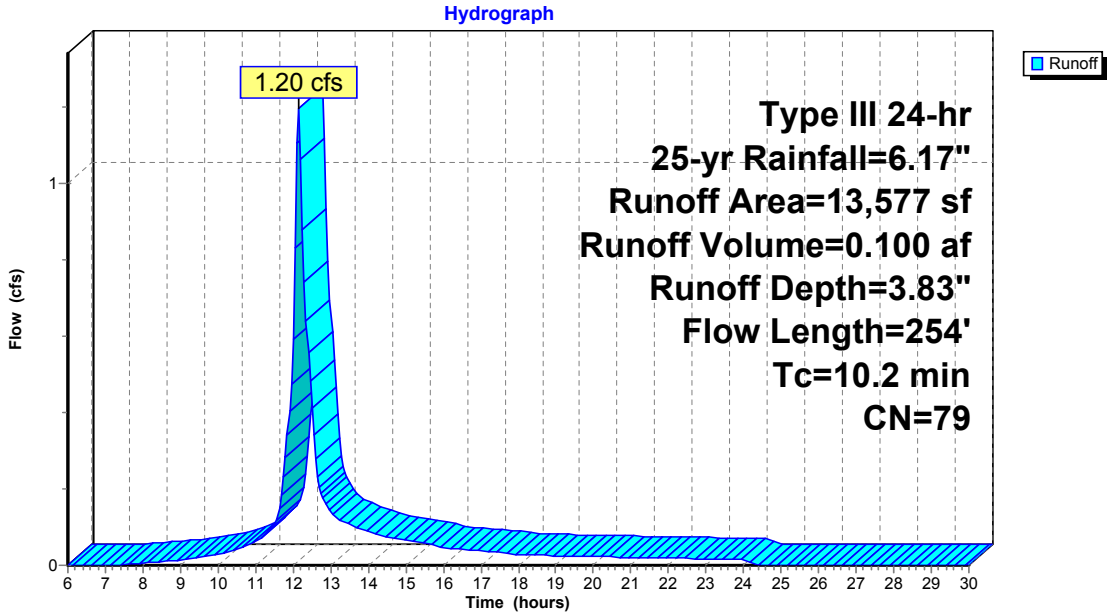
Runoff = 1.20 cfs @ 12.15 hrs, Volume= 0.100 af, Depth= 3.83"
Routed to Link POA-B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
3,577	78	Meadow, non-grazed, HSG D
8,878	78	Meadow, non-grazed, HSG D
1,122	91	Gravel roads, HSG D
13,577	79	Weighted Average
13,577		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0500	0.17		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	62	0.1290	2.51		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	51	0.3333	4.04		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	31	0.2903	3.77		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
10.2	254	Total			

Subcatchment B:



Summary for Subcatchment C:

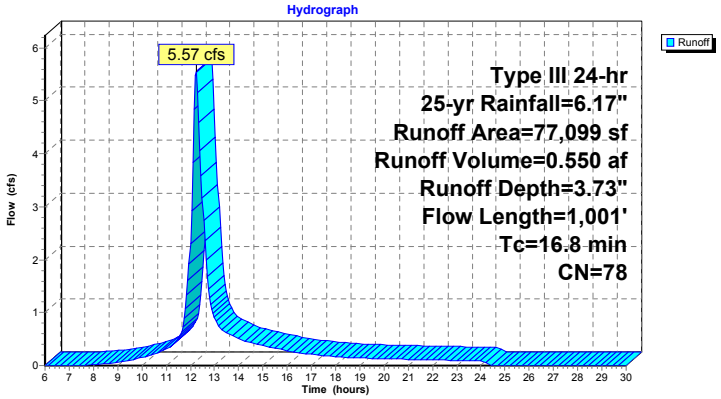
Runoff = 5.57 cfs @ 12.23 hrs, Volume= 0.550 af, Depth= 3.73"
Routed to Link POA-C :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
13,937	78	Meadow, non-grazed, HSG D
1,693	71	Meadow, non-grazed, HSG C
8,141	30	Meadow, non-grazed, HSG A
18,914	78	Meadow, non-grazed, HSG D
7,463	79	Woods, Fair, HSG D
2,986	73	Woods, Fair, HSG C
336	36	Woods, Fair, HSG A
2,453	91	Gravel roads, HSG D
8,413	98	Paved parking, HSG D
620	98	Paved parking, HSG B
12,143	98	Paved parking, HSG A
77,099	78	Weighted Average
55,923		72.53% Pervious Area
21,176		27.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0300	0.14		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
1.1	126	0.0794	1.97		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	80	0.3375	4.07		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
3.1	607	0.0264	3.30		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
0.3	44	0.1136	2.36		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	44	0.2500	2.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
16.8	1,001	Total			

Subcatchment C:



Summary for Subcatchment D:

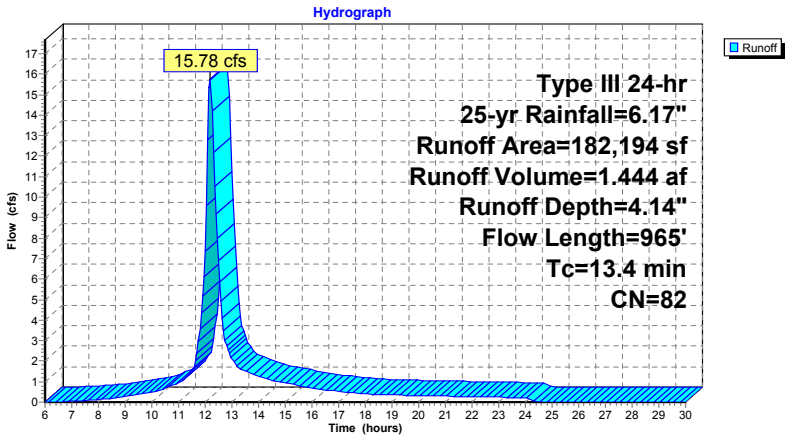
Runoff = 15.78 cfs @ 12.18 hrs, Volume= 1.444 af, Depth= 4.14"
Routed to Link POA-D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
38,983	78	Meadow, non-grazed, HSG D
0	71	Meadow, non-grazed, HSG C
1,146	30	Meadow, non-grazed, HSG A
80,797	78	Meadow, non-grazed, HSG D
489	71	Meadow, non-grazed, HSG C
10,224	79	Woods, Fair, HSG D
0	73	Woods, Fair, HSG C
8,558	91	Gravel roads, HSG D
940	89	Gravel roads, HSG C
10,060	76	Gravel roads, HSG A
27,271	98	Paved parking, HSG D
329	98	Paved parking, HSG C
3,397	98	Paved parking, HSG A
182,194	82	Weighted Average
151,197		82.99% Pervious Area
30,997		17.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0600	0.19		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	73	0.1781	2.95		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	64	0.4219	4.55		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
2.6	634	0.0394	4.03		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
1.3	94	0.0053	1.17		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
13.4	965	Total			

Subcatchment D:

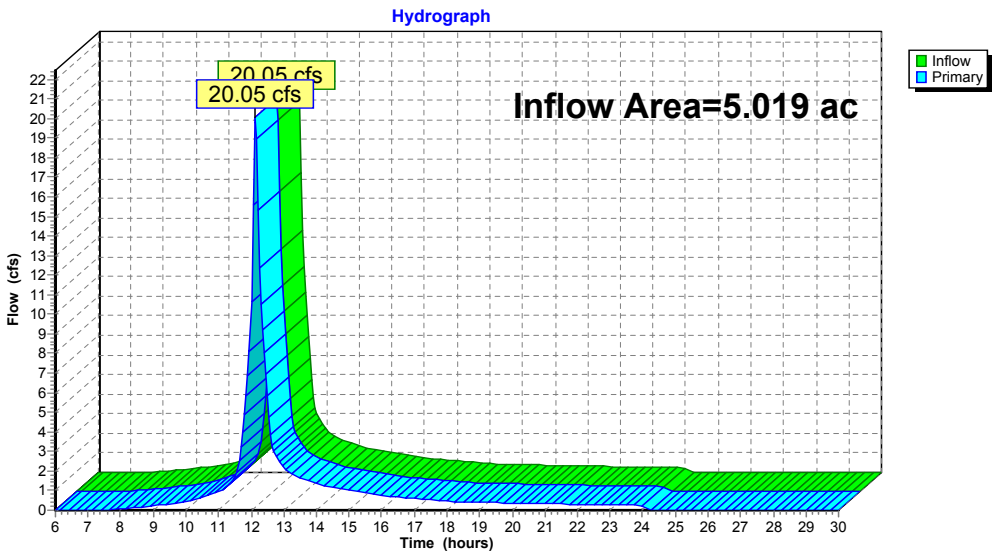


Summary for Link POA-A:

Inflow Area = 5.019 ac, 0.00% Impervious, Inflow Depth = 3.73" for 25-yr event
Inflow = 20.05 cfs @ 12.12 hrs, Volume= 1.560 af
Primary = 20.05 cfs @ 12.12 hrs, Volume= 1.560 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-A:

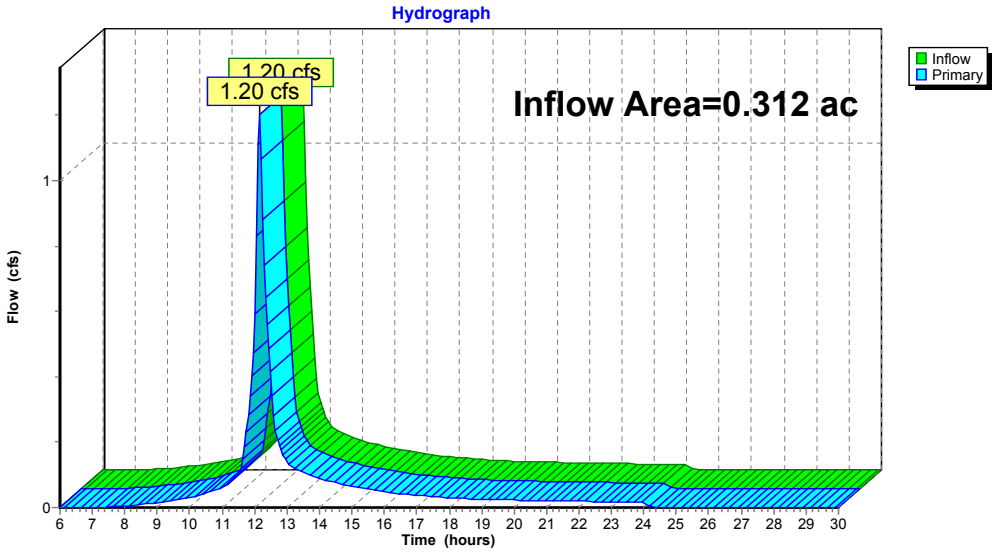


Summary for Link POA-B:

Inflow Area = 0.312 ac, 0.00% Impervious, Inflow Depth = 3.83" for 25-yr event
Inflow = 1.20 cfs @ 12.15 hrs, Volume= 0.100 af
Primary = 1.20 cfs @ 12.15 hrs, Volume= 0.100 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-B:

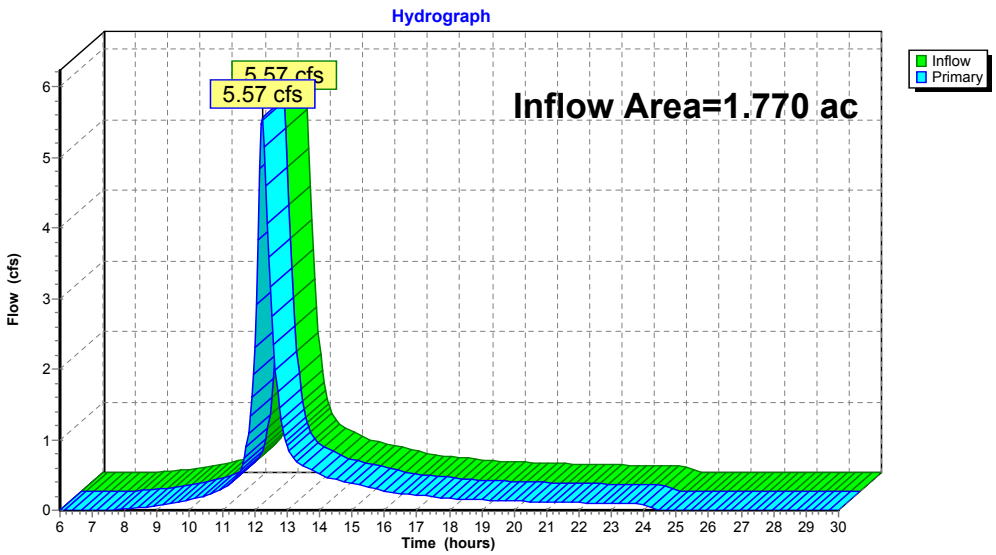


Summary for Link POA-C:

Inflow Area = 1.770 ac, 27.47% Impervious, Inflow Depth = 3.73" for 25-yr event
Inflow = 5.57 cfs @ 12.23 hrs, Volume= 0.550 af
Primary = 5.57 cfs @ 12.23 hrs, Volume= 0.550 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-C:

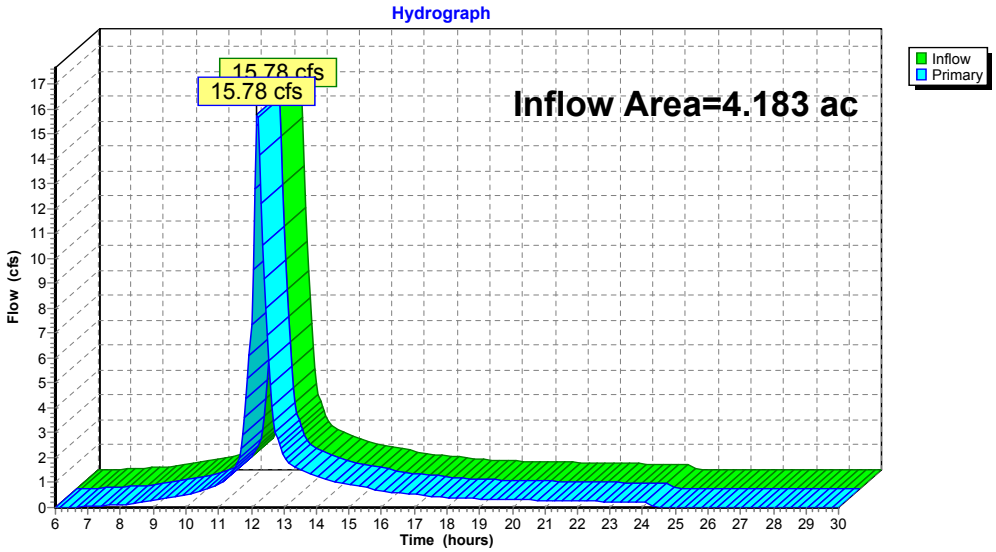


Summary for Link POA-D:

Inflow Area = 4.183 ac, 17.01% Impervious, Inflow Depth = 4.14" for 25-yr event
Inflow = 15.78 cfs @ 12.18 hrs, Volume= 1.444 af
Primary = 15.78 cfs @ 12.18 hrs, Volume= 1.444 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-D:



Summary for Subcatchment A:

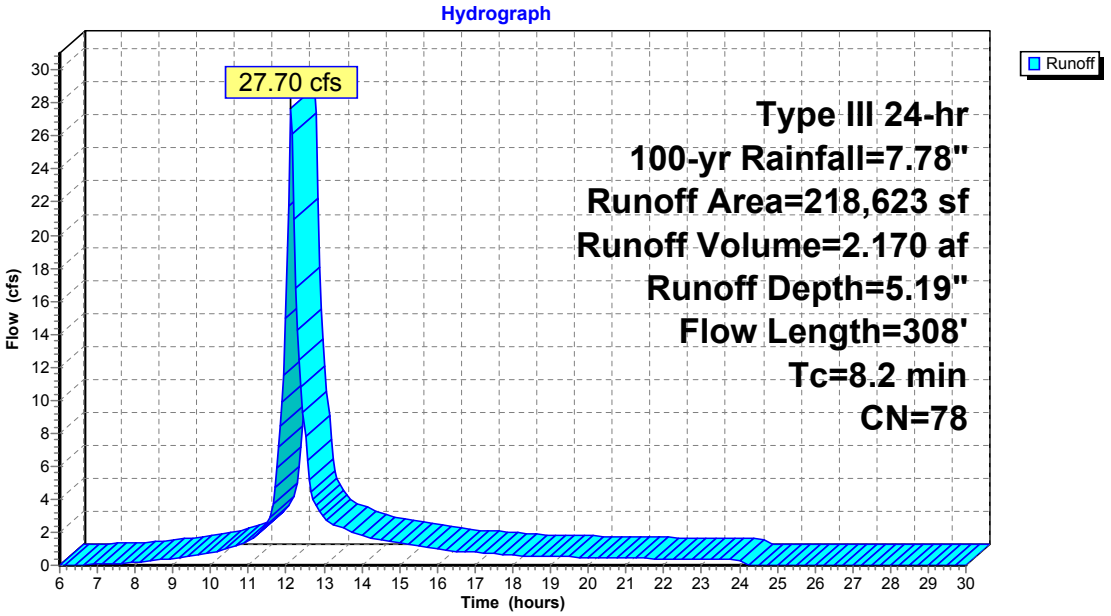
Runoff = 27.70 cfs @ 12.12 hrs, Volume= 2.170 af, Depth= 5.19"
Routed to Link POA-A :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=7.78"

Area (sf)	CN	Description
13,906	78	Meadow, non-grazed, HSG D
1,075	71	Meadow, non-grazed, HSG C
670	30	Meadow, non-grazed, HSG A
66,841	78	Meadow, non-grazed, HSG D
1,720	71	Meadow, non-grazed, HSG C
92,438	79	Woods, Fair, HSG D
33,692	73	Woods, Fair, HSG C
662	36	Woods, Fair, HSG A
6,666	91	Gravel roads, HSG D
953	89	Gravel roads, HSG C
218,623	78	Weighted Average
218,623		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.1	13	0.3462	4.12		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	8	0.1250	5.69		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	21	0.3095	3.89		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
1.1	166	0.2530	2.51		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
8.2	308	Total			

Subcatchment A:



Summary for Subcatchment B:

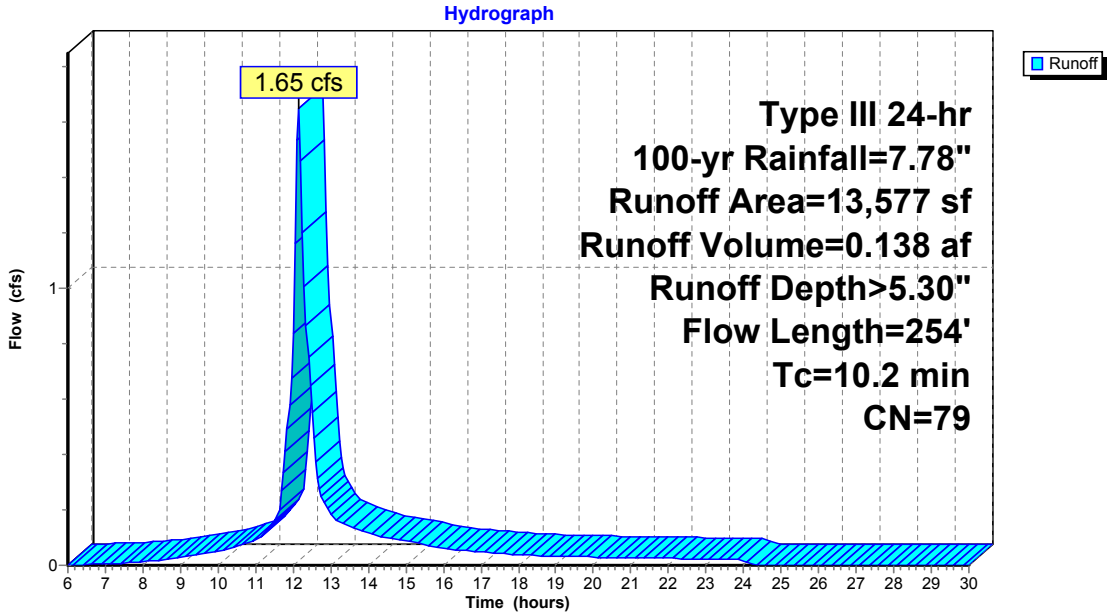
Runoff = 1.65 cfs @ 12.14 hrs, Volume= 0.138 af, Depth> 5.30"
Routed to Link POA-B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=7.78"

Area (sf)	CN	Description
3,577	78	Meadow, non-grazed, HSG D
8,878	78	Meadow, non-grazed, HSG D
1,122	91	Gravel roads, HSG D
13,577	79	Weighted Average
13,577		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0500	0.17		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	62	0.1290	2.51		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	51	0.3333	4.04		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	31	0.2903	3.77		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
10.2	254	Total			

Subcatchment B:



Summary for Subcatchment C:

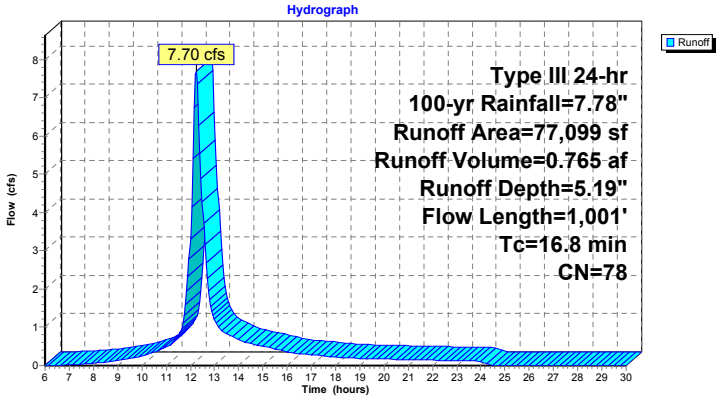
Runoff = 7.70 cfs @ 12.23 hrs, Volume= 0.765 af, Depth= 5.19"
Routed to Link POA-C :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=7.78"

Area (sf)	CN	Description
13,937	78	Meadow, non-grazed, HSG D
1,693	71	Meadow, non-grazed, HSG C
8,141	30	Meadow, non-grazed, HSG A
18,914	78	Meadow, non-grazed, HSG D
7,463	79	Woods, Fair, HSG D
2,986	73	Woods, Fair, HSG C
336	36	Woods, Fair, HSG A
2,453	91	Gravel roads, HSG D
8,413	98	Paved parking, HSG D
620	98	Paved parking, HSG B
12,143	98	Paved parking, HSG A
77,099	78	Weighted Average
55,923		72.53% Pervious Area
21,176		27.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0300	0.14		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
1.1	126	0.0794	1.97		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	80	0.3375	4.07		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
3.1	607	0.0264	3.30		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
0.3	44	0.1136	2.36		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	44	0.2500	2.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
16.8	1,001	Total			

Subcatchment C:



Summary for Subcatchment D:

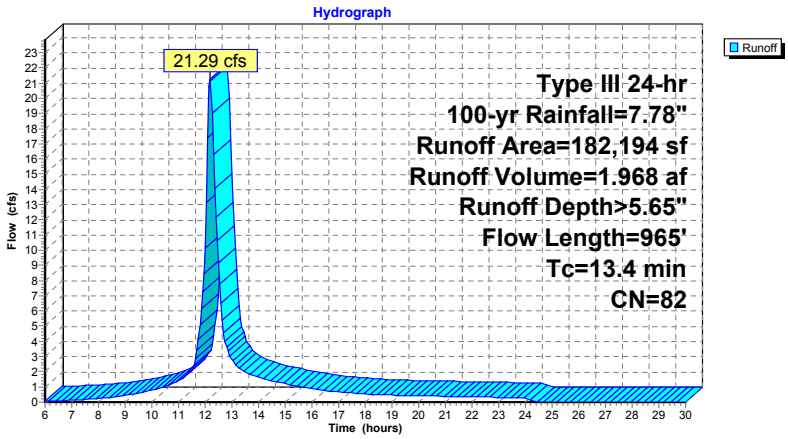
Runoff = 21.29 cfs @ 12.18 hrs, Volume= 1.968 af, Depth> 5.65"
Routed to Link POA-D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=7.78"

Area (sf)	CN	Description
38,983	78	Meadow, non-grazed, HSG D
0	71	Meadow, non-grazed, HSG C
1,146	30	Meadow, non-grazed, HSG A
80,797	78	Meadow, non-grazed, HSG D
489	71	Meadow, non-grazed, HSG C
10,224	79	Woods, Fair, HSG D
0	73	Woods, Fair, HSG C
8,558	91	Gravel roads, HSG D
940	89	Gravel roads, HSG C
10,060	76	Gravel roads, HSG A
27,271	98	Paved parking, HSG D
329	98	Paved parking, HSG C
3,397	98	Paved parking, HSG A
182,194	82	Weighted Average
151,197		82.99% Pervious Area
30,997		17.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0600	0.19		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	73	0.1781	2.95		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	64	0.4219	4.55		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
2.6	634	0.0394	4.03		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
1.3	94	0.0053	1.17		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
13.4	965	Total			

Subcatchment D:

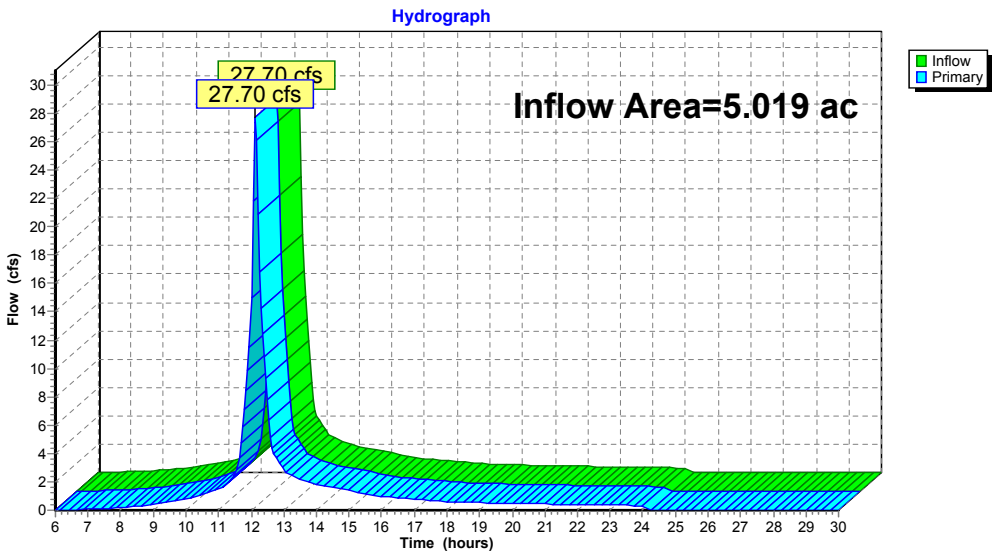


Summary for Link POA-A:

Inflow Area = 5.019 ac, 0.00% Impervious, Inflow Depth = 5.19" for 100-yr event
Inflow = 27.70 cfs @ 12.12 hrs, Volume= 2.170 af
Primary = 27.70 cfs @ 12.12 hrs, Volume= 2.170 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-A:

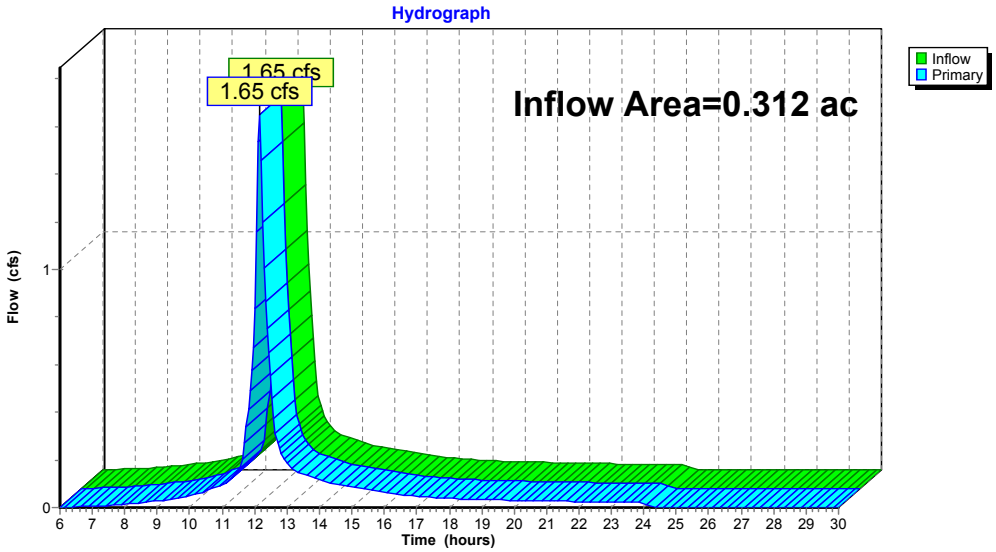


Summary for Link POA-B:

Inflow Area = 0.312 ac, 0.00% Impervious, Inflow Depth > 5.30" for 100-yr event
Inflow = 1.65 cfs @ 12.14 hrs, Volume= 0.138 af
Primary = 1.65 cfs @ 12.14 hrs, Volume= 0.138 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-B:

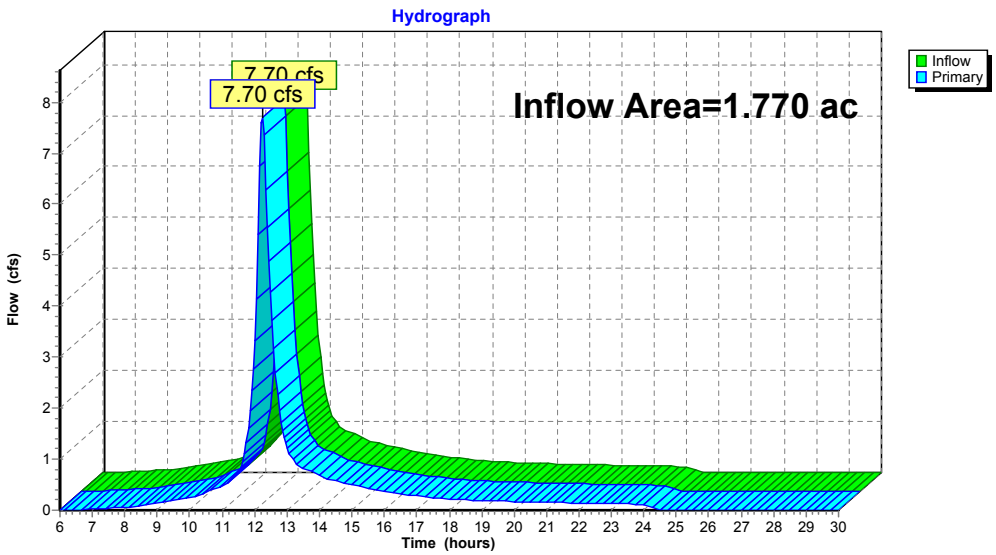


Summary for Link POA-C:

Inflow Area = 1.770 ac, 27.47% Impervious, Inflow Depth = 5.19" for 100-yr event
Inflow = 7.70 cfs @ 12.23 hrs, Volume= 0.765 af
Primary = 7.70 cfs @ 12.23 hrs, Volume= 0.765 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-C:

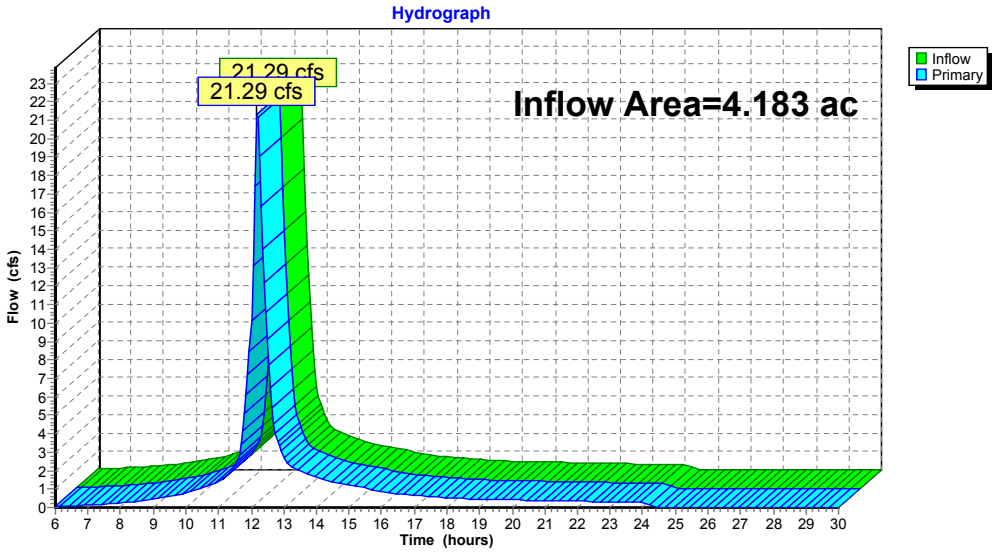


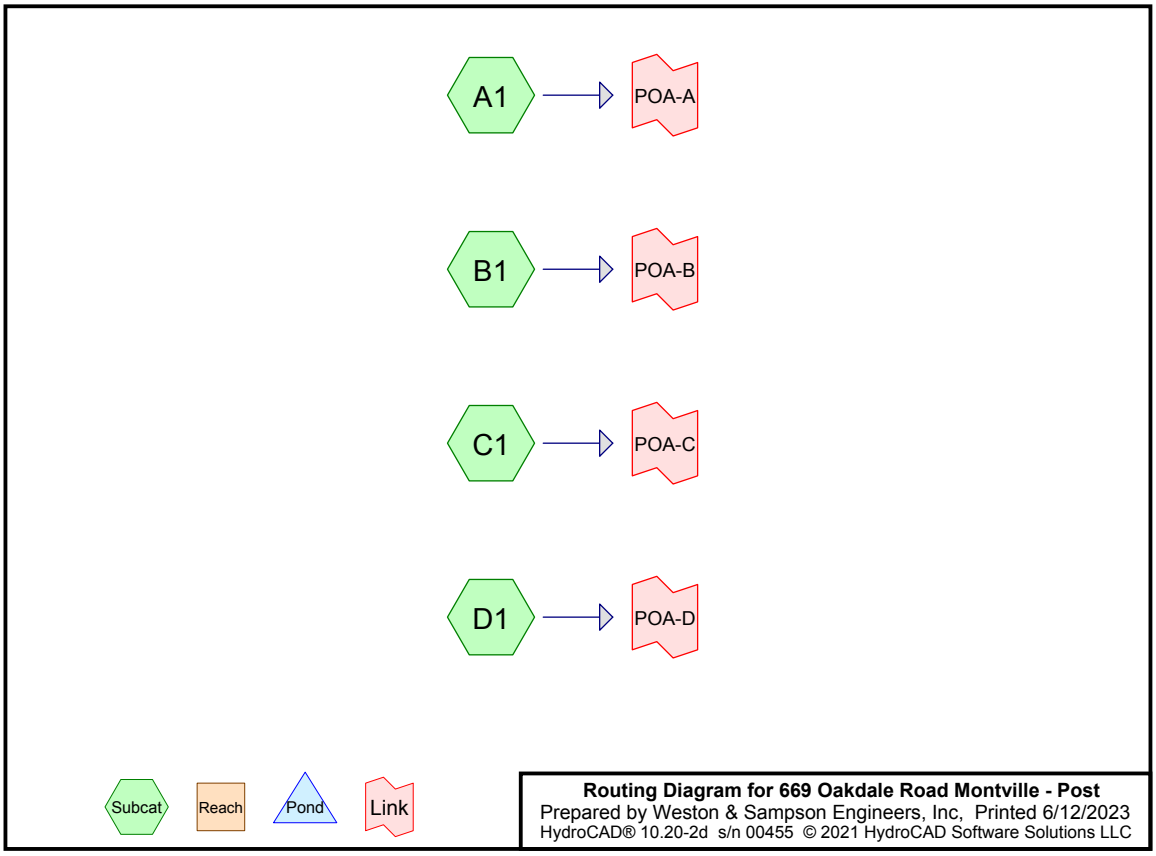
Summary for Link POA-D:

Inflow Area = 4.183 ac, 17.01% Impervious, Inflow Depth > 5.65" for 100-yr event
Inflow = 21.29 cfs @ 12.18 hrs, Volume= 1.968 af
Primary = 21.29 cfs @ 12.18 hrs, Volume= 1.968 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-D:





Routing Diagram for 669 Oakdale Road Montville - Post
Prepared by Weston & Sampson Engineers, Inc, Printed 6/12/2023
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Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-yr	Type III 24-hr		Default	24.00	1	3.45	2
2	10-yr	Type III 24-hr		Default	24.00	1	5.12	2
3	25-yr	Type III 24-hr		Default	24.00	1	6.17	2
4	100-yr	Type III 24-hr		Default	24.00	1	7.78	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.231	76	Gravel roads, HSG A (D1)
0.043	89	Gravel roads, HSG C (A1, D1)
0.446	91	Gravel roads, HSG D (A1, B1, C1, D1)
0.229	30	Meadow, non-grazed, HSG A (A1, C1, D1)
0.114	71	Meadow, non-grazed, HSG C (A1, C1, D1)
5.556	78	Meadow, non-grazed, HSG D (A1, B1, C1, D1)
0.357	98	Paved parking, HSG A (C1, D1)
0.014	98	Paved parking, HSG B (C1)
0.008	98	Paved parking, HSG C (D1)
0.832	98	Paved parking, HSG D (C1, D1)
0.092	98	Unconnected pavement, HSG D (A1, B1, C1, D1)
0.023	36	Woods, Fair, HSG A (A1, C1)
0.842	73	Woods, Fair, HSG C (A1, C1)
2.496	79	Woods, Fair, HSG D (A1, C1, D1)
11.283	**80**	**TOTAL AREA**

Summary for Subcatchment A1:

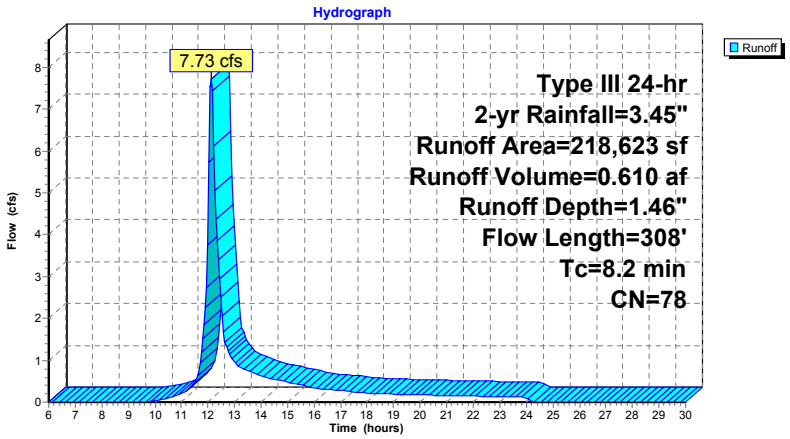
Runoff = 7.73 cfs @ 12.12 hrs, Volume= 0.610 af, Depth= 1.46"
Routed to Link POA-A :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
54,384	78	Meadow, non-grazed, HSG D
1,075	71	Meadow, non-grazed, HSG C
670	30	Meadow, non-grazed, HSG A
24,778	78	Meadow, non-grazed, HSG D
1,720	71	Meadow, non-grazed, HSG C
91,474	79	Woods, Fair, HSG D
33,692	73	Woods, Fair, HSG C
662	36	Woods, Fair, HSG A
7,640	91	Gravel roads, HSG D
953	89	Gravel roads, HSG C
1,575	98	Unconnected pavement, HSG D
218,623	78	Weighted Average
217,048		99.28% Pervious Area
1,575		0.72% Impervious Area
1,575		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.1	13	0.3462	4.12		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	8	0.1250	5.69		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	21	0.3095	3.89		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
1.1	166	0.2530	2.51		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
8.2	308	Total			

Subcatchment A1:



Summary for Subcatchment B1:

