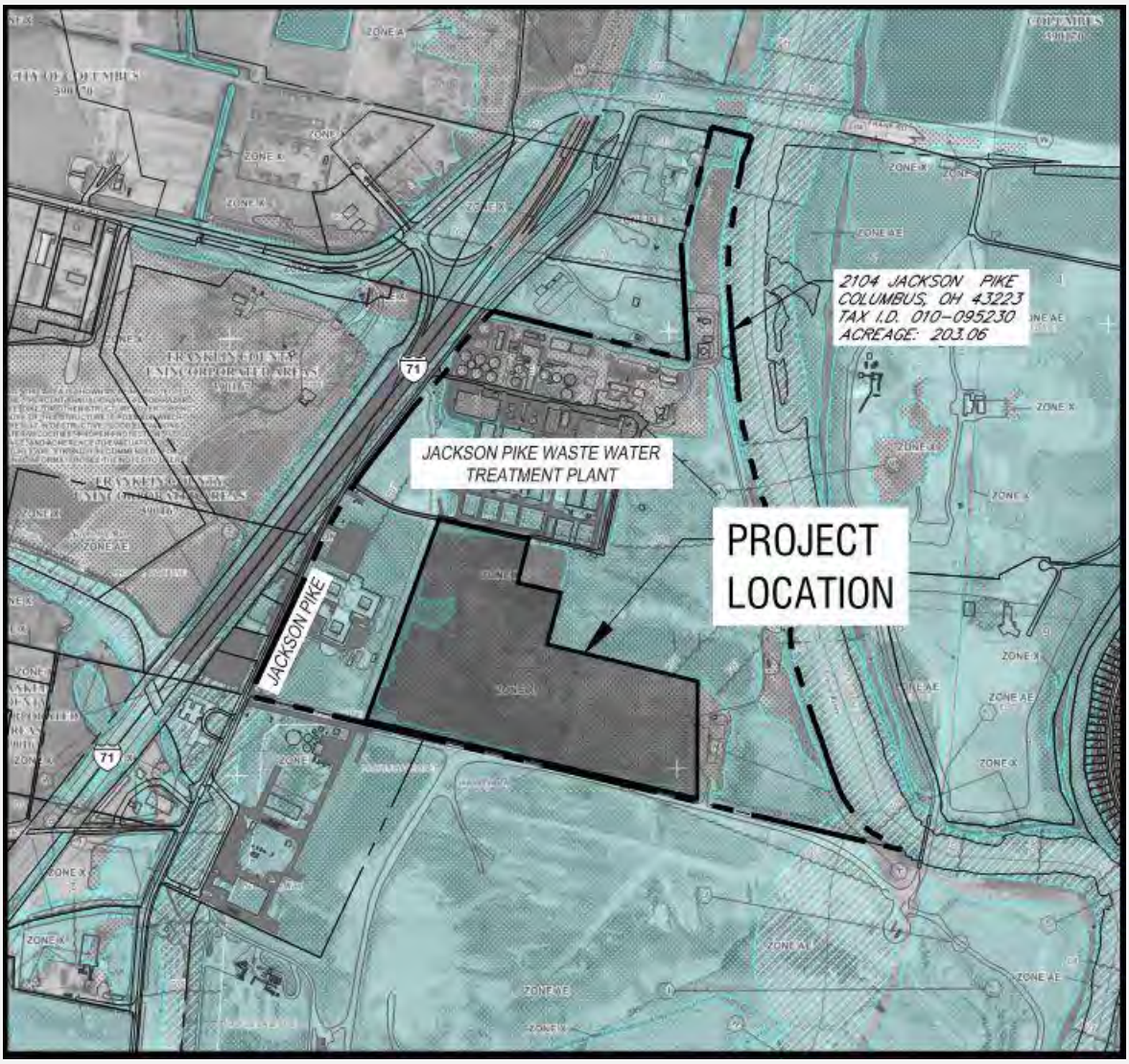

DG Columbus Jackson Pike, LLC

Jackson Pike Solar Project

Stormwater Drainage Manual – Type II Variance Application Report

17 February 2023

Project No.: 0615631

STATE OF OHIO
JAMES HEMME
72851
02/17/23
REGISTERED PROFESSIONAL ENGINEER

The business of sustainability

ERM

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Jackson Pike Solar Project

Stormwater Drainage Manual – Type II Variance Application Report

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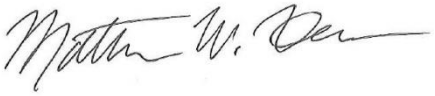

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CONTENTS

Acronyms and Abbreviations

Name	Description
AC	Alternating Current
BFE	Base flood elevation
BMP	Best Management Practice
CN	Curve Number
DA	Drainage Area
DC	Direct Current
ERM	Environmental Resources Management, Inc.
FEMA	Federal Emergency Management Agency
HELP	Hydrologic Evaluation of Landfill Performance
HSG	Hydrologic Soil Group
IDF	Intensity-Duration Frequency
LOMA	Letter of Map Amendment
MW	Megawatts
NEER	DG Columbus Jackson Pike, LLC
NOAA	National Oceanic and Atmospheric Administration
NRCS	National Resources Conservation Service
NREL	National Renewable Energy Laboratory
NSRDB	National Solar Radiation Data Base
PV	Photovoltaic
OEPA	Ohio Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
SCP	Stormwater Control Practice
SCPZ	Stream Corridor Protection Zone
SF	Square Feet
SWDM	Stormwater Drainage Manual
Tc	Time of concentration
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
WWTP	Wastewater Treatment Plant

1. INTRODUCTION

On behalf of DG Columbus Jackson Pike, LLC (NEER), Environmental Resources Management, Inc. (ERM) respectfully submits this Stormwater Drainage Manual – Type II Variance Application Report (Report). NEER plans to redevelop a former landfill for the purpose of installing and operating a solar photovoltaic project referred to as the Jackson Pike Solar Project (Project). NEER is under a long-term Power Purchase Agreement with the City of Columbus Department of Public Utilities for the purchase of 100% of the electric output of the Project. This Report provides information for the requested variance from the City of Columbus Stormwater Drainage Manual (SWDM) for the Project. The requested Re-Development Project is a solar site on a portion of the former Jackson Pike landfill.

The former landfill is a capped and vegetated landfill site generally located within the City Limits of Columbus, Ohio and is bordered to the north by Jackson Pike Wastewater Treatment Plant (WWTP), to the west by a drainage channel, correctional facility and Interstate I-71, to the south by an open pit quarry and to the east by the Scioto River and jurisdictional waters that appear to have been former ponds. The redevelopment is a proposed photovoltaic solar power generating system that will produce approximately 18.0 megawatts (MW) AC of solar output and 23.5 MW of installed DC capacity. The Type II variance request and the design alternatives are detailed in **Sections 2 and 3**.

1.1 Site History and Current Conditions

The former landfill was operated from 1969 to 1976 and was known as the Jackson Pike Landfill. Ohio Environmental Protection Agency (OEPA) regulates the former landfill.

According to OEPA, the closed landfill was appropriately capped at the time of discontinuation of use. The existing surface over the landfill waste is considered a soil cap utilized to minimize infiltration and the potential for leachate production. Since its closure in 1976, the site has become vegetated with a mixture of herbaceous, scrub shrub and poor to fair quality forested conditions. The landfill is still considered appropriately capped and closed (Matt Boyer, February 1, 2022 conference call with NEER and ERM and OEPA Letter by Matt Boyer, April 19, 2022, “Letter Re: Stormwater Management Concerns for Jackson Pike Landfill Cap, Columbus, Franklin County” (OEPA Letter, April 2022) contained in **Appendix A**).

The former landfill and associated proposed solar array exist above the Federal Emergency Management Agency (FEMA) 100-year floodplain. A letter of map amendment (LOMA) is in process to remove an inaccurate portion of the 100-year flood plain fringe that is located above the base flood elevation (BFE). This area is located on the west side of the Project. Please refer to **Figure 1A** provided in **Appendix B** showing the extent of proposed development, proposed LOMA and FEMA 100-year floodplain, SPCZ, and flood lines. A letter providing the physical description of the LOMA by a professional surveyor is also provided in **Appendix B**. A copy of the LOMA including map with metes and bounds clearly shown will be provided when complete. Construction of the solar arrays and associated equipment has been designed to stay above and outside the limits of the 100-year base flood elevation.

The elevation is typically highest near the center of the landfill and lowest near the perimeter with runoff flowing in multiple directions to the north, south, east, and west. Current stormwater runoff can be divided into four sub watersheds.: (1) northeast contributing drainage of the site flows north and northeast towards a former pond (2) southeast contributing drainage of the site flows into an existing ditch system named as South Pond B, (3) the south-central and portion of southwestern contributing drainage flows to South Pond A, and (4) the western portion of contributing drainage area flows to an existing waterway flowing north to south that ultimately conveys stormwater to the existing quarry south of the landfill. As a result of differential settlement likely caused by uneven consolidation of historically placed waste, there are localized areas of the existing site where water pools in shallow depressions on the landfill surface promoting potential infiltration.

Please refer to **Figure 1** for existing contours and noted depressions within the landfill.

1.2 Site Development

The Project consists of development of the 62.76-acre site, of which 54.6 acres will be fenced to contain the solar arrays and associated infrastructure. The solar site will be placed on the cleared ground surface of the former landfill area constructed in accordance with OEPA 1976 Solid Waste Regulations. The photovoltaic array system and associated infrastructure will be attached to concrete ballast surface foundation systems placed on top of stone leveling pads to prevent penetrations into or through the cap. This has been considered in lieu of the typical foundation support method of driving posts into the ground to support the panels.

Suitable soil materials will be brought onsite to accomplish the desired grading, which includes reduction of steep slopes and eliminating existing depressions in the cap. Localized areas near the settlement depressions will receive additional fill to promote positive drainage as sheet flow to the perimeter of the former landfill.

In addition to this soil fill, the proposed Project will include construction of minimal but necessary gravel access roads and slightly elevated pads for ancillary equipment. Where there is no proposed crushed stone placed, the soil will be amended as required to promote reestablishment of robust grassy/herbaceous vegetation in general conformance with the requirements for establishing grass cover as laid out in OEPA Rainwater and Land Development Best Management Practice (BMP): 2.1 Impervious Surface Disconnection.

No excavation of the current cap is proposed but will rather be supplemented with additional soil. In the event of an unintended localized undercut or disturbance affecting the cap, it will be replaced per OEPA requirements. If the landfill cap is damaged during construction, it will be repaired per the specifications of a qualified engineer and per OEPA guidance. As a result of the Project, the existing landfill cap is proposed to be maintained and expected to be hydrologically improved through the improvement of poor surface drainage, provision of additional soil for grading and planting and improvement of evapotranspiration through the replacement of poor to fair wooded conditions currently on site with maintained herbaceous/grassy vegetation.

The 100-year FEMA floodplain is adjacent to the project. No fill will be placed within a regulatory floodway. There will be a temporary construction laydown area and access road to the northwest of the site that will be within the 100-year floodplain fringe. There will be no temporary or permanent impacts to the SPCZ. No net fill will be placed in the floodplain as a result of the temporary gravel laydown areas. Net fill in the floodplain fringe will be temporary and will be zero at the completion of the project. Following construction, the temporary gravel laydown areas and associated access roads/construction entrances will be restored to existing topographic conditions and revegetated.

2. TYPE II VARIANCE REQUEST

Challenges to development of the former landfill site include the following:

- OEPA has provided their opinion that engineered infiltration practices (bioretention, detention ponds, etc.) are to be avoided within the limits of solid waste and would unlikely be approved by OEPA (refer to OEPA Letter, April 2022 in **Appendix A**). Accordingly, infiltration immediately adjacent to the solid waste where a connection may still exist is assumed to be undesirable.
- Existing site runoff is controlled by current topography which is highest in elevation in the center of the site and from this crown drains to the site perimeter with no focused outlet. There are a multitude

of sheet flow outlets around the perimeter of the site from which stormwater is dispersed. As a result of prior waste placement, construction of stormwater systems around the entire perimeter is infeasible due to limited space and proximity to solid waste.

- The site is surrounded by the 100-year FEMA floodplain, making development and placement of permanent stormwater control structures outside the limits of the Project infeasible.
- OEPA has requested that the existing soil cap not be compromised through isolated excavation or penetration. As such the solar array foundation system will be a surface cast-in-place concrete ballast system as opposed to a typical driven pile design.

The applicant is proposing to place imported fill to improve existing drainage and hydrologic conditions. Grading will allow for positive drainage as sheet flow to the perimeter of the landfill. Proposed grading of the Project surface is not in a single uniform direction but rather in a variety of mild, changing slopes and extended flow patterns minimizing the potential for long slope erosion. The site will generally mimic the current distribution of flow, but with improved soil and surface conditions having improved evapotranspiration characteristics. Use of additional fill soils will remove existing problematic standing water/depressions and will minimize leachate production potential. Potential runoff and potential leachate reduction will also occur through maintaining the new land cover of herbaceous species and grasses in a maintained meadow condition instead of the poor to fair soil and ground cover condition within the trees currently on site. The removal of the existing vegetation (e.g., trees and thick brush) which could grow through the cap or topple and expose solid waste will improve upon current conditions.

As a result of land use and the associated curve number for the site being kept the same or reduced slightly, the Project is expected to improve the site hydrology and drainage conditions without the installation of stormwater quantity detention. As such, the applicant is seeking a Type II variance to Section 3.2 and 3.3 of the City of Columbus SWDM. Specifically, the applicant requests relief from the requirement that the peak stormwater flow from 100-year post-construction event meets the 10-year pre-construction event.

The applicant is also seeking waiver of water quality variance from OEPA, under separate submittal and cover, to allow use of Impervious Surface Disconnection per the OEPA Rainwater and Land Development Manual as sole BMP to achieve water quantity volume reduction.

2.1 Impacts to Stormwater Detention

There are no material impacts to stormwater quantity for the proposed development compared to pre-construction conditions. Calculations considering pre-construction and post-construction hydrology for the Preferred Redevelopment Plan alternative are presented in **Appendix C**. As the existing cap on the landfill is to be maintained per OEPA, the addition of new ballast bases was required. In addition, the site requires equipment pads and gravel access roads for facility access and emergency responder access. However, when compared to current land use conditions, the Project maintains approximately the same runoff curve number in each of the four analyzed watersheds.

After careful consideration of impacts, NEER determined that keeping existing drainage patterns while eliminating standing water and improving surface conditions was the best path to keep the same runoff and peak flow conditions. In general, low-lying areas are proposed to be eliminated and positive drainage established through the installation of an average of 6 inches of soil based on current grades. By raising the site to improve drainage conditions in local areas and promoting better evapotranspiration, the Project reduces production of leachate.

Alternate stormwater management options are considered in **Section 3**. The feasibility with respect to other SWDM requirements and cost make the two rejected alternatives unviable.

The expense for the No Impact and Minimal Impact alternatives would not materially improve drainage conditions on-site compared to the Preferred Redevelopment Plan given off-site drainage structures have maintained and handled hydrology for the existence of the landfill. The two rejected alternatives have the potential to facilitate more stormwater infiltration into the former landfill, which is not an accepted practice by OEPA.

2.2 Statement of Hardship

The Project poses unique challenges which makes following the SWDM for full compliance or minimal impact very costly. The landfill cap must be restored to pre-construction conditions which requires any development activity to be aboveground or significant excavation into landfill to remove landfill waste (up to 25 feet deep) and achieve stable and safe OSHA slopes for excavation. To meet all water requirements, development of on-site infiltration or detention BMPs would require significant excavation and fill and associated construction costs would be very high.

The Project development as proposed in the Preferred Redevelopment Plan alternative is economically viable because the space is optimized for placement of solar arrays and associated infrastructure while maintaining the same or improved hydrologic conditions. In addition to the economic hardship of significant additional excavation/fill in the landfill and associated costs for construction of BMPs for the alternatives proposed, the alternatives are also less feasible due to the following reasons: (1) would provide less usable space for solar development, (2) would present a potential health and safety hazard in transporting that volume of solid waste off site for disposal and (3) the sheer magnitude of the effort for alternatives makes Project construction and maintenance unsuitable from a cost/revenue standpoint.

3. SITE DEVELOPMENT ALTERNATIVES

The site development alternatives are presented in **Appendix D**.

3.1 Full Compliance

For the Full Compliance alternative with the SWDM, several large stormwater detention facilities would need to be constructed within the limits of the landfill, near the perimeter of the landfill. Each stormwater detention facility would require excavation of landfill waste material to provide safe/stable slopes to an estimated depth of up to 25 feet below surface. Please refer to Exhibit V3 in **Appendix D**.

Each area would require suitable fill material to be imported to refill the excavated areas to elevations that would allow for the basin storage volumes to be above the floodplain elevations. The multiple detention facilities necessary to manage the runoff from multiple drainage areas would require a large amount of trucking of landfill waste to another permitted facility for disposal, along with trucking approximately the same amount of suitable material to refill the excavated areas and provide a subgrade to construct the new detention facilities. Previous test borings at the site have identified dangerous levels of methane gas and give concern for the safety of equipment operators and workers during the excavation of the landfill waste. There is potential to encounter a large amount of leachate that would enter the excavated area during this work.

Such an expense would likely exceed $10 million additional dollars. In addition, construction of large stormwater BMPs on-site would eliminate usable space for solar infrastructure, reducing the economic viability of the Project.

Last, full compliance would be unlikely to be approved by OEPA based on their April 19, 2022, letter attached in **Appendix A.**

3.2 Minimal Impact

For the Minimal Impact alternative, shallow detention facilities would be constructed above the landfill waste within the multiple drainage paths. Please refer to Exhibit V4 in **Appendix D**.

While this option would avoid excavating into the landfill waste, it would still require a Variance from the SWDM Section 3.4.1.1 to allow construction of detention facilities over un-compacted material. Extra care would be necessary to produce detention facilities that could detain runoff without leaking into the landfill and would require synthetic or clay liners. Due to poor bearing capacity of underlying landfill waste, differential settlement of the detention facility bottoms leading to liner failure is a concern. Failure would allow large quantities of stormwater into the landfill waste and generate leachate.

This option would comply with the SWDM by reducing the runoff rate. Improving the landfill cap by reducing the amount of water entering the landfill would reduce generation of leachate; however, a failure of any of the detention facilities could cause a significant degradation of water quality due to the potential to create a large volume of leachate.

This option conflicts with direction provided by Ohio EPA which has stated that ponding water on the cap will not be permitted. The potential of stormwater ponding on the cap could produce leachate that would be unacceptable to discharge off-site. This overrides the technical challenges that this option presents.

Even if this were permitted by Ohio EPA, this design alternative would also increase construction costs and significantly reduce space available for placement of solar arrays thereby reducing the overall economically viability of the Project.

3.3 Preferred Redevelopment Plan

The Preferred Redevelopment Plan alternative will repair problem areas associated with the existing soil cap and provide a useable surface for installation of the ballast mounted solar panels. Filling in localized on-site depressions will improve the current drainage by eliminating areas prone to pooling and infiltration and will maintain positive drainage off the former landfill site as sheet flow, thereby reducing infiltration and production of landfill leachate. Establishment of a vegetative meadow condition in lieu of the fair to poor woody vegetation condition will further promote evapotranspiration and landfill cover maintenance.

A description of current stormwater runoff is provided in **Section 1.1**. The Preferred Redevelopment Plan will maintain existing drainage patterns. The existing stormwater system has a long history of functionality for handling the stormwater from the former landfill and distribution off-site. Given this history, and that drainage patterns are not changing, the current stormwater path is expected to satisfactorily maintain existing hydrologic patterns and thus there are no anticipated downstream impacts.

The proposed grading maintains existing drainage conditions without changing overall peak flow or runoff volume. Post-construction drainage conditions are improved but overall contributing drainage and hydrology is unchanged.

3.4 Off-Site Drainage Mitigation

The Off-Site Drainage Mitigation alternative proposed would provide limited mitigation of off-site drainage into the existing waterway to the west of the Project. The only local area that is accessible and capable of providing potential storage is to the northwest of the Project near the proposed laydown yard. This would require interception of drainage coming off of I-71 or adjacent side roads and construction of a stormwater detention structure with the intent of attenuating peak flow impacts from upstream off-site runoff in entering the existing waterway. Please refer to Exhibit V-6 in **Appendix D**.

The Project area itself is substantially constrained in all directions that would preclude off-site detention construction/mitigation on those properties. To the north lies the existing WWTP, to the east are

designated wetland areas, to the west is a correctional facility and the existing gas monitoring probes and vents and to the south is an open pit quarry where the western edge drainage channel eventually empties. This alternative would partially comply with the SWDM by reducing the runoff rate entering the existing waterway, albeit the option would not be completely compliant as it would be an off-site source. The reduction in peak flow would have minimal positive impact to the post-development hydrology.

The contributing upstream drainage area that could be intercepted by a pond in this area is relatively small and would include runoff predominately from Jackson Pike and I-71 so the impacts will not provide a significant benefit for the cost.

Further, this option conflicts with direction provided by the SWDM which states that permanent stormwater structures should not be constructed in the floodplain. This consideration overrides the other technical considerations that this alternative presents.

4. STORMWATER CALCULATIONS

Stormwater calculation methods and results are presented herein in **Sections 4.1 and 4.2**, respectively for the Preferred Redevelopment Plan. A hydrologic analysis of the Preferred Redevelopment Plan was conducted in general conformance with United States Department of Agriculture (USDA) Win TR-55 small watershed methodology to calculate pre-construction and post-construction stormwater peak flow rate and quantity volume for runoff. **Appendix C** presents the stormwater calculations based on the preferred plan.

4.1 Stormwater Calculation Methods and Inputs

4.1.1 Hydrologic Modeling and Inputs

Hydrologic modeling was carried out in HydroCAD, version 10.0 using the National Resources Conservation Service (NRCS) Curve Number Method for peak flow. The drainage areas were drawn using existing contour data in 2020 AutoCAD Civil 3D. The evaluation of hydrology for the various site conditions was based on existing site topography, the site AutoCAD file, insights from the site visit performed in 2022, as well as available topography from survey data for on-site drainage areas, and publicly available databases for soil types, hydrologic soil groups (HSGs), and rainfall.

4.1.1.1 Land Cover and Soils

Pre- and post-construction land cover classifications were assigned a WinTR-55 curve number (CN) based on land cover obtained from Runoff Curve Numbers for Typical Land Uses in Columbus in Section 2 of the Columbus Stormwater Drainage Manual (SWDM). A hydrologic soil group of “C” indicating soils with moderately high runoff potential when thoroughly wet was assigned for purposes of analysis of the hydrology. This assignment of hydrologic group of “C” was based on the noted conditions of the existing layer and soil cap, which consisted of silty clay soils, which would be well aggregated and have relatively low bulk density. A summary of the CN and hydrologic soil group is presented in **Table 1**.

Existing Conditions

The baseline land cover data for pre-construction conditions was modeled based on a site visit conducted by the ERM team in October 2022. The visual observations of this team are consistent with the aerial coverage shown on **Figure 2**. During the site visit, the team observed a fairly dense wooded area, that had pockets of localized depressions and variable cover with pockets of surface litter/trash apparent at the surface with an approximate 50 to 75% ground cover. The wooded area had a thin layer of vegetation

debris, detritus and undergrowth. As such the team provided a baseline land cover of "Woods in fair condition" with a hydrologic soil group of "C."

During the site visit, the team noted the presence of an existing gravel access road on-site with a footprint of about 12 feet wide. Review of historical aerial imagery from 1994 (**Figure 3**), revealed the extent of the road and the area of the road was measured to be approximately 2.51 acres with an assigned land cover of gravel for hydrologic soil group "C."

Trees were inventoried by ERM scientists during January 31 to February 1, 2022 field investigation, following coordination with the City of Columbus Recreation and Parks Department. Onsite investigations were conducted using the technical guidance outlined in the 2018 Forestry Inventory Methods Technical Notes issued by the U.S. Department of Agriculture Natural Resources Conservation Service. Executive Order 2015-01 and the Columbus Forestry Master Plan were also used to guide survey methods. NEER and the City have used this inventory to guide discussions regarding appropriate mitigation for trees scheduled to be removed by the Project.

Post-Construction Conditions

The post-construction conditions will include solar panel development, and development of proposed access roads. The overall site will be maintained as a bi-annually maintained meadow. As the surface soil cover is going to be improved and depressions filled, the vegetative coverage will be maintained at 75% vegetative coverage or greater. As such, the overall post-construction land cover for the site was assigned as "Meadow in good condition" with a hydrologic soil group of "C". The development also took into account the proposed concrete ballast system as impervious and stone base of ballast system and proposed gravel access roads as "gravel", summarized in **Table 1**.

Table 1. Land Cover and Hydrologic Soil Group for Pre-Construction and Post-Construction Conditions

Pre-Construction				Post-Construction			
Land Use	Area (acres)	HSG	CN	Land Use	Area (acres)	HSG	CN
Woods, fair condition	60.25	C	73	Meadow, good condition	53.50	C	71
Gravel[1]	2.51	C	89	Gravel[2]	5.49	C	89
				Concrete[3]	3.77	C	98
Total Area	62.76			Total Area	62.76		
		Weighted CN	**74**			**Weighted CN**	**74**

1 Estimated existing gravel roads based on 1994 Google Earth Aerial Imagery

2 Proposed gravel access roads from Hawbaker Engineering 60% Design drawings and stone base of ballast system

3 Proposed concrete ballasts for solar panels

4.1.1.2 Storm Events and Precipitation Depths

Stormwater runoff volumes were calculated for 24-hour design storm events. Peak runoff flows were used for conveyance design. For the Site, the storm events including 1-year, 2-year, 10-year, 25-year, 50-year, and 100-year were calculated based off the acreage, HSG, and CN of drainage areas delineated. Precipitation depths were obtained from the National Oceanic and Atmospheric Administration's (NOAA's) National Weather Service and based on the approved rainfall intensity-duration frequency (IDF) curves for the precipitation values referenced in the Columbus SWDM (SWDM Section 2.2.2.1). The chosen

storm event was Type II Rainfall Distribution Type over a 24-hour period. Storm events for each drainage area were modelled in WinTR-55 and HydroCAD, version 10.00.

4.1.1.3 Topography, Delineation of Drainage Areas, and Time of Concentration

Based on existing site topography, existing drainage was analyzed for overall drainage on-site and also split up into the four prevalent drainage areas for the site, DA-01 draining to west, DA-02 draining to north, DA-03 draining to southwest, and DA-04 draining to southeast (**Figure 4**). Pre-construction and post-construction times of concentration (Tcs) were calculated for each drainage area using the aforementioned topography. The Tc was calculated using the linear time of concentration methodology outlined in the NRCS Small Watershed Hydrology WinTR-55 User Guide, which is consistent with the method presented in Chapter 3 of the WinTR-55 Manual. The associated surface roughness (Manning's N) was based on land covers provided in the WinTR-55 User Guide and checked against field observations.

4.2 Stormwater Calculation Results

4.2.1 Stormwater Runoff and Peak Flow Modeling Results

A summary of stormwater runoff is presented in **Table 2A** for peak flow runoff in cubic feet per second (cfs) and in **Table 2B** for runoff volume in acre-feet (ac-ft). The results indicate that runoff volume and peak flow rate for the modeled storm events are anticipated to remain mostly the same. For these results, from an aggregate standpoint, the aggregate CN is the same at 74 for pre-construction and post-construction conditions. In reviewing individual drainage areas, labeled DA-01 through DA-04, shown on **Figure 4**, there are small differences in CN, but in aggregate, the runoff curve number remains approximately the same. Detailed calculations and results are presented in **Appendix C**.

Table 2A. Modeled peak flow rates in cfs for 24-hour storm events

Parameter/Storm Event	1-year	2-year	5-year	10-year	25-year	50-year	100-year
Pre-Construction	6.22	10.33	17.27	23.65	33.32	41.80	51.21
Post-Construction	6.11	10.23	17.25	23.72	33.62	42.31	51.97
% Difference	2%	1%	<1%	<1%	1%	1%	1%

Table 2B. Modeled runoff volumes in ac-ft for 24-hour storm events

Parameter/Storm Event	1-year	2-year	5-year	10-year	25-year	50-year	100-year
Pre-Construction	2.19	3.35	5.26	6.99	9.60	11.90	14.45
Post-Construction	2.10	3.25	5.13	6.84	9.43	11.70	14.23
% Difference	4%	3%	2%	2%	2%	2%	1%

Table 2C. Summary peak flow rates in cfs for 24-hour storm events

Storm Event	Pre-construction	Post-construction
1-year	6.22	6.11
10-year	**23.65**	23.72
100-year	51.21	**51.97**

The model results show that the peak flows for the 1-year pre-construction and post-construction events are equivalent. For the post-construction 100-year storm event, the peak flow is greater than the pre-construction 10-year storm event, as shown in **Table 2C**. As noted in **Section 2.0**, a waiver is requested seeking relief of the SWDM requirement that the 100-year storm event peak flow for post-construction is less than the 10-year storm event peak flow for pre-construction.

5. DISCUSSION

DG Columbus Jackson Pike, LLC is seeking approval from the City of Columbus of a Type II Variance for the presented Preferred Redevelopment Plan alternative. The Redevelopment Project as designed, addresses the challenging site constraints including: no excavation into the existing landfill soil cap; utilization of ballast systems under the solar panels to avoid cap penetrations, no net fill within the FEMA 100-year floodplain and improvement of poor drainage conditions which maintain positive and non-erosive flow and reduce the estimated potential to produce leachate.

The OEPA per Section 513 requirements has expressly indicated that placing stormwater detention or infiltration facilities on the landfill should not occur and placement within the floodplain or on adjacent property has been shown to be infeasible. The applicant considers the Preferred Development alternative as the only viable option.

Two alternatives including Full Compliance and Minimal Impact would require significant additional construction costs for grading/excavation and/or construction of BMPs and would significantly reduce the usable area for solar development. The two alternatives are also not permitted by Ohio EPA due to impacts to the current former landfill. A fourth alternative regarding adjacent off-site drainage mitigation for construction of a stormwater detention structure for interception of drainage coming off of I-71 or adjacent side roads, located off-site to the northwest of the Project site provides minimal post-construction hydrological benefit, and would construction of stormwater detention in the floodplain.

Stormwater calculations are provided and reveal that overall runoff volume will be reduced after construction due to change of landcover from woods in fair condition to a meadow condition. The use of water quality SCPs, which details or infiltrates water over the cap is also not feasible given OEPA Section 513 requirements and the potential to generate leachate.

Without this stormwater variance, the Project is not viable from a development cost standpoint. The Preferred Redevelopment Plan alternative enables the Project to use the former landfill site efficiently for solar site development. This alternative maintains existing drainage patterns from the former landfill and improves existing on-site drainage conditions. Given this former landfill site is unsuitable for most other uses, this variance provides a benefit to the community by re-using the land and adding a valuable renewable resource. The Project helps the City of Columbus move closer to achieving its green energy goals.

APPENDIX A OEPA LETTER, DATED APRIL 19, 2022

Ohio Environmental Protection Agency

Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

April 19, 2022

ELECTRONIC DELIVERY ONLY

Adam J. Siegelstein
Director Development – Distributed Generation
NextEra Energy Resources, LLC
Adam.Siegelstein@NEE.com

RE: Stormwater Management Concerns for Jackson Pike Landfill Cap, Columbus, Franklin County

To Mr. Siegelstein:

The purpose of this letter is to reiterate Ohio EPA's position regarding generally accepted standards of stormwater controls placed on top of closed landfills like the former Jackson Pike landfill (Landfill).

Ohio EPA concurred with Landfill's closure in 1978, performed in accordance with the regulations in place at that time. One of those requirements was to place a 2-foot layer of soil on top of the waste (Cap). The Cap's purpose, among other things, was to inhibit infiltration of stormwater and precipitation into the waste mass. Continuation of this purpose remains paramount in protecting human health and the environment. Although woody vegetation and brush have since grown on a significant portion of the Cap, the Landfill is still considered "capped".

Ohio EPA is not inclined to authorize installation or placement of any stormwater controls (i.e.: dry or wet detention, engineered storage, or intentional infiltration), on top of the Landfill or in the Cap. In general, the Agency is not inclined to approve anything that might affect the integrity of the cap; a stormwater retention pond is without question something that might affect cap integrity.

Please contact me should you have any questions. I may be reached at (614) 779-0099 or matthew.boyer@epa.ohio.gov.

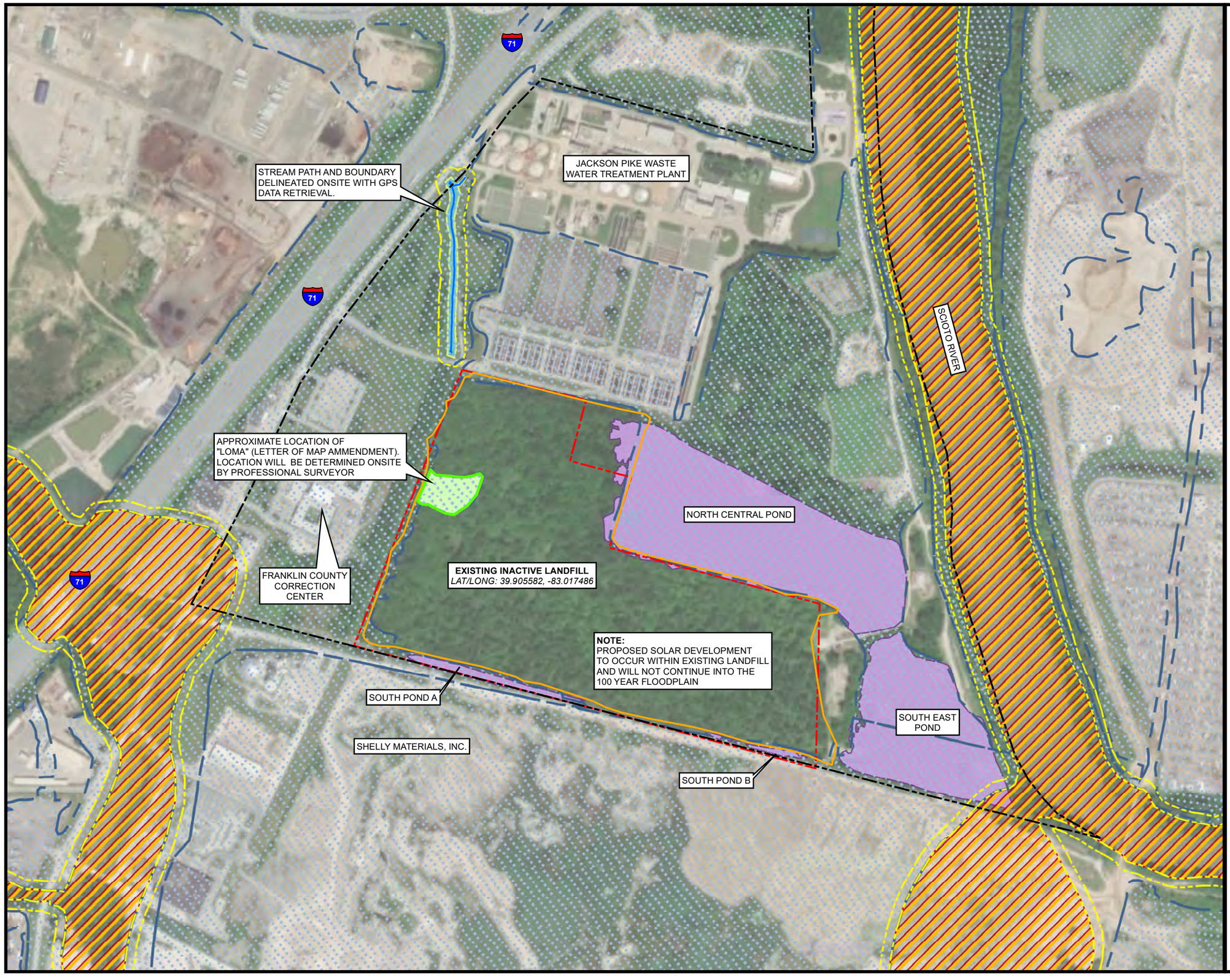
Sincerely,

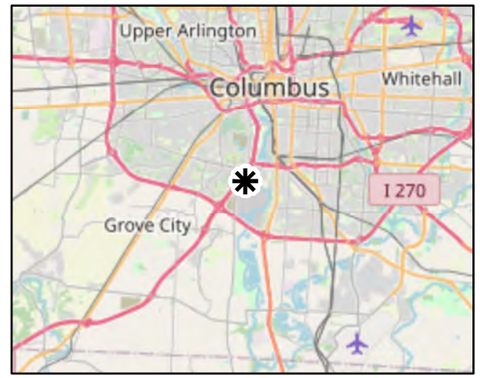
Matthew C. Boyer

Matt Boyer, Inspector
Ohio EPA-Central District Office DMWM

EC: Constance Livchak, Manager, DMWM CDO
Dan Bremer, ERM
Dan Holz, City of Columbus, Division of Sewerage and Drainage

APPENDIX B LOMA FIGURE AND SUPPORTING SURVEY INFORMATION





Legend:

- Loma Boundary
- Tract Boundary
- Project Lease
- Extent of Landfill Cap
- FEMA 100 Year Flood Plain (AE Zone)
- FEMA Floodway Zone
- Flood Line
- Delineated Stream Centerline
- Stream Top of Bank - Floodway Boundary
- Stream Corridor Protection Zone (SCPZ)
- Pond

NOTES:
1. Aerial Imagery: ESRI World Imagery Reproduced under license in ArcGIS 10.8
2. Projected Coordinate System: NAD 1983 UTM 17N (USFT)
3. Flood Plain boundary retrieved via FEMA's National Flood Hazard Layer (NFHL)
4. Letter of Map Ammendment (LOMA) location is approximate and will be determined following a professional survey onsite.
5. Stream path has been delineated onsite following current USACE wetland delineation Manual 1987.
6. **SCPZ** - Stream Corridor Protection Zone Boundary regulations are located here: https://www.columbus.gov/utilities/SCPZ/

N

1:6,000

0 250 500 1,000
Feet

FIGURE 1A

Flood Hazard Zone - FEMA Flood Plain
Jackson Pike Solar Project
DG Columbus Jackson Pike, LLC
Jackson Pike, Columbus, Ohio

ERM

DRAWN BY: MAW Date: 2/17/2023

The Kramer Building
43980 Plymouth Oaks Blvd.
Plymouth, MI 48170-2584

T (734) 454-9900

www.sme-usa.com

January 20, 2023

Adam Siegelstein
NextEra Energy Resources, LLC
700 Universe Blvd
Juno Beach, Florida 33408

Via E-Mail: adam.siegelstein@NEE.com

RE: Legal Description
City of Columbus
Lease Parcel
Jackson Pike – State Route 104
File No. 14560F-LD002
SME Project No.: 087611.00.001

Situated in the State of Ohio, County of Franklin, City of Columbus, Township of Jackson, and in Virginia Military Survey No. 1108, being part of 165.073 acres out of that tract conveyed to Demarco, Inc by deed of record in Official Record 16667 D-06 of Franklin County Records and being more particularly bounded and described as follows:

Commencing at a railroad spike found in the centerline of Jackson Pike (State Route 104) (60 Feet Wide & Varies), thence North 25°17'45" East, along the centerline of said Jackson Pike, a distance of 1544.33 feet to the Southwest corner of lands conveyed to the City of Columbus by deed of record in Deed Book 389, Page 183 of Franklin County Records;

Thence South 76°43'20" East, along the South line of said City of Columbus lands, a distance of 922.22 feet to the Principal Place of Beginning of the lease parcel herein described;

- Course 1 Thence North 19°58'18" East, a distance of 1607.16 feet to a point;
- Course 2 Thence South 77°39'39" East, a distance of 331.53 feet to a point;
- Course 3 Thence South 19°58'18" West, a distance of 1612.91 feet to a point on the South line of said City of Columbus lands;
- Course 4 Thence North 76°40'29" West, along the Southerly line of said City of Columbus lands, a distance of 330.82 feet to the Principal Place of Beginning and containing a total of 12.1452 Acres (529,047 Square Feet) of land, as surveyed by Steven J. Metcalf, Registered Surveyor No.8622-Ohio of Neff & Associates, Dated: January, 2022.

The basis of bearings for the premises surveyed is derived from VRS GPS observations performed in February 2018, NAD83 (CORS96), Ohio State Plane Coordinate System, South Zone (3402), observed bearing for Jackson Pike, as stated North 25°17'45" East, and are used to denote angles only.

Monuments described as “5/8” iron pin set are (5/8”x30”) rebar with orange cap stamped “Neff & Assoc.-#8622”.

Be the same more or less, but subject to all legal highways and easements of record. Being a part of Parcel No. 010-095230.

Sincerely,

SME

PREPARED BY:
Steven J. Metcalf
Registered Surveyor No. 8622-Ohio

APPENDIX C STORMWATER RUNOFF AND PEAK FLOW CALCULATIONS FOR PREFERRED REDEVELOPMENT PLAN

Summary for Subcatchment 1: DA-01 Post-development

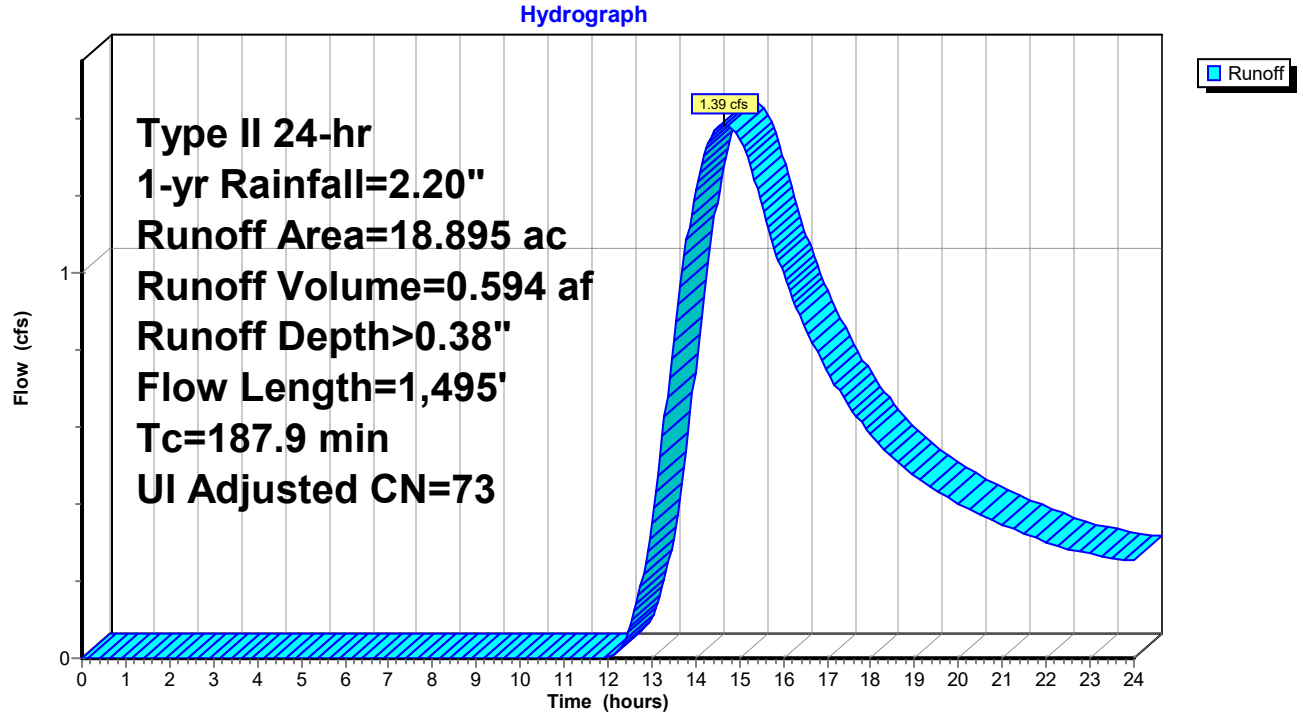
Runoff = 1.39 cfs @ 14.63 hrs, Volume= 0.594 af, Depth> 0.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.20"

	Area (ac)	CN	Adj	Description
	16.350	71		Meadow, non-grazed, HSG C
	0.370	89		Gravel roads, HSG C
	1.136	98		Unconnected pavement, HSG C
*	1.039	89		Ballast aggregate, HSG C
	18.895	74	73	Weighted Average, UI Adjusted
	17.759			93.99% Pervious Area
	1.136			6.01% Impervious Area
	1.136			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.9	1,495	Total			

Subcatchment 1: DA-01 Post-development



Hydrograph for Subcatchment 1: DA-01 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.02	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.04	0.00	0.00
2.00	0.05	0.00	0.00
2.25	0.06	0.00	0.00
2.50	0.06	0.00	0.00
2.75	0.07	0.00	0.00
3.00	0.08	0.00	0.00
3.25	0.08	0.00	0.00
3.50	0.09	0.00	0.00
3.75	0.10	0.00	0.00
4.00	0.11	0.00	0.00
4.25	0.11	0.00	0.00
4.50	0.12	0.00	0.00
4.75	0.13	0.00	0.00
5.00	0.14	0.00	0.00
5.25	0.15	0.00	0.00
5.50	0.16	0.00	0.00
5.75	0.17	0.00	0.00
6.00	0.18	0.00	0.00
6.25	0.19	0.00	0.00
6.50	0.20	0.00	0.00
6.75	0.21	0.00	0.00
7.00	0.22	0.00	0.00
7.25	0.23	0.00	0.00
7.50	0.24	0.00	0.00
7.75	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.25	0.28	0.00	0.00
8.50	0.29	0.00	0.00
8.75	0.31	0.00	0.00
9.00	0.32	0.00	0.00
9.25	0.34	0.00	0.00
9.50	0.36	0.00	0.00
9.75	0.38	0.00	0.00
10.00	0.40	0.00	0.00
10.25	0.42	0.00	0.00
10.50	0.45	0.00	0.00
10.75	0.48	0.00	0.00
11.00	0.52	0.00	0.00
11.25	0.56	0.00	0.00
11.50	0.62	0.00	0.00
11.75	0.85	0.00	0.00
12.00	1.46	0.12	0.00
12.25	1.55	0.15	0.02
12.50	1.62	0.17	0.08
12.75	1.66	0.18	0.19
13.00	1.70	0.20	0.35
13.25	1.73	0.21	0.58
13.50	1.76	0.22	0.83
13.75	1.78	0.23	1.05
14.00	1.80	0.24	1.22
14.25	1.82	0.25	1.32
14.50	1.84	0.25	**1.38**
14.75	1.86	0.26	**1.38**
15.00	1.88	0.27	1.35
15.25	1.89	0.27	1.29
15.50	1.91	0.28	1.18
15.75	1.92	0.29	1.08
16.00	1.94	0.29	1.00
16.25	1.95	0.30	0.92
16.50	1.96	0.30	0.86
16.75	1.97	0.31	0.80
17.00	1.98	0.31	0.75
17.25	1.99	0.32	0.70
17.50	2.01	0.32	0.66
17.75	2.02	0.33	0.62
18.00	2.03	0.33	0.58
18.25	2.04	0.34	0.55
18.50	2.05	0.34	0.52
18.75	2.05	0.34	0.50
19.00	2.06	0.35	0.47
19.25	2.07	0.35	0.45
19.50	2.08	0.36	0.43
19.75	2.09	0.36	0.42
20.00	2.09	0.36	0.40
20.25	2.10	0.37	0.39
20.50	2.11	0.37	0.37
20.75	2.12	0.37	0.36
21.00	2.12	0.38	0.35
21.25	2.13	0.38	0.34
21.50	2.14	0.38	0.32
21.75	2.14	0.39	0.31
22.00	2.15	0.39	0.30
22.25	2.16	0.39	0.29
22.50	2.16	0.40	0.28
22.75	2.17	0.40	0.28
23.00	2.18	0.40	0.27
23.25	2.18	0.40	0.27
23.50	2.19	0.41	0.26
23.75	2.19	0.41	0.26
24.00	**2.20**	**0.41**	0.25

Summary for Subcatchment 1S: DA-01 Pre-development

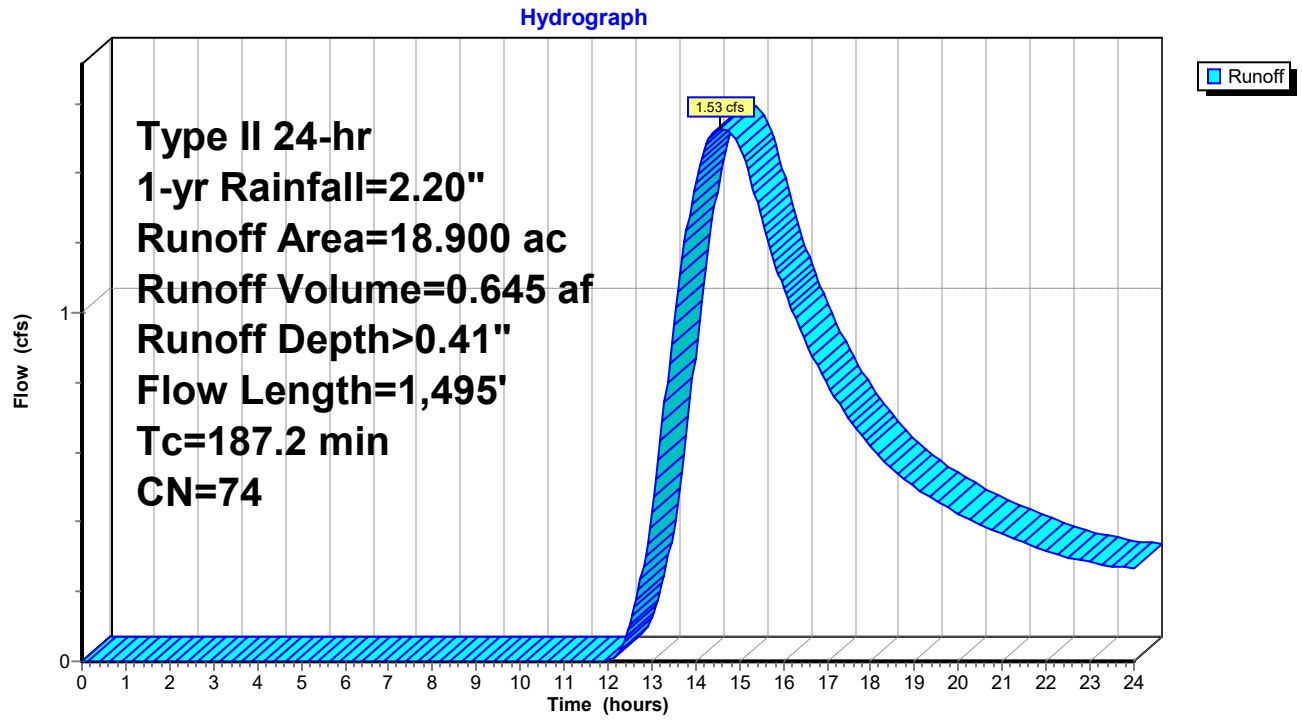
Runoff = 1.53 cfs @ 14.57 hrs, Volume= 0.645 af, Depth> 0.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.20"

Area (ac)	CN	Description
18.000	73	Woods, Fair, HSG C
0.900	89	Gravel roads, HSG C
18.900	74	Weighted Average
18.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.2	1,495	Total			

Subcatchment 1S: DA-01 Pre-development



Hydrograph for Subcatchment 1S: DA-01 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.02	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.04	0.00	0.00
2.00	0.05	0.00	0.00
2.25	0.06	0.00	0.00
2.50	0.06	0.00	0.00
2.75	0.07	0.00	0.00
3.00	0.08	0.00	0.00
3.25	0.08	0.00	0.00
3.50	0.09	0.00	0.00
3.75	0.10	0.00	0.00
4.00	0.11	0.00	0.00
4.25	0.11	0.00	0.00
4.50	0.12	0.00	0.00
4.75	0.13	0.00	0.00
5.00	0.14	0.00	0.00
5.25	0.15	0.00	0.00
5.50	0.16	0.00	0.00
5.75	0.17	0.00	0.00
6.00	0.18	0.00	0.00
6.25	0.19	0.00	0.00
6.50	0.20	0.00	0.00
6.75	0.21	0.00	0.00
7.00	0.22	0.00	0.00
7.25	0.23	0.00	0.00
7.50	0.24	0.00	0.00
7.75	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.25	0.28	0.00	0.00
8.50	0.29	0.00	0.00
8.75	0.31	0.00	0.00
9.00	0.32	0.00	0.00
9.25	0.34	0.00	0.00
9.50	0.36	0.00	0.00
9.75	0.38	0.00	0.00
10.00	0.40	0.00	0.00
10.25	0.42	0.00	0.00
10.50	0.45	0.00	0.00
10.75	0.48	0.00	0.00
11.00	0.52	0.00	0.00
11.25	0.56	0.00	0.00
11.50	0.62	0.00	0.00
11.75	0.85	0.01	0.00
12.00	1.46	0.13	0.00
12.25	1.55	0.17	0.03
12.50	1.62	0.19	0.11
12.75	1.66	0.21	0.24
13.00	1.70	0.22	0.43
13.25	1.73	0.23	0.69
13.50	1.76	0.24	0.96
13.75	1.78	0.25	1.20
14.00	1.80	0.26	1.37
14.25	1.82	0.27	1.48
14.50	1.84	0.28	**1.53**
14.75	1.86	0.29	**1.53**
15.00	1.88	0.29	1.48
15.25	1.89	0.30	1.39
15.50	1.91	0.31	1.27
15.75	1.92	0.31	1.17
16.00	1.94	0.32	1.07
16.25	1.95	0.33	0.99
16.50	1.96	0.33	0.92
16.75	1.97	0.34	0.86
17.00	1.98	0.34	0.80
17.25	1.99	0.35	0.74
17.50	2.01	0.35	0.70
17.75	2.02	0.36	0.65
18.00	2.03	0.36	0.62
18.25	2.04	0.37	0.58
18.50	2.05	0.37	0.55
18.75	2.05	0.38	0.52
19.00	2.06	0.38	0.50
19.25	2.07	0.38	0.48
19.50	2.08	0.39	0.46
19.75	2.09	0.39	0.44
20.00	2.09	0.39	0.42
20.25	2.10	0.40	0.41
20.50	2.11	0.40	0.39
20.75	2.12	0.41	0.38
21.00	2.12	0.41	0.37
21.25	2.13	0.41	0.35
21.50	2.14	0.42	0.34
21.75	2.14	0.42	0.33
22.00	2.15	0.42	0.32
22.25	2.16	0.43	0.31
22.50	2.16	0.43	0.30
22.75	2.17	0.43	0.29
23.00	2.18	0.43	0.28
23.25	2.18	0.44	0.28
23.50	2.19	0.44	0.27
23.75	2.19	0.44	0.27
24.00	**2.20**	**0.45**	0.27

Summary for Subcatchment 1: DA-01 Post-development

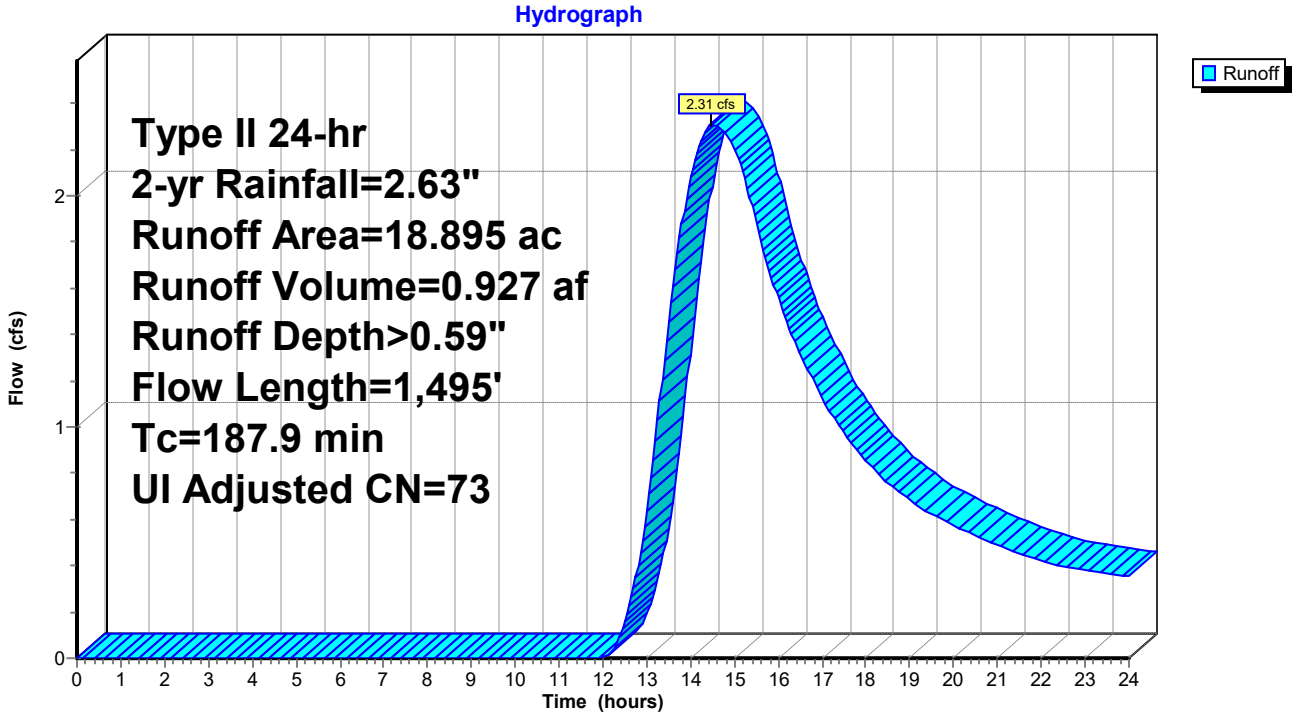
Runoff = 2.31 cfs @ 14.45 hrs, Volume= 0.927 af, Depth> 0.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.63"

	Area (ac)	CN	Adj	Description
	16.350	71		Meadow, non-grazed, HSG C
	0.370	89		Gravel roads, HSG C
	1.136	98		Unconnected pavement, HSG C
*	1.039	89		Ballast aggregate, HSG C
	18.895	74	73	Weighted Average, UI Adjusted
	17.759			93.99% Pervious Area
	1.136			6.01% Impervious Area
	1.136			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.9	1,495	Total			

Subcatchment 1: DA-01 Post-development



Hydrograph for Subcatchment 1: DA-01 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.07	0.00	0.00
2.75	0.08	0.00	0.00
3.00	0.09	0.00	0.00
3.25	0.10	0.00	0.00
3.50	0.11	0.00	0.00
3.75	0.12	0.00	0.00
4.00	0.13	0.00	0.00
4.25	0.14	0.00	0.00
4.50	0.15	0.00	0.00
4.75	0.16	0.00	0.00
5.00	0.17	0.00	0.00
5.25	0.18	0.00	0.00
5.50	0.19	0.00	0.00
5.75	0.20	0.00	0.00
6.00	0.21	0.00	0.00
6.25	0.22	0.00	0.00
6.50	0.23	0.00	0.00
6.75	0.25	0.00	0.00
7.00	0.26	0.00	0.00
7.25	0.27	0.00	0.00
7.50	0.29	0.00	0.00
7.75	0.30	0.00	0.00
8.00	0.32	0.00	0.00
8.25	0.33	0.00	0.00
8.50	0.35	0.00	0.00
8.75	0.37	0.00	0.00
9.00	0.39	0.00	0.00
9.25	0.41	0.00	0.00
9.50	0.43	0.00	0.00
9.75	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.25	0.50	0.00	0.00
10.50	0.54	0.00	0.00
10.75	0.57	0.00	0.00
11.00	0.62	0.00	0.00
11.25	0.67	0.00	0.00
11.50	0.74	0.00	0.00
11.75	1.02	0.02	0.00
12.00	1.74	0.21	0.00
12.25	1.86	0.26	0.04
12.50	1.93	0.29	0.16
12.75	1.99	0.31	0.35
13.00	2.03	0.33	0.64
13.25	2.07	0.35	1.03
13.50	2.10	0.37	1.45
13.75	2.13	0.38	1.82
14.00	2.16	0.39	2.08
14.25	2.18	0.40	**2.24**
14.50	2.20	0.41	**2.31**
14.75	2.22	0.43	2.29
15.00	2.24	0.44	2.21
15.25	2.26	0.44	2.08
15.50	2.28	0.45	1.88
15.75	2.30	0.46	1.70
16.00	2.31	0.47	1.56
16.25	2.33	0.48	1.43
16.50	2.34	0.49	1.32
16.75	2.36	0.49	1.22
17.00	2.37	0.50	1.13
17.25	2.38	0.51	1.05
17.50	2.40	0.51	0.97
17.75	2.41	0.52	0.91
18.00	2.42	0.53	0.85
18.25	2.43	0.53	0.80
18.50	2.45	0.54	0.76
18.75	2.46	0.54	0.72
19.00	2.47	0.55	0.68
19.25	2.48	0.55	0.65
19.50	2.49	0.56	0.62
19.75	2.50	0.56	0.60
20.00	2.50	0.57	0.57
20.25	2.51	0.57	0.55
20.50	2.52	0.58	0.53
20.75	2.53	0.58	0.51
21.00	2.54	0.59	0.49
21.25	2.55	0.59	0.47
21.50	2.55	0.60	0.46
21.75	2.56	0.60	0.44
22.00	2.57	0.61	0.42
22.25	2.58	0.61	0.41
22.50	2.59	0.61	0.40
22.75	2.59	0.62	0.39
23.00	2.60	0.62	0.38
23.25	2.61	0.63	0.37
23.50	2.62	0.63	0.36
23.75	2.62	0.64	0.36
24.00	**2.63**	**0.64**	0.35

Summary for Subcatchment 1S: DA-01 Pre-development

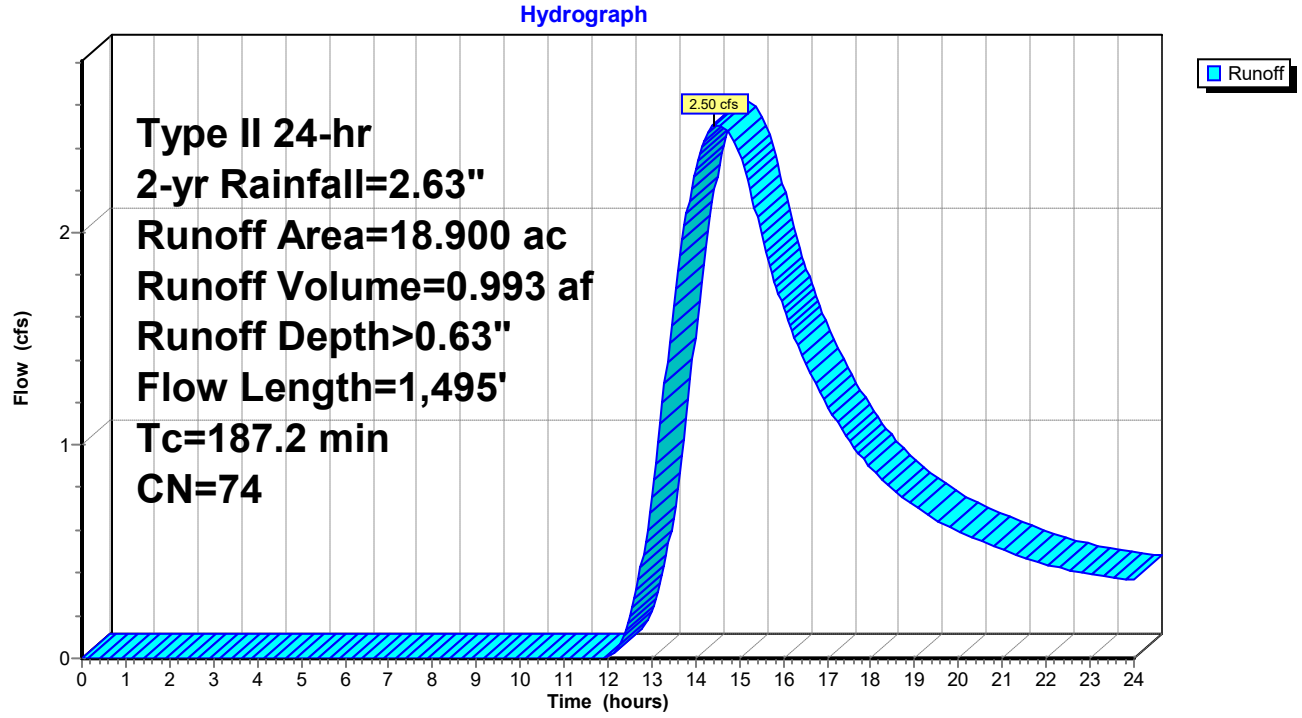
Runoff = 2.50 cfs @ 14.40 hrs, Volume= 0.993 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.63"

Area (ac)	CN	Description
18.000	73	Woods, Fair, HSG C
0.900	89	Gravel roads, HSG C
18.900	74	Weighted Average
18.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.2	1,495	Total			

Subcatchment 1S: DA-01 Pre-development



Hydrograph for Subcatchment 1S: DA-01 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.07	0.00	0.00
2.75	0.08	0.00	0.00
3.00	0.09	0.00	0.00
3.25	0.10	0.00	0.00
3.50	0.11	0.00	0.00
3.75	0.12	0.00	0.00
4.00	0.13	0.00	0.00
4.25	0.14	0.00	0.00
4.50	0.15	0.00	0.00
4.75	0.16	0.00	0.00
5.00	0.17	0.00	0.00
5.25	0.18	0.00	0.00
5.50	0.19	0.00	0.00
5.75	0.20	0.00	0.00
6.00	0.21	0.00	0.00
6.25	0.22	0.00	0.00
6.50	0.23	0.00	0.00
6.75	0.25	0.00	0.00
7.00	0.26	0.00	0.00
7.25	0.27	0.00	0.00
7.50	0.29	0.00	0.00
7.75	0.30	0.00	0.00
8.00	0.32	0.00	0.00
8.25	0.33	0.00	0.00
8.50	0.35	0.00	0.00
8.75	0.37	0.00	0.00
9.00	0.39	0.00	0.00
9.25	0.41	0.00	0.00
9.50	0.43	0.00	0.00
9.75	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.25	0.50	0.00	0.00
10.50	0.54	0.00	0.00
10.75	0.57	0.00	0.00
11.00	0.62	0.00	0.00
11.25	0.67	0.00	0.00
11.50	0.74	0.00	0.00
11.75	1.02	0.03	0.00
12.00	1.74	0.24	0.00
12.25	1.86	0.29	0.05
12.50	1.93	0.32	0.20
12.75	1.99	0.34	0.43
13.00	2.03	0.36	0.76
13.25	2.07	0.38	1.20
13.50	2.10	0.40	1.65
13.75	2.13	0.41	2.03
14.00	2.16	0.43	2.29
14.25	2.18	0.44	**2.45**
14.50	2.20	0.45	**2.50**
14.75	2.22	0.46	2.47
15.00	2.24	0.47	2.37
15.25	2.26	0.48	2.20
15.50	2.28	0.49	1.99
15.75	2.30	0.50	1.80
16.00	2.31	0.51	1.65
16.25	2.33	0.51	1.51
16.50	2.34	0.52	1.39
16.75	2.36	0.53	1.28
17.00	2.37	0.54	1.18
17.25	2.38	0.54	1.10
17.50	2.40	0.55	1.02
17.75	2.41	0.56	0.96
18.00	2.42	0.57	0.90
18.25	2.43	0.57	0.84
18.50	2.45	0.58	0.79
18.75	2.46	0.58	0.75
19.00	2.47	0.59	0.71
19.25	2.48	0.59	0.68
19.50	2.49	0.60	0.65
19.75	2.50	0.61	0.62
20.00	2.50	0.61	0.60
20.25	2.51	0.62	0.57
20.50	2.52	0.62	0.55
20.75	2.53	0.62	0.53
21.00	2.54	0.63	0.51
21.25	2.55	0.63	0.49
21.50	2.55	0.64	0.47
21.75	2.56	0.64	0.46
22.00	2.57	0.65	0.44
22.25	2.58	0.65	0.43
22.50	2.59	0.66	0.41
22.75	2.59	0.66	0.40
23.00	2.60	0.67	0.39
23.25	2.61	0.67	0.39
23.50	2.62	0.67	0.38
23.75	2.62	0.68	0.37
24.00	**2.63**	**0.68**	0.37

Summary for Subcatchment 1: DA-01 Post-development

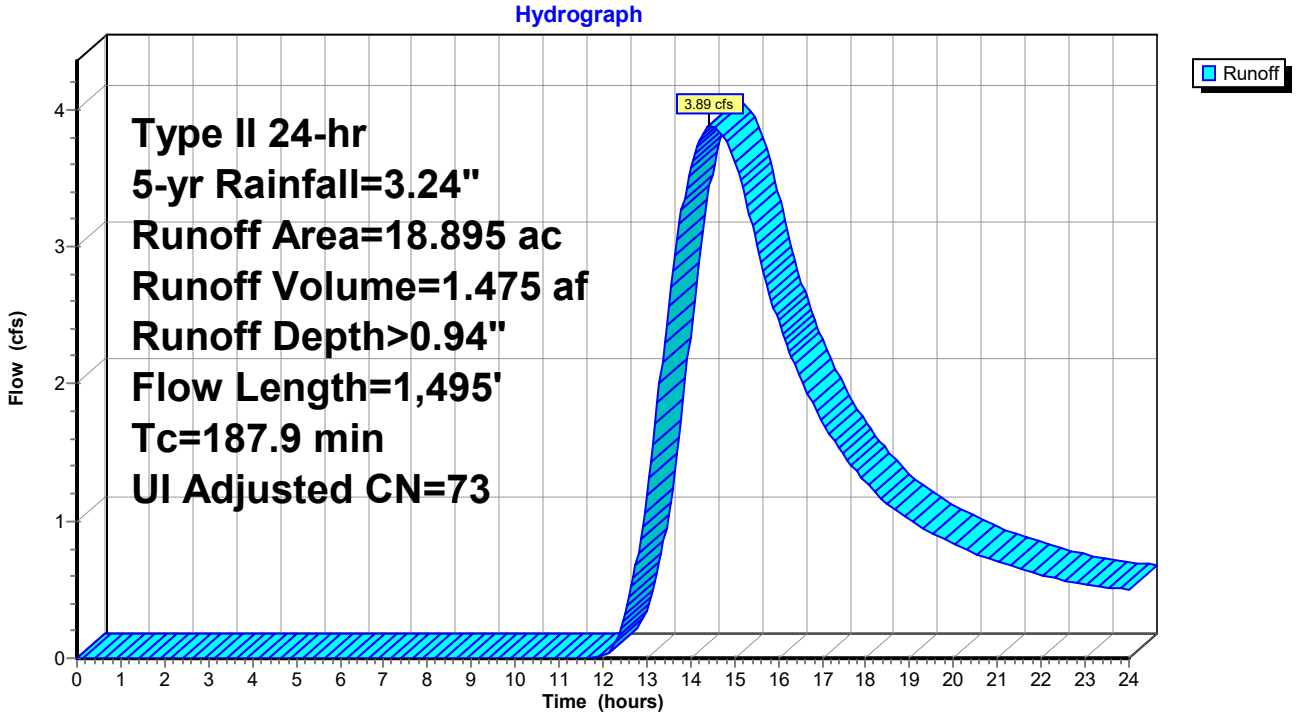
Runoff = 3.89 cfs @ 14.42 hrs, Volume= 1.475 af, Depth> 0.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=3.24"

	Area (ac)	CN	Adj	Description
	16.350	71		Meadow, non-grazed, HSG C
	0.370	89		Gravel roads, HSG C
	1.136	98		Unconnected pavement, HSG C
*	1.039	89		Ballast aggregate, HSG C
	18.895	74	73	Weighted Average, UI Adjusted
	17.759			93.99% Pervious Area
	1.136			6.01% Impervious Area
	1.136			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.9	1,495	Total			

Subcatchment 1: DA-01 Post-development



Hydrograph for Subcatchment 1: DA-01 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.07	0.00	0.00
2.25	0.08	0.00	0.00
2.50	0.09	0.00	0.00
2.75	0.10	0.00	0.00
3.00	0.11	0.00	0.00
3.25	0.12	0.00	0.00
3.50	0.13	0.00	0.00
3.75	0.14	0.00	0.00
4.00	0.16	0.00	0.00
4.25	0.17	0.00	0.00
4.50	0.18	0.00	0.00
4.75	0.19	0.00	0.00
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.23	0.00	0.00
5.75	0.24	0.00	0.00
6.00	0.26	0.00	0.00
6.25	0.27	0.00	0.00
6.50	0.29	0.00	0.00
6.75	0.30	0.00	0.00
7.00	0.32	0.00	0.00
7.25	0.34	0.00	0.00
7.50	0.35	0.00	0.00
7.75	0.37	0.00	0.00
8.00	0.39	0.00	0.00
8.25	0.41	0.00	0.00
8.50	0.43	0.00	0.00
8.75	0.45	0.00	0.00
9.00	0.48	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.56	0.00	0.00
10.00	0.59	0.00	0.00
10.25	0.62	0.00	0.00
10.50	0.66	0.00	0.00
10.75	0.71	0.00	0.00
11.00	0.76	0.00	0.00
11.25	0.83	0.00	0.00
11.50	0.92	0.01	0.00
11.75	1.25	0.06	0.00
12.00	2.15	0.39	0.02
12.25	2.29	0.46	0.10
12.50	2.38	0.50	0.32
12.75	2.45	0.54	0.67
13.00	2.50	0.57	1.19
13.25	2.55	0.59	1.86
13.50	2.59	0.62	2.57
13.75	2.62	0.64	3.16
14.00	2.66	0.65	3.58
14.25	2.69	0.67	**3.80**
14.50	2.71	0.69	**3.88**
14.75	2.74	0.70	3.80
15.00	2.77	0.72	3.64
15.25	2.79	0.73	3.37
15.50	2.81	0.74	3.02
15.75	2.83	0.76	2.71
16.00	2.85	0.77	2.46
16.25	2.87	0.78	2.24
16.50	2.89	0.79	2.05
16.75	2.90	0.80	1.88
17.00	2.92	0.81	1.73
17.25	2.94	0.82	1.60
17.50	2.95	0.83	1.48
17.75	2.97	0.84	1.37
18.00	2.98	0.85	1.28
18.25	3.00	0.86	1.20
18.50	3.01	0.86	1.13
18.75	3.03	0.87	1.06
19.00	3.04	0.88	1.01
19.25	3.05	0.89	0.96
19.50	3.06	0.90	0.91
19.75	3.07	0.90	0.87
20.00	3.08	0.91	0.83
20.25	3.09	0.92	0.80
20.50	3.11	0.92	0.77
20.75	3.12	0.93	0.74
21.00	3.13	0.94	0.71
21.25	3.14	0.94	0.68
21.50	3.15	0.95	0.66
21.75	3.16	0.95	0.63
22.00	3.17	0.96	0.61
22.25	3.18	0.97	0.59
22.50	3.18	0.97	0.57
22.75	3.19	0.98	0.55
23.00	3.20	0.99	0.54
23.25	3.21	0.99	0.53
23.50	3.22	1.00	0.52
23.75	3.23	1.00	0.51
24.00	**3.24**	**1.01**	0.50

Summary for Subcatchment 1S: DA-01 Pre-development

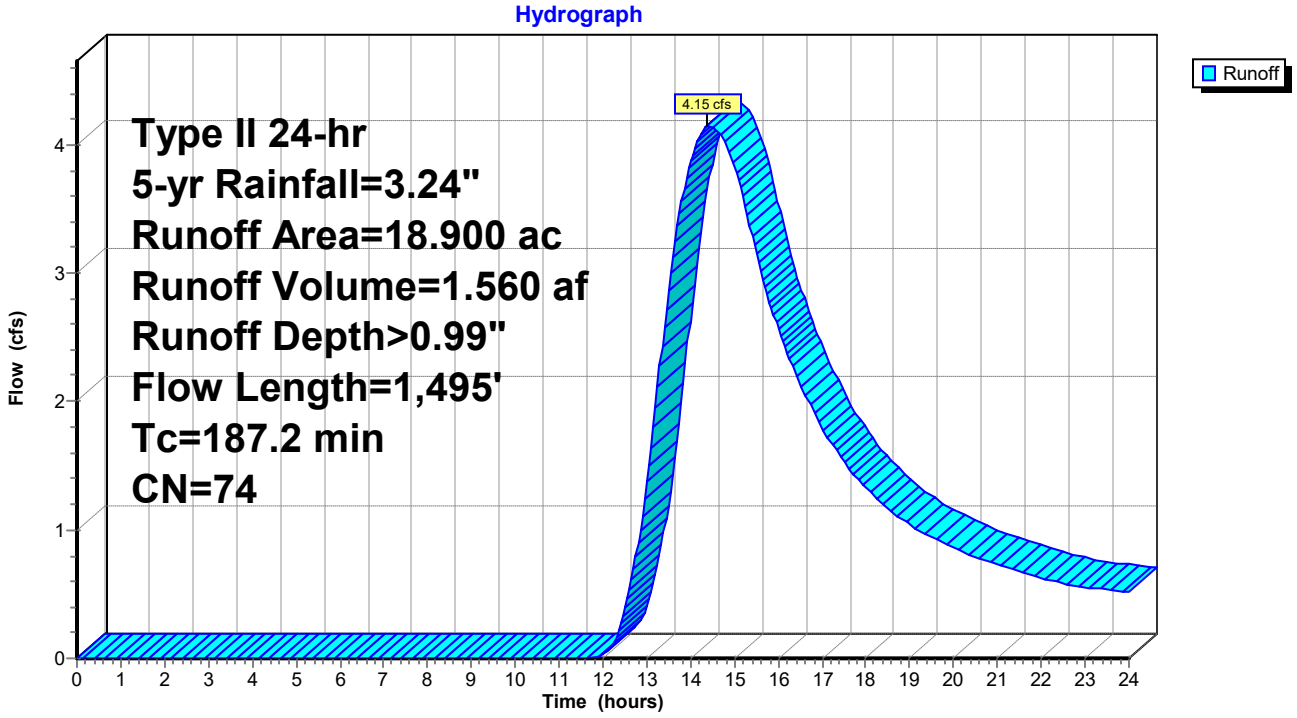
Runoff = 4.15 cfs @ 14.37 hrs, Volume= 1.560 af, Depth> 0.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=3.24"

Area (ac)	CN	Description
18.000	73	Woods, Fair, HSG C
0.900	89	Gravel roads, HSG C
18.900	74	Weighted Average
18.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.2	1,495	Total			

Subcatchment 1S: DA-01 Pre-development



Hydrograph for Subcatchment 1S: DA-01 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.07	0.00	0.00
2.25	0.08	0.00	0.00
2.50	0.09	0.00	0.00
2.75	0.10	0.00	0.00
3.00	0.11	0.00	0.00
3.25	0.12	0.00	0.00
3.50	0.13	0.00	0.00
3.75	0.14	0.00	0.00
4.00	0.16	0.00	0.00
4.25	0.17	0.00	0.00
4.50	0.18	0.00	0.00
4.75	0.19	0.00	0.00
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.23	0.00	0.00
5.75	0.24	0.00	0.00
6.00	0.26	0.00	0.00
6.25	0.27	0.00	0.00
6.50	0.29	0.00	0.00
6.75	0.30	0.00	0.00
7.00	0.32	0.00	0.00
7.25	0.34	0.00	0.00
7.50	0.35	0.00	0.00
7.75	0.37	0.00	0.00
8.00	0.39	0.00	0.00
8.25	0.41	0.00	0.00
8.50	0.43	0.00	0.00
8.75	0.45	0.00	0.00
9.00	0.48	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.56	0.00	0.00
10.00	0.59	0.00	0.00
10.25	0.62	0.00	0.00
10.50	0.66	0.00	0.00
10.75	0.71	0.00	0.00
11.00	0.76	0.00	0.00
11.25	0.83	0.00	0.00
11.50	0.92	0.01	0.00
11.75	1.25	0.07	0.01
12.00	2.15	0.42	0.02
12.25	2.29	0.49	0.12
12.50	2.38	0.54	0.39
12.75	2.45	0.58	0.80
13.00	2.50	0.61	1.37
13.25	2.55	0.64	2.11
13.50	2.59	0.66	2.86
13.75	2.62	0.68	3.47
14.00	2.66	0.70	3.87
14.25	2.69	0.72	**4.09**
14.50	2.71	0.73	**4.13**
14.75	2.74	0.75	4.04
15.00	2.77	0.76	3.83
15.25	2.79	0.78	3.52
15.50	2.81	0.79	3.15
15.75	2.83	0.80	2.83
16.00	2.85	0.82	2.56
16.25	2.87	0.83	2.33
16.50	2.89	0.84	2.14
16.75	2.90	0.85	1.96
17.00	2.92	0.86	1.79
17.25	2.94	0.87	1.66
17.50	2.95	0.88	1.53
17.75	2.97	0.89	1.42
18.00	2.98	0.90	1.33
18.25	3.00	0.91	1.24
18.50	3.01	0.92	1.16
18.75	3.03	0.92	1.10
19.00	3.04	0.93	1.04
19.25	3.05	0.94	0.99
19.50	3.06	0.95	0.94
19.75	3.07	0.96	0.90
20.00	3.08	0.96	0.86
20.25	3.09	0.97	0.82
20.50	3.11	0.98	0.79
20.75	3.12	0.98	0.76
21.00	3.13	0.99	0.73
21.25	3.14	1.00	0.70
21.50	3.15	1.00	0.68
21.75	3.16	1.01	0.65
22.00	3.17	1.01	0.63
22.25	3.18	1.02	0.60
22.50	3.18	1.03	0.58
22.75	3.19	1.03	0.57
23.00	3.20	1.04	0.56
23.25	3.21	1.05	0.54
23.50	3.22	1.05	0.53
23.75	3.23	1.06	0.52
24.00	**3.24**	**1.06**	0.52

Summary for Subcatchment 1: DA-01 Post-development

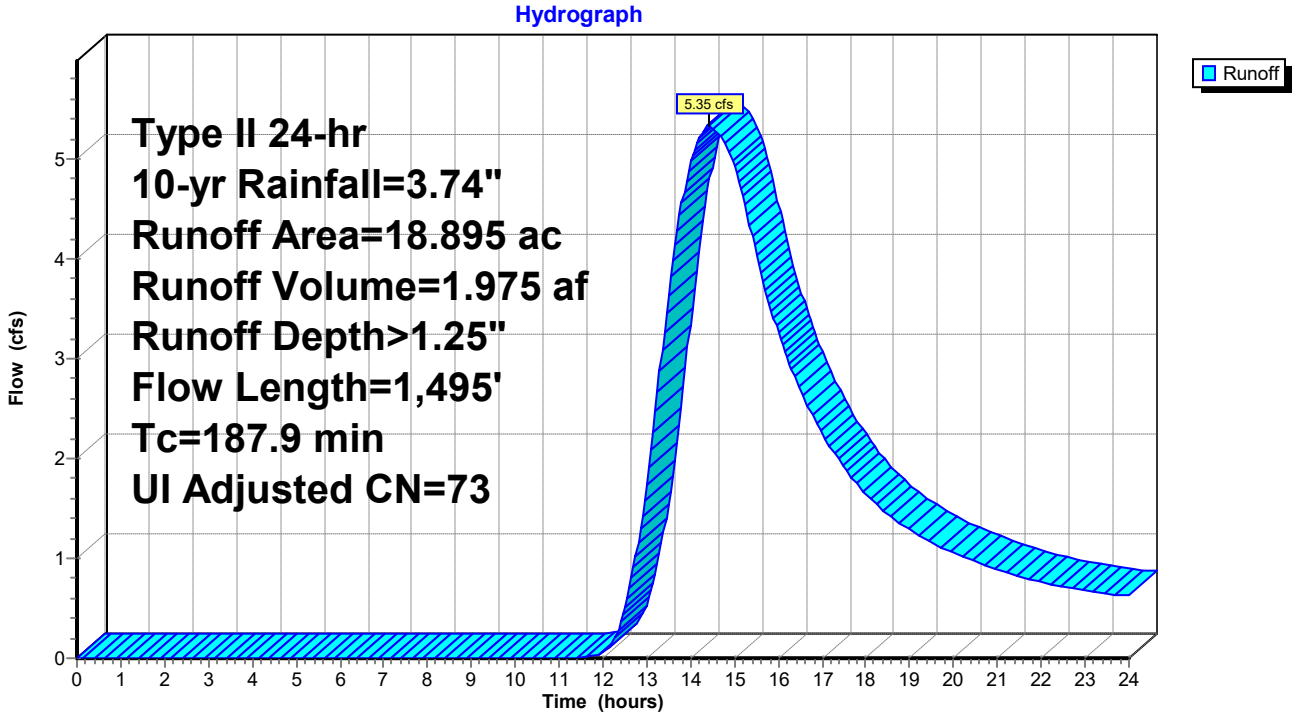
Runoff = 5.35 cfs @ 14.41 hrs, Volume= 1.975 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.74"

	Area (ac)	CN	Adj	Description
	16.350	71		Meadow, non-grazed, HSG C
	0.370	89		Gravel roads, HSG C
	1.136	98		Unconnected pavement, HSG C
*	1.039	89		Ballast aggregate, HSG C
	18.895	74	73	Weighted Average, UI Adjusted
	17.759			93.99% Pervious Area
	1.136			6.01% Impervious Area
	1.136			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.9	1,495	Total			

Subcatchment 1: DA-01 Post-development



Hydrograph for Subcatchment 1: DA-01 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.04	0.00	0.00
1.25	0.05	0.00	0.00
1.50	0.06	0.00	0.00
1.75	0.07	0.00	0.00
2.00	0.08	0.00	0.00
2.25	0.09	0.00	0.00
2.50	0.11	0.00	0.00
2.75	0.12	0.00	0.00
3.00	0.13	0.00	0.00
3.25	0.14	0.00	0.00
3.50	0.15	0.00	0.00
3.75	0.17	0.00	0.00
4.00	0.18	0.00	0.00
4.25	0.19	0.00	0.00
4.50	0.21	0.00	0.00
4.75	0.22	0.00	0.00
5.00	0.24	0.00	0.00
5.25	0.25	0.00	0.00
5.50	0.27	0.00	0.00
5.75	0.28	0.00	0.00
6.00	0.30	0.00	0.00
6.25	0.32	0.00	0.00
6.50	0.33	0.00	0.00
6.75	0.35	0.00	0.00
7.00	0.37	0.00	0.00
7.25	0.39	0.00	0.00
7.50	0.41	0.00	0.00
7.75	0.43	0.00	0.00
8.00	0.45	0.00	0.00
8.25	0.47	0.00	0.00
8.50	0.49	0.00	0.00
8.75	0.52	0.00	0.00
9.00	0.55	0.00	0.00
9.25	0.58	0.00	0.00
9.50	0.61	0.00	0.00
9.75	0.64	0.00	0.00
10.00	0.68	0.00	0.00
10.25	0.72	0.00	0.00
10.50	0.76	0.00	0.00
10.75	0.82	0.00	0.00
11.00	0.88	0.01	0.00
11.25	0.96	0.01	0.00
11.50	1.06	0.03	0.01
11.75	1.45	0.11	0.02
12.00	2.48	0.56	0.06
12.25	2.64	0.65	0.18
12.50	2.75	0.71	0.51
12.75	2.82	0.75	1.02
13.00	2.89	0.79	1.75
13.25	2.94	0.82	2.68
13.50	2.99	0.85	3.64
13.75	3.03	0.88	4.44
14.00	3.07	0.90	4.99
14.25	3.10	0.92	**5.25**
14.50	3.13	0.94	**5.32**
14.75	3.16	0.96	5.19
15.00	3.19	0.98	4.93
15.25	3.22	1.00	4.55
15.50	3.24	1.01	4.05
15.75	3.27	1.03	3.62
16.00	3.29	1.04	3.27
16.25	3.31	1.06	2.96
16.50	3.33	1.07	2.70
16.75	3.35	1.08	2.47
17.00	3.37	1.09	2.26
17.25	3.39	1.11	2.08
17.50	3.41	1.12	1.92
17.75	3.43	1.13	1.78
18.00	3.44	1.14	1.65
18.25	3.46	1.15	1.54
18.50	3.48	1.16	1.44
18.75	3.49	1.17	1.36
19.00	3.51	1.18	1.28
19.25	3.52	1.19	1.22
19.50	3.54	1.20	1.16
19.75	3.55	1.21	1.11
20.00	3.56	1.22	1.06
20.25	3.57	1.23	1.01
20.50	3.58	1.24	0.97
20.75	3.60	1.24	0.93
21.00	3.61	1.25	0.89
21.25	3.62	1.26	0.86
21.50	3.63	1.27	0.82
21.75	3.64	1.28	0.79
22.00	3.65	1.28	0.76
22.25	3.67	1.29	0.74
22.50	3.68	1.30	0.71
22.75	3.69	1.31	0.69
23.00	3.70	1.31	0.67
23.25	3.71	1.32	0.66
23.50	3.72	1.33	0.65
23.75	3.73	1.34	0.64
24.00	**3.74**	**1.34**	0.63

Summary for Subcatchment 1S: DA-01 Pre-development

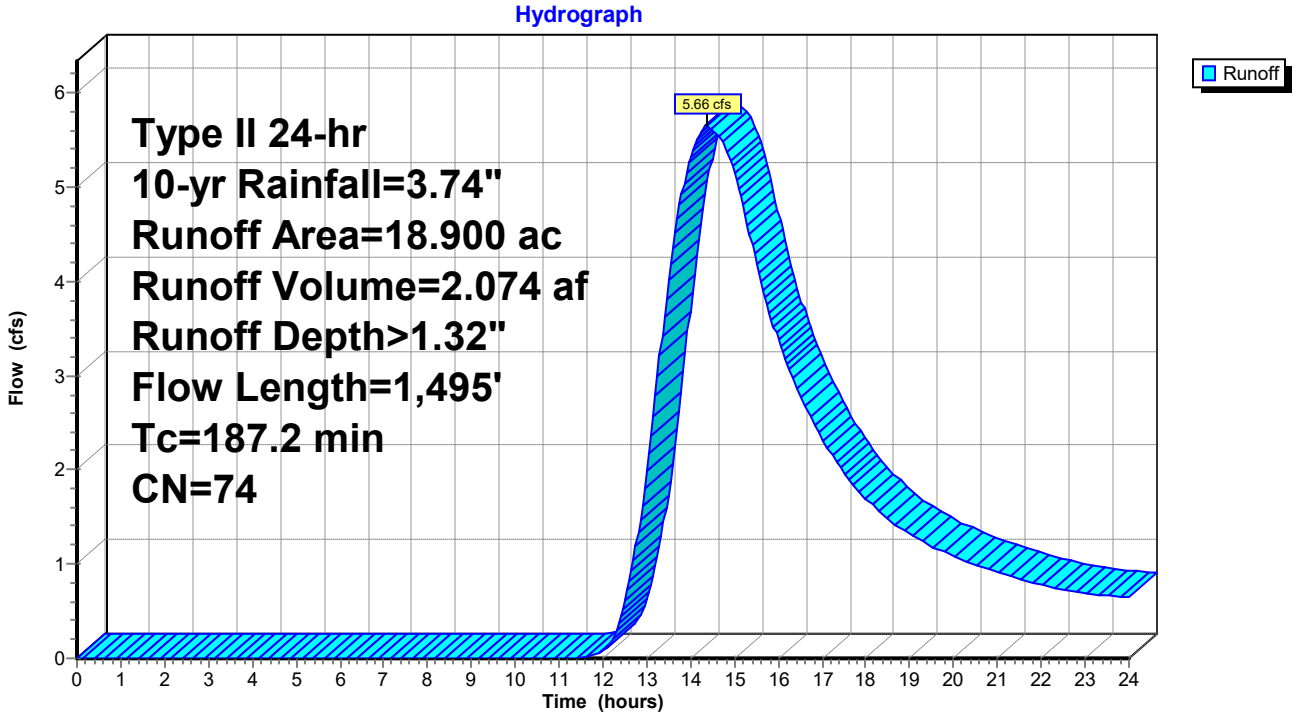
Runoff = 5.66 cfs @ 14.36 hrs, Volume= 2.074 af, Depth> 1.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.74"

Area (ac)	CN	Description
18.000	73	Woods, Fair, HSG C
0.900	89	Gravel roads, HSG C
18.900	74	Weighted Average
18.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.2	1,495	Total			

Subcatchment 1S: DA-01 Pre-development



Hydrograph for Subcatchment 1S: DA-01 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.04	0.00	0.00
1.25	0.05	0.00	0.00
1.50	0.06	0.00	0.00
1.75	0.07	0.00	0.00
2.00	0.08	0.00	0.00
2.25	0.09	0.00	0.00
2.50	0.11	0.00	0.00
2.75	0.12	0.00	0.00
3.00	0.13	0.00	0.00
3.25	0.14	0.00	0.00
3.50	0.15	0.00	0.00
3.75	0.17	0.00	0.00
4.00	0.18	0.00	0.00
4.25	0.19	0.00	0.00
4.50	0.21	0.00	0.00
4.75	0.22	0.00	0.00
5.00	0.24	0.00	0.00
5.25	0.25	0.00	0.00
5.50	0.27	0.00	0.00
5.75	0.28	0.00	0.00
6.00	0.30	0.00	0.00
6.25	0.32	0.00	0.00
6.50	0.33	0.00	0.00
6.75	0.35	0.00	0.00
7.00	0.37	0.00	0.00
7.25	0.39	0.00	0.00
7.50	0.41	0.00	0.00
7.75	0.43	0.00	0.00
8.00	0.45	0.00	0.00
8.25	0.47	0.00	0.00
8.50	0.49	0.00	0.00
8.75	0.52	0.00	0.00
9.00	0.55	0.00	0.00
9.25	0.58	0.00	0.00
9.50	0.61	0.00	0.00
9.75	0.64	0.00	0.00
10.00	0.68	0.00	0.00
10.25	0.72	0.00	0.00
10.50	0.76	0.00	0.00
10.75	0.82	0.00	0.00
11.00	0.88	0.01	0.00
11.25	0.96	0.02	0.00
11.50	1.06	0.03	0.01
11.75	1.45	0.13	0.03
12.00	2.48	0.60	0.07
12.25	2.64	0.69	0.23
12.50	2.75	0.75	0.61
12.75	2.82	0.80	1.19
13.00	2.89	0.84	1.99
13.25	2.94	0.87	3.00
13.50	2.99	0.90	4.01
13.75	3.03	0.93	4.81
14.00	3.07	0.95	5.32
14.25	3.10	0.97	**5.59**
14.50	3.13	0.99	**5.61**
14.75	3.16	1.01	5.46
15.00	3.19	1.03	5.16
15.25	3.22	1.05	4.71
15.50	3.24	1.07	4.19
15.75	3.27	1.08	3.75
16.00	3.29	1.10	3.38
16.25	3.31	1.11	3.06
16.50	3.33	1.13	2.79
16.75	3.35	1.14	2.55
17.00	3.37	1.15	2.33
17.25	3.39	1.17	2.14
17.50	3.41	1.18	1.97
17.75	3.43	1.19	1.83
18.00	3.44	1.20	1.70
18.25	3.46	1.21	1.58
18.50	3.48	1.22	1.49
18.75	3.49	1.23	1.40
19.00	3.51	1.24	1.32
19.25	3.52	1.25	1.25
19.50	3.54	1.26	1.19
19.75	3.55	1.27	1.14
20.00	3.56	1.28	1.08
20.25	3.57	1.29	1.04
20.50	3.58	1.30	0.99
20.75	3.60	1.31	0.95
21.00	3.61	1.32	0.92
21.25	3.62	1.32	0.88
21.50	3.63	1.33	0.85
21.75	3.64	1.34	0.81
22.00	3.65	1.35	0.78
22.25	3.67	1.36	0.75
22.50	3.68	1.36	0.73
22.75	3.69	1.37	0.71
23.00	3.70	1.38	0.69
23.25	3.71	1.39	0.68
23.50	3.72	1.39	0.67
23.75	3.73	1.40	0.65
24.00	**3.74**	**1.41**	0.64

Summary for Subcatchment 1: DA-01 Post-development

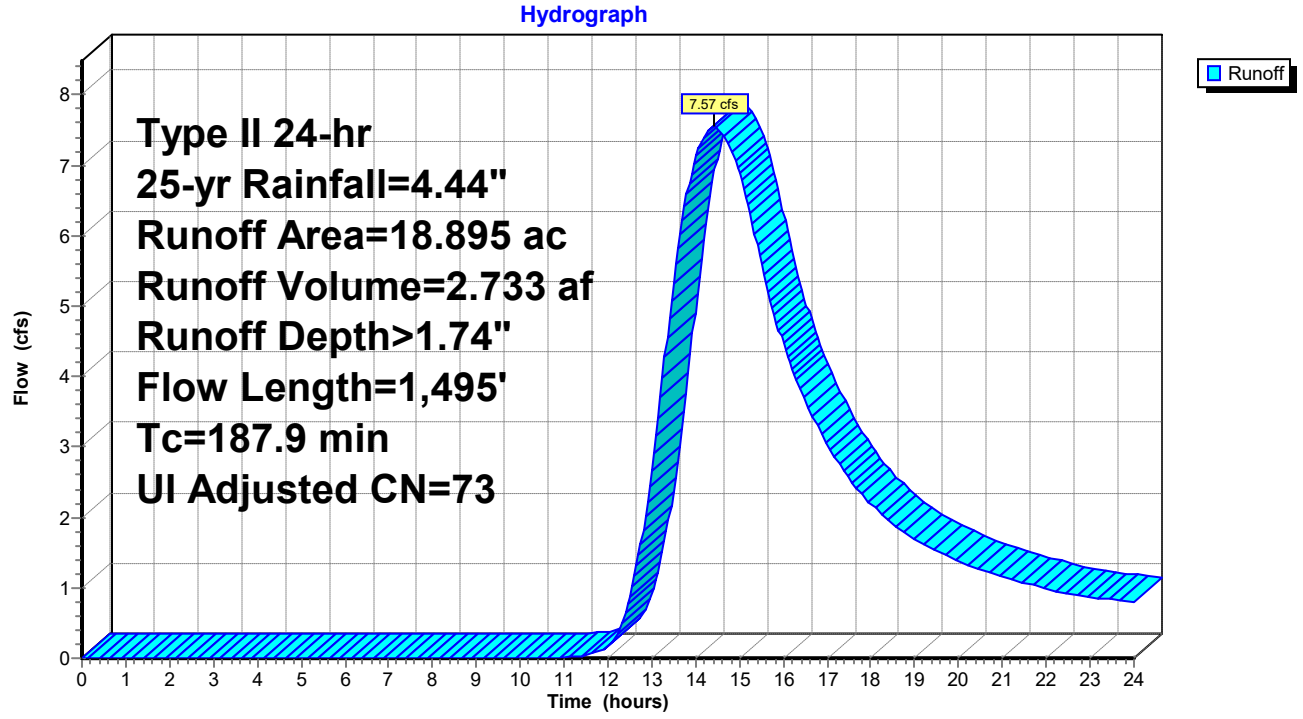
Runoff = 7.57 cfs @ 14.41 hrs, Volume= 2.733 af, Depth> 1.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=4.44"

	Area (ac)	CN	Adj	Description
	16.350	71		Meadow, non-grazed, HSG C
	0.370	89		Gravel roads, HSG C
	1.136	98		Unconnected pavement, HSG C
*	1.039	89		Ballast aggregate, HSG C
	18.895	74	73	Weighted Average, UI Adjusted
	17.759			93.99% Pervious Area
	1.136			6.01% Impervious Area
	1.136			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.9	1,495	Total			

Subcatchment 1: DA-01 Post-development



Hydrograph for Subcatchment 1: DA-01 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.10	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.14	0.00	0.00
3.00	0.15	0.00	0.00
3.25	0.17	0.00	0.00
3.50	0.18	0.00	0.00
3.75	0.20	0.00	0.00
4.00	0.21	0.00	0.00
4.25	0.23	0.00	0.00
4.50	0.25	0.00	0.00
4.75	0.26	0.00	0.00
5.00	0.28	0.00	0.00
5.25	0.30	0.00	0.00
5.50	0.32	0.00	0.00
5.75	0.34	0.00	0.00
6.00	0.36	0.00	0.00
6.25	0.38	0.00	0.00
6.50	0.40	0.00	0.00
6.75	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.25	0.46	0.00	0.00
7.50	0.49	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.53	0.00	0.00
8.25	0.56	0.00	0.00
8.50	0.59	0.00	0.00
8.75	0.62	0.00	0.00
9.00	0.65	0.00	0.00
9.25	0.69	0.00	0.00
9.50	0.72	0.00	0.00
9.75	0.76	0.00	0.00
10.00	0.80	0.00	0.00
10.25	0.85	0.00	0.00
10.50	0.91	0.01	0.00
10.75	0.97	0.01	0.00
11.00	1.04	0.02	0.01
11.25	1.14	0.04	0.02
11.50	1.26	0.06	0.04
11.75	1.72	0.20	0.08
12.00	2.94	0.82	0.16
12.25	3.14	0.94	0.38
12.50	3.26	1.02	0.88
12.75	3.35	1.08	1.63
13.00	3.43	1.13	2.67
13.25	3.49	1.17	3.98
13.50	3.55	1.21	5.33
13.75	3.60	1.25	6.42
14.00	3.64	1.28	7.14
14.25	3.68	1.30	**7.46**
14.50	3.72	1.33	**7.52**
14.75	3.76	1.35	7.28
15.00	3.79	1.38	6.88
15.25	3.82	1.40	6.31
15.50	3.85	1.42	5.59
15.75	3.88	1.44	4.98
16.00	3.91	1.46	4.47
16.25	3.93	1.48	4.03
16.50	3.96	1.50	3.66
16.75	3.98	1.51	3.34
17.00	4.00	1.53	3.04
17.25	4.03	1.55	2.79
17.50	4.05	1.56	2.56
17.75	4.07	1.58	2.37
18.00	4.09	1.59	2.19
18.25	4.11	1.61	2.04
18.50	4.13	1.62	1.91
18.75	4.15	1.63	1.79
19.00	4.16	1.65	1.69
19.25	4.18	1.66	1.60
19.50	4.20	1.67	1.52
19.75	4.21	1.68	1.44
20.00	4.23	1.69	1.38
20.25	4.24	1.70	1.32
20.50	4.26	1.71	1.26
20.75	4.27	1.72	1.21
21.00	4.28	1.73	1.16
21.25	4.30	1.74	1.11
21.50	4.31	1.75	1.07
21.75	4.32	1.76	1.02
22.00	4.34	1.77	0.99
22.25	4.35	1.78	0.95
22.50	4.36	1.79	0.92
22.75	4.38	1.80	0.89
23.00	4.39	1.81	0.87
23.25	4.40	1.82	0.85
23.50	4.42	1.83	0.83
23.75	4.43	1.84	0.82
24.00	**4.44**	**1.85**	0.81

Summary for Subcatchment 1S: DA-01 Pre-development

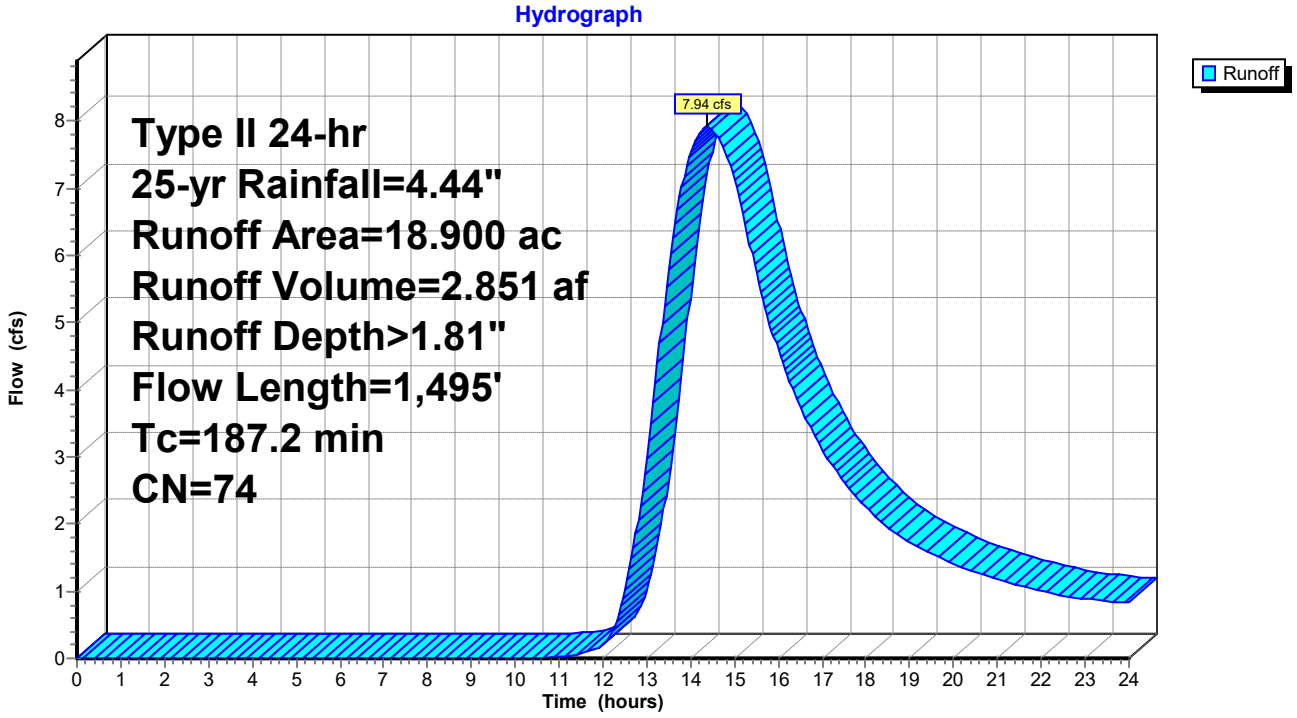
Runoff = 7.94 cfs @ 14.36 hrs, Volume= 2.851 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=4.44"

Area (ac)	CN	Description
18.000	73	Woods, Fair, HSG C
0.900	89	Gravel roads, HSG C
18.900	74	Weighted Average
18.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.2	1,495	Total			

Subcatchment 1S: DA-01 Pre-development



Hydrograph for Subcatchment 1S: DA-01 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.00	3.43	1.19	2.99
0.25	0.01	0.00	0.00	13.25	3.49	1.23	4.40
0.50	0.02	0.00	0.00	13.50	3.55	1.27	5.80
0.75	0.03	0.00	0.00	13.75	3.60	1.31	6.87
1.00	0.05	0.00	0.00	14.00	3.64	1.34	7.54
1.25	0.06	0.00	0.00	14.25	3.68	1.37	**7.86**
1.50	0.07	0.00	0.00	14.50	3.72	1.39	**7.85**
1.75	0.08	0.00	0.00	14.75	3.76	1.42	7.59
2.00	0.10	0.00	0.00	15.00	3.79	1.44	7.13
2.25	0.11	0.00	0.00	15.25	3.82	1.47	6.48
2.50	0.12	0.00	0.00	15.50	3.85	1.49	5.73
2.75	0.14	0.00	0.00	15.75	3.88	1.51	5.11
3.00	0.15	0.00	0.00	16.00	3.91	1.53	4.58
3.25	0.17	0.00	0.00	16.25	3.93	1.55	4.13
3.50	0.18	0.00	0.00	16.50	3.96	1.56	3.76
3.75	0.20	0.00	0.00	16.75	3.98	1.58	3.42
4.00	0.21	0.00	0.00	17.00	4.00	1.60	3.11
4.25	0.23	0.00	0.00	17.25	4.03	1.62	2.85
4.50	0.25	0.00	0.00	17.50	4.05	1.63	2.62
4.75	0.26	0.00	0.00	17.75	4.07	1.65	2.42
5.00	0.28	0.00	0.00	18.00	4.09	1.66	2.24
5.25	0.30	0.00	0.00	18.25	4.11	1.68	2.08
5.50	0.32	0.00	0.00	18.50	4.13	1.69	1.95
5.75	0.34	0.00	0.00	18.75	4.15	1.70	1.83
6.00	0.36	0.00	0.00	19.00	4.16	1.72	1.72
6.25	0.38	0.00	0.00	19.25	4.18	1.73	1.63
6.50	0.40	0.00	0.00	19.50	4.20	1.74	1.55
6.75	0.42	0.00	0.00	19.75	4.21	1.75	1.48
7.00	0.44	0.00	0.00	20.00	4.23	1.76	1.40
7.25	0.46	0.00	0.00	20.25	4.24	1.78	1.34
7.50	0.49	0.00	0.00	20.50	4.26	1.79	1.29
7.75	0.51	0.00	0.00	20.75	4.27	1.80	1.23
8.00	0.53	0.00	0.00	21.00	4.28	1.81	1.18
8.25	0.56	0.00	0.00	21.25	4.30	1.82	1.13
8.50	0.59	0.00	0.00	21.50	4.31	1.83	1.09
8.75	0.62	0.00	0.00	21.75	4.32	1.84	1.05
9.00	0.65	0.00	0.00	22.00	4.34	1.85	1.00
9.25	0.69	0.00	0.00	22.25	4.35	1.86	0.97
9.50	0.72	0.00	0.00	22.50	4.36	1.87	0.93
9.75	0.76	0.00	0.00	22.75	4.38	1.88	0.91
10.00	0.80	0.00	0.00	23.00	4.39	1.89	0.89
10.25	0.85	0.01	0.00	23.25	4.40	1.90	0.87
10.50	0.91	0.01	0.00	23.50	4.42	1.91	0.85
10.75	0.97	0.02	0.01	23.75	4.43	1.92	0.84
11.00	1.04	0.03	0.02	24.00	**4.44**	**1.93**	0.82
11.25	1.14	0.05	0.04				
11.50	1.26	0.08	0.07				
11.75	1.72	0.23	0.12				
12.00	2.94	0.87	0.20				
12.25	3.14	1.00	0.45				
12.50	3.26	1.08	1.03				
12.75	3.35	1.14	1.86				

Summary for Subcatchment 1: DA-01 Post-development

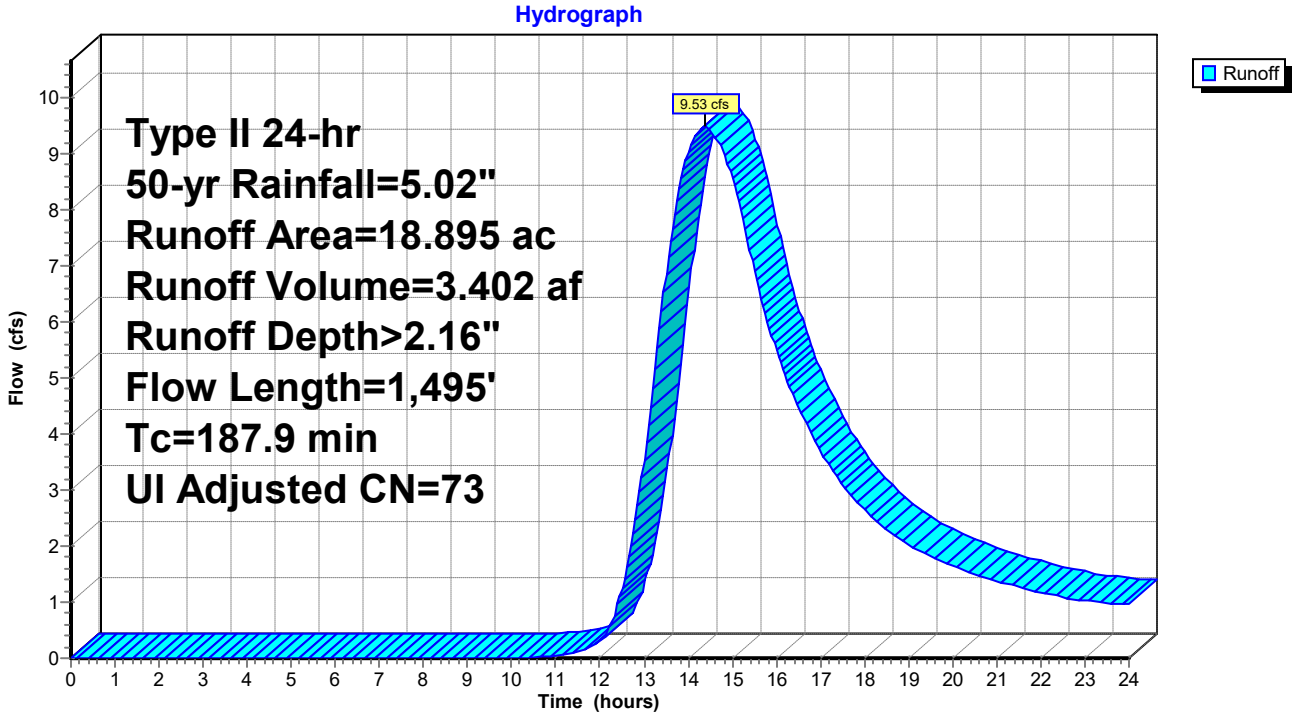
Runoff = 9.53 cfs @ 14.40 hrs, Volume= 3.402 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=5.02"

	Area (ac)	CN	Adj	Description
	16.350	71		Meadow, non-grazed, HSG C
	0.370	89		Gravel roads, HSG C
	1.136	98		Unconnected pavement, HSG C
*	1.039	89		Ballast aggregate, HSG C
	18.895	74	73	Weighted Average, UI Adjusted
	17.759			93.99% Pervious Area
	1.136			6.01% Impervious Area
	1.136			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.9	1,495	Total			

Subcatchment 1: DA-01 Post-development



Hydrograph for Subcatchment 1: DA-01 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.13	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.16	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.21	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.26	0.00	0.00
4.50	0.28	0.00	0.00
4.75	0.30	0.00	0.00
5.00	0.32	0.00	0.00
5.25	0.34	0.00	0.00
5.50	0.36	0.00	0.00
5.75	0.38	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.45	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.52	0.00	0.00
7.50	0.55	0.00	0.00
7.75	0.58	0.00	0.00
8.00	0.60	0.00	0.00
8.25	0.63	0.00	0.00
8.50	0.66	0.00	0.00
8.75	0.70	0.00	0.00
9.00	0.74	0.00	0.00
9.25	0.78	0.00	0.00
9.50	0.82	0.00	0.00
9.75	0.86	0.00	0.00
10.00	0.91	0.01	0.00
10.25	0.96	0.01	0.01
10.50	1.02	0.02	0.01
10.75	1.10	0.03	0.02
11.00	1.18	0.05	0.04
11.25	1.29	0.07	0.07
11.50	1.42	0.11	0.12
11.75	1.94	0.30	0.19
12.00	3.33	1.07	0.31
12.25	3.54	1.21	0.61
12.50	3.69	1.31	1.26
12.75	3.79	1.38	2.21
13.00	3.88	1.44	3.53
13.25	3.95	1.49	5.17
13.50	4.01	1.54	6.84
13.75	4.07	1.58	8.17
14.00	4.12	1.61	9.05
14.25	4.16	1.64	**9.41**
14.50	4.20	1.68	**9.44**
14.75	4.25	1.71	9.12
15.00	4.28	1.73	8.59
15.25	4.32	1.76	7.85
15.50	4.36	1.79	6.93
15.75	4.39	1.81	6.15
16.00	4.42	1.83	5.51
16.25	4.45	1.86	4.95
16.50	4.47	1.88	4.49
16.75	4.50	1.90	4.08
17.00	4.53	1.92	3.71
17.25	4.55	1.94	3.39
17.50	4.58	1.95	3.11
17.75	4.60	1.97	2.87
18.00	4.62	1.99	2.65
18.25	4.65	2.01	2.47
18.50	4.67	2.02	2.30
18.75	4.69	2.04	2.15
19.00	4.71	2.05	2.03
19.25	4.73	2.07	1.92
19.50	4.74	2.08	1.82
19.75	4.76	2.10	1.73
20.00	4.78	2.11	1.65
20.25	4.80	2.12	1.57
20.50	4.81	2.13	1.50
20.75	4.83	2.15	1.44
21.00	4.84	2.16	1.38
21.25	4.86	2.17	1.32
21.50	4.87	2.18	1.27
21.75	4.89	2.19	1.22
22.00	4.90	2.21	1.17
22.25	4.92	2.22	1.13
22.50	4.93	2.23	1.09
22.75	4.95	2.24	1.06
23.00	4.96	2.25	1.03
23.25	4.98	2.26	1.01
23.50	4.99	2.27	0.99
23.75	5.01	2.29	0.97
24.00	**5.02**	**2.30**	0.96

Summary for Subcatchment 1S: DA-01 Pre-development

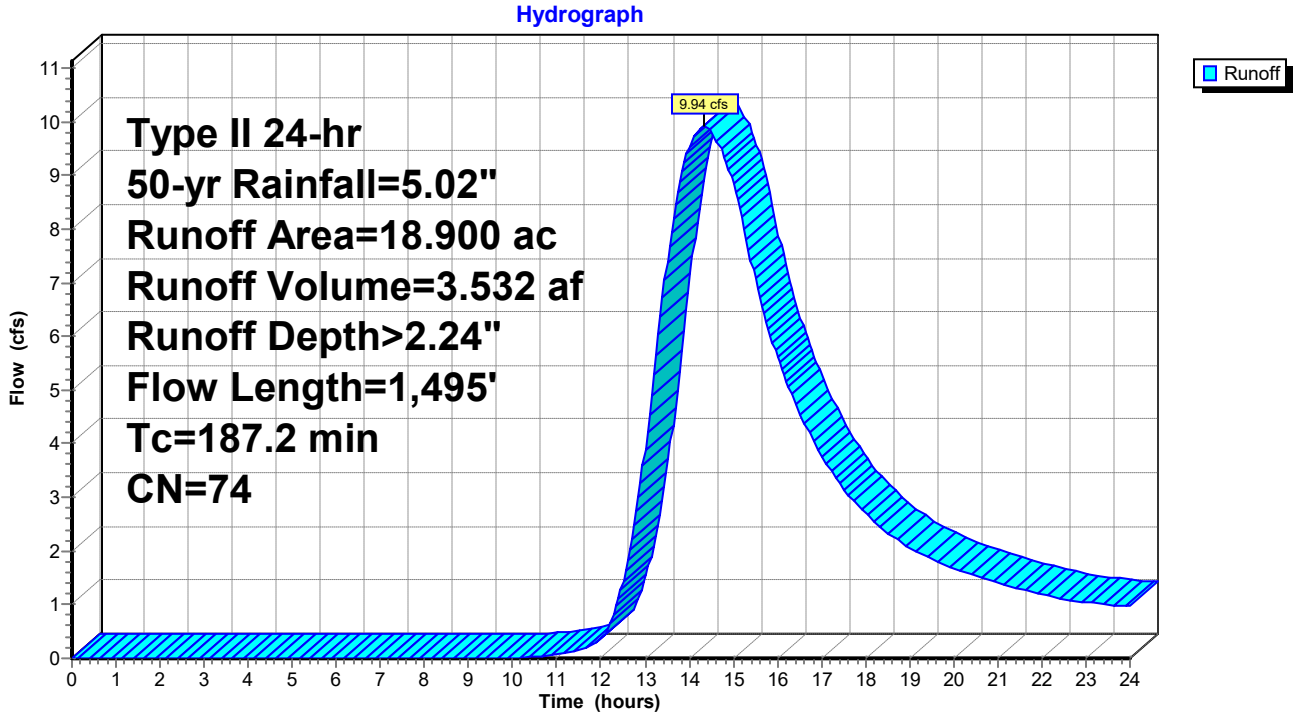
Runoff = 9.94 cfs @ 14.35 hrs, Volume= 3.532 af, Depth> 2.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=5.02"

Area (ac)	CN	Description
18.000	73	Woods, Fair, HSG C
0.900	89	Gravel roads, HSG C
18.900	74	Weighted Average
18.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.2	1,495	Total			

Subcatchment 1S: DA-01 Pre-development



Hydrograph for Subcatchment 1S: DA-01 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.13	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.16	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.21	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.26	0.00	0.00
4.50	0.28	0.00	0.00
4.75	0.30	0.00	0.00
5.00	0.32	0.00	0.00
5.25	0.34	0.00	0.00
5.50	0.36	0.00	0.00
5.75	0.38	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.45	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.52	0.00	0.00
7.50	0.55	0.00	0.00
7.75	0.58	0.00	0.00
8.00	0.60	0.00	0.00
8.25	0.63	0.00	0.00
8.50	0.66	0.00	0.00
8.75	0.70	0.00	0.00
9.00	0.74	0.00	0.00
9.25	0.78	0.00	0.00
9.50	0.82	0.00	0.00
9.75	0.86	0.01	0.00
10.00	0.91	0.01	0.00
10.25	0.96	0.02	0.01
10.50	1.02	0.03	0.02
10.75	1.10	0.04	0.04
11.00	1.18	0.06	0.06
11.25	1.29	0.08	0.10
11.50	1.42	0.12	0.16
11.75	1.94	0.32	0.24
12.00	3.33	1.12	0.36
12.25	3.54	1.27	0.70
12.50	3.69	1.37	1.44
12.75	3.79	1.44	2.48
13.00	3.88	1.51	3.90
13.25	3.95	1.56	5.66
13.50	4.01	1.60	7.38
13.75	4.07	1.65	8.69
14.00	4.12	1.68	9.49
14.25	4.16	1.72	**9.86**
14.50	4.20	1.75	**9.81**
14.75	4.25	1.78	9.45
15.00	4.28	1.81	8.85
15.25	4.32	1.84	8.02
15.50	4.36	1.86	7.07
15.75	4.39	1.89	6.28
16.00	4.42	1.91	5.62
16.25	4.45	1.93	5.06
16.50	4.47	1.95	4.59
16.75	4.50	1.97	4.17
17.00	4.53	1.99	3.78
17.25	4.55	2.01	3.46
17.50	4.58	2.03	3.17
17.75	4.60	2.05	2.92
18.00	4.62	2.07	2.70
18.25	4.65	2.08	2.51
18.50	4.67	2.10	2.34
18.75	4.69	2.12	2.19
19.00	4.71	2.13	2.07
19.25	4.73	2.15	1.95
19.50	4.74	2.16	1.85
19.75	4.76	2.18	1.76
20.00	4.78	2.19	1.68
20.25	4.80	2.20	1.60
20.50	4.81	2.21	1.53
20.75	4.83	2.23	1.46
21.00	4.84	2.24	1.41
21.25	4.86	2.25	1.35
21.50	4.87	2.26	1.29
21.75	4.89	2.28	1.24
22.00	4.90	2.29	1.19
22.25	4.92	2.30	1.15
22.50	4.93	2.31	1.11
22.75	4.95	2.32	1.08
23.00	4.96	2.34	1.05
23.25	4.98	2.35	1.03
23.50	4.99	2.36	1.01
23.75	5.01	2.37	0.99
24.00	**5.02**	**2.38**	0.97

Summary for Subcatchment 1: DA-01 Post-development

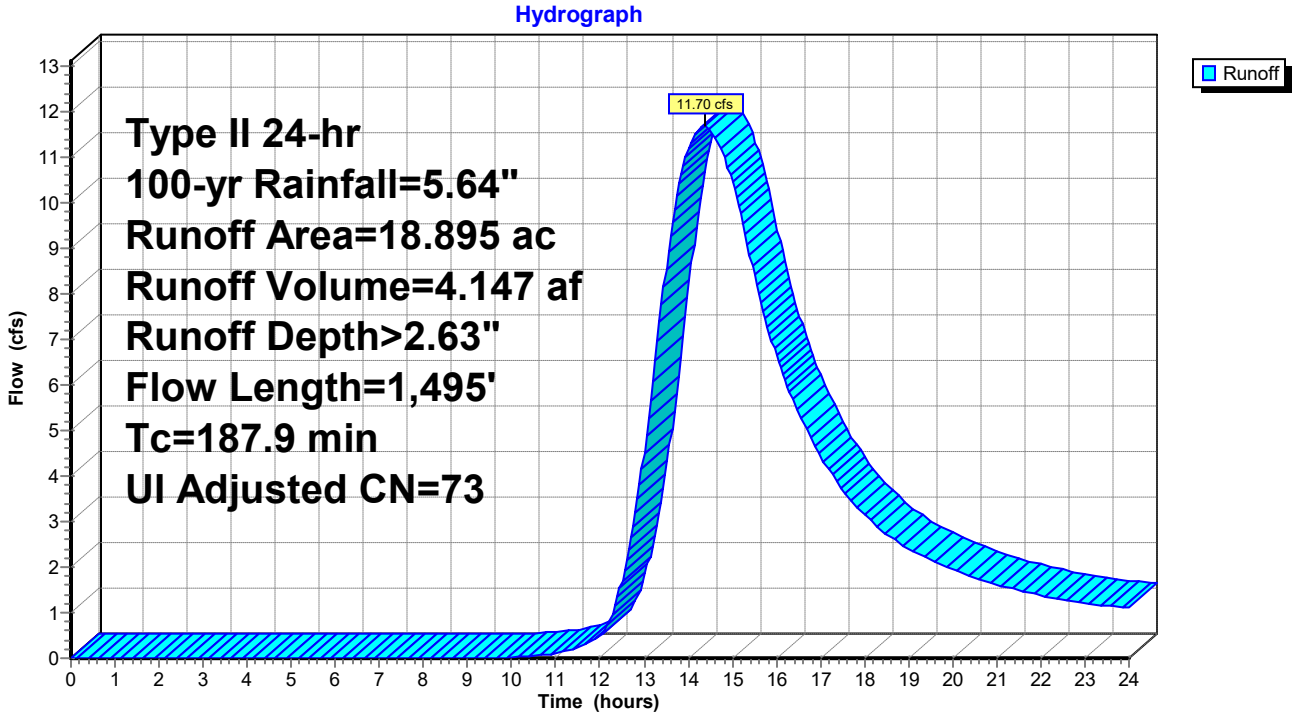
Runoff = 11.70 cfs @ 14.40 hrs, Volume= 4.147 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.64"

	Area (ac)	CN	Adj	Description
	16.350	71		Meadow, non-grazed, HSG C
	0.370	89		Gravel roads, HSG C
	1.136	98		Unconnected pavement, HSG C
*	1.039	89		Ballast aggregate, HSG C
	18.895	74	73	Weighted Average, UI Adjusted
	17.759			93.99% Pervious Area
	1.136			6.01% Impervious Area
	1.136			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow, Sheet Flow** Grass: Dense n= 0.240 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.9	1,495	Total			

Subcatchment 1: DA-01 Post-development



Hydrograph for Subcatchment 1: DA-01 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.12	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.50	0.00	0.00
6.75	0.53	0.00	0.00
7.00	0.56	0.00	0.00
7.25	0.59	0.00	0.00
7.50	0.62	0.00	0.00
7.75	0.65	0.00	0.00
8.00	0.68	0.00	0.00
8.25	0.71	0.00	0.00
8.50	0.75	0.00	0.00
8.75	0.79	0.00	0.00
9.00	0.83	0.00	0.00
9.25	0.87	0.00	0.00
9.50	0.92	0.01	0.00
9.75	0.97	0.01	0.01
10.00	1.02	0.02	0.01
10.25	1.08	0.03	0.03
10.50	1.15	0.04	0.05
10.75	1.23	0.06	0.07
11.00	1.33	0.08	0.11
11.25	1.44	0.11	0.16
11.50	1.60	0.16	0.24
11.75	2.18	0.40	0.34
12.00	3.74	1.34	0.51
12.25	3.98	1.51	0.90
12.50	4.15	1.63	1.71
12.75	4.26	1.72	2.89
13.00	4.35	1.79	4.52
13.25	4.44	1.85	6.52
13.50	4.51	1.90	8.54
13.75	4.57	1.95	10.14
14.00	4.62	1.99	11.17
14.25	4.68	2.03	**11.59**
14.50	4.72	2.07	**11.58**
14.75	4.77	2.10	11.15
15.00	4.81	2.14	10.47
15.25	4.85	2.17	9.54
15.50	4.89	2.20	8.40
15.75	4.93	2.23	7.44
16.00	4.96	2.25	6.65
16.25	5.00	2.28	5.97
16.50	5.03	2.30	5.40
16.75	5.06	2.32	4.90
17.00	5.09	2.35	4.44
17.25	5.11	2.37	4.06
17.50	5.14	2.39	3.71
17.75	5.17	2.41	3.42
18.00	5.19	2.43	3.15
18.25	5.22	2.45	2.93
18.50	5.24	2.47	2.73
18.75	5.27	2.49	2.55
19.00	5.29	2.51	2.40
19.25	5.31	2.53	2.26
19.50	5.33	2.54	2.15
19.75	5.35	2.56	2.04
20.00	5.37	2.57	1.94
20.25	5.39	2.59	1.85
20.50	5.41	2.60	1.77
20.75	5.42	2.62	1.69
21.00	5.44	2.63	1.62
21.25	5.46	2.65	1.55
21.50	5.48	2.66	1.49
21.75	5.49	2.67	1.43
22.00	5.51	2.69	1.37
22.25	5.53	2.70	1.32
22.50	5.54	2.71	1.27
22.75	5.56	2.73	1.24
23.00	5.58	2.74	1.21
23.25	5.59	2.75	1.18
23.50	5.61	2.77	1.16
23.75	5.62	2.78	1.14
24.00	**5.64**	**2.79**	1.12

Summary for Subcatchment 1S: DA-01 Pre-development

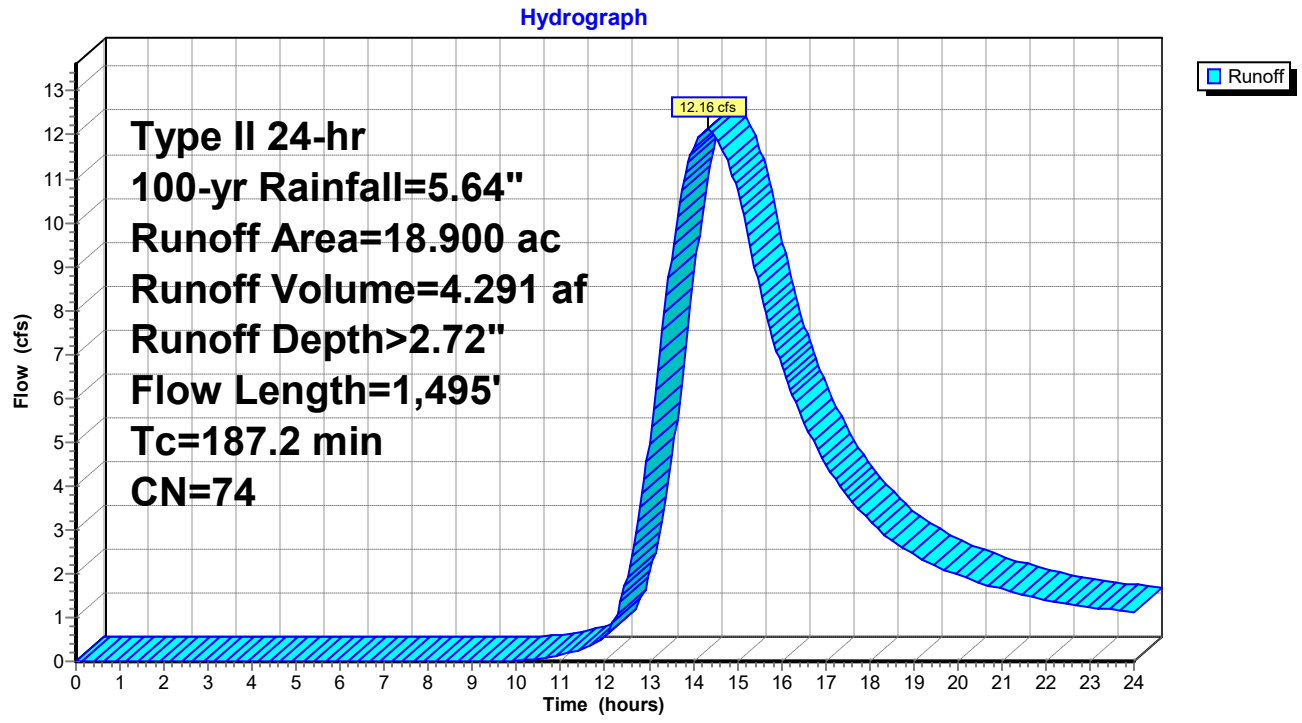
Runoff = 12.16 cfs @ 14.35 hrs, Volume= 4.291 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.64"

Area (ac)	CN	Description
18.000	73	Woods, Fair, HSG C
0.900	89	Gravel roads, HSG C
18.900	74	Weighted Average
18.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow, Sheet Flow** Woods: Light underbrush n= 0.400 P2= 2.63"
167.1	1,395	0.0086	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
187.2	1,495	Total			

Subcatchment 1S: DA-01 Pre-development



Hydrograph for Subcatchment 1S: DA-01 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.12	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.50	0.00	0.00
6.75	0.53	0.00	0.00
7.00	0.56	0.00	0.00
7.25	0.59	0.00	0.00
7.50	0.62	0.00	0.00
7.75	0.65	0.00	0.00
8.00	0.68	0.00	0.00
8.25	0.71	0.00	0.00
8.50	0.75	0.00	0.00
8.75	0.79	0.00	0.00
9.00	0.83	0.00	0.00
9.25	0.87	0.01	0.00
9.50	0.92	0.01	0.01
9.75	0.97	0.02	0.01
10.00	1.02	0.03	0.02
10.25	1.08	0.04	0.04
10.50	1.15	0.05	0.07
10.75	1.23	0.07	0.10
11.00	1.33	0.09	0.15
11.25	1.44	0.13	0.21
11.50	1.60	0.18	0.29
11.75	2.18	0.44	0.41
12.00	3.74	1.41	0.58
12.25	3.98	1.58	1.01
12.50	4.15	1.70	1.92
12.75	4.26	1.79	3.21
13.00	4.35	1.86	4.94
13.25	4.44	1.92	7.08
13.50	4.51	1.98	9.16
13.75	4.57	2.03	10.73
14.00	4.62	2.07	11.67
14.25	4.68	2.11	**12.07**
14.50	4.72	2.15	**11.97**
14.75	4.77	2.18	11.50
15.00	4.81	2.22	10.75
15.25	4.85	2.25	9.71
15.50	4.89	2.28	8.54
15.75	4.93	2.31	7.57
16.00	4.96	2.33	6.76
16.25	5.00	2.36	6.07
16.50	5.03	2.39	5.50
16.75	5.06	2.41	4.98
17.00	5.09	2.43	4.51
17.25	5.11	2.46	4.12
17.50	5.14	2.48	3.77
17.75	5.17	2.50	3.47
18.00	5.19	2.52	3.21
18.25	5.22	2.54	2.97
18.50	5.24	2.56	2.77
18.75	5.27	2.58	2.59
19.00	5.29	2.60	2.44
19.25	5.31	2.61	2.30
19.50	5.33	2.63	2.18
19.75	5.35	2.65	2.07
20.00	5.37	2.66	1.97
20.25	5.39	2.68	1.88
20.50	5.41	2.69	1.79
20.75	5.42	2.71	1.72
21.00	5.44	2.72	1.65
21.25	5.46	2.74	1.58
21.50	5.48	2.75	1.51
21.75	5.49	2.76	1.45
22.00	5.51	2.78	1.39
22.25	5.53	2.79	1.34
22.50	5.54	2.81	1.29
22.75	5.56	2.82	1.26
23.00	5.58	2.83	1.22
23.25	5.59	2.85	1.20
23.50	5.61	2.86	1.17
23.75	5.62	2.87	1.15
24.00	**5.64**	**2.88**	1.13

Summary for Subcatchment 2: DA-02 Post-development

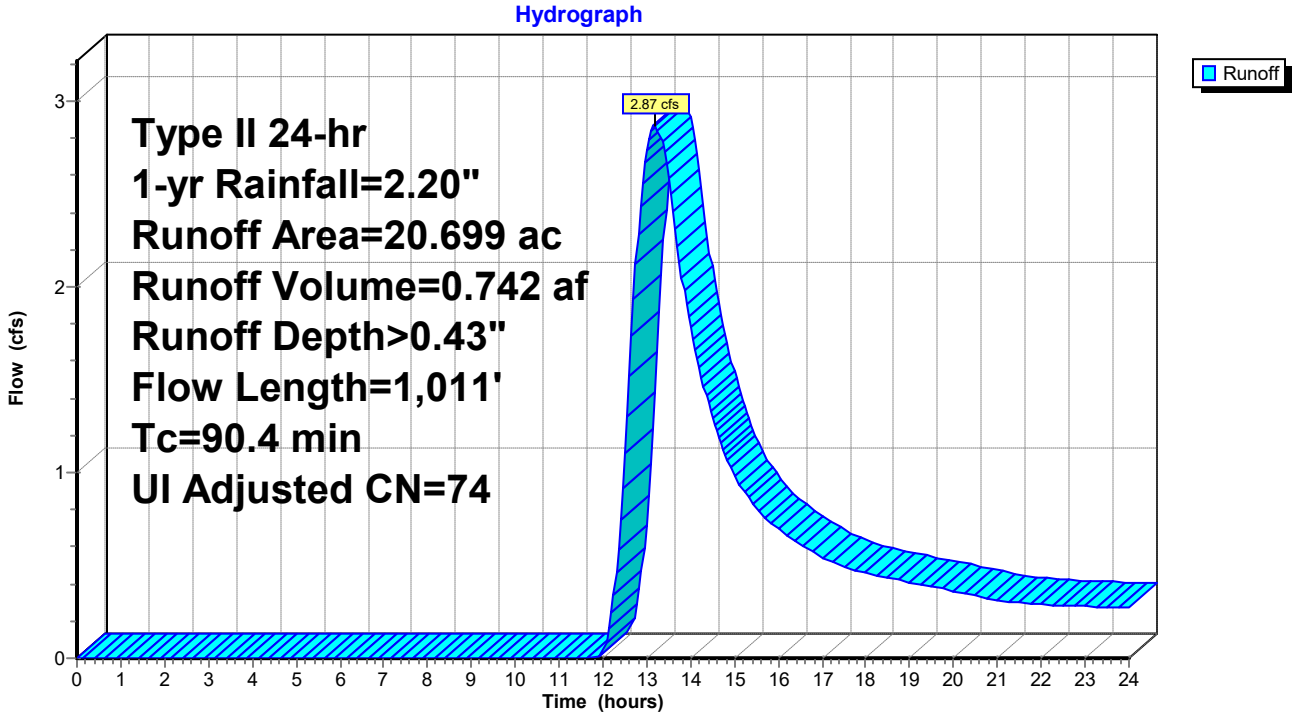
Runoff = 2.87 cfs @ 13.17 hrs, Volume= 0.742 af, Depth> 0.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.20"

	Area (ac)	CN	Adj	Description
	17.203	71		Meadow, non-grazed, HSG C
	1.114	89		Gravel roads, HSG C
	1.244	98		Unconnected pavement, HSG C
*	1.138	89		Ballast aggregate, HSG C
	20.699	75	74	Weighted Average, UI Adjusted
	19.455			93.99% Pervious Area
	1.244			6.01% Impervious Area
	1.244			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
90.4	1,011	Total			

Subcatchment 2: DA-02 Post-development



Hydrograph for Subcatchment 2: DA-02 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.02	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.04	0.00	0.00
2.00	0.05	0.00	0.00
2.25	0.06	0.00	0.00
2.50	0.06	0.00	0.00
2.75	0.07	0.00	0.00
3.00	0.08	0.00	0.00
3.25	0.08	0.00	0.00
3.50	0.09	0.00	0.00
3.75	0.10	0.00	0.00
4.00	0.11	0.00	0.00
4.25	0.11	0.00	0.00
4.50	0.12	0.00	0.00
4.75	0.13	0.00	0.00
5.00	0.14	0.00	0.00
5.25	0.15	0.00	0.00
5.50	0.16	0.00	0.00
5.75	0.17	0.00	0.00
6.00	0.18	0.00	0.00
6.25	0.19	0.00	0.00
6.50	0.20	0.00	0.00
6.75	0.21	0.00	0.00
7.00	0.22	0.00	0.00
7.25	0.23	0.00	0.00
7.50	0.24	0.00	0.00
7.75	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.25	0.28	0.00	0.00
8.50	0.29	0.00	0.00
8.75	0.31	0.00	0.00
9.00	0.32	0.00	0.00
9.25	0.34	0.00	0.00
9.50	0.36	0.00	0.00
9.75	0.38	0.00	0.00
10.00	0.40	0.00	0.00
10.25	0.42	0.00	0.00
10.50	0.45	0.00	0.00
10.75	0.48	0.00	0.00
11.00	0.52	0.00	0.00
11.25	0.56	0.00	0.00
11.50	0.62	0.00	0.00
11.75	0.85	0.01	0.00
12.00	1.46	0.13	0.04
12.25	1.55	0.17	0.34
12.50	1.62	0.19	1.11
12.75	1.66	0.21	2.12
13.00	1.70	0.22	**2.73**
13.25	1.73	0.23	**2.85**
13.50	1.76	0.24	2.58
13.75	1.78	0.25	2.13
14.00	1.80	0.26	1.78
14.25	1.82	0.27	1.51
14.50	1.84	0.28	1.29
14.75	1.86	0.29	1.12
15.00	1.88	0.29	0.99
15.25	1.89	0.30	0.89
15.50	1.91	0.31	0.81
15.75	1.92	0.31	0.75
16.00	1.94	0.32	0.70
16.25	1.95	0.33	0.65
16.50	1.96	0.33	0.61
16.75	1.97	0.34	0.57
17.00	1.98	0.34	0.54
17.25	1.99	0.35	0.51
17.50	2.01	0.35	0.49
17.75	2.02	0.36	0.48
18.00	2.03	0.36	0.46
18.25	2.04	0.37	0.45
18.50	2.05	0.37	0.43
18.75	2.05	0.38	0.42
19.00	2.06	0.38	0.41
19.25	2.07	0.38	0.40
19.50	2.08	0.39	0.39
19.75	2.09	0.39	0.37
20.00	2.09	0.39	0.36
20.25	2.10	0.40	0.35
20.50	2.11	0.40	0.34
20.75	2.12	0.41	0.32
21.00	2.12	0.41	0.31
21.25	2.13	0.41	0.31
21.50	2.14	0.42	0.30
21.75	2.14	0.42	0.29
22.00	2.15	0.42	0.29
22.25	2.16	0.43	0.29
22.50	2.16	0.43	0.28
22.75	2.17	0.43	0.28
23.00	2.18	0.43	0.28
23.25	2.18	0.44	0.28
23.50	2.19	0.44	0.27
23.75	2.19	0.44	0.27
24.00	**2.20**	**0.45**	0.27

Summary for Subcatchment 2S: DA-02 Pre-development

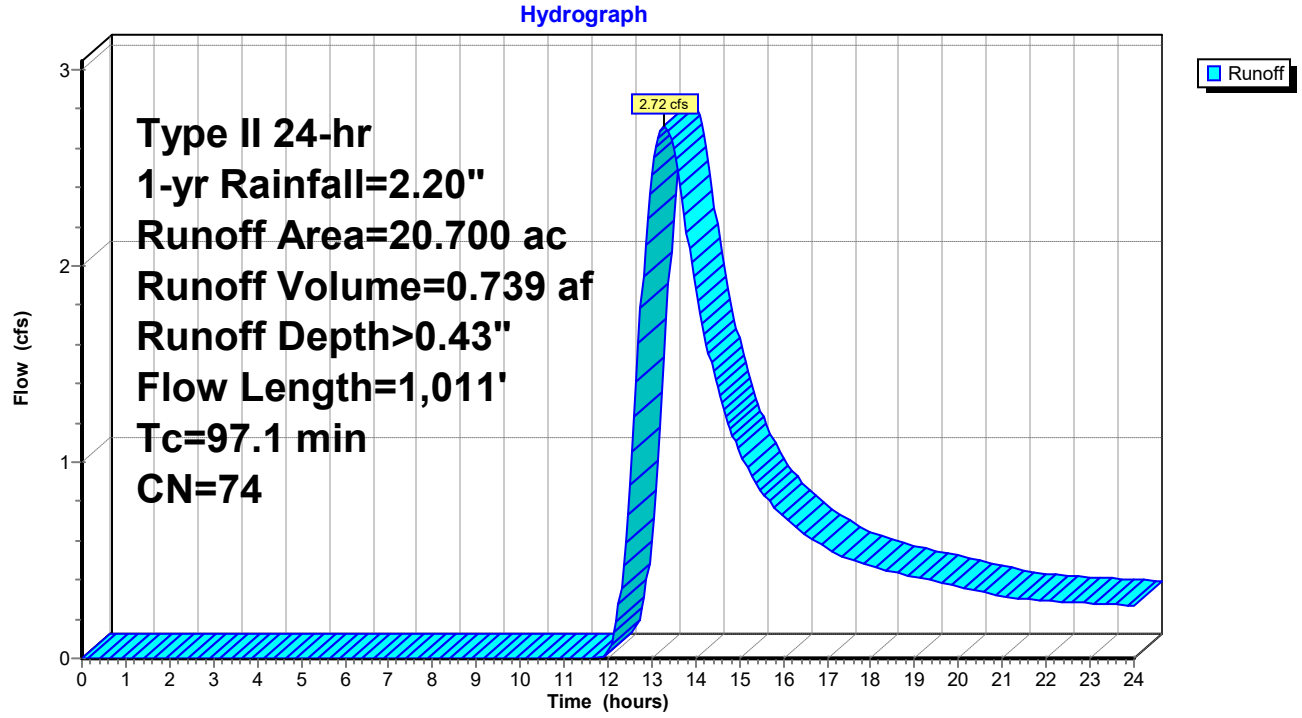
Runoff = 2.72 cfs @ 13.28 hrs, Volume= 0.739 af, Depth> 0.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.20"

Area (ac)	CN	Description
19.950	73	Woods, Fair, HSG C
0.750	89	Gravel roads, HSG C
20.700	74	Weighted Average
20.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
97.1	1,011	Total			

Subcatchment 2S: DA-02 Pre-development



Hydrograph for Subcatchment 2S: DA-02 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.00	1.70	0.22	2.46
0.25	0.01	0.00	0.00	13.25	1.73	0.23	**2.71**
0.50	0.01	0.00	0.00	13.50	1.76	0.24	**2.60**
0.75	0.02	0.00	0.00	13.75	1.78	0.25	2.25
1.00	0.02	0.00	0.00	14.00	1.80	0.26	1.88
1.25	0.03	0.00	0.00	14.25	1.82	0.27	1.60
1.50	0.04	0.00	0.00	14.50	1.84	0.28	1.38
1.75	0.04	0.00	0.00	14.75	1.86	0.29	1.20
2.00	0.05	0.00	0.00	15.00	1.88	0.29	1.05
2.25	0.06	0.00	0.00	15.25	1.89	0.30	0.94
2.50	0.06	0.00	0.00	15.50	1.91	0.31	0.85
2.75	0.07	0.00	0.00	15.75	1.92	0.31	0.78
3.00	0.08	0.00	0.00	16.00	1.94	0.32	0.72
3.25	0.08	0.00	0.00	16.25	1.95	0.33	0.68
3.50	0.09	0.00	0.00	16.50	1.96	0.33	0.63
3.75	0.10	0.00	0.00	16.75	1.97	0.34	0.59
4.00	0.11	0.00	0.00	17.00	1.98	0.34	0.56
4.25	0.11	0.00	0.00	17.25	1.99	0.35	0.53
4.50	0.12	0.00	0.00	17.50	2.01	0.35	0.50
4.75	0.13	0.00	0.00	17.75	2.02	0.36	0.48
5.00	0.14	0.00	0.00	18.00	2.03	0.36	0.47
5.25	0.15	0.00	0.00	18.25	2.04	0.37	0.45
5.50	0.16	0.00	0.00	18.50	2.05	0.37	0.44
5.75	0.17	0.00	0.00	18.75	2.05	0.38	0.43
6.00	0.18	0.00	0.00	19.00	2.06	0.38	0.41
6.25	0.19	0.00	0.00	19.25	2.07	0.38	0.40
6.50	0.20	0.00	0.00	19.50	2.08	0.39	0.39
6.75	0.21	0.00	0.00	19.75	2.09	0.39	0.38
7.00	0.22	0.00	0.00	20.00	2.09	0.39	0.37
7.25	0.23	0.00	0.00	20.25	2.10	0.40	0.35
7.50	0.24	0.00	0.00	20.50	2.11	0.40	0.34
7.75	0.25	0.00	0.00	20.75	2.12	0.41	0.33
8.00	0.26	0.00	0.00	21.00	2.12	0.41	0.32
8.25	0.28	0.00	0.00	21.25	2.13	0.41	0.31
8.50	0.29	0.00	0.00	21.50	2.14	0.42	0.30
8.75	0.31	0.00	0.00	21.75	2.14	0.42	0.30
9.00	0.32	0.00	0.00	22.00	2.15	0.42	0.29
9.25	0.34	0.00	0.00	22.25	2.16	0.43	0.29
9.50	0.36	0.00	0.00	22.50	2.16	0.43	0.29
9.75	0.38	0.00	0.00	22.75	2.17	0.43	0.28
10.00	0.40	0.00	0.00	23.00	2.18	0.43	0.28
10.25	0.42	0.00	0.00	23.25	2.18	0.44	0.28
10.50	0.45	0.00	0.00	23.50	2.19	0.44	0.27
10.75	0.48	0.00	0.00	23.75	2.19	0.44	0.27
11.00	0.52	0.00	0.00	24.00	**2.20**	**0.45**	0.27
11.25	0.56	0.00	0.00				
11.50	0.62	0.00	0.00				
11.75	0.85	0.01	0.00				
12.00	1.46	0.13	0.03				
12.25	1.55	0.17	0.27				
12.50	1.62	0.19	0.89				
12.75	1.66	0.21	1.78				

Summary for Subcatchment 2: DA-02 Post-development

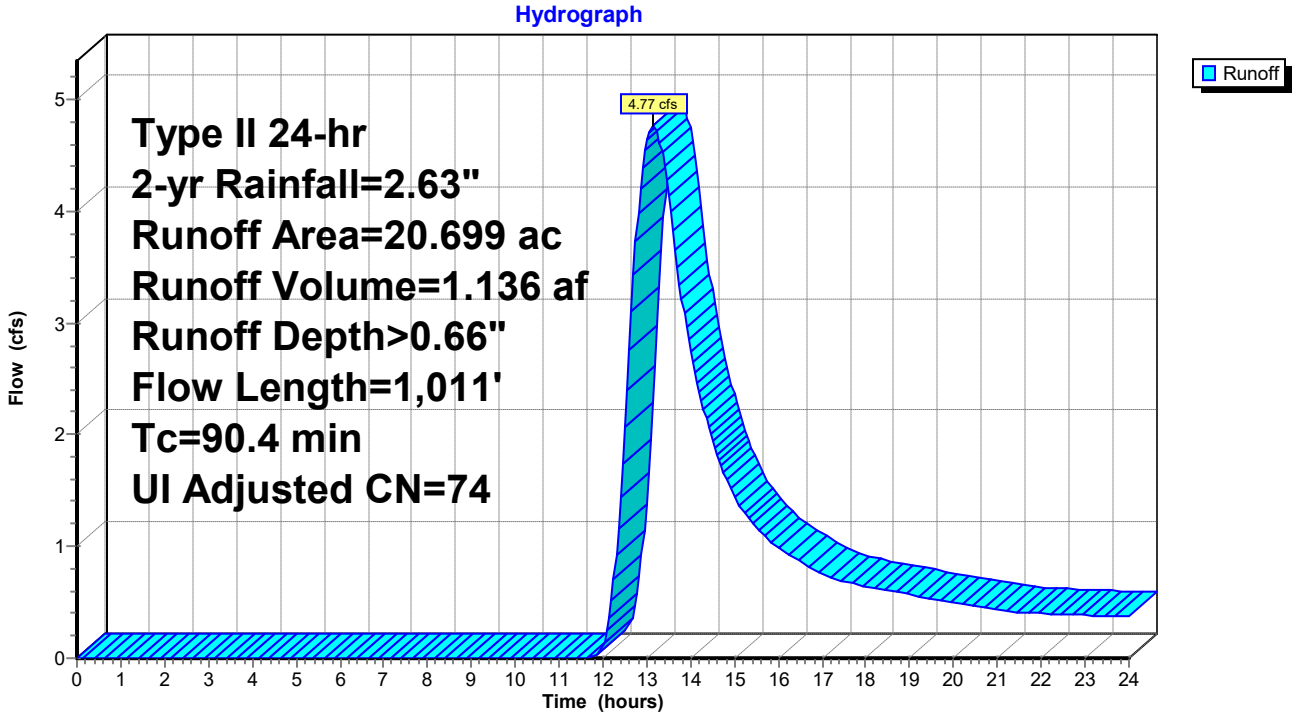
Runoff = 4.77 cfs @ 13.15 hrs, Volume= 1.136 af, Depth> 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.63"

	Area (ac)	CN	Adj	Description
	17.203	71		Meadow, non-grazed, HSG C
	1.114	89		Gravel roads, HSG C
	1.244	98		Unconnected pavement, HSG C
*	1.138	89		Ballast aggregate, HSG C
	20.699	75	74	Weighted Average, UI Adjusted
	19.455			93.99% Pervious Area
	1.244			6.01% Impervious Area
	1.244			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
90.4	1,011	Total			

Subcatchment 2: DA-02 Post-development



Hydrograph for Subcatchment 2: DA-02 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.07	0.00	0.00
2.75	0.08	0.00	0.00
3.00	0.09	0.00	0.00
3.25	0.10	0.00	0.00
3.50	0.11	0.00	0.00
3.75	0.12	0.00	0.00
4.00	0.13	0.00	0.00
4.25	0.14	0.00	0.00
4.50	0.15	0.00	0.00
4.75	0.16	0.00	0.00
5.00	0.17	0.00	0.00
5.25	0.18	0.00	0.00
5.50	0.19	0.00	0.00
5.75	0.20	0.00	0.00
6.00	0.21	0.00	0.00
6.25	0.22	0.00	0.00
6.50	0.23	0.00	0.00
6.75	0.25	0.00	0.00
7.00	0.26	0.00	0.00
7.25	0.27	0.00	0.00
7.50	0.29	0.00	0.00
7.75	0.30	0.00	0.00
8.00	0.32	0.00	0.00
8.25	0.33	0.00	0.00
8.50	0.35	0.00	0.00
8.75	0.37	0.00	0.00
9.00	0.39	0.00	0.00
9.25	0.41	0.00	0.00
9.50	0.43	0.00	0.00
9.75	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.25	0.50	0.00	0.00
10.50	0.54	0.00	0.00
10.75	0.57	0.00	0.00
11.00	0.62	0.00	0.00
11.25	0.67	0.00	0.00
11.50	0.74	0.00	0.00
11.75	1.02	0.03	0.00
12.00	1.74	0.24	0.11
12.25	1.86	0.29	0.70
12.50	1.93	0.32	2.06
12.75	1.99	0.34	3.73
13.00	2.03	0.36	**4.63**
13.25	2.07	0.38	**4.69**
13.50	2.10	0.40	4.14
13.75	2.13	0.41	3.34
14.00	2.16	0.43	2.75
14.25	2.18	0.44	2.30
14.50	2.20	0.45	1.94
14.75	2.22	0.46	1.67
15.00	2.24	0.47	1.46
15.25	2.26	0.48	1.29
15.50	2.28	0.49	1.17
15.75	2.30	0.50	1.07
16.00	2.31	0.51	0.99
16.25	2.33	0.51	0.93
16.50	2.34	0.52	0.87
16.75	2.36	0.53	0.81
17.00	2.37	0.54	0.76
17.25	2.38	0.54	0.72
17.50	2.40	0.55	0.69
17.75	2.41	0.56	0.67
18.00	2.42	0.57	0.64
18.25	2.43	0.57	0.62
18.50	2.45	0.58	0.61
18.75	2.46	0.58	0.59
19.00	2.47	0.59	0.57
19.25	2.48	0.59	0.55
19.50	2.49	0.60	0.54
19.75	2.50	0.61	0.52
20.00	2.50	0.61	0.50
20.25	2.51	0.62	0.48
20.50	2.52	0.62	0.47
20.75	2.53	0.62	0.45
21.00	2.54	0.63	0.44
21.25	2.55	0.63	0.42
21.50	2.55	0.64	0.41
21.75	2.56	0.64	0.41
22.00	2.57	0.65	0.40
22.25	2.58	0.65	0.40
22.50	2.59	0.66	0.39
22.75	2.59	0.66	0.39
23.00	2.60	0.67	0.38
23.25	2.61	0.67	0.38
23.50	2.62	0.67	0.38
23.75	2.62	0.68	0.37
24.00	**2.63**	**0.68**	0.37

Summary for Subcatchment 2S: DA-02 Pre-development

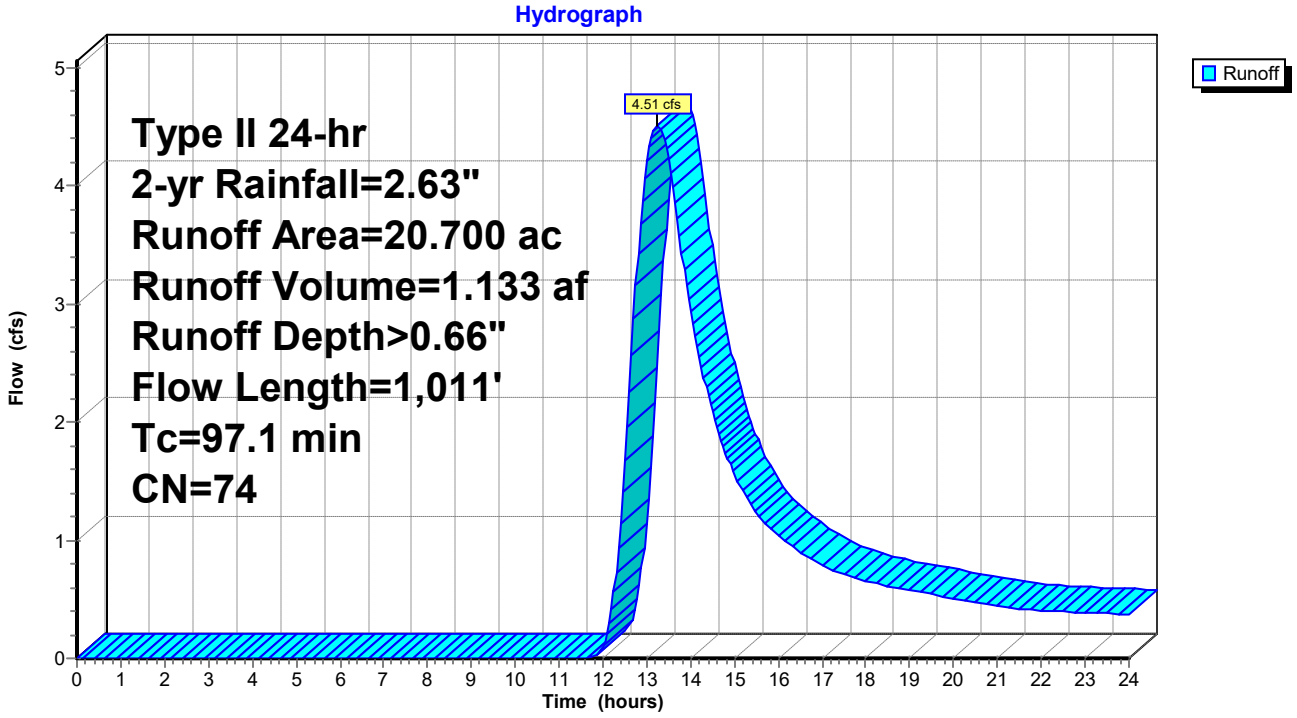
Runoff = 4.51 cfs @ 13.25 hrs, Volume= 1.133 af, Depth> 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.63"

Area (ac)	CN	Description
19.950	73	Woods, Fair, HSG C
0.750	89	Gravel roads, HSG C
20.700	74	Weighted Average
20.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
97.1	1,011	Total			

Subcatchment 2S: DA-02 Pre-development



Hydrograph for Subcatchment 2S: DA-02 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.07	0.00	0.00
2.75	0.08	0.00	0.00
3.00	0.09	0.00	0.00
3.25	0.10	0.00	0.00
3.50	0.11	0.00	0.00
3.75	0.12	0.00	0.00
4.00	0.13	0.00	0.00
4.25	0.14	0.00	0.00
4.50	0.15	0.00	0.00
4.75	0.16	0.00	0.00
5.00	0.17	0.00	0.00
5.25	0.18	0.00	0.00
5.50	0.19	0.00	0.00
5.75	0.20	0.00	0.00
6.00	0.21	0.00	0.00
6.25	0.22	0.00	0.00
6.50	0.23	0.00	0.00
6.75	0.25	0.00	0.00
7.00	0.26	0.00	0.00
7.25	0.27	0.00	0.00
7.50	0.29	0.00	0.00
7.75	0.30	0.00	0.00
8.00	0.32	0.00	0.00
8.25	0.33	0.00	0.00
8.50	0.35	0.00	0.00
8.75	0.37	0.00	0.00
9.00	0.39	0.00	0.00
9.25	0.41	0.00	0.00
9.50	0.43	0.00	0.00
9.75	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.25	0.50	0.00	0.00
10.50	0.54	0.00	0.00
10.75	0.57	0.00	0.00
11.00	0.62	0.00	0.00
11.25	0.67	0.00	0.00
11.50	0.74	0.00	0.00
11.75	1.02	0.03	0.00
12.00	1.74	0.24	0.09
12.25	1.86	0.29	0.56
12.50	1.93	0.32	1.67
12.75	1.99	0.34	3.16
13.00	2.03	0.36	4.20
13.25	2.07	0.38	**4.51**
13.50	2.10	0.40	4.22
13.75	2.13	0.41	3.57
14.00	2.16	0.43	2.93
14.25	2.18	0.44	2.45
14.50	2.20	0.45	2.09
14.75	2.22	0.46	1.79
15.00	2.24	0.47	1.56
15.25	2.26	0.48	1.38
15.50	2.28	0.49	1.24
15.75	2.30	0.50	1.13
16.00	2.31	0.51	1.04
16.25	2.33	0.51	0.96
16.50	2.34	0.52	0.90
16.75	2.36	0.53	0.84
17.00	2.37	0.54	0.79
17.25	2.38	0.54	0.74
17.50	2.40	0.55	0.71
17.75	2.41	0.56	0.68
18.00	2.42	0.57	0.66
18.25	2.43	0.57	0.63
18.50	2.45	0.58	0.61
18.75	2.46	0.58	0.60
19.00	2.47	0.59	0.58
19.25	2.48	0.59	0.56
19.50	2.49	0.60	0.54
19.75	2.50	0.61	0.53
20.00	2.50	0.61	0.51
20.25	2.51	0.62	0.49
20.50	2.52	0.62	0.47
20.75	2.53	0.62	0.46
21.00	2.54	0.63	0.44
21.25	2.55	0.63	0.43
21.50	2.55	0.64	0.42
21.75	2.56	0.64	0.41
22.00	2.57	0.65	0.40
22.25	2.58	0.65	0.40
22.50	2.59	0.66	0.39
22.75	2.59	0.66	0.39
23.00	2.60	0.67	0.39
23.25	2.61	0.67	0.38
23.50	2.62	0.67	0.38
23.75	2.62	0.68	0.37
24.00	**2.63**	**0.68**	0.37

Summary for Subcatchment 2: DA-02 Post-development

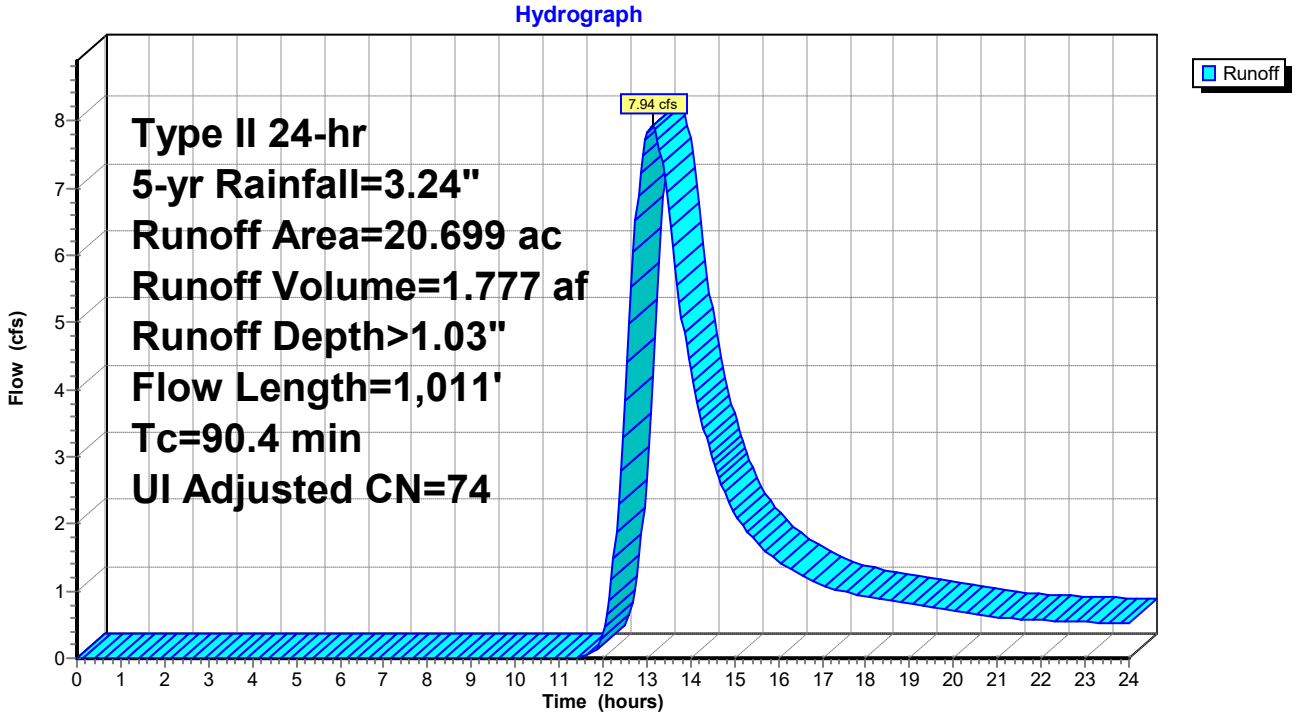
Runoff = 7.94 cfs @ 13.13 hrs, Volume= 1.777 af, Depth> 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=3.24"

	Area (ac)	CN	Adj	Description
	17.203	71		Meadow, non-grazed, HSG C
	1.114	89		Gravel roads, HSG C
	1.244	98		Unconnected pavement, HSG C
*	1.138	89		Ballast aggregate, HSG C
	20.699	75	74	Weighted Average, UI Adjusted
	19.455			93.99% Pervious Area
	1.244			6.01% Impervious Area
	1.244			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
90.4	1,011	Total			

Subcatchment 2: DA-02 Post-development



Hydrograph for Subcatchment 2: DA-02 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.07	0.00	0.00
2.25	0.08	0.00	0.00
2.50	0.09	0.00	0.00
2.75	0.10	0.00	0.00
3.00	0.11	0.00	0.00
3.25	0.12	0.00	0.00
3.50	0.13	0.00	0.00
3.75	0.14	0.00	0.00
4.00	0.16	0.00	0.00
4.25	0.17	0.00	0.00
4.50	0.18	0.00	0.00
4.75	0.19	0.00	0.00
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.23	0.00	0.00
5.75	0.24	0.00	0.00
6.00	0.26	0.00	0.00
6.25	0.27	0.00	0.00
6.50	0.29	0.00	0.00
6.75	0.30	0.00	0.00
7.00	0.32	0.00	0.00
7.25	0.34	0.00	0.00
7.50	0.35	0.00	0.00
7.75	0.37	0.00	0.00
8.00	0.39	0.00	0.00
8.25	0.41	0.00	0.00
8.50	0.43	0.00	0.00
8.75	0.45	0.00	0.00
9.00	0.48	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.56	0.00	0.00
10.00	0.59	0.00	0.00
10.25	0.62	0.00	0.00
10.50	0.66	0.00	0.00
10.75	0.71	0.00	0.00
11.00	0.76	0.00	0.00
11.25	0.83	0.00	0.00
11.50	0.92	0.01	0.02
11.75	1.25	0.07	0.07
12.00	2.15	0.42	0.35
12.25	2.29	0.49	1.49
12.50	2.38	0.54	3.84
12.75	2.45	0.58	6.51
13.00	2.50	0.61	**7.82**
13.25	2.55	0.64	**7.72**
13.50	2.59	0.66	6.67
13.75	2.62	0.68	5.30
14.00	2.66	0.70	4.29
14.25	2.69	0.72	3.54
14.50	2.71	0.73	2.96
14.75	2.74	0.75	2.51
15.00	2.77	0.76	2.17
15.25	2.79	0.78	1.91
15.50	2.81	0.79	1.72
15.75	2.83	0.80	1.57
16.00	2.85	0.82	1.44
16.25	2.87	0.83	1.34
16.50	2.89	0.84	1.25
16.75	2.90	0.85	1.17
17.00	2.92	0.86	1.09
17.25	2.94	0.87	1.03
17.50	2.95	0.88	0.99
17.75	2.97	0.89	0.95
18.00	2.98	0.90	0.92
18.25	3.00	0.91	0.89
18.50	3.01	0.92	0.86
18.75	3.03	0.92	0.84
19.00	3.04	0.93	0.81
19.25	3.05	0.94	0.78
19.50	3.06	0.95	0.76
19.75	3.07	0.96	0.73
20.00	3.08	0.96	0.71
20.25	3.09	0.97	0.68
20.50	3.11	0.98	0.66
20.75	3.12	0.98	0.64
21.00	3.13	0.99	0.61
21.25	3.14	1.00	0.60
21.50	3.15	1.00	0.58
21.75	3.16	1.01	0.57
22.00	3.17	1.01	0.56
22.25	3.18	1.02	0.56
22.50	3.18	1.03	0.55
22.75	3.19	1.03	0.54
23.00	3.20	1.04	0.54
23.25	3.21	1.05	0.53
23.50	3.22	1.05	0.53
23.75	3.23	1.06	0.52
24.00	**3.24**	**1.06**	0.52

Summary for Subcatchment 2S: DA-02 Pre-development

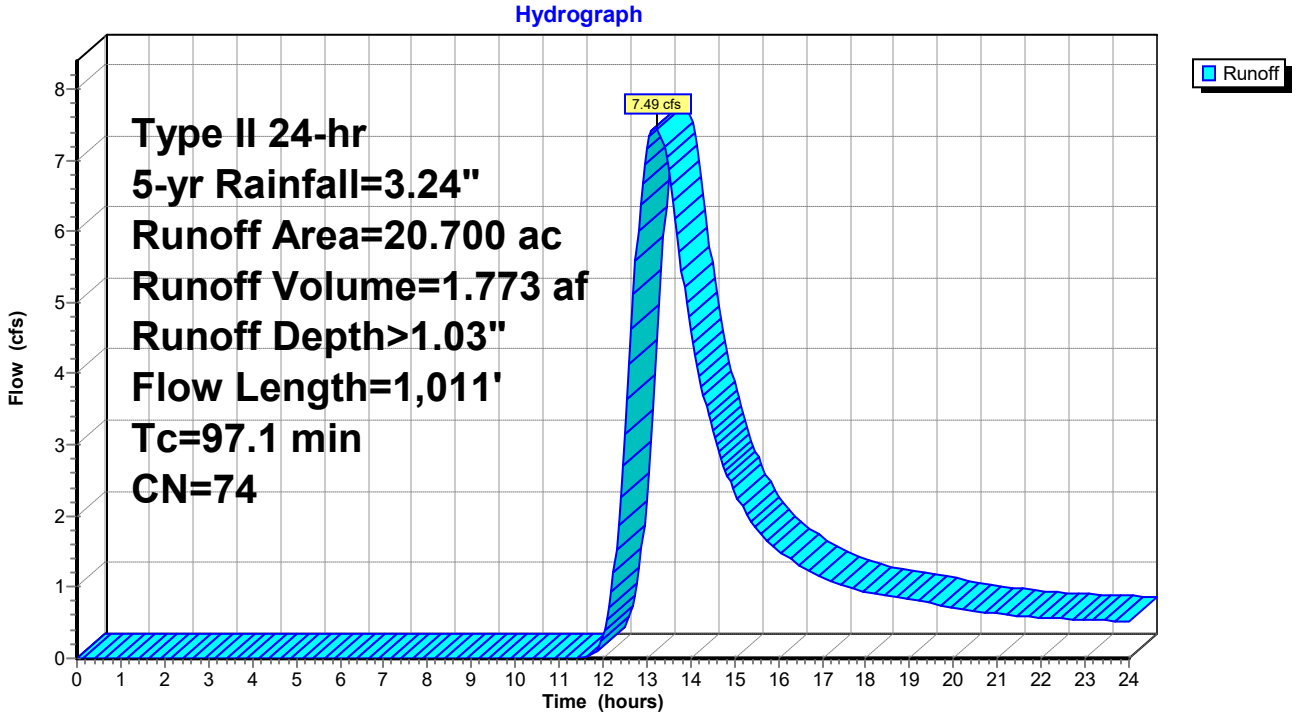
Runoff = 7.49 cfs @ 13.22 hrs, Volume= 1.773 af, Depth> 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=3.24"

Area (ac)	CN	Description
19.950	73	Woods, Fair, HSG C
0.750	89	Gravel roads, HSG C
20.700	74	Weighted Average
20.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
97.1	1,011	Total			

Subcatchment 2S: DA-02 Pre-development



Hydrograph for Subcatchment 2S: DA-02 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.00	2.50	0.61	**7.15**
0.25	0.01	0.00	0.00	13.25	2.55	0.64	**7.49**
0.50	0.02	0.00	0.00	13.50	2.59	0.66	6.86
0.75	0.03	0.00	0.00	13.75	2.62	0.68	5.70
1.00	0.03	0.00	0.00	14.00	2.66	0.70	4.60
1.25	0.04	0.00	0.00	14.25	2.69	0.72	3.81
1.50	0.05	0.00	0.00	14.50	2.71	0.73	3.20
1.75	0.06	0.00	0.00	14.75	2.74	0.75	2.72
2.00	0.07	0.00	0.00	15.00	2.77	0.76	2.34
2.25	0.08	0.00	0.00	15.25	2.79	0.78	2.05
2.50	0.09	0.00	0.00	15.50	2.81	0.79	1.83
2.75	0.10	0.00	0.00	15.75	2.83	0.80	1.65
3.00	0.11	0.00	0.00	16.00	2.85	0.82	1.52
3.25	0.12	0.00	0.00	16.25	2.87	0.83	1.40
3.50	0.13	0.00	0.00	16.50	2.89	0.84	1.30
3.75	0.14	0.00	0.00	16.75	2.90	0.85	1.22
4.00	0.16	0.00	0.00	17.00	2.92	0.86	1.14
4.25	0.17	0.00	0.00	17.25	2.94	0.87	1.07
4.50	0.18	0.00	0.00	17.50	2.95	0.88	1.01
4.75	0.19	0.00	0.00	17.75	2.97	0.89	0.97
5.00	0.20	0.00	0.00	18.00	2.98	0.90	0.94
5.25	0.22	0.00	0.00	18.25	3.00	0.91	0.90
5.50	0.23	0.00	0.00	18.50	3.01	0.92	0.88
5.75	0.24	0.00	0.00	18.75	3.03	0.92	0.85
6.00	0.26	0.00	0.00	19.00	3.04	0.93	0.82
6.25	0.27	0.00	0.00	19.25	3.05	0.94	0.80
6.50	0.29	0.00	0.00	19.50	3.06	0.95	0.77
6.75	0.30	0.00	0.00	19.75	3.07	0.96	0.75
7.00	0.32	0.00	0.00	20.00	3.08	0.96	0.72
7.25	0.34	0.00	0.00	20.25	3.09	0.97	0.69
7.50	0.35	0.00	0.00	20.50	3.11	0.98	0.67
7.75	0.37	0.00	0.00	20.75	3.12	0.98	0.65
8.00	0.39	0.00	0.00	21.00	3.13	0.99	0.62
8.25	0.41	0.00	0.00	21.25	3.14	1.00	0.61
8.50	0.43	0.00	0.00	21.50	3.15	1.00	0.59
8.75	0.45	0.00	0.00	21.75	3.16	1.01	0.58
9.00	0.48	0.00	0.00	22.00	3.17	1.01	0.57
9.25	0.50	0.00	0.00	22.25	3.18	1.02	0.56
9.50	0.53	0.00	0.00	22.50	3.18	1.03	0.55
9.75	0.56	0.00	0.00	22.75	3.19	1.03	0.55
10.00	0.59	0.00	0.00	23.00	3.20	1.04	0.54
10.25	0.62	0.00	0.00	23.25	3.21	1.05	0.54
10.50	0.66	0.00	0.00	23.50	3.22	1.05	0.53
10.75	0.71	0.00	0.00	23.75	3.23	1.06	0.53
11.00	0.76	0.00	0.00	24.00	**3.24**	**1.06**	0.52
11.25	0.83	0.00	0.00				
11.50	0.92	0.01	0.01				
11.75	1.25	0.07	0.06				
12.00	2.15	0.42	0.29				
12.25	2.29	0.49	1.22				
12.50	2.38	0.54	3.16				
12.75	2.45	0.58	5.59				

Summary for Subcatchment 2: DA-02 Post-development

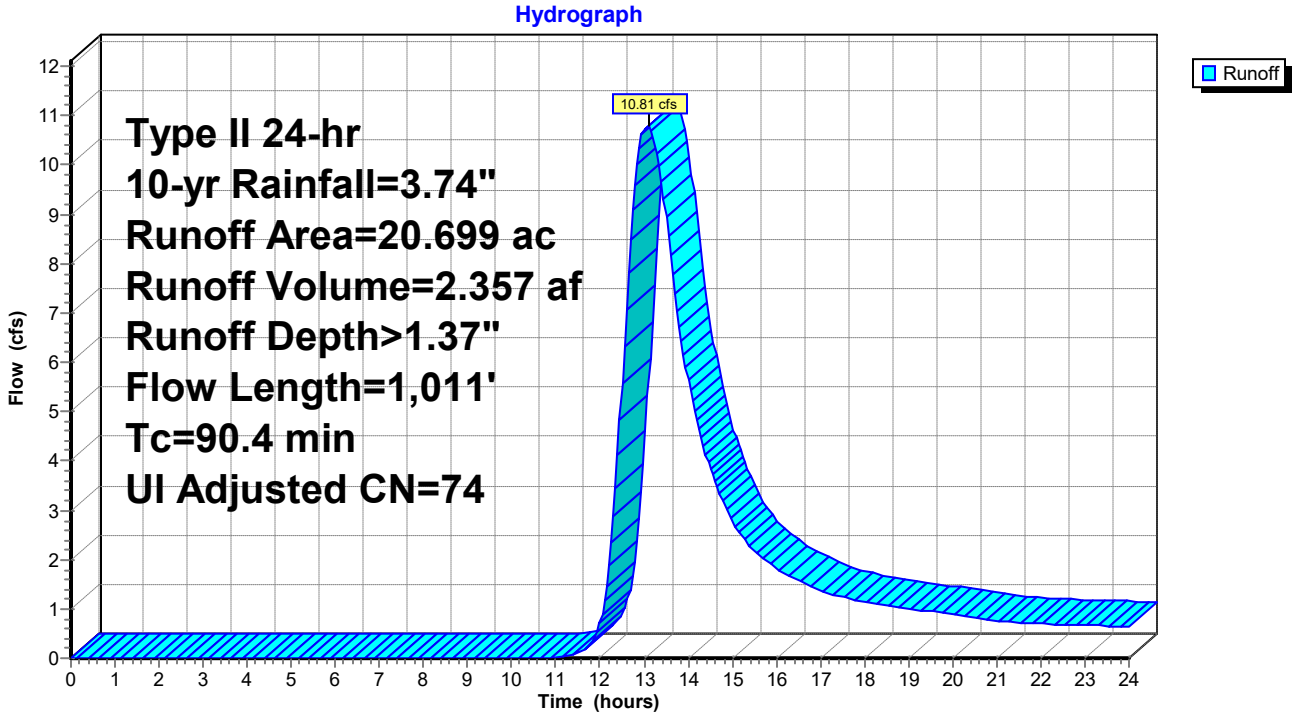
Runoff = 10.81 cfs @ 13.09 hrs, Volume= 2.357 af, Depth> 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.74"

	Area (ac)	CN	Adj	Description
	17.203	71		Meadow, non-grazed, HSG C
	1.114	89		Gravel roads, HSG C
	1.244	98		Unconnected pavement, HSG C
*	1.138	89		Ballast aggregate, HSG C
	20.699	75	74	Weighted Average, UI Adjusted
	19.455			93.99% Pervious Area
	1.244			6.01% Impervious Area
	1.244			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
90.4	1,011	Total			

Subcatchment 2: DA-02 Post-development



Hydrograph for Subcatchment 2: DA-02 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.04	0.00	0.00
1.25	0.05	0.00	0.00
1.50	0.06	0.00	0.00
1.75	0.07	0.00	0.00
2.00	0.08	0.00	0.00
2.25	0.09	0.00	0.00
2.50	0.11	0.00	0.00
2.75	0.12	0.00	0.00
3.00	0.13	0.00	0.00
3.25	0.14	0.00	0.00
3.50	0.15	0.00	0.00
3.75	0.17	0.00	0.00
4.00	0.18	0.00	0.00
4.25	0.19	0.00	0.00
4.50	0.21	0.00	0.00
4.75	0.22	0.00	0.00
5.00	0.24	0.00	0.00
5.25	0.25	0.00	0.00
5.50	0.27	0.00	0.00
5.75	0.28	0.00	0.00
6.00	0.30	0.00	0.00
6.25	0.32	0.00	0.00
6.50	0.33	0.00	0.00
6.75	0.35	0.00	0.00
7.00	0.37	0.00	0.00
7.25	0.39	0.00	0.00
7.50	0.41	0.00	0.00
7.75	0.43	0.00	0.00
8.00	0.45	0.00	0.00
8.25	0.47	0.00	0.00
8.50	0.49	0.00	0.00
8.75	0.52	0.00	0.00
9.00	0.55	0.00	0.00
9.25	0.58	0.00	0.00
9.50	0.61	0.00	0.00
9.75	0.64	0.00	0.00
10.00	0.68	0.00	0.00
10.25	0.72	0.00	0.00
10.50	0.76	0.00	0.00
10.75	0.82	0.00	0.00
11.00	0.88	0.01	0.02
11.25	0.96	0.02	0.05
11.50	1.06	0.03	0.11
11.75	1.45	0.13	0.24
12.00	2.48	0.60	0.70
12.25	2.64	0.69	2.34
12.50	2.75	0.75	5.56
12.75	2.82	0.80	9.10
13.00	2.89	0.84	**10.73**
13.25	2.94	0.87	**10.46**
13.50	2.99	0.90	8.94
13.75	3.03	0.93	7.03
14.00	3.07	0.95	5.66
14.25	3.10	0.97	4.63
14.50	3.13	0.99	3.84
14.75	3.16	1.01	3.25
15.00	3.19	1.03	2.79
15.25	3.22	1.05	2.45
15.50	3.24	1.07	2.19
15.75	3.27	1.08	1.99
16.00	3.29	1.10	1.83
16.25	3.31	1.11	1.69
16.50	3.33	1.13	1.58
16.75	3.35	1.14	1.47
17.00	3.37	1.15	1.37
17.25	3.39	1.17	1.30
17.50	3.41	1.18	1.24
17.75	3.43	1.19	1.19
18.00	3.44	1.20	1.15
18.25	3.46	1.21	1.11
18.50	3.48	1.22	1.08
18.75	3.49	1.23	1.05
19.00	3.51	1.24	1.01
19.25	3.52	1.25	0.98
19.50	3.54	1.26	0.95
19.75	3.55	1.27	0.92
20.00	3.56	1.28	0.89
20.25	3.57	1.29	0.85
20.50	3.58	1.30	0.82
20.75	3.60	1.31	0.79
21.00	3.61	1.32	0.77
21.25	3.62	1.32	0.74
21.50	3.63	1.33	0.73
21.75	3.64	1.34	0.71
22.00	3.65	1.35	0.70
22.25	3.67	1.36	0.69
22.50	3.68	1.36	0.68
22.75	3.69	1.37	0.68
23.00	3.70	1.38	0.67
23.25	3.71	1.39	0.66
23.50	3.72	1.39	0.66
23.75	3.73	1.40	0.65
24.00	**3.74**	**1.41**	0.65

Summary for Subcatchment 2S: DA-02 Pre-development

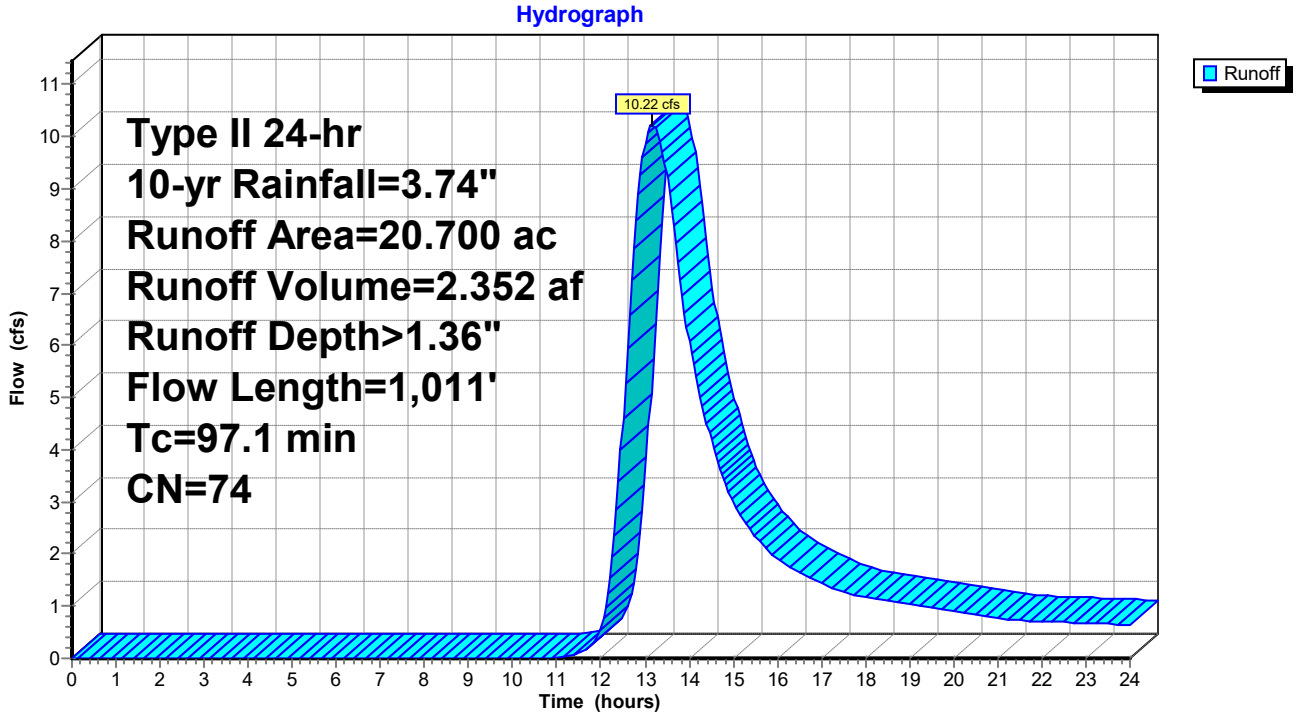
Runoff = 10.22 cfs @ 13.17 hrs, Volume= 2.352 af, Depth> 1.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.74"

Area (ac)	CN	Description
19.950	73	Woods, Fair, HSG C
0.750	89	Gravel roads, HSG C
20.700	74	Weighted Average
20.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
97.1	1,011	Total			

Subcatchment 2S: DA-02 Pre-development



Hydrograph for Subcatchment 2S: DA-02 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.04	0.00	0.00
1.25	0.05	0.00	0.00
1.50	0.06	0.00	0.00
1.75	0.07	0.00	0.00
2.00	0.08	0.00	0.00
2.25	0.09	0.00	0.00
2.50	0.11	0.00	0.00
2.75	0.12	0.00	0.00
3.00	0.13	0.00	0.00
3.25	0.14	0.00	0.00
3.50	0.15	0.00	0.00
3.75	0.17	0.00	0.00
4.00	0.18	0.00	0.00
4.25	0.19	0.00	0.00
4.50	0.21	0.00	0.00
4.75	0.22	0.00	0.00
5.00	0.24	0.00	0.00
5.25	0.25	0.00	0.00
5.50	0.27	0.00	0.00
5.75	0.28	0.00	0.00
6.00	0.30	0.00	0.00
6.25	0.32	0.00	0.00
6.50	0.33	0.00	0.00
6.75	0.35	0.00	0.00
7.00	0.37	0.00	0.00
7.25	0.39	0.00	0.00
7.50	0.41	0.00	0.00
7.75	0.43	0.00	0.00
8.00	0.45	0.00	0.00
8.25	0.47	0.00	0.00
8.50	0.49	0.00	0.00
8.75	0.52	0.00	0.00
9.00	0.55	0.00	0.00
9.25	0.58	0.00	0.00
9.50	0.61	0.00	0.00
9.75	0.64	0.00	0.00
10.00	0.68	0.00	0.00
10.25	0.72	0.00	0.00
10.50	0.76	0.00	0.00
10.75	0.82	0.00	0.00
11.00	0.88	0.01	0.01
11.25	0.96	0.02	0.04
11.50	1.06	0.03	0.10
11.75	1.45	0.13	0.21
12.00	2.48	0.60	0.59
12.25	2.64	0.69	1.93
12.50	2.75	0.75	4.61
12.75	2.82	0.80	7.85
13.00	2.89	0.84	**9.86**
13.25	2.94	0.87	**10.19**
13.50	2.99	0.90	9.23
13.75	3.03	0.93	7.60
14.00	3.07	0.95	6.09
14.25	3.10	0.97	5.01
14.50	3.13	0.99	4.18
14.75	3.16	1.01	3.53
15.00	3.19	1.03	3.02
15.25	3.22	1.05	2.64
15.50	3.24	1.07	2.34
15.75	3.27	1.08	2.11
16.00	3.29	1.10	1.93
16.25	3.31	1.11	1.77
16.50	3.33	1.13	1.65
16.75	3.35	1.14	1.53
17.00	3.37	1.15	1.43
17.25	3.39	1.17	1.34
17.50	3.41	1.18	1.27
17.75	3.43	1.19	1.22
18.00	3.44	1.20	1.17
18.25	3.46	1.21	1.13
18.50	3.48	1.22	1.10
18.75	3.49	1.23	1.06
19.00	3.51	1.24	1.03
19.25	3.52	1.25	1.00
19.50	3.54	1.26	0.96
19.75	3.55	1.27	0.93
20.00	3.56	1.28	0.90
20.25	3.57	1.29	0.87
20.50	3.58	1.30	0.83
20.75	3.60	1.31	0.80
21.00	3.61	1.32	0.78
21.25	3.62	1.32	0.75
21.50	3.63	1.33	0.74
21.75	3.64	1.34	0.72
22.00	3.65	1.35	0.71
22.25	3.67	1.36	0.70
22.50	3.68	1.36	0.69
22.75	3.69	1.37	0.68
23.00	3.70	1.38	0.67
23.25	3.71	1.39	0.67
23.50	3.72	1.39	0.66
23.75	3.73	1.40	0.65
24.00	**3.74**	**1.41**	0.65

Summary for Subcatchment 2: DA-02 Post-development

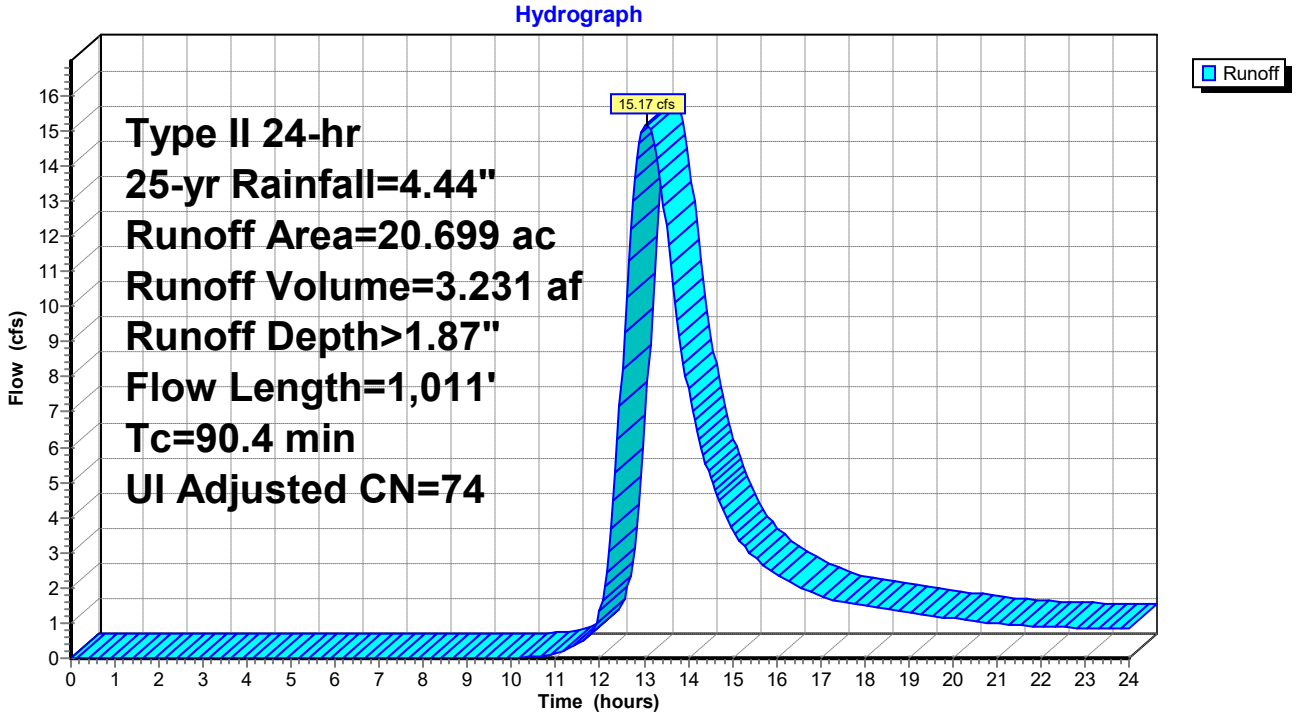
Runoff = 15.17 cfs @ 13.06 hrs, Volume= 3.231 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=4.44"

	Area (ac)	CN	Adj	Description
	17.203	71		Meadow, non-grazed, HSG C
	1.114	89		Gravel roads, HSG C
	1.244	98		Unconnected pavement, HSG C
*	1.138	89		Ballast aggregate, HSG C
	20.699	75	74	Weighted Average, UI Adjusted
	19.455			93.99% Pervious Area
	1.244			6.01% Impervious Area
	1.244			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
90.4	1,011	Total			

Subcatchment 2: DA-02 Post-development



Hydrograph for Subcatchment 2: DA-02 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.00	3.43	1.19	**15.10**
0.25	0.01	0.00	0.00	13.25	3.49	1.23	**14.56**
0.50	0.02	0.00	0.00	13.50	3.55	1.27	12.31
0.75	0.03	0.00	0.00	13.75	3.60	1.31	9.61
1.00	0.05	0.00	0.00	14.00	3.64	1.34	7.67
1.25	0.06	0.00	0.00	14.25	3.68	1.37	6.24
1.50	0.07	0.00	0.00	14.50	3.72	1.39	5.14
1.75	0.08	0.00	0.00	14.75	3.76	1.42	4.32
2.00	0.10	0.00	0.00	15.00	3.79	1.44	3.69
2.25	0.11	0.00	0.00	15.25	3.82	1.47	3.22
2.50	0.12	0.00	0.00	15.50	3.85	1.49	2.87
2.75	0.14	0.00	0.00	15.75	3.88	1.51	2.60
3.00	0.15	0.00	0.00	16.00	3.91	1.53	2.39
3.25	0.17	0.00	0.00	16.25	3.93	1.55	2.20
3.50	0.18	0.00	0.00	16.50	3.96	1.56	2.05
3.75	0.20	0.00	0.00	16.75	3.98	1.58	1.90
4.00	0.21	0.00	0.00	17.00	4.00	1.60	1.77
4.25	0.23	0.00	0.00	17.25	4.03	1.62	1.67
4.50	0.25	0.00	0.00	17.50	4.05	1.63	1.60
4.75	0.26	0.00	0.00	17.75	4.07	1.65	1.54
5.00	0.28	0.00	0.00	18.00	4.09	1.66	1.48
5.25	0.30	0.00	0.00	18.25	4.11	1.68	1.43
5.50	0.32	0.00	0.00	18.50	4.13	1.69	1.39
5.75	0.34	0.00	0.00	18.75	4.15	1.70	1.35
6.00	0.36	0.00	0.00	19.00	4.16	1.72	1.30
6.25	0.38	0.00	0.00	19.25	4.18	1.73	1.26
6.50	0.40	0.00	0.00	19.50	4.20	1.74	1.22
6.75	0.42	0.00	0.00	19.75	4.21	1.75	1.18
7.00	0.44	0.00	0.00	20.00	4.23	1.76	1.14
7.25	0.46	0.00	0.00	20.25	4.24	1.78	1.10
7.50	0.49	0.00	0.00	20.50	4.26	1.79	1.05
7.75	0.51	0.00	0.00	20.75	4.27	1.80	1.02
8.00	0.53	0.00	0.00	21.00	4.28	1.81	0.98
8.25	0.56	0.00	0.00	21.25	4.30	1.82	0.95
8.50	0.59	0.00	0.00	21.50	4.31	1.83	0.93
8.75	0.62	0.00	0.00	21.75	4.32	1.84	0.91
9.00	0.65	0.00	0.00	22.00	4.34	1.85	0.90
9.25	0.69	0.00	0.00	22.25	4.35	1.86	0.89
9.50	0.72	0.00	0.00	22.50	4.36	1.87	0.88
9.75	0.76	0.00	0.00	22.75	4.38	1.88	0.87
10.00	0.80	0.00	0.00	23.00	4.39	1.89	0.86
10.25	0.85	0.01	0.01	23.25	4.40	1.90	0.85
10.50	0.91	0.01	0.04	23.50	4.42	1.91	0.84
10.75	0.97	0.02	0.08	23.75	4.43	1.92	0.83
11.00	1.04	0.03	0.15	24.00	**4.44**	**1.93**	0.83
11.25	1.14	0.05	0.25				
11.50	1.26	0.08	0.39				
11.75	1.72	0.23	0.63				
12.00	2.94	0.87	1.35				
12.25	3.14	1.00	3.71				
12.50	3.26	1.08	8.22				
12.75	3.35	1.14	13.02				

Summary for Subcatchment 2S: DA-02 Pre-development

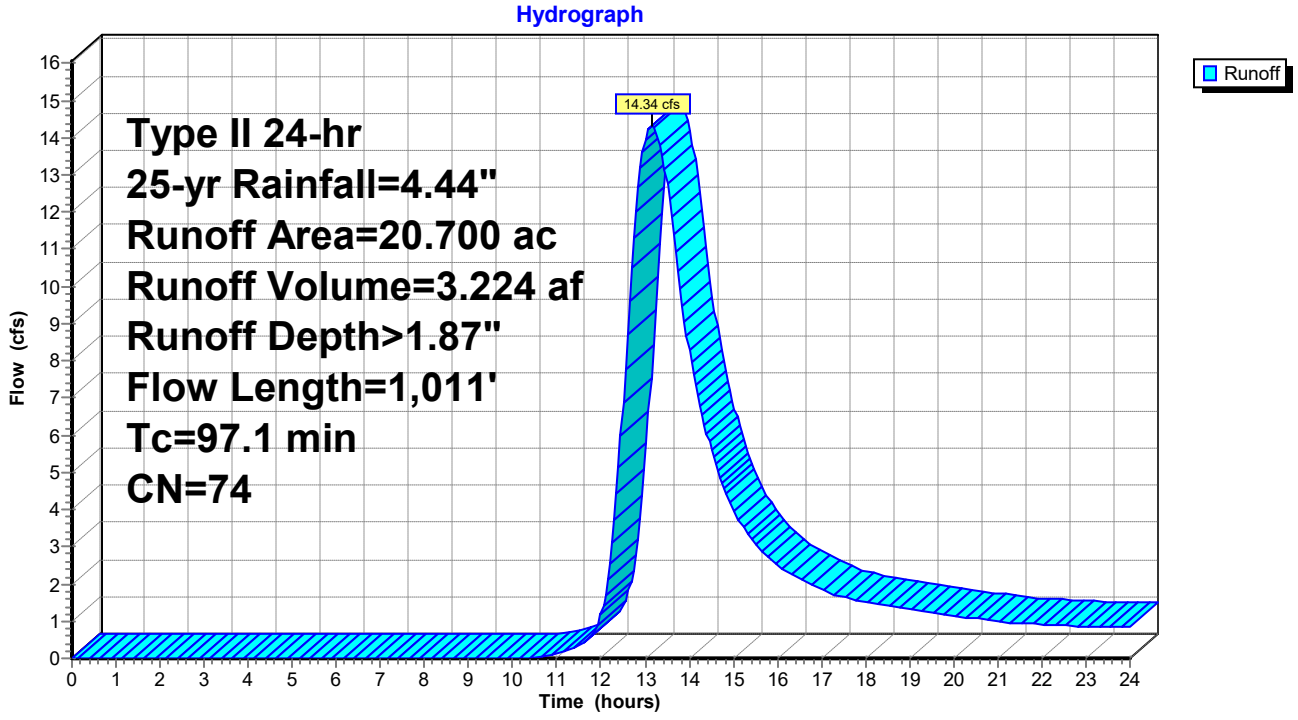
Runoff = 14.34 cfs @ 13.15 hrs, Volume= 3.224 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=4.44"

Area (ac)	CN	Description
19.950	73	Woods, Fair, HSG C
0.750	89	Gravel roads, HSG C
20.700	74	Weighted Average
20.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
97.1	1,011	Total			

Subcatchment 2S: DA-02 Pre-development



Hydrograph for Subcatchment 2S: DA-02 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.10	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.14	0.00	0.00
3.00	0.15	0.00	0.00
3.25	0.17	0.00	0.00
3.50	0.18	0.00	0.00
3.75	0.20	0.00	0.00
4.00	0.21	0.00	0.00
4.25	0.23	0.00	0.00
4.50	0.25	0.00	0.00
4.75	0.26	0.00	0.00
5.00	0.28	0.00	0.00
5.25	0.30	0.00	0.00
5.50	0.32	0.00	0.00
5.75	0.34	0.00	0.00
6.00	0.36	0.00	0.00
6.25	0.38	0.00	0.00
6.50	0.40	0.00	0.00
6.75	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.25	0.46	0.00	0.00
7.50	0.49	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.53	0.00	0.00
8.25	0.56	0.00	0.00
8.50	0.59	0.00	0.00
8.75	0.62	0.00	0.00
9.00	0.65	0.00	0.00
9.25	0.69	0.00	0.00
9.50	0.72	0.00	0.00
9.75	0.76	0.00	0.00
10.00	0.80	0.00	0.00
10.25	0.85	0.01	0.01
10.50	0.91	0.01	0.03
10.75	0.97	0.02	0.07
11.00	1.04	0.03	0.13
11.25	1.14	0.05	0.22
11.50	1.26	0.08	0.35
11.75	1.72	0.23	0.56
12.00	2.94	0.87	1.16
12.25	3.14	1.00	3.11
12.50	3.26	1.08	6.88
12.75	3.35	1.14	11.31
13.00	3.43	1.19	**13.95**
13.25	3.49	1.23	**14.24**
13.50	3.55	1.27	12.77
13.75	3.60	1.31	10.42
14.00	3.64	1.34	8.29
14.25	3.68	1.37	6.78
14.50	3.72	1.39	5.62
14.75	3.76	1.42	4.71
15.00	3.79	1.44	4.02
15.25	3.82	1.47	3.48
15.50	3.85	1.49	3.08
15.75	3.88	1.51	2.76
16.00	3.91	1.53	2.52
16.25	3.93	1.55	2.31
16.50	3.96	1.56	2.14
16.75	3.98	1.58	1.99
17.00	4.00	1.60	1.85
17.25	4.03	1.62	1.73
17.50	4.05	1.63	1.64
17.75	4.07	1.65	1.57
18.00	4.09	1.66	1.51
18.25	4.11	1.68	1.46
18.50	4.13	1.69	1.41
18.75	4.15	1.70	1.37
19.00	4.16	1.72	1.32
19.25	4.18	1.73	1.28
19.50	4.20	1.74	1.24
19.75	4.21	1.75	1.20
20.00	4.23	1.76	1.15
20.25	4.24	1.78	1.11
20.50	4.26	1.79	1.07
20.75	4.27	1.80	1.03
21.00	4.28	1.81	1.00
21.25	4.30	1.82	0.97
21.50	4.31	1.83	0.94
21.75	4.32	1.84	0.92
22.00	4.34	1.85	0.91
22.25	4.35	1.86	0.89
22.50	4.36	1.87	0.88
22.75	4.38	1.88	0.87
23.00	4.39	1.89	0.86
23.25	4.40	1.90	0.85
23.50	4.42	1.91	0.84
23.75	4.43	1.92	0.84
24.00	**4.44**	**1.93**	0.83

Summary for Subcatchment 2: DA-02 Post-development

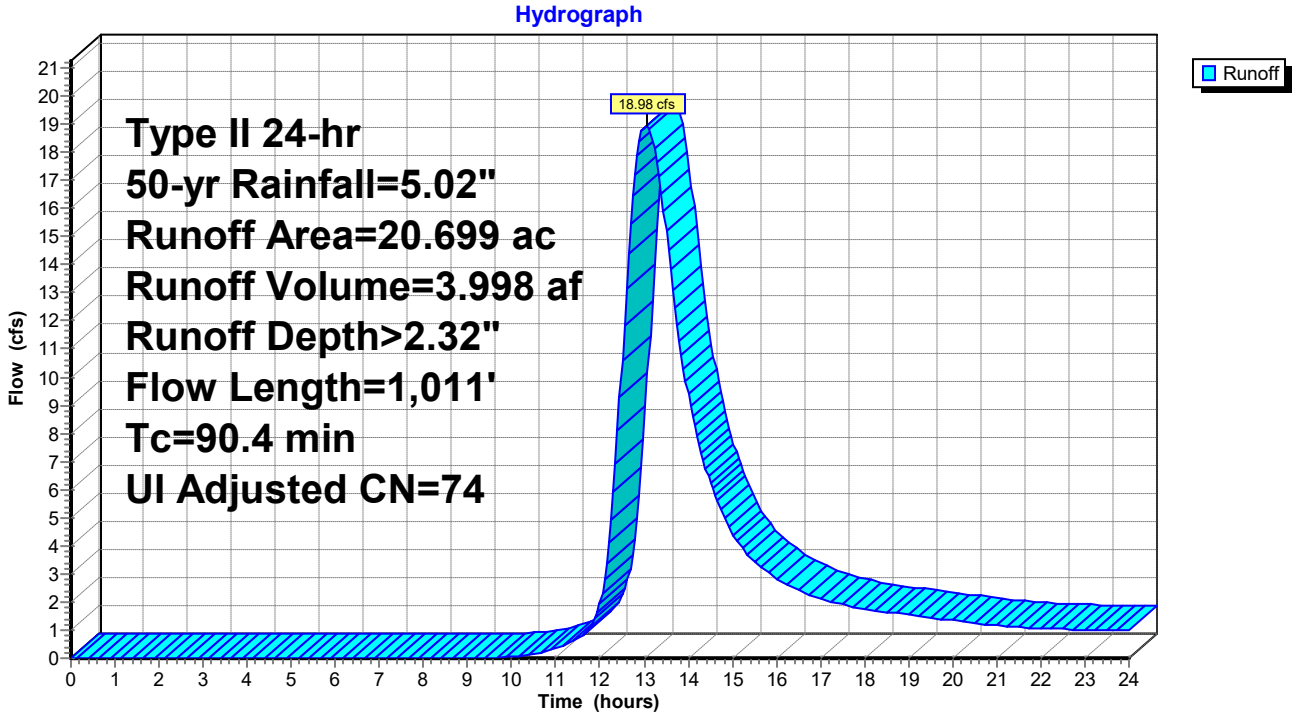
Runoff = 18.98 cfs @ 13.05 hrs, Volume= 3.998 af, Depth> 2.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=5.02"

	Area (ac)	CN	Adj	Description
	17.203	71		Meadow, non-grazed, HSG C
	1.114	89		Gravel roads, HSG C
	1.244	98		Unconnected pavement, HSG C
*	1.138	89		Ballast aggregate, HSG C
	20.699	75	74	Weighted Average, UI Adjusted
	19.455			93.99% Pervious Area
	1.244			6.01% Impervious Area
	1.244			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
90.4	1,011	Total			

Subcatchment 2: DA-02 Post-development



Hydrograph for Subcatchment 2: DA-02 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.13	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.16	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.21	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.26	0.00	0.00
4.50	0.28	0.00	0.00
4.75	0.30	0.00	0.00
5.00	0.32	0.00	0.00
5.25	0.34	0.00	0.00
5.50	0.36	0.00	0.00
5.75	0.38	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.45	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.52	0.00	0.00
7.50	0.55	0.00	0.00
7.75	0.58	0.00	0.00
8.00	0.60	0.00	0.00
8.25	0.63	0.00	0.00
8.50	0.66	0.00	0.00
8.75	0.70	0.00	0.00
9.00	0.74	0.00	0.00
9.25	0.78	0.00	0.00
9.50	0.82	0.00	0.01
9.75	0.86	0.01	0.02
10.00	0.91	0.01	0.05
10.25	0.96	0.02	0.09
10.50	1.02	0.03	0.15
10.75	1.10	0.04	0.23
11.00	1.18	0.06	0.34
11.25	1.29	0.08	0.49
11.50	1.42	0.12	0.70
11.75	1.94	0.32	1.02
12.00	3.33	1.12	1.96
12.25	3.54	1.27	4.95
12.50	3.69	1.37	10.58
12.75	3.79	1.44	16.47
13.00	3.88	1.51	**18.92**
13.25	3.95	1.56	**18.11**
13.50	4.01	1.60	15.22
13.75	4.07	1.65	11.83
14.00	4.12	1.68	9.40
14.25	4.16	1.72	7.62
14.50	4.20	1.75	6.25
14.75	4.25	1.78	5.24
15.00	4.28	1.81	4.46
15.25	4.32	1.84	3.88
15.50	4.36	1.86	3.45
15.75	4.39	1.89	3.12
16.00	4.42	1.91	2.85
16.25	4.45	1.93	2.63
16.50	4.47	1.95	2.44
16.75	4.50	1.97	2.26
17.00	4.53	1.99	2.11
17.25	4.55	2.01	1.99
17.50	4.58	2.03	1.90
17.75	4.60	2.05	1.83
18.00	4.62	2.07	1.76
18.25	4.65	2.08	1.70
18.50	4.67	2.10	1.65
18.75	4.69	2.12	1.60
19.00	4.71	2.13	1.55
19.25	4.73	2.15	1.50
19.50	4.74	2.16	1.44
19.75	4.76	2.18	1.40
20.00	4.78	2.19	1.35
20.25	4.80	2.20	1.30
20.50	4.81	2.21	1.25
20.75	4.83	2.23	1.20
21.00	4.84	2.24	1.16
21.25	4.86	2.25	1.13
21.50	4.87	2.26	1.10
21.75	4.89	2.28	1.08
22.00	4.90	2.29	1.06
22.25	4.92	2.30	1.05
22.50	4.93	2.31	1.04
22.75	4.95	2.32	1.02
23.00	4.96	2.34	1.01
23.25	4.98	2.35	1.00
23.50	4.99	2.36	0.99
23.75	5.01	2.37	0.98
24.00	**5.02**	**2.38**	0.97

Summary for Subcatchment 2S: DA-02 Pre-development

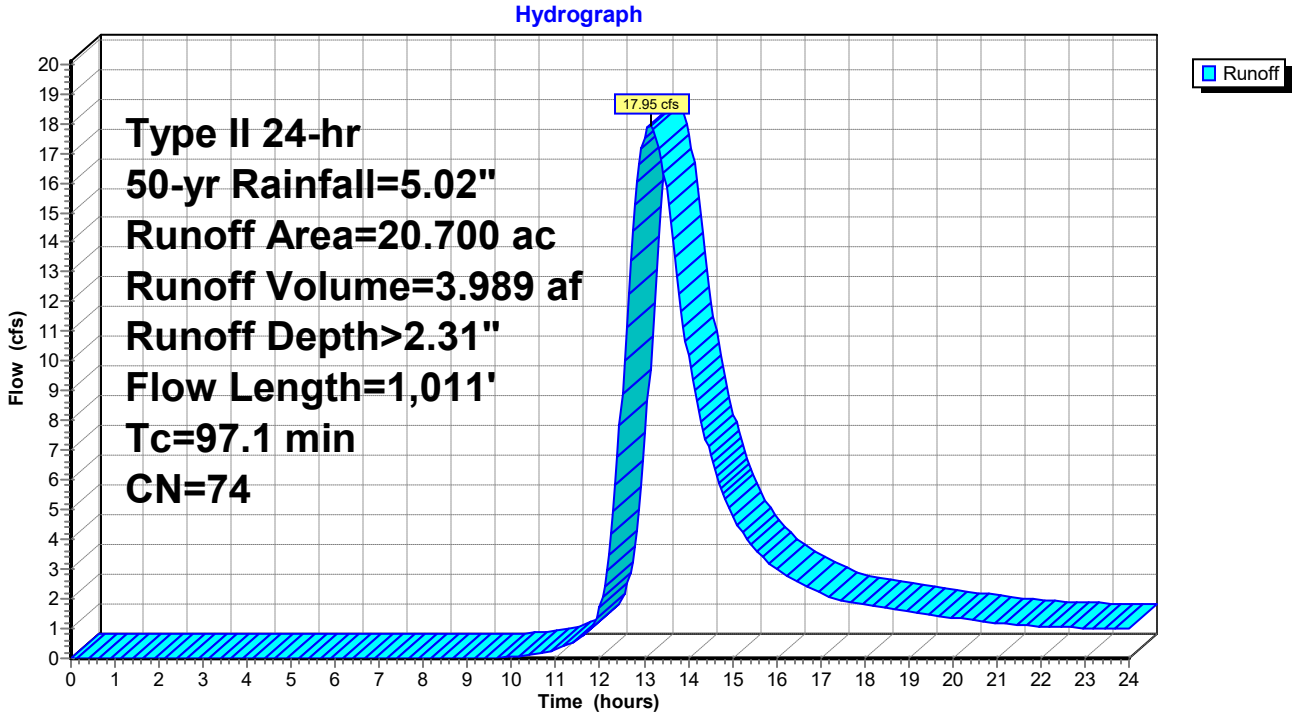
Runoff = 17.95 cfs @ 13.13 hrs, Volume= 3.989 af, Depth> 2.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=5.02"

Area (ac)	CN	Description
19.950	73	Woods, Fair, HSG C
0.750	89	Gravel roads, HSG C
20.700	74	Weighted Average
20.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
97.1	1,011	Total			

Subcatchment 2S: DA-02 Pre-development



Hydrograph for Subcatchment 2S: DA-02 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.13	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.16	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.21	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.26	0.00	0.00
4.50	0.28	0.00	0.00
4.75	0.30	0.00	0.00
5.00	0.32	0.00	0.00
5.25	0.34	0.00	0.00
5.50	0.36	0.00	0.00
5.75	0.38	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.45	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.52	0.00	0.00
7.50	0.55	0.00	0.00
7.75	0.58	0.00	0.00
8.00	0.60	0.00	0.00
8.25	0.63	0.00	0.00
8.50	0.66	0.00	0.00
8.75	0.70	0.00	0.00
9.00	0.74	0.00	0.00
9.25	0.78	0.00	0.00
9.50	0.82	0.00	0.00
9.75	0.86	0.01	0.02
10.00	0.91	0.01	0.04
10.25	0.96	0.02	0.08
10.50	1.02	0.03	0.13
10.75	1.10	0.04	0.21
11.00	1.18	0.06	0.31
11.25	1.29	0.08	0.44
11.50	1.42	0.12	0.63
11.75	1.94	0.32	0.92
12.00	3.33	1.12	1.71
12.25	3.54	1.27	4.19
12.50	3.69	1.37	8.90
12.75	3.79	1.44	14.37
13.00	3.88	1.51	**17.52**
13.25	3.95	1.56	**17.76**
13.50	4.01	1.60	15.84
13.75	4.07	1.65	12.85
14.00	4.12	1.68	10.19
14.25	4.16	1.72	8.29
14.50	4.20	1.75	6.85
14.75	4.25	1.78	5.72
15.00	4.28	1.81	4.86
15.25	4.32	1.84	4.20
15.50	4.36	1.86	3.70
15.75	4.39	1.89	3.32
16.00	4.42	1.91	3.02
16.25	4.45	1.93	2.77
16.50	4.47	1.95	2.56
16.75	4.50	1.97	2.37
17.00	4.53	1.99	2.21
17.25	4.55	2.01	2.06
17.50	4.58	2.03	1.95
17.75	4.60	2.05	1.87
18.00	4.62	2.07	1.80
18.25	4.65	2.08	1.73
18.50	4.67	2.10	1.68
18.75	4.69	2.12	1.62
19.00	4.71	2.13	1.57
19.25	4.73	2.15	1.52
19.50	4.74	2.16	1.47
19.75	4.76	2.18	1.42
20.00	4.78	2.19	1.37
20.25	4.80	2.20	1.32
20.50	4.81	2.21	1.27
20.75	4.83	2.23	1.22
21.00	4.84	2.24	1.18
21.25	4.86	2.25	1.14
21.50	4.87	2.26	1.11
21.75	4.89	2.28	1.09
22.00	4.90	2.29	1.07
22.25	4.92	2.30	1.06
22.50	4.93	2.31	1.04
22.75	4.95	2.32	1.03
23.00	4.96	2.34	1.02
23.25	4.98	2.35	1.01
23.50	4.99	2.36	1.00
23.75	5.01	2.37	0.99
24.00	**5.02**	**2.38**	0.98

Summary for Subcatchment 2: DA-02 Post-development

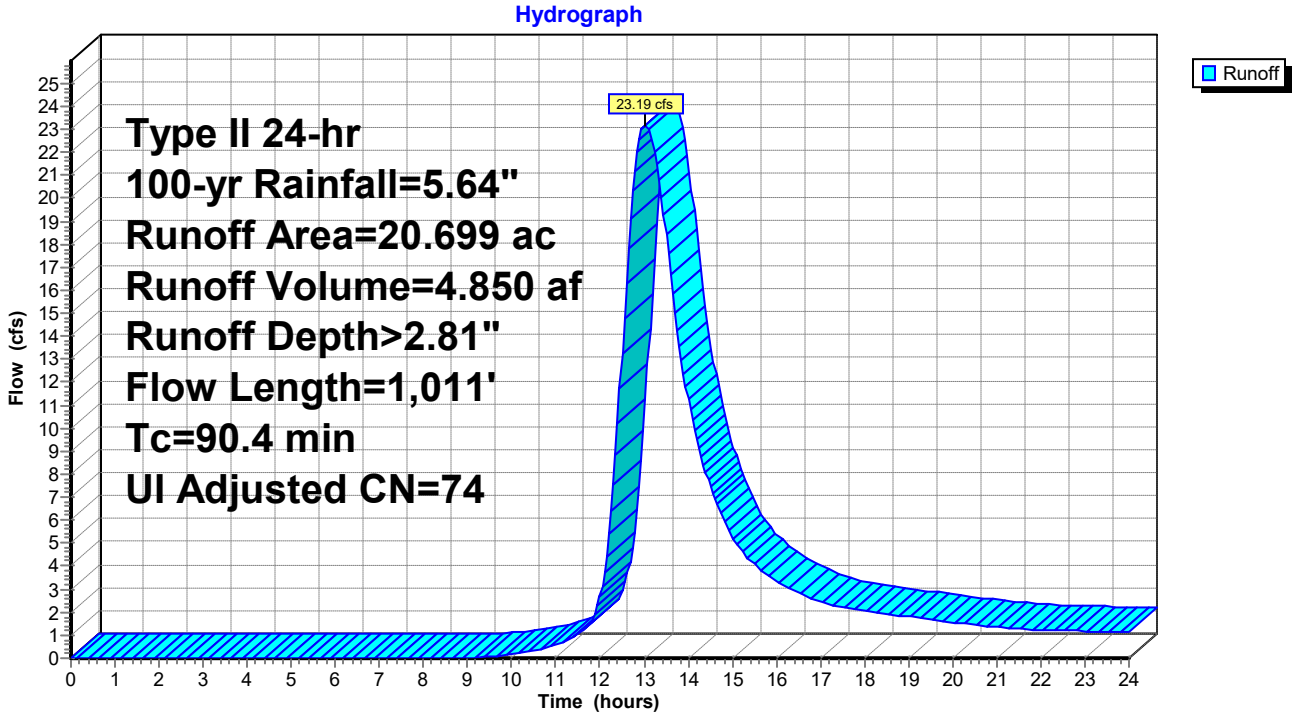
Runoff = 23.19 cfs @ 13.04 hrs, Volume= 4.850 af, Depth> 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.64"

	Area (ac)	CN	Adj	Description
	17.203	71		Meadow, non-grazed, HSG C
	1.114	89		Gravel roads, HSG C
	1.244	98		Unconnected pavement, HSG C
*	1.138	89		Ballast aggregate, HSG C
	20.699	75	74	Weighted Average, UI Adjusted
	19.455			93.99% Pervious Area
	1.244			6.01% Impervious Area
	1.244			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
90.4	1,011	Total			

Subcatchment 2: DA-02 Post-development



Hydrograph for Subcatchment 2: DA-02 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.12	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.50	0.00	0.00
6.75	0.53	0.00	0.00
7.00	0.56	0.00	0.00
7.25	0.59	0.00	0.00
7.50	0.62	0.00	0.00
7.75	0.65	0.00	0.00
8.00	0.68	0.00	0.00
8.25	0.71	0.00	0.00
8.50	0.75	0.00	0.00
8.75	0.79	0.00	0.00
9.00	0.83	0.00	0.01
9.25	0.87	0.01	0.03
9.50	0.92	0.01	0.06
9.75	0.97	0.02	0.10
10.00	1.02	0.03	0.17
10.25	1.08	0.04	0.24
10.50	1.15	0.05	0.33
10.75	1.23	0.07	0.45
11.00	1.33	0.09	0.60
11.25	1.44	0.13	0.79
11.50	1.60	0.18	1.07
11.75	2.18	0.44	1.48
12.00	3.74	1.41	2.67
12.25	3.98	1.58	6.37
12.50	4.15	1.70	13.23
12.75	4.26	1.79	20.30
13.00	4.35	1.86	**23.15**
13.25	4.44	1.92	**22.04**
13.50	4.51	1.98	18.43
13.75	4.57	2.03	14.26
14.00	4.62	2.07	11.30
14.25	4.68	2.11	9.12
14.50	4.72	2.15	7.46
14.75	4.77	2.18	6.23
15.00	4.81	2.22	5.29
15.25	4.85	2.25	4.59
15.50	4.89	2.28	4.07
15.75	4.93	2.31	3.68
16.00	4.96	2.33	3.36
16.25	5.00	2.36	3.09
16.50	5.03	2.39	2.86
16.75	5.06	2.41	2.65
17.00	5.09	2.43	2.47
17.25	5.11	2.46	2.33
17.50	5.14	2.48	2.23
17.75	5.17	2.50	2.14
18.00	5.19	2.52	2.06
18.25	5.22	2.54	1.99
18.50	5.24	2.56	1.93
18.75	5.27	2.58	1.87
19.00	5.29	2.60	1.81
19.25	5.31	2.61	1.75
19.50	5.33	2.63	1.69
19.75	5.35	2.65	1.63
20.00	5.37	2.66	1.57
20.25	5.39	2.68	1.51
20.50	5.41	2.69	1.46
20.75	5.42	2.71	1.40
21.00	5.44	2.72	1.36
21.25	5.46	2.74	1.32
21.50	5.48	2.75	1.28
21.75	5.49	2.76	1.26
22.00	5.51	2.78	1.24
22.25	5.53	2.79	1.22
22.50	5.54	2.81	1.21
22.75	5.56	2.82	1.19
23.00	5.58	2.83	1.18
23.25	5.59	2.85	1.17
23.50	5.61	2.86	1.16
23.75	5.62	2.87	1.15
24.00	**5.64**	**2.88**	1.13

Summary for Subcatchment 2S: DA-02 Pre-development

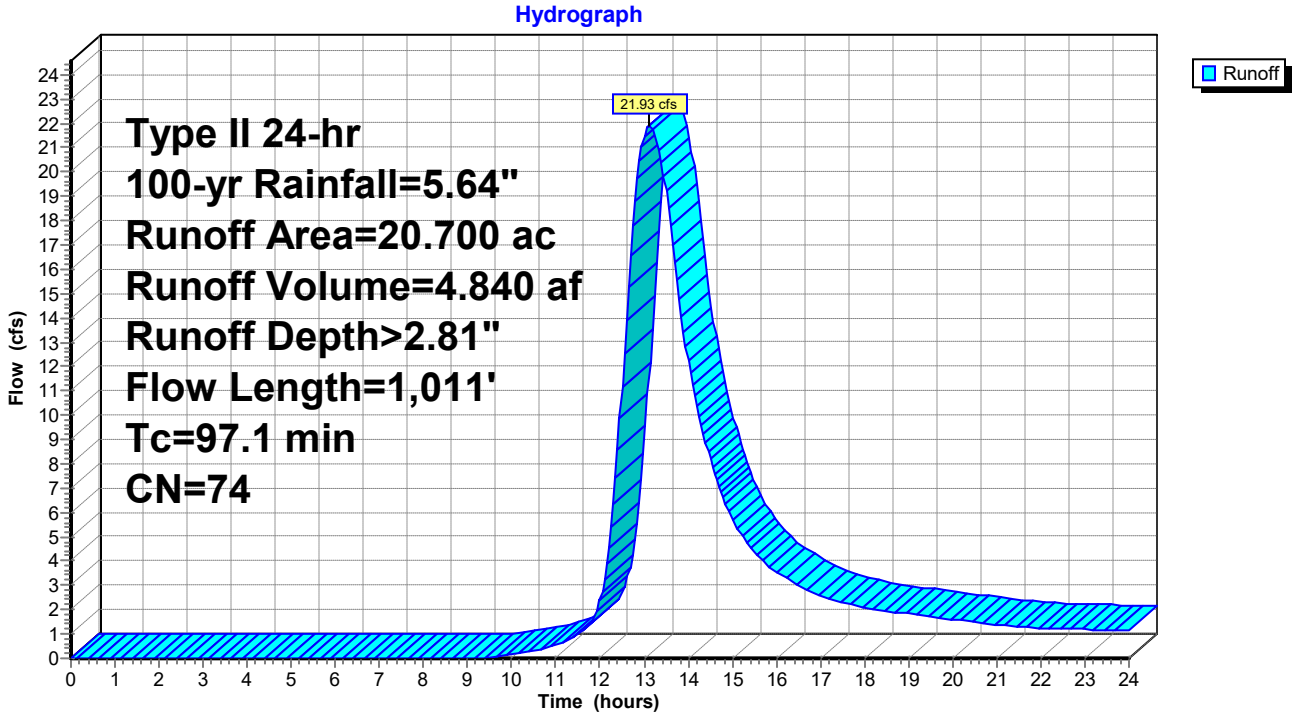
Runoff = 21.93 cfs @ 13.12 hrs, Volume= 4.840 af, Depth> 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.64"

Area (ac)	CN	Description
19.950	73	Woods, Fair, HSG C
0.750	89	Gravel roads, HSG C
20.700	74	Weighted Average
20.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	911	0.0120	0.20		**Shallow Concentrated Flow,** Kv= 1.8 fps
97.1	1,011	Total			

Subcatchment 2S: DA-02 Pre-development



Hydrograph for Subcatchment 2S: DA-02 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.12	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.50	0.00	0.00
6.75	0.53	0.00	0.00
7.00	0.56	0.00	0.00
7.25	0.59	0.00	0.00
7.50	0.62	0.00	0.00
7.75	0.65	0.00	0.00
8.00	0.68	0.00	0.00
8.25	0.71	0.00	0.00
8.50	0.75	0.00	0.00
8.75	0.79	0.00	0.00
9.00	0.83	0.00	0.01
9.25	0.87	0.01	0.02
9.50	0.92	0.01	0.05
9.75	0.97	0.02	0.09
10.00	1.02	0.03	0.15
10.25	1.08	0.04	0.22
10.50	1.15	0.05	0.30
10.75	1.23	0.07	0.41
11.00	1.33	0.09	0.54
11.25	1.44	0.13	0.73
11.50	1.60	0.18	0.98
11.75	2.18	0.44	1.35
12.00	3.74	1.41	2.36
12.25	3.98	1.58	5.43
12.50	4.15	1.70	11.18
12.75	4.26	1.79	17.77
13.00	4.35	1.86	**21.49**
13.25	4.44	1.92	**21.66**
13.50	4.51	1.98	19.22
13.75	4.57	2.03	15.52
14.00	4.62	2.07	12.27
14.25	4.68	2.11	9.95
14.50	4.72	2.15	8.19
14.75	4.77	2.18	6.82
15.00	4.81	2.22	5.78
15.25	4.85	2.25	4.98
15.50	4.89	2.28	4.38
15.75	4.93	2.31	3.92
16.00	4.96	2.33	3.55
16.25	5.00	2.36	3.26
16.50	5.03	2.39	3.00
16.75	5.06	2.41	2.79
17.00	5.09	2.43	2.59
17.25	5.11	2.46	2.42
17.50	5.14	2.48	2.28
17.75	5.17	2.50	2.19
18.00	5.19	2.52	2.10
18.25	5.22	2.54	2.03
18.50	5.24	2.56	1.96
18.75	5.27	2.58	1.89
19.00	5.29	2.60	1.83
19.25	5.31	2.61	1.77
19.50	5.33	2.63	1.71
19.75	5.35	2.65	1.66
20.00	5.37	2.66	1.60
20.25	5.39	2.68	1.54
20.50	5.41	2.69	1.48
20.75	5.42	2.71	1.43
21.00	5.44	2.72	1.38
21.25	5.46	2.74	1.33
21.50	5.48	2.75	1.30
21.75	5.49	2.76	1.27
22.00	5.51	2.78	1.25
22.25	5.53	2.79	1.23
22.50	5.54	2.81	1.22
22.75	5.56	2.82	1.20
23.00	5.58	2.83	1.19
23.25	5.59	2.85	1.17
23.50	5.61	2.86	1.16
23.75	5.62	2.87	1.15
24.00	**5.64**	**2.88**	1.14

Summary for Subcatchment 3: DA-03 Post-development

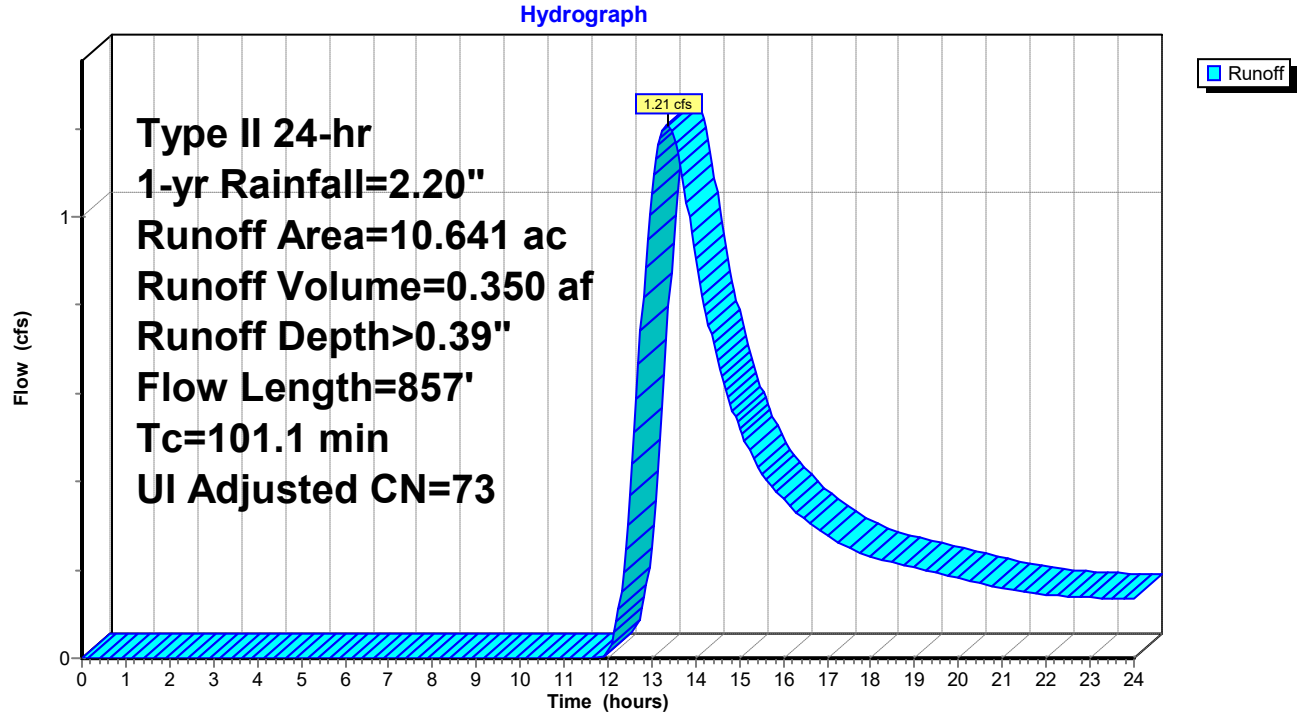
Runoff = 1.21 cfs @ 13.36 hrs, Volume= 0.350 af, Depth> 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.20"

	Area (ac)	CN	Adj	Description
	9.235	71		Meadow, non-grazed, HSG C
	0.181	89		Gravel roads, HSG C
	0.640	98		Unconnected pavement, HSG C
*	0.585	89		Ballast aggregate, HSG C
	10.641	74	73	Weighted Average, UI Adjusted
	10.001			93.99% Pervious Area
	0.640			6.01% Impervious Area
	0.640			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
101.1	857	Total			

Subcatchment 3: DA-03 Post-development



Hydrograph for Subcatchment 3: DA-03 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.02	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.04	0.00	0.00
2.00	0.05	0.00	0.00
2.25	0.06	0.00	0.00
2.50	0.06	0.00	0.00
2.75	0.07	0.00	0.00
3.00	0.08	0.00	0.00
3.25	0.08	0.00	0.00
3.50	0.09	0.00	0.00
3.75	0.10	0.00	0.00
4.00	0.11	0.00	0.00
4.25	0.11	0.00	0.00
4.50	0.12	0.00	0.00
4.75	0.13	0.00	0.00
5.00	0.14	0.00	0.00
5.25	0.15	0.00	0.00
5.50	0.16	0.00	0.00
5.75	0.17	0.00	0.00
6.00	0.18	0.00	0.00
6.25	0.19	0.00	0.00
6.50	0.20	0.00	0.00
6.75	0.21	0.00	0.00
7.00	0.22	0.00	0.00
7.25	0.23	0.00	0.00
7.50	0.24	0.00	0.00
7.75	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.25	0.28	0.00	0.00
8.50	0.29	0.00	0.00
8.75	0.31	0.00	0.00
9.00	0.32	0.00	0.00
9.25	0.34	0.00	0.00
9.50	0.36	0.00	0.00
9.75	0.38	0.00	0.00
10.00	0.40	0.00	0.00
10.25	0.42	0.00	0.00
10.50	0.45	0.00	0.00
10.75	0.48	0.00	0.00
11.00	0.52	0.00	0.00
11.25	0.56	0.00	0.00
11.50	0.62	0.00	0.00
11.75	0.85	0.00	0.00
12.00	1.46	0.12	0.01
12.25	1.55	0.15	0.11
12.50	1.62	0.17	0.37
12.75	1.66	0.18	0.74
13.00	1.70	0.20	1.05
13.25	1.73	0.21	**1.19**
13.50	1.76	0.22	**1.18**
13.75	1.78	0.23	1.06
14.00	1.80	0.24	0.90
14.25	1.82	0.25	0.78
14.50	1.84	0.25	0.67
14.75	1.86	0.26	0.59
15.00	1.88	0.27	0.52
15.25	1.89	0.27	0.47
15.50	1.91	0.28	0.42
15.75	1.92	0.29	0.39
16.00	1.94	0.29	0.36
16.25	1.95	0.30	0.33
16.50	1.96	0.30	0.31
16.75	1.97	0.31	0.29
17.00	1.98	0.31	0.28
17.25	1.99	0.32	0.26
17.50	2.01	0.32	0.25
17.75	2.02	0.33	0.24
18.00	2.03	0.33	0.23
18.25	2.04	0.34	0.22
18.50	2.05	0.34	0.22
18.75	2.05	0.34	0.21
19.00	2.06	0.35	0.20
19.25	2.07	0.35	0.20
19.50	2.08	0.36	0.19
19.75	2.09	0.36	0.19
20.00	2.09	0.36	0.18
20.25	2.10	0.37	0.17
20.50	2.11	0.37	0.17
20.75	2.12	0.37	0.16
21.00	2.12	0.38	0.16
21.25	2.13	0.38	0.15
21.50	2.14	0.38	0.15
21.75	2.14	0.39	0.15
22.00	2.15	0.39	0.14
22.25	2.16	0.39	0.14
22.50	2.16	0.40	0.14
22.75	2.17	0.40	0.14
23.00	2.18	0.40	0.14
23.25	2.18	0.40	0.14
23.50	2.19	0.41	0.14
23.75	2.19	0.41	0.13
24.00	**2.20**	**0.41**	0.13

Summary for Subcatchment 3S: DA-03 Pre-development

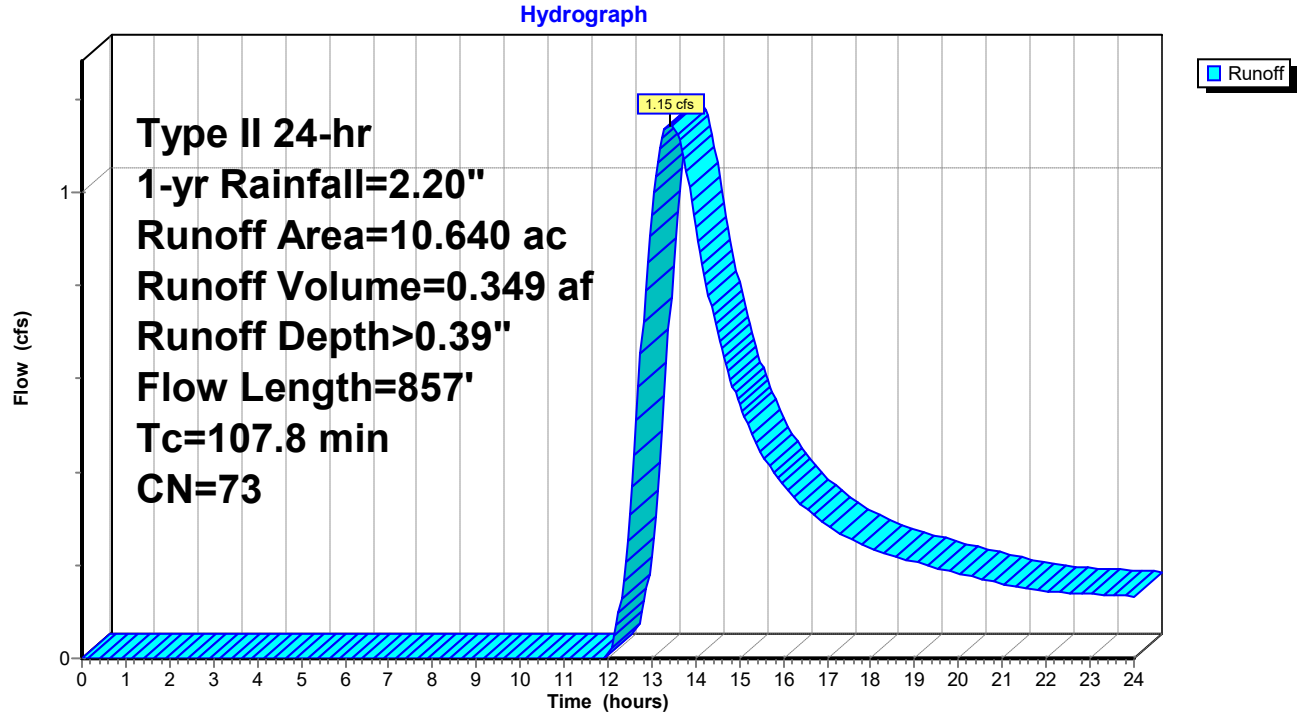
Runoff = 1.15 cfs @ 13.42 hrs, Volume= 0.349 af, Depth> 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.20"

Area (ac)	CN	Description
10.490	73	Woods, Fair, HSG C
0.150	89	Gravel roads, HSG C
10.640	73	Weighted Average
10.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
107.8	857	Total			

Subcatchment 3S: DA-03 Pre-development



Hydrograph for Subcatchment 3S: DA-03 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.02	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.04	0.00	0.00
2.00	0.05	0.00	0.00
2.25	0.06	0.00	0.00
2.50	0.06	0.00	0.00
2.75	0.07	0.00	0.00
3.00	0.08	0.00	0.00
3.25	0.08	0.00	0.00
3.50	0.09	0.00	0.00
3.75	0.10	0.00	0.00
4.00	0.11	0.00	0.00
4.25	0.11	0.00	0.00
4.50	0.12	0.00	0.00
4.75	0.13	0.00	0.00
5.00	0.14	0.00	0.00
5.25	0.15	0.00	0.00
5.50	0.16	0.00	0.00
5.75	0.17	0.00	0.00
6.00	0.18	0.00	0.00
6.25	0.19	0.00	0.00
6.50	0.20	0.00	0.00
6.75	0.21	0.00	0.00
7.00	0.22	0.00	0.00
7.25	0.23	0.00	0.00
7.50	0.24	0.00	0.00
7.75	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.25	0.28	0.00	0.00
8.50	0.29	0.00	0.00
8.75	0.31	0.00	0.00
9.00	0.32	0.00	0.00
9.25	0.34	0.00	0.00
9.50	0.36	0.00	0.00
9.75	0.38	0.00	0.00
10.00	0.40	0.00	0.00
10.25	0.42	0.00	0.00
10.50	0.45	0.00	0.00
10.75	0.48	0.00	0.00
11.00	0.52	0.00	0.00
11.25	0.56	0.00	0.00
11.50	0.62	0.00	0.00
11.75	0.85	0.00	0.00
12.00	1.46	0.12	0.01
12.25	1.55	0.15	0.10
12.50	1.62	0.17	0.31
12.75	1.66	0.18	0.65
13.00	1.70	0.20	0.95
13.25	1.73	0.21	**1.12**
13.50	1.76	0.22	**1.14**
13.75	1.78	0.23	1.07
14.00	1.80	0.24	0.92
14.25	1.82	0.25	0.80
14.50	1.84	0.25	0.70
14.75	1.86	0.26	0.62
15.00	1.88	0.27	0.55
15.25	1.89	0.27	0.49
15.50	1.91	0.28	0.44
15.75	1.92	0.29	0.40
16.00	1.94	0.29	0.37
16.25	1.95	0.30	0.35
16.50	1.96	0.30	0.32
16.75	1.97	0.31	0.30
17.00	1.98	0.31	0.29
17.25	1.99	0.32	0.27
17.50	2.01	0.32	0.26
17.75	2.02	0.33	0.25
18.00	2.03	0.33	0.24
18.25	2.04	0.34	0.23
18.50	2.05	0.34	0.22
18.75	2.05	0.34	0.21
19.00	2.06	0.35	0.21
19.25	2.07	0.35	0.20
19.50	2.08	0.36	0.20
19.75	2.09	0.36	0.19
20.00	2.09	0.36	0.18
20.25	2.10	0.37	0.18
20.50	2.11	0.37	0.17
20.75	2.12	0.37	0.17
21.00	2.12	0.38	0.16
21.25	2.13	0.38	0.16
21.50	2.14	0.38	0.15
21.75	2.14	0.39	0.15
22.00	2.15	0.39	0.15
22.25	2.16	0.39	0.14
22.50	2.16	0.40	0.14
22.75	2.17	0.40	0.14
23.00	2.18	0.40	0.14
23.25	2.18	0.40	0.14
23.50	2.19	0.41	0.14
23.75	2.19	0.41	0.13
24.00	**2.20**	**0.41**	0.13

Summary for Subcatchment 3: DA-03 Post-development

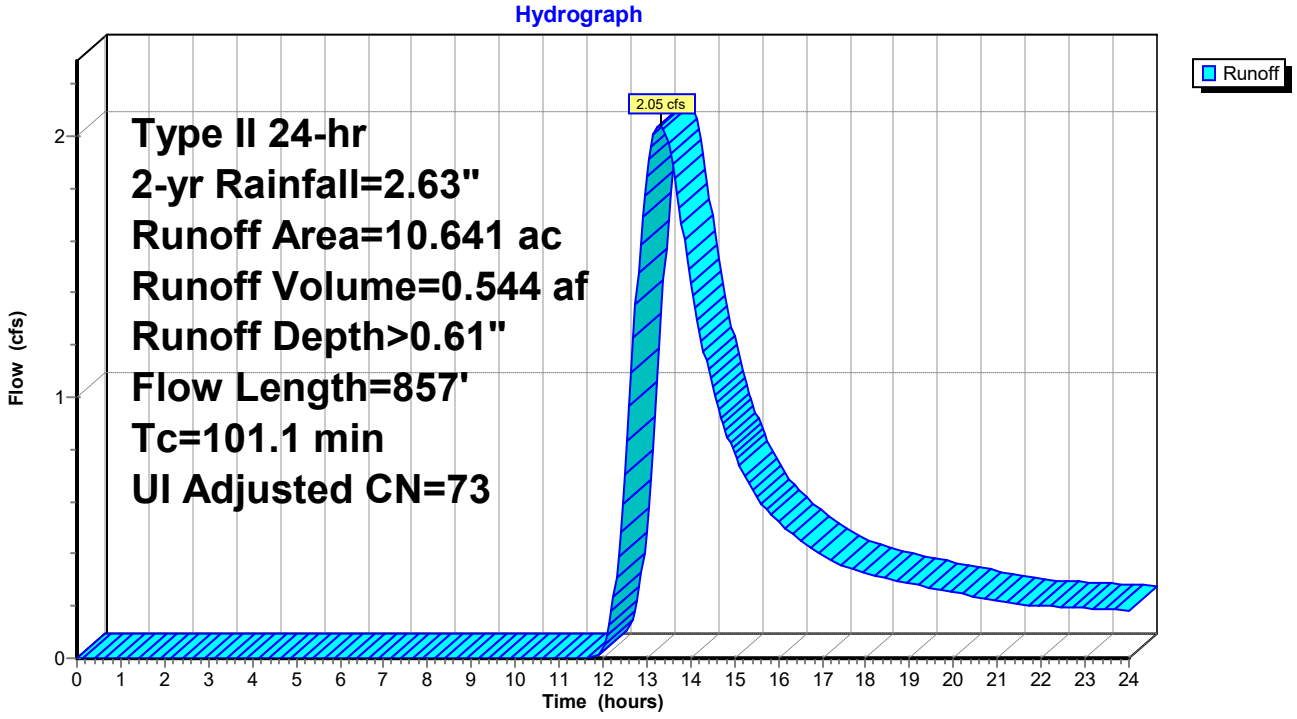
Runoff = 2.05 cfs @ 13.33 hrs, Volume= 0.544 af, Depth> 0.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.63"

	Area (ac)	CN	Adj	Description
	9.235	71		Meadow, non-grazed, HSG C
	0.181	89		Gravel roads, HSG C
	0.640	98		Unconnected pavement, HSG C
*	0.585	89		Ballast aggregate, HSG C
	10.641	74	73	Weighted Average, UI Adjusted
	10.001			93.99% Pervious Area
	0.640			6.01% Impervious Area
	0.640			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
101.1	857	Total			

Subcatchment 3: DA-03 Post-development



Hydrograph for Subcatchment 3: DA-03 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.07	0.00	0.00
2.75	0.08	0.00	0.00
3.00	0.09	0.00	0.00
3.25	0.10	0.00	0.00
3.50	0.11	0.00	0.00
3.75	0.12	0.00	0.00
4.00	0.13	0.00	0.00
4.25	0.14	0.00	0.00
4.50	0.15	0.00	0.00
4.75	0.16	0.00	0.00
5.00	0.17	0.00	0.00
5.25	0.18	0.00	0.00
5.50	0.19	0.00	0.00
5.75	0.20	0.00	0.00
6.00	0.21	0.00	0.00
6.25	0.22	0.00	0.00
6.50	0.23	0.00	0.00
6.75	0.25	0.00	0.00
7.00	0.26	0.00	0.00
7.25	0.27	0.00	0.00
7.50	0.29	0.00	0.00
7.75	0.30	0.00	0.00
8.00	0.32	0.00	0.00
8.25	0.33	0.00	0.00
8.50	0.35	0.00	0.00
8.75	0.37	0.00	0.00
9.00	0.39	0.00	0.00
9.25	0.41	0.00	0.00
9.50	0.43	0.00	0.00
9.75	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.25	0.50	0.00	0.00
10.50	0.54	0.00	0.00
10.75	0.57	0.00	0.00
11.00	0.62	0.00	0.00
11.25	0.67	0.00	0.00
11.50	0.74	0.00	0.00
11.75	1.02	0.02	0.00
12.00	1.74	0.21	0.03
12.25	1.86	0.26	0.23
12.50	1.93	0.29	0.71
12.75	1.99	0.31	1.35
13.00	2.03	0.33	1.85
13.25	2.07	0.35	**2.04**
13.50	2.10	0.37	**1.98**
13.75	2.13	0.38	1.72
14.00	2.16	0.39	1.44
14.25	2.18	0.40	1.22
14.50	2.20	0.41	1.04
14.75	2.22	0.43	0.90
15.00	2.24	0.44	0.78
15.25	2.26	0.44	0.69
15.50	2.28	0.45	0.62
15.75	2.30	0.46	0.57
16.00	2.31	0.47	0.52
16.25	2.33	0.48	0.48
16.50	2.34	0.49	0.45
16.75	2.36	0.49	0.42
17.00	2.37	0.50	0.40
17.25	2.38	0.51	0.37
17.50	2.40	0.51	0.35
17.75	2.41	0.52	0.34
18.00	2.42	0.53	0.33
18.25	2.43	0.53	0.32
18.50	2.45	0.54	0.31
18.75	2.46	0.54	0.30
19.00	2.47	0.55	0.29
19.25	2.48	0.55	0.28
19.50	2.49	0.56	0.27
19.75	2.50	0.56	0.26
20.00	2.50	0.57	0.25
20.25	2.51	0.57	0.24
20.50	2.52	0.58	0.24
20.75	2.53	0.58	0.23
21.00	2.54	0.59	0.22
21.25	2.55	0.59	0.21
21.50	2.55	0.60	0.21
21.75	2.56	0.60	0.20
22.00	2.57	0.61	0.20
22.25	2.58	0.61	0.20
22.50	2.59	0.61	0.20
22.75	2.59	0.62	0.19
23.00	2.60	0.62	0.19
23.25	2.61	0.63	0.19
23.50	2.62	0.63	0.19
23.75	2.62	0.64	0.19
24.00	**2.63**	**0.64**	0.18

Summary for Subcatchment 3S: DA-03 Pre-development

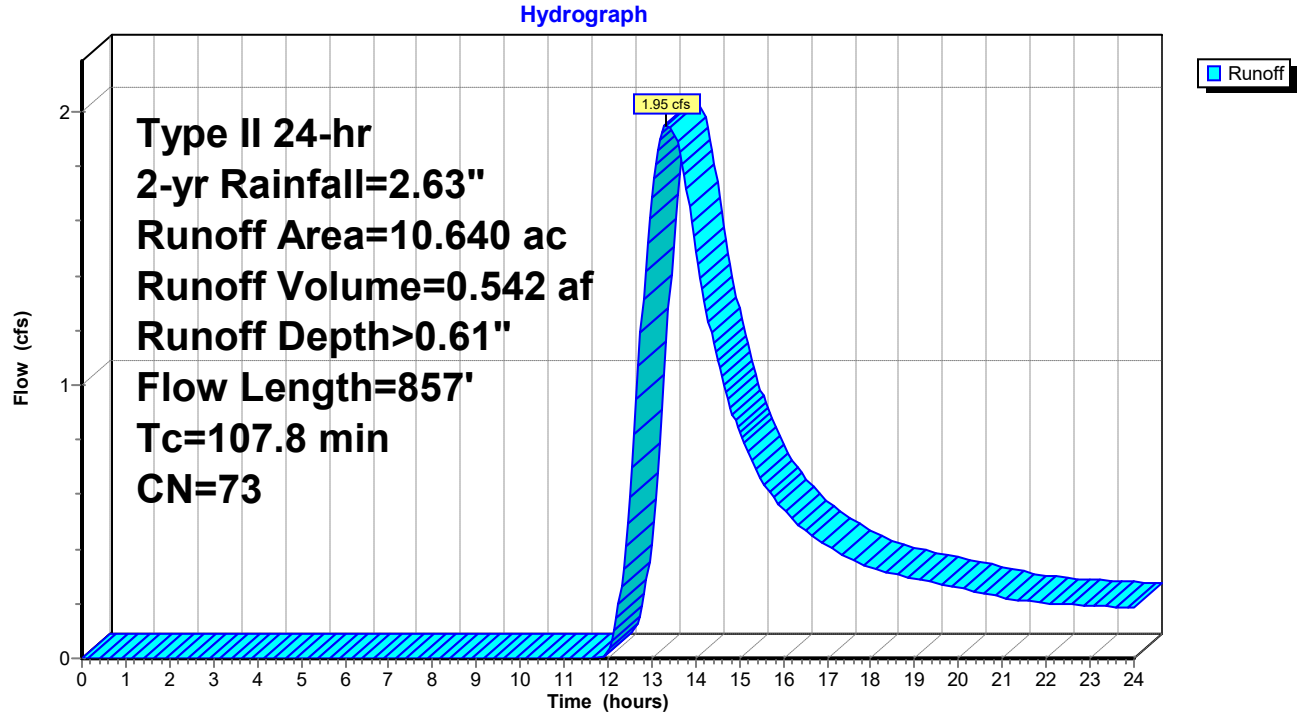
Runoff = 1.95 cfs @ 13.33 hrs, Volume= 0.542 af, Depth> 0.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.63"

Area (ac)	CN	Description
10.490	73	Woods, Fair, HSG C
0.150	89	Gravel roads, HSG C
10.640	73	Weighted Average
10.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
107.8	857	Total			

Subcatchment 3S: DA-03 Pre-development



Hydrograph for Subcatchment 3S: DA-03 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.07	0.00	0.00
2.75	0.08	0.00	0.00
3.00	0.09	0.00	0.00
3.25	0.10	0.00	0.00
3.50	0.11	0.00	0.00
3.75	0.12	0.00	0.00
4.00	0.13	0.00	0.00
4.25	0.14	0.00	0.00
4.50	0.15	0.00	0.00
4.75	0.16	0.00	0.00
5.00	0.17	0.00	0.00
5.25	0.18	0.00	0.00
5.50	0.19	0.00	0.00
5.75	0.20	0.00	0.00
6.00	0.21	0.00	0.00
6.25	0.22	0.00	0.00
6.50	0.23	0.00	0.00
6.75	0.25	0.00	0.00
7.00	0.26	0.00	0.00
7.25	0.27	0.00	0.00
7.50	0.29	0.00	0.00
7.75	0.30	0.00	0.00
8.00	0.32	0.00	0.00
8.25	0.33	0.00	0.00
8.50	0.35	0.00	0.00
8.75	0.37	0.00	0.00
9.00	0.39	0.00	0.00
9.25	0.41	0.00	0.00
9.50	0.43	0.00	0.00
9.75	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.25	0.50	0.00	0.00
10.50	0.54	0.00	0.00
10.75	0.57	0.00	0.00
11.00	0.62	0.00	0.00
11.25	0.67	0.00	0.00
11.50	0.74	0.00	0.00
11.75	1.02	0.02	0.00
12.00	1.74	0.21	0.02
12.25	1.86	0.26	0.20
12.50	1.93	0.29	0.59
12.75	1.99	0.31	1.19
13.00	2.03	0.33	1.69
13.25	2.07	0.35	**1.93**
13.50	2.10	0.37	**1.93**
13.75	2.13	0.38	1.77
14.00	2.16	0.39	1.49
14.25	2.18	0.40	1.27
14.50	2.20	0.41	1.09
14.75	2.22	0.43	0.95
15.00	2.24	0.44	0.83
15.25	2.26	0.44	0.73
15.50	2.28	0.45	0.66
15.75	2.30	0.46	0.59
16.00	2.31	0.47	0.54
16.25	2.33	0.48	0.50
16.50	2.34	0.49	0.47
16.75	2.36	0.49	0.44
17.00	2.37	0.50	0.41
17.25	2.38	0.51	0.39
17.50	2.40	0.51	0.37
17.75	2.41	0.52	0.35
18.00	2.42	0.53	0.33
18.25	2.43	0.53	0.32
18.50	2.45	0.54	0.31
18.75	2.46	0.54	0.30
19.00	2.47	0.55	0.29
19.25	2.48	0.55	0.28
19.50	2.49	0.56	0.27
19.75	2.50	0.56	0.27
20.00	2.50	0.57	0.26
20.25	2.51	0.57	0.25
20.50	2.52	0.58	0.24
20.75	2.53	0.58	0.23
21.00	2.54	0.59	0.22
21.25	2.55	0.59	0.22
21.50	2.55	0.60	0.21
21.75	2.56	0.60	0.21
22.00	2.57	0.61	0.20
22.25	2.58	0.61	0.20
22.50	2.59	0.61	0.20
22.75	2.59	0.62	0.19
23.00	2.60	0.62	0.19
23.25	2.61	0.63	0.19
23.50	2.62	0.63	0.19
23.75	2.62	0.64	0.19
24.00	**2.63**	**0.64**	0.19

Summary for Subcatchment 3: DA-03 Post-development

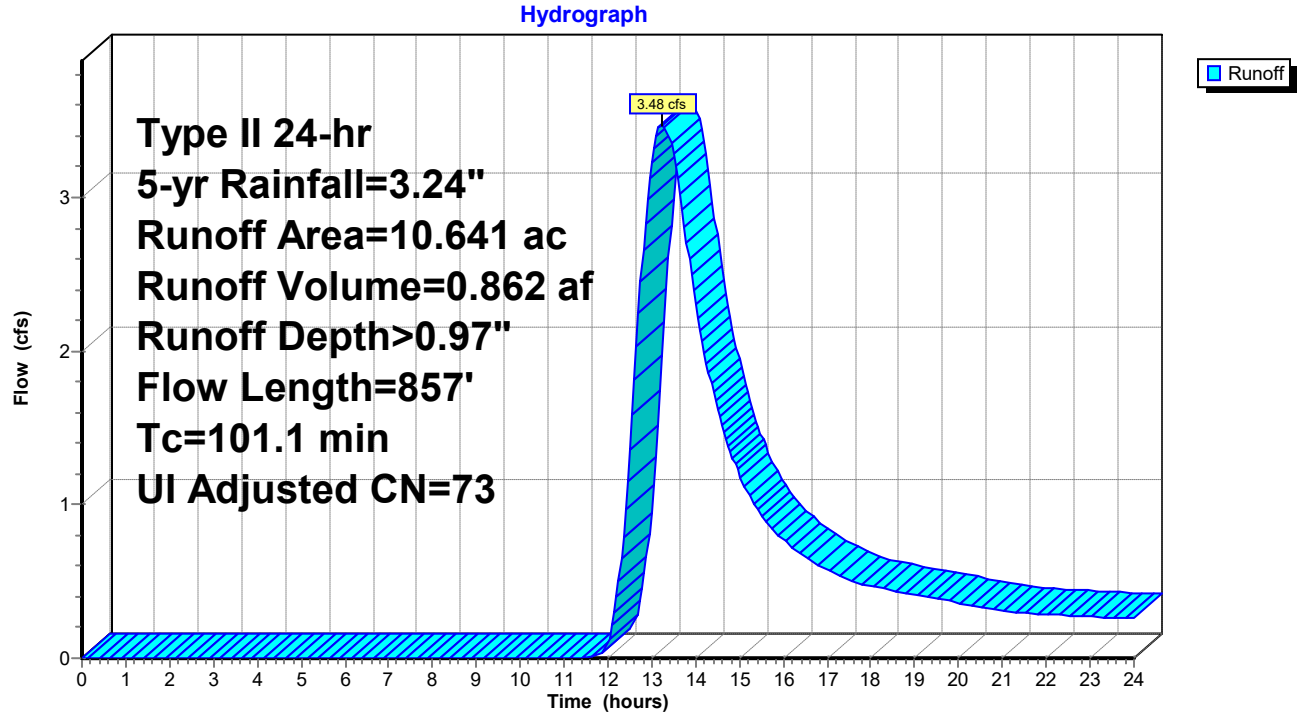
Runoff = 3.48 cfs @ 13.24 hrs, Volume= 0.862 af, Depth> 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=3.24"

	Area (ac)	CN	Adj	Description
	9.235	71		Meadow, non-grazed, HSG C
	0.181	89		Gravel roads, HSG C
	0.640	98		Unconnected pavement, HSG C
*	0.585	89		Ballast aggregate, HSG C
	10.641	74	73	Weighted Average, UI Adjusted
	10.001			93.99% Pervious Area
	0.640			6.01% Impervious Area
	0.640			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
101.1	857	Total			

Subcatchment 3: DA-03 Post-development



Hydrograph for Subcatchment 3: DA-03 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.07	0.00	0.00
2.25	0.08	0.00	0.00
2.50	0.09	0.00	0.00
2.75	0.10	0.00	0.00
3.00	0.11	0.00	0.00
3.25	0.12	0.00	0.00
3.50	0.13	0.00	0.00
3.75	0.14	0.00	0.00
4.00	0.16	0.00	0.00
4.25	0.17	0.00	0.00
4.50	0.18	0.00	0.00
4.75	0.19	0.00	0.00
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.23	0.00	0.00
5.75	0.24	0.00	0.00
6.00	0.26	0.00	0.00
6.25	0.27	0.00	0.00
6.50	0.29	0.00	0.00
6.75	0.30	0.00	0.00
7.00	0.32	0.00	0.00
7.25	0.34	0.00	0.00
7.50	0.35	0.00	0.00
7.75	0.37	0.00	0.00
8.00	0.39	0.00	0.00
8.25	0.41	0.00	0.00
8.50	0.43	0.00	0.00
8.75	0.45	0.00	0.00
9.00	0.48	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.56	0.00	0.00
10.00	0.59	0.00	0.00
10.25	0.62	0.00	0.00
10.50	0.66	0.00	0.00
10.75	0.71	0.00	0.00
11.00	0.76	0.00	0.00
11.25	0.83	0.00	0.00
11.50	0.92	0.01	0.00
11.75	1.25	0.06	0.01
12.00	2.15	0.39	0.10
12.25	2.29	0.46	0.51
12.50	2.38	0.50	1.36
12.75	2.45	0.54	2.46
13.00	2.50	0.57	3.23
13.25	2.55	0.59	**3.48**
13.50	2.59	0.62	3.29
13.75	2.62	0.64	2.81
14.00	2.66	0.65	2.31
14.25	2.69	0.67	1.92
14.50	2.71	0.69	1.62
14.75	2.74	0.70	1.38
15.00	2.77	0.72	1.20
15.25	2.79	0.73	1.05
15.50	2.81	0.74	0.93
15.75	2.83	0.76	0.84
16.00	2.85	0.77	0.77
16.25	2.87	0.78	0.71
16.50	2.89	0.79	0.66
16.75	2.90	0.80	0.62
17.00	2.92	0.81	0.58
17.25	2.94	0.82	0.54
17.50	2.95	0.83	0.51
17.75	2.97	0.84	0.49
18.00	2.98	0.85	0.47
18.25	3.00	0.86	0.45
18.50	3.01	0.86	0.44
18.75	3.03	0.87	0.43
19.00	3.04	0.88	0.41
19.25	3.05	0.89	0.40
19.50	3.06	0.90	0.39
19.75	3.07	0.90	0.37
20.00	3.08	0.91	0.36
20.25	3.09	0.92	0.35
20.50	3.11	0.92	0.34
20.75	3.12	0.93	0.32
21.00	3.13	0.94	0.31
21.25	3.14	0.94	0.30
21.50	3.15	0.95	0.30
21.75	3.16	0.95	0.29
22.00	3.17	0.96	0.28
22.25	3.18	0.97	0.28
22.50	3.18	0.97	0.28
22.75	3.19	0.98	0.27
23.00	3.20	0.99	0.27
23.25	3.21	0.99	0.27
23.50	3.22	1.00	0.27
23.75	3.23	1.00	0.26
24.00	**3.24**	**1.01**	0.26

Summary for Subcatchment 3S: DA-03 Pre-development

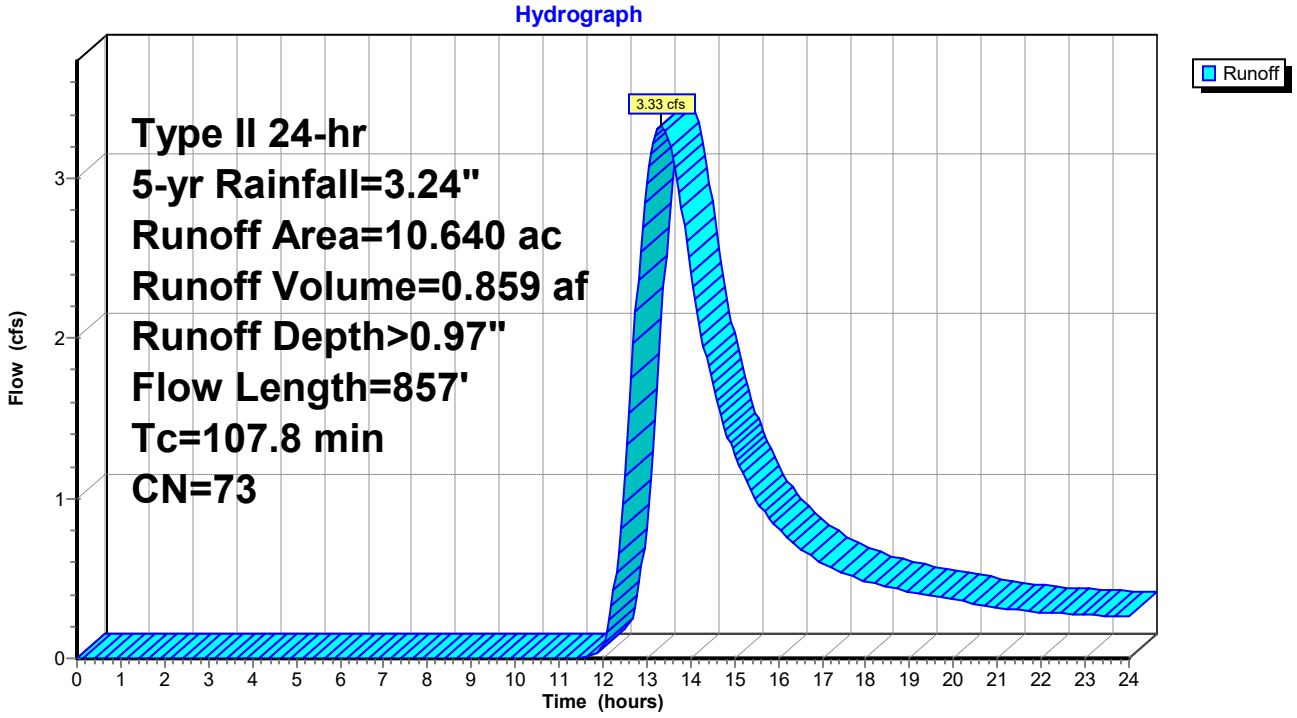
Runoff = 3.33 cfs @ 13.31 hrs, Volume= 0.859 af, Depth> 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=3.24"

Area (ac)	CN	Description
10.490	73	Woods, Fair, HSG C
0.150	89	Gravel roads, HSG C
10.640	73	Weighted Average
10.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
107.8	857	Total			

Subcatchment 3S: DA-03 Pre-development



Hydrograph for Subcatchment 3S: DA-03 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.07	0.00	0.00
2.25	0.08	0.00	0.00
2.50	0.09	0.00	0.00
2.75	0.10	0.00	0.00
3.00	0.11	0.00	0.00
3.25	0.12	0.00	0.00
3.50	0.13	0.00	0.00
3.75	0.14	0.00	0.00
4.00	0.16	0.00	0.00
4.25	0.17	0.00	0.00
4.50	0.18	0.00	0.00
4.75	0.19	0.00	0.00
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.23	0.00	0.00
5.75	0.24	0.00	0.00
6.00	0.26	0.00	0.00
6.25	0.27	0.00	0.00
6.50	0.29	0.00	0.00
6.75	0.30	0.00	0.00
7.00	0.32	0.00	0.00
7.25	0.34	0.00	0.00
7.50	0.35	0.00	0.00
7.75	0.37	0.00	0.00
8.00	0.39	0.00	0.00
8.25	0.41	0.00	0.00
8.50	0.43	0.00	0.00
8.75	0.45	0.00	0.00
9.00	0.48	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.56	0.00	0.00
10.00	0.59	0.00	0.00
10.25	0.62	0.00	0.00
10.50	0.66	0.00	0.00
10.75	0.71	0.00	0.00
11.00	0.76	0.00	0.00
11.25	0.83	0.00	0.00
11.50	0.92	0.01	0.00
11.75	1.25	0.06	0.01
12.00	2.15	0.39	0.07
12.25	2.29	0.46	0.43
12.50	2.38	0.50	1.14
12.75	2.45	0.54	2.17
13.00	2.50	0.57	2.96
13.25	2.55	0.59	**3.30**
13.50	2.59	0.62	**3.24**
13.75	2.62	0.64	2.91
14.00	2.66	0.65	2.41
14.25	2.69	0.67	2.02
14.50	2.71	0.69	1.72
14.75	2.74	0.70	1.47
15.00	2.77	0.72	1.27
15.25	2.79	0.73	1.11
15.50	2.81	0.74	0.99
15.75	2.83	0.76	0.89
16.00	2.85	0.77	0.81
16.25	2.87	0.78	0.74
16.50	2.89	0.79	0.69
16.75	2.90	0.80	0.64
17.00	2.92	0.81	0.60
17.25	2.94	0.82	0.56
17.50	2.95	0.83	0.53
17.75	2.97	0.84	0.50
18.00	2.98	0.85	0.48
18.25	3.00	0.86	0.46
18.50	3.01	0.86	0.45
18.75	3.03	0.87	0.43
19.00	3.04	0.88	0.42
19.25	3.05	0.89	0.41
19.50	3.06	0.90	0.39
19.75	3.07	0.90	0.38
20.00	3.08	0.91	0.37
20.25	3.09	0.92	0.35
20.50	3.11	0.92	0.34
20.75	3.12	0.93	0.33
21.00	3.13	0.94	0.32
21.25	3.14	0.94	0.31
21.50	3.15	0.95	0.30
21.75	3.16	0.95	0.29
22.00	3.17	0.96	0.29
22.25	3.18	0.97	0.28
22.50	3.18	0.97	0.28
22.75	3.19	0.98	0.28
23.00	3.20	0.99	0.27
23.25	3.21	0.99	0.27
23.50	3.22	1.00	0.27
23.75	3.23	1.00	0.26
24.00	**3.24**	**1.01**	0.26

Summary for Subcatchment 3: DA-03 Post-development

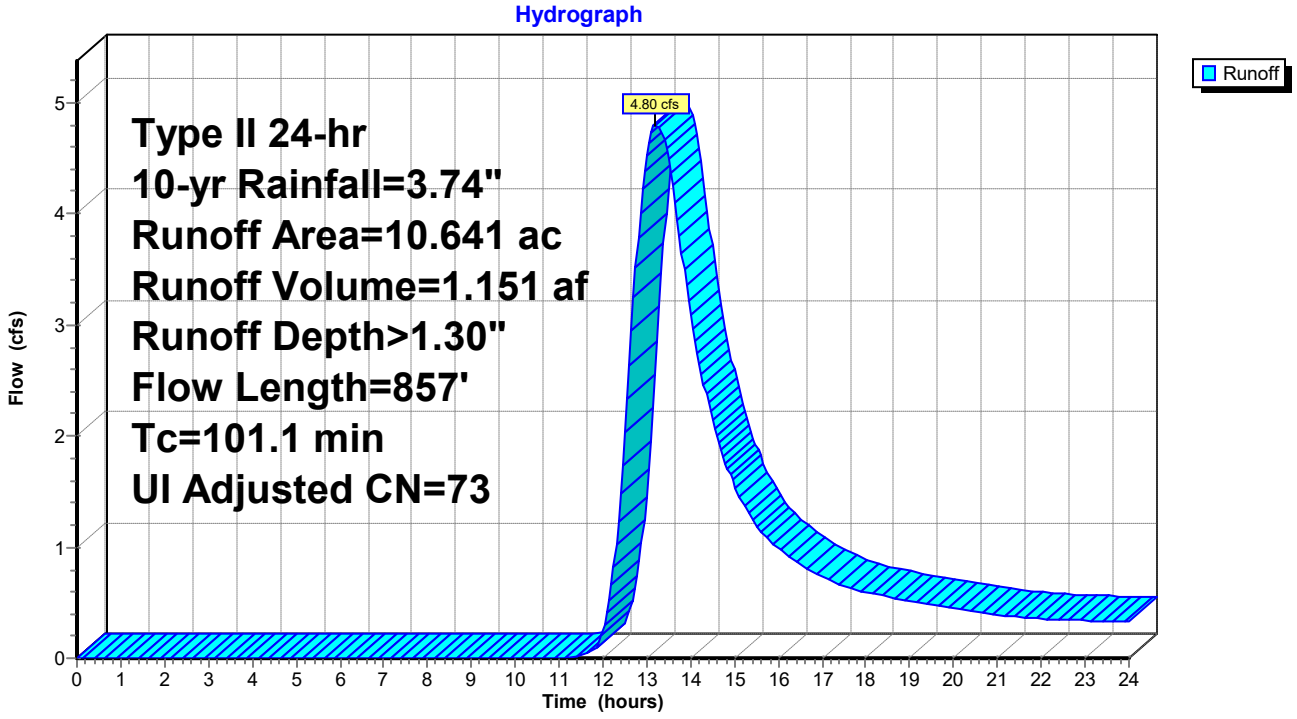
Runoff = 4.80 cfs @ 13.21 hrs, Volume= 1.151 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.74"

	Area (ac)	CN	Adj	Description
	9.235	71		Meadow, non-grazed, HSG C
	0.181	89		Gravel roads, HSG C
	0.640	98		Unconnected pavement, HSG C
*	0.585	89		Ballast aggregate, HSG C
	10.641	74	73	Weighted Average, UI Adjusted
	10.001			93.99% Pervious Area
	0.640			6.01% Impervious Area
	0.640			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
101.1	857	Total			

Subcatchment 3: DA-03 Post-development



Hydrograph for Subcatchment 3: DA-03 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.04	0.00	0.00
1.25	0.05	0.00	0.00
1.50	0.06	0.00	0.00
1.75	0.07	0.00	0.00
2.00	0.08	0.00	0.00
2.25	0.09	0.00	0.00
2.50	0.11	0.00	0.00
2.75	0.12	0.00	0.00
3.00	0.13	0.00	0.00
3.25	0.14	0.00	0.00
3.50	0.15	0.00	0.00
3.75	0.17	0.00	0.00
4.00	0.18	0.00	0.00
4.25	0.19	0.00	0.00
4.50	0.21	0.00	0.00
4.75	0.22	0.00	0.00
5.00	0.24	0.00	0.00
5.25	0.25	0.00	0.00
5.50	0.27	0.00	0.00
5.75	0.28	0.00	0.00
6.00	0.30	0.00	0.00
6.25	0.32	0.00	0.00
6.50	0.33	0.00	0.00
6.75	0.35	0.00	0.00
7.00	0.37	0.00	0.00
7.25	0.39	0.00	0.00
7.50	0.41	0.00	0.00
7.75	0.43	0.00	0.00
8.00	0.45	0.00	0.00
8.25	0.47	0.00	0.00
8.50	0.49	0.00	0.00
8.75	0.52	0.00	0.00
9.00	0.55	0.00	0.00
9.25	0.58	0.00	0.00
9.50	0.61	0.00	0.00
9.75	0.64	0.00	0.00
10.00	0.68	0.00	0.00
10.25	0.72	0.00	0.00
10.50	0.76	0.00	0.00
10.75	0.82	0.00	0.00
11.00	0.88	0.01	0.00
11.25	0.96	0.01	0.01
11.50	1.06	0.03	0.03
11.75	1.45	0.11	0.07
12.00	2.48	0.56	0.23
12.25	2.64	0.65	0.82
12.50	2.75	0.71	2.03
12.75	2.82	0.75	3.52
13.00	2.89	0.79	**4.52**
13.25	2.94	0.82	**4.79**
13.50	2.99	0.85	4.49
13.75	3.03	0.88	3.79
14.00	3.07	0.90	3.09
14.25	3.10	0.92	2.55
14.50	3.13	0.94	2.14
14.75	3.16	0.96	1.81
15.00	3.19	0.98	1.56
15.25	3.22	1.00	1.36
15.50	3.24	1.01	1.20
15.75	3.27	1.03	1.08
16.00	3.29	1.04	0.99
16.25	3.31	1.06	0.91
16.50	3.33	1.07	0.84
16.75	3.35	1.08	0.78
17.00	3.37	1.09	0.73
17.25	3.39	1.11	0.69
17.50	3.41	1.12	0.65
17.75	3.43	1.13	0.62
18.00	3.44	1.14	0.59
18.25	3.46	1.15	0.57
18.50	3.48	1.16	0.55
18.75	3.49	1.17	0.54
19.00	3.51	1.18	0.52
19.25	3.52	1.19	0.50
19.50	3.54	1.20	0.49
19.75	3.55	1.21	0.47
20.00	3.56	1.22	0.45
20.25	3.57	1.23	0.44
20.50	3.58	1.24	0.42
20.75	3.60	1.24	0.41
21.00	3.61	1.25	0.39
21.25	3.62	1.26	0.38
21.50	3.63	1.27	0.37
21.75	3.64	1.28	0.36
22.00	3.65	1.28	0.36
22.25	3.67	1.29	0.35
22.50	3.68	1.30	0.35
22.75	3.69	1.31	0.34
23.00	3.70	1.31	0.34
23.25	3.71	1.32	0.34
23.50	3.72	1.33	0.33
23.75	3.73	1.34	0.33
24.00	**3.74**	**1.34**	0.33

Summary for Subcatchment 3S: DA-03 Pre-development

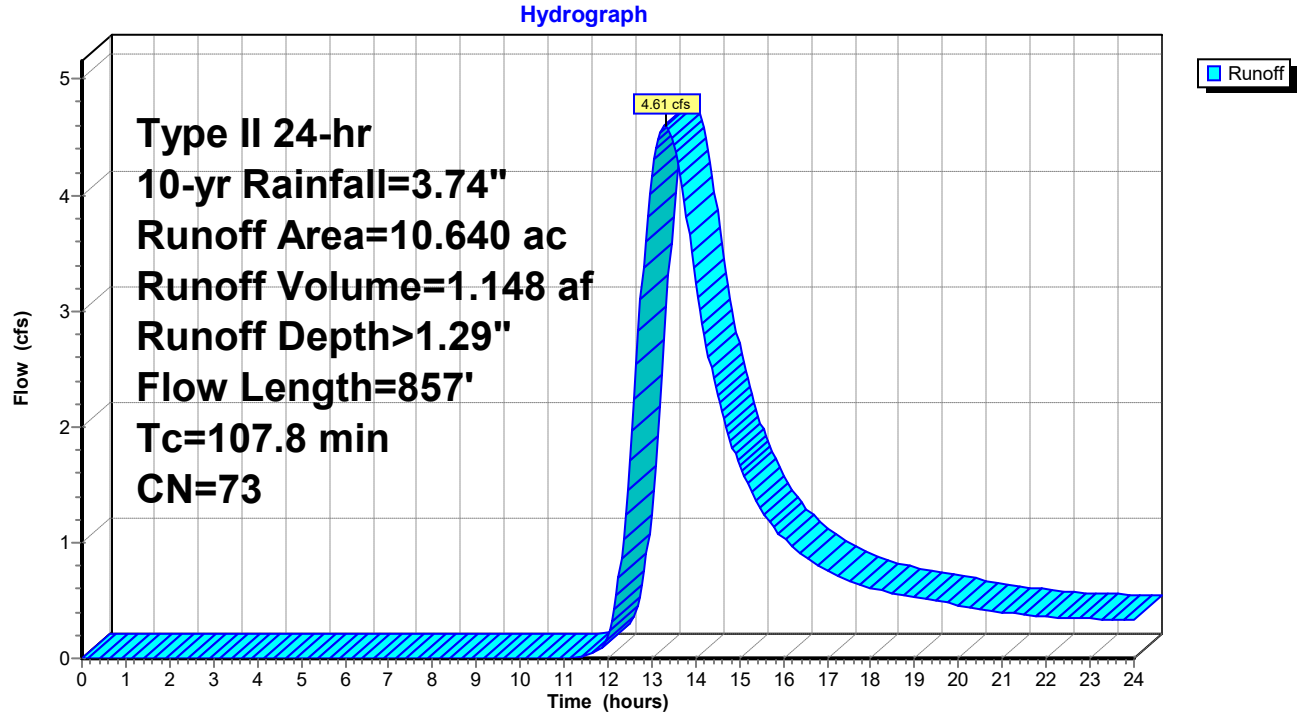
Runoff = 4.61 cfs @ 13.30 hrs, Volume= 1.148 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.74"

Area (ac)	CN	Description
10.490	73	Woods, Fair, HSG C
0.150	89	Gravel roads, HSG C
10.640	73	Weighted Average
10.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
107.8	857	Total			

Subcatchment 3S: DA-03 Pre-development



Hydrograph for Subcatchment 3S: DA-03 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.04	0.00	0.00
1.25	0.05	0.00	0.00
1.50	0.06	0.00	0.00
1.75	0.07	0.00	0.00
2.00	0.08	0.00	0.00
2.25	0.09	0.00	0.00
2.50	0.11	0.00	0.00
2.75	0.12	0.00	0.00
3.00	0.13	0.00	0.00
3.25	0.14	0.00	0.00
3.50	0.15	0.00	0.00
3.75	0.17	0.00	0.00
4.00	0.18	0.00	0.00
4.25	0.19	0.00	0.00
4.50	0.21	0.00	0.00
4.75	0.22	0.00	0.00
5.00	0.24	0.00	0.00
5.25	0.25	0.00	0.00
5.50	0.27	0.00	0.00
5.75	0.28	0.00	0.00
6.00	0.30	0.00	0.00
6.25	0.32	0.00	0.00
6.50	0.33	0.00	0.00
6.75	0.35	0.00	0.00
7.00	0.37	0.00	0.00
7.25	0.39	0.00	0.00
7.50	0.41	0.00	0.00
7.75	0.43	0.00	0.00
8.00	0.45	0.00	0.00
8.25	0.47	0.00	0.00
8.50	0.49	0.00	0.00
8.75	0.52	0.00	0.00
9.00	0.55	0.00	0.00
9.25	0.58	0.00	0.00
9.50	0.61	0.00	0.00
9.75	0.64	0.00	0.00
10.00	0.68	0.00	0.00
10.25	0.72	0.00	0.00
10.50	0.76	0.00	0.00
10.75	0.82	0.00	0.00
11.00	0.88	0.01	0.00
11.25	0.96	0.01	0.01
11.50	1.06	0.03	0.02
11.75	1.45	0.11	0.05
12.00	2.48	0.56	0.18
12.25	2.64	0.65	0.70
12.50	2.75	0.71	1.71
12.75	2.82	0.75	3.11
13.00	2.89	0.79	4.16
13.25	2.94	0.82	**4.58**
13.50	2.99	0.85	**4.44**
13.75	3.03	0.88	3.95
14.00	3.07	0.90	3.24
14.25	3.10	0.92	2.69
14.50	3.13	0.94	2.27
14.75	3.16	0.96	1.93
15.00	3.19	0.98	1.66
15.25	3.22	1.00	1.45
15.50	3.24	1.01	1.28
15.75	3.27	1.03	1.15
16.00	3.29	1.04	1.04
16.25	3.31	1.06	0.95
16.50	3.33	1.07	0.88
16.75	3.35	1.08	0.81
17.00	3.37	1.09	0.76
17.25	3.39	1.11	0.71
17.50	3.41	1.12	0.67
17.75	3.43	1.13	0.64
18.00	3.44	1.14	0.61
18.25	3.46	1.15	0.58
18.50	3.48	1.16	0.56
18.75	3.49	1.17	0.54
19.00	3.51	1.18	0.53
19.25	3.52	1.19	0.51
19.50	3.54	1.20	0.49
19.75	3.55	1.21	0.48
20.00	3.56	1.22	0.46
20.25	3.57	1.23	0.45
20.50	3.58	1.24	0.43
20.75	3.60	1.24	0.41
21.00	3.61	1.25	0.40
21.25	3.62	1.26	0.39
21.50	3.63	1.27	0.38
21.75	3.64	1.28	0.37
22.00	3.65	1.28	0.36
22.25	3.67	1.29	0.35
22.50	3.68	1.30	0.35
22.75	3.69	1.31	0.34
23.00	3.70	1.31	0.34
23.25	3.71	1.32	0.34
23.50	3.72	1.33	0.33
23.75	3.73	1.34	0.33
24.00	**3.74**	**1.34**	0.33

Summary for Subcatchment 3: DA-03 Post-development

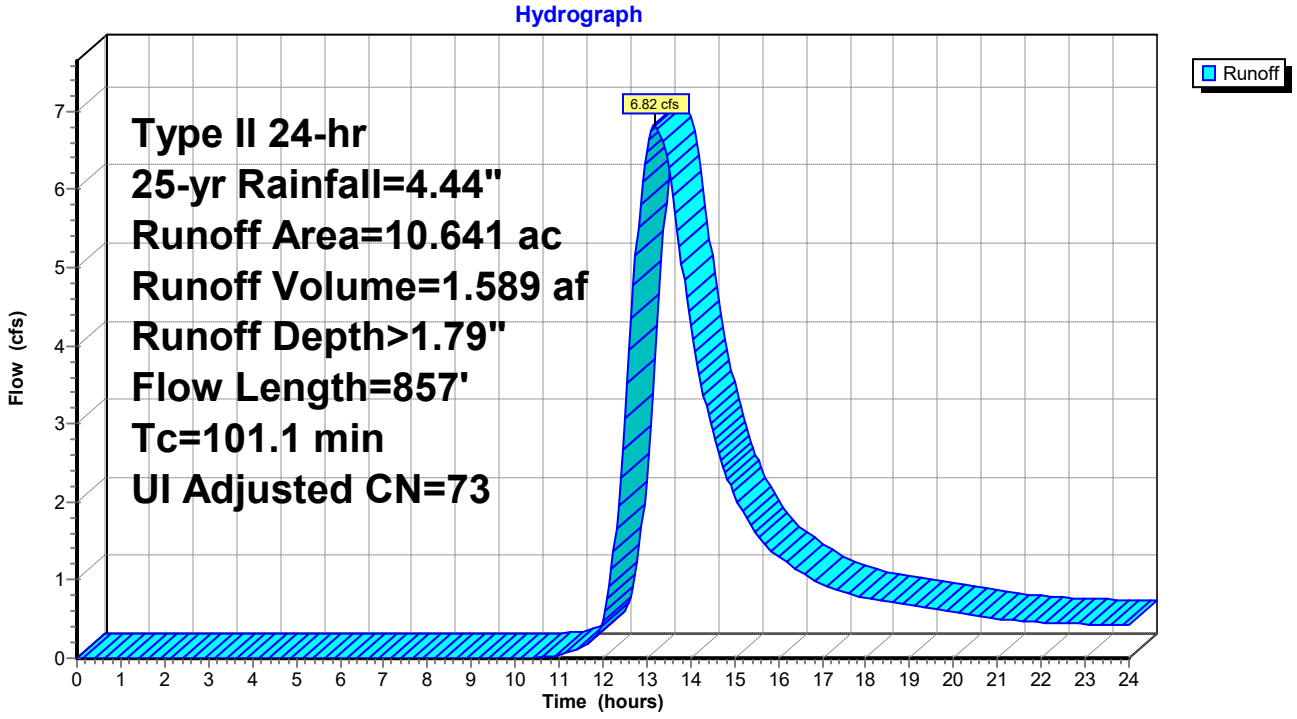
Runoff = 6.82 cfs @ 13.17 hrs, Volume= 1.589 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=4.44"

	Area (ac)	CN	Adj	Description
	9.235	71		Meadow, non-grazed, HSG C
	0.181	89		Gravel roads, HSG C
	0.640	98		Unconnected pavement, HSG C
*	0.585	89		Ballast aggregate, HSG C
	10.641	74	73	Weighted Average, UI Adjusted
	10.001			93.99% Pervious Area
	0.640			6.01% Impervious Area
	0.640			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
101.1	857	Total			

Subcatchment 3: DA-03 Post-development



Hydrograph for Subcatchment 3: DA-03 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.10	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.14	0.00	0.00
3.00	0.15	0.00	0.00
3.25	0.17	0.00	0.00
3.50	0.18	0.00	0.00
3.75	0.20	0.00	0.00
4.00	0.21	0.00	0.00
4.25	0.23	0.00	0.00
4.50	0.25	0.00	0.00
4.75	0.26	0.00	0.00
5.00	0.28	0.00	0.00
5.25	0.30	0.00	0.00
5.50	0.32	0.00	0.00
5.75	0.34	0.00	0.00
6.00	0.36	0.00	0.00
6.25	0.38	0.00	0.00
6.50	0.40	0.00	0.00
6.75	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.25	0.46	0.00	0.00
7.50	0.49	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.53	0.00	0.00
8.25	0.56	0.00	0.00
8.50	0.59	0.00	0.00
8.75	0.62	0.00	0.00
9.00	0.65	0.00	0.00
9.25	0.69	0.00	0.00
9.50	0.72	0.00	0.00
9.75	0.76	0.00	0.00
10.00	0.80	0.00	0.00
10.25	0.85	0.00	0.00
10.50	0.91	0.01	0.01
10.75	0.97	0.01	0.02
11.00	1.04	0.02	0.04
11.25	1.14	0.04	0.07
11.50	1.26	0.06	0.13
11.75	1.72	0.20	0.22
12.00	2.94	0.82	0.48
12.25	3.14	0.94	1.36
12.50	3.26	1.02	3.08
12.75	3.35	1.08	5.14
13.00	3.43	1.13	**6.49**
13.25	3.49	1.17	**6.79**
13.50	3.55	1.21	6.28
13.75	3.60	1.25	5.26
14.00	3.64	1.28	4.25
14.25	3.68	1.30	3.49
14.50	3.72	1.33	2.90
14.75	3.76	1.35	2.45
15.00	3.79	1.38	2.09
15.25	3.82	1.40	1.81
15.50	3.85	1.42	1.59
15.75	3.88	1.44	1.43
16.00	3.91	1.46	1.30
16.25	3.93	1.48	1.19
16.50	3.96	1.50	1.10
16.75	3.98	1.51	1.02
17.00	4.00	1.53	0.95
17.25	4.03	1.55	0.89
17.50	4.05	1.56	0.84
17.75	4.07	1.58	0.80
18.00	4.09	1.59	0.77
18.25	4.11	1.61	0.74
18.50	4.13	1.62	0.72
18.75	4.15	1.63	0.69
19.00	4.16	1.65	0.67
19.25	4.18	1.66	0.65
19.50	4.20	1.67	0.63
19.75	4.21	1.68	0.61
20.00	4.23	1.69	0.59
20.25	4.24	1.70	0.56
20.50	4.26	1.71	0.54
20.75	4.27	1.72	0.52
21.00	4.28	1.73	0.51
21.25	4.30	1.74	0.49
21.50	4.31	1.75	0.48
21.75	4.32	1.76	0.47
22.00	4.34	1.77	0.46
22.25	4.35	1.78	0.45
22.50	4.36	1.79	0.45
22.75	4.38	1.80	0.44
23.00	4.39	1.81	0.44
23.25	4.40	1.82	0.43
23.50	4.42	1.83	0.43
23.75	4.43	1.84	0.42
24.00	**4.44**	**1.85**	0.42

Summary for Subcatchment 3S: DA-03 Pre-development

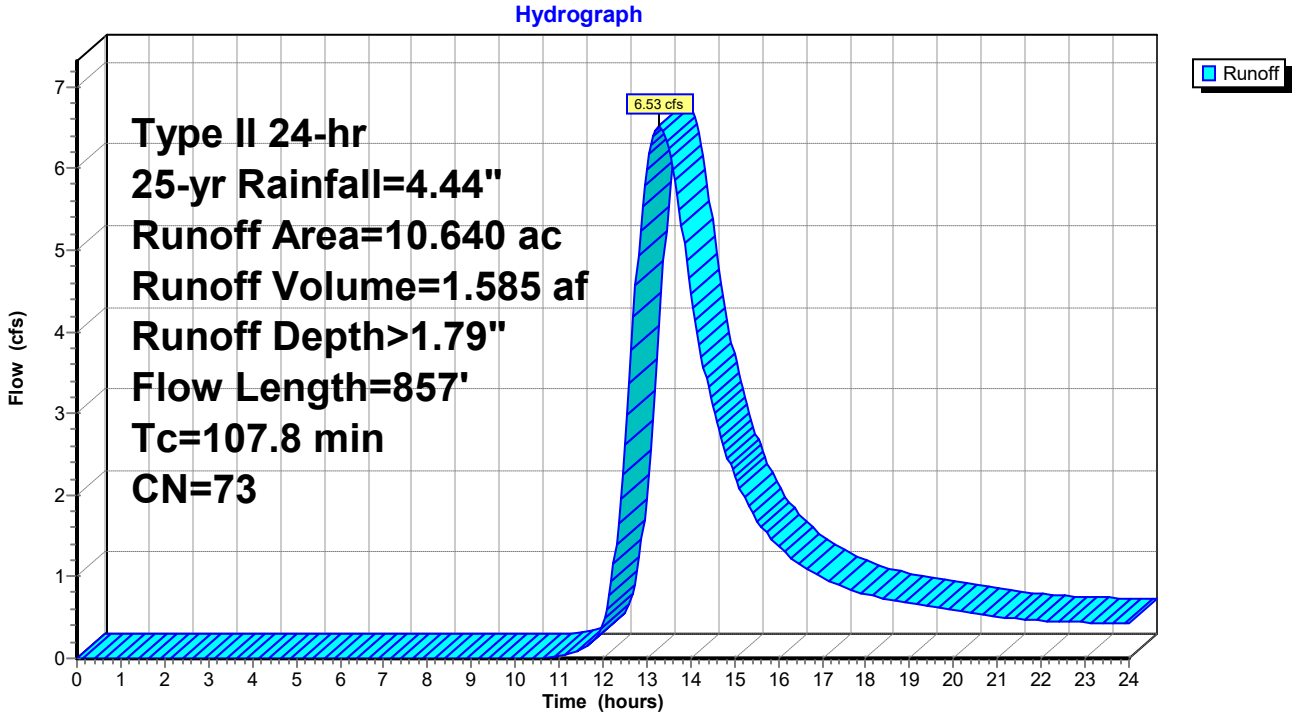
Runoff = 6.53 cfs @ 13.29 hrs, Volume= 1.585 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=4.44"

Area (ac)	CN	Description
10.490	73	Woods, Fair, HSG C
0.150	89	Gravel roads, HSG C
10.640	73	Weighted Average
10.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
107.8	857	Total			

Subcatchment 3S: DA-03 Pre-development



Hydrograph for Subcatchment 3S: DA-03 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.10	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.14	0.00	0.00
3.00	0.15	0.00	0.00
3.25	0.17	0.00	0.00
3.50	0.18	0.00	0.00
3.75	0.20	0.00	0.00
4.00	0.21	0.00	0.00
4.25	0.23	0.00	0.00
4.50	0.25	0.00	0.00
4.75	0.26	0.00	0.00
5.00	0.28	0.00	0.00
5.25	0.30	0.00	0.00
5.50	0.32	0.00	0.00
5.75	0.34	0.00	0.00
6.00	0.36	0.00	0.00
6.25	0.38	0.00	0.00
6.50	0.40	0.00	0.00
6.75	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.25	0.46	0.00	0.00
7.50	0.49	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.53	0.00	0.00
8.25	0.56	0.00	0.00
8.50	0.59	0.00	0.00
8.75	0.62	0.00	0.00
9.00	0.65	0.00	0.00
9.25	0.69	0.00	0.00
9.50	0.72	0.00	0.00
9.75	0.76	0.00	0.00
10.00	0.80	0.00	0.00
10.25	0.85	0.00	0.00
10.50	0.91	0.01	0.00
10.75	0.97	0.01	0.01
11.00	1.04	0.02	0.03
11.25	1.14	0.04	0.06
11.50	1.26	0.06	0.11
11.75	1.72	0.20	0.19
12.00	2.94	0.82	0.39
12.25	3.14	0.94	1.17
12.50	3.26	1.02	2.61
12.75	3.35	1.08	4.56
13.00	3.43	1.13	5.99
13.25	3.49	1.17	**6.51**
13.50	3.55	1.21	**6.24**
13.75	3.60	1.25	5.50
14.00	3.64	1.28	4.47
14.25	3.68	1.30	3.70
14.50	3.72	1.33	3.10
14.75	3.76	1.35	2.62
15.00	3.79	1.38	2.24
15.25	3.82	1.40	1.94
15.50	3.85	1.42	1.71
15.75	3.88	1.44	1.52
16.00	3.91	1.46	1.37
16.25	3.93	1.48	1.25
16.50	3.96	1.50	1.15
16.75	3.98	1.51	1.07
17.00	4.00	1.53	0.99
17.25	4.03	1.55	0.93
17.50	4.05	1.56	0.87
17.75	4.07	1.58	0.83
18.00	4.09	1.59	0.79
18.25	4.11	1.61	0.76
18.50	4.13	1.62	0.73
18.75	4.15	1.63	0.70
19.00	4.16	1.65	0.68
19.25	4.18	1.66	0.66
19.50	4.20	1.67	0.64
19.75	4.21	1.68	0.62
20.00	4.23	1.69	0.60
20.25	4.24	1.70	0.57
20.50	4.26	1.71	0.55
20.75	4.27	1.72	0.53
21.00	4.28	1.73	0.51
21.25	4.30	1.74	0.50
21.50	4.31	1.75	0.48
21.75	4.32	1.76	0.47
22.00	4.34	1.77	0.46
22.25	4.35	1.78	0.46
22.50	4.36	1.79	0.45
22.75	4.38	1.80	0.44
23.00	4.39	1.81	0.44
23.25	4.40	1.82	0.43
23.50	4.42	1.83	0.43
23.75	4.43	1.84	0.42
24.00	**4.44**	**1.85**	0.42

Summary for Subcatchment 3: DA-03 Post-development

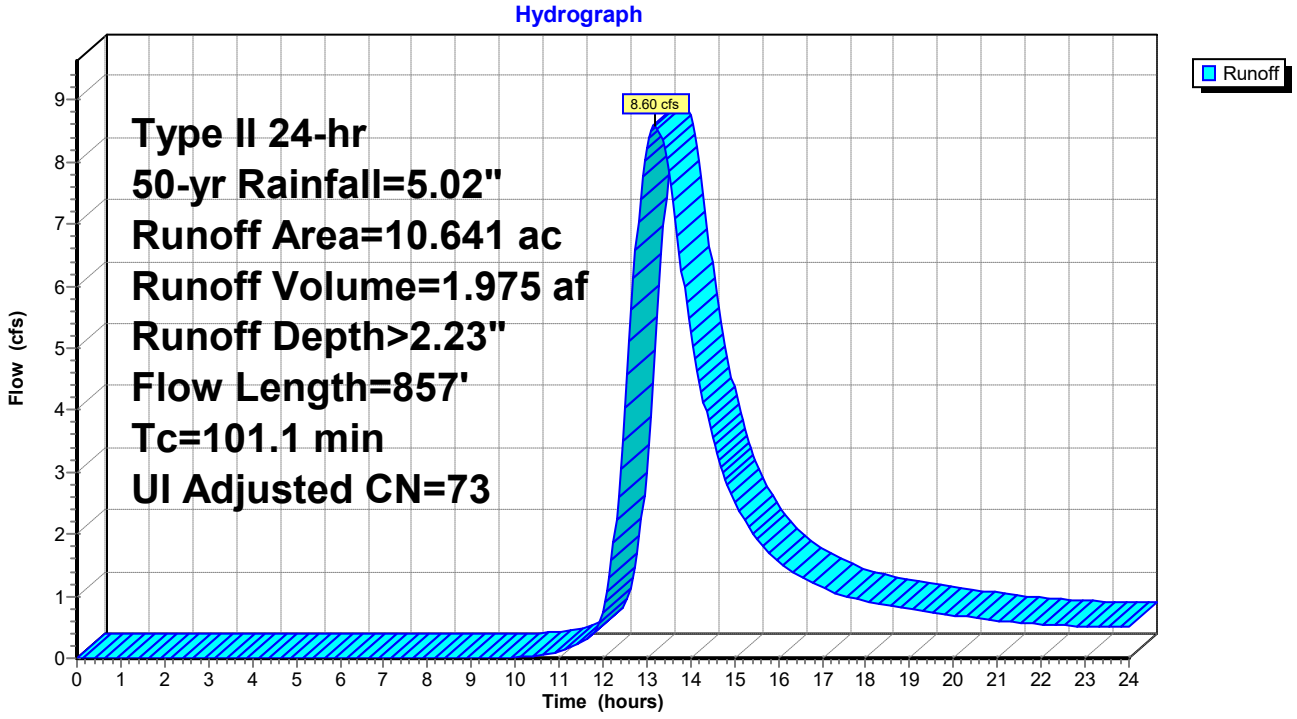
Runoff = 8.60 cfs @ 13.16 hrs, Volume= 1.975 af, Depth> 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=5.02"

	Area (ac)	CN	Adj	Description
	9.235	71		Meadow, non-grazed, HSG C
	0.181	89		Gravel roads, HSG C
	0.640	98		Unconnected pavement, HSG C
*	0.585	89		Ballast aggregate, HSG C
	10.641	74	73	Weighted Average, UI Adjusted
	10.001			93.99% Pervious Area
	0.640			6.01% Impervious Area
	0.640			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
101.1	857	Total			

Subcatchment 3: DA-03 Post-development



Hydrograph for Subcatchment 3: DA-03 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.13	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.16	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.21	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.26	0.00	0.00
4.50	0.28	0.00	0.00
4.75	0.30	0.00	0.00
5.00	0.32	0.00	0.00
5.25	0.34	0.00	0.00
5.50	0.36	0.00	0.00
5.75	0.38	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.45	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.52	0.00	0.00
7.50	0.55	0.00	0.00
7.75	0.58	0.00	0.00
8.00	0.60	0.00	0.00
8.25	0.63	0.00	0.00
8.50	0.66	0.00	0.00
8.75	0.70	0.00	0.00
9.00	0.74	0.00	0.00
9.25	0.78	0.00	0.00
9.50	0.82	0.00	0.00
9.75	0.86	0.00	0.00
10.00	0.91	0.01	0.01
10.25	0.96	0.01	0.02
10.50	1.02	0.02	0.04
10.75	1.10	0.03	0.07
11.00	1.18	0.05	0.11
11.25	1.29	0.07	0.17
11.50	1.42	0.11	0.25
11.75	1.94	0.30	0.38
12.00	3.33	1.07	0.73
12.25	3.54	1.21	1.87
12.50	3.69	1.31	4.03
12.75	3.79	1.38	6.59
13.00	3.88	1.44	**8.22**
13.25	3.95	1.49	**8.53**
13.50	4.01	1.54	7.85
13.75	4.07	1.58	6.53
14.00	4.12	1.61	5.25
14.25	4.16	1.64	4.29
14.50	4.20	1.68	3.56
14.75	4.25	1.71	2.99
15.00	4.28	1.73	2.54
15.25	4.32	1.76	2.19
15.50	4.36	1.79	1.93
15.75	4.39	1.81	1.73
16.00	4.42	1.83	1.57
16.25	4.45	1.86	1.43
16.50	4.47	1.88	1.32
16.75	4.50	1.90	1.23
17.00	4.53	1.92	1.14
17.25	4.55	1.94	1.07
17.50	4.58	1.95	1.00
17.75	4.60	1.97	0.95
18.00	4.62	1.99	0.92
18.25	4.65	2.01	0.88
18.50	4.67	2.02	0.85
18.75	4.69	2.04	0.83
19.00	4.71	2.05	0.80
19.25	4.73	2.07	0.77
19.50	4.74	2.08	0.75
19.75	4.76	2.10	0.72
20.00	4.78	2.11	0.70
20.25	4.80	2.12	0.67
20.50	4.81	2.13	0.65
20.75	4.83	2.15	0.62
21.00	4.84	2.16	0.60
21.25	4.86	2.17	0.58
21.50	4.87	2.18	0.57
21.75	4.89	2.19	0.55
22.00	4.90	2.21	0.54
22.25	4.92	2.22	0.54
22.50	4.93	2.23	0.53
22.75	4.95	2.24	0.52
23.00	4.96	2.25	0.52
23.25	4.98	2.26	0.51
23.50	4.99	2.27	0.51
23.75	5.01	2.29	0.50
24.00	**5.02**	**2.30**	0.50

Summary for Subcatchment 3S: DA-03 Pre-development

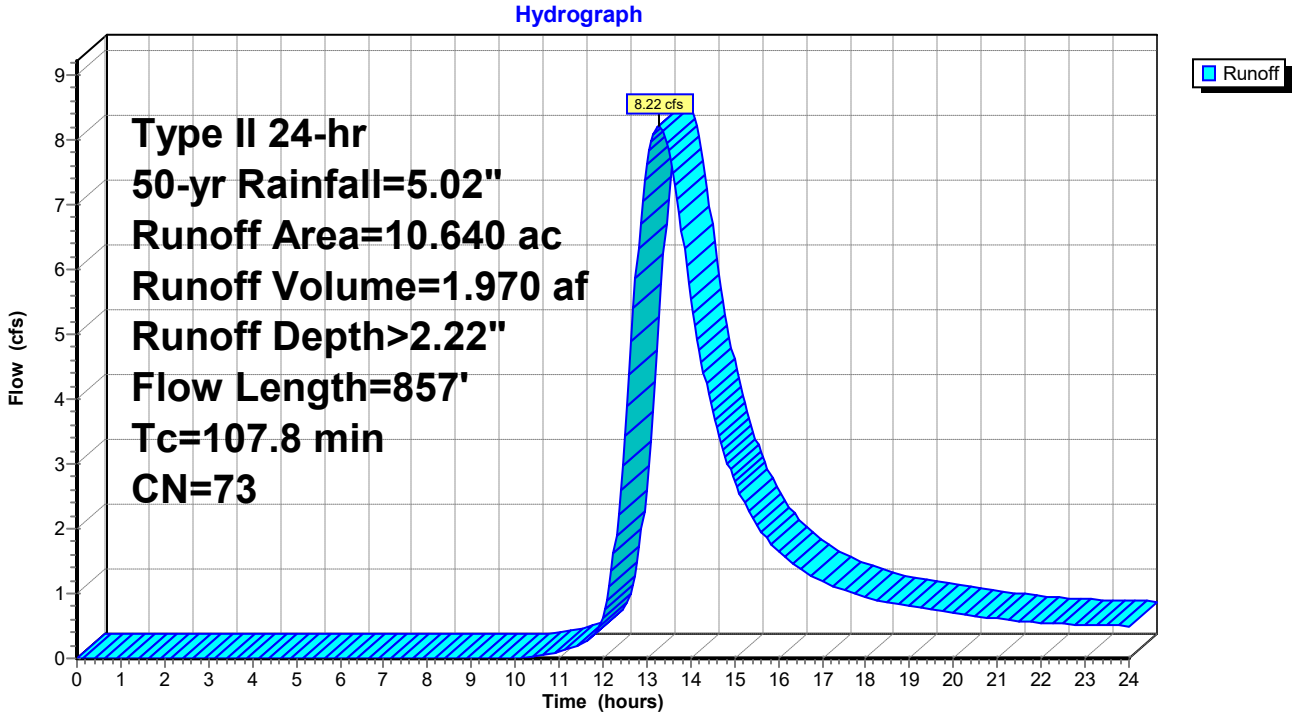
Runoff = 8.22 cfs @ 13.29 hrs, Volume= 1.970 af, Depth> 2.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=5.02"

Area (ac)	CN	Description
10.490	73	Woods, Fair, HSG C
0.150	89	Gravel roads, HSG C
10.640	73	Weighted Average
10.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
107.8	857	Total			

Subcatchment 3S: DA-03 Pre-development



Hydrograph for Subcatchment 3S: DA-03 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.13	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.16	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.21	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.26	0.00	0.00
4.50	0.28	0.00	0.00
4.75	0.30	0.00	0.00
5.00	0.32	0.00	0.00
5.25	0.34	0.00	0.00
5.50	0.36	0.00	0.00
5.75	0.38	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.45	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.52	0.00	0.00
7.50	0.55	0.00	0.00
7.75	0.58	0.00	0.00
8.00	0.60	0.00	0.00
8.25	0.63	0.00	0.00
8.50	0.66	0.00	0.00
8.75	0.70	0.00	0.00
9.00	0.74	0.00	0.00
9.25	0.78	0.00	0.00
9.50	0.82	0.00	0.00
9.75	0.86	0.00	0.00
10.00	0.91	0.01	0.01
10.25	0.96	0.01	0.02
10.50	1.02	0.02	0.03
10.75	1.10	0.03	0.06
11.00	1.18	0.05	0.10
11.25	1.29	0.07	0.15
11.50	1.42	0.11	0.23
11.75	1.94	0.30	0.34
12.00	3.33	1.07	0.62
12.25	3.54	1.21	1.61
12.50	3.69	1.31	3.43
12.75	3.79	1.38	5.86
13.00	3.88	1.44	7.60
13.25	3.95	1.49	**8.20**
13.50	4.01	1.54	**7.82**
13.75	4.07	1.58	6.85
14.00	4.12	1.61	5.54
14.25	4.16	1.64	4.56
14.50	4.20	1.68	3.81
14.75	4.25	1.71	3.21
15.00	4.28	1.73	2.73
15.25	4.32	1.76	2.36
15.50	4.36	1.79	2.07
15.75	4.39	1.81	1.84
16.00	4.42	1.83	1.66
16.25	4.45	1.86	1.51
16.50	4.47	1.88	1.38
16.75	4.50	1.90	1.28
17.00	4.53	1.92	1.19
17.25	4.55	1.94	1.11
17.50	4.58	1.95	1.05
17.75	4.60	1.97	0.99
18.00	4.62	1.99	0.94
18.25	4.65	2.01	0.90
18.50	4.67	2.02	0.87
18.75	4.69	2.04	0.84
19.00	4.71	2.05	0.81
19.25	4.73	2.07	0.78
19.50	4.74	2.08	0.76
19.75	4.76	2.10	0.73
20.00	4.78	2.11	0.71
20.25	4.80	2.12	0.68
20.50	4.81	2.13	0.66
20.75	4.83	2.15	0.63
21.00	4.84	2.16	0.61
21.25	4.86	2.17	0.59
21.50	4.87	2.18	0.57
21.75	4.89	2.19	0.56
22.00	4.90	2.21	0.55
22.25	4.92	2.22	0.54
22.50	4.93	2.23	0.53
22.75	4.95	2.24	0.53
23.00	4.96	2.25	0.52
23.25	4.98	2.26	0.51
23.50	4.99	2.27	0.51
23.75	5.01	2.29	0.50
24.00	**5.02**	**2.30**	0.50

Summary for Subcatchment 3: DA-03 Post-development

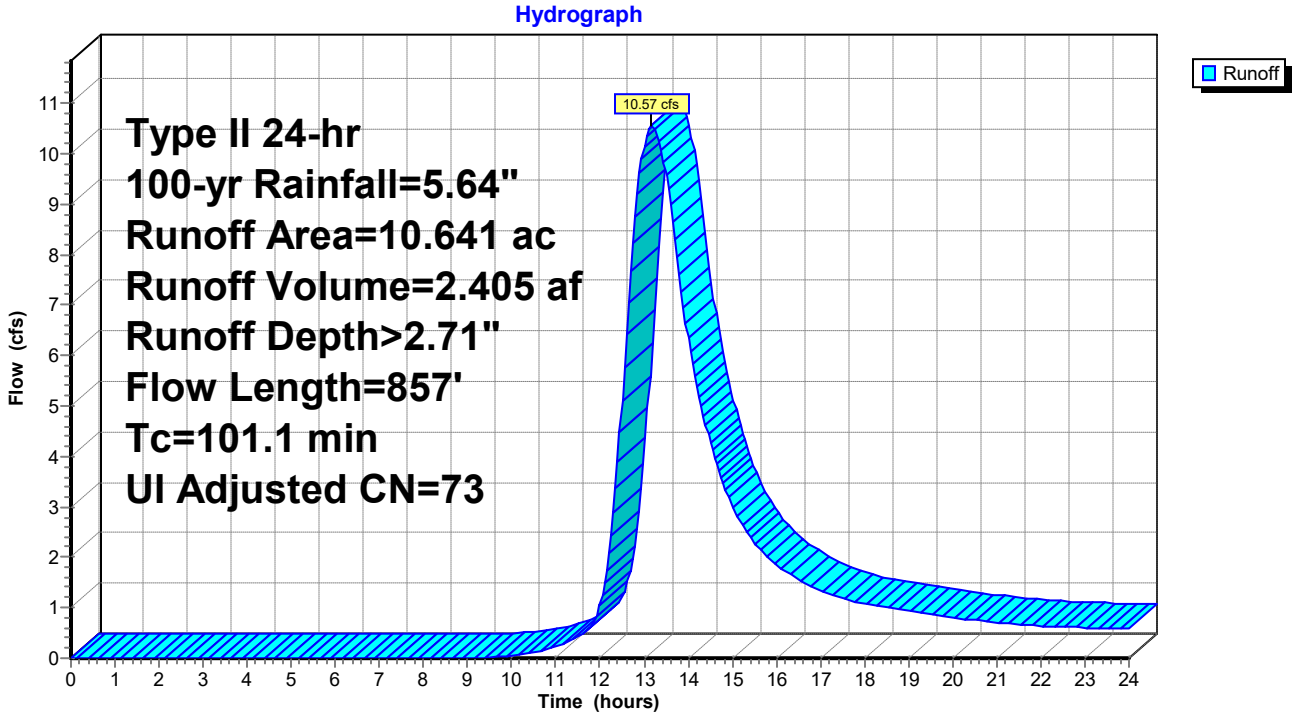
Runoff = 10.57 cfs @ 13.16 hrs, Volume= 2.405 af, Depth> 2.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.64"

	Area (ac)	CN	Adj	Description
	9.235	71		Meadow, non-grazed, HSG C
	0.181	89		Gravel roads, HSG C
	0.640	98		Unconnected pavement, HSG C
*	0.585	89		Ballast aggregate, HSG C
	10.641	74	73	Weighted Average, UI Adjusted
	10.001			93.99% Pervious Area
	0.640			6.01% Impervious Area
	0.640			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
101.1	857	Total			

Subcatchment 3: DA-03 Post-development



Hydrograph for Subcatchment 3: DA-03 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.12	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.50	0.00	0.00
6.75	0.53	0.00	0.00
7.00	0.56	0.00	0.00
7.25	0.59	0.00	0.00
7.50	0.62	0.00	0.00
7.75	0.65	0.00	0.00
8.00	0.68	0.00	0.00
8.25	0.71	0.00	0.00
8.50	0.75	0.00	0.00
8.75	0.79	0.00	0.00
9.00	0.83	0.00	0.00
9.25	0.87	0.00	0.00
9.50	0.92	0.01	0.01
9.75	0.97	0.01	0.02
10.00	1.02	0.02	0.04
10.25	1.08	0.03	0.07
10.50	1.15	0.04	0.11
10.75	1.23	0.06	0.16
11.00	1.33	0.08	0.22
11.25	1.44	0.11	0.30
11.50	1.60	0.16	0.42
11.75	2.18	0.40	0.59
12.00	3.74	1.34	1.03
12.25	3.98	1.51	2.45
12.50	4.15	1.63	5.10
12.75	4.26	1.72	8.21
13.00	4.35	1.79	**10.14**
13.25	4.44	1.85	**10.47**
13.50	4.51	1.90	9.58
13.75	4.57	1.95	7.93
14.00	4.62	1.99	6.35
14.25	4.68	2.03	5.18
14.50	4.72	2.07	4.28
14.75	4.77	2.10	3.58
15.00	4.81	2.14	3.04
15.25	4.85	2.17	2.61
15.50	4.89	2.20	2.29
15.75	4.93	2.23	2.05
16.00	4.96	2.25	1.85
16.25	5.00	2.28	1.69
16.50	5.03	2.30	1.56
16.75	5.06	2.32	1.44
17.00	5.09	2.35	1.34
17.25	5.11	2.37	1.25
17.50	5.14	2.39	1.18
17.75	5.17	2.41	1.12
18.00	5.19	2.43	1.07
18.25	5.22	2.45	1.04
18.50	5.24	2.47	1.00
18.75	5.27	2.49	0.97
19.00	5.29	2.51	0.94
19.25	5.31	2.53	0.90
19.50	5.33	2.54	0.87
19.75	5.35	2.56	0.84
20.00	5.37	2.57	0.81
20.25	5.39	2.59	0.79
20.50	5.41	2.60	0.76
20.75	5.42	2.62	0.73
21.00	5.44	2.63	0.70
21.25	5.46	2.65	0.68
21.50	5.48	2.66	0.66
21.75	5.49	2.67	0.65
22.00	5.51	2.69	0.64
22.25	5.53	2.70	0.63
22.50	5.54	2.71	0.62
22.75	5.56	2.73	0.61
23.00	5.58	2.74	0.60
23.25	5.59	2.75	0.60
23.50	5.61	2.77	0.59
23.75	5.62	2.78	0.58
24.00	**5.64**	**2.79**	0.58

Summary for Subcatchment 3S: DA-03 Pre-development

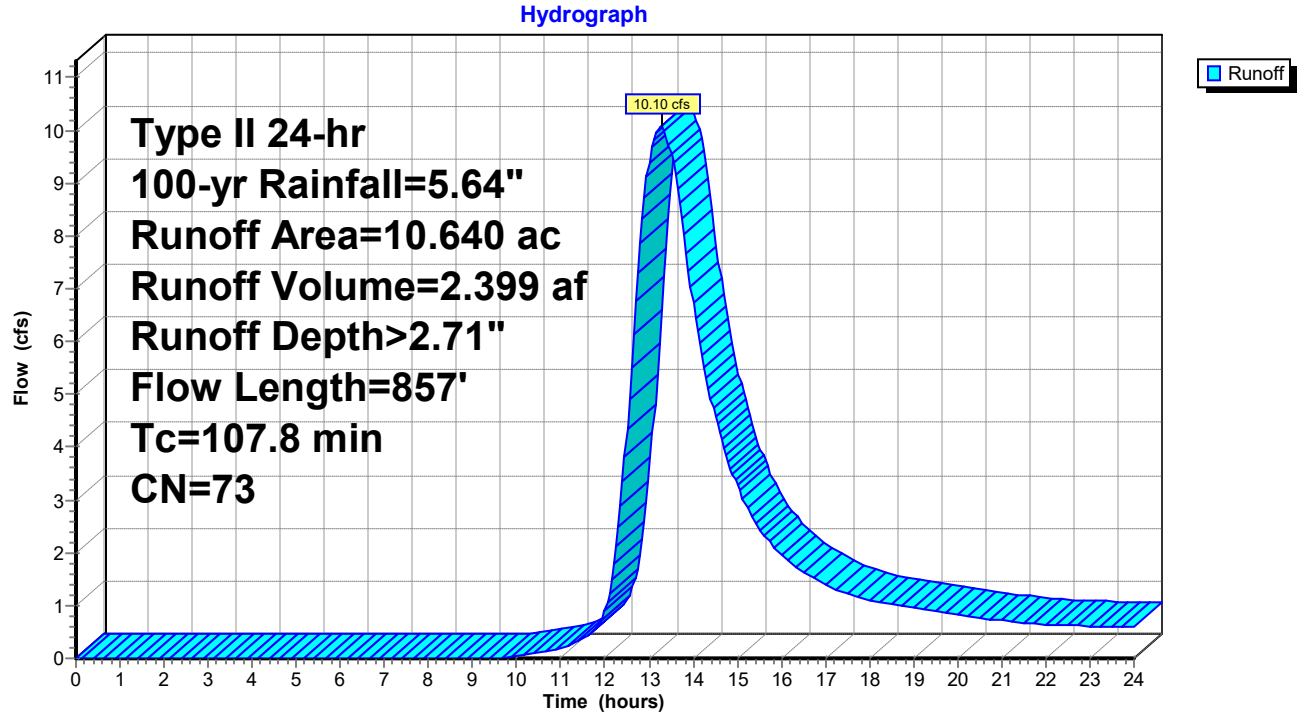
Runoff = 10.10 cfs @ 13.28 hrs, Volume= 2.399 af, Depth> 2.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.64"

Area (ac)	CN	Description
10.490	73	Woods, Fair, HSG C
0.150	89	Gravel roads, HSG C
10.640	73	Weighted Average
10.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
87.7	757	0.0092	0.14		**Shallow Concentrated Flow,** Kv= 1.5 fps
107.8	857	Total			

Subcatchment 3S: DA-03 Pre-development



Hydrograph for Subcatchment 3S: DA-03 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.12	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.50	0.00	0.00
6.75	0.53	0.00	0.00
7.00	0.56	0.00	0.00
7.25	0.59	0.00	0.00
7.50	0.62	0.00	0.00
7.75	0.65	0.00	0.00
8.00	0.68	0.00	0.00
8.25	0.71	0.00	0.00
8.50	0.75	0.00	0.00
8.75	0.79	0.00	0.00
9.00	0.83	0.00	0.00
9.25	0.87	0.00	0.00
9.50	0.92	0.01	0.01
9.75	0.97	0.01	0.02
10.00	1.02	0.02	0.04
10.25	1.08	0.03	0.06
10.50	1.15	0.04	0.10
10.75	1.23	0.06	0.14
11.00	1.33	0.08	0.20
11.25	1.44	0.11	0.28
11.50	1.60	0.16	0.38
11.75	2.18	0.40	0.53
12.00	3.74	1.34	0.89
12.25	3.98	1.51	2.12
12.50	4.15	1.63	4.35
12.75	4.26	1.72	7.31
13.00	4.35	1.79	9.40
13.25	4.44	1.85	**10.08**
13.50	4.51	1.90	**9.57**
13.75	4.57	1.95	8.34
14.00	4.62	1.99	6.72
14.25	4.68	2.03	5.51
14.50	4.72	2.07	4.59
14.75	4.77	2.10	3.85
15.00	4.81	2.14	3.27
15.25	4.85	2.17	2.82
15.50	4.89	2.20	2.46
15.75	4.93	2.23	2.18
16.00	4.96	2.25	1.96
16.25	5.00	2.28	1.79
16.50	5.03	2.30	1.64
16.75	5.06	2.32	1.51
17.00	5.09	2.35	1.40
17.25	5.11	2.37	1.31
17.50	5.14	2.39	1.23
17.75	5.17	2.41	1.16
18.00	5.19	2.43	1.10
18.25	5.22	2.45	1.06
18.50	5.24	2.47	1.02
18.75	5.27	2.49	0.98
19.00	5.29	2.51	0.95
19.25	5.31	2.53	0.92
19.50	5.33	2.54	0.89
19.75	5.35	2.56	0.86
20.00	5.37	2.57	0.83
20.25	5.39	2.59	0.80
20.50	5.41	2.60	0.77
20.75	5.42	2.62	0.74
21.00	5.44	2.63	0.71
21.25	5.46	2.65	0.69
21.50	5.48	2.66	0.67
21.75	5.49	2.67	0.66
22.00	5.51	2.69	0.64
22.25	5.53	2.70	0.63
22.50	5.54	2.71	0.62
22.75	5.56	2.73	0.61
23.00	5.58	2.74	0.61
23.25	5.59	2.75	0.60
23.50	5.61	2.77	0.59
23.75	5.62	2.78	0.59
24.00	**5.64**	**2.79**	0.58

Summary for Subcatchment 4: DA-04 Post-development

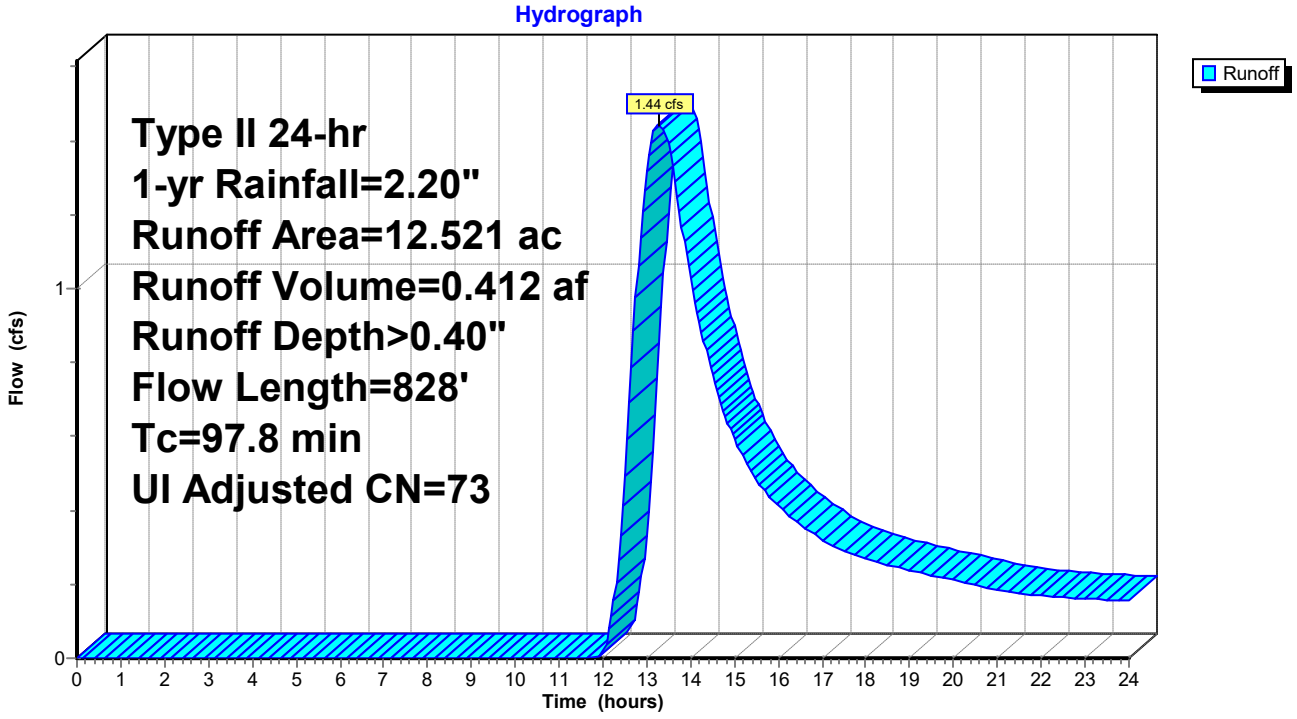
Runoff = 1.44 cfs @ 13.29 hrs, Volume= 0.412 af, Depth> 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.20"

	Area (ac)	CN	Adj	Description
	10.706	71		Meadow, non-grazed, HSG C
	0.373	89		Gravel roads, HSG C
	0.753	98		Unconnected pavement, HSG C
*	0.689	89		ballast aggregate, HSG C
	12.521	74	73	Weighted Average, UI Adjusted
	11.768			93.99% Pervious Area
	0.753			6.01% Impervious Area
	0.753			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
97.8	828	Total			

Subcatchment 4: DA-04 Post-development



Hydrograph for Subcatchment 4: DA-04 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.02	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.04	0.00	0.00
2.00	0.05	0.00	0.00
2.25	0.06	0.00	0.00
2.50	0.06	0.00	0.00
2.75	0.07	0.00	0.00
3.00	0.08	0.00	0.00
3.25	0.08	0.00	0.00
3.50	0.09	0.00	0.00
3.75	0.10	0.00	0.00
4.00	0.11	0.00	0.00
4.25	0.11	0.00	0.00
4.50	0.12	0.00	0.00
4.75	0.13	0.00	0.00
5.00	0.14	0.00	0.00
5.25	0.15	0.00	0.00
5.50	0.16	0.00	0.00
5.75	0.17	0.00	0.00
6.00	0.18	0.00	0.00
6.25	0.19	0.00	0.00
6.50	0.20	0.00	0.00
6.75	0.21	0.00	0.00
7.00	0.22	0.00	0.00
7.25	0.23	0.00	0.00
7.50	0.24	0.00	0.00
7.75	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.25	0.28	0.00	0.00
8.50	0.29	0.00	0.00
8.75	0.31	0.00	0.00
9.00	0.32	0.00	0.00
9.25	0.34	0.00	0.00
9.50	0.36	0.00	0.00
9.75	0.38	0.00	0.00
10.00	0.40	0.00	0.00
10.25	0.42	0.00	0.00
10.50	0.45	0.00	0.00
10.75	0.48	0.00	0.00
11.00	0.52	0.00	0.00
11.25	0.56	0.00	0.00
11.50	0.62	0.00	0.00
11.75	0.85	0.00	0.00
12.00	1.46	0.12	0.01
12.25	1.55	0.15	0.16
12.50	1.62	0.17	0.49
12.75	1.66	0.18	0.98
13.00	1.70	0.20	1.32
13.25	1.73	0.21	**1.44**
13.50	1.76	0.22	**1.39**
13.75	1.78	0.23	1.21
14.00	1.80	0.24	1.03
14.25	1.82	0.25	0.88
14.50	1.84	0.25	0.77
14.75	1.86	0.26	0.67
15.00	1.88	0.27	0.59
15.25	1.89	0.27	0.53
15.50	1.91	0.28	0.48
15.75	1.92	0.29	0.45
16.00	1.94	0.29	0.41
16.25	1.95	0.30	0.39
16.50	1.96	0.30	0.36
16.75	1.97	0.31	0.34
17.00	1.98	0.31	0.32
17.25	1.99	0.32	0.30
17.50	2.01	0.32	0.29
17.75	2.02	0.33	0.28
18.00	2.03	0.33	0.27
18.25	2.04	0.34	0.26
18.50	2.05	0.34	0.25
18.75	2.05	0.34	0.25
19.00	2.06	0.35	0.24
19.25	2.07	0.35	0.23
19.50	2.08	0.36	0.23
19.75	2.09	0.36	0.22
20.00	2.09	0.36	0.21
20.25	2.10	0.37	0.20
20.50	2.11	0.37	0.20
20.75	2.12	0.37	0.19
21.00	2.12	0.38	0.18
21.25	2.13	0.38	0.18
21.50	2.14	0.38	0.17
21.75	2.14	0.39	0.17
22.00	2.15	0.39	0.17
22.25	2.16	0.39	0.17
22.50	2.16	0.40	0.16
22.75	2.17	0.40	0.16
23.00	2.18	0.40	0.16
23.25	2.18	0.40	0.16
23.50	2.19	0.41	0.16
23.75	2.19	0.41	0.16
24.00	**2.20**	**0.41**	0.16

Summary for Subcatchment 4S: DA-04 Pre-development

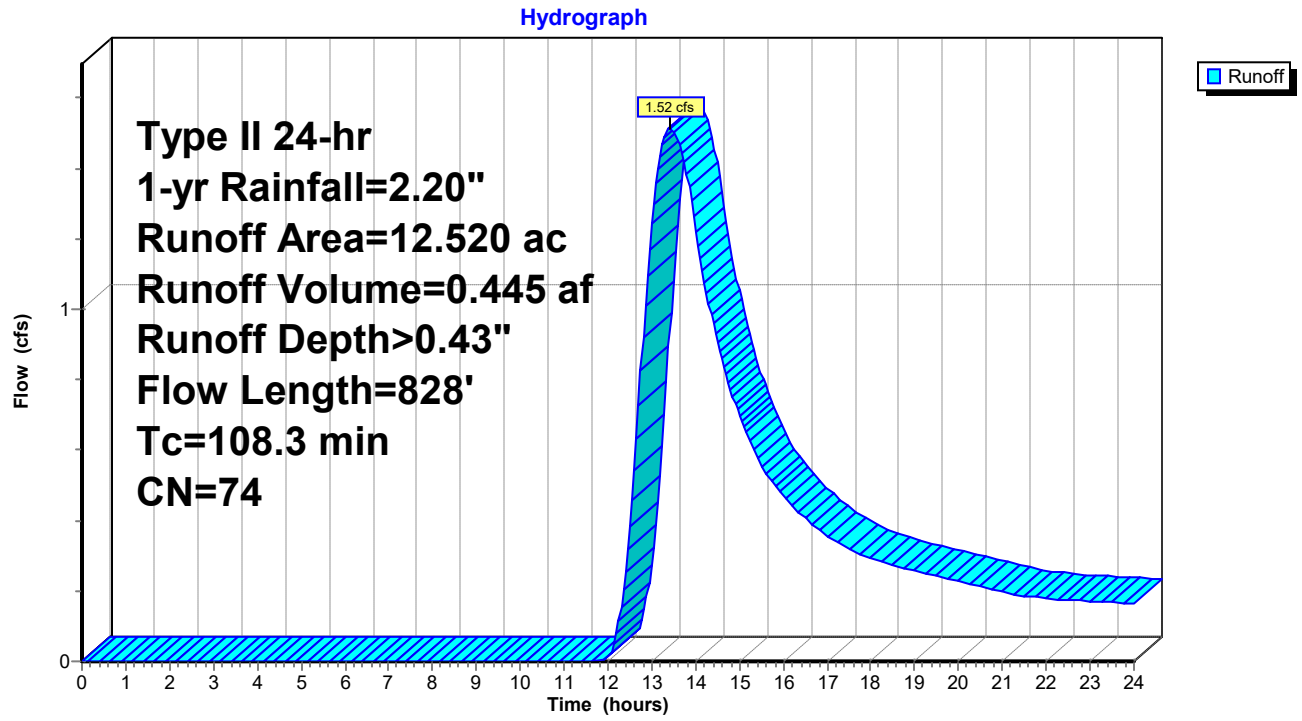
Runoff = 1.52 cfs @ 13.41 hrs, Volume= 0.445 af, Depth> 0.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.20"

Area (ac)	CN	Description
11.810	73	Woods, Fair, HSG C
0.710	89	Gravel roads, HSG C
12.520	74	Weighted Average
12.520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.3	100	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
108.3	828	Total			

Subcatchment 4S: DA-04 Pre-development



Hydrograph for Subcatchment 4S: DA-04 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.02	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.04	0.00	0.00
2.00	0.05	0.00	0.00
2.25	0.06	0.00	0.00
2.50	0.06	0.00	0.00
2.75	0.07	0.00	0.00
3.00	0.08	0.00	0.00
3.25	0.08	0.00	0.00
3.50	0.09	0.00	0.00
3.75	0.10	0.00	0.00
4.00	0.11	0.00	0.00
4.25	0.11	0.00	0.00
4.50	0.12	0.00	0.00
4.75	0.13	0.00	0.00
5.00	0.14	0.00	0.00
5.25	0.15	0.00	0.00
5.50	0.16	0.00	0.00
5.75	0.17	0.00	0.00
6.00	0.18	0.00	0.00
6.25	0.19	0.00	0.00
6.50	0.20	0.00	0.00
6.75	0.21	0.00	0.00
7.00	0.22	0.00	0.00
7.25	0.23	0.00	0.00
7.50	0.24	0.00	0.00
7.75	0.25	0.00	0.00
8.00	0.26	0.00	0.00
8.25	0.28	0.00	0.00
8.50	0.29	0.00	0.00
8.75	0.31	0.00	0.00
9.00	0.32	0.00	0.00
9.25	0.34	0.00	0.00
9.50	0.36	0.00	0.00
9.75	0.38	0.00	0.00
10.00	0.40	0.00	0.00
10.25	0.42	0.00	0.00
10.50	0.45	0.00	0.00
10.75	0.48	0.00	0.00
11.00	0.52	0.00	0.00
11.25	0.56	0.00	0.00
11.50	0.62	0.00	0.00
11.75	0.85	0.01	0.00
12.00	1.46	0.13	0.01
12.25	1.55	0.17	0.12
12.50	1.62	0.19	0.38
12.75	1.66	0.21	0.83
13.00	1.70	0.22	1.24
13.25	1.73	0.23	**1.47**
13.50	1.76	0.24	**1.51**
13.75	1.78	0.25	1.42
14.00	1.80	0.26	1.22
14.25	1.82	0.27	1.05
14.50	1.84	0.28	0.91
14.75	1.86	0.29	0.79
15.00	1.88	0.29	0.70
15.25	1.89	0.30	0.62
15.50	1.91	0.31	0.56
15.75	1.92	0.31	0.51
16.00	1.94	0.32	0.47
16.25	1.95	0.33	0.44
16.50	1.96	0.33	0.41
16.75	1.97	0.34	0.38
17.00	1.98	0.34	0.36
17.25	1.99	0.35	0.34
17.50	2.01	0.35	0.32
17.75	2.02	0.36	0.31
18.00	2.03	0.36	0.29
18.25	2.04	0.37	0.28
18.50	2.05	0.37	0.27
18.75	2.05	0.38	0.26
19.00	2.06	0.38	0.26
19.25	2.07	0.38	0.25
19.50	2.08	0.39	0.24
19.75	2.09	0.39	0.23
20.00	2.09	0.39	0.23
20.25	2.10	0.40	0.22
20.50	2.11	0.40	0.21
20.75	2.12	0.41	0.20
21.00	2.12	0.41	0.20
21.25	2.13	0.41	0.19
21.50	2.14	0.42	0.19
21.75	2.14	0.42	0.18
22.00	2.15	0.42	0.18
22.25	2.16	0.43	0.18
22.50	2.16	0.43	0.17
22.75	2.17	0.43	0.17
23.00	2.18	0.43	0.17
23.25	2.18	0.44	0.17
23.50	2.19	0.44	0.17
23.75	2.19	0.44	0.17
24.00	**2.20**	**0.45**	0.16

Summary for Subcatchment 4: DA-04 Post-development

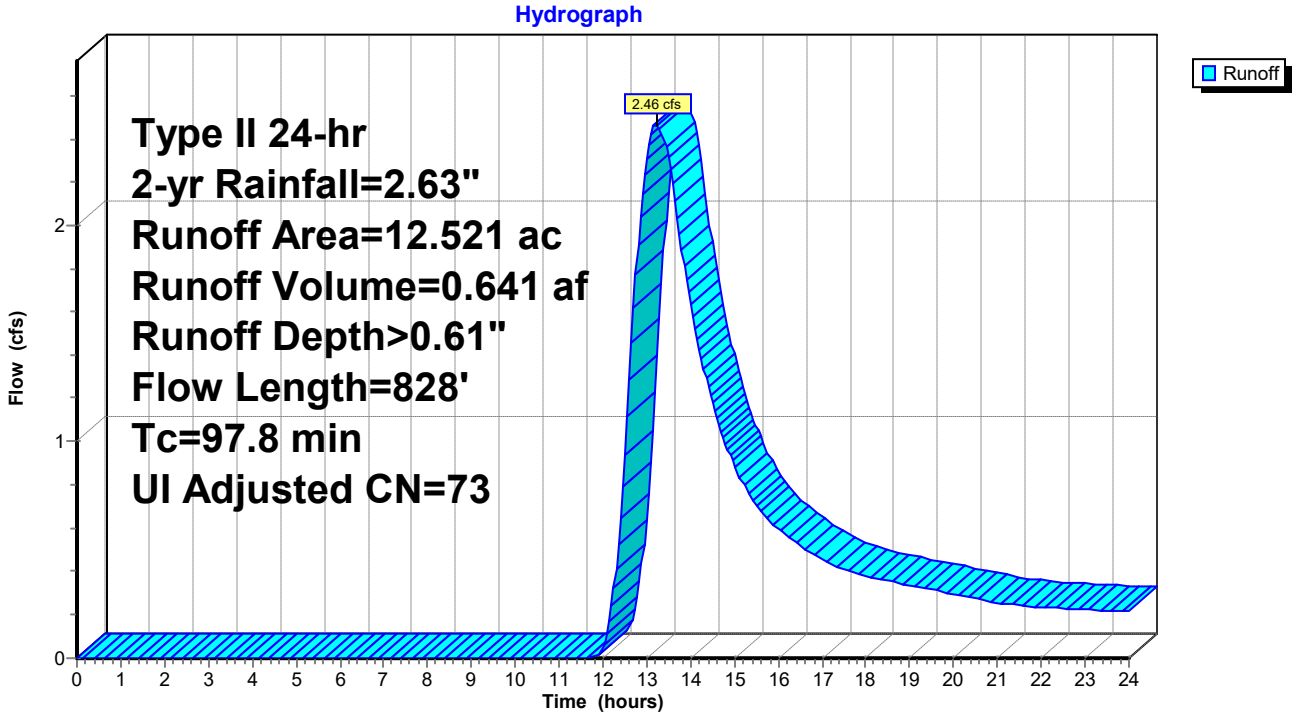
Runoff = 2.46 cfs @ 13.22 hrs, Volume= 0.641 af, Depth> 0.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.63"

	Area (ac)	CN	Adj	Description
	10.706	71		Meadow, non-grazed, HSG C
	0.373	89		Gravel roads, HSG C
	0.753	98		Unconnected pavement, HSG C
*	0.689	89		ballast aggregate, HSG C
	12.521	74	73	Weighted Average, UI Adjusted
	11.768			93.99% Pervious Area
	0.753			6.01% Impervious Area
	0.753			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
97.8	828	Total			

Subcatchment 4: DA-04 Post-development



Hydrograph for Subcatchment 4: DA-04 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.07	0.00	0.00
2.75	0.08	0.00	0.00
3.00	0.09	0.00	0.00
3.25	0.10	0.00	0.00
3.50	0.11	0.00	0.00
3.75	0.12	0.00	0.00
4.00	0.13	0.00	0.00
4.25	0.14	0.00	0.00
4.50	0.15	0.00	0.00
4.75	0.16	0.00	0.00
5.00	0.17	0.00	0.00
5.25	0.18	0.00	0.00
5.50	0.19	0.00	0.00
5.75	0.20	0.00	0.00
6.00	0.21	0.00	0.00
6.25	0.22	0.00	0.00
6.50	0.23	0.00	0.00
6.75	0.25	0.00	0.00
7.00	0.26	0.00	0.00
7.25	0.27	0.00	0.00
7.50	0.29	0.00	0.00
7.75	0.30	0.00	0.00
8.00	0.32	0.00	0.00
8.25	0.33	0.00	0.00
8.50	0.35	0.00	0.00
8.75	0.37	0.00	0.00
9.00	0.39	0.00	0.00
9.25	0.41	0.00	0.00
9.50	0.43	0.00	0.00
9.75	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.25	0.50	0.00	0.00
10.50	0.54	0.00	0.00
10.75	0.57	0.00	0.00
11.00	0.62	0.00	0.00
11.25	0.67	0.00	0.00
11.50	0.74	0.00	0.00
11.75	1.02	0.02	0.00
12.00	1.74	0.21	0.04
12.25	1.86	0.26	0.32
12.50	1.93	0.29	0.94
12.75	1.99	0.31	1.77
13.00	2.03	0.33	**2.31**
13.25	2.07	0.35	**2.46**
13.50	2.10	0.37	2.32
13.75	2.13	0.38	1.96
14.00	2.16	0.39	1.63
14.25	2.18	0.40	1.38
14.50	2.20	0.41	1.18
14.75	2.22	0.43	1.02
15.00	2.24	0.44	0.89
15.25	2.26	0.44	0.79
15.50	2.28	0.45	0.71
15.75	2.30	0.46	0.65
16.00	2.31	0.47	0.60
16.25	2.33	0.48	0.56
16.50	2.34	0.49	0.52
16.75	2.36	0.49	0.49
17.00	2.37	0.50	0.46
17.25	2.38	0.51	0.43
17.50	2.40	0.51	0.41
17.75	2.41	0.52	0.39
18.00	2.42	0.53	0.38
18.25	2.43	0.53	0.37
18.50	2.45	0.54	0.36
18.75	2.46	0.54	0.35
19.00	2.47	0.55	0.34
19.25	2.48	0.55	0.33
19.50	2.49	0.56	0.32
19.75	2.50	0.56	0.31
20.00	2.50	0.57	0.30
20.25	2.51	0.57	0.29
20.50	2.52	0.58	0.28
20.75	2.53	0.58	0.27
21.00	2.54	0.59	0.26
21.25	2.55	0.59	0.25
21.50	2.55	0.60	0.24
21.75	2.56	0.60	0.24
22.00	2.57	0.61	0.23
22.25	2.58	0.61	0.23
22.50	2.59	0.61	0.23
22.75	2.59	0.62	0.23
23.00	2.60	0.62	0.22
23.25	2.61	0.63	0.22
23.50	2.62	0.63	0.22
23.75	2.62	0.64	0.22
24.00	**2.63**	**0.64**	0.22

Summary for Subcatchment 4S: DA-04 Pre-development

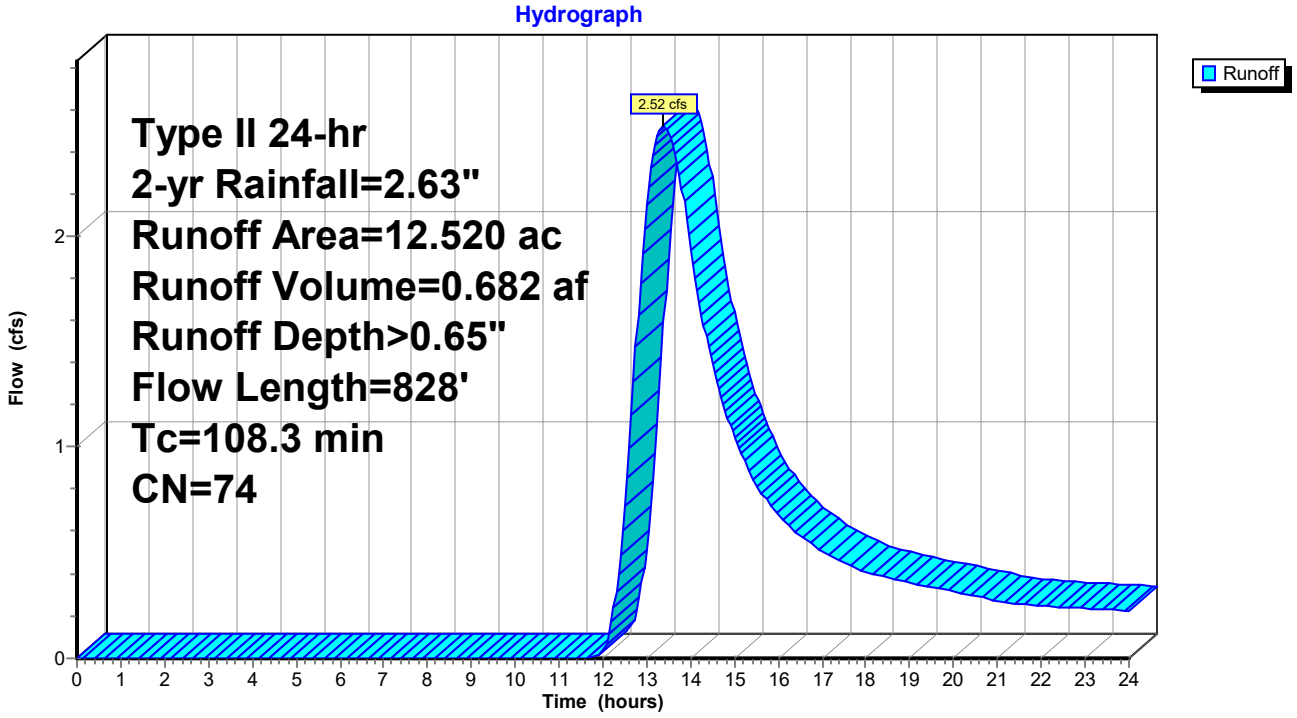
Runoff = 2.52 cfs @ 13.37 hrs, Volume= 0.682 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.63"

Area (ac)	CN	Description
11.810	73	Woods, Fair, HSG C
0.710	89	Gravel roads, HSG C
12.520	74	Weighted Average
12.520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.3	100	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
108.3	828	Total			

Subcatchment 4S: DA-04 Pre-development



Hydrograph for Subcatchment 4S: DA-04 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.01	0.00	0.00
0.75	0.02	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.03	0.00	0.00
1.50	0.04	0.00	0.00
1.75	0.05	0.00	0.00
2.00	0.06	0.00	0.00
2.25	0.07	0.00	0.00
2.50	0.07	0.00	0.00
2.75	0.08	0.00	0.00
3.00	0.09	0.00	0.00
3.25	0.10	0.00	0.00
3.50	0.11	0.00	0.00
3.75	0.12	0.00	0.00
4.00	0.13	0.00	0.00
4.25	0.14	0.00	0.00
4.50	0.15	0.00	0.00
4.75	0.16	0.00	0.00
5.00	0.17	0.00	0.00
5.25	0.18	0.00	0.00
5.50	0.19	0.00	0.00
5.75	0.20	0.00	0.00
6.00	0.21	0.00	0.00
6.25	0.22	0.00	0.00
6.50	0.23	0.00	0.00
6.75	0.25	0.00	0.00
7.00	0.26	0.00	0.00
7.25	0.27	0.00	0.00
7.50	0.29	0.00	0.00
7.75	0.30	0.00	0.00
8.00	0.32	0.00	0.00
8.25	0.33	0.00	0.00
8.50	0.35	0.00	0.00
8.75	0.37	0.00	0.00
9.00	0.39	0.00	0.00
9.25	0.41	0.00	0.00
9.50	0.43	0.00	0.00
9.75	0.45	0.00	0.00
10.00	0.48	0.00	0.00
10.25	0.50	0.00	0.00
10.50	0.54	0.00	0.00
10.75	0.57	0.00	0.00
11.00	0.62	0.00	0.00
11.25	0.67	0.00	0.00
11.50	0.74	0.00	0.00
11.75	1.02	0.03	0.00
12.00	1.74	0.24	0.03
12.25	1.86	0.29	0.24
12.50	1.93	0.32	0.72
12.75	1.99	0.34	1.48
13.00	2.03	0.36	2.14
13.25	2.07	0.38	**2.47**
13.50	2.10	0.40	**2.49**
13.75	2.13	0.41	2.28
14.00	2.16	0.43	1.93
14.25	2.18	0.44	1.63
14.50	2.20	0.45	1.39
14.75	2.22	0.46	1.20
15.00	2.24	0.47	1.05
15.25	2.26	0.48	0.92
15.50	2.28	0.49	0.82
15.75	2.30	0.50	0.74
16.00	2.31	0.51	0.68
16.25	2.33	0.51	0.63
16.50	2.34	0.52	0.58
16.75	2.36	0.53	0.54
17.00	2.37	0.54	0.51
17.25	2.38	0.54	0.48
17.50	2.40	0.55	0.45
17.75	2.41	0.56	0.43
18.00	2.42	0.57	0.41
18.25	2.43	0.57	0.39
18.50	2.45	0.58	0.38
18.75	2.46	0.58	0.37
19.00	2.47	0.59	0.36
19.25	2.48	0.59	0.35
19.50	2.49	0.60	0.34
19.75	2.50	0.61	0.33
20.00	2.50	0.61	0.31
20.25	2.51	0.62	0.30
20.50	2.52	0.62	0.29
20.75	2.53	0.62	0.28
21.00	2.54	0.63	0.27
21.25	2.55	0.63	0.27
21.50	2.55	0.64	0.26
21.75	2.56	0.64	0.25
22.00	2.57	0.65	0.25
22.25	2.58	0.65	0.24
22.50	2.59	0.66	0.24
22.75	2.59	0.66	0.24
23.00	2.60	0.67	0.24
23.25	2.61	0.67	0.23
23.50	2.62	0.67	0.23
23.75	2.62	0.68	0.23
24.00	**2.63**	**0.68**	0.23

Summary for Subcatchment 4: DA-04 Post-development

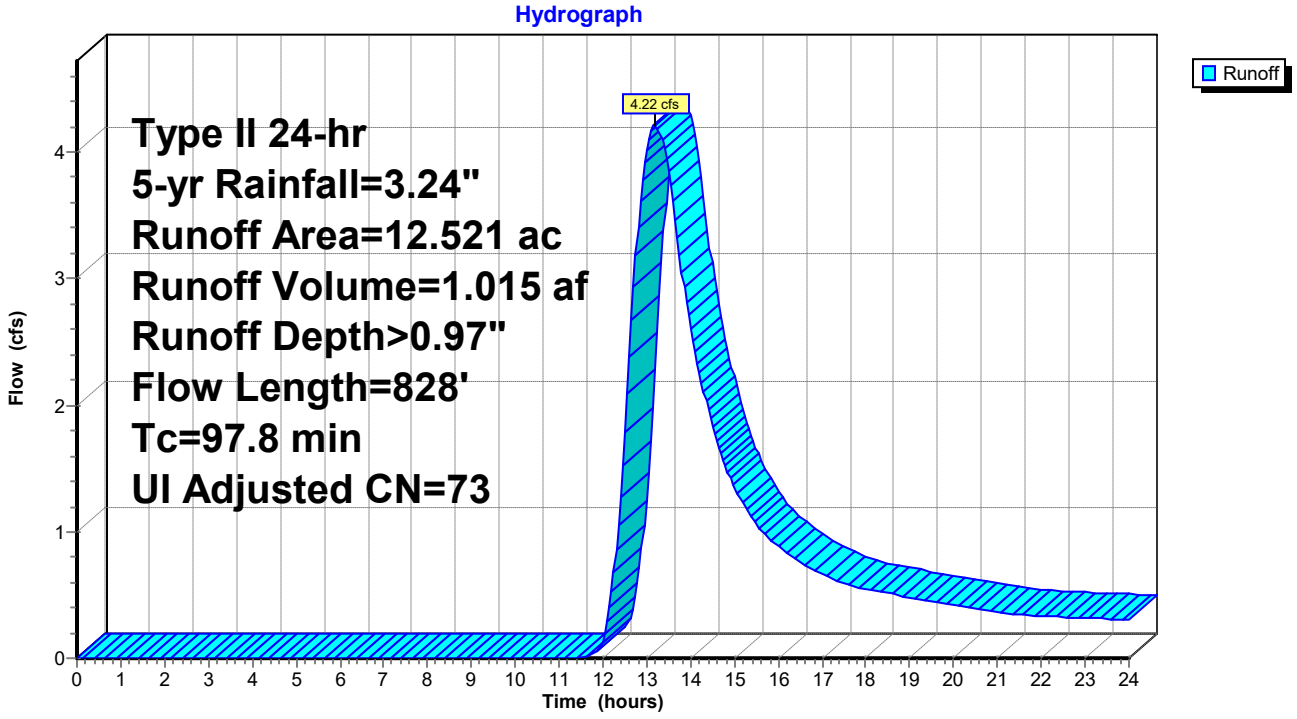
Runoff = 4.22 cfs @ 13.17 hrs, Volume= 1.015 af, Depth> 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=3.24"

	Area (ac)	CN	Adj	Description
	10.706	71		Meadow, non-grazed, HSG C
	0.373	89		Gravel roads, HSG C
	0.753	98		Unconnected pavement, HSG C
*	0.689	89		ballast aggregate, HSG C
	12.521	74	73	Weighted Average, UI Adjusted
	11.768			93.99% Pervious Area
	0.753			6.01% Impervious Area
	0.753			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
97.8	828	Total			

Subcatchment 4: DA-04 Post-development



Hydrograph for Subcatchment 4: DA-04 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.07	0.00	0.00
2.25	0.08	0.00	0.00
2.50	0.09	0.00	0.00
2.75	0.10	0.00	0.00
3.00	0.11	0.00	0.00
3.25	0.12	0.00	0.00
3.50	0.13	0.00	0.00
3.75	0.14	0.00	0.00
4.00	0.16	0.00	0.00
4.25	0.17	0.00	0.00
4.50	0.18	0.00	0.00
4.75	0.19	0.00	0.00
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.23	0.00	0.00
5.75	0.24	0.00	0.00
6.00	0.26	0.00	0.00
6.25	0.27	0.00	0.00
6.50	0.29	0.00	0.00
6.75	0.30	0.00	0.00
7.00	0.32	0.00	0.00
7.25	0.34	0.00	0.00
7.50	0.35	0.00	0.00
7.75	0.37	0.00	0.00
8.00	0.39	0.00	0.00
8.25	0.41	0.00	0.00
8.50	0.43	0.00	0.00
8.75	0.45	0.00	0.00
9.00	0.48	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.56	0.00	0.00
10.00	0.59	0.00	0.00
10.25	0.62	0.00	0.00
10.50	0.66	0.00	0.00
10.75	0.71	0.00	0.00
11.00	0.76	0.00	0.00
11.25	0.83	0.00	0.00
11.50	0.92	0.01	0.00
11.75	1.25	0.06	0.02
12.00	2.15	0.39	0.13
12.25	2.29	0.46	0.68
12.50	2.38	0.50	1.79
12.75	2.45	0.54	3.19
13.00	2.50	0.57	**4.02**
13.25	2.55	0.59	**4.18**
13.50	2.59	0.62	3.85
13.75	2.62	0.64	3.18
14.00	2.66	0.65	2.61
14.25	2.69	0.67	2.18
14.50	2.71	0.69	1.83
14.75	2.74	0.70	1.56
15.00	2.77	0.72	1.35
15.25	2.79	0.73	1.19
15.50	2.81	0.74	1.06
15.75	2.83	0.76	0.97
16.00	2.85	0.77	0.89
16.25	2.87	0.78	0.82
16.50	2.89	0.79	0.76
16.75	2.90	0.80	0.71
17.00	2.92	0.81	0.67
17.25	2.94	0.82	0.63
17.50	2.95	0.83	0.59
17.75	2.97	0.84	0.57
18.00	2.98	0.85	0.55
18.25	3.00	0.86	0.53
18.50	3.01	0.86	0.51
18.75	3.03	0.87	0.50
19.00	3.04	0.88	0.48
19.25	3.05	0.89	0.47
19.50	3.06	0.90	0.45
19.75	3.07	0.90	0.44
20.00	3.08	0.91	0.42
20.25	3.09	0.92	0.41
20.50	3.11	0.92	0.39
20.75	3.12	0.93	0.38
21.00	3.13	0.94	0.37
21.25	3.14	0.94	0.36
21.50	3.15	0.95	0.35
21.75	3.16	0.95	0.34
22.00	3.17	0.96	0.33
22.25	3.18	0.97	0.33
22.50	3.18	0.97	0.33
22.75	3.19	0.98	0.32
23.00	3.20	0.99	0.32
23.25	3.21	0.99	0.32
23.50	3.22	1.00	0.31
23.75	3.23	1.00	0.31
24.00	**3.24**	**1.01**	0.31

Summary for Subcatchment 4S: DA-04 Pre-development

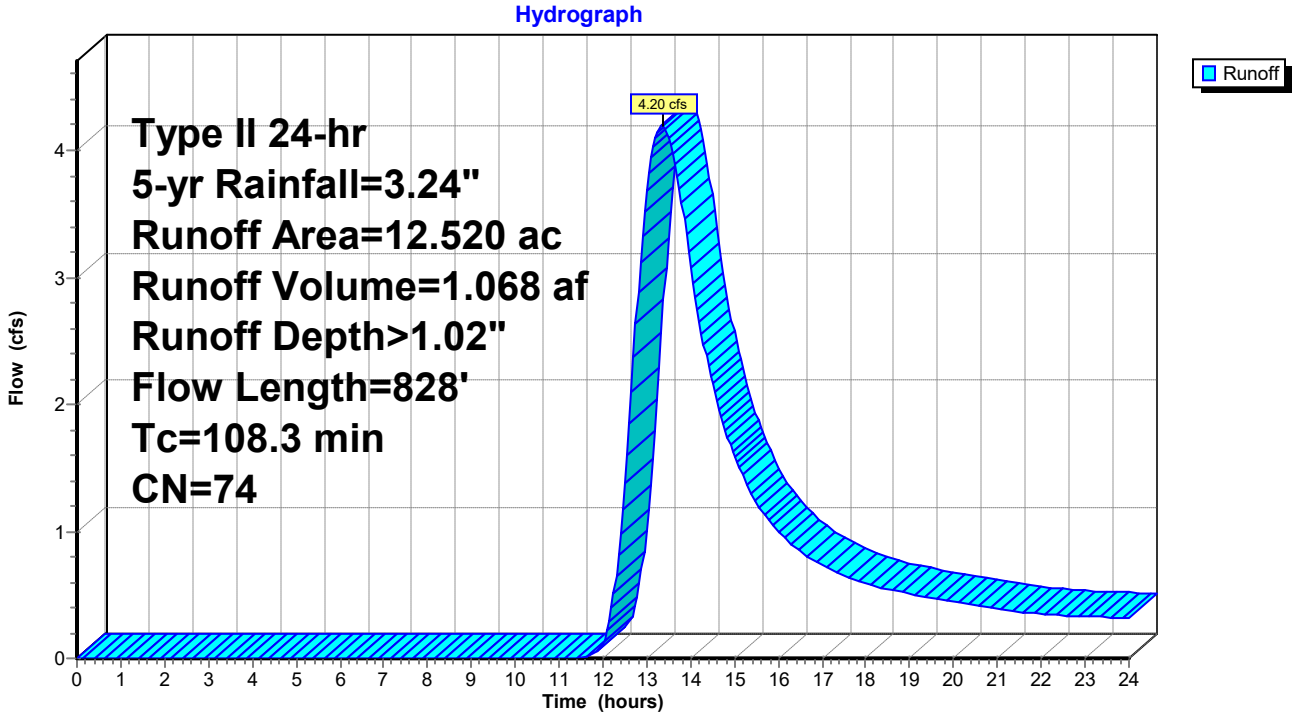
Runoff = 4.20 cfs @ 13.35 hrs, Volume= 1.068 af, Depth> 1.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 5-yr Rainfall=3.24"

Area (ac)	CN	Description
11.810	73	Woods, Fair, HSG C
0.710	89	Gravel roads, HSG C
12.520	74	Weighted Average
12.520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.3	100	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
108.3	828	Total			

Subcatchment 4S: DA-04 Pre-development



Hydrograph for Subcatchment 4S: DA-04 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.03	0.00	0.00
1.25	0.04	0.00	0.00
1.50	0.05	0.00	0.00
1.75	0.06	0.00	0.00
2.00	0.07	0.00	0.00
2.25	0.08	0.00	0.00
2.50	0.09	0.00	0.00
2.75	0.10	0.00	0.00
3.00	0.11	0.00	0.00
3.25	0.12	0.00	0.00
3.50	0.13	0.00	0.00
3.75	0.14	0.00	0.00
4.00	0.16	0.00	0.00
4.25	0.17	0.00	0.00
4.50	0.18	0.00	0.00
4.75	0.19	0.00	0.00
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.23	0.00	0.00
5.75	0.24	0.00	0.00
6.00	0.26	0.00	0.00
6.25	0.27	0.00	0.00
6.50	0.29	0.00	0.00
6.75	0.30	0.00	0.00
7.00	0.32	0.00	0.00
7.25	0.34	0.00	0.00
7.50	0.35	0.00	0.00
7.75	0.37	0.00	0.00
8.00	0.39	0.00	0.00
8.25	0.41	0.00	0.00
8.50	0.43	0.00	0.00
8.75	0.45	0.00	0.00
9.00	0.48	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.56	0.00	0.00
10.00	0.59	0.00	0.00
10.25	0.62	0.00	0.00
10.50	0.66	0.00	0.00
10.75	0.71	0.00	0.00
11.00	0.76	0.00	0.00
11.25	0.83	0.00	0.00
11.50	0.92	0.01	0.01
11.75	1.25	0.07	0.02
12.00	2.15	0.42	0.11
12.25	2.29	0.49	0.52
12.50	2.38	0.54	1.38
12.75	2.45	0.58	2.64
13.00	2.50	0.61	3.69
13.25	2.55	0.64	**4.15**
13.50	2.59	0.66	**4.10**
13.75	2.62	0.68	3.70
14.00	2.66	0.70	3.08
14.25	2.69	0.72	2.56
14.50	2.71	0.73	2.16
14.75	2.74	0.75	1.85
15.00	2.77	0.76	1.59
15.25	2.79	0.78	1.39
15.50	2.81	0.79	1.23
15.75	2.83	0.80	1.10
16.00	2.85	0.82	1.00
16.25	2.87	0.83	0.92
16.50	2.89	0.84	0.85
16.75	2.90	0.85	0.79
17.00	2.92	0.86	0.73
17.25	2.94	0.87	0.69
17.50	2.95	0.88	0.65
17.75	2.97	0.89	0.62
18.00	2.98	0.90	0.59
18.25	3.00	0.91	0.56
18.50	3.01	0.92	0.54
18.75	3.03	0.92	0.53
19.00	3.04	0.93	0.51
19.25	3.05	0.94	0.49
19.50	3.06	0.95	0.48
19.75	3.07	0.96	0.46
20.00	3.08	0.96	0.45
20.25	3.09	0.97	0.43
20.50	3.11	0.98	0.42
20.75	3.12	0.98	0.40
21.00	3.13	0.99	0.39
21.25	3.14	1.00	0.37
21.50	3.15	1.00	0.36
21.75	3.16	1.01	0.36
22.00	3.17	1.01	0.35
22.25	3.18	1.02	0.34
22.50	3.18	1.03	0.34
22.75	3.19	1.03	0.33
23.00	3.20	1.04	0.33
23.25	3.21	1.05	0.33
23.50	3.22	1.05	0.32
23.75	3.23	1.06	0.32
24.00	**3.24**	**1.06**	0.32

Summary for Subcatchment 4: DA-04 Post-development

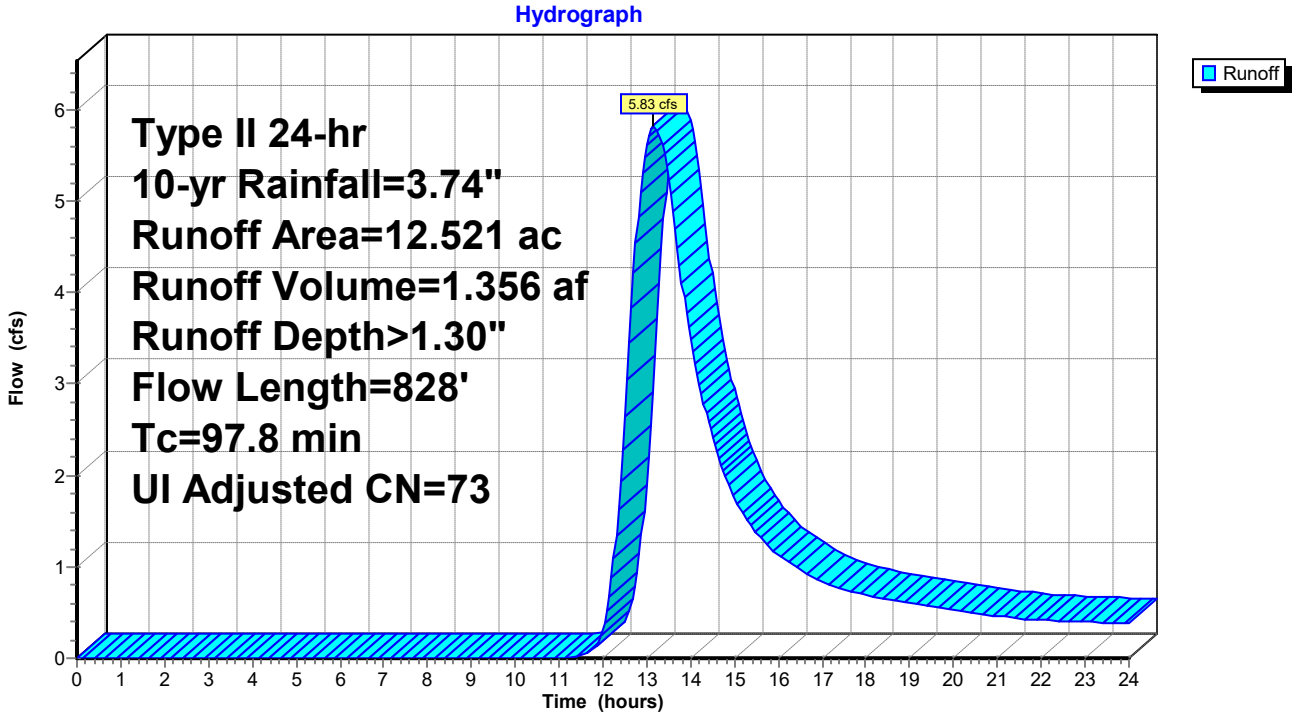
Runoff = 5.83 cfs @ 13.16 hrs, Volume= 1.356 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.74"

	Area (ac)	CN	Adj	Description
	10.706	71		Meadow, non-grazed, HSG C
	0.373	89		Gravel roads, HSG C
	0.753	98		Unconnected pavement, HSG C
*	0.689	89		ballast aggregate, HSG C
	12.521	74	73	Weighted Average, UI Adjusted
	11.768			93.99% Pervious Area
	0.753			6.01% Impervious Area
	0.753			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
97.8	828	Total			

Subcatchment 4: DA-04 Post-development



Hydrograph for Subcatchment 4: DA-04 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.00	2.89	0.79	**5.61**
0.25	0.01	0.00	0.00	13.25	2.94	0.82	**5.76**
0.50	0.02	0.00	0.00	13.50	2.99	0.85	5.24
0.75	0.03	0.00	0.00	13.75	3.03	0.88	4.29
1.00	0.04	0.00	0.00	14.00	3.07	0.90	3.49
1.25	0.05	0.00	0.00	14.25	3.10	0.92	2.89
1.50	0.06	0.00	0.00	14.50	3.13	0.94	2.41
1.75	0.07	0.00	0.00	14.75	3.16	0.96	2.05
2.00	0.08	0.00	0.00	15.00	3.19	0.98	1.76
2.25	0.09	0.00	0.00	15.25	3.22	1.00	1.54
2.50	0.11	0.00	0.00	15.50	3.24	1.01	1.37
2.75	0.12	0.00	0.00	15.75	3.27	1.03	1.24
3.00	0.13	0.00	0.00	16.00	3.29	1.04	1.13
3.25	0.14	0.00	0.00	16.25	3.31	1.06	1.04
3.50	0.15	0.00	0.00	16.50	3.33	1.07	0.97
3.75	0.17	0.00	0.00	16.75	3.35	1.08	0.90
4.00	0.18	0.00	0.00	17.00	3.37	1.09	0.84
4.25	0.19	0.00	0.00	17.25	3.39	1.11	0.79
4.50	0.21	0.00	0.00	17.50	3.41	1.12	0.75
4.75	0.22	0.00	0.00	17.75	3.43	1.13	0.72
5.00	0.24	0.00	0.00	18.00	3.44	1.14	0.69
5.25	0.25	0.00	0.00	18.25	3.46	1.15	0.67
5.50	0.27	0.00	0.00	18.50	3.48	1.16	0.65
5.75	0.28	0.00	0.00	18.75	3.49	1.17	0.63
6.00	0.30	0.00	0.00	19.00	3.51	1.18	0.61
6.25	0.32	0.00	0.00	19.25	3.52	1.19	0.59
6.50	0.33	0.00	0.00	19.50	3.54	1.20	0.57
6.75	0.35	0.00	0.00	19.75	3.55	1.21	0.55
7.00	0.37	0.00	0.00	20.00	3.56	1.22	0.53
7.25	0.39	0.00	0.00	20.25	3.57	1.23	0.51
7.50	0.41	0.00	0.00	20.50	3.58	1.24	0.49
7.75	0.43	0.00	0.00	20.75	3.60	1.24	0.48
8.00	0.45	0.00	0.00	21.00	3.61	1.25	0.46
8.25	0.47	0.00	0.00	21.25	3.62	1.26	0.45
8.50	0.49	0.00	0.00	21.50	3.63	1.27	0.43
8.75	0.52	0.00	0.00	21.75	3.64	1.28	0.42
9.00	0.55	0.00	0.00	22.00	3.65	1.28	0.42
9.25	0.58	0.00	0.00	22.25	3.67	1.29	0.41
9.50	0.61	0.00	0.00	22.50	3.68	1.30	0.41
9.75	0.64	0.00	0.00	22.75	3.69	1.31	0.40
10.00	0.68	0.00	0.00	23.00	3.70	1.31	0.40
10.25	0.72	0.00	0.00	23.25	3.71	1.32	0.39
10.50	0.76	0.00	0.00	23.50	3.72	1.33	0.39
10.75	0.82	0.00	0.00	23.75	3.73	1.34	0.39
11.00	0.88	0.01	0.00	24.00	**3.74**	**1.34**	0.38
11.25	0.96	0.01	0.01				
11.50	1.06	0.03	0.03				
11.75	1.45	0.11	0.08				
12.00	2.48	0.56	0.28				
12.25	2.64	0.65	1.09				
12.50	2.75	0.71	2.65				
12.75	2.82	0.75	4.53				

Summary for Subcatchment 4S: DA-04 Pre-development

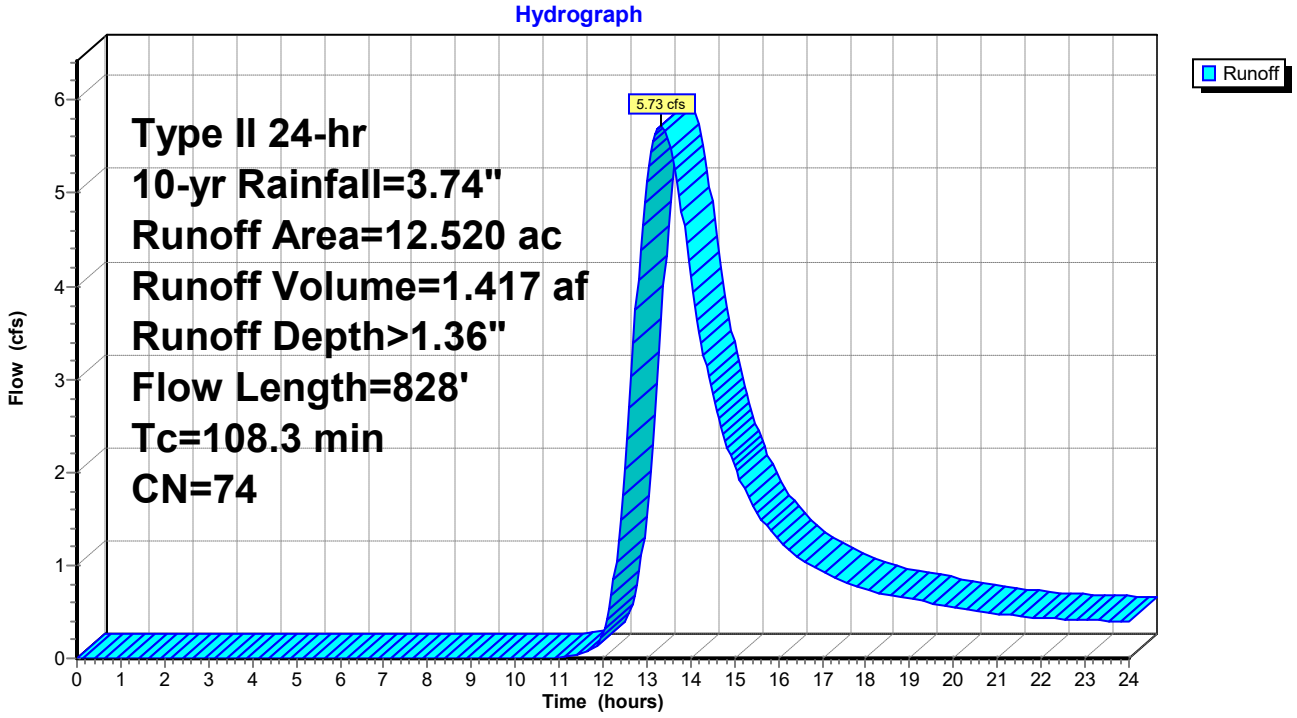
Runoff = 5.73 cfs @ 13.34 hrs, Volume= 1.417 af, Depth> 1.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.74"

Area (ac)	CN	Description
11.810	73	Woods, Fair, HSG C
0.710	89	Gravel roads, HSG C
12.520	74	Weighted Average
12.520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.3	100	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
108.3	828	Total			

Subcatchment 4S: DA-04 Pre-development



Hydrograph for Subcatchment 4S: DA-04 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.04	0.00	0.00
1.25	0.05	0.00	0.00
1.50	0.06	0.00	0.00
1.75	0.07	0.00	0.00
2.00	0.08	0.00	0.00
2.25	0.09	0.00	0.00
2.50	0.11	0.00	0.00
2.75	0.12	0.00	0.00
3.00	0.13	0.00	0.00
3.25	0.14	0.00	0.00
3.50	0.15	0.00	0.00
3.75	0.17	0.00	0.00
4.00	0.18	0.00	0.00
4.25	0.19	0.00	0.00
4.50	0.21	0.00	0.00
4.75	0.22	0.00	0.00
5.00	0.24	0.00	0.00
5.25	0.25	0.00	0.00
5.50	0.27	0.00	0.00
5.75	0.28	0.00	0.00
6.00	0.30	0.00	0.00
6.25	0.32	0.00	0.00
6.50	0.33	0.00	0.00
6.75	0.35	0.00	0.00
7.00	0.37	0.00	0.00
7.25	0.39	0.00	0.00
7.50	0.41	0.00	0.00
7.75	0.43	0.00	0.00
8.00	0.45	0.00	0.00
8.25	0.47	0.00	0.00
8.50	0.49	0.00	0.00
8.75	0.52	0.00	0.00
9.00	0.55	0.00	0.00
9.25	0.58	0.00	0.00
9.50	0.61	0.00	0.00
9.75	0.64	0.00	0.00
10.00	0.68	0.00	0.00
10.25	0.72	0.00	0.00
10.50	0.76	0.00	0.00
10.75	0.82	0.00	0.00
11.00	0.88	0.01	0.01
11.25	0.96	0.02	0.02
11.50	1.06	0.03	0.04
11.75	1.45	0.13	0.09
12.00	2.48	0.60	0.25
12.25	2.64	0.69	0.84
12.50	2.75	0.75	2.04
12.75	2.82	0.80	3.74
13.00	2.89	0.84	5.12
13.25	2.94	0.87	**5.68**
13.50	2.99	0.90	**5.56**
13.75	3.03	0.93	4.97
14.00	3.07	0.95	4.10
14.25	3.10	0.97	3.38
14.50	3.13	0.99	2.84
14.75	3.16	1.01	2.41
15.00	3.19	1.03	2.07
15.25	3.22	1.05	1.79
15.50	3.24	1.07	1.58
15.75	3.27	1.08	1.41
16.00	3.29	1.10	1.28
16.25	3.31	1.11	1.17
16.50	3.33	1.13	1.07
16.75	3.35	1.14	0.99
17.00	3.37	1.15	0.93
17.25	3.39	1.17	0.87
17.50	3.41	1.18	0.82
17.75	3.43	1.19	0.77
18.00	3.44	1.20	0.74
18.25	3.46	1.21	0.71
18.50	3.48	1.22	0.68
18.75	3.49	1.23	0.66
19.00	3.51	1.24	0.64
19.25	3.52	1.25	0.62
19.50	3.54	1.26	0.60
19.75	3.55	1.27	0.58
20.00	3.56	1.28	0.56
20.25	3.57	1.29	0.54
20.50	3.58	1.30	0.52
20.75	3.60	1.31	0.50
21.00	3.61	1.32	0.48
21.25	3.62	1.32	0.47
21.50	3.63	1.33	0.45
21.75	3.64	1.34	0.44
22.00	3.65	1.35	0.44
22.25	3.67	1.36	0.43
22.50	3.68	1.36	0.42
22.75	3.69	1.37	0.42
23.00	3.70	1.38	0.41
23.25	3.71	1.39	0.41
23.50	3.72	1.39	0.40
23.75	3.73	1.40	0.40
24.00	**3.74**	**1.41**	0.40

Summary for Subcatchment 4: DA-04 Post-development

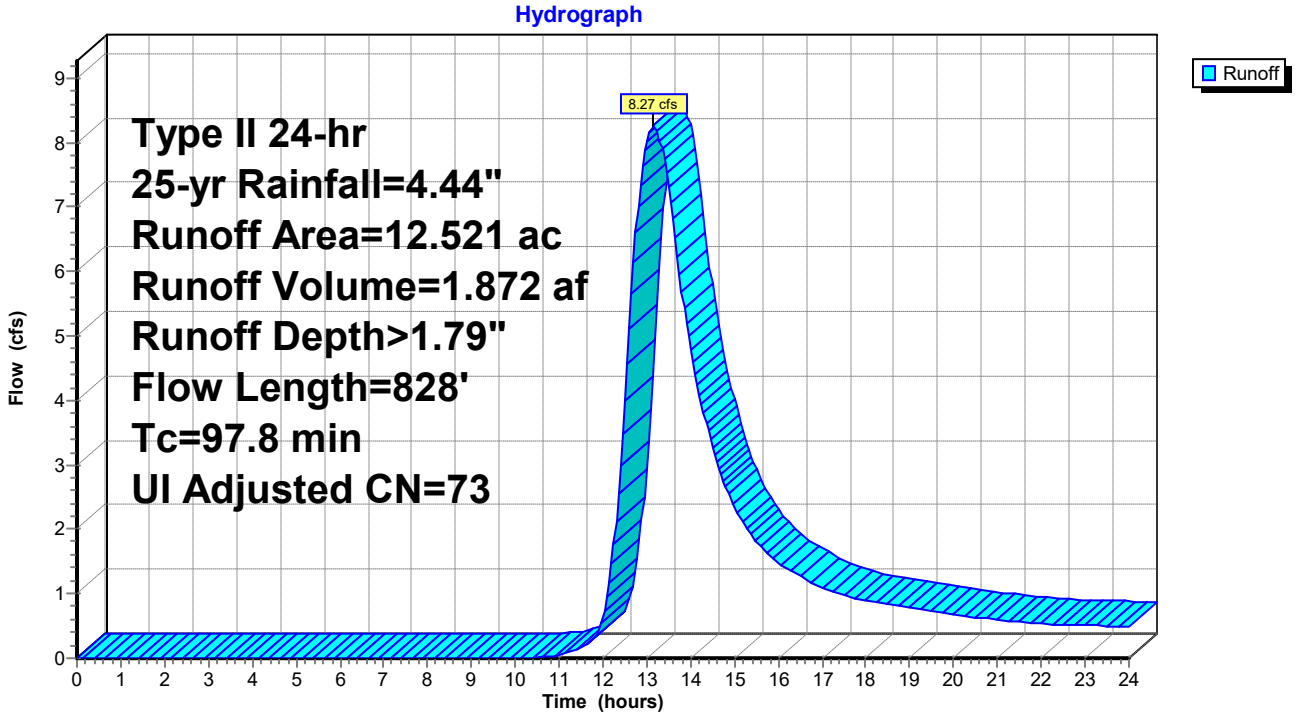
Runoff = 8.27 cfs @ 13.15 hrs, Volume= 1.872 af, Depth> 1.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=4.44"

	Area (ac)	CN	Adj	Description
	10.706	71		Meadow, non-grazed, HSG C
	0.373	89		Gravel roads, HSG C
	0.753	98		Unconnected pavement, HSG C
*	0.689	89		ballast aggregate, HSG C
	12.521	74	73	Weighted Average, UI Adjusted
	11.768			93.99% Pervious Area
	0.753			6.01% Impervious Area
	0.753			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
97.8	828	Total			

Subcatchment 4: DA-04 Post-development



Hydrograph for Subcatchment 4: DA-04 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.10	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.14	0.00	0.00
3.00	0.15	0.00	0.00
3.25	0.17	0.00	0.00
3.50	0.18	0.00	0.00
3.75	0.20	0.00	0.00
4.00	0.21	0.00	0.00
4.25	0.23	0.00	0.00
4.50	0.25	0.00	0.00
4.75	0.26	0.00	0.00
5.00	0.28	0.00	0.00
5.25	0.30	0.00	0.00
5.50	0.32	0.00	0.00
5.75	0.34	0.00	0.00
6.00	0.36	0.00	0.00
6.25	0.38	0.00	0.00
6.50	0.40	0.00	0.00
6.75	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.25	0.46	0.00	0.00
7.50	0.49	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.53	0.00	0.00
8.25	0.56	0.00	0.00
8.50	0.59	0.00	0.00
8.75	0.62	0.00	0.00
9.00	0.65	0.00	0.00
9.25	0.69	0.00	0.00
9.50	0.72	0.00	0.00
9.75	0.76	0.00	0.00
10.00	0.80	0.00	0.00
10.25	0.85	0.00	0.00
10.50	0.91	0.01	0.01
10.75	0.97	0.01	0.02
11.00	1.04	0.02	0.05
11.25	1.14	0.04	0.09
11.50	1.26	0.06	0.16
11.75	1.72	0.20	0.27
12.00	2.94	0.82	0.60
12.25	3.14	0.94	1.78
12.50	3.26	1.02	3.99
12.75	3.35	1.08	6.60
13.00	3.43	1.13	**8.02**
13.25	3.49	1.17	**8.14**
13.50	3.55	1.21	7.32
13.75	3.60	1.25	5.94
14.00	3.64	1.28	4.79
14.25	3.68	1.30	3.94
14.50	3.72	1.33	3.27
14.75	3.76	1.35	2.75
15.00	3.79	1.38	2.35
15.25	3.82	1.40	2.05
15.50	3.85	1.42	1.81
15.75	3.88	1.44	1.63
16.00	3.91	1.46	1.49
16.25	3.93	1.48	1.37
16.50	3.96	1.50	1.26
16.75	3.98	1.51	1.18
17.00	4.00	1.53	1.10
17.25	4.03	1.55	1.03
17.50	4.05	1.56	0.97
17.75	4.07	1.58	0.93
18.00	4.09	1.59	0.90
18.25	4.11	1.61	0.86
18.50	4.13	1.62	0.84
18.75	4.15	1.63	0.81
19.00	4.16	1.65	0.78
19.25	4.18	1.66	0.76
19.50	4.20	1.67	0.73
19.75	4.21	1.68	0.71
20.00	4.23	1.69	0.68
20.25	4.24	1.70	0.66
20.50	4.26	1.71	0.64
20.75	4.27	1.72	0.61
21.00	4.28	1.73	0.59
21.25	4.30	1.74	0.57
21.50	4.31	1.75	0.56
21.75	4.32	1.76	0.55
22.00	4.34	1.77	0.54
22.25	4.35	1.78	0.53
22.50	4.36	1.79	0.52
22.75	4.38	1.80	0.52
23.00	4.39	1.81	0.51
23.25	4.40	1.82	0.51
23.50	4.42	1.83	0.50
23.75	4.43	1.84	0.50
24.00	**4.44**	**1.85**	0.49

Summary for Subcatchment 4S: DA-04 Pre-development

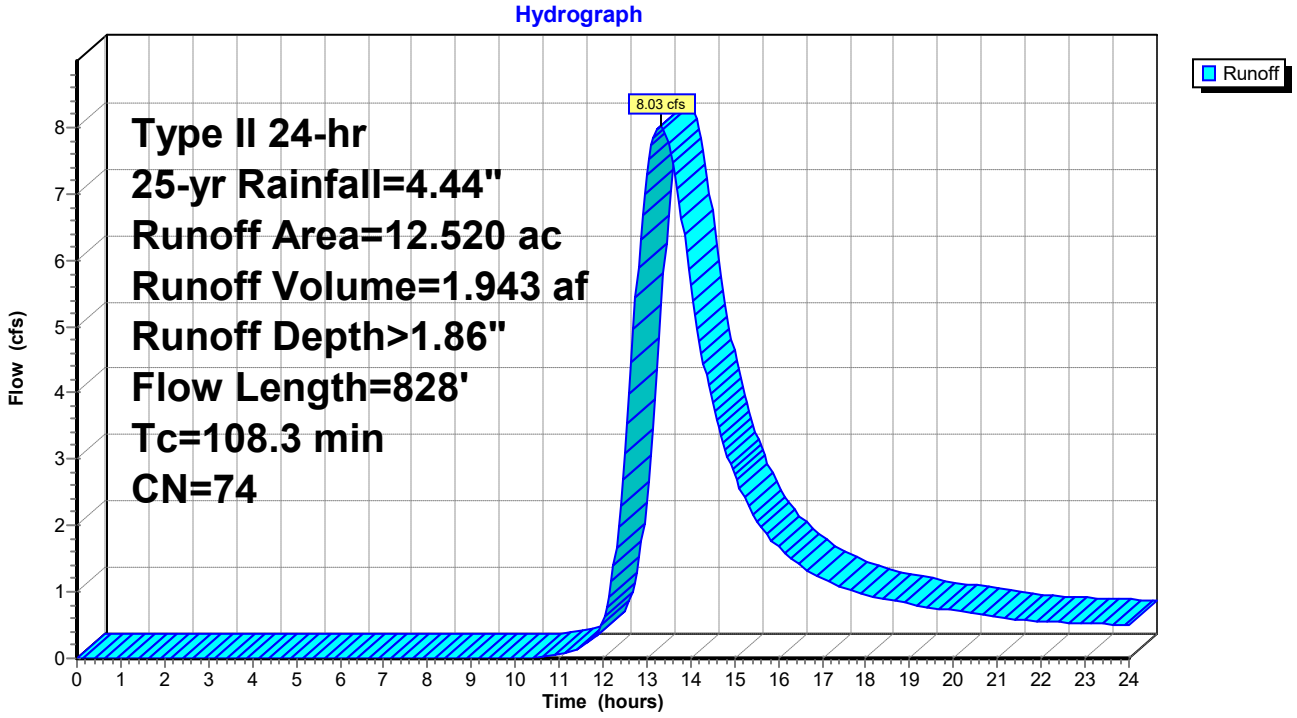
Runoff = 8.03 cfs @ 13.33 hrs, Volume= 1.943 af, Depth> 1.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-yr Rainfall=4.44"

Area (ac)	CN	Description
11.810	73	Woods, Fair, HSG C
0.710	89	Gravel roads, HSG C
12.520	74	Weighted Average
12.520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.3	100	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
108.3	828	Total			

Subcatchment 4S: DA-04 Pre-development



Hydrograph for Subcatchment 4S: DA-04 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.02	0.00	0.00
0.75	0.03	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.06	0.00	0.00
1.50	0.07	0.00	0.00
1.75	0.08	0.00	0.00
2.00	0.10	0.00	0.00
2.25	0.11	0.00	0.00
2.50	0.12	0.00	0.00
2.75	0.14	0.00	0.00
3.00	0.15	0.00	0.00
3.25	0.17	0.00	0.00
3.50	0.18	0.00	0.00
3.75	0.20	0.00	0.00
4.00	0.21	0.00	0.00
4.25	0.23	0.00	0.00
4.50	0.25	0.00	0.00
4.75	0.26	0.00	0.00
5.00	0.28	0.00	0.00
5.25	0.30	0.00	0.00
5.50	0.32	0.00	0.00
5.75	0.34	0.00	0.00
6.00	0.36	0.00	0.00
6.25	0.38	0.00	0.00
6.50	0.40	0.00	0.00
6.75	0.42	0.00	0.00
7.00	0.44	0.00	0.00
7.25	0.46	0.00	0.00
7.50	0.49	0.00	0.00
7.75	0.51	0.00	0.00
8.00	0.53	0.00	0.00
8.25	0.56	0.00	0.00
8.50	0.59	0.00	0.00
8.75	0.62	0.00	0.00
9.00	0.65	0.00	0.00
9.25	0.69	0.00	0.00
9.50	0.72	0.00	0.00
9.75	0.76	0.00	0.00
10.00	0.80	0.00	0.00
10.25	0.85	0.01	0.00
10.50	0.91	0.01	0.01
10.75	0.97	0.02	0.03
11.00	1.04	0.03	0.06
11.25	1.14	0.05	0.10
11.50	1.26	0.08	0.17
11.75	1.72	0.23	0.27
12.00	2.94	0.87	0.53
12.25	3.14	1.00	1.39
12.50	3.26	1.08	3.09
12.75	3.35	1.14	5.44
13.00	3.43	1.19	7.29
13.25	3.49	1.23	**7.99**
13.50	3.55	1.27	**7.75**
13.75	3.60	1.31	6.86
14.00	3.64	1.34	5.61
14.25	3.68	1.37	4.60
14.50	3.72	1.39	3.84
14.75	3.76	1.42	3.24
15.00	3.79	1.44	2.76
15.25	3.82	1.47	2.39
15.50	3.85	1.49	2.09
15.75	3.88	1.51	1.86
16.00	3.91	1.53	1.68
16.25	3.93	1.55	1.53
16.50	3.96	1.56	1.40
16.75	3.98	1.58	1.30
17.00	4.00	1.60	1.20
17.25	4.03	1.62	1.13
17.50	4.05	1.63	1.06
17.75	4.07	1.65	1.00
18.00	4.09	1.66	0.95
18.25	4.11	1.68	0.91
18.50	4.13	1.69	0.88
18.75	4.15	1.70	0.85
19.00	4.16	1.72	0.82
19.25	4.18	1.73	0.79
19.50	4.20	1.74	0.77
19.75	4.21	1.75	0.74
20.00	4.23	1.76	0.72
20.25	4.24	1.78	0.69
20.50	4.26	1.79	0.67
20.75	4.27	1.80	0.64
21.00	4.28	1.81	0.62
21.25	4.30	1.82	0.60
21.50	4.31	1.83	0.58
21.75	4.32	1.84	0.57
22.00	4.34	1.85	0.56
22.25	4.35	1.86	0.55
22.50	4.36	1.87	0.54
22.75	4.38	1.88	0.53
23.00	4.39	1.89	0.53
23.25	4.40	1.90	0.52
23.50	4.42	1.91	0.52
23.75	4.43	1.92	0.51
24.00	**4.44**	**1.93**	0.50

Summary for Subcatchment 4: DA-04 Post-development

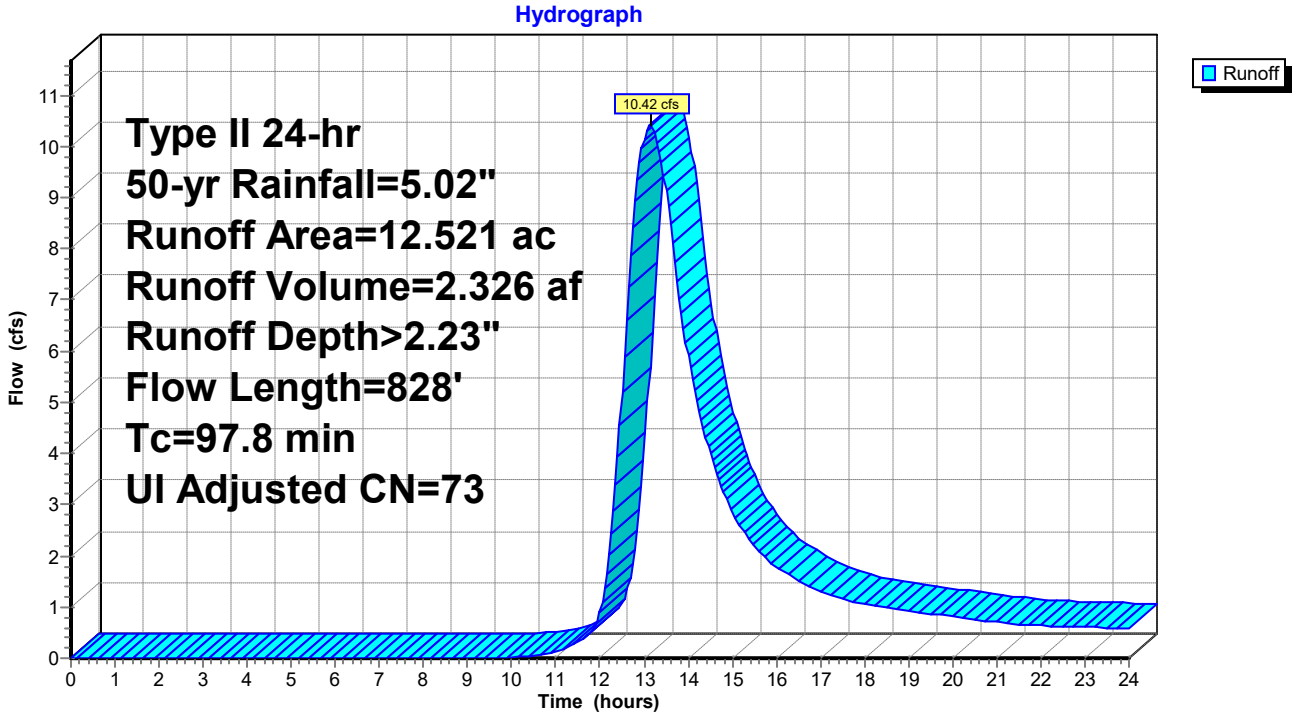
Runoff = 10.42 cfs @ 13.14 hrs, Volume= 2.326 af, Depth> 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=5.02"

	Area (ac)	CN	Adj	Description
	10.706	71		Meadow, non-grazed, HSG C
	0.373	89		Gravel roads, HSG C
	0.753	98		Unconnected pavement, HSG C
*	0.689	89		ballast aggregate, HSG C
	12.521	74	73	Weighted Average, UI Adjusted
	11.768			93.99% Pervious Area
	0.753			6.01% Impervious Area
	0.753			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
97.8	828	Total			

Subcatchment 4: DA-04 Post-development



Hydrograph for Subcatchment 4: DA-04 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.13	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.16	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.21	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.26	0.00	0.00
4.50	0.28	0.00	0.00
4.75	0.30	0.00	0.00
5.00	0.32	0.00	0.00
5.25	0.34	0.00	0.00
5.50	0.36	0.00	0.00
5.75	0.38	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.45	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.52	0.00	0.00
7.50	0.55	0.00	0.00
7.75	0.58	0.00	0.00
8.00	0.60	0.00	0.00
8.25	0.63	0.00	0.00
8.50	0.66	0.00	0.00
8.75	0.70	0.00	0.00
9.00	0.74	0.00	0.00
9.25	0.78	0.00	0.00
9.50	0.82	0.00	0.00
9.75	0.86	0.00	0.00
10.00	0.91	0.01	0.01
10.25	0.96	0.01	0.03
10.50	1.02	0.02	0.05
10.75	1.10	0.03	0.09
11.00	1.18	0.05	0.14
11.25	1.29	0.07	0.21
11.50	1.42	0.11	0.32
11.75	1.94	0.30	0.47
12.00	3.33	1.07	0.91
12.25	3.54	1.21	2.41
12.50	3.69	1.31	5.20
12.75	3.79	1.38	8.43
13.00	3.88	1.44	**10.14**
13.25	3.95	1.49	**10.22**
13.50	4.01	1.54	9.14
13.75	4.07	1.58	7.37
14.00	4.12	1.61	5.91
14.25	4.16	1.64	4.84
14.50	4.20	1.68	4.00
14.75	4.25	1.71	3.36
15.00	4.28	1.73	2.86
15.25	4.32	1.76	2.48
15.50	4.36	1.79	2.19
15.75	4.39	1.81	1.97
16.00	4.42	1.83	1.79
16.25	4.45	1.86	1.64
16.50	4.47	1.88	1.52
16.75	4.50	1.90	1.41
17.00	4.53	1.92	1.31
17.25	4.55	1.94	1.23
17.50	4.58	1.95	1.16
17.75	4.60	1.97	1.11
18.00	4.62	1.99	1.07
18.25	4.65	2.01	1.03
18.50	4.67	2.02	0.99
18.75	4.69	2.04	0.96
19.00	4.71	2.05	0.93
19.25	4.73	2.07	0.90
19.50	4.74	2.08	0.87
19.75	4.76	2.10	0.84
20.00	4.78	2.11	0.81
20.25	4.80	2.12	0.78
20.50	4.81	2.13	0.76
20.75	4.83	2.15	0.73
21.00	4.84	2.16	0.70
21.25	4.86	2.17	0.68
21.50	4.87	2.18	0.66
21.75	4.89	2.19	0.65
22.00	4.90	2.21	0.64
22.25	4.92	2.22	0.63
22.50	4.93	2.23	0.62
22.75	4.95	2.24	0.61
23.00	4.96	2.25	0.61
23.25	4.98	2.26	0.60
23.50	4.99	2.27	0.59
23.75	5.01	2.29	0.59
24.00	**5.02**	**2.30**	0.58

Summary for Subcatchment 4S: DA-04 Pre-development

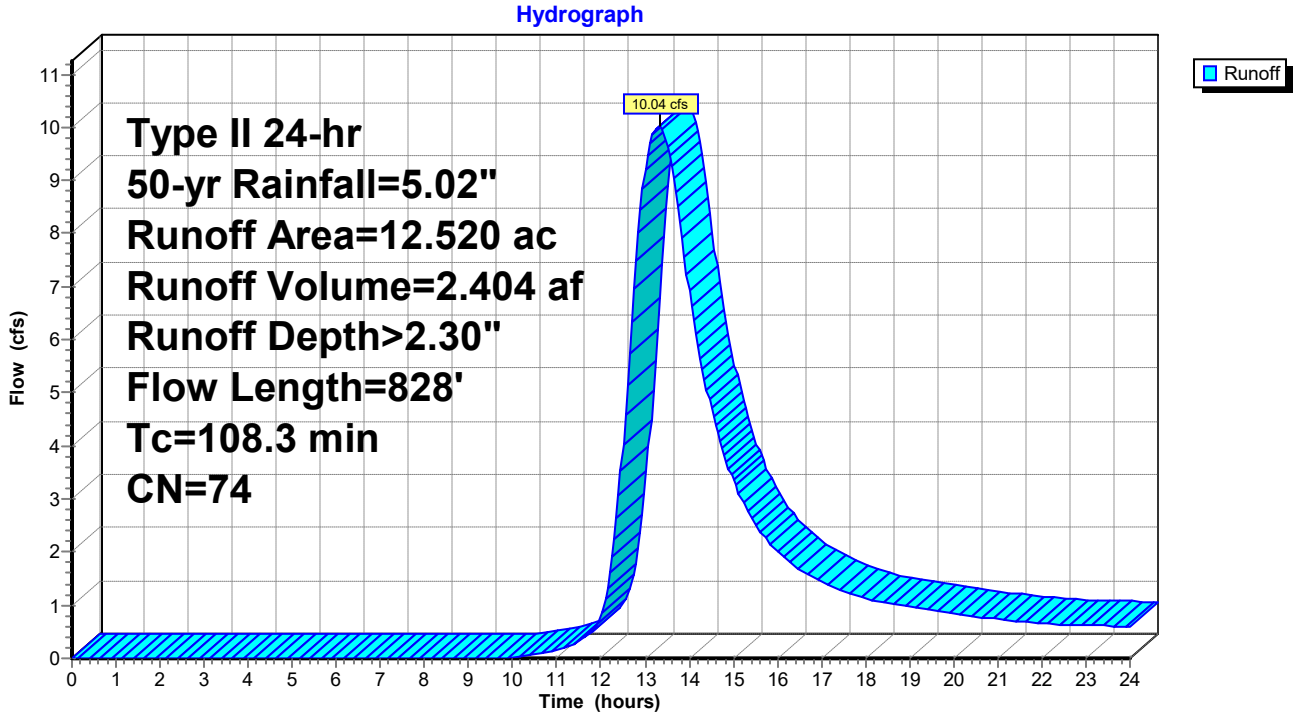
Runoff = 10.04 cfs @ 13.33 hrs, Volume= 2.404 af, Depth> 2.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50-yr Rainfall=5.02"

Area (ac)	CN	Description
11.810	73	Woods, Fair, HSG C
0.710	89	Gravel roads, HSG C
12.520	74	Weighted Average
12.520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.3	100	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
108.3	828	Total			

Subcatchment 4S: DA-04 Pre-development



Hydrograph for Subcatchment 4S: DA-04 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.05	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.08	0.00	0.00
1.75	0.10	0.00	0.00
2.00	0.11	0.00	0.00
2.25	0.13	0.00	0.00
2.50	0.14	0.00	0.00
2.75	0.16	0.00	0.00
3.00	0.17	0.00	0.00
3.25	0.19	0.00	0.00
3.50	0.21	0.00	0.00
3.75	0.22	0.00	0.00
4.00	0.24	0.00	0.00
4.25	0.26	0.00	0.00
4.50	0.28	0.00	0.00
4.75	0.30	0.00	0.00
5.00	0.32	0.00	0.00
5.25	0.34	0.00	0.00
5.50	0.36	0.00	0.00
5.75	0.38	0.00	0.00
6.00	0.40	0.00	0.00
6.25	0.42	0.00	0.00
6.50	0.45	0.00	0.00
6.75	0.47	0.00	0.00
7.00	0.50	0.00	0.00
7.25	0.52	0.00	0.00
7.50	0.55	0.00	0.00
7.75	0.58	0.00	0.00
8.00	0.60	0.00	0.00
8.25	0.63	0.00	0.00
8.50	0.66	0.00	0.00
8.75	0.70	0.00	0.00
9.00	0.74	0.00	0.00
9.25	0.78	0.00	0.00
9.50	0.82	0.00	0.00
9.75	0.86	0.01	0.01
10.00	0.91	0.01	0.02
10.25	0.96	0.02	0.04
10.50	1.02	0.03	0.06
10.75	1.10	0.04	0.10
11.00	1.18	0.06	0.15
11.25	1.29	0.08	0.22
11.50	1.42	0.12	0.32
11.75	1.94	0.32	0.46
12.00	3.33	1.12	0.81
12.25	3.54	1.27	1.91
12.50	3.69	1.37	4.03
12.75	3.79	1.44	6.95
13.00	3.88	1.51	9.20
13.25	3.95	1.56	**10.01**
13.50	4.01	1.60	**9.65**
13.75	4.07	1.65	8.50
14.00	4.12	1.68	6.93
14.25	4.16	1.72	5.66
14.50	4.20	1.75	4.70
14.75	4.25	1.78	3.96
15.00	4.28	1.81	3.36
15.25	4.32	1.84	2.89
15.50	4.36	1.86	2.53
15.75	4.39	1.89	2.24
16.00	4.42	1.91	2.02
16.25	4.45	1.93	1.83
16.50	4.47	1.95	1.68
16.75	4.50	1.97	1.55
17.00	4.53	1.99	1.44
17.25	4.55	2.01	1.34
17.50	4.58	2.03	1.26
17.75	4.60	2.05	1.19
18.00	4.62	2.07	1.13
18.25	4.65	2.08	1.08
18.50	4.67	2.10	1.04
18.75	4.69	2.12	1.01
19.00	4.71	2.13	0.97
19.25	4.73	2.15	0.94
19.50	4.74	2.16	0.91
19.75	4.76	2.18	0.88
20.00	4.78	2.19	0.85
20.25	4.80	2.20	0.82
20.50	4.81	2.21	0.79
20.75	4.83	2.23	0.76
21.00	4.84	2.24	0.73
21.25	4.86	2.25	0.71
21.50	4.87	2.26	0.69
21.75	4.89	2.28	0.67
22.00	4.90	2.29	0.66
22.25	4.92	2.30	0.65
22.50	4.93	2.31	0.64
22.75	4.95	2.32	0.63
23.00	4.96	2.34	0.62
23.25	4.98	2.35	0.62
23.50	4.99	2.36	0.61
23.75	5.01	2.37	0.60
24.00	**5.02**	**2.38**	0.60

Summary for Subcatchment 4: DA-04 Post-development

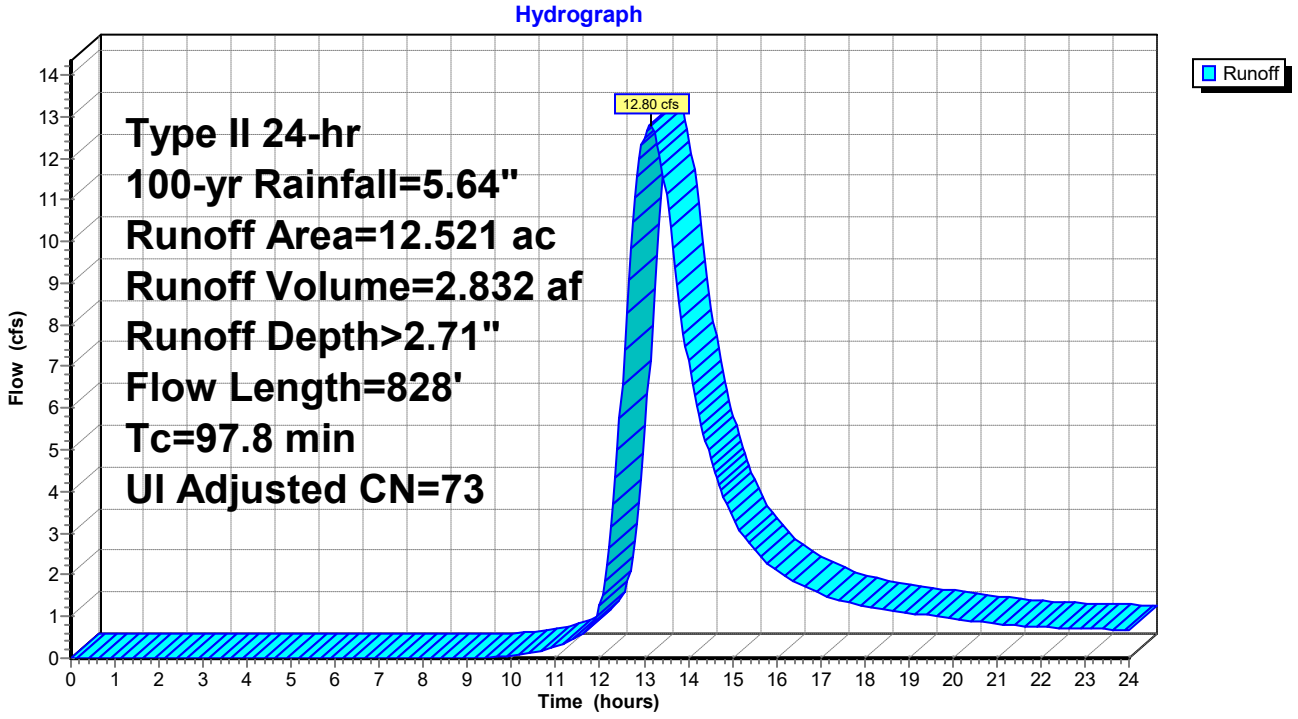
Runoff = 12.80 cfs @ 13.14 hrs, Volume= 2.832 af, Depth> 2.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.64"

	Area (ac)	CN	Adj	Description
	10.706	71		Meadow, non-grazed, HSG C
	0.373	89		Gravel roads, HSG C
	0.753	98		Unconnected pavement, HSG C
*	0.689	89		ballast aggregate, HSG C
	12.521	74	73	Weighted Average, UI Adjusted
	11.768			93.99% Pervious Area
	0.753			6.01% Impervious Area
	0.753			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
97.8	828	Total			

Subcatchment 4: DA-04 Post-development



Hydrograph for Subcatchment 4: DA-04 Post-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.12	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.50	0.00	0.00
6.75	0.53	0.00	0.00
7.00	0.56	0.00	0.00
7.25	0.59	0.00	0.00
7.50	0.62	0.00	0.00
7.75	0.65	0.00	0.00
8.00	0.68	0.00	0.00
8.25	0.71	0.00	0.00
8.50	0.75	0.00	0.00
8.75	0.79	0.00	0.00
9.00	0.83	0.00	0.00
9.25	0.87	0.00	0.00
9.50	0.92	0.01	0.01
9.75	0.97	0.01	0.03
10.00	1.02	0.02	0.06
10.25	1.08	0.03	0.09
10.50	1.15	0.04	0.14
10.75	1.23	0.06	0.20
11.00	1.33	0.08	0.27
11.25	1.44	0.11	0.37
11.50	1.60	0.16	0.51
11.75	2.18	0.40	0.72
12.00	3.74	1.34	1.27
12.25	3.98	1.51	3.15
12.50	4.15	1.63	6.56
12.75	4.26	1.72	10.47
13.00	4.35	1.79	**12.50**
13.25	4.44	1.85	**12.53**
13.50	4.51	1.90	11.14
13.75	4.57	1.95	8.95
14.00	4.62	1.99	7.15
14.25	4.68	2.03	5.83
14.50	4.72	2.07	4.81
14.75	4.77	2.10	4.02
15.00	4.81	2.14	3.41
15.25	4.85	2.17	2.95
15.50	4.89	2.20	2.60
15.75	4.93	2.23	2.33
16.00	4.96	2.25	2.12
16.25	5.00	2.28	1.94
16.50	5.03	2.30	1.79
16.75	5.06	2.32	1.66
17.00	5.09	2.35	1.54
17.25	5.11	2.37	1.44
17.50	5.14	2.39	1.36
17.75	5.17	2.41	1.30
18.00	5.19	2.43	1.25
18.25	5.22	2.45	1.21
18.50	5.24	2.47	1.17
18.75	5.27	2.49	1.13
19.00	5.29	2.51	1.09
19.25	5.31	2.53	1.06
19.50	5.33	2.54	1.02
19.75	5.35	2.56	0.99
20.00	5.37	2.57	0.95
20.25	5.39	2.59	0.92
20.50	5.41	2.60	0.88
20.75	5.42	2.62	0.85
21.00	5.44	2.63	0.82
21.25	5.46	2.65	0.80
21.50	5.48	2.66	0.77
21.75	5.49	2.67	0.76
22.00	5.51	2.69	0.75
22.25	5.53	2.70	0.73
22.50	5.54	2.71	0.72
22.75	5.56	2.73	0.72
23.00	5.58	2.74	0.71
23.25	5.59	2.75	0.70
23.50	5.61	2.77	0.69
23.75	5.62	2.78	0.69
24.00	**5.64**	**2.79**	0.68

Summary for Subcatchment 4S: DA-04 Pre-development

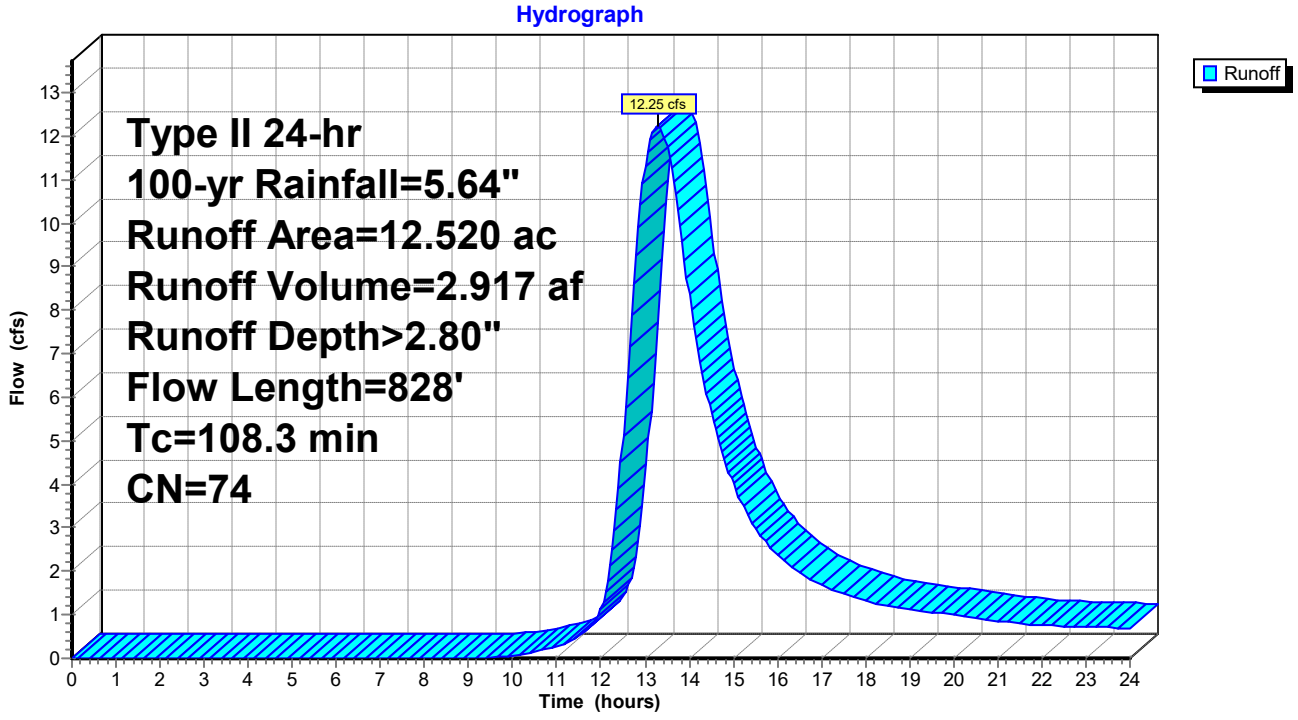
Runoff = 12.25 cfs @ 13.31 hrs, Volume= 2.917 af, Depth> 2.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.64"

Area (ac)	CN	Description
11.810	73	Woods, Fair, HSG C
0.710	89	Gravel roads, HSG C
12.520	74	Weighted Average
12.520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.3	100	0.0100	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.63"
77.0	728	0.0097	0.16		**Shallow Concentrated Flow,** Kv= 1.6 fps
108.3	828	Total			

Subcatchment 4S: DA-04 Pre-development



Hydrograph for Subcatchment 4S: DA-04 Pre-development

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
0.25	0.01	0.00	0.00
0.50	0.03	0.00	0.00
0.75	0.04	0.00	0.00
1.00	0.06	0.00	0.00
1.25	0.07	0.00	0.00
1.50	0.09	0.00	0.00
1.75	0.11	0.00	0.00
2.00	0.12	0.00	0.00
2.25	0.14	0.00	0.00
2.50	0.16	0.00	0.00
2.75	0.18	0.00	0.00
3.00	0.19	0.00	0.00
3.25	0.21	0.00	0.00
3.50	0.23	0.00	0.00
3.75	0.25	0.00	0.00
4.00	0.27	0.00	0.00
4.25	0.29	0.00	0.00
4.50	0.31	0.00	0.00
4.75	0.33	0.00	0.00
5.00	0.36	0.00	0.00
5.25	0.38	0.00	0.00
5.50	0.40	0.00	0.00
5.75	0.43	0.00	0.00
6.00	0.45	0.00	0.00
6.25	0.48	0.00	0.00
6.50	0.50	0.00	0.00
6.75	0.53	0.00	0.00
7.00	0.56	0.00	0.00
7.25	0.59	0.00	0.00
7.50	0.62	0.00	0.00
7.75	0.65	0.00	0.00
8.00	0.68	0.00	0.00
8.25	0.71	0.00	0.00
8.50	0.75	0.00	0.00
8.75	0.79	0.00	0.00
9.00	0.83	0.00	0.00
9.25	0.87	0.01	0.01
9.50	0.92	0.01	0.02
9.75	0.97	0.02	0.04
10.00	1.02	0.03	0.07
10.25	1.08	0.04	0.11
10.50	1.15	0.05	0.15
10.75	1.23	0.07	0.21
11.00	1.33	0.09	0.28
11.25	1.44	0.13	0.38
11.50	1.60	0.18	0.51
11.75	2.18	0.44	0.69
12.00	3.74	1.41	1.14
12.25	3.98	1.58	2.50
12.50	4.15	1.70	5.10
12.75	4.26	1.79	8.63
13.00	4.35	1.86	11.32
13.25	4.44	1.92	**12.24**
13.50	4.51	1.98	**11.75**
13.75	4.57	2.03	10.31
14.00	4.62	2.07	8.37
14.25	4.68	2.11	6.81
14.50	4.72	2.15	5.65
14.75	4.77	2.18	4.74
15.00	4.81	2.22	4.01
15.25	4.85	2.25	3.44
15.50	4.89	2.28	3.00
15.75	4.93	2.31	2.65
16.00	4.96	2.33	2.38
16.25	5.00	2.36	2.16
16.50	5.03	2.39	1.98
16.75	5.06	2.41	1.82
17.00	5.09	2.43	1.69
17.25	5.11	2.46	1.58
17.50	5.14	2.48	1.48
17.75	5.17	2.50	1.39
18.00	5.19	2.52	1.32
18.25	5.22	2.54	1.27
18.50	5.24	2.56	1.22
18.75	5.27	2.58	1.18
19.00	5.29	2.60	1.14
19.25	5.31	2.61	1.10
19.50	5.33	2.63	1.06
19.75	5.35	2.65	1.03
20.00	5.37	2.66	0.99
20.25	5.39	2.68	0.96
20.50	5.41	2.69	0.92
20.75	5.42	2.71	0.89
21.00	5.44	2.72	0.86
21.25	5.46	2.74	0.83
21.50	5.48	2.75	0.80
21.75	5.49	2.76	0.78
22.00	5.51	2.78	0.77
22.25	5.53	2.79	0.76
22.50	5.54	2.81	0.74
22.75	5.56	2.82	0.73
23.00	5.58	2.83	0.73
23.25	5.59	2.85	0.72
23.50	5.61	2.86	0.71
23.75	5.62	2.87	0.70
24.00	**5.64**	**2.88**	0.69

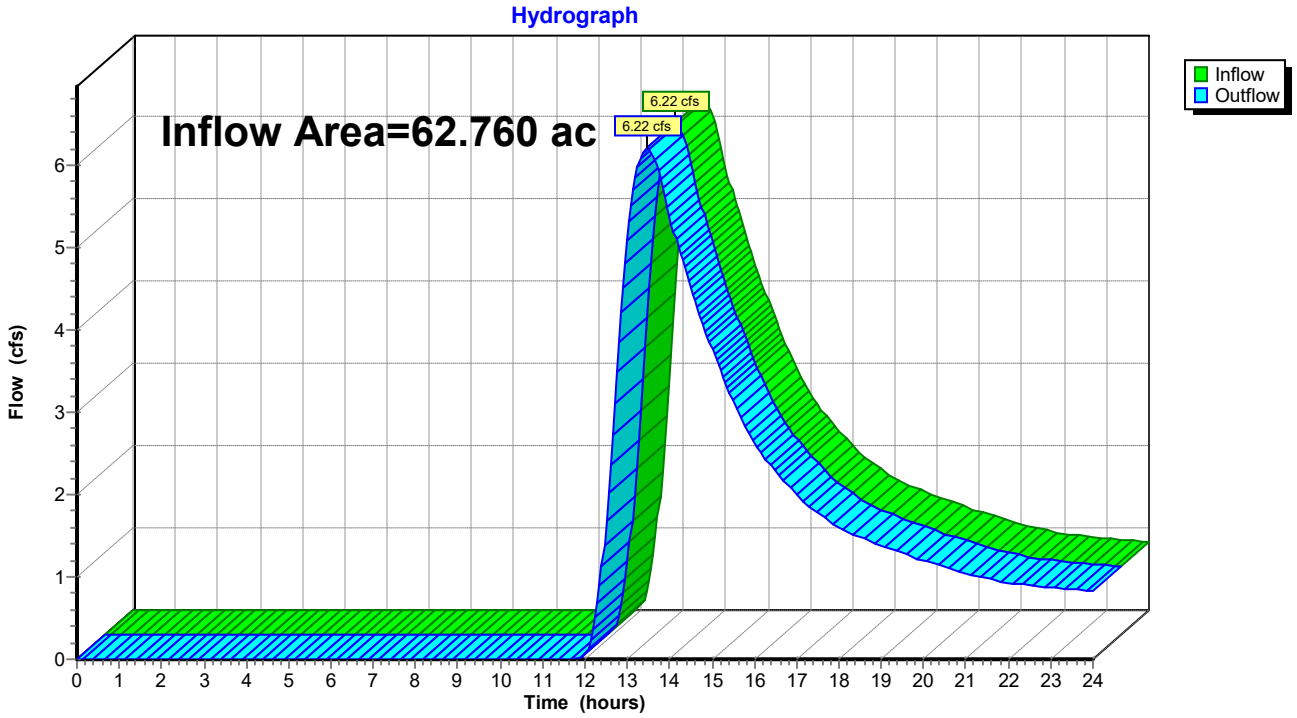
Summary for Reach 11R: Pre-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.760 ac, 0.00% Impervious, Inflow Depth > 0.42" for 1-yr event
Inflow = 6.22 cfs @ 13.48 hrs, Volume= 2.178 af
Outflow = 6.22 cfs @ 13.48 hrs, Volume= 2.178 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 11R: Pre-development



Hydrograph for Reach 11R: Pre-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	13.00	5.09		5.09
0.25	0.00		0.00	13.25	5.99		5.99
0.50	0.00		0.00	13.50	**6.22**		**6.22**
0.75	0.00		0.00	13.75	5.95		5.95
1.00	0.00		0.00	14.00	5.40		5.40
1.25	0.00		0.00	14.25	4.93		4.93
1.50	0.00		0.00	14.50	4.52		4.52
1.75	0.00		0.00	14.75	4.13		4.13
2.00	0.00		0.00	15.00	3.78		3.78
2.25	0.00		0.00	15.25	3.44		3.44
2.50	0.00		0.00	15.50	3.12		3.12
2.75	0.00		0.00	15.75	2.86		2.86
3.00	0.00		0.00	16.00	2.64		2.64
3.25	0.00		0.00	16.25	2.45		2.45
3.50	0.00		0.00	16.50	2.29		2.29
3.75	0.00		0.00	16.75	2.14		2.14
4.00	0.00		0.00	17.00	2.00		2.00
4.25	0.00		0.00	17.25	1.88		1.88
4.50	0.00		0.00	17.50	1.78		1.78
4.75	0.00		0.00	17.75	1.69		1.69
5.00	0.00		0.00	18.00	1.61		1.61
5.25	0.00		0.00	18.25	1.54		1.54
5.50	0.00		0.00	18.50	1.48		1.48
5.75	0.00		0.00	18.75	1.43		1.43
6.00	0.00		0.00	19.00	1.38		1.38
6.25	0.00		0.00	19.25	1.33		1.33
6.50	0.00		0.00	19.50	1.29		1.29
6.75	0.00		0.00	19.75	1.24		1.24
7.00	0.00		0.00	20.00	1.20		1.20
7.25	0.00		0.00	20.25	1.16		1.16
7.50	0.00		0.00	20.50	1.12		1.12
7.75	0.00		0.00	20.75	1.08		1.08
8.00	0.00		0.00	21.00	1.04		1.04
8.25	0.00		0.00	21.25	1.01		1.01
8.50	0.00		0.00	21.50	0.98		0.98
8.75	0.00		0.00	21.75	0.96		0.96
9.00	0.00		0.00	22.00	0.93		0.93
9.25	0.00		0.00	22.25	0.92		0.92
9.50	0.00		0.00	22.50	0.90		0.90
9.75	0.00		0.00	22.75	0.89		0.89
10.00	0.00		0.00	23.00	0.87		0.87
10.25	0.00		0.00	23.25	0.86		0.86
10.50	0.00		0.00	23.50	0.85		0.85
10.75	0.00		0.00	23.75	0.84		0.84
11.00	0.00		0.00	24.00	0.83		0.83
11.25	0.00		0.00				
11.50	0.00		0.00				
11.75	0.00		0.00				
12.00	0.05		0.05				
12.25	0.51		0.51				
12.50	1.69		1.69				
12.75	3.50		3.50				

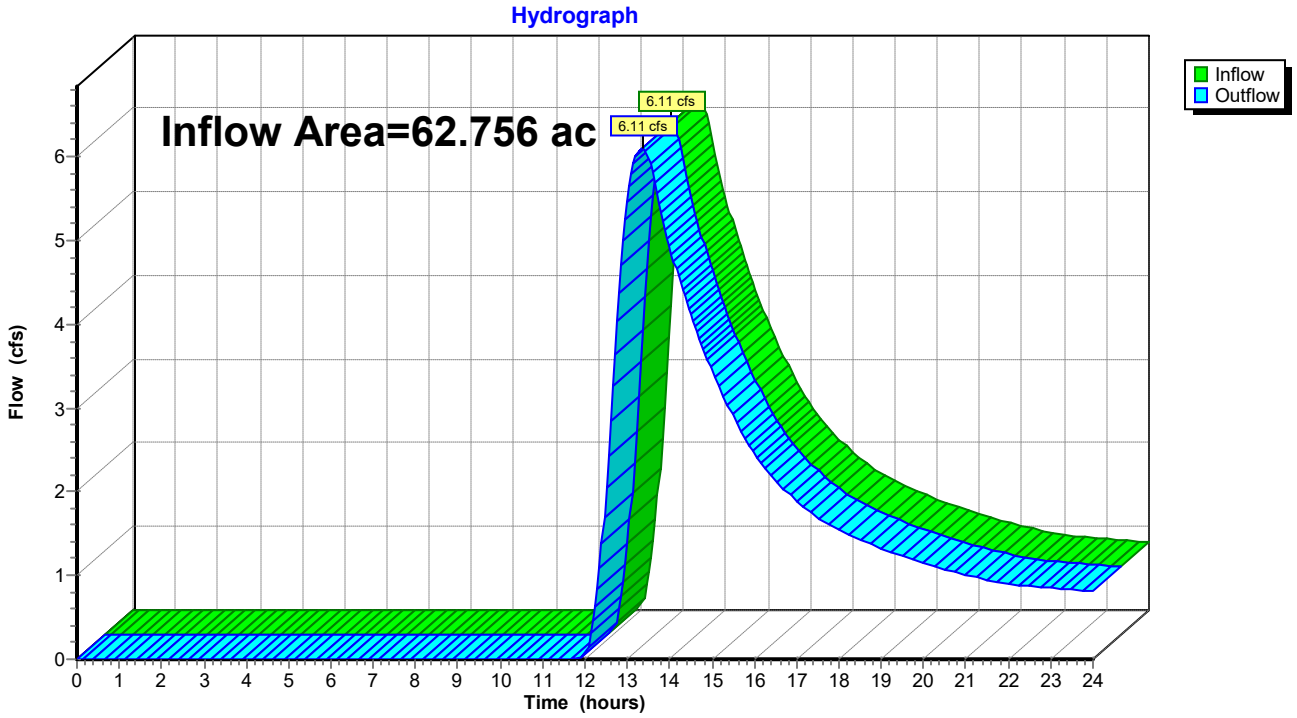
Summary for Reach 12R: Post-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.756 ac, 6.01% Impervious, Inflow Depth > 0.40" for 1-yr event
Inflow = 6.11 cfs @ 13.35 hrs, Volume= 2.098 af
Outflow = 6.11 cfs @ 13.35 hrs, Volume= 2.098 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 12R: Post-development



Hydrograph for Reach 12R: Post-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
0.25	0.00		0.00
0.50	0.00		0.00
0.75	0.00		0.00
1.00	0.00		0.00
1.25	0.00		0.00
1.50	0.00		0.00
1.75	0.00		0.00
2.00	0.00		0.00
2.25	0.00		0.00
2.50	0.00		0.00
2.75	0.00		0.00
3.00	0.00		0.00
3.25	0.00		0.00
3.50	0.00		0.00
3.75	0.00		0.00
4.00	0.00		0.00
4.25	0.00		0.00
4.50	0.00		0.00
4.75	0.00		0.00
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.00		0.00
9.25	0.00		0.00
9.50	0.00		0.00
9.75	0.00		0.00
10.00	0.00		0.00
10.25	0.00		0.00
10.50	0.00		0.00
10.75	0.00		0.00
11.00	0.00		0.00
11.25	0.00		0.00
11.50	0.00		0.00
11.75	0.00		0.00
12.00	0.06		0.06
12.25	0.63		0.63
12.50	2.05		2.05
12.75	4.03		4.03
13.00	5.45		5.45
13.25	**6.06**		**6.06**
13.50	**5.98**		**5.98**
13.75	5.44		5.44
14.00	4.93		4.93
14.25	4.49		4.49
14.50	4.11		4.11
14.75	3.77		3.77
15.00	3.46		3.46
15.25	3.17		3.17
15.50	2.89		2.89
15.75	2.66		2.66
16.00	2.47		2.47
16.25	2.30		2.30
16.50	2.15		2.15
16.75	2.01		2.01
17.00	1.89		1.89
17.25	1.78		1.78
17.50	1.69		1.69
17.75	1.61		1.61
18.00	1.54		1.54
18.25	1.48		1.48
18.50	1.42		1.42
18.75	1.37		1.37
19.00	1.33		1.33
19.25	1.28		1.28
19.50	1.24		1.24
19.75	1.20		1.20
20.00	1.15		1.15
20.25	1.11		1.11
20.50	1.07		1.07
20.75	1.04		1.04
21.00	1.00		1.00
21.25	0.97		0.97
21.50	0.95		0.95
21.75	0.92		0.92
22.00	0.91		0.91
22.25	0.89		0.89
22.50	0.87		0.87
22.75	0.86		0.86
23.00	0.85		0.85
23.25	0.84		0.84
23.50	0.83		0.83
23.75	0.82		0.82
24.00	0.81		0.81

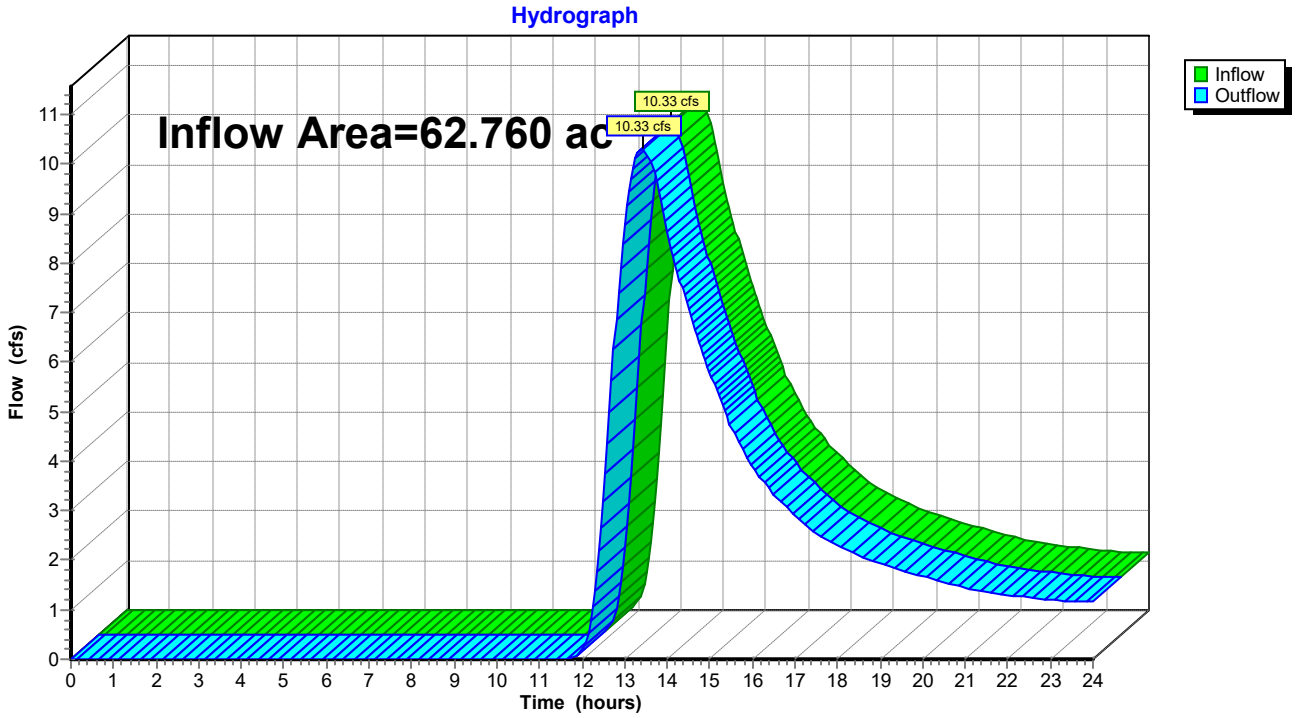
Summary for Reach 11R: Pre-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.760 ac, 0.00% Impervious, Inflow Depth > 0.64" for 2-yr event
Inflow = 10.33 cfs @ 13.41 hrs, Volume= 3.351 af
Outflow = 10.33 cfs @ 13.41 hrs, Volume= 3.351 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 11R: Pre-development



Hydrograph for Reach 11R: Pre-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	13.00	8.79		8.79
0.25	0.00		0.00	13.25	**10.10**		**10.10**
0.50	0.00		0.00	13.50	**10.29**		**10.29**
0.75	0.00		0.00	13.75	9.66		9.66
1.00	0.00		0.00	14.00	8.64		8.64
1.25	0.00		0.00	14.25	7.80		7.80
1.50	0.00		0.00	14.50	7.07		7.07
1.75	0.00		0.00	14.75	6.41		6.41
2.00	0.00		0.00	15.00	5.80		5.80
2.25	0.00		0.00	15.25	5.23		5.23
2.50	0.00		0.00	15.50	4.70		4.70
2.75	0.00		0.00	15.75	4.27		4.27
3.00	0.00		0.00	16.00	3.91		3.91
3.25	0.00		0.00	16.25	3.60		3.60
3.50	0.00		0.00	16.50	3.34		3.34
3.75	0.00		0.00	16.75	3.10		3.10
4.00	0.00		0.00	17.00	2.89		2.89
4.25	0.00		0.00	17.25	2.71		2.71
4.50	0.00		0.00	17.50	2.55		2.55
4.75	0.00		0.00	17.75	2.41		2.41
5.00	0.00		0.00	18.00	2.29		2.29
5.25	0.00		0.00	18.25	2.19		2.19
5.50	0.00		0.00	18.50	2.10		2.10
5.75	0.00		0.00	18.75	2.02		2.02
6.00	0.00		0.00	19.00	1.94		1.94
6.25	0.00		0.00	19.25	1.87		1.87
6.50	0.00		0.00	19.50	1.80		1.80
6.75	0.00		0.00	19.75	1.74		1.74
7.00	0.00		0.00	20.00	1.68		1.68
7.25	0.00		0.00	20.25	1.62		1.62
7.50	0.00		0.00	20.50	1.56		1.56
7.75	0.00		0.00	20.75	1.50		1.50
8.00	0.00		0.00	21.00	1.45		1.45
8.25	0.00		0.00	21.25	1.40		1.40
8.50	0.00		0.00	21.50	1.36		1.36
8.75	0.00		0.00	21.75	1.33		1.33
9.00	0.00		0.00	22.00	1.29		1.29
9.25	0.00		0.00	22.25	1.27		1.27
9.50	0.00		0.00	22.50	1.24		1.24
9.75	0.00		0.00	22.75	1.22		1.22
10.00	0.00		0.00	23.00	1.21		1.21
10.25	0.00		0.00	23.25	1.19		1.19
10.50	0.00		0.00	23.50	1.18		1.18
10.75	0.00		0.00	23.75	1.16		1.16
11.00	0.00		0.00	24.00	1.15		1.15
11.25	0.00		0.00				
11.50	0.00		0.00				
11.75	0.00		0.00				
12.00	0.14		0.14				
12.25	1.05		1.05				
12.50	3.18		3.18				
12.75	6.26		6.26				

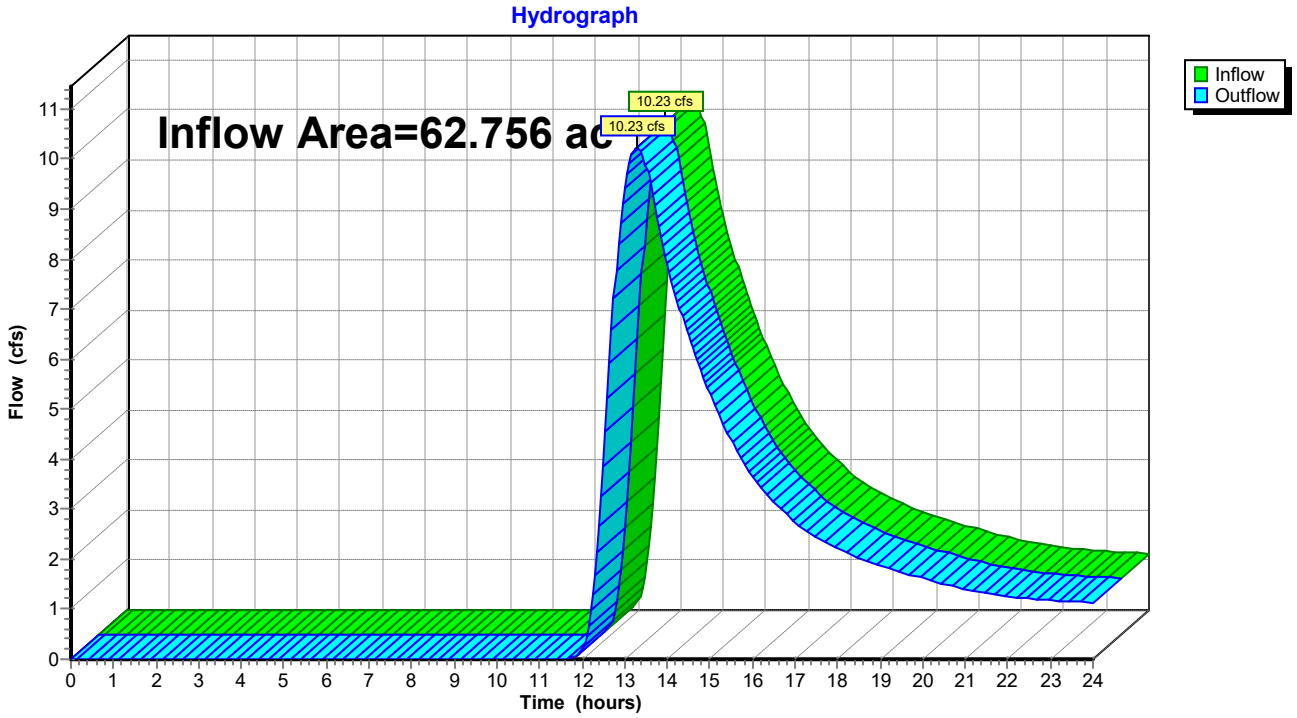
Summary for Reach 12R: Post-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.756 ac, 6.01% Impervious, Inflow Depth > 0.62" for 2-yr event
Inflow = 10.23 cfs @ 13.29 hrs, Volume= 3.249 af
Outflow = 10.23 cfs @ 13.29 hrs, Volume= 3.249 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 12R: Post-development



Hydrograph for Reach 12R: Post-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
0.25	0.00		0.00
0.50	0.00		0.00
0.75	0.00		0.00
1.00	0.00		0.00
1.25	0.00		0.00
1.50	0.00		0.00
1.75	0.00		0.00
2.00	0.00		0.00
2.25	0.00		0.00
2.50	0.00		0.00
2.75	0.00		0.00
3.00	0.00		0.00
3.25	0.00		0.00
3.50	0.00		0.00
3.75	0.00		0.00
4.00	0.00		0.00
4.25	0.00		0.00
4.50	0.00		0.00
4.75	0.00		0.00
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.00		0.00
9.25	0.00		0.00
9.50	0.00		0.00
9.75	0.00		0.00
10.00	0.00		0.00
10.25	0.00		0.00
10.50	0.00		0.00
10.75	0.00		0.00
11.00	0.00		0.00
11.25	0.00		0.00
11.50	0.00		0.00
11.75	0.01		0.01
12.00	0.18		0.18
12.25	1.30		1.30
12.50	3.87		3.87
12.75	7.20		7.20
13.00	9.43		9.43
13.25	**10.22**		**10.22**
13.50	**9.89**		**9.89**
13.75	8.84		8.84
14.00	7.90		7.90
14.25	7.13		7.13
14.50	6.47		6.47
14.75	5.87		5.87
15.00	5.34		5.34
15.25	4.85		4.85
15.50	4.38		4.38
15.75	3.99		3.99
16.00	3.67		3.67
16.25	3.39		3.39
16.50	3.16		3.16
16.75	2.94		2.94
17.00	2.74		2.74
17.25	2.58		2.58
17.50	2.43		2.43
17.75	2.31		2.31
18.00	2.21		2.21
18.25	2.11		2.11
18.50	2.03		2.03
18.75	1.95		1.95
19.00	1.88		1.88
19.25	1.81		1.81
19.50	1.75		1.75
19.75	1.68		1.68
20.00	1.62		1.62
20.25	1.56		1.56
20.50	1.51		1.51
20.75	1.45		1.45
21.00	1.40		1.40
21.25	1.36		1.36
21.50	1.32		1.32
21.75	1.29		1.29
22.00	1.26		1.26
22.25	1.24		1.24
22.50	1.21		1.21
22.75	1.19		1.19
23.00	1.18		1.18
23.25	1.16		1.16
23.50	1.15		1.15
23.75	1.14		1.14
24.00	1.13		1.13

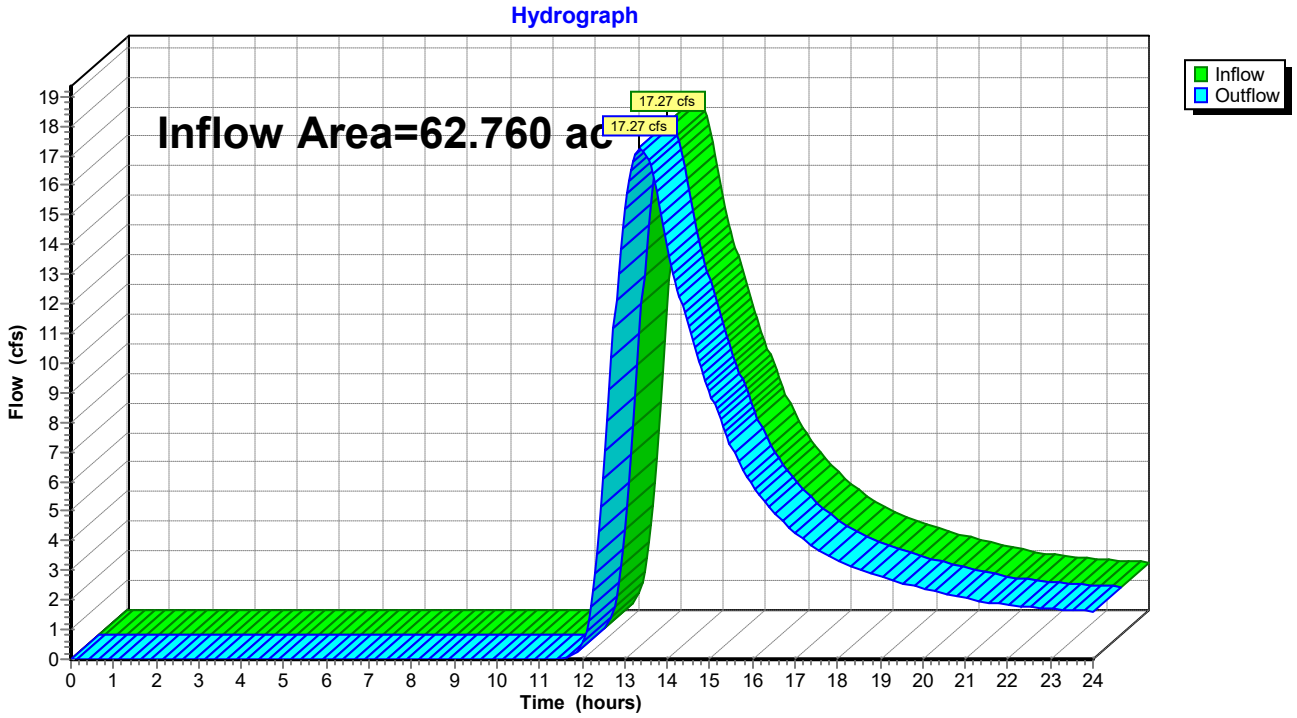
Summary for Reach 11R: Pre-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.760 ac, 0.00% Impervious, Inflow Depth > 1.01" for 5-yr event
Inflow = 17.27 cfs @ 13.36 hrs, Volume= 5.261 af
Outflow = 17.27 cfs @ 13.36 hrs, Volume= 5.261 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 11R: Pre-development



Hydrograph for Reach 11R: Pre-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	13.00	15.18		15.18
0.25	0.00		0.00	13.25	**17.05**		**17.05**
0.50	0.00		0.00	13.50	**17.06**		**17.06**
0.75	0.00		0.00	13.75	15.78		15.78
1.00	0.00		0.00	14.00	13.95		13.95
1.25	0.00		0.00	14.25	12.47		12.47
1.50	0.00		0.00	14.50	11.21		11.21
1.75	0.00		0.00	14.75	10.07		10.07
2.00	0.00		0.00	15.00	9.04		9.04
2.25	0.00		0.00	15.25	8.07		8.07
2.50	0.00		0.00	15.50	7.19		7.19
2.75	0.00		0.00	15.75	6.48		6.48
3.00	0.00		0.00	16.00	5.89		5.89
3.25	0.00		0.00	16.25	5.39		5.39
3.50	0.00		0.00	16.50	4.97		4.97
3.75	0.00		0.00	16.75	4.60		4.60
4.00	0.00		0.00	17.00	4.26		4.26
4.25	0.00		0.00	17.25	3.97		3.97
4.50	0.00		0.00	17.50	3.72		3.72
4.75	0.00		0.00	17.75	3.51		3.51
5.00	0.00		0.00	18.00	3.33		3.33
5.25	0.00		0.00	18.25	3.17		3.17
5.50	0.00		0.00	18.50	3.03		3.03
5.75	0.00		0.00	18.75	2.90		2.90
6.00	0.00		0.00	19.00	2.79		2.79
6.25	0.00		0.00	19.25	2.68		2.68
6.50	0.00		0.00	19.50	2.58		2.58
6.75	0.00		0.00	19.75	2.49		2.49
7.00	0.00		0.00	20.00	2.39		2.39
7.25	0.00		0.00	20.25	2.30		2.30
7.50	0.00		0.00	20.50	2.22		2.22
7.75	0.00		0.00	20.75	2.13		2.13
8.00	0.00		0.00	21.00	2.06		2.06
8.25	0.00		0.00	21.25	1.99		1.99
8.50	0.00		0.00	21.50	1.93		1.93
8.75	0.00		0.00	21.75	1.88		1.88
9.00	0.00		0.00	22.00	1.83		1.83
9.25	0.00		0.00	22.25	1.79		1.79
9.50	0.00		0.00	22.50	1.76		1.76
9.75	0.00		0.00	22.75	1.73		1.73
10.00	0.00		0.00	23.00	1.70		1.70
10.25	0.00		0.00	23.25	1.68		1.68
10.50	0.00		0.00	23.50	1.66		1.66
10.75	0.00		0.00	23.75	1.64		1.64
11.00	0.00		0.00	24.00	1.62		1.62
11.25	0.00		0.00				
11.50	0.02		0.02				
11.75	0.10		0.10				
12.00	0.49		0.49				
12.25	2.28		2.28				
12.50	6.06		6.06				
12.75	11.19		11.19				

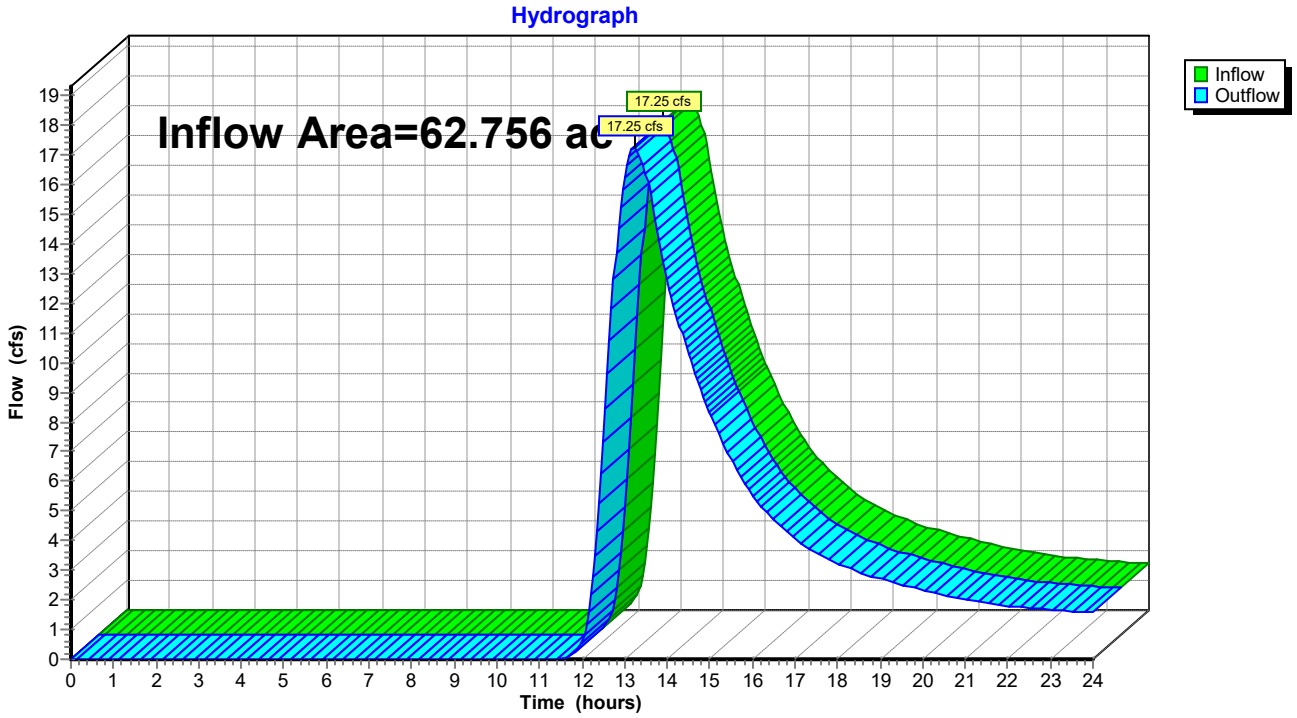
Summary for Reach 12R: Post-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.756 ac, 6.01% Impervious, Inflow Depth > 0.98" for 5-yr event
Inflow = 17.25 cfs @ 13.24 hrs, Volume= 5.130 af
Outflow = 17.25 cfs @ 13.24 hrs, Volume= 5.130 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 12R: Post-development



Hydrograph for Reach 12R: Post-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
0.25	0.00		0.00
0.50	0.00		0.00
0.75	0.00		0.00
1.00	0.00		0.00
1.25	0.00		0.00
1.50	0.00		0.00
1.75	0.00		0.00
2.00	0.00		0.00
2.25	0.00		0.00
2.50	0.00		0.00
2.75	0.00		0.00
3.00	0.00		0.00
3.25	0.00		0.00
3.50	0.00		0.00
3.75	0.00		0.00
4.00	0.00		0.00
4.25	0.00		0.00
4.50	0.00		0.00
4.75	0.00		0.00
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.00		0.00
9.25	0.00		0.00
9.50	0.00		0.00
9.75	0.00		0.00
10.00	0.00		0.00
10.25	0.00		0.00
10.50	0.00		0.00
10.75	0.00		0.00
11.00	0.00		0.00
11.25	0.00		0.00
11.50	0.02		0.02
11.75	0.11		0.11
12.00	0.60		0.60
12.25	2.78		2.78
12.50	7.32		7.32
12.75	12.83		12.83
13.00	16.26		16.26
13.25	**17.24**		**17.24**
13.50	16.38		16.38
13.75	14.46		14.46
14.00	12.79		12.79
14.25	11.44		11.44
14.50	10.29		10.29
14.75	9.26		9.26
15.00	8.36		8.36
15.25	7.52		7.52
15.50	6.73		6.73
15.75	6.09		6.09
16.00	5.56		5.56
16.25	5.11		5.11
16.50	4.72		4.72
16.75	4.38		4.38
17.00	4.06		4.06
17.25	3.80		3.80
17.50	3.57		3.57
17.75	3.38		3.38
18.00	3.22		3.22
18.25	3.07		3.07
18.50	2.94		2.94
18.75	2.82		2.82
19.00	2.71		2.71
19.25	2.61		2.61
19.50	2.51		2.51
19.75	2.42		2.42
20.00	2.33		2.33
20.25	2.24		2.24
20.50	2.15		2.15
20.75	2.08		2.08
21.00	2.00		2.00
21.25	1.94		1.94
21.50	1.88		1.88
21.75	1.83		1.83
22.00	1.79		1.79
22.25	1.75		1.75
22.50	1.72		1.72
22.75	1.69		1.69
23.00	1.67		1.67
23.25	1.65		1.65
23.50	1.63		1.63
23.75	1.61		1.61
24.00	1.59		1.59

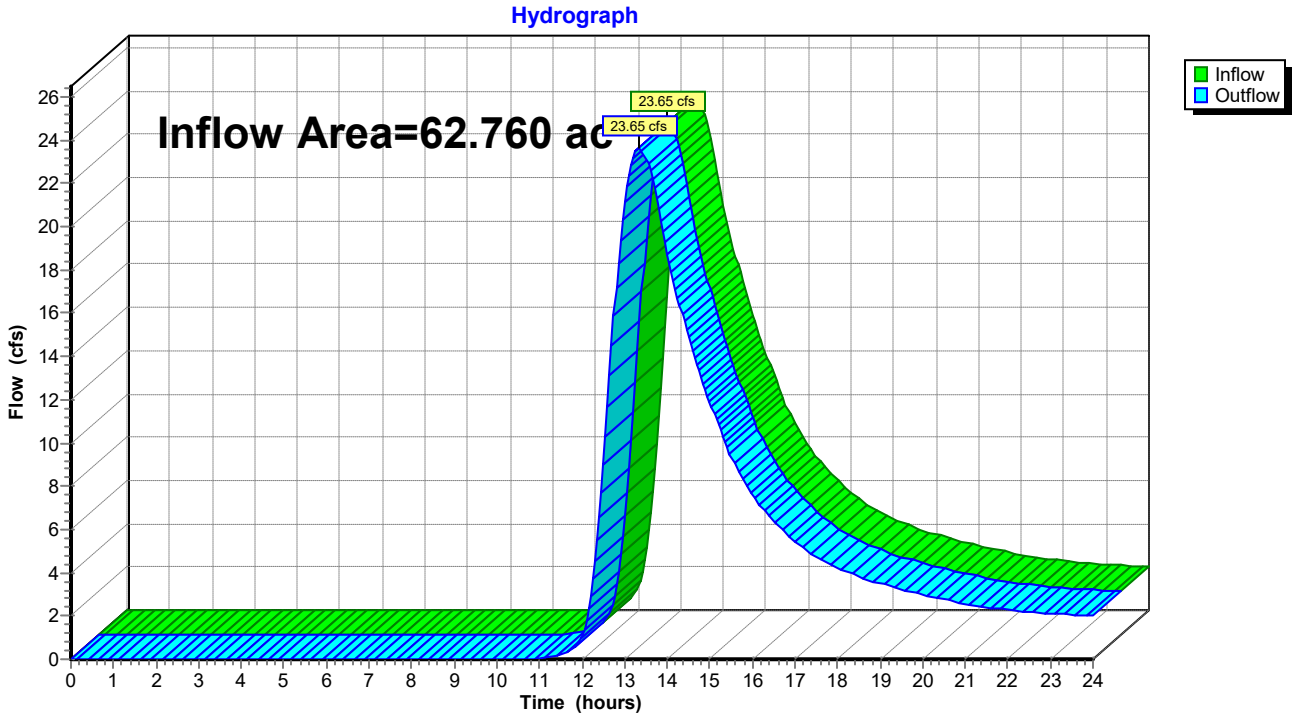
Summary for Reach 11R: Pre-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.760 ac, 0.00% Impervious, Inflow Depth > 1.34" for 10-yr event
Inflow = 23.65 cfs @ 13.34 hrs, Volume= 6.991 af
Outflow = 23.65 cfs @ 13.34 hrs, Volume= 6.991 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 11R: Pre-development



Hydrograph for Reach 11R: Pre-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
0.25	0.00		0.00
0.50	0.00		0.00
0.75	0.00		0.00
1.00	0.00		0.00
1.25	0.00		0.00
1.50	0.00		0.00
1.75	0.00		0.00
2.00	0.00		0.00
2.25	0.00		0.00
2.50	0.00		0.00
2.75	0.00		0.00
3.00	0.00		0.00
3.25	0.00		0.00
3.50	0.00		0.00
3.75	0.00		0.00
4.00	0.00		0.00
4.25	0.00		0.00
4.50	0.00		0.00
4.75	0.00		0.00
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.00		0.00
9.25	0.00		0.00
9.50	0.00		0.00
9.75	0.00		0.00
10.00	0.00		0.00
10.25	0.00		0.00
10.50	0.00		0.00
10.75	0.00		0.00
11.00	0.02		0.02
11.25	0.07		0.07
11.50	0.17		0.17
11.75	0.38		0.38
12.00	1.09		1.09
12.25	3.70		3.70
12.50	8.97		8.97
12.75	15.89		15.89
13.00	21.13		21.13
13.25	**23.45**		**23.45**
13.50	**23.24**		**23.24**
13.75	21.32		21.32
14.00	18.75		18.75
14.25	16.68		16.68
14.50	14.91		14.91
14.75	13.33		13.33
15.00	11.91		11.91
15.25	10.59		10.59
15.50	9.39		9.39
15.75	8.41		8.41
16.00	7.62		7.62
16.25	6.95		6.95
16.50	6.39		6.39
16.75	5.89		5.89
17.00	5.45		5.45
17.25	5.06		5.06
17.50	4.73		4.73
17.75	4.46		4.46
18.00	4.21		4.21
18.25	4.01		4.01
18.50	3.83		3.83
18.75	3.66		3.66
19.00	3.51		3.51
19.25	3.37		3.37
19.50	3.24		3.24
19.75	3.12		3.12
20.00	3.00		3.00
20.25	2.89		2.89
20.50	2.78		2.78
20.75	2.67		2.67
21.00	2.58		2.58
21.25	2.49		2.49
21.50	2.41		2.41
21.75	2.34		2.34
22.00	2.28		2.28
22.25	2.23		2.23
22.50	2.19		2.19
22.75	2.15		2.15
23.00	2.12		2.12
23.25	2.09		2.09
23.50	2.06		2.06
23.75	2.04		2.04
24.00	2.01		2.01

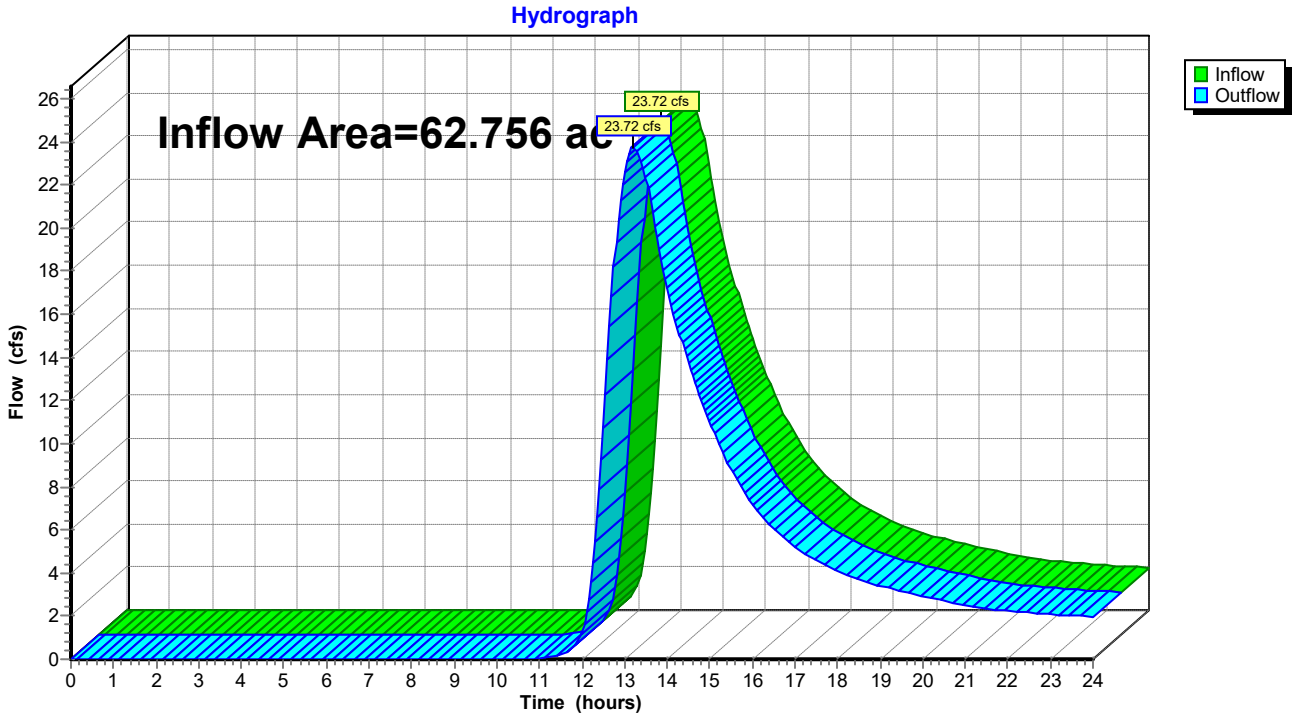
Summary for Reach 12R: Post-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.756 ac, 6.01% Impervious, Inflow Depth > 1.31" for 10-yr event
Inflow = 23.72 cfs @ 13.20 hrs, Volume= 6.840 af
Outflow = 23.72 cfs @ 13.20 hrs, Volume= 6.840 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 12R: Post-development



Hydrograph for Reach 12R: Post-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	13.00	**22.60**		**22.60**
0.25	0.00		0.00	13.25	**23.69**		**23.69**
0.50	0.00		0.00	13.50	22.31		22.31
0.75	0.00		0.00	13.75	19.56		19.56
1.00	0.00		0.00	14.00	17.22		17.22
1.25	0.00		0.00	14.25	15.33		15.33
1.50	0.00		0.00	14.50	13.72		13.72
1.75	0.00		0.00	14.75	12.30		12.30
2.00	0.00		0.00	15.00	11.04		11.04
2.25	0.00		0.00	15.25	9.89		9.89
2.50	0.00		0.00	15.50	8.81		8.81
2.75	0.00		0.00	15.75	7.93		7.93
3.00	0.00		0.00	16.00	7.22		7.22
3.25	0.00		0.00	16.25	6.60		6.60
3.50	0.00		0.00	16.50	6.09		6.09
3.75	0.00		0.00	16.75	5.62		5.62
4.00	0.00		0.00	17.00	5.21		5.21
4.25	0.00		0.00	17.25	4.85		4.85
4.50	0.00		0.00	17.50	4.55		4.55
4.75	0.00		0.00	17.75	4.30		4.30
5.00	0.00		0.00	18.00	4.09		4.09
5.25	0.00		0.00	18.25	3.89		3.89
5.50	0.00		0.00	18.50	3.72		3.72
5.75	0.00		0.00	18.75	3.57		3.57
6.00	0.00		0.00	19.00	3.42		3.42
6.25	0.00		0.00	19.25	3.29		3.29
6.50	0.00		0.00	19.50	3.16		3.16
6.75	0.00		0.00	19.75	3.04		3.04
7.00	0.00		0.00	20.00	2.93		2.93
7.25	0.00		0.00	20.25	2.81		2.81
7.50	0.00		0.00	20.50	2.71		2.71
7.75	0.00		0.00	20.75	2.60		2.60
8.00	0.00		0.00	21.00	2.51		2.51
8.25	0.00		0.00	21.25	2.43		2.43
8.50	0.00		0.00	21.50	2.36		2.36
8.75	0.00		0.00	21.75	2.29		2.29
9.00	0.00		0.00	22.00	2.24		2.24
9.25	0.00		0.00	22.25	2.19		2.19
9.50	0.00		0.00	22.50	2.15		2.15
9.75	0.00		0.00	22.75	2.12		2.12
10.00	0.00		0.00	23.00	2.08		2.08
10.25	0.00		0.00	23.25	2.06		2.06
10.50	0.00		0.00	23.50	2.03		2.03
10.75	0.00		0.00	23.75	2.00		2.00
11.00	0.02		0.02	24.00	1.98		1.98
11.25	0.07		0.07				
11.50	0.18		0.18				
11.75	0.41		0.41				
12.00	1.27		1.27				
12.25	4.44		4.44				
12.50	10.75		10.75				
12.75	18.16		18.16				

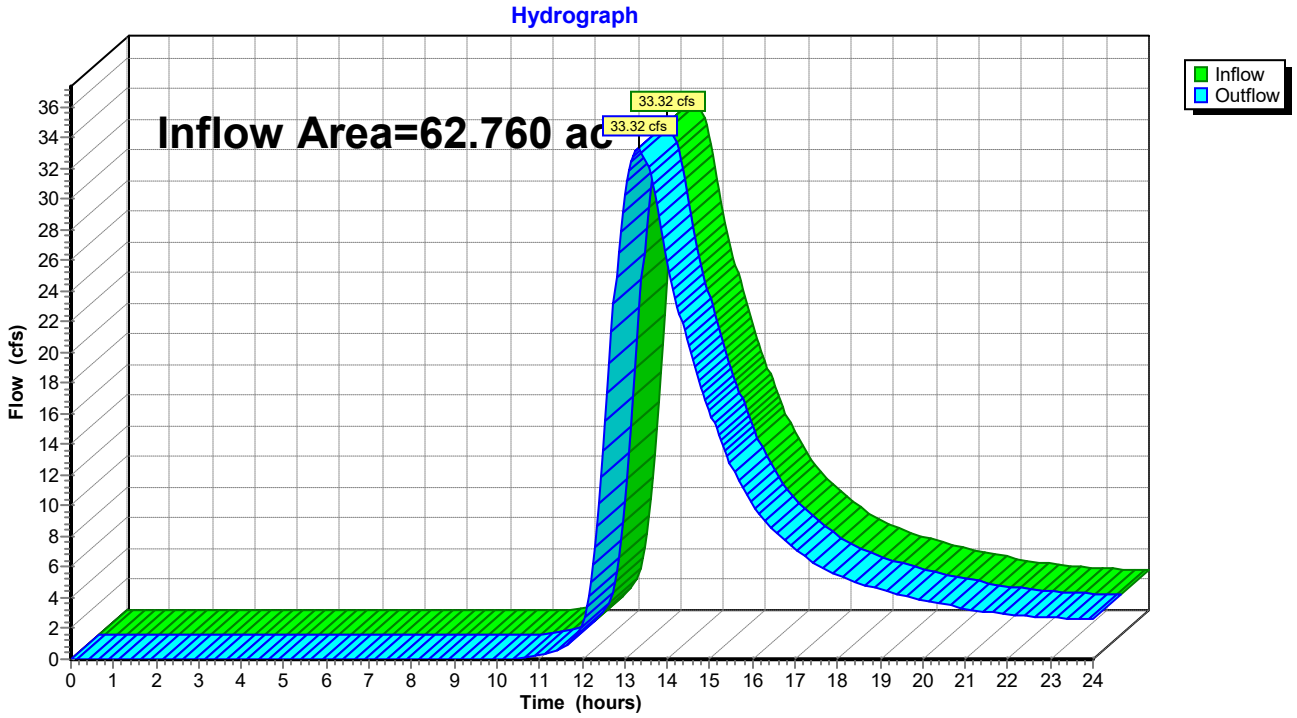
Summary for Reach 11R: Pre-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.760 ac, 0.00% Impervious, Inflow Depth > 1.84" for 25-yr event
Inflow = 33.32 cfs @ 13.32 hrs, Volume= 9.603 af
Outflow = 33.32 cfs @ 13.32 hrs, Volume= 9.603 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 11R: Pre-development



Hydrograph for Reach 11R: Pre-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
0.25	0.00		0.00
0.50	0.00		0.00
0.75	0.00		0.00
1.00	0.00		0.00
1.25	0.00		0.00
1.50	0.00		0.00
1.75	0.00		0.00
2.00	0.00		0.00
2.25	0.00		0.00
2.50	0.00		0.00
2.75	0.00		0.00
3.00	0.00		0.00
3.25	0.00		0.00
3.50	0.00		0.00
3.75	0.00		0.00
4.00	0.00		0.00
4.25	0.00		0.00
4.50	0.00		0.00
4.75	0.00		0.00
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.00		0.00
9.25	0.00		0.00
9.50	0.00		0.00
9.75	0.00		0.00
10.00	0.00		0.00
10.25	0.02		0.02
10.50	0.05		0.05
10.75	0.12		0.12
11.00	0.24		0.24
11.25	0.42		0.42
11.50	0.69		0.69
11.75	1.13		1.13
12.00	2.29		2.29
12.25	6.12		6.12
12.50	13.60		13.60
12.75	23.17		23.17
13.00	30.21		30.21
13.25	**33.13**		**33.13**
13.50	**32.56**		**32.56**
13.75	29.65		29.65
14.00	25.92		25.92
14.25	22.94		22.94
14.50	20.41		20.41
14.75	18.17		18.17
15.00	16.15		16.15
15.25	14.29		14.29
15.50	12.61		12.61
15.75	11.25		11.25
16.00	10.15		10.15
16.25	9.23		9.23
16.50	8.46		8.46
16.75	7.77		7.77
17.00	7.16		7.16
17.25	6.64		6.64
17.50	6.19		6.19
17.75	5.82		5.82
18.00	5.49		5.49
18.25	5.21		5.21
18.50	4.97		4.97
18.75	4.74		4.74
19.00	4.55		4.55
19.25	4.36		4.36
19.50	4.19		4.19
19.75	4.03		4.03
20.00	3.87		3.87
20.25	3.72		3.72
20.50	3.58		3.58
20.75	3.44		3.44
21.00	3.31		3.31
21.25	3.20		3.20
21.50	3.10		3.10
21.75	3.01		3.01
22.00	2.93		2.93
22.25	2.86		2.86
22.50	2.80		2.80
22.75	2.76		2.76
23.00	2.71		2.71
23.25	2.67		2.67
23.50	2.64		2.64
23.75	2.61		2.61
24.00	2.58		2.58

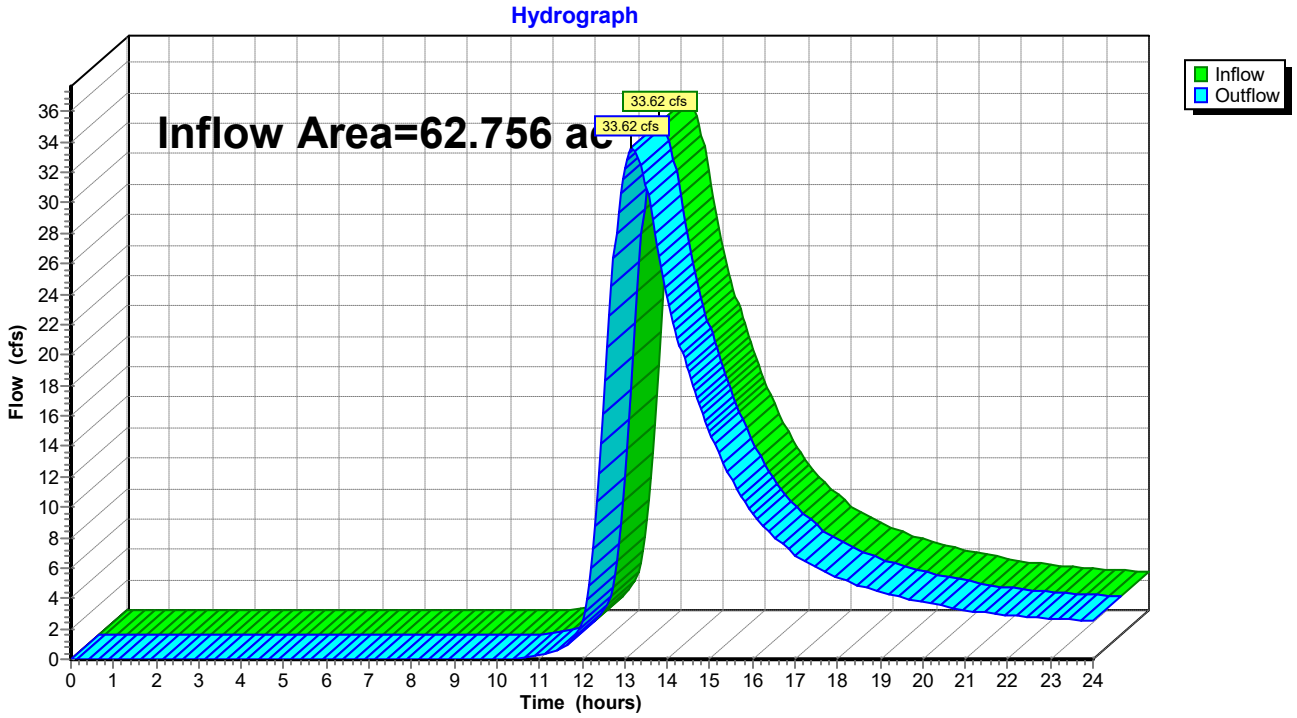
Summary for Reach 12R: Post-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.756 ac, 6.01% Impervious, Inflow Depth > 1.80" for 25-yr event
Inflow = 33.62 cfs @ 13.17 hrs, Volume= 9.426 af
Outflow = 33.62 cfs @ 13.17 hrs, Volume= 9.426 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 12R: Post-development



Hydrograph for Reach 12R: Post-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
0.25	0.00		0.00
0.50	0.00		0.00
0.75	0.00		0.00
1.00	0.00		0.00
1.25	0.00		0.00
1.50	0.00		0.00
1.75	0.00		0.00
2.00	0.00		0.00
2.25	0.00		0.00
2.50	0.00		0.00
2.75	0.00		0.00
3.00	0.00		0.00
3.25	0.00		0.00
3.50	0.00		0.00
3.75	0.00		0.00
4.00	0.00		0.00
4.25	0.00		0.00
4.50	0.00		0.00
4.75	0.00		0.00
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.00		0.00
9.25	0.00		0.00
9.50	0.00		0.00
9.75	0.00		0.00
10.00	0.00		0.00
10.25	0.02		0.02
10.50	0.05		0.05
10.75	0.12		0.12
11.00	0.24		0.24
11.25	0.43		0.43
11.50	0.72		0.72
11.75	1.20		1.20
12.00	2.58		2.58
12.25	7.23		7.23
12.50	16.17		16.17
12.75	26.38		26.38
13.00	**32.28**		**32.28**
13.25	**33.47**		**33.47**
13.50	31.24		31.24
13.75	27.22		27.22
14.00	23.85		23.85
14.25	21.13		21.13
14.50	18.83		18.83
14.75	16.80		16.80
15.00	15.02		15.02
15.25	13.39		13.39
15.50	11.87		11.87
15.75	10.64		10.64
16.00	9.64		9.64
16.25	8.79		8.79
16.50	8.07		8.07
16.75	7.44		7.44
17.00	6.86		6.86
17.25	6.38		6.38
17.50	5.97		5.97
17.75	5.63		5.63
18.00	5.34		5.34
18.25	5.08		5.08
18.50	4.85		4.85
18.75	4.64		4.64
19.00	4.45		4.45
19.25	4.26		4.26
19.50	4.10		4.10
19.75	3.94		3.94
20.00	3.78		3.78
20.25	3.64		3.64
20.50	3.49		3.49
20.75	3.36		3.36
21.00	3.24		3.24
21.25	3.13		3.13
21.50	3.03		3.03
21.75	2.95		2.95
22.00	2.88		2.88
22.25	2.82		2.82
22.50	2.76		2.76
22.75	2.72		2.72
23.00	2.67		2.67
23.25	2.64		2.64
23.50	2.60		2.60
23.75	2.57		2.57
24.00	2.54		2.54

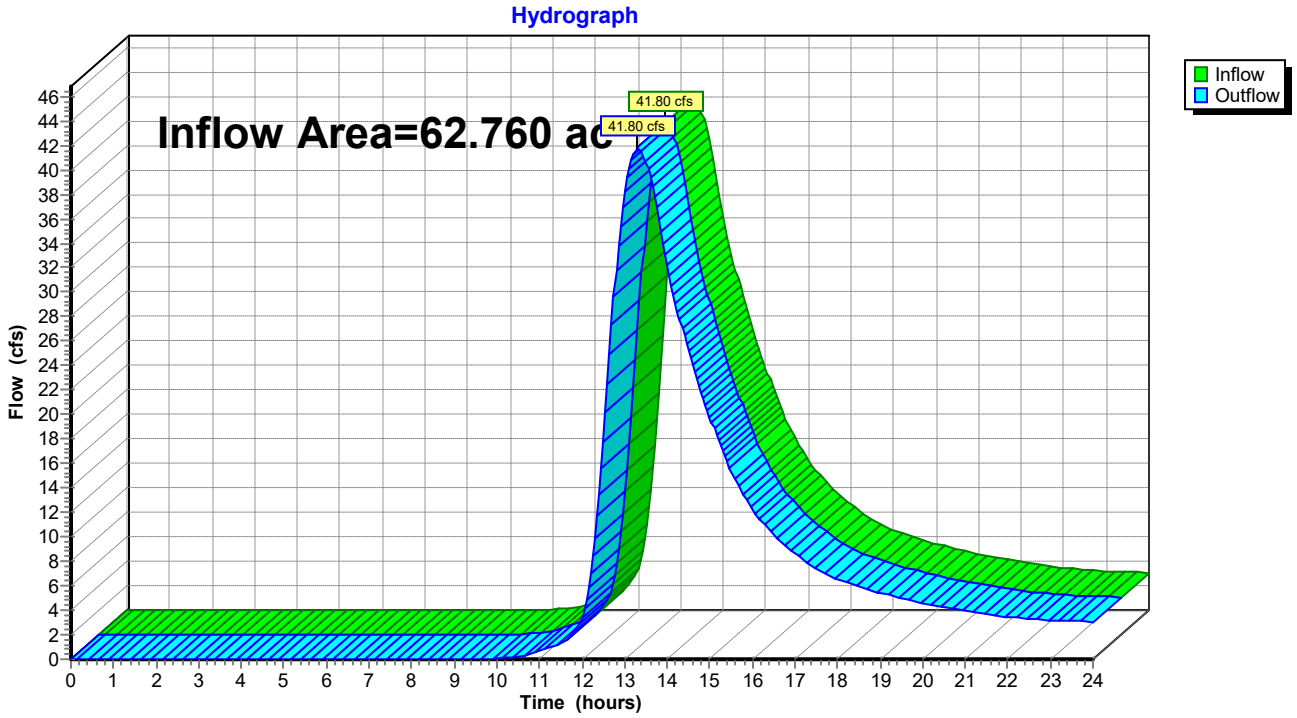
Summary for Reach 11R: Pre-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.760 ac, 0.00% Impervious, Inflow Depth > 2.27" for 50-yr event
Inflow = 41.80 cfs @ 13.31 hrs, Volume= 11.896 af
Outflow = 41.80 cfs @ 13.31 hrs, Volume= 11.896 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 11R: Pre-development



Hydrograph for Reach 11R: Pre-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	13.00	38.23		38.23
0.25	0.00		0.00	13.25	**41.63**		**41.63**
0.50	0.00		0.00	13.50	**40.69**		**40.69**
0.75	0.00		0.00	13.75	36.90		36.90
1.00	0.00		0.00	14.00	32.15		32.15
1.25	0.00		0.00	14.25	28.37		28.37
1.50	0.00		0.00	14.50	25.17		25.17
1.75	0.00		0.00	14.75	22.34		22.34
2.00	0.00		0.00	15.00	19.81		19.81
2.25	0.00		0.00	15.25	17.47		17.47
2.50	0.00		0.00	15.50	15.37		15.37
2.75	0.00		0.00	15.75	13.68		13.68
3.00	0.00		0.00	16.00	12.31		12.31
3.25	0.00		0.00	16.25	11.17		11.17
3.50	0.00		0.00	16.50	10.21		10.21
3.75	0.00		0.00	16.75	9.37		9.37
4.00	0.00		0.00	17.00	8.61		8.61
4.25	0.00		0.00	17.25	7.98		7.98
4.50	0.00		0.00	17.50	7.43		7.43
4.75	0.00		0.00	17.75	6.97		6.97
5.00	0.00		0.00	18.00	6.57		6.57
5.25	0.00		0.00	18.25	6.22		6.22
5.50	0.00		0.00	18.50	5.93		5.93
5.75	0.00		0.00	18.75	5.66		5.66
6.00	0.00		0.00	19.00	5.42		5.42
6.25	0.00		0.00	19.25	5.20		5.20
6.50	0.00		0.00	19.50	4.99		4.99
6.75	0.00		0.00	19.75	4.79		4.79
7.00	0.00		0.00	20.00	4.60		4.60
7.25	0.00		0.00	20.25	4.42		4.42
7.50	0.00		0.00	20.50	4.24		4.24
7.75	0.00		0.00	20.75	4.08		4.08
8.00	0.00		0.00	21.00	3.93		3.93
8.25	0.00		0.00	21.25	3.79		3.79
8.50	0.00		0.00	21.50	3.67		3.67
8.75	0.00		0.00	21.75	3.56		3.56
9.00	0.00		0.00	22.00	3.47		3.47
9.25	0.00		0.00	22.25	3.39		3.39
9.50	0.01		0.01	22.50	3.32		3.32
9.75	0.03		0.03	22.75	3.26		3.26
10.00	0.07		0.07	23.00	3.21		3.21
10.25	0.14		0.14	23.25	3.16		3.16
10.50	0.25		0.25	23.50	3.12		3.12
10.75	0.41		0.41	23.75	3.08		3.08
11.00	0.62		0.62	24.00	3.05		3.05
11.25	0.92		0.92				
11.50	1.33		1.33				
11.75	1.95		1.95				
12.00	3.50		3.50				
12.25	8.41		8.41				
12.50	17.80		17.80				
12.75	29.66		29.66				

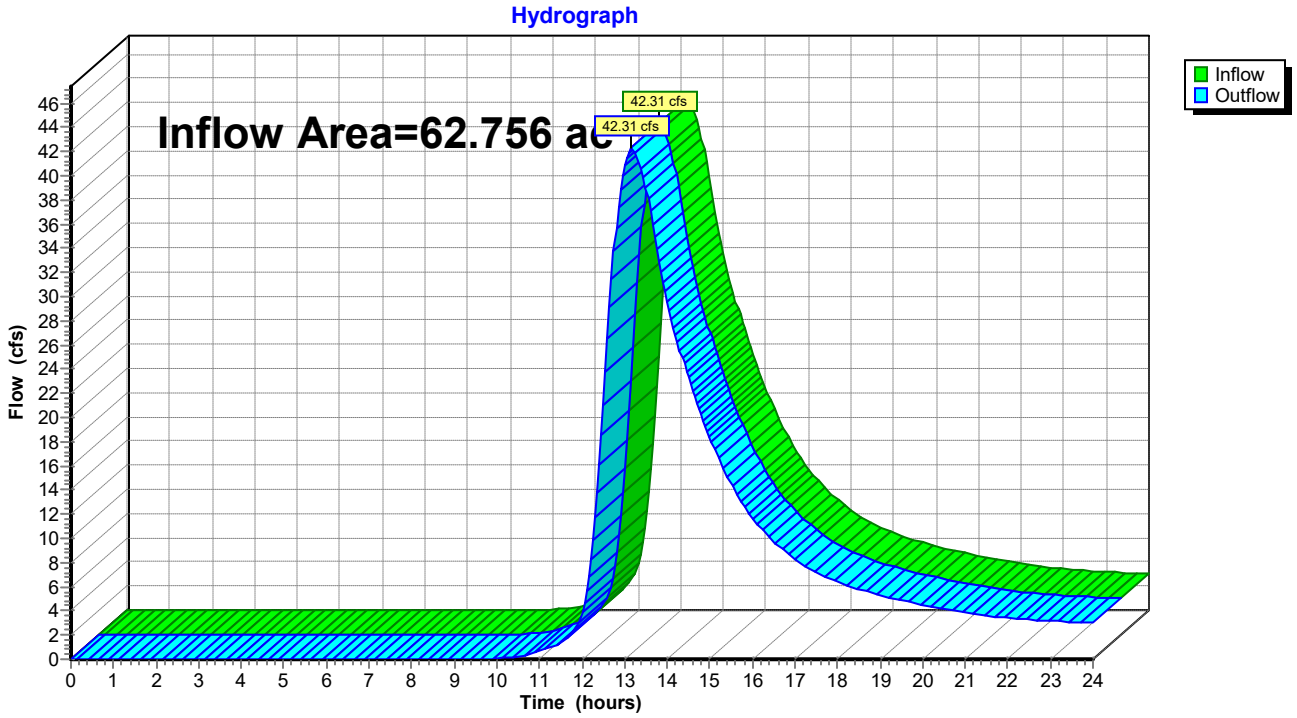
Summary for Reach 12R: Post-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.756 ac, 6.01% Impervious, Inflow Depth > 2.24" for 50-yr event
Inflow = 42.31 cfs @ 13.17 hrs, Volume= 11.700 af
Outflow = 42.31 cfs @ 13.17 hrs, Volume= 11.700 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 12R: Post-development



Hydrograph for Reach 12R: Post-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	13.00	**40.81**		**40.81**
0.25	0.00		0.00	13.25	**42.04**		**42.04**
0.50	0.00		0.00	13.50	39.05		39.05
0.75	0.00		0.00	13.75	33.90		33.90
1.00	0.00		0.00	14.00	29.61		29.61
1.25	0.00		0.00	14.25	26.16		26.16
1.50	0.00		0.00	14.50	23.26		23.26
1.75	0.00		0.00	14.75	20.70		20.70
2.00	0.00		0.00	15.00	18.45		18.45
2.25	0.00		0.00	15.25	16.40		16.40
2.50	0.00		0.00	15.50	14.50		14.50
2.75	0.00		0.00	15.75	12.96		12.96
3.00	0.00		0.00	16.00	11.72		11.72
3.25	0.00		0.00	16.25	10.66		10.66
3.50	0.00		0.00	16.50	9.77		9.77
3.75	0.00		0.00	16.75	8.98		8.98
4.00	0.00		0.00	17.00	8.27		8.27
4.25	0.00		0.00	17.25	7.68		7.68
4.50	0.00		0.00	17.50	7.18		7.18
4.75	0.00		0.00	17.75	6.76		6.76
5.00	0.00		0.00	18.00	6.40		6.40
5.25	0.00		0.00	18.25	6.08		6.08
5.50	0.00		0.00	18.50	5.80		5.80
5.75	0.00		0.00	18.75	5.54		5.54
6.00	0.00		0.00	19.00	5.31		5.31
6.25	0.00		0.00	19.25	5.09		5.09
6.50	0.00		0.00	19.50	4.88		4.88
6.75	0.00		0.00	19.75	4.69		4.69
7.00	0.00		0.00	20.00	4.50		4.50
7.25	0.00		0.00	20.25	4.33		4.33
7.50	0.00		0.00	20.50	4.15		4.15
7.75	0.00		0.00	20.75	3.99		3.99
8.00	0.00		0.00	21.00	3.85		3.85
8.25	0.00		0.00	21.25	3.71		3.71
8.50	0.00		0.00	21.50	3.60		3.60
8.75	0.00		0.00	21.75	3.50		3.50
9.00	0.00		0.00	22.00	3.42		3.42
9.25	0.00		0.00	22.25	3.34		3.34
9.50	0.01		0.01	22.50	3.27		3.27
9.75	0.03		0.03	22.75	3.22		3.22
10.00	0.07		0.07	23.00	3.17		3.17
10.25	0.14		0.14	23.25	3.12		3.12
10.50	0.25		0.25	23.50	3.08		3.08
10.75	0.41		0.41	23.75	3.04		3.04
11.00	0.64		0.64	24.00	3.01		3.01
11.25	0.95		0.95				
11.50	1.38		1.38				
11.75	2.06		2.06				
12.00	3.91		3.91				
12.25	9.84		9.84				
12.50	21.06		21.06				
12.75	33.70		33.70				

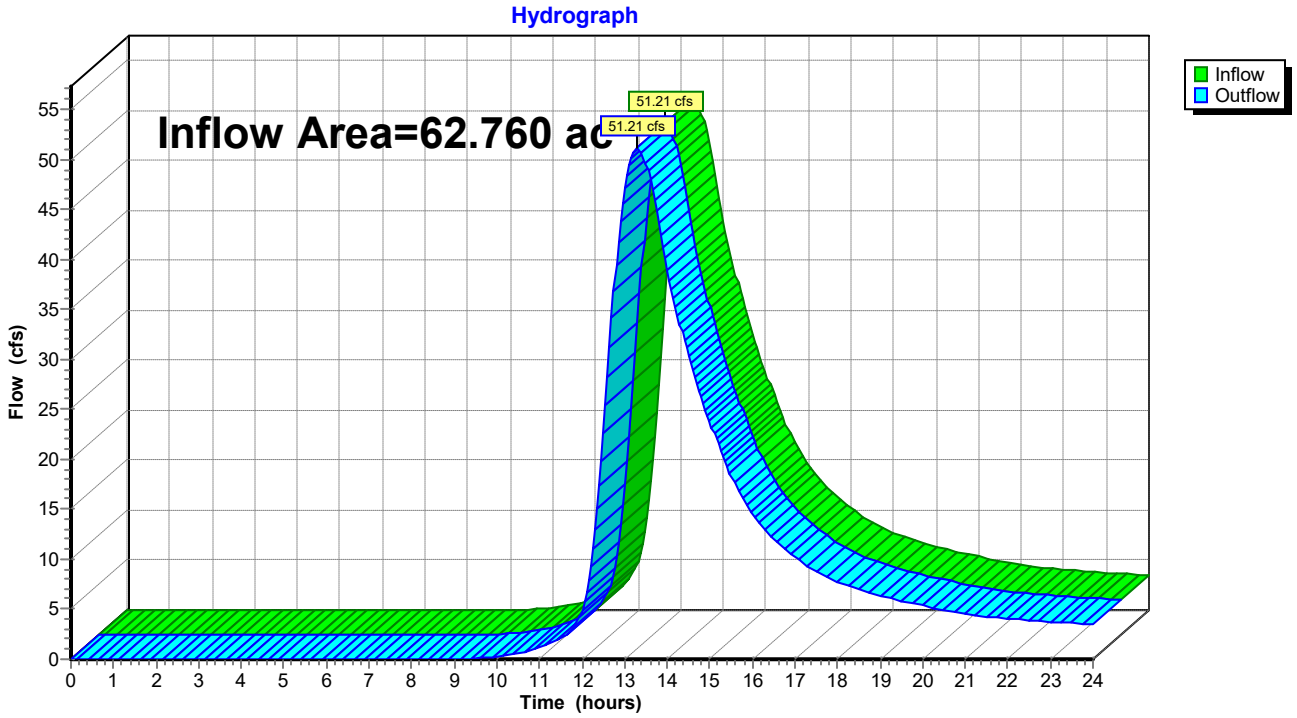
Summary for Reach 11R: Pre-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.760 ac, 0.00% Impervious, Inflow Depth > 2.76" for 100-yr event
Inflow = 51.21 cfs @ 13.30 hrs, Volume= 14.448 af
Outflow = 51.21 cfs @ 13.30 hrs, Volume= 14.448 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 11R: Pre-development



Hydrograph for Reach 11R: Pre-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
0.25	0.00		0.00
0.50	0.00		0.00
0.75	0.00		0.00
1.00	0.00		0.00
1.25	0.00		0.00
1.50	0.00		0.00
1.75	0.00		0.00
2.00	0.00		0.00
2.25	0.00		0.00
2.50	0.00		0.00
2.75	0.00		0.00
3.00	0.00		0.00
3.25	0.00		0.00
3.50	0.00		0.00
3.75	0.00		0.00
4.00	0.00		0.00
4.25	0.00		0.00
4.50	0.00		0.00
4.75	0.00		0.00
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.01		0.01
9.25	0.03		0.03
9.50	0.08		0.08
9.75	0.16		0.16
10.00	0.28		0.28
10.25	0.43		0.43
10.50	0.62		0.62
10.75	0.86		0.86
11.00	1.18		1.18
11.25	1.59		1.59
11.50	2.16		2.16
11.75	2.98		2.98
12.00	4.96		4.96
12.25	11.05		11.05
12.50	22.56		22.56
12.75	36.92		36.92
13.00	47.16		47.16
13.25	**51.06**		**51.06**
13.50	**49.70**		**49.70**
13.75	44.90		44.90
14.00	39.02		39.02
14.25	34.34		34.34
14.50	30.40		30.40
14.75	26.92		26.92
15.00	23.81		23.81
15.25	20.95		20.95
15.50	18.38		18.38
15.75	16.32		16.32
16.00	14.66		14.66
16.25	13.28		13.28
16.50	12.12		12.12
16.75	11.10		11.10
17.00	10.19		10.19
17.25	9.42		9.42
17.50	8.76		8.76
17.75	8.21		8.21
18.00	7.73		7.73
18.25	7.32		7.32
18.50	6.96		6.96
18.75	6.64		6.64
19.00	6.36		6.36
19.25	6.09		6.09
19.50	5.84		5.84
19.75	5.61		5.61
20.00	5.38		5.38
20.25	5.17		5.17
20.50	4.96		4.96
20.75	4.77		4.77
21.00	4.59		4.59
21.25	4.43		4.43
21.50	4.29		4.29
21.75	4.16		4.16
22.00	4.05		4.05
22.25	3.96		3.96
22.50	3.87		3.87
22.75	3.81		3.81
23.00	3.74		3.74
23.25	3.69		3.69
23.50	3.64		3.64
23.75	3.59		3.59
24.00	3.55		3.55

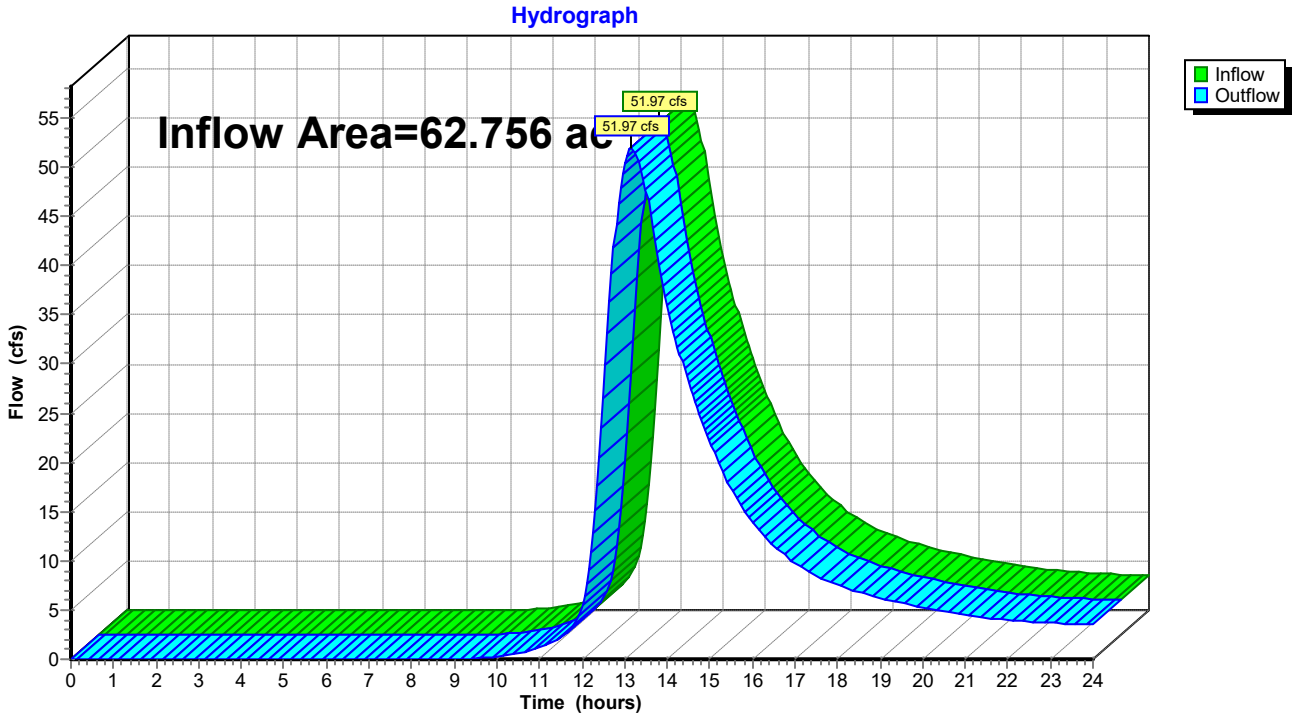
Summary for Reach 12R: Post-development

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 62.756 ac, 6.01% Impervious, Inflow Depth > 2.72" for 100-yr event
Inflow = 51.97 cfs @ 13.16 hrs, Volume= 14.234 af
Outflow = 51.97 cfs @ 13.16 hrs, Volume= 14.234 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

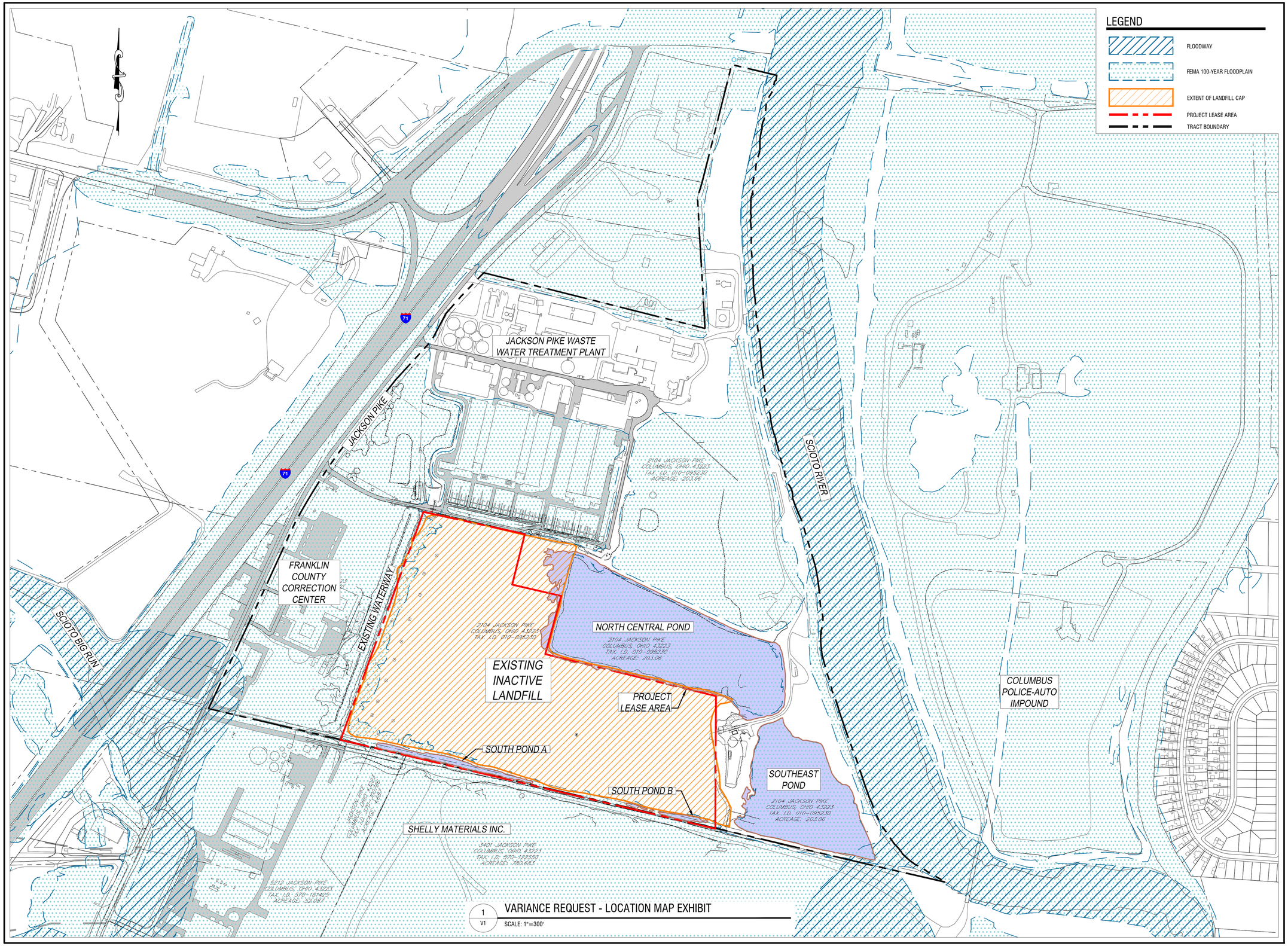
Reach 12R: Post-development



Hydrograph for Reach 12R: Post-development

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
0.25	0.00		0.00
0.50	0.00		0.00
0.75	0.00		0.00
1.00	0.00		0.00
1.25	0.00		0.00
1.50	0.00		0.00
1.75	0.00		0.00
2.00	0.00		0.00
2.25	0.00		0.00
2.50	0.00		0.00
2.75	0.00		0.00
3.00	0.00		0.00
3.25	0.00		0.00
3.50	0.00		0.00
3.75	0.00		0.00
4.00	0.00		0.00
4.25	0.00		0.00
4.50	0.00		0.00
4.75	0.00		0.00
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.01		0.01
9.25	0.03		0.03
9.50	0.08		0.08
9.75	0.16		0.16
10.00	0.28		0.28
10.25	0.43		0.43
10.50	0.63		0.63
10.75	0.87		0.87
11.00	1.20		1.20
11.25	1.63		1.63
11.50	2.23		2.23
11.75	3.12		3.12
12.00	5.49		5.49
12.25	12.86		12.86
12.50	26.60		26.60
12.75	41.88		41.88
13.00	**50.31**		**50.31**
13.25	**51.56**		**51.56**
13.50	47.70		47.70
13.75	41.28		41.28
14.00	35.98		35.98
14.25	31.71		31.71
14.50	28.13		28.13
14.75	24.98		24.98
15.00	22.21		22.21
15.25	19.70		19.70
15.50	17.37		17.37
15.75	15.50		15.50
16.00	13.98		13.98
16.25	12.69		12.69
16.50	11.61		11.61
16.75	10.66		10.66
17.00	9.80		9.80
17.25	9.09		9.09
17.50	8.48		8.48
17.75	7.98		7.98
18.00	7.54		7.54
18.25	7.16		7.16
18.50	6.82		6.82
18.75	6.51		6.51
19.00	6.24		6.24
19.25	5.97		5.97
19.50	5.73		5.73
19.75	5.50		5.50
20.00	5.28		5.28
20.25	5.07		5.07
20.50	4.86		4.86
20.75	4.67		4.67
21.00	4.50		4.50
21.25	4.34		4.34
21.50	4.21		4.21
21.75	4.09		4.09
22.00	3.99		3.99
22.25	3.90		3.90
22.50	3.82		3.82
22.75	3.76		3.76
23.00	3.70		3.70
23.25	3.65		3.65
23.50	3.60		3.60
23.75	3.55		3.55
24.00	3.51		3.51

APPENDIX D SITE DEVELOPMENT ALTERNATIVES



1 / V1 VARIANCE REQUEST - LOCATION MAP EXHIBIT

SCALE: 1"=300'

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JUNO BEACH, FL 33408

2021 OH JACKSON AVENUE PV DESIGN
2104 JACKSON PIKE
COLUMBUS, OH 43223

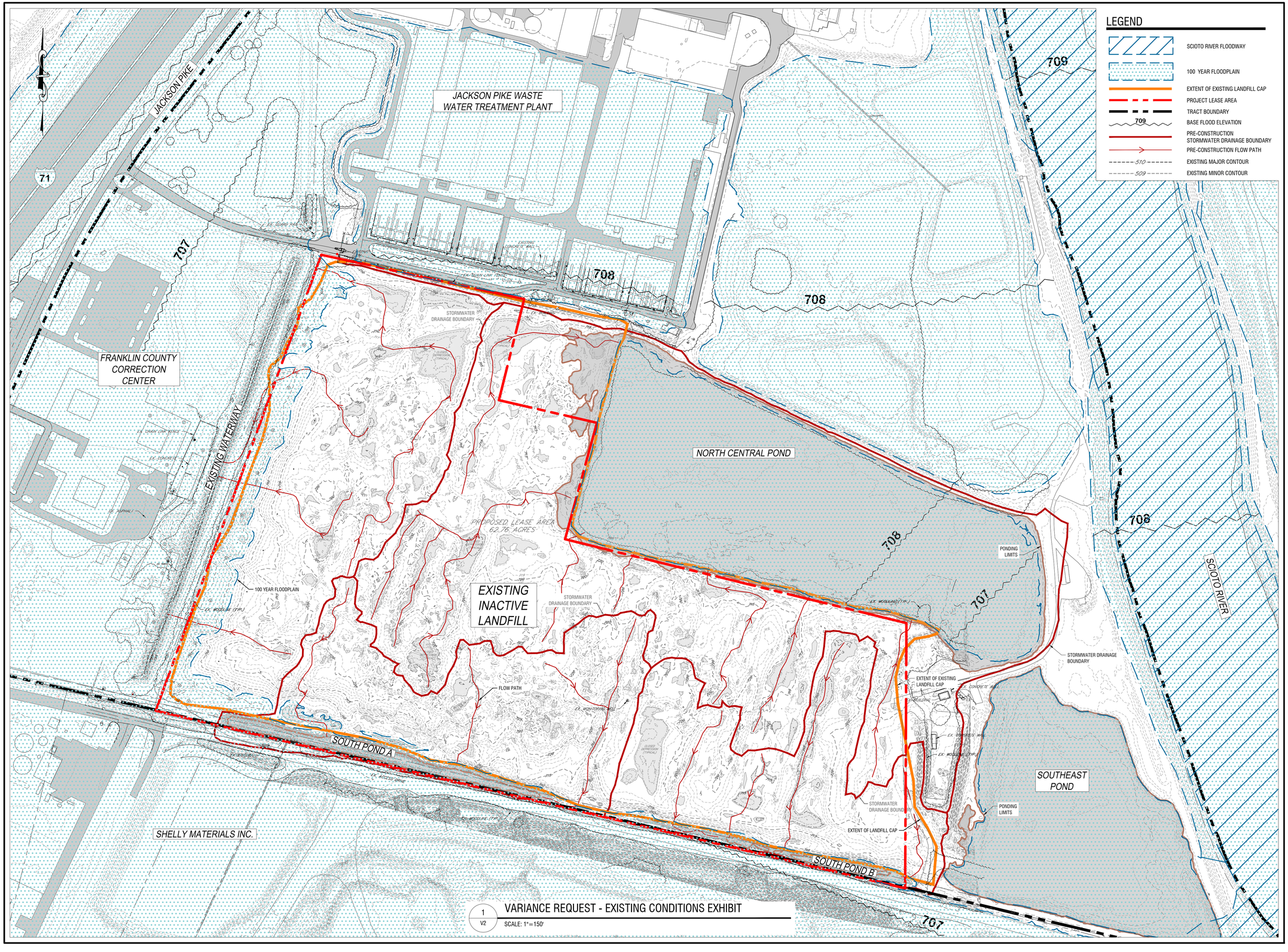
NO:	DATE:	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2213460.01
DRAWN BY: ESK
REVIEWED BY: KSH
ISSUED FOR:
DATE: JANUARY 13, 2023
DRAWING NAME:

VARIANCE REQUEST LOCATION MAP EXHIBIT

DRAWING NUMBER:

V1



1 V2 VARIANCE REQUEST - EXISTING CONDITIONS EXHIBIT

SCALE: 1"=150'

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PROJECT NUMBER: 2213460.01

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REVIEWED BY: KSH

ISSUED FOR:

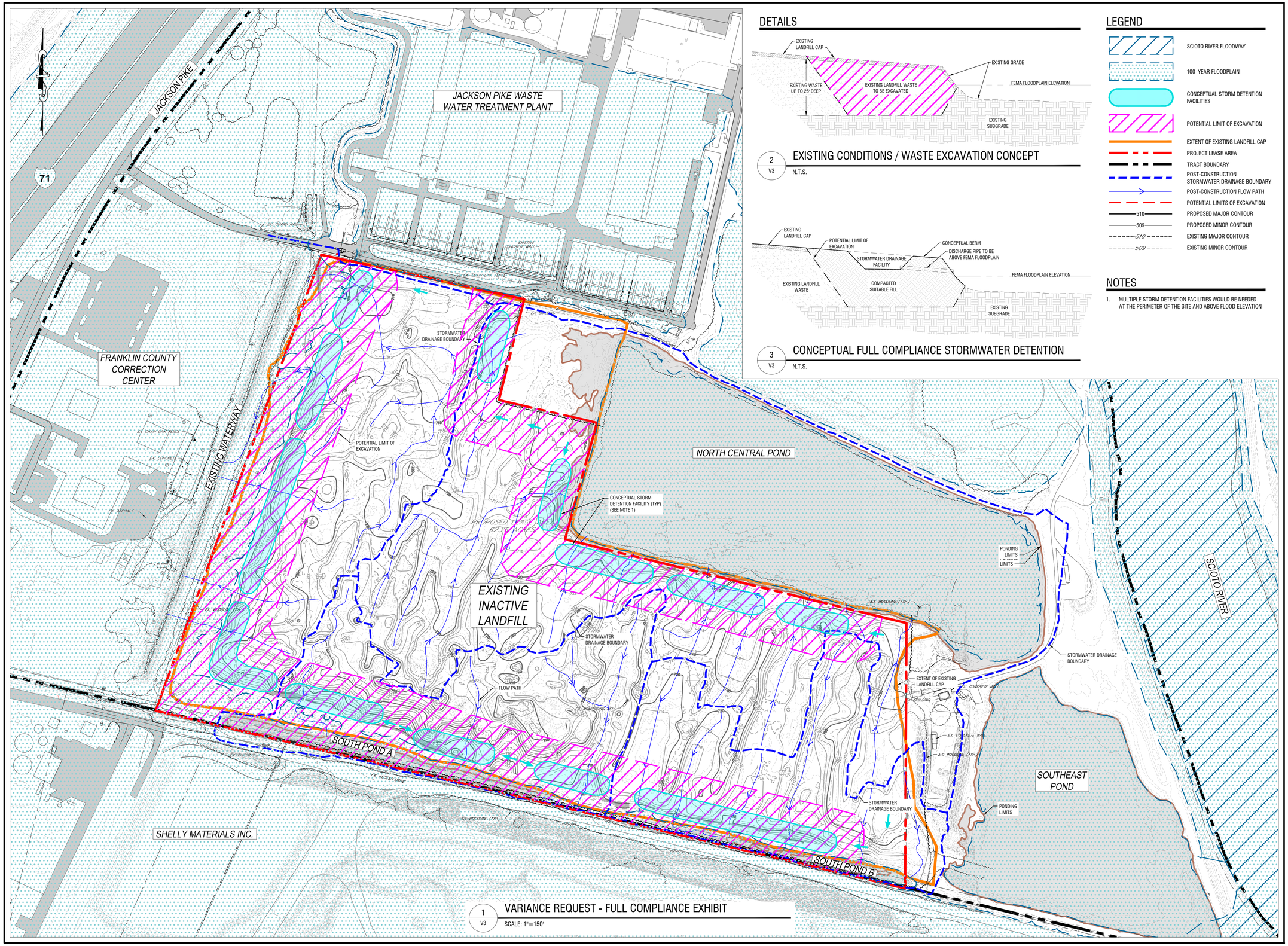
DATE: JANUARY 13, 2023

DRAWING NAME:

VARIANCE REQUEST EXISTING CONDITIONS EXHIBIT

DRAWING NUMBER:

V2



DETAILS

2 / V3 — EXISTING CONDITIONS / WASTE EXCAVATION CONCEPT

N.T.S.

3 / V3 — CONCEPTUAL FULL COMPLIANCE STORMWATER DETENTION

N.T.S.

LEGEND

- SCIOTO RIVER FLOODWAY
- 100 YEAR FLOODPLAIN
- CONCEPTUAL STORM DETENTION FACILITIES
- POTENTIAL LIMIT OF EXCAVATION
- EXTENT OF EXISTING LANDFILL CAP
- PROJECT LEASE AREA
- TRACT BOUNDARY
- POST-CONSTRUCTION STORMWATER DRAINAGE BOUNDARY
- POST-CONSTRUCTION FLOW PATH
- POTENTIAL LIMITS OF EXCAVATION
- 510 — PROPOSED MAJOR CONTOUR
- 509 — PROPOSED MINOR CONTOUR
- 510 — EXISTING MAJOR CONTOUR
- 509 — EXISTING MINOR CONTOUR

NOTES

1. MULTIPLE STORM DETENTION FACILITIES WOULD BE NEEDED AT THE PERIMETER OF THE SITE AND ABOVE FLOOD ELEVATION

1 / V3 — VARIANCE REQUEST - FULL COMPLIANCE EXHIBIT

SCALE: 1"=150'

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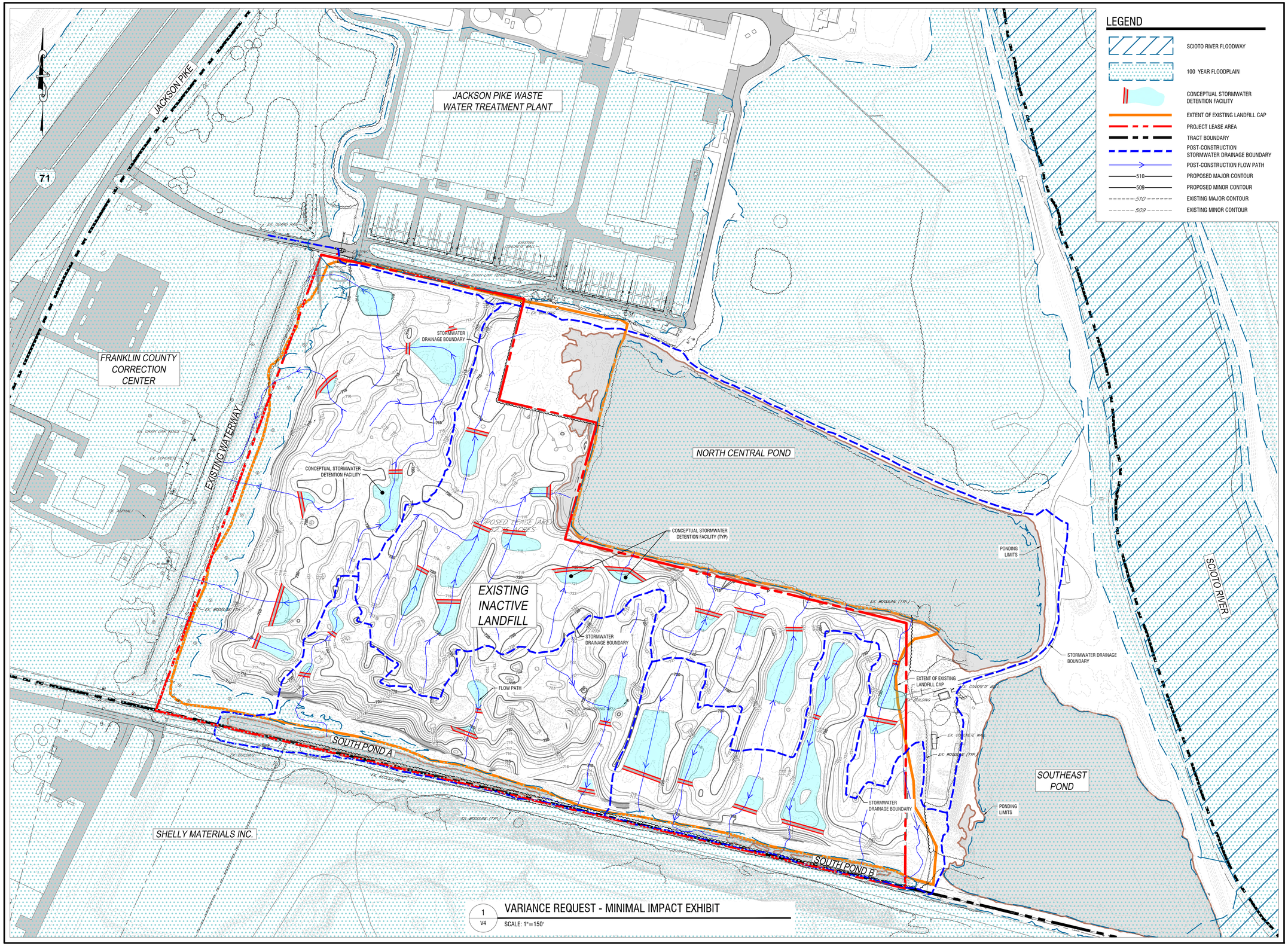
VARIANCE REQUEST FULL COMPLIANCE EXHIBIT

DRAWING NUMBER:

V3



1 V4 VARIANCE REQUEST - MINIMAL IMPACT EXHIBIT

SCALE: 1"=150'

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DATE: JANUARY 13, 2023
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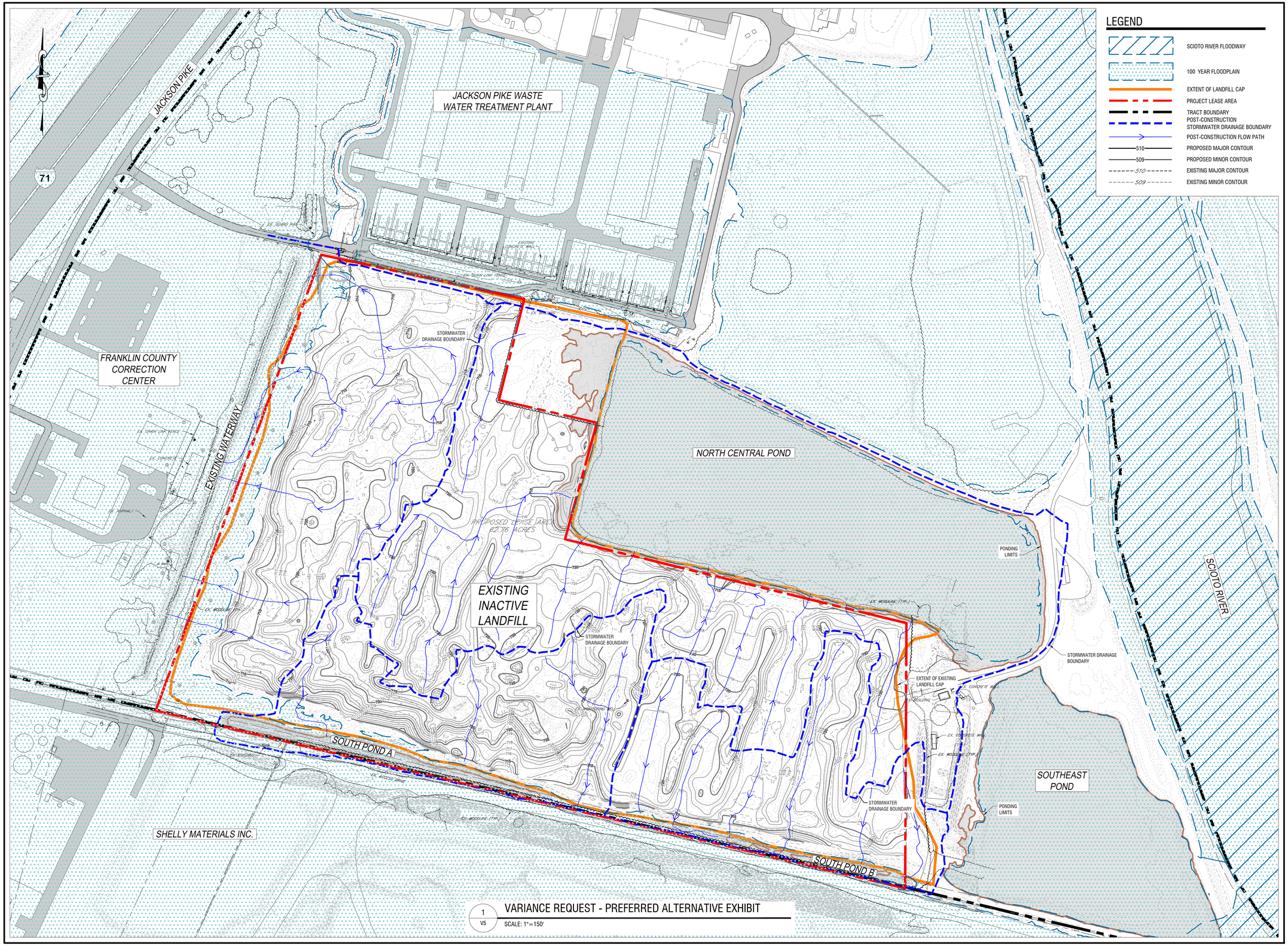
VARIANCE REQUEST MINIMAL IMPACT EXHIBIT

DRAWING NUMBER:

V4



1 V5 VARIANCE REQUEST - PREFERRED ALTERNATIVE EXHIBIT

SCALE: 1"=150'

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PROJECT NUMBER: 2213460.01
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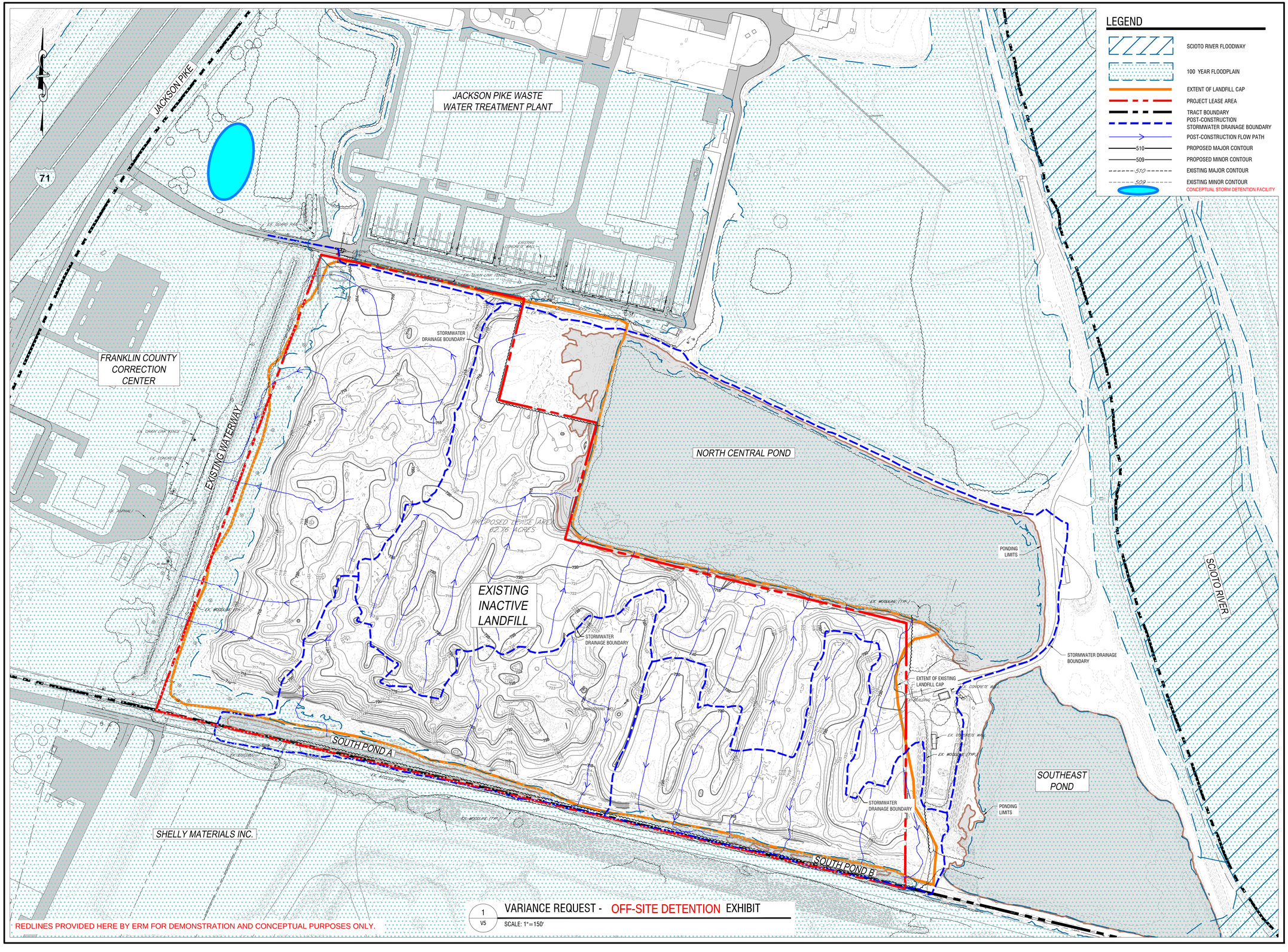
REVIEWED BY: KSH
ISSUED FOR:
DATE: JANUARY 13, 2023
DRAWING NAME:

VARIANCE REQUEST PREFERRED ALTERNATIVE EXHIBIT

DRAWING NUMBER:

V5



1 V5 VARIANCE REQUEST - OFF-SITE DETENTION EXHIBIT

SCALE: 1"=150'

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Revisions		

PROJECT NUMBER: 2213460.01
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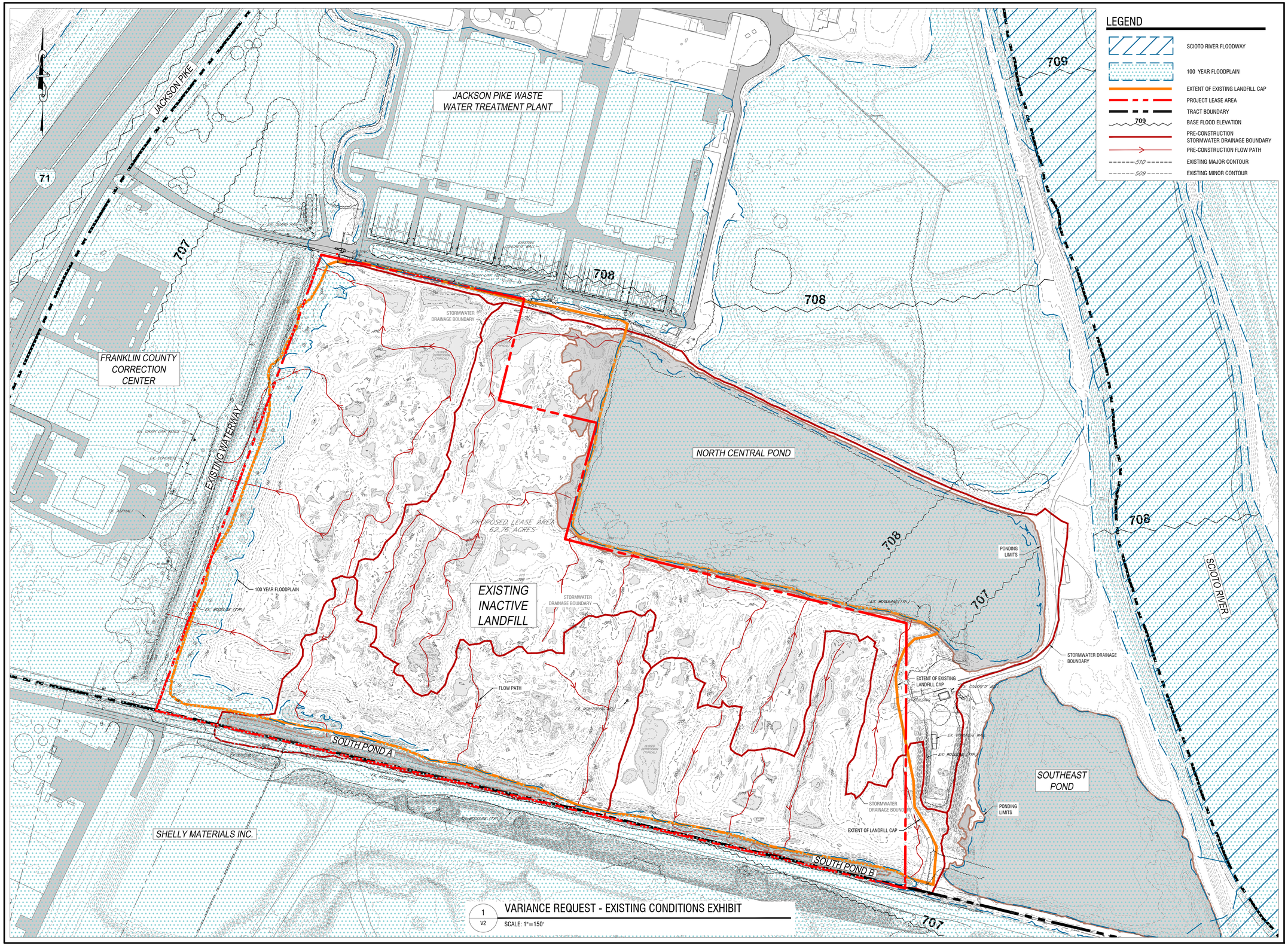
REVIEWED BY: KSH
ISSUED FOR:
DATE: JANUARY 13, 2023
DRAWING NAME:

VARIANCE REQUEST
OFF-SITE DETENTION

DRAWING NUMBER:

V6

FIGURES



1 V2 VARIANCE REQUEST - EXISTING CONDITIONS EXHIBIT

SCALE: 1"=150'

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REVIEWED BY: KSH

ISSUED FOR:

DATE: JANUARY 13, 2023

DRAWING NAME:

FIGURE 1
VARIANCE REQUEST EXISTING CONDITIONS EXHIBIT

DRAWING NUMBER:

V2

Legend

Existing Landfill Boundary (Approximate)

Notes:

1. Aerial imagery retrieved from Google Earth Pro 10-2019.
2. Scale is approximate due to aerial imagery retrieval via Google Earth Pro and imported to ESRI ArcMap 10.8.2.
3. Boundary of site is approximate via "VARIANCE REQUEST EXISTING CONDITIONS EXHIBIT" from Hawbaker Engineering

1:5,000

0 250 500

Feet

Figure 2: Aerial Imagery 10-2019
Jackson Pike Solar Project
NextEra Energy Resources
Jackson Pike, Columbus, Ohio

ERM

NEXTera ENERGY RESOURCES

Projected Coordinate System: NAD 1983 UTM ZONE 17N (US FT)

DRAWN BY: MAW

Legend

Existing Landfill Boundary (Approximate)

Notes:

1. Aerial imagery retrieved from Google Earth Pro 04-1994.
2. Scale is approximate due to aerial imagery retrieval via Google Earth Pro and imported to ESRI ArcMap 10.8.2.
3. Boundary of site is approximate via "VARIANCE REQUEST EXISTING CONDITIONS EXHIBIT" from Hawbaker Engineering

1:5,000

0 250 500

Feet

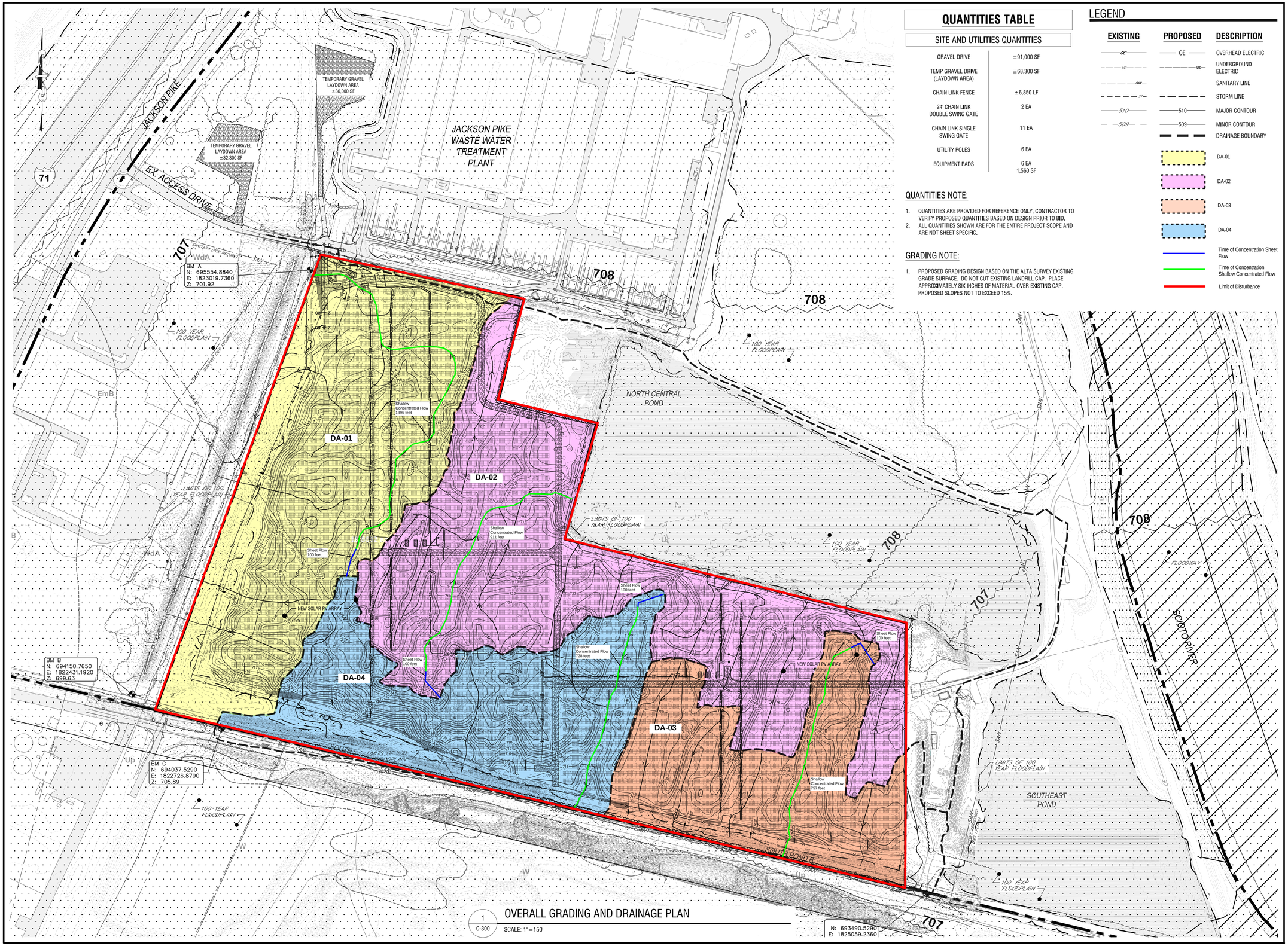
Figure 3: Aerial Imagery 04-1994
Jackson Pike Solar Project
NextEra Energy Resources
Jackson Pike, Columbus, Ohio

ERM

NEXTera ENERGY RESOURCES

Projected Coordinate System: NAD 1983 UTM ZONE 17N (US FT)

DRAWN BY: MAW



1 C-300 OVERALL GRADING AND DRAINAGE PLAN
SCALE: 1"=150'

QUANTITIES TABLE

SITE AND UTILITIES QUANTITIES

GRAVEL DRIVE	±91,000 SF
TEMP GRAVEL DRIVE (LAYDOWN AREA)	±68,300 SF
CHAIN LINK FENCE	±6,850 LF
24' CHAIN LINK DOUBLE SWING GATE	2 EA
CHAIN LINK SINGLE SWING GATE	11 EA
UTILITY POLES	6 EA
EQUIPMENT PADS	6 EA 1,560 SF

QUANTITIES NOTE:

1. QUANTITIES ARE PROVIDED FOR REFERENCE ONLY. CONTRACTOR TO VERIFY PROPOSED QUANTITIES BASED ON DESIGN PRIOR TO BID.
2. ALL QUANTITIES SHOWN ARE FOR THE ENTIRE PROJECT SCOPE AND ARE NOT SHEET SPECIFIC.

GRADING NOTE:

1. PROPOSED GRADING DESIGN BASED ON THE ALTA SURVEY EXISTING GRADE SURFACE. DO NOT CUT EXISTING LANDFILL CAP. PLACE APPROXIMATELY SIX INCHES OF MATERIAL OVER EXISTING CAP. PROPOSED SLOPES NOT TO EXCEED 15%.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
OE	OE	OVERHEAD ELECTRIC
UE	UE	UNDERGROUND ELECTRIC
SAN		SANITARY LINE
ST	ST	STORM LINE
510	510	MAJOR CONTOUR
509	509	MINOR CONTOUR
		DRAINAGE BOUNDARY
		DA-01
		DA-02
		DA-03
		DA-04
		Time of Concentration Sheet Flow
		Time of Concentration Shallow Concentrated Flow
		Limit of Disturbance

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PROJECT NUMBER: 2213460.01
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REVIEWED BY: KSH
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FIGURE 4
OVERALL GRADING AND DRAINAGE PLAN

DRAWING NUMBER:
C-300

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