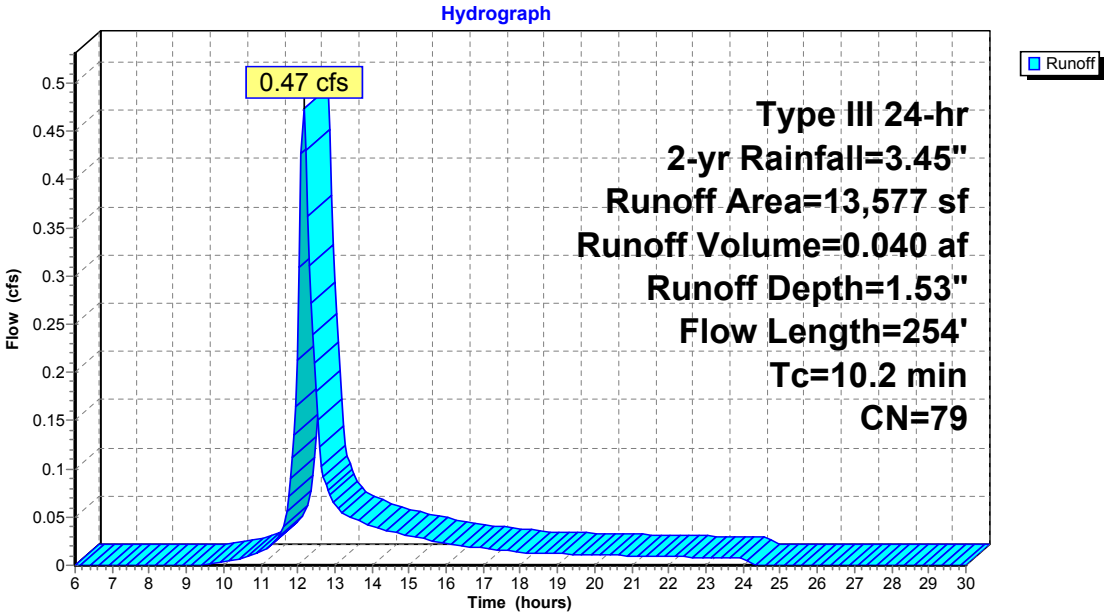
Runoff = 0.47 cfs @ 12.15 hrs, Volume= 0.040 af, Depth= 1.53"
Routed to Link POA-B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
6,112	78	Meadow, non-grazed, HSG D
6,218	78	Meadow, non-grazed, HSG D
1,112	91	Gravel roads, HSG D
135	98	Unconnected pavement, HSG D
13,577	79	Weighted Average
13,442		99.01% Pervious Area
135		0.99% Impervious Area
135		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0500	0.17		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	62	0.1290	2.51		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	51	0.3333	4.04		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	31	0.2903	3.77		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
10.2	254	Total			

Subcatchment B1:



Summary for Subcatchment C1:

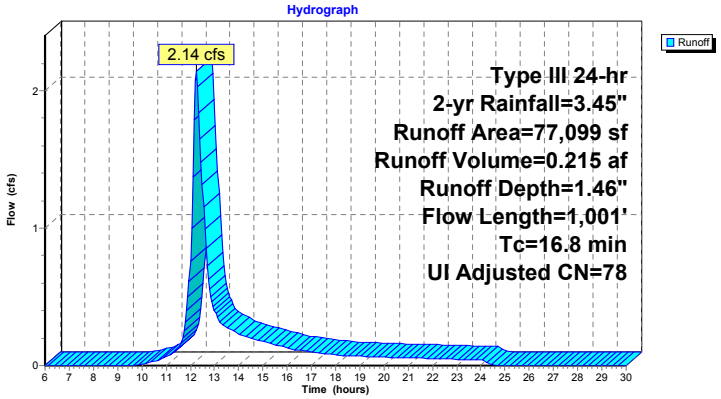
Runoff = 2.14 cfs @ 12.24 hrs, Volume= 0.215 af, Depth= 1.46"
Routed to Link POA-C :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Adj	Description
25,170	78		Meadow, non-grazed, HSG D
1,693	71		Meadow, non-grazed, HSG C
8,141	30		Meadow, non-grazed, HSG A
7,191	78		Meadow, non-grazed, HSG D
7,463	79		Woods, Fair, HSG D
2,986	73		Woods, Fair, HSG C
336	36		Woods, Fair, HSG A
2,358	91		Gravel roads, HSG D
8,413	98		Paved parking, HSG D
620	98		Paved parking, HSG B
12,143	98		Paved parking, HSG A
585	98		Unconnected pavement, HSG D
77,099	79	78	Weighted Average, UI Adjusted
55,338			71.78% Pervious Area
21,761			28.22% Impervious Area
585			2.69% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0300	0.14		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
1.1	126	0.0794	1.97		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	80	0.3375	4.07		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
3.1	607	0.0264	3.30		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
0.3	44	0.1136	2.36		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	44	0.2500	2.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
16.8	1,001	Total			

Subcatchment C1:



Summary for Subcatchment D1:

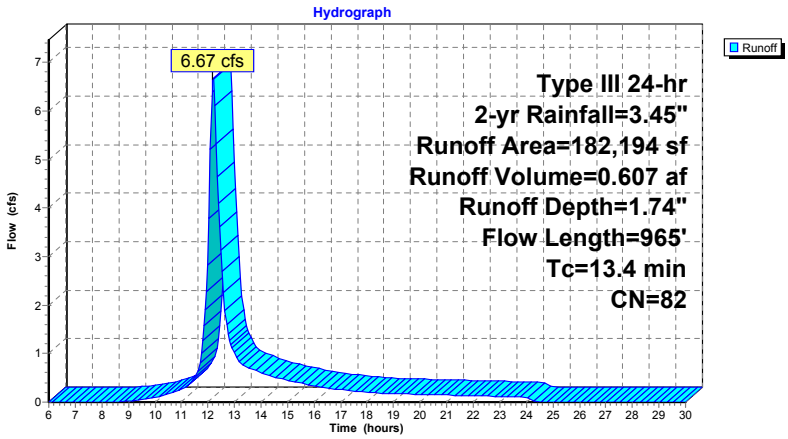
Runoff = 6.67 cfs @ 12.19 hrs, Volume= 0.607 af, Depth= 1.74"
Routed to Link POA-D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
80,169	78	Meadow, non-grazed, HSG D
0	71	Meadow, non-grazed, HSG C
1,146	30	Meadow, non-grazed, HSG A
38,003	78	Meadow, non-grazed, HSG D
489	71	Meadow, non-grazed, HSG C
9,808	79	Woods, Fair, HSG D
0	73	Woods, Fair, HSG C
8,312	91	Gravel roads, HSG D
940	89	Gravel roads, HSG C
10,060	76	Gravel roads, HSG A
27,831	98	Paved parking, HSG D
329	98	Paved parking, HSG C
3,397	98	Paved parking, HSG A
1,710	98	Unconnected pavement, HSG D
182,194	82	Weighted Average
148,927		81.74% Pervious Area
33,267		18.26% Impervious Area
1,710		5.14% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0600	0.19		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	73	0.1781	2.95		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	64	0.4219	4.55		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
2.6	634	0.0394	4.03		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
1.3	94	0.0053	1.17		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
13.4	965	Total			

Subcatchment D1:

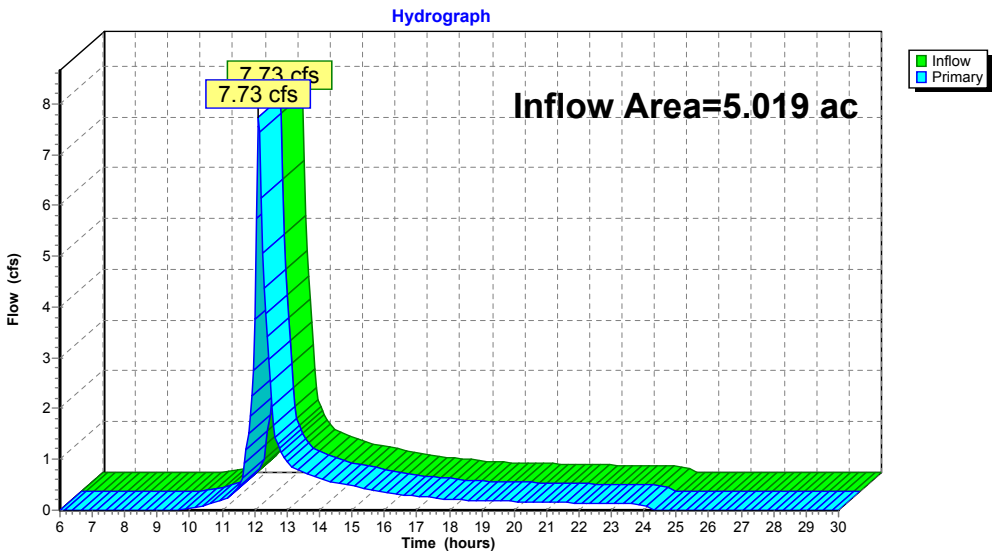


Summary for Link POA-A:

Inflow Area = 5.019 ac, 0.72% Impervious, Inflow Depth = 1.46" for 2-yr event
Inflow = 7.73 cfs @ 12.12 hrs, Volume= 0.610 af
Primary = 7.73 cfs @ 12.12 hrs, Volume= 0.610 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-A:

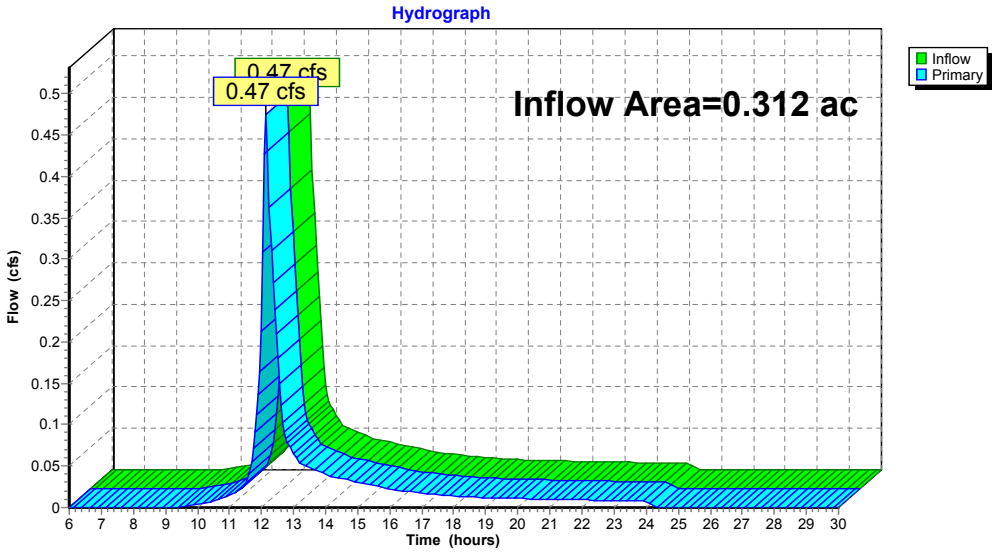


Summary for Link POA-B:

Inflow Area = 0.312 ac, 0.99% Impervious, Inflow Depth = 1.53" for 2-yr event
Inflow = 0.47 cfs @ 12.15 hrs, Volume= 0.040 af
Primary = 0.47 cfs @ 12.15 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-B:

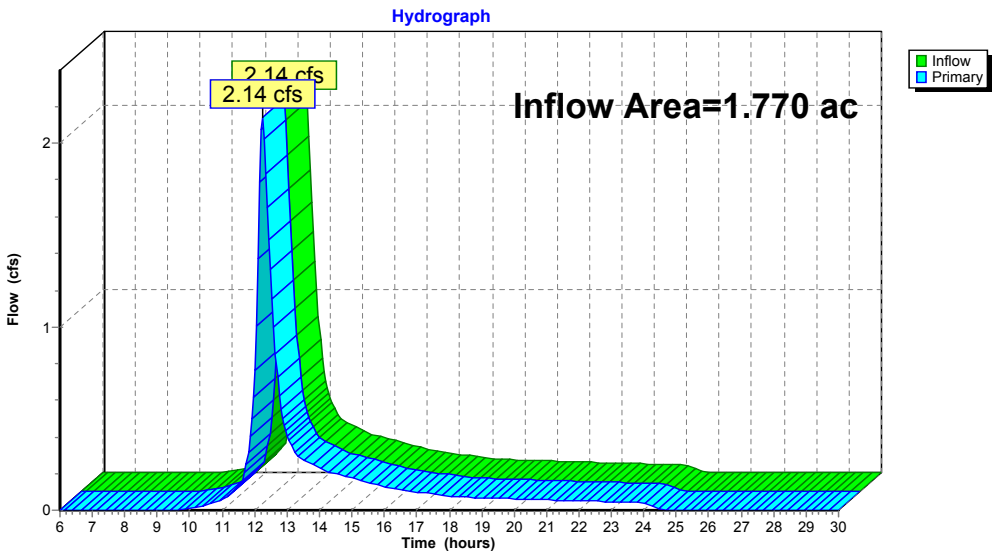


Summary for Link POA-C:

Inflow Area = 1.770 ac, 28.22% Impervious, Inflow Depth = 1.46" for 2-yr event
Inflow = 2.14 cfs @ 12.24 hrs, Volume= 0.215 af
Primary = 2.14 cfs @ 12.24 hrs, Volume= 0.215 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-C:

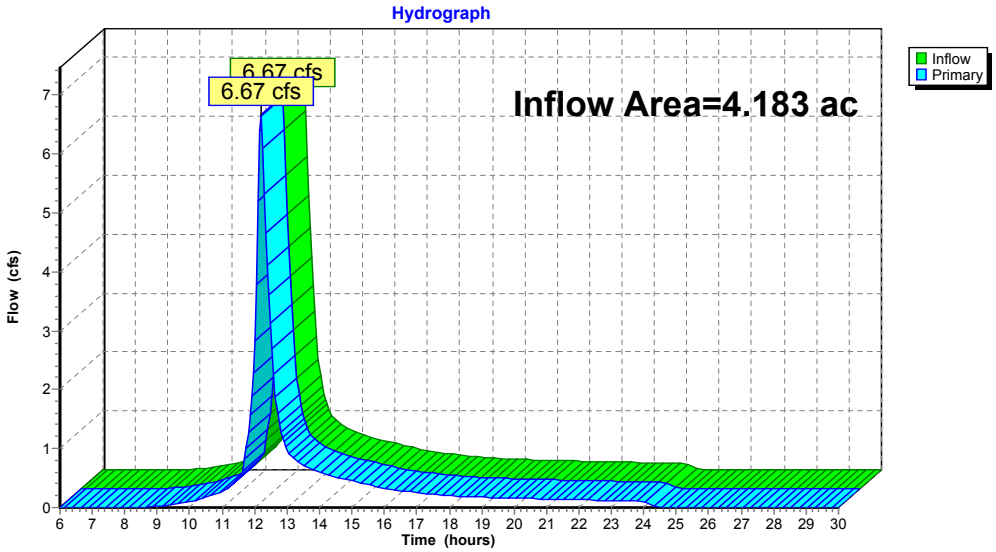


Summary for Link POA-D:

Inflow Area = 4.183 ac, 18.26% Impervious, Inflow Depth = 1.74" for 2-yr event
Inflow = 6.67 cfs @ 12.19 hrs, Volume= 0.607 af
Primary = 6.67 cfs @ 12.19 hrs, Volume= 0.607 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-D:



Summary for Subcatchment A1:

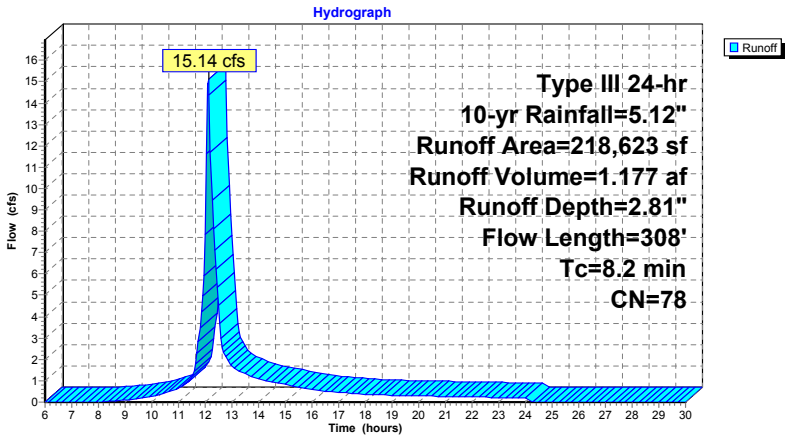
Runoff = 15.14 cfs @ 12.12 hrs, Volume= 1.177 af, Depth= 2.81"
Routed to Link POA-A :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.12"

Area (sf)	CN	Description
54,384	78	Meadow, non-grazed, HSG D
1,075	71	Meadow, non-grazed, HSG C
670	30	Meadow, non-grazed, HSG A
24,778	78	Meadow, non-grazed, HSG D
1,720	71	Meadow, non-grazed, HSG C
91,474	79	Woods, Fair, HSG D
33,692	73	Woods, Fair, HSG C
662	36	Woods, Fair, HSG A
7,640	91	Gravel roads, HSG D
953	89	Gravel roads, HSG C
1,575	98	Unconnected pavement, HSG D
218,623	78	Weighted Average
217,048		99.28% Pervious Area
1,575		0.72% Impervious Area
1,575		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.1	13	0.3462	4.12		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	8	0.1250	5.69		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	21	0.3095	3.89		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
1.1	166	0.2530	2.51		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
8.2	308	Total			

Subcatchment A1:



Summary for Subcatchment B1:

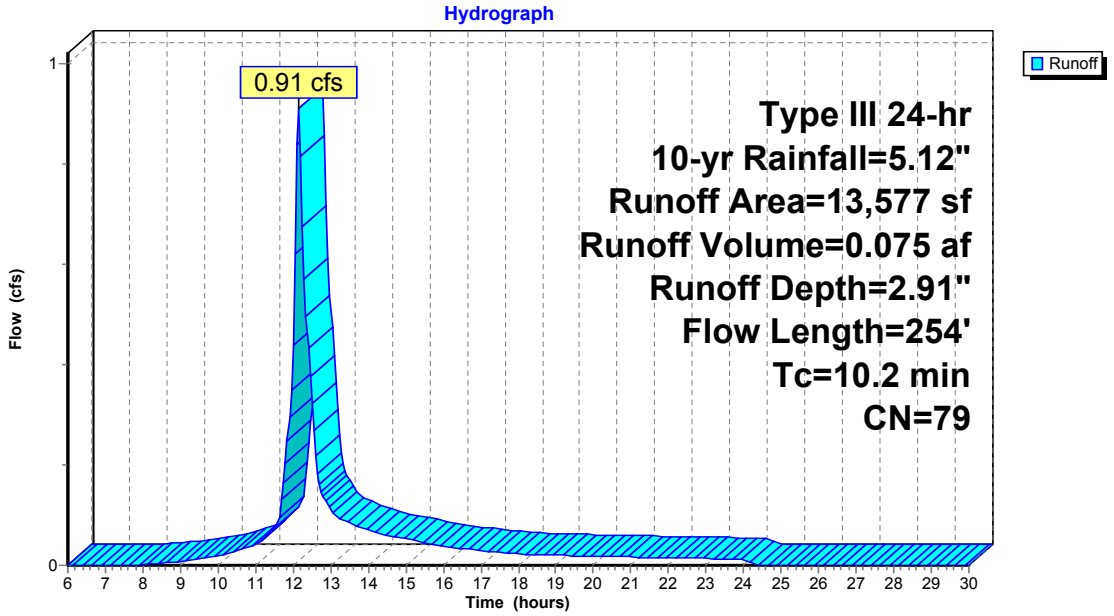
Runoff = 0.91 cfs @ 12.15 hrs, Volume= 0.075 af, Depth= 2.91"
Routed to Link POA-B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.12"

Area (sf)	CN	Description
6,112	78	Meadow, non-grazed, HSG D
6,218	78	Meadow, non-grazed, HSG D
1,112	91	Gravel roads, HSG D
135	98	Unconnected pavement, HSG D
13,577	79	Weighted Average
13,442		99.01% Pervious Area
135		0.99% Impervious Area
135		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0500	0.17		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	62	0.1290	2.51		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	51	0.3333	4.04		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	31	0.2903	3.77		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
10.2	254	Total			

Subcatchment B1:



Summary for Subcatchment C1:

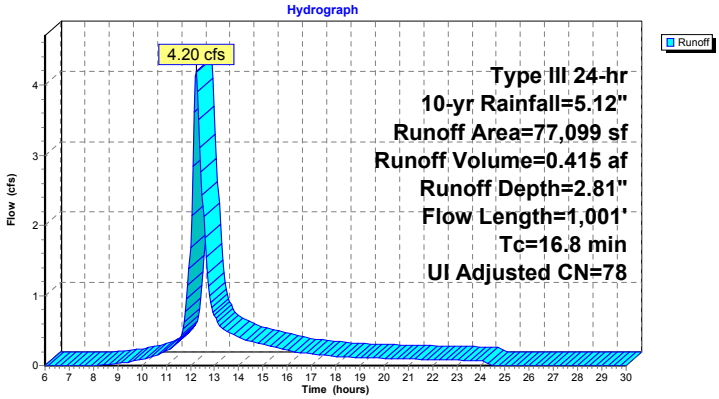
Runoff = 4.20 cfs @ 12.23 hrs, Volume= 0.415 af, Depth= 2.81"
Routed to Link POA-C :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.12"

Area (sf)	CN	Adj	Description
25,170	78		Meadow, non-grazed, HSG D
1,693	71		Meadow, non-grazed, HSG C
8,141	30		Meadow, non-grazed, HSG A
7,191	78		Meadow, non-grazed, HSG D
7,463	79		Woods, Fair, HSG D
2,986	73		Woods, Fair, HSG C
336	36		Woods, Fair, HSG A
2,358	91		Gravel roads, HSG D
8,413	98		Paved parking, HSG D
620	98		Paved parking, HSG B
12,143	98		Paved parking, HSG A
585	98		Unconnected pavement, HSG D
77,099	79	78	Weighted Average, UI Adjusted
55,338			71.78% Pervious Area
21,761			28.22% Impervious Area
585			2.69% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0300	0.14		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
1.1	126	0.0794	1.97		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	80	0.3375	4.07		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
3.1	607	0.0264	3.30		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
0.3	44	0.1136	2.36		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	44	0.2500	2.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
16.8	1,001	Total			

Subcatchment C1:



Summary for Subcatchment D1:

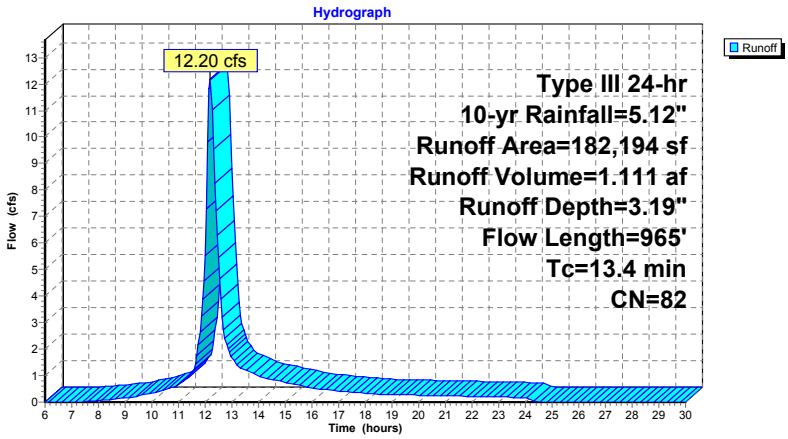
Runoff = 12.20 cfs @ 12.19 hrs, Volume= 1.111 af, Depth= 3.19"
Routed to Link POA-D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.12"

Area (sf)	CN	Description
80,169	78	Meadow, non-grazed, HSG D
0	71	Meadow, non-grazed, HSG C
1,146	30	Meadow, non-grazed, HSG A
38,003	78	Meadow, non-grazed, HSG D
489	71	Meadow, non-grazed, HSG C
9,808	79	Woods, Fair, HSG D
0	73	Woods, Fair, HSG C
8,312	91	Gravel roads, HSG D
940	89	Gravel roads, HSG C
10,060	76	Gravel roads, HSG A
27,831	98	Paved parking, HSG D
329	98	Paved parking, HSG C
3,397	98	Paved parking, HSG A
1,710	98	Unconnected pavement, HSG D
182,194	82	Weighted Average
148,927		81.74% Pervious Area
33,267		18.26% Impervious Area
1,710		5.14% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0600	0.19		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	73	0.1781	2.95		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	64	0.4219	4.55		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
2.6	634	0.0394	4.03		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
1.3	94	0.0053	1.17		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
13.4	965	Total			

Subcatchment D1:

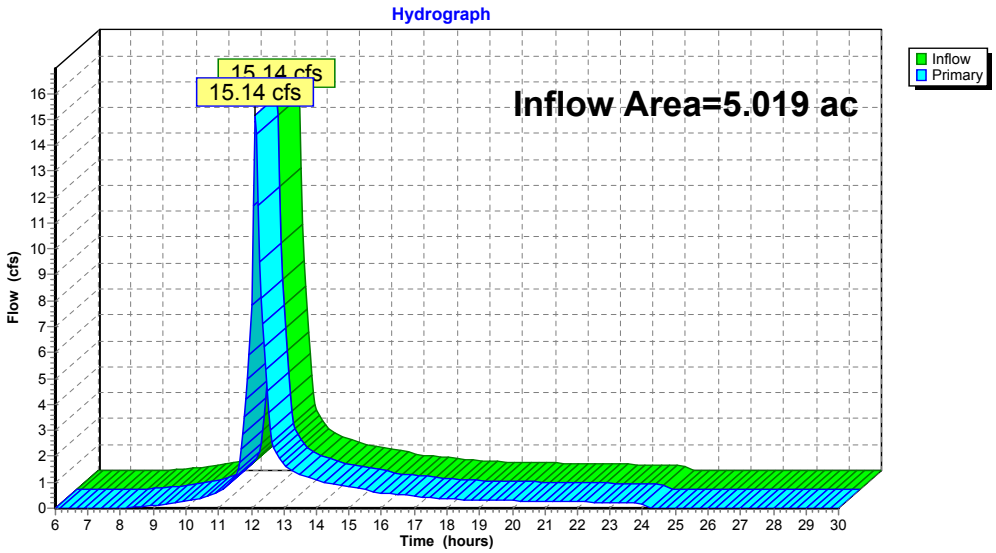


Summary for Link POA-A:

Inflow Area = 5.019 ac, 0.72% Impervious, Inflow Depth = 2.81" for 10-yr event
Inflow = 15.14 cfs @ 12.12 hrs, Volume= 1.177 af
Primary = 15.14 cfs @ 12.12 hrs, Volume= 1.177 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-A:

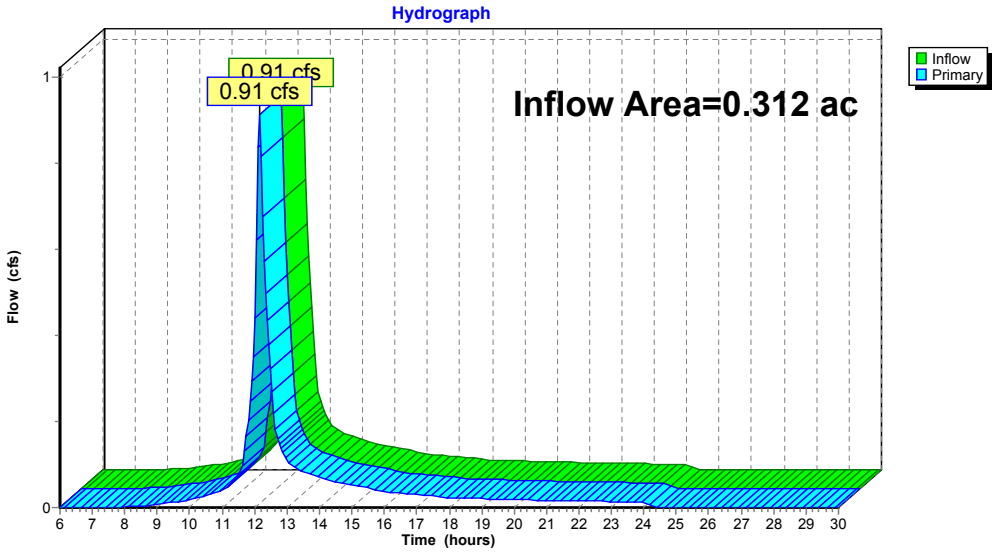


Summary for Link POA-B:

Inflow Area = 0.312 ac, 0.99% Impervious, Inflow Depth = 2.91" for 10-yr event
Inflow = 0.91 cfs @ 12.15 hrs, Volume= 0.075 af
Primary = 0.91 cfs @ 12.15 hrs, Volume= 0.075 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-B:

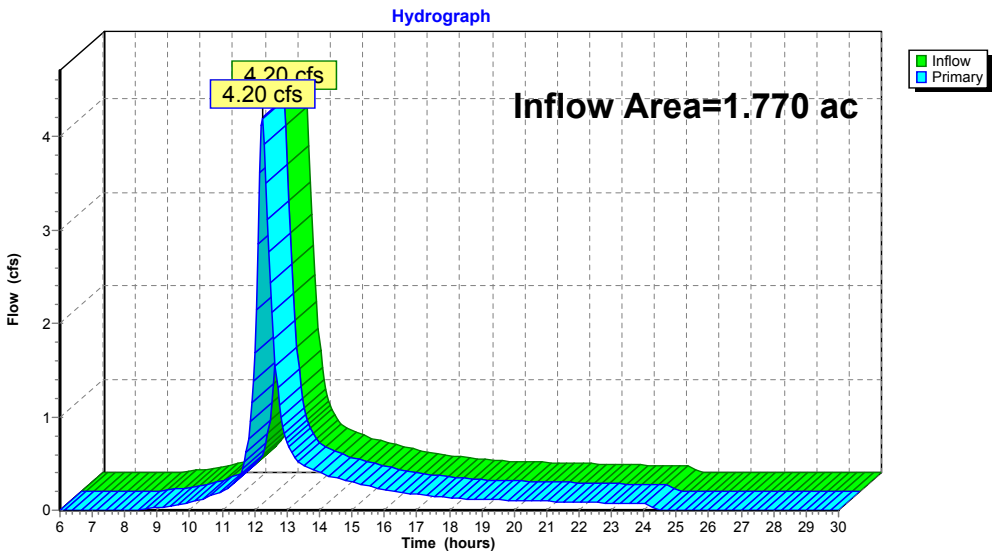


Summary for Link POA-C:

Inflow Area = 1.770 ac, 28.22% Impervious, Inflow Depth = 2.81" for 10-yr event
Inflow = 4.20 cfs @ 12.23 hrs, Volume= 0.415 af
Primary = 4.20 cfs @ 12.23 hrs, Volume= 0.415 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-C:

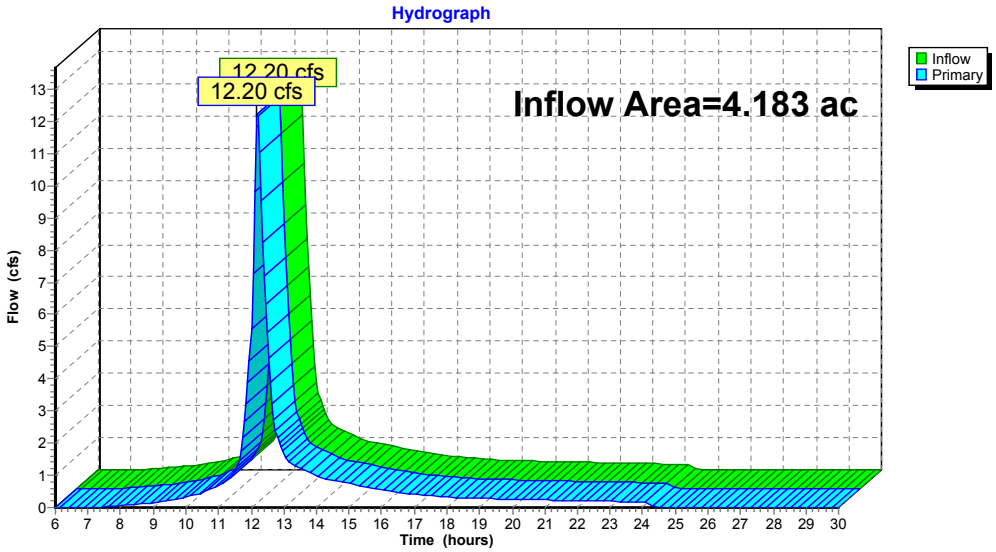


Summary for Link POA-D:

Inflow Area = 4.183 ac, 18.26% Impervious, Inflow Depth = 3.19" for 10-yr event
Inflow = 12.20 cfs @ 12.19 hrs, Volume= 1.111 af
Primary = 12.20 cfs @ 12.19 hrs, Volume= 1.111 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-D:



Summary for Subcatchment A1:

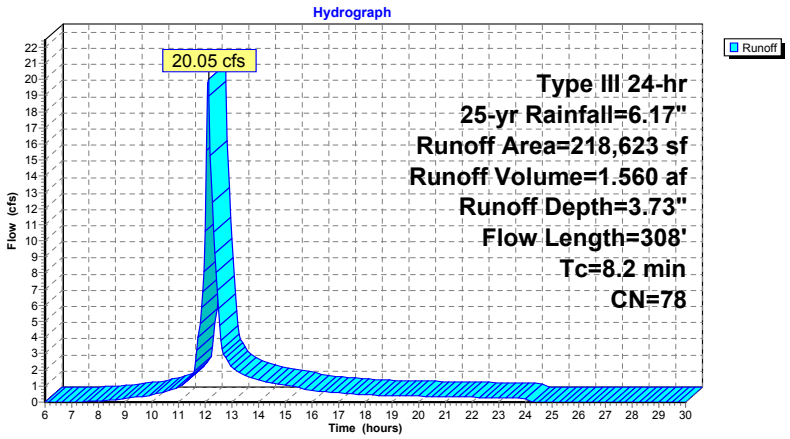
Runoff = 20.05 cfs @ 12.12 hrs, Volume= 1.560 af, Depth= 3.73"
Routed to Link POA-A :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
54,384	78	Meadow, non-grazed, HSG D
1,075	71	Meadow, non-grazed, HSG C
670	30	Meadow, non-grazed, HSG A
24,778	78	Meadow, non-grazed, HSG D
1,720	71	Meadow, non-grazed, HSG C
91,474	79	Woods, Fair, HSG D
33,692	73	Woods, Fair, HSG C
662	36	Woods, Fair, HSG A
7,640	91	Gravel roads, HSG D
953	89	Gravel roads, HSG C
1,575	98	Unconnected pavement, HSG D
218,623	78	Weighted Average
217,048		99.28% Pervious Area
1,575		0.72% Impervious Area
1,575		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.1	13	0.3462	4.12		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	8	0.1250	5.69		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	21	0.3095	3.89		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
1.1	166	0.2530	2.51		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
8.2	308	Total			

Subcatchment A1:



Summary for Subcatchment B1:

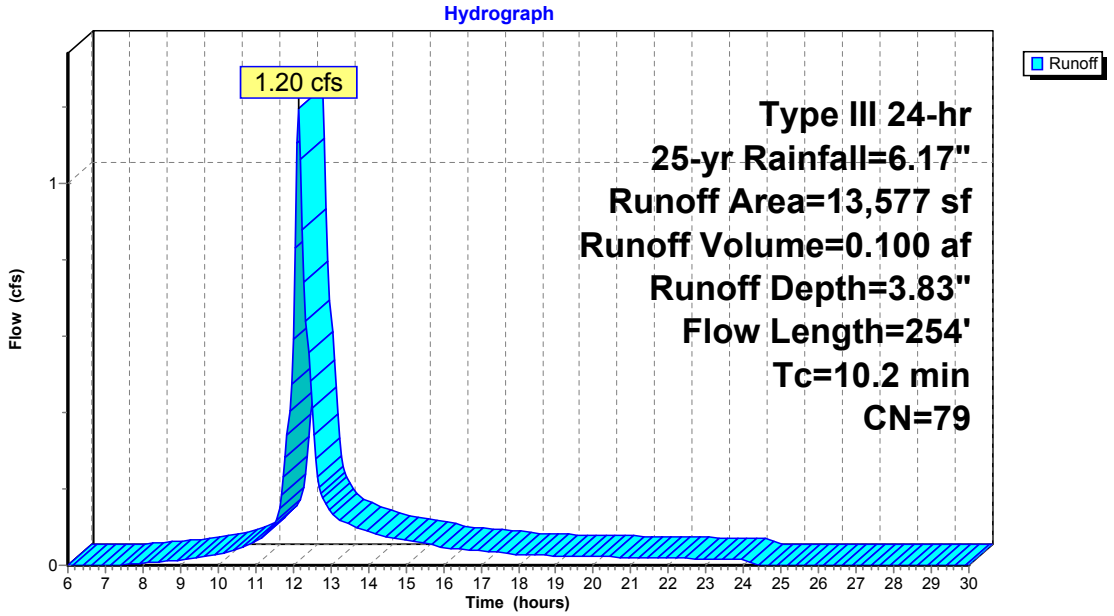
Runoff = 1.20 cfs @ 12.15 hrs, Volume= 0.100 af, Depth= 3.83"
Routed to Link POA-B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
6,112	78	Meadow, non-grazed, HSG D
6,218	78	Meadow, non-grazed, HSG D
1,112	91	Gravel roads, HSG D
135	98	Unconnected pavement, HSG D
13,577	79	Weighted Average
13,442		99.01% Pervious Area
135		0.99% Impervious Area
135		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0500	0.17		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	62	0.1290	2.51		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	51	0.3333	4.04		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	31	0.2903	3.77		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
10.2	254	Total			

Subcatchment B1:



Summary for Subcatchment C1:

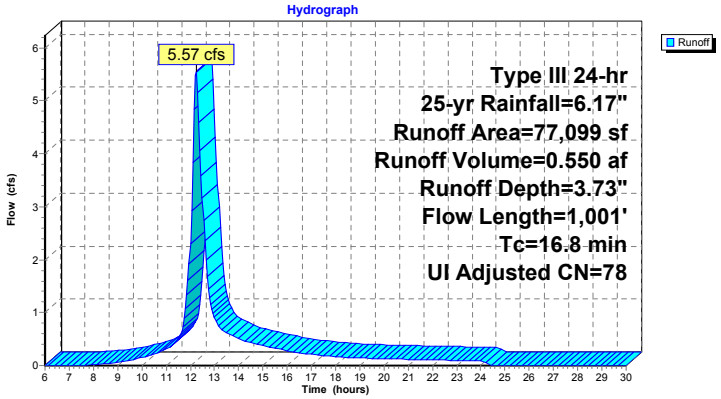
Runoff = 5.57 cfs @ 12.23 hrs, Volume= 0.550 af, Depth= 3.73"
Routed to Link POA-C :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Adj	Description
25,170	78		Meadow, non-grazed, HSG D
1,693	71		Meadow, non-grazed, HSG C
8,141	30		Meadow, non-grazed, HSG A
7,191	78		Meadow, non-grazed, HSG D
7,463	79		Woods, Fair, HSG D
2,986	73		Woods, Fair, HSG C
336	36		Woods, Fair, HSG A
2,358	91		Gravel roads, HSG D
8,413	98		Paved parking, HSG D
620	98		Paved parking, HSG B
12,143	98		Paved parking, HSG A
585	98		Unconnected pavement, HSG D
77,099	79	78	Weighted Average, UI Adjusted
55,338			71.78% Pervious Area
21,761			28.22% Impervious Area
585			2.69% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0300	0.14		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
1.1	126	0.0794	1.97		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	80	0.3375	4.07		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
3.1	607	0.0264	3.30		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
0.3	44	0.1136	2.36		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	44	0.2500	2.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
16.8	1,001	Total			

Subcatchment C1:



Summary for Subcatchment D1:

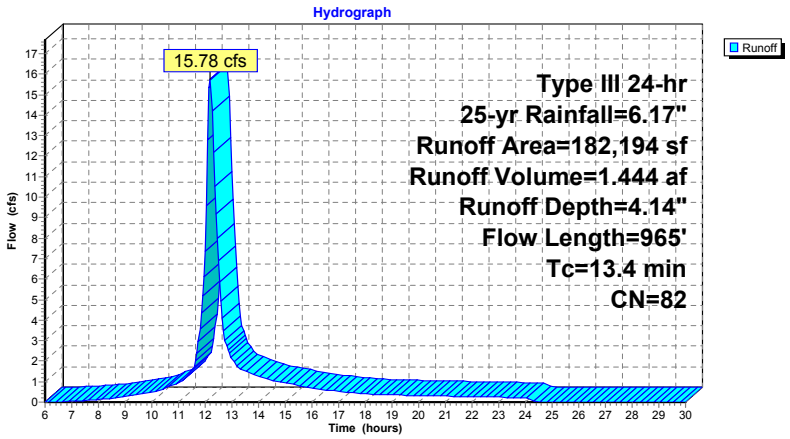
Runoff = 15.78 cfs @ 12.18 hrs, Volume= 1.444 af, Depth= 4.14"
Routed to Link POA-D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
80,169	78	Meadow, non-grazed, HSG D
0	71	Meadow, non-grazed, HSG C
1,146	30	Meadow, non-grazed, HSG A
38,003	78	Meadow, non-grazed, HSG D
489	71	Meadow, non-grazed, HSG C
9,808	79	Woods, Fair, HSG D
0	73	Woods, Fair, HSG C
8,312	91	Gravel roads, HSG D
940	89	Gravel roads, HSG C
10,060	76	Gravel roads, HSG A
27,831	98	Paved parking, HSG D
329	98	Paved parking, HSG C
3,397	98	Paved parking, HSG A
1,710	98	Unconnected pavement, HSG D
182,194	82	Weighted Average
148,927		81.74% Pervious Area
33,267		18.26% Impervious Area
1,710		5.14% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0600	0.19		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	73	0.1781	2.95		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	64	0.4219	4.55		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
2.6	634	0.0394	4.03		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
1.3	94	0.0053	1.17		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
13.4	965	Total			

Subcatchment D1:

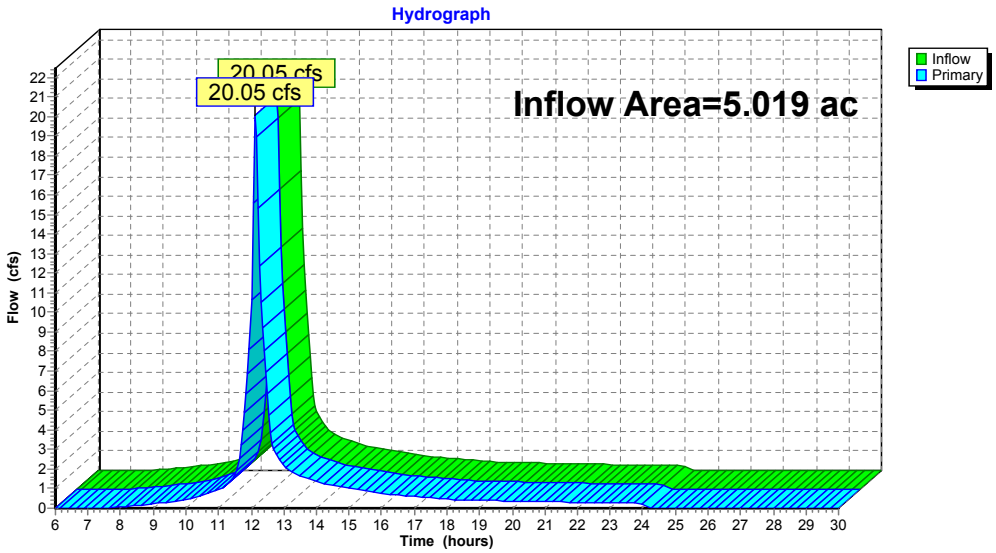


Summary for Link POA-A:

Inflow Area = 5.019 ac, 0.72% Impervious, Inflow Depth = 3.73" for 25-yr event
Inflow = 20.05 cfs @ 12.12 hrs, Volume= 1.560 af
Primary = 20.05 cfs @ 12.12 hrs, Volume= 1.560 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-A:

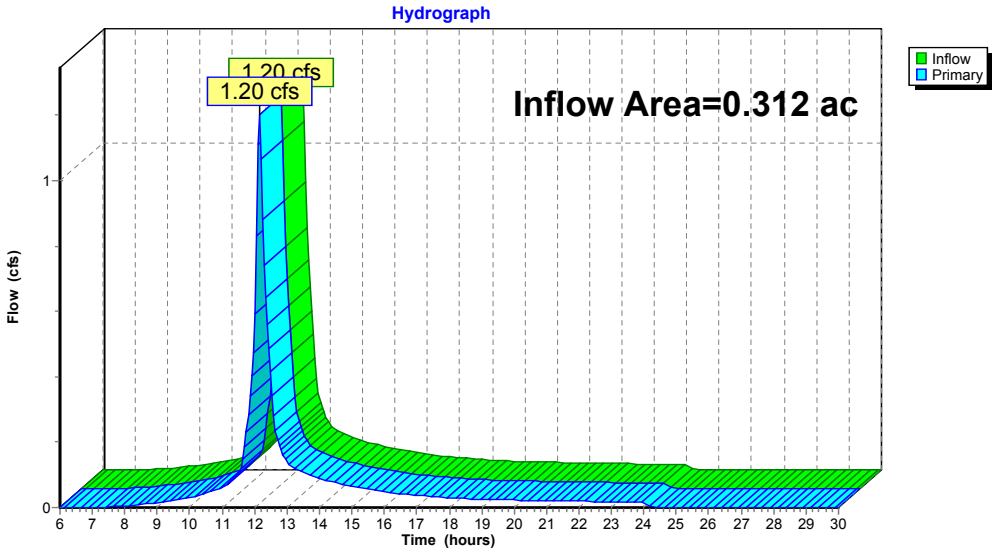


Summary for Link POA-B:

Inflow Area = 0.312 ac, 0.99% Impervious, Inflow Depth = 3.83" for 25-yr event
Inflow = 1.20 cfs @ 12.15 hrs, Volume= 0.100 af
Primary = 1.20 cfs @ 12.15 hrs, Volume= 0.100 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-B:

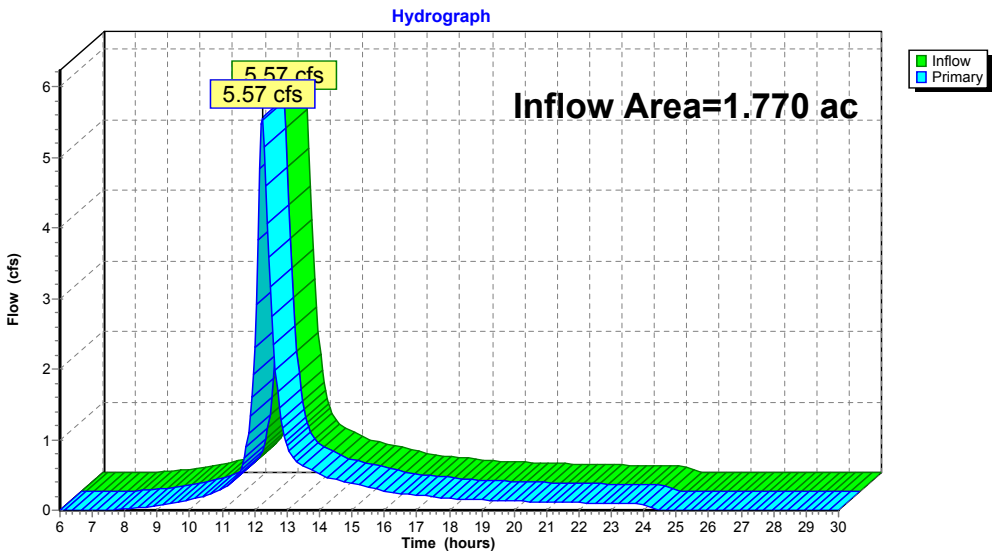


Summary for Link POA-C:

Inflow Area = 1.770 ac, 28.22% Impervious, Inflow Depth = 3.73" for 25-yr event
Inflow = 5.57 cfs @ 12.23 hrs, Volume= 0.550 af
Primary = 5.57 cfs @ 12.23 hrs, Volume= 0.550 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-C:

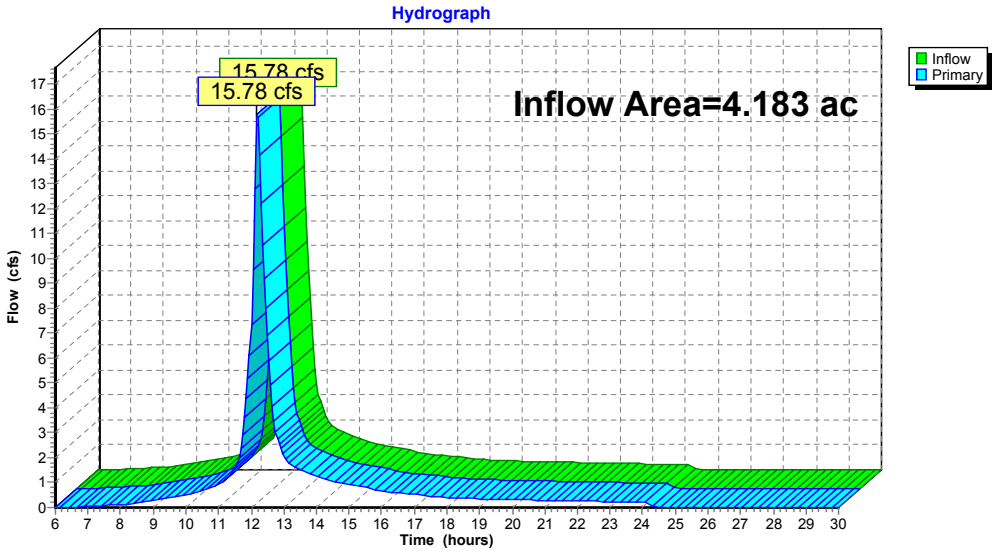


Summary for Link POA-D:

Inflow Area = 4.183 ac, 18.26% Impervious, Inflow Depth = 4.14" for 25-yr event
Inflow = 15.78 cfs @ 12.18 hrs, Volume= 1.444 af
Primary = 15.78 cfs @ 12.18 hrs, Volume= 1.444 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-D:



Summary for Subcatchment A1:

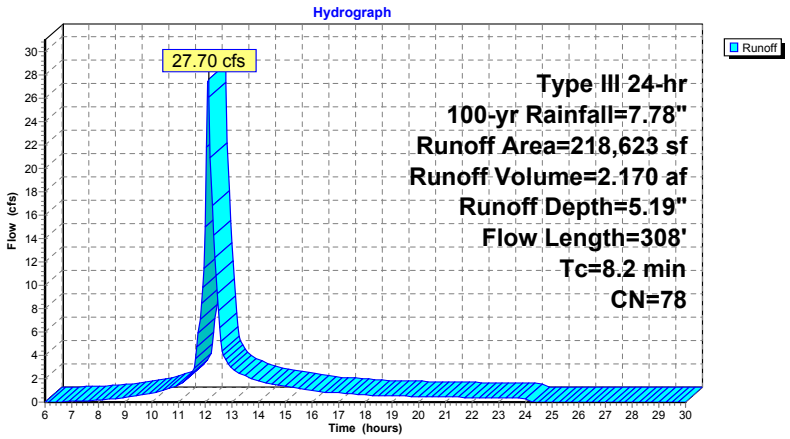
Runoff = 27.70 cfs @ 12.12 hrs, Volume= 2.170 af, Depth= 5.19"
Routed to Link POA-A :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=7.78"

Area (sf)	CN	Description
54,384	78	Meadow, non-grazed, HSG D
1,075	71	Meadow, non-grazed, HSG C
670	30	Meadow, non-grazed, HSG A
24,778	78	Meadow, non-grazed, HSG D
1,720	71	Meadow, non-grazed, HSG C
91,474	79	Woods, Fair, HSG D
33,692	73	Woods, Fair, HSG C
662	36	Woods, Fair, HSG A
7,640	91	Gravel roads, HSG D
953	89	Gravel roads, HSG C
1,575	98	Unconnected pavement, HSG D
218,623	78	Weighted Average
217,048		99.28% Pervious Area
1,575		0.72% Impervious Area
1,575		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.1100	0.24		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.1	13	0.3462	4.12		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	8	0.1250	5.69		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	21	0.3095	3.89		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
1.1	166	0.2530	2.51		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
8.2	308	Total			

Subcatchment A1:



Summary for Subcatchment B1:

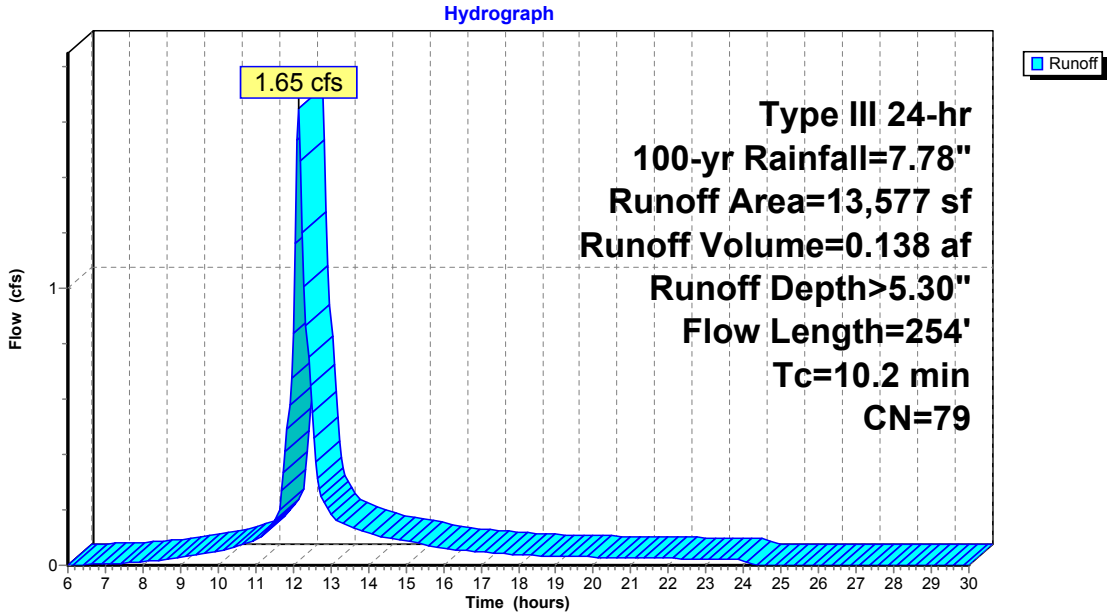
Runoff = 1.65 cfs @ 12.14 hrs, Volume= 0.138 af, Depth> 5.30"
Routed to Link POA-B :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=7.78"

Area (sf)	CN	Description
6,112	78	Meadow, non-grazed, HSG D
6,218	78	Meadow, non-grazed, HSG D
1,112	91	Gravel roads, HSG D
135	98	Unconnected pavement, HSG D
13,577	79	Weighted Average
13,442		99.01% Pervious Area
135		0.99% Impervious Area
135		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0500	0.17		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	62	0.1290	2.51		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	51	0.3333	4.04		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.0	10	0.1000	5.09		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
0.1	31	0.2903	3.77		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
10.2	254	Total			

Subcatchment B1:



Summary for Subcatchment C1:

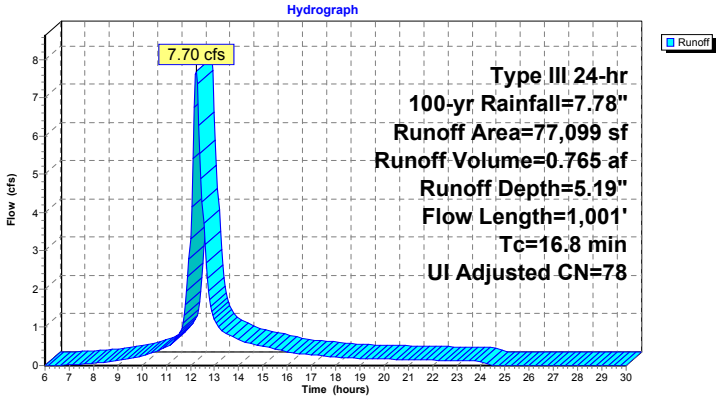
Runoff = 7.70 cfs @ 12.23 hrs, Volume= 0.765 af, Depth= 5.19"
Routed to Link POA-C :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=7.78"

Area (sf)	CN	Adj	Description
25,170	78		Meadow, non-grazed, HSG D
1,693	71		Meadow, non-grazed, HSG C
8,141	30		Meadow, non-grazed, HSG A
7,191	78		Meadow, non-grazed, HSG D
7,463	79		Woods, Fair, HSG D
2,986	73		Woods, Fair, HSG C
336	36		Woods, Fair, HSG A
2,358	91		Gravel roads, HSG D
8,413	98		Paved parking, HSG D
620	98		Paved parking, HSG B
12,143	98		Paved parking, HSG A
585	98		Unconnected pavement, HSG D
77,099	79	78	Weighted Average, UI Adjusted
55,338			71.78% Pervious Area
21,761			28.22% Impervious Area
585			2.69% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0300	0.14		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
1.1	126	0.0794	1.97		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	80	0.3375	4.07		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
3.1	607	0.0264	3.30		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
0.3	44	0.1136	2.36		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.3	44	0.2500	2.50		**Shallow Concentrated Flow, Shallow - Woods** Woodland Kv= 5.0 fps
16.8	1,001	Total			

Subcatchment C1:



Summary for Subcatchment D1:

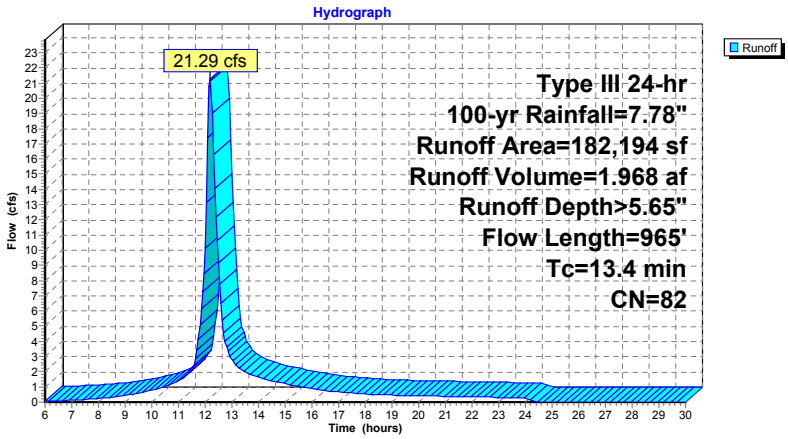
Runoff = 21.29 cfs @ 12.18 hrs, Volume= 1.968 af, Depth> 5.65"
Routed to Link POA-D :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=7.78"

Area (sf)	CN	Description
80,169	78	Meadow, non-grazed, HSG D
0	71	Meadow, non-grazed, HSG C
1,146	30	Meadow, non-grazed, HSG A
38,003	78	Meadow, non-grazed, HSG D
489	71	Meadow, non-grazed, HSG C
9,808	79	Woods, Fair, HSG D
0	73	Woods, Fair, HSG C
8,312	91	Gravel roads, HSG D
940	89	Gravel roads, HSG C
10,060	76	Gravel roads, HSG A
27,831	98	Paved parking, HSG D
329	98	Paved parking, HSG C
3,397	98	Paved parking, HSG A
1,710	98	Unconnected pavement, HSG D
182,194	82	Weighted Average
148,927		81.74% Pervious Area
33,267		18.26% Impervious Area
1,710		5.14% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0600	0.19		**Sheet Flow, Sheet - Meadow** Grass: Dense n= 0.240 P2= 3.45"
0.4	73	0.1781	2.95		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
0.2	64	0.4219	4.55		**Shallow Concentrated Flow, Shallow - Meadow** Short Grass Pasture Kv= 7.0 fps
2.6	634	0.0394	4.03		**Shallow Concentrated Flow, Shallow - Pavement** Paved Kv= 20.3 fps
1.3	94	0.0053	1.17		**Shallow Concentrated Flow, Shallow - Gravel** Unpaved Kv= 16.1 fps
13.4	965	Total			

Subcatchment D1:

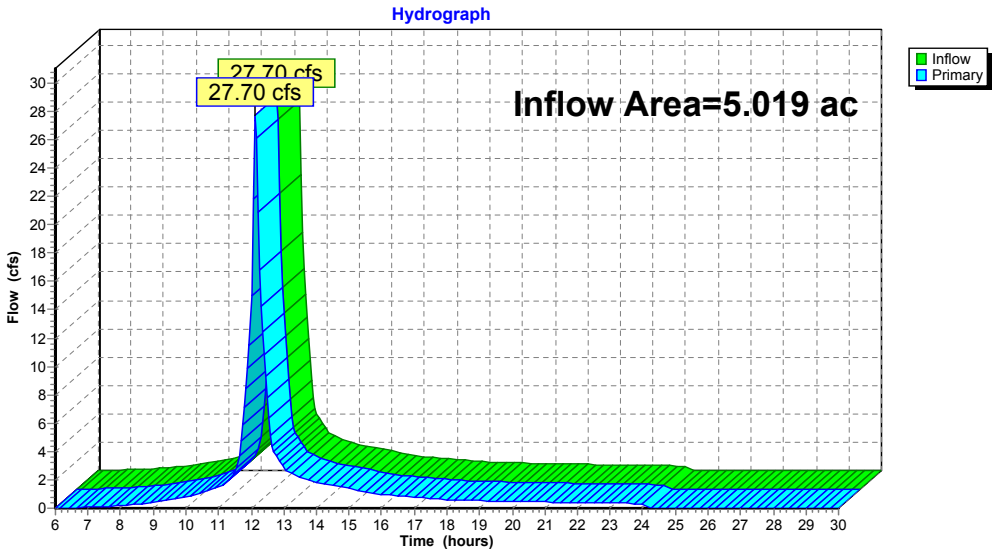


Summary for Link POA-A:

Inflow Area = 5.019 ac, 0.72% Impervious, Inflow Depth = 5.19" for 100-yr event
Inflow = 27.70 cfs @ 12.12 hrs, Volume= 2.170 af
Primary = 27.70 cfs @ 12.12 hrs, Volume= 2.170 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-A:

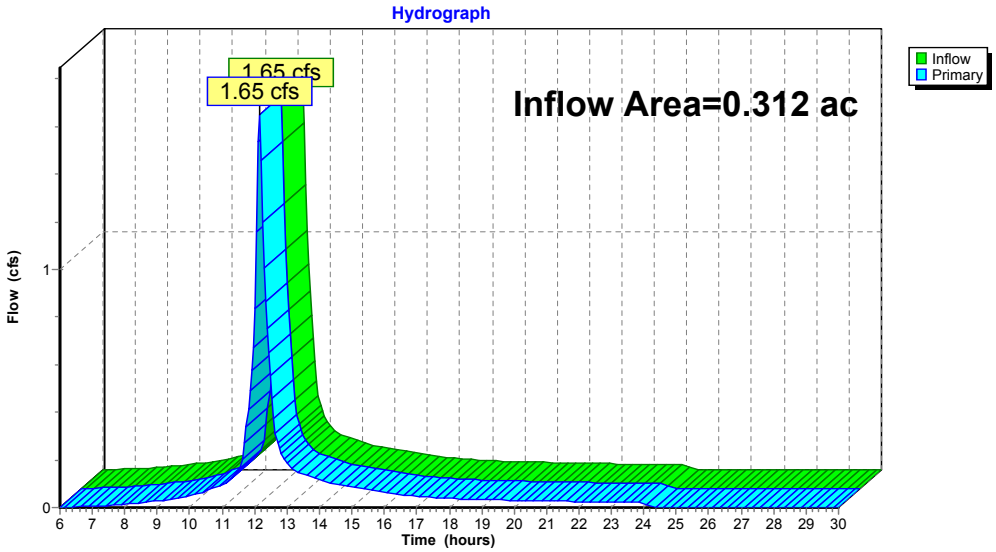


Summary for Link POA-B:

Inflow Area = 0.312 ac, 0.99% Impervious, Inflow Depth > 5.30" for 100-yr event
Inflow = 1.65 cfs @ 12.14 hrs, Volume= 0.138 af
Primary = 1.65 cfs @ 12.14 hrs, Volume= 0.138 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-B:

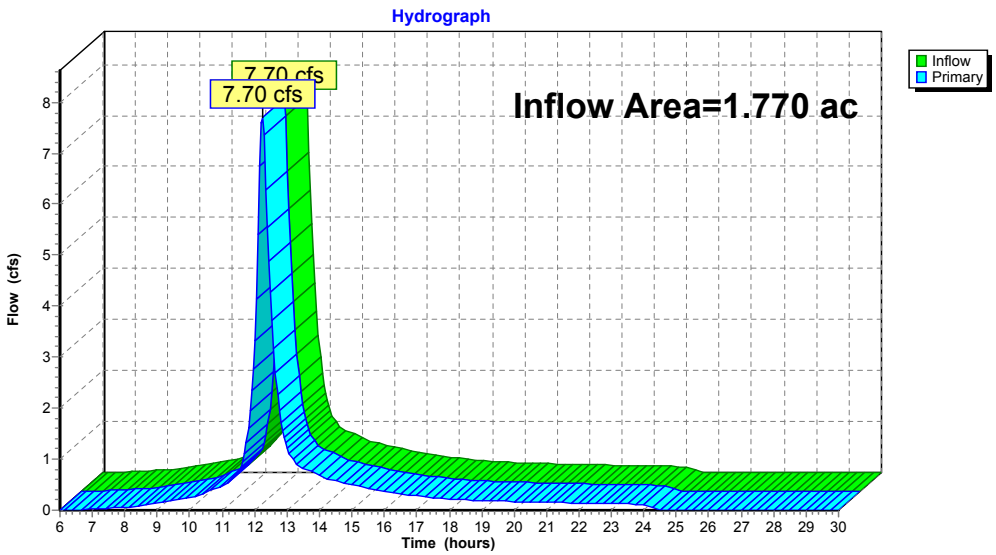


Summary for Link POA-C:

Inflow Area = 1.770 ac, 28.22% Impervious, Inflow Depth = 5.19" for 100-yr event
Inflow = 7.70 cfs @ 12.23 hrs, Volume= 0.765 af
Primary = 7.70 cfs @ 12.23 hrs, Volume= 0.765 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-C:



Summary for Link POA-D:

Inflow Area = 4.183 ac, 18.26% Impervious, Inflow Depth > 5.65" for 100-yr event
Inflow = 21.29 cfs @ 12.18 hrs, Volume= 1.968 af
Primary = 21.29 cfs @ 12.18 hrs, Volume= 1.968 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 6.00-30.00 hrs, dt= 0.05 hrs

Link POA-D: